



## Proposition E: Municipal Transportation Quality Review

July 1, 2010 - June 30, 2012

FINAL REPORT



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## Introduction

This report is the sixth Transportation Quality Review produced since the passage of Proposition E in 1999 (meaning that the SFMTA has now been making performance reports to the public for well over a decade). Proposition E amended the City Charter, creating the San Francisco Municipal Transportation Agency by combining the transit operations of Muni and the street operations of the Department of Parking and Traffic into a single agency. This report fulfills the requirement under Proposition E for a biennial audit of Muni “service standards” reporting. Data describing Muni performance in each of the service standards categories have historically been published on a quarterly basis. Every two years, the Charter mandates that an independent auditor review the data, ensure that it is being accurately collected and reported, and make recommendations for improved reporting.

This report presents the findings of the Municipal Transportation Quality Review for the period between July 1, 2010 and June 30, 2012 (Fiscal Years [FY] 2011 and 2012). This report is the last which reviews performance standards and metrics that were part of the previous framework, which has since been replaced by a new system that was developed in part on the basis of Quality Review recommendations made over the past several audit periods. This report primarily focuses on describing trends and potential reasons for the observed trends in system performance; unlike previous reports, there is a reduced focus on Auditor recommendations.

The report consists of three primary components:

- A review of data collection and reporting methods
- An analysis of trends in reported data
- Auditor recommendations

This chapter summarizes findings and recommendations. The following chapters present findings and recommendations specific to each individual service standard.

## Summary

Beginning in FY 2013, with the completion of a six-year Strategic Plan, the SFMTA began placing an even greater emphasis on performance reporting with resources devoted to a Performance unit housed within the Technology and Performance Section of its Finance and Information Technology Division. Since that time, the unit has focused on developing Transtat, a business intelligence system serving as the central repository of the agency’s performance data and metrics spanning both mandated Proposition E reporting as well as others associated with the Strategic Plan.

The SFMTA’s performance reporting initiative included a comprehensive overview of all data sources, with an emphasis on data quality assurance and methodology. In addition, the SFMTA now holds regular Transtat meetings to discuss performance issues, not only on Transit Operations but other topics as well. A full discussion of Transtat will occur in a subsequent Municipal Transportation Quality Review for Fiscal Years 2013-2014. All findings and recommendations in this report should be taken in the context that the SFMTA has

focused and is continuing to focus on improving performance reporting subsequent to the time frame of this review.

### ***Review of data collection and reporting methods***

For the most part, the auditors found that data reported by the SFMTA appeared to be accurate and reliable. There were, however, a few issues, including:

- The exclusion of standards that had been included in prior audit period reports, such as A6 Vacancy Rates for Transit Operators, C3 Operator Training, D1 Grievances (number of grievances and number of grievances per 1,000 employees), and the exclusion of detailed appendices (FY 2012 only).
- Incidences of updating past data without noting that this had occurred. (FY 2012 year-end report, B4 Cost per Hour and C4 Safety standards.)
- The persistent appearance of unclear or outdated notes.
- Internal inconsistencies within year-end reports, particularly in FY 2012 wherein data for eight (8) metrics on the summary page were either transposed or incorrectly reported from elsewhere in the document.

SFMTA staff provided the auditors with contextual information about some of these issues during the auditing process; this information is included in this report as appropriate. Nevertheless, that the SFMTA's public

year-end documentation included several instances of confusing and/or inaccurate data is a reminder that the agency must continually strive to provide adequate transparency and consistency in its public reporting.

### ***Analysis of trends in reported data***

Although overall Muni performance declined during the audit period (a trend that can be attributed, at least in part, to vehicle constraints and increased ridership), improvements in important areas of service delivery and vehicle reliability were noted.

### ***Auditor recommendations***

The following section summarizes general and measure-specific recommendations. Please note that due to the major changes in the way Muni performance is reported, we have only made recommendations for measures that have been carried forward into the current reporting framework.

#### **General Recommendations**

- Ensure the accuracy and internal consistency of publicly reported data.
- Ensure timely and transparent performance reporting.

#### **Measure-Specific Recommendations**

- *A2 Service Delivery (Late Pull-Outs)* – Adopt a more aggressive goal of 0.5%.

## Background

### **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 VIII A 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 VIII A created the San Francisco Municipal Transportation Agency (SFMTA), combining the responsibility for street operations (Department of Parking and Traffic) with the dominant "user" of the streets – Muni. Article VIII A also established service standards and accountability measures, and requires an independent, biennial quality review of transit operations. This report represents the findings of an independent review of Muni's performance for Fiscal Years 2011 and 2012.

### **An Independent Transportation Quality Review**

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

- Help the 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, 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 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 standards reporting. This audit covers Fiscal Years 2011 and 2012 (July 1, 2010 – June 30, 2012). Auditors reviewed Muni's quarterly Service Standards Reports from this period to verify that data were collected according to the definitions and methods of measurement specified by Proposition E and the SFMTA Board of Directors, and that the data were calculated correctly. During the spring of 2014, auditors met with Muni staff responsible for data collection and reporting to review procedures as well as the actual reported data. Systematic spot checks of original source data and of automated tracking systems and procedures were used to determine the accuracy of reported data.

- **Trends analysis**

Auditors reviewed trends in data and performance achievement over the two-year audit period.

- **Auditor recommendations**

Auditor recommendations focus on ways to further refine or improve performance reporting to make it more relevant to the 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.

### ***Summary of Service Standards and Changes since the Previous Audit***

The service standards (or performance measures) adopted under Proposition E were not intended to create onerous reporting requirements, but rather to provide the 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 Council (CAC) and the SFMTA Board review Muni’s performance quarterly, and annually review the definitions of measurement, methods of measurement, and the goals for each of the service standards. After the 2<sup>nd</sup> Quarter of FY 2011, however, the SFMTA no longer published quarterly Service Standards Reports, which included a description of each of the service standards and a summary of Muni performance, as well as performance by other SFMTA divisions. Instead, year-end (Q4) reports were produced. These were provided to the Auditor directly by SFMTA staff, and it is not clear whether they were previously made available on the SFMTA website, which recently underwent a major redesign and reorganization.

Beginning in FY 2013, the SFMTA introduced a complete overhaul of the performance standard reporting system. The new system brings a wide variety of changes, including a recategorization of metrics and, in some cases, wholly redefined standards (in large part based on previous Quality Review recommendations). These changes will be more thoroughly analyzed in the forthcoming FY 2013-2014 Quality Review.

Figure 1 below lists service standards reporting changes that were made or are planned to be made, as well as changes that were not made, in response to recommendations from the last Quality Review.

**Figure 1 Recommendations from FY 2009-2010 Quality Review and SFMTA Responses**

Measure	Recommendation from Previous Audit	Adopted (Y=Yes; N=No; P=Part)	Notes
N/A	Make changes to make performance reporting more timely	P	New system of monthly performance data reporting is currently in use (i.e., beginning in FY 2013) and will be described in more detail in the forthcoming FY 2013 and 2014 Quality Review.
N/A	More proactively use data as a management tool		
“A” Measures	Report A3 Load Factor and A13 Productivity by service type	P	A3 Load Factor reflected rail statistics only in both years. A13 Productivity statistics were reported consistent with this recommendation. (In FY 2013, the SFMTA began reporting Load Factor as the percentage of vehicles that are full.)

Measure	Recommendation from Previous Audit	Adopted (Y=Yes; N=No; P=Part)	Notes
A1 On-Time Performance	Replace headway adherence standard with “bunching” and “gapping” standards, make these the primary measures of on-time performance for Rapid Network lines, and report only schedule adherence for other types of routes	P	Implemented in new data reporting system; not implemented for FY 2011 or FY 2012 scorecard summaries.
A2 Service Delivery	Measure the percentages of scheduled miles and trips delivered in addition to scheduled hours delivered	N	The SFMTA implemented a measure of trips delivered in its new data reporting system; it was not, however, implemented for the FY 2011 or FY 2012 scorecard summaries.
A5 Mean Distance Between Failure	Report rates of “pull-ins”	N	
A6 Vacancy Rate for Service Critical Positions	Restore goal of no more than a 5% vacancy rate for Crafts and Maintenance positions	N	
B3 Farebox Performance	Report farebox recovery ratios	N	Farebox recovery ratios are reported on an annual basis, once the close-out for financials is complete.
C1 Customer Perceptions	Make reporting more timely	N	The SFMTA began more frequent online surveying in FY 2013 and instituted regular quarterly surveying in FY 2014; these changes, however, were not implemented for the FY 2011 or FY 2012 scorecard summaries.

Measure	Recommendation from Previous Audit	Adopted (Y=Yes; N=No; P=Part)	Notes
C2 Complaint Resolution Rate	Change the timeline for resolution of Americans with Disabilities Act-related Passenger Service Reports to 60 days	N	
C3 Training	Restore measure	N	
C6 Proof of Payment	Report fare evasion rates, numbers of citations issued, and “contacts” by mode	N	The SFMTA is conducting fare surveys approximately every two years to assess fare compliance systemwide.
D1 Grievances	Report numbers of grievances by division	N	

Additionally, a recommendation made in a previous audit, for FY 2005-2006, was adopted by the SFMTA but has not yet been implemented. This is:

- *A13 Productivity, B4 Cost per Hour, and B5 Cost per Boarding* – “Establish goals for these important indicators.” The SFMTA had planned to develop goals “based on results benchmarked to peers,” but this was “deferred due to limited staff resources.” (While we continue to support development of goals in these categories, this recommendation is not repeated in this Quality Review as it has been formally adopted by the SFMTA Board.)

Previous audits have also made a number of general recommendations that at this point have been largely addressed by the SFMTA, but which continue to inform recommendations made as part of this Quality Review.

These are described in detail in previous Quality Reviews, but in sum, they are:

- *Performance measures should reflect the multimodal nature of the SFMTA*
- *Improve the organization of measures to improve readability*
- *Set different performance standards for different types of Muni service*
- *Ensure technological resources are properly maintained and fully utilized*
- *Focus on improving the performance measures that address customer experience*

A few of these overall recommendations were implemented in the new performance data reporting system that was implemented in FY 2013, including revising service standards categories and descriptions to

more accurately reflect customer experience (e.g., assessing bus “bunching” and schedule “gaps”). Again, the Auditor will review these and other changes in the forthcoming FY 2013-2014 Quality Review.

### **Data Collection and Reporting**

For this Quality Review, auditors both reviewed Muni’s Service Standards Reports and, in one instance where the reporting methodology for a standard changed, interviewed Muni staff to verify that data were collected according to the definitions and methods of measurement specified by the SFMTA and that data were calculated and reported correctly.

For the most part, the auditors found that data reported by Muni appeared to be reliable. However, two issues are identified below.

#### **Unreported Data**

A relatively small selection of additional data was unavailable for review due to technical issues or FTA auditing schedules. However, for various reasons, data reported in FYs 2011 and 2012 were not as thorough or complete as in previous audit periods. Most notably, quarterly reports were no longer made publicly available after the 2<sup>nd</sup> Quarter of FY 2011.

Specific standards that were not reported during the audit period included:

- A6 Vacancy Rates for Service Critical Positions: Transit Operators

- C3 Operator Training
- D1 Grievances (# of grievances and # of grievances per 1,000 employees)
- Appendices providing additional details of quarterly route-level on-time performance, headway adherence, and load factors over 125% for sampled routes, as well as SFPD crimes and other incidents (available in FY 2011 only)

Note: in subsequent correspondence, SFMTA staff have provided the auditors contextual information about some of the unreported standards. In particular:

- Reporting of A6 Vacancy Rates for Service Critical Positions: Transit Operators was eliminated due to the fact that the measure did not account for employees on long-term leave, which SFMTA staff considered misleading.
- Route-level A3 Load Factor data for the SFMTA’s bus services were unavailable because there were no annual observations for buses in FY11 or FY12. Route-level data for rail services were provided upon request, although FY11 Q1 data were ultimately unavailable for review.

#### **Inconsistencies in Reporting**

As part of the Quality Review, the Auditor reviewed the consistency of reported data within the Year-End Service Standards Scorecards, particularly between the summary tables and the individual metric pages. In FY 2012 in particular, there were a number of inconsistencies between the data reported in these two locations, suggesting that quality control should remain a high

priority for SFMTA staff. (Please note that the Auditor assumes that the data reported on each individual metric page is the “Correct Value.”) The inconsistencies included:

### *FY 2011*

- C2 Customer Complaints Received, Quarterly FY11 Q4
  - Summary: 5,025; Correct Value: 5,029
- C2 Complaint Resolution Rate, Quarterly FY11 Q4
  - Summary: 85%; Correct Value: 84%

### *FY 2012*

- A2 Service Delivery - Scheduled Hours Delivered, Annual FY12
  - Summary: 97.0%; Correct Value: 96.7%
- A5 Mean Distance Between Failure, Annual FY12
  - Summary: Bus 2,934, Rail 1,946; Correct Value: Bus 3,330 Rail 2,934
- A5 Mean Distance Between Failure, Quarterly FY12 Q4
  - Summary: Bus 3,401 Rail 2,251; Correct Value: Bus 3,334 Rail 3,401
- A12 Traffic Lane Lines, Bus Zones and Crosswalks
  - Annual FY12: Summary: 16%; Correct Value: 15%

- Quarterly FY12 Q4: Summary 15%, Correct Value 16%
- C3 Safety – Collisions per 100,000 miles
  - Annual & Quarterly percentages are transposed
- C3 Safety – Muni falls on board per 100,000 miles
  - Annual & Quarterly percentages are transposed
- C8 Walk-in Citation and RPP Customers, Annual FY12
  - Summary: 66%; Correct Value: 63%
- C10 Mail-in RPP Renewals
  - Summary: 97%; Correct Value: 98%

In a few locations, the FY 2012 year-end report updated data for FY 2010 for reasons that were not made clear in the report. This was observed in data for the B4 Cost per Hour and C4 Safety (Collisions per 100,000 Miles) standards. In particular, the FY 2012 report revised FY 2008, 2009, and 2010 B4 Cost per Hour data for the light rail mode. In subsequent correspondence with the auditors, SFMTA staff have confirmed the reasons for the updating past data:

- For B4 Cost per Hour, staff noted that the FY 2010 scorecard reported data that had not been audited by the FTA, and moreover light rail data used “train hours” instead of the “car hours” measurement required by the NTD. Consequently, the FY 2012 scorecard included FTA-audited FY 2010 data, and prior years of light rail data were

recalculated to use “car hours” rather than “train hours” to fully comply with NTD requirements.

- FY 2010 data for C4 Collisions per 100,000 Miles were slightly adjusted in the FY 2012 year-end report most likely due to a minor correction in either the number of incidents or mileage reported at the time the data were queried for the FY12 scorecard; sometimes an incident may be flagged as a “blind claim” (meaning it cannot be substantiated) well after the incident is entered in the database.

Finally, there were a couple of metrics in the FY 2012 Year-End Service Standards Report for which notes about the data are unclear or outdated:









- A13 Productivity: Notes field reads, “Awaiting FY12 results,” but data are included for FY12. It is possible the note means that FTA audited data are forthcoming, but it is not clear as written. (Note: the final FY12 FTA-audited data have been provided to the auditors by SFMTA staff and are included in this evaluation.)

- C5 Security Incidents: Notes field indicates that the “Crime reporting methodology is currently under evaluation. Complete reporting will return in FY12 Q3.” Despite the note, data appear for all quarters.











### **Trends Analysis**










Figure 2 summarizes Muni performance for each of the service standards that were in effect during the period covered by this review (FY 2011 and 2012). The arrow graphics indicate general trends (up for “positive,” facing right for “neutral,” and turned down for “negative”) in terms of both historic patterns and performance over the course of the audit period. Attainment of goals for each standard is not generally addressed below, but is addressed in the detailed performance review that makes up the body of this report. All data informing this analysis were sourced from the SFMTA’s Service Standards Scorecards and were subject to availability.





Figure 2 FY 2011-2012 Performance Summary

Standard	Trend	 Positive Trend  Neutral Trend  Negative Trend
<b>A1 On-Time Performance</b> <i>Customer Observed Schedule Adherence</i>		In Fiscal Years 2011 and 2012, Muni remained well below the systemwide goal of 85% adherence to a standard of no more than 1 minute early or 4 minutes late. In Q3 of FY 2012, the SFMTA implemented a revised on-time performance calculation, which improved the accuracy of reported results, but which also had the appearance of worsening performance. Systemwide, customer observed schedule adherence was 73.0% in FY 2011 and dropped to 65.4% in FY 2012, largely reflecting the calculation change.
<b>A1 On-Time Performance</b> <i>Headway Adherence</i>		A secondary measure of on-time performance, headway adherence, is based on a standard of vehicles operating within 30% or 10 minutes (whichever is less) of their scheduled headway (or frequency). Performance in this area improved over the course of the audit period, increasing to just under 64%.
<b>A2 Service Delivery</b> <i>Scheduled Service Hours Delivered</i>		The percentage of scheduled service hours that was delivered continued to hover around approximately 97% over the audit period, reaching its highest level in seven years in FY 2011 (97%) before falling slightly in FY 2012. However, Muni remained below its goal of 98.5% delivery of scheduled service hours.
<b>A2 Service Delivery</b> <i>Late Pull-Outs</i>		Late "pull-outs" from yards at the beginnings of peak periods decreased in both FY 2011 and FY 2012 to points well below the target cap (upper limit) of no more than 1.5%.
<b>A3 Load Factors</b>		In FY 2009, the standard for measuring overcrowding changed from the percentages of routes with loads greater than 85% of total (seated and standing) capacity over the course of the day to a more meaningful metric of the percentages of trips during peak periods experiencing loads of 125% of capacity (the standard by which Load Factors were measured during the audit period). During the audit period, the number of Muni trips experiencing overcrowding by this standard exceeded the target of 4% in both the AM and PM peak periods, increasing to over 10% in both peak periods in FY 2012. <i>Note: due to challenges in readying Automatic Passenger Counter (APC) data for public release, Load Factor data were available for rail services only in FY 2011 and 2012.</i>



Standard	Trend	 Positive Trend  Neutral Trend  Negative Trend
<b>A4 Unscheduled Absences</b>		While the rate of unscheduled absenteeism for most positions is in the mid- to upper-single digits, the rate for operators has consistently been higher than 10%. This is a key reason why Muni has historically been unable to achieve its target for Scheduled Service Hours Delivered of 98.5%.
<b>A5 Mean Distance Between Failure</b>		During the audit period there was an increase in the mechanical reliability of all types of rail and bus vehicles. Additionally, with the exceptions of the Woods division diesel buses and cable cars, all vehicle divisions achieved their reliability targets for a majority of the audit period. These improved reliability records are likely due to a variety of factors including vehicle refurbishment programs.
<b>A6 Vacancy Rate for Service Critical Positions</b>		During the audit period, maintenance staff vacancy remained relatively constant at approximately 19%, while crafts staff vacancy also hovered around 16% over the two-year period. Muni reliability improved during this period; however, the long-term effects of a consistently short-staffed maintenance team cannot be fully known at this time. The SFMTA did not report the vacancy rate for Transit Operators in FY 2011 and FY 2012.
<b>A13 Productivity</b>		The numbers of boardings onto Muni vehicles per hour of service fell slightly between FY 2010 and FY 2011 before increasing again in FY 2012.
<b>A17 Sustainability</b>	N/A	In the 2011 biennial Controller’s Survey, the question about commute trips changed slightly, making it impossible to conduct a direct analysis of this metric over time. In FY 2011, 47.5% of commute trips by those who were employed were made by “sustainable” modes (transit, biking, and walking). 32.1% percent of these commute trips were by transit.
<b>B1 Ridership</b>		After dropping to FY 2006 levels in FY 2011, ridership hit its second highest level in ten years in FY 2012 when over 222 million people rode Muni systemwide.
<b>B2 Revenue</b>		Muni fare revenue increased slightly in FY 2011, then again in FY 2012.
<b>B3 Farebox Performance</b>		While costs per hour increased, revenue increased at a faster rate. As a result, over the audit period Muni experienced an increase in farebox performance.

Standard	Trend	 Positive Trend  Neutral Trend  Negative Trend
<b>B4 Cost per Hour</b>		After consistently rising since FY 2005, Muni's operating cost per hour of revenue service leveled off during the audit period, even dropping slightly in FY 2012 as bus revenue hours increased in the two audit years.
<b>B5 Cost per Boarding</b>		Muni's operating cost per boarding reached a high of \$2.88 in FY 2011 after consistently rising since FY 2007, but fell gradually in FY 2012 to \$2.83.
<b>C1 Customer Perceptions</b>		In FY 2011, overall satisfaction (in terms of those rating service "good" or "excellent") in Muni's customer service survey increased to 57%, an increase from 52% in FY 2010 and slightly higher than in 2007.
<b>C2 Customer Feedback Received</b>	N/A	In FY 2008, the number of Passenger Service Reports (PSRs) submitted to Muni increased significantly, apparently due to implementation of 24-hour 311 customer service. The number of PSRs stayed relatively steady during the audit period.
<b>C2 Complaint Resolution Rate</b>		During the audit period, complaint resolution rates were near goals in all categories, although significant methodological changes make historical comparison impractical.
<b>C3 Training</b>	N/A	Starting in FY 2011, the SFMTA no longer reported this measure because "(o)utcomes of training are measured in customer satisfaction, safety, and maintenance metrics."
<b>C4 Safety</b> <i>Collisions per 100,000 Miles</i>		Safety improved on both bus rails lines in FY 2011 and FY 2012 with the number of bus and rail collisions per 100,000 declining in both years.
<b>C4 Safety</b> <i>Falls on Board per 100,000 Miles</i>		In FY 2011 there was a 30% increase in falls on board for bus, and a slight increase in falls aboard rail. Falls on board both modes increased slightly in FY 2012.
<b>C5 Security Incidents</b>	N/A	Between FY 2010 and 2011, crime rates on Muni property increased slightly. In FY 2012, Muni transitioned to a different method for reporting crime rates, including only SFPD-reported crimes and not incidents from the SFMTA's internal system.
<b>C6 Proof-of-Payment Program</b>	N/A	In FY 2011 the number of citations issued dropped to approximately 35,000 but in FY 2012 the number of citations issued reached the highest level yet with almost 48,000 citations. However, citation data were not complete throughout FY 2012, so a true audit period trend is not available.

Standard	Trend	 Positive Trend  Neutral Trend  Negative Trend
<b>D1 Grievances</b>	N/A	Grievance data for FY 2011 or FY 2012 were not available for review.
<b>D1 Grievance Resolution Rate</b>		Resolution rates for operator grievances were below the target rate of 90% throughout the audit period and averaged 50% in FY 2011 and 60% in FY 2012. <i>(Note: in previous transit performance data releases, the Grievance Resolution Rate metric was numbered D2.)</i>
<b>D3 Employee Satisfaction</b>	N/A	Data for the current audit period were not available for review. <i>(Note: in previous transit performance data releases, the Employee Satisfaction metric was numbered D4.)</i>

## Recommendations

While many improvements have been made in performance reporting in recent years, the most significant revision yet to the reporting process was implemented in FY 2013 (immediately following the current audit period). In particular, this revision introduced the SFMTA’s monthly Strategic Plan Metrics Reports (which succeeded the previous Service Standard Scorecards). The Strategic Plan Metric Reports are organized into the four goals and 16 objectives that are laid forth in the FY13-18 SFMTA Strategic Plan. This and other changes associated with the Transtat business intelligence tool will be detailed in the forthcoming FY 2013-2014 audit.

Two types of recommendations are included in this Quality Review: general recommendations to improve both performance reporting and, in some cases, performance; and measure-specific recommendations related to individual service standards. Recognizing that a new reporting system is already in place, we have

limited our measure-specific recommendations to those that have carried forward intact from the old to the new system.

### **General**

The Quality Review team identified a few general issues related to Muni performance reporting.

#### **Ensure the accuracy and internal consistency of publicly reported data.**

The Auditor noted several internal discrepancies between the summary pages and the individual metric pages of the FY 2011 and 2012 Year-End Service Standards Reports. Additionally, there were a few instances of outdated notes regarding missing data. The Auditor also noted that the FY 2012 year-end report amended FY 2010 data for three service standards without noting that these updates had been made.

The SFMTA should ensure that these reports contain up-to-date information and are held to the highest possible

quality control standards, as these reports help form the public image of Muni.

### **Ensure timely and transparent performance reporting.**

Largely due to the transition to the new performance reporting system that was implemented in FY 2013, reporting using the legacy system lagged during the audit period; the public posting of quarterly reports ceased following the 2<sup>nd</sup> Quarter of FY 2011. While it is commendable that the new system is capable of producing more frequent reports, it is also important to stress that the SFMTA should continue to make these reports publicly available on a timely basis. At a minimum, staff should post the FY 2011 and FY 2012 Year-End Service Standards Scorecards, which are currently absent from the Service Standards section of the revamped website.

A more detailed assessment of and set of recommendations for the current (new) reporting system will be included in the forthcoming FY 2013-2014 audit. However, the Auditor will likely carry forward a previous recommendation to increase the frequency of reporting certain measures, such as on-time performance. Using available data, this metric could be reported more often – weekly or even daily – on the SFMTA website. Additionally, it is apparent from the FY 2013 year-end Transit Performance Report currently available on the SFMTA website that monthly reporting of key statistics is available through the new system; to further improve transparency and accountability, and to restore the regularity of data reporting observed prior to Q3 FY 2011,

the SFMTA should publish these data on a monthly basis as they become available.

### ***Measure-Specific Recommendations***

In addition to the general recommendations, one recommendation is made below to refine a specific measure that has carried through verbatim to the new reporting system.

#### **A2 Service Delivery (Late Pull-Outs)**

*Adopt a more aggressive goal (0.5% / 99.5%).*

Over the past ten years, Muni has consistently exceeded the Late Pull-Outs goal of less than 1.5%; since FY 2007, it has exceeded the goal by nearly 0.5%.

In an effort to continually improve service, the SFMTA should adopt a new standard of fewer than 0.5% late pull-outs. This goal should be increasingly attainable as newer, more reliable bus and rail vehicles enter service.

## **Operations Analysis**

Task 4 in the scope of work for the Quality Review calls for an operational analysis focused on transit performance, rather than performance reporting. This analysis was conducted by Angelo Figone and John Pappas, based on a review of the available data and a series of informational meetings with SFMTA staff. This section summarizes findings and recommendations from that analysis. Please note that the analysis and conclusions in this section are not limited to the audit period timeframe, and may take into account

developments and changes that occurred after June 30, 2012.

As a first step, a kick-off meeting was held with SFMTA audit managers and staff in order to identify areas for analysis. This meeting highlighted the importance of focusing analysis in areas where both public perception and performance trends are linked. The two major areas of concern were determined to be service reliability and service capacity.

The Task 4 analysis team then reviewed annual and quarterly performance for Service Standards A1 through A3 for each fiscal year. With respect to service reliability, standards A1 and A2 reflect a slight degradation in performance over the audit period, and with respect to service capacity, standard A3 similarly reflects degradation over time.

These two major areas of customer/rider focus are at the heart of the Transit Division's mission, and achieving measurable improvement in both is critical to the SFMTA.

### ***Findings on Reliability***

Public usage of Muni service depends on knowledge that a transit vehicle will arrive at a specific location according to stated SFMTA public information (printed or real-time) relative to the stated frequency of service. An expectation that an average travel time between origin and destination will be met within reasonable tolerance is also mandatory for public patronage. Provision of these two important service elements requires systematic attention to operational detail.

Muni's ability to deliver daily service according to its own plan (schedule) is dependent on providing a fully functional revenue vehicle (rubber tire, light rail vehicle, streetcar or cable car) and fully trained operator for each trip each day. Sustaining daily provision of this linked pair sounds fundamental, but is problematic due to many causes.

Operator availability at Muni has been the subject of many internal reviews, organizational reporting changes and infrequent focus. Planning for normal attrition of transit operators is critical to understanding the myriad human resource functions. The apparent chronic shortage of available operators to sustain a base level of service negates any opportunity to attain a service expansion in the near term. Addressing operator availability issues from a holistic viewpoint with all stakeholders involved is essential for resolution.

Vehicle availability for the rubber-tire, light rail and streetcar modes was problematic during the audit fiscal years. The reasons for each shortage largely are related to unavailability of timely specific fleet rehabilitation and the ongoing unavailability of materiel or parts. While current plans for subfleet replacement are progressing, the fiscal years' audit period as well as the current period have been marked by critical shortages. The unavailability of streetcars and articulated trolley coaches have been partially compensated with standard vehicle substitution, albeit at a loss of capacity. Light rail unavailability has not been compensated.

The travel time expectation critical for customer satisfaction and sustainable reliability is frequently unmet



due to multiple conditions. Surface street travel times incurred by Muni vehicles are subject to increased congestion and unmitigated reduction of available lanes as a result of various planning efforts. Programs recently enacted by the SFMTA to dedicate specific operational lanes are successful, but slower running times both lengthen rider travel and result in loss of capacity through longer cycle times.

Conditions on the surface streets are both quantifiable and largely being addressed by the SFMTA's Sustainable Streets Division. Conditions under the street (Muni Metro) also have resulted in unpredictable delay and resulting service degradation. A light rail vehicle that experiences on-board system failures will delay multiple trains in the Metro system. A light rail vehicle that is unable to enter subway operation due to multiple failures also impacts travel time. These two causes of disrupted and irregular service delivery persisted during the audit period.

### ***Findings on Capacity***

It is perhaps incorrect to separate "capacity" from "reliability," as reliable transit service is certainly dependent on all passengers being able to board a transit vehicle when it arrives at their initial stop. The importance of addressing capacity cannot be overstated. In reviewing the service standard A3 Load Factors for FY 11 and FY 12, there was a measurable increase in the percentage of trips that exceeded the 125 percentage load standard. (Note: the SFMTA's load factor standard changed to 100 percent of seated and standing riders in FY2012/13.)

The trending data presented in the scorecard reflects multi-year increases in demand for Muni service with the A3 overcrowding measurement showing a 10 percentage increase in the AM Peak from FY 10 thru FY 12. Recognizing that the reported A2 Service Hours Delivered results for FY 11 and FY 12 are static – 97 percent for both years – then the 3 to 9 percent increase in trips exceeding the load standard is noteworthy. It calls attention to the probability that many passengers must wait for successive vehicles before being able to board. The effectiveness of the schedule to reflect and meet demand is the primary component of adequate capacity; however, substitution of subfleet vehicles to provide service (e.g. standard motor coach for articulated trolley coach) also has impacted actual capacity.

While this analysis is not informed by external census data, it is widely known that the San Francisco population has increased during this audit period, and it can be assumed that in specific corridors, demand for transit service has increased. Notwithstanding the reduction in capacity that went into effect in May 2010 and was partially reinstated in September 2010, there appears to have been increased peak and off-peak period demand as the economy improved during the audit period.

The operations analysis team interviewed the Director of Transit to discuss the major areas of focus as well as to understand the topics for specific detailed review. The team was also informed by specific reports generated by the transit management staff to augment the service standard data. Additionally, the analysis team met with members of the Service Planning and Scheduling units within the Transit Division as well as members of the

Performance Review unit within the Finance and Information Technology Division.

The major areas of customer focus – reliability and capacity – are further explored in the recommendations set forth below. The analysis team believes that each topic merits attention by the SFMTA with an emphasis on setting actionable task deadlines.

### ***Reliability***

#### **Operator Availability**

The classification 9163 (Operator) comprises the largest single number of employees assigned to the Transit Division. The 9163 classification is a both an entry and career classification within the SFMTA, and as such experiences ongoing attrition due to normal retirements and other reasons, including promotion to supervisory classifications. While attrition rates over several years fluctuate somewhat, attrition will generally occur in the range of 130-160 operators per year. Planning for normal attrition is absolutely mandatory, regardless of the resources required to meet that plan. Abnormal demand for 9163, such as decisions to add service on a permanent basis, should also be incorporated into the work plan.

#### ***Recommendations***

The following are recommendations designed to improve operator availability at the SFMTA:

- An ongoing work group consisting of SFMTA Human Resources management, Finance/Budget

management, Transit Division Operations Management, and Operator Training Management should meet on a biweekly basis to monitor specific changes in operator availability and determine the causes of these changes.

- Identification of operators who are habitually unavailable should generate specific actions to expedite return-to-work status, reclassify the operator, or terminate employment. In all cases where the operator is not in pay status, a fill-behind 9163 should be generated. To afford maximum focus specifically on long-term unavailable operators, multi-discipline human resources staff should remove operators from division-specific administration and assign outside the Transit Division.
- Transit Division Operations management should include both Division Operations and Operations Planning managers to establish specific target dates for signup/service changes and specific target dates for changes in platform (run) requirements, e.g. full-time or part-time; rail or rubber tire.
- Operator Training management should incorporate training demand loads for multiple programs (e.g. Accident Reduction, New Operator Refresher, Senior Operator Refresher/VTT, Modal/GSU Training) into New Operator Training.
- The Operator Availability work group should explore a collaborative program outside the SFMTA (e.g., with City College) to initiate a Class 'B' license attainment program. The goal of that



program would be to provide pre-qualified (DMV pre-screened and qualified to drive heavy vehicle) applicants to the SFMTA (operations and maintenance), SFPD, and other transit systems. The SFMTA would continue to provide modal training as well as all existing retraining programs.

### **Vehicle Availability**

Service reliability issues related to vehicle availability appears to finally be easing as new buses have been delivered and are in service. Specifically, 112 new diesel hybrid buses have replaced about 90 aging diesel buses. An order has been placed for new 60-foot electric trolleybuses which will replace 20 year old equipment whose numbers have dwindled to less than 30 still available for service. Two of Muni's heavy trunk routes benefit from having the articulated trolleybuses assigned and this assignment will be more consistent when the new coaches start arriving by the end of the year.

Also on order are over 300 new hybrid diesel buses that will replace 124 diesel articulated buses, likewise a staple on major routes. The current fleet now exceeds the 12 year retirement age allowed by FTA, although 80 of the existing Neoplan diesels have recently been rehabilitated, extending their life span until 2018.

One of the most needed improvements in equipment is the replacement of the trouble-prone Breda light rail fleet. The SFMTA has reached an agreement with Siemens Industry, Inc. as the manufacturer, and it appears that some of the new cars could be received by 2016. The daily struggle to supply 117 cars for present peak hour schedules has meant that service improvements to ease

overcrowding on parts of the light rail system have not been realized.

Experience with partial rehabilitation of accident damaged Bredas and retrofitting of trouble-prone parts, such as doors, have not produced an increase in reliability. Therefore, the potential of a relatively short-term replacement of the fleet holds out promise for significant improvement in service quality and reliability as well as providing necessary cars for the opening of the Central Subway.

### **Facilities**

At most locations, Muni's operating facilities are old, outmoded and contribute to the inefficiency of the service delivery and maintenance of equipment. From the hundred year old division and shop facilities at Potrero Division to the newest facility, Muni Metro East, operations and maintenance functions are comprised. Important features such as a paint booth and body shop, which would contribute necessary capabilities in assuring availability of scheduled vehicles, are not located where they expedite a good state of repair. Providing effective repair bays, servicing paths and adequate bus and employee parking is essential to meeting expanded fleet plans.

The SFMTA's 2012 plan for facility upgrades, "SFMTA Real Estate and Facilities Vision for the 21st Century," outlined a phased implementation plan including options for capital funding. Consequences for not implementing the specific replacements and improvements were also detailed, including impacts on timelines to achieve light

rail availability for the beginning of service in the Central Subway.

### ***Recommendations***

- The SFMTA should prioritize replacement of the oldest operating facilities. Attention should be given to the timeline required for achieving functionality in concert with delivery of the vehicle fleets stated above.
- The SFMTA should prioritize an ongoing study of the Muni Metro underground facilities including track, switches, ATCS support components. Work is already underway to speed up the Metro system through implementation of double berthing at stations in the Market Street subway, replacement of track in the Twin Peaks Tunnel, and rule changes that will speed up service on the street without compromising safety. These should be vigorously pursued to completion, as a significant decrease in running time can be expected from these actions.

### **Service Monitoring**

Transit Division's efforts at monitoring and adjusting service takes three forms; Central Control, the Line Management Center (LMC), and on-street supervisors observing and interacting with buses and rail vehicles. All three have proven to be problematic. Central Control, the "brains" of the combined effort, cannot see the transit vehicles (no vehicle location system other than NextBus) and relies on radio communication to conduct their activities. The radio system is long outmoded, but will be

replaced with an entirely new system in a much expanded facility within the next two years.

Additionally, the LMC (located at 1 South Van Ness Avenue) attempts to watch key points of the operation through closed circuit television monitors, but does not have communication capability with Central Control except via telephone. Without the new radio system in place, the LMC can only be partially effective in their mission as an "early warning" system for Operations.

Street supervision, the time honored method of regulating on-street service, suffers from a diminished number of supervisors. There is also a concern that the remaining staff is not always effective at, or eager to, confront service issues in an effort toward improving on-time performance through aggressive monitoring and adjusting individual trips in order to ease bunching or to fill service gaps caused by missing operators. Part of the problem is culture. This work force is not challenged by their management. This is often caused by vacant positions in the management ranks above them at the superintendent level.

### ***Recommendations***

- With the combined LMC/Central Control center due to come online in the next year, the SFMTA should develop in advance an overall strategy on how to use the new capabilities of the Center to achieve the goals of service reliability.
- A dedicated cadre of management level positions should be tasked with hands-on supervision of

critical service functions and serve to “supervise the supervisors” by enforcing a work ethic that demands proactive supervision practices and takes action when these practices are not followed. These “Service Quality Managers” would have management authority to go along with their position, be properly trained in service management techniques, and be familiar with Muni’s routes and schedules. These Service Quality Managers should be promoted from within the ranks of experienced and dedicated Operations staff, but if necessary could also be sourced from outside the agency. In any case, they should not be affiliated with any of the existing Operations labor unions within the SFMTA. Management would assign one or more to critical areas to identify and solve service issues, such as routes with major service reliability problems.

**Capacity:****Realistic/Current Vehicle Capacity Standards**

The A3 Load Factors standard currently in use reflects numerous thresholds for capacity targets. While these targets do not represent the maximum crush load for specific modes and vehicle types, they do encompass a degree of reasonable comfort given the need to recognize standee requirements. The current targets are:

- 63 passengers for a standard motor coach/trolley coach and cable cars

- 94 passengers for an articulated motor coach/trolley coach
- 45 passengers for a 30-foot motor coach
- 119 passengers for light rail vehicles
- 70 passengers for streetcar/historic cars

During the previous decade there have been several subfleet changes; in particular, in the last year a substantial percentage of the motor coach fleet has been replaced with low-floor vehicles. The resulting changes in available seating and standing space require a review of reasonable loading/volume targets. Due to a manufacturer’s request for safety reasons, the SFMTA (and other transit agencies) have disabled forward-facing flip-up seats on buses, resulting in a loss of capacity.

Load data reporting has been collected from multiple sources during the audit period, including Traffic Checkers assigned to count specific vehicles and Automatic Passenger Counters (APCs) aboard a rotating vehicle fleet. Given the trends in peak period overcrowding, it is incumbent to ensure that both the sampling methodology and the data synthesis reflects the duration of the underserved period.

**Recommendations**

- Load factor targets should be reviewed to reflect an updated ratio of standing room to seats on each subfleet in current usage.
- Service Standard A3 should be reviewed to reflect the reality of both modal demand and fleet availability; e.g., light rail should measure trips

within the entire peak period, but buses should measure trips within the peak-of-the peak.

- A methodology should be developed to derive the tolerance rate and accuracy of load data for vehicle trips that exceed the target maximum load factors. This should include a study of each vehicle subfleet and the hardware and software utilized.

### **Addressing Headway/Trip-specific Adjustments and Minimizing Peak Vehicles**

Analysis of the peak-of-the-peak load factor for high demand (“Demand”) lines as recommended above will produce a refined headway specification that may allow for schedule revision. That revision may either call for added trips to meet the service standard or allow for reduction of trips. The scheduling goal is to provide the amount of service that is “just right” without creating the need for additional peak vehicles.

Analysis of maximum load point data and intermediate timepoint load data allows for consideration of both “long-line” and “short-line” trip combinations. Generally Demand and Rapid lines will have sufficient route length and significant load reductions prior to the long-line terminal to create tailored short-line trips. A combination of headway changes and short-line trips on either side of the maximum load point will create capacity where it is need versus inefficient capacity at distant route segments. This is a valuable consideration for light rail service where multiple car trains can consolidate resulting residual loads and return for capacity where and when no additional vehicles are available for service.

### *Recommendations*

- Review each Demand and Rapid route maximum load point data to derive peak-of-the-peak load factors including period averages with three to six trips maximum. Adjust trip-specific headways to attain 125% average for this period.
- Analyze the load data for distant route segments to ascertain if consolidation of trips less than 33% of maximum trip load will allow for short-line headways. Utilize candidate short-line trips to provide successive capacity in the peak direction. In the case of light rail service, consider short-line/shuttle trips.

### **Future Capacity Planning**

The TEP initiative addresses both long-term growth and ridership projections and attempts to rationalize service goals with resource effectiveness. The phases of implementation further commit capital improvements necessary to achieve both greater capacity and reduction of travel times. As the demand for Muni service increases in the short-term, the available vehicles, operators and support facilities will be stressed. It is incumbent to progress the programs/projects in concert and with date-specific deadlines.

The opening of the Central Subway in 2019 creates the opportunity to achieve substantial capacity improvement in multiple corridors before this project is completed. Over the next five years, demand in existing corridors and along newly-developed corridors will require

advancing both TEP implementation and innovative operations planning.

*Recommendations*

- Analyze the total modal vehicle availability from 2014 through 2019 when both the bus and light rail fleets will be 100% replaced. The total modal peak vehicle capacity should be quantified and represented in relation to total peak demand.
- Consider mode and subfleet vehicle substitutions in the near-term to achieve load factor service standards where longer-term fleet replacement will exacerbate underserved lines.

## **A Operational Efficiency**

Service standards in this category are primarily related to service reliability, including Muni's ability to deliver all of its scheduled service and on-time performance. In the 3<sup>rd</sup> Quarter of Fiscal Year 2012, Muni substantially revised its methodology for reporting performance in the key area of On-Time Performance (A1), resulting in an apparent decline in schedule adherence of more than 10 percent. However, rates of service delivery (A2) and vehicle reliability (A5) improved during the audit period.

Following the changes to the methodology for reporting on-time performance, officially reported figures for schedule adherence, which were already averaging around 71% to 75%, well below the Charter-mandated standard of 85%, fell even further, to approximately 61% in the 3<sup>rd</sup> Quarter of FY 2012 and approximately 58% in FY 2012. Due to the change in methodology, however, it is impossible to determine whether actual performance improved, declined, or remained about the same.

On the following pages are brief summaries of Muni's Fiscal Years 2011-2012 performance for each of the service standards in this category, including arrows indicating general trends (up for "positive," facing right for "neutral," and turned down for "negative") in terms of both historic patterns and performance over the course of the audit period.

Please note that starting in FY 2013, the SFMTA implemented a new data reporting system, in part building on previous audit recommendations to provide more understandable performance standards and measures. Additionally, the next Quality Review (for Fiscal Years 2013 and 2014) is scheduled to begin immediately. For these reasons we have developed few recommendations for changing measures in this audit.



## **A Operational Efficiency**



### **A1 On-Time Performance**

*Customer Observed Schedule Adherence*

In Fiscal Years 2011 and 2012, Muni remained well below the systemwide goal of 85% adherence to a standard of no more than 1 minute early or 4 minutes late. In Q3 of FY2012, the SFMTA implemented a revised on-time performance calculation, which improved the accuracy of reported results, but which also had the appearance of worsening performance. Systemwide, customer observed schedule adherence was 73.0% in FY2011 and dropped to 65.4% in FY2012, largely reflecting the calculation change.



### **A1 On-Time Performance**

*Headway Adherence*

A secondary measure of on-time performance, headway adherence, is based on a standard of vehicles operating within 30% or 10 minutes (whichever is less) of their scheduled headway (or frequency). Performance in this area improved over the course of the audit period, increasing to just under 64%.



### **A2 Service Delivery**

*Scheduled Service Hours Delivered*

The percentage of scheduled service hours that was delivered continued to hover around approximately 97% over the audit period, reaching its highest level in seven years in FY 2011 (97%) before falling slightly in FY 2012. However, Muni remained below its goal of 98.5% delivery of scheduled service hours.



### **A2 Service Delivery**

*Late Pull-Outs*

Late "pull-outs" from yards at the beginnings of peak periods decreased in both FY 2011 and FY 2012 to points well below the target cap of no more than 1.5%.



### **A3 Load Factors**

In FY 2009, the standard for measuring overcrowding changed from the percentages of routes with loads greater than 85% of total (seated and standing) capacity over the course of the day to a more meaningful metric of the percentages of trips during peak periods experiencing loads of 125% of capacity. During the audit period, the number of Muni trips experiencing overcrowding by this standard exceeded the target of 4% in both the AM and PM peak periods, increasing to over 10% in both peak periods in FY 2012.



## **A Operational Efficiency**

### **A4 Unscheduled Absences**

While the rate of unscheduled absenteeism for most positions is in the mid- to upper-single digits, the rate for operators has consistently been higher than 10%. This is a key reason why Muni has historically been unable to achieve its target for Scheduled Service Hours Delivered of 98.5%.

### **A5 Mean Distance Between Failure**

During the audit period there was an increase in the mechanical reliability of all types of rail and bus vehicles. Additionally, with the exceptions of the Woods division diesel buses and cable cars, all vehicle divisions achieved their reliability targets for a majority of the audit period. These improved reliability records are likely due to a variety of factors including vehicle refurbishment programs.

### **A6 Vacancy Rate for Service Critical Positions**

During the audit period, maintenance staff vacancy remained relatively constant at approximately 19%, while crafts staff vacancy also hovered around 16% over the two-year period. Muni reliability improved during this period; however, the long-term effects of a consistently short-staffed maintenance team cannot be fully known at this time. The SFMTA did not report the vacancy rate for Transit Operators in FY 2011 and FY 2012.

### **A13 Productivity**

The numbers of boardings onto Muni vehicles per hour of service fell slightly between FY 2010 and FY 2011 before increasing again in FY 2012.

### **N/A A17 Sustainability**

In the 2011 biannual Controller's Survey, the question about commute trips changed slightly, complicating a direct analysis of this metric over time. In FY 2011, 47.5% of commute trips by those who were employed were made by "sustainable" modes (transit, biking, and walking). 32.1% percent of these commute trips were by transit.

**A1 On-Time Performance (Customer Observed Schedule Adherence)**

**Goal** > 85%

**FY11-12 Performance**



*Goal Not Achieved*

**Trend** *N/A due to methodology change*

**Purpose** To measure schedule adherence.

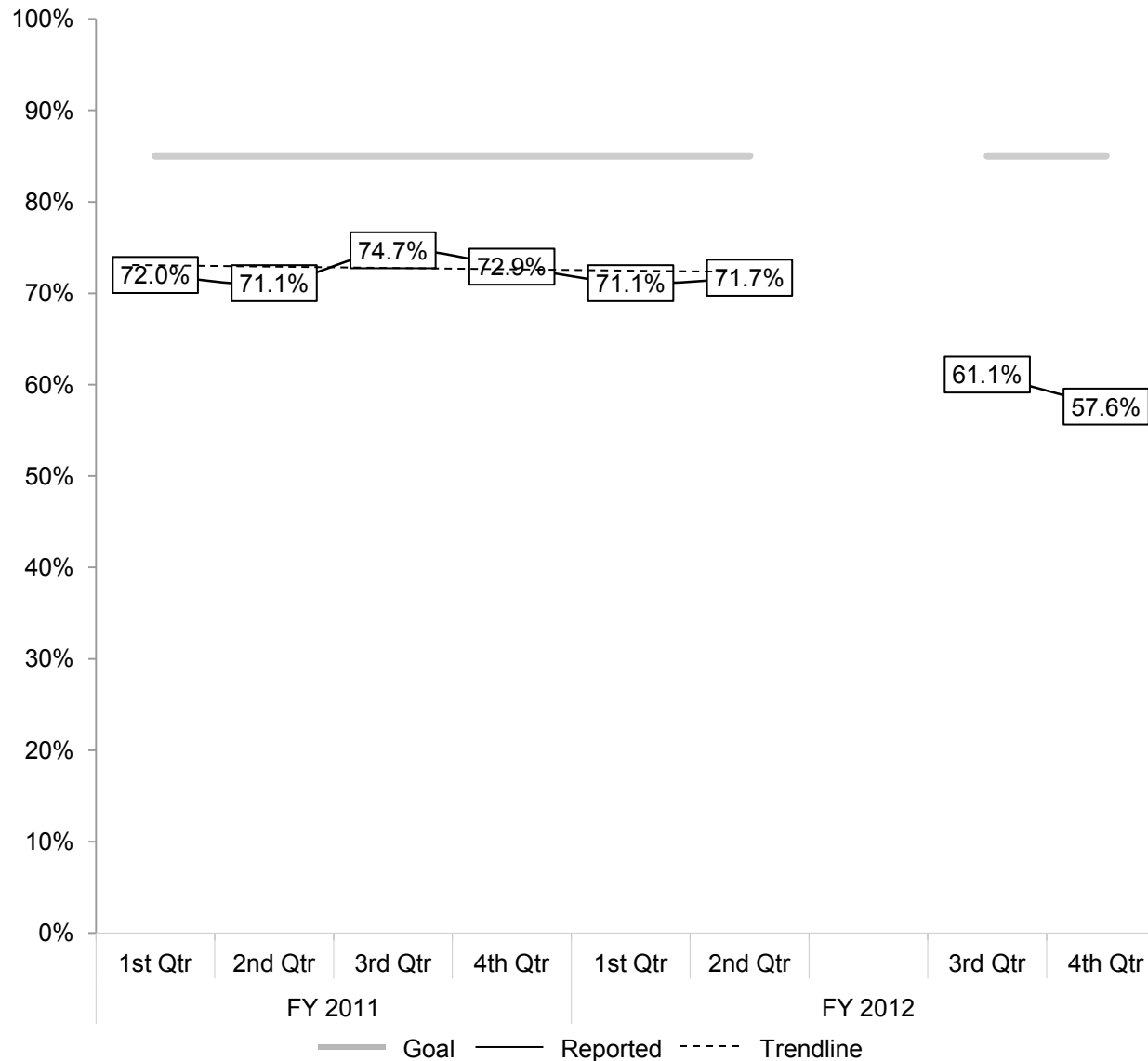
**Definition** Each line is checked at least once in each six month period. Such checks shall be conducted no less often than 10 weekdays and weekends per period. An annual checking schedule shall be established for the routes. The order in which the routes are checked will be determined monthly through 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 will be used.

Note: From FY11 Q4 through FY12 Q2, a bus was considered "on time" if it arrived between 1 minute early and 4:59 minutes late at any time point. Beginning in FY12 Q3, the standard was changed to count as "on time" only those vehicles arriving at their stop between 1 minute early and 4 minutes later than its scheduled arrival time.

**Method** Check the designated lines using criteria of -1/+4 minutes. Periods of time include morning rush (6am-9 am), midday (9am-4pm), evening rush (4pm-7pm), and night (7pm-1am). Supervisors conduct a one-hour check at a point at mid-route during all four time periods stated above.

(Note: while on-time performance continued to be collected through human observations, the methodology for reporting cable car on-time performance changed midway through FY12. In Q3 and Q4 of FY12, the SFMTA's chosen reporting methodology for cable cars switched to automated NextBus calculations.)

