SFMTA | Municipal Transportation Agency

Proposition E: Municipal Transportation Quality Review

July 1, 2004 – June 30, 2006

FINAL REPORT

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Introduction

Proposition E – The Muni Reform Initiative

On November 2, 1999, the voters of San Francisco overwhelmingly approved Proposition E, the most substantial reform in Muni history. The voters' intent was to institute structural, administrative and financial reforms designed to provide Muni with the "resources, independence and focus necessary" to become one of the best urban transit systems in the world. Recognizing the City's dependence on public transit and its need for efficient and reliable transit service that can compete with the private automobile, the drafters of the initiative sought to restructure the City's provision and administration of transportation and parking services and strengthen the City's Transit-First Policy.

The overall goals for transit service articulated in Proposition E (now Article VIIIA of the San Francisco City Charter) are as follows (Section 8A.100):

1. Reliable, safe, timely, frequent, and convenient service to all neighborhoods;
2. A reduction in breakdowns, delays, over-crowding, preventable accidents;
3. Clean and comfortable vehicles and stations, operated by competent, courteous, and well-trained employees;
4. Support and accommodation of the special transportation needs of the elderly and the disabled;
5. Protection from crime and inappropriate passenger behavior on the Municipal Railway; and
6. Responsive, efficient, and accountable management.

To achieve these goals, Article VIIIA created the San Francisco Municipal Transportation Agency (SFMTA), combining the responsibility for street operation (Department of Parking and Traffic) with the dominant "user" of the streets – Muni. Article VIIIA also established service standards and accountability measures, and required an independent, biennial quality review of transit operations. **This report represents the findings of an independent review of Muni's performance for fiscal years 2005 and 2006.** Data collected beyond Fiscal Year (FY) 2006 is also included as unaudited information for trends analysis.

An Independent Transportation Quality Review

This biennial Transportation Quality Review mandated by Proposition E provides yet another tool that SFMTA can use to continue to improve Muni's performance. This review has been conducted with the following goals in mind:

- Help SFMTA assess Muni's progress toward the goals and objectives of Proposition E.
- Evaluate Muni's established goals and performance against the letter and intent of Proposition E.
- Assess whether specific implementation goals and methods and definitions of measurement are appropriate or could be improved.
- Provide independent verification to the public that Muni is on track by auditing Muni's data collection and analysis procedures.

The Transportation Quality Review consists of the following main elements:

- **Data review and verification of performance** – Proposition E requires a routine audit of Muni's quality

assurance process including an audit of data collection methods and service standard reporting. This audit covers fiscal years 2005 and 2006 (July 1, 2004 – June 30, 2006). Auditors reviewed Muni's Service Standards Reports from those years to verify that data were collected according to the definitions and methods of measurement specified by Proposition E and that reported service standards were computed correctly. Systematic spot checks of original source data and of automated tracking systems and procedures were used to determine the accuracy of reported service standards. During summer of 2007, auditors met with Muni staff responsible for data collection and computation to review data collection and computation procedures as well as the actual performance data.

- **Trends analysis** – Auditors reviewed trends in data and performance achievement over the two-year audit period, as well as unaudited data and performance from fiscal year 2007. Findings from this trends analysis were used to develop recommendations for those areas in which Muni's performance could be improved.
- **Auditor recommendations** – Auditor recommendations focus on ways to further refine or improve performance reporting to make it more relevant to SFMTA and the public, or on ways to improve performance in areas where Muni has failed to meet its goals. Although the recommendations focus on the two-year audit period, they incorporate any changes that have been made since that time. The recommendations are reviewed with Muni staff to ensure that they are in line with current budget and resource constraints.
- **Documentation and communication of results** – In addition to the final report, a more reader-friendly "Report Card" is developed that summarizes performance trends and recommendations in easy-to-understand, lay terms.

Proposition E Service Standards and Performance Summary

The service standards (or performance measures) adopted under Proposition E were not intended to create onerous reporting requirements, but rather to provide SFMTA with the tools needed to create a world-class transit service. In order to do this effectively, the service standards need to provide information and feedback that SFMTA management can readily use to help shape decisions and policies so that the desired outcomes can be achieved.

While Proposition E specifically stated the method of measurement and goals for several of the service standards, it also provided some flexibility with regard to the way in which other standards could be measured and the milestones or goals could be achieved. When not specified by Proposition E, the SFMTA Board adopted methods and definitions of measurement as well as specific goals and milestones for each of the service standards. Additionally, Section 8A.104 of the City Charter allows the SFMTA Board to vote to amend any of the service standards (after holding a public hearing on any such amendments).

Muni's Citizens' Advisory Committee (CAC) and the SFMTA Board review Muni's performance quarterly, and review the definitions of measurement, methods of measurement and the goals for each of the service standards annually. SFMTA publishes quarterly Service Standards Reports which include a description of each of the Service Standards and a summary of Muni's performance and, as of 2006, the performance of DPT. (These reports are available to the public via Muni's web site.) These reports also include additional performance information that is not required by Proposition E, but is used by Muni for other purposes, such as employee incentive programs.

The following table (Figure 1) summarizes the service standards that were required by Proposition E and/or the SFMTA Board as of the period covered by this review (FY 2005 and 2006), the goals that were established, and whether or not Muni achieved the goals during the audit period. (For a more detailed discussion of performance, please see the body of this report.)

Figure 1 Service Standards and Summary of FY 2005 and 2006 Achievement

Performance Measure	Goal	Achievement
		● Achieved ⊙ Partially Achieved ○ Not Achieved
1a. Schedule Adherence: % of vehicles that run on time according to published schedules.	85%	○
2a. Service Delivery: % of scheduled service hours that are delivered and % of scheduled vehicles that begin service at the scheduled time.	98.5%	○
4a. Pass-Ups: % of vehicles that pass published time points during measurement periods unable to pick up passengers due to crowding without being followed within 3 minutes or less by another vehicle on the same route with space for all waiting passengers.	< 5%	●
5a. Passenger Overcrowding: Peak period passenger load factors.	≤ 85% of combined seating & standing capacity	○
6a. Headway Adherence: Actual headways against scheduled headways on all radial, express, cross-town, secondary and feeder lines for peak, base, evening and late night services.	Operate no less than 85% of the time within 30% or 10 minutes of scheduled headway (whichever is lower)	○
7a. Vehicle Availability: % vehicle availability and reliability (mean distance between failure) by mode.	≥ 98.5% vehicle availability	⊙

Performance Measure	Goal	Achievement
		● Achieved ⊙ Partially Achieved ○ Not Achieved
8a. Unscheduled Absences: Unscheduled absences by operator, mechanical and administrative personnel.	Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin	⊙
9a. Miles Between Roadcalls by Mode	Increase miles between roadcalls	⊙
1b. Passengers Carried by Mode	1.5% annual increase	⊙
2b. Average Fare Per Passenger	$117M in fare revenue	●
3b. Hours and Miles Operated by Mode	*Discontinued*	—
4b. Fully Allocated Costs Per Hour of Service by Mode	Provide fully allocated costs per hour of service by mode	●
1c. Net Vacancies by Position: Vacancies remaining once promotions and new hires have been deducted from retirees or resignations, for each division.	≤ 5% vacancy rate	●
2c. Attrition Rates: For new employees, by division and level.	≤ 10%	●
1d. Marketing Plan: Development of annual marketing plan identifying specific programs and projects that will promote increased patronage.	Develop marketing plan by January 1of each year	●
2d. Schedule Publication: Publication and distribution to the public of schedules for all trips taken by all vehicles that shall consist of specific arrival times at terminals and established intermediate points.	Publish a complete timetable during each fiscal year	○
3d. Operator Conduct Complaints	75% of all Passenger Service Reports resolved in 30 days	⊙

Performance Measure	Goal	Achievement
		● Achieved ⊙ Partially Achieved ○ Not Achieved
4d. Annual Passenger Surveys and Follow-up by Management	Conduct a rider survey and an employee survey	⊙
5d. Public Information: Improvements in public information regarding vehicle delays during operations as well as any general user information regarding system modifications, route changes and schedules.	Improve passenger information	●
6d. Operator Training and Accident Follow-up: Efforts to improve driver training, technical as well as accident follow-up.	50,000 hours of driver training per year and 5% reduction in accidents	⊙
7d. Crime Incidents: Number of crime incidents on Municipal Railway vehicles or in Municipal Railway facilities.	5% reduction from previous year	⊙
1e. Number of Grievances	Quarterly grievance report	●
2e. Speed of Resolution of Grievances	Resolve 75% of internal grievances within 30 days	●
3e. Longevity of Employment	*Discontinued*	—
4e. Employee Recognition	Annual achievement of honorees in a number of programs.	⊙
5e. Employee Education and Training Opportunities	Provide approximately 20 hours per FTE	○

Data Collection and Reporting Compliance Summary

Auditors reviewed Muni's Service Standards Reports to verify that data were collected according to the definitions and methods of measurement specified by SFMTA and that reported service standards were computed correctly. For the most part, the auditors found that Muni's methods complied with SFMTA requirements. The following exceptions were noted:

- For service standard 9a, "Miles Between Roadcalls," a number of problems were noted within the Cable Car division. First, calculations are made not using computer software or calculators, but by hand, and no audit trail is maintained. Additionally, attempts to verify accuracy of data uncovered a second problem: reported quarterly figures were averages of monthly figures, resulting in slightly, though not substantially inaccurate quarterly figures. Finally, the Cable Car's division's definition of a roadcall does not include some failures which are mechanical in nature, specifically interruptions of service caused by broken pieces of wood or grips which operators deemed defective whether or not there was actually a problem identified by maintenance crews.
- For service standard 1b, "Passengers Carried by Mode," problems were identified with transmission of passenger data from Muni's Trapeze handheld devices. Specifically, when exporting data to Excel spreadsheets, the devices would sometimes drop third digits, so, for example, a count of 105 riders aboard a vehicle would be reported as 10. Staff developed an interim solution to this problem by identifying reported figures that appeared low given ridership patterns and adding a "5" as the third digit. This hand adjustment resulted in only a 1 to 2 percent increase over the original totals, suggesting that reported totals are reasonably accurate systemwide; however, inaccuracies might be magnified on a mode-specific level. Muni has recently installed automated passenger counters on its bus fleet. If that data is maintained, it should represent the most comprehensive and accurate source of ridership data by mode and by route.
- For service standard 6d, "Operator Training and Accident Follow-up," a number of disparities were noted between the information reported in SFMTA quarterly reports and information in either the TransitSafe database, which is designed to automate the accident reporting process, or information provided by the responsible department. Due to a retirement in a key staff position, it was not possible to identify the source of the discrepancy. For example, for FY06Q3, the spreadsheet produced by the department reported 638 accidents; the figure in the quarterly reports was 606.
- For service standard 7d, "Crime," retirements in two key staff positions made it impossible to follow an audit trail for the reported numbers. Historically, SFPD has provided information about crimes on Muni based on the reporting categories established by FBI Parts I & II crimes. This information has been supplemented by incidents in additional categories from Muni's TransitSafe database. A retirement at the police department midway through the audit period resulted in the department no longer reporting TransitSafe information, and a retirement at SFMTA made it impossible to determine to what extent these categories may have then been differently reported. For example, reported totals of operator assaults were 11 in FY05 and just 1 in FY06; however, the number of "battery operator" incidents increased from 31 in FY05 to 49 in FY06. Also, it is possible that some crimes identified in police reports as having taken place on Muni property might actually have occurred nearby.
- For service standard 2e, "Speed of Resolution of Grievances," the measure does not refer specifically to operator grievances, yet only operator grievances are tracked.

Measures that have been discontinued (see Changes Since the Previous Audit, below) were not audited.

Changes Since the Previous Audit

Following the audit for FY 2003-2004, Muni made a number of changes in performance reporting based on auditor's recommendations. These changes, documented in Figure 2, were not implemented until after the audit period, and therefore do not impact this audit.

Figure 2 Summary of FY 2008 Changes to Service Standards

FY05-07 Measure	FYO8 Measure	Major Measure-Specific Reporting Recommendations from Previous Audit	Adopted by 1/08	Revisions to Recommendations or Additional Changes Adopted by Muni
			● Adopted ⊙ Partially Adopted ○ Not Adopted	
1a. Schedule Adherence	**A1. On-Time Performance**	Consider developing a service classification system that would allow Muni to tailor reliability goals to different service types	⊙	Awaiting Transit Effectiveness Project recommendations
6a. Headway Adherence	**A1. On-Time Performance**	Combine with measure 1a – rename joint measure "On-time performance"	●	–
7a. Vehicle Availability	**A5. Vehicles Available**	Increase vehicle availability goal	●	Vehicle availability goal increased to 99%
		Report number of days when each facility does not meet goal	●	Numbers of days when each facility does not have 99% availability reported
8a. Unscheduled Absences	**A6. Unscheduled Absences**	–	–	Goal for operators changed from 10% reduction to "10.7% for FY08 with a reduction of 10% per year until we cap out at 7%. Goal will range from 7% to 10.7%."
9a. Miles Between Roadcalls by Mode	**A7. Mean Distance Between Failure**	Develop common reporting standards and methods for all divisions	⊙	Goals standardized by mode
1b. Passengers Carried by Mode	**B1. Passengers Carried**	Use transit mode share goals to determine ridership growth goals	⊙	Awaiting Transit Effectiveness Project recommendations

FY05-07 Measure	FYO8 Measure	Major Measure-Specific Reporting Recommendations from Previous Audit	Adopted by 1/08	Revisions to Recommendations or Additional Changes Adopted by Muni
			● Adopted ⊙ Partially Adopted ○ Not Adopted	
2b. Average Fare Per Passenger	**B2. Farebox Performance**	Expand measure to include farebox recovery ratio and change measure name to "Farebox Performance"	●	–
		Determine farebox recovery ratio performance goal	⊙	Data reported but no goal established; awaiting Transit Effectiveness Project recommendations
–	–	**ADD NEW MEASURE: 3b. Gross Speed**	⊙	Awaiting Transit Effectiveness Project recommendations
4b. Fully Allocated Costs Per Hour of Service by Mode	**B3. Cost Efficiency**	Change title from "Fully allocated costs per hour of service by mode" to "Cost efficiency"	●	Costs per passenger mile (by mode and systemwide) added
–	**B4. Productivity**	Add new measure "Productivity," measured by passenger boardings per revenue service hour	●	–
–	**B5. Cost Effectiveness**	Add new measure "Cost Effectiveness," measured by the cost to provide each passenger trip	●	–
1c. Net Vacancies by Position	**A8. Vacancy Rate for Service Critical Positions**	Eliminate measure	○	
2c. Attrition Rates	–	Eliminate measure	●	–
		Replace measure with data from Muni's Annual Employee Survey and report in "Employee Satisfaction" area, the more appropriate place for employee satisfaction.	●	
1d. Marketing Plan	–	Eliminate measure	●	Measure eliminated

FY05-07 Measure	FYO8 Measure	Major Measure-Specific Reporting Recommendations from Previous Audit	Adopted by 1/08	Revisions to Recommendations or Additional Changes Adopted by Muni
			● Adopted ⊙ Partially Adopted ○ Not Adopted	
2d. Schedule Publication	–	Eliminate measure	●	Measure eliminated
	C1. Overall Customer Satisfaction	**ADD NEW MEASURE: 2d. Operator Courtesy**	●	From Rider Survey; goal is annual improvement
3d. Operator Conduct Complaints	**C2. Operator Conduct Complaints and Resolution**	Move resolution of operator conduct complaints to measure 3e	●	–
		Use Muni's Annual Rider Survey to measure customer satisfaction instead of the number of PSRs	●	
		Change title of measure to "customer satisfaction"	●	
4d. Annual Passenger Surveys and Follow-up by Management	**C1. Overall Customer Satisfaction**	Eliminate measure	●	3d recommendation "Use Muni's Annual Rider Survey to measure customer satisfaction instead of the number of PSRs" implemented here; goal is annual improvement
		ADD NEW MEASURE: 4d. Vehicle and Station Cleanliness	●	Implemented under new Measure C1; from Rider Survey; goal is annual improvement
5d. Public Information		Change to measure customer information in terms of the percent of all boardings that have real time transit vehicle arrival information	○	Communication with riders now under Measure C1; from Rider Survey; goal is annual improvement
6d. Operator Training and Accident Follow-up	**C4. Passenger and Vehicle Accidents**	Report accident rate in terms of accidents per 100,000 vehicle miles (incl. non-revenue miles)	●	–
		Report the accident rate of the 10% of operators with the highest accident rates	●	

FY05-07 Measure	FYO8 Measure	Major Measure-Specific Reporting Recommendations from Previous Audit	Adopted by 1/08	Revisions to Recommendations or Additional Changes Adopted by Muni
			● Adopted ⊙ Partially Adopted ○ Not Adopted	
7d. Crime Incidents	**C5. Security Incidents**	Refine measure to report the different types of crimes that occur on its vehicles and in its stations (types of incidents: felonious, quality of life, and fare evasion)	●	–
		Report each type of incident as both a rate (per 100,000 passenger trips) and an absolute number	●	
1e. Number of Grievances	**D1. Number of Grievances**	Report as rate (grievances per employee per year) in addition to absolute number of grievances	○	–
		Report by division in addition to as an organization to improve accountability	○	
2e. Speed of Resolution of Grievances	**D2. Grievance Resolution Rate**	Change goal from "resolve 75% of grievances within 30 days" to "resolve 90% of grievances within 90 days" to more realistically reflect the resolution process timeframes	●	–
4e. Employee Recognition	**D3. Employee Satisfaction**	Replace current measure 4e with data from Muni's Annual Employee Survey	●	–
5e. Employee Education and Training Opportunities	–	Eliminate measure	●	–

Audit Recommendations

Significant improvements have been made in performance reporting and documentation since the previous Performance Review; however, these improvements were made too late to be documented during the 2005-06 audit period. Improvements in the format of the quarterly reports, and implementation of recommendations from the prior audit will be evident during the 2007-08 audit, to be completed next year. The following recommendations are offered as further

improvements that could be made beyond those that have already been taken. To avoid redundancy, we have assumed that SFMTA will implement the changes that are in progress since the past Quality Review.

Two types of recommendations are included in this Performance Review.

General Recommendations to Improve Performance Reporting

The quality review team identified several general issues related to the reporting of SFMTA's performance. A number of these recommendations were not incorporated into FY05 and FY06 reporting. However, several of these have been implemented in recent quarters, or are being addressed by the ongoing Transit Effectiveness Project (TEP) and may be implemented at the conclusion of that project.

- **Performance measures should reflect the multimodal nature of SFMTA.** Since 2000, Muni and DPT have had separate performance measures and have historically reported them separately. Beginning in FY 2006 DPT and Muni performance reporting was combined, and this is an important step. However, a significant opportunity remains for the combined performance measures to better reflect overall SFMTA performance, for Muni service as well as walking, bicycling, and driving.

  Figures 3 and 4 present a sample reorganization of the performance report which more fully integrates measures for all modes of transportation, reflecting SFMTA's multimodal mission. This is one example of an alternative structure; SFMTA may consider other structures with the goal of improved interpretation.

- **Improve organization of measures to improve readability.** The current categorization of measures is especially problematic after the integration of Muni and DPT measures in FY 2006. With a set of performance measures that are more multimodal, improved categorization of SFMTA measures will help readers more clearly understand how performance measures relate to the organization's goals, as well as how performance for several factors relate to a larger goal.

  For example, Muni reliability is a complicated matter that is measured using several different indicators, such as schedule adherence, amount of service delivered, vehicle availability, and mean distance between vehicle failure. These measures should be grouped together under the heading "reliability" within the general category of "Muni customer experience" or something similar.

  Figures 3 and 4 suggest one possible way to group SFMTA's performance measures into a higher level report tailored for the SFMTA Board, as well as a report for SFMTA Management that emphasizes technical, operational, and day-to-day matters. They also suggest possible reporting frequency, showing what measures might be more appropriately reported once a year in an annual report.

Figure 4: Proposed Stakeholder Performance Report

Performance Area	Measure	Reporting frequency (months)
Overall MTA Success	**Mode Share** (of all trips in SF work and non-work trips)	TBD
	Absolute number of trips (Muni, BART in SF, auto, bike)	12
	Customer satisfaction (customer survey for all modes)	12
	Quality of life (measures TBD)	12
	Economic vitality	--
	Person delay (amount of person hours wasted because of substandard speed or reliability)	12
	Person capacity of street network (bike, transit, auto)	12
	Environmental impact	--
	Tons of pollution generated by car/truck trips in SF	12
	Tons of pollution generated by Muni	12
Transportation Safety	**Number of collisions** (severe and non-severe) (all modes)	3
	Rate of collisions (for all modes)	3
	Customer perception of safety (all modes)	12
Muni Performance	**Productivity**	12
	Cost efficiency (cost per service hour)	12
	Cost effectiveness (cost per passenger trip)	12
	Farebox recovery ratio	12
	Financial sustainability (measure TBD)	12
Muni Customer Experience	**Reliability** (standards vary by service type)	--
	On-time performance	--
	-- Headway adherence (used for service operated every 15 minutes or more)	3
	-- Schedule adherence (used only for service operated less than every 15 minutes)	3
	Percent of scheduled service not delivered	3
	Travel time variability	3
	Customer perception of reliability	12
	Speed (standards vary by service type)	--
	System	12
	Each service type	12
	Average transt travel time in key corridors	12
	Crowding (standards vary by service type)	--
	Passenger loading	3
	Pass-Ups	3
	Customer Interface	--
	Vehicle cleanliness (objective measure; customer survey)	3
	Comfort (customer perception measured by customer survey)	12
	Operator courtesy	12
	Customer information (percent of person boardings that have real-time information)	12
	Ease of payment (percent fare payments made with cash; customer survey)	12
	Accessibility -- percent of stops that are level / accessible	12
	Accessibility -- percent of boardings that take place at accessible locations	12
	Ease of using the Muni system (customer survey)	12
	Crime/ Personal Security	--
	Rate of crime: felonious crimes	3
	Rate of crime: quality of life violations	3
	Customer perception of personal security	12
Pedestrian Experience	**Completeness**	--
	Pedestrian measures (measures TBD by ped and streetscape master plans)	12
	Maintenance	--
	Pedestrian measures (measures TBD by ped and streetscape master plans)	12
	Convenience	--
	Pedestrian measures (measures TBD by ped and streetscape master plans)	12
Cyclist Experience	**Completeness**	--
	Bicycle quality of service	12
	Maintenance	--
	Condition of bicycle facilities (lanes, paths, and boulevards)	12
	Convenience	--
	Customer perception	12
Motorist Experience	**Driving**	--
	Pavement quality	12
	Variability of travel times	12
	Parking Availability	--
	On-street availability (Goal of 15%)	12
	Off-street availability in public garages and lots (Goal of 15%)	12

Figure 5: Proposed Organizational Performance Report

Performance Area	Measure	Reporting frequency (months)
MTA Employee Management and Satisfaction	**Employee management**	--
	Employee productivity	12
	Amount of overtime	3
	Resolution of operator conduct complaints	12
	Unscheduled absences	3
	Percent positive drug/alcohol tests	12
	Employee satisfaction	--
	Employee satisfaction surveys	12
	Number of grievances	12
	Speed of resolution	12
	OSHA reportable employee injuries	12
	Work days lost to injury	12
MTA Risk Management	**Worker's compensation payments**	12
	Vehicle liability losses (cost to repair transit or other vehicles)	12
	General liability losses (customer injuries)	12
	Property liability losses (damage to Muni property or damage caused by Muni)	12
	Other liability losses (environmental, contractual, civil rights, sexual harassment)	12
MTA Financial	**Parking revenue**	--
	On-street	3
	Off-street	3
	Parking tax	3
	Parking tax collection rate	12
	Fare revenue	--
	Fare revenue by mode	3
	Farebox Recovery	12
	Average Fare	12
	Fare evasion incidents	3
Street Management	**Enforcement**	--
	Double parking	12
	Availability of on-street spaces for autos	12
	Availability of on-street commercial parking spaces	12
	Response to phone requests for parking enforcement	12
	Percent of all parking meters that are "smart" meters	12
	Curb cuts (net change in curb cuts)	12
	Maintenance	--
	Color curb applications	12
	Parking meter repair	12
	Hazardous traffic sign conditions	3
	Hazardous traffic signal conditions	3
	Traffic lane line maintenance	12
	Abandoned automobile reports	12
Muni Service delivery	**Percent of scheduled service not delivered**	3
	Vehicle Availability	3
	Operator Availability	3
	Maintenance	3
	Miles Between Roadcalls	3
	Preventative maintenance completed on-time	3
MTA Customer service	**Number of locations that sell Muni FastPass**	12
	Quality of Muni customer service	12
	Speed of service	--
	Citations and Residential Parking Permits	12
	Requests for changes to traffic or parking controls	12
	Administrative and tow hearings	12
	Residential Parking Permit renewals	12

- **Set different performance standards for different types of Muni service.** Not all of Muni's services are the same. For example, the 38-Geary is quite different than the community service offered by the 37-Corbett, yet current performance measures make no distinction between these different types of service. The best practice in the industry is to develop different standards and goals for the different types of services offered. For example, Muni already recognizes that measuring on-time performance in terms of headway adherence is most appropriate for lines with frequent service, while schedule adherence is more appropriate for lines with less frequent service. Tailoring specific standards to different types of service is a critical refinement that would both take actual conditions into account and allow Muni to tailor its improvement programs to the type of service being operated.

  One reason that Muni does not currently do this is that its current service categorization (radial, crosstown, and community service) does not necessarily reflect levels or qualities of services that require different standards. For example, the crosstown 22-Fillmore route is very different from the crosstown 18-46th Avenue. As another example, the 47-Van Ness and the 17-Park Merced are both community service routes but offer very different types of service.

  SFMTA should consider adopting a new service classification so that it can tailor performance standards to different types of service. Under Measure 1a in the next chapter, on-time performance is reported by line, and the lines are grouped according to one possible classification allowing different service standards (for, possibly, reliability, frequency, and speed) to be developed for each of Muni's service types. This would be both more meaningful to Muni's customers and, potentially, more useful for Muni as an organization.

- **Ensure technological resources are properly maintained and fully utilized.** Like many large organizations, SFMTA has been and will for some time remain in the process of adapting to newly available technologies. An array of complex management tools have recently been installed, upgraded, or are planned, including TransitSafe, SHOPS, NextMuni, automatic passenger counters (APCs), and perhaps even a new control center. Continued investment in such infrastructure is essential to save time, money, and to improve performance (and, as an added benefit, to simplify and help ensure compliance with requirements for reporting performance). However, SFMTA must also devote resources to helping staff cope with what can be a difficult period of transition. This includes not only initial training, but a continuing commitment to help guide personnel through a long-term process. It requires both ongoing attention from all levels of management, and constant monitoring of the actual applications of new tools, including necessary adjustments to the tools themselves. Over the course of this audit, the quality review team encountered a range of responses to new tools, including discomfort and, in some cases, a refusal or inability to use software as designed. The tools themselves were also sometimes found to be problematic. In order for Muni to maximize and justify its investment in expensive technology, such investments must be viewed as much more than a one-time outlay followed by a short training process.

- **Focus on improving the performance measures that address customer experience.** The Proposition E performance reporting framework assigns equal weight to all measures of performance. For the foreseeable future, however, the handful of measures that describe customer experience – reliability as measured by scheduled service hours delivered and on-time performance, and overcrowding – will remain of greater

immediacy. Efforts are underway to address the customer experience as part of the Transit Effectiveness Project, including the 1-California and J-Church on-time performance pilot programs. Reported performances in System Reliability categories, which have not measurably improved in recent years, will be of the utmost importance going forward.

Measure-Specific Recommendations

This final report also includes recommendations to improve performance reporting in order to make it more relevant to SFMTA staff, officials and the public. Recommendations have been made to refine some existing measures and to eliminate one measure. A number of measure-specific recommendations made in the last audit that are now under consideration as part of the Transit Effectiveness Project (TEP) are not repeated below, but can be found in Figure 2 on previous pages.

Refine/enhance measures

Changes are recommended to the following measures:

- **Schedule Adherence (1a).** *Utilize automated tools to collect more and better data.* The NextMuni real-time vehicle arrival system has the capability to collect, tabulate, and report all arrivals at schedule timepoints. Using this automated data collection tool, rather than ridecheck staff, could free staff for other types of data collection or for additional data analysis. However, SFMTA should not do so until a high degree of confidence in NextMuni data has been established, and spot-check confirmations should be conducted.
- **Miles Between Roadcalls by Mode (8a).** *Create standards by mode and improve consistency in collection and reporting.* Historically, Mean Distance Between Failures (MDBF) goals have been set by division. This is understandable given that Muni operates not only many modes, but many models of rolling stock within each modal category, and as a result the age, condition, complexity and reliability of equipment maintained by each division varies. Moreover, available resources vary by division: for example, as of the time of this review, Trolley Coach divisions lacked full-time maintenance controllers and dedicated roadcrews. Finally, setting goals by division has the virtue of attainability; no division's goal is so far out of reach as to make it meaningless.

  While these variations are reality, we recommend creating performance targets by mode, and reporting information by division so that each division can see how they are contributing to the total for their mode. From a passenger perspective, it is unimportant whether a trolley bus pulled out of Presidio or Potrero Division – riders want to know that their service is reliable. A passenger would find it difficult to understand that fleets maintained at one location are allowed fewer miles between breakdowns than vehicles maintained at another location.

  Standardizing the performance goals by mode, at the very least, would introduce a degree of consistency (goals for Service Delivery and Vehicle Availability, both areas in which performance varies by division, are set systemwide). If Muni chooses to do so, it is important that it then review each division's reporting standards for consistency within modal categories; otherwise, data will not be comparable. To the extent that consistency in reporting across modes can be achieved (cable cars lack hubometers, making reporting procedures necessarily different), this would ensure more useful information.
- **Passengers Carried by Mode (1b).** *Take advantage of new technology by developing a plan for APC deployment.* The availability of automated passenger

counters on Muni's rubber tired fleets has created an opportunity for more frequent and more accurate data to be related to Muni riders. This does not change the measure, but does change the method of collecting data. To take advantage of this technology, Muni will need to develop a plan for rotating the APC units around to all lines and all trips during a specified period of time. Creating and implementing this plan should be a high priority, as should increasing the number of APC units to make this rotation easier to orchestrate.

- **Cost Efficiency (3b), Productivity (4b), and Cost Effectiveness (5b).** *Establish goals for these important indicators.* Based on previous audit recommendations, Muni has begun reporting three industry-standard measures of cost-effectiveness and productivity: operating costs per passenger mile and per boarding, as well as numbers of boardings per revenue service hour. However, the agency has not yet set goals for these or for the previously existing measure of costs per hour of revenue service. Establishing goals for these important measures should be a high priority.

