

# APPENDIX K

## 2013 TIP Investment Analysis: Focus on Low-Income and Minority Communities

The federally required Transportation Improvement Program, or TIP, is a comprehensive listing of all Bay Area surface transportation projects that are to receive federal funding or are subject to a federally required action, or are considered regionally significant for air quality conformity purposes. The 2011 TIP was adopted by the Commission on October 27, 2010 and approved by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) on December 14, 2010. MTC has developed the 2013 TIP, which covers the six-year period of FY 2012-13 through FY 2017-18.

As part of the 2011 TIP development, MTC had conducted an investment analysis with a focus on minority and low-income residents to assist in the public assessment of the TIP, and specifically to address the equity implications of the proposed TIP investments. An update to this analysis for the 2013 TIP is discussed here. The purpose of the analysis is to understand if low-income and minority populations are sharing equitably in the TIP's financial investments. The analysis calculates the shares of 2013 TIP investments flowing to the identified communities, and compares those shares with the proportional size of this group's population and trip-making, relative to that of the general population. This report presents the results of this analysis. For reference, the 2011 TIP investment analysis is available at [http://www.mtc.ca.gov/funding/tip/2011/TIP\\_Investment\\_Analysis\\_Report\\_September\\_16.pdf](http://www.mtc.ca.gov/funding/tip/2011/TIP_Investment_Analysis_Report_September_16.pdf).

While this investment analysis is a companion to the 2013 TIP, it is also a follow-up to several related MTC efforts, including the Plan Bay Area Equity Analysis, Transportation 2035 Equity Analysis (February 2009), the Snapshot Analysis for MTC Communities of Concern (June 2010) and the 2011 TIP Investment Analysis (September 2010). Together, these efforts are meant to provide accurate and current data to help inform decision-makers and the public, and to inform and encourage engagement in the public participation process.

MTC strives to employ best practices in metropolitan planning, and we constantly seek to refine and improve the analytical work that undergirds our planning processes. In keeping with these efforts MTC staff actively seeks feedback on this analysis. This document is available online at [www.mtc.ca.gov/funding/tip/2013/tip\\_investment\\_analysis\\_report.pdf](http://www.mtc.ca.gov/funding/tip/2013/tip_investment_analysis_report.pdf).

### **About the 2013 TIP**

The Bay Area's 2013 TIP includes roughly 880 transportation projects, and a total of approximately \$16.9 billion in committed federal, state and local funding over the six-year TIP period through fiscal year 2018. Figure 1 on the next page illustrates the relative share of the 2013 TIP fund sources, with local sources comprising the largest share at nearly one-half of total funding. Roughly 40 projects account for \$11 billion or 64 percent of the total funding in the TIP 6-year period. See Attachment A for a map of projects with costs greater than \$200 million.



Figure 1

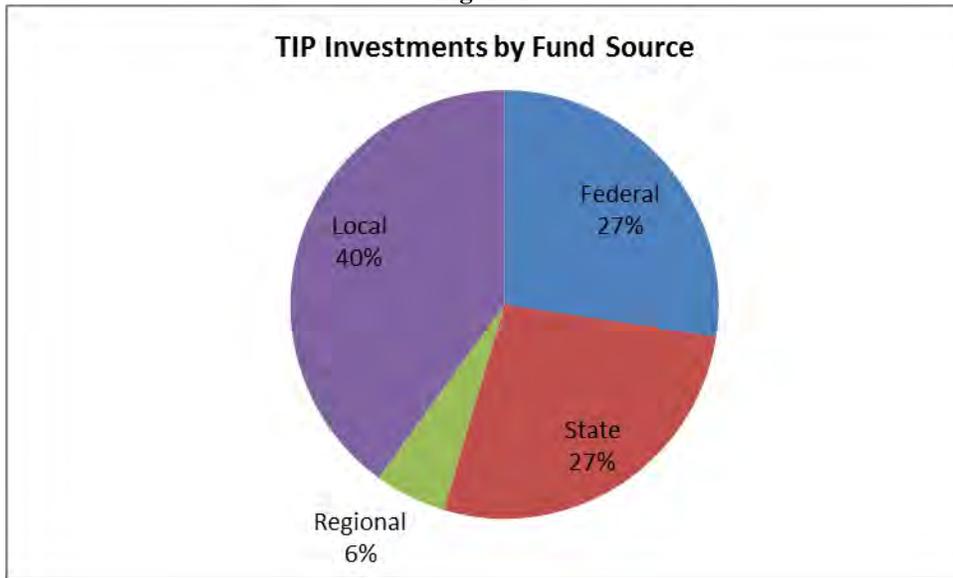
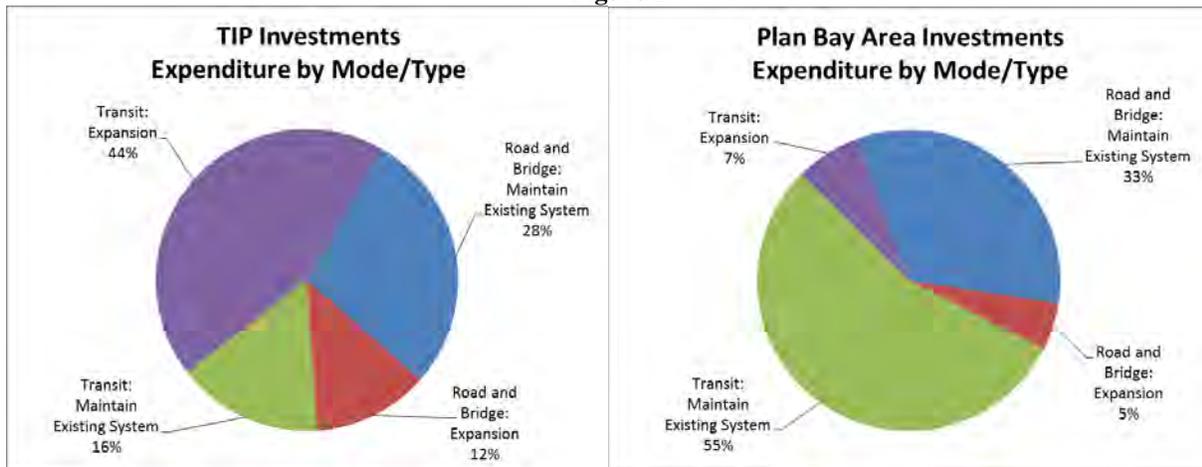


Figure 2 below at left shows the planned investments in the 2013 TIP by transportation mode (complete streets/highway or transit) and type of expenditure (maintenance/management or capital expansion). It must be noted that the TIP investments for bicycle and pedestrian improvements are included under complete streets / highway category. As a frame of reference, the Plan Bay Area expenditures by mode and function are shown as well on the right.

Figure 2



The most striking difference is that the share of capital expansion for both transit and complete streets/highways is much greater in the 2013 TIP than is the case for Plan Bay Area.

The main reason for this difference is that the TIP represents only a fraction of Bay Area transportation investments and is only a six-year snapshot. Because the TIP is focused on projects that have federal funds, will require a federal action, or are regionally significant, it

tends by its nature to be more heavily weighted toward capital projects – such as roads, transit extensions and replacement of transit vehicles. The majority of funds that go to operate, maintain, and manage the region’s transportation system – both for transit and streets and roads – are not a part of the TIP though they are a significant part of Plan Bay Area. For this reason, the TIP investments are not representative of the broader funding picture in Plan Bay Area, the region’s long-range plan.

Another feature of the TIP that distinguishes it from the region’s long-range plan is that it tends to be a more dynamic document – meaning that it is revised frequently to reflect changing fund sources and project changes, and on-going programming efforts. For example, the current 2013 TIP does not yet reflect over \$1.5 billion in Federal Transit Administration (FTA) formula funds because the Commission has not yet adopted a final program for the last four years of the TIP. These funds have historically been directed to transit rehabilitation. Once the action occurs, the 2013 TIP will be amended to include the projects and funding. As context, the 2011 TIP has been revised over 30 times since its adoption two years ago.

### **Equity and Environmental Justice Considerations**

As the federally designated MPO, MTC is responsible for developing a long-range regional transportation plan and the TIP. The legal, regulatory, and policy framework for addressing equity and environmental justice as it relates to the long-range transportation planning process is included in Appendix A and includes: 1) Title VI of the Civil Rights Act; 2) Federal Guidance on Environmental Justice; and 3) MTC’s Environmental Justice Principles.

These laws, regulations, and policies form the basis of analyzing MTC’s Plan Bay Area for equity and inform the 2013 TIP Investment Analysis. MTC is building on the work undertaken in the 2011 TIP Investment Analysis, the Transportation 2035 analysis, and the Equity Analysis for Plan Bay Area including some enhancements based on feedback from stakeholders on the prior analysis. We continue to seek feedback on the methodology and future enhancements to the methodology.

### **Bay Area – Demographic Context**

Before embarking on a discussion of the analysis, it is important to understand demographic and travel patterns for the Bay Area. In terms of overall demographics, roughly 31 percent of the region’s households are low-income, defined as households with incomes that fall below roughly 200 percent of the federal poverty level. Also, the Bay Area is now a “majority minority” region with 58 percent of the households in the racial/ethnic minority category. Table 1 provides summary information on demographics.

**Table 1. Population Distribution by Income and Race/Ethnicity**

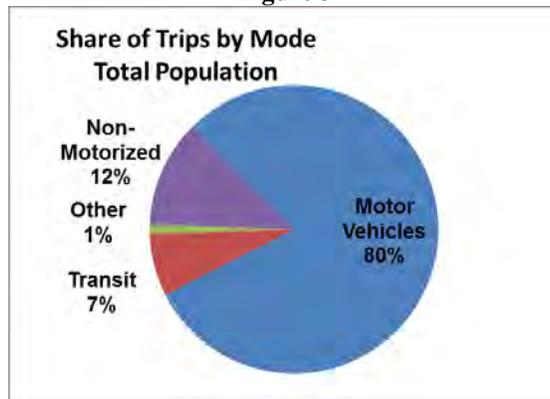
<b>Population Distribution by Household Income</b>		
	<b>Population</b>	<b>% of Total</b>
<b>Low-Income (<math>\leq</math> \$50,000)</b>	2,211,080	31%
<b>Not Low-Income (<math>&gt;</math> \$50,000)</b>	4,843,266	69%
<b>Total</b>	7,054,346	100%
<b>Population Distribution by Race/Ethnicity</b>		
	<b>Population</b>	<b>% of Total</b>
<b>Minority</b>	4,117,836	58%
<b>Non-Minority</b>	3,032,903	42%
<b>Total</b>	7,150,739	100%

Sources: 2010 Census SF1; 2010 American Community Survey (ACS): Public Use Microdata Sample 1 Year Estimates.

Notes: Low-income universe is population in households, excluding persons living in group quarters. Low-income households adjusted for inflation across different data sources/years to capture households with incomes below \$50,000 per year in 2006 dollars.

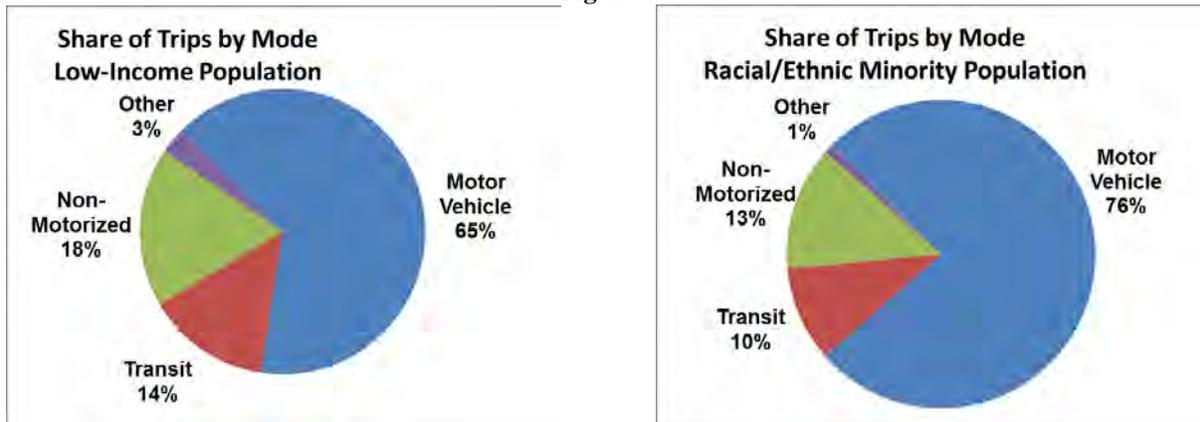
Most notably in terms of travel patterns, Figure 3 illustrates that trips by all Bay Area residents are overwhelmingly made by motor vehicle (80 percent) by the population at large, followed by non-motorized trips (12 percent), and transit (7 percent). While there are real differences for travel patterns for minority and low-income populations, motor vehicles are still the primary mode for trips at 65 percent or greater for both groups (see Figure 4).

**Figure 3**



Source: 2000 Bay Area Travel Survey.

Figure 4



Source: 2000 Bay Area Travel Survey.

### Investment Analysis Overview and Results

The 2013 TIP Investment Analysis uses the following analytical methodology to compare how low-income and minority communities may be affected by the proposed investments in the 2013 TIP:

- Population Use-Based Analysis:** This analysis is use-based. It compares the estimated percent of investment for low-income and minority populations to the percent of use of the transportation system (both roadways and transit) by low-income and minority populations. In the aggregate, the analysis measures transit and motor vehicle trips using the 2000 Bay Area Travel Survey (2000 BATS). In drilling deeper into the slice of roadway investment alone, the analysis uses vehicle miles traveled (VMT) as the measure of system use from the 2000 BATS. Similarly, for a more refined look at transit investment alone, transit trips are measured using data from MTC's 2006 Transit Passenger Demographic Survey.
- Mapped Projects Analysis:** In addition to the analytical methodologies framework and based on feedback received from the MTC Policy Advisory Council, staff has also mapped the 2013 TIP projects that are mappable and overlaid them over Communities of Concern; and census tracts with above average minority populations (included as Appendix C).
- Title VI Analysis:** MTC is using the above methodologies within the broader Transportation Investment Analysis framework along with a disparate impact analysis of the Transportation Investment Analysis results to meet federal Title VI requirements.

The results are discussed below. Appendix B includes definitions and data sources used in this analysis.

### Population Use-Based Analysis

The population-based analysis was conducted as follows:

- The 2013 TIP investments were separated into two modes: transit and road/highway.

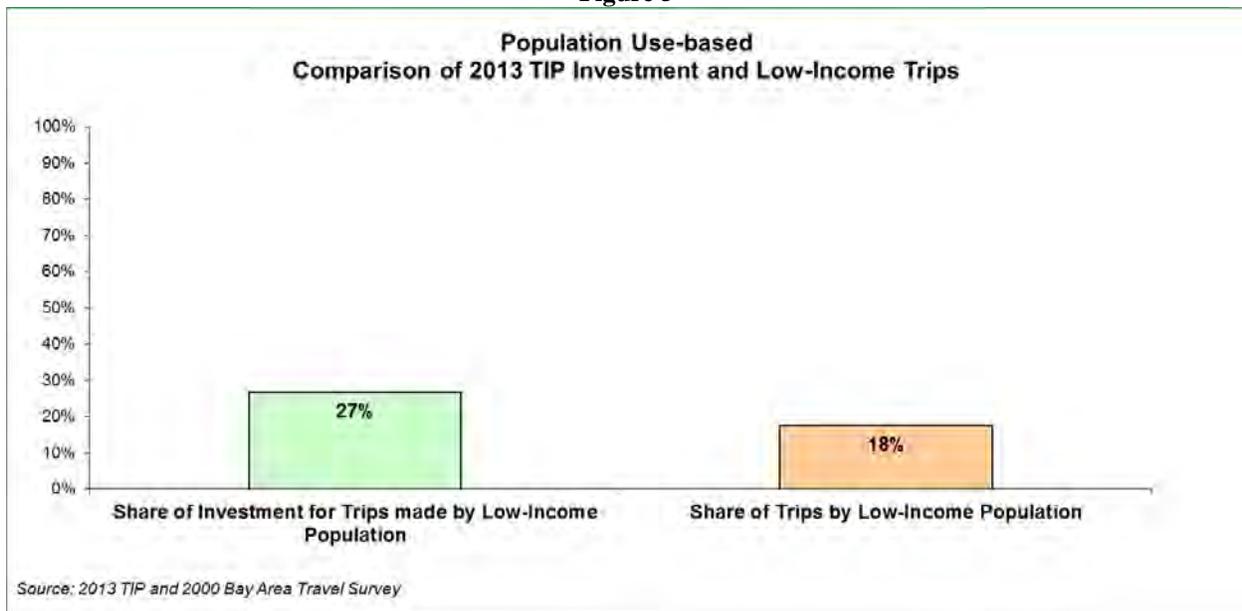
- Investments were allocated in each category to low-income and minority populations, and other populations according to each groups' usage share of each mode at the county or transit operator level.
  - First, to analyze what share of each mode (transit and roads/highways) low-income and minority populations utilize, the following definitions were used:
    - *Low-Income Households:* Low-income households were defined as households earning \$50,000 or less. This is roughly equivalent to 200 percent of the federal poverty level.
    - *Minority Households:* For this analysis, minority households were defined using U.S. Census Bureau definitions.
  - Second, the assignment of investment by usage was performed by multiplying the percent of use of the mode by the investment in that particular mode. This analysis was conducted at the county level for highways and roadways and at the transit-operator level for transit. As an illustrative example, for a \$50 million state highway project in Alameda County, 18 percent or \$9 million, would have been assigned as a financial benefit to low-income populations and the remaining 82 percent or \$41 million to other populations because 18 percent of Alameda County motor vehicle trips are made by low-income populations based on the 2000 BATS. A similar approach was followed for transit investment allocations. For multimodal, aggregate analysis, trip data from the 2000 BATS were used. For the in-depth transit analysis, data came from MTC's 2006 Transit Passenger Demographic Survey. For the focused roadway analysis, vehicle miles traveled (VMT) and 2000 BATS data were used.
- Lastly, the investments by mode (from county or transit operator data) were summed for low-income and minority populations and for all other populations based on each group's usage share of each mode. The percent of usage of the system by the target and other populations was then compared to the percent of investment for trips supporting that population.

As a regional-level analysis, this assessment is quite coarse, and has several limitations. The most significant shortcoming is that the analysis does not directly assess the benefit and burden of specific projects or programs. With respect to assigning investment benefit from expansion projects to households, this analysis is limited to assuming that existing usage demographics apply, since current demographic and travel surveys do not include future riders or drivers who will be attracted to the areas served by these expansions either as origins and destinations. Moreover, the roadway-usage share does not account for the benefit to the region's transit vehicles that share the roads with private automobiles. Also, for simplicity, pedestrian and bicycle projects were assigned to local streets and roads and not specifically assigned based on usage by low-income or minority populations of these facilities, or walk/bike mode share.

**Population Use-Based Results**

Table 2. Population Use-Based Comparison of 2013 TIP Investment and Trips by Income Distribution			
	2013 TIP Investments	% of Investment	% of Trips
Trips by People Living in Low-Income Households ( $\leq$ \$50k/yr)	\$4,548,196,882	27%	18%
Trips by People Living in Not-Low Income Households ( $>$ \$50k/yr)	\$12,386,126,249	73%	82%
<b>Total</b>	<b>\$16,934,323,131</b>	<b>100%</b>	<b>100%</b>

Figure 5

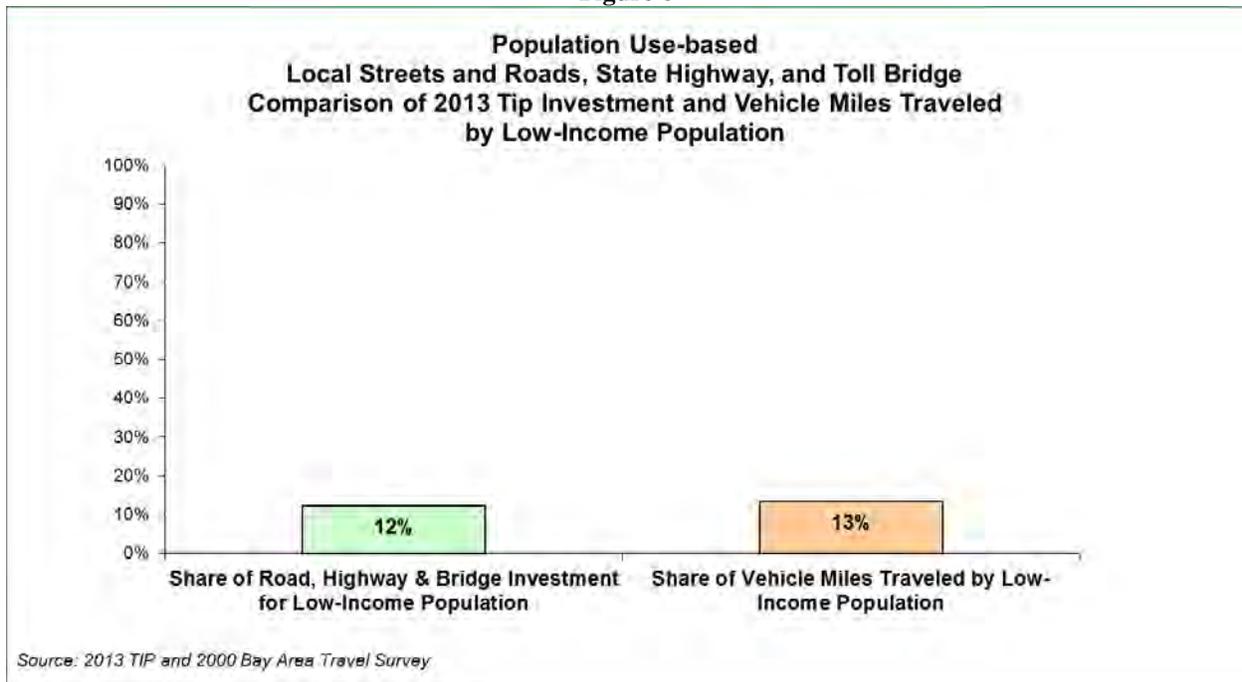


**Observations**

- The share of investment in projects that support trips made by people living in low-income households (27%) is greater than the proportion of trips made by people living in households that earns \$50,000 or less (18%).
- While low-income households make up 31% of the population in the Bay Area (Source: 2010 American Community Survey [ACS]: Public Use Microdata Sample 1 Year Estimates) people living in these households account for only 18% of all trips (Source: 2000 Bay Area Travel Survey).

Table 3. Population Use-Based Local Streets and Roads, State Highway, and Toll Bridge Comparison of 2013 TIP Investment and Vehicle Miles Traveled by Income Distribution			
	Road, Highway & Bridge Investment	% of Investment	% of Vehicle Miles Traveled
Drivers Living in Low-Income Households (<\$50k/yr)	\$843,002,879	12%	13%
Drivers Living in Not Low-Income Households (>\$50k/yr)	\$6,018,376,421	88%	87%
<b>Total</b>	<b>\$6,861,379,300</b>	<b>100%</b>	<b>100%</b>

Figure 6

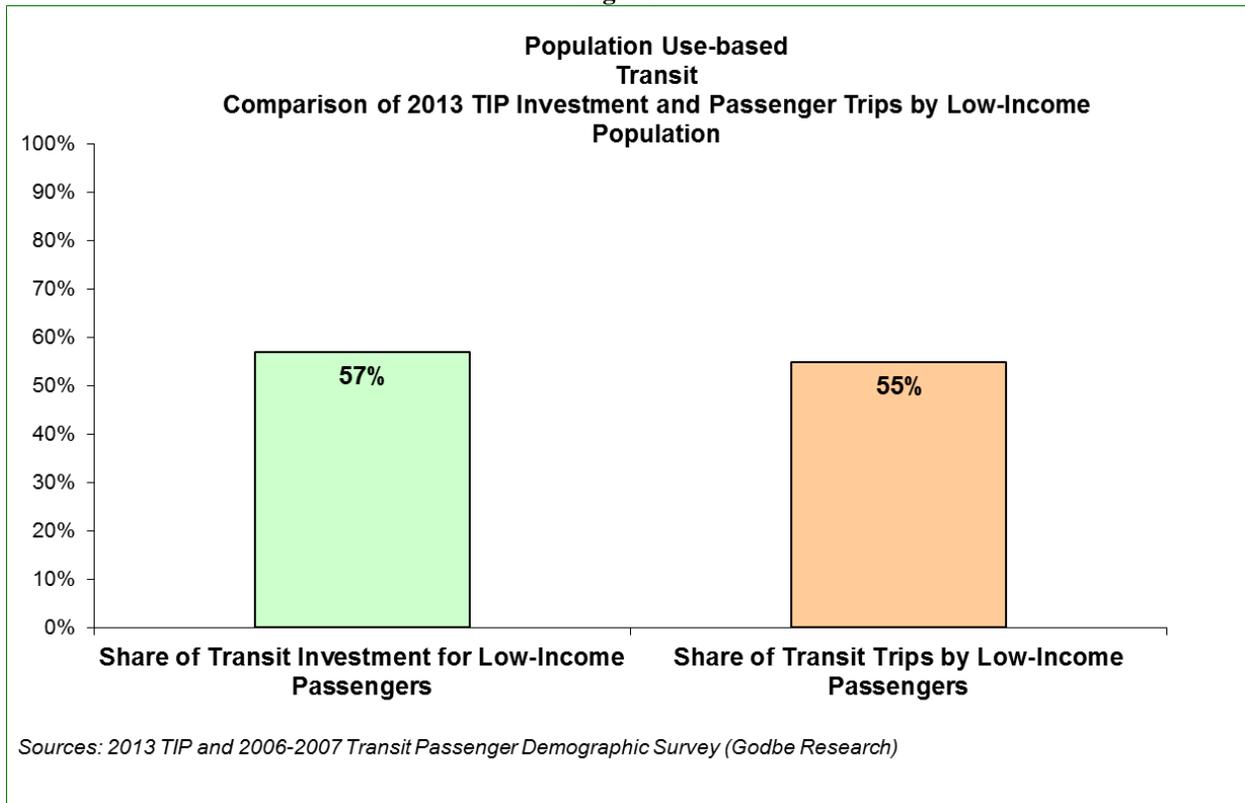


**Observations**

- The share of investments in local road, state highway and toll bridge systems that benefit drivers living in low-income households (12%) is slightly lower than the share of total vehicle miles traveled by drivers living in low-income households (13%).
- While low-income households account for 31% of the population in the Bay Area (Source: 2010 American Community Survey [ACS]: Public Use Microdata Sample 1 Year Estimates) the drivers living in these households account for only 13% of the driving done in the region (Source: 2000 Bay Area Travel Survey).

Table 4. Population Use-Based Transit Comparison of 2013 TIP Investment and Passenger Trips by Income Distribution			
	Transit Investment	% of Investments	% of Passenger Transit Trips
Passengers Living in Low-Income Households (≤\$50k/yr)	\$5,735,863,558	57%	55%
Passengers Living in Not Low-Income Households (>\$50k/yr)	\$4,337,080,273	43%	45%
<b>Total</b>	<b>\$10,072,943,831</b>	<b>100%</b>	<b>100%</b>

Figure 7

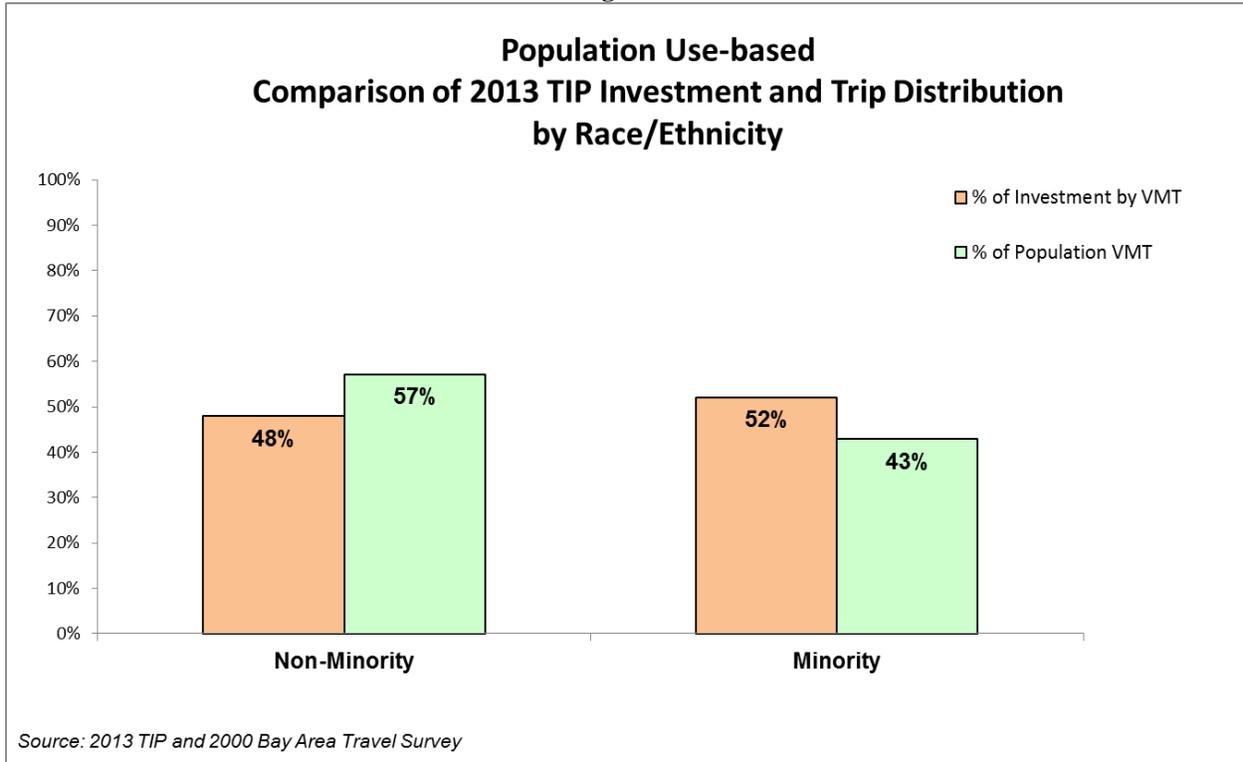


**Observations**

- The share of transit investment for passengers living in low-income households (57%) is greater than the share of transit trips taken by passengers living in low-income households (55%).
- While the share of total low-income households in the Bay Area is 31% of the population (Source: 2010 American Community Survey [ACS]: Public Use Microdata Sample 1 Year Estimates), passengers from these households account for 55% of transit trips (2006-2007 Transit Passenger Demographic Survey).