**A1 On-Time Performance (Customer Observed Schedule Adherence)**

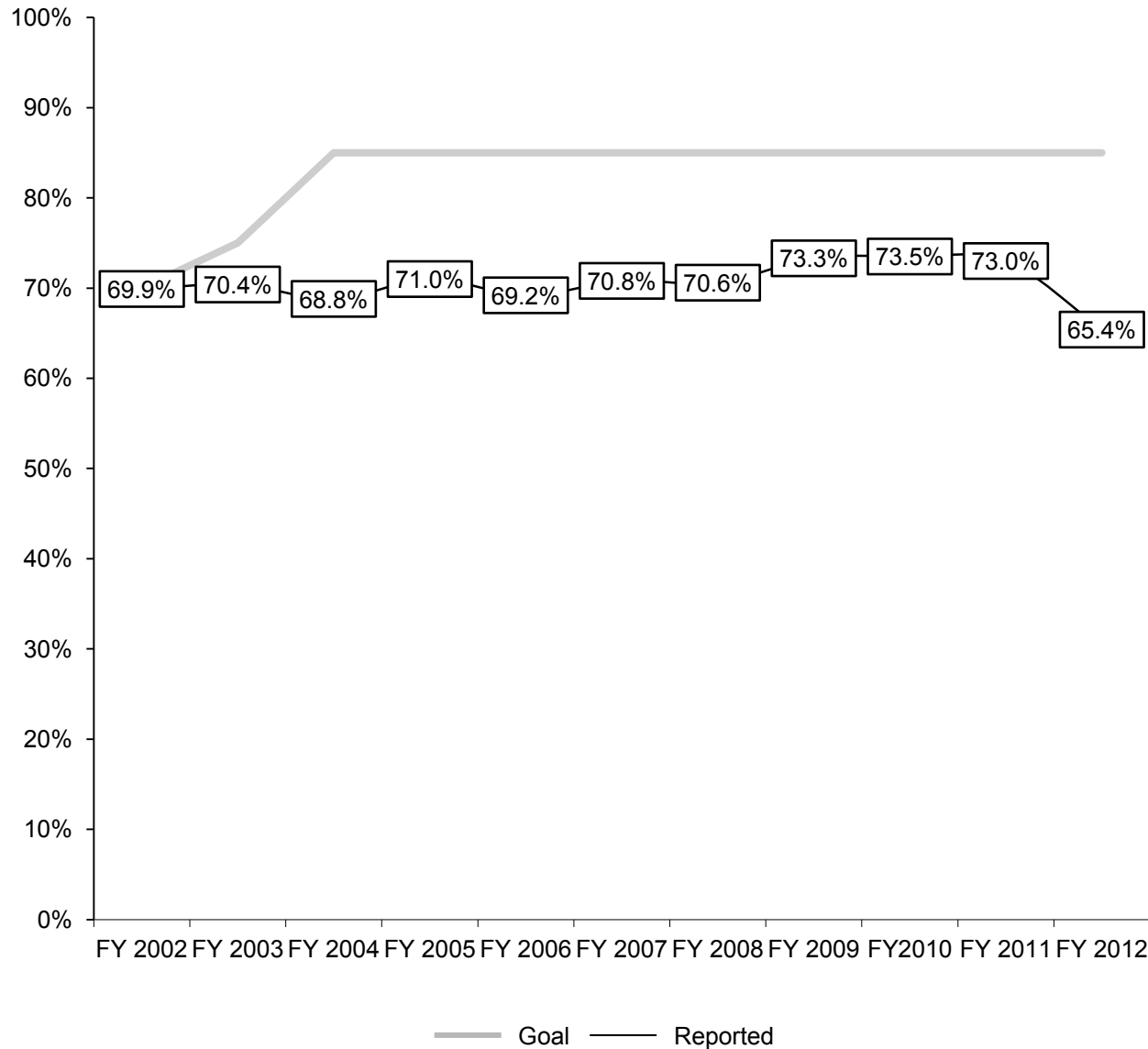


**Systemwide (Audit Period)**

The Charter standard for schedule adherence is arrival no more than 1 minute earlier or 4 minutes later than scheduled. Among other elements of the previous methodology that were changed, prior to the 3<sup>rd</sup> Quarter of FY 2012, the SFMTA considered a vehicle “on time” if it arrived up to 4 minutes and 59 seconds late. Using this methodology, on-time performance was between 71.1% and 74.7% for the first six quarters of the audit period, well below the goal of 85%. Due to the calculation change implemented in FY12 Q3, reported on-time performance fell even further, to 57.6%.

Note: On-time performance is depicted using a “gap” due to the change in methodology. Additionally, it should be noted that since different lines have historically been sampled each quarter, quarter-over-quarter changes are not especially meaningful; annual figures are more representative.)

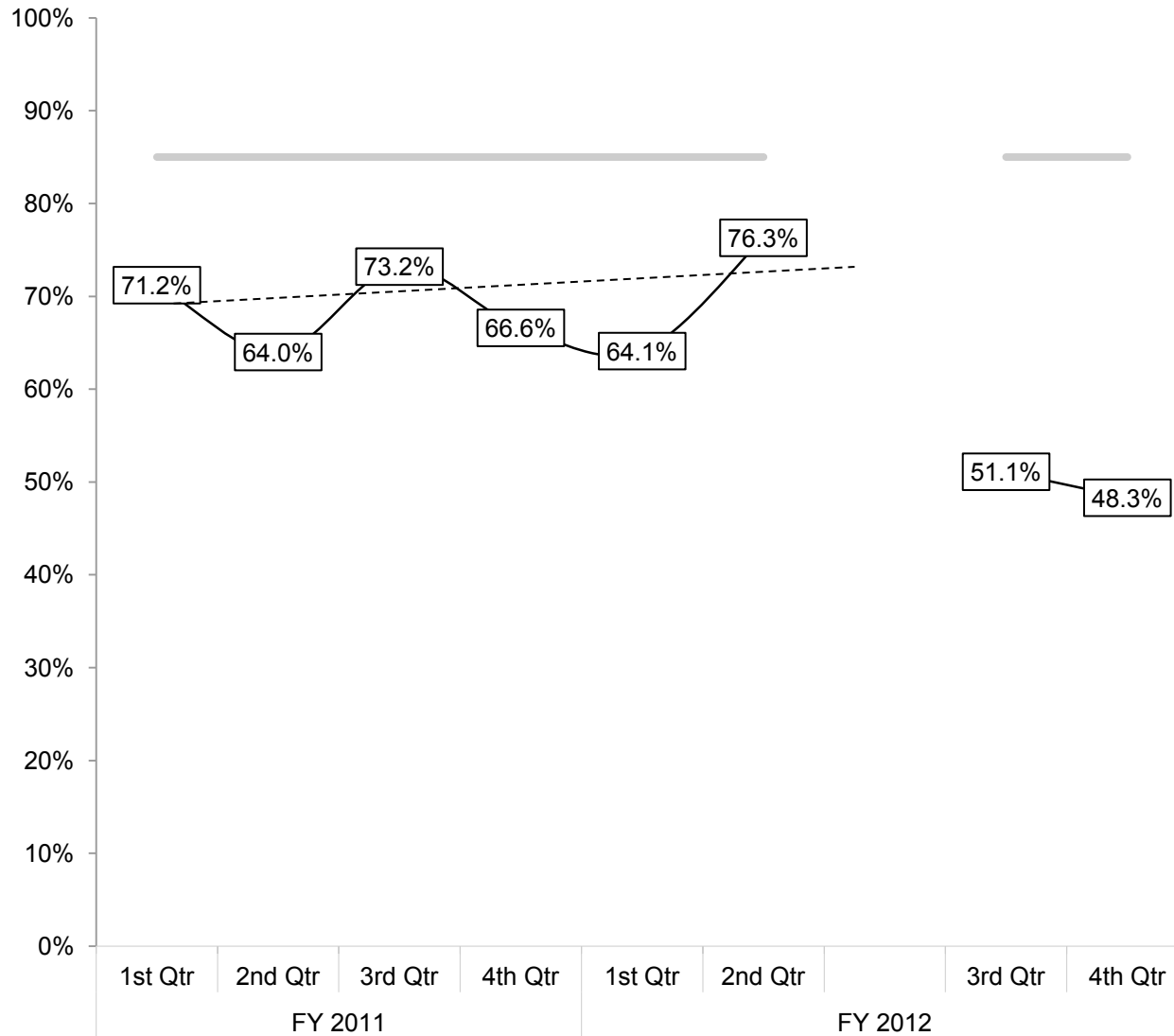
**A1 On-Time Performance (Customer Observed Schedule Adherence)**



**Systemwide (Historic)**

Based on the previous methodology, schedule adherence declined slightly in FY 2011, to 73.0%. Due all or in part to the change in the way the SFMTA calculated on-time performance beginning in the 3<sup>rd</sup> Quarter of FY 2012, on-time performance for FY 2012 fell to a ten-year low of 65.4%. Because this drop is due at least partly to the change in the SFMTA’s reporting methodology, a trendline is omitted from this graphic.

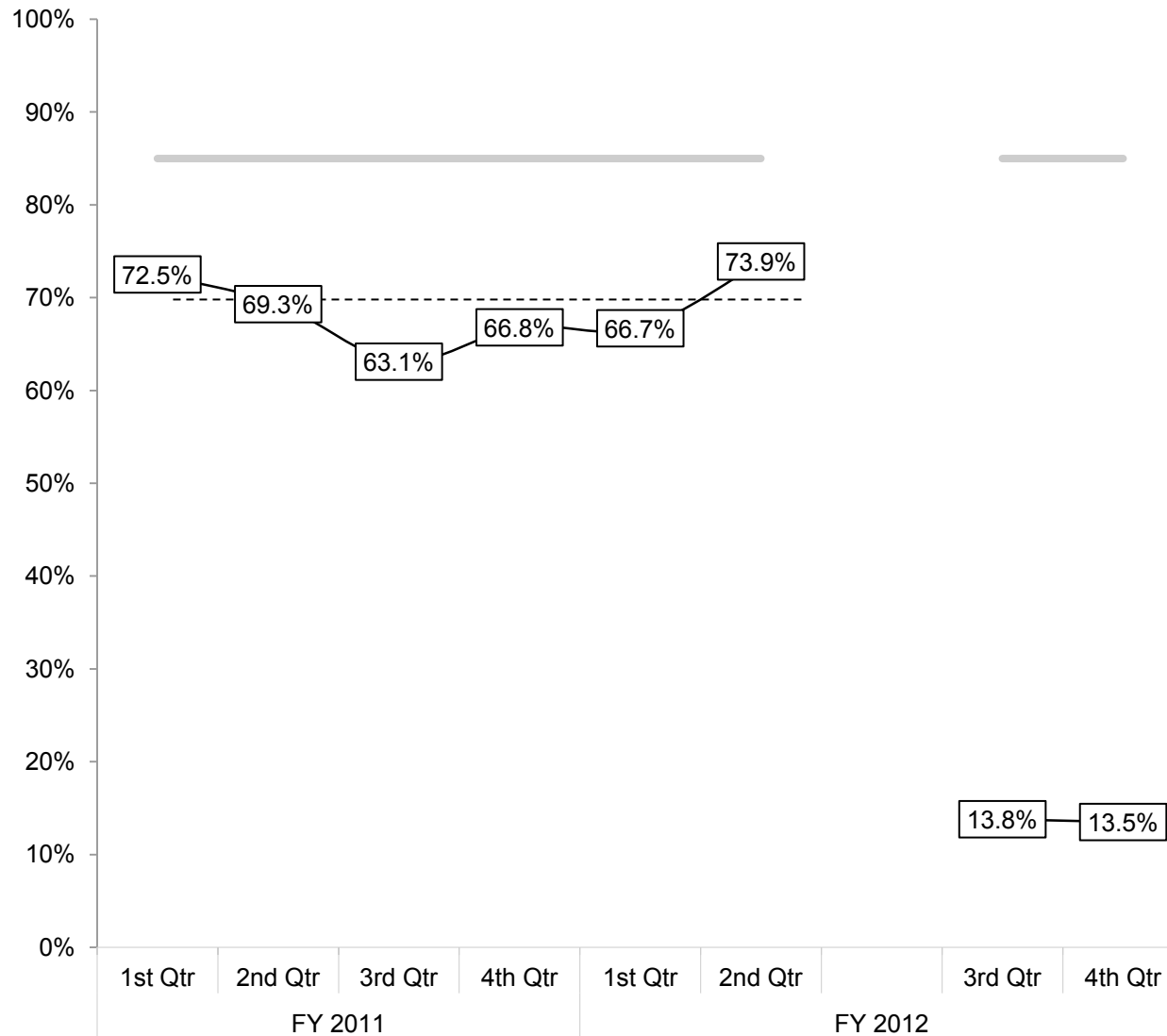
**A1 On-Time Performance (Customer Observed Schedule Adherence)**



**(Audit Period)**

During FY 2011, light rail on-time performance fluctuated between 64% and 73.2%, and this trend continued into the first half of FY 2012. Under the SFMTA's revised on-time performance calculations, light rail on-time performance reached audit period lows in Q3 and Q4 of FY 2012 of 51.1% and 48.3%, respectively. Note, however, that this drop in on-time performance is not necessarily indicative of declining performance, but rather reflects a significant change in the standard.

**A1 On-Time Performance (Customer Observed Schedule Adherence)**

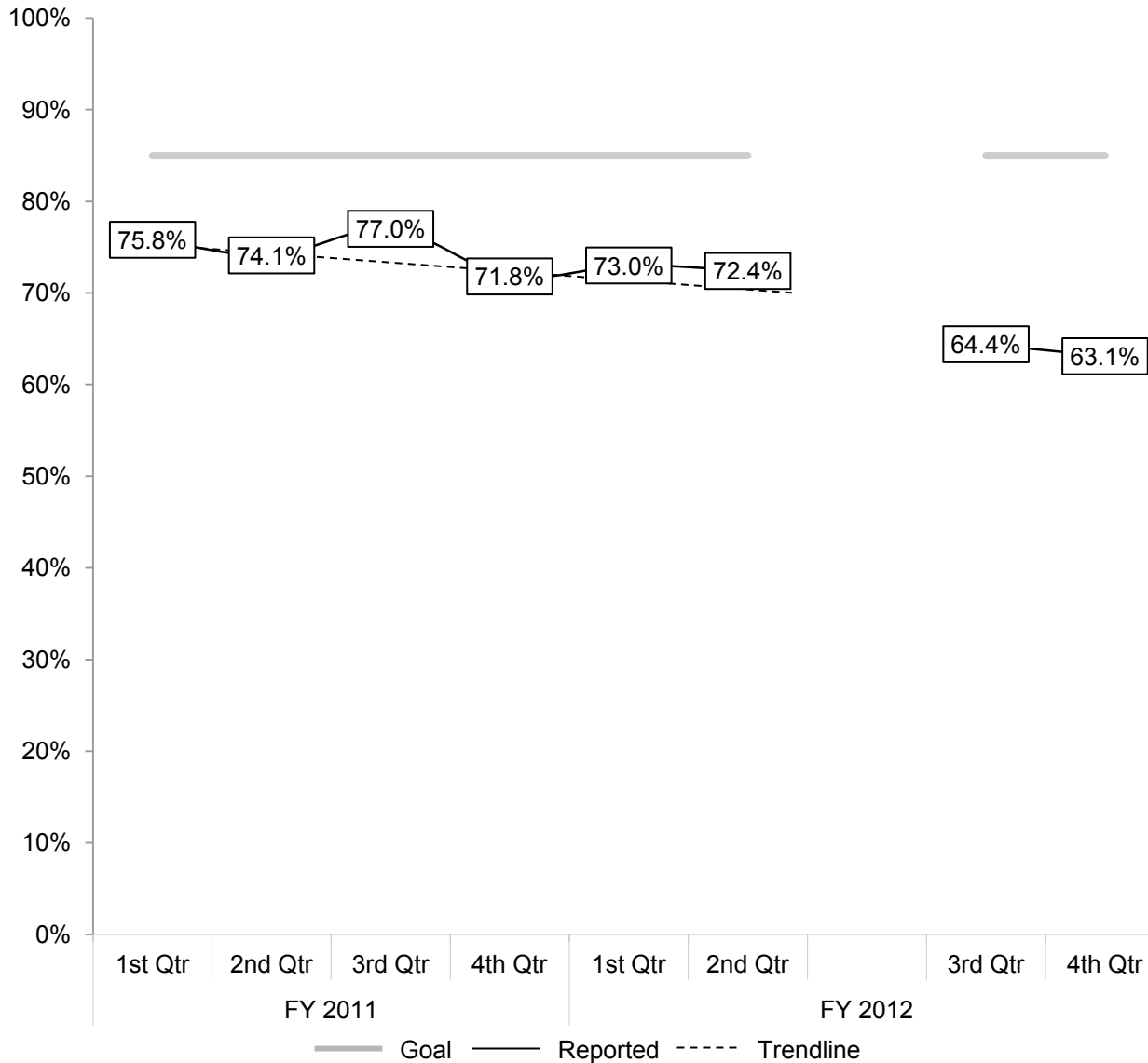


**(Audit Period)**

From the 1<sup>st</sup> Quarter of FY 2011 to the 2<sup>nd</sup> Quarter of FY 2012, cable car schedule adherence varied, ranging from a low of approximately 63% to nearly 74%. The adoption of the SFMTA's new on-time performance methodology in the 3<sup>rd</sup> Quarter of FY 2012 resulted in greatly reduced official figures for cable car operations, with schedule adherence of just under 14%.

Note: while on-time performance observations continued to be collected manually throughout the audit period, reporting of on-time performance switched to automated NextBus calculations beginning in FY12 Q3. This may have also contributed to the lower results in the final two quarters of FY12.

**A1 On-Time Performance (Customer Observed Schedule Adherence)**

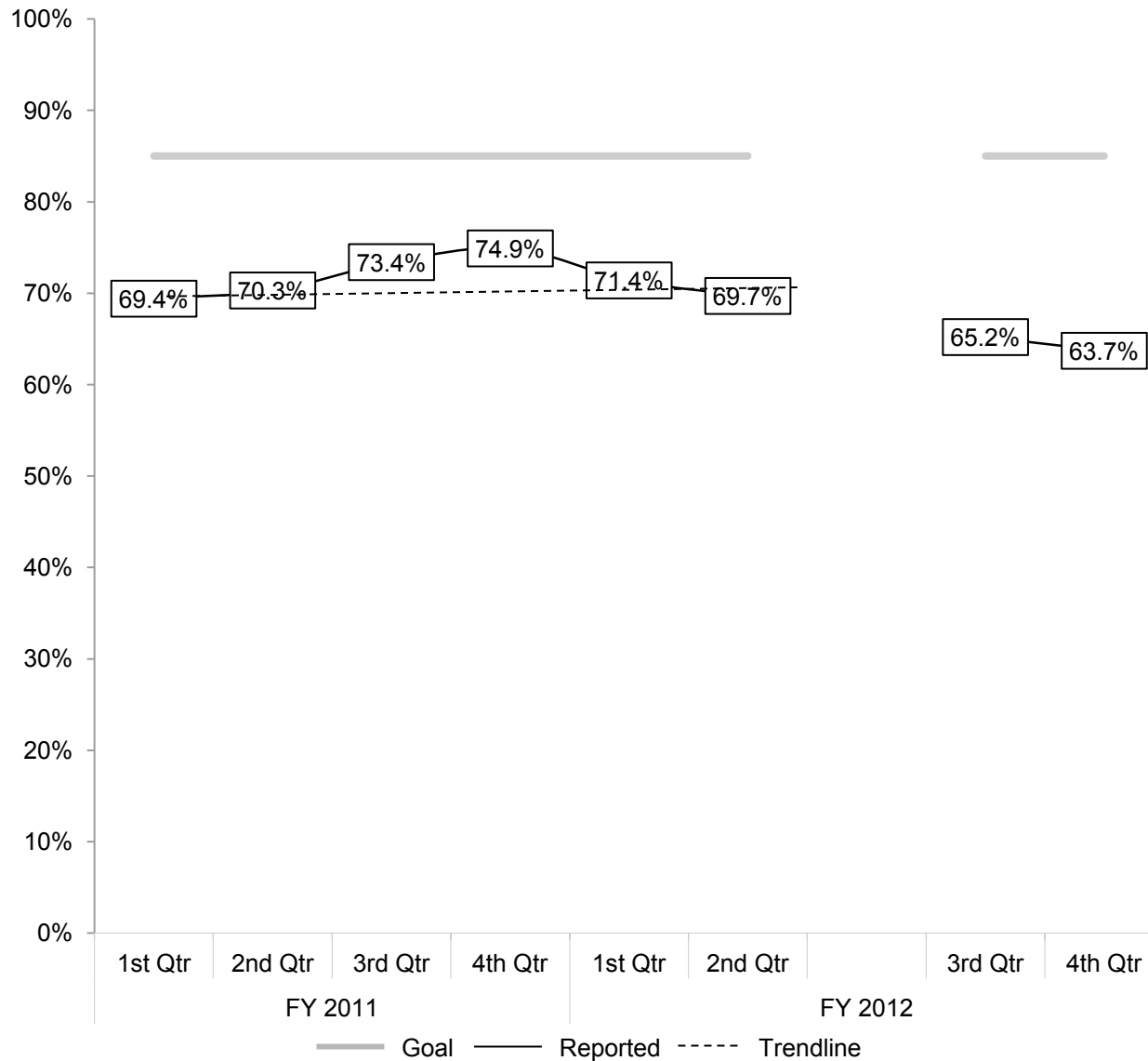


**Trolley Coach (Audit Period)**

Electric trolley vehicles have historically been Muni’s most reliable mode. This remained true during the audit period, with performance consistently above 70% in all quarters before the on-time performance calculation change. Even after this change in the 3<sup>rd</sup> Quarter of FY 2012, trolley coach schedule adherence remained relatively strong, especially in comparison with light rail and cable car performance during the last two quarters of FY 2012.



**A1 On-Time Performance (Customer Observed Schedule Adherence)**



**Motor Coach (Audit Period)**

Most Muni service is provided by diesel buses, so it is to be expected that schedule adherence on these lines will track closely with the systemwide average. Historically, this has generally been the case. Notably, however, following the on-time performance calculation adjustment in Q3 of FY 2012, motor coaches performed several percentage points better than other modes.

**A1 On-Time Performance (Headway Adherence)**

**Goal** > 85%

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



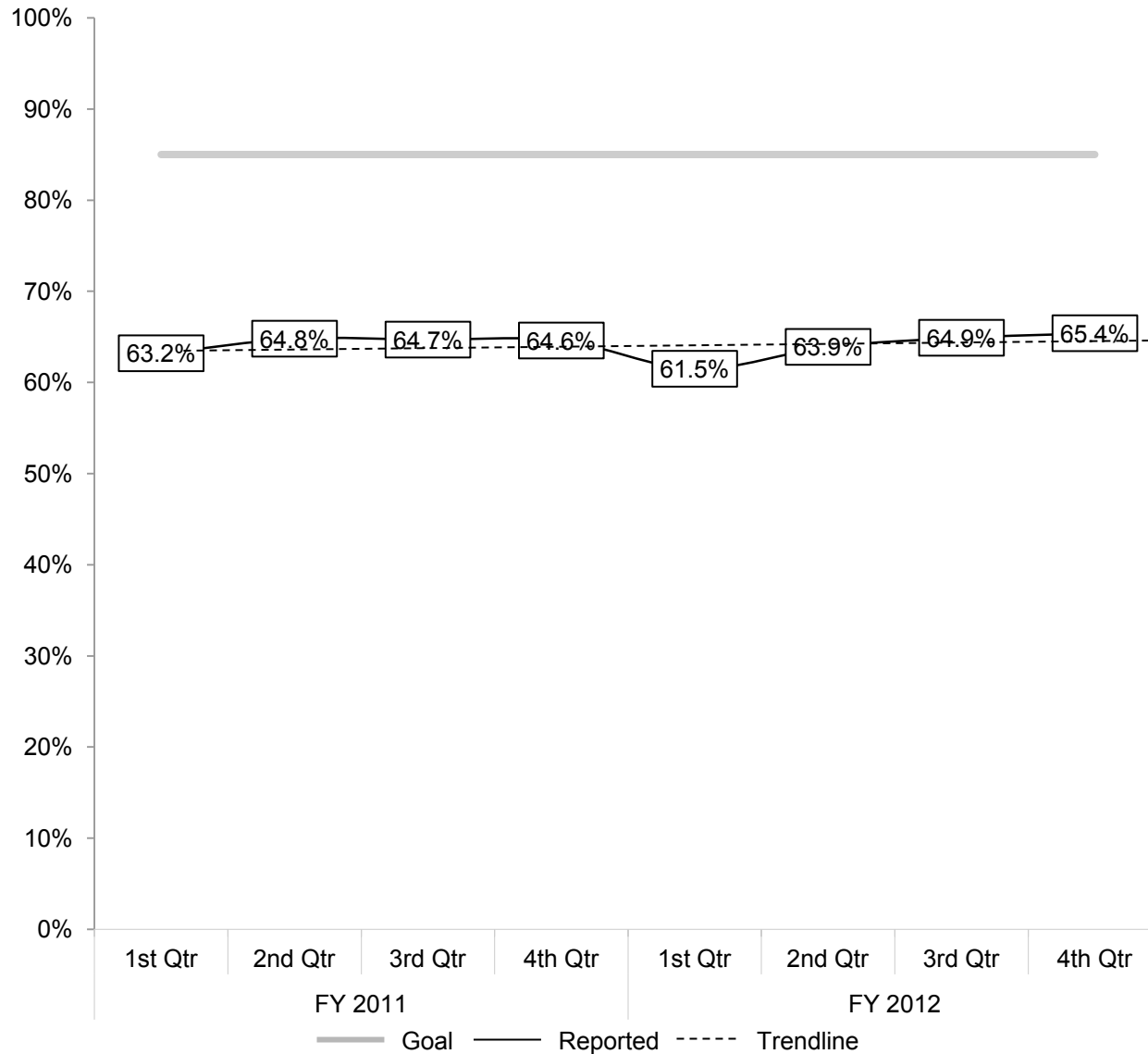
*Neutral*

**Purpose** To measure scheduled headways against actual headways.

**Definition** Actual headways are compared against scheduled headways on all radial express, cross-town, secondary, and feeder lines during all time periods. Each line is checked twice a year. Such checks shall be conducted no less often than 10 weekdays and weekends per period. An annual checking schedule is 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 will be used.

**Method** Headways are checked in four time periods including morning rush (6am-9am), midday (9am-4pm), evening rush (4pm-7pm), and night (7pm-1am). Supervisors conduct a one-hour standard check at a maximum load point during all four time periods stated above. *(Note: The standard for headway adherence is +/- 30% or 10 minutes of scheduled headway, whichever is less.)*

**A1 On-Time Performance (Headway Adherence)**

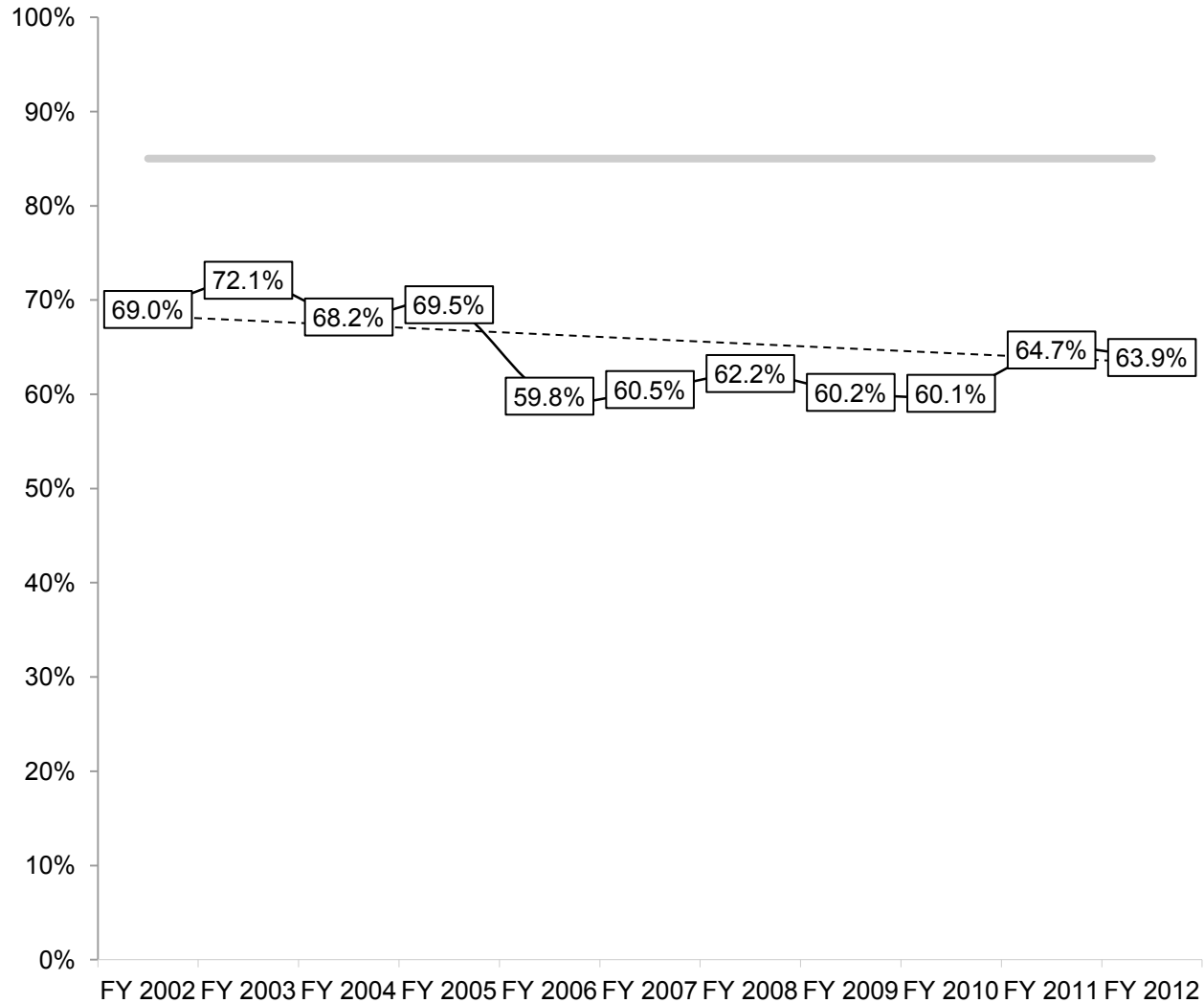


**Systemwide (Audit Period)**

Headway adherence is a secondary measure of on-time performance; it measures “gaps” between arrivals (e.g., 10 minutes) and is based on a standard of no more than 30% or 10 minutes of the scheduled headway, whichever is less. During the audit period, headway adherence experienced a very slight upward trend, hitting its highest levels since FY 2005 (see the next slide).

The consistency of headway adherence data further confirms the hypothesis that the apparent deterioration in on-time performance in 2012 can be primarily attributed to the tightening of the standard at that time, rather than by significantly worsening performance, as the headway adherence methodology did not change.

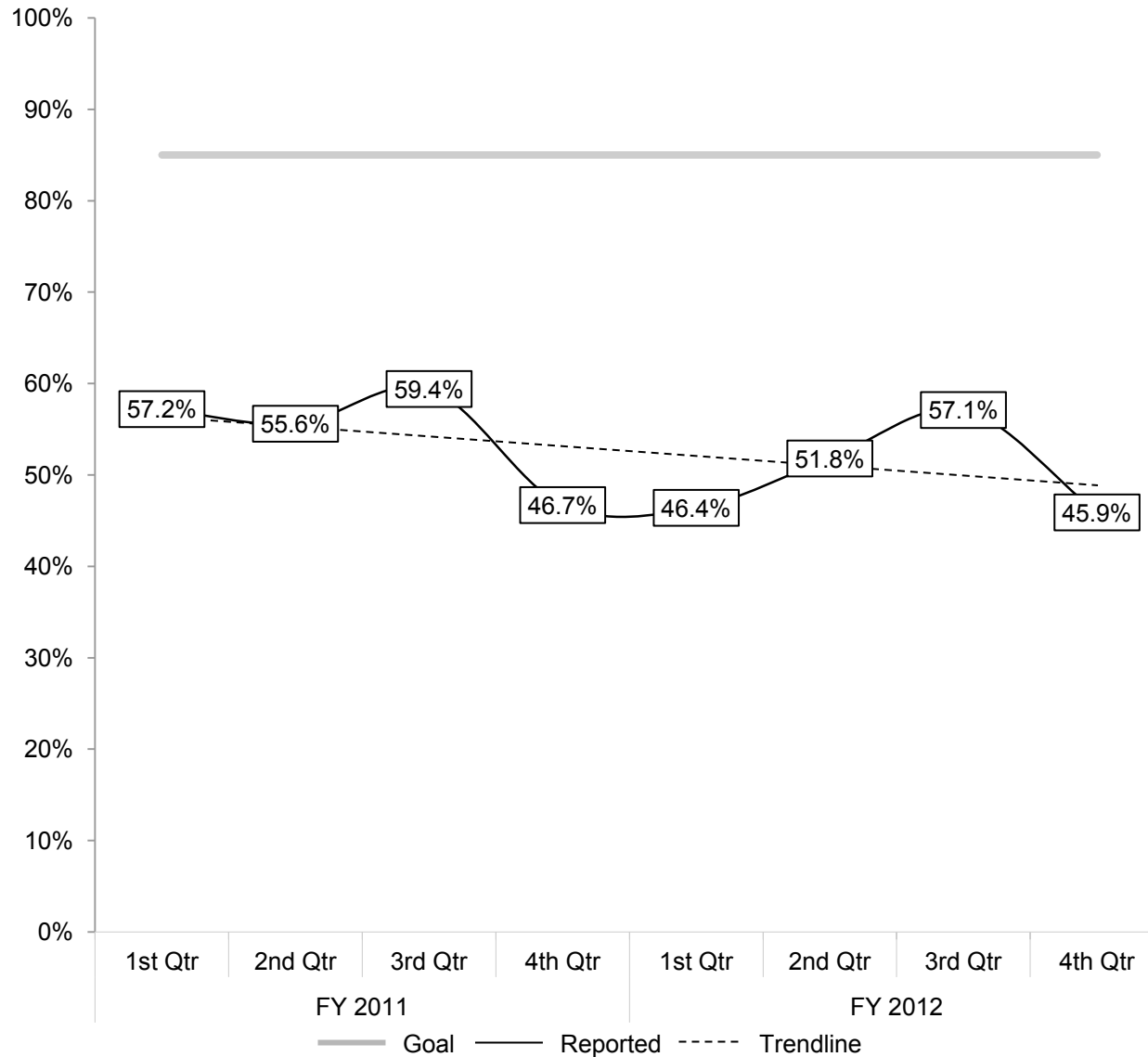
### A1 On-Time Performance (Headway Adherence)



#### Systemwide (Historic)

Until FY 2006, headway adherence tracked closely with schedule adherence. Starting that year, headway adherence declined significantly; however, in FY 2011 it improved modestly, and remained at about the same level in FY 2012.

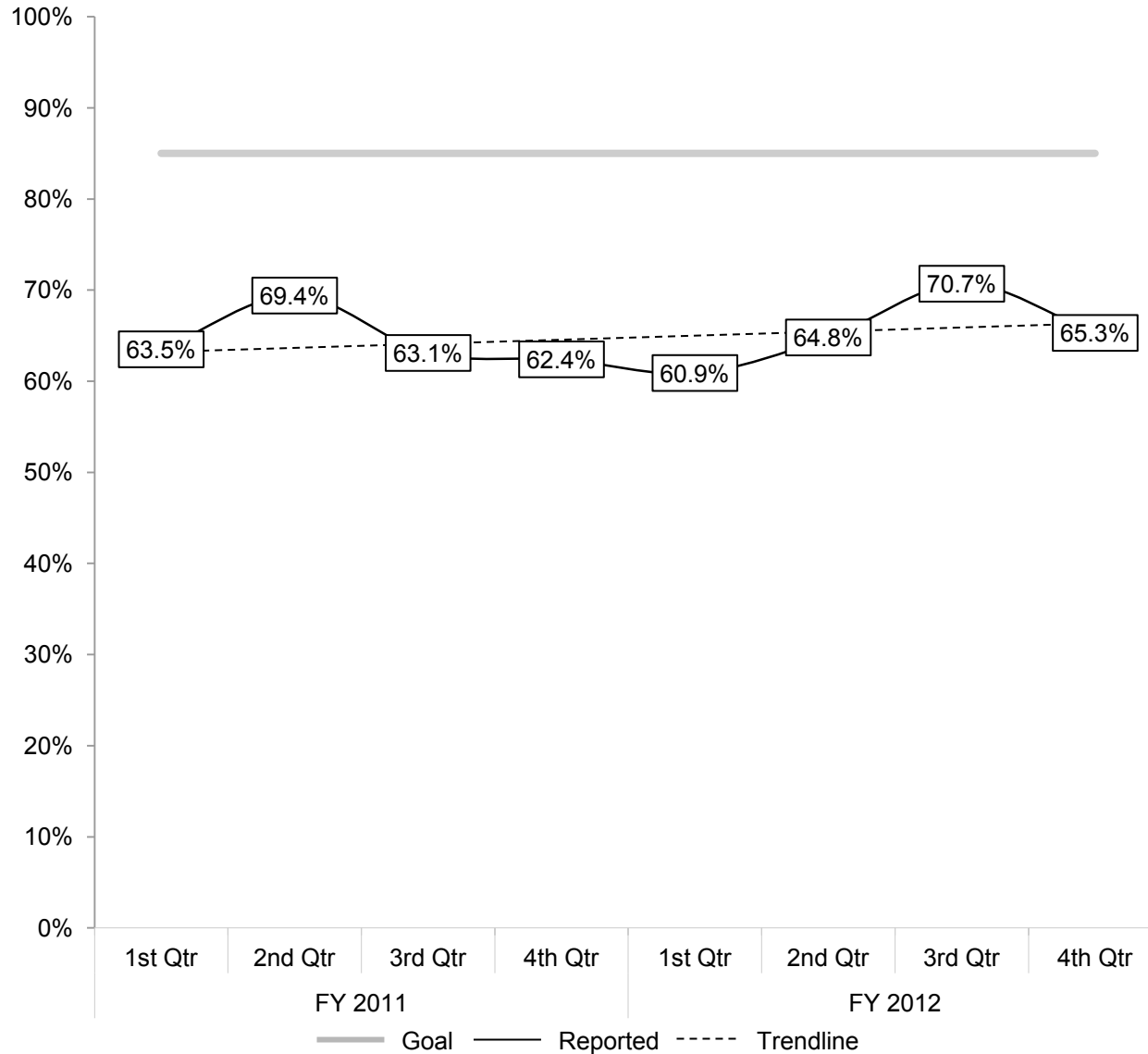
**A1 On-Time Performance (Headway Adherence)**



**Light Rail (Audit Period)**

Under Muni’s current headway adherence standard, light rail lines are especially susceptible to poor performance, as they operate relatively frequently, (e.g., 30% of 7 minutes – the peak headway on the N Judah – is just 2.1 minutes, leaving relatively little margin for error). During the audit period, Metro headway adherence fluctuated between a high of 59.4% in the 3<sup>rd</sup> Quarter of FY 2011 and a low of 45.9% in the final quarter of FY 2012.

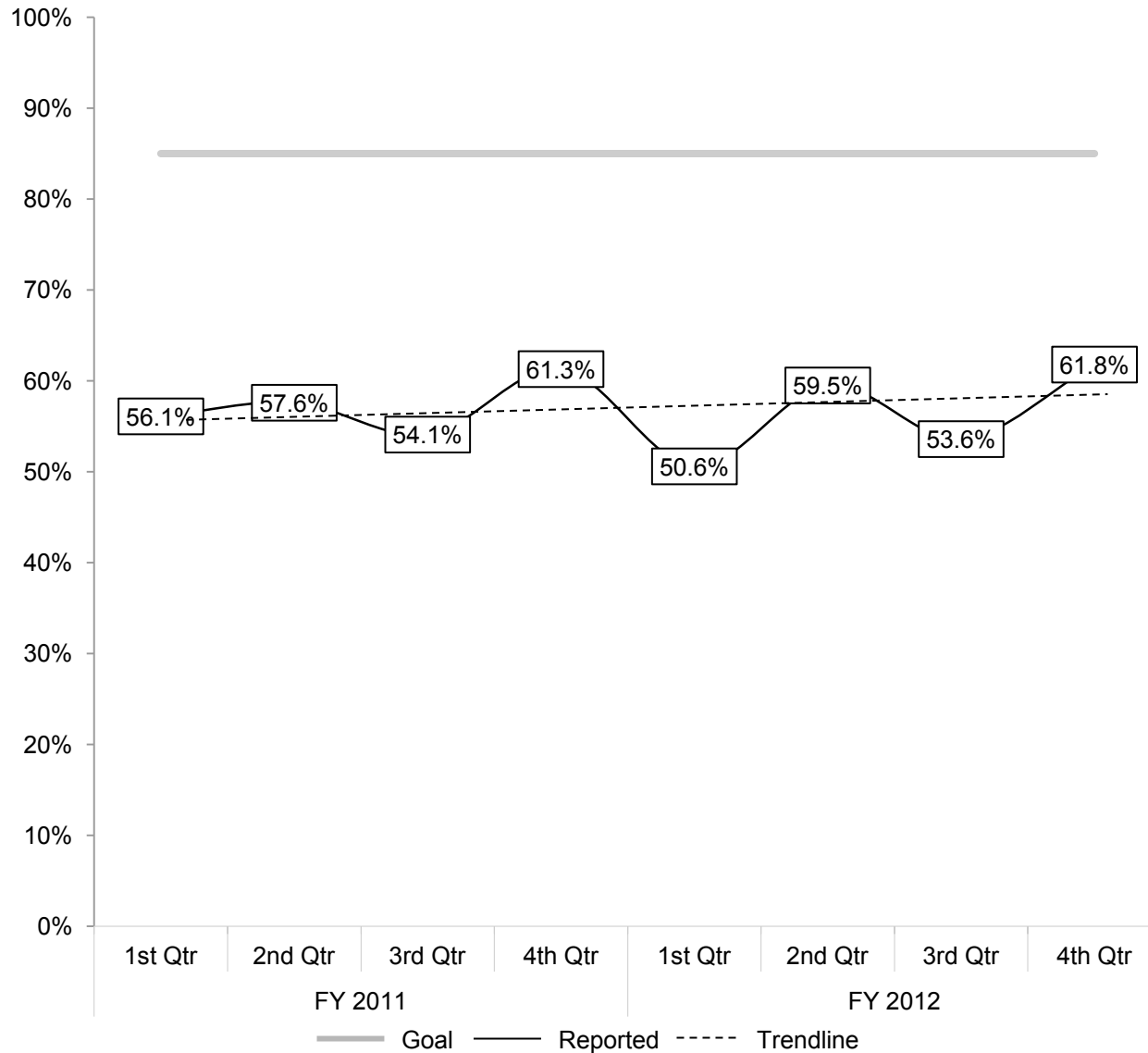
**A1 On-Time Performance (Headway Adherence)**



**Cable Car (Audit Period)**

Over the audit period, cable car headway adherence fell on par with systemwide performance, with a slightly upward trend line hovering around 65%. In the 2<sup>nd</sup> Quarter of FY 2011 and the 3<sup>rd</sup> Quarter of FY 2012, headway adherence jumped to highs around 70%.

**A1 On-Time Performance (Headway Adherence)**

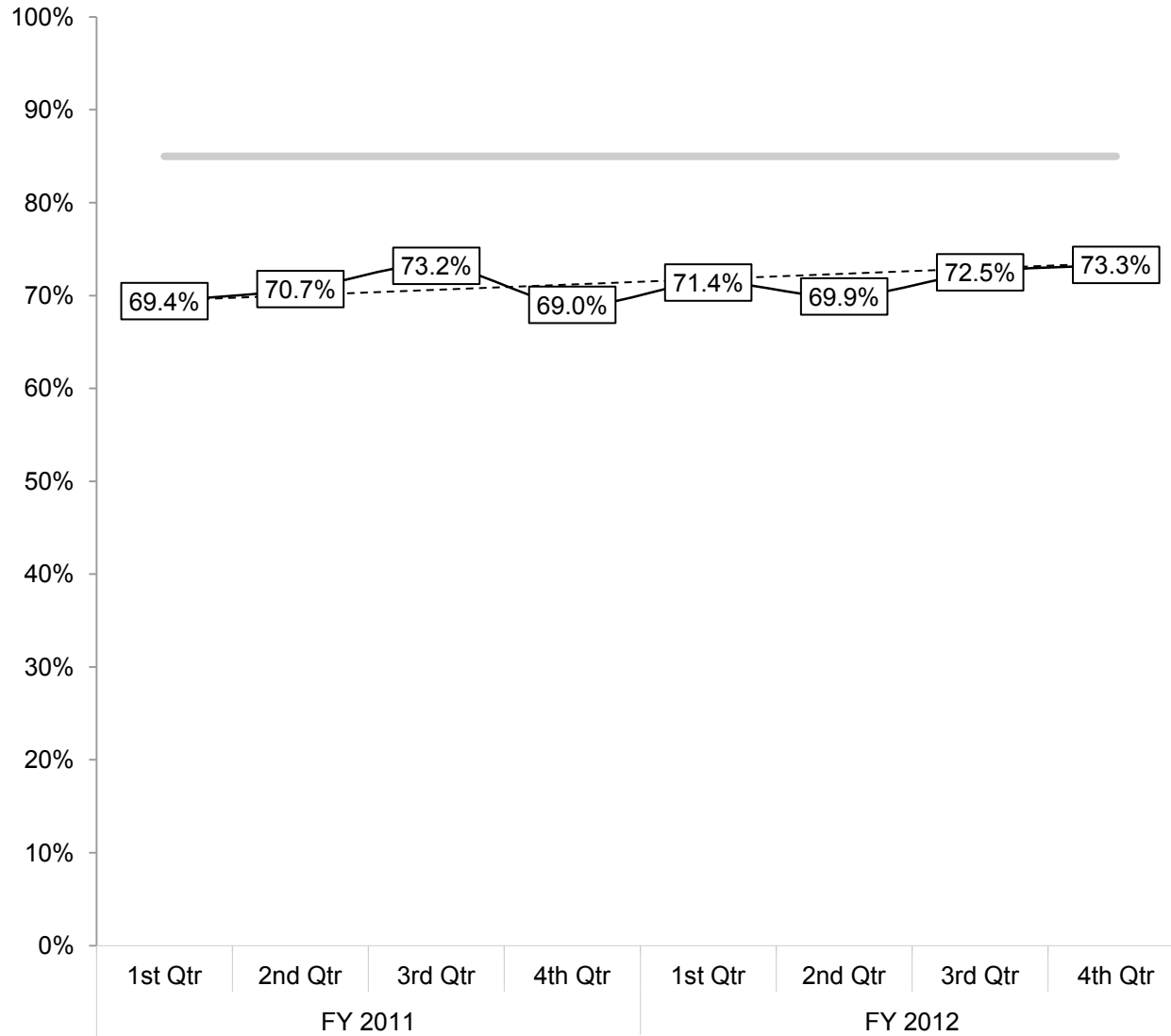


**Trolley Coach (Audit Period)**

While trolley coach schedule adherence was above the average for other modes, headway adherence on trolley lines fluctuated below the systemwide average of around 65%, at times maintaining consistent headway adherence a little more than only half of the time.



**A1 On-Time Performance (Headway Adherence)**



**Motor Coach  
(Audit Period)**

During the audit period, diesel bus headway adherence averaged about 70%, higher than the systemwide average.

**A2 Service Delivery (Scheduled Service Hours Delivered)**

**Goal** > 98.5%

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



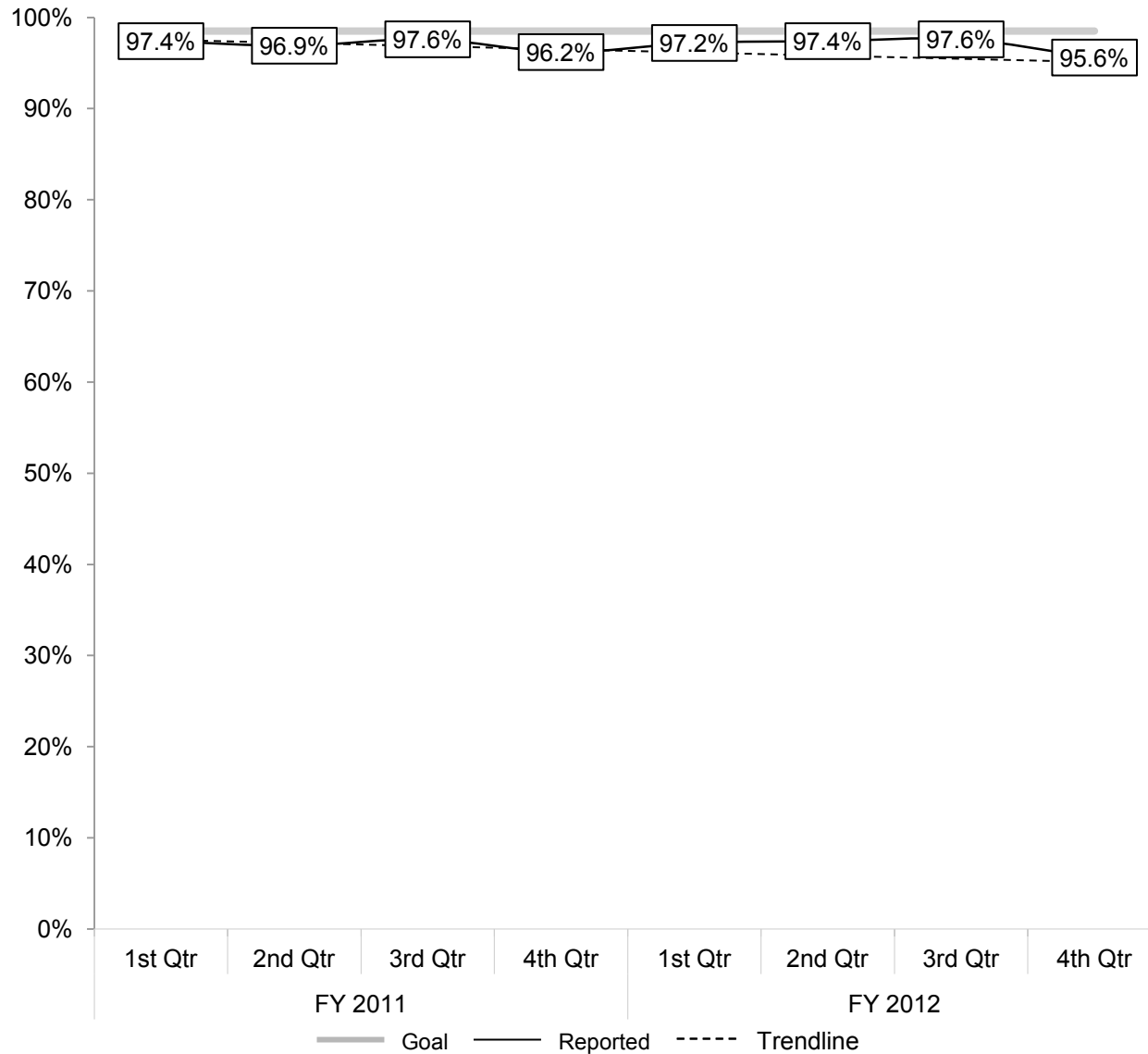
*Neutral*

**Purpose** To measure service hours through available operators and equipment deployed in revenue service, along with the percentage of equipment available for service; to measure timely deployment of service. *(Note: AM/PM Peak Equipment Availability and Operator Availability are no longer reported. Additionally, service delivery data by motor coach and trolley division were not provided for the two audit years.)*

**Definition** Monthly measurement of the percent of total available hours for service measuring operators and equipment and percentage of equipment available daily.

**Method** 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 Trapeze System.

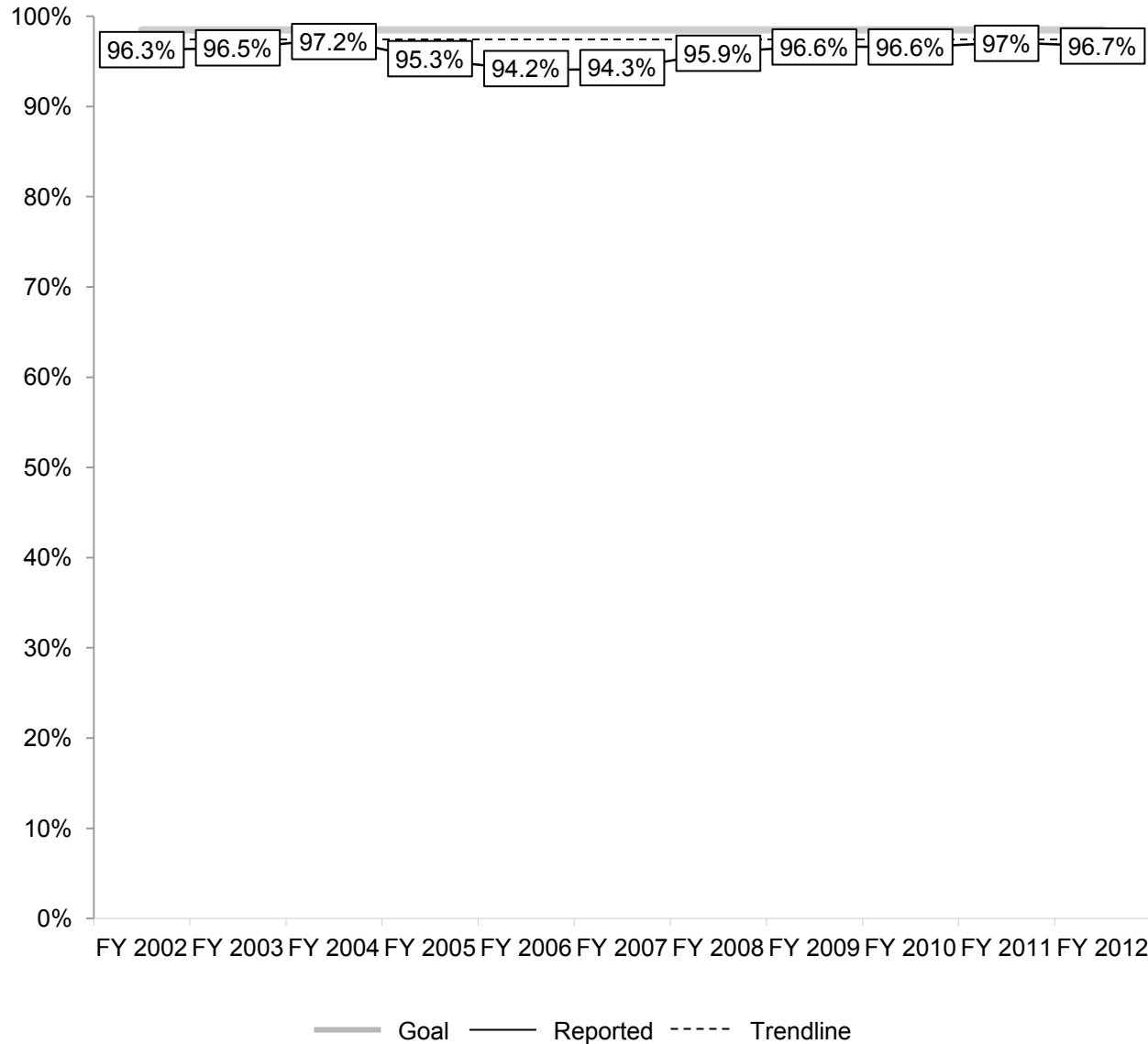
**A2 Service Delivery (Scheduled Service Hours Delivered)**



**Systemwide (Audit Period)**

The percentage of total scheduled service hours delivered remained relatively steady over the course of the audit period at between 95.6% and 97.6%, yet still below the goal of 98.5%. Persistent operator shortages during the audit period may have contributed to this performance.

