

TIP OVERVIEW

What is the TIP and what projects are included?

The Transportation Improvement Program (TIP) is a list of surface transportation projects, programs and investment priorities in the nine-county San Francisco Bay Area over a four year period. As the federally-designated Metropolitan Planning Organization (MPO) for the nine-county San Francisco Bay Area, Metropolitan Transportation Commission (MTC) is required by California Department of Transportation (Caltrans) to prepare and adopt a regional TIP at least once every two years.

The TIP can be found online at: www.mtc.ca.gov/our-work/fund-invest/transportation-improvement-program

Projects Included in the TIP

The TIP includes all surface transportation projects that are federally funded, require a federal action, or are considered regionally significant for air quality conformity purposes. The majority of projects in the TIP are federally-funded, although some local or state-funded projects may also be included, particularly those that are large in scale or impact travel patterns over a relatively large geographic area, such as a new lane on a state highway. Given its federal focus, many locally or state-funded projects are not included in the TIP, such as pavement preservation projects, transit operations, planning efforts, and minor sidewalk or intersection improvements.

Role of the TIP

The TIP represents the projects that Bay Area jurisdictions, transit agencies, and other public entities intend to construct or implement in the near-term. Each project in the TIP must include details on project location and scope, as well as a comprehensive accounting of the amount and sources of funds that have been expended, are committed, or estimated to be reasonably available for the project.

The TIP also serves as an implementation tool of the long-range transportation plan. A project cannot receive federal funds or other federal project-related approvals unless the project is included in the TIP. As a result, inclusion in the TIP is a critical factor of any major project, if using federal funds or otherwise requiring federal actions.

Federal Requirements for the TIP

- Cover a period of at least 4 years.
- Updated at least once every 4 years (Caltrans requires an update every 2 years).
- Include all transportation projects with federal funds, requiring federal action, or regionally significant for air quality conformity purposes.
- Projects must be consistent with the region's long-range transportation plan.
- Financially constrained by year (funds committed to projects cannot exceed the funds estimated to be available).
- Financial plan that demonstrates that programmed projects can be implemented.
- Accompanied by an evaluation and finding of air quality conformity.
- Provide public involvement and opportunity to comment prior to TIP approval.

TRANSPORTATION PLANNING AND PROGRAMMING

Where does the TIP fit in the planning process?

As the near-term listing of federal projects and programs that stem from the long-range transportation plan, all projects included (also referred to as “programmed”) in the TIP must be consistent with, and work to implement the vision of the regional plan.

Plan Bay Area

Plan Bay Area is the comprehensive regional plan for the nine-county Bay Area, coordinating both land use and transportation investments from 2013 through 2040. The plan is a federal requirement for all metropolitan areas, and also serves as the state-mandated Regional Transportation Plan (RTP) and Sustainable Community Strategy (SCS) for the Bay Area.

The current plan is available online at: <http://planbayarea.org/the-plan/adopted-plan-bay-area-2013.html>. Hard copies of the plan can also be viewed at MTC’s offices at 375 Beale St., San Francisco.

The development of the next plan, Plan Bay Area 2040, is currently underway. Information about the plan update can be found online at: <http://planbayarea.org/plan-bay-area.html>. The 2017 TIP will also be updated along with Plan Bay Area 2040 adoption, to ensure consistency with the new plan.

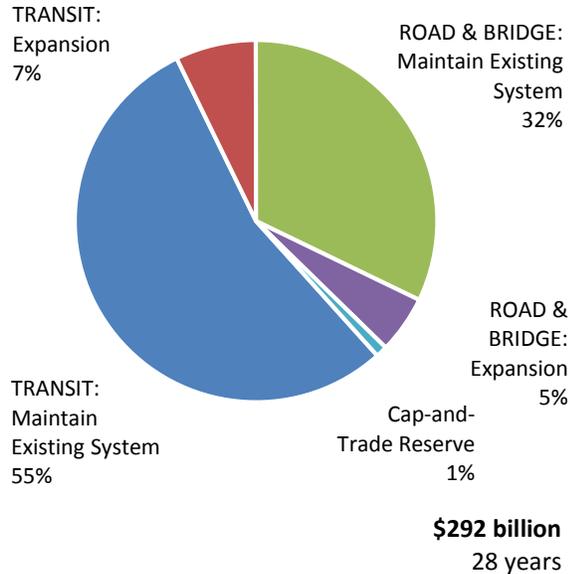
TIP in Context

Although the TIP and long-range transportation plan are related, there is an important distinction that complicates any side-by-side comparison between the two documents. While Plan Bay Area includes the universe of federal, state and local revenues reasonably available to implement the transportation projects, program, and strategies over the 28 years of the plan, the TIP is much more focused on the near-term projects with federal funding. As a result, the TIP tends to be heavily weighted toward large capital projects, such as transit and highway expansions, that are more likely to require federal funds. The vast majority of funds that go to operate, maintain, and manage the region’s existing transportation system, a top priority of Plan Bay Area, are not typically captured in the TIP. An illustration of this distinction is provided on the following page.

Plan and TIP Investments by Mode/Type

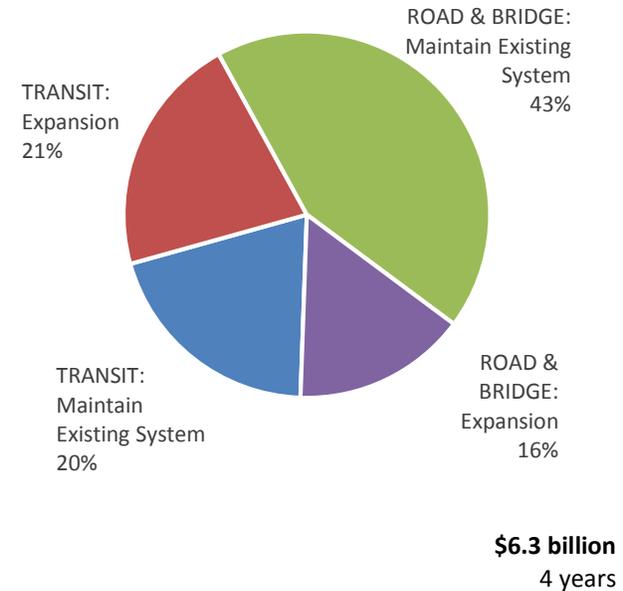
Plan Bay Area Investments

Expenditures by Mode/Type



2017 TIP Investments

Expenditures by Mode/Type



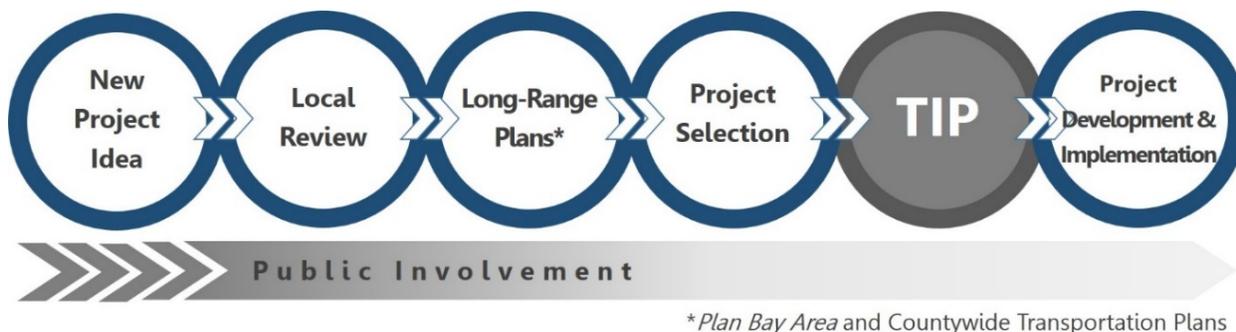
Projects from Idea to Implementation

Before projects are ever identified in the long-range plan or the TIP they have gone through several iterations of review and refinement. Ideas for projects first emerge through planning efforts at the jurisdictional, transit operator, and regional levels. Some of the primary sources for projects are the county congestion management programs, countywide transportation plans, transit operator short-range transit plans or similar transit capital and service planning efforts, and the state highway planning process conducted by Caltrans. These local and sub-regional planning efforts are then merged at a regional level through the long-range transportation plan.

When the project scope, schedule, and budget are developed, the project may then be proposed for funding. Project sponsors (the agencies designated to implement the projects) are responsible for applying for the funds, initiating requests for TIP programming, and carrying their projects to completion. In the Bay Area, the implementing agencies include public transit operators, Caltrans, MTC, the Bay Area Air Quality Management District, the Congestion Management Agencies (CMAs), the nine Bay Area counties, several joint power authorities, and the individual cities within each county.

Below is an illustration of how the TIP fits into the overall planning and programming process, from the time a transportation project is first conceived to its ultimate construction or implementation.

Idea to Implementation Flowchart



Congestion Management Process

In addition to preparing a long-range plan, MTC is required under federal regulations to address congestion management for the Bay Area through a process that provides for effective management and operation of new and existing facilities. The Congestion Management Process (CMP) is based on collaboration among transportation partners and stakeholders, specifically focused on congestion management strategies for key corridors. These strategies include public transit, carpool and vanpool programs, transportation demand management, and operational strategies to maximize the use of existing facilities. The current CMP is provided as Appendix A-70.

As part of the TIP development process, project sponsors must identify whether a project is capacity increasing for single occupant vehicles (SOVs). The project sponsor and CMAAs review these projects and confirm that they are consistent with all regional and local plans and processes. Appendix A-74 identifies the projects included in 2017 TIP that have been identified as capacity increasing for SOVs.

Air Quality Conformity

The TIP and long-range plan must also demonstrate transportation conformity. Transportation conformity is required under the Clean Air Act (Section 176(c) and 42 U.S.C. 7506(c)) to ensure that federally funded or approved highway and transit activities are consistent with, or conform to, the purpose of the state air quality implementation plan (SIP). Conformity to the purpose of the SIP means that transportation activities will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant national ambient air quality standards (NAAQS) or any interim milestones. The Environmental Protection Agency (EPA) transportation conformity rule (40 CFR Parts 51 and 93) establishes the criteria and procedures for determining whether metropolitan transportation plans, TIPs, and federally supported highway and transit projects conform to the purpose of the SIP. Transportation conformity applies to designated nonattainment and maintenance areas for transportation-related criteria pollutants: ozone, PM_{2.5}, PM₁₀, carbon monoxide, and nitrogen dioxide.

Using the latest planning assumptions, MTC conducted a new air quality conformity analysis for the 2017 TIP. The conformity determination was made under the motor vehicles emissions

budget contained in the 2001 1-Hour Ozone Attainment Plan for the ozone precursors and the 2004 Carbon Monoxide Maintenance Plan. Conformity for the 2006 24-hour PM2.5 standard was demonstrated by conducting an interim conformity test. The Transportation Control Measures (TCMs) A through E in the approved 2001 Ozone Attainment Plan have been fully implemented. All information on the timely implementation of TCMs in the Conformity Report is still current. A copy of the analysis is included as Appendix A-4, and is available online at <http://mtc.ca.gov/our-work/fund-invest/transportation-improvement-program> and at MTC's offices at 375 Beale St., San Francisco.

Federal Statewide Transportation Improvement Program

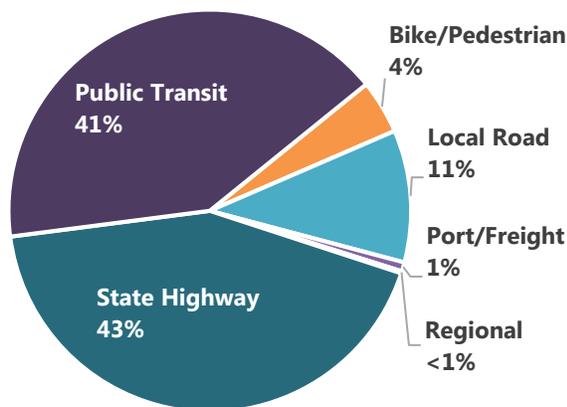
Just as each metropolitan region is required to develop a TIP, each state is required to develop a Federal Statewide Transportation Improvement Program (FSTIP) pursuant to federal regulations. The FSTIP includes all projects with federal funds, those that require a federal action and regionally significant transportation projects throughout the state. In California, regional TIPs are included in the FSTIP without modification once approved by the relevant Metropolitan Planning Organization (MTC, in the case of the Bay Area) and after the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and Federal Environmental Protection Agency (EPA) make their required findings of financial constraint and air quality conformity. Projects must be in the FSTIP before funding authorities, such as FTA, FHWA, or the California Department of Transportation (Caltrans), can "obligate" funds (i.e., commit funds to contract) and therefore, before sponsors can actually spend any of these monies. Once adopted by MTC, the 2017 TIP will be submitted to Caltrans for incorporation into the FSTIP.

2017 TIP: FEATURES AND HIGHLIGHTS

What investments are included in the 2017 TIP?

The 2017 TIP for the nine-county San Francisco Bay Area includes more than 700 transportation projects¹ with more than \$6.3 billion in committed federal, state, and local funding for federal fiscal years 2016-17 through 2019-20. The cumulative project cost for these projects, including funds spent in prior years as well as funding planned for future years, totals over \$44.7 billion.

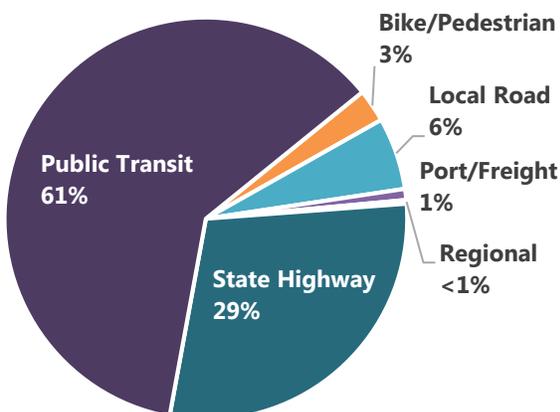
2017 TIP Investments 2017-2020, \$6.3 billion



2017 TIP Investments by County Millions \$, rounded

| County | 2017-2020 Programmed Investments | Total Project Costs ² |
|---------------|----------------------------------|----------------------------------|
| Alameda | \$567 | \$4,333 |
| Contra Costa | \$324 | \$1,929 |
| Marin | \$219 | \$1,383 |
| Napa | \$31 | \$250 |
| San Francisco | \$1,247 | \$13,039 |
| San Mateo | \$661 | \$2,716 |
| Santa Clara | \$510 | \$10,023 |
| Solano | \$65 | \$1,403 |
| Sonoma | \$78 | \$926 |
| Multi-County | \$2,614 | \$8,651 |
| Total | \$6,316 | \$44,653 |

2017 TIP Total Project Costs All years, \$44.7 billion



¹ In addition to individual project listings, the TIP also includes grouped listings or lump-sum entries for certain program categories, such as state highway maintenance, that summarize project and funding information for several additional projects.