Table 5. Population Use-Based Comparison of 2013 TIP Investment and Trip Distribution by Race/Ethnicity			
Race/Ethnicity	Investment by Trips	% of Investment	% of Trips
Non-Minority	\$8,115,673,582	48%	57%
Minority	\$8,818,649,549	52%	43%
<b>Total</b>	<b>\$16,934,323,131</b>	<b>100%</b>	<b>100%</b>

Figure 8

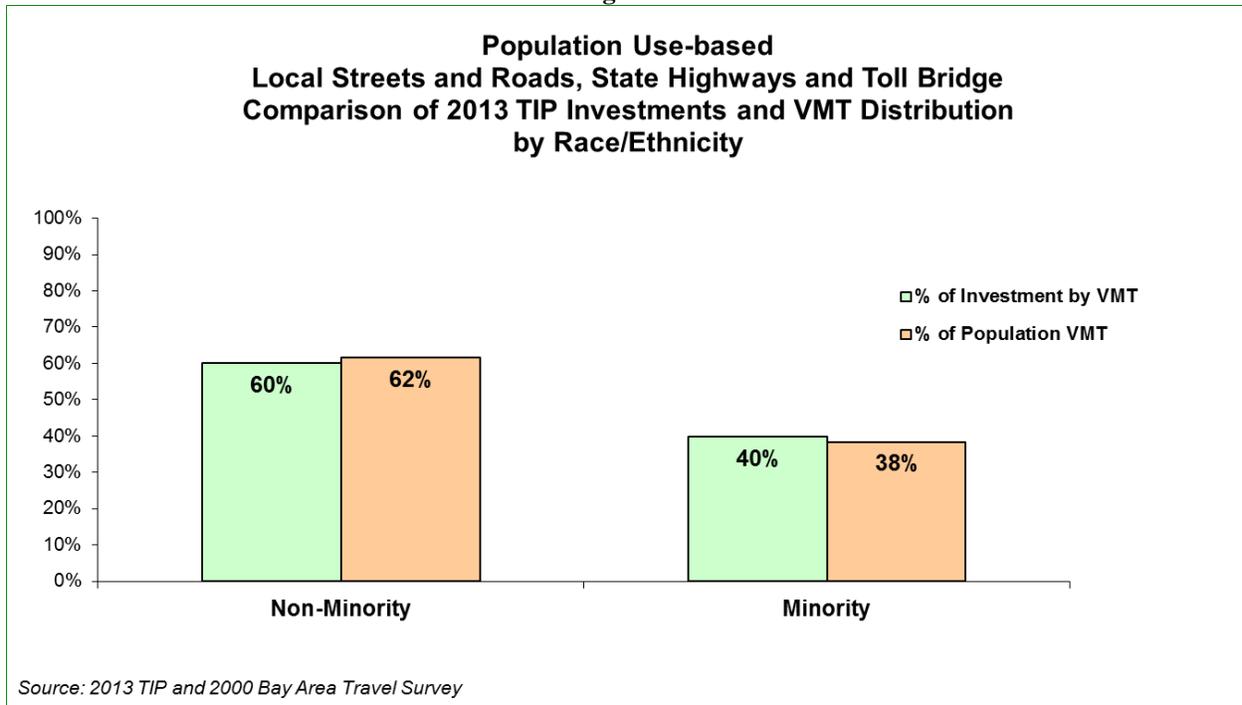


**Observations**

- Minority households make up 58% of the population, and take 43% of all trips in the Bay Area.
- The share of transportation investments in the Bay Area that support minority population trips (52%) is greater than the share of trips taken by these communities (43%).

Table 6. Population Use-Based Local Streets and Roads, State Highways and Toll Bridge Comparison of 2013 TIP Investments and VMT Distribution by Race/Ethnicity			
Race/Ethnicity	Investment by VMT	% of Investment	% of Population VMT
Non-Minority	\$4,127,466,951	60%	62%
Minority	\$2,733,912,349	40%	38%
Total	\$6,861,379,300	100%	100%

Figure 9

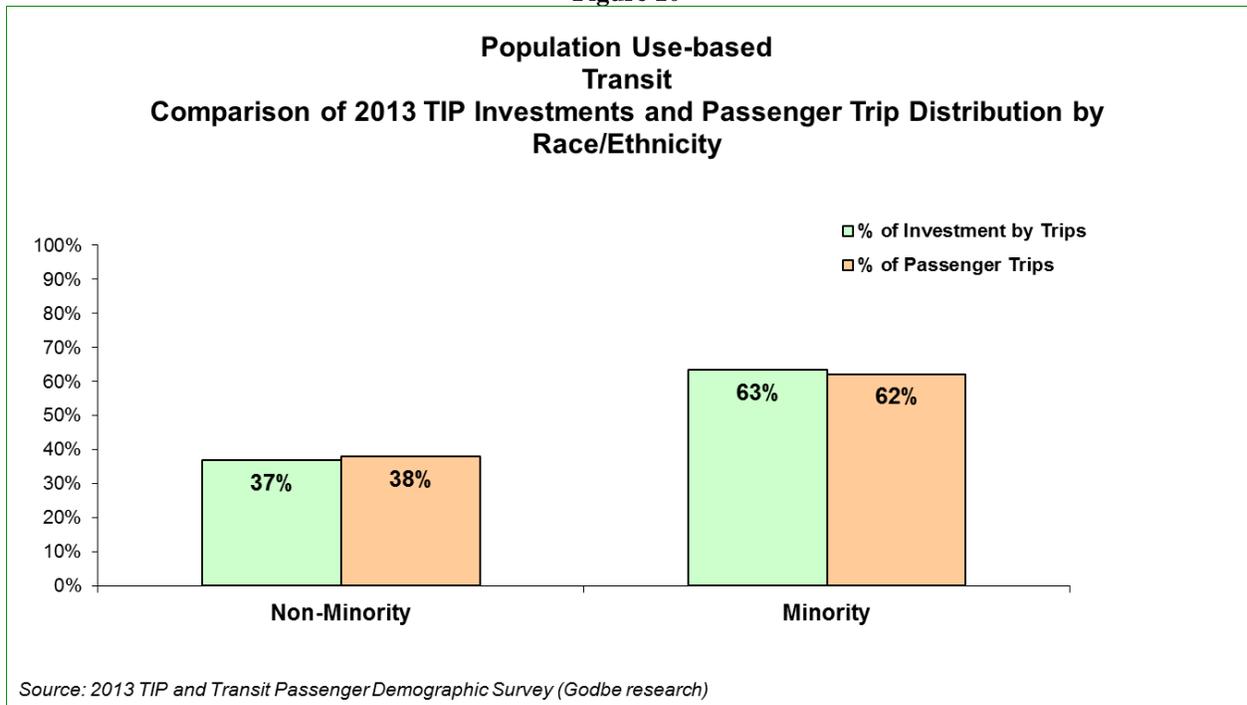


**Observations**

- Minority households make up 58% of the population in the Bay Area, and account for 38% of the vehicle miles traveled in the Bay Area.
- The share of local streets and roads, state highway, and toll bridge investments that support minority communities in the Bay Area (40%) is greater than the share of vehicle miles traveled by minority populations at 38%.

Table 7. Population Use-Based Transit Comparison of 2013 TIP Investments and Passenger Trip Distribution by Race/Ethnicity			
Race/Ethnicity	Investment by Trips	% of Investment	% of Passenger Trips
Non-Minority	\$3,699,902,360	37%	38%
Minority	\$6,373,041,471	63%	62%
Total	\$10,072,943,831	100%	100%

Figure 10



**Observations**

- While minority groups make up 58% of the Bay Area population, this population accounts for 62% of all transit trips.
- The share of investment in racial/ethnic minority transit trips (63%) is greater than the share of transit trips made by minority populations (62%).

### **Mapped Project Analysis**

To supplement the population/use-based analysis described above, MTC mapped the TIP projects that are mappable and overlaid them against communities of concern as well as census tracts with concentrations of minority populations that are above the regional average. This analysis is in response to stakeholder feedback that the overall spatial distribution of projects is also important to analyze to assess equitable access to TIP investments.

The project mapping analysis also has some 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 operations and maintenance of their entire system, which cannot be represented as a simple point or line on a map in relation to a specific community.

Second, despite previous attempts by MTC to quantify the spatial distribution of regional investments in response to stakeholder requests (as in the 2011 TIP Investment Analysis), stakeholders have not agreed on how and whether investments can be appropriately accounted for in terms of whether a specific project or investment truly benefits a specific community and to what degree.

Given these limitations, the Regional Equity Working Group, which reviewed and provided input on the Transportation Investment Analysis methodology for Plan Bay Area and the draft 2013 TIP, recommended a more straightforward qualitative, rather than quantitative, assessment of the spatial distribution of mappable projects included in the TIP.

This qualitative assessment mainly involves examining the distribution of projects for any apparent systematic exclusion of communities of concern or minority communities in the spatial distribution of benefits, or any apparent systematic imbalances between the distribution of projects between communities of concern and the remainder of the region, or between minority and non-minority communities.

The component of this analysis overlaying TIP investments against communities with above-average minority populations also constitutes part of the Title VI Analysis. All the maps are included as part of Appendix C.

**Title VI Analysis**

The Federal Transit Administration released new guidance in October 2012 specifying how MPOs such as MTC are to certify compliance with the provisions of Title VI of the Civil Rights Act of 1964 in the metropolitan planning process. This section describes the methodology that MTC is using to meet these requirements within the broader Transportation Investment Analysis framework for the TIP, including the methodology for conducting a disparate impact analysis of the Transportation Investment Analysis results. This methodology is the same as the one utilized in Plan Bay Area.

The key FTA requirements the Transportation Investment Analysis addresses in terms of Title VI are:

FTA Requirement	Related Plan Bay Area Analysis
<b>“Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data ...”</b>	(1) <b>Project mapping analysis</b> overlaying mappable TIP projects against 2010 Census tracts with above-average concentrations of minority residents.
<b>“[C]harts that analyze the impacts of the distribution of State and Federal funds in the aggregate for public transportation purposes...”</b>	(2) <b>Population/use-based analysis</b> of <u>only</u> public transit investments using State and Federal funding sources.
<b>“An analysis of impacts identified in paragraph [above] that identifies any disparate impacts on the basis of race, color, or national origin”<sup>1</sup></b>	(3) <b>Disparate impact analysis</b> comparing TIP investments per capita for minority populations identified under (2) above as a percentage of per-capita investments identified for non-minority populations.

The disparate impact analysis under (3) incorporates the quantitative results produced by the population/use-based analysis under (2) to make a determination of any disparate impact. The mapping analysis under (1) therefore shows all investments overlaid against minority tracts, regardless of fund source, and is a qualitative analysis only. MTC does have the ability to specify public transportation investments that use State and Federal funds in the population/use-based analysis under (2) above. Some of the State and Federal fund sources included in the Title VI analysis of are: FTA 5307, FTA 5309, FTA 5337 funds, STP/CMAQ, Proposition 1B funds, FTA 5311 funds.

It is important to note that a substantial share of total funding dedicated to transit operators for ongoing operations and maintenance of their entire system comes from state, regional and local sources and are generally not included as part of the TIP as they may not require a federal action.

<sup>1</sup> FTA Circular 4702.1B, page VI-2.

To conduct the disparate impact analysis under (3) above, the results of the population/use-based analysis of public transportation investments using State and Federal funds under (2) are first expressed in terms of investments per capita for both minority and non-minority transit riders (or total population) in the region as follows:

$$\text{Minority benefit per capita} = \frac{\text{Total transit investments allocated to minority riders}}{\text{Total regional minority transit ridership (or population)}}$$

$$\text{Non-minority benefit per capita} = \frac{\text{Total transit investments allocated to non-minority riders}}{\text{Total regional non-minority transit ridership (or population)}}$$

Next, the minority and non-minority per-capita benefit results are compared, expressing the minority benefit per capita as a percentage of the non-minority benefit per capita:

$$\text{Result (\%)} = \frac{\text{Minority benefit per capita}}{\text{Non-minority benefit per capita}}$$

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 represents a disparate impact, a general practice in disparate impact analysis is to use the percentage result to determine whether any differences between benefits for minority or non-minority populations may be considered statistically significant. If a disparate impact 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.”<sup>2</sup>

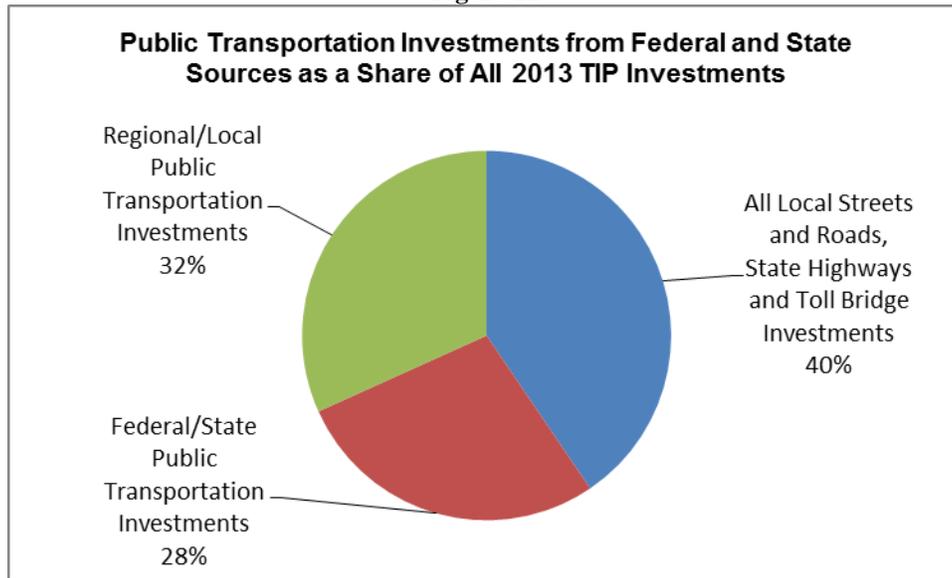
### **Results of the Title VI Analysis**

First, to address FTA’s MPO-specific requirements for Title VI disparate-impact analysis, Federal and State funding sources for public transportation are separated out from the total TIP investments, as illustrated below in Figure 11.

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<sup>2</sup> FTA Circular 4702.1B, page VI-2.

**Figure 11**



Next, using the same methodology as the population/use based investment analysis presented above, the \$4.7 billion in the TIP’s public transportation investments using Federal and State sources is distributed to minority and non-minority transit riders based on their respective shares of ridership among the various Bay Area transit agencies, and total investment shares are compared to the region’s overall transit ridership and populations as a whole, as shown in Table 8.

<b>Table 8. Comparison of Federal and State Transit 2013 TIP Investments by Minority Status</b>				
<b>Race/Ethnicity</b>	<b>Total Federal/ State Transit Funding (Millions \$)</b>	<b>% of Total Federal/ State Transit Funding</b>	<b>% of Regional Transit Ridership</b>	<b>% of Total Regional Population</b>
<b>Minority</b>	<b>\$2,880</b>	<b>61%</b>	<b>62%</b>	<b>58%</b>
<b>Non-minority</b>	<b>\$1,818</b>	<b>39%</b>	<b>38%</b>	<b>42%</b>
<b>Total</b>	<b>\$4,698</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Finally, investments are distributed on a per-capita and per-rider basis so that investment benefits accruing to the region’s minority riders and populations can be compared as a percentage to investment benefits accruing to the region’s non-minority populations and riders, as shown in Table 9 and Table 10, respectively.

<b>Table 9. Disparate Impact Analysis of 2013 TIP Investments: Population Analysis</b>				
<b>Race/Ethnicity</b>	<b>Total Federal/ State Transit Funding (Millions \$)</b>	<b>Regional Population (2010)</b>	<b>Per-Capita Benefit</b>	<b>Minority Per-Capita Benefit as % of Non-minority Per-Capita Benefit</b>
<b>Minority</b>	<b>\$2,880</b>	<b>4,117,836</b>	<b>\$699</b>	<b>117%</b>
<b>Non-minority</b>	<b>\$1,818</b>	<b>3,032,903</b>	<b>\$599</b>	
<b>Total</b>	<b>\$4,698</b>	<b>7,150,739</b>		

Source: 2013 TIP, 2006 Transit Passenger Demographic Survey, 2010 Census SF1.

<b>Table 10. Disparate Impact Analysis of 2013 TIP Investments: Ridership Analysis</b>				
<b>Race/Ethnicity</b>	<b>Total Federal/ State Transit Funding (Millions \$)</b>	<b>Avg. Daily Transit Ridership (2006)</b>	<b>Per-Rider Benefit</b>	<b>Minority Per-Capita Benefit as % of Non-minority Per-Capita Benefit</b>
<b>Minority</b>	<b>\$2,880</b>	<b>816,059</b>	<b>\$3,529</b>	<b>97%</b>
<b>Non-minority</b>	<b>\$1,818</b>	<b>498,303</b>	<b>\$3,649</b>	
<b>Total</b>	<b>\$4,698</b>	<b>1,314,362</b>		

Source: 2013 TIP, 2006 Transit Passenger Demographic Survey, MTC Statistical Summary for Bay Area Transit Operators.

On a per-capita population basis, Table 9 shows minority persons in the region are receiving 117% of the benefit of the TIP’s investments in public transportation from Federal and State sources compared to non-minority persons. On a ridership basis, Table 10, shows that minority riders are receiving 97% of the benefit of Federal- and State-funded transit investments in the TIP compared to non-minority riders. This 3% difference between minority and non-minority per-rider benefits does not demonstrate a systematic disbenefit to minority populations, and therefore this analysis finds no disparate impact in the distribution of Federal and State funding for public transportation purposes between minority and non-minority populations or riders in the draft 2013 TIP.

**Key Findings**

The purpose of this investment analysis is to compare the allocation of 2013 TIP investments between low-income and minority populations and all other populations. The key question addressed is: “Are low-income and minority populations sharing equitably in the TIP’s financial investments?”

This analysis attempts to take a relatively conservative approach to assigning investments (or “benefit”) to low-income households given some of the limitations of the analysis. The results suggest that according to several indices, the 2013 TIP invests greater public funding to the

benefit of low-income and minority communities than their proportionate share of the region’s population or trip-making as a whole.

- As shown in Table 11 the analysis concludes in the aggregate that there is a relatively higher proportional investment in the 2013 TIP in minority and low-income populations than the proportionate share of trips taken by minority and low-income populations.

**Table 11. Findings for Aggregate Analysis**

	Share of 2013 TIP Investment	Share of Total Trips/Population
<b>Population Use-Based</b>		
<i>Low-Income</i>	27%	18% (total trips)
<i>Minority</i>	52%	43% (total trips)

- In delving deeper into the investments by mode, one finds that the results are similar. For example, for transit, the results show that for low-income populations, the share of investment (57 percent) was slightly higher than the share of trips (55 percent). The share of investment in minority transit trips (63 percent) is both slightly greater than the minority share of the total population and also slightly more than the share of transit trips made by minority populations (62 percent). For streets and road investments, these findings also hold true for the minority trips but not for trips by low-income population when compared against the Vehicle Miles Traveled. However, in no case, do the results appear to demonstrate a systematic disbenefit to low-income or minority populations.
- The Title VI Analysis finds no disparate impact in the distribution of Federal and State funding for public transportation purposes between minority and non-minority populations or riders in the 2013 TIP.

## Appendix A: Regulatory and Policy Context for Environmental Justice in Transportation Planning

The contents of this report are intended to satisfy several federal requirements as well as regional policy objectives as summarized in this section. At the federal level are civil rights protections afforded to persons against discrimination in federal programs on the basis of race, color, or national origin; and federal environmental justice objectives. At the regional level are MTC's own adopted environmental justice principles in addition to numerous efforts by MTC and ABAG to incorporate social equity throughout the agencies' regional planning efforts, including Plan Bay Area.

### Title VI of the Civil Rights Act of 1964: The Right of Non-discrimination in Federally Funded Programs on the Basis of Race, Color, or National Origin

This section discusses the relationship between Title VI, its requirements, and the development of the Regional Transportation Plan and Transportation Improvement Program.

#### ***What Is Covered under Title VI?***

Title VI of the Civil Rights Act of 1964 states that “[n]o 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.”<sup>3</sup> Title VI further authorizes Federal agencies that make grants (for example, the U.S. Department of Transportation) to promulgate regulations to effectuate compliance with the law's provisions.

#### ***What Are MTC's Responsibilities?***

As a recipient of DOT funds, MTC is responsible for complying with DOT regulations related to Title VI<sup>4</sup> (see sidebar). In October 2012, the Federal

### U.S. Department of Transportation Title VI Regulations

Specific discriminatory actions prohibited under DOT Title VI regulations include:

- (1) A recipient under any program to which this part applies may not, directly or through contractual or other arrangements, on the grounds of race, color, or national origin.
  - (a) Deny a person any service, financial aid, or other benefit provided under the program;
  - (b) Provide any service, financial aid, or other benefit to a person which is different, or is provided in a different manner, from that provided to others under the program;
  - (c) Subject a person to segregation or separate treatment in any matter related to his receipt of any service, financial aid, or other benefit under the program;
  - (d) Restrict a person in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program;
  - (e) Treat a person differently from others in determining whether he satisfies any admission, enrollment, quota, eligibility, membership, or other requirement or condition which persons must meet in order to be provided any service, financial aid, or other benefit provided under the program;
  - (f) Deny a person an opportunity to participate in the program through the provision of services or otherwise or afford him an opportunity to do so which is different from that afforded others under the program; or
  - (g) Deny a person the opportunity to participate as a member of a planning, advisory, or similar body which is an integral part of the program.
- (2) A recipient, in determining the types of services, financial aid, or other benefits, or facilities which will be provided under any such program, or the class of person to whom, or the situations in which, such services, financial aid, other benefits, or facilities will be provided under any such program, or the class of persons to be afforded an opportunity to participate in any such program; may not, directly or through contractual or other arrangements, utilize criteria or methods of administration which have the effect of subjecting persons to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program with respect to individuals of a particular race, color, or national origin.

<sup>3</sup> 42 U.S.C §2000d.

<sup>4</sup> 49 CFR part 21.

Transit Administration issued a new Circular with guidance to its recipients for compliance with federal Title VI requirements.<sup>5</sup> This guidance lays out requirements for FTA’s recipients, including metropolitan planning organizations (MPOs) such as MTC, to ensure that their programs, policies, and activities comply with the Department of Transportation’s Title VI regulations. The guidance offers several specific requirements that MPOs must submit to the State and to FTA as part of their overall Title VI Programs, including:

- “All general requirements set out in [the General Requirements section of the] Circular.
- “A demographic profile of the metropolitan area that includes identification of the locations of minority populations in the aggregate;...
- “A description of the procedures by which the mobility needs of minority populations are identified and considered within the planning process;
- “Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data ... and charts that analyze the impacts of the distribution of State and Federal funds in the aggregate for public transportation purposes...;
- “An analysis of impacts identified in paragraph (4) that identifies any disparate impacts on the basis of race, color, or national origin, and, if so, determines 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.”<sup>6</sup>

Specific methods MTC uses in addressing these requirements for the Regional Transportation Plan are included in Plan Bay Area. In addition to analyzing the long-range Plan as described in this report, MTC’s broader Title VI program includes a variety of commitments to ensure nondiscrimination on the basis of race, color, or national origin in its programs and activities.<sup>7</sup>

### **Environmental Justice: Avoiding, Minimizing, or Mitigating Disproportionately High and Adverse Effects on Low-Income and Minority Populations**

Environmental justice is a concept related to but distinct from civil rights and Title VI. Whereas Title VI provides legal protection from discrimination in Federal programs on the basis of “race, color, or national origin,” environmental justice in the context of this Plan relates to an administrative framework for internal management of federal agencies to ensure their programs and activities incorporate environmental justice principles and do not disproportionately burden low-income and minority populations.

The environmental justice movement emerged following the broader environmental movement of the 1960s and 1970s, out of concern that predominantly minority and low-income communities were bearing disproportionate environmental burdens relative to their non-minority and non-low-income counterparts. In this sense, the “justice” aspect of environmental justice is

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<sup>5</sup> Federal Transit Administration Circular 4702.1B, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients*: [http://www.fta.dot.gov/documents/FTA\\_Title\\_VI\\_FINAL.pdf](http://www.fta.dot.gov/documents/FTA_Title_VI_FINAL.pdf).

<sup>6</sup> FTA Circular 4702.1B, page VI-1f.

<sup>7</sup> For more information, see MTC’s Title VI page at: [http://www.mtc.ca.gov/get\\_involved/rights/title\\_VI.htm](http://www.mtc.ca.gov/get_involved/rights/title_VI.htm).

rooted in the basic concept of fairness in terms of an equitable distribution of environmental benefits and burdens, and seeks to promote participation of community members in the decision-making processes that affect them.

### ***What Is Covered under Environmental Justice?***

In an effort to address environmental justice concerns mounting across the country during the 1980s and early 1990s, in 1994 President Clinton signed Executive Order 12898, *Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*. This Order directed each Federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...”<sup>8</sup> Furthermore, the Executive Order directed each agency to develop an agency-wide environmental justice strategy.

Accordingly, the U.S. Department of Transportation issued its original Environmental Justice Order in April 1997, establishing DOT’s overall strategy and procedures to be used by DOT to comply with EO 12898. In response to the Memorandum of Understanding on Environmental Justice signed by heads of Federal agencies on August 4, 2011, in an effort to “renew the process under Executive Order 12898 for agencies to provide environmental justice strategies and implementation progress reports,”<sup>9</sup> DOT issued its revised environmental justice strategy, DOT Order 5610.2(a), in March 2012. This Order places responsibility on the head of each Operating Administration within DOT to determine whether programs, policies, or activities for which they are responsible will have an adverse human health or environmental effect on minority and low-income populations and whether that adverse effect will be disproportionately high.

As operating administrations within DOT, the Federal Highway Administration and Federal Transit Administration both define three fundamental environmental justice principles consistent with the Executive and DOT Orders as follows:

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

The DOT Order further defines “disproportionately high and adverse effect on minority and low-income populations” as an adverse effect that:

1. is predominately borne by a minority population and/or a low-income population, or

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<sup>8</sup> Executive Order 12898 (1994, Clinton).

<sup>9</sup> Memorandum of Understanding on Environmental Justice and Executive Order 12898, available at: <http://www.epa.gov/compliance/ej/resources/publications/interagency/ej-mou-2011-08.pdf>.

2. will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

In June 2012, the Federal Highway Administration released a new and updated Order **6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.**<sup>10</sup> This Order clarifies FHWA's environmental justice policies, guidance, and responsibilities consistent with the updated DOT Order.

In August 2012, the Federal Transit Administration released final guidance in the form of a Circular on incorporating environmental justice principles into plans, projects, and activities that receive funding from FTA.<sup>11</sup> This final guidance provides recommendations to recipients of FTA funds, including metropolitan planning organizations, on how to fully engage environmental justice populations in the public transportation decision-making process; how to determine whether environmental justice populations would be subjected to disproportionately high and adverse human health or environmental effects as a result of a transportation plan, project, or activity; and how to avoid, minimize, or mitigate these effects.

### ***MTC Environmental Justice Principles***

In addition to MTC's long-standing commitment to supporting DOT, FHWA, and FTA in fulfilling their environmental justice mission under the Executive Order, MTC's commitment to environmental justice is embodied in the Environmental Justice principles adopted by the Commission in 2007. Developed in a collaborative process involving regional environmental-justice stakeholders and transportation agencies, the adopted principles affirm MTC's ongoing commitments to:

1. Create an open and transparent public participation process that empowers low-income communities and communities of color to participate in decision making that affects them.
2. 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.

### ***What Are MTC's Responsibilities?***

Recipients' responsibilities regarding environmental justice are part of FTA's annual Master Agreement, which requires recipients, including MTC, to promote environmental justice by following and facilitating FTA's compliance with Executive Order 12898, and following DOT's Order on environmental justice. MTC fulfills these responsibilities through a range of programs and activities that support environmental justice principles, including:

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<sup>10</sup> FHWA Order 6640.23A, available at: <http://www.fhwa.dot.gov/legregs/directives/orders/664023a.htm>.

<sup>11</sup> FTA Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, available at: [http://www.fta.dot.gov/legislation\\_law/12349\\_14740.html](http://www.fta.dot.gov/legislation_law/12349_14740.html).