- **Net Vacancies by Position (1c).** *Measure the percentage of positions filled by drivers available to drive, rather than whether the position is filled*. This measure is intended to capture the number of budgeted positions that are not being filled for a variety of reasons. Most critical are vacancies in mission-critical positions, especially transit operators. SFMTA generally reports that there are no operator positions vacant. While this is technically accurate, it simply means that there is a "name assigned" to every budgeted position; it is not an indication that the person in that position is available to drive. We find the measure as reported to have little value to management or the public. Therefore we recommend that Muni develop a measure of the percentage of drivers driving – the percentage of total drivers who are available to drive averaged for the quarter. We presume this will be less than 100%. Muni should attach a goal to this measure, which we believe will be more useful as a management tool than whether a position is technically filled or not.

- **Crime Incidents (7d).** *Standardize reporting methods.* The categories developed for reporting crime statistics have resulted in confusion and potentially misleading information. For example, Muni has reported the numbers of "Drunk Persons", "Persons on Drugs" and "Insane Persons" in addition to "Disturbance/Disorderly Conduct", rather than simply reporting incidents involving inappropriate passenger behavior.

  In addition, some of the incidents reported have been based on information reported by the SFPD drawn from police reports, and reported in categories consistent with Parts I & II crime categories developed by the FBI; and some information came from Central Control logs and the TransitSafe Database.

  SFMTA staff has proposed a new methodology that would compile information on only those incidents resulting in an SFPD report using Central Control logs, and would classify them into just three categories: felonius crimes, quality-of-life offenses, and fare evasion. While this would be more consistent than the existing methodology, Muni should consider a more thorough method that also includes a) a reasonable number of relatively specific crime subcategories, and b) all incidents recorded in the TransitSafe database.

  Where possible, subcategories would be consistent with FBI and National Transit Database safety classifications. For example, assaults would be reported, but would no longer be divided into "Battery Operator," "Battery," "Operator Assault,"

"Operator/Passenger Altercation," and "Passenger Assault." A proposed list of categories can be found on the next page.

Reporting all incidents from TransitSafe, meanwhile, would satisfy the quality review team's concern that some categories of crime, such as assaults on operators, may be seriously underreported if incidents that do not result in a call to police are not included.

Finally, crimes should be reported as both a rate and an absolute number. If crimes are not reported as a rate in addition to as an absolute number, it becomes less meaningful to compare crime data over time. The suggested rate, as used by several other transit agencies, is the number of crimes (by class) per 100,000 passenger boardings.

Proposed Crime Reporting Categories	
Felonius	**Quality of Life**
• Homicide • Forcible Rape • Robbery • Aggravated Assault • Larceny/Theft • Motor Vehicle Theft • Arson • Other Assault • Miscellaneous (e.g., Bombing)	• Malicious Mischief • Disorderly Conduct • Miscellaneous (e.g., Trespassing) **Fare Evasion**

- **Number of Grievances (1e).** *Measure the rate rather than the number of grievances.* Employee grievances are currently reported as totals. Reporting as a rate (grievances per employee) would be more meaningful and comparable over time. Additionally, reporting by division in addition to organization-wide would improve accountability.

Eliminate measures

The following measure is recommended for elimination:

- **Pass-ups (3a).** While the phenomenon of pass-ups – which occur when a vehicle is so overcrowded that it is unable to stop and pick up waiting passengers – is an especially frustrating one for riders, as a measure of performance it is problematic in a number of ways. First, pass-ups are essentially a function or symptom of another, more fundamental measure of performance that is already reported: load factor. Moreover, pass-ups are difficult to accurately gauge. The existing methodology consists of spot-checks: the five lines with the highest reported load factors in the previous quarter are observed at what is believed to be the most likely location for pass-ups, the stop prior to the line's highest load point (maximum load points are also time points, which in turn are generally major stops that even full vehicles are unlikely to pass up).

  The method of spot-checking a handful of routes amounts to a sample so small (if not necessarily random) as to be nearly meaningless. As a result, reported proportions of peak-period runs are highly variable and are generally statistically unreliable. Because pass-ups are difficult to measure accurately, we recommend eliminating this measure.

A. System Reliability

This group of service standards measure system reliability – the extent to which transit vehicles arrive, depart and are able to accommodate all passengers at expected times and frequencies. System reliability is the most significant factor in attracting choice riders, as riders are unlikely to depend on a system that is unreliable. Poor system reliability can significantly lengthen the amount of time passengers spend both waiting for a transit vehicle and traveling to their final destination. It can also result in crush loads and pass-ups, where transit vehicles are at capacity and unable to accommodate waiting passengers. This situation often leads to further delays and breakdowns in service reliability. [1]

During the audit period, SFMTA utilized the following service standards in order to improve and maintain the reliability of Muni transit service. Collectively, these performance measures give an overall picture of performance as well as the ability to diagnose service delivery problems.

- 1a. Percentage of vehicles that run on time according to published schedules (no more than 4 minutes late or 1 minute early) measured at terminals and established intermediate points.
- 2a. Percentage of scheduled service hours that are delivered and percentage of scheduled vehicles that begin service at the scheduled time.
- 3a. Missed service due to either insufficient vehicles or driver unavailability as a percentage of scheduled service hours. *(This measure has been eliminated from Muni Service Standard Reports because it is simply an inverse of the preceding service standard.)*
- 4a. Percentage of vehicles that pass published time points during measurement periods unable to pick up passengers due to crowding without being followed within 3 minutes or less by another vehicle on the same route with space for all waiting passengers.
- 5a. Peak period passenger load factors.
- 6a. Actual headways against scheduled headways on all radial, express, cross-town, secondary, and feeder lines for peak, base, evening, and late night services.
- 7a. Percentage of vehicle availability and reliability (mean distance between failure) by mode.
- 8a. Unscheduled absences by operator, mechanical and administrative personnel.
- 9a. Miles between roadcalls by mode.

The following summarizes the key system reliability findings:

1a. Schedule Adherence: The percentage of vehicles running on-time according to published schedules at select time points was 70.7% systemwide in the fourth quarter of FY05 and 69.2% systemwide for all of FY06 (Muni began reporting annual figures in FY06). Muni did not satisfy the schedule adherence goal of 85% systemwide or for any individual mode in any quarter of either year of the audit period. Schedule adherence for Light Rail vehicles was particularly mixed, with a high of 83% on time in the first quarter of FY06 falling dramatically to a low of 63% on-time in the very next quarter.

[1] "Transit Capacity and Quality of Service Manual" (TCQSM), Second Edition, *TCRP Report 100*, 2003, p. 3-18. http://www4.trb.org/trb/onlinepubs.nsf/web/tcrp_report_100

2a. Service Delivery: The percentage of scheduled service hours delivered was 94.33% systemwide in the fourth quarter of FY05 and 92.96% systemwide in the fourth quarter of FY06. Muni did not satisfy the Service Delivery goal of 98.5% delivered systemwide or for any individual mode in any quarter of either year of the audit period.

4a. Passenger Pass-ups: Muni satisfied the goal of less than 5% in all quarters of both years of the audit period, though its pass-up percentage was notably higher in the 2nd (2.46%) and 4th (2.82%) quarters of FY06.

5a. Passenger Overcrowding: About 27% of Muni routes were found to be overcrowded during either or both of two checks of each route in FY05, and 28% in FY06.

6a. Headway Adherence: The percentage of vehicles adhering to scheduled headways was 66.4% systemwide in the fourth quarter of FY05 and 59.8% systemwide for all of FY06 (Muni began reporting annual figures in FY06). Muni did not satisfy the headway adherence goal of 85% in any quarter of either year of the audit period. In the 2nd quarter of FY06, headway adherence fell to 55.1%, an approximately 15% decline from the previous quarter.

7a. Vehicle Availability: Cable cars were the only vehicle type to consistently exceed the 98.5% availability goal during both the a.m. and p.m. periods, though trolley coaches exceeded the target in the a.m. period for all four quarters of both years, and in both periods for three quarters of FY06.

8a. Unscheduled Absences: All personnel categories either satisfied or fell just short of goals in all quarters of both years with the exception of transit operators, who failed to achieve the more stringent standards for their division in any quarter.

9a. Miles Between Roadcalls by Mode: While most divisions either satisfied or fell just short of goals in all quarters of both years, three roadcall standards for three fleet types -- Potrero (Standard), PCC, and Breda Light Rail – consistently failed to achieve standards throughout the audit period. The number of miles between roadcalls for Breda Light Rail declined 55%, and the number of miles between roadcalls for PCC 33%, between the 2nd quarter of FY05 and the 4th quarter of FY06.

1a. Schedule Adherence: Percentage of vehicles that run on time according to published schedules (no more than 4 minutes late or 1 minute early) measured at terminals and established intermediate points

Goal:	No less than 85% on July 1.
Purpose:	To measure schedule adherence. In addition, Muni commenced a Pilot Program for FY06 to measure On-Time performance for lines with greater than 10-minute headways.
Definition of Measurement:	Each line will be checked at least once in each six-month period. Such checks shall be conducted no less often than 10 weekdays and weekends per check. An annual checking schedule shall be established for the routes. The order in which the routes are checked will be determined monthly through a random selection process. To the extent automated systems can be substituted at less cost for such checks, or the measurement of any performance standard, such systems must be used.
Method of Measurement:	Check the designated lines using criteria of -1 minute to +4 minutes. "Periods of time includes morning rush (6 a.m. to 9 a.m.) midday (9 a.m. - 4 p.m.) evening rush (4 p.m. to 7 p.m.) and night (7p.m. to 1 a.m.). Supervisory personnel shall conduct a one-hour, on-time, and load standard check at a maximum load point at mid-route during all four time periods stated above."
Milestones:	FY01 65%; FY02 70%; FY 03 75%; FY04-FY06: 85%

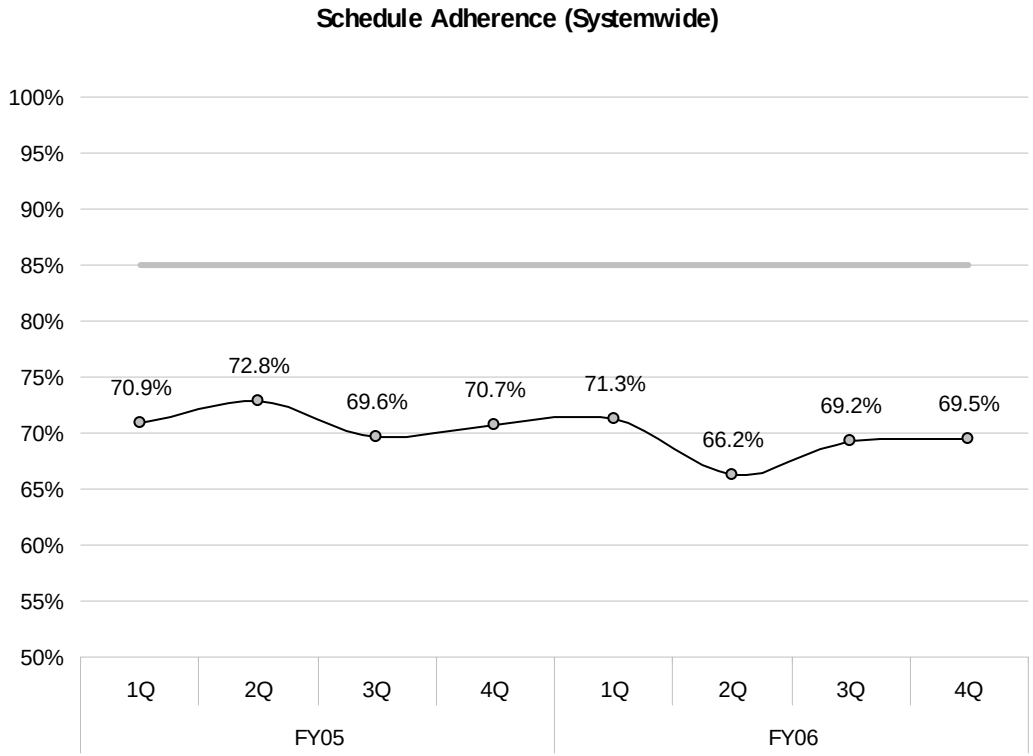
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

1a

System Reliability > Schedule Adherence

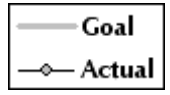
Measure: The percentage of vehicles that run on-time according to published schedules (no more than 4 minutes late or 1 minute early) measured at terminals and established intermediate points.

Goal: No less than 85%



Audit Period FY05-06 by Quarter

Muni did not satisfy this measure's goal in any quarter of either year of the audit period systemwide or for any individual mode (see following pages). Additionally, schedule adherence decreased from the first to the second year of the audit period.

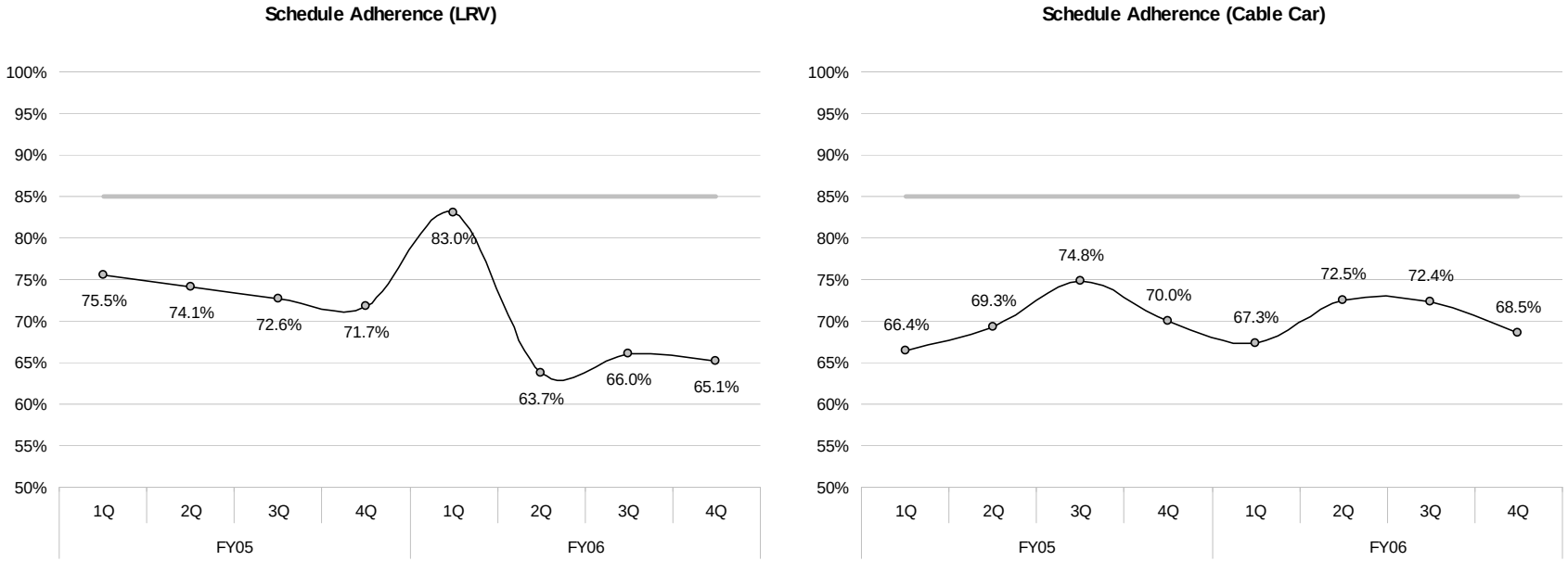


1a

System Reliability > Schedule Adherence

Measure: The percentage of vehicles that run on time according to published schedules (no more than 4 minutes late or 1 minute early) measured at terminals and established intermediate points.

Goal: No less than 85%



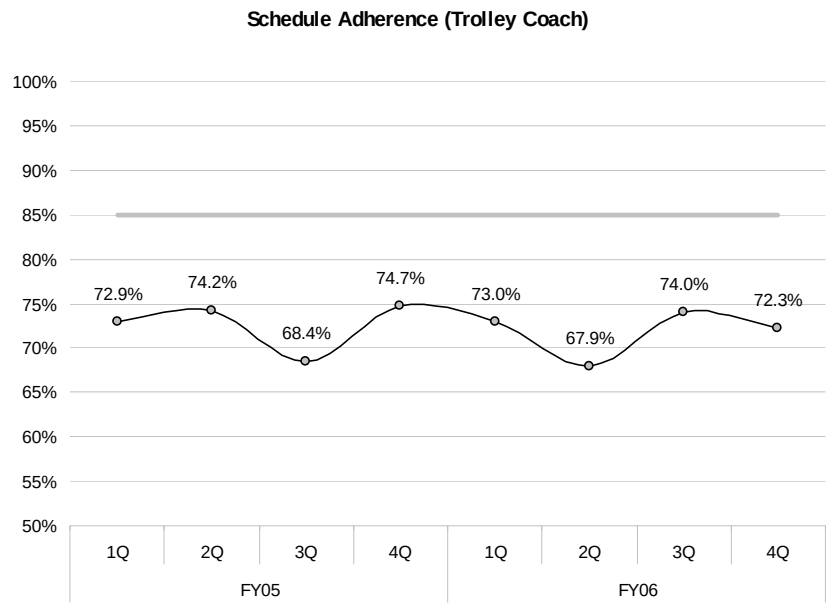
Audit Period FY05–FY06 by Quarter

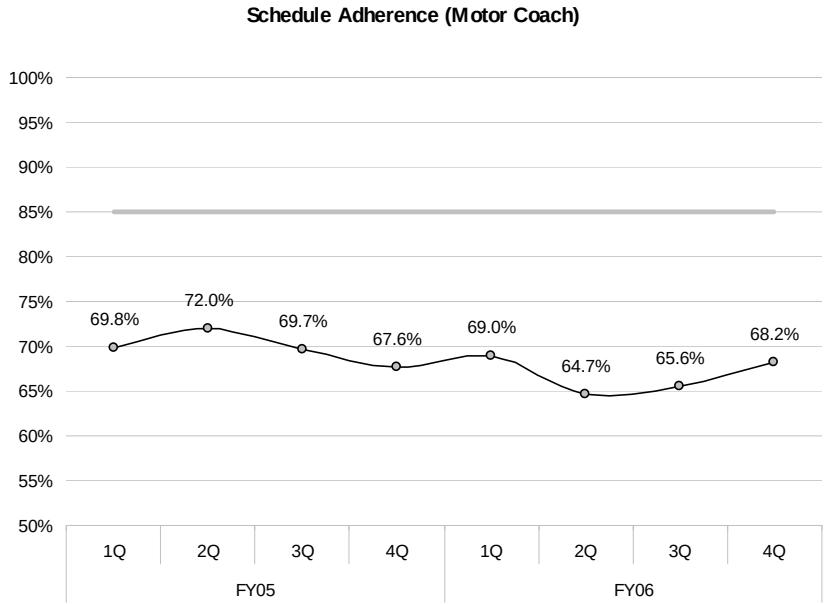
1a

System Reliability > Schedule Adherence

Measure: The percentage of vehicles that run on time according to published schedules (no more than 4 minutes late or 1 minute early) measured at terminals and established intermediate points.

Goal: No less than 85%





Audit Period FY05–FY06 by Quarter

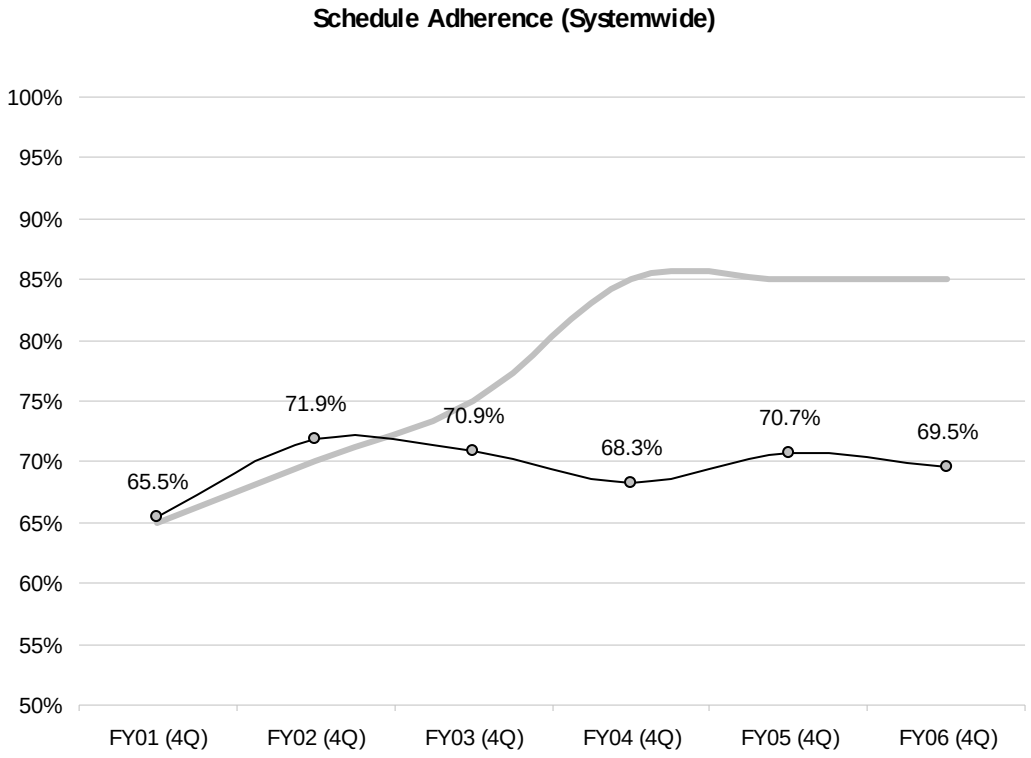
Goal
Actual

1a

System Reliability > Schedule Adherence

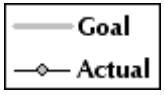
Measure: The percentage of vehicles that run on time according to published schedules (no more than 4 minutes late or 1 minute early) measured at terminals and established intermediate points.

Goal: No less than 85%



Since climbing from the fourth quarter of FY01 to FY02, schedule adherence has remained relatively constant at around 70%.

Historical Trend FY01–FY06. Includes Audit Period Data.



In FY 2006, Muni began a Pilot Program to measure on-time performance for lines with greater than 10-minute headways.

	Headways of 10 Minutes or more		Headways under 10 Minutes		All Headways	
	# of Checks	Schedule Adherence	# of Checks	Schedule Adherence	# of Checks	Schedule Adherence
July	1,103	68.9%	711	72.3%	1,814	70.2%
August	874	71.9%	778	69.7%	1,652	70.8%
September	663	68.5%	567	79.5%	1,230	73.6%
October	509	63.3%	668	67.7%	1,177	65.8%
November	687	68.6%	250	60.4%	937	66.4%
December	695	64.5%	559	68.7%	1,254	66.3%
January	877	69.3%	545	68.8%	1,422	69.1%
February	1,040	66.6%	411	71.0%	1,451	67.9%
March	869	63.6%	808	77.5%	1,677	70.3%
April	1,144	65.3%	849	70.0%	1,993	67.3%
May	774	66.4%	898	75.6%	1,672	71.4%
June	518	67.0%	419	75.4%	937	70.8%

FY 2006 On-Time Performance by Line							
Primary Routes		**Cable Cars**		**Community Routes**		**Commuter Routes**	
1 California	81.6 %	61 California	72.1 %	108 Treasure Island	94.7 %	31BX Balboa "B" Express	87.0 %
N Judah	75.8 %	59 Powell/Mason	69.9 %	53 Southern Heights	78.6 %	4 Sutter	81.2 %
L Taraval	75.7 %	60 Powell/Hyde	68.1 %	67 Bernal Heights	76.6 %	38AX Geary "A" Express	79.3 %
30 Stockton	75.7 %	**Secondary Routes**		23 Monterey	73.4 %	41 Union	78.6 %
14 Mission	75.1 %	6 Parnassus	75.4 %	18 46th Avenue	73.3 %	14X Mission Express	78.3 %
47 Van Ness	74.9 %	27 Bryant	73.3 %	37 Corbett	71.7 %	16BX Noriega "B" Express	74.5 %
K Ingleside	72.1 %	3 Jackson	71.6 %	35 Eureka	70.4 %	7 Haight	72.4 %
24 Divisadero	71.9 %	31 Balboa	70.6 %	66 Quintara	70.2 %	82X Presidio Express	71.5 %
38 Geary	71.4 %	44 O'Shaughnessy	69.1 %	56 Rutland	68.2 %	30X Marina Express	71.3 %
9 San Bruno	70.8 %	43 Masonic	67.5 %	26 Valencia	66.8 %	38BX Geary "B" Express	70.9 %
5 Fulton	70.5 %	12 Folsom/Pacific	67.3 %	17 Parkmerced	64.9 %	1BX California "B" Express	69.7 %
28 19th Avenue	68.4 %	33 Stanyan	66.2 %	36 Teresita	60.5 %	31AX Balboa "A" Express	68.2 %
22 Fillmore	68.0 %	10 Townsend	65.9 %	52 Excelsior	60.0 %	9BX San Bruno "B" Express	66.3 %
14L Mission Limited	65.9 %	2 Clement	65.5 %	39 Coit	57.4 %	16AX Noriega "A" Express	63.1 %

45 Union/Stockton	65.5 %	19 Polk	64.3 %	54 Felton	52.3 %	81X Cal Train Express	62.5 %
F Market & Wharves	65.4 %	21 Hayes	62.0 %	89 Laguna Honda	51.8 %	1AX California "A" Express	60.8 %
28L 19th Ave Limited	65.1 %	48 Quintara/24th Street	61.7 %	18 46th Avenue	73.3 %	88 BART Shuttle	60.3 %
38L Geary Limited	65.0 %	29 Sunset	59.0 %	37 Corbett	71.7 %	9X San Bruno Express	59.1 %
M Ocean View	63.4 %			35 Eureka	70.4 %	9AX San Bruno "A" Express	48.3 %
49 Van Ness/Mission	62.9 %			66 Quintara	70.2 %	80X Gateway Express	33.3 %
15 Third	62.0 %						
J Church	61.9 %						
71/71L Haight-Noriega/ Haight-Noriega Limited	61.9 %						

Since the audit period, schedule adherence has improved somewhat, though it declined slightly in the last quarter of FY07. The mode showing the greatest improvement year-over-year was light rail. While trolley coach performance declined, it continues to outperform other modes.

			Since the Audit Period					
	GOAL	FY06 Q4	FY07 Q1	FY07 Q2	FY07 Q3	FY07 Q4	FY 2006	FY 2007
SYSTEM	>85%	69.5%	68.7%	70.4%	73.5%	71.3%	69.2%	70.8%
Light Rail	>85%	65.1%	69.2%	69.2%	73.1%	74.9%	70.3%	72.1%

Cable Car	>85%	68.5%	70.6%	73.9%	69.7%	65.0%	68.9%	69.3%
Trolley Coach	>85%	74.7%	71.5%	73.8%	76.5%	76.5%	74.3%	73.9%
Motor Coach	>85%	68.2%	66.6%	67.9%	71.6%	71.6%	69.4%	68.7%

Recommendations

Utilize automated tools to collect more and better data. The NextMuni real-time vehicle arrival system has the capability to collect, tabulate, and report all arrivals at schedule timepoints. Using this automated data collection tool, rather than ridecheck staff, could free staff for other types of data collection or for additional data analysis. However, SFMTA should not do so until a high degree of confidence in NextMuni data has been established, and spot-check confirmations should be conducted.

2a. Service Delivery: Percentage of scheduled service hours that are delivered and percentage of scheduled vehicles that begin service at the scheduled time.

Goal:	No less than 98.5% on July 1.
Purpose:	To measure service hours through available operators and available equipment, along with the percentage of equipment available for service.
Definition of	Monthly measurement of the percent of total available hours for service measuring operators and equipment

Measurement:	and percentage of equipment available daily.
Method of Measurement:	Both operators and equipment are measured as to the total number of hours in service as a percentage of the total scheduled hours. Data come from the online Dispatching System. Measurement of the vehicles that begin service at the scheduled time will be provided from the 8 a.m. and 6 p.m. 'Not-Out Report' generated by Central Control and will show the percent of vehicles that went out at the scheduled time for both the a.m. and p.m. pullout.
Milestones:	FY01 96.5%; FY02 97%; FY 03 97.5%; FY04-FY06: 98.5%

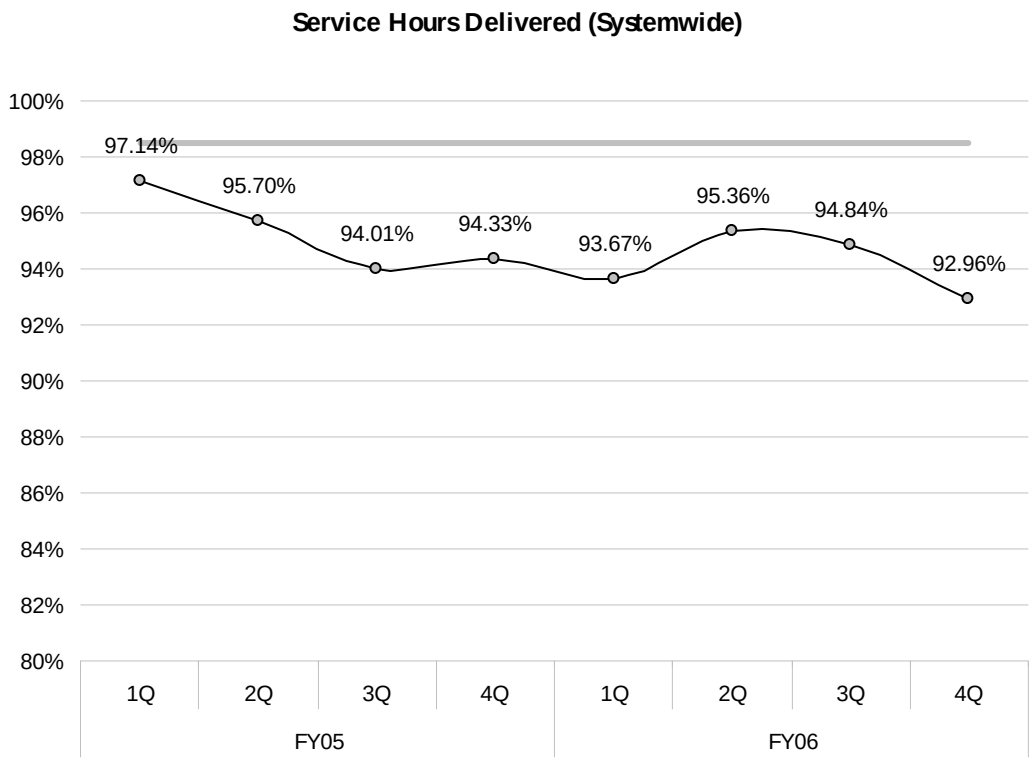
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

2a ◯

System Reliability > Service Delivery

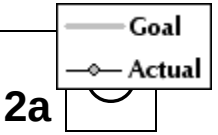
Measure: The percentage of scheduled service hours that are delivered and percentage of scheduled vehicles that begin service at the scheduled time.