² The 2017 TIP covers four years of committed funding for 2017 through 2020. In addition, the TIP is required to identify the total project cost for each project, including funding spent in years prior to 2017 as well as funding planned for the years after 2020.

New Projects

The majority of projects in the 2017 TIP have been rolled over from the previous 2015 TIP. However, a relatively small number of projects were added during the development of the 2017 TIP. The list of projects new to the TIP is available as Appendix A-63.

Archived Projects

Once projects no longer have funding programmed in the TIP, either because they have been completed or because the funds have been directed to another project, they are archived from the TIP. Federal regulations require that the TIP identify the major projects that were implemented from the previous TIP. Appendix A-64 lists all projects that were present in the 2015 TIP that have been archived in revisions to the 2015 TIP or are being archived as part of the 2017 TIP development. This list does not include the projects that are in the 2017 TIP for illustrative purposes (projects with no funding within the four active years of the TIP) or projects that have been deleted (either as a project cancellation or through redirecting the funds to different projects or phases).

After the adoption of the 2015 TIP, and including projects archived as part of the 2017 TIP development process, \$9 billion dollars in federal, state, regional, and local funding was archived on a total of 424 projects. Additional information about the funding for archived projects is provided below.

Funding Breakdown of Archived Projects, by Fund Type

| Fund Type | Total Funding (all years) | | Funding from 2015 TIP Period (FY 2015 - FY 2018) | |
|--------------|------------------------------|-------------|--------------------------------------------------------|-------------|
| | \$, in millions | % | \$, in millions | % |
| Federal | \$2,525 | 28% | \$241 | 17% |
| State | \$3,534 | 39% | \$995 | 71% |
| Regional | \$788 | 9% | \$5 | 0% |
| Local | \$2,199 | 24% | \$160 | 11% |
| Total | \$9,047 | 100% | \$1,401 | 100% |

Funding Distribution of Archived Projects, by Travel Mode

| Mode | Projects | | Total Funding (all years) | | Funding from 2015 TIP Period (FY 2015 - FY 2018) | |
|-------------------|------------|-------------|------------------------------|-------------|-----------------------------------------------------|-------------|
| | # | % | \$, in millions | % | \$, in millions | % |
| Bike/Pedestrian | 110 | 26% | \$319 | 4% | \$20 | 1% |
| Local Road | 103 | 24% | \$897 | 10% | \$158 | 11% |
| Port/Freight Rail | 2 | 0% | \$38 | 0% | \$0 | 0% |
| Regional | 7 | 2% | \$42 | 0% | \$6 | 0% |
| State Highway | 56 | 13% | \$4,463 | 49% | \$1,014 | 72% |
| Public Transit | 146 | 34% | \$3,289 | 36% | \$203 | 14% |
| Total | 424 | 100% | \$9,047 | 100% | \$1,401 | 100% |

The largest capital projects, in terms of total project costs, that have been archived are listed in the table below. The full list of archived projects is available as Appendix A-64.

Top 10 Largest Archived Projects (\$ in millions)

| Rank | County | Project Sponsor | Project Name | Total Funding (all years) |
|------|--------------|-----------------|--------------------------------------------------|---------------------------|
| 1 | Santa Clara | BART | Warm Springs Extension | \$890 |
| 2 | San Mateo | Caltrans | SR 1 Devils Slide Bypass | \$512 |
| 3 | Alameda | BART | Oakland Airport Connector | \$484 |
| 4 | Contra Costa | CCTA | SR 4 East Widening from Somersville to SR 160 | \$385 |
| 5 | Various | BART | Transbay Tube Seismic Retrofit | \$276 |
| 6 | San Mateo | Caltrans | US 101 Auxiliary Lanes - 3rd to Millbrae | \$188 |
| 7 | Alameda | ACTC | I-580 (TriValley) Corridor - EB HOV Lanes | \$179 |
| 8 | Various | Caltrain | Caltrain Grade Separation Program | \$147 |
| 9 | Alameda | ACTC | I-580 (TriValley) Corridor - WB HOV & Connectors | \$137 |
| 10 | Santa Clara | VTA | Santa Clara/Alum Rock Transit Improvement/BRT | \$115 |

Grouped Listings

Federal regulations allow projects that are exempt from air quality conformity analysis (project types listed under 40 CFR 93.126 and 127, Tables 2 & 3) to be grouped together as single project listings in the TIP (23 CFR 450.216 and 450.324). Examples of some of the project types that can be grouped in the TIP include: certain transit programs, pavement resurfacing projects, safety projects, and bridge rehabilitation projects.

The process for adding or revising a grouped (lump sum) listing, the State Managed Grouped Project Listings Process, is developed by the California Federal Programming Group (CFPG), California Department of Transportation (Caltrans), Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). MTC’s grouped listings in the 2017 TIP follow and adhere to the provisions of the State-Managed Grouped Project Listings Process.

The back-up lists for grouped listings in the 2017 TIP are included in Appendix A-65 and can also be accessed on the MTC’s TIP website: www.mtc.ca.gov/our-work/fund-invest/tip/tip-grouped-listings.

ADA projects

Consistent with federal requirements, the 2017 TIP identifies projects implementing the Americans with Disabilities Act (ADA) required paratransit and key station plans. The ADA requires that public transportation services and facilities, including trains and rail stations, be accessible to persons with disabilities. Rail system operators are allowed to designate certain stations as key stations and to make these readily accessible to and useable by individuals with disabilities, including individuals who use wheelchairs. Most of the projects adopted in the key station plans have been implemented. Appendix A-66 lists some of the ongoing ADA implementation transit projects.

2017 TIP Schedule

The development of the 2017 TIP began in November 2015 and is scheduled for final federal approval in December 2016. The public outreach schedule for the 2017 TIP is as follows:

- June 24, 2016: Beginning of public review period for Draft 2017 TIP and Draft Transportation Air Quality Conformity Analysis of the Amended Plan and 2017 TIP
- July 13, 2016: Public hearing scheduled during MTC Programming and Allocations Committee meeting
- July 28, 2016: End of public review and comment of Draft 2017 TIP and Draft Transportation Air Quality Conformity Analysis of the Amended Plan and 2017 TIP
- September 14, 2016: MTC Programming and Allocations Committee review of 2017 TIP and Transportation Air Quality Conformity Analysis of the Amended Plan and 2017 TIP and referral to Commission
- September 28, 2016: Commission approval of 2017 TIP and Transportation Air Quality Conformity Analysis of the Amended Plan and 2017 TIP
- December 16, 2016: 2017 TIP Approval by FHWA and FTA (anticipated date)

MTC's responses to significant comments are included as an appendix to the 2017 TIP (Appendix A-77).

2017 TIP At-a-Glance

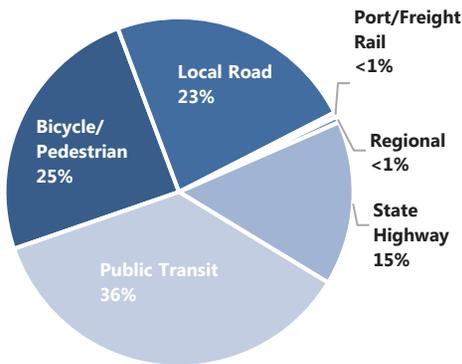
TIP-at-a-Glance provides a graphical summary of the number of projects, TIP funding and total project costs by mode, purpose and fund type for the entire region and each of the nine counties within the region.

Regional Distribution of Funds by Mode (Millions \$, rounded)

| Mode | # of Projects | | TIP Period Funding | | | | | Total Project Cost | | |
|--------------------|---------------|-------------|--------------------|----------------|--------------|--------------|--------------------|--------------------|-----------------|-------------|
| | | | FY 16/17 | FY 17/18 | FY 18/19 | FY 19/20 | TIP Period Funding | | | |
| Bicycle/Pedestrian | 176 | 25% | \$170 | \$63 | \$38 | \$3 | \$274 | 4% | \$1,188 | 3% |
| Local Road | 166 | 23% | \$215 | \$185 | \$65 | \$206 | \$671 | 11% | \$2,589 | 6% |
| Port/Freight Rail | 3 | <1% | \$5 | \$7 | \$17 | \$17 | \$46 | <1% | \$396 | <1% |
| Regional | 4 | <1% | \$11 | | | | \$11 | <1% | \$134 | <1% |
| State Highway | 109 | 15% | \$928 | \$711 | \$482 | \$590 | \$2,711 | 43% | \$12,986 | 29% |
| Public Transit | 258 | 36% | \$1,336 | \$909 | \$340 | \$18 | \$2,603 | 41% | \$27,360 | 61% |
| Total | 716 | 100% | \$2,665 | \$1,875 | \$942 | \$834 | \$6,316 | 100% | \$44,653 | 100% |

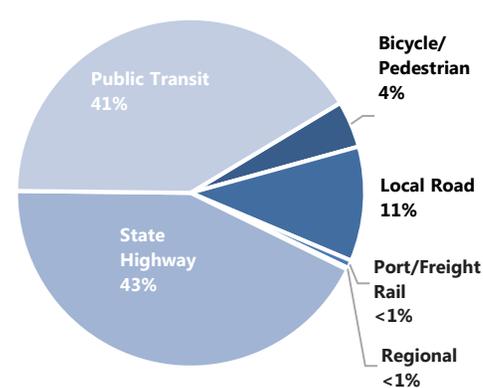
Share of Projects by Mode

Total number of Projects = 716



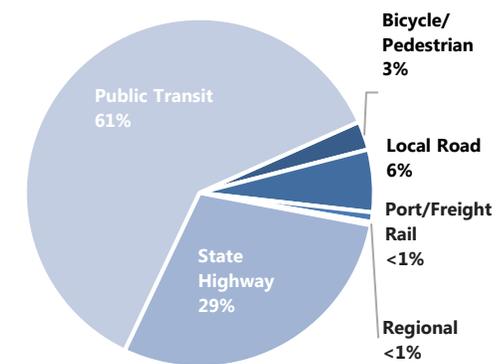
TIP Period Funding by Mode

Total Project Costs = \$6.3 billion



Total Project Cost by Mode

Total Project Costs = \$44.7 billion



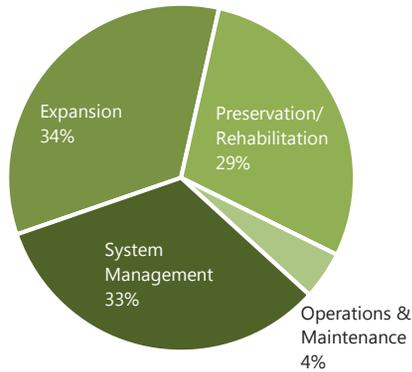
2017 TIP At-a-Glance, continued

Regional Distribution of Funds by Purpose (Millions \$, rounded)

| Purpose | # of Projects | | TIP Period Funding | | | | | | Total Project Cost | |
|-----------------------------|---------------|-------------|--------------------|----------------|--------------|--------------|--------------------|-------------|--------------------|-------------|
| | | | FY 16/17 | FY 17/18 | FY 18/19 | FY 19/20 | TIP Period Funding | | | |
| Expansion | 242 | 34% | \$1,415 | \$468 | \$165 | \$271 | \$2,319 | 37% | \$26,708 | 60% |
| Preservation/Rehabilitation | 206 | 29% | \$752 | \$1,074 | \$631 | \$468 | \$2,926 | 46% | \$13,425 | 30% |
| Operations & Maintenance | 32 | 4% | \$77 | | | | \$77 | 1% | \$675 | 1% |
| System Management | 236 | 33% | \$420 | \$333 | \$146 | \$95 | \$995 | 16% | \$3,845 | 9% |
| Total | 716 | 100% | \$2,665 | \$1,875 | \$942 | \$834 | \$6,316 | 100% | \$44,653 | 100% |

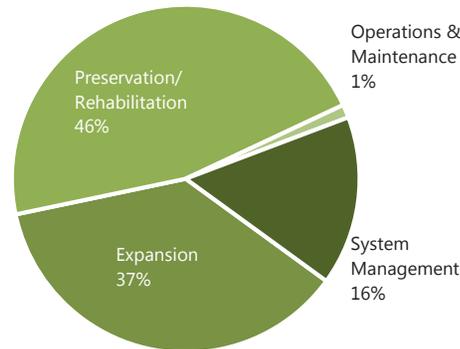
Share of Projects by Purpose

Total Projects = 716



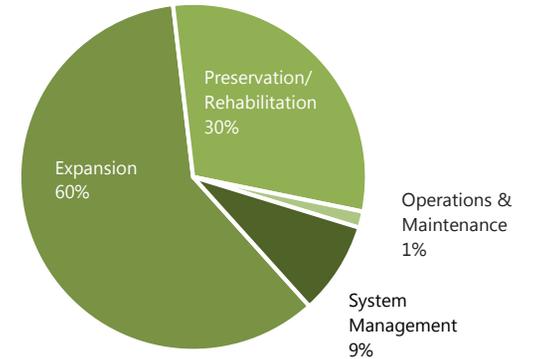
TIP Period Funding by Purpose

TIP Period Funding = \$6.3 billion



Total Project Cost by Purpose

Total Cost = \$44.7 billion

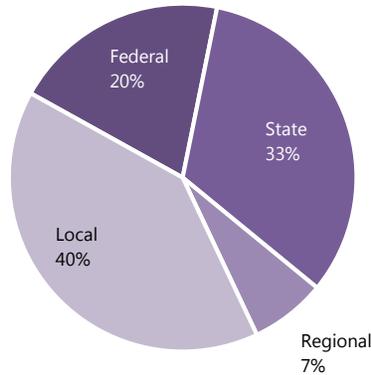


2017 TIP At-a-Glance, continued

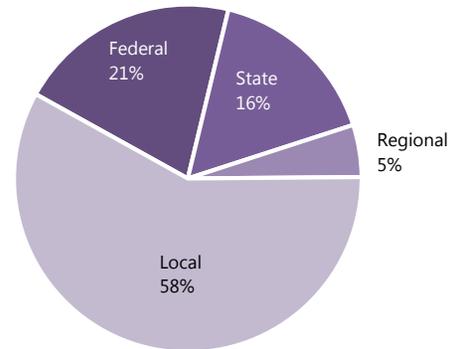
Regional Distribution of Funding by Source (Millions \$, rounded)

| Type | TIP Period Funding (in \$1,000s) | | | | | Total Project Cost | | |
|--------------|----------------------------------|----------------|--------------|--------------|--------------------|--------------------|-----------------|-------------|
| | FY 16/17 | FY 17/18 | FY 18/19 | FY 19/20 | TIP Period Funding | | | |
| Federal | \$695 | \$335 | \$105 | \$137 | \$1,272 | 20% | \$9,247 | 21% |
| State | \$573 | \$715 | \$380 | \$400 | \$2,067 | 33% | \$7,259 | 16% |
| Regional | \$231 | \$82 | \$67 | \$66 | \$445 | 7% | \$2,166 | 5% |
| Local | \$1,166 | \$744 | \$391 | \$231 | \$2,532 | 40% | \$25,980 | 58% |
| Total | \$2,665 | \$1,875 | \$942 | \$834 | \$6,316 | 100% | \$44,653 | 100% |

