



PROJECT PERFORMANCE REPORT — 2003

Regional Operations and Technical Assistance Programs
In the San Francisco Bay Area, Fiscal Year 2002–03

April 2004



Published by the
Metropolitan
Transportation
Commission

Front cover photo credits: (Top row) Woman at callbox – MTC Archives; Roadwork – MTC Archives; Carpool – George Draper; TravInfo traffic center – MTC Archives; (bottom row) Traffic signal – Photo Disc; Tow truck driver – MTC Archives; TransLink® user – John Blaustein; Screen shot 511 portal – MTC graphics.

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INTRODUCTION

The chief aim of the Metropolitan Transportation Commission (MTC) is to plan for and deliver a safe, efficient, integrated, multimodal transportation system for the San Francisco Bay Area. The system envisioned by MTC is one that successfully serves the diverse travel needs of all of the Bay Area's residents.

As the Commission prepares to update its *2001 Regional Transportation Plan (RTP)*, MTC is taking a close look at ways to strengthen the goals set forth in that long-term document. In crafting the new RTP — to be adopted in 2005 and known as the *Transportation 2030 Plan* — MTC will continue to emphasize the wise investment of limited resources to provide for a safe and well-maintained transportation system and a reliable commute. Central to these objectives are regional projects designed to enhance mobility for the traveling public. Such projects seek to improve physical and institutional connections in the transportation system, provide real-time information to help the region's residents make travel decisions, and respond to customer needs.

Both MTC's *2002 Project Performance Report* and the vision statement being refined for the *Transportation 2030 Plan* articulate the Commission's commitment to institutional partnerships, innovative technologies and customer focus as critical components of successful development, implementation and maintenance of regional projects.

- Partnership — In the Bay Area, multiple agencies are responsible for designing, building, operating and maintaining the transportation system. Coordination among these many stakeholders is key in implementing projects that cross jurisdictional boundaries.
- Technology — New technologies can improve the efficiency of the transportation system. Technology also has the ability to make the transportation system more user-friendly for the public.
- Customer Focus — Today's travelers are savvy consumers of transportation services and expect convenience and a range of travel options. Transportation service providers must maintain a strong customer focus in order to meet the public's needs and help them use the system efficiently.

As the agency responsible for overseeing regional transportation projects, MTC prides itself on sound project management. All of its projects benefit from cost-effective procurements, partner coordination, accountability through advisory committee oversight and pragmatic performance

monitoring. (See Appendix for project-specific information on advisory and oversight committees.) In addition, MTC is making more use of innovative contracting strategies such as performance incentives.

The *2003 Project Performance Report* provides an update on regional operations and technical assistance program funding and tracks project performance. Projects in this year's report are grouped around four operational themes covering eight different programs:

- Electronic Fare Payment
 - TransLink®
- 511 Traveler Information
 - TravInfo®
 - Regional Rideshare Program
 - Regional Transit Information System
- Incident Management
 - Call Box Network
 - Freeway Service Patrol
- Technical Assistance
 - Pavement Management
 - Traffic Management

Many positive steps were taken in FY 2002–03 with respect to regional project implementation and ongoing operations. Such efforts have been rewarded with peer recognition as well as favorable public response. During this past year,

- The region made steady progress toward implementation of the TransLink® universal fare payment system, including approval for full regional rollout of the TransLink® system by the transit operators who participated in Phase 1.
- The traveler information projects (TravInfo®, the Regional Transit Information System and the Regional Rideshare Program) were re-organized under the 511 brand for travel information services, and the 511 telephone number was launched. The rideshare and bicycling Web pages debuted on 511.org, and a broad marketing campaign and the first annual customer satisfaction study were kicked off.
- The American Public Transportation Association (APTA) honored the 511 Traveler Information project with an APTA Innovation Award in 2003 for being the nation's most fully implemented 511 system and serving

as a model for other metropolitan areas. In 2003, 511 also won a Transportation Management “Tranny” award from the California Transportation Foundation.

- The MTC Service Authority for Freeways and Expressways (SAFE) began to implement recommendations from the *Call Box Strategic Plan*, including identifying which roadside motorist-aid call boxes could be removed from service and exploring options to mitigate the reduction. At the same time, new call boxes were installed on the San Mateo-Hayward Bridge to replace outmoded equipment and for better integration with the regional network.
- The Freeway Service Patrol (FSP) celebrated its 10-year anniversary with a remarkable record of consistently receiving “excellent” satisfaction ratings from its customers.

Looking Ahead

MTC has new project-specific goals for FY 2003–04. Among them are the following:

- The TransLink® consortium will prepare for regionwide deployment. Golden Gate Transit and AC Transit will fully equip their transit systems with TransLink® fare collection equipment, for unveiling in FY 2004–05.
- The 511 Traveler Information project will debut its new driving times feature as well as new traffic and transit Web pages.
- The call box program will continue to implement its strategic plan to reduce the number of call boxes in its regionwide network.
- The FSP will continue implementation of its expansion plan, initiating extended morning hours and new mid-day and weekend tow truck services for some existing beats.
- The Traffic Engineering Technical Assistance Program (TETAP) will greatly increase the amount of grant assistance provided to local jurisdictions in the region to help them retime their traffic signals.

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REGIONAL OPERATIONS AND TECHNICAL ASSISTANCE PROGRAM FUNDING

Regional Operations and Technical Assistance Funding

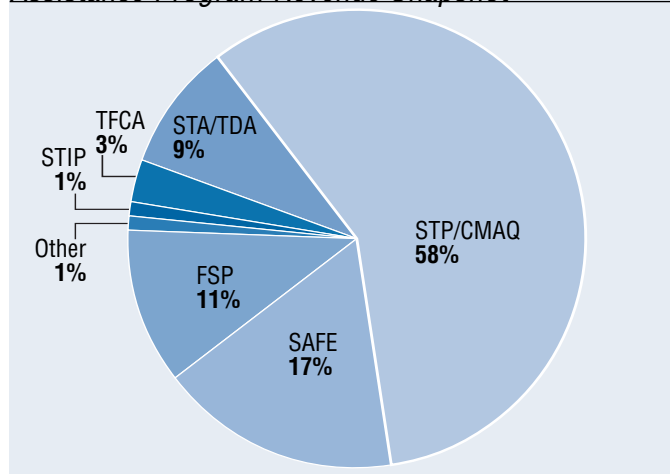
In the 2001 RTP, the Commission established a policy for funding regional projects with dedicated federal Surface Transportation Program (STP) and Congestion Mitigation and Air Quality Improvement program (CMAQ) funds. The Commission will reaffirm some level of discretionary commitment for regional projects as the Transportation 2030 planning process unfolds. Commitment of these funds demonstrates the Commission’s belief that delivery of regional projects is a cost-effective way to increase the productivity of the transportation system and that a consistent and long-term approach to funding these projects should be implemented. Complex, multiyear projects must be assured steady funding to be successful. However, they also must be subject to rigorous project management to ensure good value for the dollars invested.

Funding for MTC-sponsored regional projects accounts for a relatively small — but significant — percentage of the Bay Area’s total STP and CMAQ revenues each year. As shown in Figure 1, 18.4 percent (or \$436.5 million) of the \$2.4 billion in STP/CMAQ funds that the 2001 RTP assumes will flow to the Bay Area over the 25-year planing horizon would be spent on the projects presented in this report. (For the purpose of this

funding discussion and the entire *Project Performance Report*, all numbers are presented in 2001 dollars.)

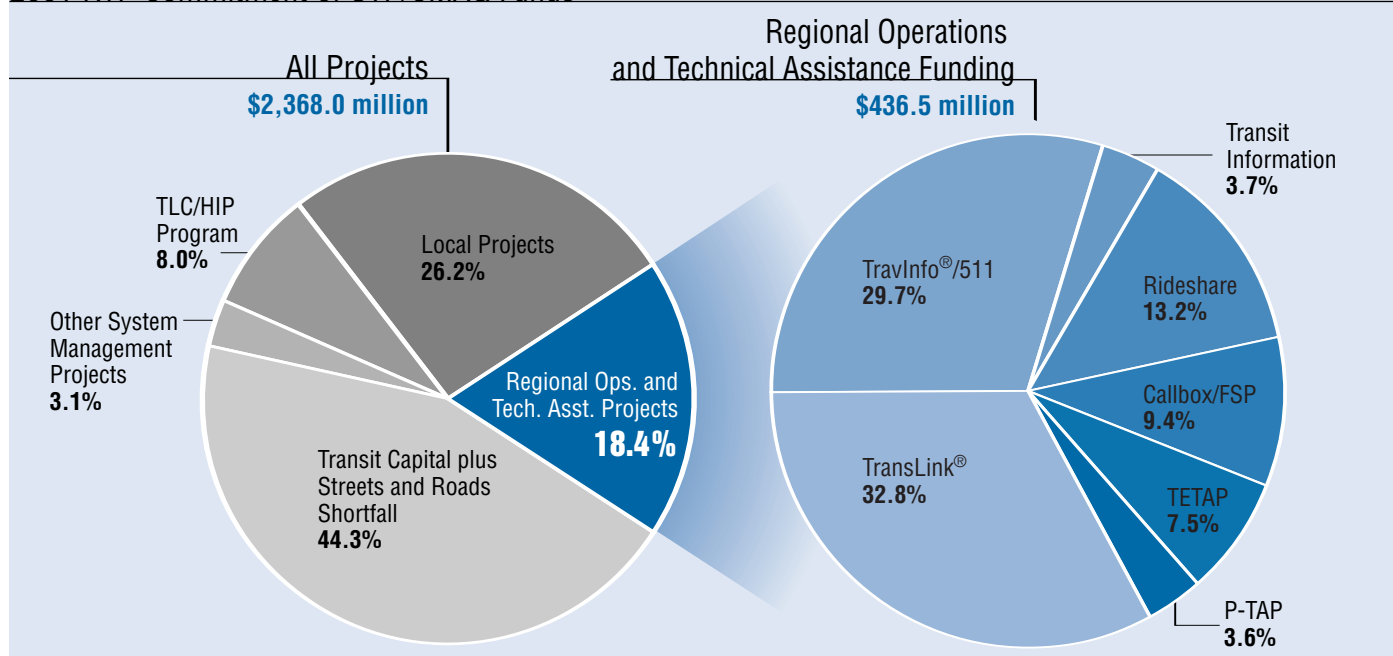
Figure 2 shows actual programming of funds to regional operations and technical assistance projects. Over the five-year period from FY 2002–03 to FY 2006–07, 42 percent of project revenues are from state and local sources rather than from the STP or CMAQ programs. This percentage is slightly different from the

figure 2
*Five-Year Regional Operations and Technical Assistance Program Revenue Snapshot**



* Abbreviations: STA - State Transit Assistance; TDA - Transportation Development Act; TFCA - Transportation Fund for Clean Air; STIP - State Transportation Improvement Act

figure 1
*2001 RTP Commitment of STP/CMAQ Funds**



* Regional funds defined as STP/CMAQ from FY 2001–02 to FY 2025–26, per the adopted 2001 RTP

numbers shown in the 2002 Project Performance Report when 55 percent of project revenues were from sources other than STP and CMAQ. The change is largely attributable to an advance of funds for the TransLink® project in support of the project’s initial capital deployment, and changes to Regional Rideshare Program funding. Details on funding for specific projects, including any significant changes in funding from the 2002 Project Performance Report, are included in the “Project Revenues” section of the individual project analyses that follow.

Figure 3 (below) displays the total and annual revenue needs for the regional projects. STP/CMAQ funding amounts from FY 2002–03 to FY 2004–05 represent actual or programmed funds while FY 2005–06 and FY 2006–07 amounts represent funds yet to be programmed as well as needs anticipated under Transportation 2030. Depending on Commission action related to Transportation 2030 and changing project conditions (especially as related to TransLink®), this funding information is subject to revision. It also is important to note that revenue information does not necessarily represent project costs in any given year.

figure 3

Five-Year Project Revenue Summary

Project		Funding Source	Fiscal Year					5-Year Total	Percent of Total
			02–03	03–04	04–05	05–06	06–07		
TransLink®	TransLink®	CMAQ/STP	\$9,739	\$9,517	\$21,146	\$16,045	\$5,862	\$62,309	79%
		Other	1,749	1,556	681	8,027	4,310	16,324	21%
		Total	\$11,488	\$11,073	\$21,827	\$24,072	\$10,172	\$78,633	
511 Traveler Information	TravInfo®	CMAQ/STP	\$5,099	\$5,491	\$4,709	\$2,588	\$6,700	\$24,587	87%
		Other	679	848	848	327	861	3,563	13%
		Total	\$5,778	\$6,339	\$5,557	\$2,915	\$7,561	\$28,150	
511 Traveler Information	Regional Rideshare Program	CMAQ/STP	\$0	\$4,393	\$2,488	\$2,847	\$2,764	\$12,491	63%
		Other	3,677	915	888	863	837	7,181	37%
		Total	\$3,677	\$5,308	\$3,376	\$3,710	\$3,601	\$19,672	
511 Traveler Information	Regional Transit Information System	CMAQ/STP	\$290	\$641	\$711	\$776	\$837	\$3,256	59%
		Other	1,388	620	92	98	99	2,297	41%
		Total	\$1,678	\$1,261	\$803	\$874	\$936	\$5,553	
Incident Management	Call Box and FSP Projects	CMAQ/STP	\$303	\$0	\$0	\$1,984	\$2,010	\$4,297	8%
		Other	10,735	10,036	10,308	10,855	10,347	52,281	92%
		Total	\$11,038	\$10,036	\$10,308	\$12,839	\$12,357	\$56,578	
Technical Assistance Programs	Pavement Management (P-TAP)	CMAQ/STP	\$471	\$641	\$622	\$604	\$586	\$2,924	89%
		Other	61	83	81	78	76	379	11%
		Total	\$532	\$724	\$703	\$682	\$662	\$3,303	
Technical Assistance Programs	Traffic Engineering (TETAP)	CMAQ/STP	\$208	\$1,327	\$1,288	\$1,251	\$1,214	\$5,289	89%
		Other	27	172	167	162	157	685	11%
		Total	\$235	\$1,499	\$1,455	\$1,413	\$1,371	\$5,974	
TOTALS	All Regional Operations and Technical Assistance Projects	CMAQ/STP	\$16,110	\$22,010	\$30,964	\$26,095	\$19,973	\$115,152	58%
		Other	18,316	14,230	13,065	20,410	16,687	82,708	42%
		Total	\$34,426	\$36,240	\$44,029	\$46,505	\$36,660	\$197,860	

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ELECTRONIC PAYMENT PROGRAM

Electronic Payment Program

One of the regional strategies for improving transportation efficiency that MTC supports is electronic payment, including the TransLink® program for transit fares and the FasTrak™ program for collecting bridge tolls. Such payment mechanisms offer greater customer convenience, can speed transaction times through tollbooths and on transit systems, and enhance seamless regional travel by making services connect even when operated by separate institutions. For toll and transit system operators, electronic payment systems have the potential to simplify operations and increase efficiency by improving throughput, allowing greater flexibility in setting toll and fare rates, reducing costs associated with cash management, minimizing system fraud and supporting enhanced data analysis for planning purposes.