Goal: No less than 98.5%



Audit Period FY05–FY06 by Quarter

Muni did not satisfy this measure's goal in any quarter of either year of the audit period systemwide or for any individual mode (see following pages). Additionally, service delivery decreased from the first to the second year of the audit period.



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System Reliability > Service Delivery

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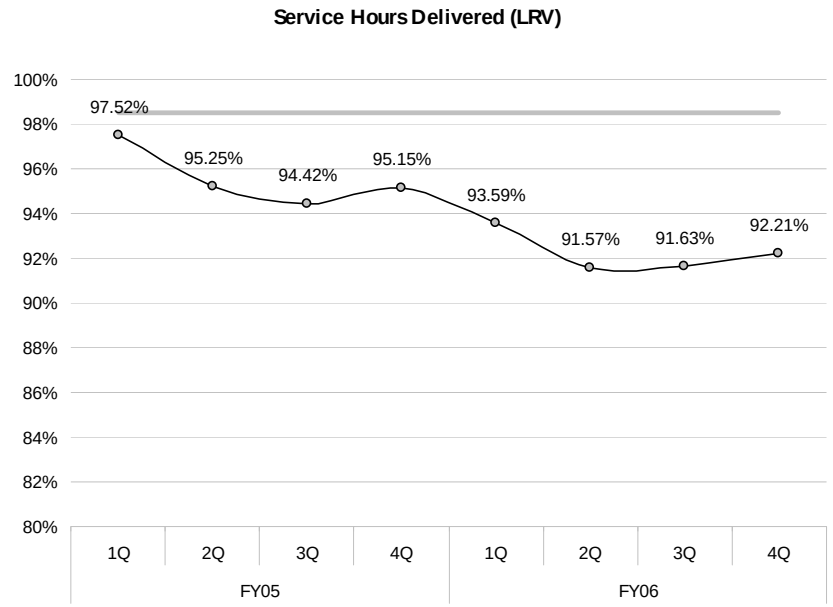
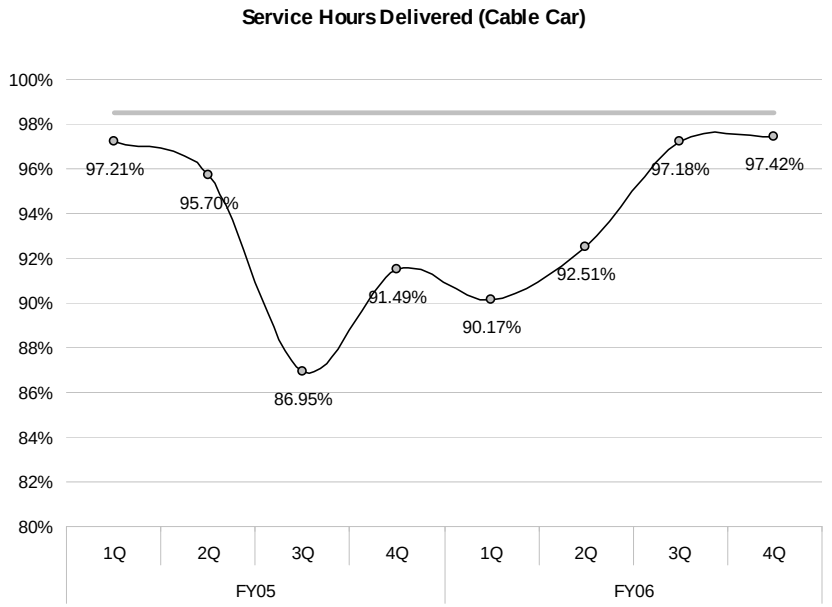
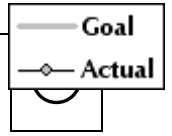




Audit Period FY05–FY06 by Quarter



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System Reliability > Service Delivery

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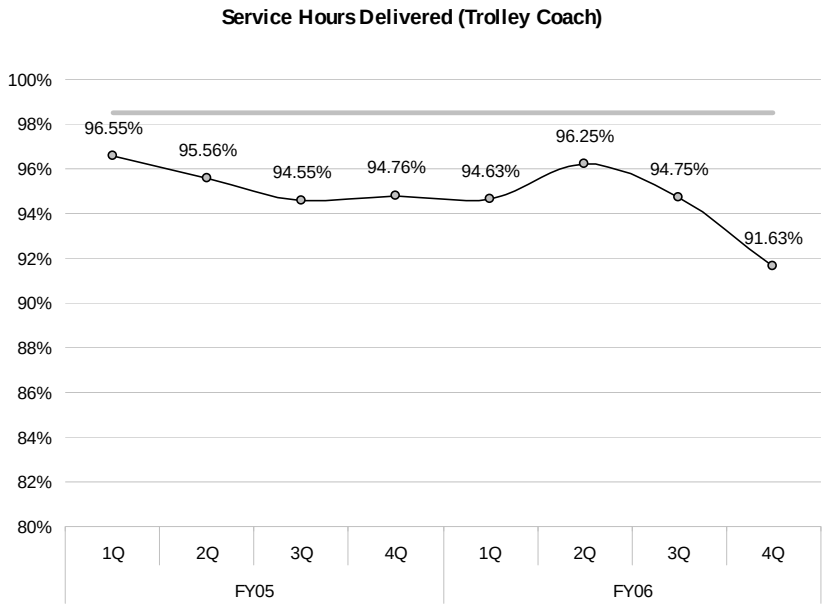
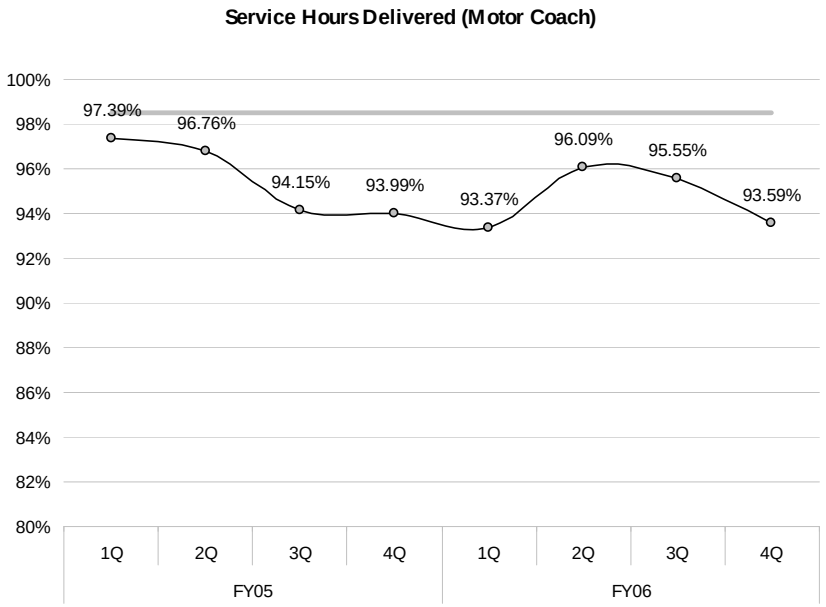
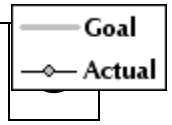




Audit Period FY05–FY06 by Quarter



2a

System Reliability > Service Delivery

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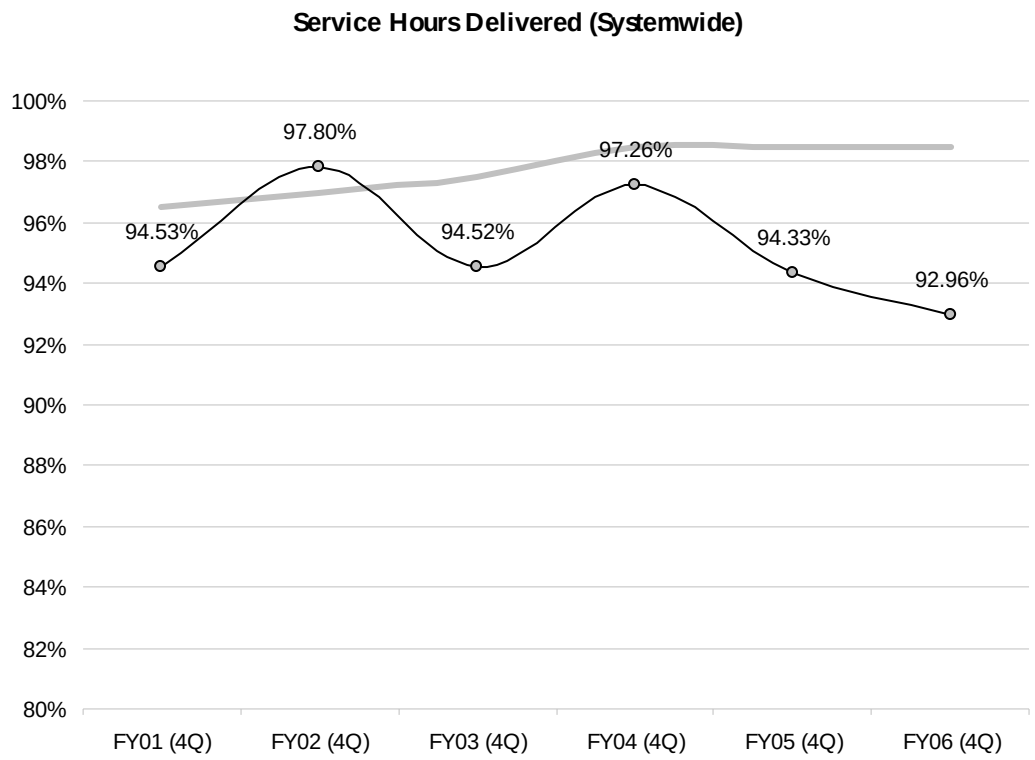


From FY04 to FY05, service delivery declined to its lowest 4th quarter total since reporting began. In FY06, it declined further still.

Historical Trend FY01–FY06. Includes Audit Period Data.

Scheduled hours of service delivered is a function of both equipment availability and operator availability. Historically and d through the audit period, operator availability has been the primary determinant of performance.

	Systemwide Availability		
	Equipment	Operator	TOTAL
FY05 Q1	**99.87%**	97.27%	97.14%

FY05 Q2	**99.72%**	95.98%	95.70%
FY05 Q3	**99.79%**	94.21%	94.01%
FY05 Q4	**99.82%**	94.51%	94.33%
FY06 Q1	**99.94%**	93.74%	93.67%
FY06 Q2	**99.93%**	95.42%	95.36%
FY06 Q3	**99.86%**	94.98%	94.84%
FY06 Q4	**99.88%**	93.09%	92.96%

Bold = met or exceeded standard

Using 8 a.m. and 6 p.m. “Not-Out Reports,” Muni also measures the percentage of all scheduled runs that go into service that do not go into service at the scheduled time.

	FY 2006	**FY 2007**
SYSTEM	1.11	0.95
Flynn – Motor Coach	.96	0.77

Woods – Motor Coach	1.22	0.87
Kirkland – Motor Coach	.62	0.77
Potrero – Trolley	1.09	0.82
Presidio – Trolley	.53	0.35
Breda Light Rail	1.04	1.23
PCC (F-Line)	1.86	1.53
Cable Car	1.53	0.95

Since the audit period, service delivery has slightly declined. It increased quarter over quarter until the final quarter of FY07, when light rail in particular experienced a decrease.

			Since the Audit Period			
	GOAL	**FY06 Q4**	**FY07 Q1**	**FY07 Q2**	**FY07 Q3**	**FY07 Q4**

SYSTEM	>98.5%	93.0%	94.2%	94.7%	95.6%	92.5%
Light Rail	>98.5%	92.2%	94.6%	91.2%	93.7%	85.3%
Cable Car	>98.5%	97.4%	98.1%	96.9%	97.4%	97.1%
Trolley (Potrero)	>98.5%	88.9%	92.7%	95.7%	93.8%	88.5%
Trolley (Presidio)	>98.5%	94.8%	94.9%	96.5%	98.4%	98.9%
Motor Coach (Flynn)	>98.5%	93.3%	93.5%	94.4%	94.8%	90.4%
Motor Coach (Kirkland)	>98.5%	94.3%	95.1%	91.4%	94.1%	94.9%
Motor Coach (Woods)	>98.5%	93.3%	93.3%	95.9%	97.5%	95.7%

4a. Pass-Ups: Percentage of vehicles that pass published time points during measurement periods unable to pick up passengers due to crowding without being followed within 3 minutes or less by another vehicle on the same route with space for all waiting passengers.

Goal:	Less than 5%.
Purpose:	To measure crowding in vehicles.
Definition of Measurement:	Pass-up checks shall be conducted no less often than 10 weekdays per month. At the beginning of each quarter, supervisory personnel will review all the lines checked in the previous quarter, and identify the five lines with the highest load factors, and the time periods those load factors occurred. Supervisory personnel will then check those five lines, during the time period that the high load factor occurred, each month during the coming quarter for pass-ups. Supervisory personnel will check to see if any PSRs for pass-ups were made for any of those five lines, and if the location of the pass-up was recorded. If it was recorded, supervisory personnel will use that point to check for pass-ups. If there are no locations recorded, supervisory personnel will use the stop just before the MLP.
Method of Measurement:	Periods of time includes morning rush (6 a.m. to 9 a.m.) midday (9 a.m. - 4 p.m.) evening rush (4 p.m. to 7 p.m.) and night (7p.m. to 1 a.m.).
Milestones:	FY01-FY06: 5%

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

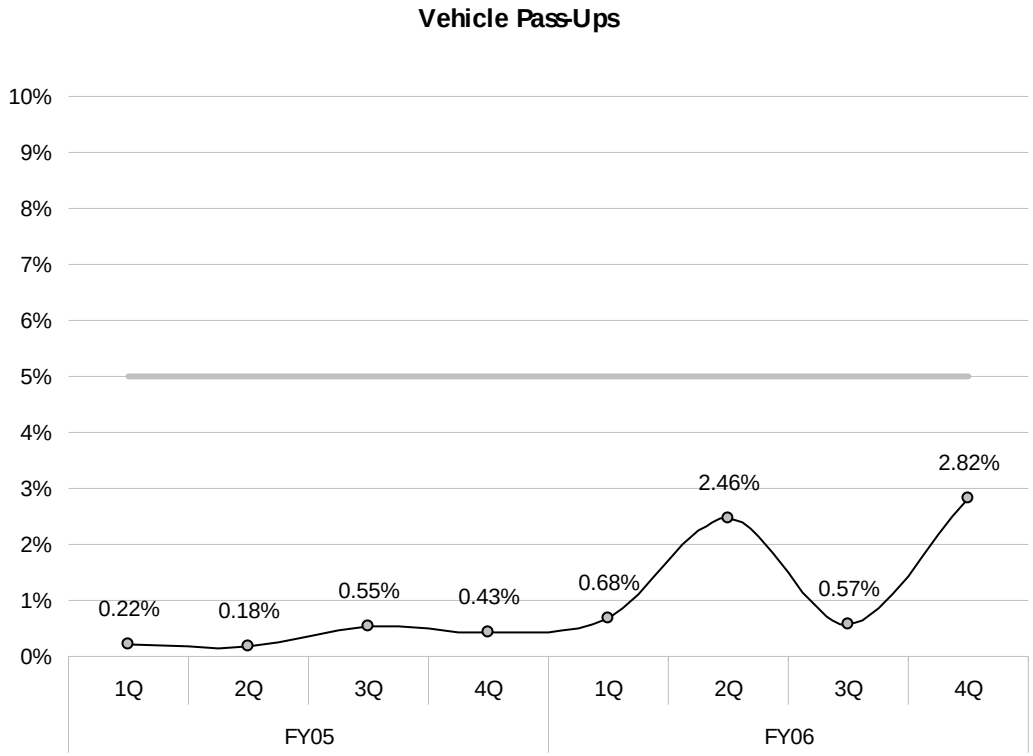
4a ●

System Reliability > Pass-Ups

Measure: The percentage of vehicles that pass published time points during measurement periods unable to pick up

Goal: Less than 5%

passengers due to crowding without being followed within 3 minutes or less by another vehicle on the same route with space for all waiting passengers.



Audit Period FY05–FY06 by Quarter

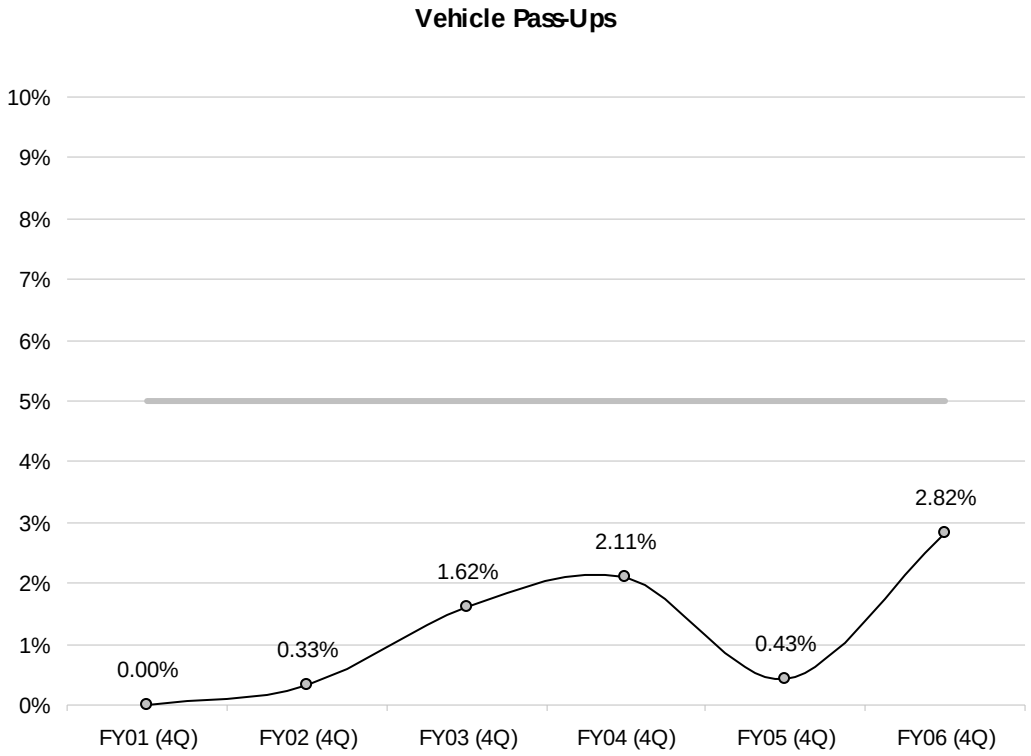
Muni satisfied this measure's goal in every quarter of both years of the audit period. However, pass-ups increased from the first to the second year of the audit period.

4a

System Reliability > Pass-Ups

Measure: The percentage of vehicles that pass published time points during measurement periods unable to pick up passengers due to crowding without being followed within 3 minutes or less by another vehicle on the same route with space for all waiting passengers.

Goal: Less than 5%



Muni has regularly satisfied the goal of 5% or less for this measure, though with the exception of FY05, 4th quarter performances have steadily declined.

Historical Trend FY01–FY06. Includes Audit Period Data.

Since the audit period, numbers of pass-ups have declined. In the 2nd and 3rd quarters of FY07, no pass-ups were observed, though in the 4th quarter pass-ups were observed in 15 of 557 checks.

			Since the Audit Period					
	GOAL	FY06 Q4	FY07 Q1	FY07 Q2	FY07 Q3	FY07 Q4	FY 2006	FY 2007
All Vehicles Observed	<5%	2.82%	0.58%	0.00%	0.00%	2.69%	1.63%	1.30%

Recommendations

This measure is recommended for elimination. While the phenomenon of pass-ups – which occur when a vehicle is so overcrowded that it is unable to stop and pick up waiting passengers – is an especially frustrating one for riders, as a measure of performance it is problematic in a number of ways. First, pass-ups are essentially a function or symptom of another, more fundamental measure of performance that is already reported: load factor. Moreover, pass-ups are difficult to accurately gauge. The existing methodology consists of spot-checks: the five lines with the highest reported load factors in the previous quarter are observed at what is believed to be the most likely location for pass-ups, the stop prior to the line's highest load point (maximum load points are also time points, which in turn are generally major stops that even full vehicles are unlikely to pass up).

The method of spot-checking a handful of routes amounts to a sample so small (if not necessarily random) as to be nearly meaningless. As a result, reported proportions of peak-period runs are highly variable and are generally statistically unreliable. Because pass-ups are difficult to measure accurately, we recommend eliminating this measure.

5a. Passenger Overcrowding: Peak period passenger load factors.

Goal:	No greater than 85% of combined seating & standing capacity.
Purpose:	To measure load factors at peak periods.
Definition of Measurement:	Each line will be checked twice a year. Such checks shall be conducted no less often than 10 weekdays and weekends per check. An annual checking schedule shall be established for the routes. The order in which the routes are checked will be determined monthly through a random selection process. To the extent automated systems can be substituted at less cost for such checks, or the measurement of any performance standard, such systems must be used.
Method of Measurement:	Periods of time includes morning rush (6 a.m. to 9 a.m.) midday (9 a.m. - 4 p.m.) evening rush (4 p.m. to 7 p.m.) and night (7p.m. to 1 a.m.). Supervisory personnel shall conduct a one-hour, on-time, and load standard check at a maximum load point at mid-route during all four time periods stated above.
Milestones:	FY01-FY06: No greater than 85% of combined seating & standing capacity

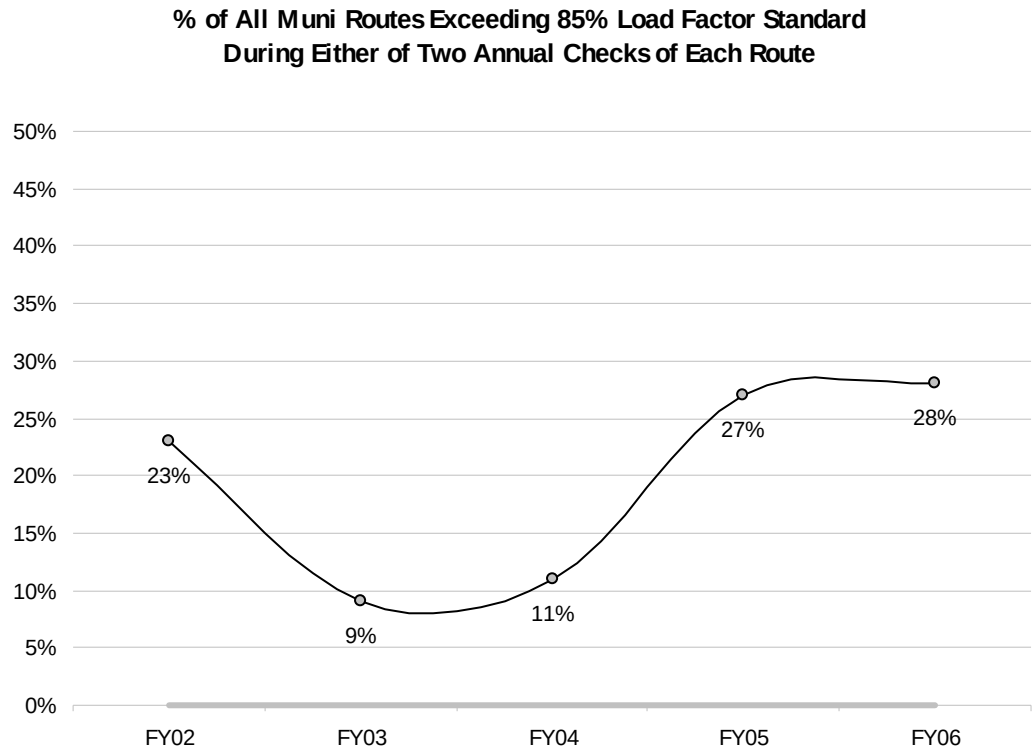
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

5a

System Reliability > Passenger Overcrowding

Measure: Peak period passenger load factors.

Goal: No greater than 85% of combined seating and standing capacity



About 27% of Muni routes were found to be overcrowded during either or both of two checks of each route in FY05, and 28% in FY06. Note: Muni quarterly reports measure the percentage of all route-checks that find a route to be overcrowded, resulting in somewhat lower figures. (For example: the 1-California and 5-Fulton each exceeded standards during one of two checks of each route in FY05; under the Muni standard, the reported percentage would be two of four checks, or 50%, and not two of two routes, or100%.)

Historical Trend FY02–FY06. Includes Audit Period Data.

Goal
Actual

The table below summarizes individual line performance. Note that only those lines attaining load factors of greater than 85% are included.

Line	FY 2002		FY2003		FY2004		FY 2005		FY 2006	
	Month	%	Month	%	Month	%	Month	%	Month	%
K	- -	- -	- -	- -	- -	- -	May -	93.9% -	August May	107.4% 86.8
N	-	-	May	104%	-	-	March	100.5%	-	-
1	July May	92.5% 90.2%	- -	- -	- -	- -	June -	85.5% -	- -	- -
1AX	- -	- -	- -	- -	- -	- -	November April	85.9% 97.1%	- -	- -
1BX	-	-	-	-	-	-	-	-	February	90.7%
5	- -	- -	- -	- -	- -	- -	December -	112.4% -	October January	94.2% 86.6%
6	-	-	-	-	January	92.7%	-	-	-	-
9	-	-	-	-	-	-	-	-	January	86.1%
9X	July April	104% 118.5%	August -	110% -	February -	85.6% -	- -	- -	- -	- -
9AX	July April	113.8% 98.2%	August January	94.8% 92.1%	December March	92.5% 91.5%	June -	94.6% -	August	92.9%
9BX	July August April	104% 98.7% 96.8%	- - -	- - -	- - -	- - -	- - -	- - -	January - -	85.1% - -
16AX	January	91.1%	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	January	86.7%
24	- -	- -	- -	- -	- -	- -	- -	- -	December February	102.2% 88.7%
28	- -	- -	- -	- -	- -	- -	December -	104.7% -	October February	111.2% 99.3%
29	August	94.3%	-	-	-	-	October	99%	March	90.6%
30	October -	89.6% -	October February	91.9% 91.4%	August March	90.9% 86.9%	November May	103.4% 91.7%	December -	102.9% -

Line	FY 2002		FY2003		FY2004		FY 2005		FY 2006	
	Month	%	Month	%	Month	%	Month	%	Month	%
30X	-	-	-	-	-	-	May	109.6%	-	-
31AX	September	98.9%	-	-	-	-	April	86.8%	December	86.8%
37	May	85.6%	-	-	-	-	-	-	-	-
38L	-	-	-	-	-	-	March	88.3%	May	85.8%
43	October March	90% 93.4%	- -	- -	- -	- -	March -	100% -	September March	109.8% 98.7%
44	October -	91.6% -	- -	- -	October -	106.4% -	January -	87% -	December May	88% 88.1%
45	June -	86.1% -	- -	- -	November -	85.8% -	October -	95.2% -	September April	95.9% 86.8%
47	-	-	-	-	-	-	-	-	August	100.4%
48	October	85.3%	-	-	-	-	November	87.3%	-	-
49	-	-	-	-	-	-	-	-	November	110.9%
54	September	93.3%	-	-	May	93.7%	February	108.5%	-	-
59	August -	91.9% -	August -	101.7% -	August June	108.5% 95.9%	August -	103% -	- -	- -
60	April -	86.9% -	August April	101.8% 92.2%	October April	104.5% 116.7%	October April	92.4% 86.1%	August April	101.3% 91.7%
71/71L	August	89.4%	February	90.5%	-	-	-	-	November	90.2%
80X	-	-	-	-	-	-	-	-	December	89.3%
88	-	-	-	-	-	-	March	89.4%	October	93.0%

Since the audit period, passenger overcrowding has declined. In fiscal year 2007, 18 routes were found during either or both of two checks to be in excess of the 85% load factor standard.

		Since the Audit Period
	FY 2006	FY 2007
% of Lines Checked Exceeding <85% Goal	28%	23%

6a. Headway Adherence: Actual headways against scheduled headways on all radial, express, cross-town, secondary, and feeder lines for peak, base, evening, and late night services.