- Identifying mobility needs of low-income and minority communities through MTC's Community Based Transportation Planning Program.
- Developing and implementing MTC's Public Participation Plan, which lays out specific strategies for engaging low-income and minority populations and other community stakeholders throughout the metropolitan planning process in general, and providing for input on the development of the Equity Analysis methodology and the definitions of environmental justice populations and performance measures in particular.
- Conducting an environmental justice analysis of the Regional Transportation Plan (as summarized in this report), including an analysis of the distribution of regional transportation investments for low-income and minority populations, and analysis of benefits and burdens using technical performance measures to determine whether the proposed investment strategy may present any disproportionately high and adverse human health and environmental effects on environmental justice populations.
- Continually refining and updating the data and analytical methods required to carry out environmental justice analysis at the regional, programmatic level, incorporating both stakeholder feedback and ongoing improvements in analytical technologies and data collection.

## Appendix B: Definitions and Data Sources

### Definitions

#### Minority

Minority populations include persons who identify as any of the following groups defined by the Census Bureau in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB):

- American Indian or Pacific Islander alone
- Asian alone
- Black or African-American alone
- Hispanic or Latino of any race
- Native Hawaiian or Pacific Islander alone

For the purposes of this report, all Hispanic and Latino residents of all races are included in the Hispanic and Latino definition, and only non-Hispanic or Latino persons are included in other minority groups. In addition, this report includes with the minority population those persons whose responses identify Some Other Race or Two or More Races. Accordingly, the “non-minority” population consists of all other persons not included in any of the above-named groups, namely those identifying as non-Hispanic white alone. Because the Bay Area is a “majority minority” region, the designation of non-Hispanic white persons as “non-minority” is not intended to be misleading, as this population still represents a relative majority (a plurality) in the region but not an absolute majority. Nevertheless, the term “non-minority” is used here to provide consistency and clarity with regard to federal guidance.

#### Low-Income Households

Many of the measures analyzed using the regional travel model are able to produce results for all low-income households, or persons living in low-income households, throughout the region, regardless of their residential location. Low-income households are defined in MTC’s travel model as having incomes of less than \$30,000 a year 2000 dollars (approximately \$38,000 in 2010 dollars), which represent the lowest 28% of households in 2010. Non-low-income households, as a basis for comparison, are defined as having incomes of \$30,000 or more per year in 2000 dollars, and represent the upper 72% of households.

Due to limitations of other regional data sources, the Plan Bay Area Transportation Investment Analysis defines low-income households as those earning \$50,000 per year or less (in 2006 dollars).

#### Low-Income Persons

A low income person is defined by MTC as persons identified by the Census Bureau as below 200% of the federal poverty level. MTC established the 200% of poverty threshold in 2001 to account for the Bay Area’s high cost of living relative to nationally defined poverty thresholds; the Census Bureau does not adjust the poverty level for different parts of the continental U.S. where different costs of living to factor into the varying affordability of basic necessities. The Census Bureau establishes poverty status for individuals based on a combination of an individual’s household composition, size, and income. As of 2010, the 200% threshold

represented a household income of approximately \$23,000 a year for a single person living alone, and approximately \$47,000 a year for a family of four.

**Communities of Concern**

In discussing how to define target populations for equity analysis, Equity Working Group members emphasized the importance of spatial location within the region with respect to the impacts of future development patterns and transportation investments. Thus, staff worked with Working Group members to develop a spatial definition of communities of concern, against which performance measure results could be compared with non-communities of concern (typically referred to in the analysis as the “remainder of region”). Except where noted, data used to define communities of concern is from the Census Bureau’s 2005–09 American Community Survey, the most recent data set available for this analysis that is readily compatible with MTC’s existing travel-analysis-zone definitions used for spatial analysis, which are based on 2000 Census geography.

In response to feedback that the analysis would be more informative with a more focused definition of communities of concern than was used in past RTP Equity Analyses, and a recommendation from MTC’s Policy Advisory Council to consider seniors and persons with disabilities in addition to low-income and minority populations, staff proposed a revised community-of-concern definition which identifies communities with multiple overlapping potential disadvantage factors relevant to the Plan Bay Area planning process.

Thresholds were proposed to incorporate the most significant concentrations of eight different target populations while minimizing inclusion of non-target population members. The list of factors, reviewed by the Equity Working Group and approved by MTC’s Planning Committee in October 2011, are summarized in the table below.

Communities of concern were then defined as recommended by Equity Working Group members as those tracts having concentrations of 4 or more factors listed above, or having concentrations of both low-income and minority populations. Based on this definition, a total of 305 out of 1,405 Census tracts in the region were identified as communities of concern.

<b>Disadvantage Factor</b>	<b>% of Regional Population<sup>1</sup></b>	<b>Proposed Concentration Threshold</b>
1. Minority	54%	70%
2. Low Income (<200% of Poverty)	23%	30%
3. Limited English Proficiency	9%	20%
4. Zero-Vehicle Households	9%	10%
5. Seniors 75 and Over	6%	10%
6. Population with a Disability	18%	25%
7. Female-Headed Families with Children	10%	15%
8. Cost-burdened Renters <sup>2</sup>	10%	15%

<sup>1</sup>Source: 2005-09 American Community Survey tract-level data; data for population with a disability is from 2000 Census, the most recent available.

<sup>2</sup>Defined as the share of housing units occupied by renters paying more than 50% of income for rent.

## Data Sources

This section describes the various data sources used to perform the 2013 TIP Investment Analysis.

### Decennial Census and American Community Survey

The Census Bureau provides two key data sets used in this report. One, the decennial Census, was most recently completed in 2010 and is a 100% count of all persons in the United States as mandated in the U.S. Constitution. The decennial Census includes complete data on all persons' race and ethnicity as well as age and certain household and family characteristics.

The second Census Bureau data product used is the American Community Survey (ACS). The ACS is an ongoing annual sample-based survey of the U.S. population and provides basic demographic information similar to the decennial Census but also provides far greater detail on various socioeconomic characteristics, including such data relevant to this analysis as household income, poverty status, level of proficiency with English, household vehicle ownership, disability status, housing costs, and information about workers' typical commuting habits.

Because the ACS is based on sample data collected by the Census Bureau (as opposed to 100% counts of the population like the decennial Census), situations calling for very detailed socioeconomic data require using larger samples. Sample sizes can be increased by looking at either larger geographic areas or else multiple years' worth of data for smaller areas. Hence, looking at just one year's worth of data to get a single "snapshot" in time may require looking only at larger geographies such as counties, while looking at very detailed geographies at a neighborhood level may require examining up to five continuous years' worth of sample data collected from the same relatively small area.

In this report, data from the 2010 Census is used primarily in the regional demographic profile and to characterize the regional minority population for the Transportation Investment Analysis described. Data from the American Community Survey is used in the definition of communities of concern, and to characterize the regional low-income population for the Transportation Investment Analysis.

### Bay Area Travel Survey (BATS)

The Bay Area Travel Survey (BATS) is MTC's periodic regional household travel survey, the most recent of which was completed in 2000. BATS2000 is an activity-based travel survey that collected information on all in-home and out-of-home activities, including all trips, over a two-day period for more than 15,000 Bay Area households. The survey provides detailed information on many trip characteristics such as trip purpose, mode, origins and destinations, as well as household demographic and socioeconomic characteristics, and informs development of the regional travel model. In this report, BATS is used primarily to provide data on usage of the regional transportation system, and in particular the share of trip-making and vehicle-miles of travel (VMT) on the region's road and highway system, for different demographic and socioeconomic groups in the Transportation Investment Analysis.

The region's household travel survey is currently in the process of being updated as part of a broader statewide travel survey project. Data collection and analysis efforts are currently under way, and new data from the updated regional travel survey is expected to be available sometime in 2014.

#### Bay Area Transit Passenger Demographic Survey

In 2006 MTC conducted a comprehensive survey of all Bay Area transit operators to collect consistent demographic and socioeconomic data for all the region's transit riders. Data collected included race/ethnicity, age, fare payment information, household income, and vehicle availability. Results for this survey are used in the Transportation Investment Analysis to determine transit-investment benefits to low-income and minority populations based on these groups' share of transit use on individual systems and across the region as a whole. The Transit Passenger Demographic Survey also informs the Title VI Analysis by establishing a consistent demographic profile of the region's overall transit ridership across all systems by minority and non-minority status.

To update this data on an ongoing basis, MTC is now working with transit operators on ridership surveys that will collect a variety of consistent demographic and travel-activity data across all transit systems surveyed. In order to make best use of available funding and resources to support these extensive survey efforts, surveys are being conducted on different systems on a serial basis over time. Surveys are anticipated to be complete for all systems and updated regional data available in 2015.

## Appendix C: Maps

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# Alameda County TIP Projects

- 1 San Francisco-Oakland Bay Bridge
- 2 BART - Warm Springs to Berryessa Extension
- 3 Toll Bridge Rehabilitation Program
- 4 BART Oakland Airport Connector
- 5 SR 24 - Caldecott Tunnel 4th Bore
- 6 Dumbarton Rail Service (PE and ROW only)
- 7 BART Transbay Tube Seismic Retrofit
- 8 7th Street Grade Separation and Roadway Improvement
- 9 Enhanced Bus - Telegraph/Intl/East 14th
- 10 I-580 (TriValley) Corridor - EB HOV/HOT Lanes
- 11 SFOBB Gateway Park
- 12 I-580 (TriValley) Corridor - WB HOV & Connectors
- 13 I-880/SR 262 I/C and HOV lanes
- 14 SR 84 Expressway Widening
- 15 Hayward Shop and Yard Expansion
- 16 I-880 SB HOV Lanes - Marina Blvd to Hegenberger
- 17 Outer Harbor Intermodal Terminals (OHIT)
- 18 East-West Connector in Fremont & Union City
- 19 Route 238 Corridor Improvement
- 20 I-880 North Safety Improvements
- 21 I-80 Integrated Corridor Mobility Project
- 22 Eastbound Truck Climbing Lane
- 23 Ferry Service - Berkeley/Albany
- 24 Union City Intermodal Station Infrastructure
- 25 Oakland Waterfront Bay Trail
- 26 Rt 92/Clawiter/Whitesell Interchange Improvements
- 27 I-680 Sunol Grade NB HOV Lane
- 28 Alameda: Vasco Road Safety Improvements
- 29 Toll Bridge Maintenance
- 30 I-880/Industrial Parkway West Interchange
- 31 Dumbarton Bridge Seismic Retrofit
- 32 Contra Costa County Vasco Road Safety Improvements
- 33 I-880/Marina Blvd Interchange and Overcrossing Repair
- 34 I-880 NB and SB Auxiliary lanes
- 35 Central Avenue Railroad Overpass at UPRR
- 36 Dougherty Road widening
- 37 Tinker Avenue Reconfiguration
- 38 42nd Ave. & High St. I-880 Access Improvements
- 39 I-580 HOT Corridor Project
- 40 ACE Track Improvements
- 41 Shore Power Initiative
- 42 AC Transit: Line 51 Corridor
- 43 I-880 Auxiliary lanes at Industrial Parkway

- # Road Projects
- # Transit Projects

**NOTE:**

- 58% of the 2013 TIP projects are mapped
- Some projects in the 2013 TIP have no funds in the six-year TIP period.
- All the maps are available at:  
[www.mtc.ca.gov/funding/tip/2013/maps](http://www.mtc.ca.gov/funding/tip/2013/maps)

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- 47 I-80 Gilman Interchange Reconfiguration
- 48 San Leandro Downtown-BART Pedestrian Interface
- 49 E. 14th St/Mission Blvd Streetscape
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- 55 Regional Real-Time Transit Information at BART
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- 57 MacArthur BART Plaza Remodel
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- 60 Estuary Bridges Seismic Retrofit and Repairs
- 61 San Leandro BART - Transit Access Improvements
- 62 I-580 / Foothill Road Interchange Improvements
- 63 Livermore Village Plaza & Infrastructure
- 64 SR 185- E. 14th St/ Hesperian Blvd/150th Ave
- 65 Oakland Foothill Blvd Streetscape
- 66 Alamo Canal Regional Trail, I-580 Undercrossing
- 67 Berkeley Bay Trail Extension - Segment One
- 68 Albany - Buchanan Bicycle and Pedestrian Path
- 69 Crow Canyon Safety Improvements
- 70 City of Alameda - Park St Streetscape
- 71 South Hayward BART Area/Dixon Street Streetscape
- 72 Downtown Berkeley BART Plaza/Transit Area
- 73 Fremont CBD/Midtown Streetscape
- 74 Fruitvale Ave Roadway Bridge Retrofit
- 75 Oakland Bay Trail to Lake Merritt Bike/Ped Bridge
- 76 West Dublin BART Golden Gate Drive Streetscape

## Alameda County TIP Projects (Continued)

- 77** Union City Blvd Corridor Bicycle Imp, Phase 1
- 78** I-580 Oakland 14th to Ardley Noise Barriers
- 79** Alameda Co - Central Unincorporated Pavement Rehab
- 80** Oakland Coliseum TOD
- 81** Pleasanton - Foothill/I-580 IC Bike/Ped Facilities
- 82** Treasure Island Ferry Service
- 83** I-580 WB Auxiliary Lane, First to Isabel
- 84** Shoreline Dr, Westline Dr and Broadway Bike Lanes
- 85** Berkeley Bike/Ped Overcrossing Site Access Imps
- 86** Lake Merritt Improvement Project
- 87** Newark - Cedar Blvd and Jarvis Ave Pavement Rehab
- 88** Dublin Citywide Street Resurfacing
- 89** Oakland 19th Street Uptown Bike Station
- 90** Walnut Argonaut Lane Reduction & Roundabout
- 91** BART Station Electronic Bike Lockers, Ph. 2
- 92** I-580 Landscaping in the City of San Leandro
- 93** WETA: Facilities Rehabilitation

# Road Projects

# Transit Projects

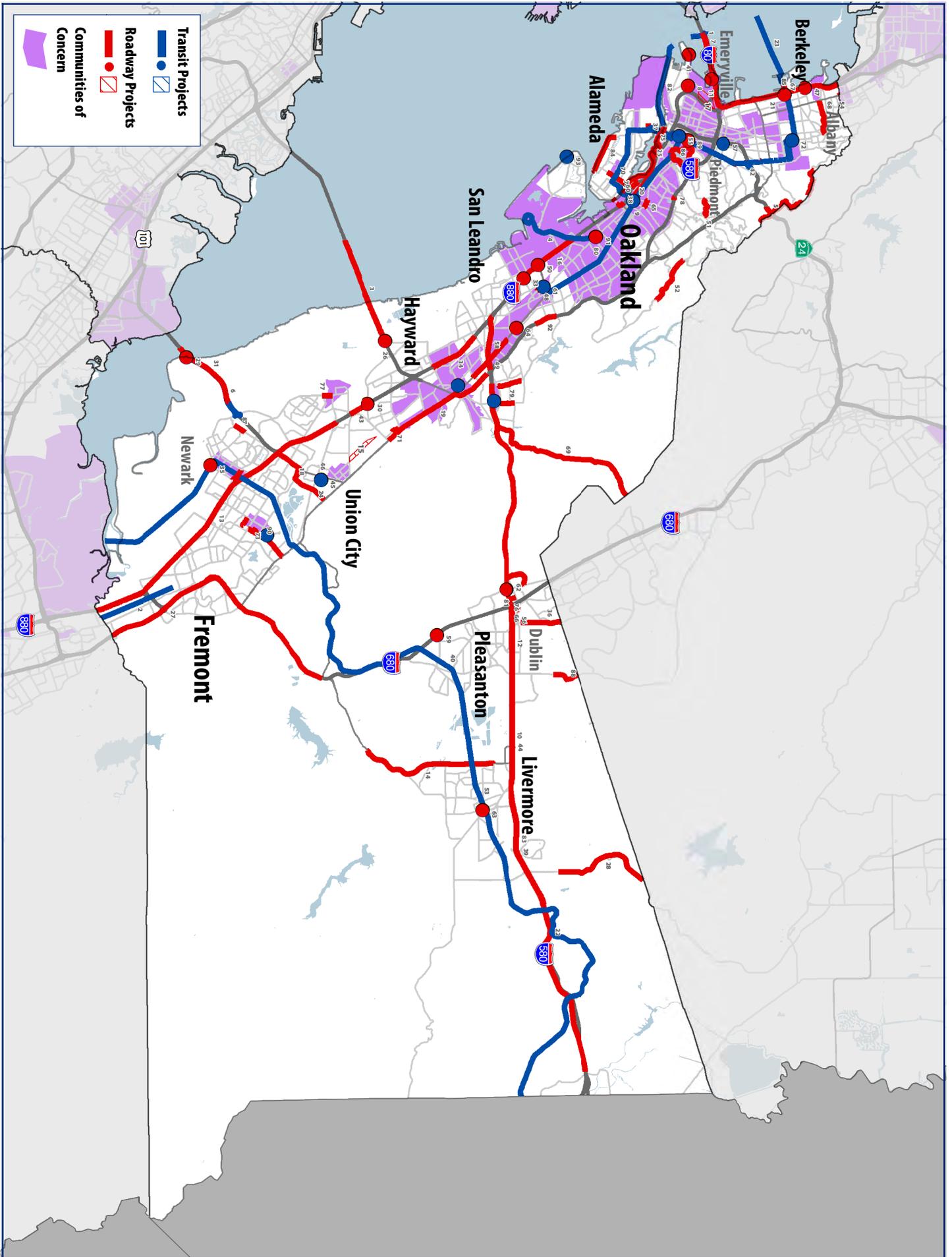
**NOTE:**

- 58% of the 2013 TIP projects are mapped

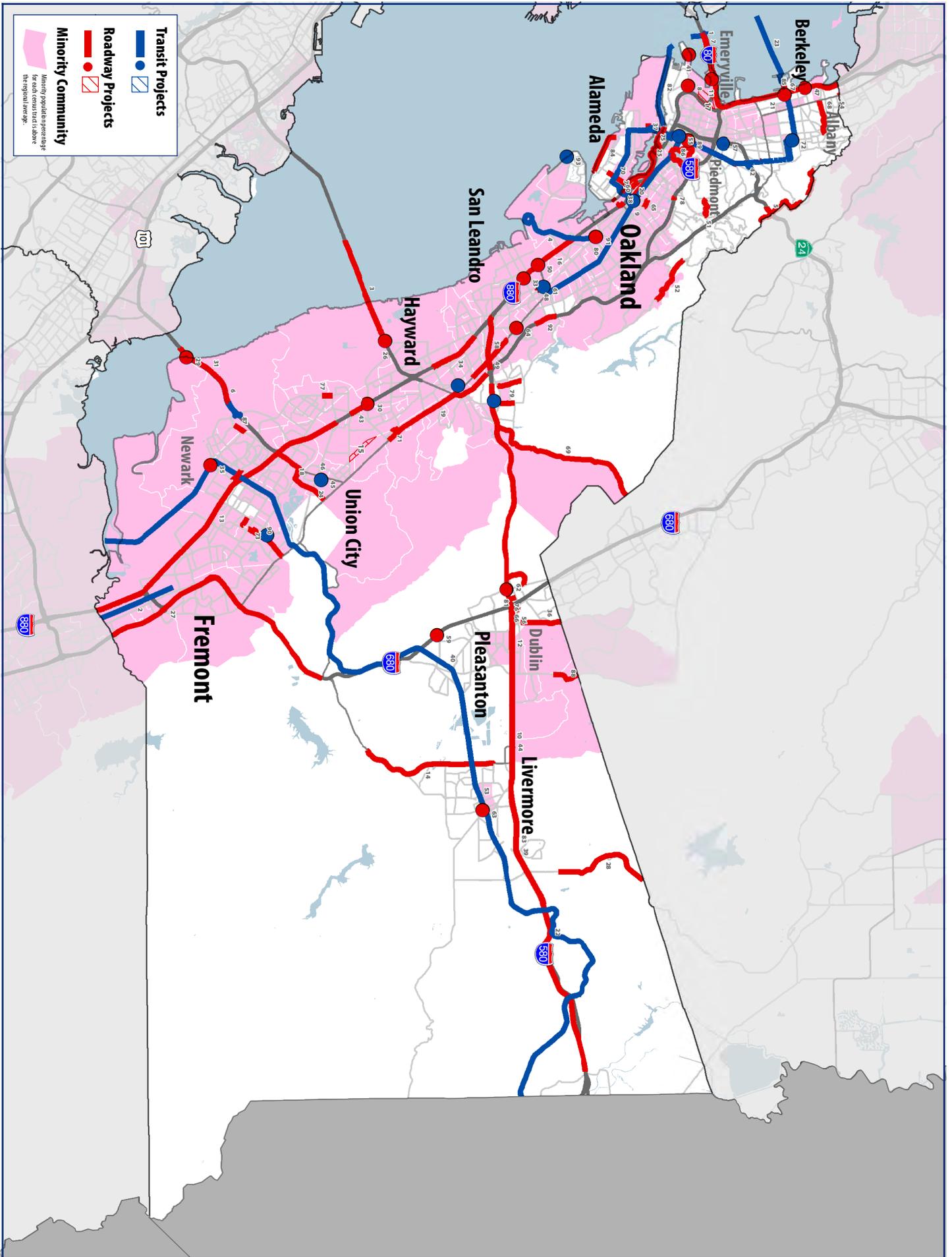
- Some projects in the 2013 TIP have no funds in the six-year TIP period.

- All the maps are available at:  
[www.mtc.ca.gov/funding/tip/2013/maps](http://www.mtc.ca.gov/funding/tip/2013/maps)

Alameda County: Overlay of 2013 TIP Mapped Projects over Communities of Concern



**Alameda County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population**



# Contra Costa County TIP Projects

- 1 Toll Bridge Rehabilitation Program
- 2 E-BART - East Contra Costa Rail Extension
- 3 I-680 / SR 4 I/C Reconstruction - Phases 1-5
- 4 SR 24 - Caldecott Tunnel 4th Bore
- 5 SR 4 East Widening from Somersville to SR 160
- 6 Reconstruct I-80/San Pablo Dam Rd Interchange
- 7 I-680 Direct Access Ramps
- 8 I-680 SB HOV Lane Gap Closure
- 9 I-80 Integrated Corridor Mobility Project
- 10 SR4 /SR160 Interchange and Connectors
- 11 Toll Bridge Maintenance
- 12 I-680 NB HOV Lane Extension
- 13 Construct Phase 2 of Hercules Intermodal Station
- 14 SR4: Balfour Road Interchange
- 15 Richmond Ferry Service
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- 25 I-80/Central Avenue Interchange Modification
- 26 SR4/Willow Avenue Ramps
- 27 Martinez Intermodal Station Parking Expansion
- 28 North Richmond Truck Route Extension
- 29 Dougherty Road widening
- 30 Richmond Prkwy Transit Center Parking
- 31 Lone Tree Way Undercrossing
- 32 Hercules Intercity Rail Station - Phase 1
- 33 eBART Railroad Avenue Station
- 34 SR4 Bypass: Laurel Rd to Sand Creek
- 35 Pacheco Blvd Widening and Realignment
- 36 Lone Tree Way Widening
- 37 Antioch - Wilbur Ave Bridge Widening
- 38 California Avenue Widening
- 39 Brentwood Blvd North Widening - Phases II & III
- 40 Pleasant Hill - Buskirk Avenue Widening
- 41 Somersville Road Widening
- 42 Kirker Pass Road NB Truck Climbing Lanes
- 43 Byron Hwy Extension

- # Road Projects
- # Transit Projects

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- 44 Martinez - Court Street Overcrossing, Phase 1
- 45 Walnut Creek BART TOD Access Improvements
- 46 Bailey Road-State Route 4 Interchange
- 47 Refugio Bridge - Bike, Ped & Vehicle Connectivity
- 48 I-680/Marina Vista I/C Improvements
- 49 Commerce Avenue Extension
- 50 Del Norte Area TOD Bike/Ped/Transit Access Imps
- 51 Richmond Transit Village: Nevin Imps 19th-27th
- 52 John Muir Parkway Extension: Ph. II
- 53 SR4/Brentwood Boulevard Widening - North (Phase I)
- 54 Crow Canyon/Camino Tassajara Intersection Imps.
- 55 Mokelumne Trail Bike/Ped Overcrossing
- 56 Hercules New Town Center Complete Street
- 57 John Muir Parkway Extension (Phase I)
- 58 Pittsburg-Antioch Highway Widening
- 59 Various Streets Resurfacing and Bikeway Facilities
- 60 Central Blvd Widening (Phase II)
- 61 SR4 (Brentwood Boulevard) Widening (South)
- 62 Byron Highway - Vasco Road Connection
- 63 San Pablo Avenue Streetscape
- 64 Diablo Road Imps. - Green Valley to Avenida Neuva
- 65 Martinez - Marina Vista Streetscape
- 66 Carquinez Scenic Drive, SF Bay Trail Segment
- 67 Concord Blvd Pavement Rehabilitation
- 68 Concord Clayton Road/Treat Blvd Intersection Imps.
- 69 Crow Canyon Safety Improvements
- 70 Richmond Transit Village: Nevin Imps BART-19th
- 71 Antioch Various Streets Pavement Rehab
- 72 Montalvin Manor Ped & Transit Access Imps.
- 73 Lafayette Downtown Bike/Ped Imp & Streetscape
- 74 Bailey Road Transit Access Improvements
- 75 Walnut Creek Various Arterials & Collectors Rehab
- 76 Pacheco Transit Hub

## Contra Costa County TIP Projects (Continued)

- 77 El Portal Drive Rehabilitation / Gateway Phases II
- 78 Canal Road Bicycle and Pedestrian Facilities
- 79 Hercules Intermodal Station Improvements
- 80 Brentwood 2012 Pavement Management Program
- 81 Lafayette - Pleasant Hill Road South Bike/Ped Imps.
- 82 Monument Corridor Pedestrian and Bikeway Network I
- 83 Pittsburg Railroad Avenue Pavement Rehab
- 84 Dornan Drive/Garrard Blvd Tunnel Rehabilitation
- 85 El Cerito Central Ave & Liberty St Streetscape Imps.
- 86 Pittsburg N. Parkside Dr. Bike Lanes and Sidewalks
- 87 Richmond Transit Village Transit & Ped Imps.
- 88 Moeser & Ashbury Ped/Bike Corridor Improvements
- 89 SR25 - Nystrom, Coronado, Highland, Wilson & Wash.
- 90 Concord Monument Corridor Shared Use Trail
- 91 Tri Delta Transit Park and Ride Lots
- 92 Martinez Ferry Service
- 93 Antioch Ferry Service
- 94 Widen Pinole Valley Road ramps at I-80
- 95 Richmond Barrett Avenue Bicycle Lanes
- 96 Lisa Lane Sidewalk Project
- 97 Dublin Citywide Street Resurfacing
- 98 Moraga Way Streetscape
- 99 CCCTA: Maintenance Facility Rehabilitation
- 100 Brentwood Area Schools Bike/Ped Access Imps.
- 101 Moraga Way Pedestrian Pathway

# Road Projects

# Transit Projects

**NOTE:**

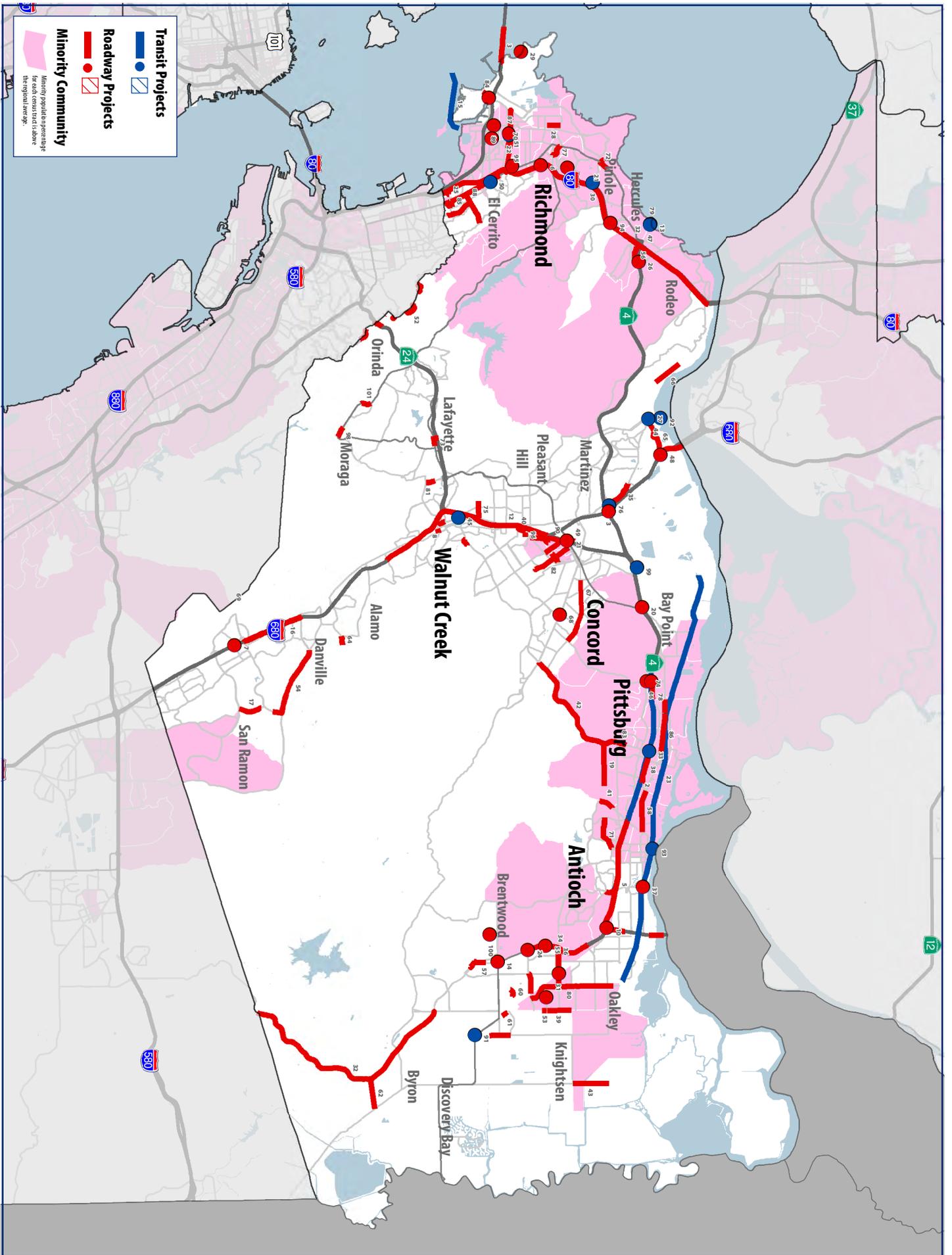
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**Contra Costa County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population**



# Marin County TIP Projects

- 1 Toll Bridge Rehabilitation Program
- 2 Sonoma Marin Area Rail Corridor
- 3 US 101 Marin/Sonoma Narrows (Sonoma)
- 4 US 101 HOV Lanes - Marin-Sonoma Narrows (Marin)
- 5 US 101 / Greenbrae Interchange Corridor Impts.
- 6 Golden Gate Nat'l Rec. Area Road Rehab
- 7 Ferry channel & berth dredging
- 8 Central Marin Ferry Access Improvements
- 9 Novato Boulevard Widening, Diablo to Grant
- 10 Mill Valley - Miller Avenue Rehabilitation
- 11 San Anselmo - Center Blvd Bridge Replace (27C0079)
- 12 Marin Parklands Visitor Access, Phase 2
- 13 Larkspur Ferry Terminal Parking Garage
- 14 Highway 101 Landscaping for Gap Closure Project
- 15 Stinson Beach Access Road
- 16 Marin county: Bus Stop Improvements
- 17 Larkspur Ferry Terminal Parking Improvements
- 18 San Rafael: Sidewalk along East Francisco Blvd
- 19 San Rafael Citywide Street Resurfacing
- 20 Mountain View Rd Bridge Replacement - 27C0154
- 21 Novato Boulevard Resurfacing
- 22 Muir Woods Road MP 0.49 Slide Repair
- 23 Tennessee Valley Bridge
- 24 Marin Bike/Ped Facility North of Atherton Ave.
- 25 US 101 - Golden Gate Botanical Area Revegetation
- 26 Sir Francis Drake Blvd. MP 20.70 Slide Repair
- 27 Sir Francis Drake Boulevard Westbound Bike Lane
- 28 Venetia Valley School SR2S Pedestrian Access Imps.
- 29 Mill Valley - Sycamore Ave Pedistrian Facilities
- 30 Miller Creek Road Bike Lanes and Ped Improvements
- 31 San Rafael Transit Center Improvements
- 32 Mill Valley - Edgwood Avenue Resurfacing
- 33 Sausalito - Bridgeway/US 101 Off Ramp Bicycle Imps.