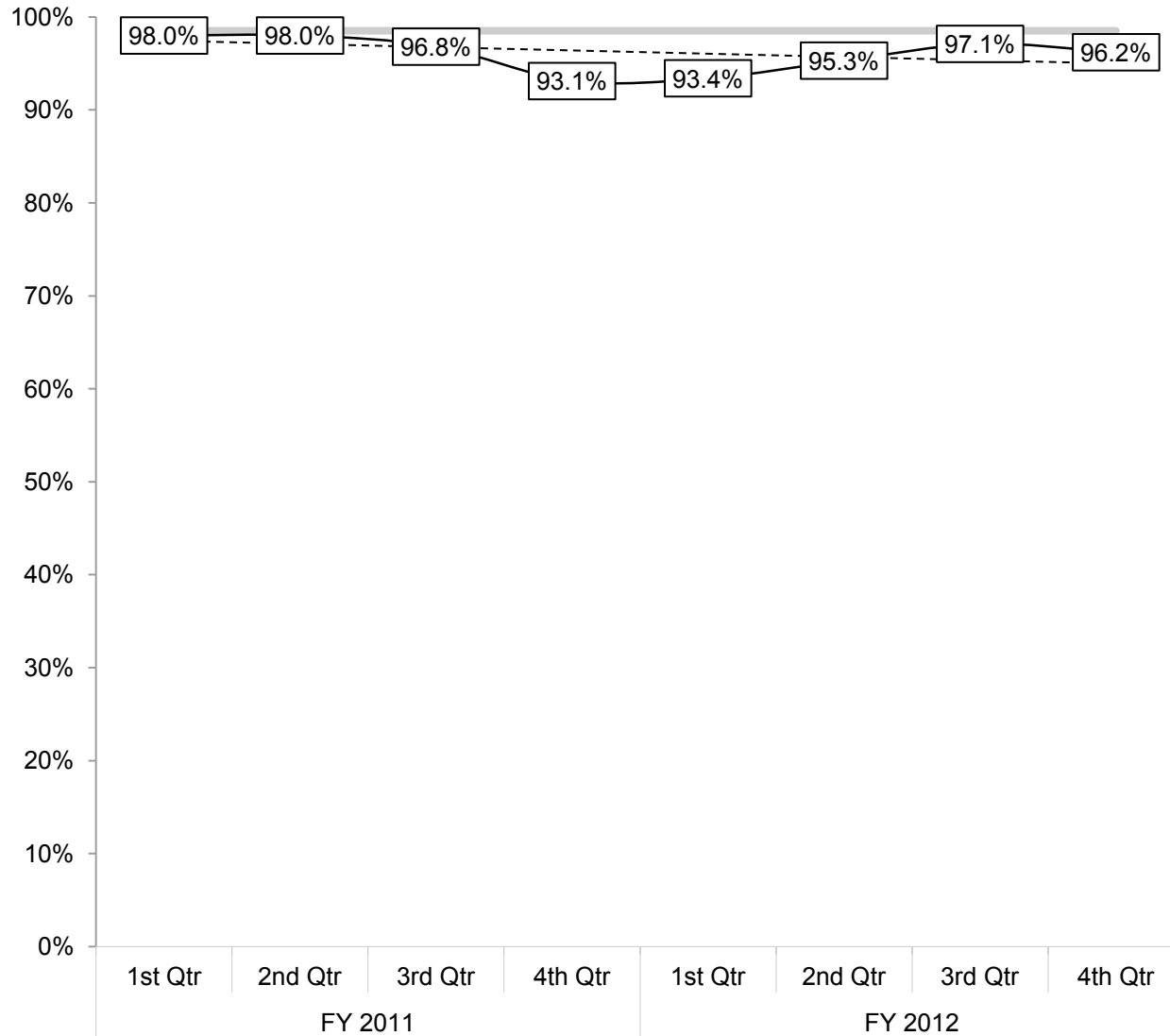
**A2 Service Delivery (Scheduled Service Hours Delivered)**



**Systemwide (Historic)**

The decline in systemwide service hours delivered experienced between FY 2005 and FY 2007, when the figure fell to around 94%, has been reversed, and in the past four years has remained steady at around 97%. Nevertheless, performance remains below the goal of 98.5%.

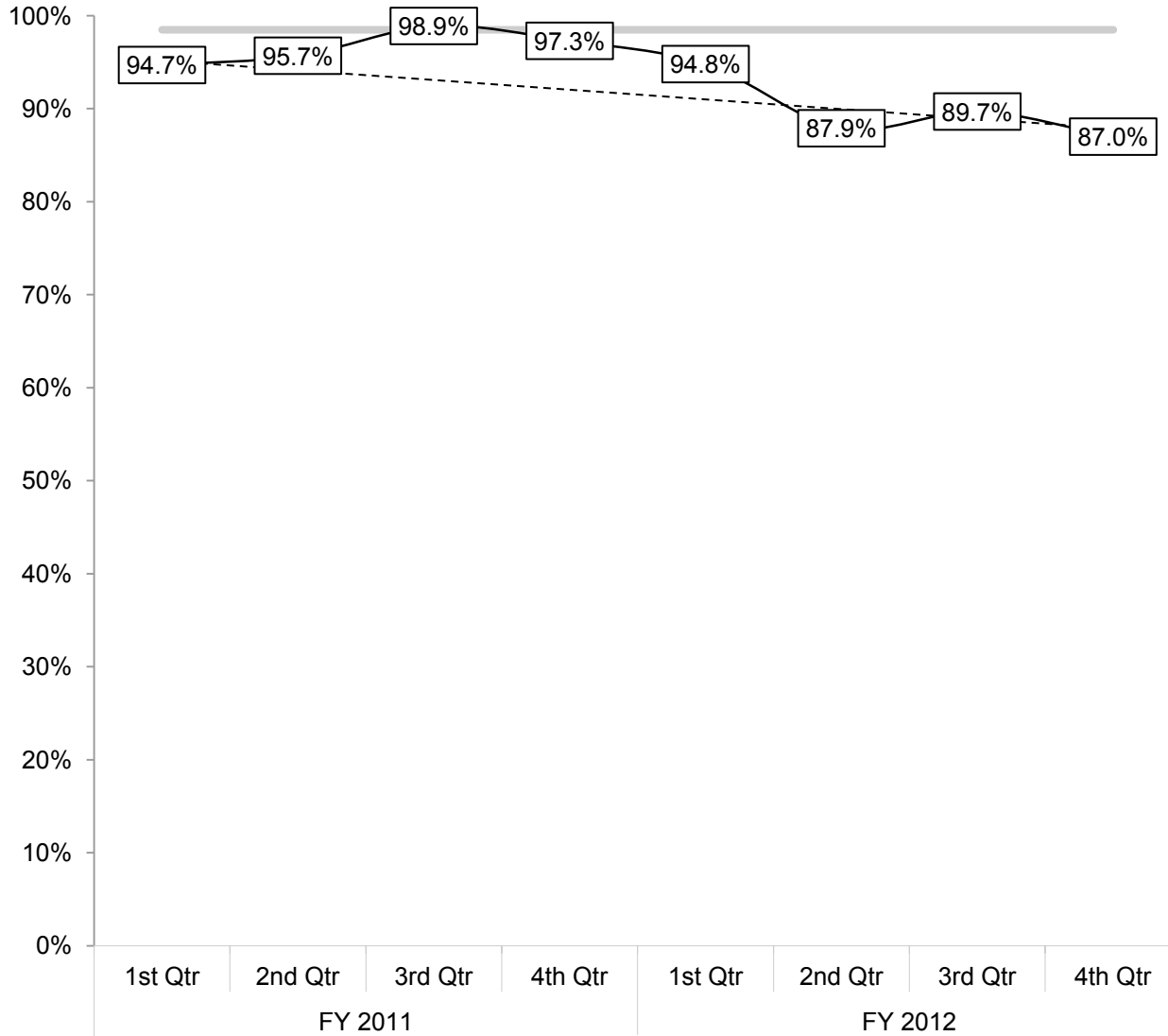
**A2 Service Delivery (Scheduled Service Hours Delivered)**



**Light Rail  
(Audit Period)**

Service hours delivered by light rail and historic streetcar vehicles began the audit period nearly reaching the goal, at 98%. Over the next two quarters, unfortunately, it declined to an audit period low of 93.1% in the 4<sup>th</sup> Quarter of FY 2011. Over the course of FY 2012, the percentage of service hours delivered improved to over 96%, however still under the goal of 98.5%.

**A2 Service Delivery (Scheduled Service Hours Delivered)**



**Cable Car (Audit Period)**

Service hours delivered by cable cars exceeded the goal in the 3<sup>rd</sup> Quarter of FY 2011, but trended downwards in the over the rest of the audit period, to a low of 87% in the 4<sup>th</sup> Quarter of FY 2012. This drop could be partly explained by mechanical problems that caused a disruption in cable car service in December 2012.

**A2 Service Delivery (Late Pull-Outs)**

**Goal** < 1.5%

**FY11-12 Performance**



*Goal  
Achieved*

**Trend**



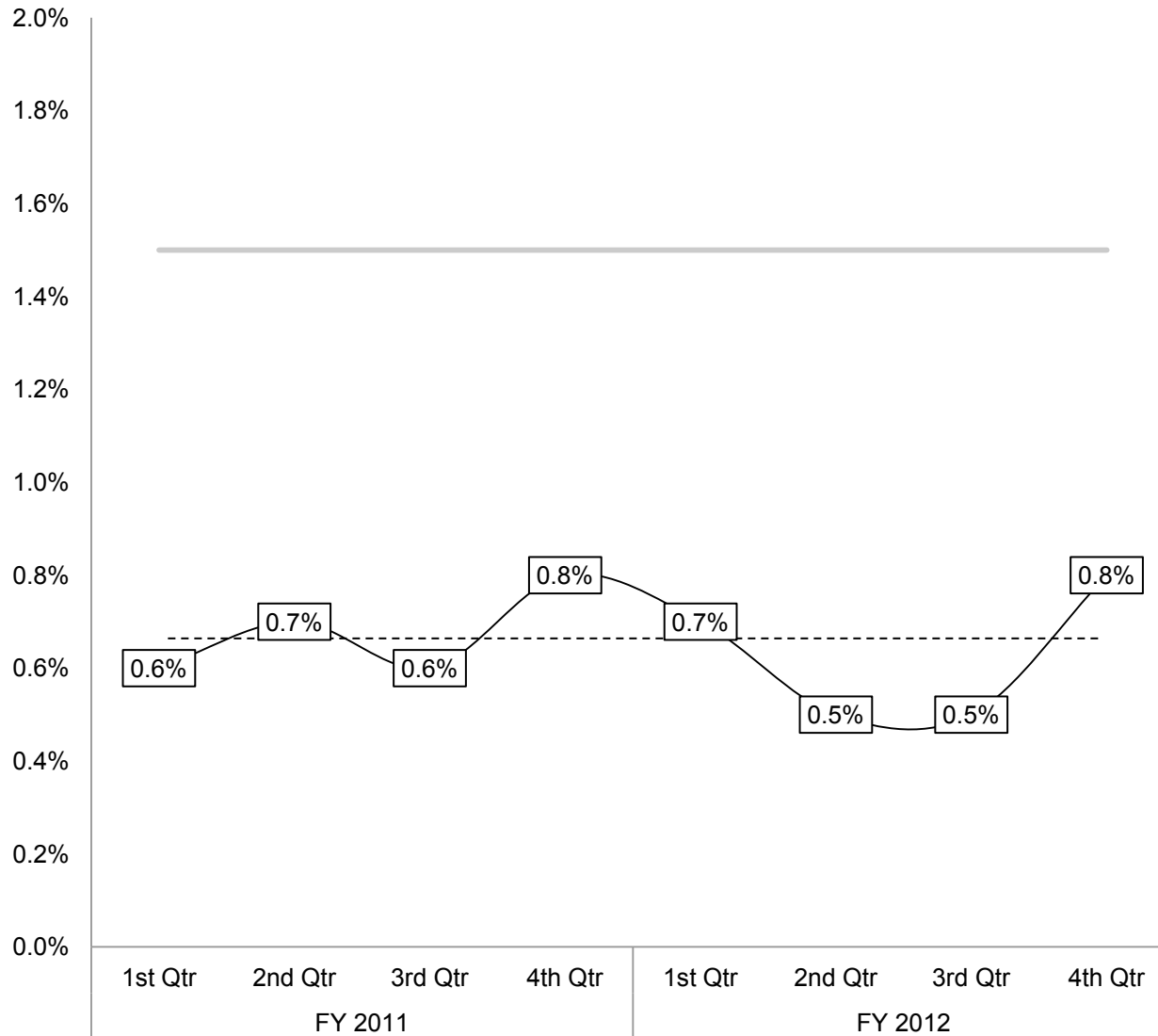
*Positive*

**Purpose** To measure timely deployment of service.

**Method** Measurement of the vehicles that begin service at the scheduled time will be provided from the 8am and 6pm “Not-Out Report” generated by Central Control and will show the percent of vehicles that went out at the scheduled time for both the AM and PM pullout.



**A2 Service Delivery (Late Pull-Outs)**

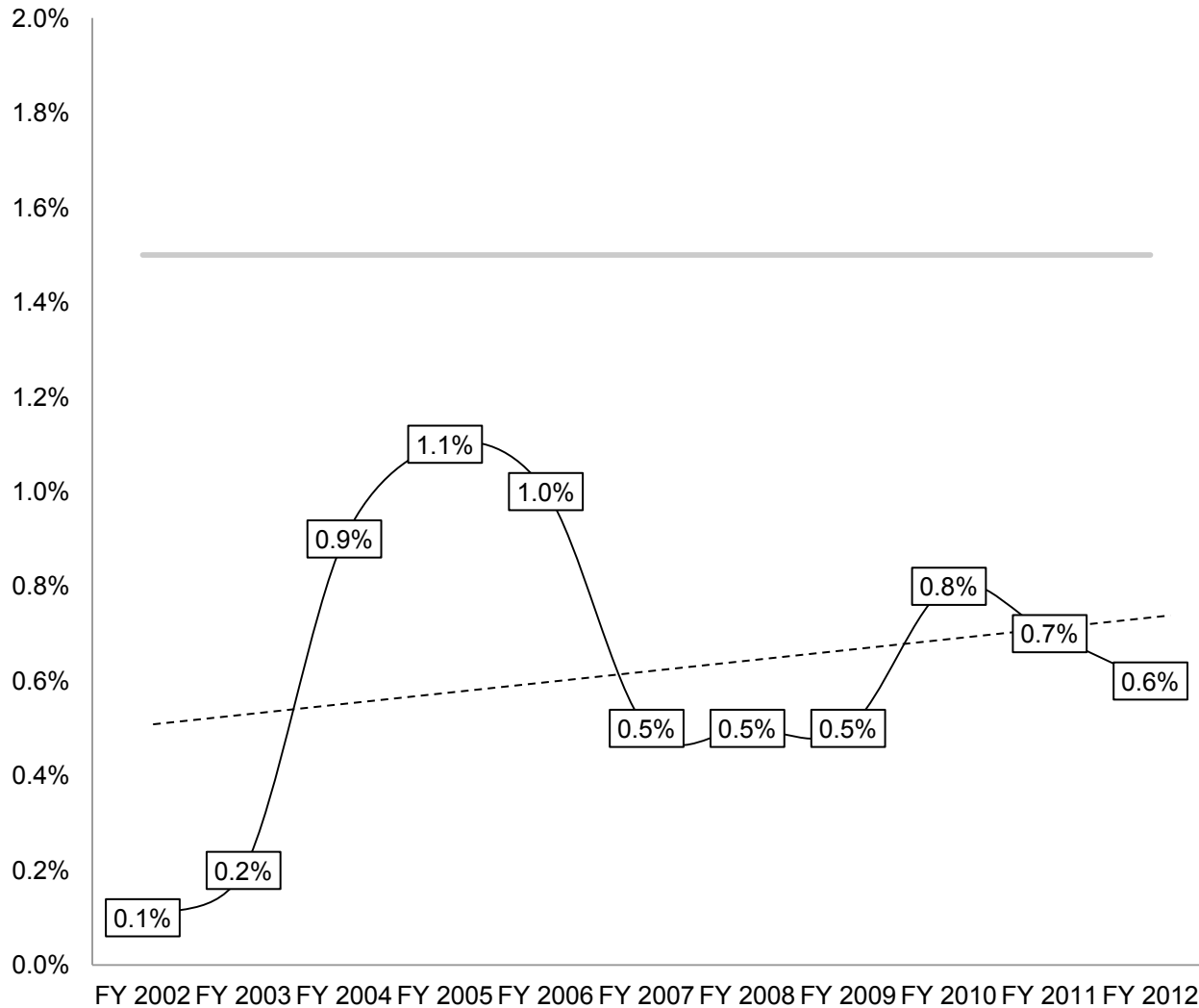


**Systemwide (Audit Period)**

“Late Pull-Outs” is a measure of how many vehicles entering into service fail to do so at their scheduled times during the AM and PM peak periods. While Muni has always achieved the goal of fewer than 1.5% of vehicles pulling out of the station late the percentage of late pull outs fell to an all time low in FY 2012 before returning to more typical levels.

(Note that unlike most service standards, the goal for Late Pull-Outs is *below* a target level – 1.5% – rather than above it.)

## A2 Service Delivery (Late Pull-Outs)



### Systemwide (Historic)

Despite an increase in FY 2010, percentages of late pull-outs have returned to more consistent performance levels with significantly less than 1% of pull outs leaving late.

## **A2 Service Delivery (Late Pull-Outs)**

### **Recommendation**

*Adopt a more aggressive goal (~0.5%).*

Over the past ten years, Muni has consistently exceeded the Late Pull-Outs goal of less than 1.5%; since FY 2007, it has exceeded the goal by nearly 0.5%.

In an effort to continually improve service, the SFMTA should adopt a new standard of fewer than 0.5% late pull-outs. This goal should be increasingly attainable as newer, more reliable bus and rail vehicles enter service.

-----

### A3 Load Factors

**Goal** < 4% of AM and PM Peak Trips Above 125% Load Factor

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



*Negative*

**Purpose** To measure overcrowding at peak periods.

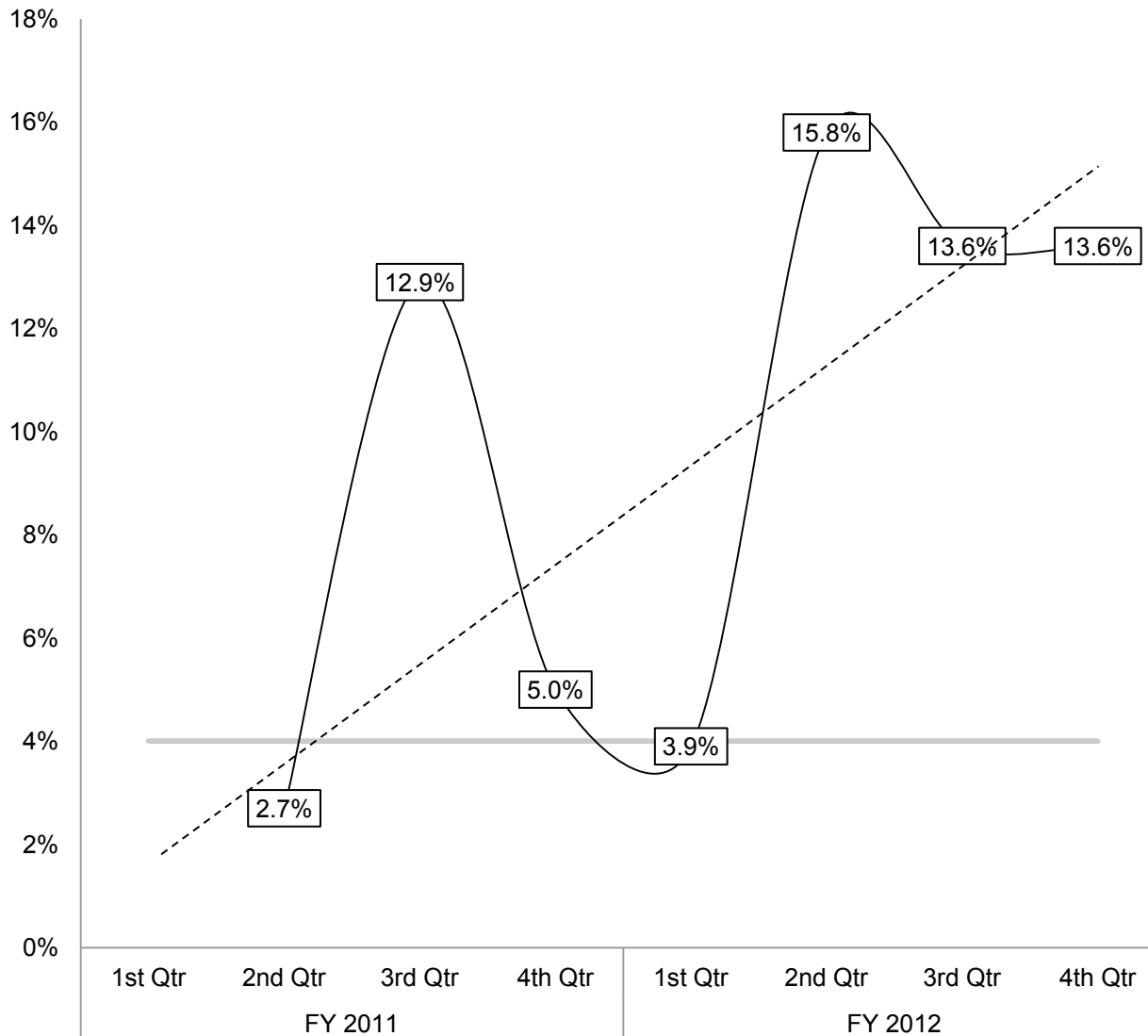
**Definition** Load Factor measures the use of available capacity aboard transit vehicles. A 100% load factor indicates that all seats on a vehicle are occupied; load factors above 100% indicate that additional passengers are standing.

On Muni, each line is checked twice a year. Checks are conducted at least 10 weekdays and weekends per period. A checking schedule is established for all routes. The order in which the routes are checked is determined monthly through a random selection process. The maximum target load factor is 125% of seating/standing capacity during peak periods.

**Method** Surveyed times include morning rush (6am-9 am) and afternoon rush (4pm-7pm) periods. Supervisors conduct a one-hour, on time, and load standard check at a maximum load point at mid-route during these two time periods.

FY 2011 and FY 2012 load factor data reflect rail services only. FY11 Q1 data were unavailable for review.

**A3 Load Factors**

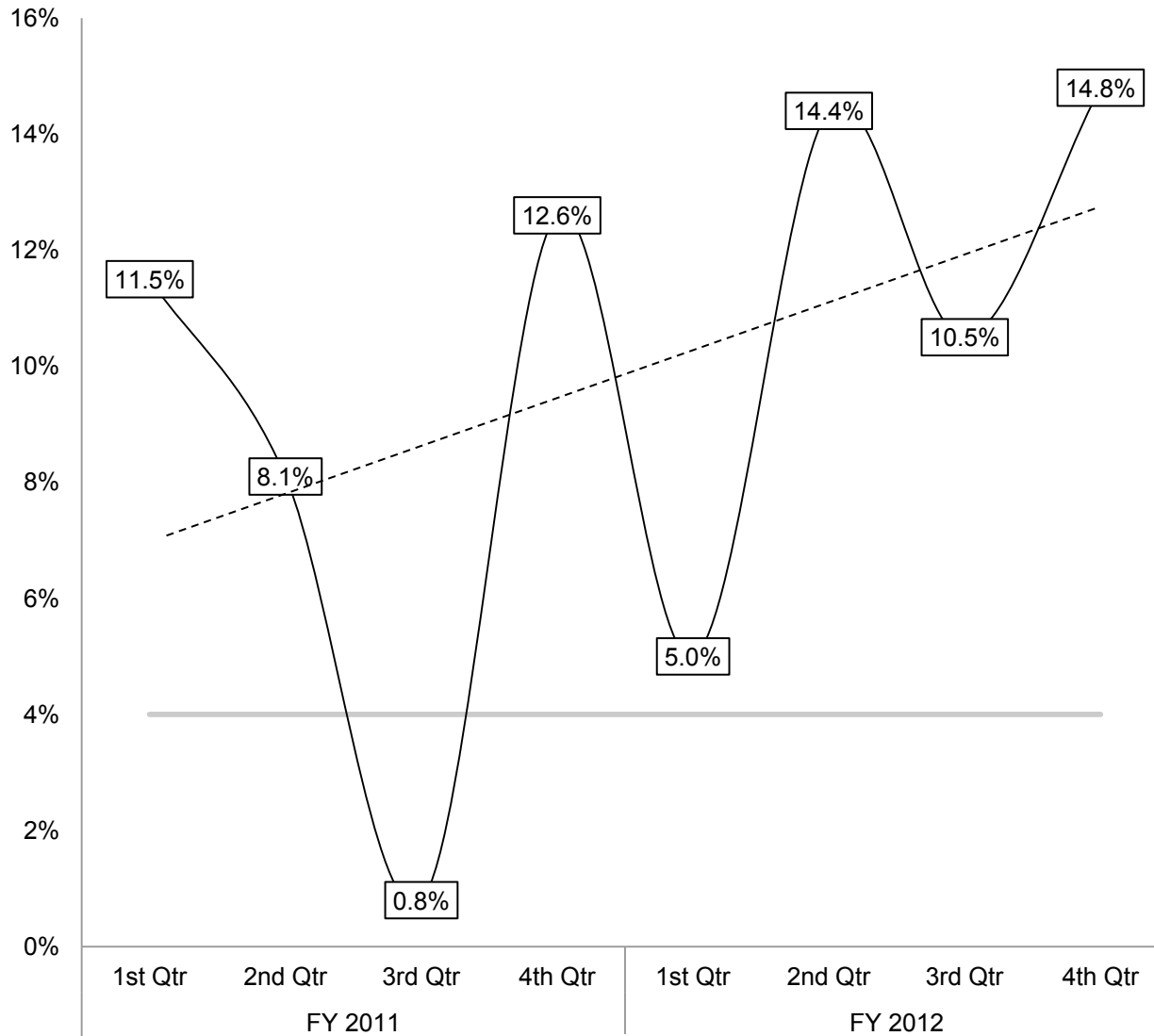


**Percentage of Trips Exceeding 125% Load During AM Peak Period (Audit Period)**

Different Muni routes are checked for overcrowding every quarter, making quarter-to-quarter comparisons difficult. However, the trend line suggests that crowding increased on Muni routes during the audit period, likely due to a combination of vehicle unreliability and increasing ridership. More telling might be a list of routes on which over 25% of AM peak trips were observed with load factors over 125% during at least one check: in FY 2012, this only included the M Oceanview.

Note: FY11 Q1 data were unavailable for review. Additionally, unlike most service standards, the goal for Load Factors is *below* a target level – 4% – rather than above it.

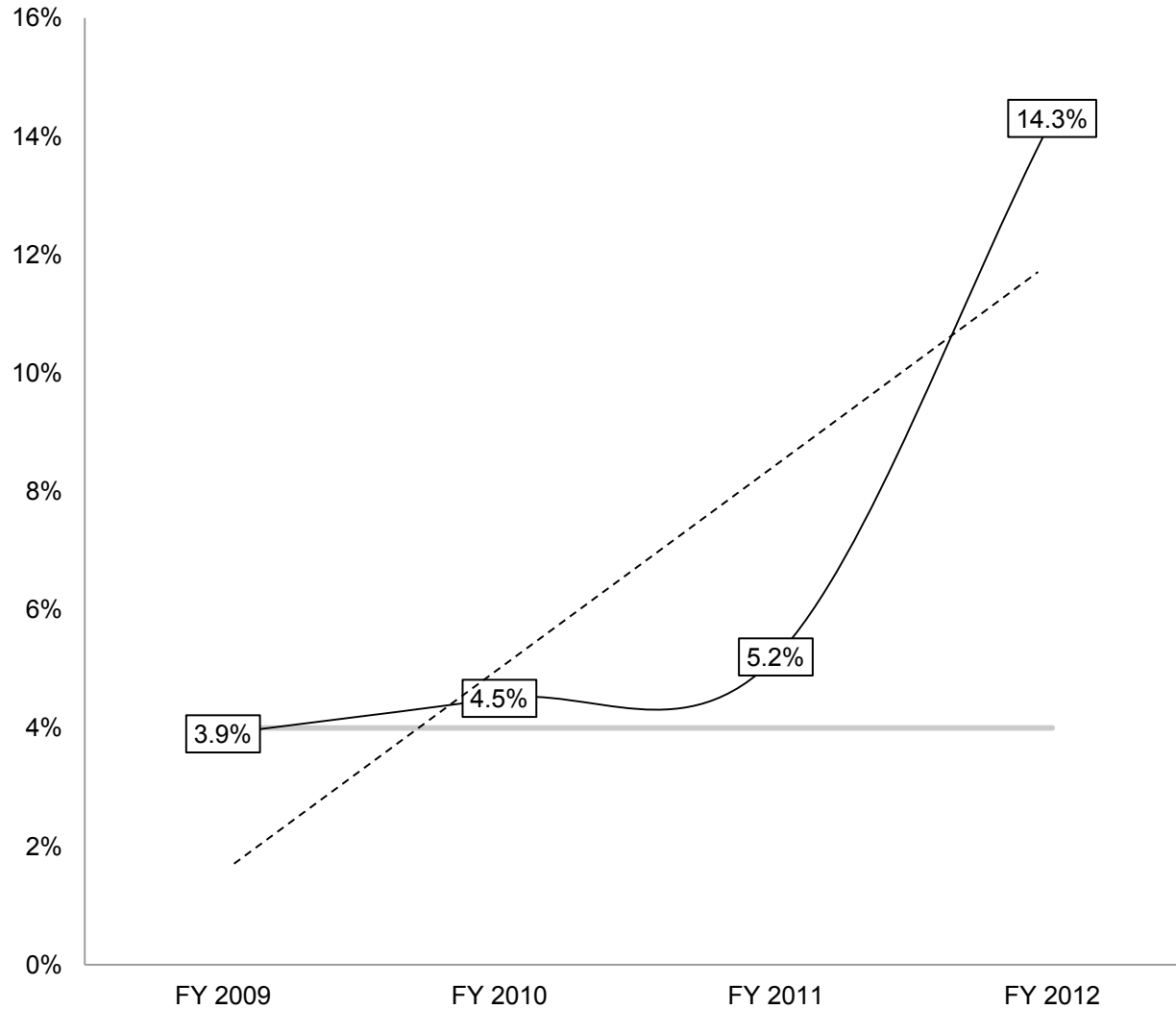
**A3 Load Factors**



**Percentage of Trips Exceeding 125% Load During PM Peak Period (Audit Period)**

Because different Muni routes are checked for overcrowding quarter to quarter result is not indicative of trends. However, the trend line suggests increased crowding on Muni during the audit period.

### A3 Load Factors



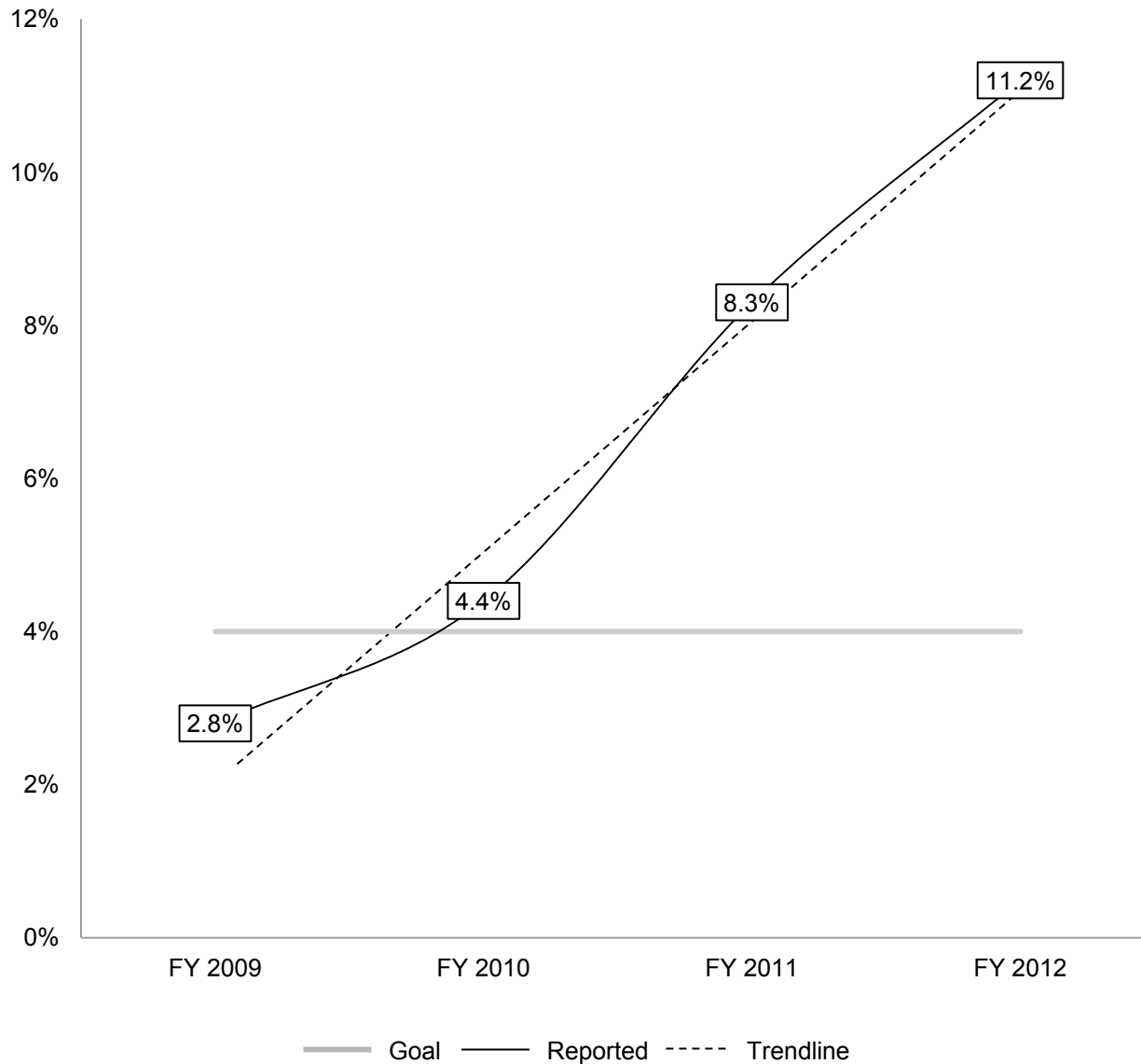
#### Percentage of Trips Exceeding 125% Load During AM Peak Period (Historical)

In FY 2009, Muni introduced a new, more meaningful standard for measurement of overcrowding: the percentage of AM and PM peak period trips with loads over 125% of seated and standing capacity\*. As the graph shows, crowding on Muni increased significantly during the audit period, with over crowding during the AM peak period reaching an unprecedented high of over 14% during 2012.

(\* capacities are: LRV, 119; historic streetcar, 60; cable car, 63; 60' bus, 94; 40' bus, 63; 30' bus, 45)



### A3 Load Factors



#### Percentage of Trips Exceeding 125% Load During PM Peak Period (Historical)

Crowding in the PM peak also increased, consistent with the other measures of crowding previously presented. In FY 2012, over 11% of PM peak trips exceeded 125% load.

## A4 Unscheduled Absences

**Goal** *Varies by category and from year to year (see following pages)*

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



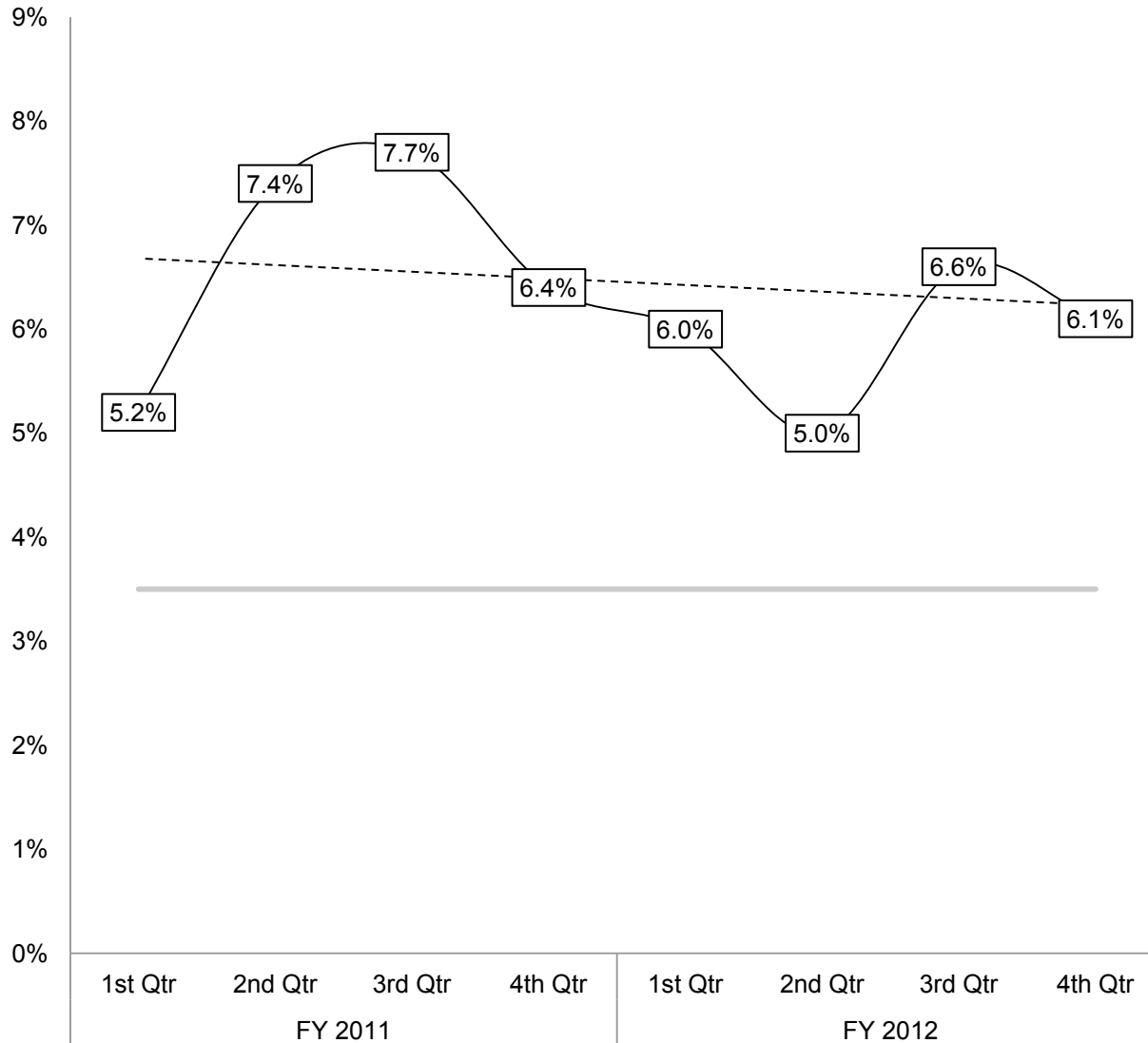
*Negative*

**Purpose** To measure unscheduled absences.

**Definition** Unscheduled absences include sick pay/leave, long term leave, AWOL, and assault pay. Results for operators also include jury duty, loans to unions, suspensions, and “working miss outs” (late arrivals to work). These additional results for operators were added to the definition beginning in FY 2009.

**Method** The City’s time entry system (Time Entry Scheduling System, or “TESS”) and the Attendance Tracking System currently provide the data as a calculation of scheduled hours available against unscheduled hours for Municipal Railway employees.

**A4 Unscheduled Absences**

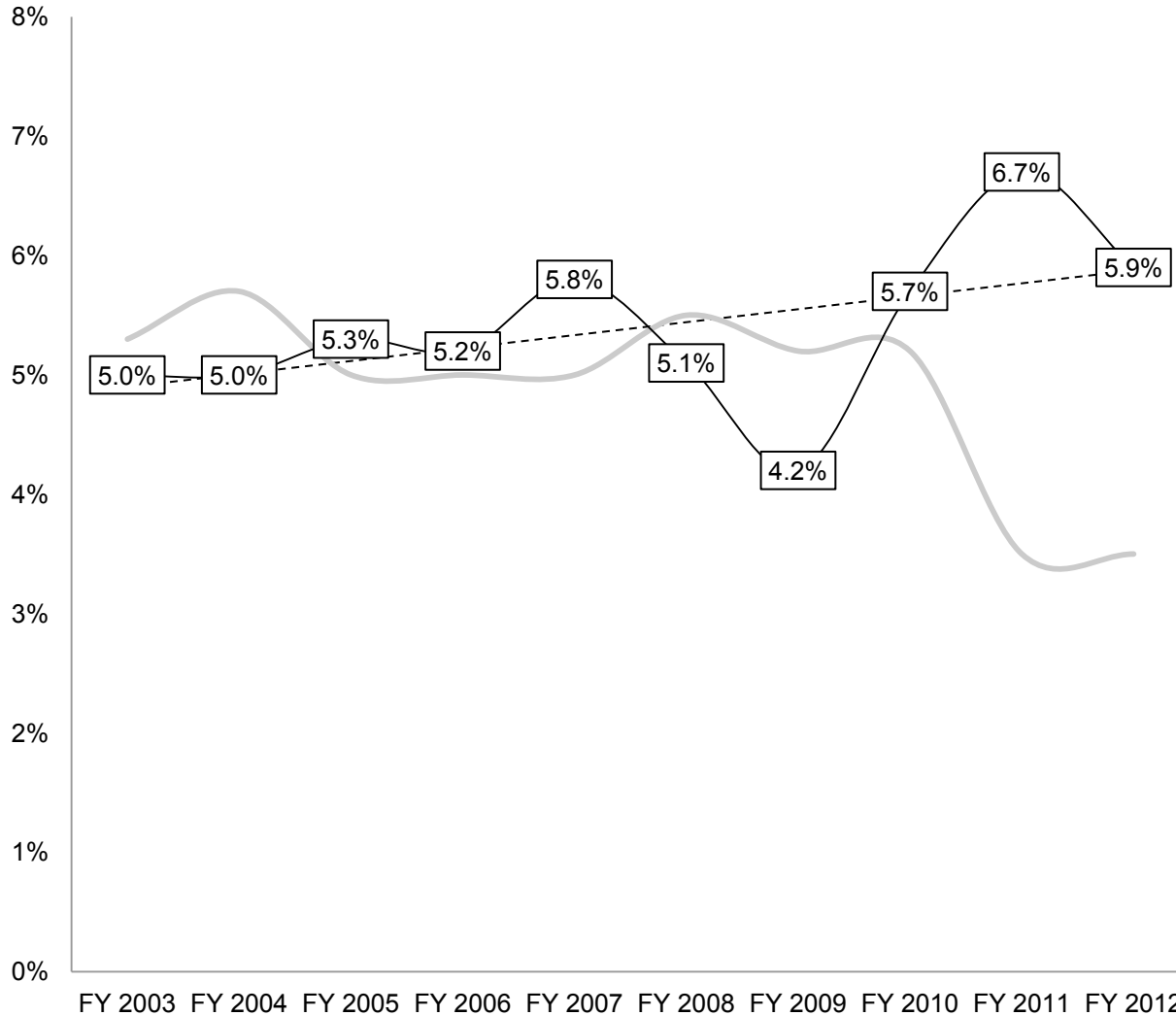


**Administration  
(Audit Period)**

The annual goal for unscheduled absences for administrative employees during the audit period was 3%. This goal was not achieved at any time during the audit period.

(Note that unlike most service standards, the goal for Unscheduled Absences is *below* a target level rather than above it.)

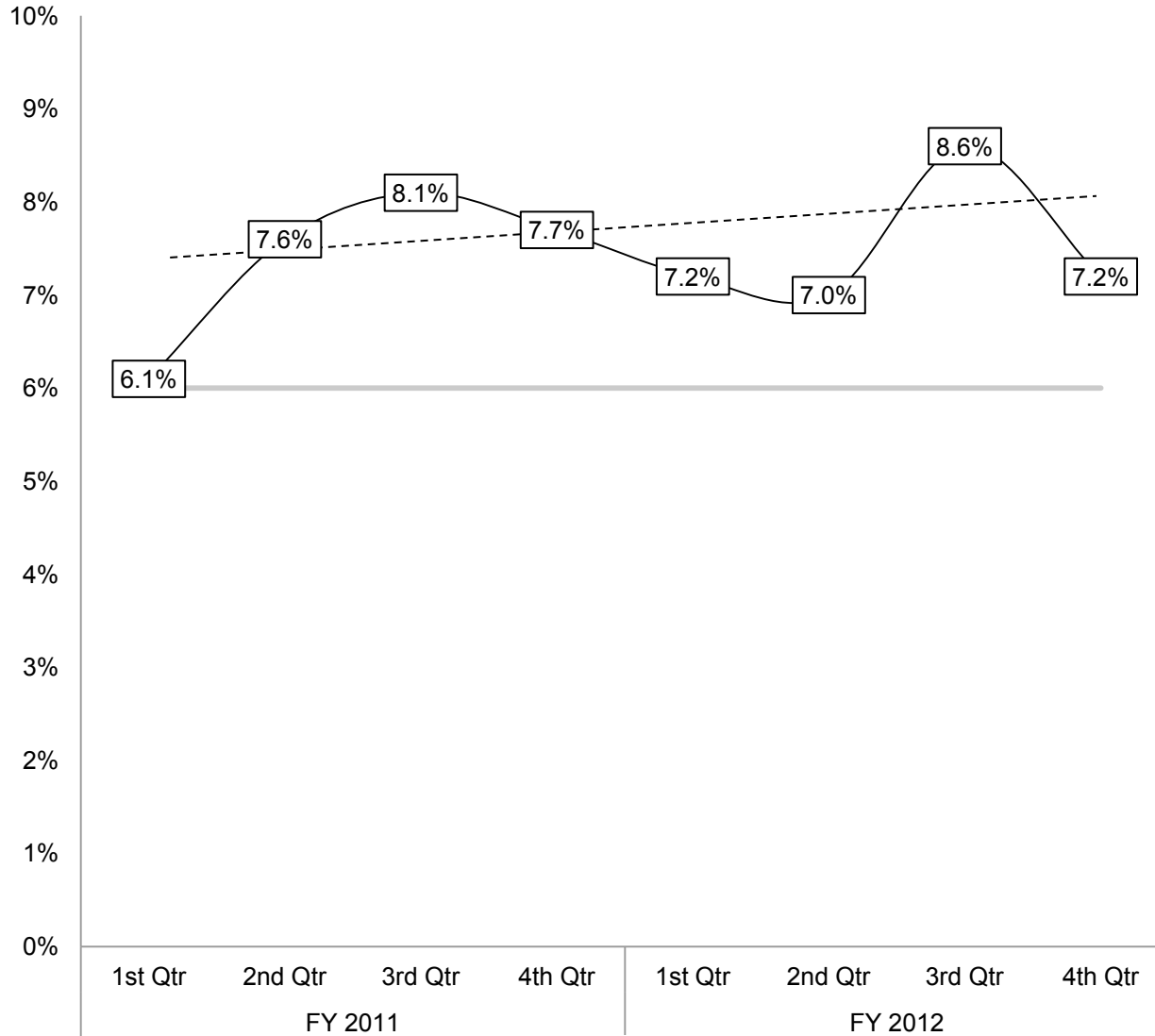
**A4 Unscheduled Absences**



**Administration (Historic)**

After reaching a historic low absence rate in FY 2009 of 4.2%, absences for Administration staff reached a nine-year high in FY 2011, at 6.7%, falling to just below 6% at the end of the audit period. It should be noted that the goals for Administration have historically been lower – and thus harder to achieve – than the goals for other departments.

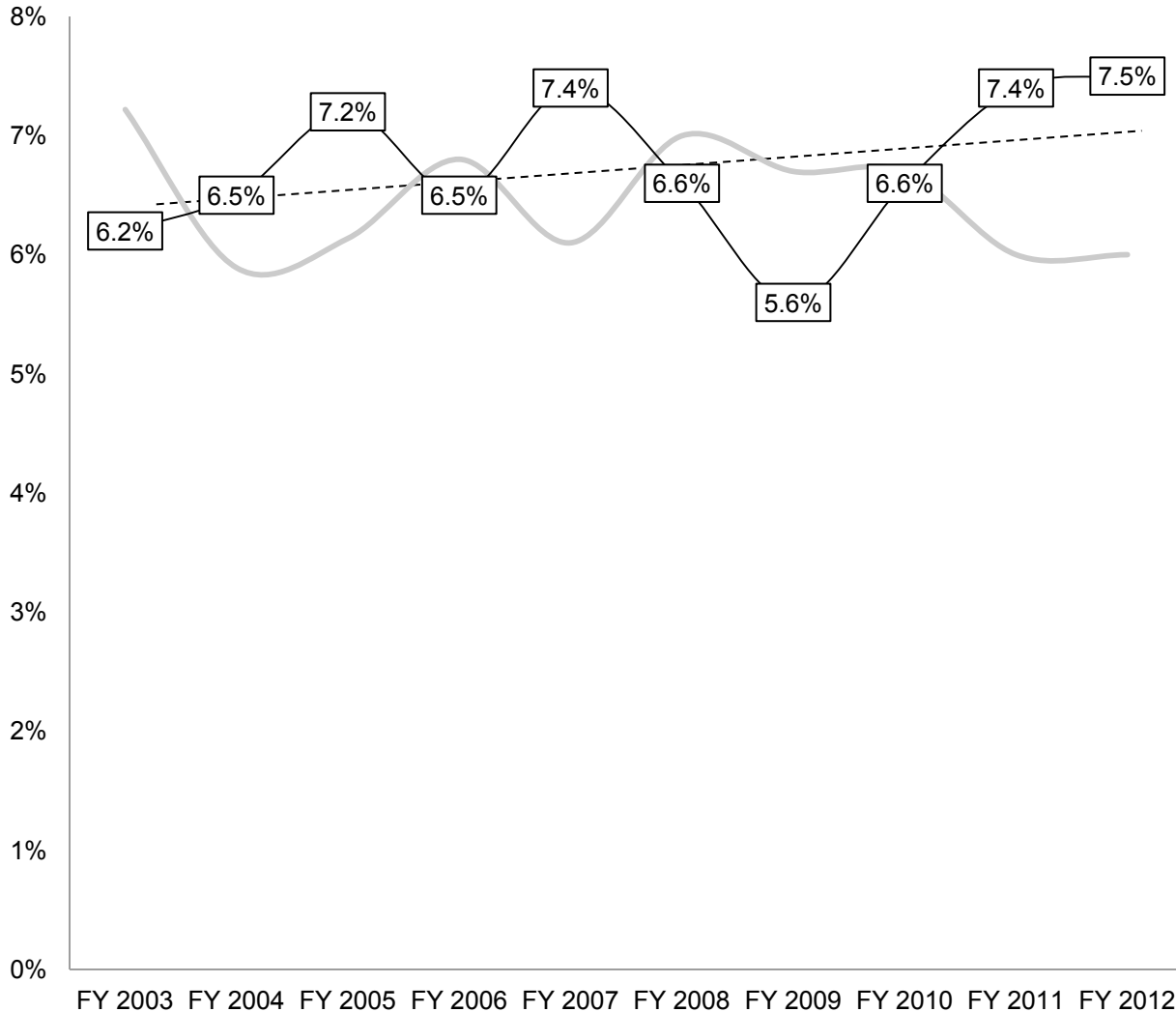
**A4 Unscheduled Absences**



**Maintenance (Audit Period)**

The annual goal for Unscheduled Absences in Maintenance during the audit period was 6%. The This goal was very nearly reached in the 1<sup>st</sup> Quarter of FY 2011 (6.1%), but absences increased later in the audit period, fluctuating between 7% and a high of 8.6% in the 3<sup>rd</sup> Quarter of FY 2012. Maintenance did not achieve its Unscheduled Absences goal during the audit period.