Goal:	Operate no less than 85% of the time within 30% or 10 minutes of scheduled headway (whichever is less).
Purpose:	Measurement of scheduled headways against actual headways. In addition, Muni commenced a Pilot Program for FY06 to measure On-Time performance for lines with greater than 10-minute headways.
Definition of Measurement:	Each line will be checked twice a year. Such checks shall be conducted no less often than 10 weekdays and weekends per check. An annual checking schedule shall be established for the routes. The order in which the routes are checked will be determined monthly through a random selection process. To the extent automated systems can be substituted at less cost for such checks, or the measurement of any performance standard, such systems must be used. Actual headways against scheduled headways on all radial express, cross-town, secondary, and feeder lines for peak, base, evening, and late night services. Will also check during periods when their headway is greater than 10 minutes.
Method of Measurement:	Check the headways of designated lines. Periods of time includes morning rush (6 a.m. to 9 a.m.) midday (9 a.m. - 4 p.m.) evening rush (4 p.m. to 7 p.m.) and night (7p.m. to 1 a.m.). Supervisory personnel shall conduct a one-hour, on-time, and load standard check at a maximum load point at mid-route during all four time periods stated above."
Milestones:	FY01 80%; FY02-FY06: 85%

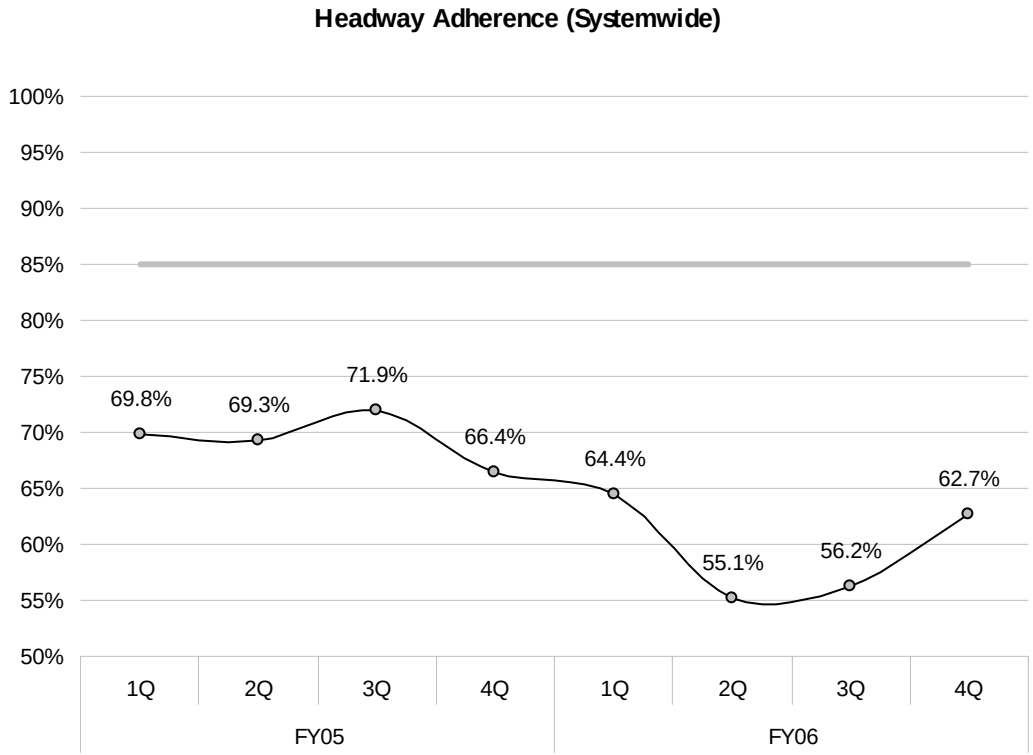
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

6a ◯

System Reliability > Headway Adherence

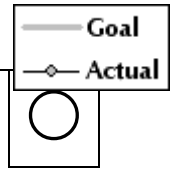
Measure: Actual headways against scheduled headways on all radial, express, cross-town, secondary and feeder lines for peak, base, evening and late night services.

Goal: Operate no less than 85% of the time within 30% or 10 minutes of scheduled headway (whichever is lower)



Headway adherence is the best measure of on-time performance on the most frequently served routes. Headway adherence declined during the audit period, nearly wiping out the gains in previous years.

Audit Period FY05–FY06 by Quarter

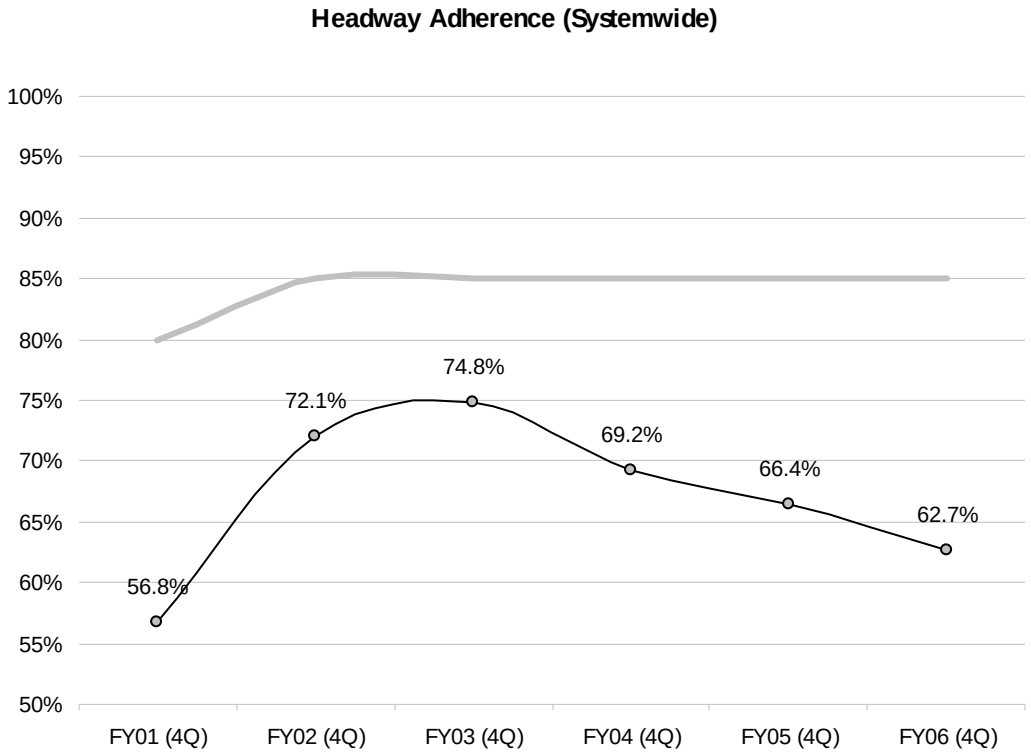


6a

System Reliability > Headway Adherence

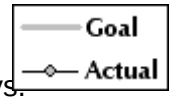
Measure: Actual headways against scheduled headways on all radial, express, cross-town, secondary and feeder lines for peak, base, evening and late night services.

Goal: Operate no less than 85% of the time within 30% or 10 minutes of scheduled headway (whichever is lower)



Headway adherence is the best measure of on-time performance on the most frequently served routes. Headway adherence declined during the audit period, nearly wiping out the gains in previous years.

Historical Trend FY01–FY06. Includes Audit Period Data.



In FY 2006, Muni began a Pilot Program to measure On-Time performance for lines with greater than 10-minute headways.

	Headways of 10 Minutes or more		Headways under 10 Minutes		All Headways	
	# of Checks	Headway Adherence	# of Checks	Headway Adherence	# of Checks	Headway Adherence
July	1,103	77.2%	711	47.4%	1,814	65.2%
August	874	77.4%	778	53.3%	1,652	65.7%
September	663	71.7%	567	49.3%	1,230	61.4%
October	509	67.2%	668	43.5%	1,177	53.5%
November	687	70.2%	250	39.1%	937	61.3%
December	695	63.0%	559	39.5%	1,254	52.2%
January	877	71.3%	545	48.1%	1,422	62.4%
February	1,040	64.3%	411	48.3%	1,451	59.8%
March	869	61.9%	808	34.4%	1,677	48.2%
April	1,144	71.2%	849	52.3%	1,993	62.7%
May	774	72.9%	898	46.4%	1,672	58.3%
June	518	67.0%	419	57.5%	937	66.7%

Since the audit period, headway adherence has improved slightly. Cable car and motor coach adherence has increased, while light rail and trolley coach performance has declined.

			Since the Audit Period			
	GOAL	FY06 Q4	FY07 Q1	FY07 Q2	FY07 Q3	FY07 Q4
SYSTEM	>85%	62.7%	58.9%	61.8%	58.8%	63.0%
Light Rail	>85%	57.7%	50.6%	53.4%	59.5%	53.9%
Cable Car	>85%	56.9%	65.1%	63.8%	55.3%	60.1%
Trolley Coach	>85%	60.3%	52.8%	52.8%	49.9%	52.6%
Motor Coach	>85%	68.5%	62.4%	69.5%	66.0%	70.6%

7a. Vehicle Availability: Percent vehicle availability and reliability (mean distance between failure) by mode.

Goal:	No less than 98.5% vehicle availability.
Purpose:	To measure the percentage of equipment available for service.
Definition of Measurement:	Monthly measurement of availability as a percentage of vehicles at each facility available at 7 a.m. and 4 p.m. on non-holiday weekdays against peak demand requirement.
Method of Measurement:	The Shop History and Online Parts System (SHOPS) provides the data. A vehicle is considered available for service if it is available for assignment to an operator no later than 7a.m. and 4p.m.
Milestones:	FY01-FY06: 98.5%

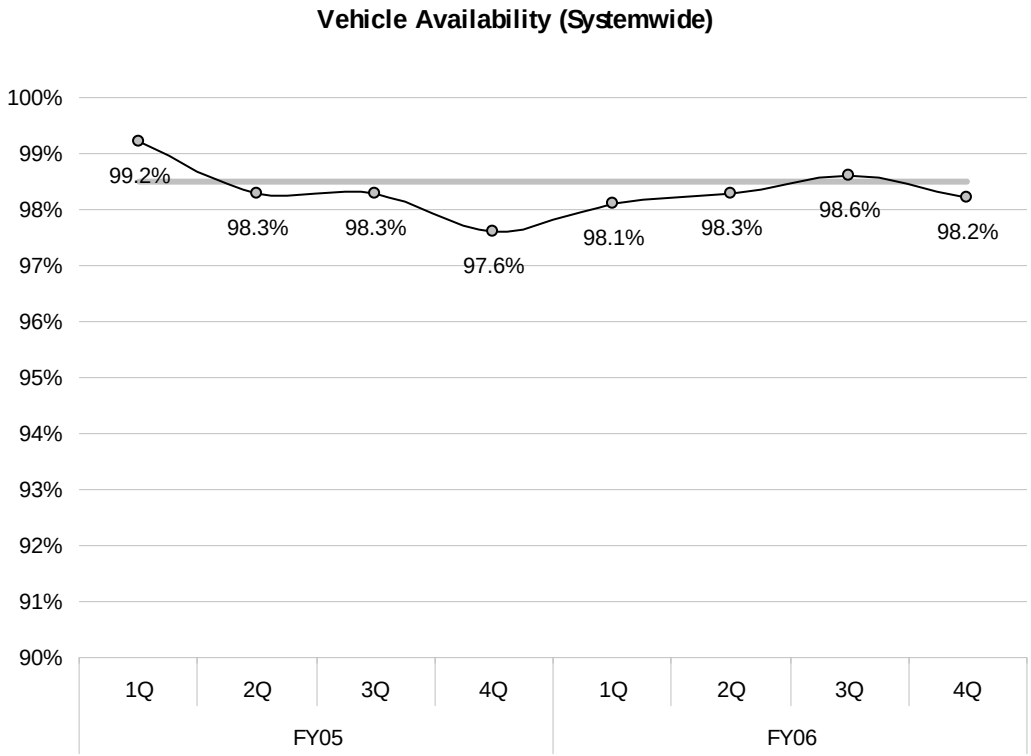
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

7a

System Reliability > Vehicle Availability

Measure: The percentage of vehicle availability and reliability (mean distance between failure) by mode.

Goal: No less than 98.5% vehicle availability



Cable cars were the only vehicle type to consistently exceed the 98.5% availability goal during both the a.m. and p.m. periods, though trolley coaches exceeded the target in the a.m. period for all four quarters of both years, and in both periods for three quarters of FY06.

Audit Period FY05–FY06 by Quarter

7a Goal / Actual

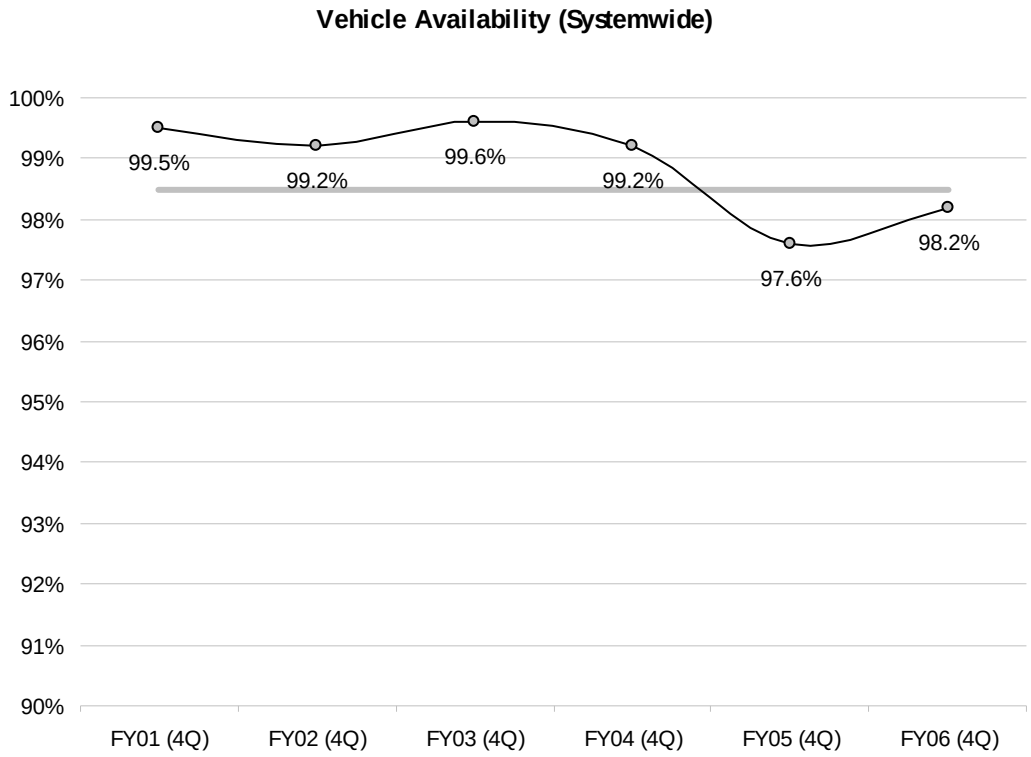
System Reliability > Vehicle Availability

Measure: The percentage of vehicle availability and reliability

Goal: No less than 98.5% vehicle

(mean distance between failure) by mode.

availability



Vehicle availability, which had consistently outperformed the standard in previous audits, fell below standard in FY05 and continued below standard in FY06.

Problems with Light Rail and F-line availability were largely responsible for this decline.

Historical Trend FY01–FY06. Includes Audit Period Data.

	Vehicle Availability by Mode and Time Period (Goal / Actual)				
	Motor Coach	**Trolley Coach**	**Light Rail**	**F-Line**	**Cable Car**
FY 2005 1st Q AM	**99.2%**	**99.7%**	**99.6%**	**98.5%**	**100%**

FY 2005 1st Q PM	**99.7%**	97.5%	**99.6%**	**99.1%**	**100%**
FY 2005 2nd Q AM	**99.7%**	**99.9%**	**98.8%**	98.2%	**100%**
FY 2005 2nd Q PM	**99.5%**	97.3%	**99.0%**	95.2%	**100%**
FY 2005 3rd Q AM	98.4%	**99.5%**	95.6%	98.0%	**100%**
FY 2005 3rd Q PM	**98.8%**	97.0%	97.4%	97.9%	**100%**
FY 2005 4th Q AM	97.9%	**98.7%**	96.4%	96.6%	**100%**
FY 2005 4th Q PM	**99.5%**	93.6%	97.2%	96.3%	**100%**
FY 2006 1st Q AM	97.4%	**99.5%**	97.5%	96.9%	**100%**
FY 2006 1st Q PM	98.3%	**100%**	97.6%	96.3%	**100%**
FY 2006 2nd Q AM	98.3%	**99.5%**	97.7%	**98.6%**	**100%**
FY 2006 2nd Q PM	97.7%	**99.7%**	97.1%	97.6%	**100%**
FY 2006 3rd Q AM	**98.6%**	97.2%	97.9%	96.2%	**100%**
FY 2006 3rd Q PM	96.6%	**99.8%**	98.1%	95.7%	**100%**
FY 2006 4th Q AM	98.3%	**99.5%**	98.2%	**99.3%**	**100%**
FY 2006 4th Q PM	96.0%	**99.7%**	**98.7%**	**98.7%**	**100%**

Bold = met or exceeded standard

Since the audit period, vehicle availability has improved substantially. In the 3rd and 4th quarters of FY07, every division achieved the 98.5% target in both the AM and PM periods, and systemwide availability reached 99.6% in the PM period.

				Since the Audit Period							
	GOAL	FY06 Q4		FY07 Q1		FY07 Q2		FY07 Q3		FY07 Q4	
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
SYSTEM	>98.5%	98.4 %	98.0 %	**98.6 %**	98.2 %	**98.7 %**	**98.8 %**	**99.3 %**	**99.6 %**	**99.3 %**	**99.6 %**
Light Rail	>98.5%	97.1 %	**98.7 %**	**99.1 %**	**99.1 %**	**99.9 %**	**99.8 %**	**99.9 %**	**99.7 %**	**99.9 %**	**99.7 %**
F-Line	>98.5%	97.6 %	**98.7 %**	**99.8 %**	**99.5 %**	**98.8 %**	98.3 %	**98.9 %**	**99.4 %**	**98.9 %**	**99.4 %**
Cable Car	>98.5%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Trolley (Potrero)	>98.5%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Trolley (Presidio)	>98.5%	**99.9 %**	**99.3 %**	**99.8 %**	97.3 %	**100%**	**100%**	**99.9 %**	**100%**	**99.9 %**	**99.9 %**
Motor Coach (Flynn)	>98.5%	**100%**	**100%**	**99.0 %**	**99.0 %**	**100%**	**99.9 %**	**100%**	**100%**	**100%**	**100%**
Motor Coach (Kirkland)	>98.5%	96.6 %	95.0 %	95.9 %	95.9 %	95.8 %	95.9 %	**99.2 %**	**98.7 %**	**99.9 %**	**99.9 %**
Motor Coach (Woods)	>98.5%	97.0 %	94.0 %	92.7 %	92.8 %	95.9 %	97.0 %	**98.5 %**	**98.9 %**	**99.5 %**	**99.5 %**

Bold = met or exceeded standard

8a. Unscheduled Absences: By operator, mechanical and administrative personnel.

Goal:	Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Administration, as long as the goal does not drop below 5%.
Purpose:	To measure unscheduled absences.
Definition of Measurement:	Monthly measurement of unscheduled absences is defined as time that is not scheduled in advance and includes the following payroll categories: Sick pay (with pay), Sick Leave (without pay), AWOL, Worker's Comp, SDI, and Assault Pay.
Method of Measurement:	The online TESS and Attendance Tracking System currently provides the data as a calculation of scheduled hours available against unscheduled hours. Unscheduled absences are tracked for operators, mechanical, and administrative staff by mode.
Milestones:	Maintenance, administration, and operations: 5% reduction in unscheduled absences Transit Operators: 10% reduction in unscheduled absences

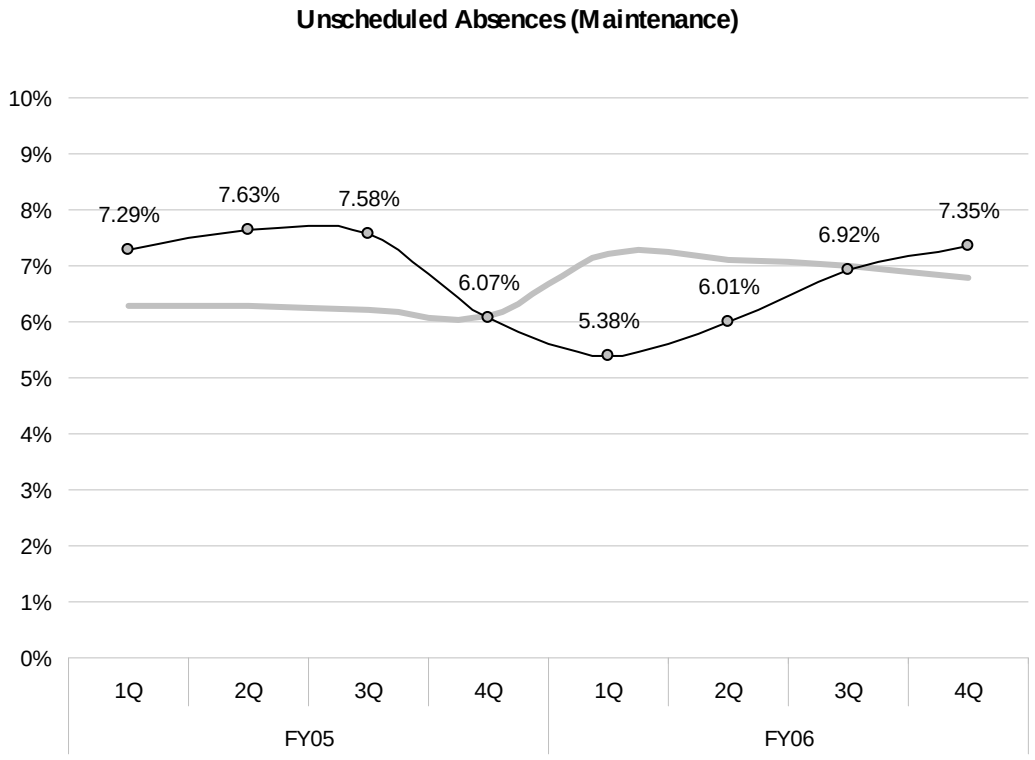
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



All personnel categories either satisfied or fell just short of goals in all quarters of both years with the exception of transit operators, who failed to achieve the lower standards for their division in any quarter.

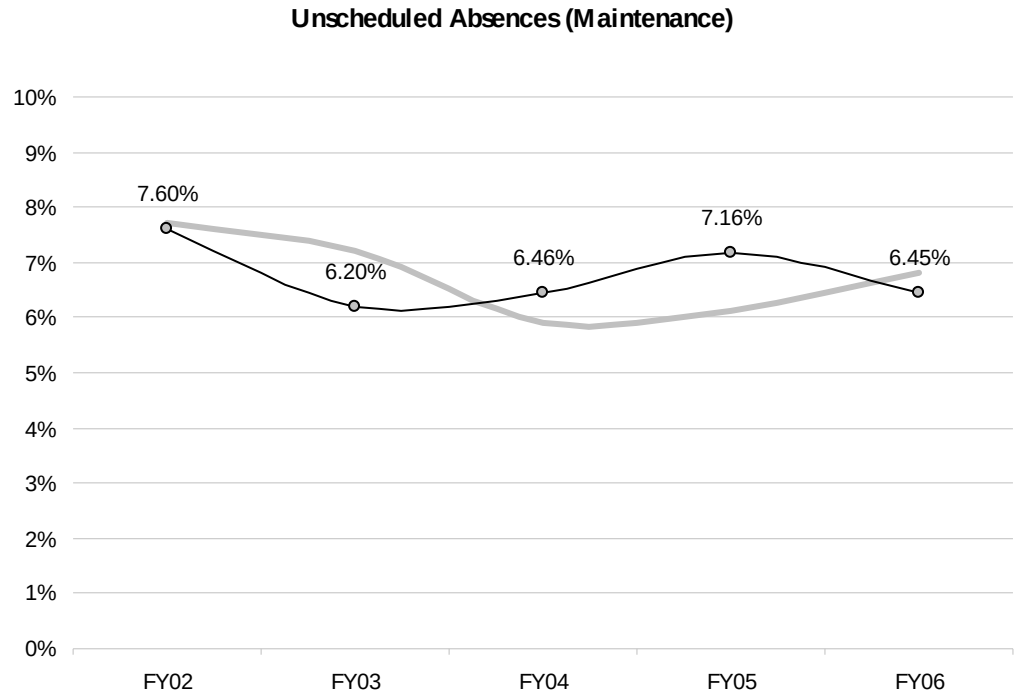
Audit Period FY05–FY06 by Quarter

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



Absence rates in each personnel category have remained relatively constant over the years, although absences by transit operators consistently have been higher than for other categories.

Historical Trend FY02–FY06. Includes Audit Period Data.

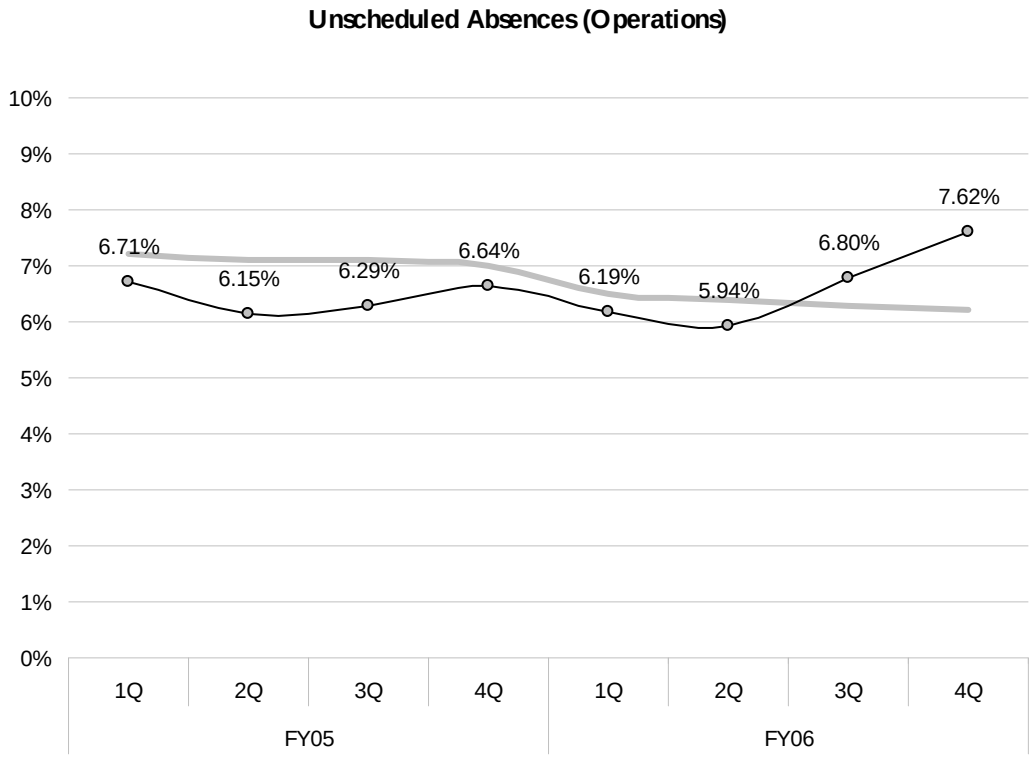
Goal
Actual

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



All personnel categories either satisfied or fell just short of goals in all quarters of both years with the exception of transit operators, who failed to achieve the lower standards for their division in any quarter.

Audit Period FY05–FY06 by Quarter

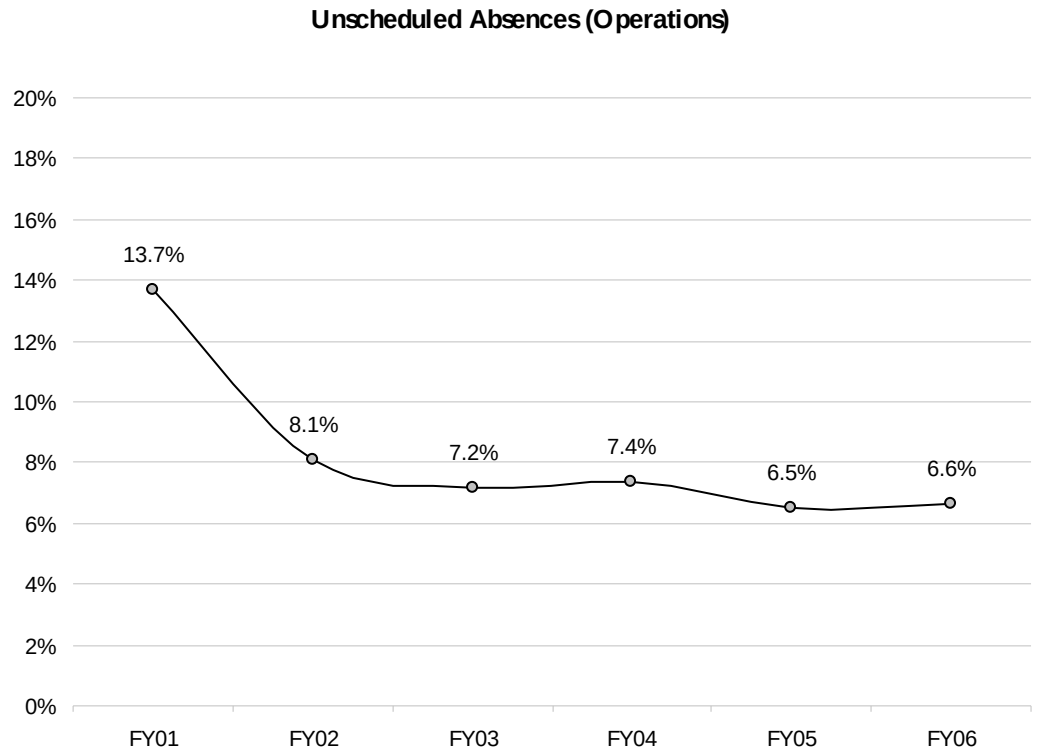
SFMTA | Municipal Transportation Agency

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



Absence rates in each personnel category have remained relatively constant over the years, although absences by transit operators consistently have been higher than for other categories.

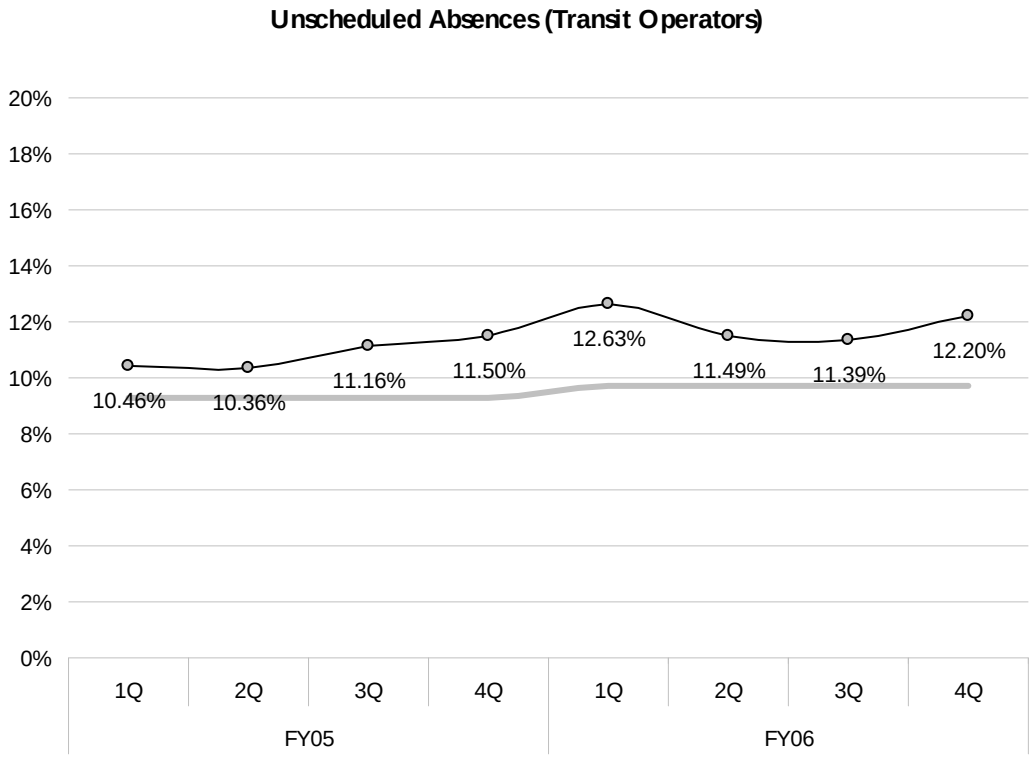
Historical Trend FY01–FY06. Includes Audit Period Data.