TIP Period Funding by Source
TIP Period Funding = \$6.3 billion



Total Project Cost Funding by Source
Total Project Cost = \$44.7 billion



2017 TIP At-a-Glance, continued

Distribution of Funding by Mode for Counties and Regional Projects (Millions \$, rounded)

| County | Bicycle/ Pedestrian | Local Road | Port/ Freight Rail | Regional | State Highway | Public Transit | Total TIP Period Funding |
|-----------------------|------------------------|--------------|-----------------------|-------------|------------------|-------------------|-----------------------------|
| Alameda | \$60 | \$97 | \$46 | | \$303 | \$61 | \$567 |
| Contra Costa | \$37 | \$48 | | <\$1 | \$189 | \$51 | \$324 |
| Marin | \$50 | \$17 | | | \$124 | \$28 | \$219 |
| Napa | \$9 | \$21 | | | \$1 | <\$1 | \$31 |
| San Francisco | \$28 | \$144 | | | \$147 | \$928 | \$1,247 |
| San Mateo | \$49 | \$17 | | | \$132 | \$463 | \$661 |
| Santa Clara | \$29 | \$44 | | | \$31 | \$405 | \$510 |
| Solano | \$6 | \$51 | | | \$4 | \$5 | \$65 |
| Sonoma | \$4 | \$38 | | | \$10 | \$25 | \$78 |
| Regional | \$3 | \$194 | | \$10 | \$1,770 | \$637 | \$2,614 |
| Total Bay Area | \$274 | \$671 | \$46 | \$11 | \$2,711 | \$2,603 | \$6,316 |

Distribution of Funding by Purpose for Counties and Regional Projects (Millions \$, rounded)

| County | Expansion | Maintenance/ Rehabilitation | Operations | System Management | Total TIP Period Funding |
|-----------------------|----------------|--------------------------------|-------------|----------------------|-----------------------------|
| Alameda | \$397 | \$48 | <\$1 | \$121 | \$567 |
| Contra Costa | \$256 | \$22 | | \$47 | \$324 |
| Marin | \$30 | \$136 | <\$1 | \$52 | \$219 |
| Napa | \$14 | \$3 | | \$14 | \$31 |
| San Francisco | \$973 | \$226 | | \$47 | \$1,247 |
| Santa Clara | \$86 | \$504 | | \$71 | \$661 |
| San Mateo | \$456 | \$11 | | \$43 | \$510 |
| Solano | \$52 | \$1 | \$1 | \$11 | \$65 |
| Sonoma | \$41 | \$16 | <\$1 | \$20 | \$78 |
| Regional | \$13 | \$1,957 | \$75 | \$569 | \$2,614 |
| Total Bay Area | \$2,319 | \$2,926 | \$77 | \$995 | \$6,316 |

2017 TIP At-a-Glance, continued

Distribution of Funding by Source for Individual Counties and Regional Projects
(Millions \$, rounded)

| County | Federal | State | Regional | Local | Total TIP Period Funding |
|-----------------------|----------------|----------------|--------------|----------------|-----------------------------|
| Alameda | \$59 | \$56 | \$67 | \$387 | \$567 |
| Contra Costa | \$78 | \$20 | \$23 | \$203 | \$324 |
| Marin | \$135 | \$3 | \$21 | \$60 | \$219 |
| Napa | \$11 | \$12 | | \$9 | \$31 |
| San Francisco | \$271 | \$106 | \$9 | \$861 | \$1,247 |
| San Mateo | \$71 | \$450 | | \$140 | \$661 |
| Santa Clara | \$260 | \$5 | | \$244 | \$510 |
| Solano | \$35 | \$24 | | \$7 | \$65 |
| Sonoma | \$59 | \$1 | | \$18 | \$78 |
| Regional | \$294 | \$1,391 | \$326 | \$602 | \$2,614 |
| Total Bay Area | \$1,272 | \$2,067 | \$445 | \$2,532 | \$6,316 |

2017 TIP: INVESTMENT DECISIONS

What is the overall investment focus of the 2017 TIP?

Transportation investments in the long-range plan and TIP are categorized into two primary categories for evaluation: maintenance and management of the existing transportation network and system expansion.

Investment Decisions

The current long-range transportation plan prioritizes the maintenance and management of the existing transportation system, by dedicating 87% of its projected \$292 billion in transportation revenues towards the existing network of transit, bridges, highways, and local streets and roads. That leaves roughly 13% of the plan's expenditures for projects that address expansion for transit, highways, local streets and roads, bridges, complete streets, as well as cap-and-trade reserve funds.

By comparison, 63% of the funds programmed in the 2017 TIP (\$4.0 billion) are dedicated to maintenance and management of the existing system, with 37% (\$2.3 billion) programmed for system expansion projects.

In comparing these investments side-by-side, it is important to keep in mind that while the plan includes the universe of revenues reasonably expected to be available to implement its planned transportation projects, programs, and strategies, the TIP is much more focused on projects with federal funding. As a result, the TIP ends up being more heavily weighted toward large capital projects, such as transit and highway expansions that are more likely to require federal funds. The vast majority of funds that go to operate, maintain, and manage the region's existing transportation system, a top priority of the long-range plan, are not typically captured in the projects programmed in the TIP.

A brief discussion of the three primary investment categories from Plan Bay Area and the more specific near-term funding strategies in the 2017 TIP follows. The detailed investment plan from Plan Bay Area can be found in Appendix A-62. Additional information on the financial constraint of the 2017 TIP is provided on page 33 of this section and in Appendix A-75.

Maintenance and Management of the Existing System

This investment category includes rehabilitation and replacement of transit vehicles and facilities as well as the upkeep of freeways and local roadways. Also included is management of the system through system operations programs.

- **Major investments:** Some of the most significant projects that the region is currently undertaking to ensure adequate maintenance and effective management of existing transportation systems are: regional toll bridge retrofit/rehabilitation programs, the BART railcar replacement program, US 101 Doyle Drive replacement, and transit preventative

maintenance for Santa Clara Valley Transportation Authority (VTA). For the full list of major projects in the TIP (projects with total costs over \$200 million), including grouped listings, see the lists and map on pages 19 through 23 of this section.

- **Local Streets and Roads:** Approximately \$239 million, or 4%, of the 2017 TIP is programmed on the preservation and rehabilitation of local streets and roads. Much of the revenue for streets and roads rehabilitation comes from gas tax subventions, which are typically not programmed in the TIP. The investment level for streets and roads in the 2017 TIP, in combination with the non-federal revenues for the local streets and roads outside of the TIP, is expected to preserve pavement in the same “fair” condition as it is currently.

In terms of federal funding, local streets and roads preservation is eligible for Surface Transportation Block Grant Program (STP) funding through the One Bay Area Grant (OBAG) program. In the first cycle of OBAG funding (OBAG 1), which covers FY 2012-13 through FY 2016-17, 26% of the available funds were committed to local streets and roads rehabilitation projects. A significant number of additional local streets and roads preservation projects are likely to be funded through the second round of OBAG (OBAG 2) which is currently underway; these funds will be programmed into the 2017 TIP as projects are selected and approved.

As part of OBAG, jurisdictions are required to have complete streets policies in place either through a board resolution or a general plan that complies with the California Complete Streets Act of 2008 to ensure that the needs of non-motorists are considered during project development. For more information on the OBAG program, see Appendices A-15 and A-16, or online at <http://www.mtc.ca.gov/our-work/invest-protect/focused-growth/one-bay-area-grants>.

- **Transit Capital Maintenance:** To address transit capital maintenance needs, Plan Bay Area investments will fund all bus, rail car and ferry vehicle replacements and 76% of other high-priority investment needs, such as rehabilitation of tracks, bridges and train control systems. An assessment of projected needs and revenues for MTC’s Transit Capital Priorities (TCP) Program demonstrates that if programming for transit capital replacement and rehabilitation projects, including projects funded through the Core Capacity Challenge Grant Program, is constrained to match projected Federal Transit Administration formula funds from FY 2014-15 through FY 2029-30, needs in the middle of this period starting in FY2017-2018 will exceed revenues, when expenditures on major vehicle replacement projects for BART, Caltrain, and SFMTA, and other Core Capacity projects peak. In anticipation of these peak needs and to smooth out cash flow during this 16-year period, the Commission has already established an approach of creating reserves in years when revenues exceed high-priority needs to help address the shortfalls in years when peak needs exceed revenues. The Commission will also explore financing strategies to use future transit capital revenues to help meet near-term needs if

necessary. In addition, the Commission has directed additional STP funds to supplement FTA formula programs to support future major fleet replacements, fixed-guideway rehabilitation and other high-scoring capital needs and to support implementation of Transit Sustainability Project (TSP) projects. The funding plans for the TCP and Core Capacity programs anticipate that future STP or other regional funds will continue to be used to support transit capital replacement and rehabilitation projects.

Currently, more than \$1.1 billion, or 18%, is programmed for transit capital maintenance in the 2017 TIP. This amount is anticipated to increase significantly as additional transit as specific programs and financing strategies are adopted by the Commission and amended into the TIP.

- **System Management:** Plan Bay Area includes various strategies to effectively manage and utilize the region's existing transportation infrastructure, leading to higher productivity, and improved accessibility and safety. During the four year 2017 TIP period, the region has programmed \$1 billion, or 16%, to such projects, including: safety and security projects for Bay Area transit operators and roadways; regional operations programs such as the 511 program, Transit Performance Initiative, regional rideshare, transportation marketing; freeway operations including the Freeway Performance Initiative, incident management, regional signal timing and technical assistance; Priority Conservation Areas; planning efforts; Complete Streets and streetscape projects; and Safe Routes to Schools.

Roughly \$147 million of STP/CMAQ funds are programmed in the 2017 TIP to support these activities. Additional system management investments are anticipated to be incorporated into the TIP through OBAG 2, as projects are selected and adopted by the Commission. Additionally, the 2017 TIP includes funding for specialized and community based programs including Lifeline Transportation Program projects.

Transit, Bridge, Highway and Roadway Expansion

This investment category targets investments to strategically expand transportation facilities. These investments include high occupancy/toll lanes, highway and rail expansions, transit oriented development policies, goods movement, and rapid bus routes/express bus service.

- **Major investments:** Major strategic expansion projects with the highest levels of programming in the 2017 TIP period include BART extension from Warm Springs to Berryessa, Central Subway in San Francisco, Transbay Terminal in San Francisco / Caltrain Downtown Extension – Phases 1 and 2, eBART – East Contra Costa BART Extension, and Sonoma Marin Area Rail Corridor (SMART). For the full list of projects in the 2017 TIP with total project costs over \$200 million, including grouped listings, see the lists and map on pages 19 through 23 of this section.

Most major transit expansions in the TIP are part of MTC Resolution No. 3434, "Regional Transit Expansion Program," which represents the region's consensus agreement on Bay Area transit expansion (see Appendix A-9).

TIP Investment Analysis

As a part of the development of the TIP, MTC completes an analysis of TIP investments specifically focused on the Bay Area's disadvantaged populations. The 2017 TIP Investment Analysis is included as Appendix A-2.

The results of the analysis suggest that according to several indices, the 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. A couple variances worth noting are the share of transit investments by trips for passengers living in low-income households and the difference between minorities and non-minorities in terms of benefits per transit rider.

- The share of transit investments in the 2017 TIP by trips for passengers in low-income households (45%) varies from the share of transit trips by passengers living in low-income households (53%).
- Similarly, there is a variance between benefits per transit riders, with minority transit riders receiving 89% of the benefits received by non-minority transit riders. There was also a smaller variance in the per capita transit benefits (96% of the benefits, or 4% disbenefit), but the relatively minor variance does not demonstrate a systemic disbenefit to minority populations.

The investment analysis of the proposed TIP indicates that although the investments in the TIP are distributed equitably overall, a variance in the share of transit investments by trips for passengers living in low-income households and in the benefits of investments to minority transit riders. It is important to note, however, that the TIP does not reflect the full picture of transportation investments in the Bay Area over the long-term. As noted above, the TIP only includes four years of near-term fund programming. Also, since the TIP primarily documents projects that require federal actions or use federal funds, it tends to include more large capital projects than rehabilitation programs. Additionally, funding shown in the TIP is included in the year that project phases begin or are obligated and does not reflect the actual flow of funding and expenditures within these phases. While rehabilitation programs will have their funding spread across many years, large capital projects tend to have their funding lumped into a single year even if the funds will actually be expended over a number of years, some of which may be outside the scope of the TIP. When compared to the investments described in the Plan, the 2017 TIP only reflects about 15% of average annual transportation spending in the Bay Area.

Since the equity analysis of the Plan includes more projects and programs than just those that are federally focused and transportation funding is captured from more years, it is not disproportionately influenced by the types of projects described above.