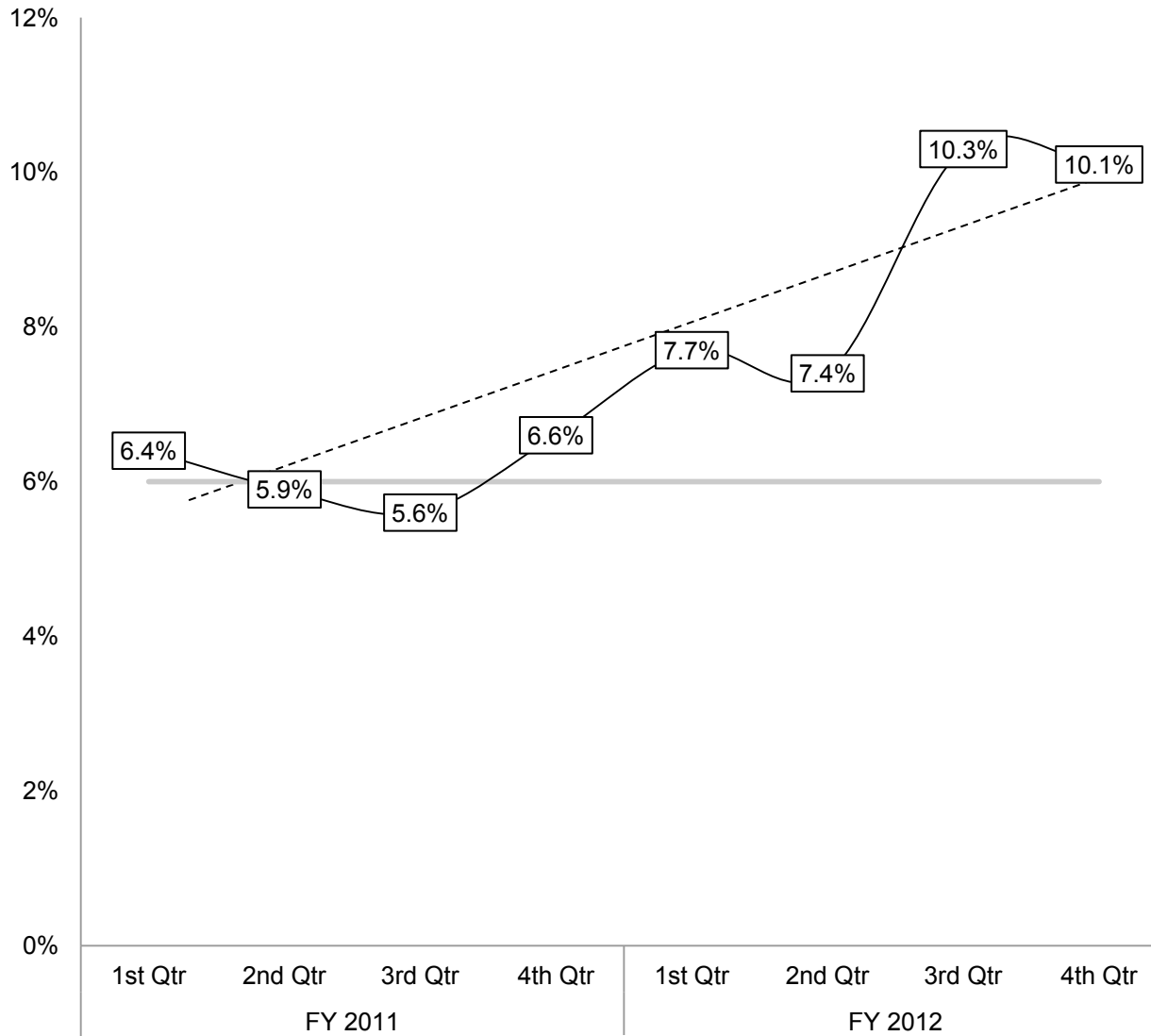
**A4 Unscheduled Absences**



**Maintenance (Historic)**

Annual averages for Unscheduled Absences in Maintenance have fluctuated over time, but the trend has remained relatively constant at around 6.5%. The goal of 6.0% has not been achieved during this audit period.

**A4 Unscheduled Absences**

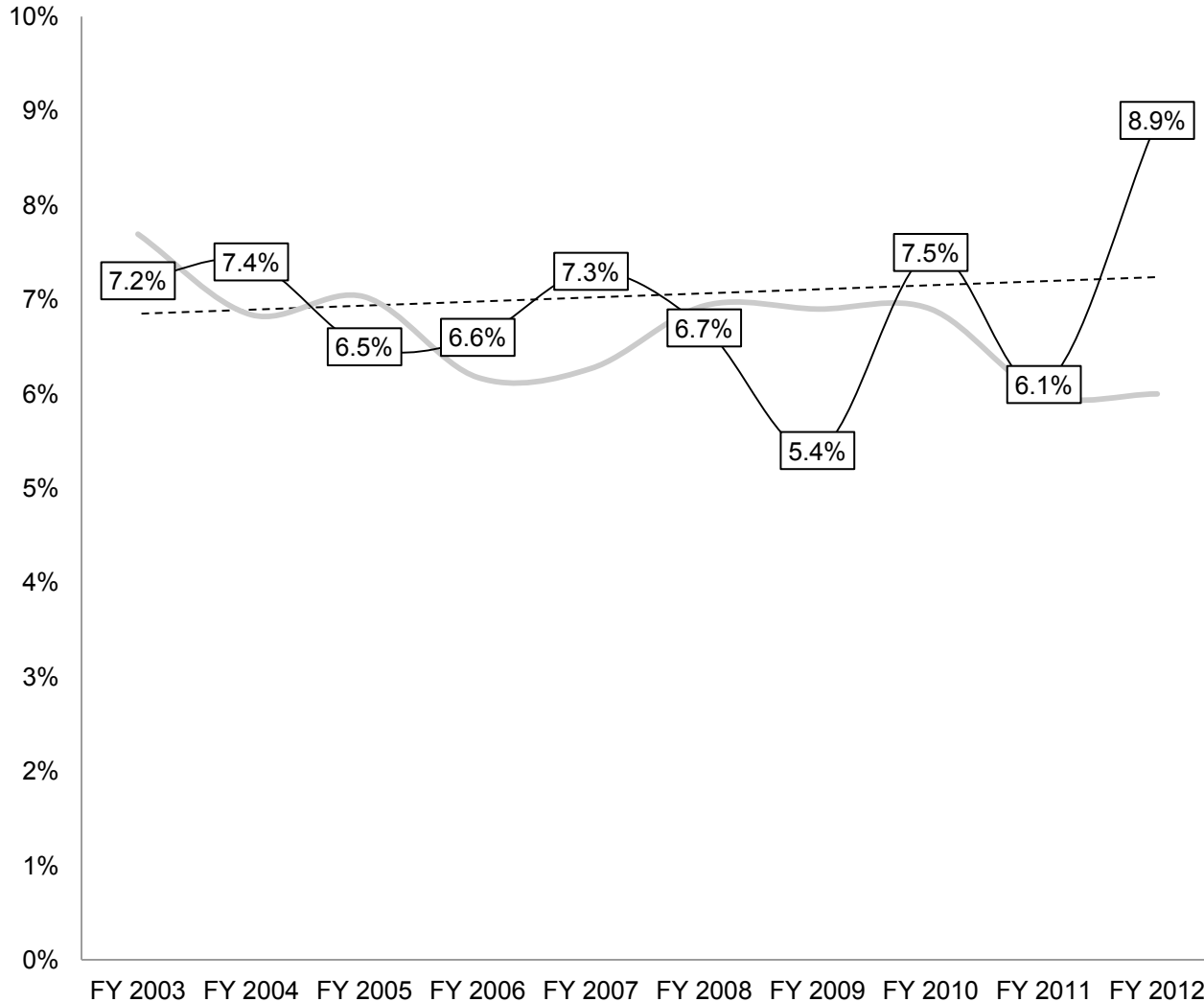


**Operations  
(Audit Period)**

The annual goal for Unscheduled Absences in Operations during the audit period was 6%. Operations achieved this goal in the 2<sup>nd</sup> and 3<sup>rd</sup> Quarters of FY 2011, but over the course of FY 2012 absences reached over 10%.



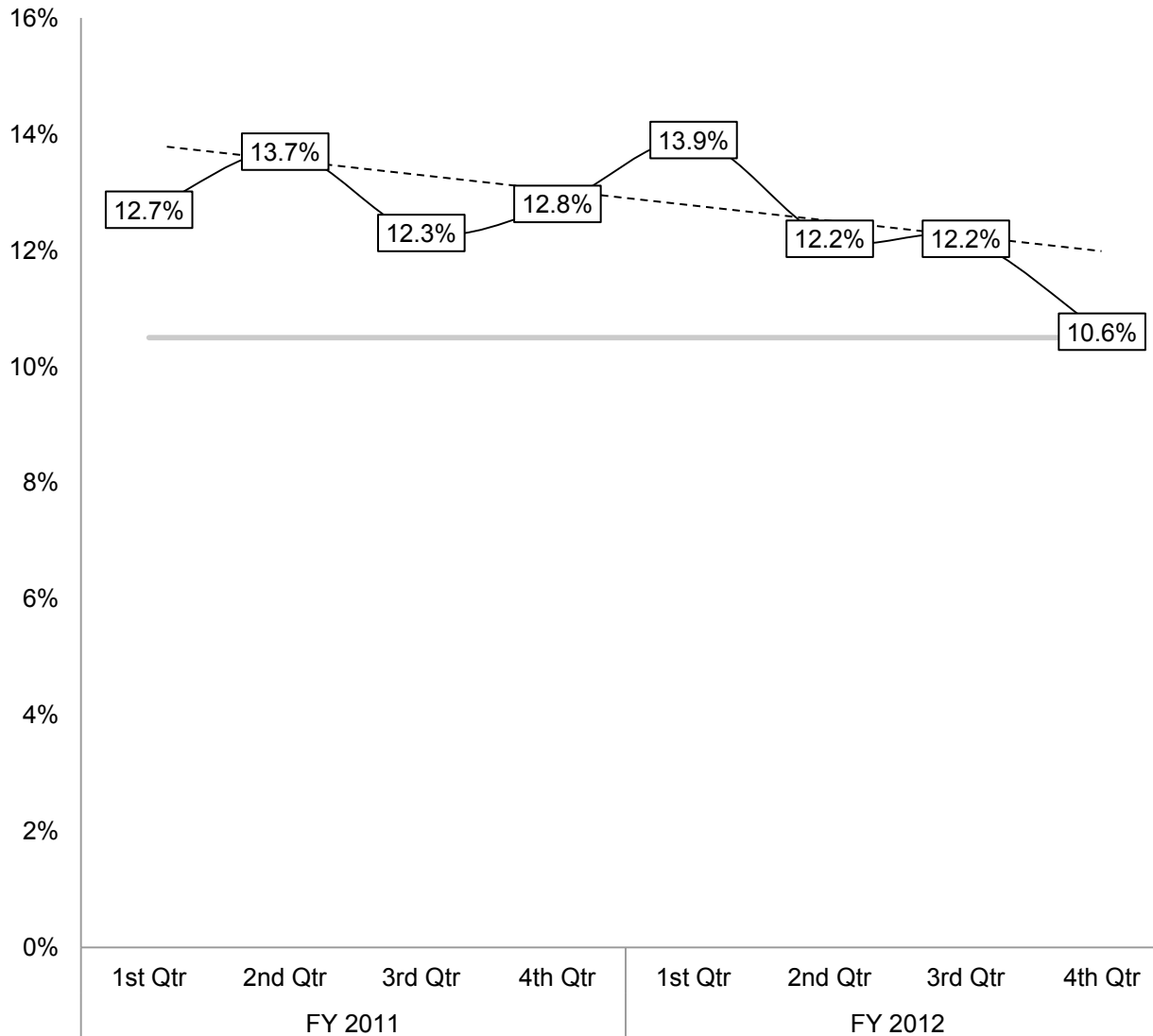
**A4 Unscheduled Absences**



**Operations  
(Historic)**

After nearly achieving the 6% goal in FY 2011 (6.1%), performance by Operations staff rose to a nine year high of 8.9% unscheduled absences in FY 2012.

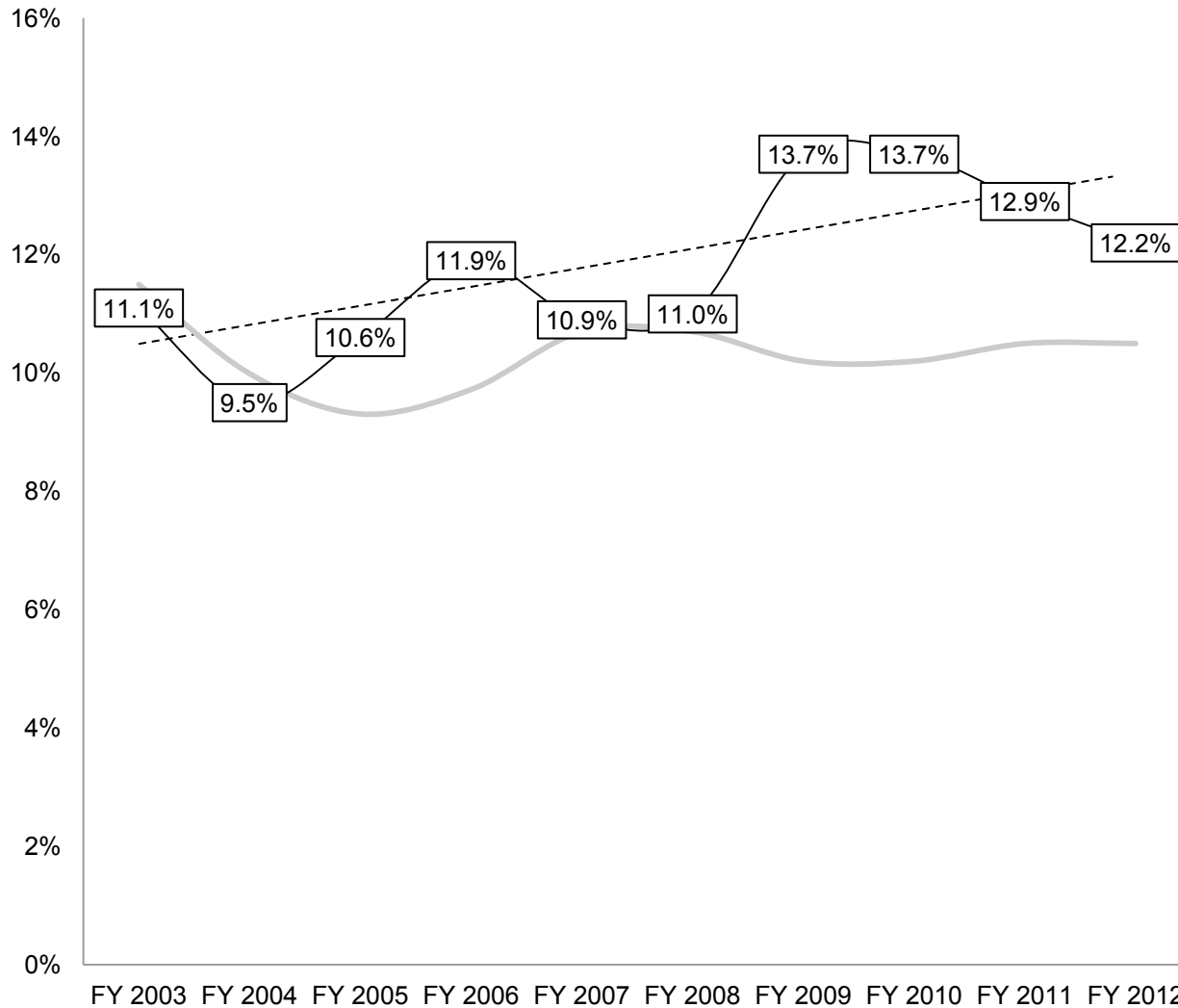
**A4 Unscheduled Absences**



**Transit Operators (Audit Period)**

Unscheduled Absence rates for transit operators have always been markedly higher than for other departments, particularly after the definition of “unscheduled absence” was expanded in FY 2009. This trend continued during FYs 2011 and 2012, reaching a high of nearly 14% in the 1<sup>st</sup> Quarter of FY 2012. However, the overall trend during the audit period was positive (i.e., unscheduled absences were decreasing); in the 4<sup>th</sup> Quarter of FY 2012, the rate of unscheduled absences among transit operators very nearly achieved the goal of 10.5%.

**A4 Unscheduled Absences**



**Transit Operators (Historic)**

While unscheduled absenteeism among operators has always been higher than for other departments, much of the increase in FY 2009 could be attributed to a new, stricter definition of “absenteeism.” Despite this increase, transit operator absenteeism dropped consistently in FY 2011 and FY 2012.

## A5 Mean Distance Between Failure

**Goal** *Varies by division*

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



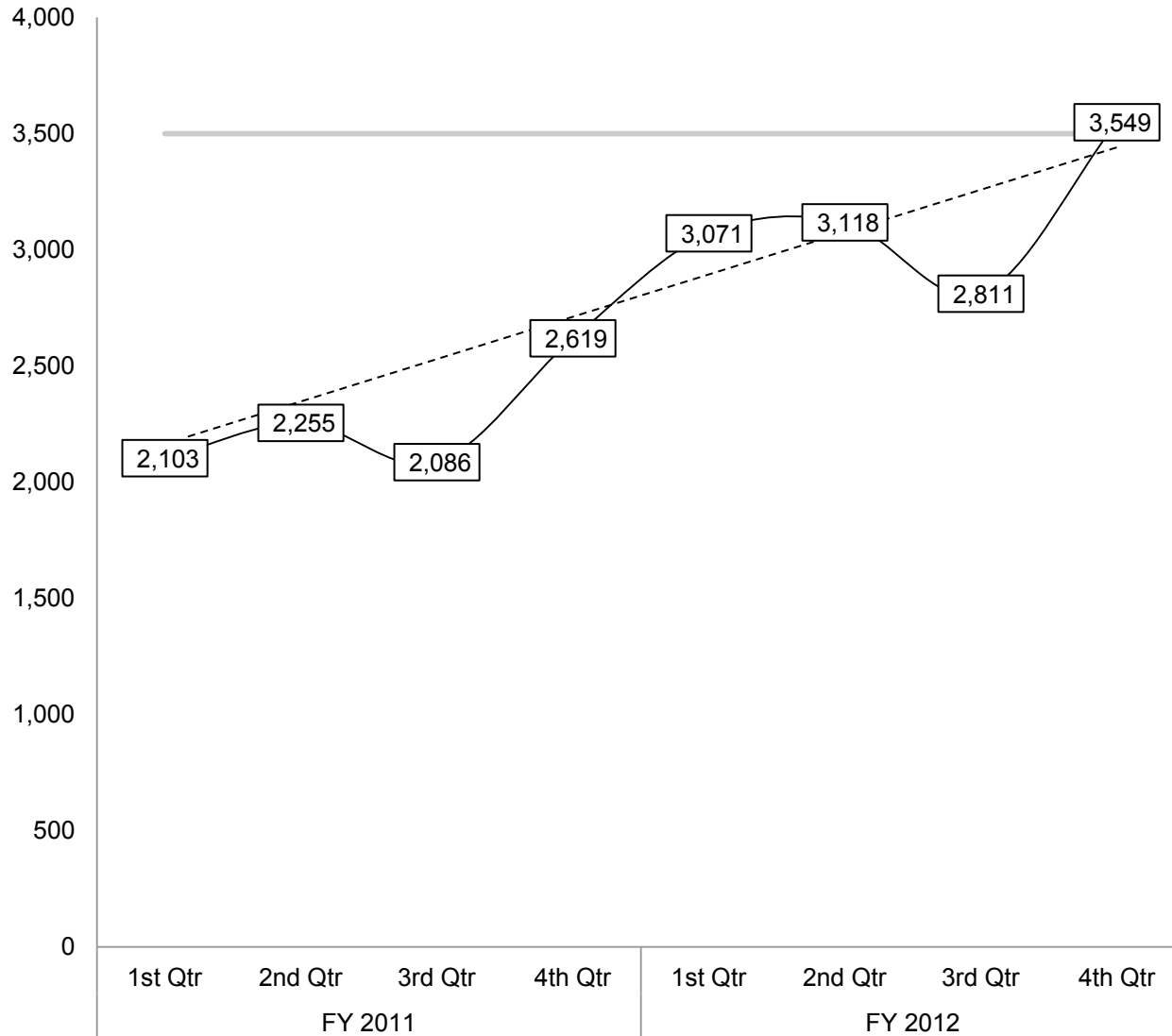
*Positive*

**Purpose** To measure reliability as indicated by the miles a vehicle travels between failures.

**Definition** 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** Data is collected from the Central Control Log and the online SHOPS system. All verifiable major and minor mechanical defects are included as part of the mean distance between failure figure. Areas that do not result in a chargeable road call to the maintenance shops include accidents, sick passengers, vandalism, body damage and broken windows. The overall goal for bus and rail vehicles is based on a weighted average using the number of vehicles by type and yard.

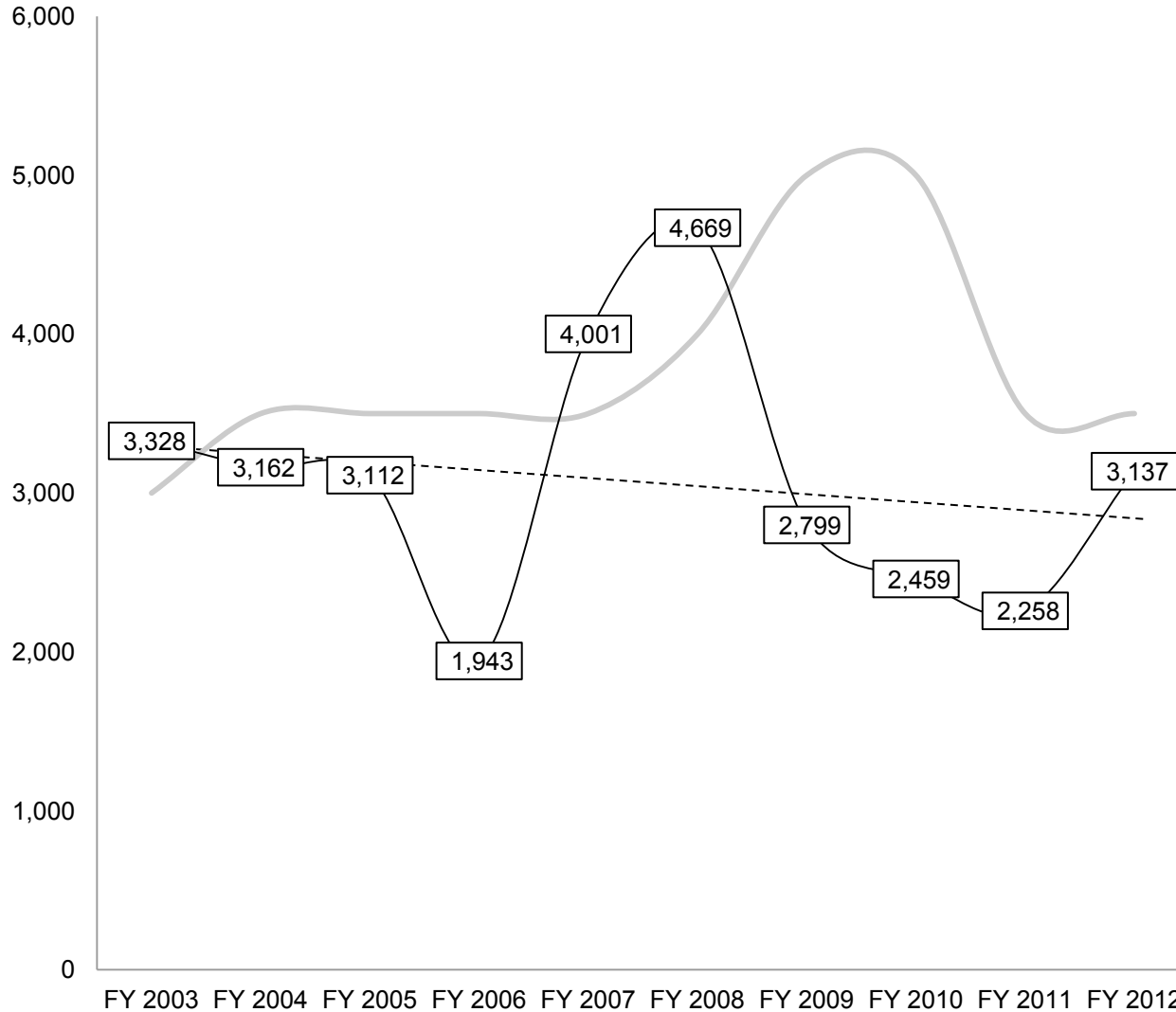
**A5 Mean Distance Between Failure (Rail)**



**Green Breda LRV (Audit Period)**

MDBF, also known as miles between roadcalls, is a measure of how far vehicles travel between mechanical failures that cause them to go out of service. Rail incidents resolved within five minutes of a report to Central Control are not included. Over the course of the audit period, Muni Metro light rail vehicles showed increased reliability, trending towards the new standard (established in FY 2011) of 3,500 miles between roadcalls. In the 4<sup>th</sup> Quarter of FY 2012, the standard was exceeded for the first time since FY 2008.

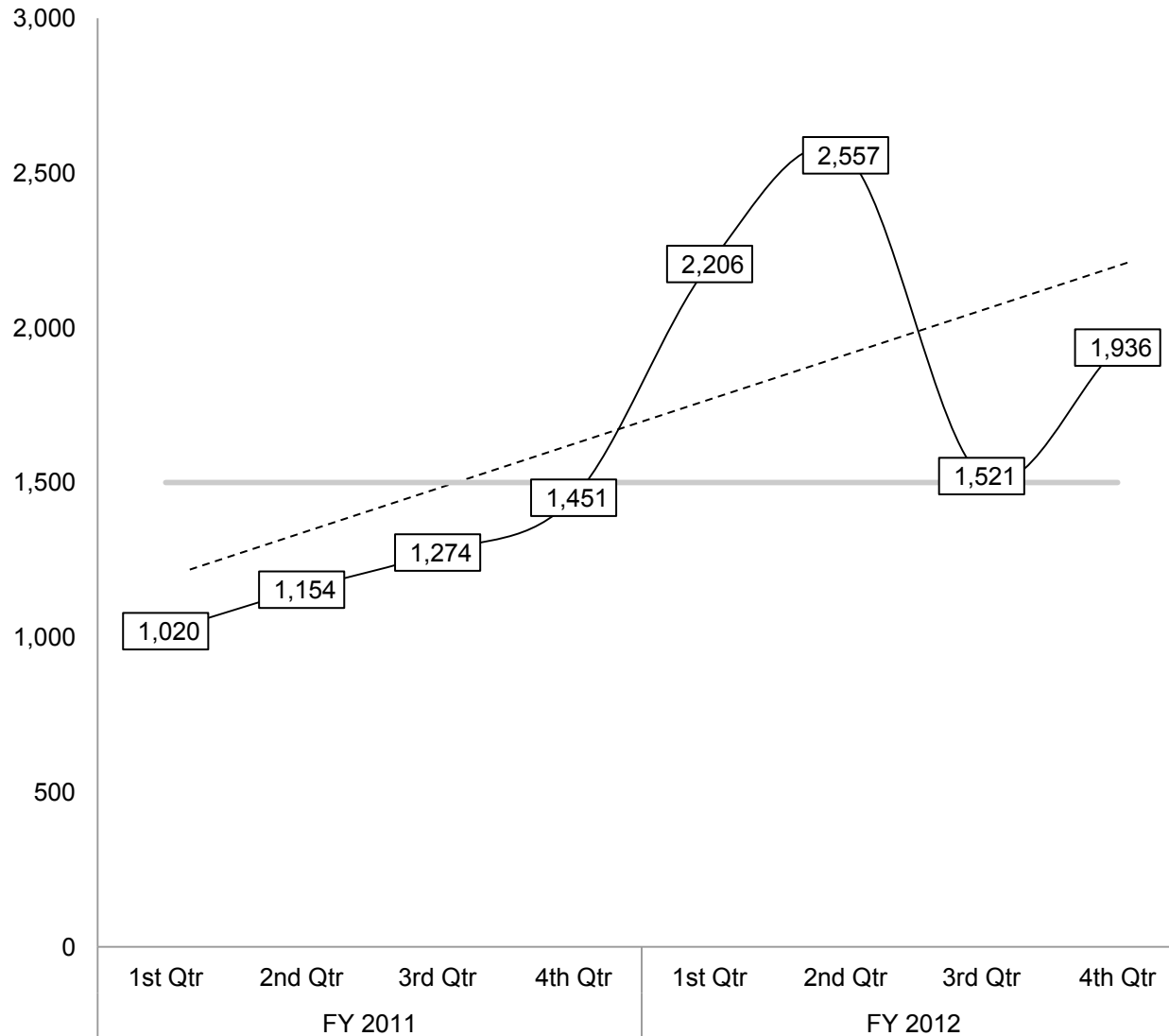
**A5 Mean Distance Between Failure (Rail)**



**Green Breda LRV (Historic)**

In FY 2011, Muni Metro light rail vehicles continued the trend observed in FY 2009 and FY 2010 of being less reliable than previous years (explained in part by a broader definition of mechanical “failure” beginning in FY 2009). Due largely to improved reliability in the second half of FY 2012, however, reliability of these vehicles appeared to be improving, coming close to meeting the revised MDBF standard of 3,500 miles between roadcalls.

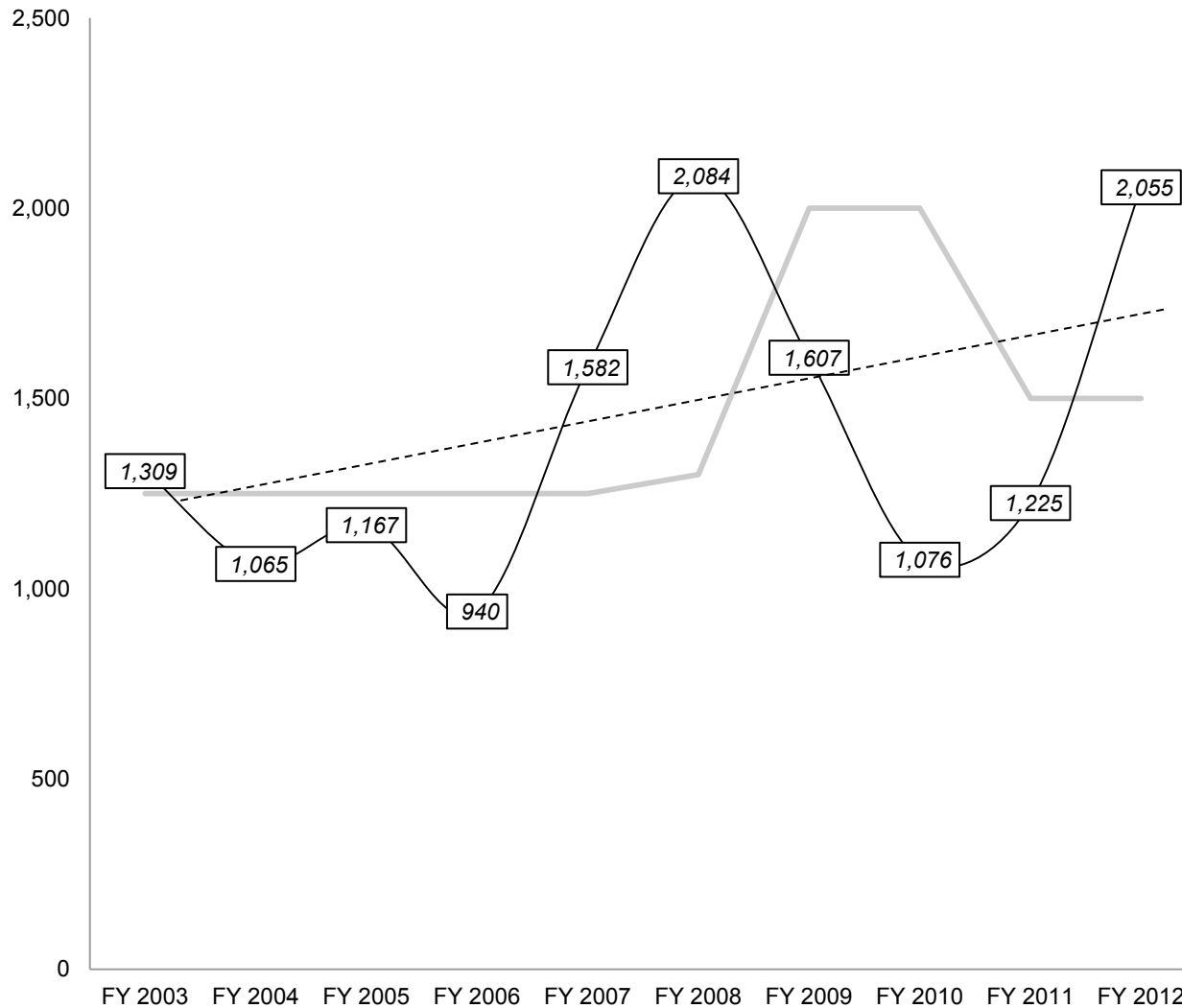
**A5 Mean Distance Between Failure (Rail)**



**Green F-Line (Audit Period)**

The reliability of the historic F-Line vehicles improved markedly in the first half of FY 2012. In fact, the F-Line fleet exceeded the 1,500 miles between roadcalls standard in place during the audit period throughout FY 2012. Potential reasons for the improving reliability of F-Line vehicles during the audit period include the canopy at the Cameron Beach yard completed in 2010, in addition to the ongoing vehicle rehabilitation project.

**A5 Mean Distance Between Failure (Rail)**

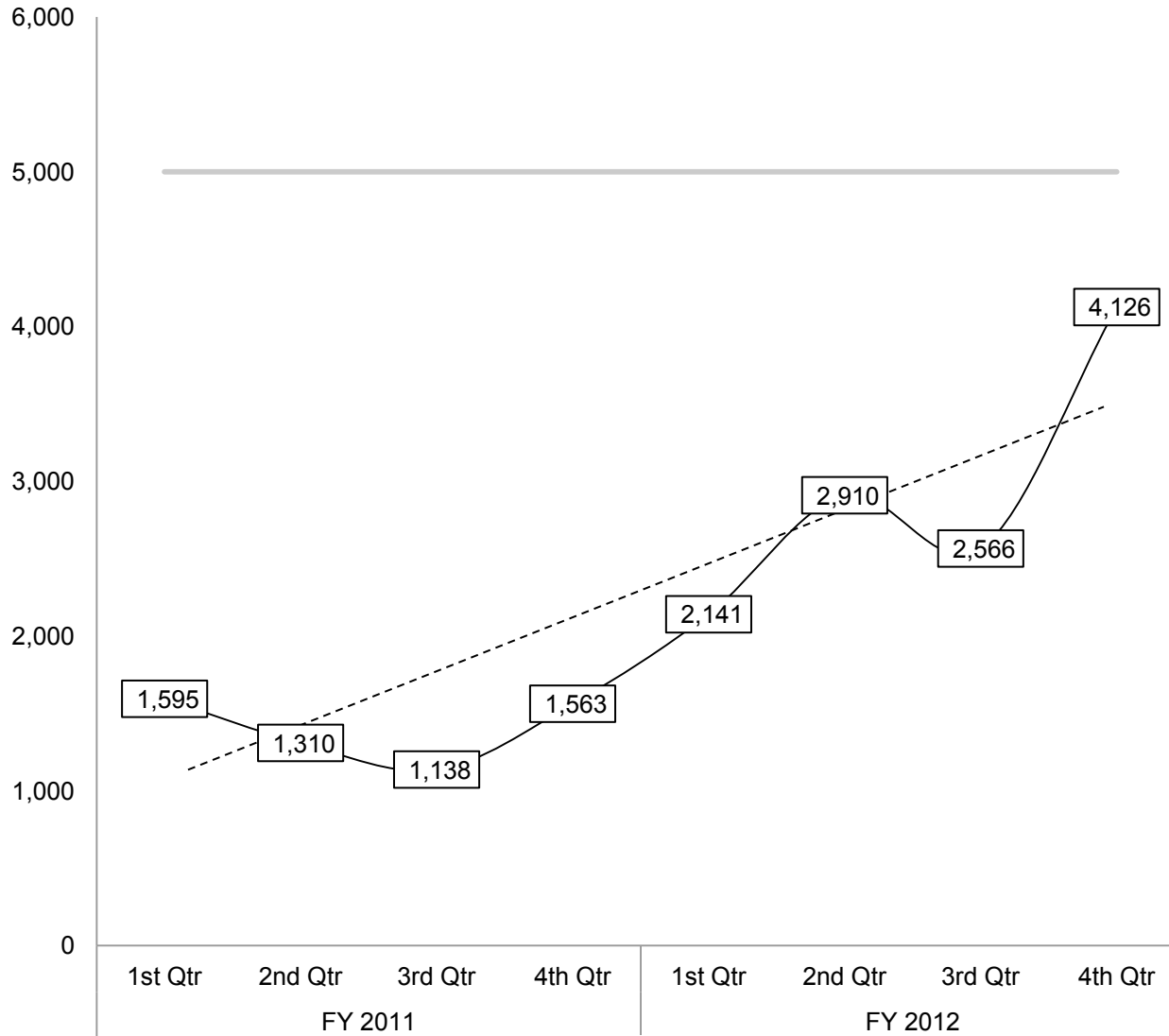


**Green F-Line  
(Historic)**

In FY 2007 and FY 2008 historic streetcars were significantly more reliable than in previous years. After a dip in reliability in FYs 2009 and 2011, F-Line reliability once again increased, exceeding the mean distance between failure standard in FY 2012.



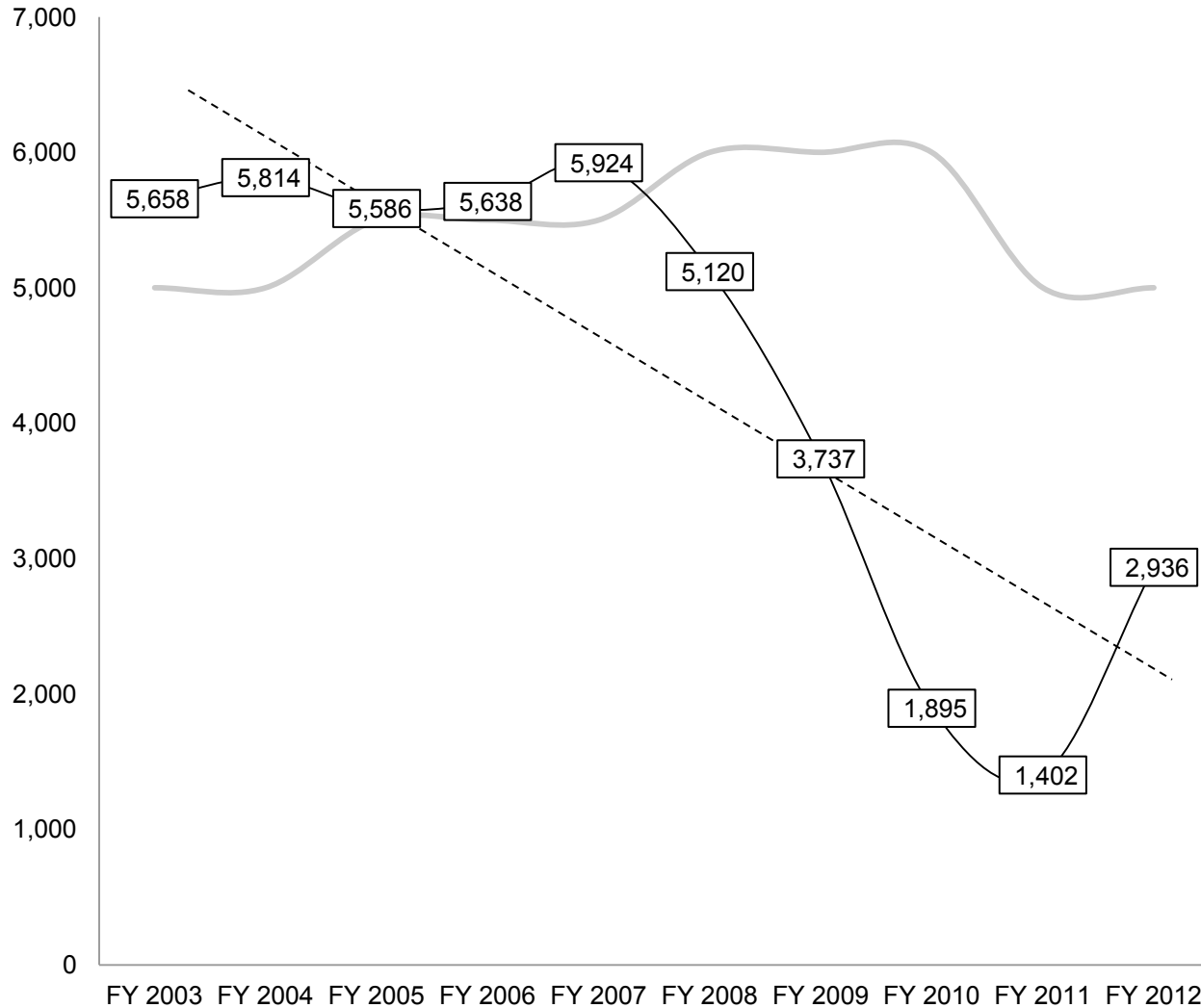
**A5 Mean Distance Between Failure (Cable Car)**



**Cable Car (Audit Period)**

While the reliability of cable cars began to improve during FY 2012, during the audit period cable cars did not achieve the 5,000 mean miles between failure standard during any quarter. In particular, in the 3<sup>rd</sup> Quarter of FY 2011, cable car reliability fell to less than 1,200 miles between roadcalls.

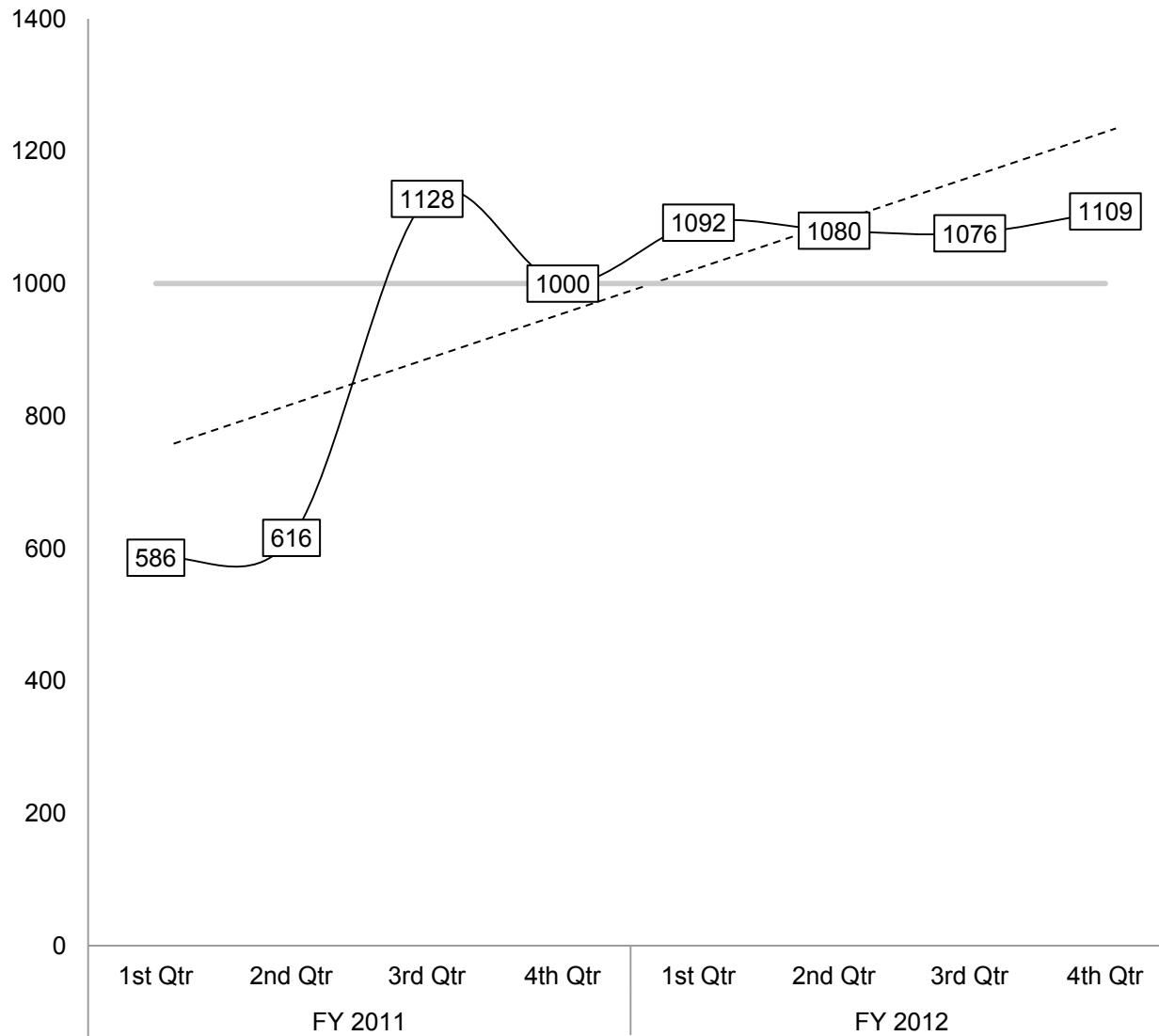
### A5 Mean Distance Between Failure (Rail)



#### Cable Car (Historic)

Cable car reliability experienced a historic decline that culminated in FY 2011, when cable cars experienced a failure on average every 1,402 miles. The trend began to improve slightly in FY 2012 with an increase to nearly 3,000 miles between failure, still far below the standard for this type of vehicle.

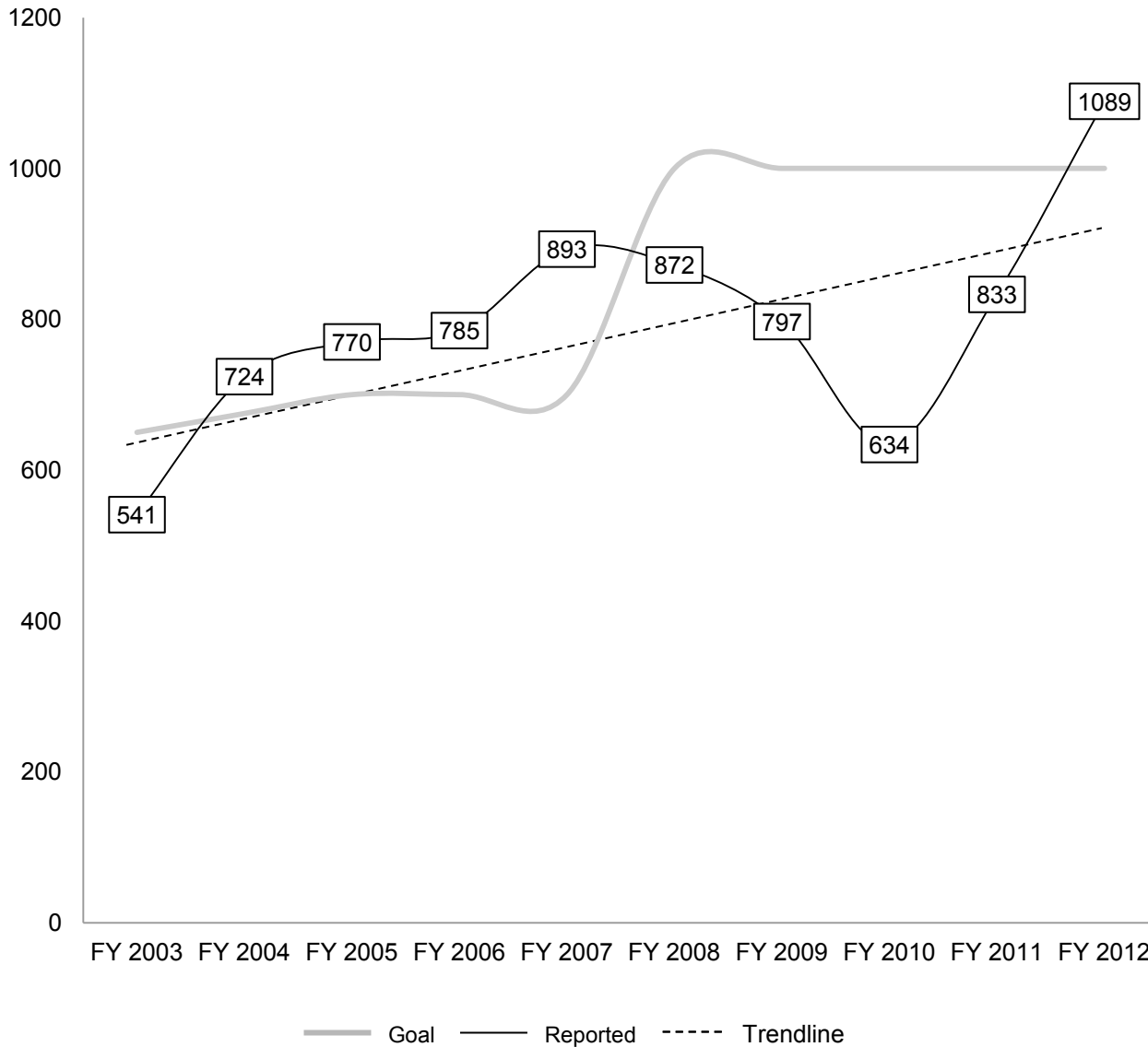
**A5 Mean Distance Between Failure (Trolley Coach)**



**Potrero Articulated (Audit Period)**

Beginning in the 3<sup>rd</sup> Quarter of FY 2011, the reliability of articulated (60-foot) electric trolleys operating out of the Potrero Division improved to either meet or exceed the goal of 1,000 miles between failure. SFMTA staff note that this improved performance is likely due to a targeted air system maintenance campaign on the ETI trolleybuses, and the removal from service of some of the typically poorer-performing New Flyer buses.