MTC has been working with the region's transit operators to implement the TransLink® smart card fare payment system in the Bay Area. With approval from the six largest transit operators, TransLink® is now ready for regional implementation. To pave the way for Phase 2, MTC helped craft an Interagency Participation Agreement and establish the multi-operator consortium that will administer the full rollout and ongoing operation of the TransLink® program.

The TransLink® project has given MTC significant experience with managing large technology- and service-oriented projects. For this reason and because of MTC's dual role as the Bay Area Toll Authority, MTC has agreed to assume responsibility for the FasTrak™ regional toll collection customer service center from Caltrans and the Golden Gate Bridge, Highway and Transportation District in the spring of 2004.

The *2003 Project Performance Report* provides electronic payment project performance information only on TransLink®. In the future, the report will include the FasTrak™ program as well.

TransLink®: Universal Fare Payment System

TransLink® is the Bay Area’s universal fare payment system for public transportation, based on smart card technology. With TransLink®, transit riders will be able to use a single card to pay their fares on buses, trains, light-rail vehicles and ferries all around the region. Phase 1 of the project included the design and manufacture of the basic components of the TransLink® system, a six-month pilot program, and a comprehensive evaluation concluded in October 2002. Phase 2 of the project includes full regional implementation and ongoing operation and maintenance of the system. For both Phases 1 and 2, MTC has signed a design-build-operate-and-maintain (DBOM) contract with Motorola, Inc. and subcontractor ERG.

Project Objectives

To establish a single regional fare collection system in order to:

- Improve passenger convenience in making inter- and intra-agency trips;
- Improve efficiency and security of the region’s fare collection system;
- Improve transit system data collection for service planning and the development of fare policies; and
- Allow participation in revenue-enhancing or cost-saving business partnerships with the private sector.

Highlights

It was a year of strategic planning for the TransLink® program. Highlights include the following:

- Phase 1 was successfully completed;
- Transit operators decided to continue Phase 1 operations until a decision to implement Phase 2 had been reached;
- The principles for a future governing body were established;
- Transit operators agreed on a cost-sharing structure to cover TransLink® variable operating costs;
- Transit operators and MTC negotiated a 13 percent reduction in program operating costs for the life of the contract; and

- The policy boards of AC Transit, the San Mateo County Transit District (SamTrans), Caltrain and Golden Gate Transit approved their participation and implementation of Phase 2. In early FY 2003–04, the San Francisco Municipal Railway (Muni), Santa Clara Valley Transportation Authority (VTA) and BART followed suit.

Project Revenues

The following table provides TransLink® project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include programmed State Transit Assistance (STA) funds. Significant TransLink® revenues (Section 5307, State Transportation Improvement Program and other state and local funds) were obligated prior to FY 2001–02 and are not included in the funding table. These previously obligated funds will be spent as the system is rolled out in the region. Because of project cash flow needs consistent with the start-up costs of implementing a large capital project, early STP/CMAQ funds programmed to TransLink® have been greater than those estimated in the *2002 Project Performance Report*.

TransLink®

Funding Source	Fiscal Year (In thousands of 2001 dollars)					5-Year Total	Percent of Total
	02–03	03–04	04–05	05–06	06–07		
STP/CMAQ	\$9,739	\$9,517	\$21,146	\$16,045	\$5,862	\$62,309	79%
Other	1,749	1,556	681	8,027	4,310	16,324	21%
Total	\$11,488	\$11,073	\$21,827	\$24,072	\$10,172	\$78,633	

Target Customer

Transit users and transit operators.

Measuring Performance

As previously reported, the TransLink® Pilot Program was independently evaluated and received high marks in terms of equipment performance and customer satisfaction. Since then, MTC

“I love not dealing with tickets and walking right on. Overall it [TransLink®] is a fantastic upgrade to my commuting life.”
— TransLink® user

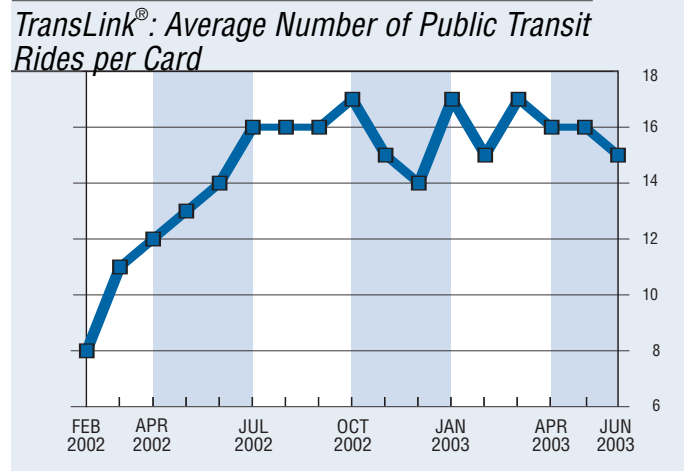
has continued to track TransLink® activity through operational data collected by the TransLink® contractor, by the participating transit operators, and by MTC.

Project Performance

Public transit riders originally recruited for the Pilot Program continued to use the TransLink® system in FY 2002–03. Since February 2002, about 6,500 cards have been issued to the public. In an average month, a TransLink® cardholder uses the card for 16 public transit rides (see Figure 1). In all, TransLink® has supported 387,600 fare payment and add-value transactions since February 2002 (see Figure 2). Of all transactions, 58 percent were made on Golden Gate Ferry (the only system that is fully equipped with TransLink®), 21 percent occurred on BART and 15 percent on Muni. AC Transit, Caltrain and VTA each had less than 3 percent of total fare payment and add-value transactions. The non-ferry transit operators have very limited TransLink® installations on select routes or stations, which explains their much smaller transactions share.

Operationally, most TransLink® equipment continued to exceed the performance requirements established in the DBOM contract. The devices used by cardholders to tag their cards, ticket equipment used at transit operator and customer service locations, and auxiliary data display units used by station agents generally performed above the contractual threshold of 7,500 mean operating hours between failures. The original handheld card readers will be replaced with a new model since their performance in the Phase 1 demonstration did not meet contract

figure 1

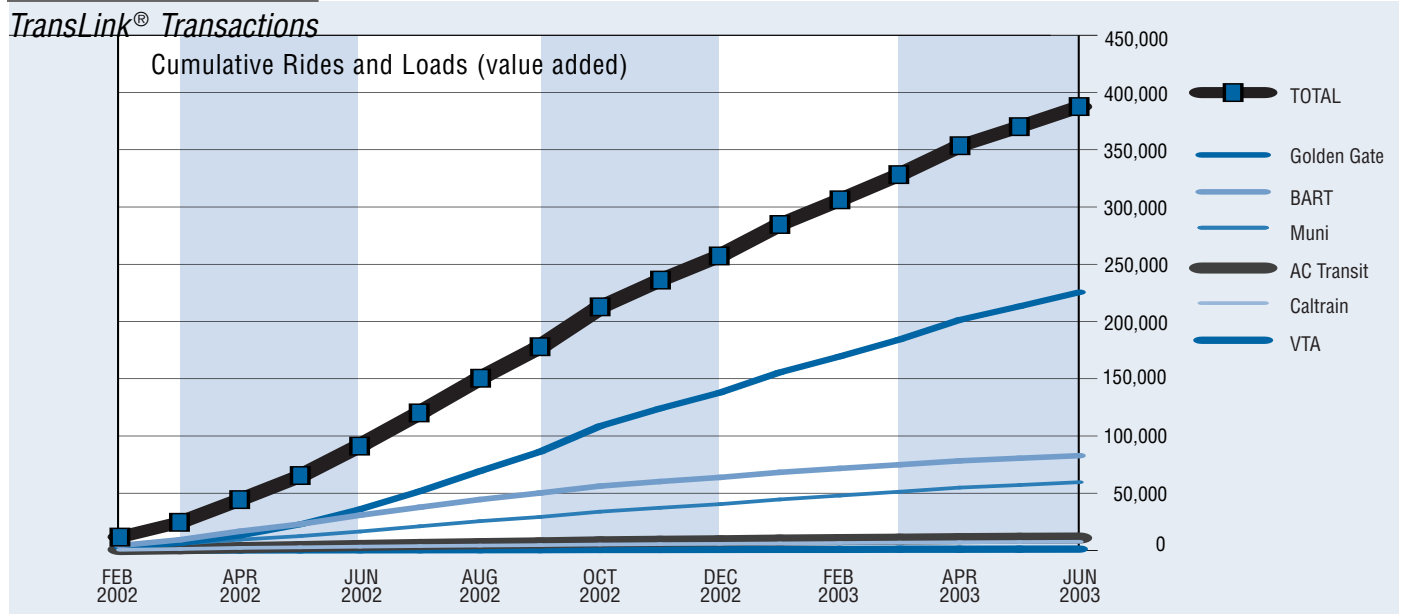


specifications of 15,000 mean operating hours between failures. The add-value machines performed below the acceptable contract threshold of 7,500 mean operating hours between failures for a significant portion of FY 2002–03, mostly in the areas of revenue servicing and transaction recording. The contractor will upgrade add-value machine software to improve performance and meet contract requirements.

In collaboration with Phase 1 transit agencies, MTC agreed to address several issues prior to issuance of Phase 2 notice to proceed. The specific issues and a brief status report follow.

- Cost-sharing agreement — Phase 1 transit operators reached agreement in December 2002, the results of which will be incorporated into the Interagency Participation Agreement.

figure 2



- Governance — The policy boards of the Phase 1 transit operators and MTC have authorized execution of the TransLink® Interagency Participation Agreement (which will establish the TransLink® Consortium), initiating implementation of Phase 2 of the project.
- Phase 1 final acceptance — MTC issued Phase 1 Final Acceptance to the contractor on Aug. 5, 2003.
- Price reductions and release of claims — Transit operators and MTC successfully negotiated a 13 percent cost reduction over the life of the contract and a general release from all claims.
- Integration of TransLink® into existing BART and Muni faregates — In July 2003, the Commission approved a change order for Muni faregate integration. In October 2003, MTC and BART executed a funding agreement for faregate integration.

Since these issues have been resolved, MTC issued its Phase 2 notice to proceed on Nov. 10, 2003.

Future Expectations

MTC wants to bring the benefits of a regional electronic fare payment system to transit riders as soon as possible.

FY 2003–04 will be a busy year of preparation: software design and development, hardware procurement and installation, testing and training, and card distribution planning and implementation. The first operators to completely deploy TransLink® on their systems will be Golden Gate Transit and AC Transit in mid-FY 2004–05. MTC will continue to work with transit operators to refine the deployment schedule based on operator readiness and other factors.

Other important issues to address in FY 2003–04 to assure the success of the project include the following:

- MTC and the operators will execute the TransLink® Participation Agreement, formally establishing the TransLink® Consortium, which will be responsible for the management and delivery of the Phase 2 TransLink® program.
- MTC will support the Consortium’s activities and decision-making process through the full regional rollout, including:
 - Revising operating rules for Phase 2 to outline detailed definitions of transit operator, contractor and MTC roles and responsibilities;
 - Defining and implementing policies for funds movement, settlement, investment and tracking;
 - Conducting research to determine where to locate vending facilities to add value to TransLink® cards. Based on the findings, the Consortium will develop a general TransLink® card distribution strategy; and
 - Completing a market segmentation study to clearly define target markets for the card. The Consortium will develop a marketing plan with recommendations for promoting the card.

“Using TransLink® makes my experience more convenient — less cash to carry, saves time. Now all I do is increase amount on my card and I’m gone.”
— TransLink® user

PROJECT PERFORMANCE REPORT

511 TRAVELER INFORMATION PROGRAM

511 Traveler Information Program

Providing the public with information about travel choices available to them is a key strategy in the continuing challenge to reduce the impact traffic congestion has on people's lives. The 511 Traveler Information Program is the culmination of years of effort by MTC, Caltrans, the California Highway Patrol (CHP), transit operators and others partners to provide on-demand, real-time information. The 511 program makes traveler information available by telephone via the federally dedicated information number and on a Web site at 511.org. Information is organized by mode: traffic, transit, ridesharing and bicycling. This innovative service seeks to:

- Empower customers to make informed travel decisions;
- Expose customers to a range of transportation options; and
- Inspire customer confidence in the transportation system.

Technological Advances

The 511 service represents the convergence of several important opportunities:

- The Federal Communications Commission recognized the importance of implementing a national three-digit telephone number for transportation information.
- Voice-response and other technologies have improved significantly.
- Consumer access to cell phones, computers, personal digital assistants and the Internet continues to grow.
- Consumers are increasingly technology savvy and have high expectations that products and services be user-friendly.
- MTC recognizes the importance of investing transportation funds to improve the ease and convenience of using the transportation system.

Customer Focus

The 511 program places a priority on the customer's experience with its service. To this end, customer feedback is sought through focus groups, surveys, comment lines and other methods. New 511 features are based on market research and designed to meet the needs of customers within budgetary, technological and institutional constraints. MTC annually conducts a survey of customers' satisfaction with 511. MTC also implements marketing campaigns and uses existing assets (e.g., blue and white highway signs) to increase consumer awareness and use of 511.

MTC has developed a Web portal for the 511 service to serve as a gateway to the traffic, transit, ridesharing and bicycling Web pages. MTC will track usage of the portal to better understand 511 customer needs, and explore opportunities to make better use of the portal as a tool for highlighting 511 features and quickly directing customers to the information they seek.

Projects Supporting 511

While 511 is presented as a single service to the customer, multiple suppliers provide the information content. For a more accurate discussion of funding, contracts and performance, the *2003 Project Performance Report* presents information by the different contracts that supply the breadth of 511 services:

- TravInfo® contract with PB Farradyne;
- Regional Rideshare Program contract with RIDES for Bay Area Commuters, Inc.; and
- Regional Transit Information System contract with bd Spatial (formerly GIS/Trans).

511 — TravInfo®

TravInfo® collects real-time transportation data from various sources in the Bay Area, and provides the public with accurate, comprehensive and timely information about traffic congestion, roadway incidents, construction activity and special events through the 511 traveler information phone number. Soon, the same information also will be available through the 511.org Web site. In addition, TravInfo®’s 511 phone system provides direct connections to Bay Area transit operators, ridesharing organizations and other transportation agencies. TravInfo® information also is disseminated through other channels, such as traffic Web sites run by private companies, local radio stations, and as a supplement to traffic reports on television, with live reports from the Traffic Management Center at Caltrans District 4 headquarters. Data for the TravInfo® system comes from MTC, the CHP, Caltrans and other Bay Area transportation agencies.

The TravInfo® contractor, PB Farradyne, has a six-year (2000–2006) design-build-operate-maintain contract with MTC to provide TravInfo® data collection, fusion, dissemination and marketing. In addition to operating the TravInfo® system, PB Farradyne is responsible for developing system enhancements. The most significant, recently unveiled enhancement is the transition of the phone system from 817-1717 to 511, including the implementation of a state-of-the-art voice responsive system. Under way now are two other improvement efforts: (a) to design and build a travel-time data collection system using data derived from FasTrak™ toll tag readers and Caltrans’ traffic operations system (TOS), and (b) to develop a traffic Web page at traffic.511.org. Now that the new phone service has been launched, it is being marketed to the public as “511,” and the TravInfo® name will no longer be marketed.