Projects in the 2017 TIP Over \$200 Million
(\$ in millions)

| TIP ID | County | Original TIP | Sponsor | Project Name | Mapping Label (Page S1-23) | Total Project Cost (all years) | Project Cost within 2017 TIP Period |
|---------------|---------------|---------------------|----------------|----------------------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------------|
| BRT030001 | Santa Clara | 2003 | VTA | BART - Berryessa to San Jose Extension | 1 | \$3,962 | \$19 |
| SCL110005 | Santa Clara | 2011 | VTA | BART - Warm Springs to Berryessa Extension | 2 | \$2,522 | \$374 |
| SF-010015 | San Francisco | 2001 | TBJPA | Transbay Term/Caltrain Downtown Ext - Ph.1 | 3 | \$2,259 | \$360 |
| REG090037 | Regional | 2009 | BART | BART: Railcar Procurement Program | A | \$2,028 | \$508 |
| SF-991030 | San Francisco | 1999 | SFCTA | US 101 Doyle Drive Replacement | 4 | \$1,987 | \$85 |
| SF-050002 | San Francisco | 2005 | TBJPA | Transbay Terminal/Caltrain Downtown Ext: Ph. 2 | 5 | \$1,925 | \$185 |
| SF-010028 | San Mateo | 2001 | Caltrain | Caltrain Electrification | 6 | \$1,612 | \$448 |
| SF-010037 | San Francisco | 2001 | SFMTA | SF Muni Third St LRT Phase 2 - New Central Subway | 7 | \$1,578 | \$186 |
| SF-070029 | San Francisco | 2007 | TBJPA | Transbay Transit Center - TIFIA Loan Debt Service | B | \$1,075 | \$20 |
| REG130002 | Regional | 2013 | MTC | Toll Bridge Rehabilitation Program | 8 | \$892 | \$260 |
| SOL070020 | Solano | 2007 | STA | I-80/I-680/SR 12 Interchange Project | 9 | \$718 | \$0 |
| REG050020 | Regional | 2005 | BART | BART Car Exchange (Preventive Maintenance) | C | \$674 | \$0 |
| SCL990046 | Santa Clara | 1999 | VTA | VTA: Preventive Maintenance | D | \$596 | \$0 |
| SON090002 | Various | 2009 | SMART | Sonoma Marin Area Rail Corridor | 10 | \$579 | \$0 |
| SCL090019 | Santa Clara | 2009 | San Jose | San Jose International Airport People Mover | 11 | \$508 | \$2 |
| CC-050025 | Contra Costa | 2005 | BART | E-BART - East Contra Costa Rail Extension | 12 | \$460 | \$0 |
| SCL110002 | Santa Clara | 2011 | VTA | Santa Clara County - US 101 Express Lanes | 13 | \$431 | \$2 |
| SON070004 | Sonoma | 2007 | SCTA | US 101 Marin/Sonoma Narrows (Sonoma) | 14 | \$374 | \$1 |
| CC-010023 | Contra Costa | 2001 | CCTA | I-680/SR 4 I/C Reconstruction - Phases 1, 2, 4 & 5 | 15 | \$369 | \$4 |
| MRN050034 | Marin | 2005 | TAM | US 101 HOV Lanes - Marin-Sonoma Narrows (Marin) | 16 | \$353 | \$0 |
| SF-110006 | San Francisco | 2011 | SF DPW | Hunters Pt Shipyard and Candlestick Pt Local Roads | 17 | \$338 | \$5 |
| REG090003 | Regional | 2009 | MTC | Freeway Performance Initiative (FPI) | E | \$333 | \$13 |

Projects in the 2017 TIP Over \$200 Million (continued)

(\$ in millions)

| TIP ID | County | Original TIP | Sponsor | Project Name | Mapping Label (Page S1-23) | Total Project Cost (all years) | Project Cost within 2017 TIP Period |
|---------------|---------------|---------------------|-----------------|---------------------------------------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------------|
| ALA170009 | Alameda | 2017 | ACTC | Widen I-680 NB and SB for EL from SR-84 to Alcosta | 18 | \$322 | \$2 |
| SCL050009 | Santa Clara | 2005 | VTA | Capitol Expressway LRT Extension- Phase II | 19 | \$294 | \$0 |
| ALA110046 | Alameda | 2011 | Oakland | Oakland Army Base Infrastructure Improvements | 20 | \$289 | \$46 |
| MRN970016 | Marin | 1997 | GGBHTD | Golden Gate Bridge Seismic Retrofit, Ph: 1-3A | 21 | \$273 | \$4 |
| SF-130006 | San Francisco | 2013 | SF DPW | Southeast Waterfront Transportation Improvements | F | \$253 | \$100 |
| SF-070027 | San Francisco | 2007 | SFCTA | Yerba Buena Island (YBI) Ramp Improvements | 22 | \$239 | \$59 |
| ALA090027 | Alameda | 2009 | Port of Oakland | 7 th St. Grade Separation and Port Arterial Improvements | 23 | \$237 | \$36 |
| SOL110001 | Solano | 2011 | MTC | I-80 Express Lanes - Fairfield & Vacaville Ph I&II | 24 | \$237 | \$2 |
| SCL110009 | Santa Clara | 2011 | VTA | El Camino Real Bus Rapid Transit | 25 | \$234 | \$0 |
| REG110030 | Regional | 2011 | Caltrain | Caltrain Positive Train Control System | G | \$231 | \$0 |
| CC-130048 | Contra Costa | 2013 | BART | BART Station Modernization Program | H | \$228 | \$0 |
| ALA170010 | Alameda | 2017 | ACTC | I-880 NB HOV/HOT: North of Hacienda to Hegenberger | 26 | \$221 | \$2 |
| ALA150001 | Alameda | 2015 | ACTC | Route 84 widening, Pigeon Pass to I-680 | 27 | \$220 | \$4 |
| BRT030004 | Regional | 2003 | BART | BART Train Control Renovation | I | \$220 | \$0 |
| SF-990022 | San Francisco | 1999 | SFMTA | SFMTA: ADA Paratransit operating support | J | \$217 | \$0 |
| SCL050001 | Santa Clara | 2005 | VTA | VTA: Standard & Small Bus Replacement | K | \$211 | \$0 |
| SF-130001 | San Francisco | 2013 | SF DPW | SF- Better Market Street Transportation Elements | 28 | \$206 | \$2 |

Grouped Listings in the 2017 TIP Over \$200 Million

(\$ in millions)

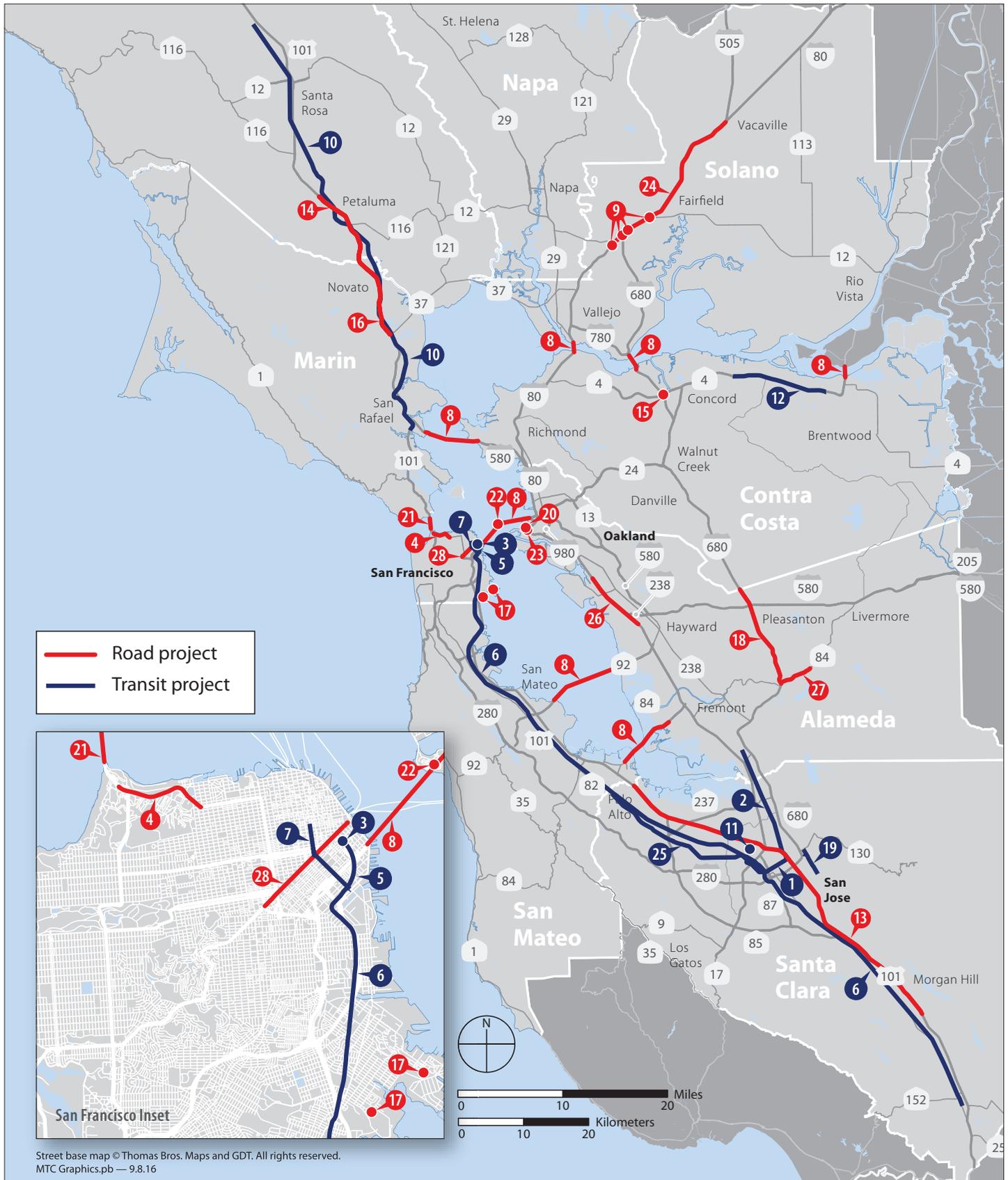
| TIP ID | County | Original TIP | Sponsor | Project Name | Total Project Cost (all years) | Project Cost within 2017 TIP Period |
|---------------|---------------|---------------------|----------------|-----------------------------------------------------------------------|---------------------------------------|--------------------------------------------|
| VAR170006 | Regional | 2017 | Caltrans | GL: Pavement Resurfacing/ Rehabilitation - SHOPP Roadway Preservation | \$510 | \$510 |
| VAR170012 | Regional | 2017 | Caltrans | GL: Bridge Rehabilitation/ Reconstruction - Local Hwy Bridge Program | \$423 | \$174 |
| VAR170007 | Regional | 2017 | Caltrans | GL: Safety Improvements - SHOPP Collision Reduction | \$342 | \$342 |
| VAR170010 | Regional | 2017 | Caltrans | GL: Bridge Rehabilitation and Reconstruction - SHOPP | \$276 | \$276 |

Projects in the 2017 TIP with Costs Greater than \$200 Million

RED Road Project
BLUE Transit Project

- | | | |
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| <p>1 BART - Berryessa to San Jose Extension Santa Clara County \$3.96 billion</p> <p>2 BART - Warm Springs to Berryessa Extension Santa Clara County \$2.52 billion</p> <p>3 Transbay Terminal/Caltrain Downtown Extension, Phase 1 San Francisco County \$2.26 billion</p> <p>4 US-101 Doyle Drive Replacement San Francisco County \$1.99 billion</p> <p>5 Transbay Terminal/Caltrain Downtown Extension, Phase 2 San Francisco County \$1.93 billion</p> <p>6 Caltrain Electrification Multiple Counties \$1.61 billion</p> <p>7 SF Muni Third St LRT Phase 2 - Central Subway San Francisco County \$1.58 billion</p> <p>8 Toll Bridge Rehabilitation Program Multiple Counties \$892 million</p> <p>9 I-80/I-680/SR-12 Interchange Project Solano County \$718 million</p> <p>10 Sonoma Marin Area Rail Corridor Sonoma/Marin Counties \$579 million</p> <p>11 San Jose International Airport People Mover Santa Clara County \$508 million</p> <p>12 E-BART - East Contra Costa County Rail Extension Contra Costa County \$460 million</p> <p>13 US 101 Express Lanes in Santa Clara County Santa Clara County \$431 million</p> <p>14 US-101 Marin-Sonoma Narrows (Sonoma) Sonoma County \$374 million</p> | <p>15 I-680/SR-4 Interchange Reconstruction - Phases 1, 2, 4 & 5 Contra Costa County \$369 million</p> <p>16 US-101 Marin-Sonoma Narrows (Marin) Marin County \$353 million</p> <p>17 Hunters Point Shipyard and Candlestick Point Local Roads San Francisco County \$338 million</p> <p>18 Widen I-680 Northbound and Southbound for Express Lanes Alameda County \$322 million</p> <p>19 Capitol Expressway LRT Extension, Phase 2 Santa Clara County \$294 million</p> <p>20 Oakland Army Base Infrastructure Improvements Alameda County \$289 million</p> <p>21 Golden Gate Bridge Seismic Retrofit, Phases 1-3A Marin/San Francisco Counties \$273 million</p> <p>22 Yerba Buena Island (YBI) Ramp Improvements San Francisco County \$239 million</p> <p>23 7th St. Grade Separation and Port Arterial Improvements Alameda County \$237 million</p> <p>24 I-80 Express Lanes in Fairfield & Vacaville, Phases 1 & 2 Solano County \$237 million</p> <p>25 El Camino Real Bus Rapid Transit Santa Clara County \$234 million</p> <p>26 I-880 Northbound HOV/Express Lane Alameda County \$221 million</p> <p>27 SR-4 East Widening from Pigeon Pass to I-680 Alameda County \$220 million</p> | <p>28 SF- Better Market Street Transportation Elements San Francisco County \$206 million</p> <p>NOT MAPPED</p> <p>A BART Railcar Procurement Program Multiple Counties \$2.03 billion</p> <p>B Transbay Transit Center- TIFIA Loan Debt Service San Francisco County \$1.08 billion</p> <p>C BART Car Exchange (Preventive Maintenance) Multiple Counties \$674 million</p> <p>D VTA: Preventive Maintenance Santa Clara County \$596 million</p> <p>E Freeway Performance Initiative (FPI) Multiple Counties \$333 million</p> <p>F Southeast Waterfront Transportation Improvements San Francisco County \$253 million</p> <p>G Caltrain Positive Train Control System Multiple Counties \$231 million</p> <p>H BART Station Modernization Program Contra Costa County \$228 million</p> <p>I BART Train Control Renovation Multiple Counties \$220 million</p> <p>J SFMTA ADA Paratransit Operating Support San Francisco County \$217 million</p> <p>K VTA: Standard and Small Bus Replacement Santa Clara County \$211 million</p> |
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Projects in the 2017 TIP with Costs Greater than \$200 Million



PROJECT SELECTION AND PROGRAMMING

How are TIP projects selected and programmed?

Project Selection Processes

The process by which a project is selected for federal, state, and regional funding depends on the type of project and the specific fund source being sought. Below is a list of some of MTC's major program-specific processes and resolutions. The full listing of project selection and programming resolutions are available as appendices to this document (Appendices A-14 through A-57) and are also available at on the MTC website at <http://mtc.ca.gov/our-work/fund-invest/transportation-improvement-program>.