# Road Projects

# Transit Projects

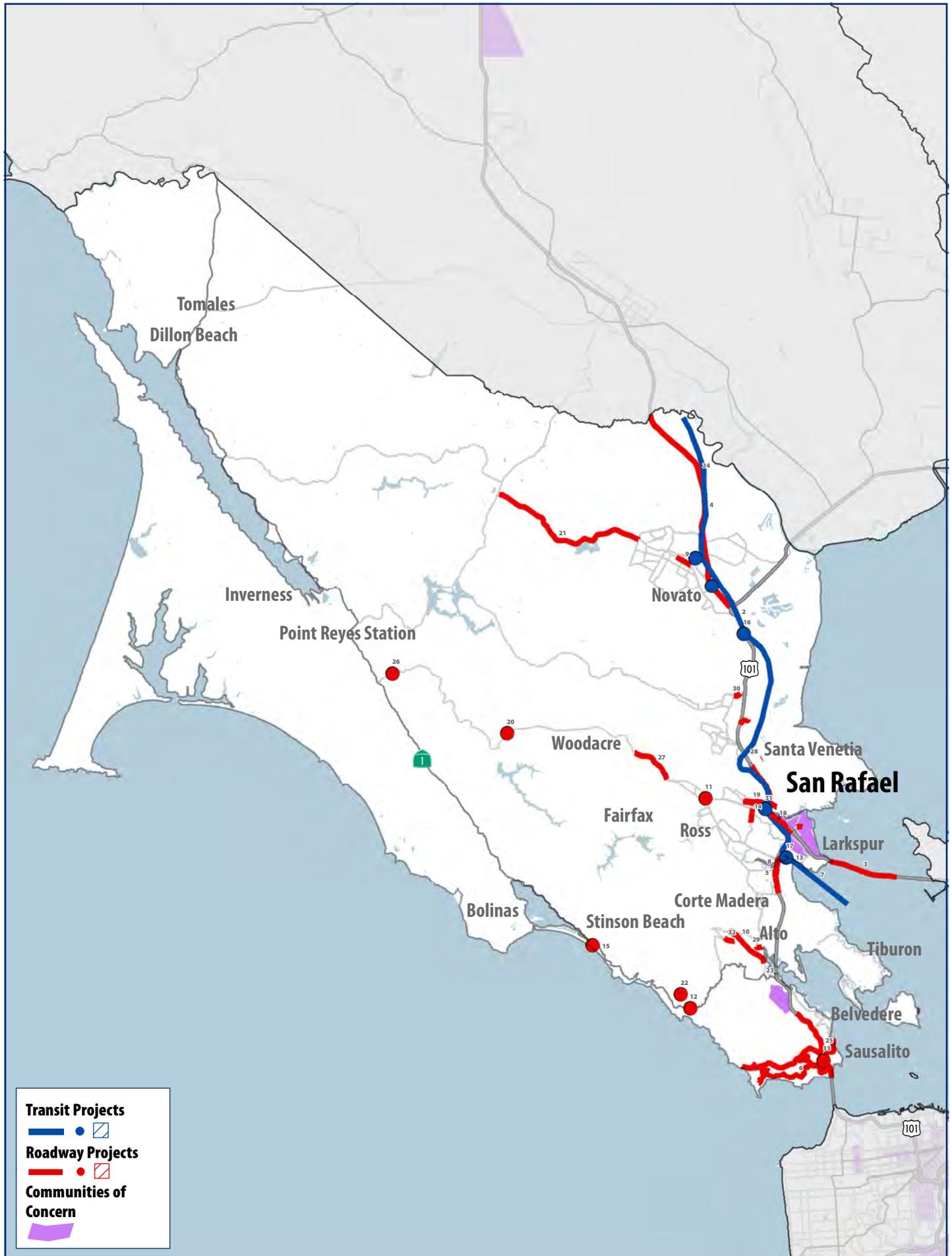
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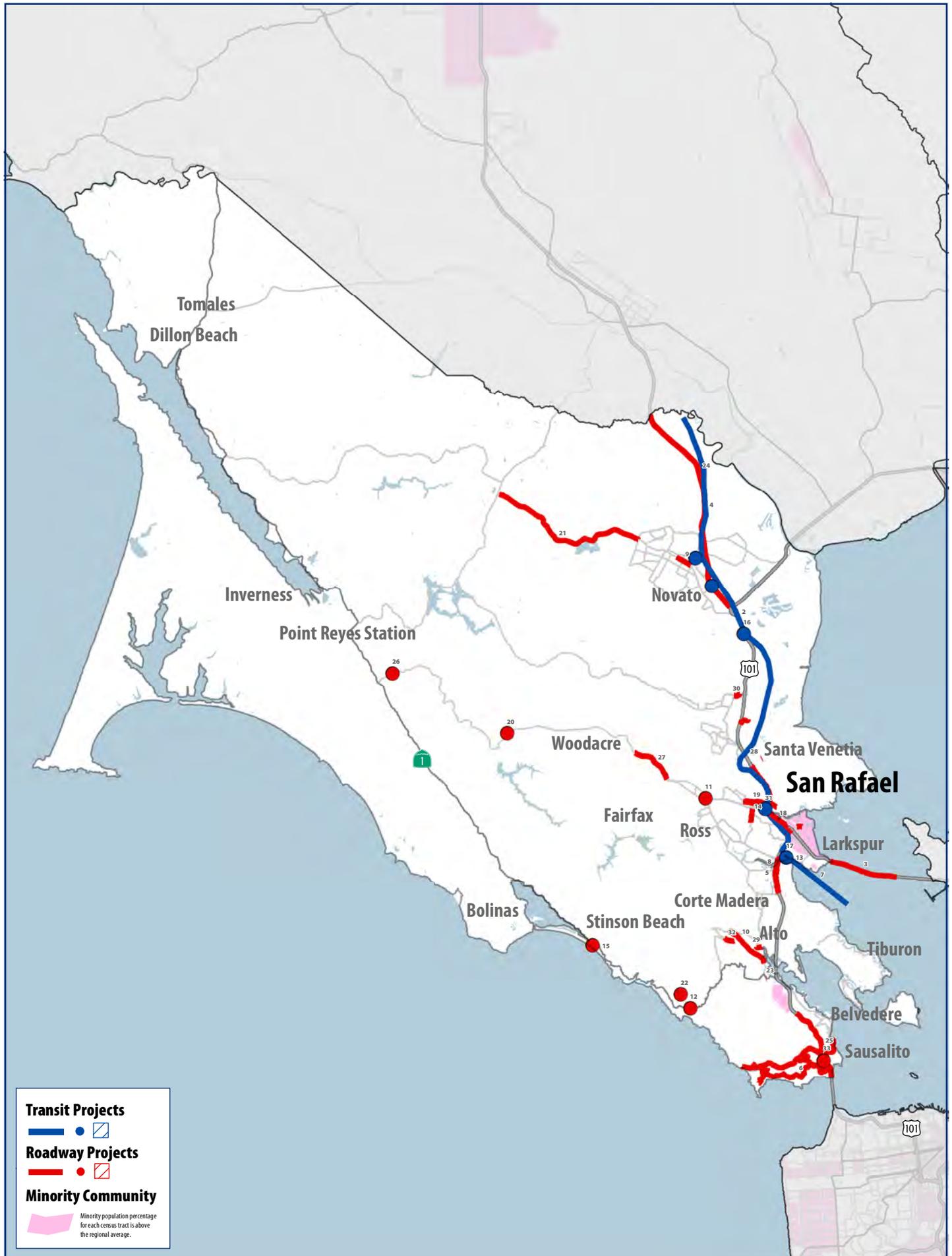
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# Marin County: Overlay of 2013 TIP Mapped Projects over Communities of Concern



**Marin County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population**



# Napa County TIP Projects

- 1 SR 12 (Jamieson Canyon Road) Widening
- 2 Cordelia Hills Sky Valley
- 3 Silverado Trail Phase G and H Rehab
- 4 Design of SR 12/29 /Airport Blvd Grade Separation
- 5 Ulatis Creek Bike Path - Ulatis to Leisure Town
- 6 Napa County: Silverado Trail Paving
- 7 Napa City - Linda Vista Pavement Overlay
- 8 Napa (City): 2011 Cape Seal Pavement Rehab
- 9 Napa City North/South Bike Connection
- 10 American Canyon Napa Junction Elementary Ped Imps.
- 11 American Canyon - Napa Square Pavement Rehab.
- 12 American Canyon: Theresa Ave Sidewalk Imp Phase 3
- 13 Napa:Lincoln Ave Bike Lane - Jefferson to Railroad
- 14 Yountville - Napa County Bicycle Path Extension

# Road Projects

# Transit Projects

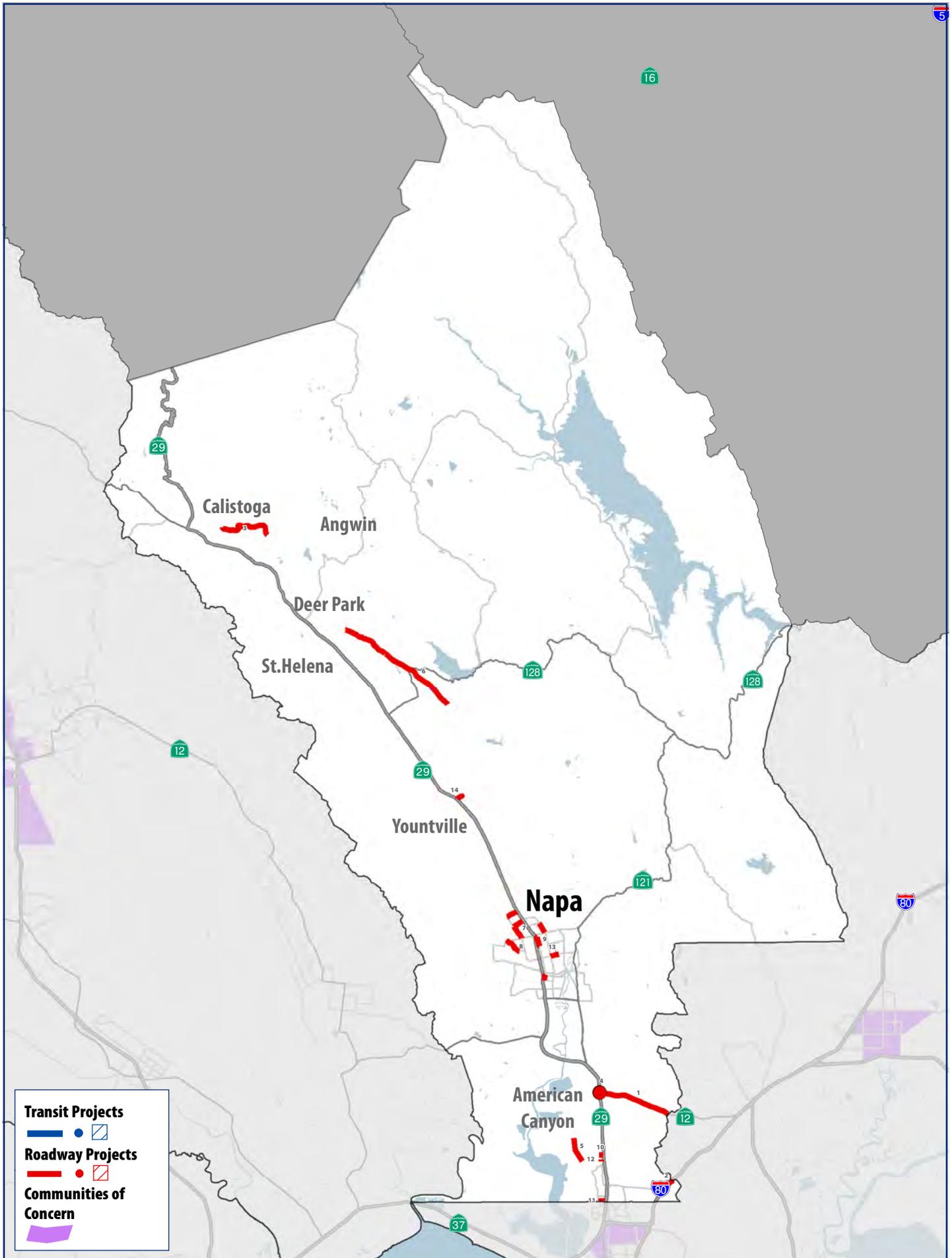
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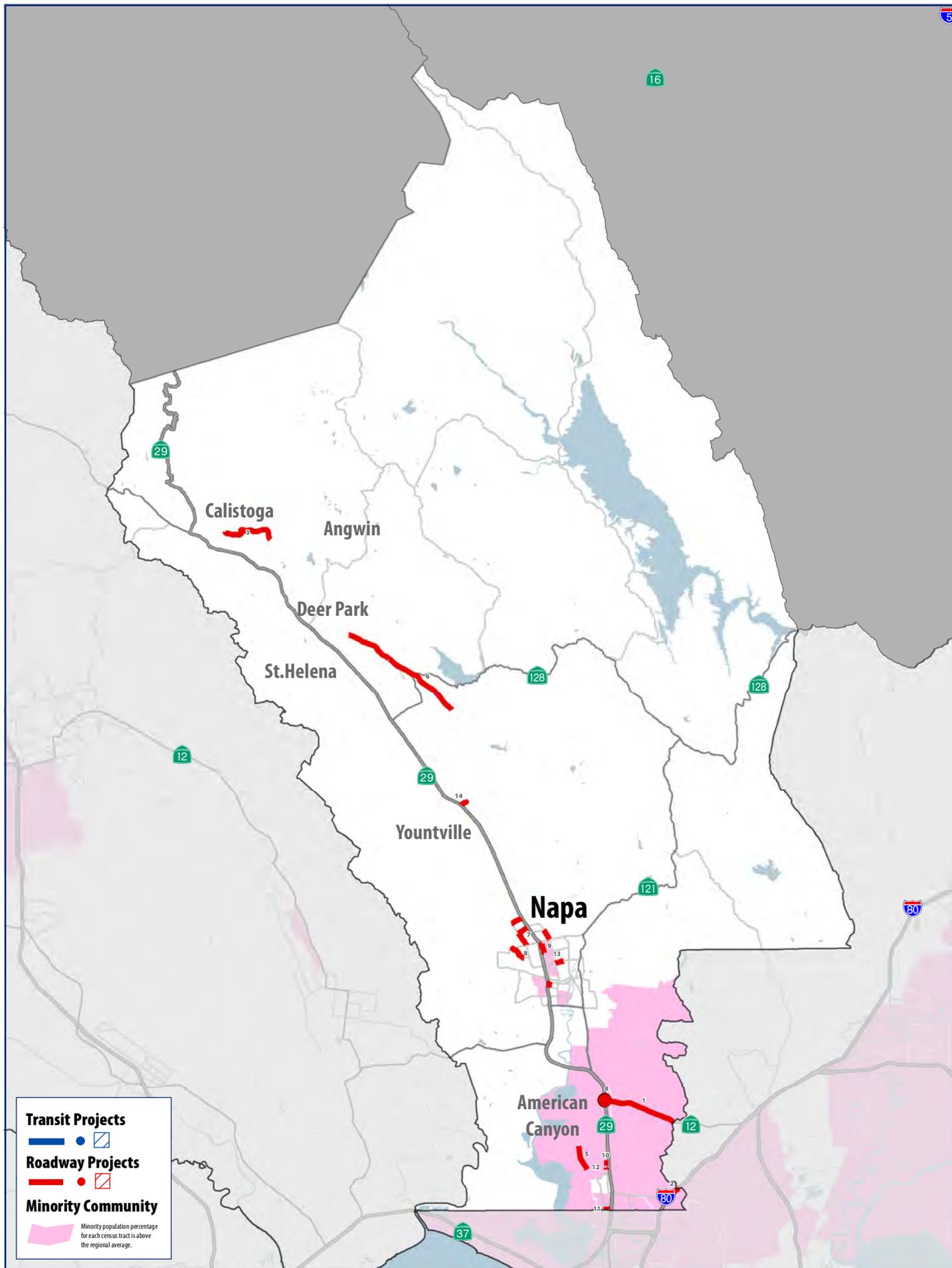
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# Napa County: Overlay of 2013 TIP Mapped Projects over Communities of Concern



# Napa County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population



# San Francisco County TIP Projects

- 1** San Francisco-Oakland Bay Bridge
- 2** Transbay Terminal/Caltrain Downtown Ext: Ph. 2
- 3** US 101 Doyle Drive Replacement
- 4** Transbay Term/Caltrain Downtown Ext - Ph.1
- 5** SF Muni Third St LRT Phase 2 - New Central Subway
- 6** Caltrain Electrification
- 7** Toll Bridge Rehabilitation Program
- 8** BART Transbay Tube Seismic Retrofit
- 9** Golden Gate Bridge Seismic Retrofit, Ph: 1-3A
- 10** Yerba Buena Island (YBI) Ramp Improvements
- 11** Geary Bus Rapid Transit
- 12** Golden Gate Bridge Seismic Retrofit, Phase 3B
- 13** Van Ness Avenue Bus Rapid Transit
- 14** Islais Creek Motor Coach Facility
- 15** Cable Car Traction Power & Guideway Rehab
- 16** Ferry Service - Berkeley/Albany
- 17** Mission Bay/UCSF Multi-Modal Transportation Imps.
- 18** SFGO-Corridor Management
- 19** Golden Gate Nat'l Rec. Area Road Rehab
- 20** Geneva-Harney BRT to Hunters Point - Geneva Portio
- 21** 4th St Bridge Seismic Retrofit & Rehab
- 22** Extended Trolleybus Service into Hunters Point
- 23** Toll Bridge Maintenance
- 24** Richmond Ferry Service
- 25** Bayview Transportation Improvements
- 26** Geneva-Harney BRT to Hunters Point - Geneva Extn
- 27** Golden Gate Bridge - Moveable Median Barrier
- 28** Harney Way Roadway Widening
- 29** Transit Center in Hunters Point
- 30** San Francisco Downtown Ferry Terminal
- 31** Citywide:San Francisco Street Improvements
- 32** Caltrain: Systemwide Security
- 33** Golden Gate Nat'l Rec. Area Non-Motorized Access
- 34** Caltrain South Terminal Phase II and III
- 35** Great Highway Restoration
- 36** SFMTA: 8X Customer First Program
- 37** Phelan Loop Pedestrian and Street Beautification
- 38** SFMTA: Mission Customer First Program
- 39** HOPE SF Street Grid Phase 1
- 40** Fishermans Wharf Ferry Terminal Improvements
- 41** Golden Gate Bridge - Suicide Deterrent System
- 42** SFMTA: N-Judah Customer First Program
- 43** San Francisco - Folsom Streetscape and Rehab

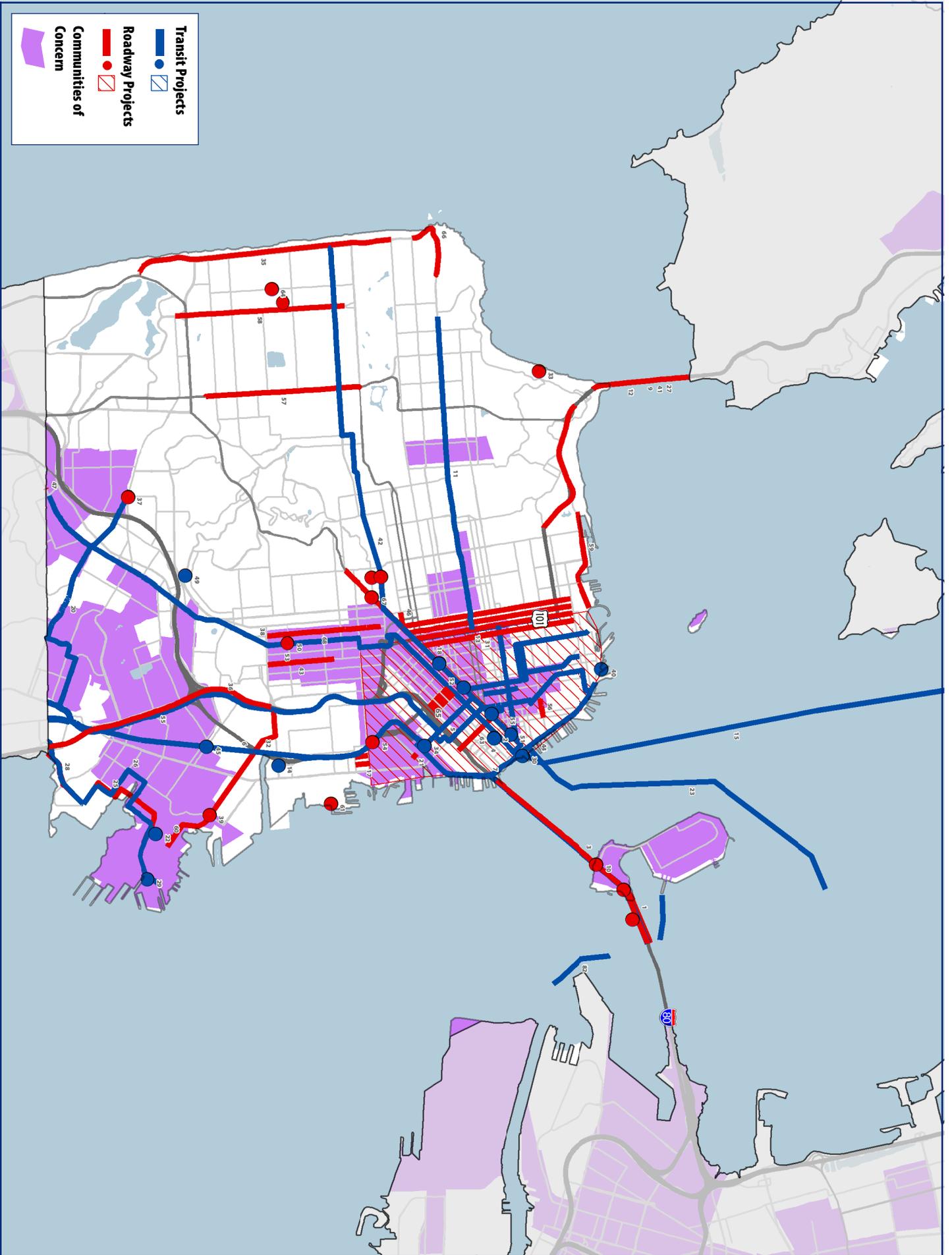
- #** Road Projects
- #** Transit Projects

**NOTE:**

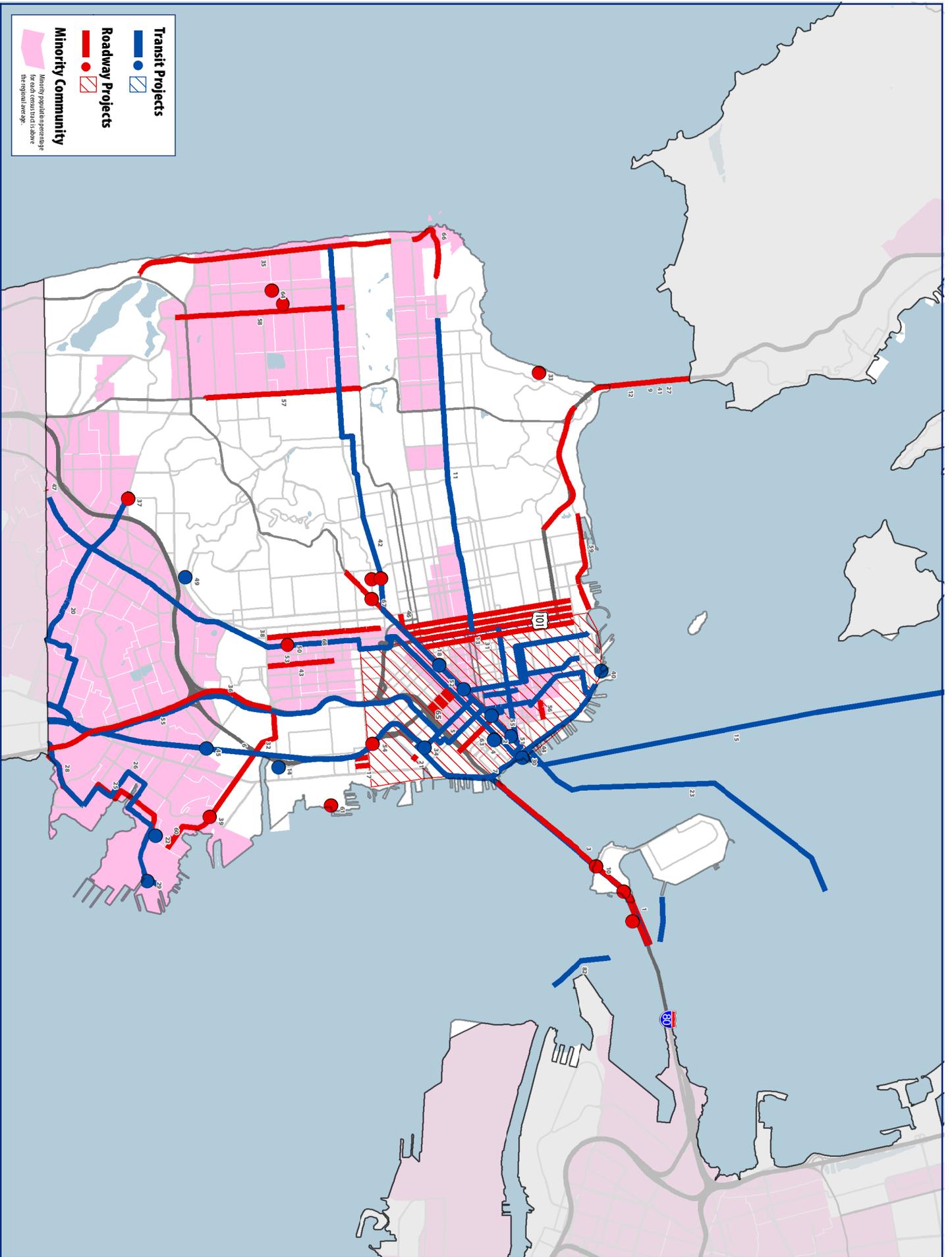
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- 44** Embarcadero Corridor Transportation Improvements
- 45** Oakdale Caltrain Station
- 46** San Francisco Market & Haight St. Transit/Ped Imps.
- 47** SR 82 - El Camino Real Grand Boulevard Initiative
- 48** Regional Real-Time Transit Information at BART
- 49** Glen Park Intermodal Facility
- 50** 24th Street/Mission BART Plaza Pedestrian Imps.
- 51** BART/MUNI Direct Connection Platform
- 52** South of Market Alleyways Improvements, Phase 2
- 53** BART 24th Street Train Control Upgrade Project
- 54** HOV Ramps: I-280/6th St Ramps-Project Development
- 55** HOV Lanes on US 101 in SF - Project Development
- 56** San Francisco - Broadway Streetscape and Rehab
- 57** SR 1 - 19th Avenue Median Improvements
- 58** Sunset Boulevard Ped Safety and Education
- 59** San Francisco - Marina Green Bicycle Trail Imps.
- 60** San Francisco - Arelious Walker Stairway Imps.
- 61** Pier 70 Shoreline Open Space Improvements
- 62** Treasure Island Ferry Service
- 63** Second St Phase 1 - SFGo Signal Rehab and Upgrade
- 64** Sunset and AP Giannini SR25 Improvements
- 65** San Francisco Parking Pricing and Regulation Study
- 66** San Francisco Point Lobos Streetscape
- 67** Church and Duboce Bike/Ped Enhancements
- 68** San Francisco Bicycle Parking