“I absolutely love the 511 system. It really helps me decide on which way I’m going to get to school in the morning. It really saves me on time.”
— 511 user

Highlights

In FY 2002–03, TravInfo®:

- Launched the new 511 traveler information service and experienced a 68 percent increase in calls for traffic information compared to FY 2001–02;
- Conducted a marketing campaign to promote awareness of traffic, transit, ridesharing and bicycling information via the 511 phone number and the 511.org Web site; and
- Completed roadside installation of the Interstate 80 corridor toll tag readers to provide estimates of travel times via 511 in FY 2003–04.

Project Objective

To provide comprehensive, accurate, reliable and useful multi-modal travel information that meets the needs of Bay Area travelers.

Project Revenues

The table below provides TravInfo® project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and anticipated funds from Transportation 2030 as well as other fund sources, which, in the case of TravInfo®, are entirely comprised of MTC Service Authority for Freeways and Expressways (SAFE) funds. SAFE funds serve as the local match to federal moneys.

Funding Source	Fiscal Year (In thousands of 2001 dollars)					5-Year Total	Percent of Total
	02–03	03–04	04–05	05–06	06–07		
STP/CMAQ	\$5,099	\$5,491	\$4,709	\$2,588	\$6,700	\$24,587	87%
Other	679	848	848	327	861	3,563	13%
Total	\$5,778	\$6,339	\$5,557	\$2,915	\$7,561	\$28,150	

Target Customer

The primary target customers for TravInfo® are users of all transportation system modes and markets; secondary customers include transportation agencies, which can use the information to fill in gaps in the data that they get from their own systems, and private-sector Information Service Providers (ISPs), which disseminate this information to travelers through their own customized products and services.

Measuring Performance

The project is founded on the belief that the most important measures of the program's performance are the number of people using 511 and the users' satisfaction with the service. The contract with PB Farradyne reinforces this by providing an incentive fee worth up to 8 percent of project costs that is awarded solely on the basis of achieving certain levels of system usage and customer satisfaction. This is in addition to the fixed contractor's fee of 6 percent. PB Farradyne generates monthly reports of system usage, and an independent contractor performs an annual survey to measure customer satisfaction.

The rationale for focusing on usage is simply that there is no better way to determine if the product meets the needs of the traveling public than by measuring how many people use it and how happy they are with it. Simply put, if people are not satisfied with TravInfo's performance, they will simply stop using it.

In order to ensure the quality of the product, MTC monitors the accuracy, reliability, timeliness and comprehensiveness of the data being provided to the public and the performance of the underlying systems that make up TravInfo®. To that end, MTC's contract with PB Farradyne includes specific numerical criteria for assessing system performance and data quality. Some examples are the following:

- Travel time reports must be accurate within one minute or 15 percent (whichever is greater) compared to actual traffic conditions.
- Incident information must be verified within eight minutes of the first report of an incident 80 percent of the time.
- The data dissemination systems (i.e., 511 and 511.org) must have a mean time-between-failures of greater than 12,000 hours.

Following system testing and acceptance of all the enhanced features required in the contract, MTC will initiate formal tracking of the contract performance requirements. Finally, to stay ahead of the curve in terms of user needs and desires, MTC will continue to conduct focus groups on a regular basis to gauge how we can improve the services, and to get more detailed information about the users' experiences than surveys can provide.

Project Performance

Data Collection

A new Traveler Information Center (TIC) opened in FY 2002–03 in shared space with Caltrans' Traffic Management Center (TMC). Although the new facility had been planned for some time, due to longer-than-expected negotiations with Caltrans and contractor delays, it did not open until March 2003. This new facility was specifically designed with the needs of the TIC operators in mind, and thus is better suited to the demands of a 24/7 operation. With operations personnel now housed in the TIC, TravInfo® staff is able to increase the accuracy and timeliness of the data available on the 511 system.

The primary data source for TravInfo® continues to be the incident information provided by the CHP. The TravInfo® operators enter this information into the automated phone system, along with information from various other sources, such as speed information from Caltrans loop detectors. Callers to 511 are thus able to access information on current road conditions. A significant deficiency in this approach is that it does not reliably provide slowdown or congestion information when there is no incident. Therefore, in FY 2002–03, the TravInfo® project began development of real-time estimates of actual travel times (called 511 Driving Times). After a series of discussions with Caltrans regarding the performance and coverage of the existing detection system (or TOS), MTC agreed to test a system using toll tag readers. MTC and Caltrans selected the Interstate 80 corridor as the pilot location to determine the feasibility of a full deployment of readers on the freeway system as a whole and to evaluate the quality of the toll tag data compared to the TOS.

MTC completed installation of the readers for the pilot program in early FY 2003–04. While formal acceptance testing of the system will not be performed until the spring of 2004, initial testing indicates that the system provides accurate data on a reliable basis. As a result, the toll tag reader network will be expanded to include portions of Interstates 280 and 580 and U.S. Highway 101 (including the Golden Gate Bridge) where TOS coverage is not available (i.e., not in existence, planned or funded for construction). In addition to deploying the toll tag network, MTC is tackling the challenge of how to present driving time information to the public. If the pilot project remains on schedule, 511 Driving Times should be available via 511 in early 2004 for select origins and destinations in the Bay Area. This will be the first 511 deployment in the country to offer this service.

Data Dissemination

TravInfo®’s primary methods of disseminating information in FY 2002–03 included the 511 phone system and independent ISPs. MTC and the contractor also worked on the development of a traffic information Web page (traffic.511.org), which will be available at the 511.org Web portal in early 2004.

Usage

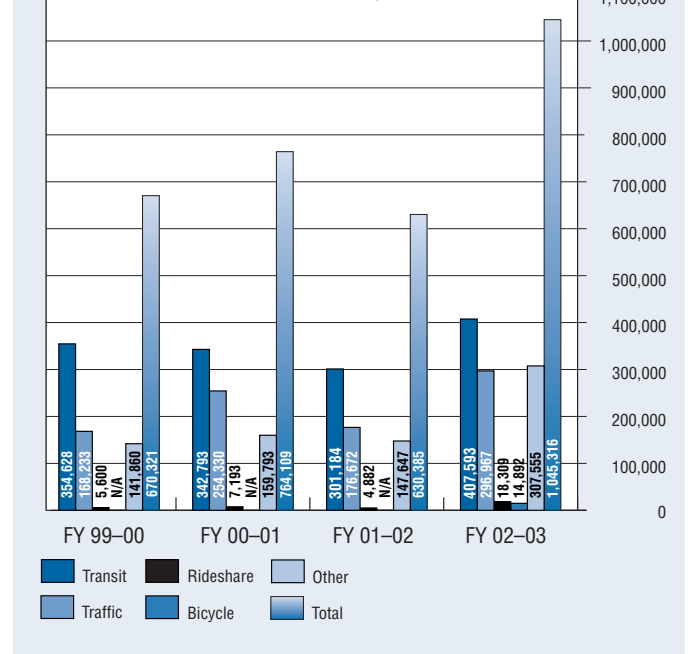
In total, use of the traveler information phone service increased 66 percent between FY 2001–02 and FY 2002–03 — growing from 630,385 calls in 2001–02 to 1,045,316 calls the following year (see Figure 1).

511 replaced the 817-1717 traveler information number in December 2002 and usage has steadily increased since that time. Figure 2 shows the call volumes and the patterns of information selection before and after the 511 launch over the past nine quarters. A variety of factors contributed to the growth in 511 usage, including the following:

- 511 is easier for callers to dial and remember than 817-1717, and the new, voice-responsive system is much easier to use than the touch-tone system that it replaced.
- In March 2003, call volumes increased dramatically during anti-war protests as commuters turned to 511 for information about their best transportation option to avoid possible jams resulting from the demonstrations.

figure 1

TravInfo® Phone Information Requests

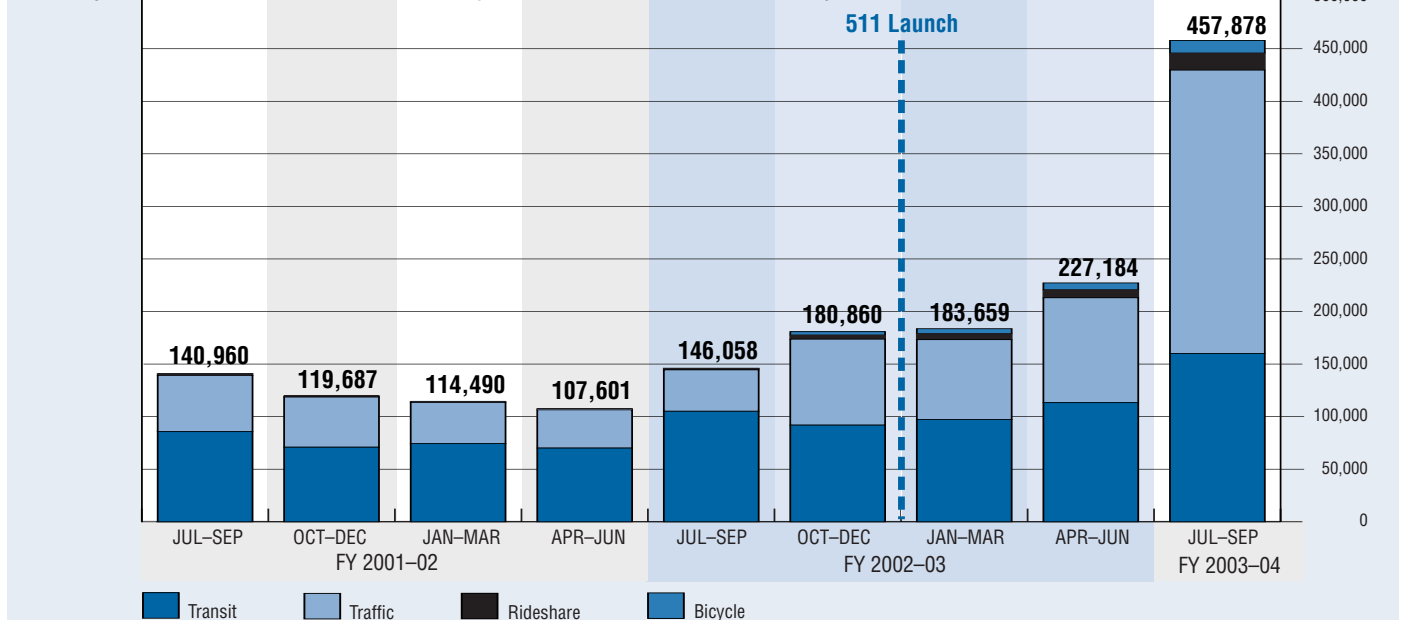


In the past, commuters have similarly relied on 817-1717 for information related to regional flooding and BART strikes.

- A significant increase in 511 phone information requests occurred in the first quarter of FY 2004. This increase can be attributed to a series of marketing efforts, including a general awareness campaign (featuring billboards, street

figure 2

Quarterly TravInfo® Phone Information Requests: Before and After 511 Implementation



Note: This figure does not include the “Other” category that was included in Figure 1. Consequently, the totals in each figure will not correspond with each other.

banners and advertising in print, radio and television media) from March to June 2003, and the replacement of 114 existing freeway rideshare signs with signs promoting the 511 telephone number in June 2003.

In addition to providing travel information through 511, the TravInfo® contractor has agreements with private companies to permit use of TravInfo® traffic data as content for their Web sites. Data usage by these ISPs is included in the TravInfo® statistics that are used to calculate the incentive payment for the contractor. Web use of traffic information through TravInfo® ISPs increased to 1.4 million user sessions in FY 2002–03, up 205 percent from 461,000 user sessions in FY 2001–02.

Including all dissemination methods, TravInfo® had 1,704,219 traffic users and 407,593 transit users in FY 2002–03 (see Figure 3). Traffic data for FY 2001–02 was retroactively revised down from 1,703,297 traffic users to 657,097 after MTC and the contractor agreed to not include radio broadcasts in usage statistics. While the overall usage of TravInfo® services increased considerably in FY 2002–03, the TravInfo® contractor remains significantly below the data usage goals established in the contract.

Customer Satisfaction

MTC conducted a survey of 1,109 users of the 511 telephone information service in May and June 2003 to determine their level of satisfaction with the service (see Figure 4). The vast majority — 90 percent — of respondents reported that overall they were satisfied with the 511 service (62 percent “Very satisfied,” 28 percent “Somewhat satisfied”). The most important factor driving satisfaction and dissatisfaction was whether callers received the information they needed or not. One hundred percent of those respondents who received the necessary informa-

figure 4

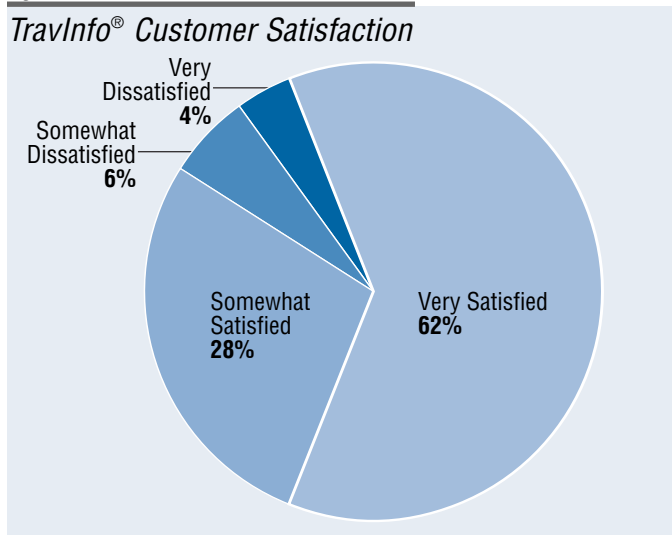
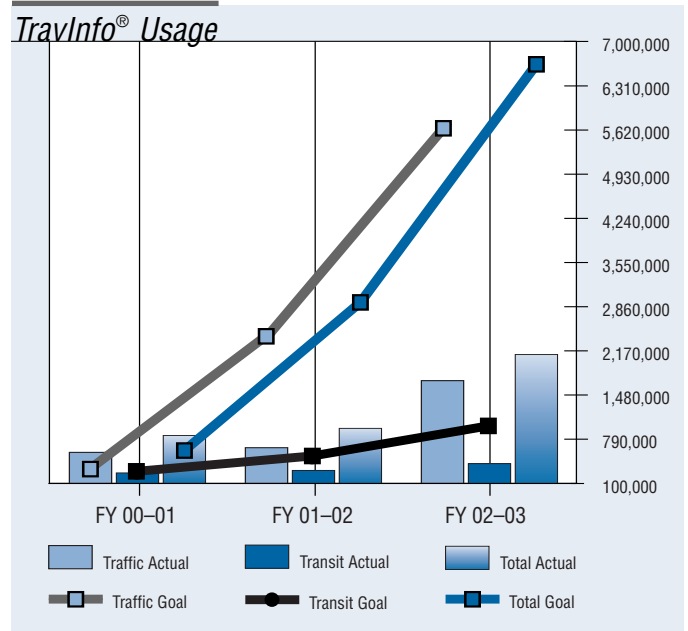


figure 3



tion on their last call indicated they would use 511 again. However, even among those callers who did not receive the information they needed, the majority (86 percent) stated that they would use 511 again.