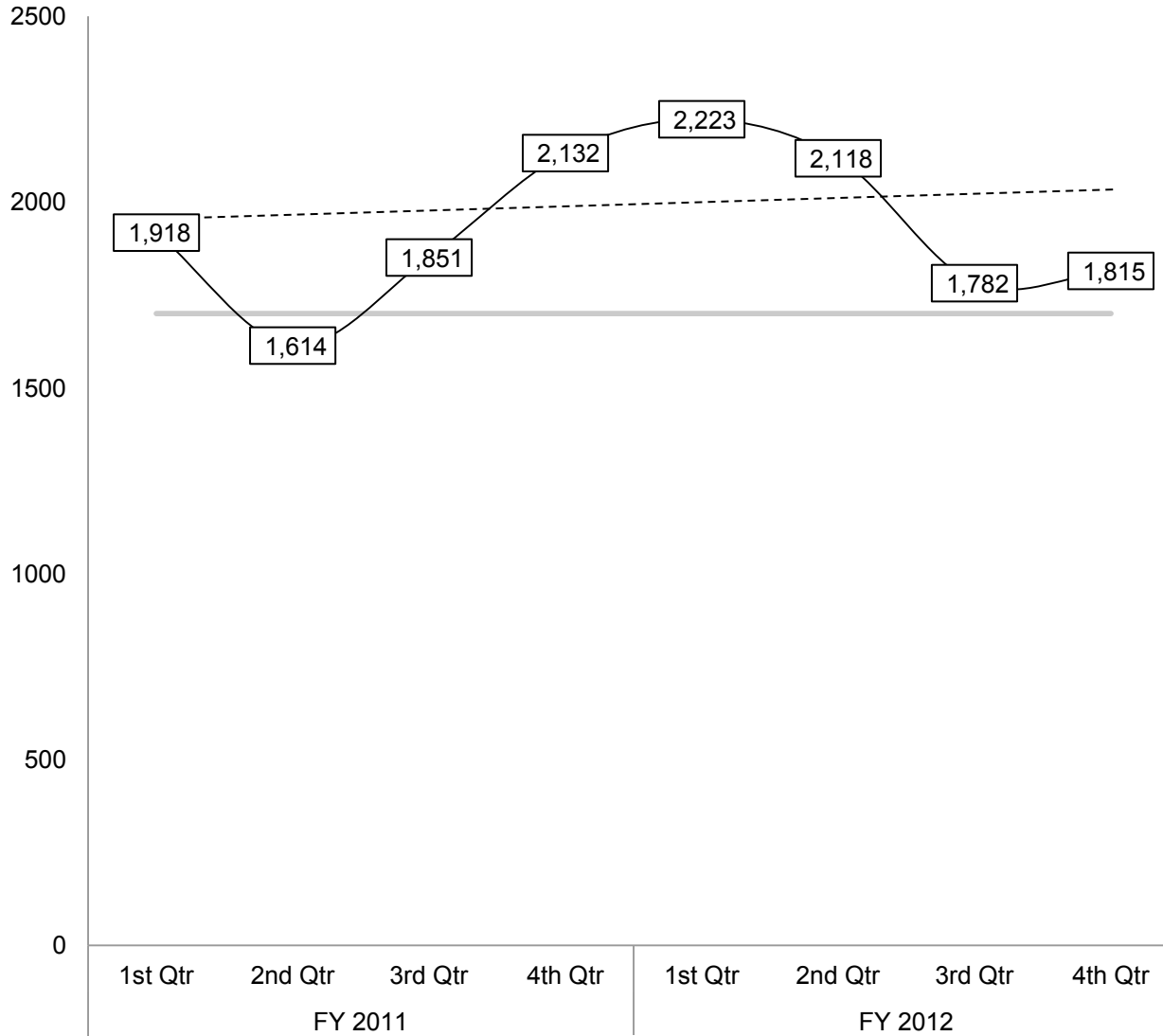
**A5 Mean Distance Between Failure (Trolley Coach)**



**Potrero Articulated (Historic)**

During the audit period, the reliability of articulated (60-foot) electric trolleys operating out of the Potrero Division increased, hitting a nine-year high of 1,089 miles between roadcalls in FY 2012. This performance, reversed a three-year downward trend that culminated in FY2010.

**A5 Mean Distance Between Failure (Trolley Coach)**

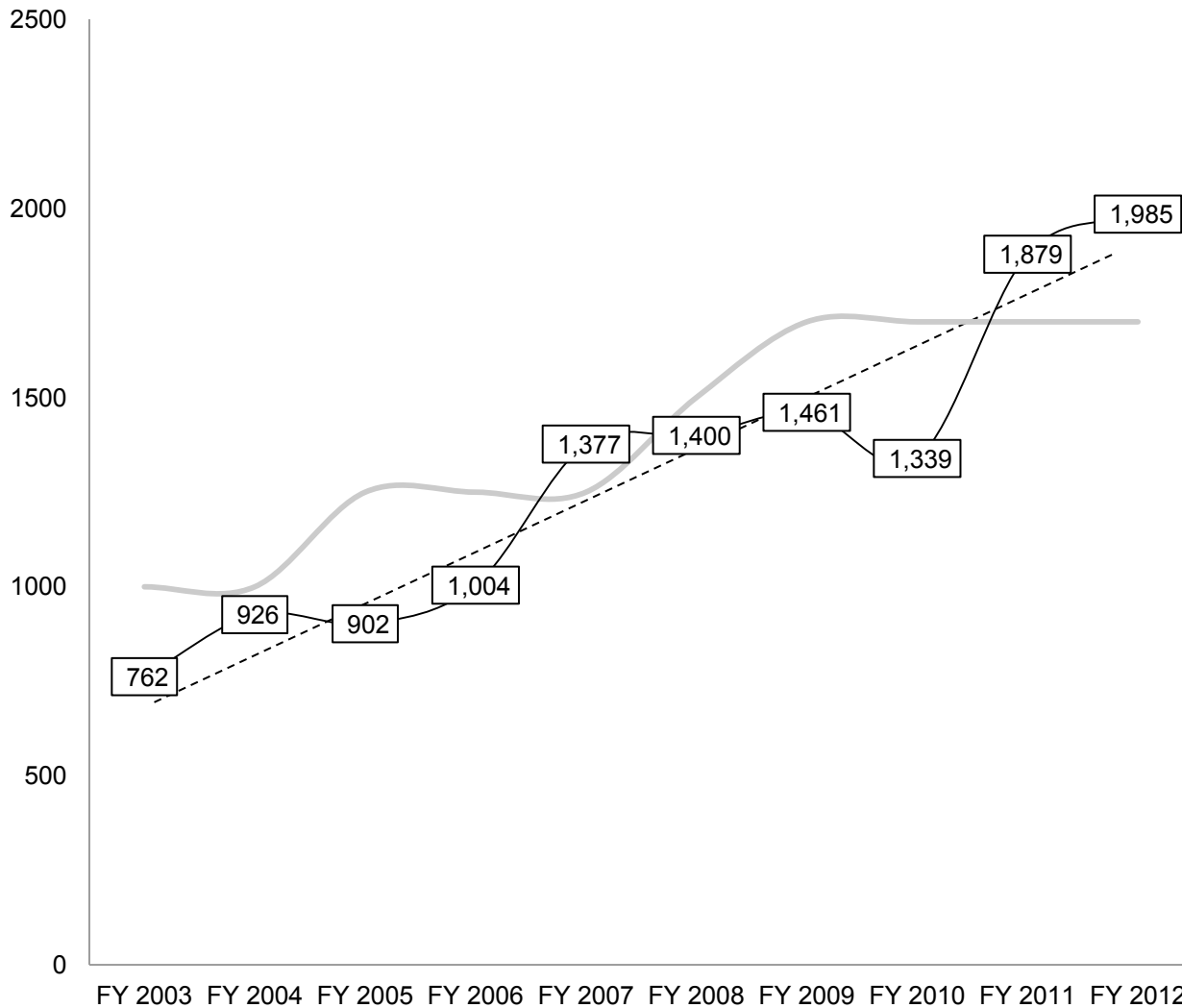


**Potrero Standard (Audit Period)**

In FY 2011 and FY 2012, reliability of 40-foot trolleys operating out of the Potrero Division met the division goal of 1,700 miles between failure in seven of eight quarters.

Note: Goals for this standard vary by mode and in some cases by division, due to the differences in reliability between different models of vehicles operating out of different yards.

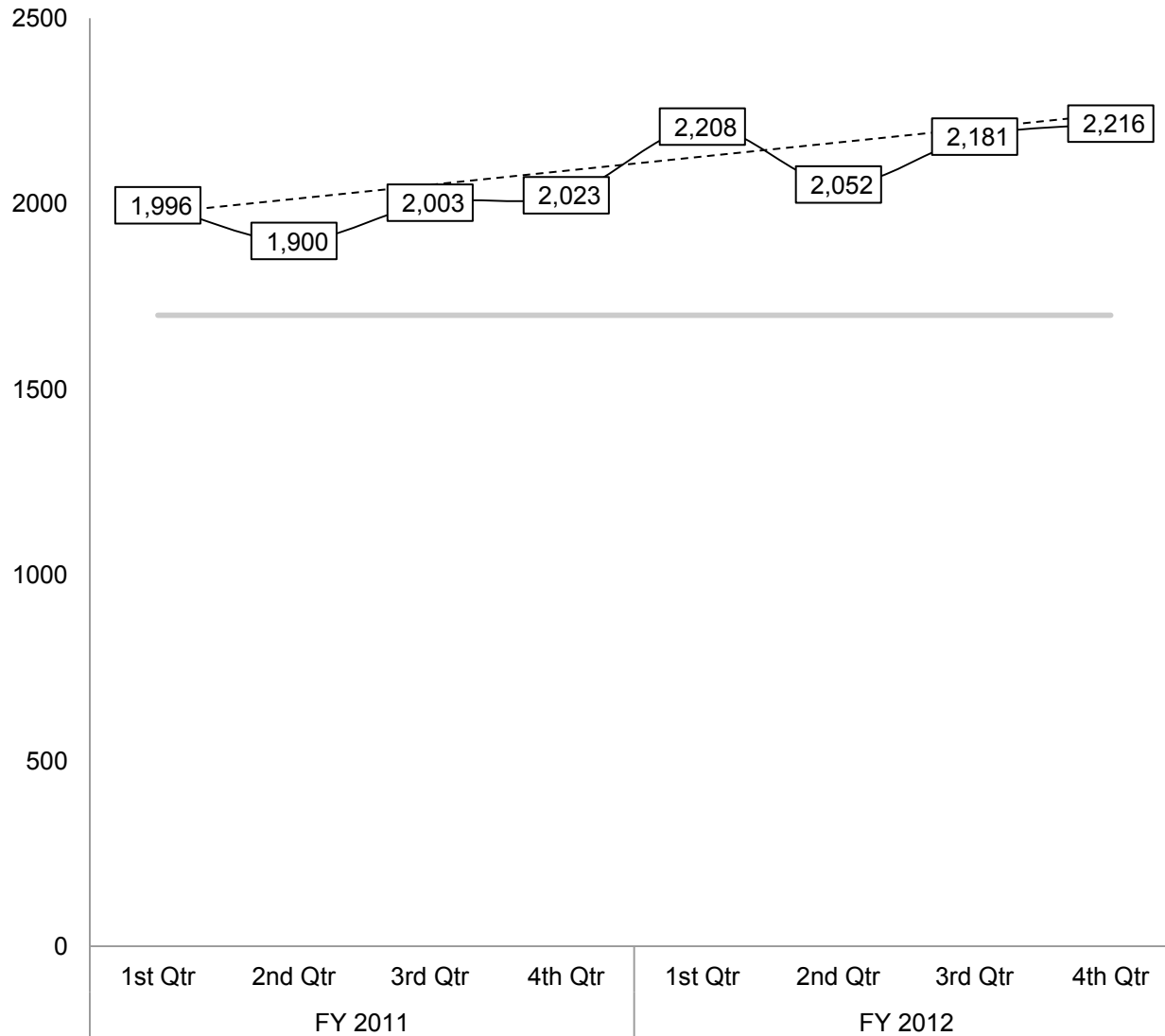
**A5 Mean Distance Between Failure (Trolley Coach)**



**Potrero Standard (Historic)**

In FY 2011 and FY 2012, 40-foot trolleys operating out of the Potrero Division were as reliable as they had ever been in the past nine years, logging approximately 1,900 miles between failures.

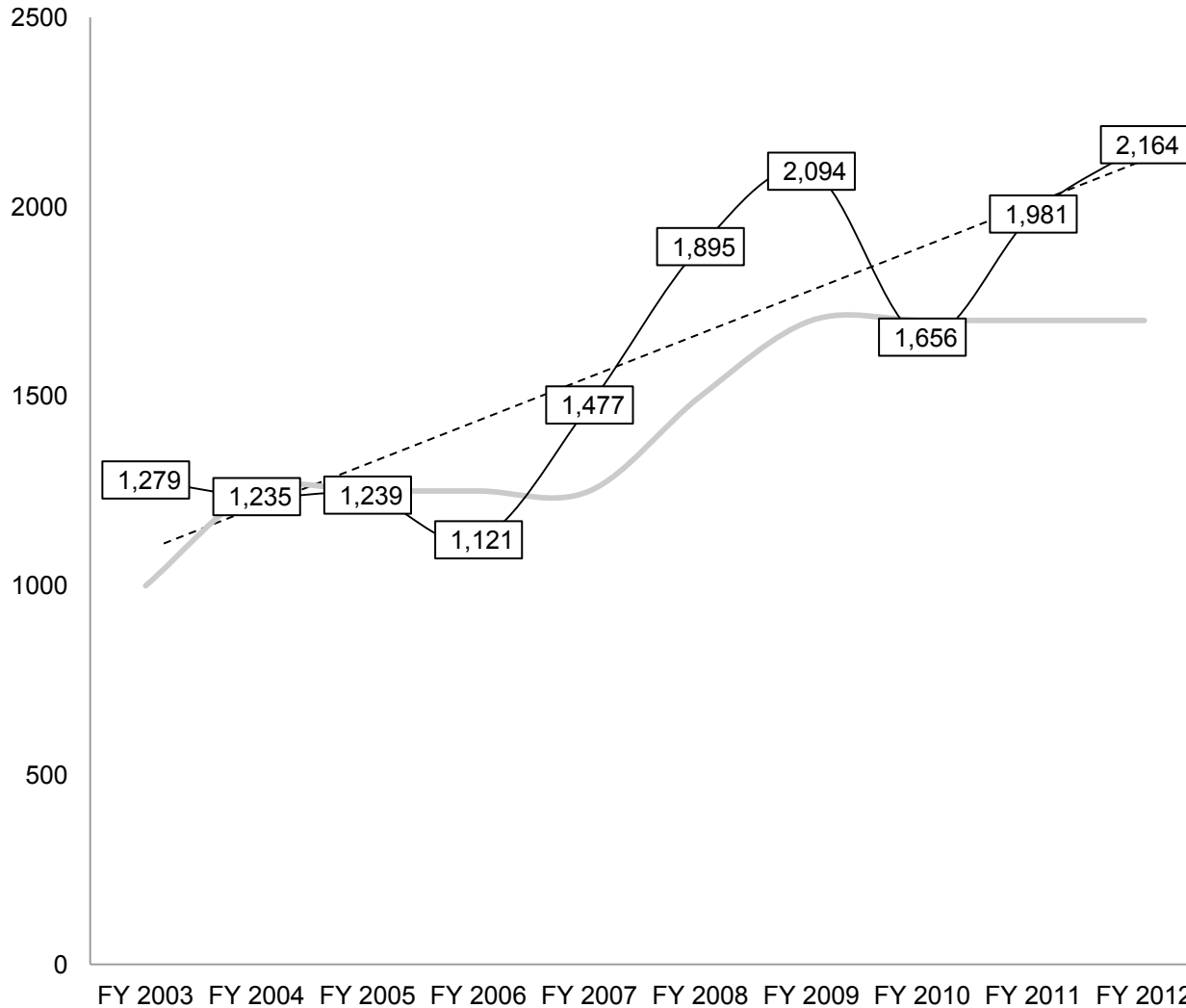
**A5 Mean Distance Between Failure (Trolley Coach)**



**Presidio Standard (Audit Period)**

In FY 2009 and FY 2010, the reliability of 40-foot trolleys operating out of the Presidio Division slightly fluctuated, but the division goal of 1,700 miles between failures was achieved in all eight quarters.

**A5 Mean Distance Between Failure (Trolley Coach)**

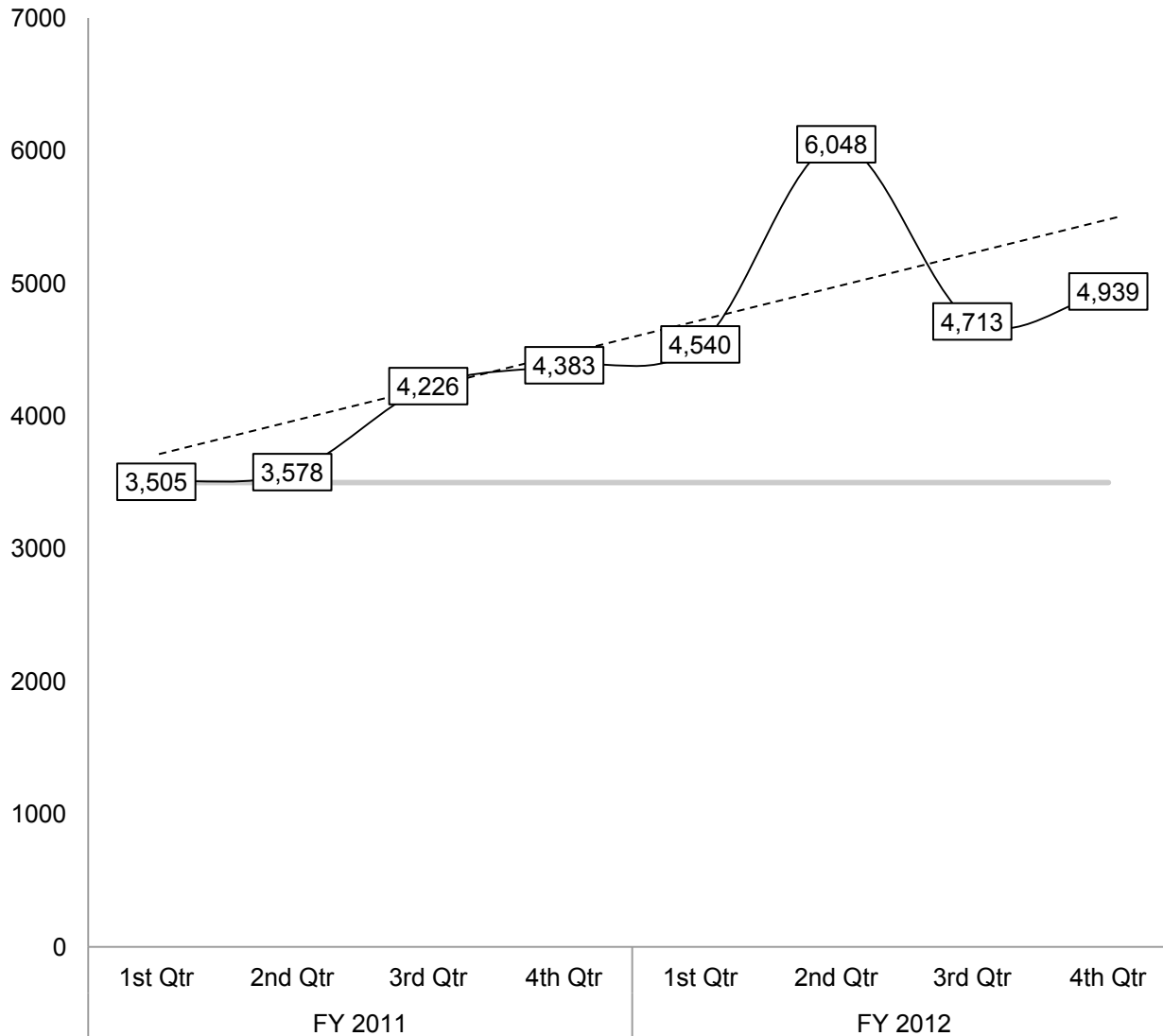


**Presidio Standard (Historic)**

In FY 2011 and FY 2012, the reliability of 40-foot trolleys operating out of the Presidio Division increased to some of the highest levels over the past nine fiscal years, exceeding the standard in both years.



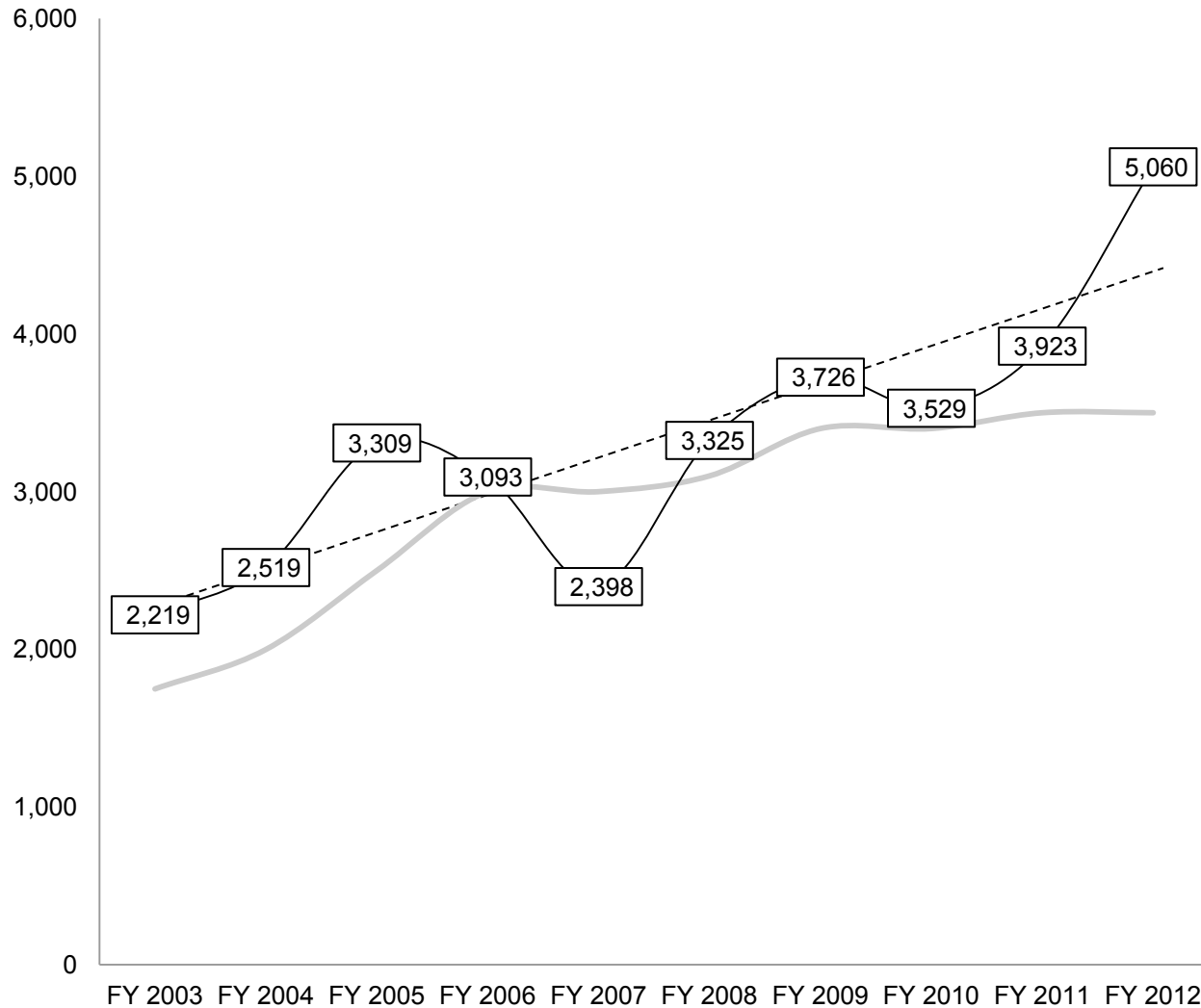
**A5 Mean Distance Between Failure (Motor Coach)**



**Flynn Articulated (Audit Period)**

60-foot diesel buses operating out of the Flynn Division met reliability goals in both FY 2011 and FY 2012, with distances between failures of more than 3,500 miles throughout all eight quarters of the audit period. In the 2<sup>nd</sup> Quarter of FY 2012, reliability peaked at a high of over 6,000 miles between failures.

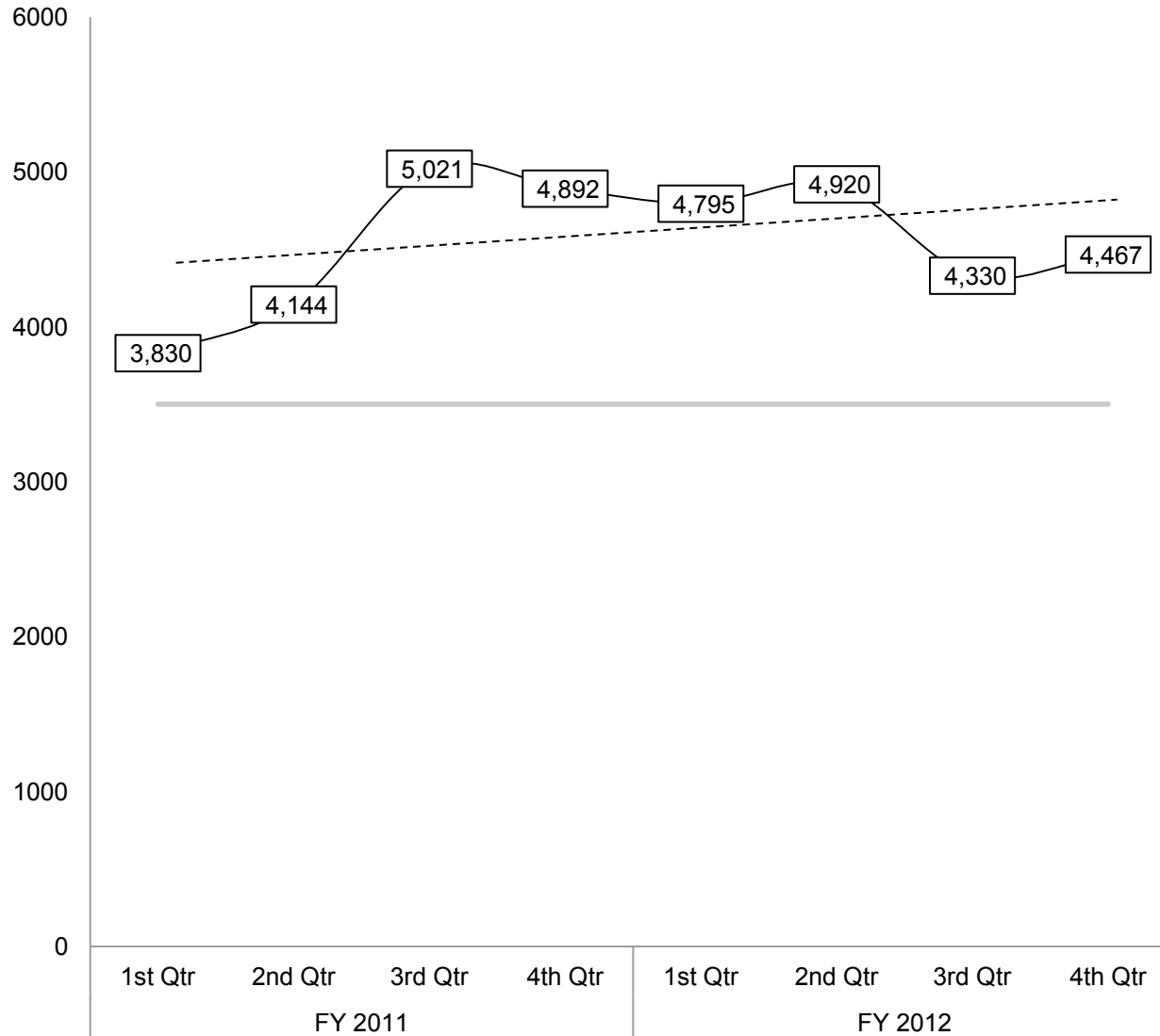
**A5 Mean Distance Between Failure (Motor Coach)**



**Flynn Articulated (Historic)**

The long-term trend in reliability for 60-foot diesel buses operating out of the Flynn Division has been positive, especially with recent gains in FY 2011 and FY 2012.

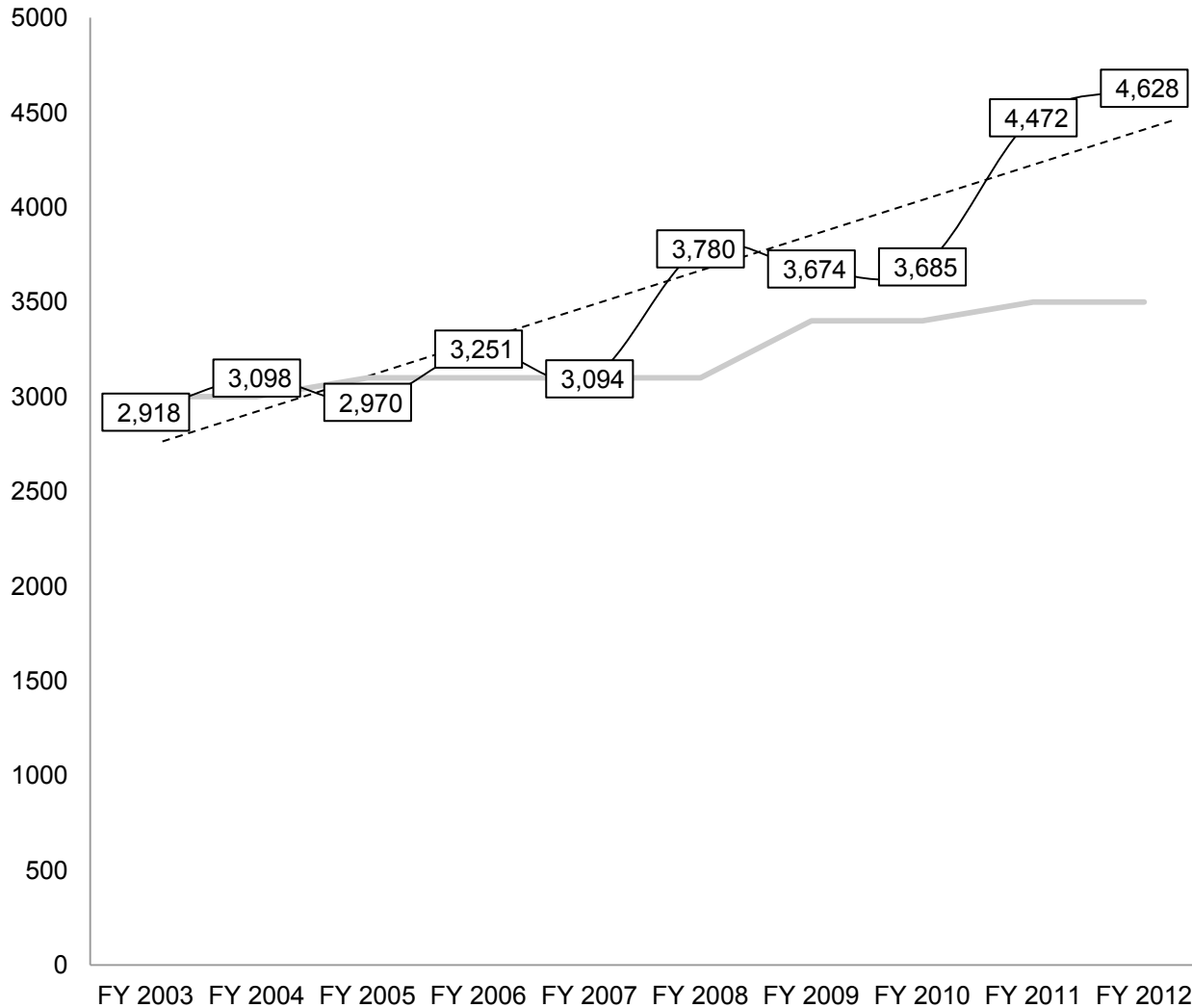
**A5 Mean Distance Between Failure (Motor Coach)**



**Kirkland Standard (Audit Period)**

Forty-foot diesel buses operating out of the Kirkland Division achieved the reliability goal (of 3,500 or more miles between failure) in all eight quarters, significantly besting the standard between the 2<sup>nd</sup> Quarter of FY 2011 and the 2<sup>nd</sup> Quarter of FY 2012.

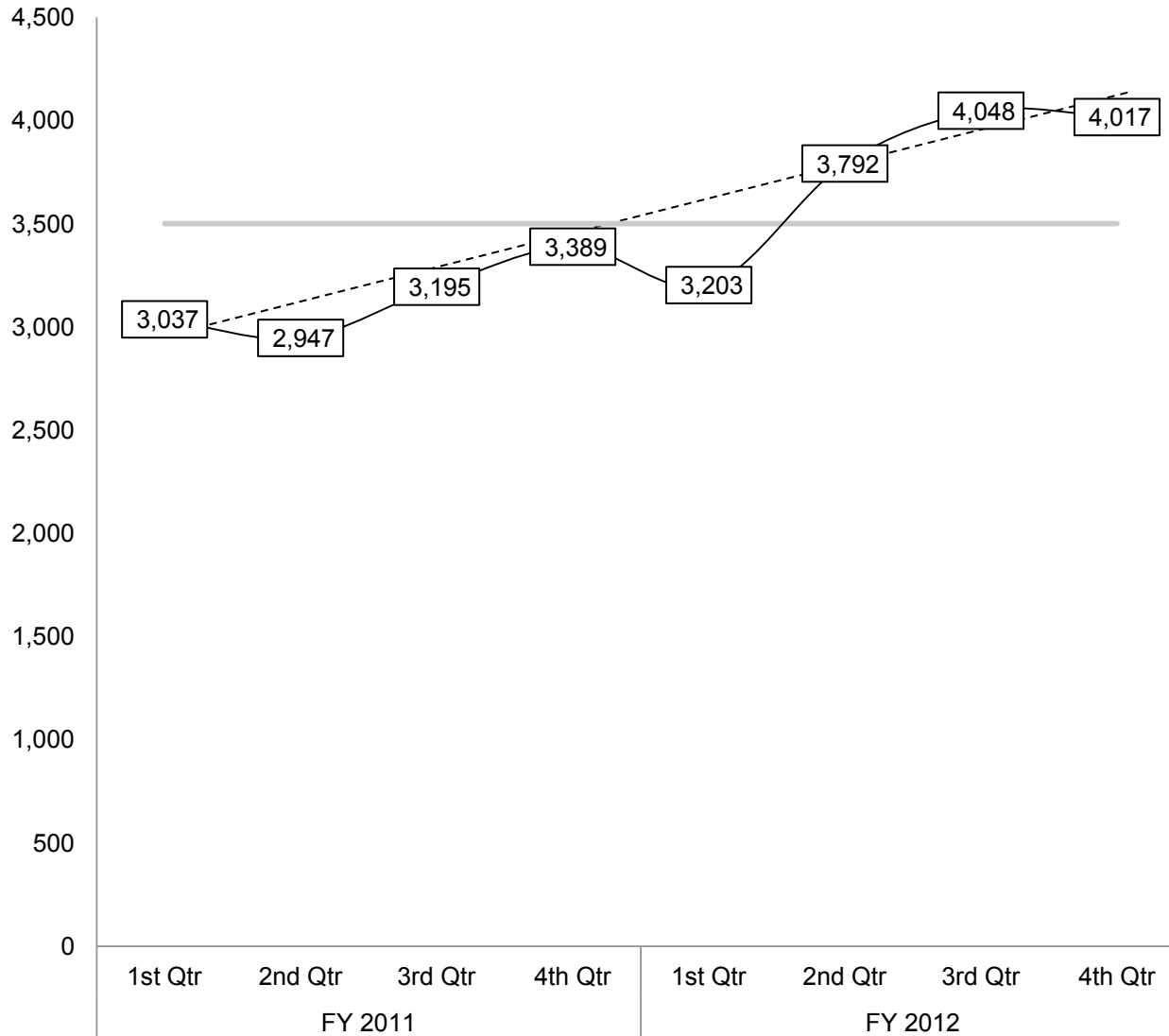
**A5 Mean Distance Between Failure (Motor Coach)**



**Kirkland Standard (Historic)**

Reliability of 40-foot diesel buses operating out of the Kirkland Division improved significantly during the audit period, increasing to over 4,000 miles between failures in FY 2011 and FY 2012.

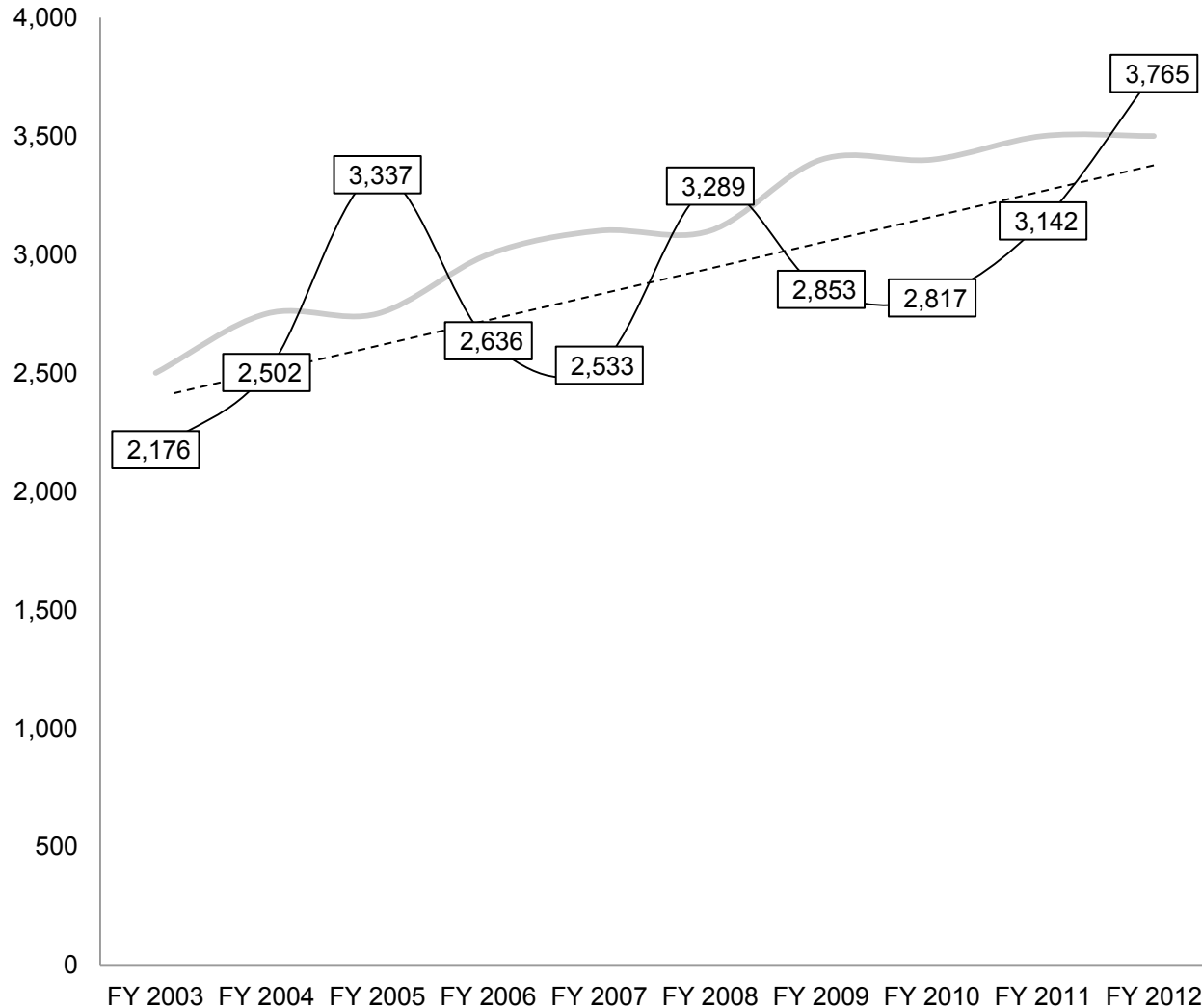
**A5 Mean Distance Between Failure (Motor Coach)**



**Woods Standard (Audit Period)**

Overall, the reliability of 40-foot diesel buses operating out of the Woods Division improved over the course of the audit period, significantly besting the goal of 3,500 miles between failures beginning in the 2<sup>nd</sup> Quarter of FY 2012 after hovering below the goal throughout FY 2011.

**A5 Mean Distance Between Failure (Motor Coach)**



**Woods Standard (Historic)**

The reliability of Woods division diesel buses improved in FYs 2011 and 2012, highlighting an overall positive trend. In the latter year, Woods division exceeded the target 3,500 miles between failures, achieving a nine year high of 3,765 miles between failures.

**A6 Vacancy Rate for Service Critical Positions**

**Goal** < 15%

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



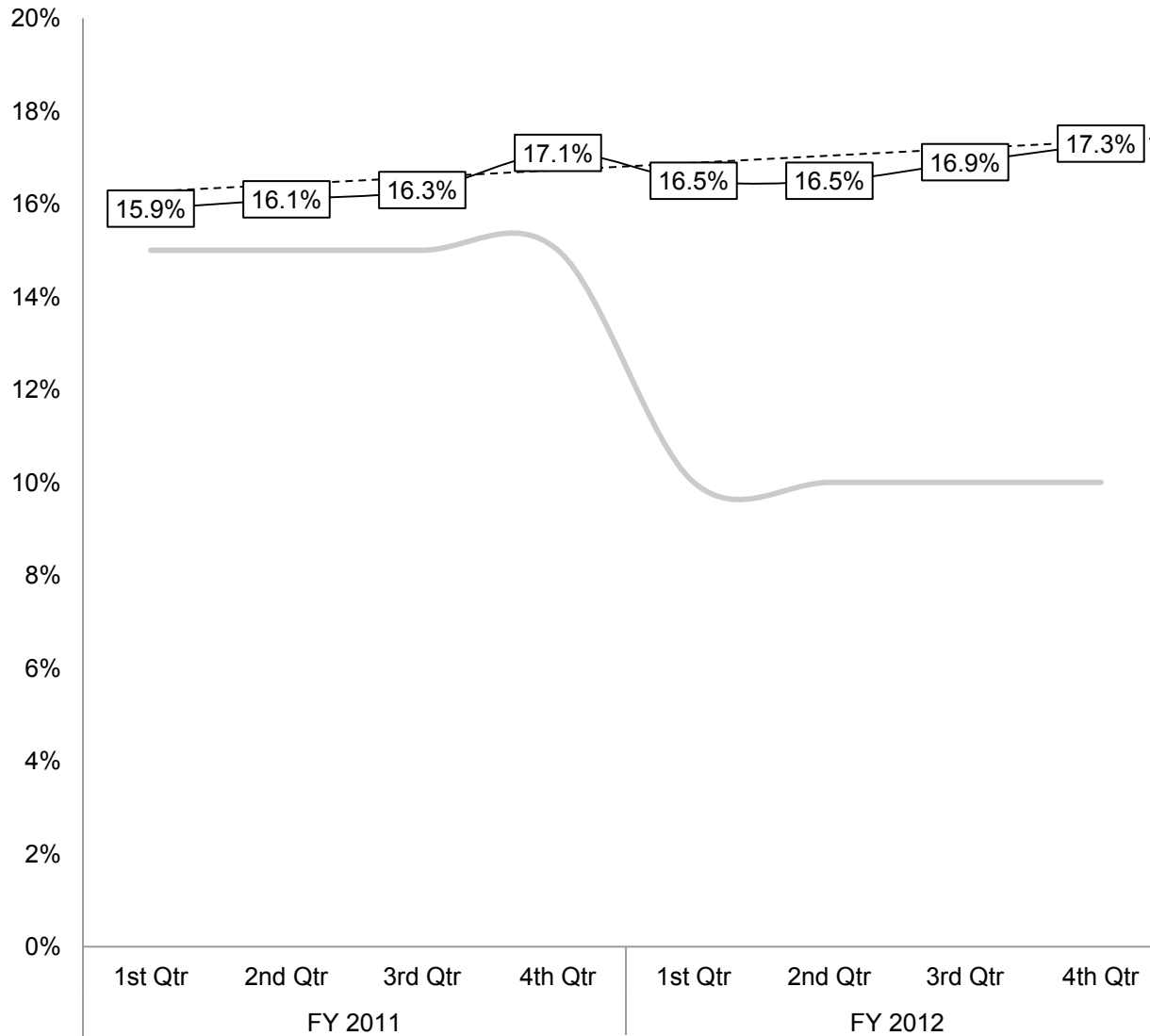
*Negative*

**Purpose** Monthly measurement of net vacancies against budgeted positions for Operations personnel.

**Definition** In FY 2011, Muni stopped reporting transit operator vacancy rates and adjusted the vacancy rate goal for all other service critical positions goal to 15% (See Service Standard A5). In FY 2012, the vacancy rate goal was revised again, to 10%.

**Method** Monthly measurement of net vacancies against budgeted positions for Operations personnel. Calculated based on vacancies remaining once promotions and new hires have been deducted from retirees or resignations.

**A6 Vacancy Rate for Service Critical Positions**

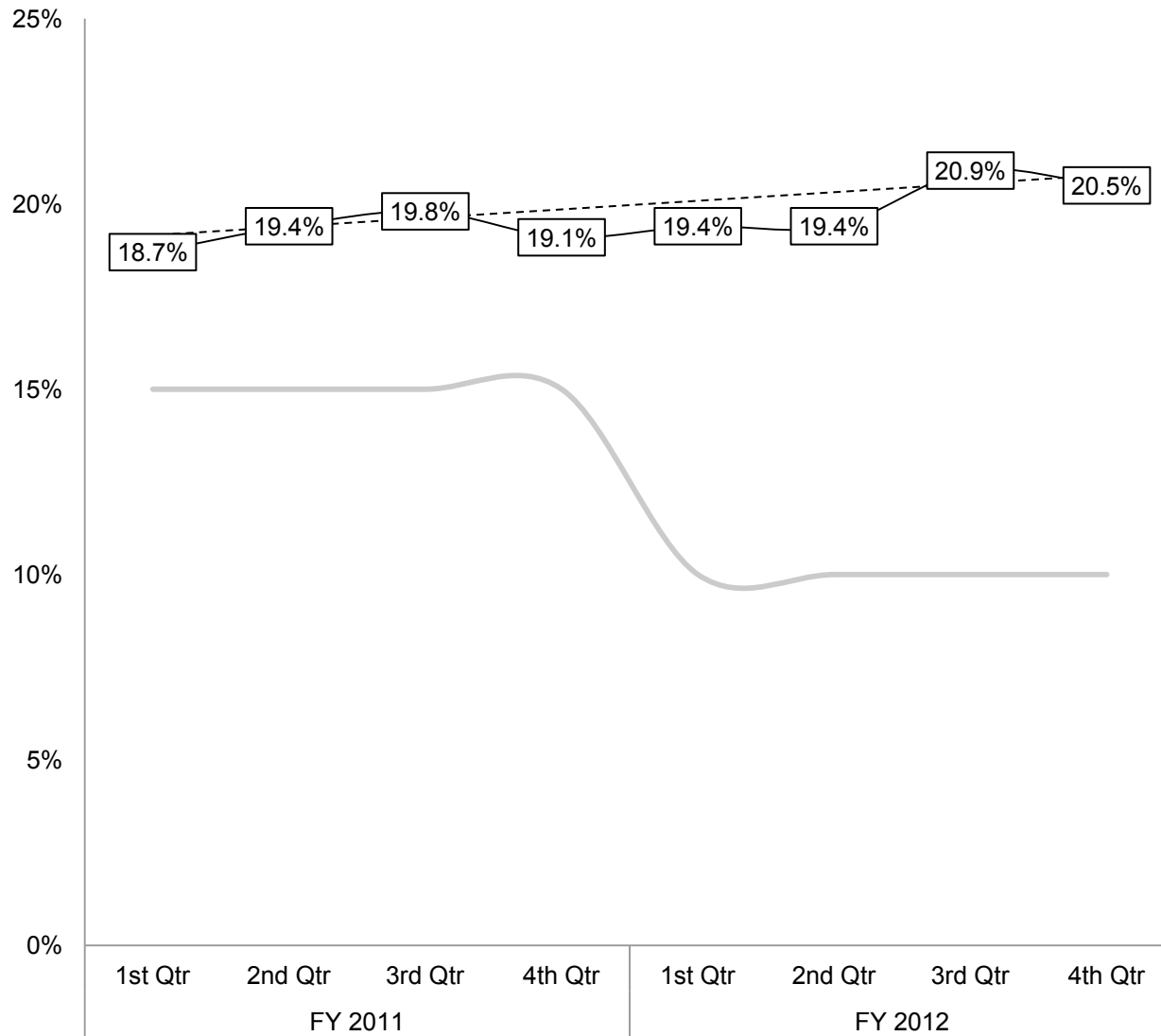


**Crafts  
(Audit Period)**

Muni's vacancy rate for crafts staff stayed relatively steady over the audit period, increasing slightly from nearly 16% in the 1<sup>st</sup> Quarter of FY 2011 to just over 17% in the 4<sup>th</sup> Quarter of FY 2012. In no quarter did the Crafts vacancy rate meet the 15% (FY 2011) and 10% (FY 2012) standards.



**A6 Vacancy Rate for Service Critical Positions**



**Maintenance (Audit Period)**

Similarly, Muni's vacancy rate for maintenance staff also increased slightly over the audit period, increasing from 18.7% at the beginning of FY 2011 to 20.5% at the end of FY 2012. This far exceeds the goals for each of the audit years, set at 15% in FY 2011 and 10% in FY 2012.

## A13 Productivity

**Goal** *N/A*

**FY11-12 Performance**

*No Goal  
For This  
Standard*

**Trend**



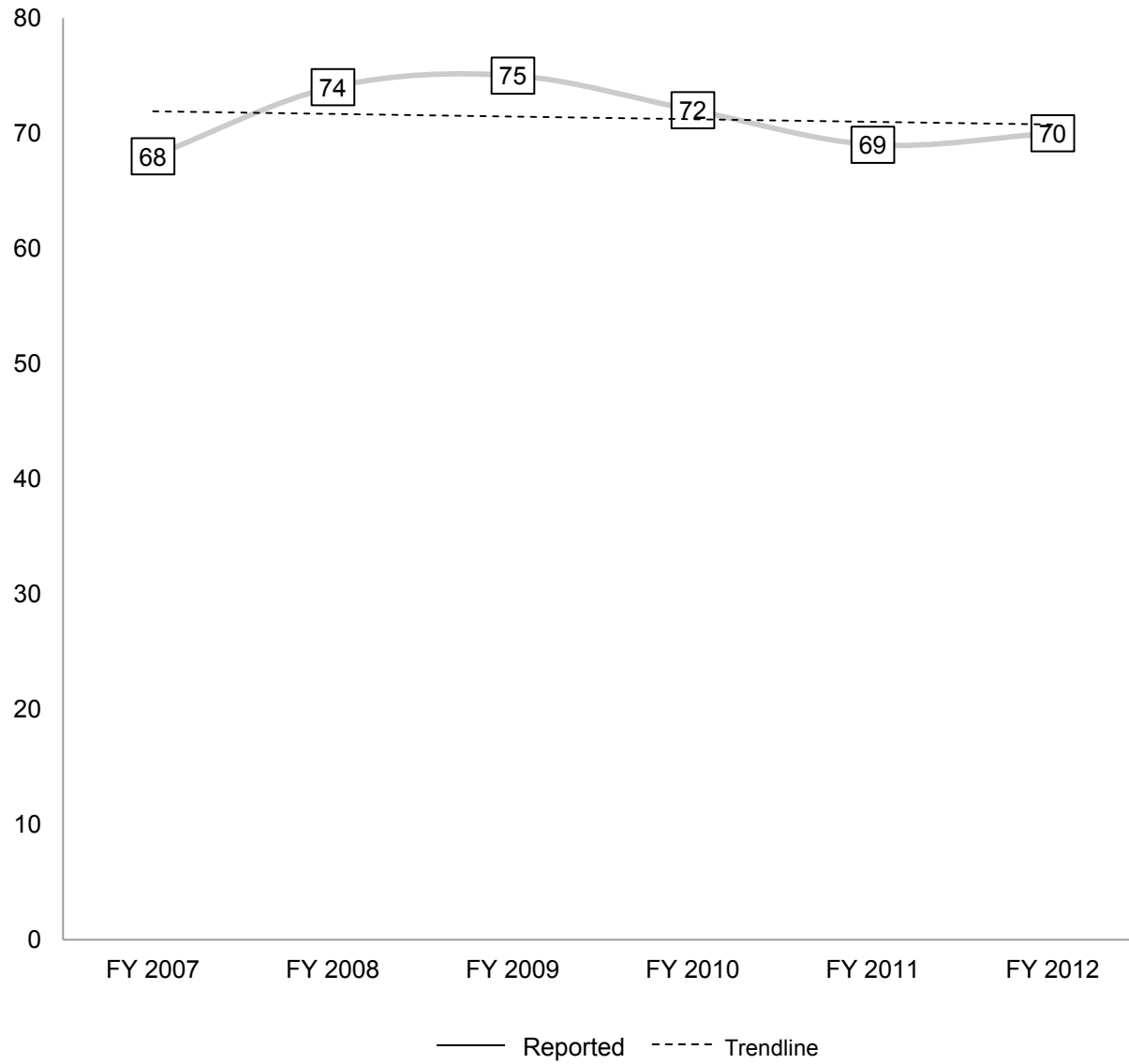
*Neutral*

**Purpose** To measure the productivity of Muni services.

**Definition** Average number of boardings per service hour.

**Method** Passenger boardings are divided by service hours delivered.

**A13 Productivity**

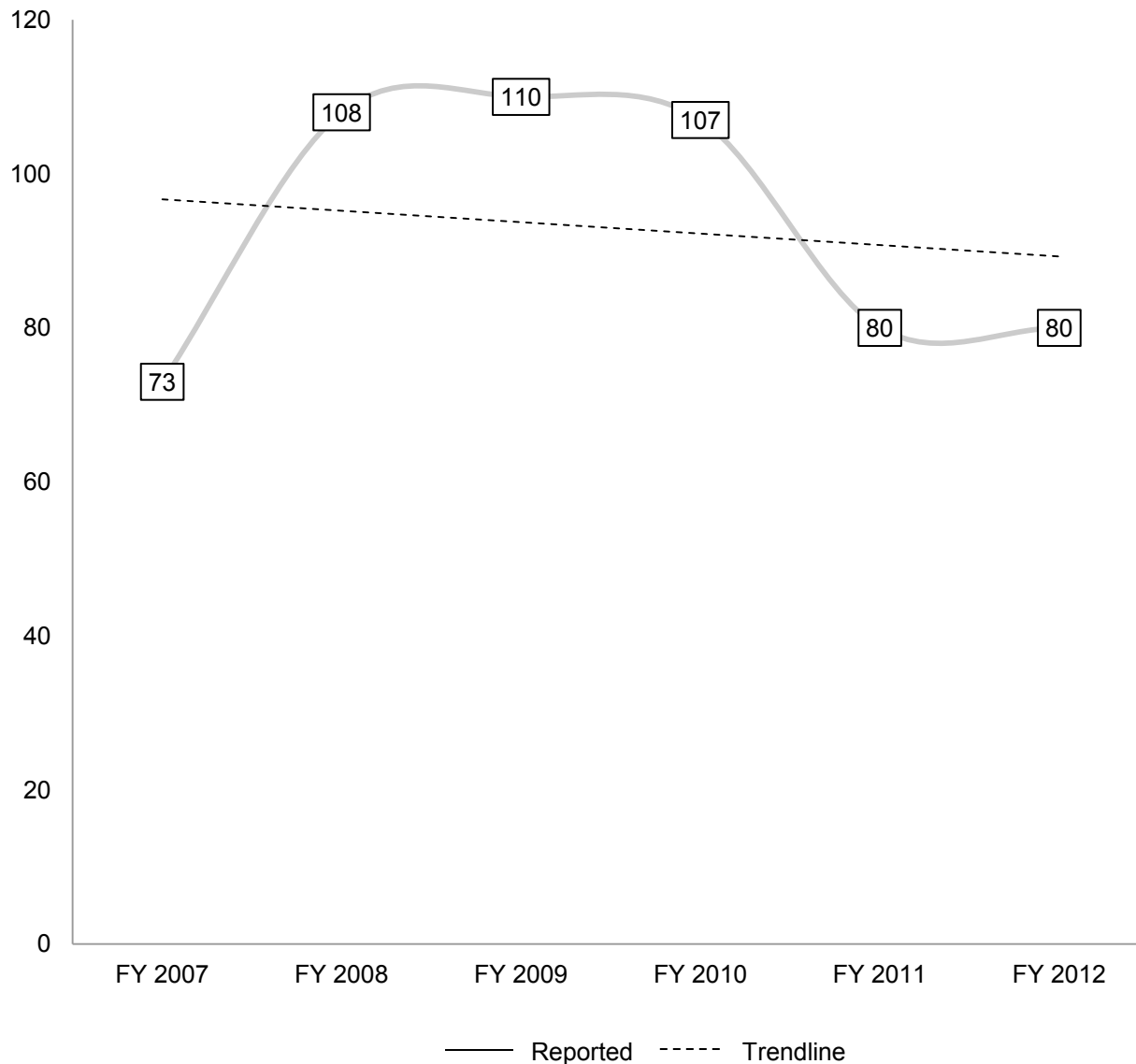


**Systemwide Average Number of Boardings per Service Hour (Audit Period & Historic)**

Boardings per revenue service hour is an industry standard measure, reported by transit operators to the Federal Transit Administration, which Muni began reporting in Service Standards reports in FY 2007. Overall, boarding productivity declined from FY 2009 through FY 2011, slightly increasing in FY 2012 to 70 boardings per service hour.