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



All personnel categories either satisfied or fell just short of goals in all quarters of both years with the exception of transit operators, who failed to achieve the lower standards for their division in any quarter.

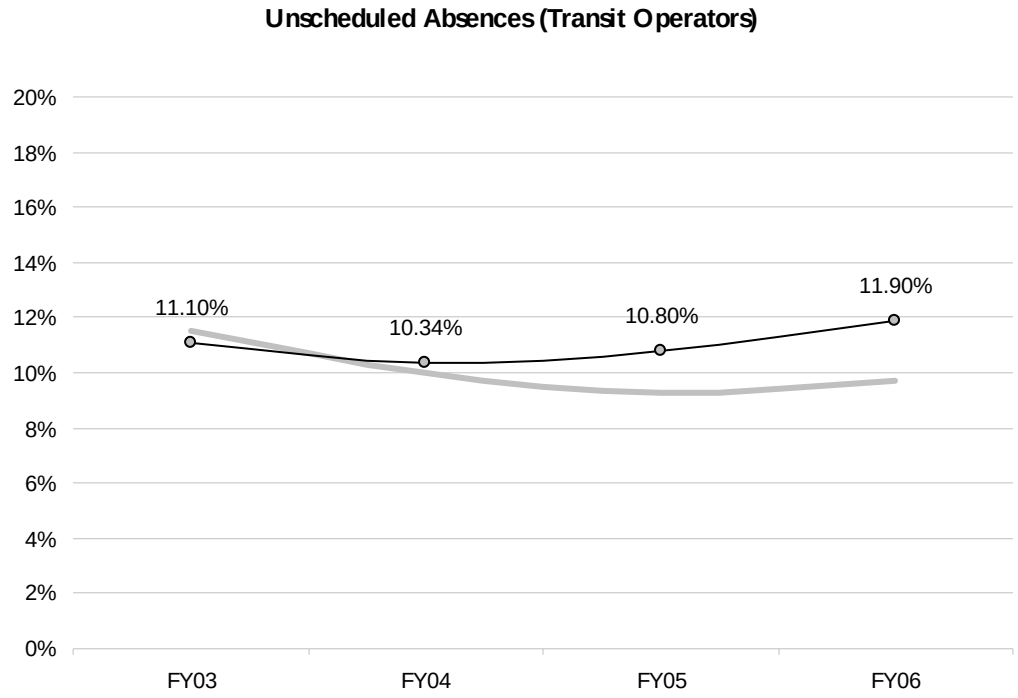
Audit Period FY05–FY06 by Quarter

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



Absence rates in each personnel category have remained relatively constant over the years, although absences by transit operators consistently have been higher than for other categories.

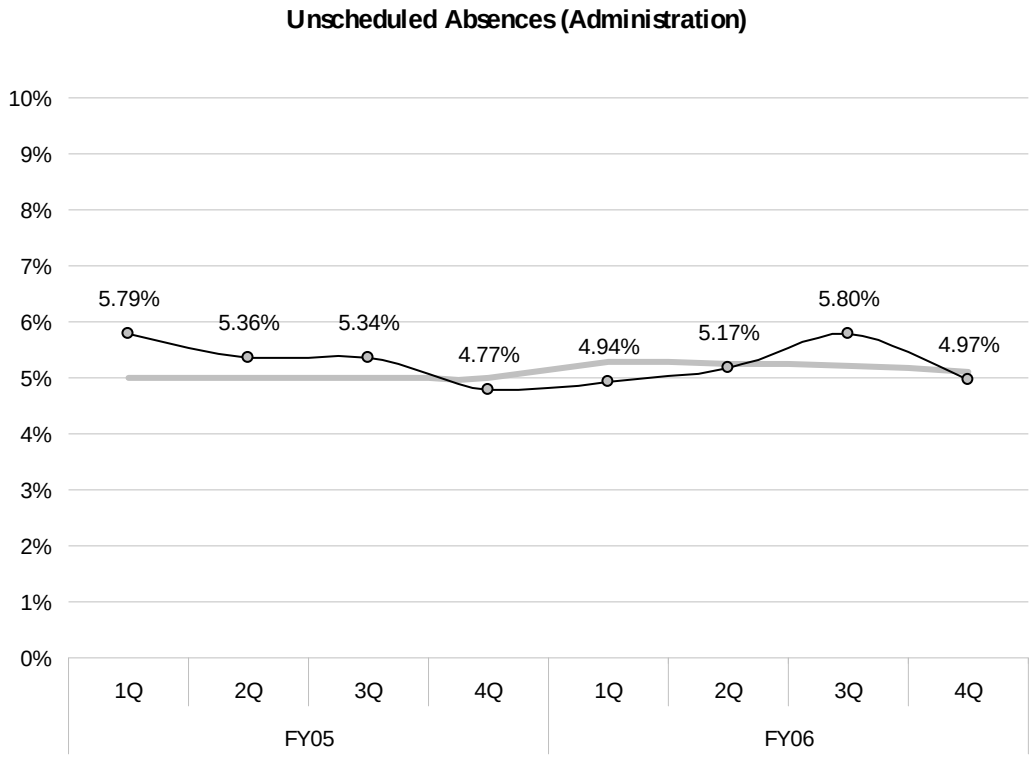
Historical Trend FY03–FY06. Includes Audit Period Data.

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



All personnel categories either satisfied or fell just short of goals in all quarters of both years with the exception of transit operators, who failed to achieve the lower standards for their division in any quarter.

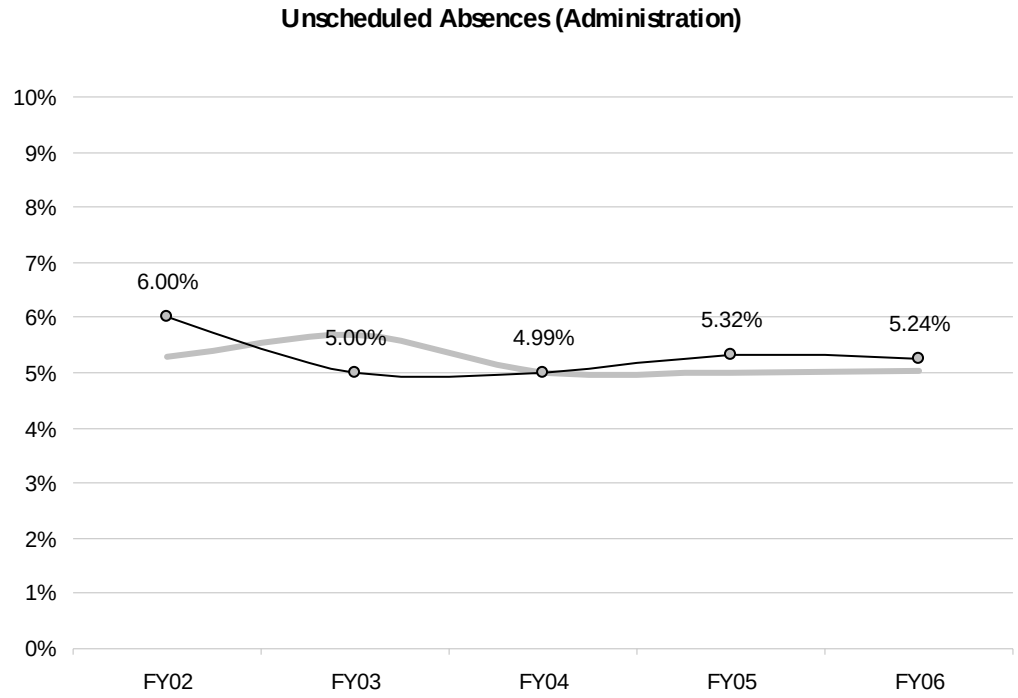
Audit Period FY05–FY06 by Quarter

8a

System Reliability > Unscheduled Absences

Measure: Unscheduled absences by operator, mechanical and administrative personnel.

Goal: Annual 5% reduction of YTD for Maintenance (Mechanical), 10% reduction for Transportation (Operators), and 5% reduction for Admin, as long as the goal does not drop below 5%



Absence rates in each personnel category have remained relatively constant over the years, although absences by transit operators consistently have been higher than for other categories.

Historical Trend FY02–FY06. Includes Audit Period Data.

Goal
Actual

Since the audit period, unscheduled absences among all personnel categories except transit operators increased. While transit operators continue to have the highest rate of absenteeism, it is declining.

			Since the Audit Period					
	FY07 GOAL	**FY06 Q4**	**FY07 Q1**	**FY07 Q2**	**FY07 Q3**	**FY07 Q4**	**FY 2006**	**FY 2007**
Maintenance	<6.1%	7.4%	7.0%	7.9%	7.5%	7.1%	**6.5%**	7.4%
Operations	<6.3%	7.6%	8.2%	7.3%	6.7%	7.2%	6.6%	7.3%
Transit Operators	<10.7%	12.2%	11.4%	11.1%	11.0%	**10.3%**	11.9%	10.9%
Administration	<5.0%	5.0%	5.4%	5.7%	6.1%	5.8%	5.2%	5.8%

BOLD = met or exceeded target

9a. Miles Between Roadcalls by Mode

Goal:	Increase the miles between roadcalls.
Purpose:	Measure reliability through the miles a vehicle travels between failures.
Definition of Measurement:	Monthly measurement is currently dictated by the Federal Transit Administration as follows: "Failures are classified as either a major or minor failure of an element of the vehicle's mechanical system. For each incident of a major or minor failure, report whether the vehicle completes the trip or the vehicle does not complete the trip. If the failure occurs during deadhead or layover, include this in revenue vehicle system failures."
Method of Measurement:	Data is collected and input into the online Vehicle Maintenance System for all revenue vehicles except for Cable Car, which has its own internal tracking system. Reports are generated and the data for roadcalls is analyzed against the Central Control log. All verifiable major and minor mechanical defects are included as part of the Mean Distance between defects number. Areas that do not result in a chargeable roadcall to the maintenance shops include accidents, sick passengers, vandalism, body damage and broken windows.
Milestones:	Increase miles between failures.

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

SFMTA | Municipal Transportation Agency

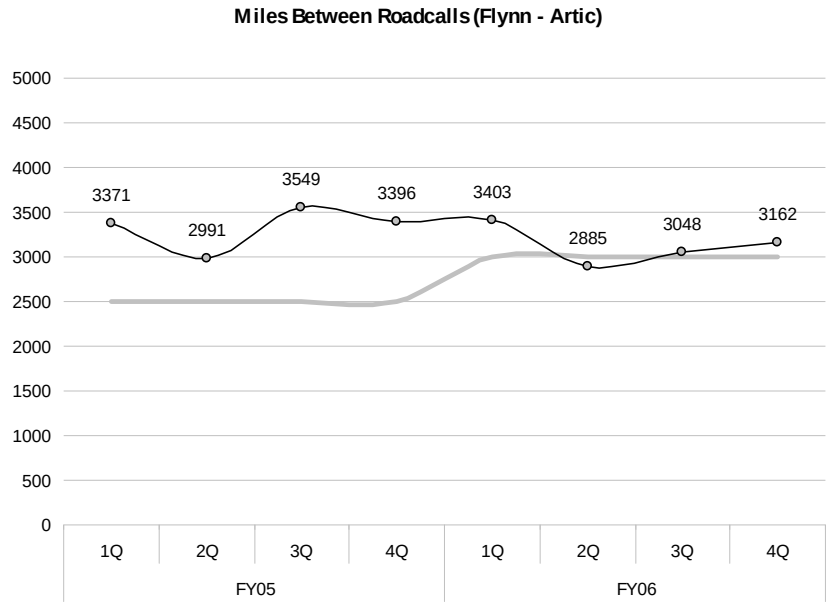
9a

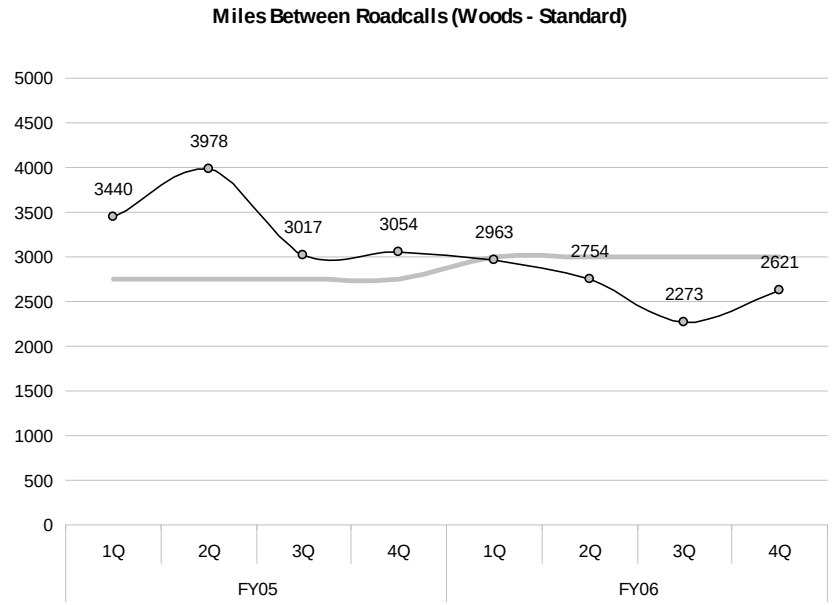
System Reliability > Miles Between Roadcalls by Mode

Measure: Measures the number of miles traveled between roadcalls by mode.

Goal: Increase the miles between roadcalls

While most maintenance facilities either satisfied or fell just short of goals in all quarters of both years, three of the facilities -- Potrero (Standard), PCC, and Breda Light Rail – consistently failed to achieve standards throughout the audit period. The number of miles between roadcalls for Breda Light Rail declined 55%, and the number of miles for PCC 33%, between the 2nd quarter of FY05 and the 4th quarter of FY06.





Audit Period FY05–FY06 by Quarter

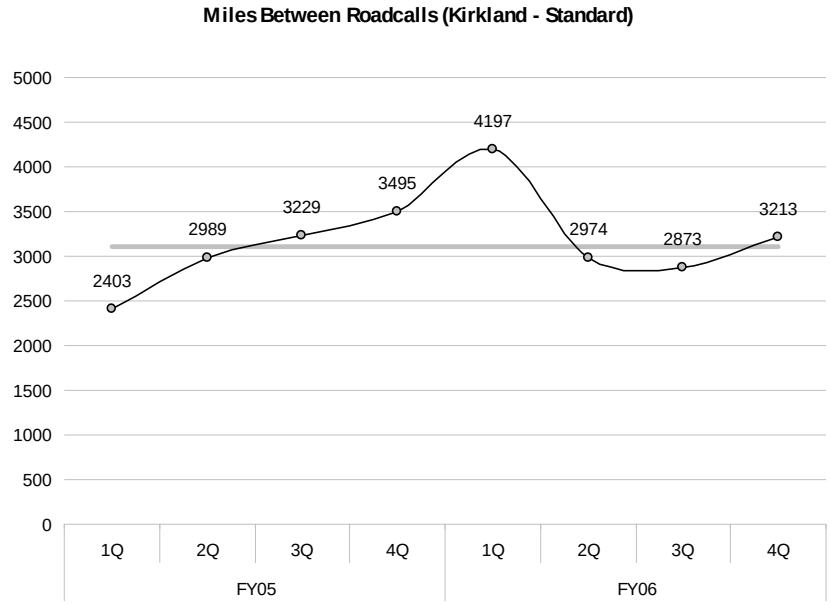
Goal
Actual

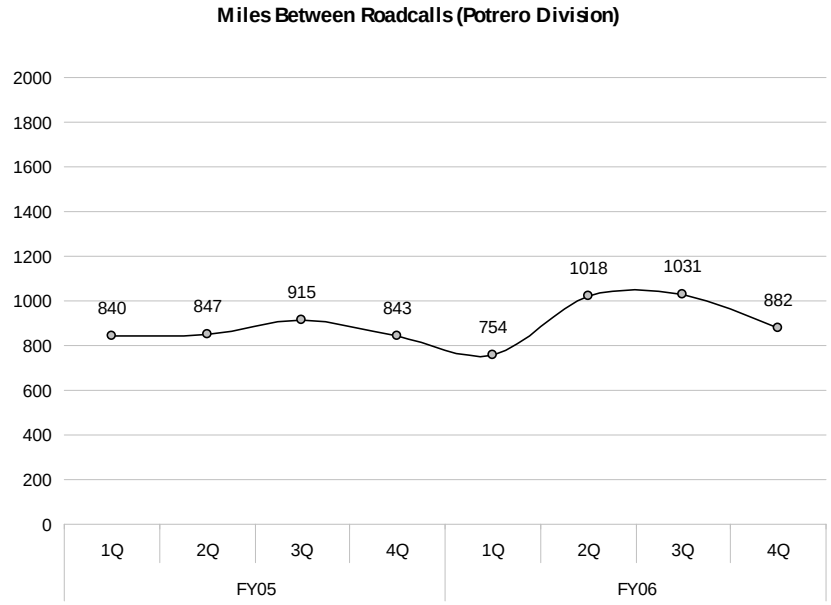
9a

System Reliability > Miles Between Roadcalls by Mode

Measure:

Goal: Increase the miles between roadcalls





Audit Period FY05–FY06 by Quarter

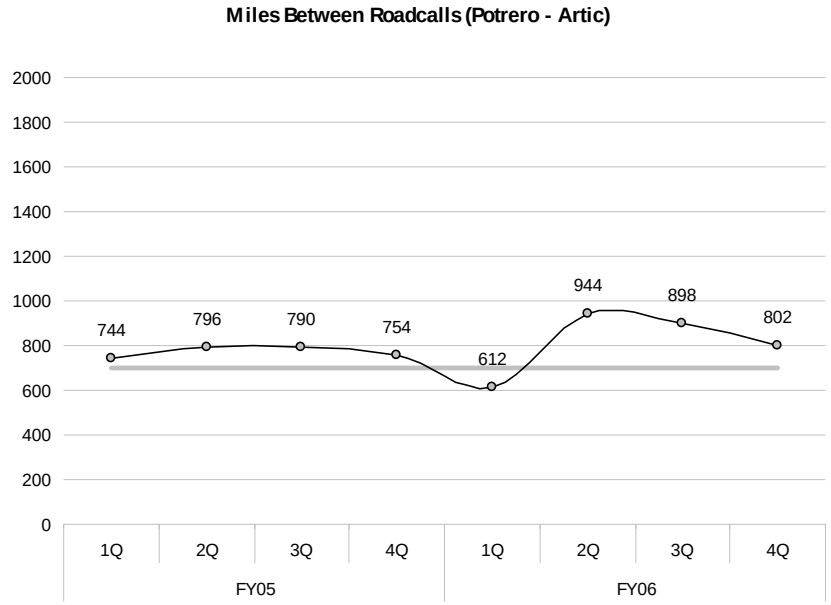
Goal
Actual

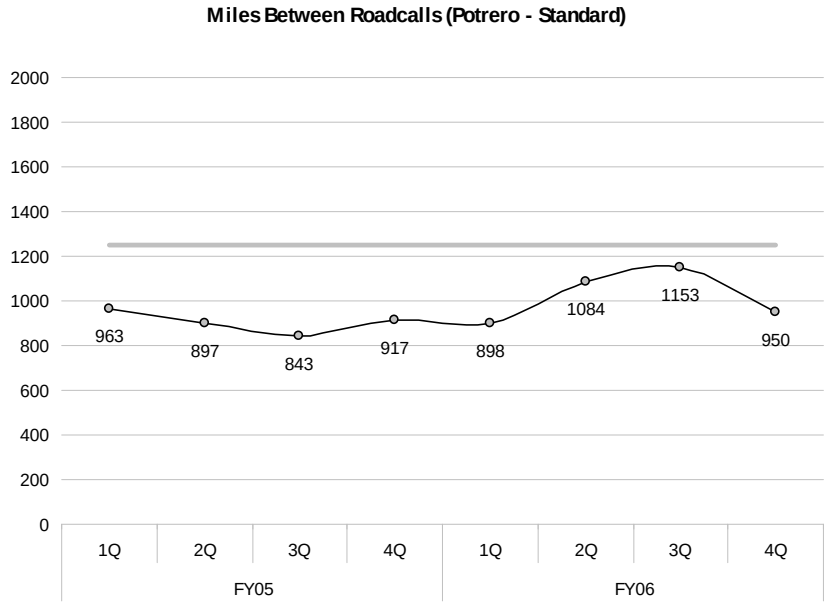
9a

System Reliability > Miles Between Roadcalls by Mode

Measure:

Goal: Increase the miles between roadcalls





Audit Period FY05–FY06 by Quarter

Goal
Actual

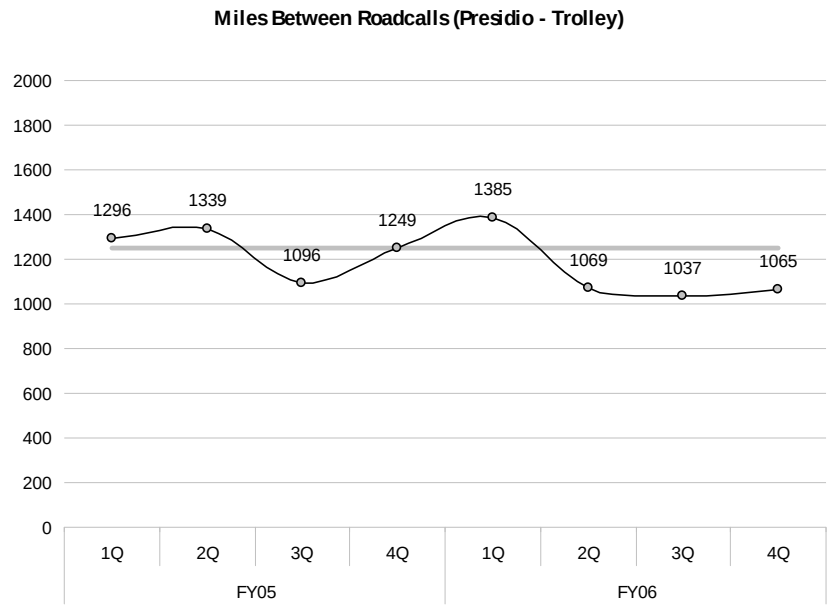
SFMTA | Municipal Transportation Agency

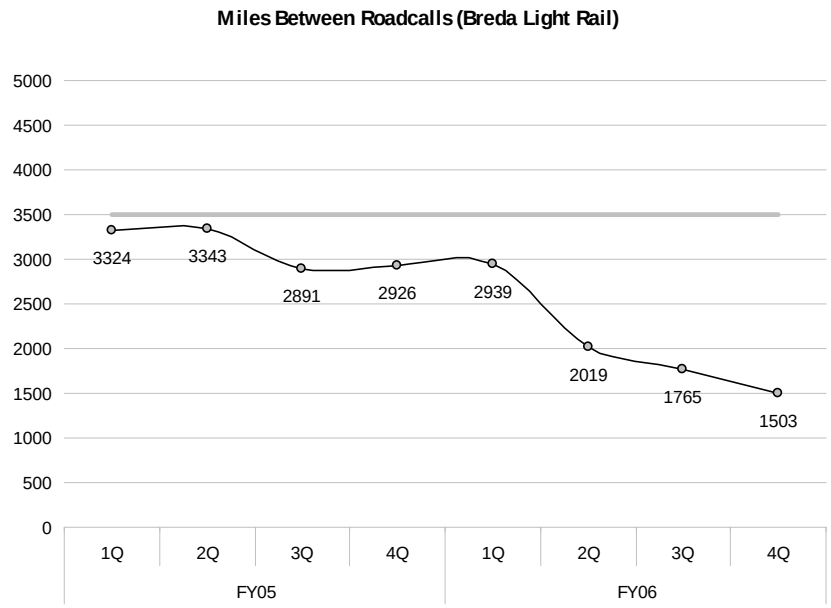
9a

System Reliability > Miles Between Roadcalls by Mode

Measure:

Goal: Increase the miles between roadcalls





Audit Period FY05–FY06 by Quarter

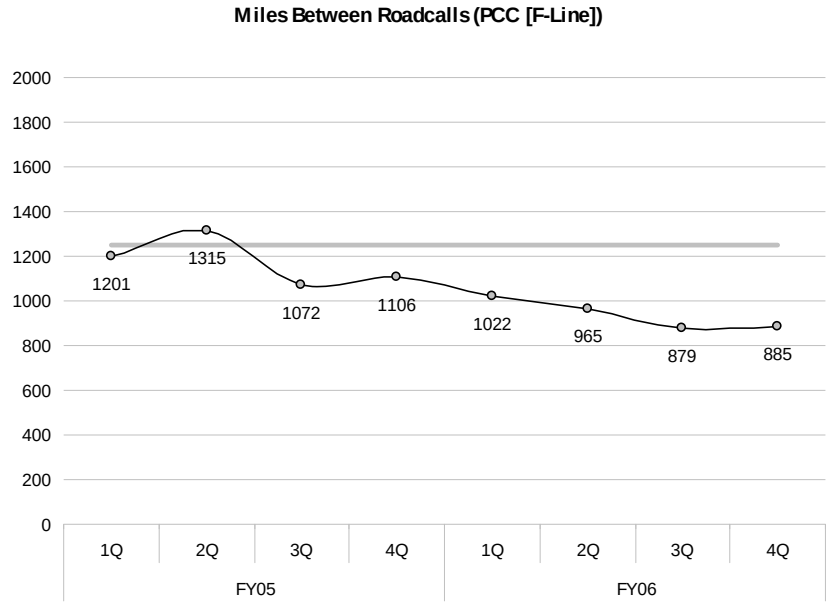
Goal
Actual

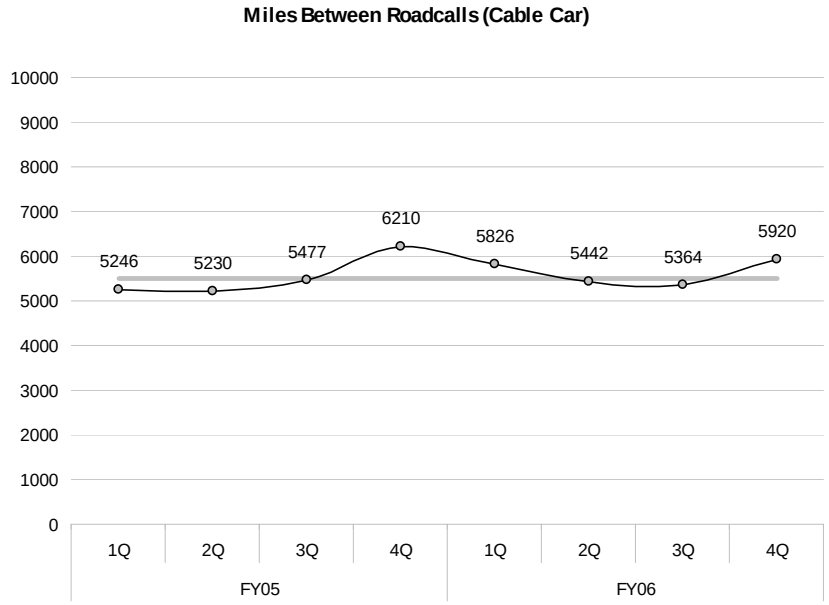
9a

System Reliability > Miles Between Roadcalls by Mode

Measure:

Goal: Increase the miles between roadcalls





Audit Period FY05–FY06 by Quarter

Historic trends in 4th quarter figures for the different divisions have varied. Notably, Light Rail declined substantially du it period.

Goal
Actual

	Mean Distance Between Failure					
	FY2001 4TH Q	FY2002 4TH Q	FY2003 4TH Q	FY2004 4TH Q	FY 2005 4TH Q	FY 2006 4TH Q
Flynn – Artic	837	1929	3003	2996	3396	3162
Woods – Standard	1773	1760	2802	3245	3054	2621
Kirkland – Standard	3467	2381	3992	2706	3495	3213
Potrero Division	563	665	687	942	843	882
Potrero – Artic	443	508	493	873	754	802
Potrero – Standard	691	795	818	1023	917	950
Presidio – Trolley	1375	1223	1221	1241	1249	1065
Breda Light Rail	3271	3276	3128	3357	2926	1503
PCC (F-Line)	808	1496	1148	1300	1106	885
Cable Car	5620	5631	6387	5724	6210	5920

Since the audit period, miles between roadcalls have increased for six of the nine divisions, and those six met their FY 2007 goals. In the Light Rail division, mean distance between failure increased 106% from FY06 to FY07.

			Since the Audit Period					
	FY07 GOAL	**FY06 Q4**	**FY07 Q1**	**FY07 Q2**	**FY07 Q3**	**FY07 Q4**	**FY 2006**	**FY 2007**
Flynn – Artic	>3000	3162	2187	2429	2081	2893	**3093**	2398
Woods – Standard	>3000	2621	2644	2383	2225	2879	2636	2533
Kirkland – Standard	>3100	3213	2878	2630	3028	3840	**3251**	3094
Potrero – Artic	>700	802	**756**	**964**	**969**	**882**	**785**	**893**
Potrero – Standard	>1250	950	1145	**1349**	**1533**	**1480**	1004	**1377**
Presidio – Trolley	>1250	1065	**1302**	**1300**	**1407**	**1900**	1121	**1477**
Breda Light Rail	>3500	1503	3029	**3838**	**4304**	**4833**	1943	**4001**
PCC (F-Line)	>1250	885	1206	**2113**	**1328**	**1682**	940	**1582**
Cable Car	>5500	5920	**5860**	**5946**	**6225**	**5666**	**5638**	**5924**

Bold = met or exceeded standard

Problems or Issues Identified During the Audit Period

A number of problems were noted within the Cable Car division. First, calculations are made not using computer software or calculators, but by hand, and no audit trail is maintained. Additionally, attempts to verify accuracy of data uncovered a second problem: reported quarterly figures were averages of monthly figures, resulting in slightly, though not substantially inaccurate quarterly figures. Finally, the Cable Car's division's definition of a roadcall does not include some failures which are mechanical in nature, specifically interruptions of service caused by broken pieces of wood or grips which operators deemed defective whether or not there was actually a problem identified by maintenance crews.