Callers requesting traffic information were more satisfied with 511 than those requesting transit, rideshare or bicycling information. This may be due to the fact that traffic callers can receive current traffic condition information through a fully automated system. Most transit, rideshare and bicycling information requests are fulfilled at least in part by transferring callers to a call center operator.

Future Expectations

MTC has established the following milestones for TravInfo® in FY 2003–04:

- 511 Driving Times** — MTC expects to launch the 511 Driving Times service in the spring of 2004. According to feedback from consumers in focus groups, the availability of real-time driving time information will be a significant benefit to 511 customers. This enhancement will provide point-to-point travel time estimates, covering portions of the Interstates 80, 580, 680 and 880, and U.S. Highway 101 corridors. (See map on page 25, for specific location of existing toll tag readers and pavement loop detectors in the anticipated coverage areas.) MTC will complete implementation of the next set of toll tag readers (in certain North Bay and Peninsula locations as well as on four toll bridges) by March 2004, and the entire toll tag data collection system by the end of 2004.

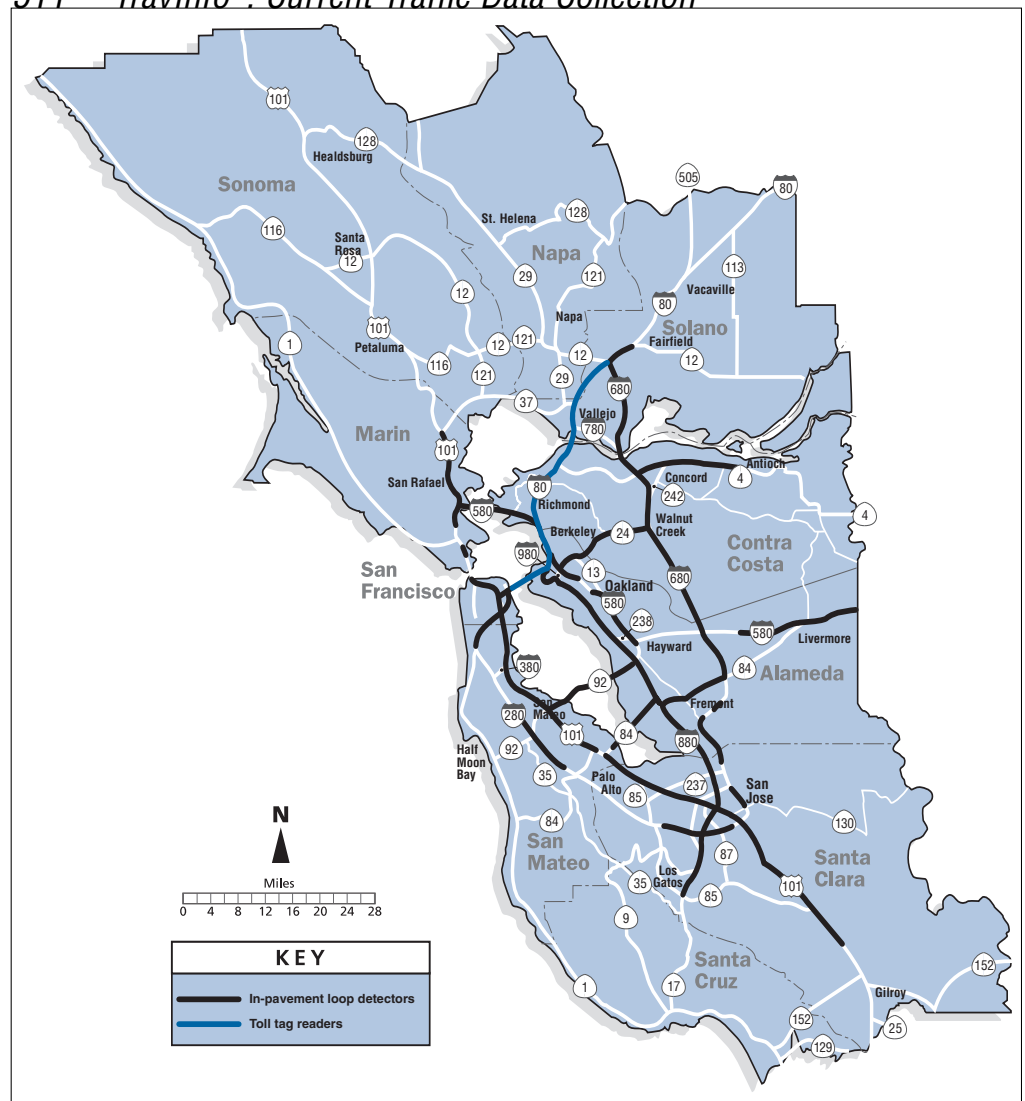
“It [511] can really help me avoid traffic jams and find alternate routes when the traffic is bad.”

— 511 user

- **Transit Arrival Information** — Many of the region’s transit agencies are implementing real-time transit arrival information systems. These systems provide the public with estimates of transit vehicle arrival times through electronic displays at transit stops or via the Web. TravInfo® is working with Muni to incorporate real-time transit arrivals for San Francisco Muni’s light-rail system in the 511 traveler information service on a pilot basis in the first half of 2004. In the long term, data-sharing relationships with other operators will be explored. In addition, PB Farradyne will conduct focus groups to determine customer preference for how to present real-time transit vehicle arrival information over the phone and Web.
- **511.org** — In early 2004, the traffic Web page will be launched. It will include features such as point-to-point driving time estimates, traffic speeds (indicating congestion on the freeway network), incident information, construction notification and updates on other events affecting freeway conditions. After the Web page is launched, the new site will be fine-tuned based on consumer feedback.

- **Usage Goals** — FY 2003–04 usage goals (including all dissemination methods) for TravInfo® are 1,500,000 transit users and 8,750,000 traffic users.
- **Performance Monitoring** — As TravInfo® moves from the development phase into an ongoing operations phase, the TravInfo® team will conduct more rigorous monitoring of system performance. MTC is working with the TravInfo® contractor PB Farradyne as well as the performance monitoring contractor (Kimley-Horn and Associates) to develop and implement a thorough performance monitoring plan. This plan will focus primarily on data quality (including travel times as well as incident data) and system performance (i.e., system failures, etc.).

511— TravInfo®: Current Traffic Data Collection



511 — Regional Rideshare Program

The Regional Rideshare Program (RRP) encourages people to use alternatives to driving alone (such as carpooling, vanpooling, riding transit, bicycling, telecommuting and walking) by providing information about travel options, with a particular focus on facilitating “matches” between interested carpoolers and vanpoolers, and conducting marketing and outreach efforts to employers and the public. Under contract to MTC, RIDES for Bay Area Commuters, Inc. provides regional program services, with support from Solano/Napa Commuter Information.

Project Objective

To shift individuals from single-occupant vehicles to carpools, vanpools and other transportation alternatives, and help individuals sustain this shift in order to mitigate the growth of traffic congestion and reduce motor vehicle emissions in the Bay Area.

Regional Rideshare Program

Funding Source	Fiscal Year <i>(In thousands of 2001 dollars)</i>					5-Year Total	Percent of Total
	02–03	03–04	04–05	05–06	06–07		
STP/CMAQ	\$0	\$4,393	\$2,488	\$2,847	\$2,764	\$12,491	63%
Other	3,677	915	888	863	837	7,181	37%
Total	\$3,677	\$5,308	\$3,376	\$3,710	\$3,601	\$19,672	

Highlights

In FY 2002–03, the program

- Achieved a 72 percent satisfaction rating from program customers regarding their general experience with rideshare services;
- Reduced congestion by eliminating 1.4 million vehicle trips (approximately 43 million vehicle miles traveled) from Bay Area roads;
- Contributed to better air quality by forestalling the emission of 1.7 million pounds of pollutants; and
- Completed a performance audit in December 2002 that resulted in the creation of a Technical Advisory Committee (TAC) to address recommendations related to program performance and strategic direction.

Project Revenues

The table above provides RRP project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources. These include State Transportation Improvement Program (STIP), Transportation Development Act (TDA) and Transportation Fund for Clean Air (TFCA) funds. Prior to FY 2003–04, the program’s funding partners — the Bay Area Air Quality Management District (BAAQMD), county congestion management agencies and MTC — contributed TFCA, STIP or TDA funds per an informal six-year funding agreement.

Beginning in FY 2003–04, the majority of the program will be funded from federal CMAQ funds, matched with TFCA funds. Changes from funding as reported in the *2002 Project Performance Report* include the following:

- In recognition of the operational nature of the rideshare program, a \$2 million advance in STP/CMAQ was programmed in FY 2003–04 to hedge against cash-flow problems such as the lack of regional obligation authority; and
- One county’s contribution, previously expected to be TFCA, will now be STP/CMAQ, consistent with the regional funding approach.

Target Customer

The RRP TAC has refined its definition of target customers as a result of a recent performance audit. The first priority will be commuter trips, feeder trips to/from transit and trips to airports. The second priority will be student trips, trips to regional attractions and general discretionary trips. The third priority will be special event trips such as sporting events, senior/special needs trips, welfare to work trips and trip reduction efforts focused around highway construction projects.

Measuring Performance

The RRP regularly conducts surveys to determine the effects of program activities on client mode choice. Following a methodology developed by researchers at California State University, Chico, the program uses “Report Card” and survey data to mathematically derive 1) the number of clients placed in an alternative to driving alone, or “placements,” 2) the number of vehicle trips reduced, 3) the reduction in vehicle miles traveled (VMT) and 4) cuts in emissions. In addition, MTC and the RRP TAC incorporated a series of specific performance goals for the program as part of the contract. These goals will be monitored and updated annually. For the first time, customer satisfaction also will be measured through a phone survey.

Project Performance

FY 2002–03 marked the second consecutive year of declining performance as measured by reductions in vehicle trips and vehicle miles traveled. The RRP eliminated about 1.4 million vehicle trips (see Figure 1) and reduced VMT by 43 million

figure 1

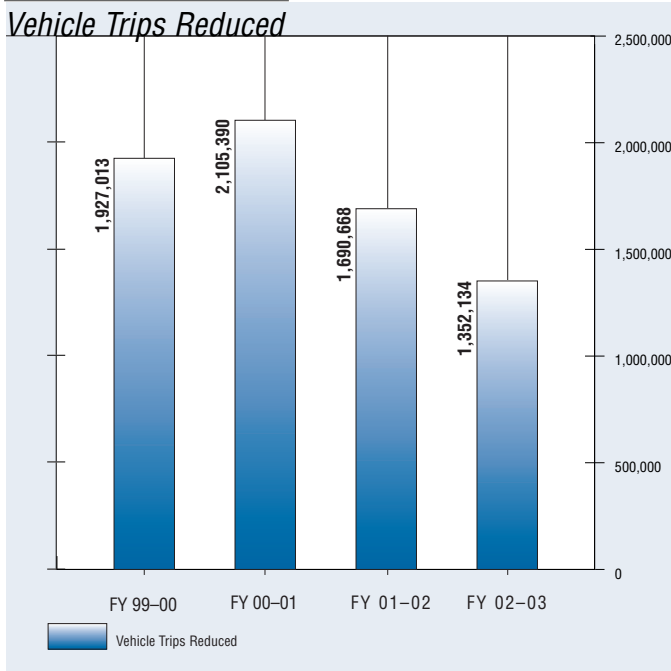
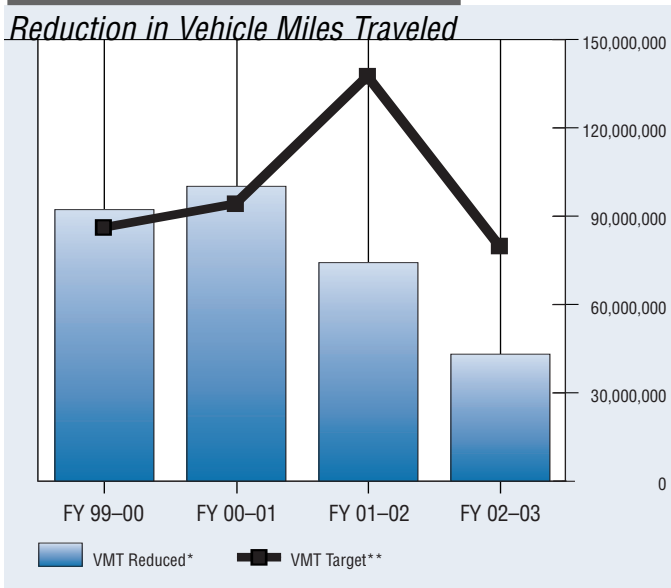


figure 2



* Vehicle Miles Traveled (VMT) Reduced is calculated as a function of the number of people placed in a commute alternative, the length of time they remain in the commute alternative and the average distance traveled via the commute alternative.

** The Transportation Fund for Clean Air (TFCA) VMT Reduced Target is for an October-to-September fiscal year, an offset of three months from MTC's standard July-to-June fiscal year.

(see Figure 2). The VMT reductions were just 54 percent of the TFCA target goal of 79.9 million established by the BAAQMD through its TFCA grant. At the same time, the contractor estimates 1.7 million pounds of pollutants were reduced in FY 2002–03.

The RRP contract includes performance goals for various work tasks. Actual results for some of these work tasks are used to calculate vehicle trips, VMT and pollutants reduced. In light of the diminished performance in FY 2001–02, MTC lowered performance goals to more realistic levels in FY 2002–03; however, the program subsequently failed to achieve these lower goals. For FY 2003–04, performance goals have been further reduced by MTC, based on consultations with the TAC.

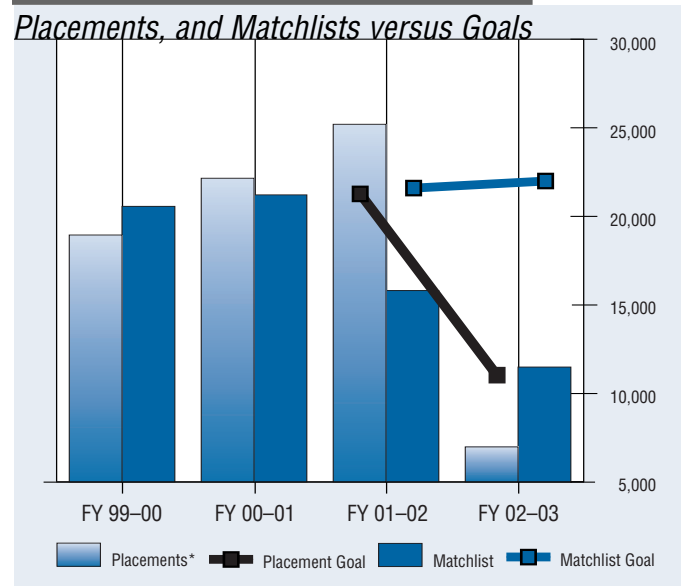
In FY 2002–03, (see Figure 3) the program:

- Placed 6,975 people in commute alternatives, 36 percent below the goal of 10,920; and
- Generated 11,496 matchlists, 48 percent below the goal of 22,000.