(Note: FY 2012 data may be unaudited by the FTA.)

**A13 Productivity**

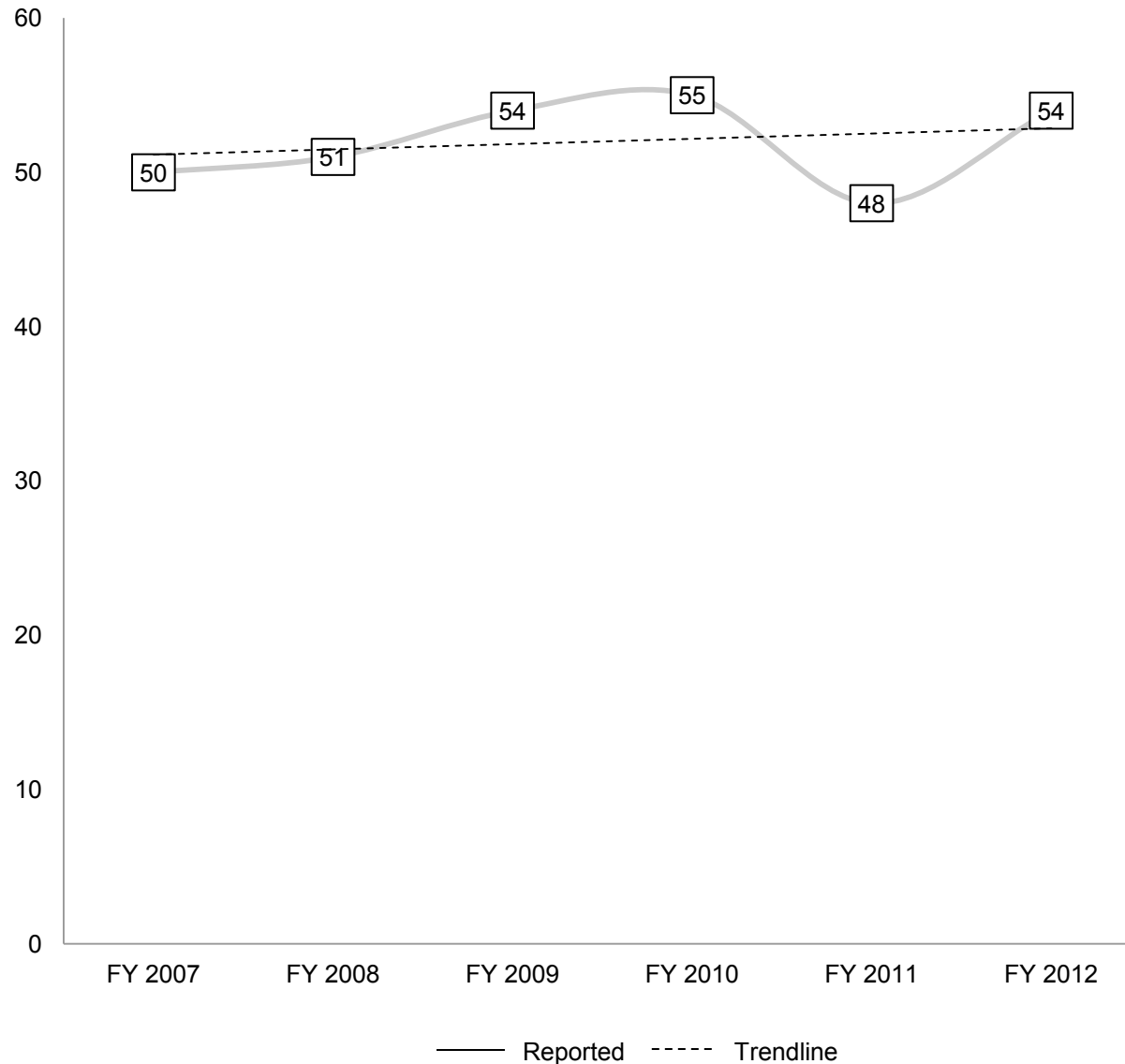


**Light Rail Average Number of Boardings per Service Hour (Audit Period & Historic)**

The methodology for reporting light rail hours was changed in FY 2008 to a more meaningful standard (individual “car hours” rather than “train hours”), making comparison with years prior to 2008 difficult. However, over the last six fiscal years productivity trends have mimicked systemwide trends, with a dip to 80 boardings per hour in both years of the audit period.

(Note: FY 2012 data may be unaudited by the FTA.)

**A13 Productivity**

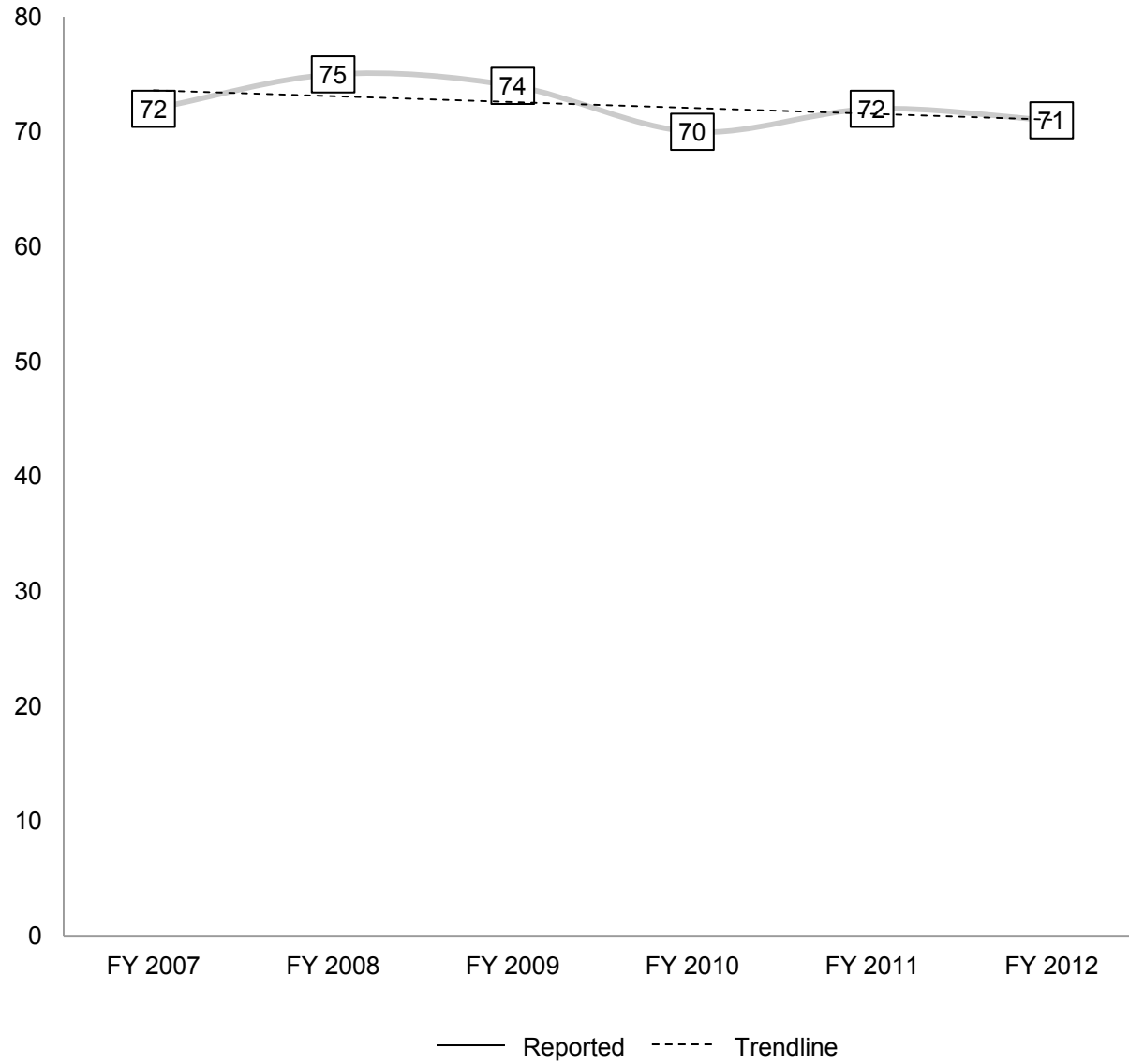


**Cable Car Average Number of Boardings per Service Hour (Audit Period & Historic)**

Overall, the gains in productivity observed in FY 2009 and FY 2010 held during the audit period; the dip in productivity in FY 2011 occurred primarily because the California line was out of service for the second half of that audit period (January to June 2011).

(Note: FY 2012 data may be unaudited by the FTA.)

### A13 Productivity

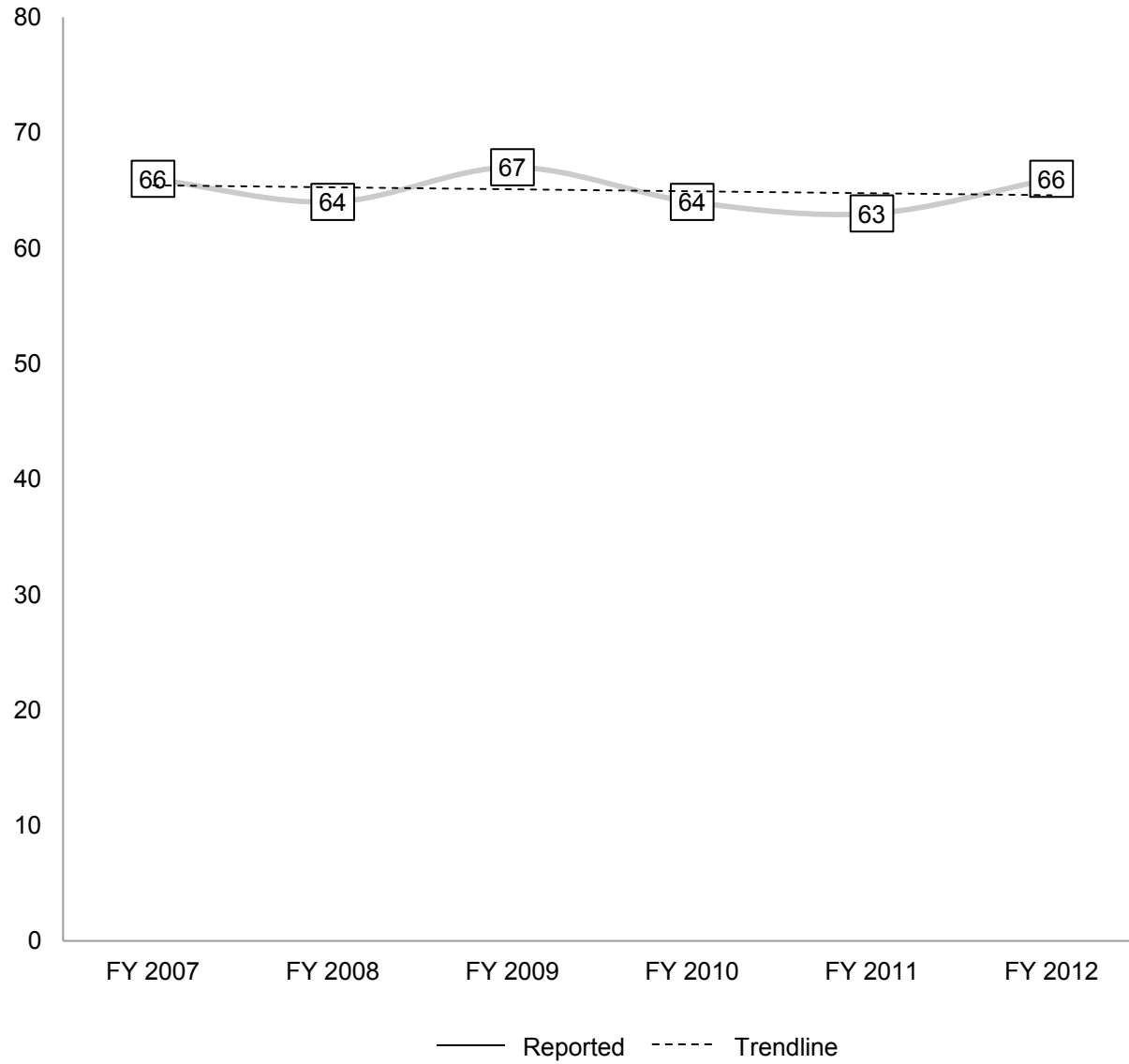


#### **Trolley Coach Average Number of Boardings per Service Hour (Audit Period & Historic)**

Trolley coach productivity continued to fluctuate during the audit period, improving passenger productivity in FY 2011 after the previous year's four-passenger drop but falling to 71 passengers per hour in FY 2012.

(Note: FY 2012 data may be unaudited by the FTA.)

### A13 Productivity



**Motor Coach  
Average Number of  
Boardings per  
Service Hour  
(Audit Period &  
Historic)**

Productivity on diesel bus lines continued to fall in FY 2011, to a six-year low of 63 boardings per hour, before rising again to the FY 2007 productivity level (66 boardings per hour) in FY 2012.

(Note: FY 2012 data may be unaudited by the FTA.)





## **A17 Sustainability**

### **% of Trips by More Sustainable Modes**

This is a new service standard, added in FY 2009. The figures below are for commute trips only, and are taken from the most recent City Survey conducted by the Office of the Controller in 2011. Results were positive, with approximately 87% of respondents indicating that they rode Muni at least once a month, and in response to the question, “If you are employed, what is your primary mode of transportation to work?,” three out of ten respondents answered that they regularly commute by Muni.

**As of January 1, 2011**

<b>Transit</b>	<b>Drive Alone</b>	<b>Walk</b>	<b>Carpool</b>	<b>Work at Home</b>	<b>Bicycle</b>	<b>Other</b>
32.1%	34%	10.5%	4.7%	8%	4.9%	2.4%

## **B Financial Stability**

Service standards in this category are measures of Muni revenue and costs, including the relationship of farebox revenue and ridership (B3 Farebox Performance) and the relationship of costs to both service provided (B4 Cost Efficiency) and ridership (B5 Cost Effectiveness). During the audit period, ridership rose to its second highest level in ten years in FY 2012 after declining to FY 2006 levels in FY 2011. Fare revenue, however, increased slightly in FY 2011 and FY 2012 due to increases in Fast Pass prices in FY 2012.

Following are brief summaries of Muni's FY 2011-2012 performance for each of the Financial Stability service standards, including arrows indicating general trends (up for "positive," facing right for "neutral," and turned down for "negative") in terms of both historic patterns and performance over the course of the audit period. More detailed information about each service standard can be found on the following pages, including historic trends and data from recent quarters since the end of the audit period. Recommendations and issues identified in the data collection and reporting processes can be found at the end of the sections for some service standards.

Note that data in this category may be revised following annual Federal Transit Administration (FTA) audits. FY 2011 data shown here are audited data from FY 2012 reports. Also note that financial data are nominal, and have not been adjusted for inflation.

### **B1 Ridership**

After dropping to FY 2006 levels in FY 2011, ridership hit its second highest level in ten years in FY 2012 when over 222 million people rode Muni systemwide.

### **B2 Revenue**

Muni fare revenue increased slightly in FY 2011, then again in FY 2012.

### **B3 Farebox Performance**

While costs per hour increased, revenue increased at a faster rate. As a result, over the audit period Muni experienced an increase in farebox performance.

### **B4 Cost per Hour**

After consistently rising since FY 2005, Muni's operating cost per hour of revenue service leveled off during the audit period, even dropping slightly in FY 2012 as bus revenue hours increased in the two audit years.

### **B5 Cost per Boarding**

Muni's operating cost per boarding reached a high of \$2.88 in FY 2011 after consistently rising since FY 2007, but fell gradually in FY 2012 to \$2.83.

## **B1 Ridership**

**Goal** + 1.5% / yr.

**FY11-12 Performance**



*Not  
Achieved*

**Trend**



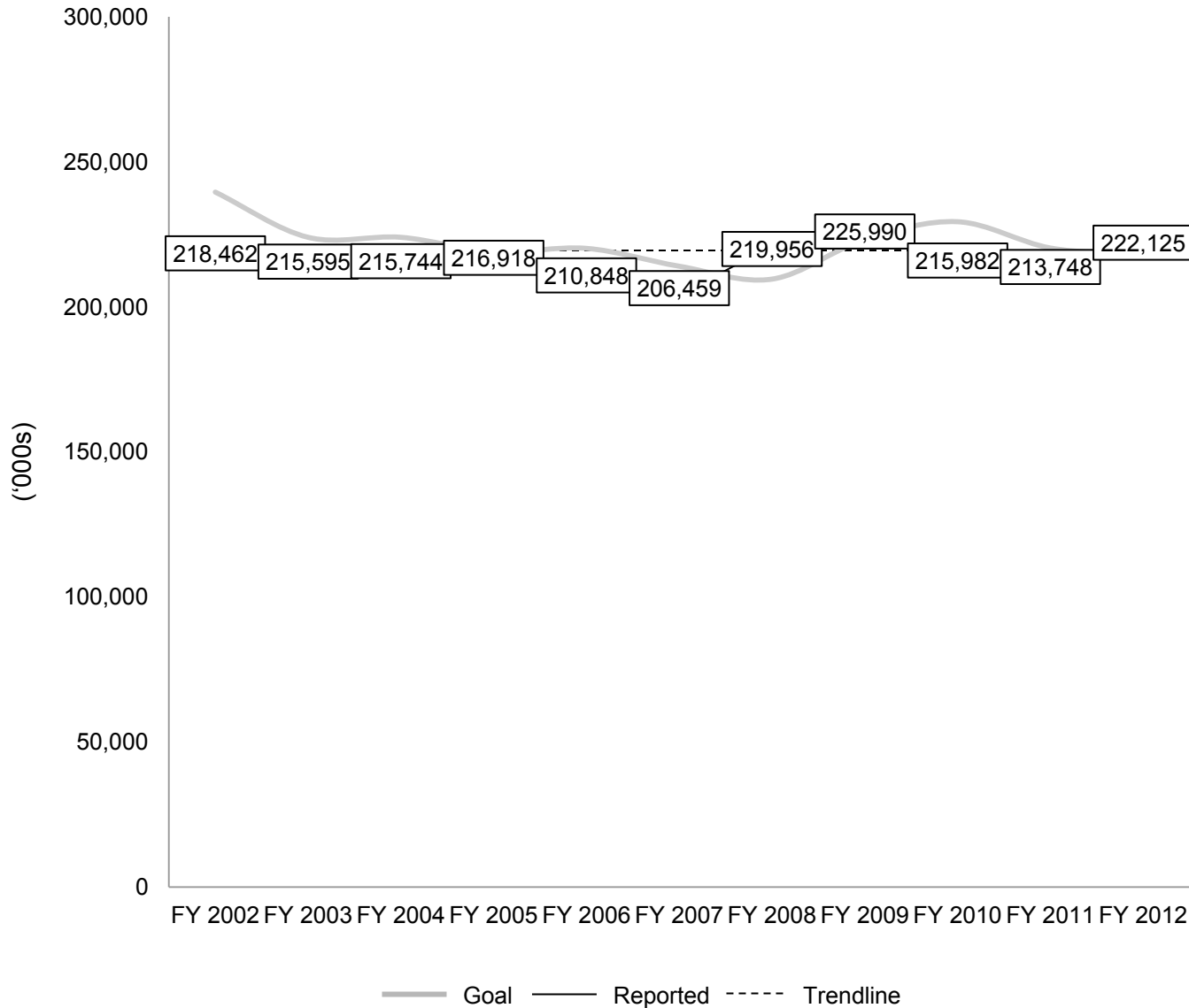
*Neutral*

**Purpose** To measure ridership.

**Definition** Annual measurement of the number of passengers who board the Municipal Railway'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** Data are collected using Automatic Passenger Counting (APC) devices aboard buses and rail vehicles.

**B1 Ridership**

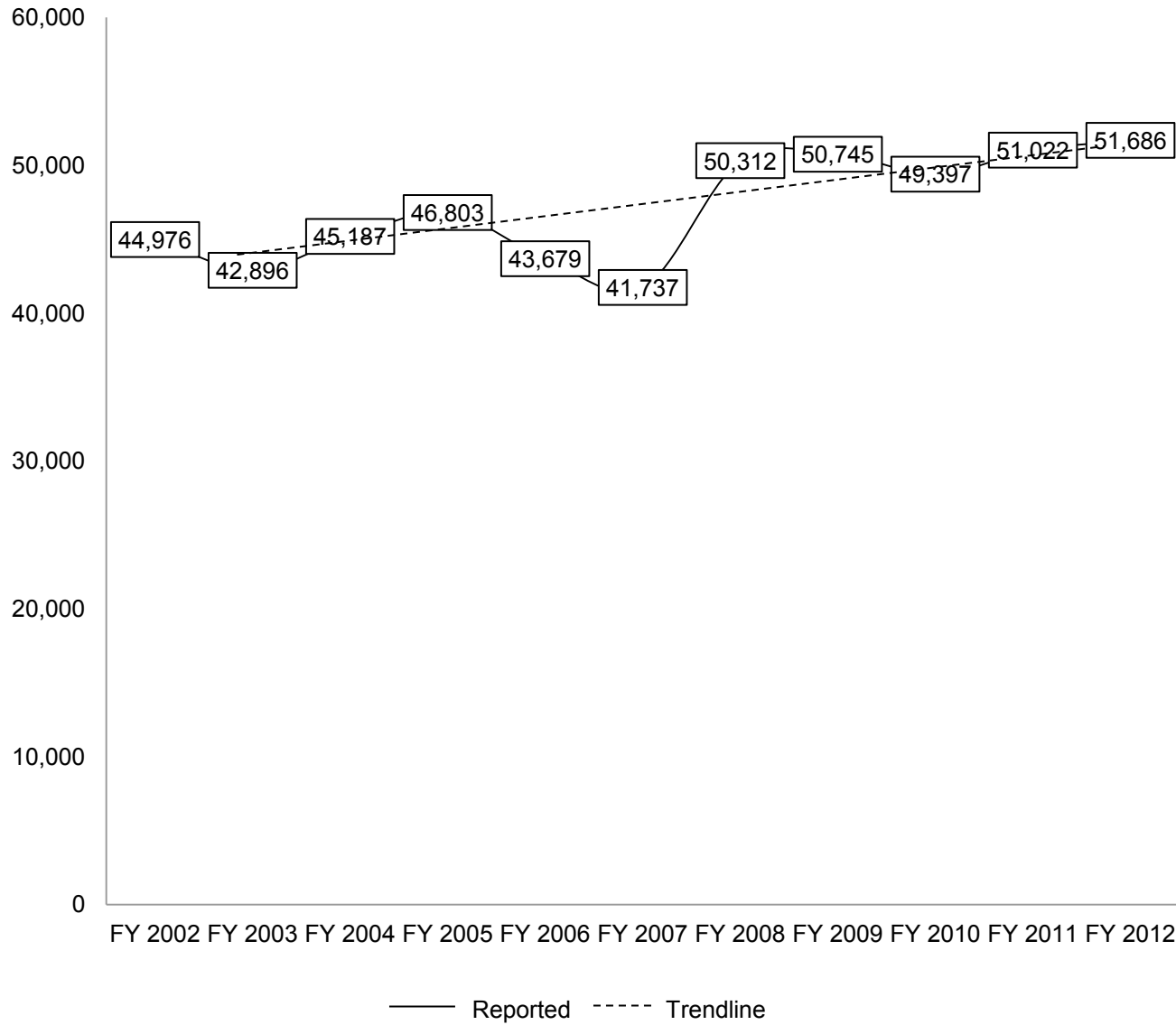


**Systemwide (Audit Period & Historic)**

After dropping to FY 2006 levels in FY 2011, ridership hit its second highest level in ten years in FY 2012 when over 222 million people rode Muni systemwide.

(Note: The goal for systemwide ridership has changed over time. It became a 1.5% annual increase starting in FY 2005.)

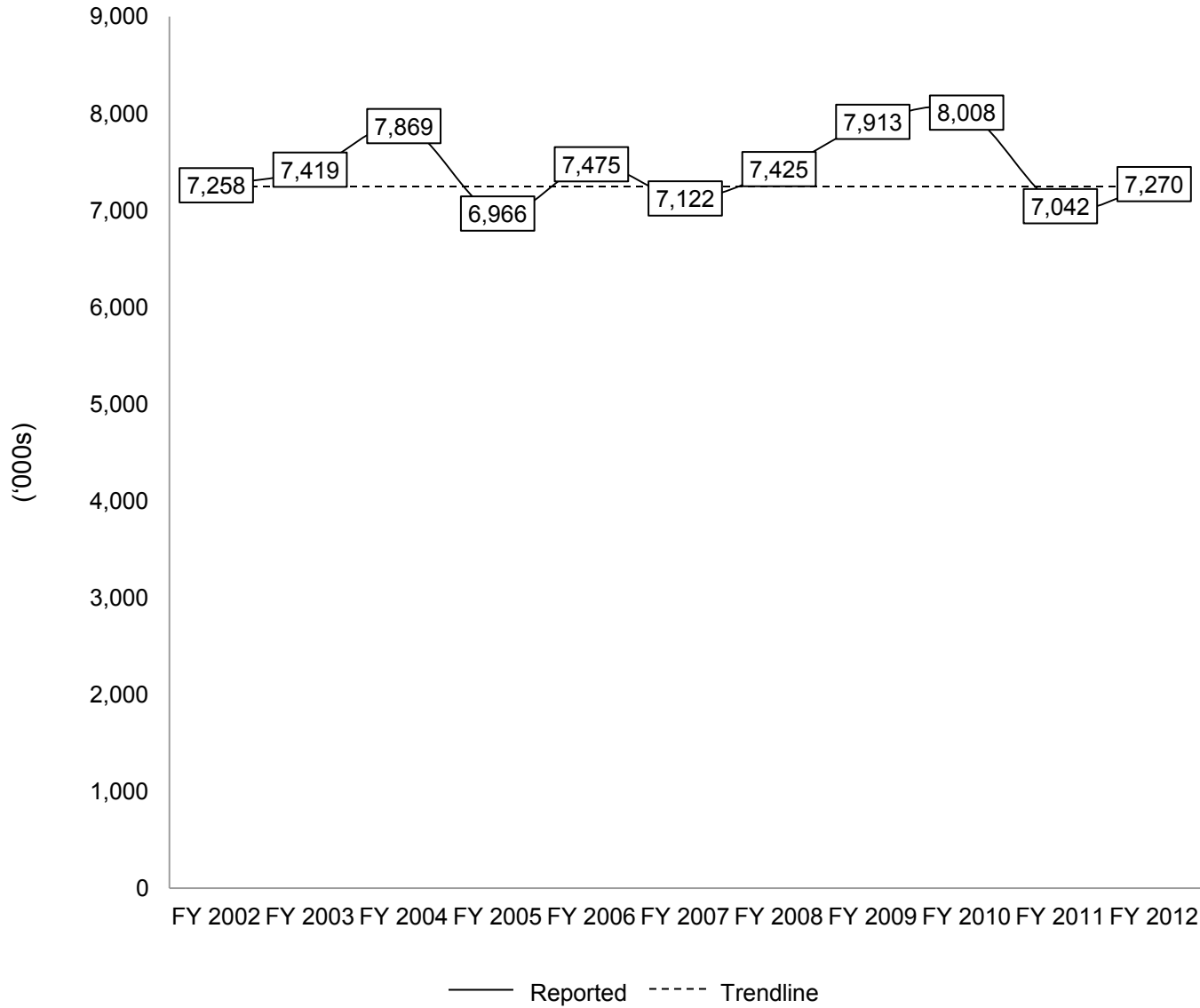
## B1 Ridership



### Light Rail (Audit Period & Historic)

Muni Metro ridership increased in FY 2008 largely due to the introduction of a new line, the T Third Street. Since then, ridership has grown modestly with a slight dip in ridership in FY 2010.

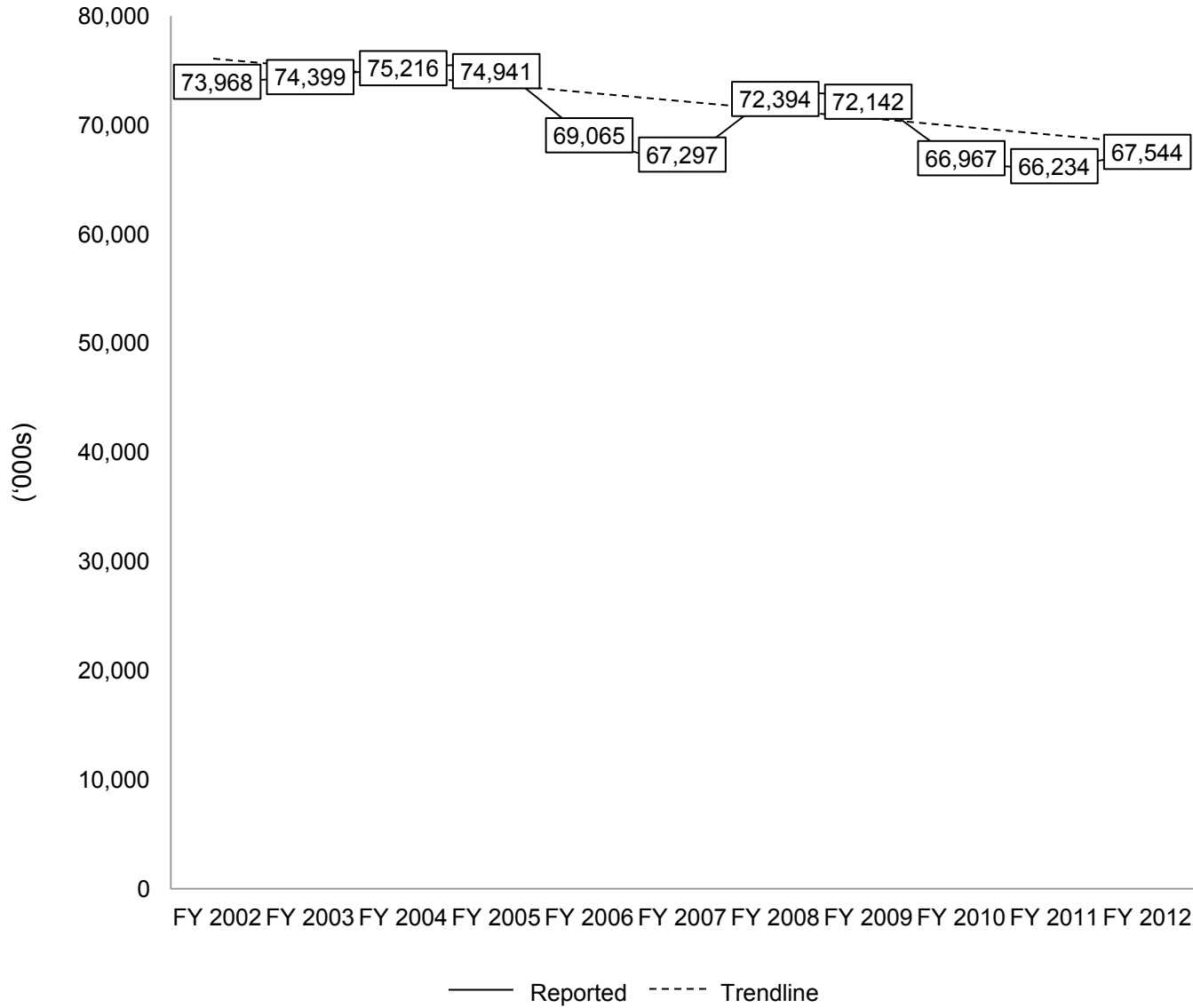
## B1 Ridership



### Cable Car (Audit Period & Historic)

In FY 2012, cable car ridership rose modestly after decreasing notably, to just over 7 million, in FY 2011. Cable car ridership since 2002 has fluctuated between approximately 7 and 8 million.

**B1 Ridership**

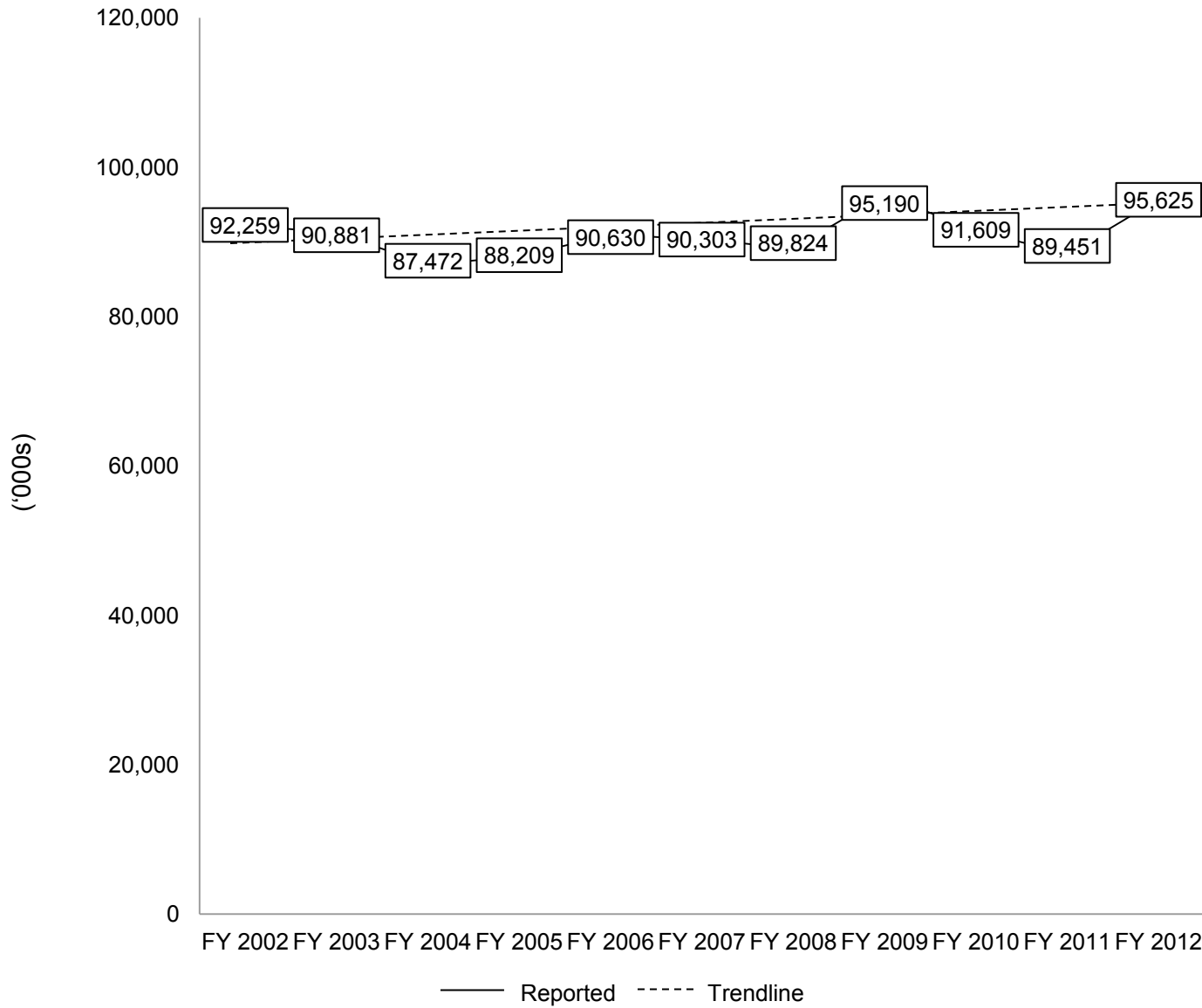


**Trolley Coach (Audit Period & Historic)**

Ridership on electric trolley lines rose to over 67 million in FY 2012 after falling slightly in FY 2011.

(Trolley lines include the 1 California, 3 Jackson, 4 Sutter, 5 Fulton, 6 Parnassus, 7 Haight, 14 Mission, 21 Hayes, 22 Fillmore, 24 Divisadero, 30 Stockton, 31 Balboa, 33 Stanyan, 41 Union, 45 Union/Stockton and 49 Van Ness/Mission.)

**B1 Ridership**



**Motor Coach  
(Audit Period &  
Historic)**

Ridership on diesel bus lines increased to a new high of 95.6 million in FY 2012 after declining in FY 2011.



## B2 Revenue

**Goal** + 1.5% / yr. (fare revenue only)

**FY11-12 Performance**



*Achieved Goal*

**Trend**



*Positive*

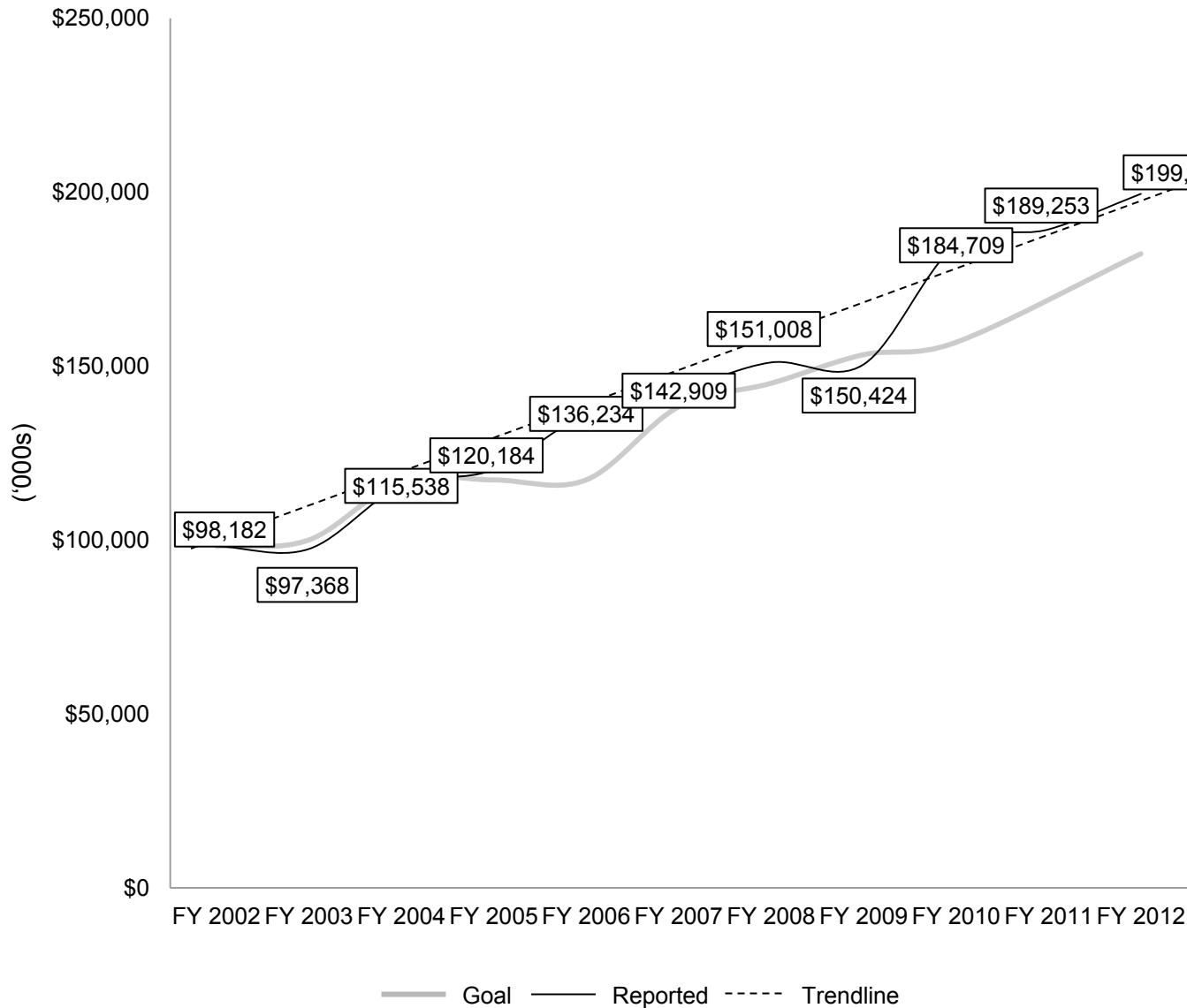
**Purpose** To measure fare revenue by average fare by passenger, mode, and general Fast Pass sales.

**Definition** Fare revenue collection on board revenue vehicles; Monthly/Weekly Fast Pass sales; individual ticket sales at POP stations; 1, 3 and 7 day pass sales; Cable Car Souvenir Tickets, Bart Plus, Tokens, Adult/Youth/Senior Passes; Ballpark and Special Event Passes; Regional Passes, etc. The goal is not applicable in years when a fare increase occurs.

Note: revenue data by mode were not available for FY 2011 or FY 2012.

**Method** Cash fares are collected electronically on board all revenue vehicles (with the exception of Cable Car), utilizing the Cubic Farebox system. In Cable Cars, a manual fare collection system along with sale of special passes is utilized. POP stations sell tickets on the platform.

**B2 Revenue**



**Systemwide Fare Revenue (Audit Period & Historic)**

Muni revenues from fares increased 104% between FY 2003 and FY 2012, due in large part to fare increases in FY 2004, FY 2006, FY 2010, and FY 2012. Between FY 2011 and FY 2012, fare revenues increased by just over \$10 million. (Note: The goal for systemwide revenue has changed over time. It became a 1.5% annual increase starting FY 2005. Also, the goal is not applicable during years in which fares are increased.)

Note: Charts in this and the following sections, addressing revenue and costs, have not been adjusted for inflation.

### **B3 Farebox Performance**

**Goal** *N/A*

**FY11-12 Performance**

*No Goal  
For This  
Standard*

**Trend**



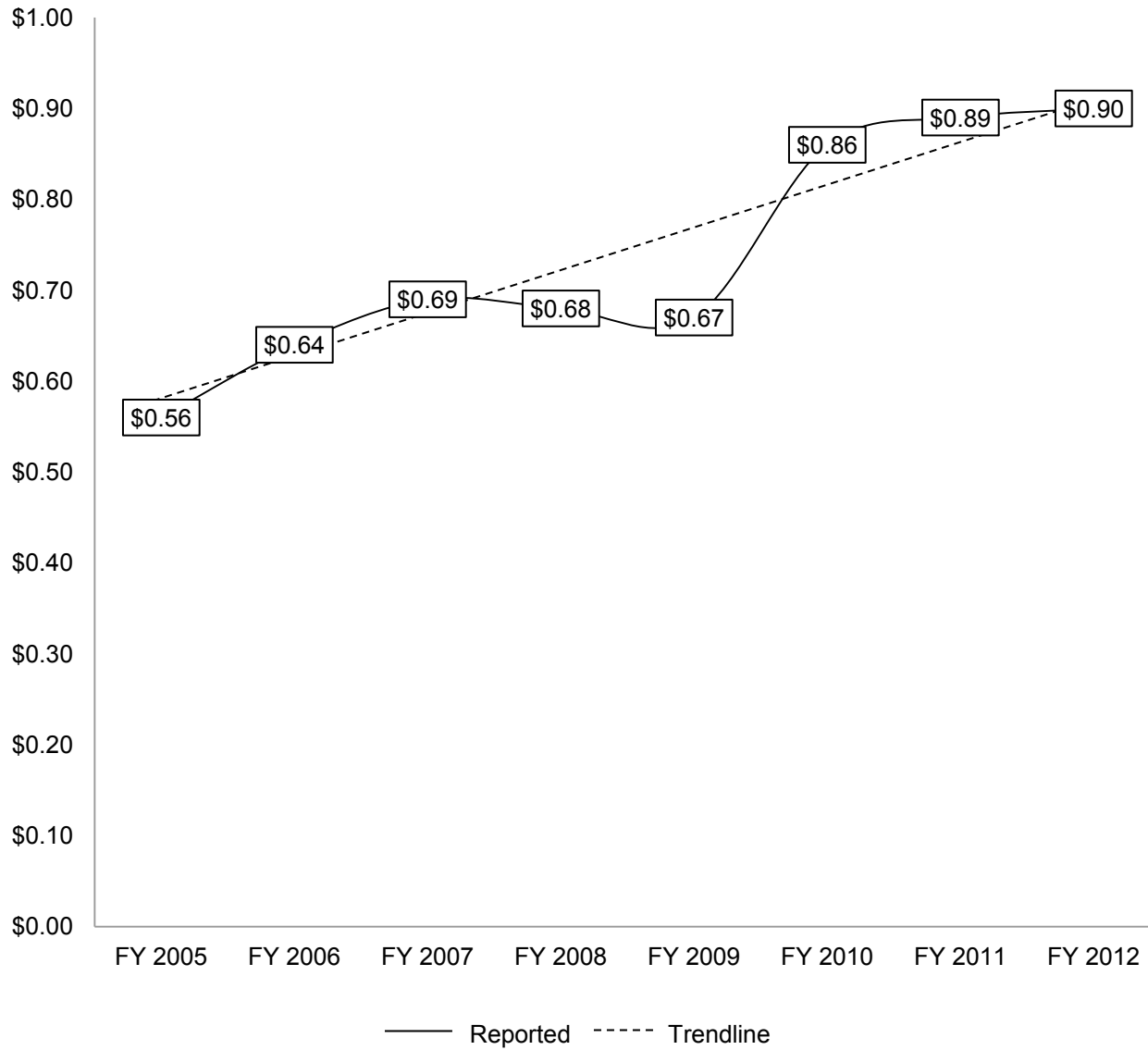
*Positive*

**Purpose** To measure farebox performance.

**Definition** Average fare per passenger based on unlinked passenger trips.

**Method** Revenues are divided by number of unlinked trips.

### B3 Farebox Performance



#### Systemwide Average Fare (Audit Period & Historic)

In FY 2012 the cost of a monthly adult pass increased 3%, and its average fare per boarding increased 1% to \$0.90 per boarding.

## B4 Cost per Hour

**Goal** N/A

**FY11-12 Performance**

*No Goal  
For This  
Standard*

**Trend**



*Positive*

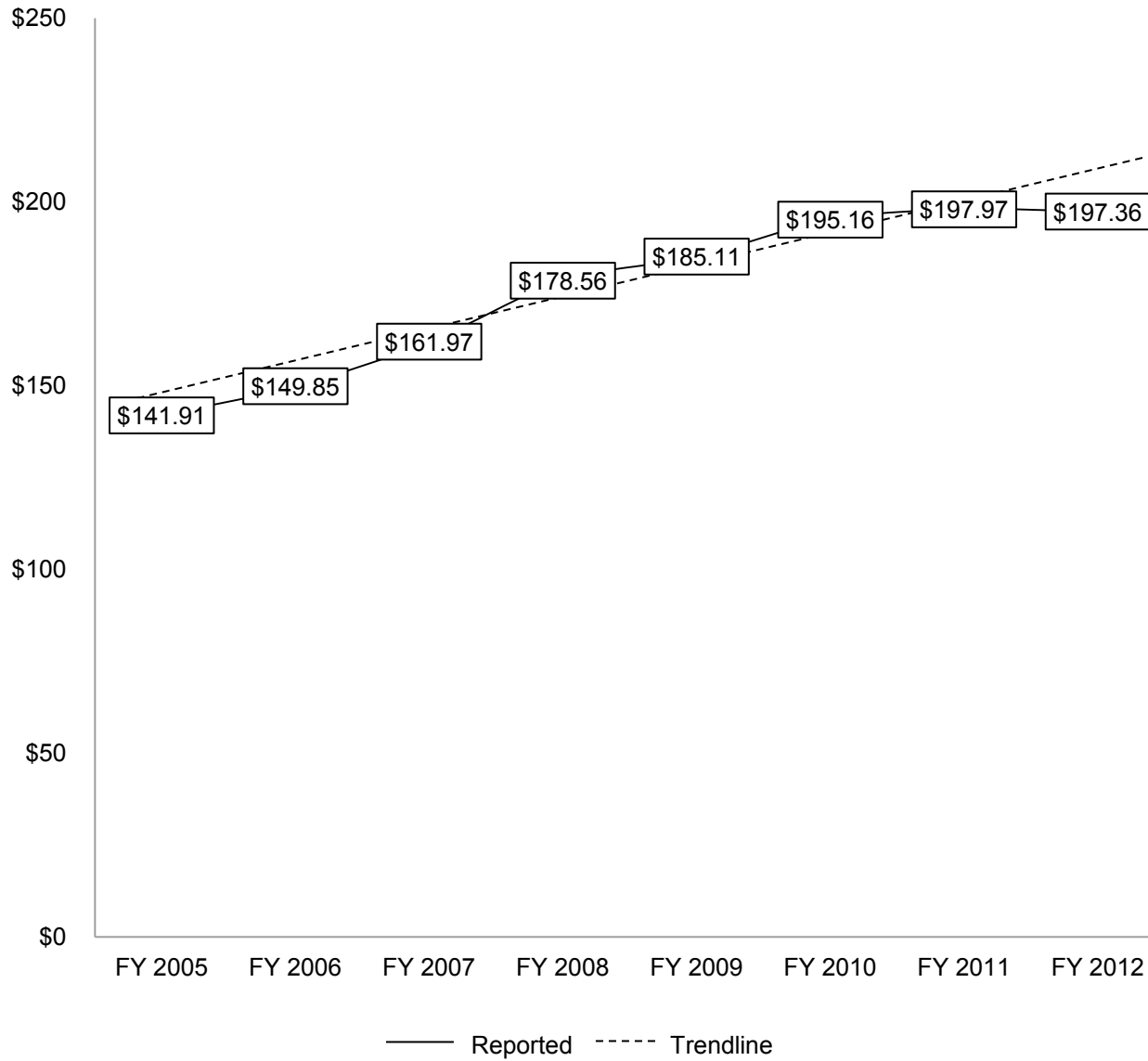
**Purpose** To measure the cost of producing revenue service by fully allocated costs per hour of service by passenger mile and mode.