San Francisco County: Overlay of 2013 TIP Mapped Projects over Communities of Concern



**San Francisco County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population**



# San Mateo County TIP Projects

- 1 Caltrain Electrification
- 2 Toll Bridge Rehabilitation Program
- 3 SR 1 Devils Slide Bypass
- 4 Dumbarton Rail Service (PE and ROW only)
- 5 US 101 Auxiliary Lanes - 3rd to Millbrae
- 6 US 101 Auxiliary Lanes - Marsh Road to SCL County
- 7 US 101 / Broadway Interchange Improvement
- 8 Geneva-Harney BRT to Hunters Point - Geneva Portio
- 9 SR 1 - Fassler to West Port Drive Widening
- 10 US 101 / Woodside Interchange Improvement
- 11 Toll Bridge Maintenance
- 12 Bayview Transportation Improvements
- 13 San Mateo Bridges Replacement
- 14 US 101 / Willow Road Interchange Reconstruction
- 15 Improve Rte 92 from SM Bridge to I-280
- 16 Geneva-Harney BRT to Hunters Point - Geneva Extn
- 17 Dumbarton Bridge Seismic Retrofit
- 18 Harney Way Roadway Widening
- 19 Construct WB lane on Rte 92
- 20 I-280/Route 1 Interchange Safety Improvements
- 21 Caltrain: Systemwide Security
- 22 Utah Avenue (Produce Avenue) Overcrossing
- 23 WETA: Redwood City Ferry Service
- 24 US 101/Candlestick Interchange
- 25 SR1 San Pedro Creek Bridge Replacement
- 26 US 101 Millbrae Ave Bike/Ped Bridge
- 27 Bay Rd Improvement Phase II & III
- 28 SR92/El Camino Real (SR82) Ramp Modifications
- 29 Route 1 improvements in Half Moon Bay
- 30 US101/Holly Interchange Modification
- 31 SR 92 Shoulder Widening & Curve Correction
- 32 Blomquist Street Extension
- 33 Reconfiguration of San Carlos Transit Center
- 34 SR 82 - El Camino Real Grand Boulevard Initiative
- 35 SR 82 Daly City-Mission St. Pedestrian Imps.- Ph I
- 36 Woodside Road Widening - El Camino to Broadway
- 37 State Route 92/Chess Drive - Ramp Widening Project
- 38 US 101 University Ave Overpass Bike/Ped Facility
- 39 HOV Lanes on US 101 in SF - Project Development
- 40 Daly City BART Station Improvements
- 41 Resurfacing of Pescadero Creek Road
- 42 Delaware Street Bike Lane and Streetscape
- 43 CSRT South of Dam Conversion

# Road Projects

# Transit Projects

**NOTE:**

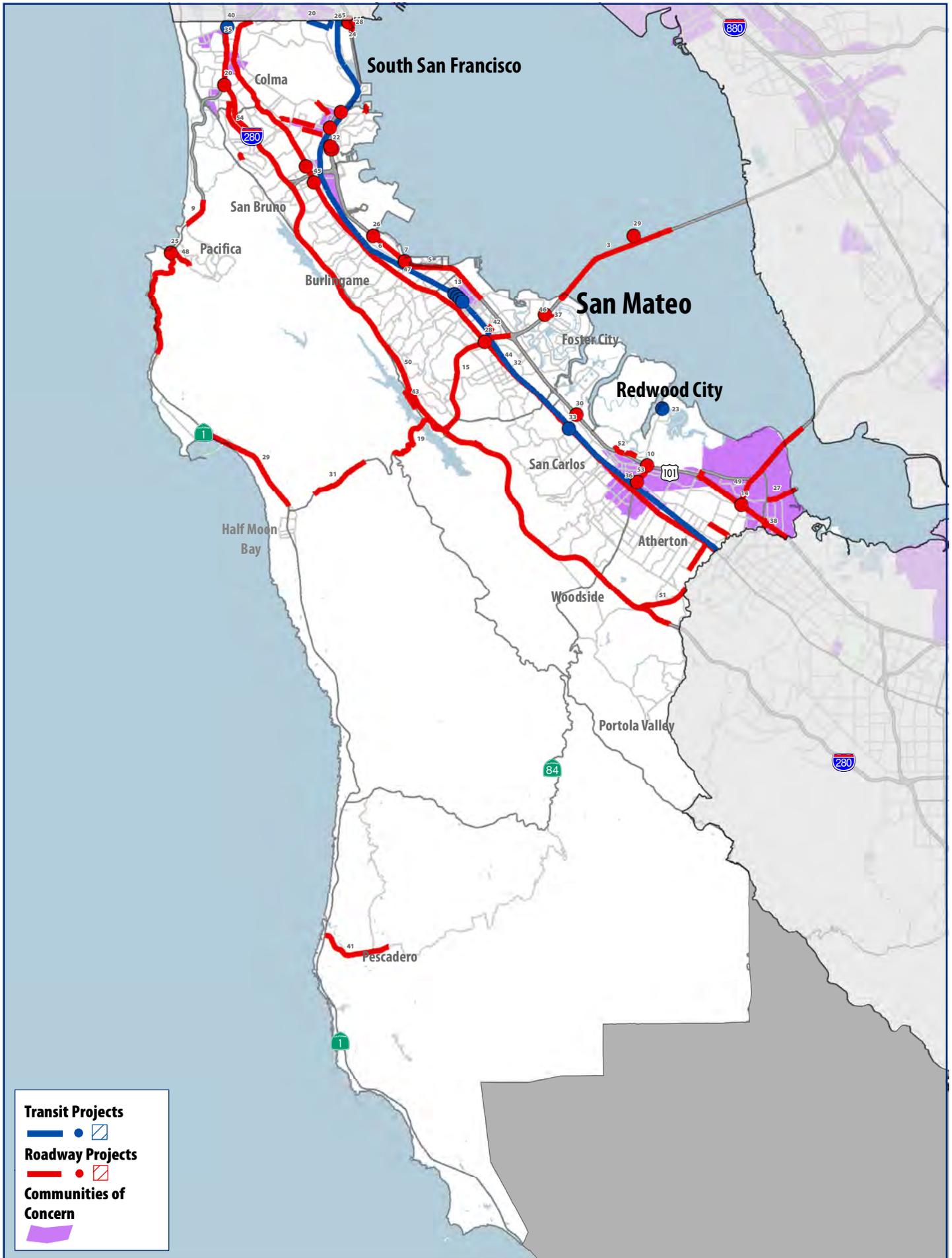
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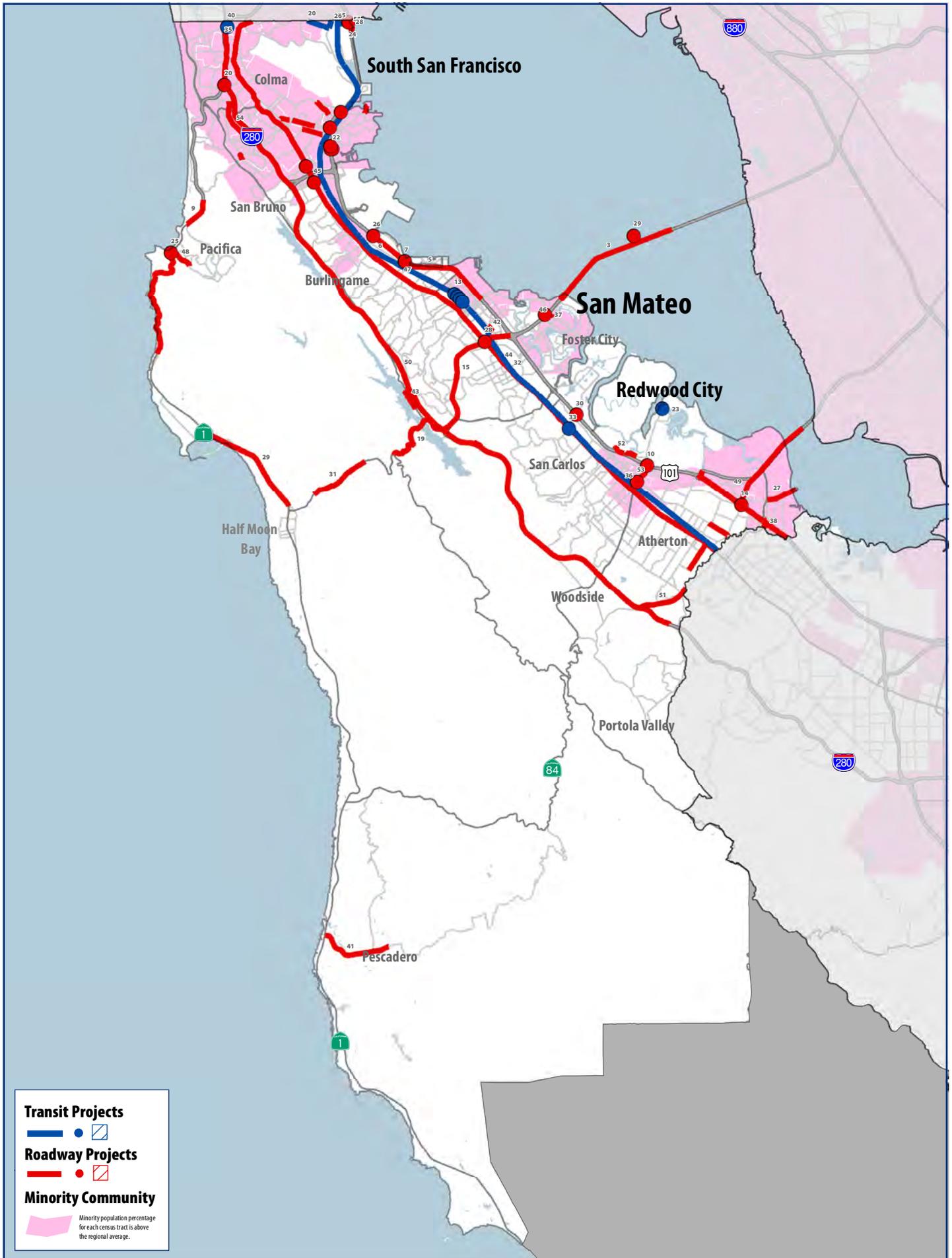
- 44 El Camino Real Phase I Improvement
- 45 San Bruno Street Medians and Grand Blvd Improv.
- 46 Foster City - Triton Drive Widening
- 47 Highway 1 Bicycle/Pedestrian Trail
- 48 FY 2014-15 Linda Mar Boulevard Pavement Rehab
- 49 Dumbarton Bridge to US101 Connection Study
- 50 I-280 Wildlife Connectivity Research
- 51 Menlo Park 2010/11 Resurfacing of Federal Aid Rtes
- 52 Bair Island Bay Trail Improvements
- 53 Middlefield Rd and Woodside Rd Intersection Improv.
- 54 South San Francisco: Regional Gap Closure Project

# San Mateo County: Overlay of 2013 TIP Mapped Projects over Communities of Concern



**Transit Projects**  
  
**Roadway Projects**  
  
**Communities of Concern**

# San Mateo County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population



# Santa Clara County TIP Projects

- 1 BART - Berryessa to San Jose Extension
- 2 BART - Warm Springs to Berryessa Extension
- 3 Caltrain Electrification
- 4 Santa Clara County - US 101 Express Lanes
- 5 Capitol Expressway LRT Extension- Phase II
- 6 El Camino Real Bus Rapid Transit
- 7 SF- Better Market Street Transportation Elements
- 8 SR 85 Express Lanes
- 9 I-880/SR 262 I/C and HOV lanes
- 10 Santa Clara/Alum Rock Transit Improvement/BRT
- 11 US 101 Auxiliary Lanes - Marsh Road to SCL County
- 12 SR 237 Express Lanes : Mathilda Avenue to SR 85
- 13 I-880 Coleman Avenue I/C Reconfiguration.
- 14 San Tomas Expressway Widening
- 15 San Tomas Expressway Widening
- 16 SR-152/SR-156 Interchange Improvements
- 17 San Jose - Autumn Street Extension
- 18 Coyote Creek Trail
- 19 US 101 SB Trimble Road/De La Cruz Boulevard/Centra
- 20 San Jose Charcot Avenue Extension Over I-880
- 21 Downtown San Jose Couplet Conversions
- 22 US 101 / Mabury New Interchange
- 23 Caltrain: Systemwide Security
- 24 SR 237 Express Lanes: Zanker Rd to Mathilda Ave
- 25 US 101 / Blossom Hill I/C Reconst & Road Widening
- 26 SR 237/US 101/Mathilda Interchange Modifications
- 27 San Jose: Road Rehab and Ped. Facilities
- 28 I-880/Montague Expressway interchange Improvements
- 29 US 101/Montague Expressway Interchange
- 30 Montague Expwy Widening - Lick Mill-Trade Zone
- 31 ACE Track Improvements.
- 32 Almaden Expressway Pedestrian Bridge
- 33 San Tomas Expressway Box Culvert Rehabilitation
- 34 Santa Clara Grade-Separated Pedestrian Crossing
- 35 Lower Guadalupe River Trail
- 36 SR 87 Guadalupe Freeway Corridor Landscaping
- 37 Bay Trail Reach 9 & 9B
- 38 I-680 Sunol Grade SouthBound HOV Lanes - SCL Final
- 39 Page Mill Road/I-280 Interchange Reconfiguration
- 40 Silicon Valley TIMC
- 41 Isabel Bridge Replacement (37C0089)
- 42 San Jose: Los Gatos Creek Reach 5 Bridge Crossings
- 43 Oregon-Page Mill Expwy Improvements

# Road Projects

# Transit Projects

**NOTE:**

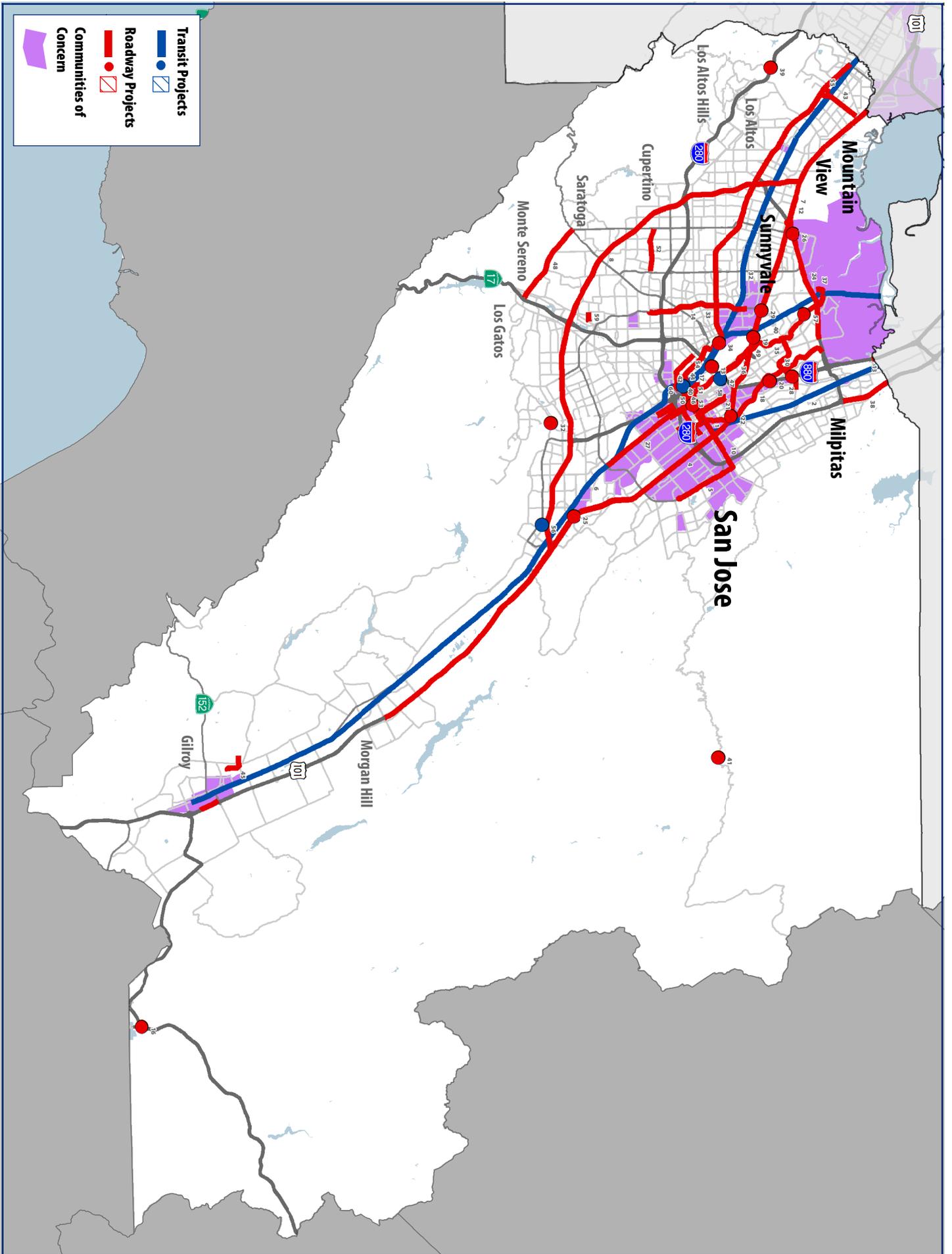
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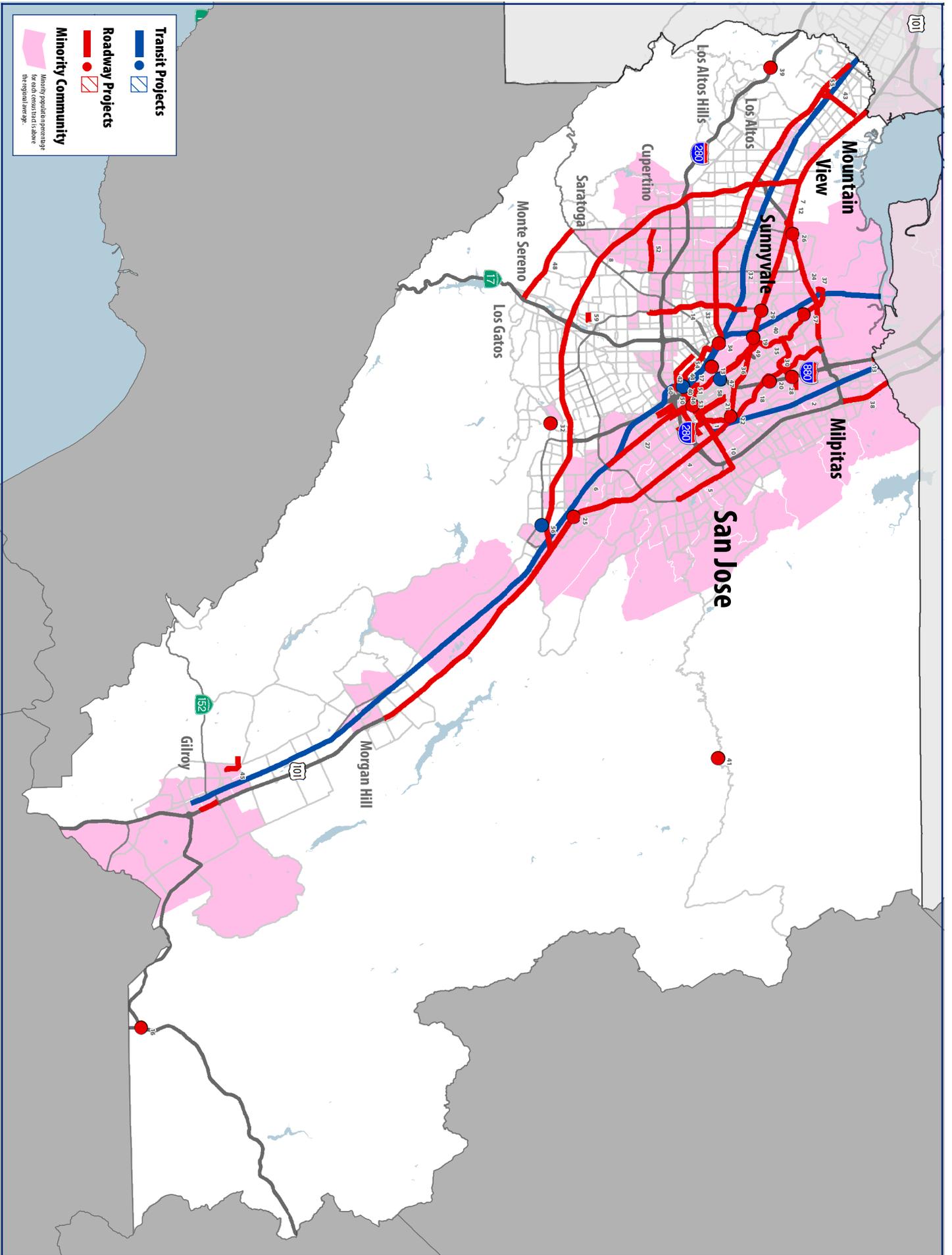
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- 44 San Jose: Alameda - A Plan for The Beautiful Way
- 45 Gilroy New Ronan Channel and Lions Creek Trail
- 46 San Jose - San Carlos Multimodal Phase 2
- 47 VTA: LRV Maintenance Shop Hoist
- 48 Highway 9 Safety Improvements
- 49 US 101 / SR 87-Trimble Road Landscaping
- 50 South Terminal Wayside Power
- 51 St. John Street Multi-Modal Improvements - Phase 1
- 52 Innovative Bicycle Detection System
- 53 San Fernando Street Enhanced Bikeway & Ped Access
- 54 Park Avenue Multi-Modal Improvements
- 55 Palo Alto California Avenue Transit Hub
- 56 VTA: Update Santa Teresa Interlock Signal House
- 57 Lower Guadalupe River Trail-Tasman Drive Underpass
- 58 VTA: LRV Body Shop Dust Separation Wall
- 59 Hacienda Ave Streetscape and Bicycle Imps.
- 60 VTA: Diridon Tunnel Radio Replacement

**Santa Clara County: Overlay of 2013 TIP Mapped Projects over Communities of Concern**



**Santa Clara County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population**



# Solano County TIP Projects

- 1 I-80/I-680/SR 12 Interchange Project
- 2 Toll Bridge Rehabilitation Program
- 3 I-80 Express Lanes (Vacaville)
- 4 SR 12 (Jamieson Canyon Road) Widening
- 5 EB I-80 Cordelia Truck Scales Relocation Project
- 6 Vallejo Ferry Terminal (Intermodal Station)
- 7 Toll Bridge Maintenance
- 8 Fairfield/Vacaville Intermodal Rail Station
- 9 North Bay Operations and Maintenance Facility
- 10 Jepson: Vanden Road from Peabody to Leisure Town
- 11 Jepson: Leisure Town Road from Vanden to Elmira
- 12 I-80 HOV conversion to Express Lanes (Fairfield)
- 13 Jepson: Walters Rd Ext - Peabody Rd Widening
- 14 Vacaville Intermodal Station - Phase 2
- 15 Jepson: Leisure Town Road from Elmira to Orange
- 16 Vallejo Curtola Transit Center
- 17 Fairfield Transportation Center - Phase 3
- 18 Dixon West B. St Bike/Pedestrian Undercrossing
- 19 Vallejo: Downtown Streetscape
- 20 I-80 / American Canyon Rd overpass Improvements
- 21 I-80 Alamo Creek On-Ramp and Bridge Widening
- 22 Suisun Valley Rd Bridge Replacement 23C0077
- 23 Military/Southampton & Military/First Intermodal
- 24 Cordelia Hills Sky Valley
- 25 Vallejo Downtown Streetscape - Phase 3
- 26 Travis AFB: South Gate Improvement Project
- 27 I-80/I-680 Aux Lanes Improvement Landscaping
- 28 Grizzly Island Trail - Phase 1
- 29 Oliver Road Park and Ride
- 30 Redwood-Fairgrounds Dr Interchange Imps (Study)
- 31 I-505/Vaca Valley Off-Ramp and Intersection Imprv.
- 32 SolTrans: Bus Maintenance Facility Renovation
- 33 Vacaville 2014 Street Preservation
- 34 Roadway Preservation in Solano County
- 35 Benicia Indust. Park Multi-Modal Transit Area Plan
- 36 Ulatis Creek Bike Path - Ulatis to Leisure Town
- 37 Vacaville-Dixon Bicycle Route (Phase 5)
- 38 San Pablo Bay Entrance Rehabilitation
- 39 Sonoma Boulevard Improvements HSIP5-04-031
- 40 I-80/I-680 Mitigation Landscaping

# Road Projects

# Transit Projects

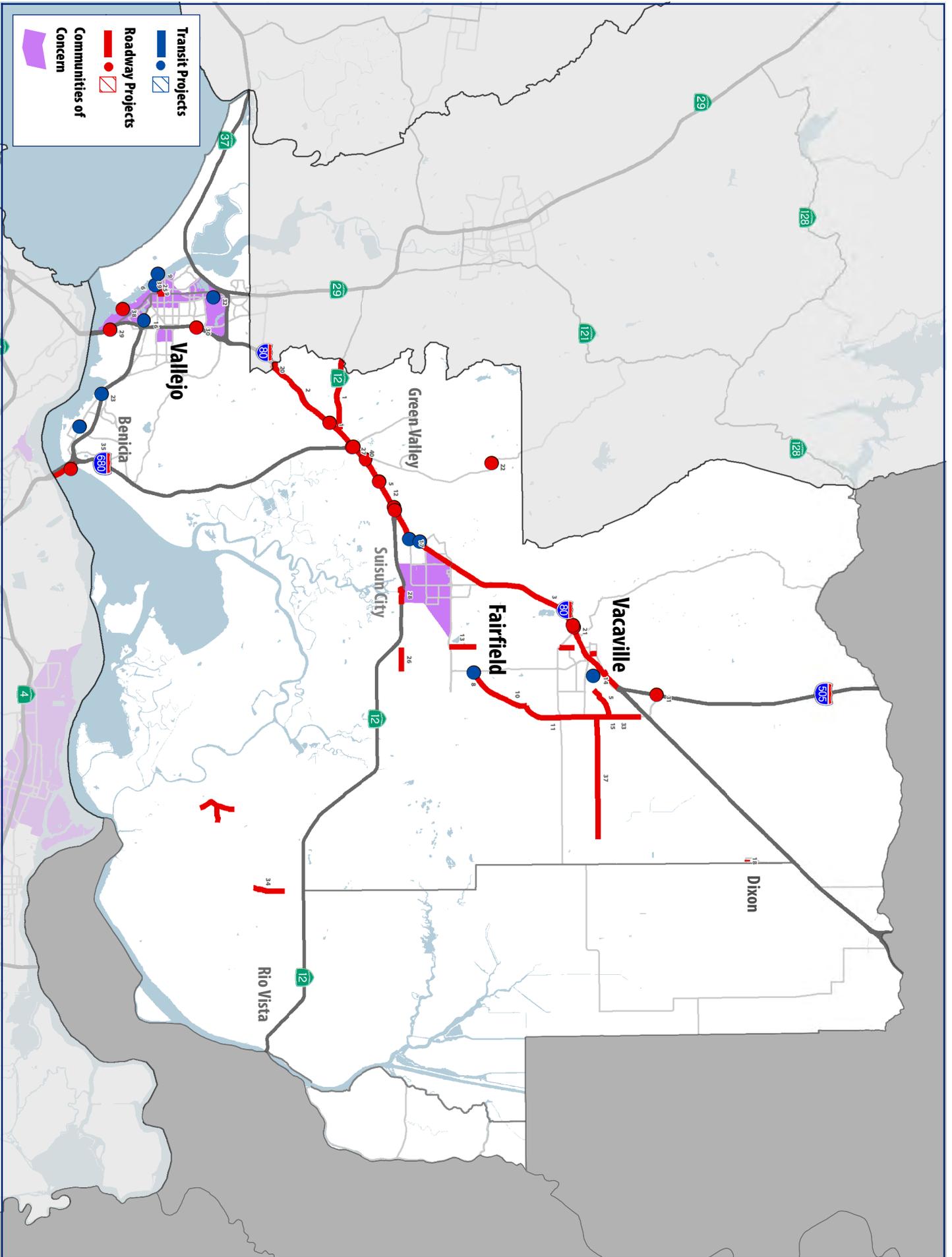
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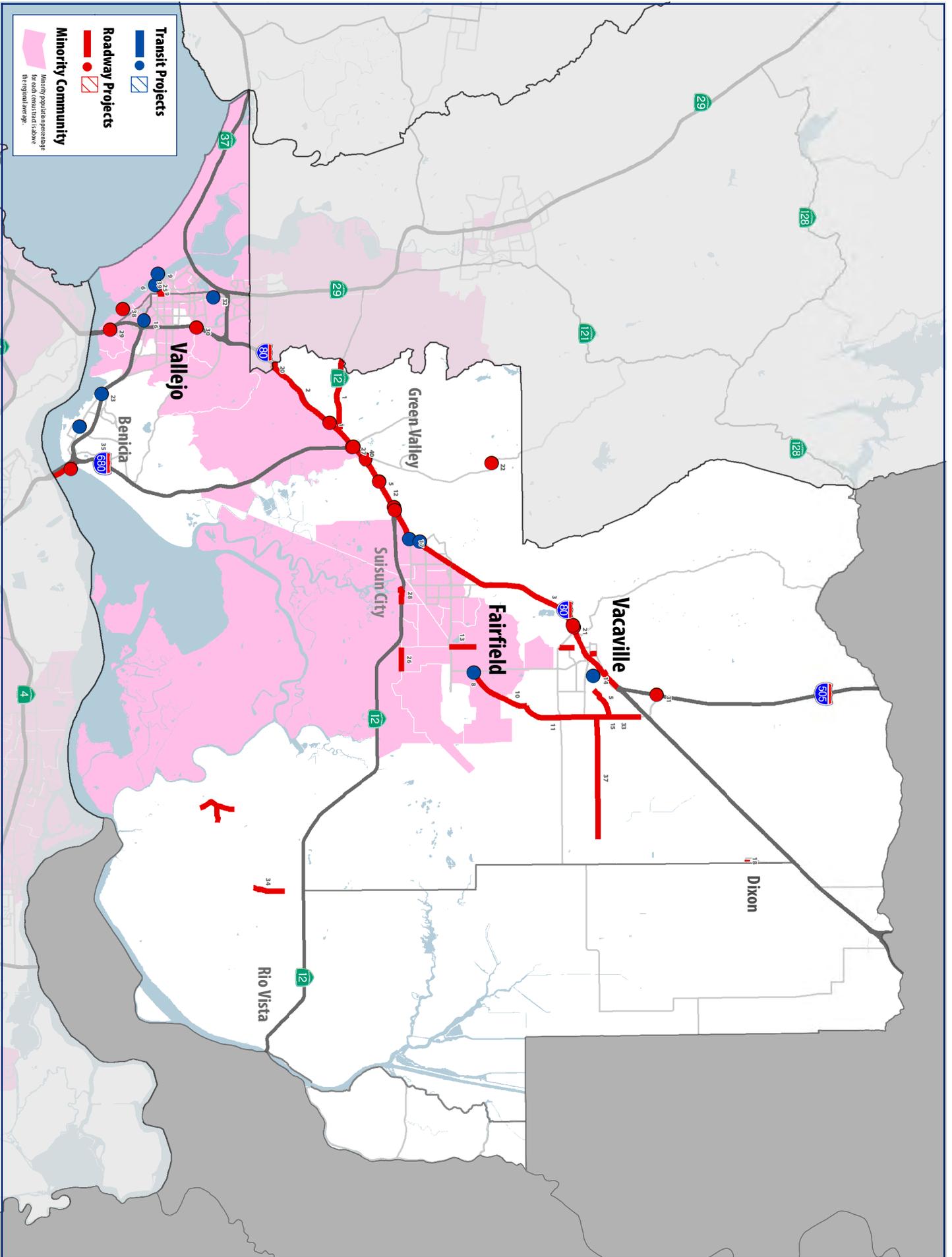
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**Solano County: Overlay of 2013 TIP Mapped Projects over Communities of Concern**