The continued slide in performance can be attributed at least in part to the following factors:

- The downturn in the economy and its impacts on employment have affected traffic levels and the numbers of commuters looking to carpool as a means to reduce

figure 3



* Placements is a calculated number based on measured statistics (matchlists generated (new and updated), placement calls made, new van riders, information requests fulfilled, promotion results and bike buddy program results) and their associated placement, commute alternative and the average distance for the commute alternative.

travel times. Some research suggests that employers do not view commute benefits and services as a top priority to offer to their employees during tough economic times.

- Some technical problems associated with converting from the existing ridematching system to a new Internet-based one at the beginning of the fiscal year limited the contractor's ability to make placement calls for five months.
- The rescheduling of rideshare program marketing in order to coordinate with the transition to the 511/511.org brand may have affected the number of matchlists generated.

While the declining statistics concern MTC, they do not give a complete picture of program activities or service delivery. In September 2003, a random survey of 101 rideshare program customers was conducted to gauge satisfaction with program services. The survey found that roughly 80 percent of the customers were satisfied with general rideshare services and the accuracy and usefulness of information provided. The survey also revealed that about 90 percent were satisfied with the type of information provided and the customer service received. Overall, 92 percent were likely to use rideshare services again. (The survey is accurate within plus or minus 10 percent.) The most frequently cited reason for dissatisfaction with rideshare services was not finding a carpool or vanpool partner.

Efforts are under way to improve the performance of the RRP. The program has been under rigorous scrutiny by MTC, the Air District, congestion management agencies and other stakeholders for several years, resulting in the development of an RRP Performance Audit, which was finalized in December 2002.

In FY 2002–03, the following actions were taken to address performance audit findings and recommendations:

- MTC created a TAC of stakeholders to advise on strategic and tactical program issues. The TAC replaced the Funding Partners Working Group.
- The target markets for program services were prioritized to allow more effective allocation of program resources.
- A consultant, working closely with MTC, the TAC and the RRP contractor, initiated development of a three-year Strategic Plan. The Strategic Plan provided guidance for changes to the FY 2003–04 contract and scope of work.
- The reporting process was overhauled to make it easier for the TAC to quickly grasp and review performance data, and includes a new "Quarterly Rideshare Program Update."

The rideshare program contractor's responsibilities include administrative, coordinating, marketing and outreach activities necessary to form carpools and vanpools in the region. Contractor activities for FY 2002–03 included the following:

- The contractor published the first-ever RRP Annual Report summarizing program initiatives and work progress for FY 2001–02.
- In early 2003, RIDES developed the rideshare Web site as part of the 511 Web portal, incorporating feedback from rideshare focus groups conducted in 2001. The contractor began to direct rideshare information requests through the 511 phone number and 511.org Web site. The contractor gathers, posts and updates the information that feeds into the rideshare pages of the 511 Web site on behalf of the region.
- The region's new Internet ridematching system went "live" in September 2002 and RIDES has continued to refine the new system's functionality by making changes that better support vanpool drivers, park-and-ride lot users and employer-based matching.
- RIDES worked with the rideshare TAC, MTC and MTC's marketing contractor to develop the "Rideshare Thursdays" campaign, which is designed to heighten public awareness and encourage individuals to share a ride at least one day a week. The campaign will debut in FY 2003–04.

Bike-to-Work Day

To allow the RRP contractor to spend more of its time and resources on forming carpools and vanpools, MTC took the lead role in regional coordination of Bike-to-Work Day (BTWD), an annual event in May to promote bicycling as a commute mode. BTWD was a success because of committed bicycle advocates, coalitions, local transportation agencies and the RRP contractor who worked together to produce the event. The RRP contractor conducted a post-BTWD survey of 360 individuals (accurate within plus or minus 5 percent) who had registered through 511 to participate in the event. Seventy-eight percent of respondents actually rode their bicycle to work. Of these respondents, 12 percent indicated they had increased their frequency of biking to work since BTWD.

The region's new Internet ridematching system went "live" in September 2002.

Future Expectations

For FY 2003–04, MTC will work with the TAC and the rideshare contractor to stabilize program performance by focusing on serving the program’s first priority markets. Special emphasis will be placed on program work tasks that are direct indicators of carpool and vanpool formation, including matchlists generated, placement calls made and vanpools formed. MTC, in consultation with the TAC and the rideshare contractor, has incorporated new performance goals for FY 2003–04 in the rideshare contract (see Figure 4).

In addition, the program will continue to address other issues:

- The public is now expected to access rideshare and bicycle services primarily through the 511 phone number and 511.org Web site. MTC, the TAC and the program contractor will continue to reinforce this access channel for information and services.
- While some progress has been made to streamline existing program performance reports and make them more transparent to reviewers, work along these lines continues.
- The approach for measuring customer satisfaction with program services will continue to be refined by the contractor.
- The contractor is researching alternative ways to measure program performance and is expected to propose some improved techniques.
- The program will introduce a pilot project to promote ridesharing to school.
- The RRP has not traditionally implemented regional incentives to encourage vanpool formation. A study to determine if incentives are an effective way to grow the Bay Area’s vanpool fleet will be conducted in FY 2003–04.
- MTC will hold focus groups to explore the usefulness, convenience and user-friendliness of the Internet ride-matching system in spring 2004. The results will inform future system enhancements.

Figure 4

Performance Measure	Performance Goal
Matchlists Generated	17,000
Placement Calls	13,000
Vanpools Formed	80
Clients Placed In Alternative Modes	8,900
Vehicle Trips Reduced	1,178,000
Vehicle Miles of Travel Reduced	54,132,000

Looking ahead, MTC also will begin preparing to rebid the rideshare contract in late FY 2003–04. The last procurement was for a five-year contract (FY 2000–01 to FY 2004–05) with an option to renew for an additional five-year period. MTC will not likely exercise the renewal option, but instead will use the opportunity of a new procurement to more directly reflect findings and recommendations from the Performance Audit. MTC expects to use the TAC to serve as the advisory body in the development of a new request for proposals.

511 — Regional Transit Information System

The Regional Transit Information System (RTIS) gathers, organizes and disseminates schedule, route and fare information for all public transit services in the region. The most visible product of the RTIS has been the transit information Web site, transitinfo.org. In addition to providing a single point of access to route, schedule and fare information, this Web site also includes the popular TakeTransitSM Trip Planner, which travelers can use to generate transit itineraries for intra- and inter-agency trips. Transit agency call centers connect to the same transit trip-planning database to provide information to their customers by telephone.

The RTIS includes three key system components: 1) the Regional Transit Database (RTD), in which MTC maintains and updates transit service data; 2) a set of software programs or applications that allow the data in the RTD to be displayed as schedule or route information on the Internet, or to generate interagency transit itineraries with the trip planner; and 3) a communications system that uses either the Internet or a dedicated frame-relay network to connect the public and transit agencies to the software programs.

The RTIS is an MTC-sponsored project that relies on the support and cooperation of Bay Area transit operators. MTC manages a contract with bd Systems (formerly GIS/Trans, Ltd.) for design, development, implementation and maintenance of the RTIS, including the database, software and communications network.

Project Objective

To provide the public with accurate, reliable and comprehensive information on all transit services in the Bay Area.

“I know my way around on Muni but East Bay transit is unfamiliar to me, so this [trip planner] really helps me launch out into the unknown, bus fare in hand. Keep up the good work!”
— user of trip planner

Highlights

FY 2002–03 performance highlights include the following:

- About 7.2 million user sessions (“visits” made by an individual computer) were recorded on transitinfo.org — a 25 percent increase over FY 2001–02; and
- Usage of the Take TransitSM Trip Planner continued to grow, generating transit itineraries in response to more than 2.1 million requests — a 108 percent increase over FY 2001–02.

Project Revenues

The following table provides Regional Transit Information System project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which, in the case of RTIS, are entirely comprised of State Transit Assistance (STA) funds. Due to the decline in the amount of STA funds anticipated to be available in future years and the need to cover TransLink[®] project costs, STA funds for RTIS have been reduced to provide only the minimum required match (11.5 percent) to STP/CMAQ funds beginning in FY 2004–05.

Regional Transit Information System

Funding Source	Fiscal Year <i>(In thousands of 2001 dollars)</i>					5-Year Total	Percent of Total
	02–03	03–04	04–05	05–06	06–07		
STP/CMAQ	\$290	\$641	\$711	\$776	\$837	\$3,256	59%
Other	1,388	620	92	98	99	2,297	41%
Total	\$1,678	\$1,261	\$803	\$874	\$936	\$5,553	

Target Customer

Current and potential transit users as well as transit agencies.

Measuring Performance

Performance of the RTIS is measured by tracking the following statistics for the Web site and the trip planner:

- Number of user sessions (“visit” made by an individual computer; requests from that same computer within a 10-minute period are counted as a single visit);
- Number of page views (Web pages viewed by an individual computer) for transitinfo.org in general and for transit agency information on transitinfo.org, sorted by the subcategories of schedules, route maps and system maps; and

■ Trip-planner itineraries generated.

The number of transit operators included in the trip planner also is an important determinant of the comprehensiveness of the service.

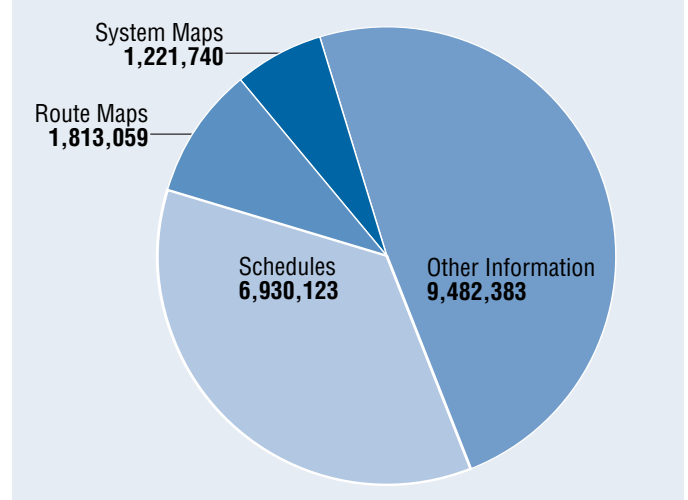
RTIS customers regularly provide feedback on transitinfo.org and the trip planner via an automatic e-mail link at the site. Customer feedback is an important tool that MTC uses to 1) improve the accuracy of transit data and 2) refine the search logic and algorithms that the trip planner uses to generate trip itineraries.

Project Performance

Despite limited advertising, the TakeTransitSM Trip Planner continued to increase in popularity. Transit patrons generated 2.1 million itineraries using the trip planner in FY 2002–03, up 108 percent from the previous fiscal year total of 1 million. In spring 2003, MTC ran a regional marketing campaign for all modes of travel covered by the 511 traveler information service. The transit portion of the campaign did not specifically reference the trip planner because MTC is waiting to complete improvements and increase transit agency participation. However, the campaign could have been an important contributing factor to FY 2002–03 fourth quarter results for trip-planner itineraries generated, which were the highest on record and exceeded 600,000 itineraries (see Figure 1).

figure 2

Transit Agency Information Page Views by Type (excluding trip planner)



Page views of information through the transitinfo.org Web site increased 20 percent from 19.1 million in FY 2001–02 to 22.8 million in FY 2002–03, not including use of the TakeTransitSM trip planner. Of these page views, 19.5 million or 85 percent were of transit agency information, which includes schedules, system maps, route maps and other information (fares, bicycle policies, etc.). A breakdown of transit agency information page views by type is included in Figure 2. Transitinfo.org user sessions increased 25 percent to 7.2 million in FY 2002–03 (see Figure 3 on following page).

figure 1

Quarterly Trip-Planner Itineraries Generated (non-cumulative)

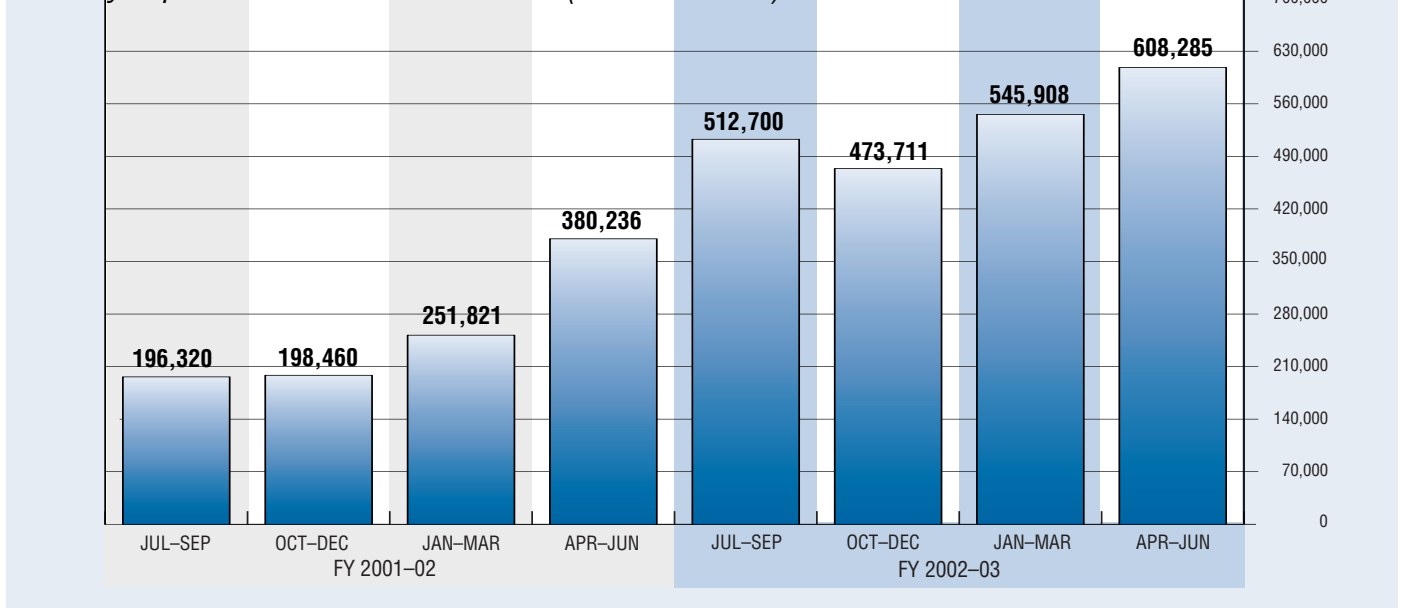
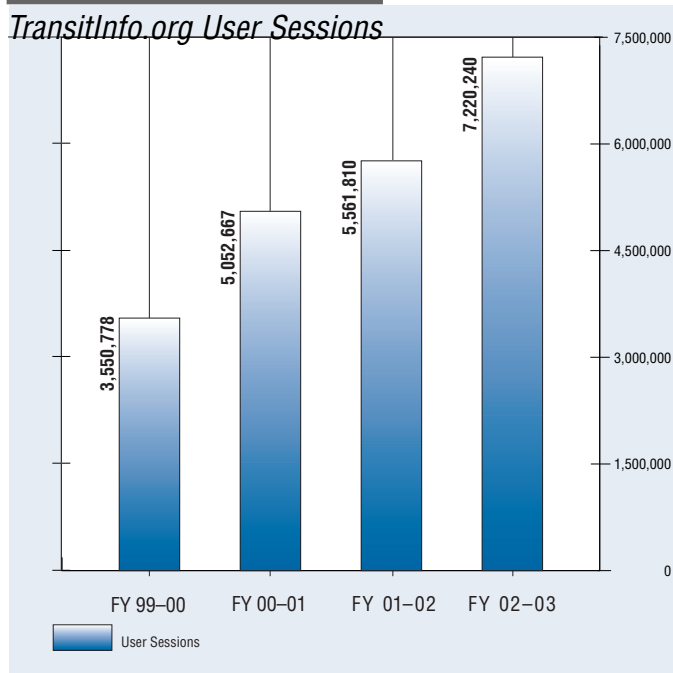


figure 3



In all, 19 of 31 transportation providers were included in the trip planner by the end of FY 2002–03. Despite the intention to include all Bay Area transit agencies in the trip planner by June 2003 and considerable coordination and planning toward that goal, no new transit agencies were actually added in FY 2002–03. One challenge has been the varying levels of resources available to some of the agencies to meet the data exchange requirements for the trip-planner system. Another challenge has been that many transit agencies are struggling with budget crises, making it difficult to devote scarce resources to the project. MTC continues to work with transit agency staff to implement the system.