- Coordinated Public Transit-Human Services Transportation Plan, Resolution No. 4085
- Regional Transit Expansion Program, Resolution No. 3434
- 2016 Regional Transportation Improvement Program (RTIP), Resolution No. 4208
- One Bay Area Grant 2 (OBAG 2), Resolution No. 4202
- Active Transportation Program (ATP), Regional Program, Cycle 2, Resolution No. 4172
- Transit Capital Priorities (TCP) for FY2015-16 (FTA Sections 5307, 5337, and 5339), Resolution No. 4212
- Lifeline Transportation Program, FY2014 through FY2016, Resolution No. 4179
- Enhanced Mobility for Seniors and Individuals with Disabilities Program for FY2012-13 and FY2013-14 (Section 5310), Resolution No. 4168
- FTA Rural Formula for FY2015-16 and FY2016-17 (Section 5311), Resolution No. 4216
- Transit Core Capacity Challenge Grant for FY2014-15 through FY2029-30, Resolution No. 4123

TIP Programming

Once selected for funding, a project is eligible for inclusion in the TIP. As a result, the TIP is a compilation of projects that have typically already been reviewed and acted upon by MTC and sponsoring agencies. Many projects in the TIP have been carried forward from previous iterations of the TIP, reflecting project selection or programming actions by the Commission from prior years.

In addition to the projects selected and programmed by MTC, the TIP also includes Toll Bridge projects and regionally significant local projects approved and funded by transportation agency partners and/or referenda. Examples here include the voter approved toll increase in the Bay Area, Regional Measure 2, and county sales tax measures.

The constrained TIP also includes available State funds, including Proposition 1B and State Transportation Improvement Program (STIP) funds, utilizing the latest fund estimates, and funding actions by the State.

Projects selected for these regional and State funds are typically selected for funding and then amended into the TIP by MTC.

Fund Management

Federal regulations stipulate that federal funds must be programmed in the TIP up to the apportionment level for that fiscal year for that fund source. The funds must be programmed within the fiscal year in which the funds are to be obligated/transferred by the Federal Highway Administration (FHWA), obligated by the Federal Transit Administration (FTA), or awarded in a FTA grant. This improves the overall management of federal Obligation Authority (OA) within the region and ensures that OA is available for projects that are programmed in a particular fiscal year.

As a result, MTC requires that projects selected for federal funding demonstrate the ability to use the funds within the established federal, state and regional funding deadlines. This criterion is used by MTC for selecting projects for funding and for placement of funding in a particular year of the TIP.

TIP Period

The TIP covers a four-year period. For the 2017 TIP, the period is Federal Fiscal Years 2016-17 through 2019-20. Previously expended funds (shown as 'prior') and funds estimated to be available in future years and are included for informational purposes and to display total project cost. All projects included in the TIP must show the total project cost escalated to the year of expenditure. Projects may be revised as cost estimates are refined and they proceed through the environmental process.

Expedited Project Selection Process

Federal regulations allow for the movement of projects within the period of the TIP and FSTIP subject to procedures agreed to by partnering agencies, including the State and transit operators within the region (23 CFR Part 450.330). MTC developed such a process, in consultation with the region's transportation partners, to permit the movement of projects in the first four years of the TIP:

- All movements must be consistent with the Regional Transportation Plan (RTP), must not adversely affect the expeditious implementation of Transportation Control Measures (TCMs), must comply with the provisions of Title VI, must not negatively impact the planned delivery of other projects in the regional programs, and must not affect the conformity finding of the TIP.
- For regional Surface Transportation Block Grant Program (STP), Congestion Mitigation and Air Quality Improvement (CMAQ) funds, and other funds administered by the Federal Highways Administration (FHWA), MTC has developed a project funding delivery policy through extensive consultations with its regional transportation partners including the Bay Area transit operators, Congestion Management Agencies (CMA's), counties,

FHWA, FTA and Caltrans. The Regional Project Funding Delivery Policy (MTC Resolution No. 3606, revised) details how project-funding deadlines and fund management requirements are enforced and how projects may be moved within the time period of the adopted TIP. The policy satisfies the requirement of the expedited project selection procedures as stated in CFR 450.330. The project funding delivery policy is also embedded in the TIP revision procedures, adopted along with the 2017 TIP. Although a TIP revision is not required at the time a project is moved, a revision may be processed following each federal fiscal year to reconcile the TIP for financial constraint purposes.

- For projects within the State Transportation Improvement Program (STIP) and Active Transportation Program (ATP), MTC will move projects subject to amendment or allocation approval by the California Transportation Commission (CTC). Caltrans may move projects in the State Minor Program, Highway Maintenance (HM) Program, and State Highway Operation Protection Program (SHOPP) document within the TIP/FSTIP period without revising the TIP, with notification to MTC.
- Caltrans Division of Local Assistance has implemented a project selection process for the Local Highway Bridge Program (LHBP), Highway Safety Improvement Program (HSIP), and other State-administered Local Assistance programs to produce the TIP listing of projects. This process was developed in cooperation with the implementing agencies, FHWA, the MPOs, Local Highway Bridge Advisory Committee, and HSIP Advisory Committee. Caltrans, MTC and the transit operators agree that the Caltrans Division of Local Assistance may move projects within the LHBP, HSIP, and other State-administered Local Assistance programs within the TIP/FSTIP period without revising the TIP, with notification to MTC.
- For FTA administered funds, projects may be moved within the period of the TIP/FSTIP at the request of the agency, as long as funding is available and the change does not negatively impact the delivery or availability of funds for other projects ready for obligation.
- Implementing agencies wishing to advance projects using their own local funds until federal funds are available may request Advance Construction Authorization (ACA) from Caltrans, or pre-award authority from FTA to proceed with the project using local funds until OA and apportionment becomes available. In accordance with the Regional Project Funding Delivery Policy (MTC Resolution No, 3606, revised), projects using ACA or FTA Grant Award Authority for FHWA-administered funds have priority for federal obligations when the availability of Obligation Authority is limited.

PROJECT DELIVERY

What happens after a project is programmed in the TIP?

After a project is programmed in the TIP, the project sponsor may proceed with delivering the project. An important component of project delivery is obligating, or drawing down, the funds that are programmed in the project's TIP listing.

Annual Listing of Obligated Projects

Detailed information about project delivery is available through the annual listing of obligated projects, a federal requirement that MTC publishes each year. The listing shows all federal funds that were obligated on projects in the previous fiscal year.

Fund obligations are a measure of progress in terms of project implementation or construction. However, projects for which funds have been obligated are not necessarily initiated or completed in that program year.

In addition, the amount of the obligation will not necessarily equal the total cost of that project or project phase. The total cost could also include matching funds, multiple phases, or could come in over or under budget. Negative obligations are also possible when unused funds are credited back after obligation.

The annual listing also is intended to increase the awareness of government spending on transportation projects to the public. The annual listing may be viewed at: <http://mtc.ca.gov/our-work/fund-invest/federal-funding/project-delivery> or at MTC's offices at 375 Beale St., San Francisco. The list for the previous federal fiscal year is also included in Appendix A-60.

FHWA Funding Project Delivery

To further facilitate project delivery and ensure all federal funds in the region are meeting federal and state regulations and deadlines, MTC has established funding deadlines for certain FHWA-administered funding, including STP and CMAQ funds. The region's Project Funding-Delivery Policy (MTC Resolution No. 3606, revised) establishes a standard policy for enforcing project funding deadlines and project substitutions for FHWA-administered funds. Projects selected to receive federal funds must have a demonstrated ability to use the funds within the established regional, state and federal funding deadlines. This criterion will be used for selecting projects for funding, and for placement of funding in a particular year of the TIP.

Recipients of FHWA-administered funding will also need to identify a staff position that serves as the single point of contact for the implementation of all FHWA-administered funds within

Project Obligation

When a project sponsor is ready to start spending money on a project or project phase, a request is sent from Caltrans to the Federal Department of Transportation requesting verification that the programmed funds are available for reimbursement. This verification of fund availability "obligates" the funds for use as soon as expenditures occur.

For Federal Transit Administration (FTA) projects, obligation occurs when the FTA grant is awarded.

that agency. The person in this position must have sufficient knowledge and expertise in the federal-aid delivery process to coordinate issues and questions that may arise from project inception to project close-out. The agency is required to confirm the contact information for this position at the time of programming of funds in the federal TIP. This person will be expected to work closely with FHWA, Caltrans, MTC and the respective CMA on all issues related to federal funding for all FHWA-funded projects implemented by the recipient.

Project sponsors that continue to miss delivery milestones and funding deadlines for any federal funds are required to prepare and update a delivery status report on all projects with FHWA-administered funds they manage, and participate if requested in a consultation meeting with the county CMA, MTC and Caltrans prior to MTC approving future programming or including any funding revisions for the agency in the federal TIP. The purpose of the status report and consultation is to ensure the local public agency has the resources and technical capacity to deliver FHWA federal-aid projects, is fully aware of the required delivery deadlines, and has developed a delivery timeline that takes into consideration the requirements and lead-time of the federal-aid process within available resources.

MTC staff actively monitors and reports the obligation status of projects to the Bay Area Partnership. The Partnership working groups will monitor project delivery issues as they arise and make recommendations as necessary. Specific provisions of the Regional Project Funding-Delivery Policy are contained within MTC Resolution No. 3606, revised, which is included as Appendix A-58.

PUBLIC & INTERAGENCY INVOLVEMENT

How are the public, project sponsors, stakeholders, and partner agencies involved in the TIP?

MTC is committed to a public involvement process that is transparent, proactive and provides comprehensive information, timely public notice, full public access to key decisions, and opportunities for continuing involvement. Because all projects included in the TIP are consistent with the region's long-range transportation plan, MTC's extensive public outreach for development of the plan is reflected in the TIP as well. Additionally, the process for updating and revising the TIP is directed by procedures contained in the MTC Public Participation Plan (PPP). The PPP is available at http://www.mtc.ca.gov/get_involved/participation_plan.htm, and is included in Appendix A-5.

Outreach Efforts

For the TIP update process, the PPP stipulates that the draft TIP must be released for a 30 day public review and comment period. As part of the public review process, the draft document is made available for review online, and at MTC's offices at 375 Beale St., San Francisco, at major libraries throughout the Bay Area upon request, and submitted for intergovernmental review via the Association of Bay Area Government's Regional Clearinghouse, which notifies all local agencies in the Bay Area and receives their comments. Notices are also sent to an extensive list of interested parties including transportation agencies, other state, federal and tribal agencies and other transportation interests. During the public comment period, a public hearing is held on the draft TIP and draft air quality conformity determination at a standing committee meeting.

After the public comment period, MTC's responses to significant comments are compiled and included as an appendix to the final draft TIP. The final draft TIP is then presented to a standing committee of the Commission and forwarded to the full Commission for adoption. Once adopted, the TIP is sent to the Caltrans Office of Federal Programs for inclusion into the California Federal Statewide Transportation Improvement Program (FSTIP) or Statewide TIP, and later forwarded to FHWA and the FTA for final federal approval.

Additional public outreach for the TIP are described below.

- MTC publishes a Guide to the San Francisco Bay Area's TIP, which is targeted to the public. The objective of the guide is to better explain what the TIP is in the context of a larger planning and project development and funding process. Since the first edition in 2011, the guide has been posted on the MTC website and distributed to the public at various workshops including the public hearings and other events. MTC also distributes the guide to state, local and federal resource agencies and Tribal Nations as part of our consultation on the development of the TIP. The guide is included as Appendix A-3 and

is available on MTC's website at: <http://mtc.ca.gov/our-work/fund-invest/transportation-improvement-program>.

- As part of the development of the current plan, MTC, together with the Association of Bay Area Governments, hosted several agency and public scoping meetings. At these scoping meetings, the development of the 2017 TIP was presented and connections with the plan were highlighted. Similarly, for the plan update that is currently underway, MTC presented information on the 2015 TIP and the 2017 TIP development process at numerous public open houses in 2015 and 2016. Outreach materials specific to the TIP included maps of the largest TIP projects in each county, county spending by various project types, an overview to how the TIP fits into the overall transportation planning process, and information about the 2017 TIP development schedule.

FTA Requirements

Federal transit law and joint FHWA/FTA planning regulations governing the metropolitan planning process require a locality to include the public and solicit comment when the locality develops its metropolitan long-range transportation plan and its metropolitan TIP. FTA has determined that when a recipient follows the procedures of the public involvement process outlined in the FHWA/FTA planning regulations, the recipient satisfies the public participation requirements associated with development of the Program of Projects (POP) that recipients of Section 5307 funds must meet. MTC's PPP and public outreach for the TIP satisfy the public participation requirements for the POP for FTA Section 5307 Program. Public notices of public involvement activities and times established for public review and comment on the TIP state that they satisfy the POP requirements of the FTA Section 5307 Program.

Consistent with Federal requirements, the 2017 TIP identifies projects implementing the Americans with Disabilities Act (ADA) required paratransit and key station plans. The ADA requires that public transportation services and facilities, including trains and rail stations, be accessible to persons with disabilities. Federal regulations allow each rail system operator to designate certain stations as key stations and to make these readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs. Most of the projects adopted in the key station plans have been implemented. Appendix A-66 lists some of the ongoing ADA implementation transit projects.

Interagency Consultation Process

MTC consults extensively with Caltrans, county Congestion Management Agencies (CMAs), transit agencies, local jurisdictions, Tribal Nations and other partner agencies affected by transportation decisions, in the preparation of the region's long-range transportation plan, and in developing the priorities and programs during each TIP period.

This interagency consultation process includes:

- Project sponsors include Caltrans, local jurisdictions, county CMAs, and transit operators. These agencies review and consult with MTC on each of their respective projects in the

TIP. Furthermore, through the Bay Area Partnership, these agencies are involved every step of the way in the establishment of MTC programs and the selection of project criteria and delivery of transportation projects contained in the TIP.