**Solano County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population**



# Sonoma County TIP Projects

- 1 Sonoma Marin Area Rail Corridor
- 2 US 101 Marin/Sonoma Narrows (Sonoma)
- 3 US 101 HOV Lanes - Marin-Sonoma Narrows (Marin)
- 4 Son 101 HOV - Redwood Hwy to Rohnert Park Expwy
- 5 Son 101 HOV - Steele Lane to Windsor (North)
- 6 Son 101 HOV - Rohnert Park Expwy to Santa Rosa Av
- 7 US 101 Airport I/C (North B)
- 8 Improve U.S. 101/Old Redwood Highway Interchange
- 9 San Pablo Bay NWR Access Road in Petaluma
- 10 Ferry Service to Port Sonoma
- 11 US 101/East Washington I/C Reconfiguration
- 12 HWY 101 HOV Lane 12/Steele - Follow-up College Ave
- 13 Replace Chalk Hill Bridge over Maacama Crk 20C0242
- 14 Replace Geysers Bridge over Sulpher Crk 20C0005
- 15 Replace Laughlin Bridge over Mark West Crk 20C0246
- 16 Replace Lambert Bridge over Dry Creek 20C0248
- 17 Son 101 HOV - Santa Rosa Bike/Ped Beautification
- 18 Replace West Dry Creek Bridge over Pena Ck 20C0407
- 19 Son 101 HOV - SR 12 to Steele & Steele Lane I/C
- 20 2011/12 Asphalt Overlay Program
- 21 City of Cotati Train Depot
- 22 Replace Freestone Flat Bridge over Salmon 20C0440
- 23 Replace Hauser Bridge over Gualala River 20C0240
- 24 Santa Rosa City Bus: Fast-fill CNG Fueling Station
- 25 Downtown Transit Mall Connectivity Improvements
- 26 Downtown Specific Plan Area Revitalization
- 27 Rehab King Ridge Bridge over Austin Crk 20C0433
- 28 Replace Bohan Dillon Bridge over Gualala 20C0435
- 29 Chanate Rd Pedestrian and Transit Improvements
- 30 SMART Bicycle and Pedestrian Path
- 31 Sonoma Mountain Parkway Rehabilitation
- 32 SMART Trail-Hearn Avenue to Joe Rodota Trail
- 33 Petaluma Transit Maintenance Facility Rehab: Ph 2
- 34 Petaluma Boulevard South Road Diet
- 35 Bodega Bay Trail Segments 1B and 1C
- 36 ORH at Lakewood Dr. Bike and Ped Enhancements
- 37 Petaluma Transit Maintenance Facility Rehab: Ph 1
- 38 Copeland Creek Bike Path Reconstruction
- 39 Central Sonoma Valley Trail
- 40 Marin Bike/Ped Facility North of Atherton Ave.
- 41 Sonoma County Transit: Bus Yard Rehab.
- 42 Hembree Lane Resurfacing
- 43 Windsor - Old Redwood Hwy Pedestrian Linkages

# Road Projects

# Transit Projects

**NOTE:**

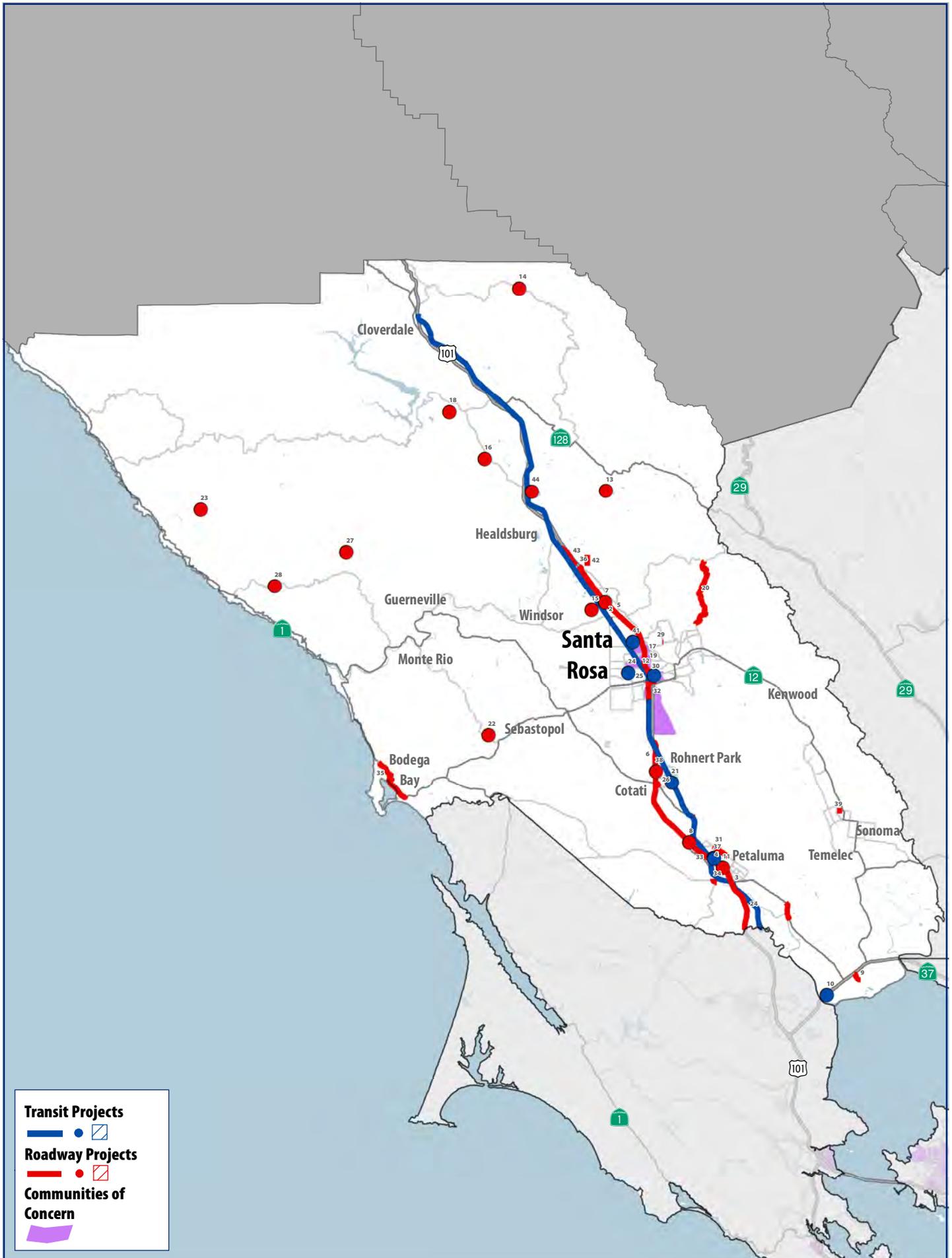
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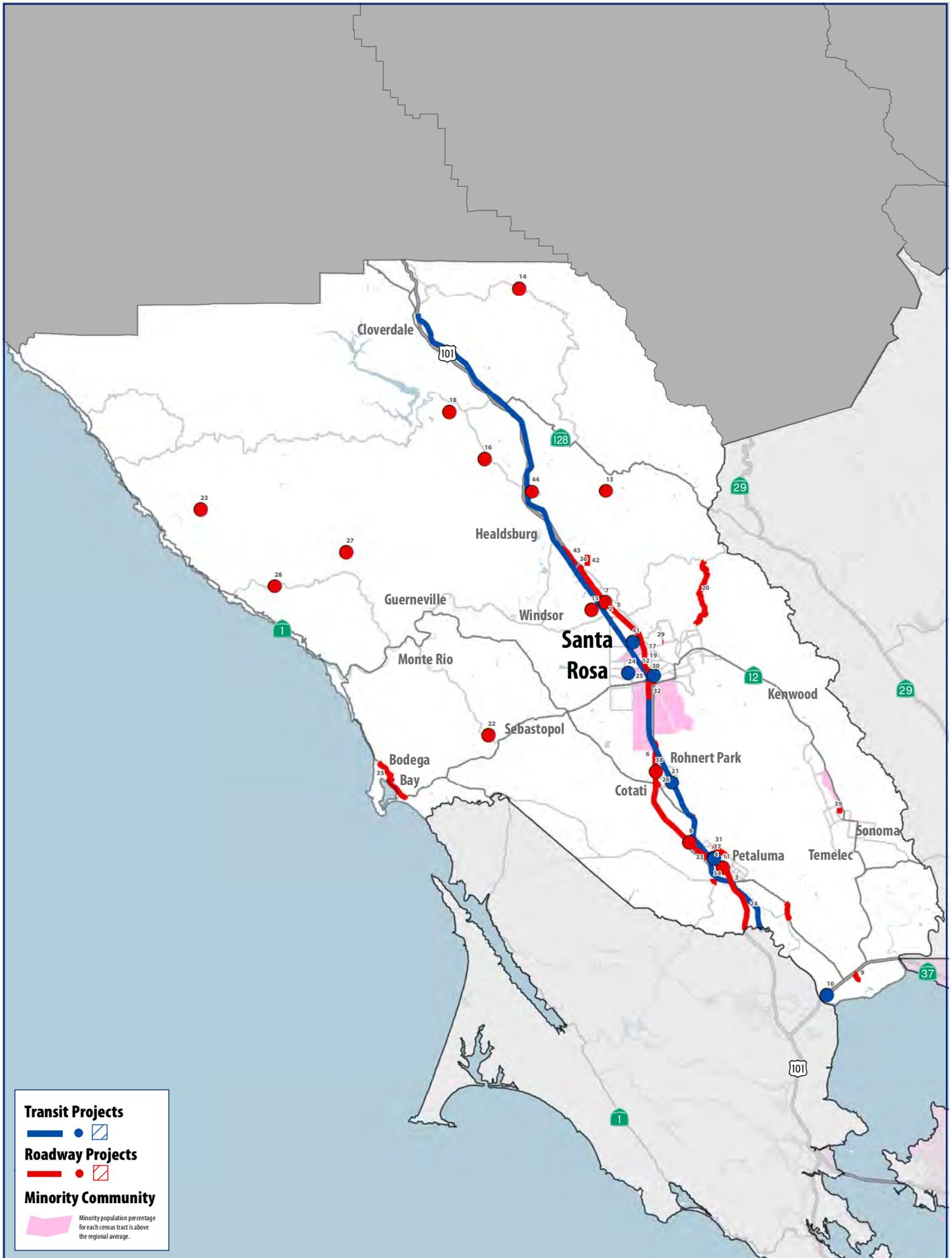
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44 Pedestrian Safety and Access Improvements

# Sonoma County: Overlay of 2013 TIP Mapped Projects over Communities of Concern



# Sonoma County: Overlay of 2013 TIP Mapped Projects over Census Tracts with Above Average Minority Population



# Projects in the 2013 TIP Over \$200 Million

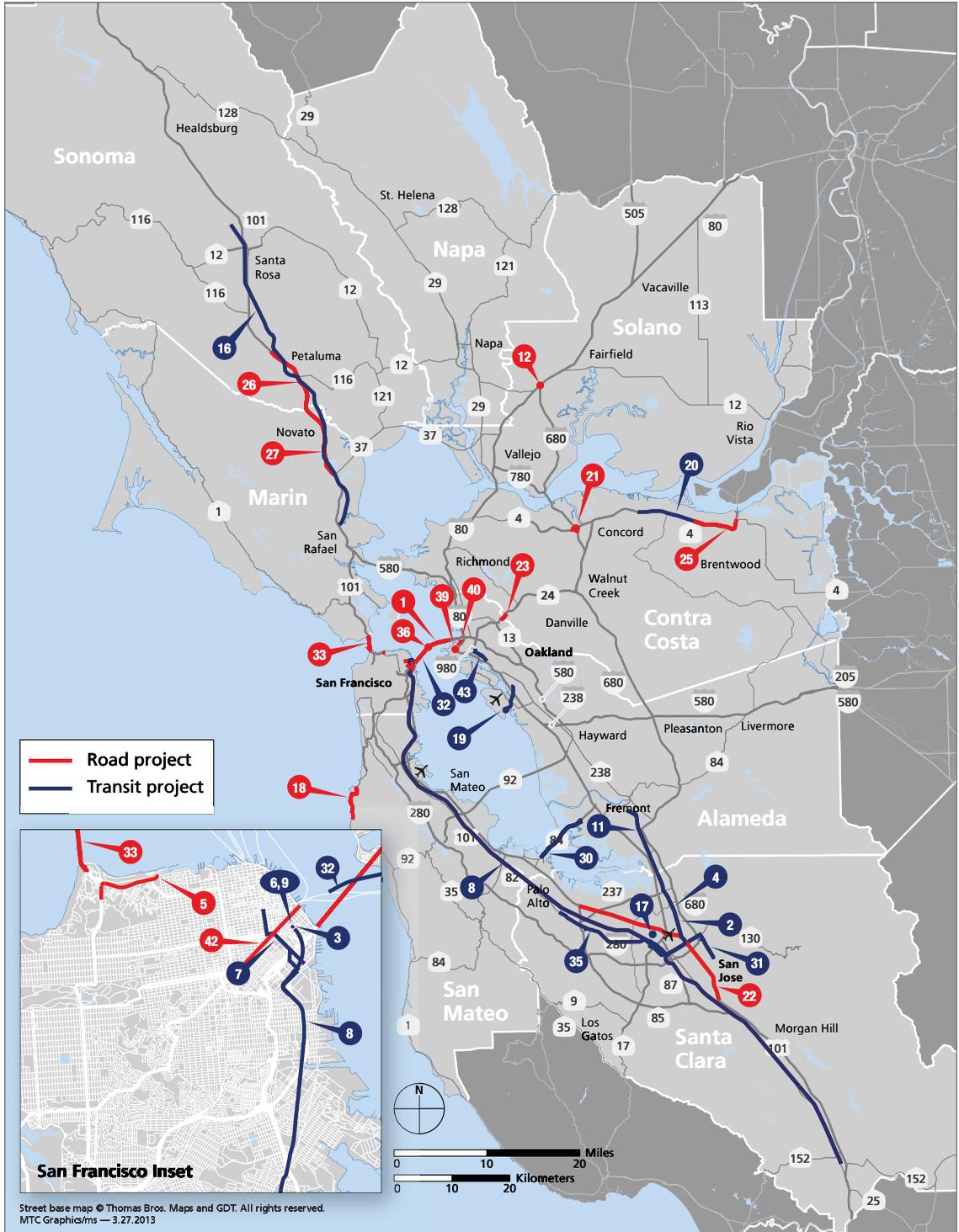
**BLUE** Transit Project

**RED** Road Project

- |   |   |   |
|---|---|---|
| <p><b>1.</b> San Francisco–Oakland Bay Bridge East Span Replacement<br/>Alameda County<br/><b>\$5.71 billion</b></p> <p><b>2.</b> BART – Berryessa to San Jose Extension<br/>Santa Clara County<br/><b>\$3.96 billion</b></p> <p><b>3.</b> Transbay Terminal/Caltrain Downtown Extension, Phase 2<br/>San Francisco County<br/><b>\$2.60 billion</b></p> <p><b>4.</b> BART – Warm Springs to Berryessa Extension<br/>Santa Clara County<br/><b>\$2.52 billion</b></p> <p><b>5.</b> US-101 Doyle Drive Replacement<br/>San Francisco County<br/><b>\$1.97 billion</b></p> <p><b>6.</b> Transbay Terminal/Caltrain Downtown Extension, Phase 1<br/>San Francisco County<br/><b>\$1.59 billion</b></p> <p><b>7.</b> SF Muni Third St LRT Phase 2 Central Subway<br/>San Francisco County<br/><b>\$1.57 billion</b></p> <p><b>8.</b> Caltrain Electrification<br/>Multiple Counties<br/><b>\$1.23 billion</b></p> <p><b>9.</b> Transbay Transit Center – TIFIA Loan Debt Service<br/>San Francisco County<br/><b>\$1.08 billion</b></p> <p><b>10.</b> BART Railcar Replacement Program**<br/>Multiple Counties<br/><b>\$1.03 billion</b></p> <p><b>11.</b> BART – Warm Springs Extension<br/>Alameda County<br/><b>\$890 million</b></p> <p><b>12.</b> I-80/680/12 Interchange Project<br/>Solano County<br/><b>\$718 million</b></p> <p><b>13.</b> Toll Bridge Rehabilitation Program**<br/>Multiple Counties<br/><b>\$629 million</b></p> <p><b>14.</b> BART Car Exchange (Preventative Maintenance)**<br/>Multiple Counties<br/><b>\$603 million</b></p> <p><b>15.</b> Valley Transportation Authority: Preventative Maintenance**<br/>Santa Clara County<br/><b>\$571 million</b></p> | <p><b>16.</b> Sonoma Marin Area Rail Corridor<br/>Sonoma/Marin Counties<br/><b>\$532 million</b></p> <p><b>17.</b> San Jose International Airport People Mover<br/>Santa Clara County<br/><b>\$508 million</b></p> <p><b>18.</b> SR-1 Devils Slide Bypass Tunnel<br/>San Mateo County<br/><b>\$505 million</b></p> <p><b>19.</b> BART Oakland Airport Connector<br/>Alameda County<br/><b>\$484 million</b></p> <p><b>20.</b> E-BART – East Contra Costa County Rail Extension<br/>Contra Costa County<br/><b>\$460 million</b></p> <p><b>21.</b> I-680/SR-4 Interchange Reconstruction, Phases 1-5<br/>Contra Costa County<br/><b>\$425 million</b></p> <p><b>22.</b> US-101 Express Lanes in Santa Clara County<br/>Santa Clara County<br/><b>\$425 million</b></p> <p><b>23.</b> SR-24 – Caldecott Tunnel Fourth Bore<br/>Alameda/Contra Costa Counties<br/><b>\$420 million</b></p> <p><b>24.</b> AC Transit: Preventative Maintenance Program**<br/>Alameda County<br/><b>\$392 million</b></p> <p><b>25.</b> SR-4 East Widening from Somersville Rd to SR-160<br/>Contra Costa County<br/><b>\$385 million</b></p> <p><b>26.</b> US-101 Marin-Sonoma Narrows (Sonoma)<br/>Sonoma County<br/><b>\$373 million</b></p> <p><b>27.</b> US-101 Marin-Sonoma Narrows (Marin)<br/>Marin County<br/><b>\$341 million</b></p> <p><b>28.</b> Hunters Point Shipyard and Candlestick Point Local Roads**<br/>San Francisco County<br/><b>\$338 million</b></p> <p><b>29.</b> Freeway Performance Initiative (FPI)**<br/>Multiple Counties<br/><b>\$328 million</b></p> | <p><b>30.</b> Dumbarton Rail Service (PE and ROW only)<br/>Alameda/San Mateo Counties<br/><b>\$301 million</b></p> <p><b>31.</b> Capitol Expressway LRT Extension, Ph. 2<br/>Santa Clara County<br/><b>\$294 million</b></p> <p><b>32.</b> BART Transbay Tube Seismic Retrofit<br/>Multiple Counties<br/><b>\$276 million</b></p> <p><b>33.</b> Golden Gate Bridge Seismic Retrofit, Ph. 1-3A<br/>Marin/San Francisco Counties<br/><b>\$274 million</b></p> <p><b>34.</b> Southeast Waterfront Transportation Improvements**<br/>San Francisco County<br/><b>\$254 million</b></p> <p><b>35.</b> El Camino Real Bus Rapid Transit<br/>Santa Clara County<br/><b>\$234 million</b></p> <p><b>36.</b> Yerba Buena Island (YBI) Ramp Improvements<br/>San Francisco County<br/><b>\$233 million</b></p> <p><b>37.</b> Caltrain Positive Train Control**<br/>Multiple Counties<br/><b>\$231 million</b></p> <p><b>38.</b> SF Muni Rail Replacement Program**<br/>San Francisco County<br/><b>\$223 million</b></p> <p><b>39.</b> 7th Street Grade Separation and Roadway Improvement<br/>Alameda County<br/><b>\$221 million</b></p> <p><b>40.</b> Oakland Army Base Infrastructure Improvements<br/>Alameda County<br/><b>\$215 million</b></p> <p><b>41.</b> SFMTA ADA Paratransit Operating Support**<br/>San Francisco County<br/><b>\$207 million</b></p> <p><b>42.</b> Better Market Street Transportation Elements<br/>San Francisco County<br/><b>\$206 million</b></p> <p><b>43.</b> Enhanced Bus – Telegraph/International/ East 14th<br/>Alameda County<br/><b>\$205 million</b></p> |
|---|---|---|

\*\* These projects not shown on map

# Projects in the 2013 TIP With Costs Greater Than \$200 million



## Draft 2015 TIP Investment Analysis: Focus on Low-Income and Minority Communities

The federally required Transportation Improvement Program, or TIP, is a comprehensive listing of all Bay Area surface transportation projects that are to receive federal funding or are subject to a federally required action, or are considered regionally significant for air quality conformity purposes. The 2013 TIP was adopted by the Commission on July 18, 2013 and approved by the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) on August 12, 2013. MTC has developed the Draft 2015 TIP, which covers the four-year period of FY 2014-15 through FY 2017-18.

As part of the 2013 TIP development, MTC had conducted an investment analysis with a focus on minority and low-income residents to assist in the public assessment of the TIP, and specifically to address the equity implications of the proposed TIP investments. An update to this analysis for the 2015 TIP is discussed here. The purpose of the analysis is to understand if low-income and minority populations are sharing equitably in the TIP's financial investments. The analysis calculates the shares of 2015 TIP investments flowing to the identified communities, and compares those shares with the proportional size of this group's population and trip-making, relative to that of the general population. This report presents the results of this analysis. For reference, the 2013 TIP investment analysis is available at [http://www.mtc.ca.gov/funding/tip/2013/2013\\_TIP\\_Final\\_Investment\\_Analysis\\_Report.pdf](http://www.mtc.ca.gov/funding/tip/2013/2013_TIP_Final_Investment_Analysis_Report.pdf).

While this investment analysis is a companion to the 2015 TIP, it is also a follow-up to several related MTC efforts, including the Plan Bay Area Equity Analysis, Transportation 2035 Equity Analysis (February 2009), the Snapshot Analysis for MTC Communities of Concern (June 2010), the 2013 TIP Investment Analysis (July 2013) and the 2011 TIP Investment Analysis (September 2010). Together, these efforts are meant to provide accurate and current data to help inform decision-makers and the public, and to inform and encourage engagement in the public participation process.

MTC strives to employ best practices in metropolitan planning, and we constantly seek to refine and improve the analytical work that undergirds our planning processes. In keeping with these efforts MTC staff actively seeks feedback on this analysis. This document is available online at [www.mtc.ca.gov/funding/tip/2015/tip\\_investment\\_analysis\\_report.pdf](http://www.mtc.ca.gov/funding/tip/2015/tip_investment_analysis_report.pdf).

### **About the 2015 TIP**

The Bay Area's 2015 TIP includes roughly 1,000 transportation projects, and a total of approximately \$9.4 billion in committed federal, state and local funding over the four-year TIP period through fiscal year 2018. Figure 1 on the next page illustrates the relative share of the 2015 TIP fund sources, with state sources comprising the largest share at over one-third of total funding. Roughly 40 projects account for \$5.9 billion or 63 percent of the total funding in the 4-year TIP period. See Attachment A for a map of projects with costs greater than \$200 million.



Figure 1

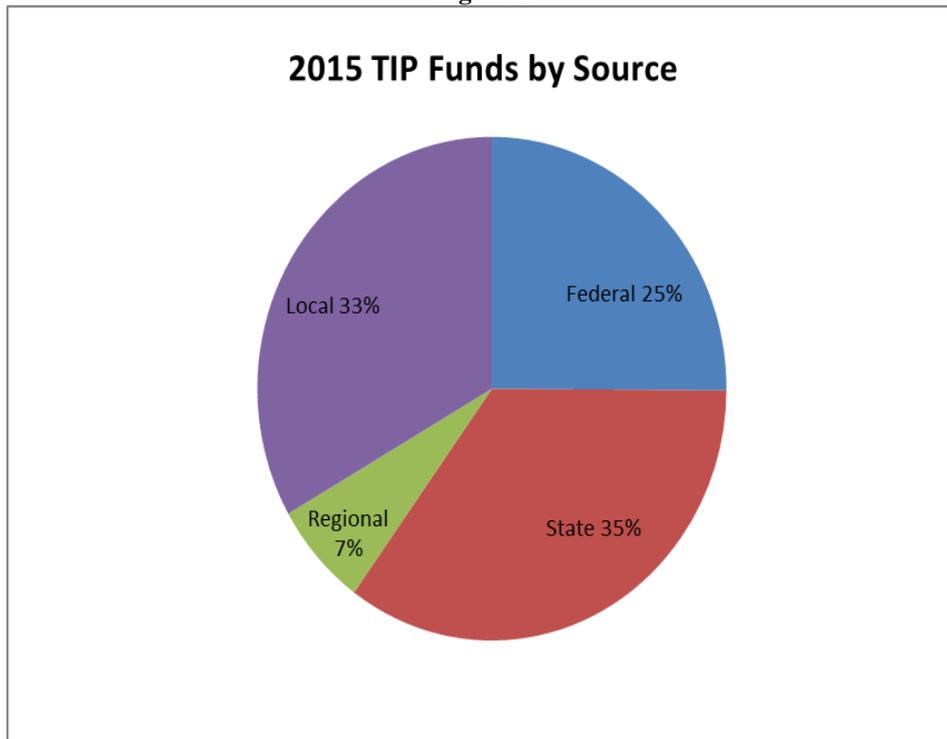
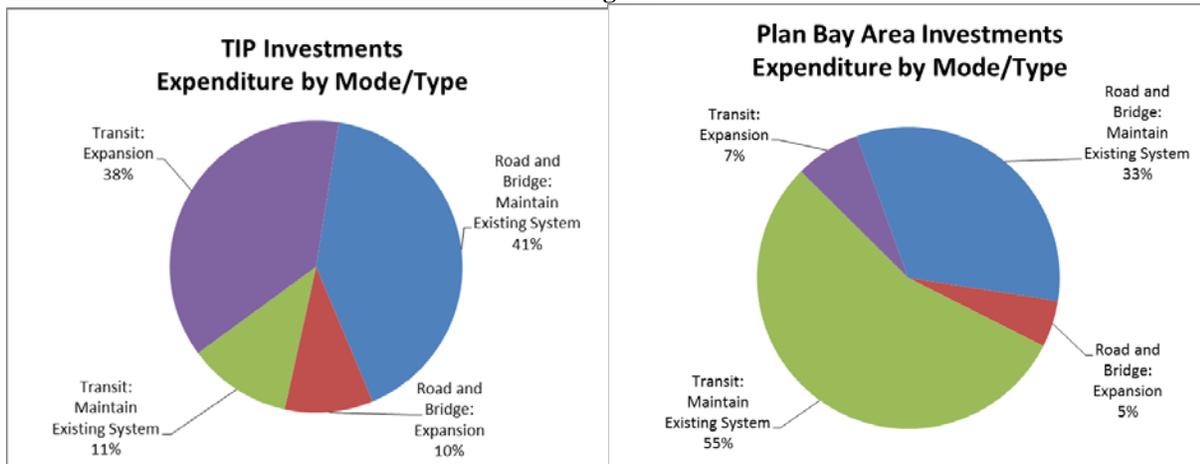


Figure 2 below at left shows the planned investments in the 2015 TIP by transportation mode (road/bridge or transit) and type of expenditure (maintenance/management or capital expansion). It must be noted that the TIP investments for bicycle and pedestrian improvements are included under the road/bridge category as elements of complete streets. As a frame of reference, the Plan Bay Area expenditures by mode and function are shown as well on the right.