MTC worked with transit agencies to design a new Web site (transit.511.org) for comprehensive transit information that has replaced the transitinfo.org Web site. The new Web page debuted in November 2003 with an improved customer-interface, better mapping and other enhanced functionality.

Future Expectations

FY 2003–04 will be a big year for the RTIS project. MTC has set the following project benchmarks for completion in FY 2003–04:

- All fixed route public transit operators will be included in the TakeTransitSM Trip Planner. MTC will continue to provide support to transit agencies and encourage them to make the necessary financial and organizational commitments to the project. Transit agencies to be added include: Golden Gate (buses), VTA, SamTrans, Santa Rosa CityBus, Napa VINE, Sonoma County Transit, Vacaville City Coach, Fairfield-Suisun Transit, American Canyon Transit, Cloverdale Transit, Healdsburg In-City Transit and Petaluma Transit.
- MTC will undertake a significant marketing campaign in FY 2003–04 to support the launch of the new transit Web page.
- MTC will develop an approach to measuring the reliability of the trip planning system to provide information to the public on demand.

In addition to the previously mentioned enhancements to the new transit information Web site, MTC is working on other improvements to the Web site and the trip planner. These enhancements will be implemented gradually and include a new geographic information systems (GIS) base map, an interface for personal digital assistants (PDAs) and a wireless interface.

Several transit agencies in the region are providing or have plans to provide real-time transit arrival information to make their service more customer-friendly. MTC will continue to explore opportunities to partner with the region's transit agencies and their contractors to make real-time transit information available through the new Web site and the 511 phone number.

“I’m so grateful for the trip planner. It’s definitely facilitated and increased my usage of public transit. Thank you for providing such an excellent service!”

— user of trip planner

PROJECT PERFORMANCE REPORT

INCIDENT MANAGEMENT PROGRAM

Incident Management Program

The Incident Management Program is an example of a mature regional program, under way since the early 1990s. The goal of this program is to quickly identify and respond to freeway incidents such as breakdowns and accidents in order to minimize their impacts in terms of congestion, public safety and air quality, and to increase the reliability of the freeway system and better manage traffic flow. Caltrans estimates that over 50 percent of all traffic congestion is due to non-recurring incidents.

The program, which is administered through the MTC Service Authority for Freeways and Expressways (SAFE), is made up of two complementary projects:

- Call Box Program — A regional network of call boxes is available 24 hours per day for motorists to request emergency roadside assistance; and
- Freeway Service Patrol (FSP) — A fleet of roving tow truck operators clear freeway accidents, assist motorists, and remove dangerous debris from the roadway, primarily during peak commute periods.

The following table provides project revenue information for the Incident Management Program. This information is broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include SAFE and state FSP and Traffic Mitigation Program funds. Prior to FY 2003–04, the Incident Management Program received inconsistent amounts of STP/CMAQ funds. Beginning in FY 2003–04, MTC is temporarily reprogramming some STP/CMAQ funding for this program to TransLink® in order to resolve cash-flow issues and minimize the likelihood that additional funds will need to be programmed. MTC intends to reimburse the Incident Management Program with TransLink® funds once the initial capital deployment of the TransLink® project is complete.

Incident Management Program (FSP/Call Box)

Funding Source	Fiscal Year					5-Year Total	Percent of Total
	<i>(In thousands of 2001 dollars)</i>						
	02–03	03–04	04–05	05–06	06–07		
STP/CMAQ	\$303	\$0	\$0	\$1,984	\$2,010	\$4,297	8%
Other	10,735	\$10,036	\$10,308	10,855	10,347	52,281	92%
Total	\$11,038	\$10,036	\$10,308	\$12,839	\$12,357	\$56,578	

Call Box Program

The Call Box Program gives motorists who need roadside assistance an effective means of communication 24 hours per day, allowing them to speak directly to an operator to report flat tires, mechanical breakdowns or dangerous roadway conditions. By speeding the removal of stalled vehicles and other hazards, the call box network also helps in the region's fight against traffic congestion. About 3,500 call boxes are installed on more than 1,100 miles of urban, suburban and rural freeways and expressways in the nine-county Bay Area. Call boxes are spaced between one quarter-mile and two-mile intervals, with most at half-mile intervals.

The Call Box Program is a joint project between Caltrans, the California Highway Patrol (CHP) and MTC SAFE. MTC SAFE manages contracts for call answering services with a private call center as well as with the CHP, and for call box installation and maintenance.

Project Objective

To provide an effective means of communication 24 hours per day for freeway motorists who need roadside assistance.

Highlights

In FY 2002–03:

- Call answering performance continued to improve.
- Call volumes continued to decline.
- Several recommendations from the *Five-Year Strategic and Financial Plan* were implemented.

Project Revenues

See Incident Management Program introduction (page 34) for a description of combined expected revenues.

Target Customer

All motorists using the approximately 1,100 miles of freeways and expressways in the Bay Area covered by the call box network.

Measuring Performance

There are three ways in which performance of the Call Box Program is measured:

- Average call delay — the time it takes for a call box call to be answered, on average, for all calls in a given month;

- Percent of calls answered within a specified time — the percentage of calls answered within 20 seconds, 90 seconds or two minutes; and
- System call-in performance — the percentage of call boxes in the system failing to meet automated maintenance call-in requirements, which confirm system availability.

Four performance ranges are set forth in the contracts for both call answering and call box maintenance. Performance is assessed monthly. Incentive payments are provided when contractors achieve specific goal levels. For example, in the maintenance contract, performance below required standards results in a payment penalty of up to 10 percent. At the same time, performance above the standard results in a 5 percent payment bonus.

Project Performance

Call center contractor performance continues to exceed goals. In FY 2002–03, the average delay in call answering was 12 seconds, 20 percent below the contract goal of 15 seconds (see Figure 1 on the following page). At the same time, 87 percent of all calls were answered within 20 seconds compared to the contract goal of 75 percent (Figure 2), while 99 percent of all calls were answered within 90 seconds. System availability, as measured by the percentage of call boxes that do not meet automated maintenance call-in requirements, held steady in FY 2002–03 at 2.4 percent, better than the contract goal of 5 percent.

Call Box Strategic Plan

In June 2002, MTC SAFE adopted a *Five-Year Strategic and Financial Plan* for the Call Box Program that calls for the phased removal of 25 percent to 30 percent of the Bay Area's 3,500 call boxes over the next two years. The Strategic Plan also recommended evaluating the feasibility of increasing motorist-aid services for groups or individuals who may be most affected by the increased spacing of call boxes. The plan to reduce the number of call boxes was developed in response to the continued surge in cellular phone ownership and a corresponding decline in call box usage, a trend that continued in 2002 (see Figure 3 on the following page).

In FY 2002–03, MTC SAFE conducted an analysis to identify call boxes for removal based on a target distance of one mile between call boxes. This analysis identified approximately 950 call boxes in the Bay Area for removal and

about 30 call boxes for installation — resulting in a net removal of about 920 call boxes from the existing system. The remaining call boxes will be spaced anywhere from one-half mile to two miles apart. MTC SAFE is estimating a savings of about \$3.5 million in operating and capital costs over a five-year period, which will be used for mitigation and to fund new incident management efforts.

MTC SAFE has approved two pilot programs to test alternative means of motorist-aid communications to mitigate any impacts that could result from the increase in call box spacing: 1) distribution of cellular phones to persons with disabilities, and 2) development of a closed circuit television (CCTV) incident-detection system. These pilot programs will get under way in FY 2003–04.

Other Strategic Plan recommendations implemented in FY 2002–03 include:

- SAFE on 17 — The Bay Area’s SAFE program teamed with Santa Cruz County to continue to provide extra CHP law enforcement on State Route 17 after a grant for the service expired. The extra CHP presence has resulted in a reduction in the number of incidents on this difficult stretch of highway.
- Freeway CCTV cameras — A new program to upgrade CCTV cameras that monitor traffic conditions is now under development with Caltrans.
- San Mateo-Hayward Bridge call box installation — Eighty-six new call boxes were installed on the west-bound direction of the San Mateo-Hayward Bridge following completion of the bridge widening project. Eastbound installation will occur in FY 2003–04.

figure 1

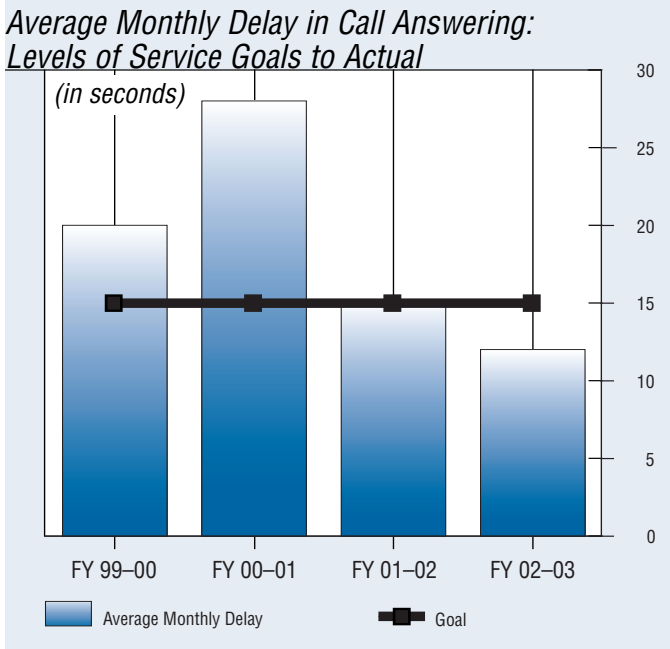
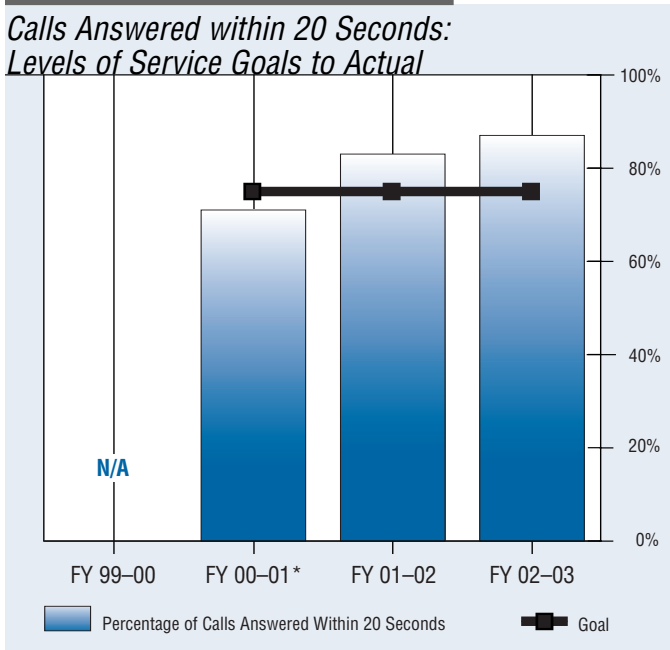
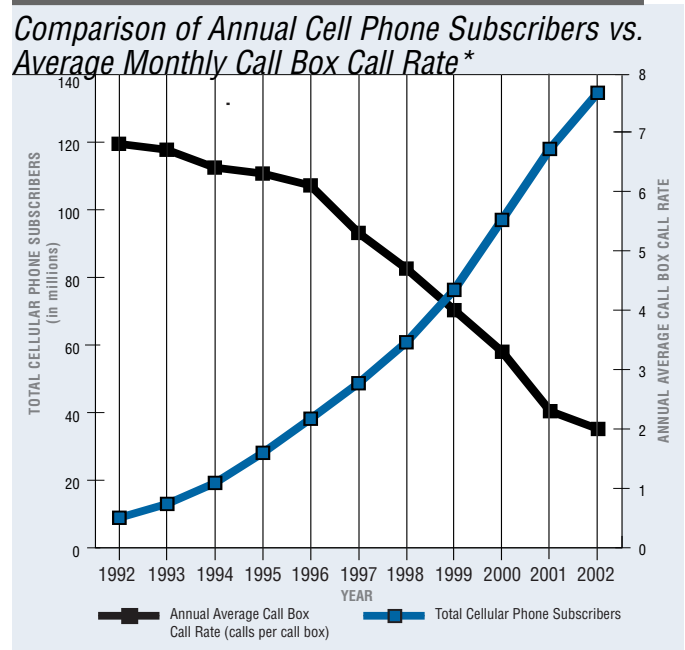