- Central to developing the TIP is MTC's process for deciding how to invest discretionary federal dollars, meaning those funds that can be used on a variety of transportation needs, be they local streets, bus replacements, rail extensions, a new freeway interchange or bicycle and pedestrian facilities. To develop a plan for spending funds for the federal Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement Program (CMAQ), MTC works closely with local partner agencies and its citizen-based Policy Advisory Council to develop regional priorities. The priorities stem from the long-range plan, Plan Bay Area.
- MTC and other regional agency staff meet periodically with the Tribal Nations in the region to consult with them on the development of the regional long-range transportation plan and related programming processes. For the development of the next plan, Plan Bay Area 2040, a Tribal Summit was held on June 13, 2016 to discuss respective MTC and tribal roles in the development of transportation plans and programs in the Bay Area. The 'Guide to the TIP' was distributed at the Summit.
- Air Quality consultations on air quality issues occur through the Air Quality Conformity Task Force (including the Bay Area Air Quality Management District as well as representatives of the Environmental Protection Agency, California Air Resources Board, Federal Highway Administration and Federal Transit Administration and state and local transportation agencies) which reviews updates to the TIP and its air quality conformity analysis.
- Notices on the draft TIP updates are mailed out along with instructions on how to access and comment on the TIP. The mailing roster targets agencies involved in the preparation of the region's long-range plan, including Tribal Nations. Additionally, state agencies and local agencies are consulted through the Inter-Governmental Review process (Association of Bay Area Government's Area-wide Clearinghouse).
- MTC's compliance with the California Environmental Quality Act (CEQA) for the regional long-range transportation plan also serves as the framework to consult, as appropriate, with federal, state and local resource agencies responsible for land use management, natural resources, environmental protections, conservation, and historic preservation.

TIP REVISIONS

What happens after the TIP is adopted?

Revising the TIP

Once a TIP is adopted, revisions are made on a frequent and routine basis to accommodate changes to project scopes and funding. Revisions to the TIP may occur as amendments, administrative modifications, or technical corrections. Each type of revision follows a different set of implementation procedures. Administrative modifications and amendments are defined in federal regulations, specifically Title 23, CFR part 450.104. The Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and California Department of Transportation (Caltrans) have developed amendment and administrative modification procedures for the TIP. These procedures are posted online at: <http://mtc.ca.gov/our-work/fund-invest/tip/tip-revisions-and-amendments>, in the MTC TIP Revision Process and Procedures document included in Appendix A-68, and by the MTC Public Participation Plan located in Appendix A-5.

MTC staff also has the authority to make technical corrections to the TIP, and the Executive Director and/or a Deputy Director has signature authority to approve administrative modifications for the TIP and Federal Statewide Transportation Improvement Program (FSTIP) under delegated authority by the California Department of Transportation (Caltrans) and to forward TIP amendments once approved by the Commission to the appropriate state and federal agencies for review and approval.

MTC processes TIP revisions when the circumstances prompting the change are compelling, and the change will not adversely affect air quality conformity or financial constraint findings of the TIP. All changes must be consistent with the regional transportation plan.

TIP Update

A TIP update is a complete update of the existing TIP to reflect new or revised transportation investment strategies and priorities. Given the dynamic nature of the TIP, with frequent project additions and amendments throughout the year, the TIP update process largely consists of moving projects already programmed in the existing TIP into the next four year period, re-demonstrating the program is constrained to estimated revenues, and re-demonstrating air quality conformity.

Federal regulations require that the TIP be updated at least once every four years. MTC may update the TIP more frequently, however, these updates are limited to special circumstances, such as aligning the update cycle with State processes or to reflect an amendment to the regional long-range plan. Caltrans requires all MPOs in the state to update their TIPs concurrently every two years.

FINANCIAL CONSTRAINT

The TIP must be financially constrained, meaning that the amount of funding programmed must not exceed the amount of funding estimated to be reasonably available. Financial constraint must be demonstrated by program and by year for the four active years of the TIP.

As an air quality non-attainment area, MTC may only program projects with committed funds in the first two years of the TIP. Reasonably available revenues (funds that are not yet committed to the project but are estimated to be available during the four years of the TIP) may be programmed to projects in the third and fourth years of the TIP.

Fiscal Constraint of the 2017 TIP

MTC has taken into consideration the transportation funding revenues expected to be available during the four years of the 2017 TIP (FY 2016-17 through FY 2019-20) and has found the programming of the 2017 TIP to be financially constrained by program and by year. For a full accounting of all funds included in the 2017 TIP, please refer to the 2017 TIP Fiscal Constraint Appendix A-75.

MTC re-demonstrates fiscal constraint with every amendment to the TIP. In addition, MTC continuously monitors developments in funding programs and funding needs of transportation projects, as reflected by the TIP project listing. Any significant changes are reviewed by MTC and its transportation partners; and, if needed, MTC will take appropriate actions, such as a TIP revision, to maintain the financial constraint of the TIP.

System Preservation, Operations and Maintenance Costs

In addition to the funds programmed to the projects in the TIP, fiscal constraint requirements also encompass the estimated costs of preserving, maintaining, and operating the region's transportation system as a whole. The bulk of these funds are not captured by the projects programmed in the TIP, which tend to be large, federally-funded capital projects. The framework of both MTC's current long-range plan and the 2017 TIP meet this requirement.

Below are key programs in the TIP which address system preservation, operation, and maintenance of the transportation system:

- **State Highways:** The State Highway Operation and Protection Program (SHOPP) is a program of projects administered by Caltrans to manage, preserve, and improve the existing State highway system. Caltrans develops a ten-year SHOPP plan that identifies the needs for rehabilitation and reconstruction of all state highways and bridges over a ten-year period. SHOPP projects fall into six major categories: Collision Reduction, Bridge Preservation, Roadway Preservation, Roadside Preservation, Mobility Improvement, and Major Disaster Restoration. Projects are approved for inclusion in the SHOPP on a statewide competitive basis, initiated by the Caltrans District Offices, with safety projects as the highest priority.

- **Local Streets and Roads:** Preservation costs for San Francisco Bay Area local roadway infrastructure (pavement, non-pavement and locally-owned bridges) are determined using a process that incorporates pavement management programs and analysis completed by jurisdictions. The information on local street and road needs feeds into the Regional Transportation Plan needs assessment and is a basis for making funds available for streets and roads preservation projects, which are programmed in the TIP. Refer to Appendix A-68 for more detailed information and Streets and Roads needs and analysis.
- **Transit Operations and Rehabilitation:** The TIP includes Financial Capacity Assessments for public transit agencies in the region, which assess the financial state of the transit operators in the region and initiatives being undertaken to maintain the existing capital plan and service operations. The assessments are included in Section 2 of the TIP document. Also, under the Transit Performance Initiative (TPI), MTC created an incentive program to reward transit agencies that achieve ridership increases and productivity improvements, and has allocated funds to projects in the TIP on the basis of performance, thereby encouraging greater efficiencies and better service to the public.

FUND SOURCES PROGRAMMED IN THE TIP

What are the primary federal, state and local fund sources included in the TIP?

The TIP includes transportation funding from a wide variety of sources. The following is a description and availability of the primary fund sources within the four years of the 2017 TIP. All dollar amounts are shown in thousands.

Federal Transit Administration (FTA) Programs

- Section 5307 Urbanized Area Formula:** FTA Section 5307 funds are distributed to urbanized areas by FTA based on population and service factors for the five large urbanized areas of San Francisco-Oakland, San Jose, Concord, Antioch, and Santa Rosa, and population factors for the seven small urbanized areas of Vallejo, Fairfield, Vacaville, Napa, Livermore, Gilroy-Morgan Hill, and Petaluma. MTC prioritizes these funds for transit capital replacement projects such as revenue vehicles and fixed guideway; however, some funds are also used for transit operations, system enhancements and job access and reverse commute projects. MTC adopted a preliminary Section 5307 program of projects for FY2015-16 in January 2016, and anticipates completing the next programming cycle later in 2016. MTC anticipates that the next cycle will include FY2016-17 through FY2019-20 to align with the term of FAST Act authorization.

| FTA 5307 | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-------------|------------|------------|------------|------------|---------|
| Revenues | 215,403 | 219,807 | 224,344 | 228,976 | 888,530 |
| Programming | 78,132 | 23,831 | | | 101,963 |
| Balance | 137,271 | 195,976 | 224,334 | 228,976 | 786,567 |

- 5309 Bus and Bus Facilities:** FTA Section 5309 Bus funds are used to fund bus and bus facility replacement, rehabilitation, expansion and enhancement projects. The program was replaced with the new Section 5339 Bus and Bus Facilities formula program by MAP-21 starting in FY2012-13 (see below). Several projects in the TIP include Section 5309 Bus funds programmed in previous years. The FTA Section 5309 Bus program funds were usually awarded by FTA directly to transit operators and other agencies through FTA's State of Good Repair, Bus Livability and other competitive, discretionary programs. The funds were also distributed by Congress through discretionary earmarks.
- 5309 Capital Investment Grants:** The FTA Capital Investment Grants program is a nationally competitive program and is used to fund new and expanded fixed guideway systems including bus rapid transit systems. This program includes the New Starts, Small Starts and Core Capacity funding programs.

| FTA 5309 CIG | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|---------------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 250,000 | 97,415 | 35,669 | | 383,084 |
| Programming | 250,000 | 97,415 | 35,669 | | 383,084 |
| Balance | | | | | |

- Section 5310 Enhanced Mobility of Seniors and Individuals with Disabilities:** FTA Section 5310 funds are available to states or local government authorities, private non-profit organizations, or operators of public transportation for capital and operating projects that serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services. Within California, Caltrans is the designated recipient for the urbanized area (UA) and rural funds in the MTC region. However, under MAP-21, Caltrans has delegated program development for the large UA funds to MTC. MTC is responsible for the region's large UA project scoring and selection as well as ensuring all projects are derived from the region's Coordinated Public Transit – Human Services Transportation Plan ("Coordinated Plan"). The Bay Area's Coordinated Plan was adopted in March 2013, with an update anticipated to be adopted in early 2017.

| FTA 5310 | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-----------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 4,752 | 4,852 | 4,955 | 5,060 | 19,619 |
| Programming | | | | | |
| Balance | 4,752 | 4,852 | 4,955 | 5,060 | 19,619 |

- Section 5311 Rural Area Program:** FTA Section 5311 funds are available to transit operators that provide transportation services in rural areas. MTC develops the funding priorities for the Bay Area in conjunction with Caltrans who is the designated recipient and administers the funds. MTC programs the Bay Area's regional apportionment to transit operators according to each operator's rural area population and rural area route miles. Recipients are required to prioritize the replacement of capital equipment, with top priority for capital assets needed to maintain existing transit services. Recipients may use funds for operations if they document that the funds are not needed to maintain or replace capital equipment. Currently, funds are programmed through FY 2015-16.

| FTA 5311 | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-----------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 1,551 | 1,588 | 1,626 | 1,664 | 6,428 |
| Programming | | | | | |
| Balance | 1,551 | 1,588 | 1,626 | 1,664 | 6,428 |

- Section 5316 Job Access and Reverse Commute Program (JARC):** FTA Section 5316 funds were available for job access projects designed to transport welfare recipients and other eligible low income individuals to and from jobs and other trips related to employment. MAP-21 eliminated Section 5316 as a separate program and combined its function and

funds with the Section 5307 program (see above). Several projects in the TIP include Section 5316 funds programmed in previous years.

- Section 5317 New Freedom Program:** FTA Section 5317 was created by SAFETEA to provide formula funding for new public transportation services and public transportation alternatives beyond those required by ADA to assist persons with disabilities. MAP-21 eliminated Section 5317 as a separate program and combined its function and funds with the Section 5310 program (see above). Several projects in the TIP include Section 5317 funds programmed in previous years.
- Section 5337 State of Good Repair Program:** FTA Section 5337 is a funding program created by MAP-21 to replace the Section 5309 Fixed Guideway Modernization program (see above). Eligible uses of the funds include the replacement and rehabilitation of fixed guideway assets including railcars, ferry vessels, buses operating in HOV lanes, and related infrastructure. Projects are limited to replacement and rehabilitation, or capital projects required to maintain public transportation systems in a state of good repair. The funds are distributed by FTA to the four large urbanized areas of San Francisco-Oakland, San Jose, Concord and Antioch based on service factors. MTC programs the Section 5337 funds using the same criteria and schedule as the FTA Section 5307 funds (see above).

| FTA 5337 | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-----------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 199,825 | 203,276 | 206,776 | 210,337 | 820,213 |
| Programming | 25,310 | 2,512 | | | 27,822 |
| Balance | 174,515 | 200,764 | 206,776 | 210,337 | 820,213 |

- Section 5339 Bus and Bus Facilities Program:** FTA Section 5339 is a formula funding program created by MAP-21 to replace the Section 5309 Bus and Bus Facilities discretionary program (see above). Eligible uses of the funds are similar: bus and bus facility replacement, rehabilitation, expansion and enhancement projects. The funds are distributed to the 12 Bay Area urbanized areas by FTA based on population and service factors. MTC programs the Section 5339 funds using the same criteria and schedule as the FTA Section 5307 funds (see above).

| FTA 5339 | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-----------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 12,274 | 12,531 | 12,797 | 13,068 | 50,670 |
| Programming | 2,566 | | | | 2,556 |
| Balance | 9,707 | 12,531 | 12,797 | 13,068 | 48,104 |

Federal Highway Administration (FHWA) Programs

- Surface Transportation Block Grant Program (STP):** Federal transportation legislation authorizes the State of California to distribute regional Surface Transportation Block

Grant Program (STP) funds to areas within the State based on urbanized population shares. MTC pools the STP funds coming to the San Francisco Bay Area with CMAQ funds to develop a comprehensive and multi-modal program. MTC, in cooperation with its transportation partners, developed a variety of regional and local programs through the STP/CMAQ funded One Bay Area Grant (OBAG) program. In general, the STP funds support the Local Streets and Road rehabilitation program, the transit priorities and regional operations programs, planning activities, bicycle and pedestrian projects, and Transportation for Livable Communities. Programming is based on apportionments provided by Caltrans and the Federal Highway Administration (FHWA). Anticipated STP apportionments for FY 2016-17 are programmed as part of OBAG 1; apportionments for FY 2017-18 through FY2021-22 will be programmed through the OBAG 2 programming cycle.

| STP | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-------------|------------|------------|------------|------------|---------|
| Revenues | 92,345 | 93,047 | 99,634 | 103,774 | 391,800 |
| Programming | 67,396 | 75,812 | | | 143,208 |
| Balance | 24,949 | 20,235 | 99,634 | 103,774 | 248,593 |