Recommendations

Create standards by mode and improve consistency in collection and reporting. Historically, Mean Distance Between Failures (MDBF) goals have been set by division. This is understandable given that Muni operates not only many modes, but many models of rolling stock within each modal category, and as a result the age, condition, complexity and reliability of equipment maintained by each division varies. Moreover, available resources vary by division: for example, as of the time of this review, Trolley Coach divisions lacked full-time maintenance controllers and dedicated roadcrews. Finally, setting goals by division has the virtue of attainability; no division's goal is so far out of reach as to make it meaningless.

While these variations are reality, we recommend creating performance targets by mode, and reporting information by division so that each division can see how they are contributing to the total for their mode. From a passenger perspective, it is unimportant whether a trolley bus pulled out of Presidio or Potrero Division – riders want to know that their service is reliable. A passenger would find it difficult to understand that fleets maintained at one location are allowed fewer miles between breakdowns than vehicles maintained at another location.

Standardizing the performance goals by mode, at the very least, would introduce a degree of consistency (goals for Service Delivery and Vehicle Availability, both areas in which performance varies by division, are set systemwide). If Muni chooses to do so, it is important that it then review each division's reporting standards for consistency within modal categories; otherwise, data will not be comparable. To the extent that consistency in reporting across modes can be achieved (cable cars lack hubometers, making reporting procedures necessarily different), this would ensure more useful information.

B. System Performance

Transit system performance measures assess how well transit agency resources are used, how efficiently service is provided within constraints, how effectively transportation demand is met, and how well the agency is administered.[2] Proposition E included the following service standards to measure Muni's system performance:

- 1b. Passengers carried by mode.
- 2b. Fare Revenue generated by mode.
- 3b. Hours and miles operated by mode. (This *measure has been eliminated from Muni Service Standard Reports.)*
- 4b. Expenses incurred by mode.

The following summarizes the key system performance findings:

1b. Passengers Carried by Mode: During the first year of the audit period, Muni ridership increased, but by less than the goal of 1.5%. Ridership of one mode – LRV – did increase by more than 1.5%. In the second year of the audit period, cable cars and motor coaches achieved the goal, but systemwide passenger boardings decreased 3.9%.

2b. Average Fare Per Passenger: Muni satisfied both the FY 2005 total revenues goal of a 1.5% increase over the previous year, and the FY 2006 target of $130 million (fares were raised during FY06). Additionally, the average fare per passenger increased 18% over the audit period.

4b. Costs per Hour of Service by Mode: The goal for this standard is merely to report the fully allocated costs per hour of service by Mode. From the first to the second year of the audit period, costs increased for every mode but cable cars.

[2] "A Guidebook for Developing a Transit Performance-Measurement System," *TCRP Report 88*, 2003, p.126. www.tcrponline.org

1b. Passengers Carried by Mode

Goal:	Passenger boarding by mode should increase by 1.5% per year compared with prior year performance.
Purpose:	Measurement of the ridership.
Definition of Measurement:	Annual measurement of the number of passengers who board Muni's revenue vehicles. A passenger is counted each time they board a vehicle, even though they may be on the same journey from origin to destination.
Method of Measurement:	Muni traffic checkers are utilized to count the passenger boardings. Counting is done on a rotating basis throughout the system. Automated passenger counters were installed outside of the audit period.
Milestones:	Increase by 1.5% over prior year

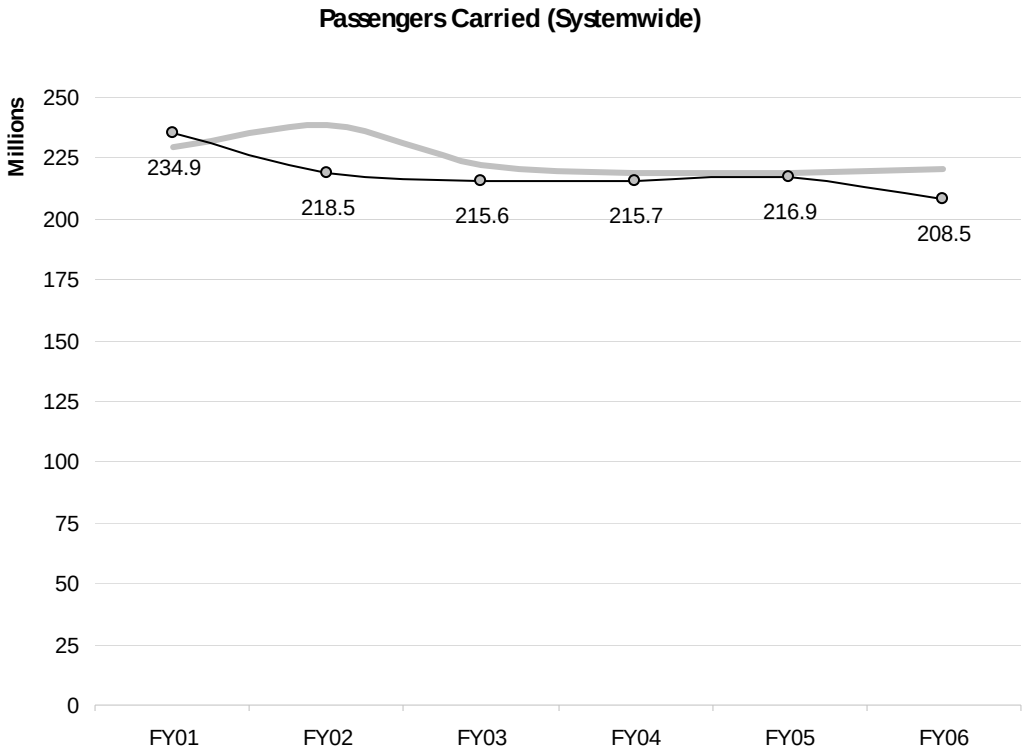
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

1b

System Performance > Passengers Carried by Mode

Measure:

Goal: Passenger boarding by mode should increase by 1.5% per year compared with prior year performance



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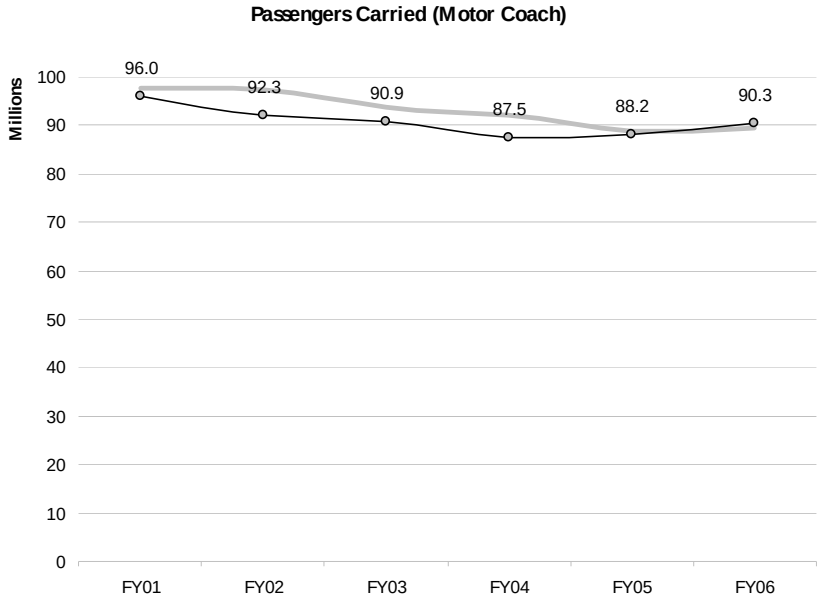
Historical Trend FY01–FY06. Includes Audit Period Data.

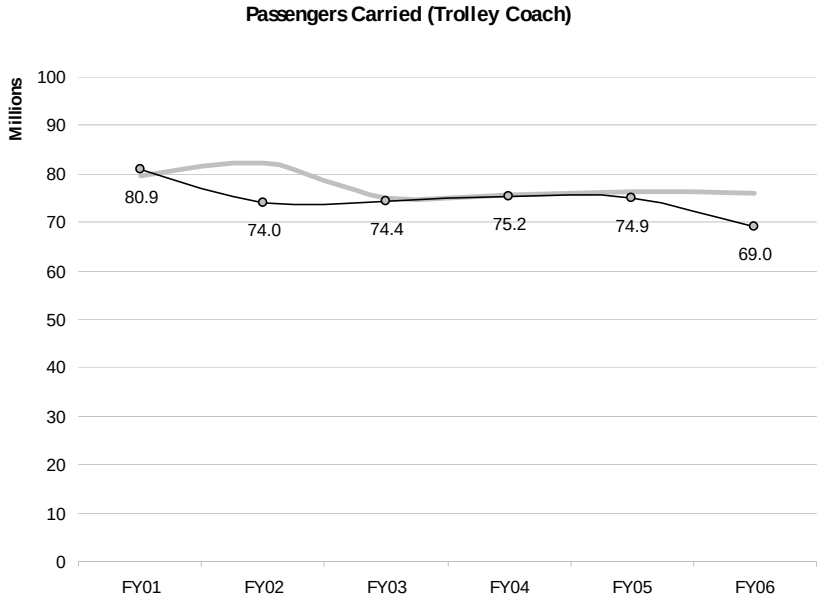
1b

System Performance > Passengers Carried by Mode

Measure:

Goal: Passenger boarding by mode should increase by 1.5% per year compared with prior year performance





Historical Trend FY01–FY06. Includes Audit Period Data.

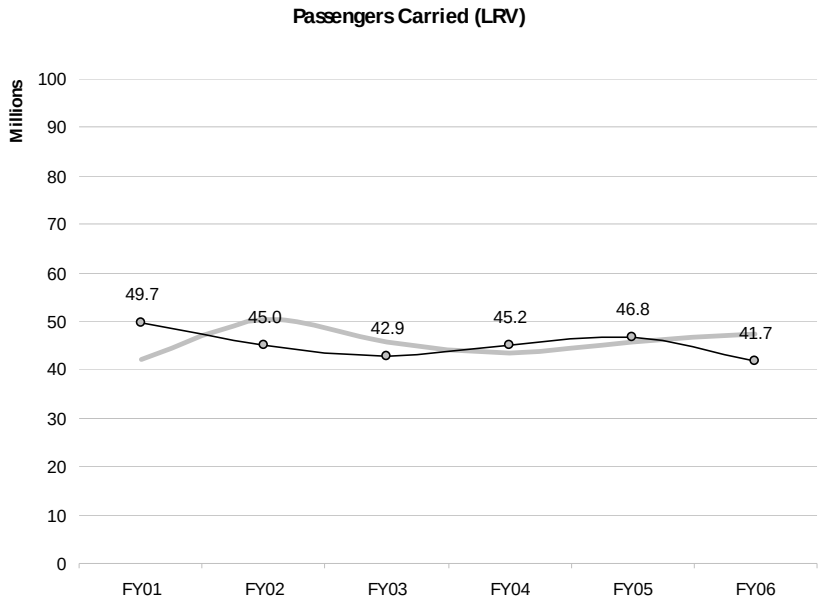
Goal
Actual

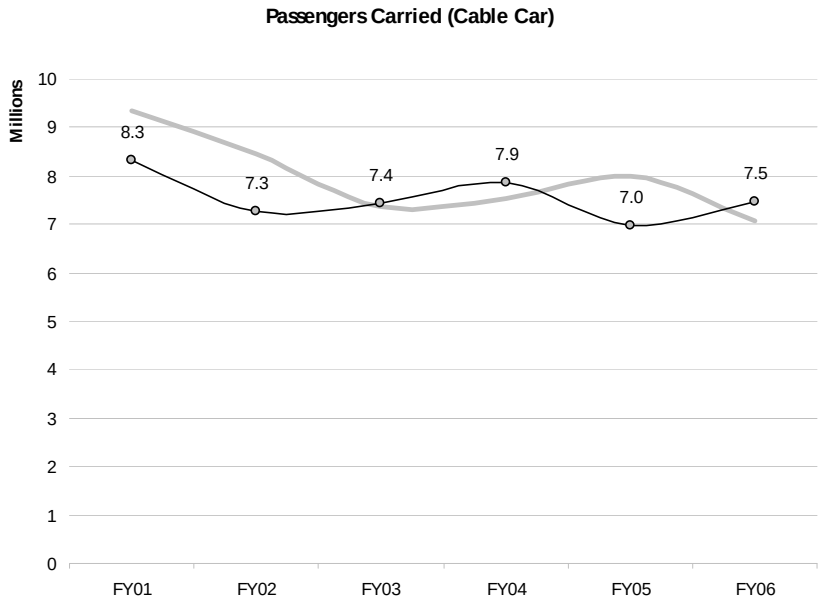
1b

System Performance > Passengers Carried by Mode

Measure:

Goal: Passenger boarding by mode should increase by 1.5% per year compared with prior year performance





Historical Trend FY01–FY06. Includes Audit Period Data.

Goal
Actual

Problems or Issues Identified During the Audit Period

Problems were identified with transmission of passenger data from Muni's Trapeze handheld devices. Specifically, when exporting data to Excel spreadsheets, the devices would sometimes drop third digits, so, for example, a count of 105 riders aboard a vehicle would be reported as 10. Staff attempted to correct this problem by identifying reported figures that appeared low given ridership patterns and adding a "5" as the third digit. This hand adjustment resulted in only a 1 to 2 percent increase over the original totals, suggesting that reported totals are reasonably accurate systemwide; however, inaccuracies might be magnified on a mode-specific level. Muni has recently installed automated passenger counters on its bus fleet. If that data is maintained, it should represent the most comprehensive and accurate source of ridership data by mode and by route.

Recommendations

Take advantage of new technology by developing a plan for APC deployment. The availability of automated passenger counters on Muni's rubber tired fleets has created an opportunity for more frequent and more accurate data to be related to Muni riders. This does not change the measure, but does change the method of collecting data. To take advantage of this technology, Muni will need to develop a plan for rotating the APC units around to all lines and all trips during a specified period of time. Creating and implementing this plan should be a high priority, as should increasing the number of APC units to make this rotation easier to orchestrate.

2b. Average Fare per Passenger

Goal:	Provide average fare per passenger. Fare revenue should increase by 1.5% per year compared with prior year performance, except in years when a fare increase takes place (FY06: $130 million).
Purpose:	Measure fare revenue by average fare by passenger, by mode, as well as by general Fast Pass sales.
Definition of Measurement:	Fare revenue collection on board revenue vehicles, sales of Fast Pass, sales of individual tickets at POP stations and special 1, 3, and 7 day pass sales, Weekly Fast Pass, Cable Car Souvenir Tickets, BART Plus, Tokens, Adult Passes, Youth Passes, Senior Passes, Ballpark and Special Event Passes, Regional Passes, etc.
Method of Measurement:	Cash fares are collected electronically on board all revenue vehicles (with the exception of Cable Car), utilizing the Cubic Farebox system. In Cable Car, a manual fare collection system along with sale of special passes is utilized. POP stations sell tickets at the platform.
Milestones:	FY01: Increase by $1.6 million FY02: Increase by $1.6 million FY03: Achieve $100 million FY04: Achieve $117 million FY05: Increase by 1.5% over prior year FY06: Achieve $130 million

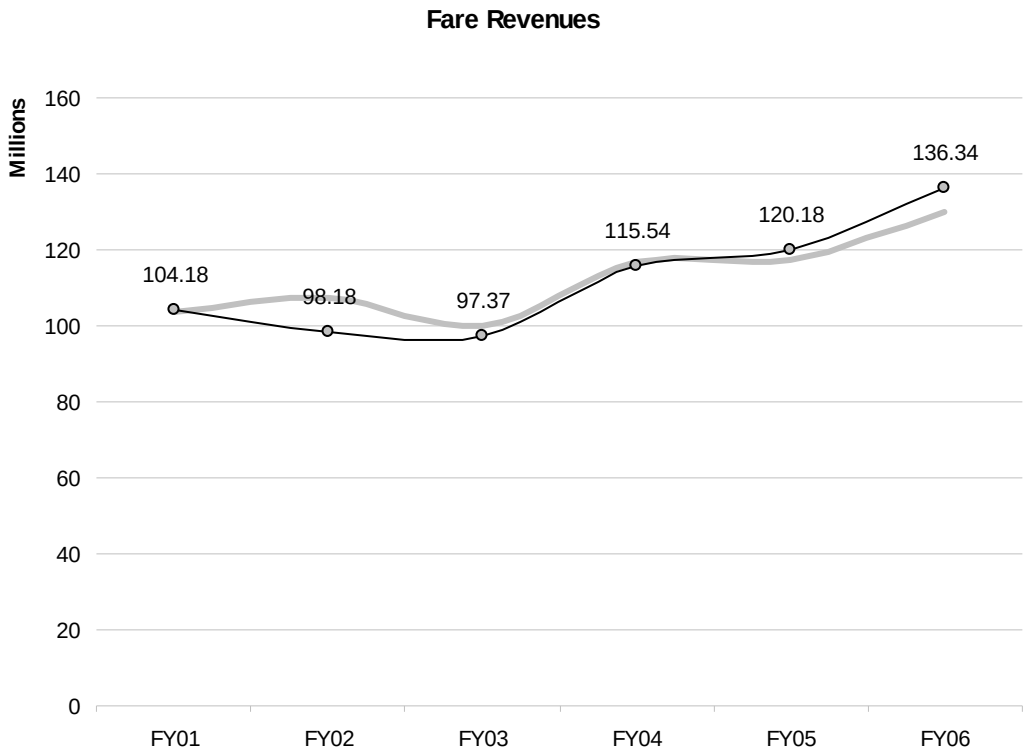
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

2b

System Performance > Total Fare Revenue

Measure: Measures total fare revenue received in millions of dollars.

Goal: Fare revenue should increase by 1.5% per year compared with prior year performance, except in years when a fare increase takes place (FY06: $130M)



Muni satisfied both the FY 2005 total revenues goal of a 1.5% increase over the previous year, and the FY 2006 target of $130 million (fares were raised during FY06). Additionally, the average fare per passenger increased 18% over the audit period.

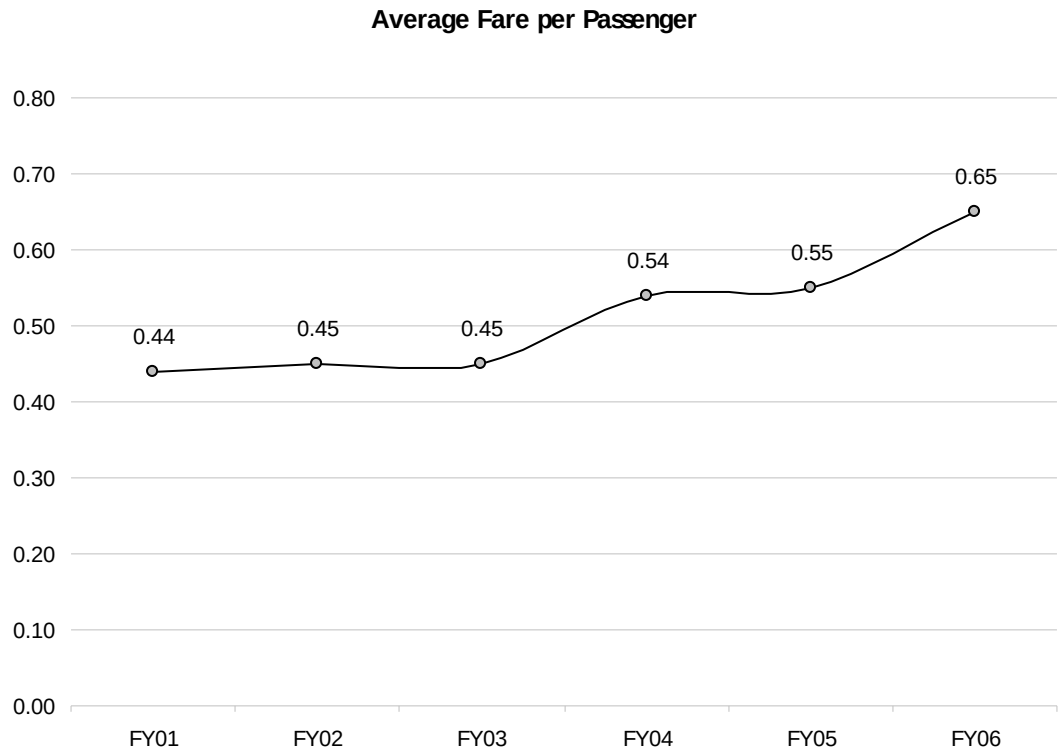
Historical Trend FY01–FY06. Includes Audit Period Data.

2b

System Performance > Average Fare Per Passenger

Measure:

Goal: Fare revenue should increase by 1.5% per year compared with prior year performance, except in years when a fare increase takes place (FY06: $130M)



Muni satisfied both the FY 2005 total revenues goal of a 1.5% increase over the previous year, and the FY 2006 target of $130 million (fares were raised during FY06). Additionally, the average fare per passenger increased 18% over the audit period.

Historical Trend FY01–FY06. Includes Audit Period Data.

Goal
Actual

4b. Costs per Hour of Service by Mode: Fully Allocated Costs per Hour of Service by Mode

Goal:	Provide fully allocated costs per hour of service by mode.
Purpose:	Measure the cost of producing revenue service by fully allocated costs per hour of service by mode.
Definition of Measurement:	Provide fully allocated costs per house of service by mode.
Method of Measurement:	Data will be reported to the board on an annual basis based on fully allocated costs per hour of service by mode.
Milestones:	

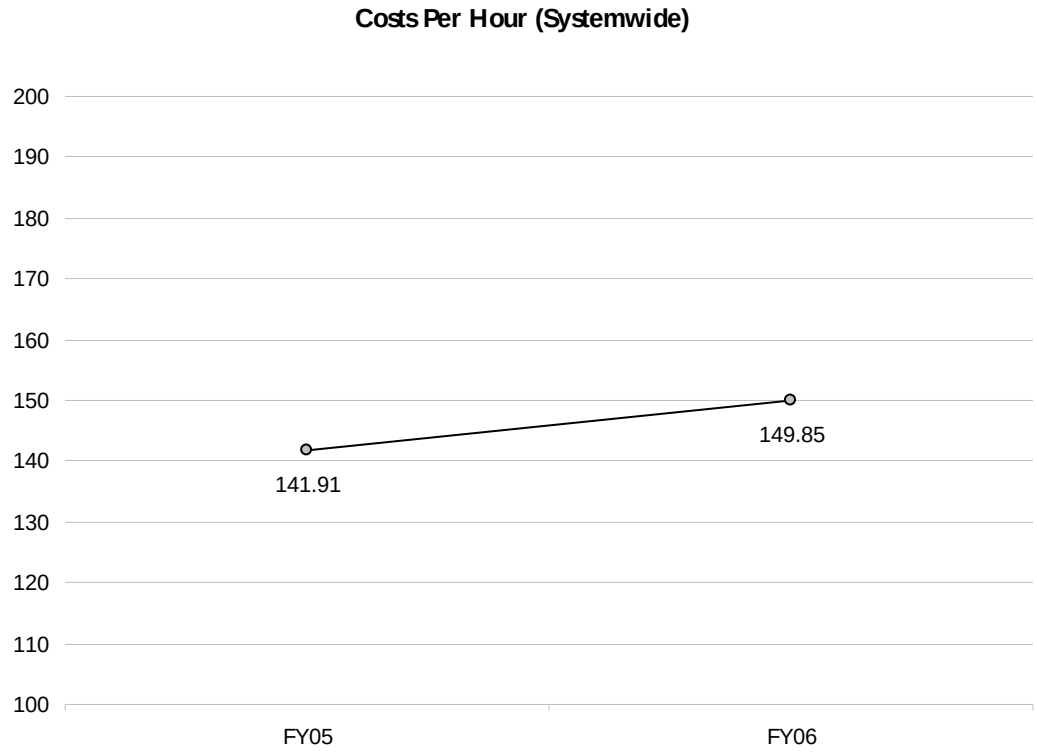
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

4b

System Performance > Fully Allocated Costs Per Hour of Service by Mode

Measure: Fully allocated costs per hour of service by mode.

Goal: Provide fully allocated costs per hour of service by mode



The goal for this standard is merely to report the fully allocated costs per hour of service by Mode. From the first to the second year of the audit period, costs increased 5.6% systemwide, and for every mode but cable cars.

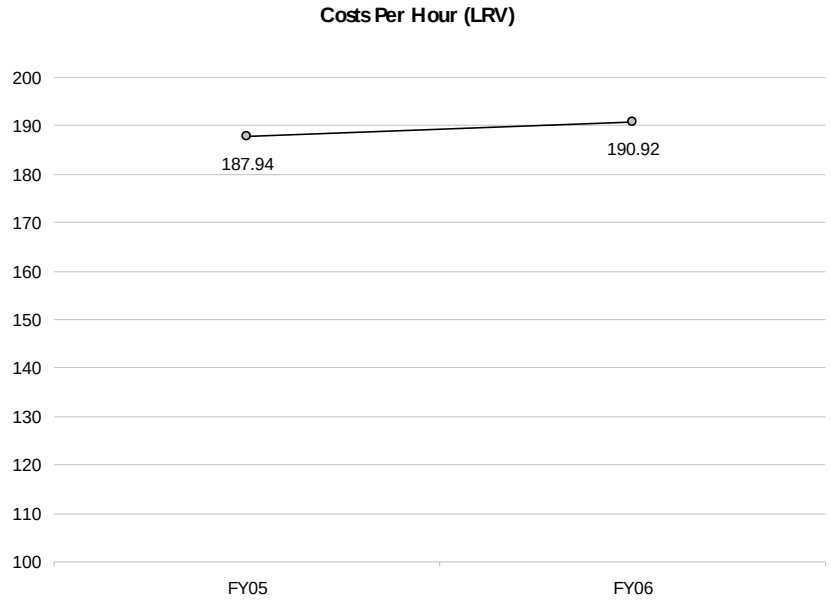
Audit Period FY05–FY06

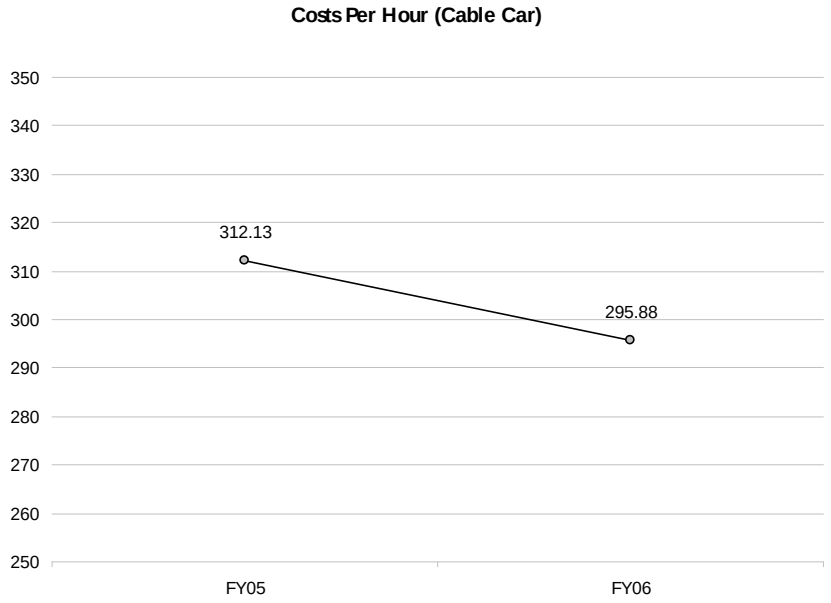
4b

System Performance > Fully Allocated Costs Per Hour of Service by Mode

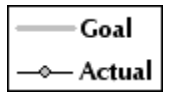
Measure: Fully allocated costs per hour of service by mode.

Goal: Provide fully allocated costs per hour of service by mode





Audit Period FY05–FY06

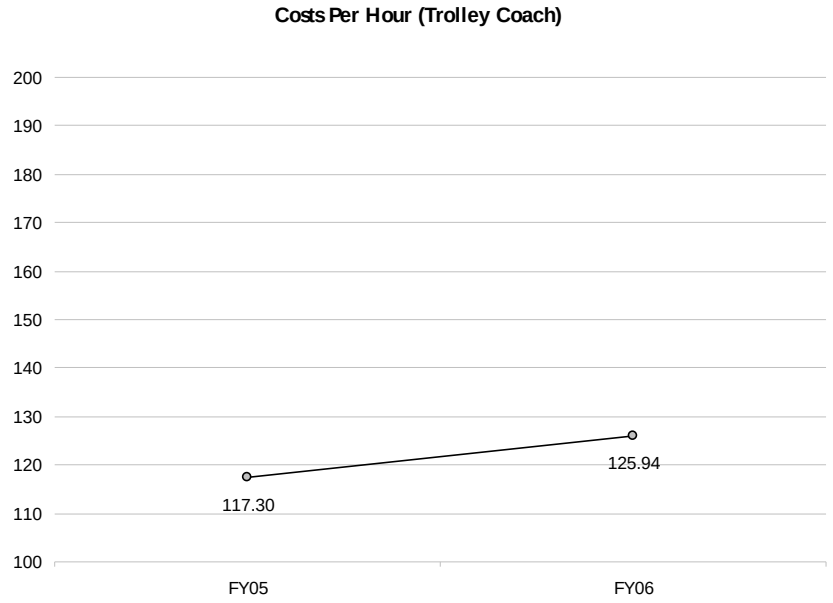


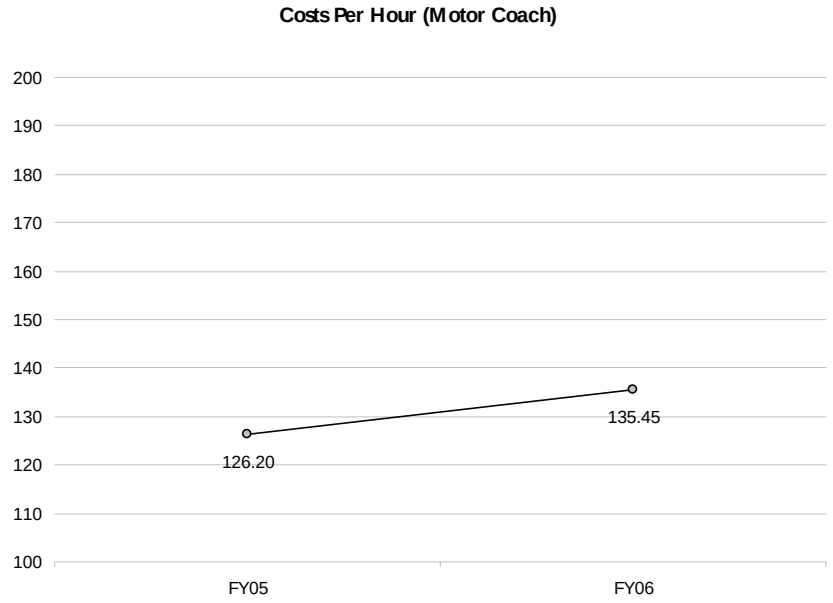
4b

System Performance > Fully Allocated Costs Per Hour of Service by Mode

Measure: Fully allocated costs per hour of service by mode.