**Definition** Fully allocated cost of service per hour and per mile.

**Method** Data are reported to the Board on an annual basis based on fully allocated costs per hour of service by mode.

Note: This analysis does not account for inflation, which may act as a contributing factor to year-over-year trends.

**B4 Cost per Hour**

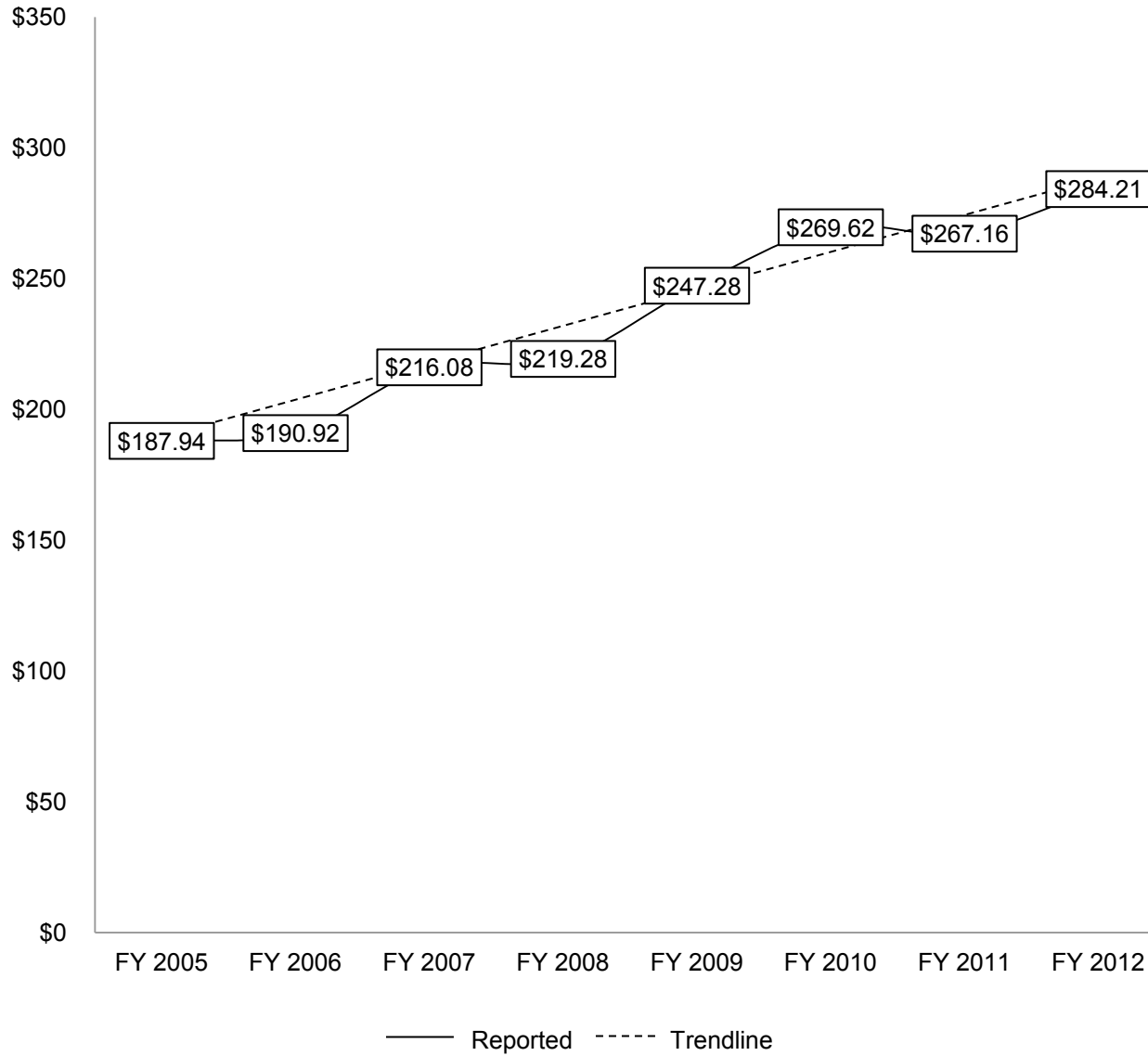


**Systemwide Fully Allocated Service Cost by Mode (Audit Period & Historic)**

Muni's operating cost per hour of revenue service increased steadily between FY 2005 and FY 2010, but began to level off during the audit period, falling slightly in FY 2012 as the hourly cost for trolley buses and motor buses both fell in that year.

Note: In its year-end scorecards for FY 2008-2010, the SFMTA reported systemwide cost per hour values that did not reflect data submitted to the National Transit Database (NTD). This practice was inconsistent with year-end reporting in the fiscal years prior to and since this three-year period. Data depicted here reflect data the SFMTA submitted to the NTD in all fiscal years.

**B4 Cost per Hour**

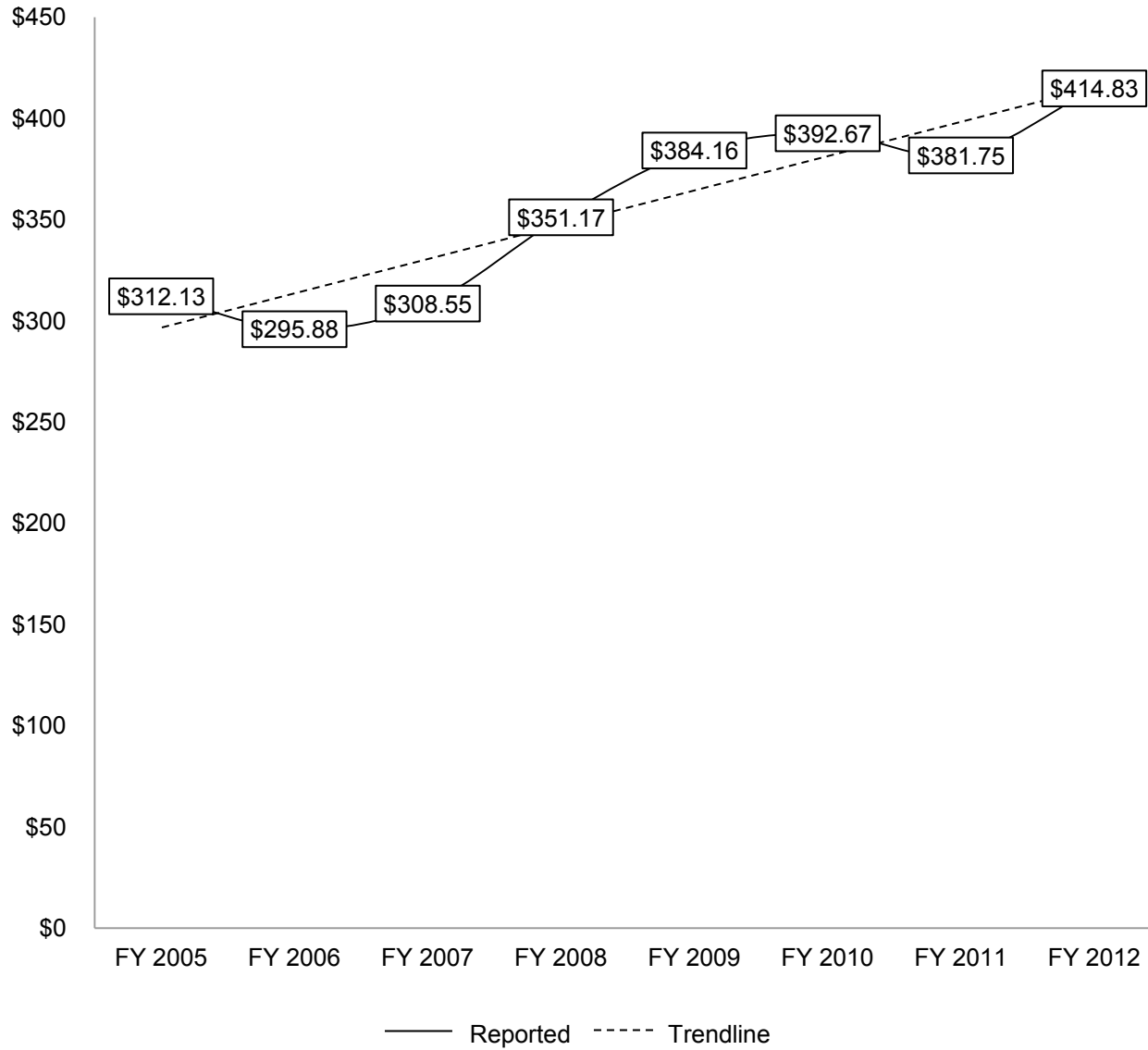


**Light Rail Fully Allocated Service Cost by Mode (Audit Period & Historic)**

After declining slightly in FY 2011, costs per hour increased by just over 6% between FY 2011 and FY 2012.

Note: in FY 2012, the SFMTA began reporting light rail and historic streetcar data separately. The cost per hour value here reflects a composite of these two modes in FY 12.

### B4 Cost per Hour

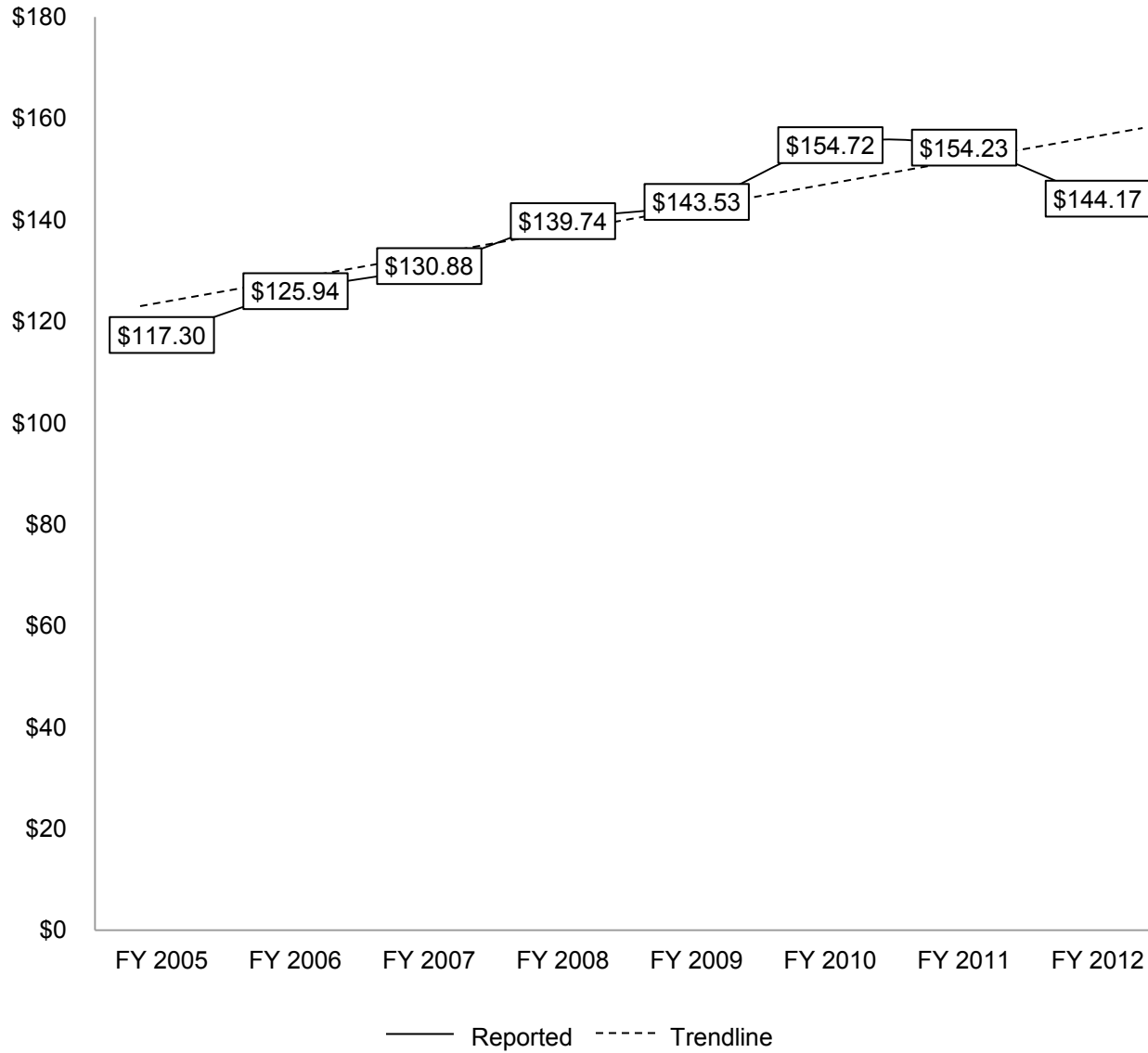


#### **Cable Car Fully Allocated Service Cost by Mode (Audit Period & Historic)**

Similar to costs for light rail vehicles, cable car costs per hour of service increased between FY 2011 and FY 2012, increasing by nearly 9% over this time period.



**B4 Cost per Hour**

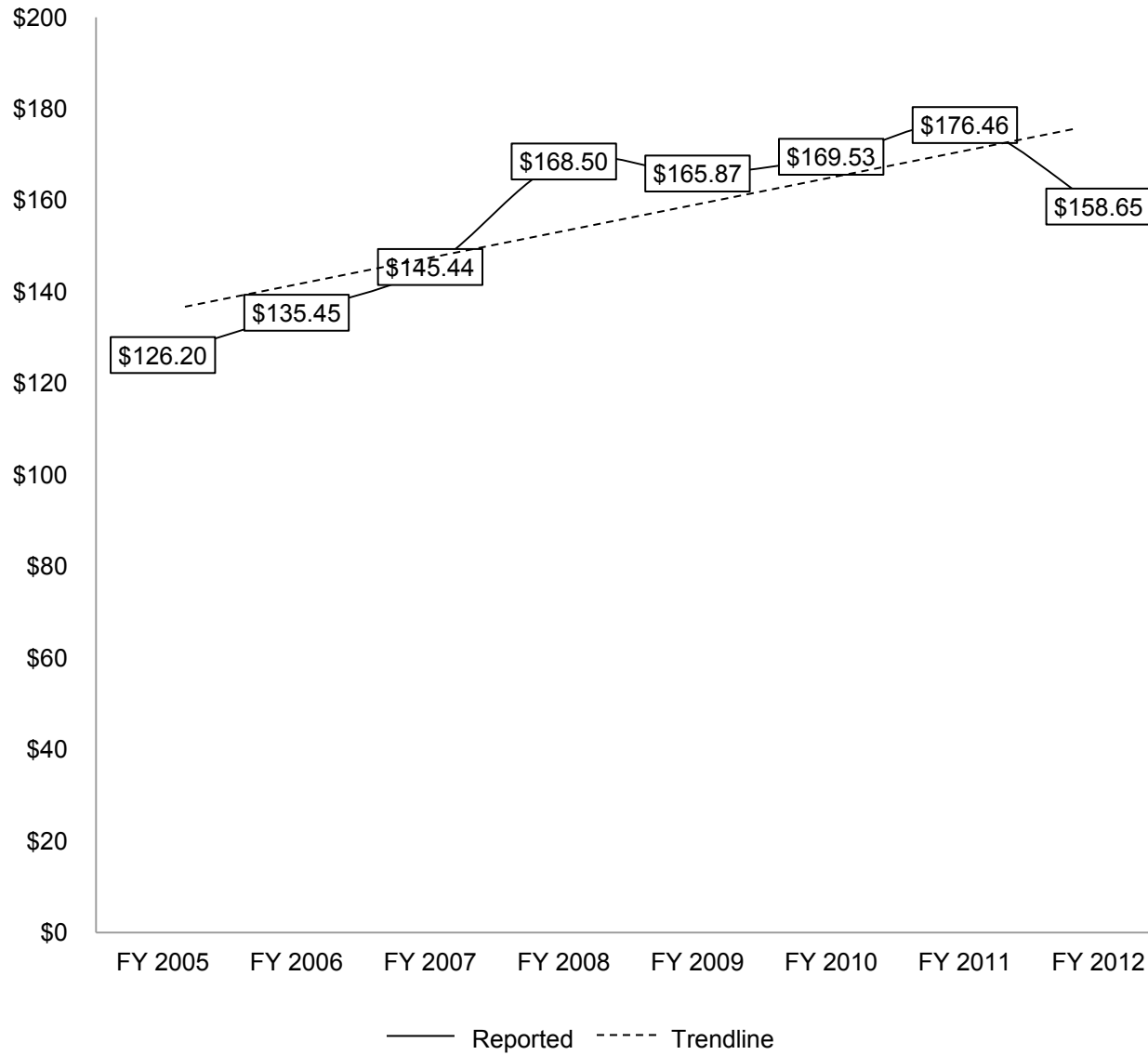


**Trolley Coach Fully Allocated Service Cost by Mode (Audit Period & Historic)**

Hourly costs fell for trolley coach service during the audit period, dropping to a three-year low of just over \$144 in FY12 as revenue hours increased 3% between FY11 and FY12.\*

\* Per the SFMTA's NTD submittals.

**B4 Cost per Hour**



**Motor Coach Fully Allocated Service Cost by Mode (Audit Period & Historic)**

Following a significant increase in FY 2008, from \$145 per hour to \$169, diesel bus operating costs increased by approximately 4% between FY 2010 and FY 2011. In FY 2012, the cost per hour for diesel bus operations dropped to a five-year low of approximately \$159 as revenue hours for motor coaches increased by 3% in FY 2012.\*

\* Per the SFMTA's NTD submittals.

## B5 Cost per Boarding

**Goal** N/A

**FY11-12 Performance**

*No Goal  
For This  
Standard*

**Trend**



*Neutral*

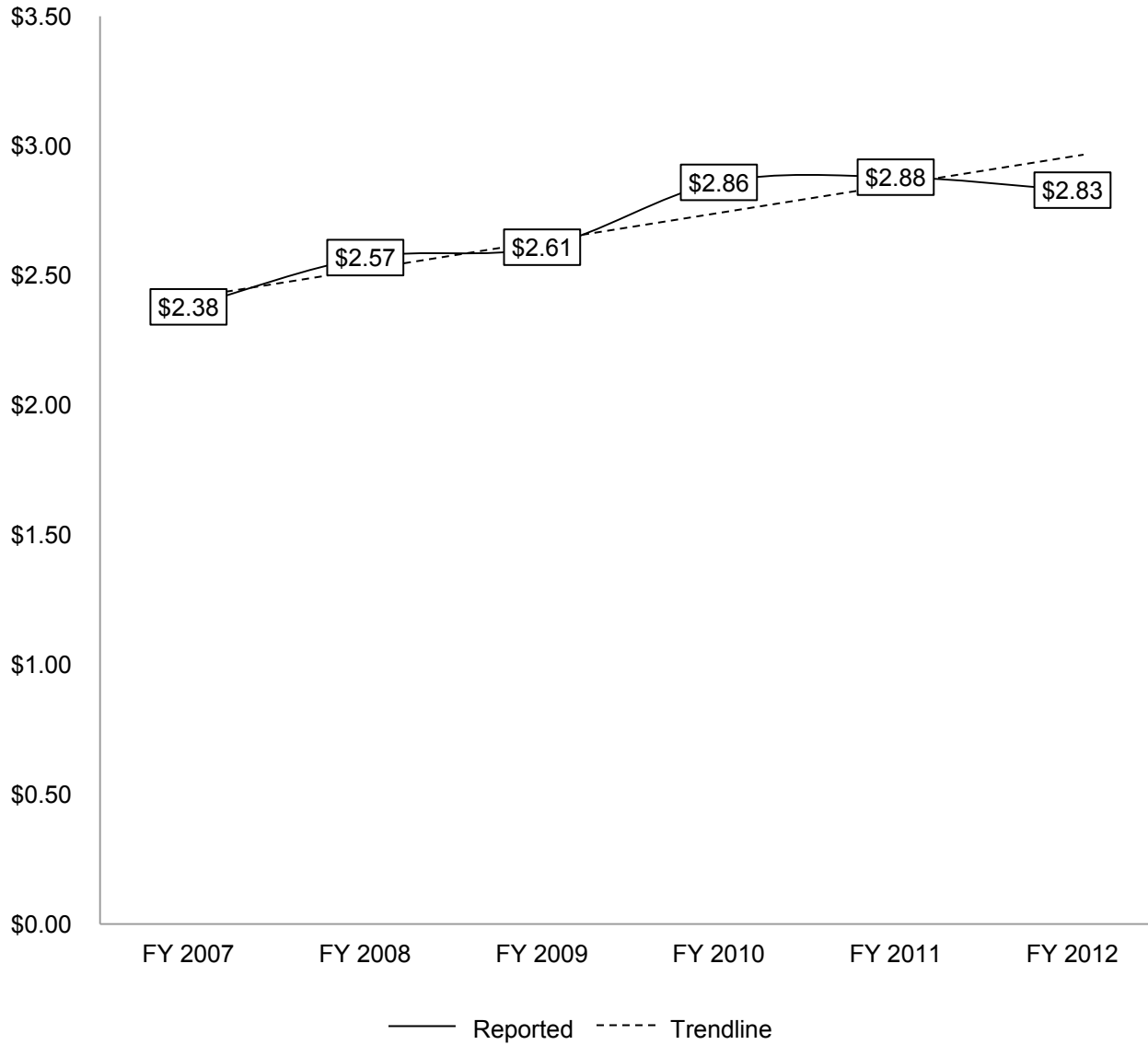
**Purpose** To measure cost effectiveness.

**Definition** Operating expense per boarding is calculated for each mode.

**Method** Operating expenses are divided by the number of passenger boardings.

Note: This analysis does not account for inflation, which may act as a contributing factor to year-over-year trends.

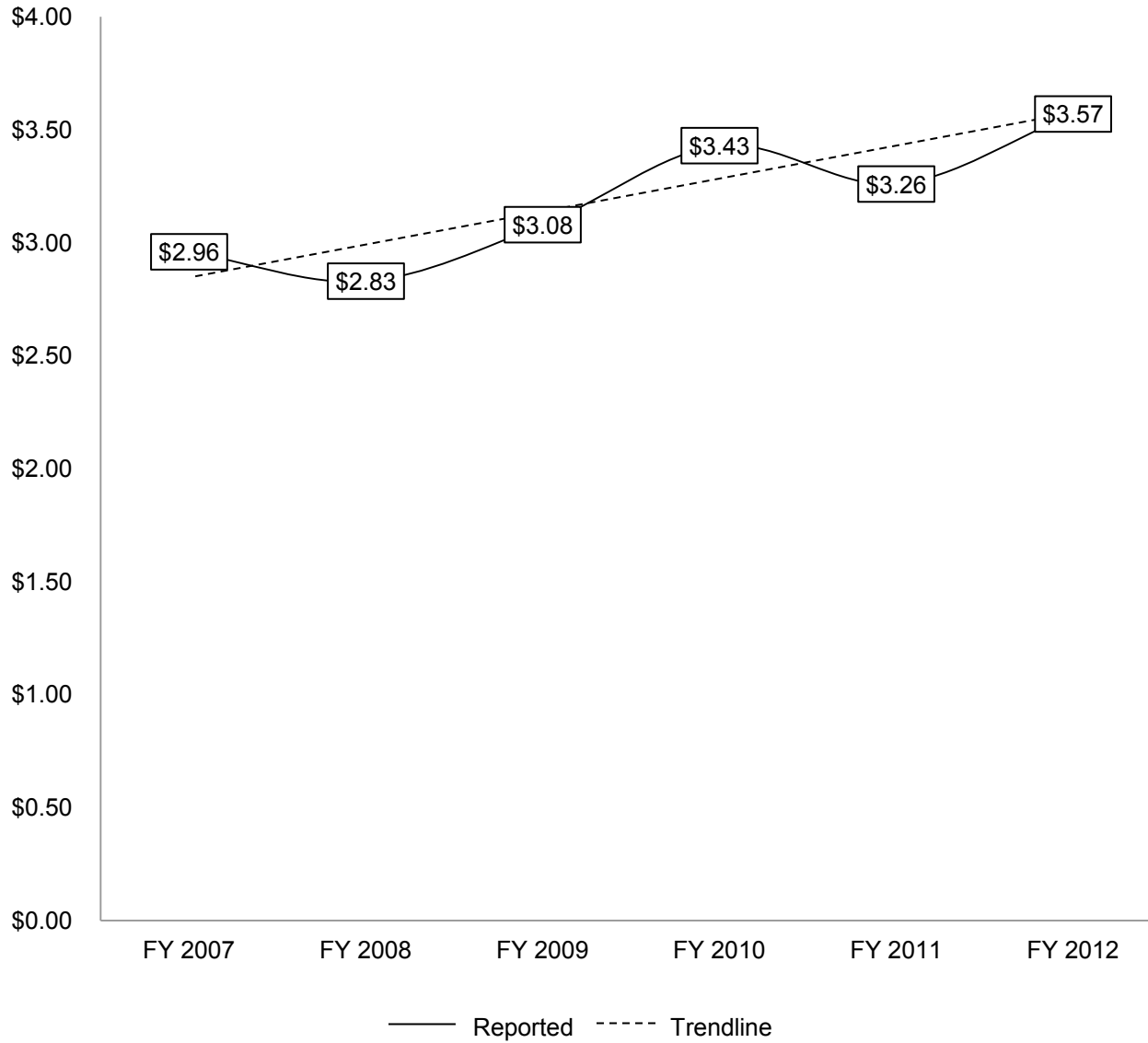
**B5 Cost per Boarding**



**Systemwide Operating Expense per Boarding (Audit Period & Historic)**

Operating cost per boarding is an industry standard measure, reported by transit operators to the Federal Transit Administration, that Muni began reporting in Service Standards reports in FY 2008. Since FY 2007 the per passenger boarding cost increased by nearly 19%, rising to its highest level in five years in FY 2011 (\$2.88). However, the cost per boarding began to fall starting in FY 2012, to \$2.83.

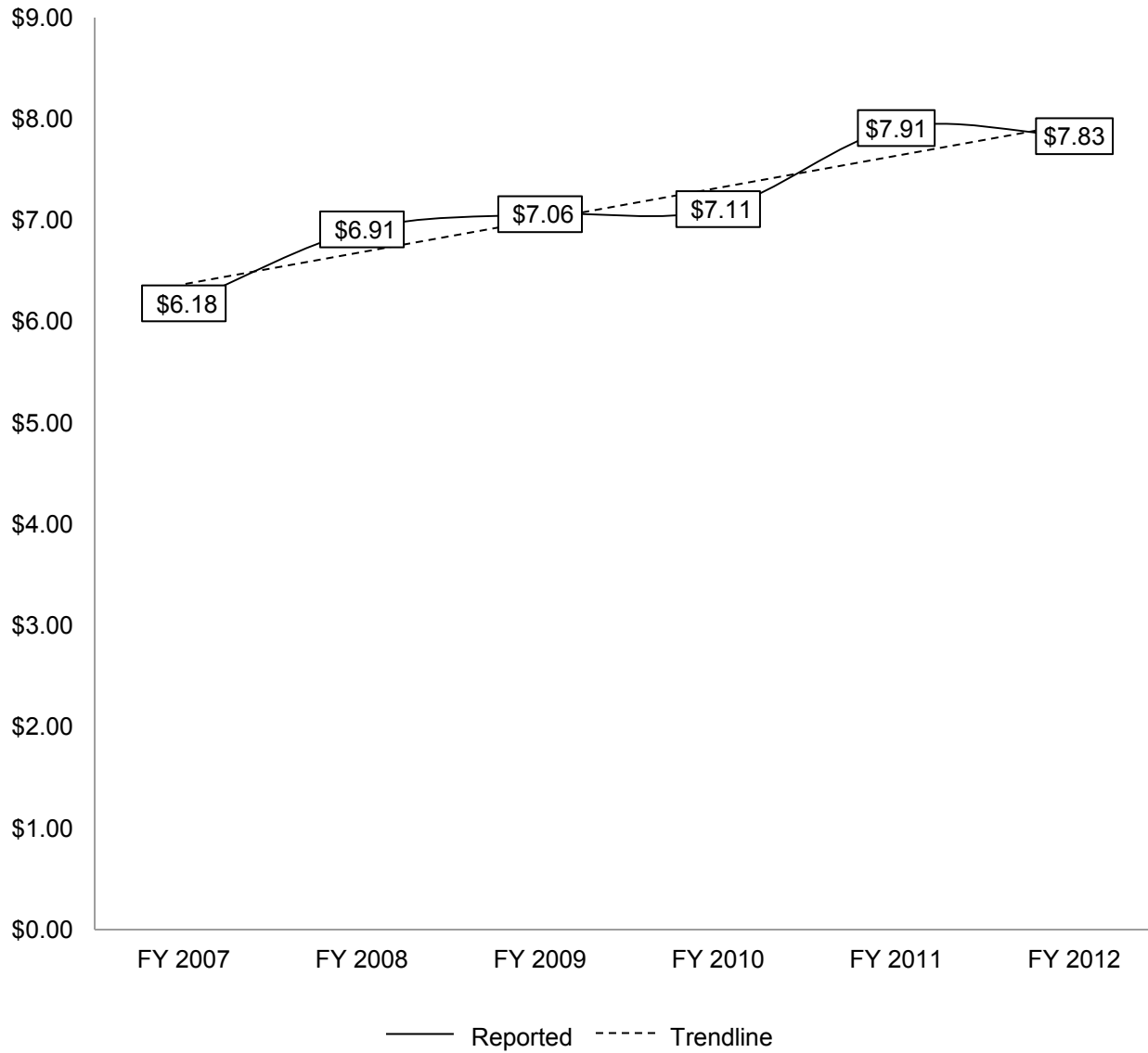
### B5 Cost per Boarding



#### Light Rail Operating Expense per Boarding (Audit Period & Historic)

Following an increase in boarding costs in FY 2009 and FY 2010, the cost per boarding decreased from \$3.43 in FY 2010 to \$3.26 in FY 2011. However boarding costs increased to \$3.69 in FY 2012. This amounts to a 7.5% increase between 2010 and 2012.

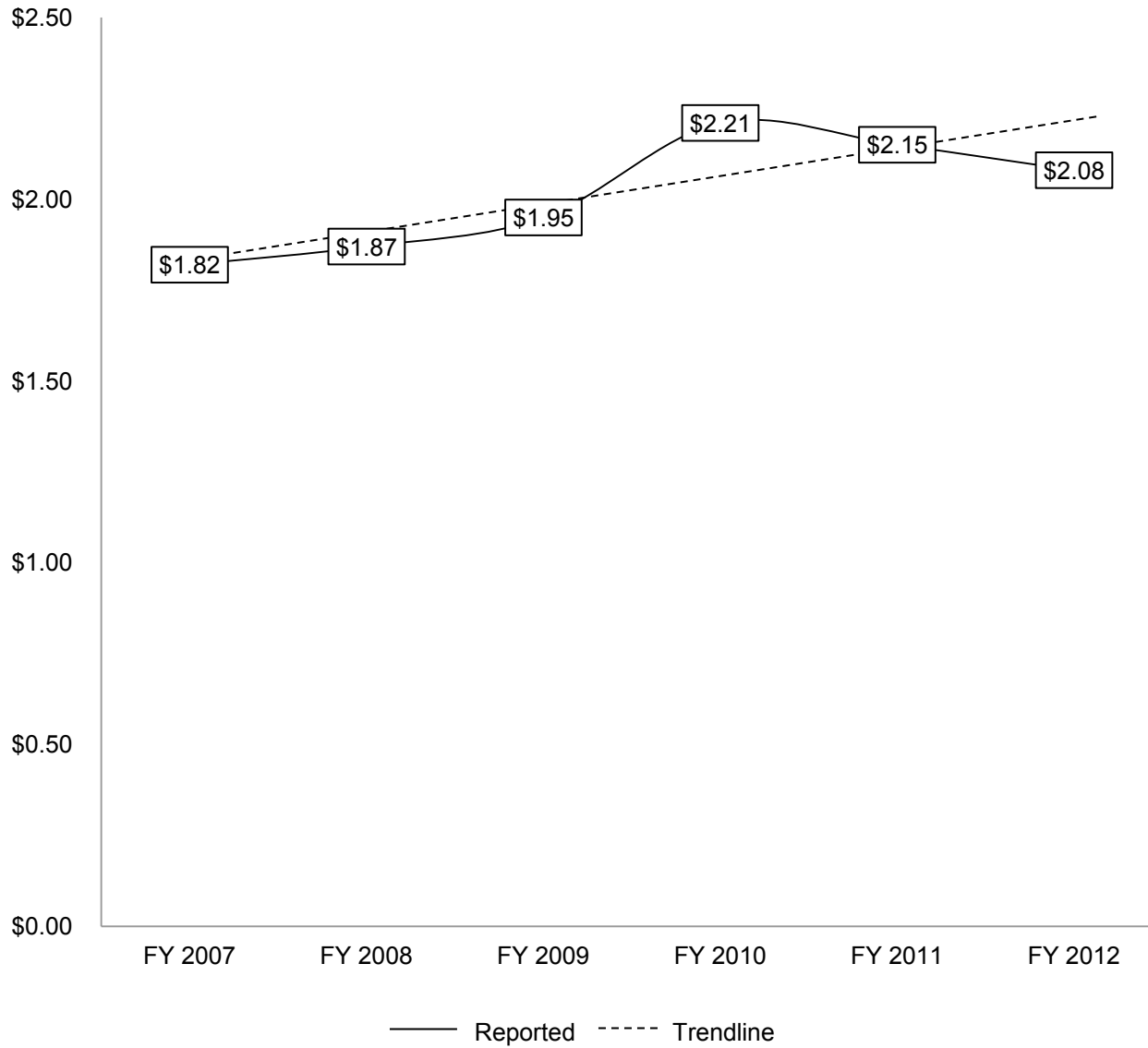
### B5 Cost per Boarding



#### **Cable Car Operating Expense per Boarding (Audit Period & Historic)**

After a steady but small yearly increase between FY 2008 and FY 2010, the rate of increase in cable car costs increased significantly in FY 2011 reaching \$7.91. The cost per boarding increased an additional 3% between FY 2011 and FY 2012.

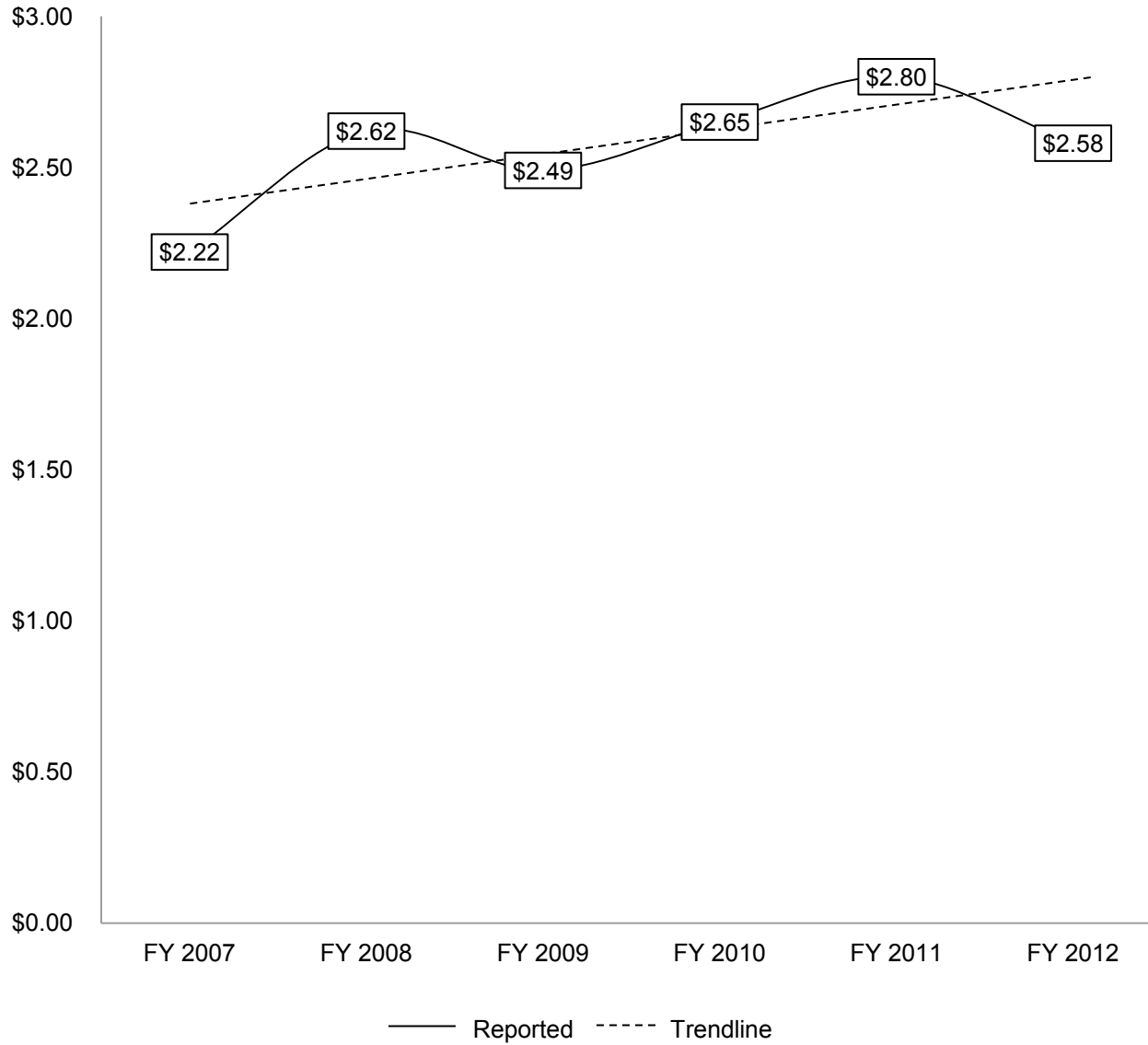
### B5 Cost per Boarding



#### Trolley Coach Operating Expense per Boarding (Audit Period & Historic)

Between FY 2010 and FY 2011 the cost per boarding decreased by 6 cents or 2%. Between FY 2011 and FY 2012 the cost per boarding increased only slightly.

### B5 Cost per Boarding



#### Motor Coach Operating Expense per Boarding (Audit Period & Historic)

Diesel bus costs increased by 15 cents or 6% between FY 2010 and FY 2011, to \$2.80 per boarding, before decreasing to \$2.67 in FY 2012, just two cents above the FY 2010 per boarding cost of \$2.65.



## **C Customer Focus**

Service standards in this category measure, both directly and indirectly, the Muni passenger experience. Muni customer service includes responsiveness to perceived problems (C2 Passenger Service Report Resolution Rate) as well as the ability to protect customers from accidents (C4 Safety) and criminal activity (C6 Security Incidents). Over the course of the audit period, Muni also started reporting the performance of its proof-of-payment program (C7). After the close of the audit period, the agency stopped reporting Operator Training.

Following are brief summaries of Muni's FY 2011-2012 performance for each of the Customer Focus service standards, including arrows indicating general trends (up for "positive," facing right for "neutral," and turned down for "negative") in terms of both historic patterns and performance over the course of the audit period. More detailed information about each service standard can be found on the following pages, including historic trends and data from recent quarters since the end of the audit period.



### **C1 Customer Perceptions**

In FY 2011, overall satisfaction (in terms of those rating service "good" or "excellent") in Muni's customer service survey increased to 57%, an increase from 52% in FY 2010 and slightly higher than in 2007.

### **N/A C2 Customer Feedback Received**

In FY 2008, the number of Passenger Service Reports (PSRs) submitted to Muni increased significantly, apparently due to implementation of 24-hour 311 customer service. The number of PSRs declined in FY 2009, but increased again in FY 2010.



### **C2 Operator Complaint Resolution Rate**

During the audit period, complaint resolution rates were near goals in all categories, although significant methodological changes make historical comparison impractical.

**C Customer Focus**

*N/A* **C3 Training**

During the audit period, Muni continued to achieve its goal of 50,000 hours of annual training.

 **C4 Safety (Collisions per 100,000 Miles)**

Safety improved on both bus rails lines in FY 2011 and FY 2012 with the number of bus and rail collisions per 100,000 declining in both years.

 **C4 Safety (Falls on Board per 100,000 Miles)**

In FY 2011 there was a 30% increase in falls on board for bus, and a slight increase in falls aboard rail. Falls on board both modes increased slightly in FY 2012.

*N/A* **C5 Security Incidents**

Between FY 2010 and 2011, crime rates on Muni property increased slightly. In FY 2012, Muni transitioned to a different method for reporting crime rates, including only SFPD-reported crimes and not incidents from the SFMTA's internal system.

*N/A* **C6 Proof-of-Payment Program**

In FY 2011 the number of citations issued dropped to approximately 35,000 but in FY 2012 the number of citations issued reached the highest level yet with almost 48,000 citations.

However, citation data were not complete throughout FY 2012, so a true audit period trend is not available.

## C1 Customer Perceptions

**Goal** + 5% / yr.

**FY11-12 Performance** N/A (see explanation below)

**Trend**



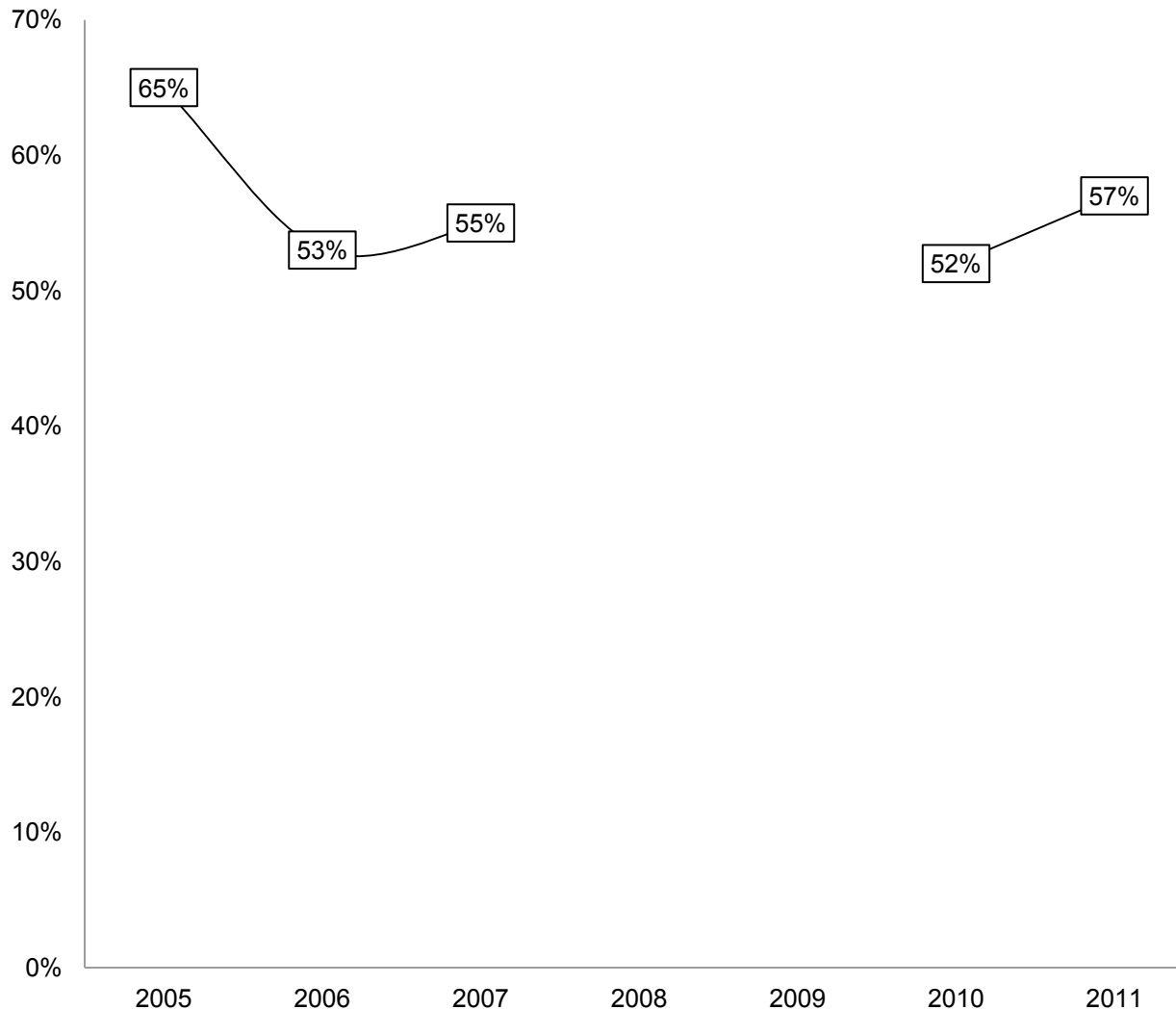
*Neutral*

**Purpose** Measure the level of satisfaction of both transit riders and employees. Use the results of the survey to implement improvements.

**Definition** Muni will conduct an annual survey of riders to determine riders' sentiments and concerns. Surveys will include an Employee Survey along with a Rider Survey.

**Method** Successful completion of the surveys prior to the end of FY 2007 and present findings of surveys to Board and Citizens Advisory Committee. *(Note: Muni did not conduct passenger surveys in 2008 and 2009, and in 2010 began to rely upon the City Survey conducted by the Office of the Controller.)*

## C1 Customer Perceptions

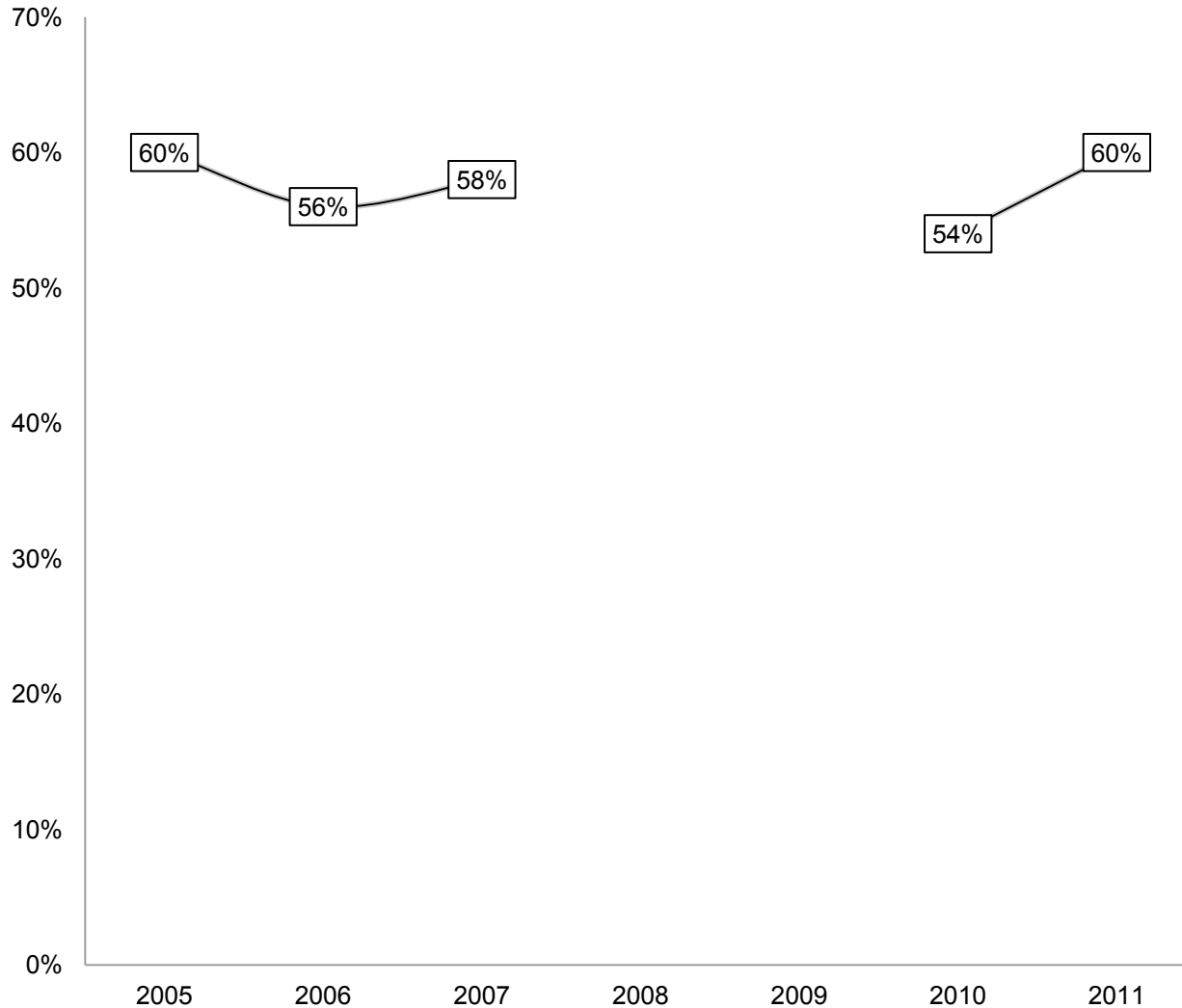


### Overall Customer Satisfaction (Audit Period & Historic)

In 2011, 57% of Muni customers described their satisfaction with the agency as "excellent" or "good," slightly higher than as in the last customer service surveys conducted by Muni, in 2006 and 2007. Data for 2012 were unavailable because the City Survey was not conducted in that year.

(In 2010 and 2011, Muni reported data from the biennial City Survey conducted by the Controller's Office. On a five-point scale, 2011 Muni-related ratings were:  
 Fares, 3.58; Safety, 3.01; Courtesy of Drivers, 3.06; Communication to Passengers, 3.00; Timeliness/Reliability, 3.02; Cleanliness 2.75.)

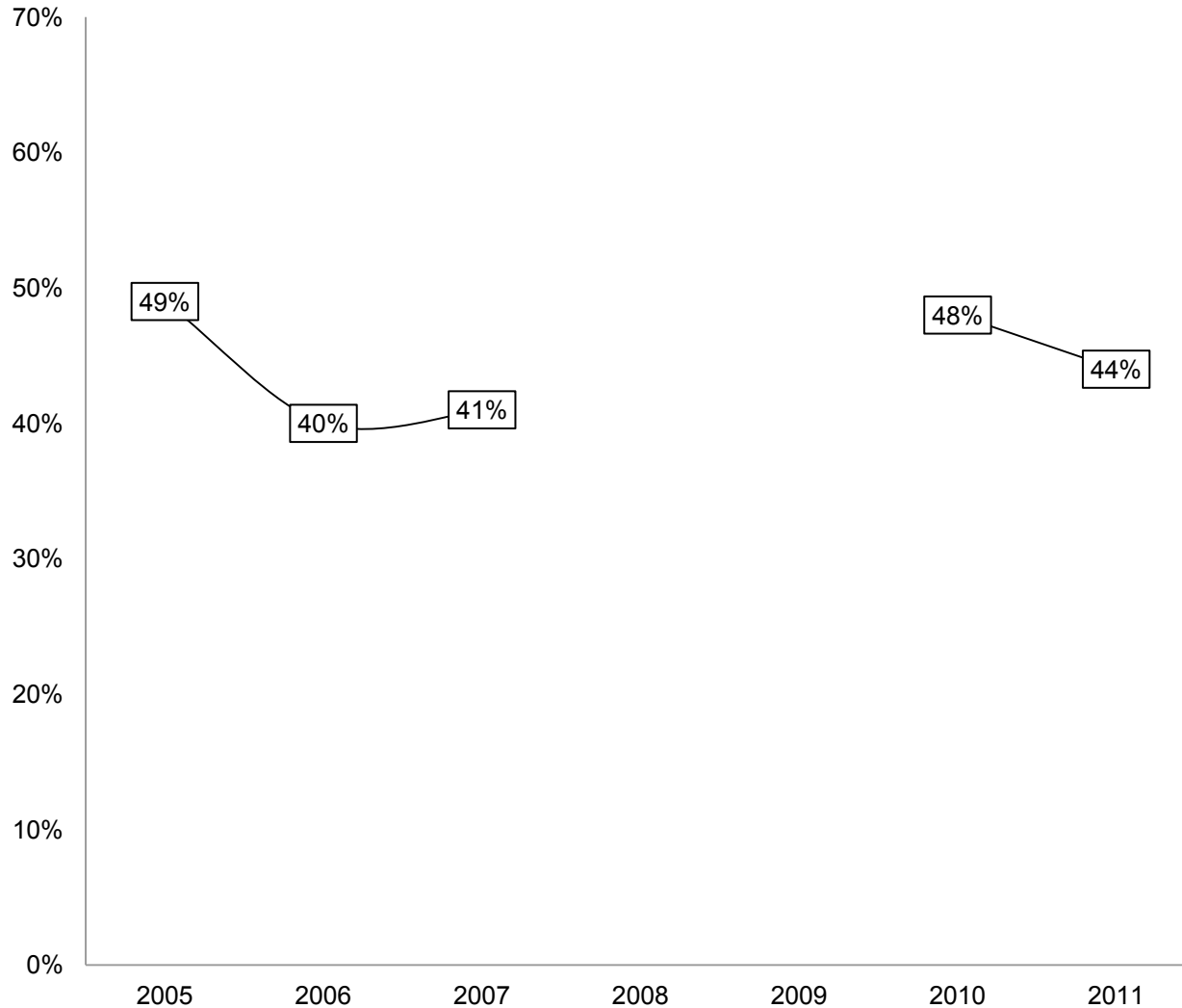
## C1 Customer Perceptions



### **Operator Helpfulness (Audit Period & Historic)**

In 2011, a majority of Muni customers, 60%, also rated operator helpfulness as "excellent" or "good," slightly higher than in previous years. Data for 2012 were unavailable because the City Survey was not conducted in that year.