- Congestion Mitigation and Air Quality Improvement Program (CMAQ):** Federal transportation legislation authorizes the State of California to spend Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds in air basins that are not in compliance with federal air quality standards. California distributes CMAQ funds to the metropolitan planning organizations (MPOs) based on population and the severity of non-attainment of air quality standards in a particular air basin using various weighting factors. MTC pools the CMAQ funds coming to the San Francisco Bay Area with STP funds to develop a comprehensive multi-modal program, known as OBAG (see above). The CMAQ portion of OBAG funds projects and programs that address air quality such as transit programs, regional operations, Transportation for Livable Communities, bicycle and pedestrian projects, Safe Routes to School, the Climate Initiatives program, Freeway Performance Initiative program, and ClipperSM (universal fare card). The amounts available for programming were provided by Caltrans and the Federal Highway Administration (FHWA). CMAQ apportionments for the TIP period are shown below. Anticipated CMAQ apportionments for FY 2016-17 are programmed as part of OBAG 1; apportionments for FY 2017-18 through FY2021-22 will be programmed through the OBAG 2 programming cycle.

| CMAQ | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-------------|------------|------------|------------|------------|---------|
| Revenues | 75,710 | 77,174 | 78,610 | 80,232 | 311,726 |
| Programming | 74,528 | 17,070 | | | 91,598 |
| Balance | 1,182 | 60,104 | 78,610 | 80,232 | 220,128 |

- **Transportation Alternatives Program (TAP):** In 2013, the State Legislature combined multiple federal and state bicycle and pedestrian fund programs, including the federal Transportation Alternatives Program (TAP), into a single program. The state's Active Transportation Program (ATP) is described under the State, Regional, and Local programs, below.
- **National Highway Freight Program (NHFP):** Introduced in 2015 with the FAST Act, the NHFP is a formula program supporting the efficient movement of freight on the National Highway Freight Network. Implementation of this new program is still under development; funds will be programmed into the TIP after project selection has been completed.
- **Highway Bridge Program:** Eliminated as a stand-alone federal program under MAP-21, Caltrans has continued to implement the local highway bridge program using other federal funds. The intent of the program is to replace or rehabilitate public highway bridges that are structurally deficient or functionally obsolete. Caltrans manages the statewide program, evaluating candidate projects for eligibility requirements, and including the successful candidate projects in the financially constrained program lists that are forwarded to MPOs for inclusion into the TIP. HBP funded projects are often programmed into the TIP as a single group listing, rather than individual projects.
- **Highway Safety Improvement Program (HSIP):** The purpose of HSIP is to achieve a significant reduction in fatalities and serious injuries on public roads. Caltrans manages the state's allocation of these federal funds, using crash reduction factors to identify candidate projects for funding. HSIP funded projects are often programmed into the TIP as a single group listing, rather than individual projects.

Federal Discretionary Programs

- **Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies (FASTLANE):** Introduced in the FAST Act as a new federal discretionary funding program, to fund critical freight and highway projects across the country. The implementation of the first round of this grant program is currently underway; funds will be programmed into the TIP after project selection has been completed.
- **Transportation Infrastructure Finance and Innovation Act (TIFIA):** The TIFIA program provides federal credit assistance in financing surface transportation projects of regional and national significance. Projects must cost at least \$50 million or 33.3% of a state's annual appropriation of federal-aid funds, whichever is less; Intelligent Traffic System (ITS) projects have a lower project cost requirement of \$15 million. Federal credit assistance under TIFIA in the form of secured loans, loan guarantees, or standby lines of credit provides more flexibility in repayment terms and potentially more favorable interest rates than private capital market alternatives.

- **Transportation Investment Generating Economic Recovery (TIGER):** TIGER grants are awarded on a competitive basis for projects that will have a significant impact on the Nation, a metropolitan area, or a region. Since the TIGER program was first created in 2009, \$4.6 billion has been awarded for capital investments in surface transportation infrastructure over seven rounds of competitive grants. TIGER funds will be programmed into the TIP after they have been awarded.
- **Earmarks:** Earmarks are the provision of funds through Congressional action, either legislation or appropriations, to specific projects. In 2011, Congress eliminated earmarks from use. However, many earmarks remain programmed in the TIP (either in the four active years of the TIP or in prior years) on active and ongoing projects. In addition, the Consolidated Appropriations Act, 2016 included a provision that enables States to repurpose unobligated balances on earmarks that are more than ten years old. MTC will amend the TIP as necessary to reflect programming changes that may be required by the implementation of this provision.

State, Regional, and Local Programs

Not all state and local funds must be programmed in the TIP. However, if these funds are used to match federal dollars described above, or if they are attached to projects that require federal approval or other formal federal action, or if the project funded is considered to be regionally significant, they must be included in the TIP. State and local fund sources include the following:

- **State Transportation Improvement Program (STIP):** The California Transportation Commission (CTC) is required to biennially adopt a State Transportation Improvement Program (STIP). The STIP is a comprehensive listing of all major projects to be funded from specified state funding programs and certain federal funds that flow directly to the state. As a result, many of the projects that are included in the STIP must eventually be included in the regional TIPs and the FSTIP as well. The STIP is funded in large part by the state excise tax on gasoline.

Regional Transportation Improvement Program (RTIP): The bulk (75%) of the STIP consists of spending programs developed at the regional level throughout California, called the Regional Transportation Improvement Programs (RTIP). The RTIP is a five-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account (SHA), federal funds, and other funding sources.

Working from a CTC Fund Estimate based on population and road miles, MTC submits the Bay Area's RTIP every two years. The amount available for programming and the actual programmed amount in the 2017 TIP reflect the County Share balances and programming targets of the 2016 STIP Fund Estimate, and funding

committed to the region as adopted by the CTC on May 19, 2016. The next STIP cycle will be in 2018.

Interregional Transportation Improvement Program (ITIP): The remaining element of the STIP (25%) is known as the Interregional Transportation Improvement Program (ITIP). The ITIP is intended to address transportation infrastructure needs that cross metropolitan boundaries and link the state’s transportation system, such as intercity rail and interregional highways. The ITIP is a five-year capital improvement program of transportation projects on and off the state highway system, funded with revenues from the SHA, federal funds, and other funding sources. The amount available for programming and the actual programmed amount in the 2017 TIP reflect the funding committed to the region adopted by the CTC on May 19, 2016. The next STIP cycle will be in 2018.

| STIP | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-------------|------------|------------|------------|------------|---------|
| Revenues | 50,957 | 56,934 | 20,244 | 21,643 | 149,778 |
| Programming | 50,957 | 56,934 | 20,244 | 21,643 | 149,778 |
| Balance | | | | | |

- State Highway Operation and Protection Program (SHOPP):** The purpose of the SHOPP is to adequately maintain and operate the state highway system. In accordance with Government Code Section 14526.5 and Streets and Highways Code Section 164.6, the SHOPP is a four-year program of projects with the purpose of collision reduction, bridge preservation, roadway preservation, roadside preservation, mobility, or facilities related to the state highway system. SHOPP is funded through the SHA, federal funding, and other sources. The most recent programming, the 2016 SHOPP, covers the four-year period from fiscal years 2016-17 through 2019-20. Similar to the RTIP, the SHOPP is updated every two years. The amount available for programming and the actual programmed amount in the 2017 TIP reflect the SHOPP funding available to the region as approved by the CTC.
- Active Transportation Program (ATP):** The State Legislature created the Active Transportation program (ATP) in 2013 to combine multiple federal and state bicycle and pedestrian fund sources and programs into a consolidated state program. ATP includes federal funding sources such as the Transportation Alternatives Program (TAP), and state funding such as the Bicycle Transportation Account (BTA) and Safe Routes to Schools (SR2S). The CTC has adopted the first two cycles of ATP projects, and the project selection process for the third cycle is currently underway. Once adopted by the CTC, MTC will program the third cycle of ATP, for years 2019-20 and 2020-2021 into the 2017 TIP.

| ATP | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|-------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 33,473 | 11,746 | 27,909 | 10,329 | 83,457 |
| Programming | 33,743 | 11,746 | 27,909 | | 73,128 |
| Balance | | | | 10,329 | 10,329 |

- Proposition 1B Bond Funds:** Approved by voters in 2006, the program includes nearly \$20 billion in investments statewide through the Corridor Mobility Improvement Account (CMIA), Trade Corridors Improvement Fund (TCIF), Public Transportation Modernization, Improvement, and Service Enhancement Account (PTMISEA), and other programs.
- Transportation Development Act (TDA) & State Transit Assistance (STA) funds:** TDA revenues are derived from a state sales tax of one-quarter of one percent on all retail sales in each county, used to finance transit operations, and bus and rail projects as well as special paratransit services for disabled passengers, and bicycle and pedestrian projects. STA funds are generated from the state sales tax on diesel fuel. These funds can be used for both transit capital and operating projects and are distributed 50% to the Population-Based program and 50% to the Revenue-Based program.
- Regional Measure 1 (RM 1), Regional Measure 2 (RM 2), and other bridge toll funds:** Bridge Toll funding is funding generated from tolls collected on the seven state-owned toll bridges in the bay area. The Bay Area Toll Authority (BATA) administers and allocates base toll revenues from the seven state-owned bridges to Caltrans for the day-to-day operations, maintenance and administration of these bridges, as well as their capital improvement and rehabilitation. BATA also serves as a pass-through agency for Regional Measure 2 (RM2) bridge toll funds to specific voter-approved projects to relieve traffic congestion in bridge corridors, earthquake retrofit of state-owned toll bridges and other traffic mitigation projects related to retrofit work. Other bridge toll funding programs include Regional Measure 1 (RM1) and AB1171 projects to relieve traffic congestion in bridge corridors; AB 664 Net Bridge Toll Revenues, which MTC's policy is to use to match federally funded transit capital projects that relieve congestion on the San Francisco-Oakland Bay, San Mateo-Hayward and Dumbarton bridges; and Two Percent Bridge Toll revenues, which are derived from the transit element of RM1 and fund specific ferry and non-ferry capital projects.

| Bridge Tolls | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|----------------------------------------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 706 | 709 | 713 | 717 | 2,845 |
| TIP Programming | 157 | 79 | 67 | 51 | 353 |
| Committed to Maintenance, debt service, etc. | 549 | 630 | 646 | 666 | 2,491 |
| Balance | | | | | |

- Proceeds from county half-cent transportation sales taxes, and sales taxes for transit:**
 Includes 1/2¢ Sales Tax for transit and other highway improvements in Alameda, San Francisco, Contra Costa, Marin, Napa, Santa Clara, San Mateo, and Sonoma Counties. It does not include pending sales tax measure. Other local funding also includes Garvee Bond financing by local agencies, gas tax subventions, and Transportation Development Act (TDA) Articles 4 and 8 (1/4-cent sales tax) for transit operating assistance and capital projects. Programming of local funding takes place at the discretion of local collecting agencies.

| Other Local | FY 2016-17 | FY 2017-18 | FY 2018-19 | FY 2019-20 | Totals |
|--------------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Revenues | 4,829 | 4,962 | 5,114 | 5,245 | 20,150 |
| Programming | 1,105 | 728 | 768 | 231 | 2,832 |
| Balance | 3,723 | 4,233 | 4,347 | 5,014 | 17,317 |

Innovative Financing

- Advance Construction:** Advance Construction (AC) is a financial management tool used to advance projects to meet program goals and project delivery schedules using non-federal funds while remaining eligible for federal funding at a later date. Once federal funding becomes available AC projects may be converted in whole or in part to normal federal funding. The previously expended funds are then replenished by federal reimbursements.
- Toll Credits:** Section 120(j) of Title 23 allows states to use certain toll revenue expenditures as a credit toward the non-federal matching share of programs authorized by Title 23 (except for the emergency relief programs) and for transit programs authorized by Chapter 53 of Title 49, referred as transportation development credits. Toll credits are not additional funds, but may be used in lieu of the non-federal match, bringing federal participation in a project to 100 percent of the project cost. The TIP must remain fiscally constrained when using toll credits in lieu of the non-federal match. Tracking of toll credits is performed through MTC's Fund Management System (FMS). State and Regional toll credits policies and procedures are included in Appendix A-53 and Appendix A-54.

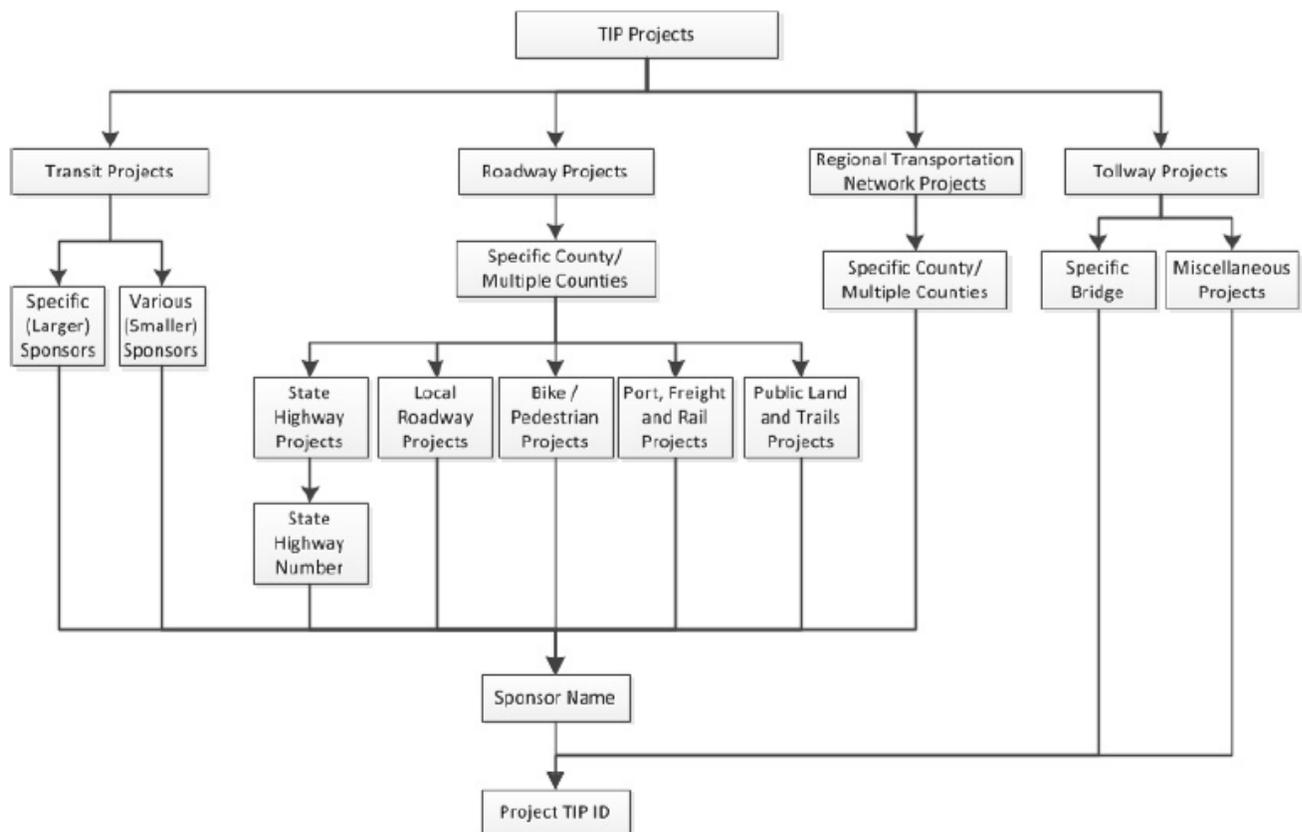
HOW TO READ THE PROJECT LISTINGS

How do I find information on specific TIP projects?