Goal: Provide fully allocated costs per hour of service by mode





Audit Period FY05–FY06

The following tables allocate costs per hour of service by mode as well as category.

	LRV		Cable Car		Trolley Coach		Motor Coach		SYSTEM	
	FY05	FY06	FY05	FY06	FY05	FY06	FY05	FY06	FY05	FY06
Vehicle Operations	$58.62	$59.52	$146.49	$148.56	$66.92	$72.57	$74.12	$82.87	$71.93	$78.29
Vehicle Maintenance	$68.45	$72.07	$40.78	$35.36	$15.19	$18.26	$20.13	$22.24	$28.06	$30.76
Non-Vehicle Maintenance	$20.35	$21.61	$72.37	$66.00	$8.09	$9.07	$2.04	$1.81	$10.10	$10.57
General & Administrative	$40.52	$37.72	$52.49	$45.95	$27.10	$26.05	$29.91	$28.53	$31.82	$20.23

For FY06, Muni made available costs per passenger mile by mode.

LRV	Cable Car	Trolley Coach	Motor Coach	SYSTEM
$0.99	$4.73	$1.17	$0.97	$1.10

C. Staffing Performance

The Proposition E Service Standards for staffing performance focus on staffing levels and the ability to retain new employees. They include:

- 1c. Net vacancies by position (vacancies remaining once promotions and new hires have been deducted from retirees or resignations) for each division.

- 2c. Attrition rates for new employees, by division and level.

The following summarizes the key staff performance findings:

1c. Net vacancies by position: The Operations vacancy rate in the fourth quarter of FY 2005 was 3.8%, and in the fourth quarter of FY 2006 it was 3.6%. Thus, the goal of maintaining a 5% or lower vacancy rate was achieved in both fiscal years. However, the vast majority of Operations positions are Transit Operators, and while that division maintained a 0% vacancy rate, both Crafts and Maintenance workers exceeded the 5% rate in every quarter of both fiscal years. Moreover, the 0% vacancy rate for operators does not reflect their actual availability for field duty, as at any given time many are on leave or otherwise unavailable.

2c. Attrition Rates: The systemwide attrition rate in the fourth quarter of FY 2005 was .008%, and in the fourth quarter of FY 2006 was .004%, both well below the 10% goal.

1c. Net Vacancies by Position: Vacancies remaining once promotions and new hires have been deducted from retirees or resignations for each division.

Goal:	No greater than 5% vacancy rate.
Purpose:	Efficiency level of the department in hiring.
Definition of Measurement:	Monthly measurement of net vacancies against budgeted positions for transit operators and maintenance personnel.
Method of Measurement:	The Vacancy Report will be the basis of the data reported to the Board on a quarterly basis.
Milestones:	No greater than 5%

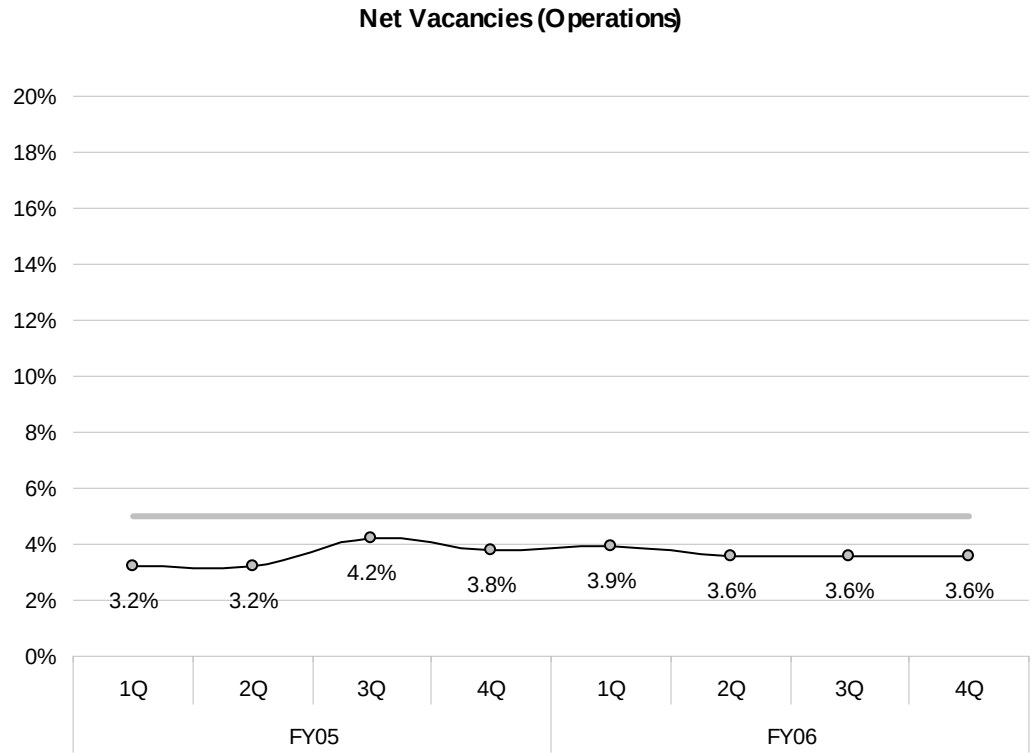
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

1c

Staffing Performance > Net Vacancies by Position

Measure: Vacancies remaining once promotions and new hires have been deducted from retirees or resignations for each division

Goal: No greater than 5% vacancy rate



The Operations vacancy rate in the fourth quarter of FY 2005 was 3.8%, and in the fourth quarter of FY 2006 it was 3.6% Thus, the goal of maintaining a 5% or lower vacancy rate was achieved in both fiscal years. However, the vast majority of Operations positions are Transit Operators, and while that division maintained a 0% vacancy rate, both Crafts and Maintenance workers exceeded the 5% rate in every quarter of both fiscal years.

Audit Period FY05–FY06 by Quarter

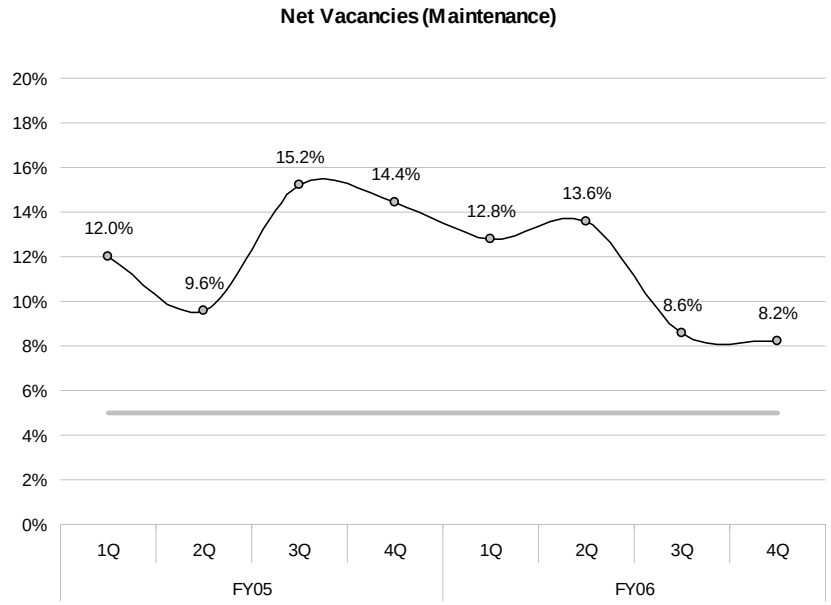
Goal
Actual

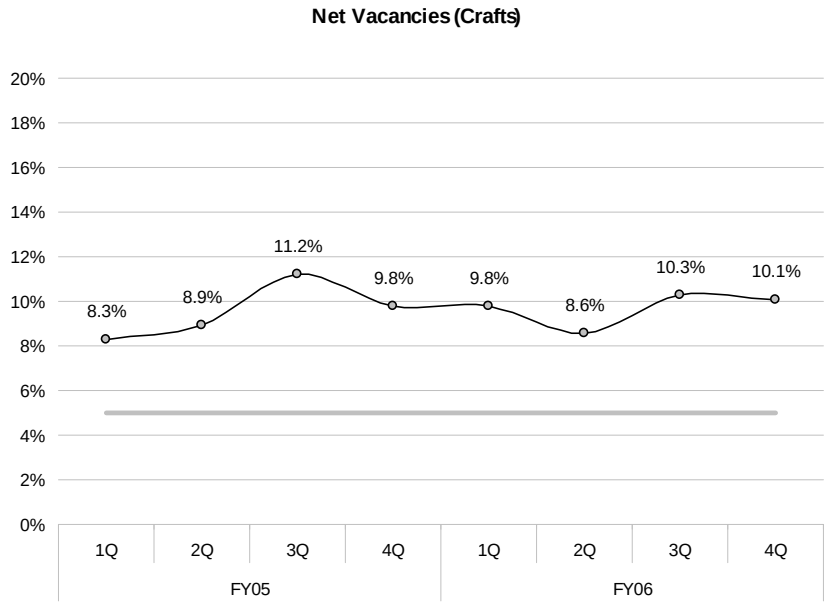
1c

Staffing Performance > Net Vacancies by Position

Measure: Vacancies remaining once promotions and new hires have been deducted from retirees or resignations for each division

Goal: No greater than 5% vacancy rate





Audit Period FY05–FY06 by Quarter

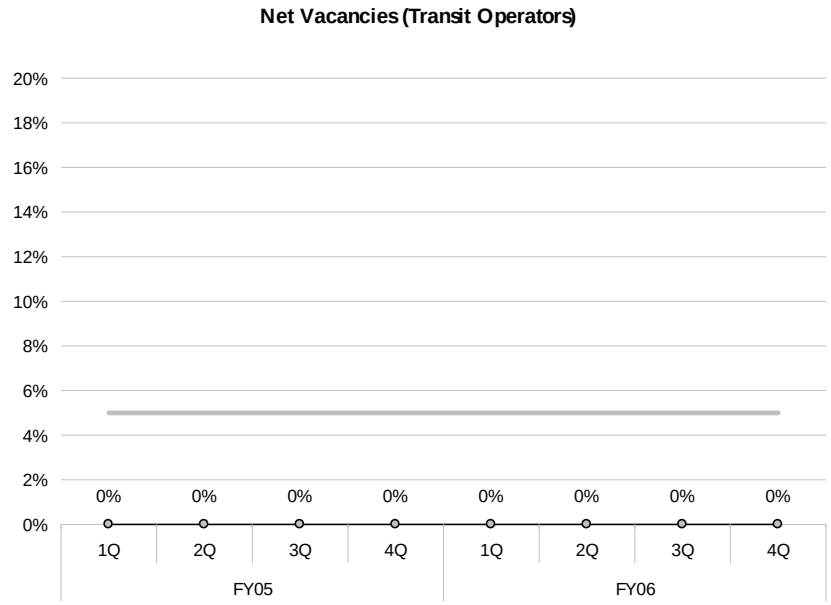
Goal
Actual

1c

Staffing Performance > Net Vacancies by Position

Measure: Vacancies remaining once promotions and new hires have been deducted from retirees or resignations for each division

Goal: No greater than 5% vacancy rate



Muni reported no vacancies during the audit period. While this appears to be correct, it is important to note that this is only a reflection of open requisitions that remain unfilled at the end of a quarter, and is not an indication of the number of drivers available to drive.

Audit Period FY05–FY06 by Quarter

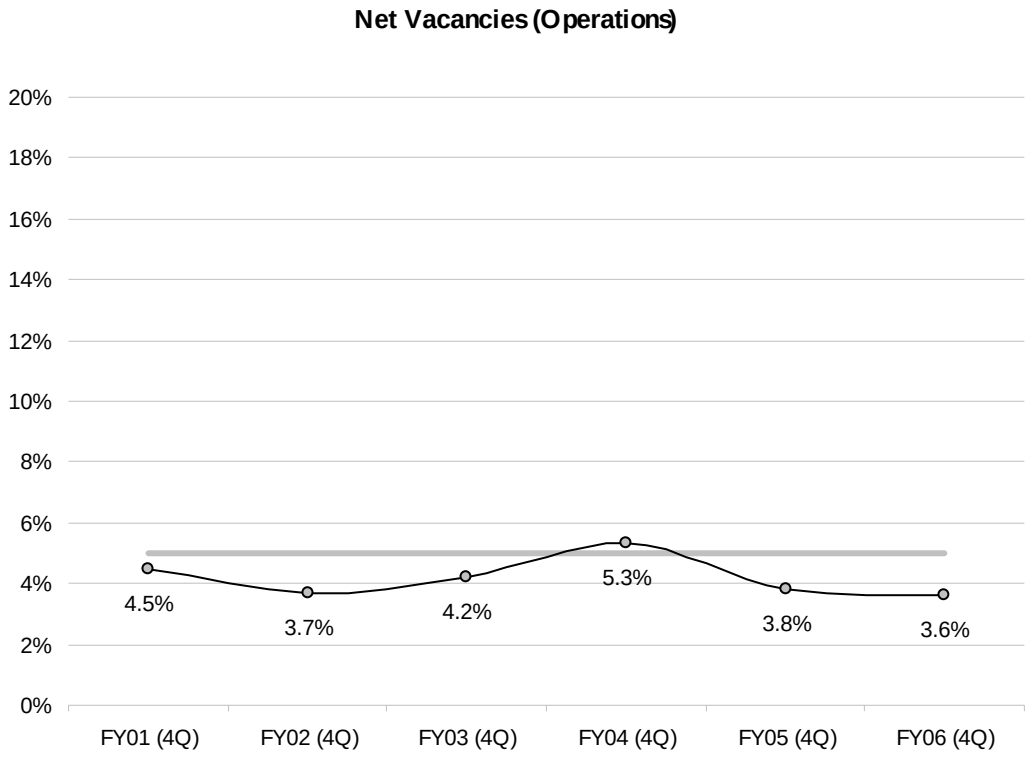
Goal
Actual

1c

Staffing Performance > Net Vacancies by Position

Measure: Vacancies remaining once promotions and new hires have been deducted from retirees or resignations for each division

Goal: No greater than 5% vacancy rate



During the audit period, the Operations vacancy rate improved over FY04, the only year it which it failed to achieve the goal of less than 5%.

Historical Trend FY01–FY06. Includes Audit Period Data.

Since the audit period, net vacancies by position for all of Operations have declined. Crafts and Maintenance vacancies, however, remain above the 5% rate.

			Since the Audit Period			
	FY07 GOAL	**FY06 Q4**	**FY07 Q1**	**FY07 Q2**	**FY07 Q3**	**FY07 Q4**
OPERATIONS	<5%	**3.6%**	**3.1%**	**2.9%**	**2.6%**	**1.9%**
Maintenance	<5%	8.2%	10.2%	5.5%	8.6%	8.6%
Crafts	<5%	10.1%	8.1%	8.7%	7.0%	7.0%
Transit Operators	<5%	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

BOLD = met or exceeded target

Recommendations

Measure the percentage of positions filled by drivers available to drive, rather than whether the position is filled. This measure is intended to capture the number of budgeted positions that are not being filled for a variety of reasons. Most critical are vacancies in mission-critical positions, especially transit operators. SFMTA generally reports that there are no operator positions vacant. While this is technically accurate, it simply means that there is a "name assigned" to every budgeted position; it is not an indication that the person in that position is available to drive. We find the measure as reported to have little value to management or the public. Therefore we recommend that Muni develop a measure of the percentage of drivers driving – the percentage of total drivers who are available to drive averaged for the quarter. We presume this will be less than 100%. Muni should attach a goal to this measure, which we believe will be more useful as a management tool than whether a position is technically filled or not.

2c. Attrition Rates: For new employees, by division and level.

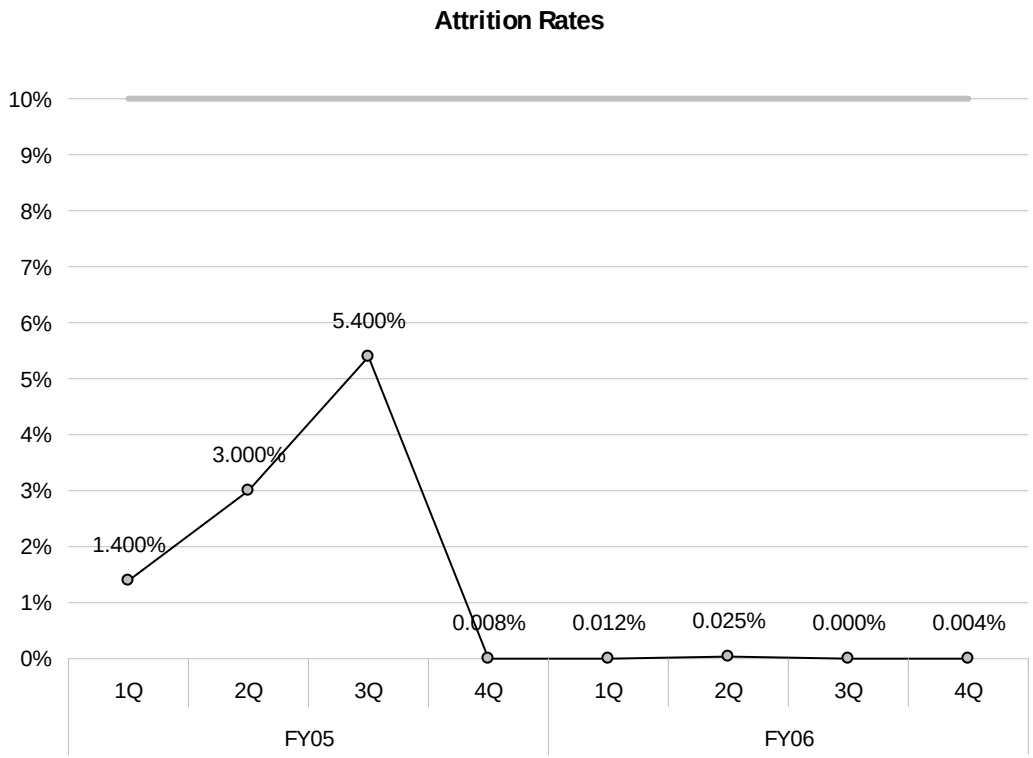
Goal:	No greater than 10%.
Purpose:	Measurement of effectiveness of recruitment and employee satisfaction by the rate of voluntary separations for new employees.
Definition of Measurement:	Number of employees by division and class who are released during probationary period or who are voluntarily separated during probation. To calculate attrition only those employees who separate after six months or within one year will be counted. Data will be reported to the board on a quarterly basis. An Exit Interview Form will be available on-line for employees to complete.
Method of Measurement:	Vacancy Report will provide data for quarterly reporting.
Milestones:	No greater than 10%

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

2c

Staffing Performance > Attrition Rates

Measure: For new employees, by division and level. **Goal:** No greater than 10%



The systemwide attrition rate in the fourth quarter of FY 2005 was .008%, and in the fourth quarter of FY 2006 was .004%, both well below the 10% goal.

Audit Period FY05–FY06 by Quarter

Goal
Actual

Since the audit period, attrition rates have remained well below the 10% level, though they increased significantly in the FY 2007. This goal may be set too low, considering historic performance.

	Since the Audit Period	
	FY 2006	**FY 2007**
Systemwide	0.4%	1.7%

Bold = met or exceeded standard

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D. Customer Service

Customer service addresses passenger safety on board vehicles and at stops; the ease with which passengers can navigate and use the transit system to get where they need to go in a timely and efficient manner; the availability of information about schedules, delays or other service interruptions; and the responsiveness of transit agency staff when customer problems or complaints arise. Proposition E includes the following Service Standards aimed at measuring customer service:

- 1d. Development of annual marketing plan identifying specific programs and projects that will promote increased patronage.
- 2d. Publication and distribution to the public of schedules for all trips taken by all vehicles that shall consist of specific arrival times at terminals and established intermediate points.
- 3d. Operator conduct complaints.
- 4d. Annual passenger surveys and follow-up by management.
- 5d. Improvements in public information regarding vehicle delays during operations as well as any general user information regarding system modifications, route changes, and schedules.
- 6d. Efforts to improve driver training, technical as well as accident follow-up.
- 7d. Number of crime incidents on Municipal Railway vehicles or in Municipal Railway facilities.

The following summarizes the key customer service performance findings:

1d. Marketing Plan: Marketing plans were published during both years of the audit period.

2d. Schedule Publication: Muni did not publish and distribute a complete timetable for 2005 or 2006. However, it did make information available via the region's 511 service.

3d. Operator Conduct Complaints: In FY 2005 and FY 2006, 65% and 74%, respectively, of operator complaints were resolved within 30 days, short of the goal of 75% resolution within 30 days.

4d. Annual Passenger Surveys and Follow-up by Management: Rider and employer surveys were conducted in FY 2005, but not in 2006.

5d. Public Information: Prior to the audit period, a plan was completed. Implementation took place during the audit period.

6d. Operator Training and Accident Follow-up: Muni provided less than 35,000 hours of driver training in FY 2005, but very nearly achieved the goal of 50,000 annual hours in FY 2006. (Note that a hiring freeze was in effect for part of the audit period.) In FY05 it reduced accidents by 18.1%, easily achieving the goal of a 5% annual reduction, but in FY06 accidents declined just 1.3%.

7d. Crime Incidents: In FY 2005 crime incidents increased by 4.8%, failing to satisfy the goal of a 5% annual reduction, but in FY 2006 crime appeared to decline 14.2%. However, the auditors have reason to believe the data may be misleading (see Introduction).

1d. Marketing Plan: Development of annual marketing plan identifying specific programs and projects that will promote increased patronage.

Goal:	To develop annual Marketing Plan by January 1 of each year.
Purpose:	To produce a variety of marketing tools that will provide the public with an incentive to utilize the services of Muni.
Definition of Measurement:	Marketing plan developed.
Method of Measurement:	Marketing Plan completed and approved for implementation.
Milestones:	Development of marketing plan

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

1d ●

Customer Service > Marketing Plan

Measure: Development of annual marketing plan identifying specific programs and projects that will promote increased patronage.

Goal: To develop annual Marketing Plan by January 1 of each year

Marketing plans were published during both years of the audit period.

2d. Schedule Publication: Publication and distribution to the public of schedules for all trips taken by all vehicles that shall consist of specific arrival times at terminals and established intermediate points.

Goal:	Publish a complete timetable during each fiscal year.
Purpose:	Provide riders with an updated schedule.
Definition of Measurement:	Publication and distribution of schedules for all trips taken by all vehicles that shall consist of specific arrival times at terminals and established intermediate points.
Method of Measurement:	Distribution of the timetable to the public. Muni is in the process of reviewing the schedules of all the lines. Once the review is complete, we will publish schedules for individual lines, as well as an updated system-wide schedule.
Milestones:	Publication of timetable

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

2d ○

Customer Service > Schedule Publication

Measure: Publication and distribution to the public of schedules for all trips taken by all vehicles that shall consist of specific arrival times at terminals and established intermediate points.

Goal: Publish a complete timetable during each fiscal year

Muni did not publish and distribute a complete timetable for 2005 or 2006. However, it did make information available via the region's 511 service.

3d. Operator Conduct Complaints: Operator conduct complaints and their resolution, by complaint, consistent with due process and required confidentiality.

Goal:	75% of all Passenger Service Reports will be resolved in 30 days.
Purpose:	Monthly measurement of customer satisfaction with the agency as well as measuring the effectiveness of internal process to address the complaints.
Definition of Measurement:	Muni will make available a summary of complaints received, resolved, and outstanding on a quarterly basis. We have replaced Minor and Major categories with three categories of operator complaints: a. Dismissed/No Merit b. No Action/Possible Merit c. Action Taken/Repeated Reports Have added a breakdown of miscellaneous employees and have added commendations.
Method of Measurement:	Data provided from the Passenger Service Report Unit will be reported to the Board on a quarterly basis.
Milestones:	75% of PSR's resolved within 30 days

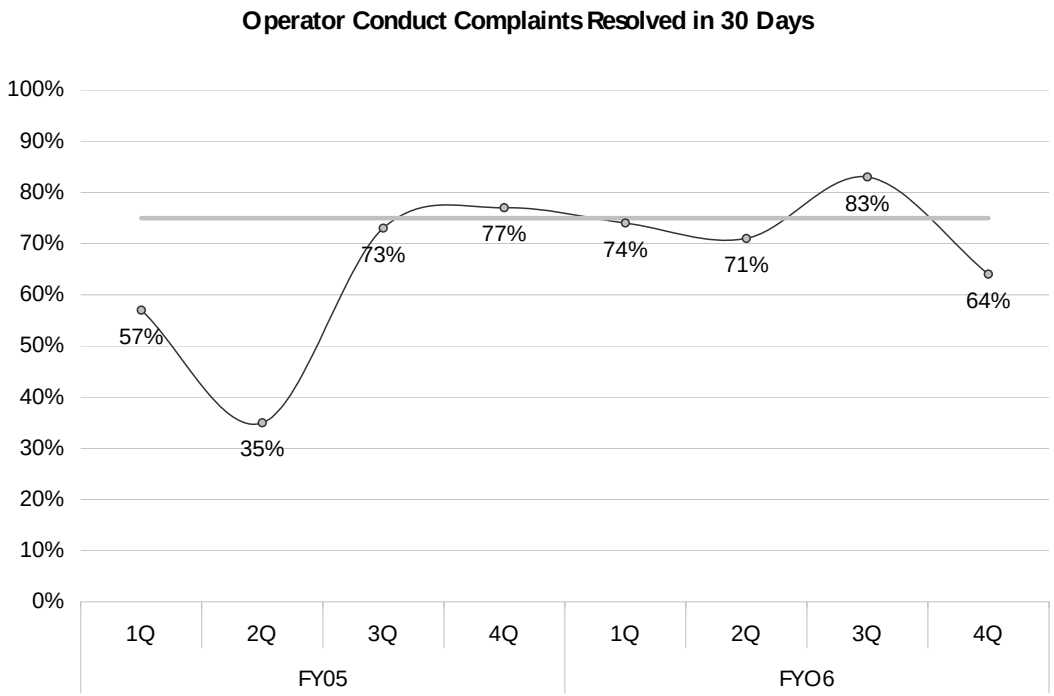
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

3d

Customer Service > Operator Conduct Complaints

Measure:

Goal: 75% of PSR's resolved within 30 days and 10% reduction of Passenger Service Reports annually.



In FY 2005 and FY 2006, 65% and 74%, respectively, of operator complaints were resolved within 30 days, short of the goal of 75% resolution within 30 days.

Audit Period FY05–FY06 by Quarter

Goal
Actual

Since the audit period, the number of operator complaints resolved within 30 days has declined.

			Since the Audit Period					
	GOAL	**FY06 Q4**	**FY07 Q1**	**FY07 Q2**	**FY07 Q3**	**FY07 Q4**	**FY 2006**	**FY 2007**
Resolutions of Operator Complaints in 30 Days	>75%	64%	74%	59%	**75%**	65%	74%	68%

Bold = met or exceeded standard

4d. Annual Passenger Surveys and Follow-up by Management

Goal:	Conduct a Rider Survey and an Employee Survey.
Purpose:	Measure the level of satisfaction of transit riders and employees. Use the results of the survey to implement improvements.
Definition of Measurement:	Conduct an annual survey of riders and hold focus-group meetings to determine riders' sentiments and concerns. Surveys will include an Employee Survey along with a Rider Survey.
Method of Measurement:	Successful completion of the surveys prior to the end of FY 2005 and FY 2006 and present findings to Board and Citizens Advisory Committee.
Milestones:	Conduct a Rider Survey and an Employee Survey.

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

4d

Customer Service > Annual Passenger Surveys and Follow-up by Management

Measure: Annual conduct of both a rider and employee survey.

Goal: Conduct a Rider Survey and an Employee Survey

Rider and employer surveys were conducted in FY 2005, but not in 2006.

5d. Public Information: Improvements in public information regarding vehicle delays during operations as well as any general user information regarding system modifications, route changes, and schedules.

Goal:	Improve Passenger Information.
Purpose:	Improve passenger information by communication of service problems and other information to each vehicle, the station platforms, the Telephone Information Center, media, the Service Hotline, and assess.
Definition of Measurement:	Assess current practices, develop and implement improvement plan.
Method of Measurement:	Plan completed and implemented.
Milestones:	Plan completed and implemented

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

5d ●

Customer Service > Public Information

Measure: Improvements in public information regarding vehicle delays during operations as well as any general user information regarding system modifications, route changes, and schedules.

Goal: Improve Passenger information.

Prior to the audit period, a plan was completed. Implementation took place during the audit period.

6d. Operator Training and Accident Follow-up: Efforts to improve driver training, technical as well as accident follow-up.