figure 2



* Does not include July 2000

figure 3



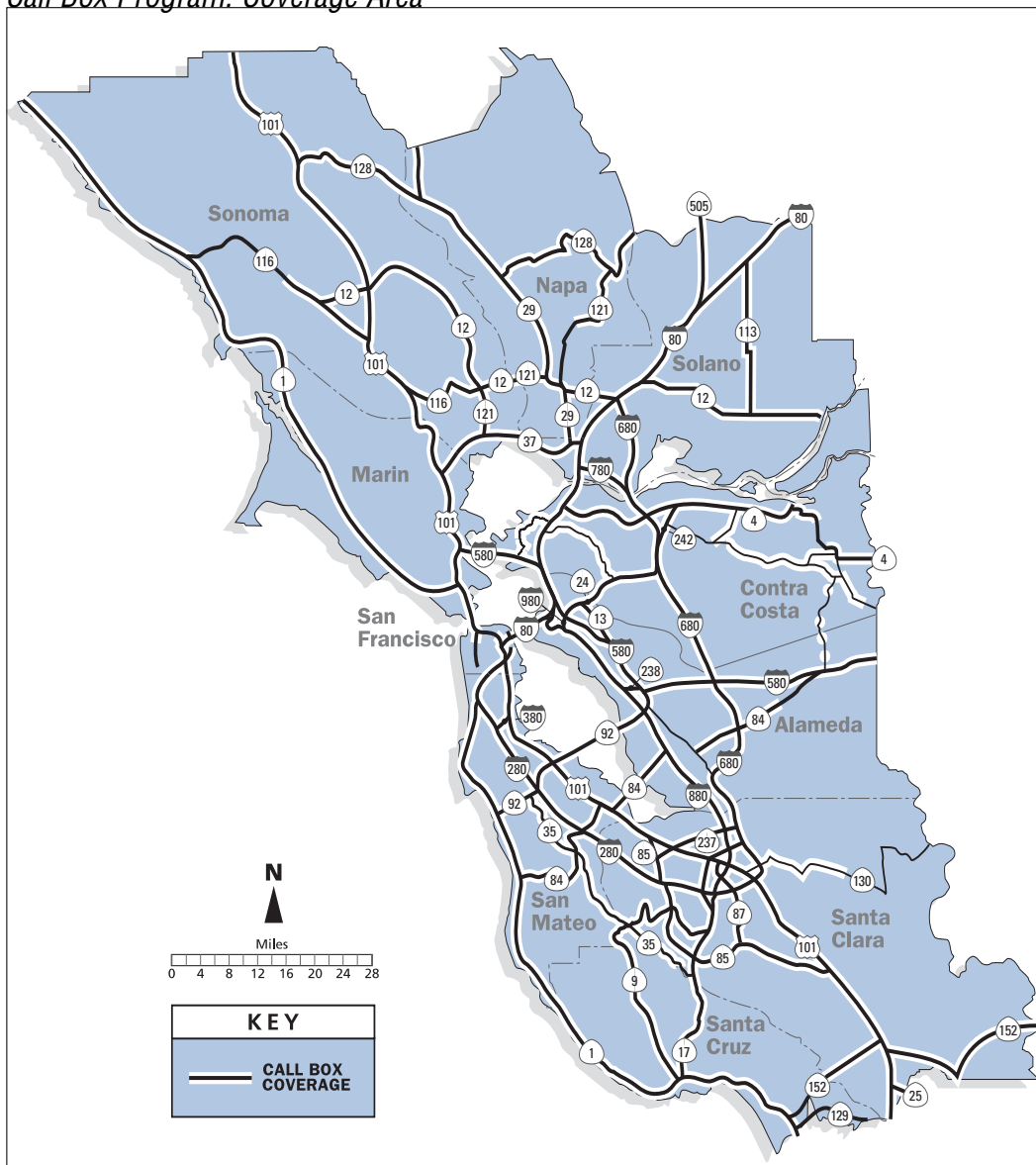
* Number of calls made each month from each call box in the network

Future Expectations

The Call Box Program will maintain its focus on assuring quality customer service and implementing the recommendations identified in the *Five-Year Strategic and Financial Plan*. Specific efforts will include the following:

- The Program will track new qualitative measures of call center staff effectiveness — e.g., courtesy, knowledgeability, professionalism, etc. — when assisting motorists;
- Removal of call boxes will commence in FY 2003–04 and continue in FY 2004–05;
- Additional call boxes will be installed on the Carquinez and San Mateo-Hayward bridges as well as at a few gaps in the existing system;
- Two pilot programs for alternative means of motorist-aid communications will be implemented and evaluated; and
- The program will initiate accessibility improvements for hearing-impaired and physically disabled motorists. In addition, the technology used in the existing call boxes will be upgraded from analog to digital in FY 2004–05.

Call Box Program: Coverage Area



Freeway Service Patrol

The Freeway Service Patrol (FSP) is a fleet of roving tow trucks that help clear accidents, assist motorists, and remove dangerous debris from some 460 miles of the Bay Area’s freeways, primarily during peak commute periods. FSP drivers are frequently the first to arrive at accident scenes or find stranded motorists. They also respond to radio-dispatched requests for assistance from the CHP.

FSP drivers patrol “beats,” i.e., route segments, that are selected based on several factors, including a high rate of traffic congestion, frequent accidents or stalls, and lack of shoulder space for disabled vehicles. The range of free assistance includes changing a flat tire, jump-starting a dead battery, refilling a radiator or providing a gallon of fuel. If a vehicle will not start, it is towed off the freeway to the nearest CHP-identified location.

The FSP is a joint project of Caltrans, the CHP and MTC SAFE. MTC SAFE manages contracts for motorist assistance services with multiple Bay Area tow contractors.

Project Objectives

To decrease congestion and improve safety and air quality by quickly clearing accidents, stalls and roadway debris on designated freeway and expressway segments, generally during peak congestion hours.

Highlights

In FY 2002–03, the FSP achieved the following:

- Responded to more than 125,000 incidents, 53 percent of which involved motorists in stalled vehicles;
- Continued implementation of a strategic expansion plan that resulted in the addition of three new beats and a 9 percent increase in total assists;
- Earned a service rating of “excellent” from 94 percent of its customers;

“My right front tire blew out. We pulled over and walked back to a call box, and, within one minute of my call, an FSP truck arrived. I have never been so happy to know that my tax dollars are going toward such a wonderful service.”

— motorist

- Saved motorists roughly 4.8 million hours of delay, reduced fuel consumption by 2.0 million gallons and reduced pollutants released into the air by 835 tons (in the calendar year 2002); and
- Celebrated its 10-year anniversary.

Project Revenues

See Incident Management Program summary (page 34) for a description of combined expected revenues.

Target Customer

All motorists driving during morning and afternoon commute hours on designated segments of the Bay Area freeway and expressway network.

Measuring Performance

The FSP program focuses on customer needs and rigorously monitors performance and service quality. Performance measures include:

- Average wait time for service;
- Number of customers assisted per beat and per truck per hour;
- Overall customer rating of FSP service, including suggestions on service improvements; and
- Percentage of assists involving people.

Since calendar year 2001, cumulative savings in delay, fuel and vehicle emissions have been calculated annually by beat, based on a methodology developed by researchers in the Partners for Advanced Transportation and Highways (PATH) program at the University of California, Berkeley. PATH continues to refine the methodology to reflect improvements in measuring vehicle emissions; because of these refinements, direct comparison of results between years cannot be made.

Project Performance

In FY 2002–03, the FSP program celebrated its 10-year anniversary with stellar performance results. The FSP program played an important role in reducing congestion, fuel consumption and pollutants in the Bay Area in calendar year 2002 as follows:

- Annual savings in delay was 4.8 million hours;
- Annual savings in fuel was 2.0 million gallons; and
- Annual emissions reductions were: 90 tons of hydrocarbons, 717 tons of carbon monoxide and 28 tons of oxides of nitrogen.

Figure 1

<i>FSP Performance</i>				
	Total Assists	Average Wait Time per Assist	Assists per Truck per Hour	Assists per Beat per Hour
FY 1999–2000	109,889	9.51	0.98	2.03
FY 2000–01	106,808	9.90	0.99	2.04
FY 2001–02	114,982	9.83	0.90	2.02
FY 2002–03	125,450	9.89	0.81	1.84

In FY 2002–03, FSP recorded 125,450 assists, of which 53 percent involved people. Systemwide results for FSP performance over the past four years are summarized in Figure 1.

MTC SAFE uses two customer-focused benchmarks to measure FSP performance: 1) average wait time per assist, i.e., the time a person waits for FSP help to arrive at their location (currently set at 10 minutes or less), and 2) customer service rating — the percentage of customers using the service who rate the service they received as “excellent” (currently set at 90 percent). Project managers established these benchmarks based on past performance.

In FY 2002–03, the average wait time remained almost unchanged from FY 2001–02 at just under 10 minutes. The very slight increase in average wait time since FY 1999–2000 is due to the increase in the number of beats added to the system outside of the core service area, which have fewer FSP trucks patrolling them. In terms of customer satisfaction, survey results from more than 12,000 respondents show that 94 percent of FSP customers rated the service “excellent.”

Since FY 1999–2000, MTC SAFE has strategically expanded FSP service. In FY 2002–03, three new beats were added, providing 85 miles of new FSP service in the region (up 22 percent from 378 miles in FY 2001–02). New beats are typically added in areas where coverage gaps exist, and in locations where congestion is expected to increase. Not surprisingly, actual productivity of the service as measured in terms of “Assists per Truck per Hour” and “Assists per Beat per Hour” declined roughly 10 percent in FY 2002–03 from FY 2001–02 levels with the addition of these beats in less congested areas of the region.

Future Expectations

The FSP will continue its four-year service expansion plan in FY 2003–04. New weekend, midday and morning service hours will be added to select existing FSP beats in FY 2003–04.

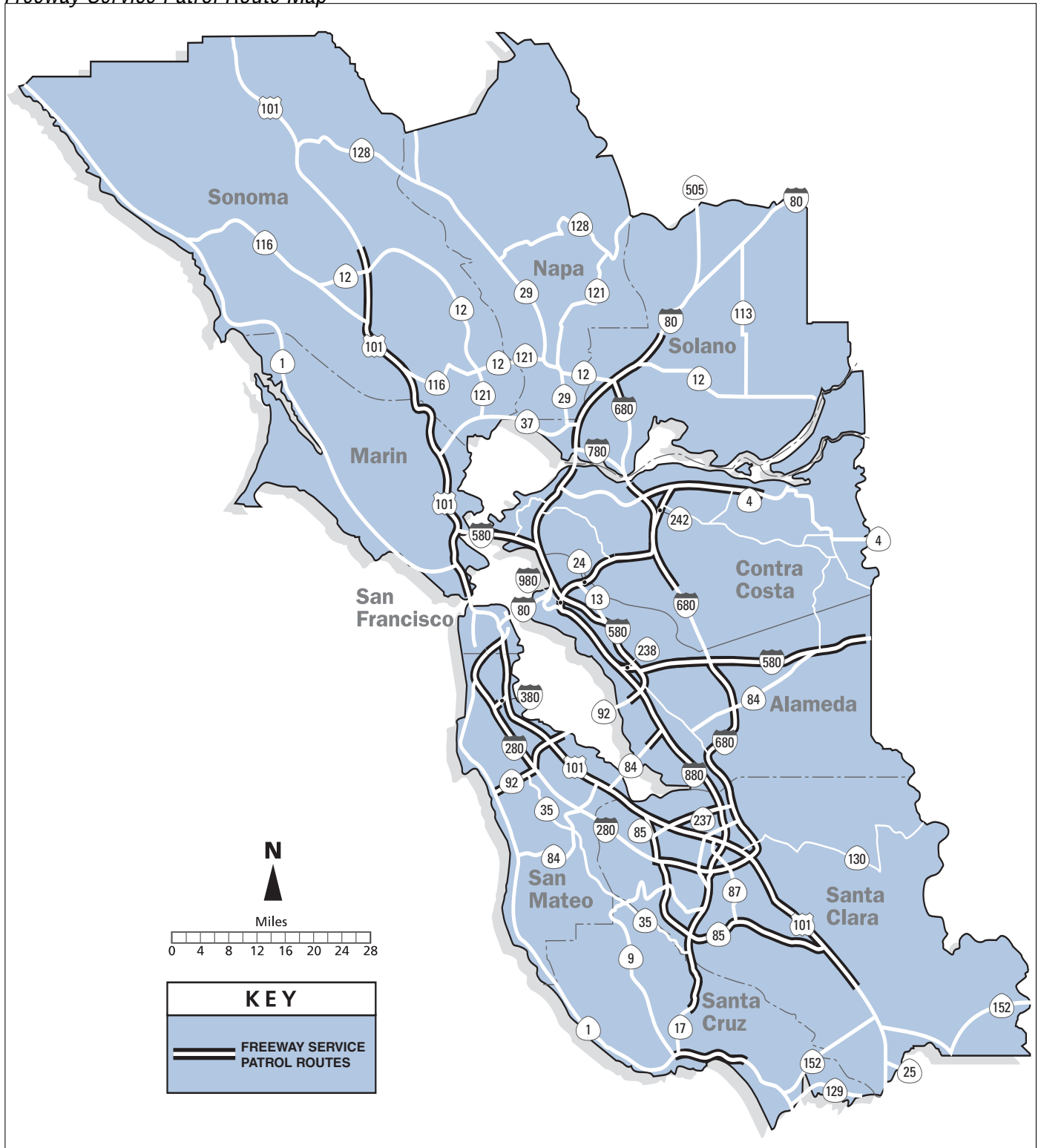
Driver retention has recently emerged as an important issue. Reducing driver turnover should lead to more consistent and

higher quality service, as well as a reduction in project costs for recruitment and training. In support of this objective, MTC SAFE plans to audit existing FSP tow contractors to ensure that employee wages and benefits cited in bids match actual expenditures for those budget items. MTC SAFE emphasizes employee compensation during the contractor selection process in order to foster driver retention, and will continue to confirm that employee compensation is not being sacrificed in the interest of company profits.

In terms of future project activities, several technology-related improvements are under consideration including:

- Telecommunication enhancements — Several telecommunications projects are planned that will improve performance by quickly and more accurately gathering, transmitting and analyzing incident data. Projects include upgraded technology used for wireless data migration, in-vehicle computer software updates, FSP computer server hardware replacement and software update, and a data network monitoring system for the entire FSP system.
- “Handshake” project — This project would allow two-way flow of freeway incident data between the FSP and the CHP. CHP dispatchers will benefit from FSP information, which includes exact driver locations and observations on the nature and severity of freeway incidents. The FSP will benefit from a better understanding of the CHP’s ability to respond to incidents. The “Handshake” project also could provide useful incident information for the 511 system.
- Bay Area Incident Reporting System (BAIRS) and automatic vehicle location (AVL) integration project — BAIRS is a newly implemented Caltrans system to assist in coordinating the timely deployment of Caltrans maintenance and construction vehicles. Caltrans and MTC intend to share FSP vehicle location and status data on the BAIRS and AVL systems to improve incident response.

Freeway Service Patrol Route Map



PROJECT PERFORMANCE REPORT

TECHNICAL ASSISTANCE PROGRAM

Technical Assistance Program

The Technical Assistance Program is designed to help Bay Area cities and counties to better manage local transportation facilities. Smaller jurisdictions tend to be the first focus of MTC's technical assistance projects since they often lack financial and technical resources; however, jurisdictions of all sizes receive assistance under two programs:

- The Pavement Management Technical Assistance Program helps jurisdictions evaluate pavement maintenance needs to support more timely and cost-effective budget decisions.
- The Traffic Engineering Technical Assistance Program helps coordinate signal timing to improve traffic flow and air quality.