Figure 2



The most striking difference is that the share of capital expansion for both transit and complete streets/highways is much greater in the 2015 TIP than is the case for Plan Bay Area.

The main reason for this difference is that the TIP represents only a fraction of Bay Area transportation investments and is only a four-year snapshot. Because the TIP is focused on projects that have federal funds, will require a federal action, or are regionally significant, it tends by its nature to be more heavily weighted toward capital projects – such as roadway preservation, transit extensions and replacement of transit vehicles. The majority of funds that go to operate, maintain, and manage the region’s transportation system – both for transit and streets and roads – are not a part of the TIP though they are a significant part of Plan Bay Area. For this reason, the TIP investments are not representative of the broader funding picture in Plan Bay Area, the region’s long-range plan.

Another feature of the TIP that distinguishes it from the region’s long-range plan is that it tends to be a more dynamic document – meaning that it is revised frequently to reflect changing fund sources and project changes, and on-going programming efforts. For example, the current 2015 TIP does not yet reflect over \$1.7 billion in Federal Transit Administration (FTA) formula funds because the Commission has not yet adopted a final program for the four years of the TIP. These funds have historically been directed to transit rehabilitation. Once the action occurs, the 2015 TIP will be amended to include the projects and funding. As context, the 2011 TIP was revised over 30 times between its adoption and the approval of the 2013 TIP.

### **Equity and Environmental Justice Considerations**

As the federally designated MPO, MTC is responsible for developing a long-range regional transportation plan and the TIP. The legal, regulatory, and policy framework for addressing equity and environmental justice as it relates to the long-range transportation planning process is included in Appendix A and includes: 1) Title VI of the Civil Rights Act; 2) Federal Guidance on Environmental Justice; and 3) MTC’s Environmental Justice Principles.

These laws, regulations, and policies form the basis of analyzing MTC’s Plan Bay Area for equity and inform the 2015 TIP Investment Analysis. MTC is building on the work undertaken in the 2011 TIP Investment Analysis, the 2013 TIP Investment Analysis, the Transportation 2035 analysis, and the Equity Analysis for Plan Bay Area including some enhancements based on feedback from stakeholders on the prior analysis. We continue to seek feedback on the methodology and future enhancements to the analysis.

### **Bay Area – Demographic Context**

Before embarking on a discussion of the analysis, it is important to understand demographic and travel patterns for the Bay Area. In terms of overall demographics, roughly 31 percent of the region’s households are low-income, defined as households with incomes that fall below roughly 200 percent of the federal poverty level for a family of four. Also, the Bay Area is now a “majority minority” region with 58 percent of the households in the racial/ethnic minority category. Table 1 provides summary information on demographics.

**Table 1. Population Distribution by Income and Race/Ethnicity**

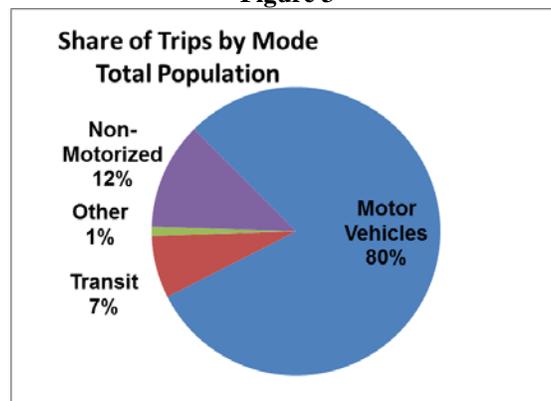
<b>Population Distribution by Household Income</b>		
	<b>Population</b>	<b>% of Total</b>
<b>Low-Income (<math>\leq</math> \$50,000)</b>	2,211,080	31%
<b>Not Low-Income (<math>&gt;</math> \$50,000)</b>	4,843,266	69%
<b>Total</b>	7,054,346	100%
<b>Population Distribution by Race/Ethnicity</b>		
	<b>Population</b>	<b>% of Total</b>
<b>Minority</b>	4,117,836	58%
<b>Non-Minority</b>	3,032,903	42%
<b>Total</b>	7,150,739	100%

Sources: 2010 Census SF1; 2010 American Community Survey (ACS): Public Use Microdata Sample 1 Year Estimates.

Notes: Low-income universe is the population in households, excluding persons living in group quarters. Low-income households adjusted for inflation across different data sources/years to capture households with incomes below \$50,000 per year in 2006 dollars.

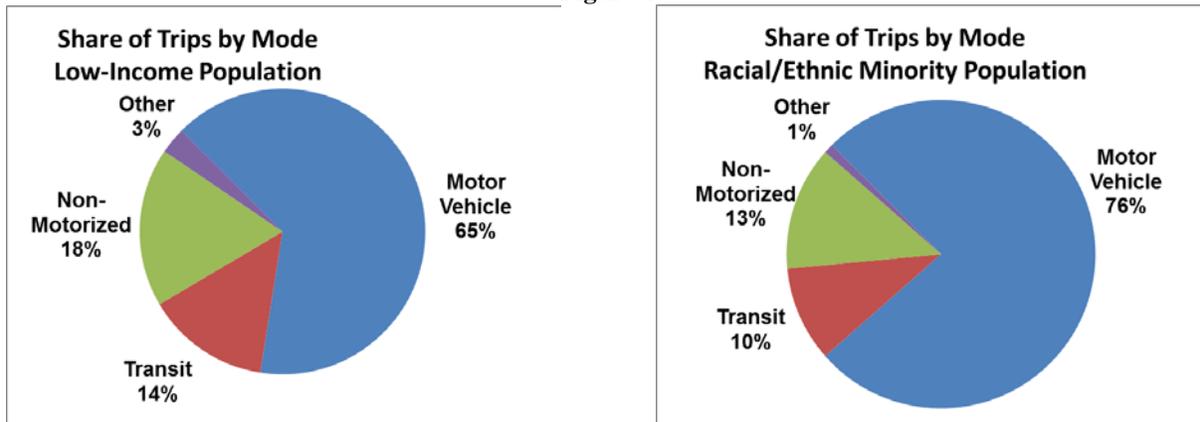
Most notably in terms of travel patterns, Figure 3 illustrates that trips by all Bay Area residents are overwhelmingly made by motor vehicle (80 percent) by the population at large, followed by non-motorized trips (12 percent), and transit (7 percent). While there are real differences for travel patterns for minority and low-income populations, motor vehicles are still the primary mode for trips at 65 percent or greater for both groups (see Figure 4).

**Figure 3**



Source: 2000 Bay Area Travel Survey.

Figure 4



Source: 2000 Bay Area Travel Survey.

### Investment Analysis Overview and Results

The 2015 TIP Investment Analysis uses the following analytical methodology to compare how low-income and minority communities may be affected by the proposed investments in the 2015 TIP:

- Population Use-Based Analysis:** This analysis is use-based. It compares the estimated percent of investment for low-income and minority populations to the percent of use of the transportation system (both roadways and transit) by low-income and minority populations. In the aggregate, the analysis measures transit and motor vehicle trips using the 2000 Bay Area Travel Survey (2000 BATS). In drilling deeper into the slice of roadway investment alone, the analysis uses vehicle miles traveled (VMT) as the measure of system use from the 2000 BATS. Similarly, for a more refined look at transit investment alone, transit trips are measured using data from MTC's 2006 Transit Passenger Demographic Survey.
- Mapped Projects Analysis:** In addition to the analytical methodologies framework and based on feedback received from the MTC Policy Advisory Council, staff has also mapped projects in the 2015 TIP that are mappable and overlaid them over Communities of Concern; and census tracts with above average minority populations (included as Appendix C).
- Title VI Analysis:** MTC is using the above methodologies within the broader Transportation Investment Analysis framework along with a disparate impact analysis of the Transportation Investment Analysis results to meet federal Title VI requirements.

The results are discussed below. Appendix B includes definitions and data sources used in this analysis.

### Population Use-Based Analysis

The population-based analysis was conducted as follows:

- The 2015 TIP investments were separated into two modes: transit and road/highway.

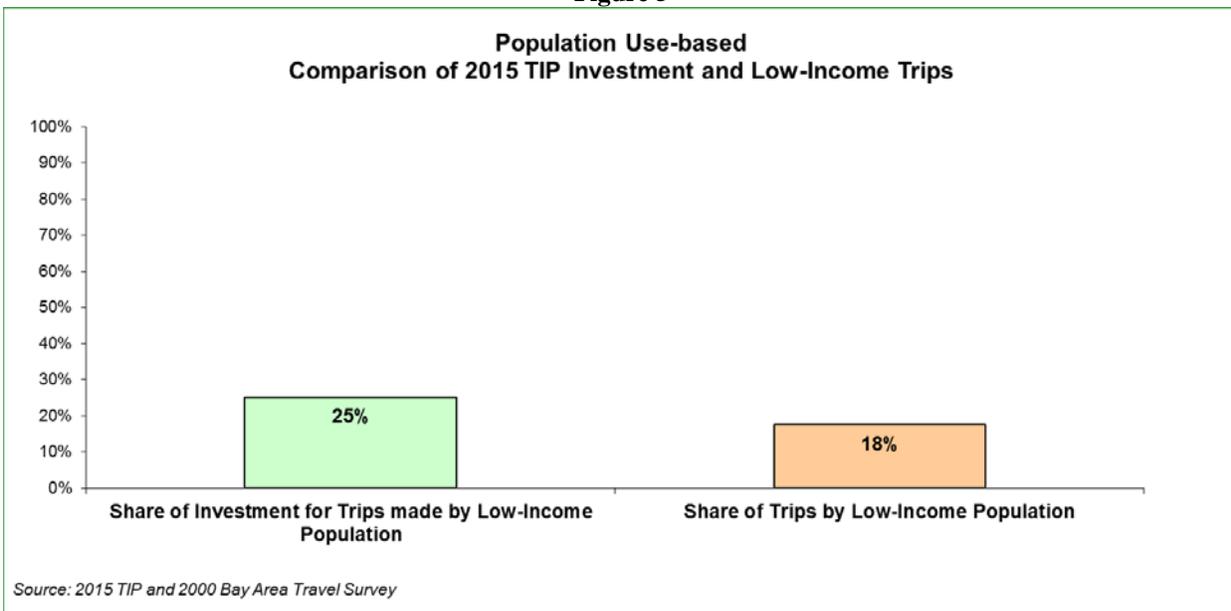
- Investments were allocated in each category to low-income and minority populations, and other populations according to each groups' usage share of each mode at the county or transit operator level.
  - First, to analyze what share of each mode (transit and roads/highways) low-income and minority populations utilize, the following definitions were used:
    - *Low-Income Households*: Low-income households were defined as households earning \$50,000 or less. This is roughly equivalent to 200 percent of the federal poverty level for a family of four.
    - *Minority Households*: For this analysis, minority households were defined using U.S. Census Bureau definitions.
  - Second, the assignment of investment by usage was performed by multiplying the percent of use of the mode by the investment in that particular mode. This analysis was conducted at the county level for highways and roadways and at the transit-operator level for transit. As an illustrative example, for a \$50 million state highway project in Alameda County, 18 percent or \$9 million, would have been assigned as a financial benefit to low-income populations and the remaining 82 percent or \$41 million to other populations because 18 percent of Alameda County motor vehicle trips are made by low-income populations based on the 2000 BATS. A similar approach was followed for transit investment allocations. For multimodal, aggregate analysis, trip data from the 2000 BATS were used. For the in-depth transit analysis, data came from MTC's 2006 Transit Passenger Demographic Survey. For the focused roadway analysis, vehicle miles traveled (VMT) data from the 2000 BATS were used.
- Lastly, the investments by mode (from county or transit operator data) were summed for low-income and minority populations and for all other populations based on each group's usage share of each mode. The percent of usage of the system by the target and other populations was then compared to the percent of investment for trips supporting that population.

As a regional-level analysis, this assessment is quite coarse, and has several limitations. The most significant shortcoming is that the analysis does not directly assess the benefit and burden of specific projects or programs. With respect to assigning investment benefit from expansion projects to households, this analysis is limited to assuming that existing usage demographics apply, since current demographic and travel surveys do not include future riders or drivers who will be attracted to the areas served by these expansions either as origins and destinations. Moreover, the roadway-usage share does not account for the benefit to the region's transit vehicles that share the roads with private automobiles. Also, for simplicity, pedestrian and bicycle projects were assigned to local streets and roads and not specifically assigned based on usage by low-income or minority populations of these facilities, or walk/bike mode share.

**Population Use-Based Results**

Table 2. Population Use-Based Comparison of 2015 TIP Investment and Trips by Income Distribution			
	2015 TIP Investments	% of Investment	% of Trips
Trips by People Living in Low-Income Households ( $\leq$ \$50k/yr)	\$2,311,730,342	25%	18%
Trips by People Living in Not-Low Income Households ( $>$ \$50k/yr)	\$7,040,576,551	75%	82%
<b>Total</b>	<b>\$9,352,306,893</b>	<b>100%</b>	<b>100%</b>

Figure 5

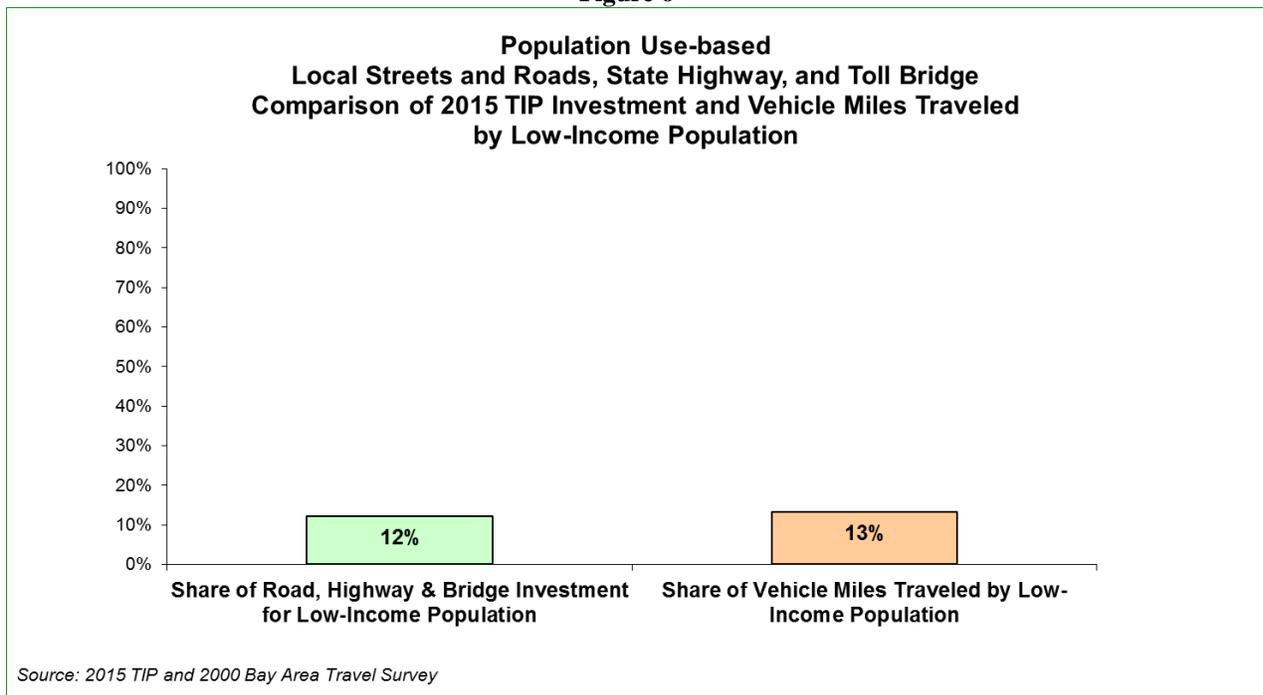


**Observations**

- The share of investment in projects that support trips made by people living in low-income households (25%) is greater than the proportion of trips made by people living in households that earns \$50,000 or less (18%).
- While low-income households make up 31% of the population in the Bay Area (Source: 2010 American Community Survey [ACS]: Public Use Microdata Sample 1 Year Estimates) people living in these households account for only 18% of all trips (Source: 2000 Bay Area Travel Survey).

Table 3. Population Use-Based Local Streets and Roads, State Highway, and Toll Bridge Comparison of 2015 TIP Investment and Vehicle Miles Traveled by Income Distribution			
	Road, Highway & Bridge Investment	% of Investment	% of Vehicle Miles Traveled
Drivers Living in Low-Income Households (<\$50k/yr)	\$578,905,196	12%	13%
Drivers Living in Not Low-Income Households (>\$50k/yr)	\$4,186,008,941	88%	87%
<b>Total</b>	<b>\$4,764,914,137</b>	<b>100%</b>	<b>100%</b>

Figure 6



**Observations**

- The share of investments in local road, state highway and toll bridge systems that benefit drivers living in low-income households (12%) is slightly lower than the share of total vehicle miles traveled by drivers living in low-income households (13%).
- While low-income households account for 31% of the population in the Bay Area (Source: 2010 American Community Survey [ACS]: Public Use Microdata Sample 1 Year Estimates) the drivers living in these households account for only 13% of the driving done in the region (Source: 2000 Bay Area Travel Survey).

Table 4. Population Use-Based Transit Comparison of 2015 TIP Investment and Passenger Trips by Income Distribution			
	Transit Investment	% of Investments	% of Passenger Transit Trips
Passengers Living in Low-Income Households (≤\$50k/yr)	\$2,503,093,084	55%	55%
Passengers Living in Not Low-Income Households (>\$50k/yr)	\$2,084,299,672	45%	45%
<b>Total</b>	<b>\$4,587,392,756</b>	<b>100%</b>	<b>100%</b>

Figure 7

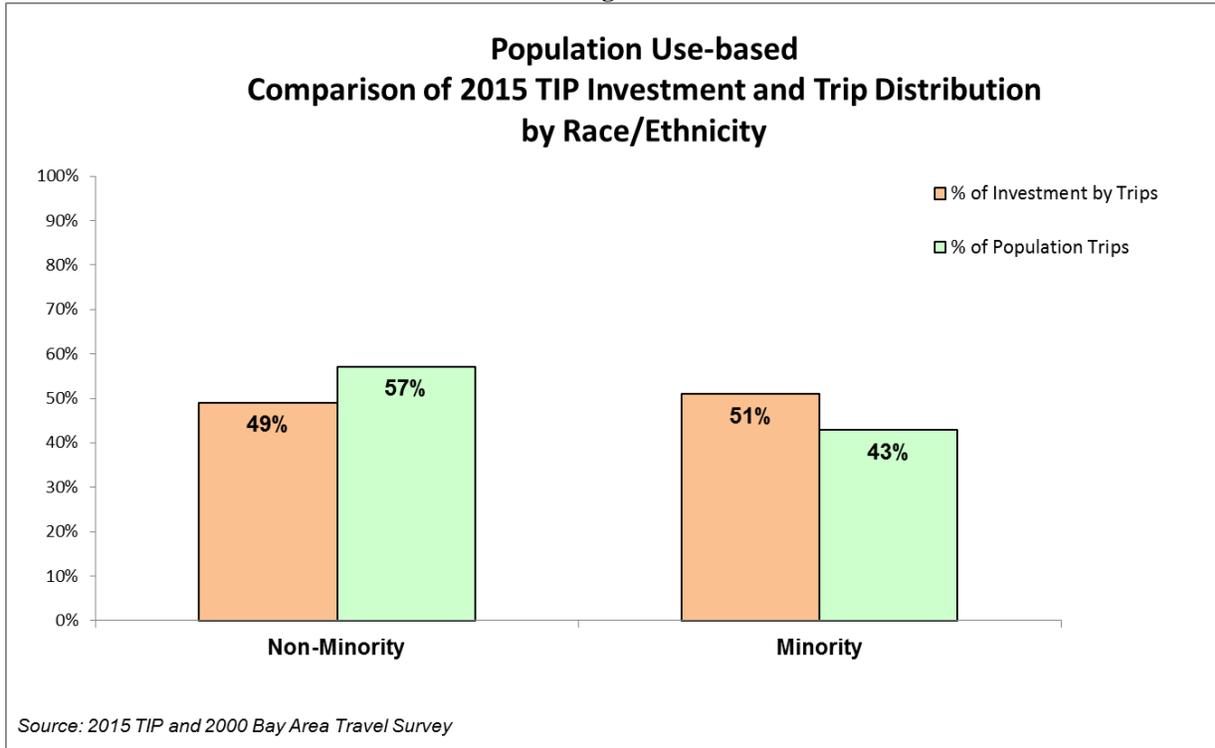


**Observations**

- The share of transit investment for passengers living in low-income households (55%) is equivalent to the share of transit trips taken by passengers living in low-income households (55%).
- While the share of total low-income households in the Bay Area is 31% of the population (Source: 2010 American Community Survey [ACS]: Public Use Microdata Sample 1 Year Estimates), passengers from these households account for 55% of transit trips (2006-2007 Transit Passenger Demographic Survey).

Table 5. Population Use-Based Comparison of 2015 TIP Investment and Trip Distribution by Race/Ethnicity			
Race/Ethnicity	Investment by Trips	% of Investment	% of Trips
Non-Minority	\$4,617,246,286	49%	57%
Minority	\$4,735,060,607	51%	43%
<b>Total</b>	<b>\$9,352,306,893</b>	<b>100%</b>	<b>100%</b>

Figure 8

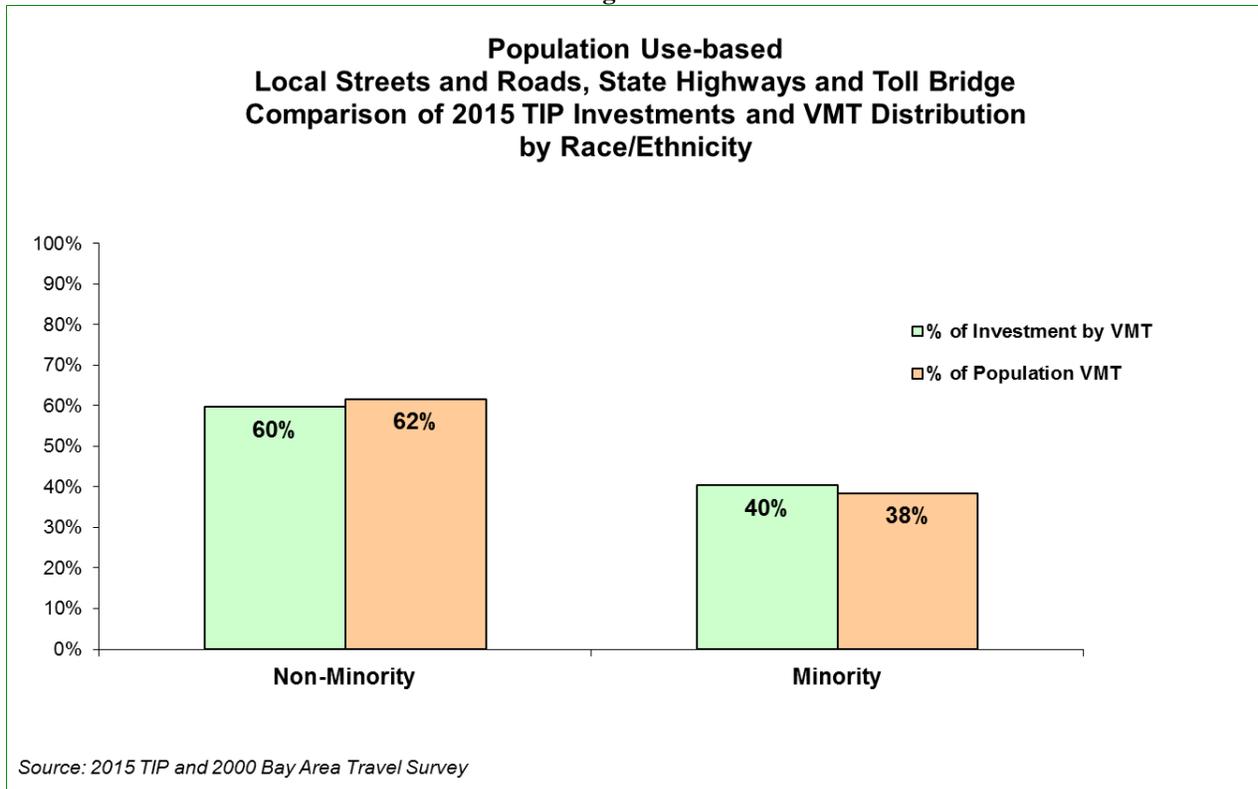


**Observations**

- Minority households make up 58% of the population, and take 43% of all trips in the Bay Area.
- The share of transportation investments in the Bay Area that support minority population trips (51%) is greater than the share of trips taken by these communities (43%).

Table 6. Population Use-Based Local Streets and Roads, State Highways and Toll Bridge Comparison of 2015 TIP Investments and VMT Distribution by Race/Ethnicity			
Race/Ethnicity	Investment by VMT	% of Investment	% of Population VMT
Non-Minority	\$2,842,836,373	60%	62%
Minority	\$1,922,077,764	40%	38%
<b>Total</b>	<b>\$4,764,914,137</b>	<b>100%</b>	<b>100%</b>

Figure 9

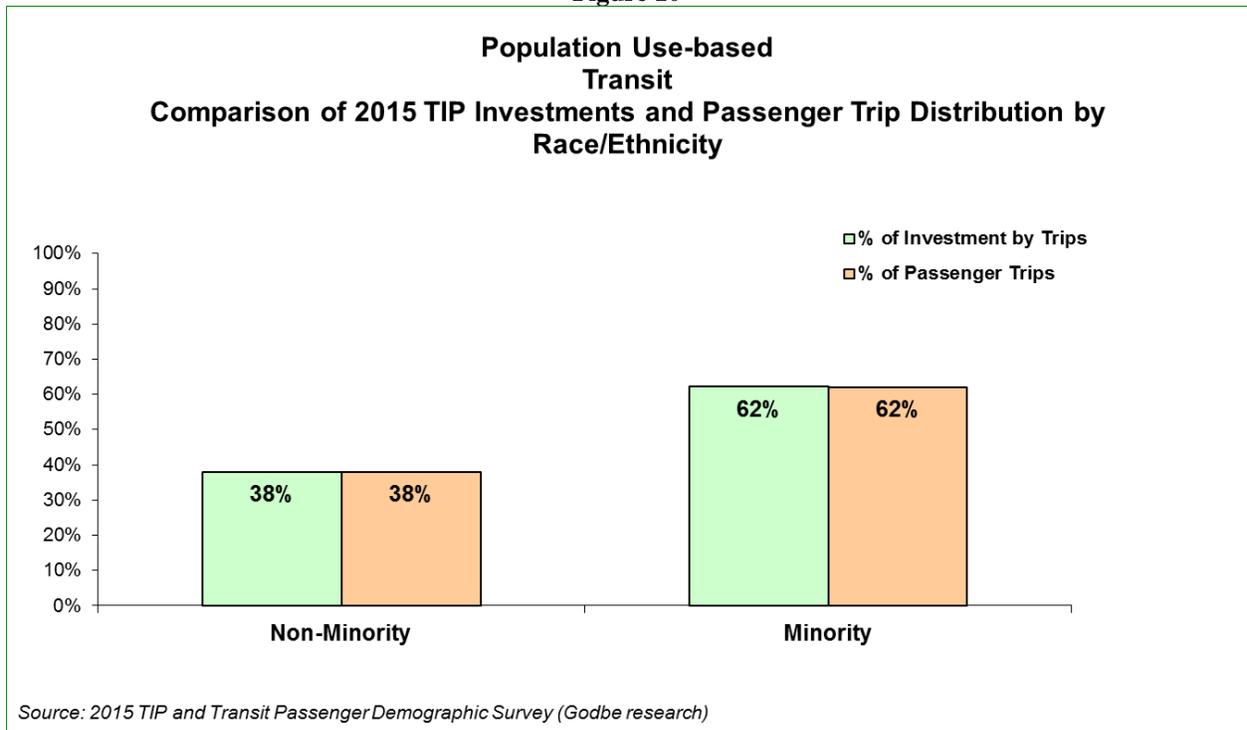


**Observations**

- Minority households make up 58% of the population in the Bay Area, and account for 38% of the vehicle miles traveled in the Bay Area.
- The share of local streets and roads, state highway, and toll bridge investments that support minority communities in the Bay Area (40%) is greater than the share of vehicle miles traveled by minority populations at 38%.