Goal:	50,000 hours of Driver Training per year and 5% reduction in accidents.
Purpose:	Reduce accidents through effective operator training programs as well as effective accident follow-up training.
Definition of Measurement:	Monthly measurement of the number of training hours by type of class. Track reduction in accidents as a result of more effective operator training and accident retraining. Training hours will be tracked for the following areas: ● New Operator Training ● Immediate Follow-up Rides ● One Day Accident Retraining ● Two Day Accident Retraining ● Verification of Transit Training ● Operator Refresher ● Passenger Relations/Conflict Training
Method of Measurement:	Number of FTA reportable accidents and training hours. Data will be reported to the board on a quarterly basis.
Milestones:	50,000 hours of driver training 5% accident reduction

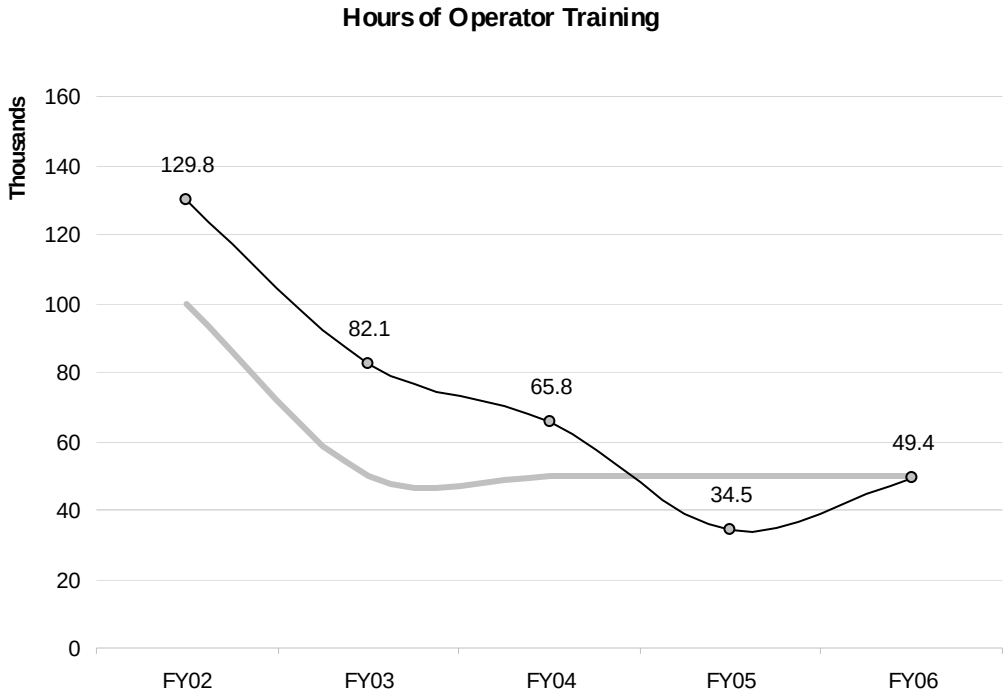
From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

6d ◯

Customer Service > Operator Training and Accident Follow-up

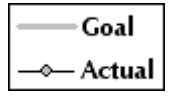
Measure: Efforts to improve driver training, technical as well as accident follow-up.

Goal: 50,000 hours of Driver Training per year and 5% reduction in accidents.



Muni provided less than 35,000 hours of driver training in FY 2005, but very nearly achieved the goal of 50,000 annual hours in FY 2006. (Note that a hiring freeze was in effect for part of the audit period.)

Historical Trend FY02–FY06. Includes Audit Period Data.

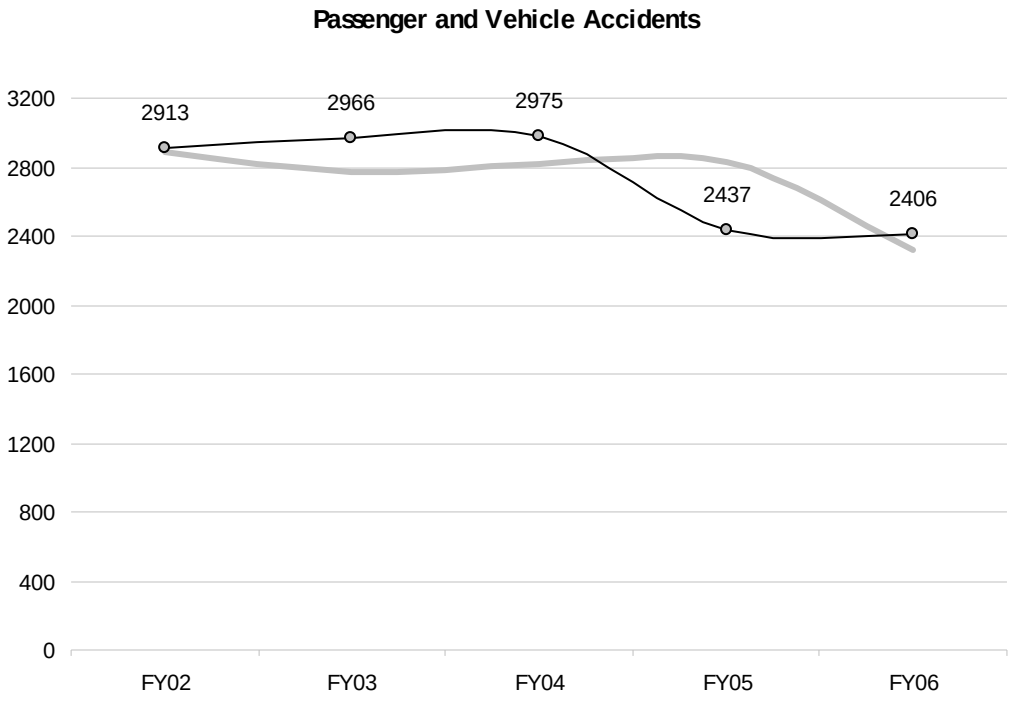


6d

Customer Service > Operator Training and Accident Follow-up

Measure: Efforts to improve driver training, technical as well as accident follow-up.

Goal: 50,000 hours of Driver Training per year and 5% reduction in accidents.



In FY05 Muni reduced accidents by 18.1%, easily achieving the goal of a 5% annual reduction, but in FY06 accidents declined just 1.3%.

Historical Trend FY02–FY06. Includes Audit Period Data.

Goal
Actual

Since the audit period, hours of operator training have increased substantially; in FY 2007, Muni more than doubled the numbers of hours of training it offered, and offered twice as much as called for under the measurel. The agency also achieved its goal of a 5% annual reduction in accidents.

			Since the Audit Period
	FY07 GOAL	**FY06**	**FY 2007**
Hours of Operator Training	> 50,000	49,390	**100,582**
Passenger and Vehicle Accidents	< 2,286	2,406	**2,256**

Problems or Issues Identified During the Audit Period

A number of disparities were noted between the information reported in SFMTA quarterly reports and information in either the TransitSafe database, which is designed to automate the accident reporting process, or information provided by the responsible department. Due to a retirement in a key staff position, it was not possible to identify the source of the discrepancy. For example, for FY06Q3, the spreadsheet produced by the department reported 638 accidents; the figure in the quarterly reports was 606.

7d. Crime Incidents: Number of crime incidents on Municipal Railway vehicles or in Municipal Railway facilities.

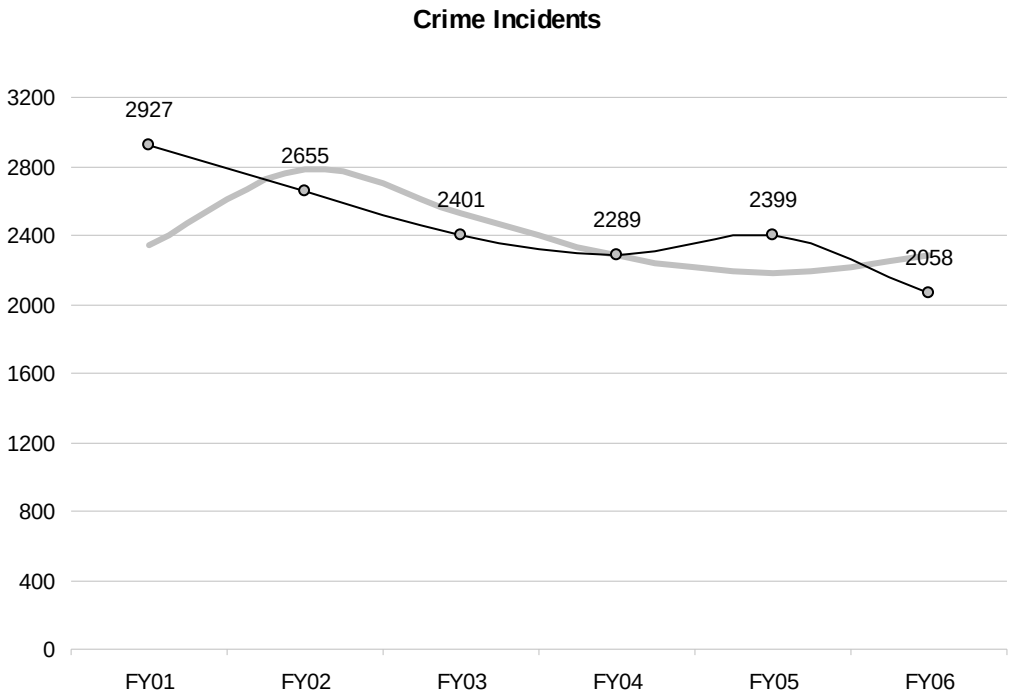
Goal:	Reduction of 5% from previous year.
Purpose:	To measure the crime rate on transit vehicles and in facilities.
Definition of Measurement:	Quarterly, we report on all categories of crime incidents with the corresponding quarter for the previous year with a % change.
Method of Measurement:	Data is collected daily by the Muni Transit Police. Data will be reported to the board on a quarterly basis.
Milestones:	Reduce by 5%

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

7d

Customer Service > Crime Incidents

Measure: Number of crime incidents on Municipal Railway vehicles or in Municipal Railway facilities. **Goal:** Reduce by 5%



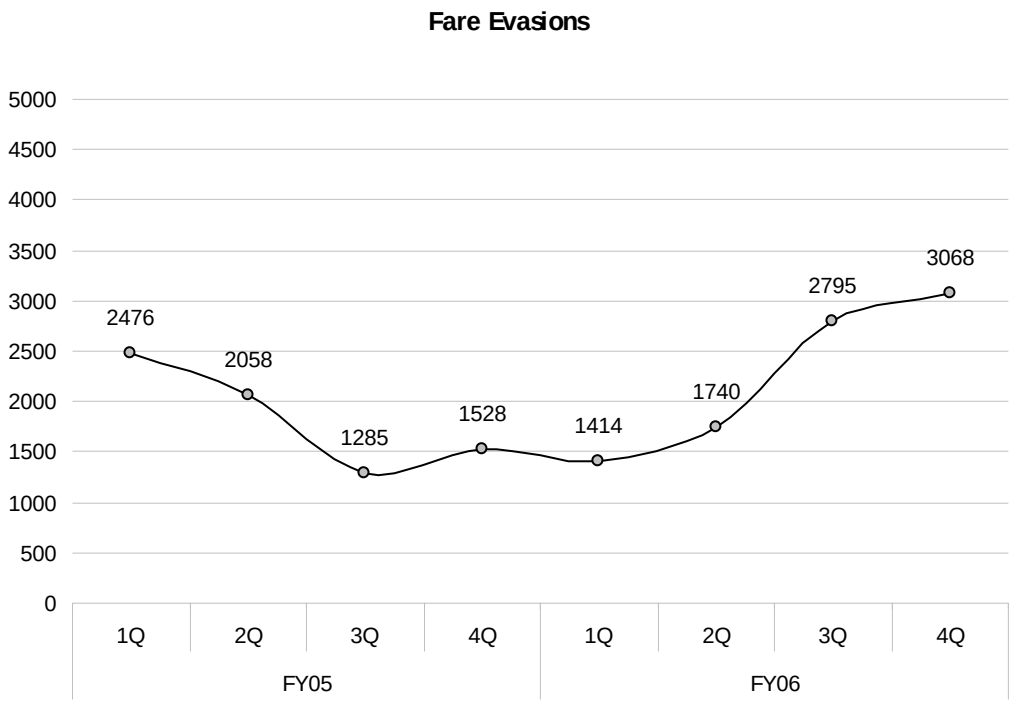
In FY 2005 crime incidents increased by 4.8%, failing to satisfy the goal of a 5% annual reduction, but in FY 2006 crime appeared to decline 14.2%. However, a change in the way data is handled may account for some of the apparent drop. (See introduction.)

Historical Trend FY01–FY06. Includes Audit Period Data.

7d

Customer Service > Crime Incidents

Measure: Number of crime incidents on Municipal Railway vehicles or in Municipal Railway facilities. **Goal:** Reduce by 5%



No goal exists for fare evasion citations issued, as until FY05 few were cited. However, during the audit period citations increased by orders of magnitude.

Audit Period FY05–FY06 by Quarter

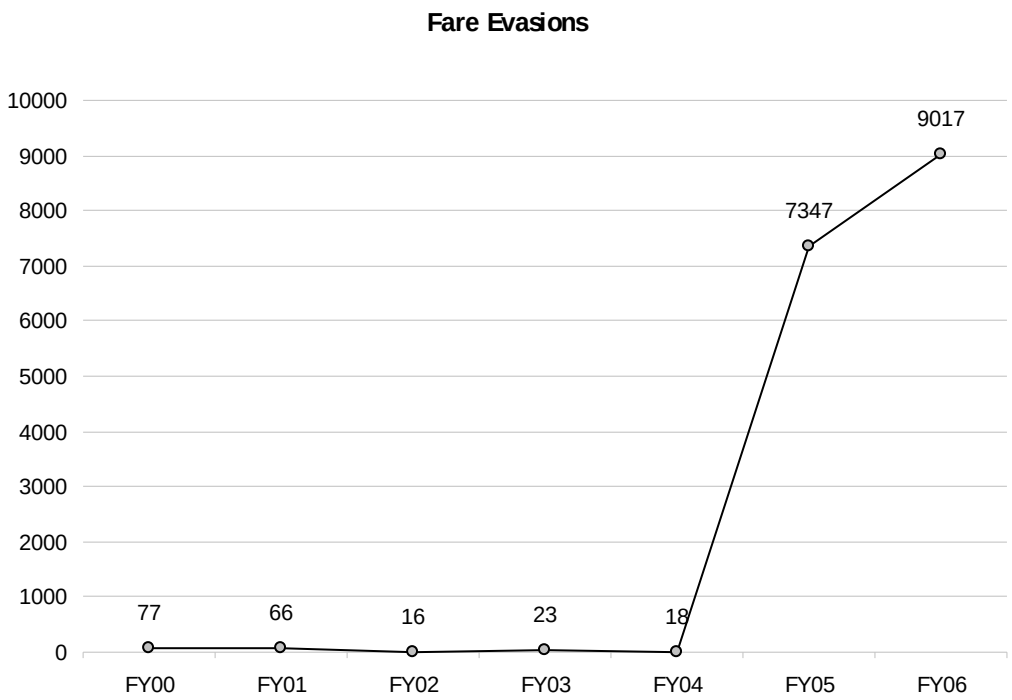
Goal
Actual

7d

Customer Service > Fare Evasions

Measure: Number of crime incidents on Municipal Railway vehicles or in Municipal Railway facilities.

Goal: No goal established for fare evasion citations.



No goal exists for fare evasion citations issued, as until FY05 few were cited. However, during the audit period citations increased by orders of magnitude. This may reflect an trend towards increased enforcement rather than an increase in fare evasion.

Historical Trend FY00–FY06. Includes Audit Period Data.

Goal
Actual

Since the audit period, crime incidents appear to have declined precipitously. However, a change in the method of reporting data may account for some of the apparent drop (see introduction). The number of fare evasion citations issued, meanwhile, rose by nearly 75%.

			Since the Audit Period
	FY07 GOAL	**FY06**	**FY 2007**
Crime Incidents (excl. Fare Evasion)	< 1,955	2,058	**1,133**
Fare Evasion	*n/a*	9,017	15,634

Problems or Issues Identified During the Audit Period

Retirements in two key staff positions made it impossible to follow an audit trail for the reported numbers. Historically, SFPD has provided information about crimes on Muni based on the reporting categories established by FBI Parts I & II crimes. This information has been supplemented by incidents in additional categories from Muni's TransitSafe database. A retirement at the police department midway through the audit period resulted in the department no longer reporting TransitSafe information, and a retirement at SFMTA made it impossible to determine to what extent these categories may have then been differently reported. For example, reported totals of operator assaults were 11 in FY05 and just 1 in FY06; however, the number of "battery operator" incidents increased from 31 in FY05 to 49 in FY06. Also, it is possible that some crimes identified in police reports as having taken place on Muni property might actually have occurred nearby.

Recommendations

Standardize reporting methods. The categories developed for reporting crime statistics have resulted in confusion and potentially misleading information. For example, Muni has reported the numbers of "Drunk Persons", "Persons on Drugs" and "Insane Persons" in addition to "Disturbance/Disorderly Conduct", rather than simply reporting incidents involving inappropriate passenger behavior.

In addition, some of the incidents reported have been based on information reported by the SFPD drawn from police reports, and reported in categories consistent with Parts I & II crime categories developed by the FBI; and some information came from Central Control logs and the TransitSafe Database.

SFMTA staff has proposed a new methodology that would compile information on only those incidents resulting in an SFPD report using Central Control logs, and would classify them into just three categories: felonius crimes, quality-of-life offenses, and fare evasion. While this would be more consistent than the existing methodology, Muni should consider a more thorough method that also includes a) a reasonable number of relatively specific crime subcategories, and b) all incidents recorded in the TransitSafe database.

Where possible, subcategories would be consistent with FBI and National Transit Database safety classifications. For example, assaults would be reported, but would no longer be divided into "Battery Operator," "Battery," "Operator Assault," "Operator/Passenger Altercation," and "Passenger Assault." A proposed list of categories can be found on the next page.

Reporting all incidents from TransitSafe, meanwhile, would satisfy the quality review team's concern that some categories of crime, such as assaults on operators, may be seriously underreported if incidents that do not result in a call to police are not included.

Finally, crimes should be reported as both a rate and an absolute number. If crimes are not reported as a rate in addition to as an absolute number, it becomes less meaningful to compare crime data over time. The suggested rate, as used by several other transit agencies, is the number of crimes (by class) per 100,000 passenger boardings.

Proposed Crime Reporting Categories	
Felonius	**Quality of Life**
• Homicide • Forcible Rape • Robbery • Aggravated Assault • Larceny/Theft • Motor Vehicle Theft • Arson • Other Assault • Miscellaneous (e.g., Bombing)	• Malicious Mischief • Disorderly Conduct • Miscellaneous (e.g., Trespassing)
	Fare Evasion

E. Employee Satisfaction

Employee satisfaction not only affects staffing performance, but also affects customer service and overall system performance as well, since dissatisfied employees are less likely to provide the best service possible. Consequently, Proposition E included the following service standards aimed at measuring employee satisfaction:

- 1e. Number of grievances.
- 2e. Speed of resolution of grievances.
- 3e. Longevity of employment. *(This measure has been eliminated from Muni Service Standard Reports based on prior recommendations..)*
- 4e. Employee recognition.
- 5e. Employee education and training opportunities.

The following summarizes the key employee satisfaction findings:

1e. Number of grievances: The number of grievances was reported quarterly, as required by the measure. No goals are set as to the number of grievances that should be acceptable.

2e. Speed of resolution of grievances: 83% and 100% of grievances, respectively, were resolved within 30 days in the fourth quarters of FY 2005 and FY 2006, satisfying the 75% goal.

4e. Employee recognition: In FY 2005, Muni issued awards to operators and maintenance employees on a monthly basis, and finance/administration and accessibility employees quarterly, but did not honor transit supervisors and safety and training employees on a quarterly basis as called for. In FY 2006, all awards were issued.

5e. Employee education and training opportunities: Employee training hours did not satisfy goals in either year of the audit period, and declined substantially each year. Total hours of training decreased by 39% from FY2004 to FY 2005, and by 35% from FY 2005 to FY 2006.

1e. Number of Grievances

Goal:	Report quarterly on the number of grievances.
Purpose:	Record and monitor the status of all grievances.
Definition of Measurement:	Quarterly reports will include number of new grievances filed, resolved and active.
Method of Measurement:	Internal tracking system will be used to provide data for the board on a quarterly basis.
Milestones:	Report quarterly.

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

1e

Employee Satisfaction > Number of Grievances

Measure:

Goal: Report quarterly on the number of grievances

	Transit Operators			Misc. Employees		
	Filed	Resolved	Active	Filed	Resolved	Active
Q1	15	15	–	11	7	–
Q2	13	16	–	4	3	–
Q3	20	15	–	3	3	–
Q4	11	18	–	6	8	–
FY 2005 TOTAL	59	64	2	24	21	2
Q1	9	9	–	10	7	–
Q2	12	7	–	1	2	–
Q3	9	10	–	9	5	–
Q4	12	6	–	4	9	–
FY 2006 TOTAL	42	32	12	24	23	1

Note:
For Transit Operators, FY05 totals include 7 grievances carried over from FY03/04, and FY06 totals include 2 grievances carried over from FY05

For Misc. Employees, FY05 totals include 1 grievance carried over from FY04

Recommendations

Measure the rate rather than the number of grievances. Employee grievances are currently reported as totals. Reporting as a rate (grievances per employee) would be more meaningful and comparable over time. Additionally, reporting by division in addition to organization-wide would improve accountability.

2e. Speed of Resolution of Grievances

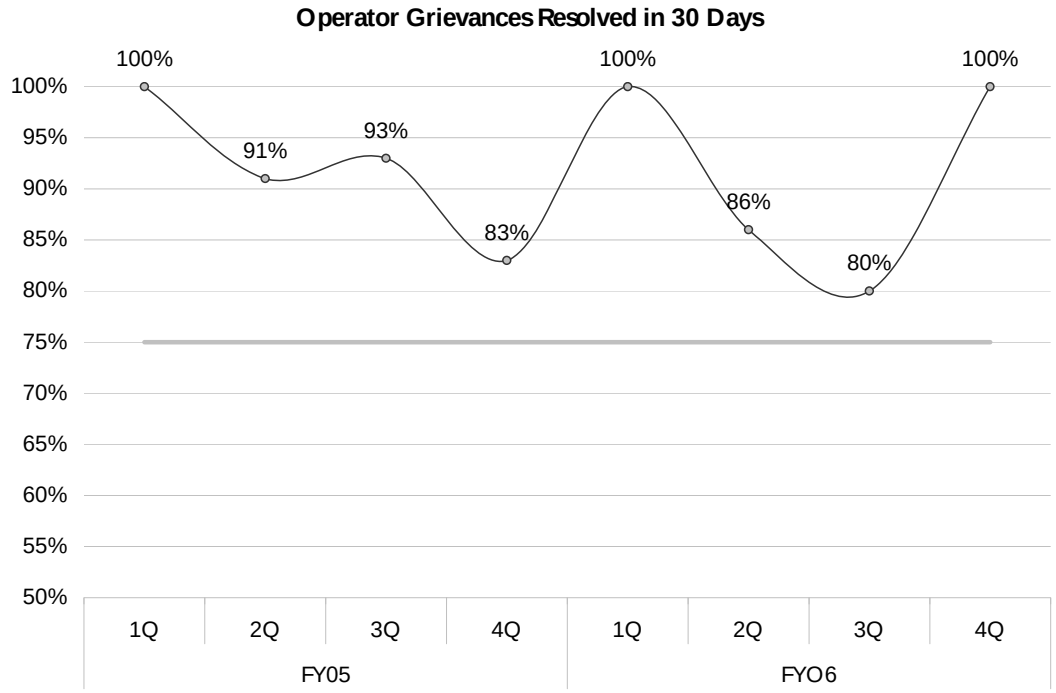
Goal:	Resolve 75% of internal grievances within 30 days.
Purpose:	Measure the effectiveness of the Labor Relations in the resolution of grievances.
Definition of Measurement:	Monthly measurement of the resolution of grievances.
Method of Measurement:	Internal tracking system will be used to provide data for the board on a quarterly basis.
Milestones:	Resolution of 75% of grievances within 30 days.

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

2e

Employee Satisfaction > Speed of Resolution of Grievances

Measure: **Goal:** Resolve 75% in 30 days



83% and 100% of grievances, respectively, were resolved within 30 days in the fourth quarters of FY 2005 and FY 2006, satisfying the 75% goal.

Audit Period FY05–FY06 by Quarter

Goal
Actual

Since the audit period, the number of grievances resolved within the specified period has remained above the target of 75%. However, between FY06 and FY07, the period was changed from 30 days to 45 "due to the availability of the hearing officer."

			Since the Audit Period					
	GOAL	**FY06 Q4**	**FY07 Q1**	**FY07 Q2**	**FY07 Q3**	**FY07 Q4**	**FY 2006**	**FY 2007**
Resolutions of Grievances in 45 Days	>75%	100% (*30 days)	**82%**	**100%**	**100%**	**100%**	**91%**	**96%**

Problems or Issues Identified During the Audit Period

The measure does not refer specifically to operator grievances, yet only operator grievances are tracked.

4e. Employee Recognition

Goal:	Annual achievement of honorees in the following programs: • (12) Systemwide Operators of the Month Award • (4) Transit Supervisors of the Quarter Award • (4) Finance & Admin Employees of the Quarter • (12) Maintenance Employees of the Month • (4) Safety & Training Employee of the Quarter • (4) Accessibility Employee of the Quarter
Purpose:	To recognize the achievements of employees and encourage excellence in job performance.
Definition of Measurement:	Monthly tracking of all award programs. Award program criteria vary for the above. A detailed nomination evaluation process exists on file for each program. Criteria for non-operator awards includes, but is not limited to employee's Performance evaluation, attendance, work performance, absence of disciplinary and or EEO measures. For Operator awards, attendance records, accident records, PSRs and safety records are used to evaluate the candidate.
Method of Measurement:	A detailed nomination evaluation process exists on file for each program and the time frame measured is generally on a rolling 12 month basis. Some of the criteria includes employee's performance evaluation, attendance, work performance, absence of disciplinary and or EEO measures. Data will be reported to the board on a quarterly basis.
Milestones:	Annual achievement.

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

4e

Employee Satisfaction > Employee Recognition

Measure:

Goal: Annual achievement of honorees

In FY 2005, Muni issued awards to operators and maintenance employees on a monthly basis, and finance/administration and accessibility employees quarterly, but did not honor transit supervisors and safety and training employees on a quarterly basis as called for. In FY 2006, all awards were issued.

5e. Employee Education and Training Opportunities

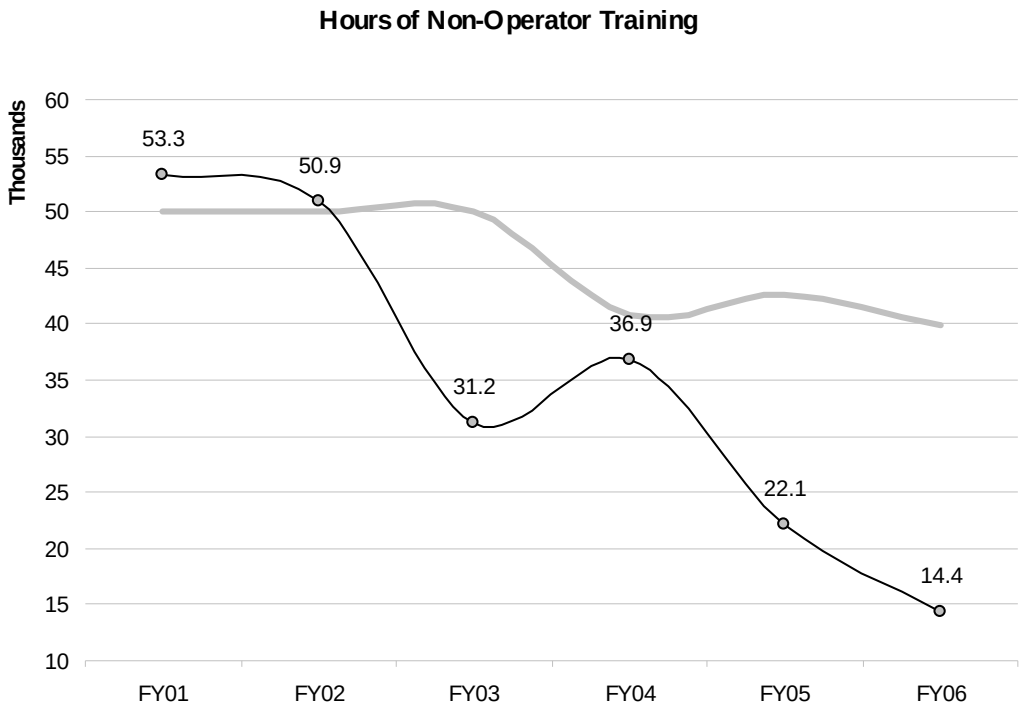
Goal:	Provide approximately 20 hours per FTE.
Purpose:	Provide continuous opportunities for employee development.
Definition of Measurement:	Training hours will be tracked monthly for the following areas: ● Maintenance Training (including new revenue vehicle training) ● Ambassador Training ● Supervisory Skills Training ● Management Skills Training ● Violence in the Workplace ● Desktop Computer Training ● Additional training as developed
Method of Measurement:	Track number of hours by type of training. Data will be reported to the board on a quarterly basis.
Milestones:	FY 2005: 42,600 hours FY 2005: 39,940 hours

From *SFMTA Service Standards Report, 4th Quarter FY 2006.*

5e

Employee Satisfaction > Employee Education and Training Opportunities

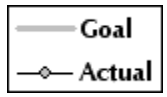
Measure: **Goal:** Resolve 75% in 30 days



Employee training hours did not satisfy goals in either year of the audit period, and declined substantially each year. Total hours of training decreased by 39% from FY2004 to FY 2005, and by 35% from FY 2005 to FY 2006.

Historical Trend FY01–FY06. Includes Audit Period Data.

Since the audit period, hours of employee training increased slightly, but still well short of the fiscal year goal.



			Since the Audit Period
	FY07 GOAL	FY06	FY 2007
Hours of Employee Training	> 50,000	14,369	16,407

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Appendix

Figure APX-1 Previous and Current Proposition E Standards

FY05-07 Measure		FYO8 Measure	
1a	Schedule Adherence	A1	On-Time Performance
2a	Service Delivery	A2	Scheduled Service Hours Delivered
4a	Pass-Ups	A3	Pass-Ups
5a	Passenger Overcrowding	A4	Load Factors
6a	Headway Adherence	A1	On-Time Performance
7a	Vehicle Availability	A5	Vehicles Available
8a	Unscheduled Absences	A6	Unscheduled Absences
9a	Miles Between Roadcalls by Mode	A7	Mean Distance Between Failure
1b	Passengers Carried by Mode	B1	Passengers Carried
2b	Average Fare Per Passenger	B2	Farebox Performance
3b	Hours and Miles Operated by Mode	--	--
4b	Fully Allocated Costs Per Hour of Service by Mode	B3	Cost Efficiency
1c	Net Vacancies by Position	A8	Vacancy Rate for Service Critical Positions
2c	Attrition Rates	--	--
1d	Marketing Plan	--	--
2d	Schedule Publication	--	--
3d	Operator Conduct Complaints	C2	Operator Conduct Complaints and Resolution
4d	Annual Passenger Surveys and Follow-up by Management	C1	Overall Customer Satisfaction
5d	Public Information	--	--
6d	Operator Training and Accident Follow-up	C3	Operator Training
		C4	Passenger and Vehicle Accidents
7d	Crime Incidents	C5	Security Incidents
1e	Number of Grievances	D1	Number of Grievances
2e	Speed of Resolution of Grievances	D2	Grievance Resolution Rate
3e	Longevity of Employment	--	--
4e	Employee Recognition	D3	Employee Satisfaction
5e	Employee Education and Training Opportunities	--	--
--	--	B4	Productivity
--	--	B5	Cost-Effectiveness

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