Both projects follow the same model for service delivery, which is to award grants to local jurisdictions on a competitive basis and to establish a pre-qualified list of consultants to provide technical assistance.

Pavement Management Technical Assistance Program (P-TAP)

Established in 1999, the Pavement Management Technical Assistance Program (P-TAP) provides the services of pre-qualified consultants to help local jurisdictions better manage and maintain their streets and roads, using a pavement management system (PMS). A PMS is a computer-aided decision-making process used by public works personnel to maximize the benefits of investments in their road networks. The system is used to track pavement conditions, establish optimum repair programs, identify the impacts of inadequate budgets on pavement condition, and guide cost-effective expenditure of existing funds. In the Bay Area, 106 of 109 cities and counties use MTC's pavement management system to manage their pavement inventories.

A critical concept in street and road maintenance is that, while pavements deteriorate only 40 percent in quality in the first 75 percent of their life, this deterioration subsequently accelerates rapidly, resulting in another 40 percent drop in quality in the next 12 percent of life (see Figure 1). A pavement management system can identify pavements that are headed toward such a precipitous decline, so that preventive maintenance can be applied in a timely fashion.

While providing vital expertise to local jurisdictions, P-TAP also is used by MTC to obtain current, reliable pavement condition information. More reliable pavement maintenance data result in better estimates of regional pavement maintenance needs, help develop effective pavement repair programs, and help in making local streets and roads maintenance funding stretch further. One important example of the value of P-TAP

and the PMS software is how the program contributed to development of regional pavement maintenance needs, which will be a critical input in the long-range Transportation 2030 (T2030) planning process.

Project Objectives

To help Bay Area cities and counties implement and maintain a PMS to assess pavement condition, determine pavement needs, identify the impact of inadequate budgets on pavement condition, establish optimum repair programs, allocate existing funds cost-effectively, and provide a basis for local funding decisions for pavement maintenance.

Specific project goals include:

- Increasing the number of centerline miles managed by a PMS, including arterials and collectors on the Metropolitan Transportation System (MTS)¹;
- Focusing technical assistance priority on jurisdictions with 100 or fewer centerline miles (since these areas are less likely to have the financial and staff resources to independently maintain a PMS);
- Assisting jurisdictions to design pavement rehabilitation projects, develop grant proposals, and increase the use of geographic information systems (GIS) to track pavement conditions; and
- Increasing the number of certified users² of PMS software in the region.

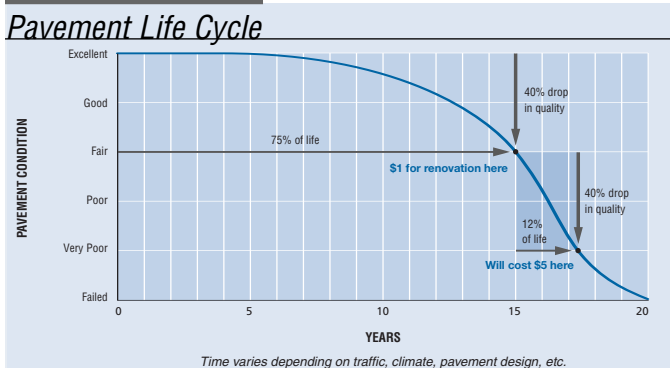
Highlights

- All 39 P-TAP grants awarded in FY 2001–02 were completed in FY 2002–03; 32 new P-TAP grants worth about \$500,000 were awarded in FY 2002–03.
- Sixty different cities and counties have received P-TAP grants in at least two funding cycles.
- MTC released the latest version of its PMS software, StreetSaver™.

Project Revenues

The following table provides P-TAP project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP, funds anticipated to flow from T2030 as well as other fund sources, which include the minimum local match required of project sponsors. All project funds are in effect returned to local

figure 1



¹ The MTS is a multimodal system of transportation facilities that are crucial to the regional freight and passenger mobility needs of the nine-county Bay Area. A centerline mile is a mile of road, regardless of how many lanes there are in each direction. An MTS mile is one mile of road on the MTS system

² State statutes require PMS certification before jurisdiction may receive state funding for streets and roads.

jurisdictions through regional grants that would otherwise require local funding.

- To develop plans, specifications and estimates for specific pavement maintenance projects; and

Pavement Management Technical Assistance Program

Funding Source	Fiscal Year <i>(In thousands of 2001 dollars)</i>					5-Year Total	Percent of Total
	02-03	03-04	04-05	05-06	06-07		
STP/CMAQ	\$471	\$641	\$622	\$604	\$586	\$2,924	89%
Other	61	83	81	78	76	379	11%
Total	\$532	\$724	\$703	\$682	\$662	\$3,303	

- To integrate PMS data with a GIS to facilitate data analysis and presentation. (The program experienced an increase in GIS-type grant awards in FY 2002-03.)

For grants awarded in FY 2002-03, 50 percent were to jurisdictions with fewer than 100 centerline miles of pavement, which is consistent with the

Target Customer

Any Bay Area city or county that has jurisdiction over roads and seeks assistance to implement and/or maintain a PMS.

Measuring Performance

The success of P-TAP is currently tracked by the following measures, with an emphasis on making sure that the needs of jurisdictions with limited financial and staff resources are met:

- Number of jurisdictions assisted;
- Increase in number of MTS and centerline miles managed through MTC’s PMS; and
- Increase in certified users of PMS software.

Project Performance

All 39 P-TAP grants awarded in FY 2001-02 were completed in FY 2002-03 on schedule. MTC also awarded a new round of P-TAP grants to 32 local jurisdictions for technical assistance in FY 2002-03. Consultant assistance provided through the grants began in July 2003.

While the number of grants awarded declined in FY 2002-03, the amount of funds awarded remained about the same. Year-to-year increases or decreases in the number of jurisdictions assisted are the result of several different factors. Most significant is the cyclical nature of the state-required certification process, which mandates pavement inspections every two years. In addition, the number of applications for P-TAP grants may be affected by fluctuations from year to year in jurisdictions’ budgets or the need for help with particular, one-time-only pavement projects.

Local jurisdictions request P-TAP grants for one of three project types:

- To inspect and record the pavement condition of local streets and roads, and perform budget analyses;

project’s emphasis on assisting smaller jurisdictions. The balance of grants awarded were evenly split between jurisdictions with 100 to 300 centerline miles of pavement to maintain and those with more than 300 centerline miles. In FY 2002-03, three new jurisdictions began using the PMS software, for a total of 106 cities and counties in the Bay Area. This resulted in a 197-mile increase in the number of centerline miles managed through MTC’s PMS, for a total of 17,399 miles.

While funds committed to the P-TAP program are used solely for technical assistance grants, MTC uses its own resources to make enhancements to the PMS software, which is the region’s critical management tool for tracking pavement condition data. In FY 2002-03, MTC released a completely new software program named StreetSaver™. Part of the development process for the new software included focus groups with PMS users to design a more user-friendly interface with enhanced functionality.

Future Expectations

The P-TAP program will continue to provide small and large jurisdictions with pavement management services, giving priority to the smaller jurisdictions. P-TAP has significantly improved the accuracy of city and county pavement data, which, in turn, increases the reliability and credibility of revenue, needs and shortfall estimates.

“The P-TAP program works well to supply cities with the technical and support assistance they might not otherwise be able to afford, especially in these times of extremely tight budgets.”
— P-TAP grant recipient

Traffic Engineering Technical Assistance Program (TETAP)

TETAP was created to help implement two of the transportation control measures (TCMs) included in the 1990 update to the *Bay Area Air Quality Plan*, and to enhance the Bay Area’s ability to take advantage of the flexible federal funds provided by the Intermodal Surface Transportation Efficiency Act of 1991. Expanding signal timing to new cities (TCM 24) and maintaining signal timing systems (TCM 25) were identified as the most cost-effective means of reducing emissions in 1990.

Through TETAP, MTC provides local jurisdictions with traffic engineering assistance and expertise on projects that improve arterial operations and safety. Since the program’s inception in 1993, 186 projects have been funded, providing assistance in traffic signal coordination, preparation of grant applications for traffic signal system improvements, analysis of bicycle and pedestrian facilities and safety, and other traffic engineering projects that improve arterial operations and safety.

Traffic engineering assistance and expertise are provided through consultants retained by MTC. Funding is approximately \$220,000 per year, with grants typically ranging from \$10,000 to \$20,000 per project. Project solicitations usually occur in the last quarter of the calendar year. Consultant selection occurs once every two years.

Project Objectives

To support local implementation of projects that:

- Implement in a timely fashion federal TCMs 24 and 25 to improve air quality;
- Have immediate benefits, such as improving traffic flow and safety on Bay Area arterials; and
- Promote multiagency cooperation.

To administer the program to:

- Distribute benefits throughout the region;
- Provide consultant expertise and assistance to small jurisdictions with limited resources; and,
- Provide high-quality assistance in a cost-effective manner.

“The consultant staff understood the city’s needs and used their expertise judiciously to develop good timing plans.”

— TETAP grant recipient

Highlights

- In both 2002 and 2003, requests have exceeded the available funding by 300 percent due to the need for this type of assistance. In order to benefit as many project sponsors as possible, many of the projects that were selected received less funding than requested.
- The number of signals retimed through the program in 2003 was 62; added to previous years’ totals, this means that 510 signals have been retimed since TETAP was created.
- Between 2002 and 2003, the overall usefulness of the program and quality of assistance from consultants improved, according to a survey of TETAP grant recipients.

Project Revenues

The following table provides TETAP project revenue information broken out by STP/CMAQ funds committed in the 2001 RTP and other fund sources, which include the minimum local match required of project sponsors. Beginning in FY 2003–04, the increase in regional funding will permit the retiming of approximately 750 signals per year, based on the most recent estimate of cost to retime one signal.

Traffic Engineering Technical Assistance Program

Funding Source	Fiscal Year <i>(In thousands of 2001 dollars)</i>					5-Year Total	Percent of Total
	02–03	03–04	04–05	05–06	06–07		
STP/CMAQ	\$208	\$1,327	\$1,288	\$1,251	\$1,214	\$5,289	89%
Other	27	172	167	162	157	685	11%
Total	\$235	\$1,499	\$1,455	\$1,413	\$1,371	\$5,974	

Target Customer

Any public agency that needs traffic engineering expertise or assistance to: a) retime traffic signals, or b) analyze an existing traffic-related problem on arterials and develop potential solutions.

Figure 1

<i>TETAP Grant Award Information</i>							
Year	Applications	Total Grants	Operations Grants	Safety Grants	Planning Grants	Multiagency Grants*	Signals Timed
1999	36	20	9	2	9	9	58
2000	19	17	7	2	8	8	56
2001	36	17	10	4	3	8	79
2002	51	26	12	12	2	9	73
2003	37	18	13	3	2	10	62
Totals	179	98	51	23	24	44	328

* Subset of "total grants"; as with grants awarded to individual jurisdictions, multiagency grants may be for operations, safety or planning projects.

Measuring Performance

The success of TETAP is primarily measured by:

- Number of projects funded with immediate benefits, including number of signals retimed;
- Number of multiagency projects funded; and
- Customer satisfaction.

Projects are categorized as operations, safety or planning projects, with operational projects that can be immediately implemented receiving priority. Customer satisfaction is evaluated through surveys that are administered at the end of each project.

Project Performance

TETAP grant award information is summarized in Figure 1.

Under TETAP, signal timing and other operational projects that typically have immediate benefits receive preference over safety or planning projects, whose benefits may take time and additional funding to realize. In 2002, the 26 projects funded included 12 operational, 12 safety, and two planning projects; 10 of the 12 operational projects resulted in the retiming of 73 signals. In 2003, the 18 projects receiving grants included 13 operational, three safety, and two planning projects; nine of the 13 operational projects resulted in the retiming of 62 signals. The 2002 cycle was characterized by an increase in the number of safety projects due to a \$50,000 set-aside for projects that promoted pedestrian safety.

Agencies that work together to make travel as seamless as possible along corridors owned by multiple jurisdictions can take full advantage of TETAP's focus on improving the timing of traffic signals. The number of projects involving multiple jurisdictions rose from nine of the 26 projects in 2002 to 10 of the 18 projects in 2003.

A TETAP project sponsor survey is administered at the conclusion of each project to evaluate the TETAP consultants' performance and solicit suggestions for improving the program. Consultants are evaluated based on their adherence to the scope of work, level of expertise, quality of deliverables, adherence to schedule, review time provided, communication of issues, quality of recommendations, and overall quality of assistance. In 2002, project sponsors gave the four TETAP consultants an average rating of C+ for overall quality of assistance and the program an average rating of B+ for overall usefulness. In an effort to improve the consultant rating, the 2003 projects were assigned to consultants based on the consultant's performance in the previous year. Project sponsors gave the consultants selected for 2003 an average rating of B for overall quality of assistance and the program an average rating of A- for overall usefulness. At the end of the year, TETAP project sponsors in both 2002 and 2003 indicated that they would apply for a TETAP grant again in the future.

Future Expectations

TETAP will continue to provide local jurisdictions with consultant assistance on traffic engineering projects, giving priority to projects with immediate benefits and providing assistance to smaller jurisdictions. Future expectations include a significant increase in the number of signals retimed and an expanded program focus.

The Bay Area has over 7,000 signals, and half of those now operate in a coordinated fashion during peak periods. Since TETAP's inception, the program was called upon to fulfill the need to retime signals every three to five years to maintain efficient operations. Since 1999, the program has retimed an average of 66 signals per year, far below the 750 per year that should be retimed to ensure that the 3,600 coordinated signals are retimed at least once every five years. Starting in FY 2003–04, TETAP will support the retiming of 750 signals each year, based on 2001 RTP commitments.

APPENDIX

Appendix

Advisory and Oversight Committees

Project	Advisory/Oversight Committee	Committee Members
TransLink®	Oversight Committee, Technical Working Groups and TransLink® Transition Group	Transit operator general managers and staff representatives
TravInfo®	Freeway Management Program Executive Committee, Technical Advisory Committee	California Department of Transportation (Caltrans) District 4 and Headquarters, California Highway Patrol (CHP) Golden Gate Division, Federal Highway Administration (FHWA), and representatives from smart corridors
Regional Rideshare Program	Rideshare Program funding partners, Transportation Demand Management Association network	Partners include the Bay Area Air Quality Management District, county congestion management agencies, transportation management associations, MTC, and other transportation organizations
Regional Transit Information System	Technical Advisory Committee of transit operators, Web Technical Advisory Committee	Transit operator staff representatives and customer service staff, Webmasters of transit operators
Call Box Program	CalSAFE	Statewide Service Authority for Freeways and Expressways managers (managers of other California call box programs), Caltrans Headquarters, CHP Headquarters
Freeway Service Patrol	Technical Advisory Committee	Caltrans District 4 and CHP Golden Gate Division
Pavement Management Technical Assistance Program	Pavement Management System Users Group	Public works staff from cities and counties
Traffic Engineering Technical Assistance Program	Arterial Operations Committee	Traffic engineering staff from cities and counties, Caltrans representatives, congestion management agency representatives

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