Organization

Project listings provide a detailed description for each individual project listed in the TIP. The projects are organized into four sections, transit projects, roadway projects, regional transportation projects (region-wide projects and initiatives), and tollway projects. Transit projects are listed alphabetically by operator. Roadway projects are sorted first by county and then by general project type (state highway, local roadway, bicycle and pedestrian, port, freight and rail, and public lands and trails), and listed alphabetically by project sponsor. Regional transportation projects are sorted by county and then listed by TIP ID number. Projects being implemented on toll facilities are sorted by the specific toll bridge that they affect and then by TIP ID.

Sort Order for Detailed Project Listings



Another way to locate the page number for a specific project is through the indices located at the end of Volume 1, Section 3. The indices are organized by County and sorted by TIP ID.

Single Line Project Listing Reports

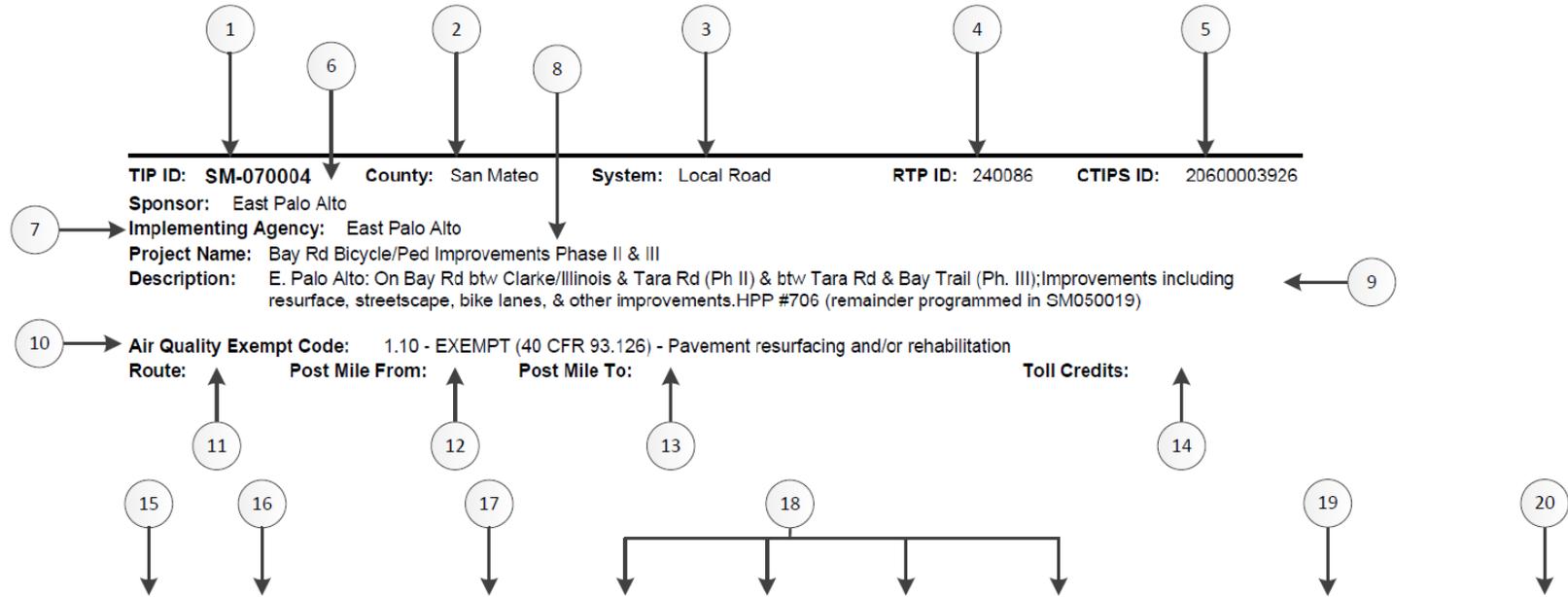
To view high level project information and aggregated funding information about each project, single line project listings and reports are included as Appendix A-70. The listings are divided by county with projects within each county sorted by project sponsor, transportation system, project purpose, and then TIP ID. The following four single line project listing reports have been included as Appendix A-70.

1. Single Line Project Listing by County
2. Single Line Project Funding Report – Funding by Phase
3. Single Line Project Funding Report – Funding by Authority
4. Single Line Project Funding Report – Funding by Funding by Fiscal Year

Key to Detailed Project Listings

Project listings contain detailed information about the scope, location, funding and schedule. Below is a sample project listing and corresponding key.

Sample Detailed Project Listing



TIP ID: SM-070004 **County:** San Mateo **System:** Local Road **RTP ID:** 240086 **CTIPS ID:** 20600003926
Sponsor: East Palo Alto
Implementing Agency: East Palo Alto
Project Name: Bay Rd Bicycle/Ped Improvements Phase II & III
Description: E. Palo Alto: On Bay Rd btw Clarke/Illinois & Tara Rd (Ph II) & btw Tara Rd & Bay Trail (Ph. III); Improvements including resurface, streetscape, bike lanes, & other improvements.HPP #706 (remainder programmed in SM050019)

Air Quality Exempt Code: 1.10 - EXEMPT (40 CFR 93.126) - Pavement resurfacing and/or rehabilitation

Route: **Post Mile From:** **Post Mile To:** **Toll Credits:**

| All funding in thousands of dollars | | Prior Years | FY 2016/17 | FY 2017/18 | FY 2018/19 | FY 2019/20 | Future Years | Total Programmed |
|-------------------------------------|-------------|------------------|-----------------|------------|------------|-----------------|------------------|------------------|
| PE | OTHER LOCAL | \$ 3,400 | \$ 1,000 | | | | | \$ 4,400 |
| ROW | OTHER LOCAL | \$ 100 | | | | | \$ 100 | \$ 200 |
| CON | EARMARK | \$ 496 | | | | | | \$ 496 |
| CON | OTHER LOCAL | | | | | \$ 1,500 | | \$ 1,500 |
| CON | RTP-LRP | | | | | | \$ 15,000 | \$ 15,000 |
| CON | ST-STP | \$ 635 | | | | | | \$ 635 |
| CON | STP | \$ 10,644 | | | | | | \$ 10,644 |
| CON | XGEN | \$ 654 | | | | | | \$ 654 |
| Total Programmed Funding: | | \$ 15,929 | \$ 1,000 | | | \$ 1,500 | \$ 15,100 | \$ 33,529 |

Key to Detailed Project Listing

| Project Information | | |
|---------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| # | Data Label | Definition |
| 1 | TIP ID | A unique number used to identify projects in the TIP. The first three characters indicate the location where the project is being implemented and refers to either a specific county, various counties, or the entire region. The next two digits indicate the version of the TIP where the project was first shown (i.e. for projects added during the 2015 TIP, these digits are 15). The final four digits indicate the order in which the project first appeared in the TIP. |
| 2 | County | The county in which the project is located. Projects may also be located in "Various" counties or they may be "Regional" projects. |
| 3 | System | The transportation system for which the project improvement is attributed: public transit, local streets and roads, State Highway System or Interstate System, Port and Freight Rail Facilities, Public Lands and Trails, Toll Bridges and Express Lanes (Tollway), and Regional projects. |
| 4 | RTP ID | The RTP ID refers to the unique parent project as described in MTC's regional long-range plan. |
| 5 | CTIPS ID | A unique number used to identify projects in the California Transportation Improvement Program System (CTIPS). |
| 6 | Sponsor | The agency in charge of administering a project. |
| 7 | Implementing Agency | The agency administering or implementing a project in partnership with the Sponsor. |
| 8 | Project Name | The name or title of the project. |
| 9 | Project Description | A brief description of the project location and the scope of work being implemented. |
| 10 | Air Quality Exempt Code | The Air Quality Exemption status per federal Environmental Protection Agency (EPA). A list of Air Quality Exempt Codes may be found in Appendix A-64. |
| 11 | Route | The State Highway System (SHS) or State Route (SR) number, if applicable. |
| 12 | Post Mile From | The beginning limit of a project's location on the State Highway System or on a State Route (if applicable). |
| 13 | Post Mile To | The terminating limit of a project's location on the State Highway System or on a State Route (if applicable). |

Key to Detailed Project Listing (continued)

| | | |
|----------------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14 | Toll Credits | The amount of Toll Credits being used on the project. More information on the use of toll credits may be found in Appendix A-53 and Appendix A-54. |
| Funding Information | | Please note that the years indicated in the funding information section of the project listing are shown as Federal Fiscal years. The Federal Fiscal Year (FY) in the TIP is from October 1 to September 30 of the following calendar year. |
| 15 | Phase | The stage of the project for which the specified funds have been programmed. Phases include: environmental (ENV), design engineering (PSE), preliminary engineering (PE), right of way acquisition (ROW), Caltrans support for right of way (ROW-CT/ROW-SUP), construction (CON), and Caltrans support for construction (CON-CT/CON-CE). |
| 16 | Fund Source | The program, law, or other source from which the specified funds originated. A list of all fund codes currently in use, including the associated funding sources, may be found in Appendix A-58. |
| 17 | Prior Years | Funding programmed in years prior to the current TIP. These funds are shown for information only. Amounts shown are in \$1,000s. |
| 18 | The Four Years of the 2015 TIP | Funding programmed in years covered by the current TIP. Amounts shown are in \$1,000s. |
| 19 | Future Years | Funding programmed in years after the current TIP. These funds are shown for information only. Amounts shown are in \$1,000s. |
| 20 | Total Programmed | The rows of the funding information table are calculated to show the total amount of funding from a given source programmed in a given phase. The columns are calculated to show the total amount of funding for all phases from all fund sources for a given year. The bottom right corner is calculated to show the total amount of funds programmed for a project inclusive of all fund sources, years, and phases. |

THE TIP ONLINE

How to find up-to-date information about TIP projects

How to View the TIP Online

In addition to being printed as a stand-alone document, the TIP is also posted online at: mtc.ca.gov/our-work/fund-invest/transportation-improvement-program. This allows project sponsors and the general public to see what transportation projects are planned in their area and in the entire Bay Area. To view the TIP online, the user will need a computer with Internet access capabilities or the user can visit any public library in the Bay Area and ask to use their Internet accessible computer.

Up-to-date Information

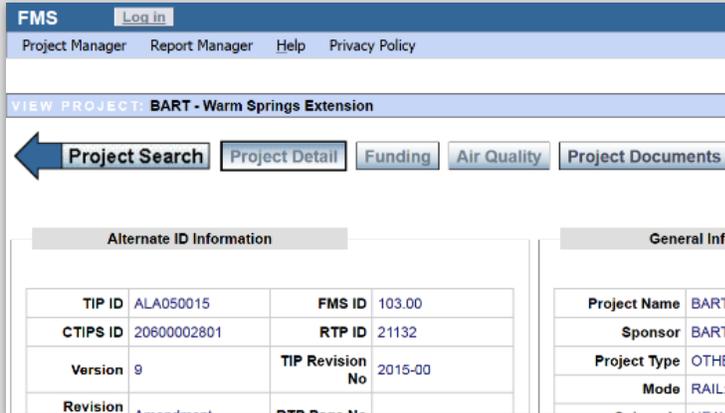
Individual project listings are also maintained in a publicly available database online. This database reflects the current version of each project, including any approved revisions (such as scope or funding changes). MTC's web-based Fund Management System (FMS) is located at: mtc.ca.gov/our-work/fund-invest/fund-management-system.

For specific or detailed information on individual projects, the particular project sponsor or lead implementing agency should be contacted directly.

View Project Locations in the TIP Interactively

Many projects in the TIP have been mapped to provide a geographic visualization of the project. However, not all projects can easily be mapped. Projects that are not tied to a specific location, such as transit operations and maintenance projects, planning projects and studies, cannot be mapped. To view project maps, visit the FMS application at: fms.mtc.ca.gov/fms/home.ds.

Once at the FMS homepage screen, select "Project Search," and click on the "Search" button. This will bring up a complete list of projects in the current TIP. Projects that can be mapped interactively display a red compass button in the left-most column of the listing under the "Map It" header. If the project is mapped, it can be viewed by clicking on the project's red compass button.



The screenshot shows the FMS interface with a navigation bar at the top containing "Project Manager", "Report Manager", "Help", and "Privacy Policy". Below this is a header for "VIEW PROJECT: BART - Warm Springs Extension". A navigation menu includes "Project Search" (highlighted with a blue arrow), "Project Detail", "Funding", "Air Quality", and "Project Documents". The main content area is divided into two sections: "Alternate ID Information" and "General Info".

| Alternate ID Information | | General Info | |
|--------------------------|-------------|-----------------|---------|
| TIP ID | ALA050015 | FMS ID | 103.00 |
| CTIPS ID | 20600002801 | RTP ID | 21132 |
| Version | 9 | TIP Revision No | 2015-00 |
| Revision | Amendment | RTP Desc No | |

For problems accessing MTC's TIP or FMS online, contact:

Adam Crenshaw
Phone: 415-778-6794
Email: acrenshaw@mtc.ca.gov

Contacts for Questions about the TIP

For questions on the TIP, you may contact:

Adam Crenshaw
Phone: 415-778-6794

- OR -

MTC Public Information
Phone: 415-778-6757
Email: info@mtc.ca.gov

Email: acrenshaw@mtc.ca.gov

For detailed information on individual projects, the particular project sponsor or lead implementing agency should be contacted directly.

General information on the transportation financing process can be found in the MTC publication, *A Guide to the San Francisco Bay Area's Transportation Improvement Program, or TIP*, updated for the 2017 TIP. The guide is posted on MTC's website at <http://mtc.ca.gov/our-work/fund-invest/transportation-improvement-program>. Printed copies are available the MTC offices also be viewed at MTC's offices at 375 Beale St., San Francisco, in the seventh floor reception area may be ordered via e-mail library@mtc.ca.gov or telephone (415) 778-5236.