Table 7. Population Use-Based Transit Comparison of 2015 TIP Investments and Passenger Trip Distribution by Race/Ethnicity			
Race/Ethnicity	Investment by Trips	% of Investment	% of Passenger Trips
Non-Minority	\$1,736,422,788	38%	38%
Minority	\$2,850,969,968	62%	62%
<b>Total</b>	<b>\$4,587,392,756</b>	<b>100%</b>	<b>100%</b>

Figure 10



**Observations**

- While minority groups make up 58% of the Bay Area population, this population accounts for 62% of all transit trips.
- The share of investment in racial/ethnic minority transit trips (62%) is equivalent the share of transit trips made by minority populations (62%).

### **Mapped Project Analysis**

To supplement the population/use-based analysis described above, MTC mapped projects in the TIP that are mappable and overlaid them against communities of concern as well as census tracts with concentrations of minority populations that are above the regional average. This analysis is in response to stakeholder feedback that it is also important to analyze the overall spatial distribution of projects to assess equitable access to TIP investments.

The project mapping analysis also has some 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 operations and maintenance of their entire system, which cannot be represented as a simple point or line on a map in relation to a specific community.

Second, despite previous attempts by MTC to quantify the spatial distribution of regional investments in response to stakeholder requests (as in the 2011 TIP Investment Analysis), stakeholders have not agreed on how investments can be appropriately accounted for in terms of whether or not a specific project or investment truly benefits a specific community and to what degree.

Given these limitations, the Regional Equity Working Group, which reviewed and provided input on the Transportation Investment Analysis methodology for Plan Bay Area and the draft 2013 TIP, recommended a more straightforward qualitative, rather than quantitative, assessment of the spatial distribution of mappable projects included in the TIP.

This qualitative assessment mainly involves examining the distribution of projects for any apparent systematic exclusion of communities of concern or minority communities in the spatial distribution of benefits, or any apparent systematic imbalances between the distribution of projects between communities of concern and the remainder of the region, or between minority and non-minority communities.

The component of this analysis overlaying TIP investments against communities with above-average minority populations also constitutes part of the Title VI Analysis. All the maps are included as part of Appendix C.

**Title VI Analysis**

The Federal Transit Administration released new guidance in October 2012 specifying how MPOs such as MTC are to certify compliance with the provisions of Title VI of the Civil Rights Act of 1964 in the metropolitan planning process. This section describes the methodology that MTC is using to meet these requirements within the broader Transportation Investment Analysis framework for the TIP, including the methodology for conducting a disparate impact analysis of the Transportation Investment Analysis results. This methodology is the same as the one utilized in Plan Bay Area.

The key FTA requirements the Transportation Investment Analysis addresses in terms of Title VI are:

FTA Requirement	Related Plan Bay Area Analysis
<b>“Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data ...”</b>	(1) <b>Project mapping analysis</b> overlaying mappable TIP projects against 2010 Census tracts with above-average concentrations of minority residents.
<b>“[C]harts that analyze the impacts of the distribution of State and Federal funds in the aggregate for public transportation purposes...”</b>	(2) <b>Population/use-based analysis</b> of <u>only</u> public transit investments using State and Federal funding sources.
<b>“An analysis of impacts identified in paragraph [above] that identifies any disparate impacts on the basis of race, color, or national origin”<sup>1</sup></b>	(3) <b>Disparate impact analysis</b> comparing TIP investments per capita for minority populations identified under (2) above as a percentage of per-capita investments identified for non-minority populations.

The disparate impact analysis under (3) incorporates the quantitative results produced by the population/use-based analysis under (2) to make a determination of any disparate impact. The mapping analysis under (1) therefore shows all investments overlaid against minority tracts, regardless of fund source, and is a qualitative analysis only. MTC does have the ability to specify public transportation investments that use State and Federal funds in the population/use-based analysis under (2) above. Some of the State and Federal fund sources included in the Title VI analysis of are: FTA 5307, FTA 5309, FTA 5311, FTA 5337 funds, STP/CMAQ, and Proposition 1B funds.

It is important to note that a substantial share of total funding dedicated to transit operators for ongoing operations and maintenance of their entire system comes from state, regional and local sources and are generally not included as part of the TIP as they may not require a federal action.

<sup>1</sup> FTA Circular 4702.1B, page VI-2.

To conduct the disparate impact analysis under (3) above, the results of the population/use-based analysis of public transportation investments using State and Federal funds under (2) are first expressed in terms of investments per capita for both minority and non-minority transit riders (or total population) in the region as follows:

$$\text{Minority benefit per capita} = \frac{\text{Total transit investments allocated to minority riders}}{\text{Total regional minority transit ridership (or population)}}$$

$$\text{Non-minority benefit per capita} = \frac{\text{Total transit investments allocated to non-minority riders}}{\text{Total regional non-minority transit ridership (or population)}}$$

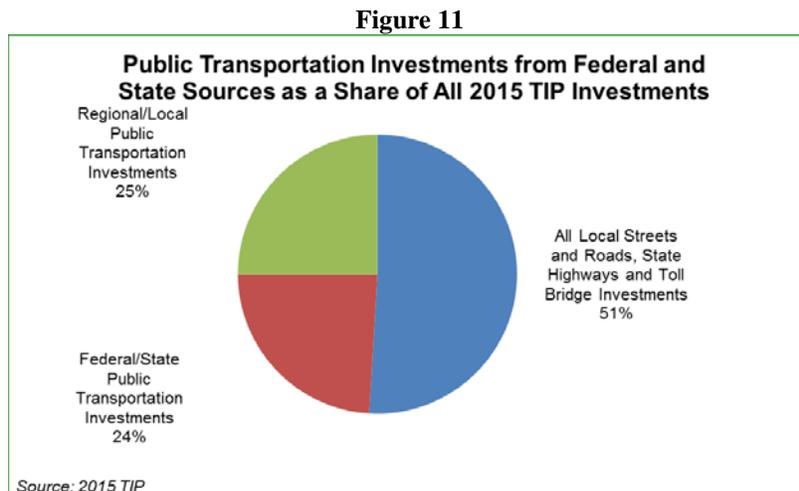
Next, the minority and non-minority per-capita benefit results are compared, expressing the minority benefit per capita as a percentage of the non-minority benefit per capita:

$$\text{Result (\%)} = \frac{\text{Minority benefit per capita}}{\text{Non-minority benefit per capita}}$$

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 represents a disparate impact, a general practice in disparate impact analysis is to use the percentage result to determine whether any differences between benefits for minority or non-minority populations may be considered statistically significant. If a disparate impact 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.”<sup>2</sup>

### Results of the Title VI Analysis

First, to address FTA’s MPO-specific requirements for Title VI disparate-impact analysis, Federal and State funding sources for public transportation are separated out from the total TIP investments, as illustrated below in Figure 11.



<sup>2</sup> FTA Circular 4702.1B, page VI-2.

Next, using the same methodology as the population/use based investment analysis presented above, the \$2.2 billion in the TIP’s public transportation investments using Federal and State sources is distributed to minority and non-minority transit riders based on their respective shares of ridership among the various Bay Area transit agencies, and total investment shares are compared to the region’s overall transit ridership and populations as a whole, as shown in Table 8.

<b>Table 8. Comparison of Federal and State Transit 2015 TIP Investments by Minority Status</b>				
<b>Race/Ethnicity</b>	<b>Total Federal/ State Transit Funding (Millions \$)</b>	<b>% of Total Federal/ State Transit Funding</b>	<b>% of Regional Transit Ridership</b>	<b>% of Total Regional Population</b>
<b>Minority</b>	<b>\$1,369</b>	<b>61%</b>	<b>62%</b>	<b>58%</b>
<b>Non-minority</b>	<b>\$879</b>	<b>39%</b>	<b>38%</b>	<b>42%</b>
<b>Total</b>	<b>\$2,248</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Finally, investments are distributed on a per-capita and per-rider basis so that investment benefits accruing to the region’s minority riders and populations can be compared as a percentage to investment benefits accruing to the region’s non-minority populations and riders, as shown in Table 9 and Table 10, respectively.

<b>Table 9. Disparate Impact Analysis of 2015 TIP Investments: Population Analysis</b>				
<b>Race/Ethnicity</b>	<b>Total Federal/ State Transit Funding (Millions \$)</b>	<b>Regional Population (2010)</b>	<b>Per-Capita Benefit</b>	<b>Minority Per-Capita Benefit as % of Non-minority Per-Capita Benefit</b>
<b>Minority</b>	<b>\$1,369</b>	<b>4,117,836</b>	<b>\$ 332</b>	<b>115%</b>
<b>Non-minority</b>	<b>\$879</b>	<b>3,032,903</b>	<b>\$ 290</b>	
<b>Total</b>	<b>\$2,248</b>	<b>7,150,739</b>		

Source: 2015 TIP, 2006 Transit Passenger Demographic Survey, 2010 Census SF1.

<b>Table 10. Disparate Impact Analysis of 2015 TIP Investments: Ridership Analysis</b>				
<b>Race/Ethnicity</b>	<b>Total Federal/ State Transit Funding (Millions \$)</b>	<b>Avg. Daily Transit Ridership (2006)</b>	<b>Per-Rider Benefit</b>	<b>Minority Per-Capita Benefit as % of Non-minority Per-Capita Benefit</b>
<b>Minority</b>	<b>\$1,369</b>	<b>816,059</b>	<b>\$1,677</b>	<b>95%</b>
<b>Non-minority</b>	<b>\$879</b>	<b>498,303</b>	<b>\$1,764</b>	
<b>Total</b>	<b>\$2,248</b>	<b>1,314,362</b>		

Source: 2015 TIP, 2006 Transit Passenger Demographic Survey, MTC Statistical Summary for Bay Area Transit Operators.

On a per-capita population basis, Table 9 shows minority persons in the region are receiving 115% of the benefit of the TIP’s investments in public transportation from Federal and State sources compared to non-minority persons. On a ridership basis, Table 10, shows that minority riders are receiving 95% of the benefit of Federal- and State-funded transit investments in the TIP compared to non-minority riders. This 5% difference between minority and non-minority per-rider benefits does not demonstrate a systematic disbenefit to minority populations, and therefore this analysis finds no disparate impact in the distribution of Federal and State funding for public transportation purposes between minority and non-minority populations or riders in the 2015 TIP.

**Key Findings**

The purpose of this investment analysis is to compare the allocation of 2015 TIP investments between low-income and minority populations and all other populations. The key question addressed is: “Are low-income and minority populations sharing equitably in the TIP’s financial investments?”

This analysis attempts to take a relatively conservative approach to assigning investments (or “benefit”) to low-income households given some of the limitations of the analysis. The results suggest that according to several indices, the 2015 TIP invests greater public funding to the benefit of low-income and minority communities than their proportionate share of the region’s population or trip-making as a whole.

- As shown in Table 11 the analysis concludes in the aggregate that there is a relatively higher proportional investment in the 2015 TIP in minority and low-income populations than the proportionate share of trips taken by minority and low-income populations.

**Table 11. Findings for Aggregate Analysis**

	Share of 2015 TIP Investment	Share of Total Trips/Population
<b>Population Use-Based</b>		
<i>Low-Income</i>	25%	18% (total trips)
<i>Minority</i>	51%	43% (total trips)

- In delving deeper into the investments by mode, one finds that the results are similar. For example, for transit, the results show that for low-income populations, the share of investment (55 percent) was equivalent to the share of trips (55 percent). The share of investment in minority transit trips (62 percent) is both slightly greater than the minority share of the total population (58 percent) and also equivalent to the share of transit trips made by minority populations (62 percent). For streets and road investments, these findings also hold true for the minority trips, but not for trips by low-income population when compared against the Vehicle Miles Traveled. However, in no case, do the results appear to demonstrate a systematic disbenefit to low-income or minority populations.
- The Title VI Analysis finds no disparate impact in the distribution of Federal and State funding for public transportation purposes between minority and non-minority populations or riders in the 2015 TIP.

## Appendix A: Regulatory and Policy Context for Environmental Justice in Transportation Planning

The contents of this report are intended to satisfy several federal requirements as well as regional policy objectives as summarized in this section. At the federal level are civil rights protections afforded to persons against discrimination in federal programs on the basis of race, color, or national origin; and federal environmental justice objectives. At the regional level are MTC's own adopted environmental justice principles in addition to numerous efforts by MTC and ABAG to incorporate social equity throughout the agencies' regional planning efforts, including Plan Bay Area.

### Title VI of the Civil Rights Act of 1964: The Right of Non-discrimination in Federally Funded Programs on the Basis of Race, Color, or National Origin

This section discusses the relationship between Title VI, its requirements, and the development of the Regional Transportation Plan and Transportation Improvement Program.

#### ***What Is Covered under Title VI?***

Title VI of the Civil Rights Act of 1964 states that “[n]o 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.”<sup>3</sup> Title VI further authorizes Federal agencies that make grants (for example, the U.S. Department of Transportation) to promulgate regulations to effectuate compliance with the law's provisions.

#### ***What Are MTC's Responsibilities?***

As a recipient of DOT funds, MTC is responsible for complying with DOT regulations related to Title VI<sup>4</sup> (see sidebar). In October 2012, the Federal

### U.S. Department of Transportation Title VI Regulations

Specific discriminatory actions prohibited under DOT Title VI regulations include:

- (1) A recipient under any program to which this part applies may not, directly or through contractual or other arrangements, on the grounds of race, color, or national origin.
  - (a) Deny a person any service, financial aid, or other benefit provided under the program;
  - (b) Provide any service, financial aid, or other benefit to a person which is different, or is provided in a different manner, from that provided to others under the program;
  - (c) Subject a person to segregation or separate treatment in any matter related to his receipt of any service, financial aid, or other benefit under the program;
  - (d) Restrict a person in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program;
  - (e) Treat a person differently from others in determining whether he satisfies any admission, enrollment, quota, eligibility, membership, or other requirement or condition which persons must meet in order to be provided any service, financial aid, or other benefit provided under the program;
  - (f) Deny a person an opportunity to participate in the program through the provision of services or otherwise or afford him an opportunity to do so which is different from that afforded others under the program; or
  - (g) Deny a person the opportunity to participate as a member of a planning, advisory, or similar body which is an integral part of the program.
- (2) A recipient, in determining the types of services, financial aid, or other benefits, or facilities which will be provided under any such program, or the class of person to whom, or the situations in which, such services, financial aid, other benefits, or facilities will be provided under any such program, or the class of persons to be afforded an opportunity to participate in any such program; may not, directly or through contractual or other arrangements, utilize criteria or methods of administration which have the effect of subjecting persons to discrimination because of their race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program with respect to individuals of a particular race, color, or national origin.

<sup>3</sup> 42 U.S.C §2000d.

<sup>4</sup> 49 CFR part 21.

Transit Administration issued a new Circular with guidance to its recipients for compliance with federal Title VI requirements.<sup>5</sup> This guidance lays out requirements for FTA’s recipients, including metropolitan planning organizations (MPOs) such as MTC, to ensure that their programs, policies, and activities comply with the Department of Transportation’s Title VI regulations. The guidance offers several specific requirements that MPOs must submit to the State and to FTA as part of their overall Title VI Programs, including:

- “All general requirements set out in [the General Requirements section of the] Circular.
- “A demographic profile of the metropolitan area that includes identification of the locations of minority populations in the aggregate;...
- “A description of the procedures by which the mobility needs of minority populations are identified and considered within the planning process;
- “Demographic maps that overlay the percent minority and non-minority populations as identified by Census or ACS data ... and charts that analyze the impacts of the distribution of State and Federal funds in the aggregate for public transportation purposes...;
- “An analysis of impacts identified in paragraph (4) that identifies any disparate impacts on the basis of race, color, or national origin, and, if so, determines 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.”<sup>6</sup>

Specific methods MTC uses in addressing these requirements for the Regional Transportation Plan are included in Plan Bay Area. In addition to analyzing the long-range Plan as described in this report, MTC’s broader Title VI program includes a variety of commitments to ensure nondiscrimination on the basis of race, color, or national origin in its programs and activities.<sup>7</sup>

### **Environmental Justice: Avoiding, Minimizing, or Mitigating Disproportionately High and Adverse Effects on Low-Income and Minority Populations**

Environmental justice is a concept related to, but distinct from civil rights and Title VI. Whereas Title VI provides legal protection from discrimination in Federal programs on the basis of “race, color, or national origin,” environmental justice in the context of this Plan relates to an administrative framework for internal management of federal agencies to ensure their programs and activities incorporate environmental justice principles and do not disproportionately burden low-income and minority populations.

The environmental justice movement emerged following the broader environmental movement of the 1960s and 1970s, out of concern that predominantly minority and low-income communities were bearing disproportionate environmental burdens relative to their non-minority and non-low-income counterparts. In this sense, the “justice” aspect of environmental justice is

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<sup>5</sup> Federal Transit Administration Circular 4702.1B, *Title VI Requirements and Guidelines for Federal Transit Administration Recipients*: [http://www.fta.dot.gov/documents/FTA\\_Title\\_VI\\_FINAL.pdf](http://www.fta.dot.gov/documents/FTA_Title_VI_FINAL.pdf).

<sup>6</sup> FTA Circular 4702.1B, page VI-1f.

<sup>7</sup> For more information, see MTC’s Title VI page at: [http://www.mtc.ca.gov/get\\_involved/rights/title\\_VI.htm](http://www.mtc.ca.gov/get_involved/rights/title_VI.htm).

rooted in the basic concept of fairness in terms of an equitable distribution of environmental benefits and burdens, and seeks to promote participation of community members in the decision-making processes that affect them.

### ***What Is Covered under Environmental Justice?***

In an effort to address environmental justice concerns mounting across the country during the 1980s and early 1990s, in 1994 President Clinton signed Executive Order 12898, *Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*. This Order directed each Federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations...”<sup>8</sup> Furthermore, the Executive Order directed each agency to develop an agency-wide environmental justice strategy.

Accordingly, the U.S. Department of Transportation issued its original Environmental Justice Order in April 1997, establishing DOT’s overall strategy and procedures to be used by DOT to comply with EO 12898. In response to the Memorandum of Understanding on Environmental Justice signed by heads of Federal agencies on August 4, 2011, in an effort to “renew the process under Executive Order 12898 for agencies to provide environmental justice strategies and implementation progress reports,”<sup>9</sup> DOT issued its revised environmental justice strategy, DOT Order 5610.2(a), in March 2012. This Order places responsibility on the head of each Operating Administration within DOT to determine whether programs, policies, or activities for which they are responsible will have an adverse human health or environmental effect on minority and low-income populations and whether that adverse effect will be disproportionately high.

As operating administrations within DOT, the Federal Highway Administration and Federal Transit Administration both define three fundamental environmental justice principles consistent with the Executive and DOT Orders as follows:

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

The DOT Order further defines “disproportionately high and adverse effect on minority and low-income populations” as an adverse effect that:

1. is predominately borne by a minority population and/or a low-income population, or

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<sup>8</sup> Executive Order 12898 (1994, Clinton).

<sup>9</sup> Memorandum of Understanding on Environmental Justice and Executive Order 12898, available at: <http://www.epa.gov/compliance/ej/resources/publications/interagency/ej-mou-2011-08.pdf>.

2. will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

In June 2012, the Federal Highway Administration released a new and updated Order **6640.23A, FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**.<sup>10</sup> This Order clarifies FHWA's environmental justice policies, guidance, and responsibilities consistent with the updated DOT Order.

In August 2012, the Federal Transit Administration released final guidance in the form of a Circular on incorporating environmental justice principles into plans, projects, and activities that receive funding from FTA.<sup>11</sup> This final guidance provides recommendations to recipients of FTA funds, including metropolitan planning organizations, on how to fully engage environmental justice populations in the public transportation decision-making process; how to determine whether environmental justice populations would be subjected to disproportionately high and adverse human health or environmental effects as a result of a transportation plan, project, or activity; and how to avoid, minimize, or mitigate these effects.

### ***MTC Environmental Justice Principles***

In addition to MTC's long-standing commitment to supporting DOT, FHWA, and FTA in fulfilling their environmental justice mission under the Executive Order, MTC's commitment to environmental justice is embodied in the Environmental Justice principles adopted by the Commission in 2007. Developed in a collaborative process involving regional environmental-justice stakeholders and transportation agencies, the adopted principles affirm MTC's ongoing commitments to:

1. Create an open and transparent public participation process that empowers low-income communities and communities of color to participate in decision making that affects them.
2. 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.

### ***What Are MTC's Responsibilities?***

Recipients' responsibilities regarding environmental justice are part of FTA's annual Master Agreement, which requires recipients, including MTC, to promote environmental justice by following and facilitating FTA's compliance with Executive Order 12898, and following DOT's Order on environmental justice. MTC fulfills these responsibilities through a range of programs and activities that support environmental justice principles, including:

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<sup>10</sup> FHWA Order 6640.23A, available at: <http://www.fhwa.dot.gov/legregs/directives/orders/664023a.htm>.

<sup>11</sup> FTA Circular 4703.1, *Environmental Justice Policy Guidance for Federal Transit Administration Recipients*, available at: [http://www.fta.dot.gov/legislation\\_law/12349\\_14740.html](http://www.fta.dot.gov/legislation_law/12349_14740.html).

- Identifying mobility needs of low-income and minority communities through MTC's Community Based Transportation Planning Program.
- Developing and implementing MTC's Public Participation Plan, which lays out specific strategies for engaging low-income and minority populations and other community stakeholders throughout the metropolitan planning process in general, and providing for input on the development of the Equity Analysis methodology and the definitions of environmental justice populations and performance measures in particular.
- Conducting an environmental justice analysis of the Regional Transportation Plan (as summarized in this report), including an analysis of the distribution of regional transportation investments for low-income and minority populations, and analysis of benefits and burdens using technical performance measures to determine whether the proposed investment strategy may present any disproportionately high and adverse human health and environmental effects on environmental justice populations.
- Continually refining and updating the data and analytical methods required to carry out environmental justice analysis at the regional, programmatic level, incorporating both stakeholder feedback and ongoing improvements in analytical technologies and data collection.

## Appendix B: Definitions and Data Sources

### Definitions

#### Minority

Minority populations include persons who identify as any of the following groups defined by the Census Bureau in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB):

- American Indian or Pacific Islander alone
- Asian alone
- Black or African-American alone
- Hispanic or Latino of any race
- Native Hawaiian or Pacific Islander alone

For the purposes of this report, all Hispanic and Latino residents of all races are included in the Hispanic and Latino definition, and only non-Hispanic or Latino persons are included in other minority groups. In addition, this report includes with the minority population those persons whose responses identify Some Other Race or Two or More Races. Accordingly, the “non-minority” population consists of all other persons not included in any of the above-named groups, namely those identifying as non-Hispanic white alone. Because the Bay Area is a “majority minority” region, the designation of non-Hispanic white persons as “non-minority” is not intended to be misleading, as this population still represents a relative majority (a plurality) in the region but not an absolute majority. Nevertheless, the term “non-minority” is used here to provide consistency and clarity with regard to federal guidance.

#### Low-Income Households

Many of the measures analyzed using the regional travel model are able to produce results for all low-income households, or persons living in low-income households, throughout the region, regardless of their residential location. Low-income households are defined in MTC’s travel model as having incomes of less than \$30,000 a year 2000 dollars (approximately \$38,000 in 2010 dollars), which represent the lowest 28% of households in 2010. Non-low-income households, as a basis for comparison, are defined as having incomes of \$30,000 or more per year in 2000 dollars, and represent the upper 72% of households.

Due to limitations of other regional data sources, the Plan Bay Area Transportation Investment Analysis defines low-income households as those earning \$50,000 per year or less (in 2006 dollars).

#### Low-Income Persons

A low income person is defined by MTC as persons identified by the Census Bureau as below 200% of the federal poverty level. MTC established the 200% of poverty threshold in 2001 to account for the Bay Area’s high cost of living relative to nationally defined poverty thresholds; the Census Bureau does not adjust the poverty level for different parts of the continental U.S. where different costs of living to factor into the varying affordability of basic necessities. The Census Bureau establishes poverty status for individuals based on a combination of an individual’s household composition, size, and income. As of 2010, the 200% threshold

represented a household income of approximately \$23,000 a year for a single person living alone, and approximately \$47,000 a year for a family of four.

Communities of Concern

In discussing how to define target populations for equity analysis, Equity Working Group members emphasized the importance of spatial location within the region with respect to the impacts of future development patterns and transportation investments. Thus, staff worked with Working Group members to develop a spatial definition of communities of concern, against which performance measure results could be compared with non-communities of concern (typically referred to in the analysis as the “remainder of region”). Except where noted, data used to define communities of concern is from the Census Bureau’s 2005–09 American Community Survey, the most recent data set available for this analysis that is readily compatible with MTC’s existing travel-analysis-zone definitions used for spatial analysis, which are based on 2000 Census geography.

In response to feedback that the analysis would be more informative with a more focused definition of communities of concern than was used in past RTP Equity Analyses, and a recommendation from MTC’s Policy Advisory Council to consider seniors and persons with disabilities in addition to low-income and minority populations, staff proposed a revised community-of-concern definition which identifies communities with multiple overlapping potential disadvantage factors relevant to the Plan Bay Area planning process.

Thresholds were proposed to incorporate the most significant concentrations of eight different target populations while minimizing inclusion of non-target population members. The list of factors, reviewed by the Equity Working Group and approved by MTC’s Planning Committee in October 2011, are summarized in the table below.

Communities of concern were then defined as recommended by Equity Working Group members as those tracts having concentrations of 4 or more factors listed above, or having concentrations of both low-income and minority populations. Based on this definition, a total of 305 out of 1,405 Census tracts in the region were identified as communities of concern.

<b>Disadvantage Factor</b>	<b>% of Regional Population<sup>1</sup></b>	<b>Proposed Concentration Threshold</b>
1. Minority	54%	70%
2. Low Income (<200% of Poverty)	23%	30%
3. Limited English Proficiency	9%	20%
4. Zero-Vehicle Households	9%	10%
5. Seniors 75 and Over	6%	10%
6. Population with a Disability	18%	25%
7. Female-Headed Families with Children	10%	15%
8. Cost-burdened Renters <sup>2</sup>	10%	15%

<sup>1</sup>Source: 2005-09 American Community Survey tract-level data; data for population with a disability is from 2000 Census, the most recent available.

<sup>2</sup>Defined as the share of housing units occupied by renters paying more than 50% of income for rent.

## Data Sources

This section describes the various data sources used to perform the 2015 TIP Investment Analysis.

### Decennial Census and American Community Survey

The Census Bureau provides two key data sets used in this report. One, the decennial Census, was most recently completed in 2010 and is a 100% count of all persons in the United States as mandated in the U.S. Constitution. The decennial Census includes complete data on all persons' race and ethnicity as well as age and certain household and family characteristics.

The second Census Bureau data product used is the American Community Survey (ACS). The ACS is an ongoing annual sample-based survey of the U.S. population and provides basic demographic information similar to the decennial Census but also provides far greater detail on various socioeconomic characteristics, including such data relevant to this analysis as household income, poverty status, level of proficiency with English, household vehicle ownership, disability status, housing costs, and information about workers' typical commuting habits.

Because the ACS is based on sample data collected by the Census Bureau (as opposed to 100% counts of the population like the decennial Census), situations calling for very detailed socioeconomic data require using larger samples. Sample sizes can be increased by looking at either larger geographic areas or else multiple years' worth of data for smaller areas. Hence, looking at just one year's worth of data to get a single "snapshot" in time may require looking only at larger geographies such as counties, while looking at very detailed geographies at a neighborhood level may require examining up to five continuous years' worth of sample data collected from the same relatively small area.

In this report, data from the 2010 Census is used primarily in the regional demographic profile and to characterize the regional minority population for the Transportation Investment Analysis described. Data from the American Community Survey is used in the definition of communities of concern, and to characterize the regional low-income population for the Transportation Investment Analysis.

### Bay Area Travel Survey (BATS)

The Bay Area Travel Survey (BATS) is MTC's periodic regional household travel survey, the most recent of which was completed in 2000. BATS2000 is an activity-based travel survey that collected information on all in-home and out-of-home activities, including all trips, over a two-day period for more than 15,000 Bay Area households. The survey provides detailed information on many trip characteristics such as trip purpose, mode, origins and destinations, as well as household demographic and socioeconomic characteristics, and informs development of the regional travel model. In this report, BATS is used primarily to provide data on usage of the regional transportation system, and in particular the share of trip-making and vehicle-miles of travel (VMT) on the region's road and highway system, for different demographic and socioeconomic groups in the Transportation Investment Analysis.

The region's household travel survey is currently in the process of being updated as part of a broader statewide travel survey project. Data collection and analysis efforts are currently under way, and new data from the updated regional travel survey is expected to be available sometime in 2014.

#### Bay Area Transit Passenger Demographic Survey

In 2006 MTC conducted a comprehensive survey of all Bay Area transit operators to collect consistent demographic and socioeconomic data for all the region's transit riders. Data collected included race/ethnicity, age, fare payment information, household income, and vehicle availability. Results for this survey are used in the Transportation Investment Analysis to determine transit-investment benefits to low-income and minority populations based on these groups' share of transit use on individual systems and across the region as a whole. The Transit Passenger Demographic Survey also informs the Title VI Analysis by establishing a consistent demographic profile of the region's overall transit ridership across all systems by minority and non-minority status.

To update this data on an ongoing basis, MTC is now working with transit operators on ridership surveys that will collect a variety of consistent demographic and travel-activity data across all transit systems surveyed. In order to make best use of available funding and resources to support these extensive survey efforts, surveys are being conducted on different systems on a serial basis over time. Surveys are anticipated to be complete for all systems and updated regional data available in 2015.

## Appendix C: Maps

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