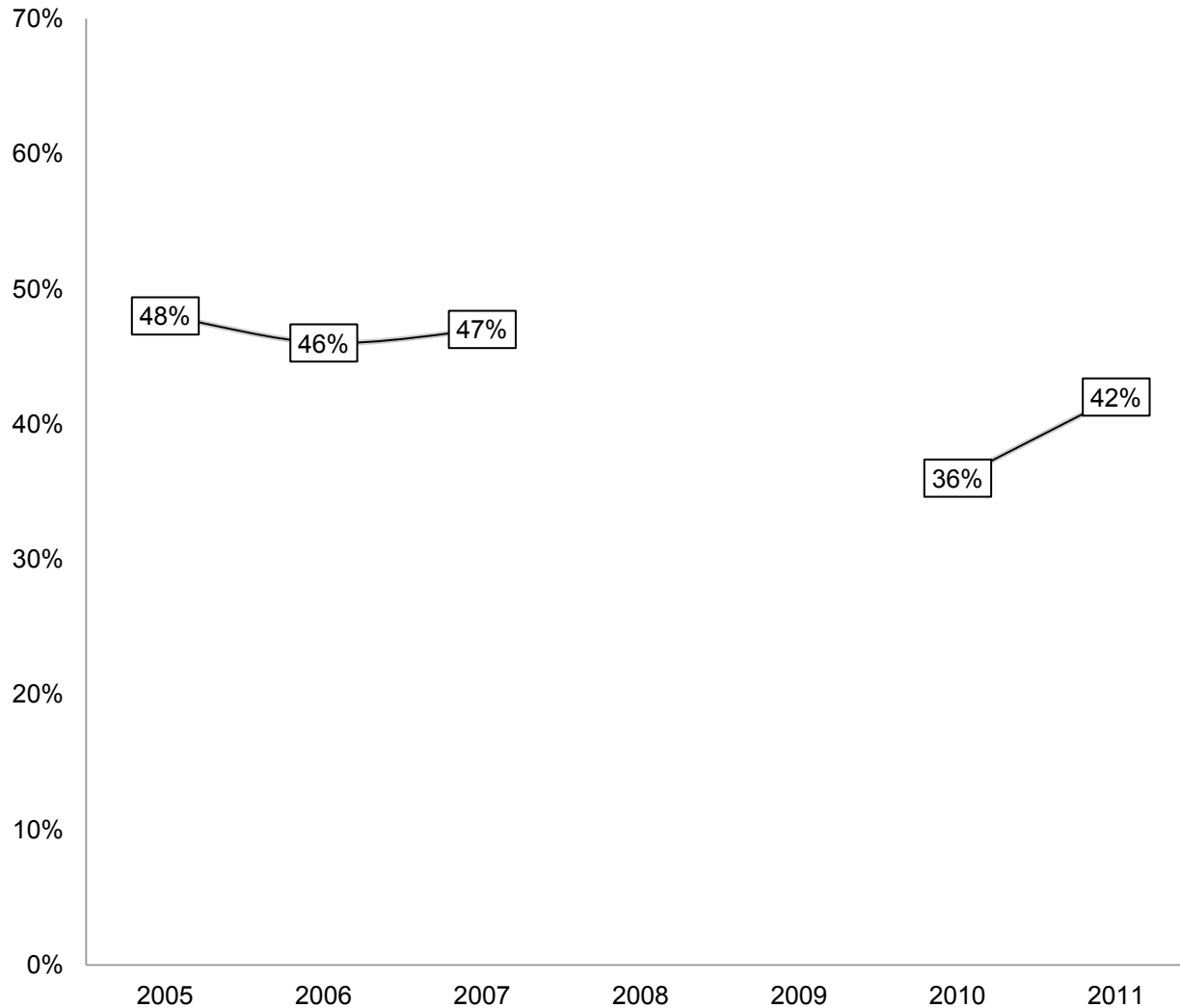
## C1 Customer Perceptions



### Communication with Riders (Audit Period & Historic)

By contrast, the majority of Muni customers, 56% considered the agency's communications with riders to be "fair" or "poor." Data for 2012 were unavailable because the City Survey was not conducted in that year.

## C1 Customer Perceptions



### Vehicle Cleanliness (Audit Period & Historic)

Customer perceptions of vehicle cleanliness were noticeably better in 2011 as compared to 2010; however the percentage of who Muni riders rated vehicle cleanliness “fair” or “poor,” is still higher compared to 2006 and 2007 rates. Data for 2012 were unavailable because the City Survey was not conducted in that year.

## **C2 Customer Feedback Received**

<b>Goal</b>	<i>N/A</i>	<b>FY11-12 Performance</b>	<i>No Goal For This Standard</i>	<b>Trend</b>	<i>N/A (see explanation below)</i>
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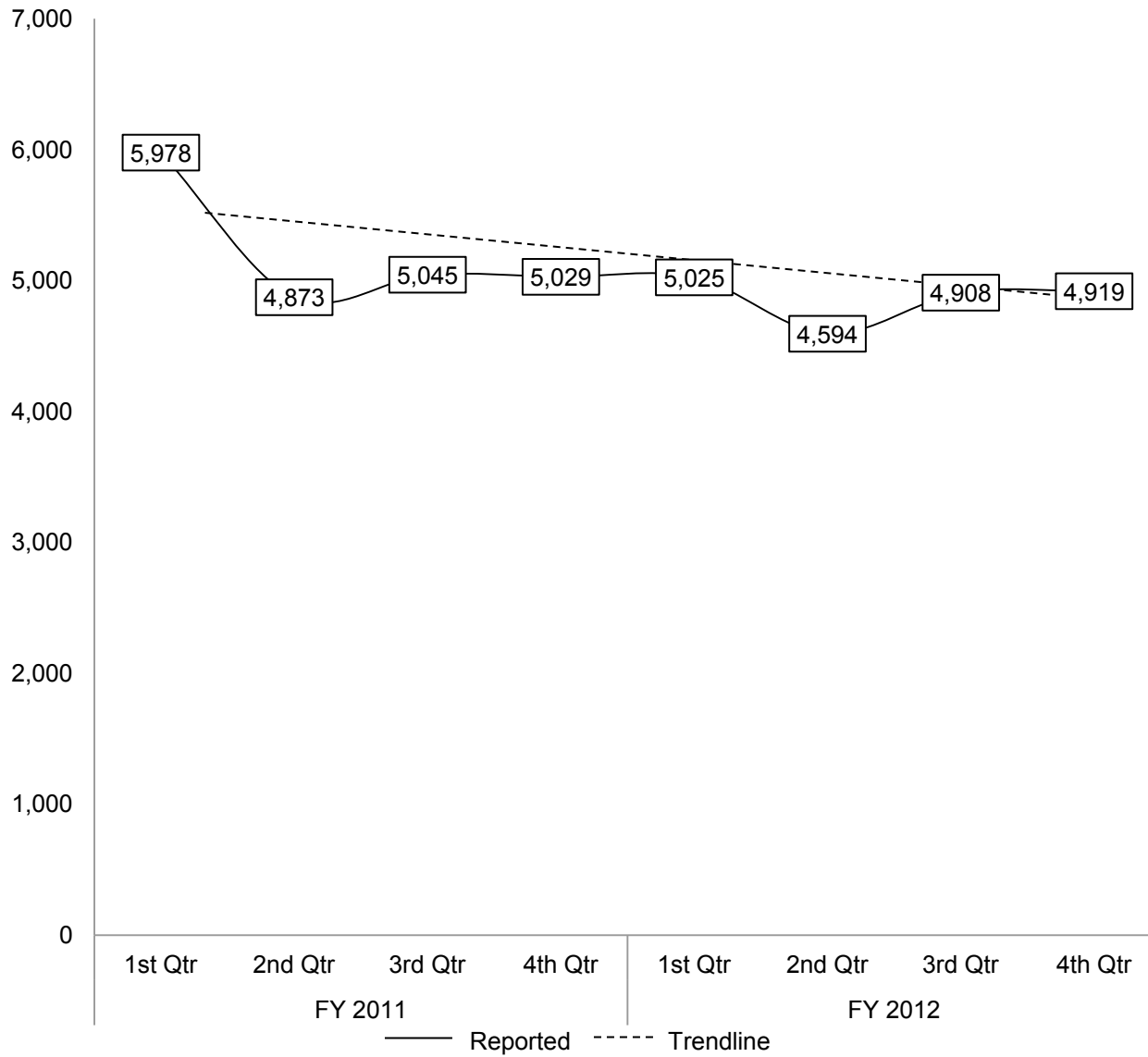
**Purpose** To identify the key types of feedback received by Muni customers.

**Definition** Consists of employee conduct and products/services complaints.

**Method** Customer feedback statistics are extracted from the Trapeze COM system and categorized by feedback type.



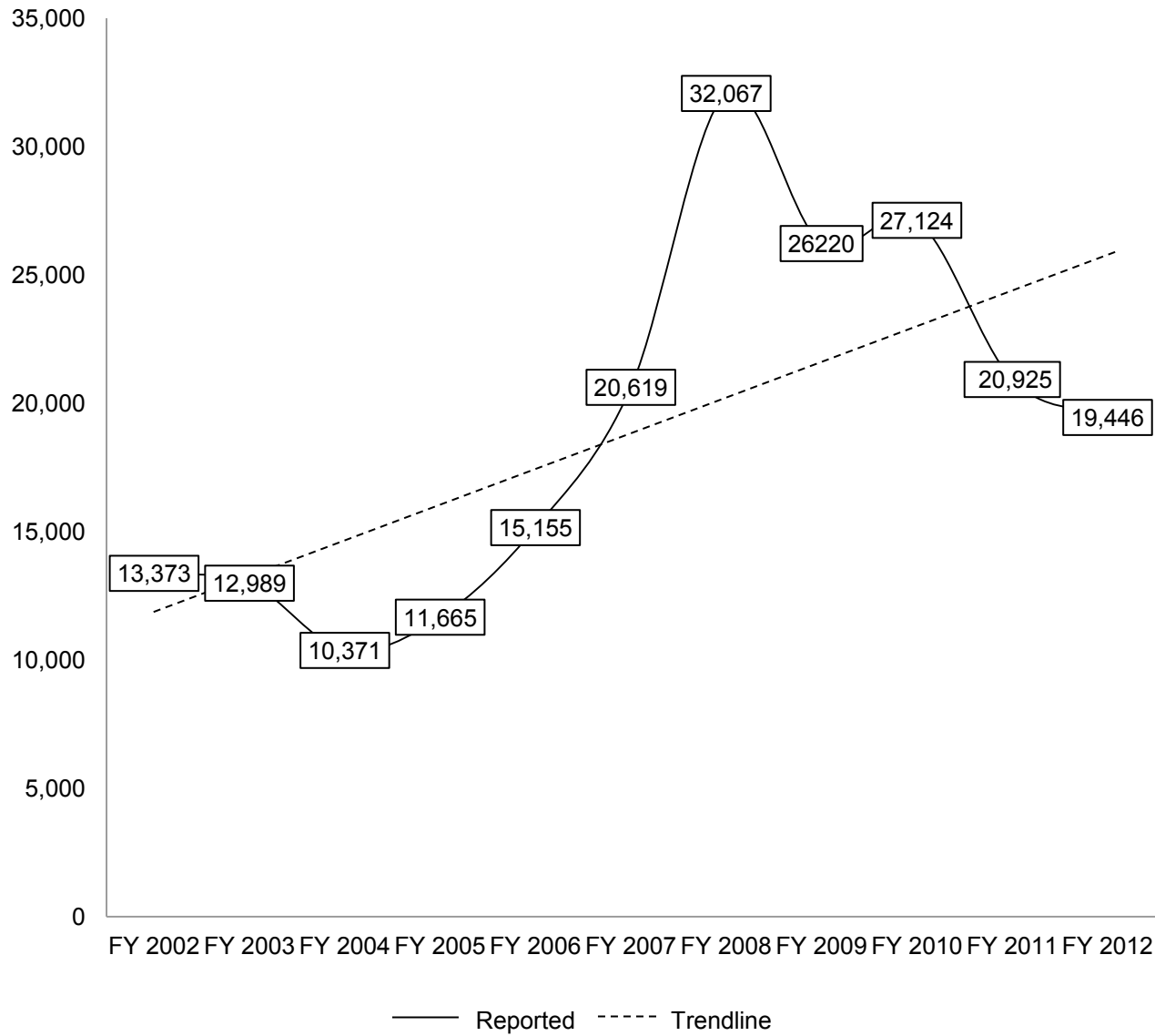
**C2 Customer Feedback Received**



**Passenger Service Reports (Audit Period)**

Muni complaints are known as Passenger Service Reports, or PSRs. The total numbers of PSRs submitted fluctuated somewhat over the audit period, from a high of approximately 6,000 in the first quarter of FY 2011 to a low of 4,600 in the second quarter of FY 2012.

**C2 Customer Feedback Received**



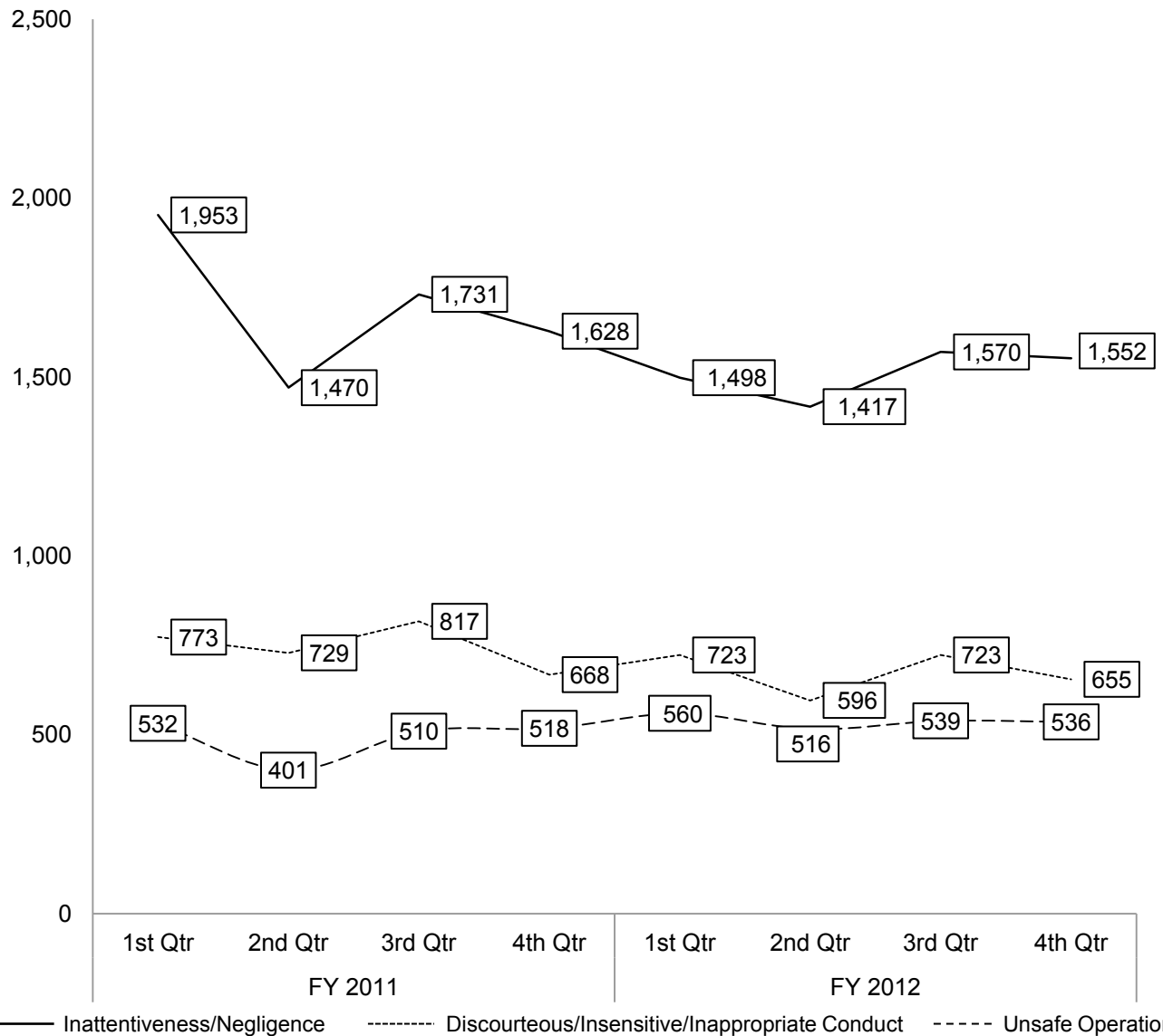
**Passenger Service Reports (Historic)**

After a sharp increase in customer complaints in FY 2008 to more than 32,000 per year, complaints have continued to decline to the lowest level since 2006 with approximately 19,4000 complaints in FY 2012. According to staff, much of the increase in FY 2008 can be explained by the increased ease of filing complaints using the city's 311 customer service hotline: starting in 2007, operators were available 24 hours.

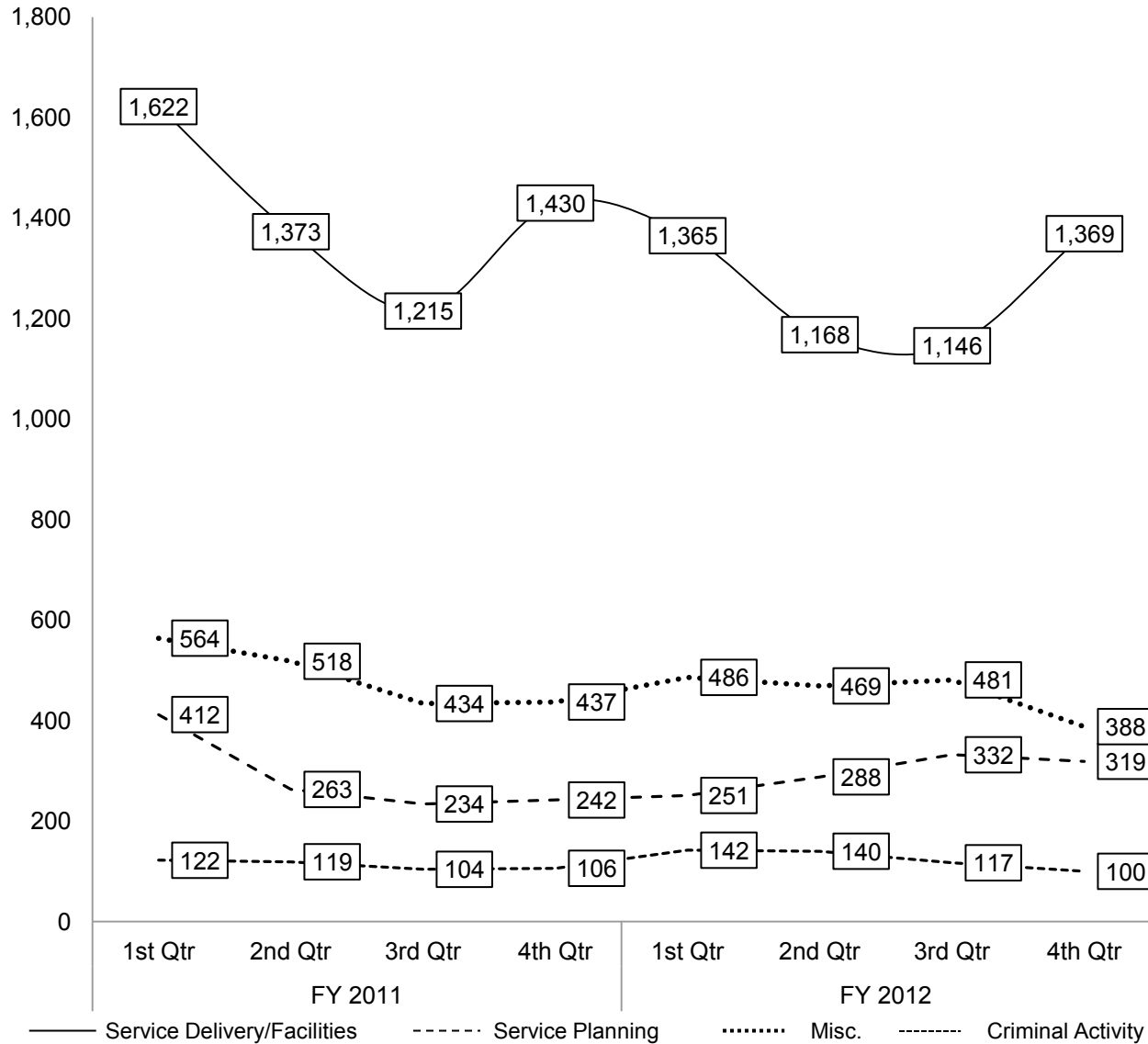
**C2 Customer Feedback Received**

**Passenger Service Reports: Employee Conduct (Audit Period)**

In FY 2011 and FY 2012 the most common employee conduct PSR involved inattentive or negligent drivers. The least common employee conduct-related PSR was unsafe operation. In all categories except unsafe operation, employee conduct PSRs declined slightly over the course of the audit period. PSRs related to unsafe operation increased very slightly.



**C2 Customer Feedback Received**



**Passenger Service Reports: Products and Services (Audit Period)**

The most common product and service PSR involved facilities and service delivery; least common was criminal activity. In all four product and service categories PSRs declined.

## C2 Complaint Resolution Rate

**Goal** > 90% within 14 days (non-ADA)  
>90% within 45 days (ADA violations)

**FY11-12 Performance**



*Near Goal*

**Trend**



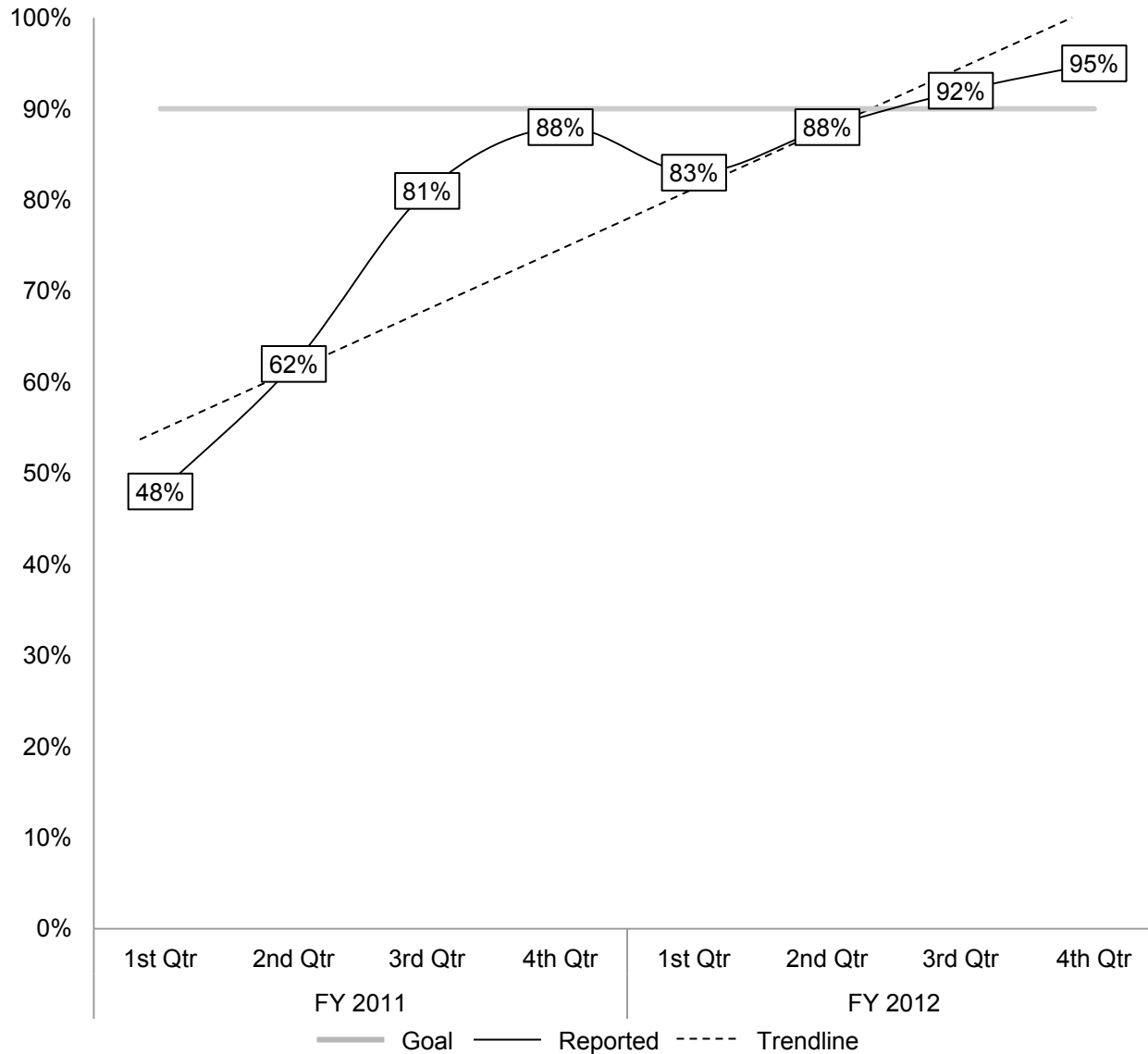
*Neutral*

**Purpose** To measure customer satisfaction with the Municipal Railway and the effectiveness of internal processes to address the complaints.

**Definition** The SFMTA summarizes complaints received, resolved, and outstanding on a quarterly basis.

**Method** Data provided by the Muni Customer Services Unit and will be reported to the Board on a quarterly basis.

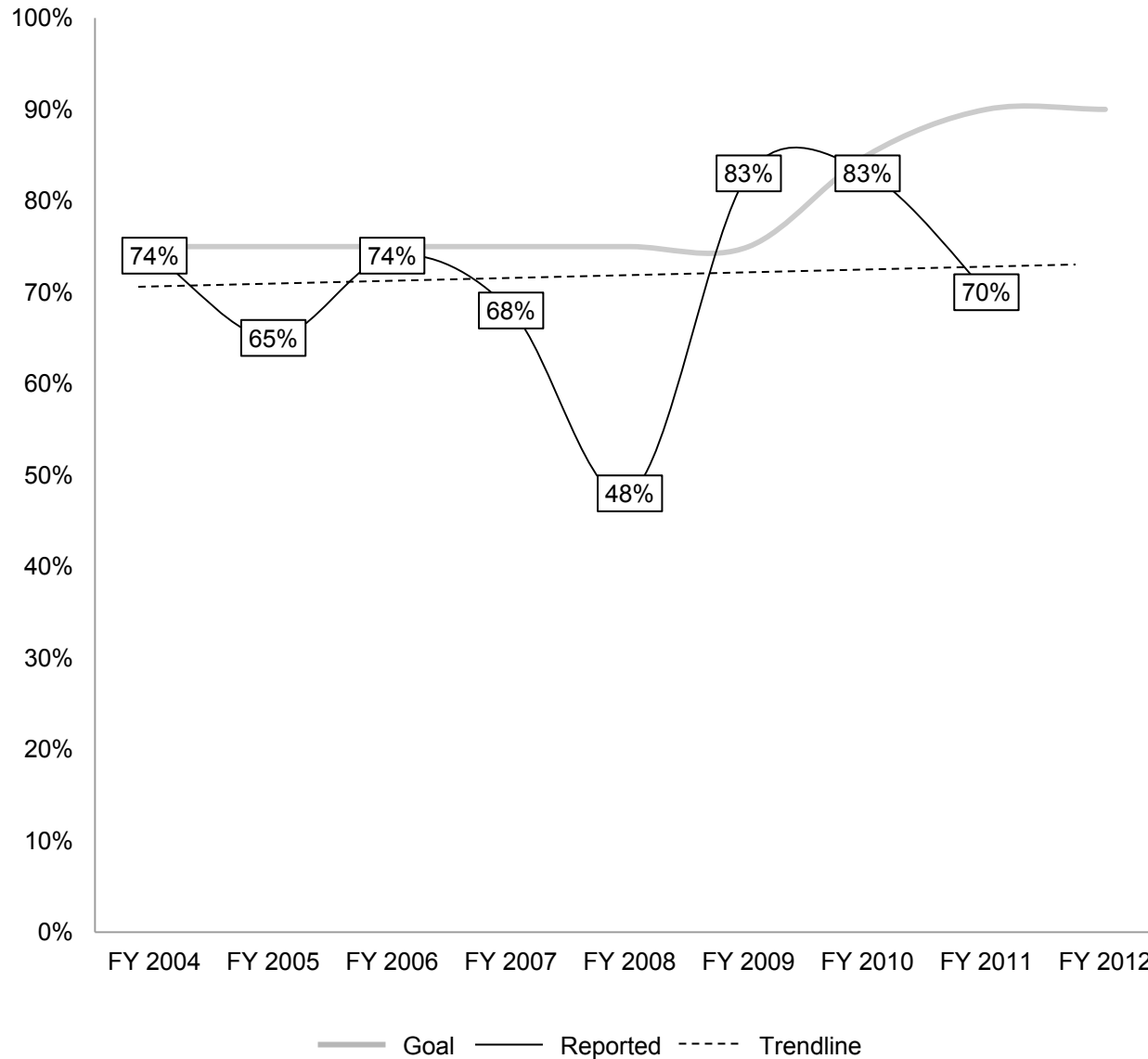
**C2 Complaint Resolution Rate**



**Percentage Resolved Within 45 Days: ADA Violations (Audit Period)**

For the current audit period the goal was increased from 85% to 90%. After relatively poor performance in the first half of FY 2011, Americans with Disabilities Act-related complaint resolution rates improved noticeably, and in second half of FY 2012 and exceeded the goal of resolution of 90% of complaints within 45 days.

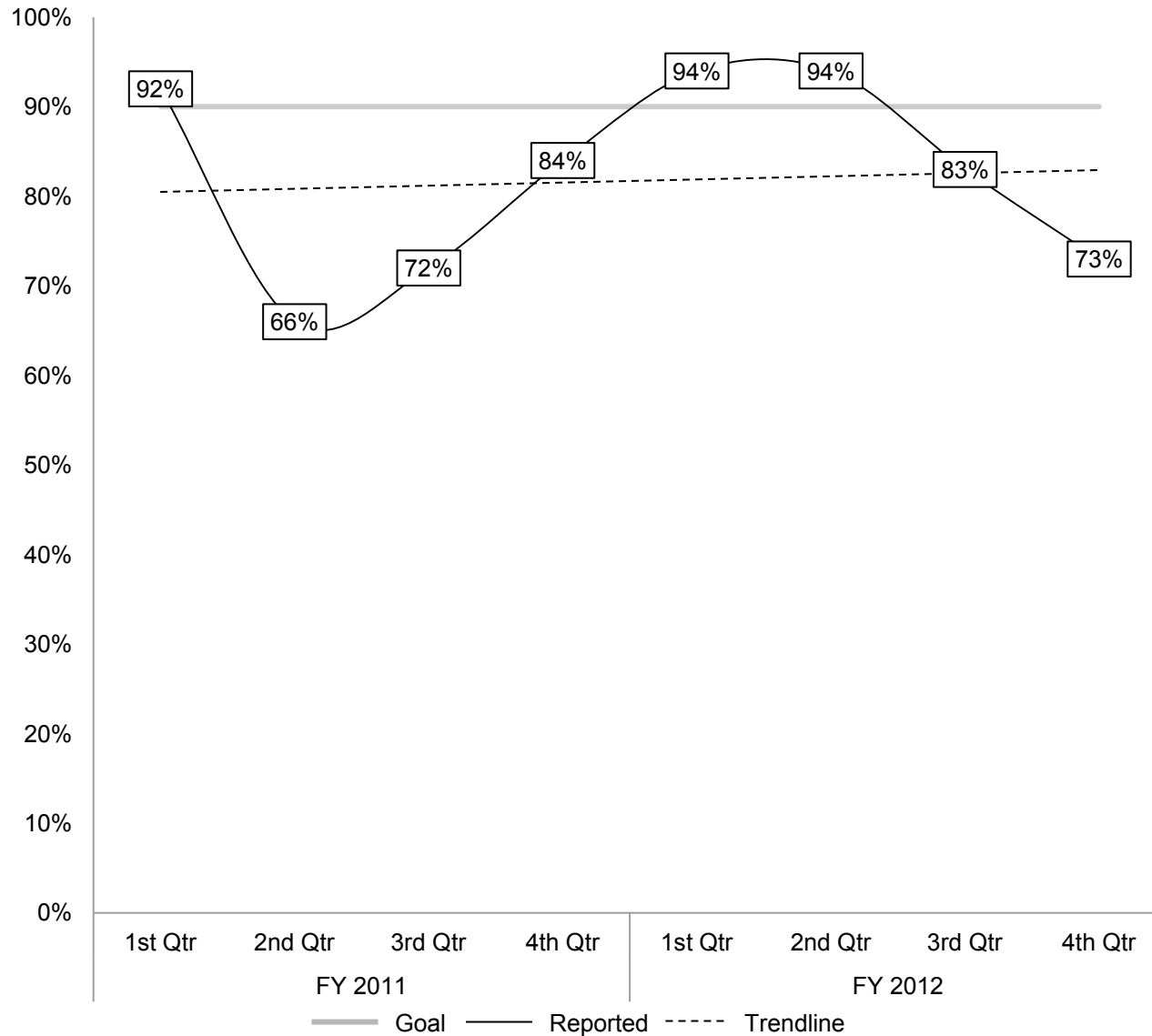
## C2 Complaint Resolution Rate



### Percentage Resolved Within 45 Days: ADA Violations (Historic)

After holding steady in FY 2008 and FY 2009, resolution rates for Americans with Disabilities Act-related complaints decreased significantly in FY 2011 to 70%. No annual data was publicly released for FY 2012.

**C2 Complaint Resolution Rate**

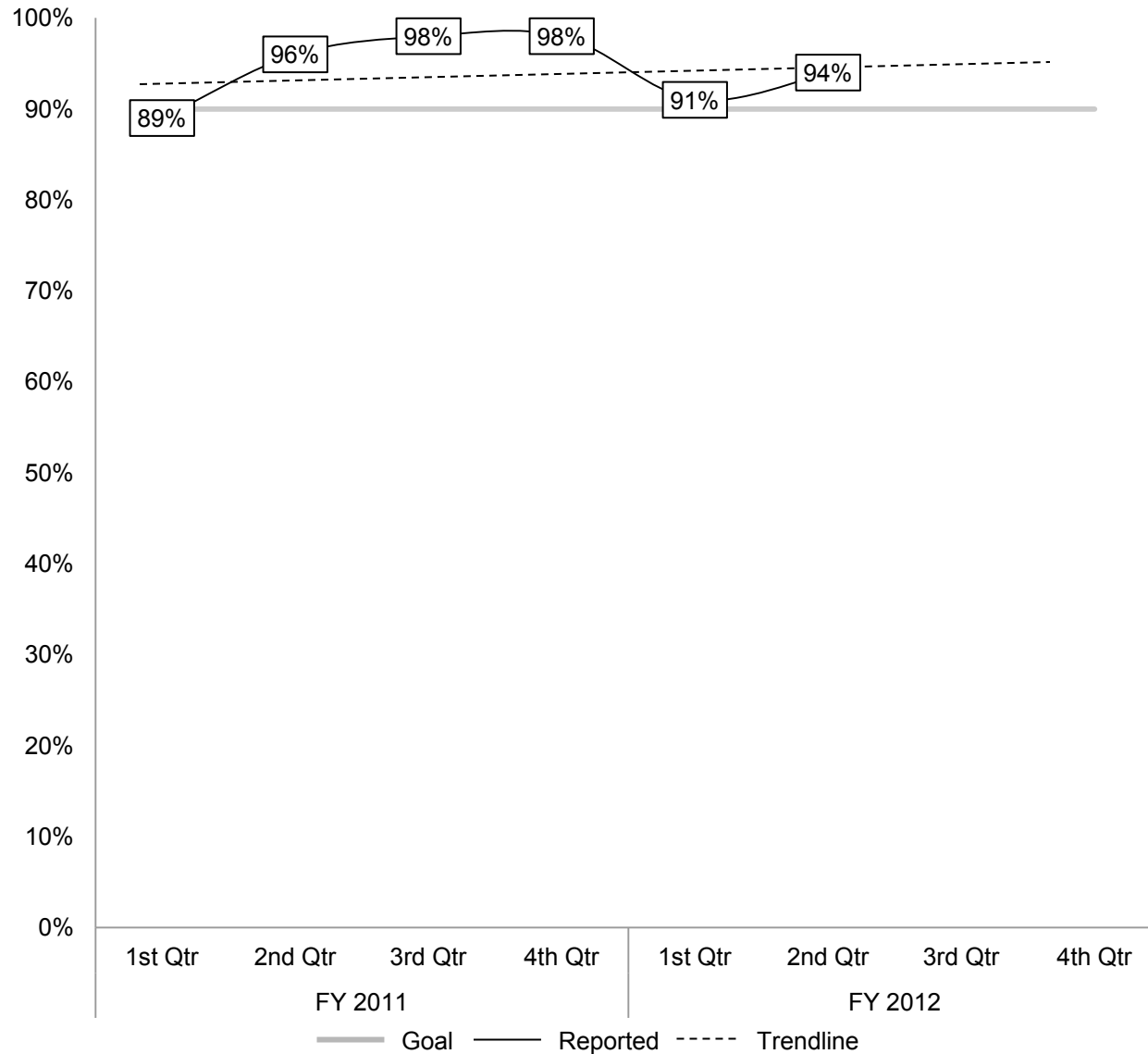


**Percentage Resolved Within 14 Days: Operator Conduct PSRs (Audit Period)**

Starting in 2010, Muni began to report resolution rates for operator conduct PSRs. In FY 2011, the SFMTA only meet the goal of resolution of 90% of non-ADA complaints within 14 days, during the 1<sup>st</sup> quarter. In FY 2012 resolution rates exceeded the goal of 90% during the first half of the year but declined to 73% during the final quarter.



**C2 Complaint Resolution Rate**



**Percentage Resolved Within 45 Days: Products/Services PSRs (Audit Period)**

Starting in 2010, Muni began to report resolution rates for products and services PSRs. During FY 2011 the complaint resolution rate exceeded the goal of 90% for all quarters except for the 1<sup>st</sup> quarter. In the first half of FY 2012 the resolution rate declined slightly but still exceeded the 90% goal. No data for the second half of FY 2012 was publicly released.



## **C4 Safety (Collisions per 100,000 Miles)**

**Goal** - 5% / yr.

**FY11-12 Performance**



*Near Goal*

**Trend**



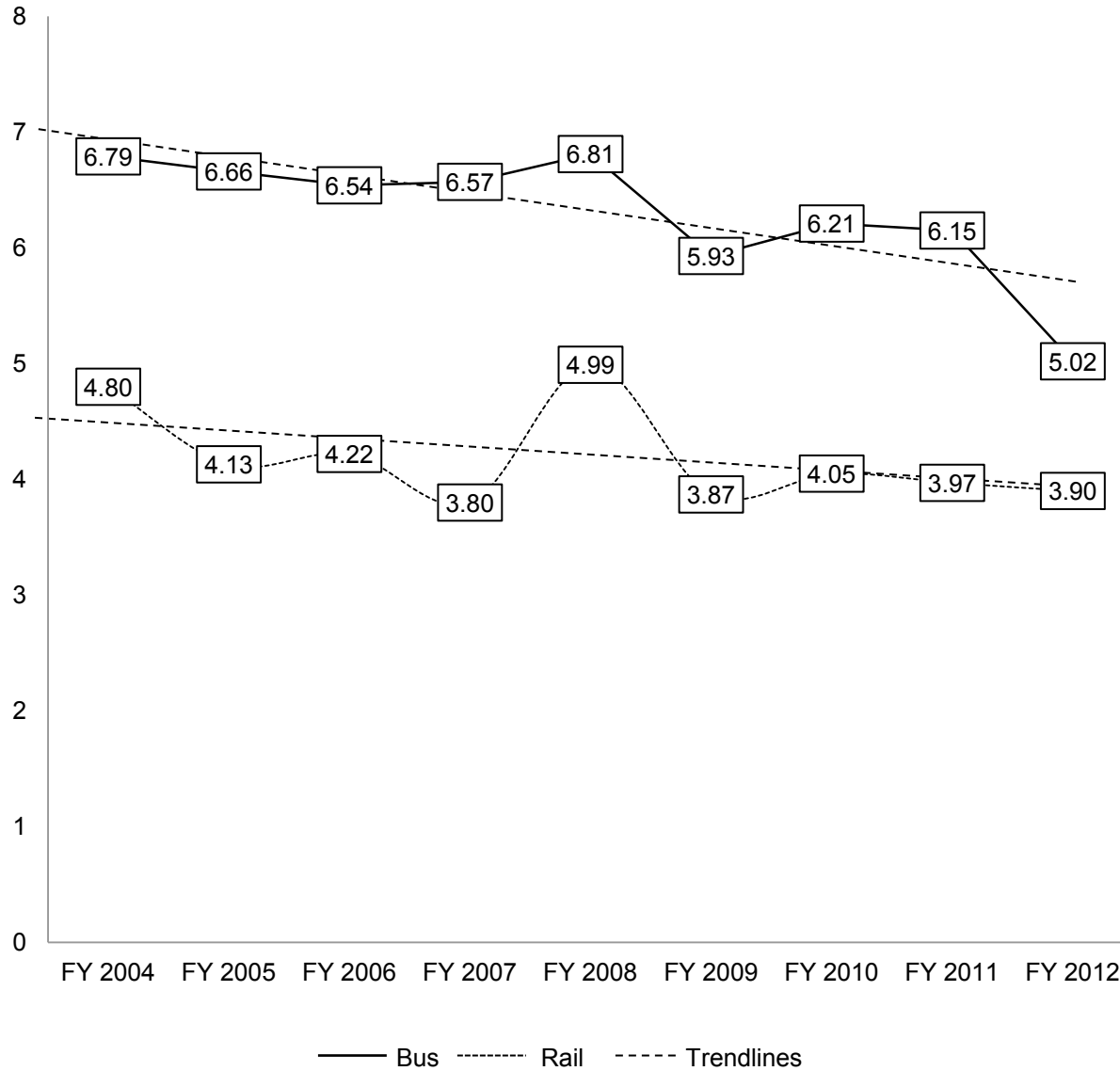
*Neutral*

**Purpose** To reduce accidents through effective operator training programs as well as effective accident follow-up training.

**Definition** Track reduction in accidents as a result of more effective operator training and accident retraining.

**Method** Number of reportable revenue service accidents. Data will be reported to the Board on a quarterly basis.

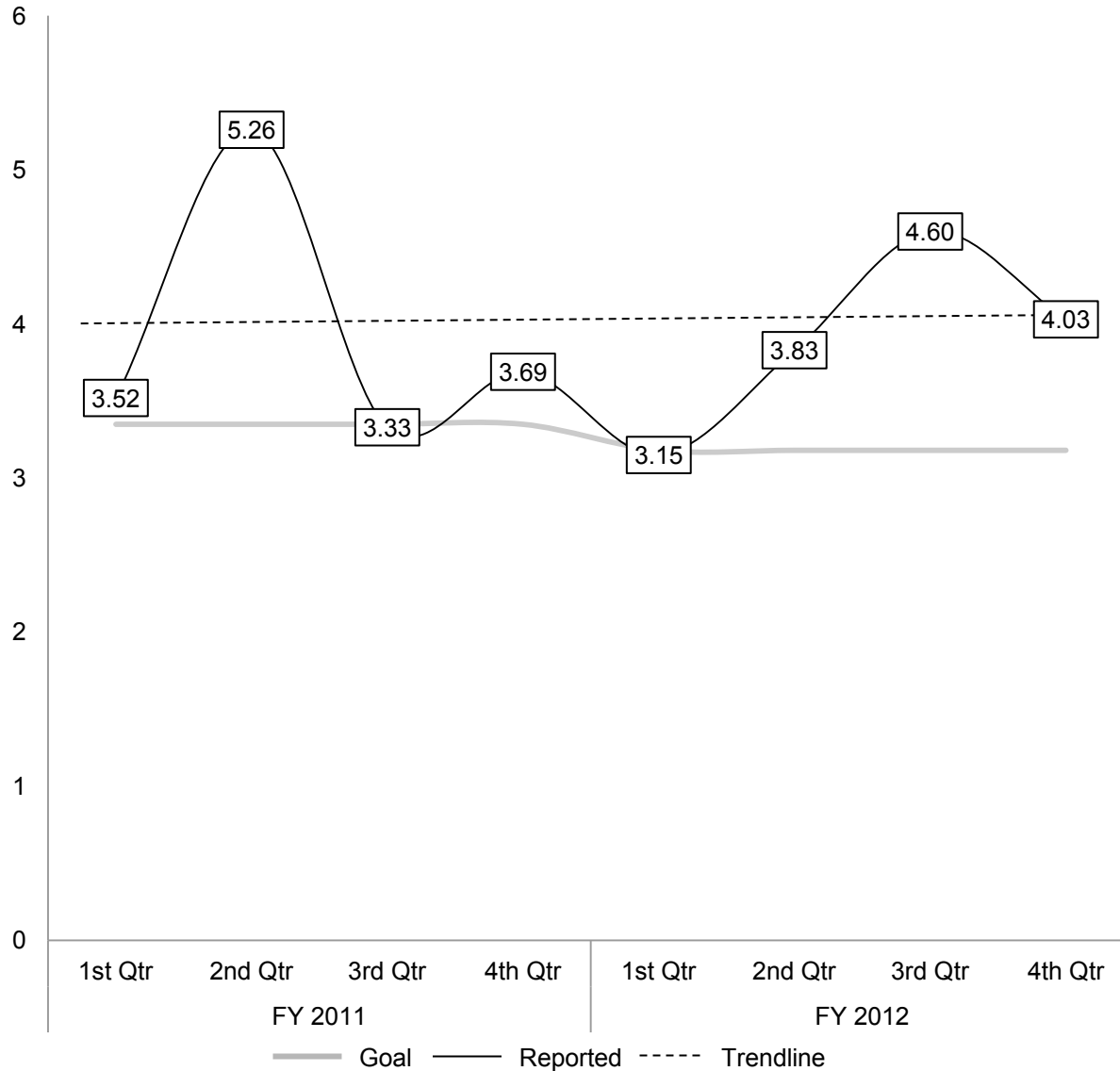
**C4 Safety (Collisions per 100,000 Miles)**



**Systemwide (Audit Period & Historic)**

Safety improved on both bus rails lines in FY 2011 and FY 2012 with the number of bus and rail collisions per 100,000 declining in both years.

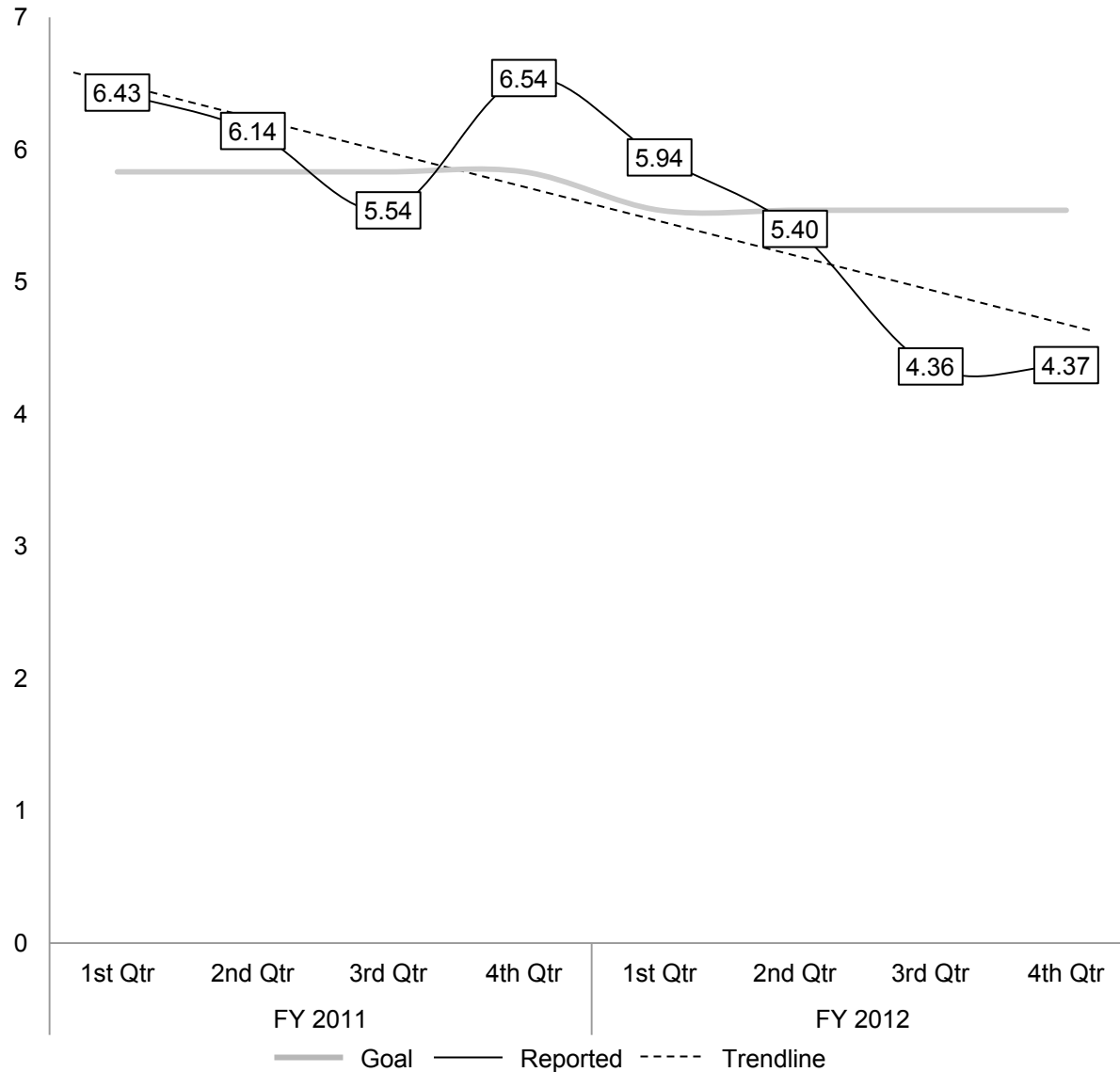
**C4 Safety (Collisions per 100,000 Miles)**



**Rail (Audit Period)**

For most of the audit period, rail collisions per 100,000 miles remained above the target ceiling (just over 3 collisions), with the exception of the 1<sup>st</sup> quarter of FY 2012. (Note that unlike most service standards, the goal for Safety is *below* a target level rather than above it.)

**C4 Safety (Collisions per 100,000 Miles)**



**Bus (Audit Period)**

Historically and during the audit period, rates of bus collisions per 100,000 miles have been higher than for rail. The target ceiling for bus collisions was set at just over 5.5 to reflecting this difference. After declining in the 3<sup>rd</sup> quarter of FY 2011 bus collision rates exceeded the ceiling for the 1<sup>st</sup> quarter of FY 2012 before declining to less than 5.5 for the remainder of FY 2012.

## **C4 Safety (Falls on Board per 100,000 Miles)**

**Goal** - 5% / yr.

**FY11-12 Performance**



*Near Goal*

**Trend**



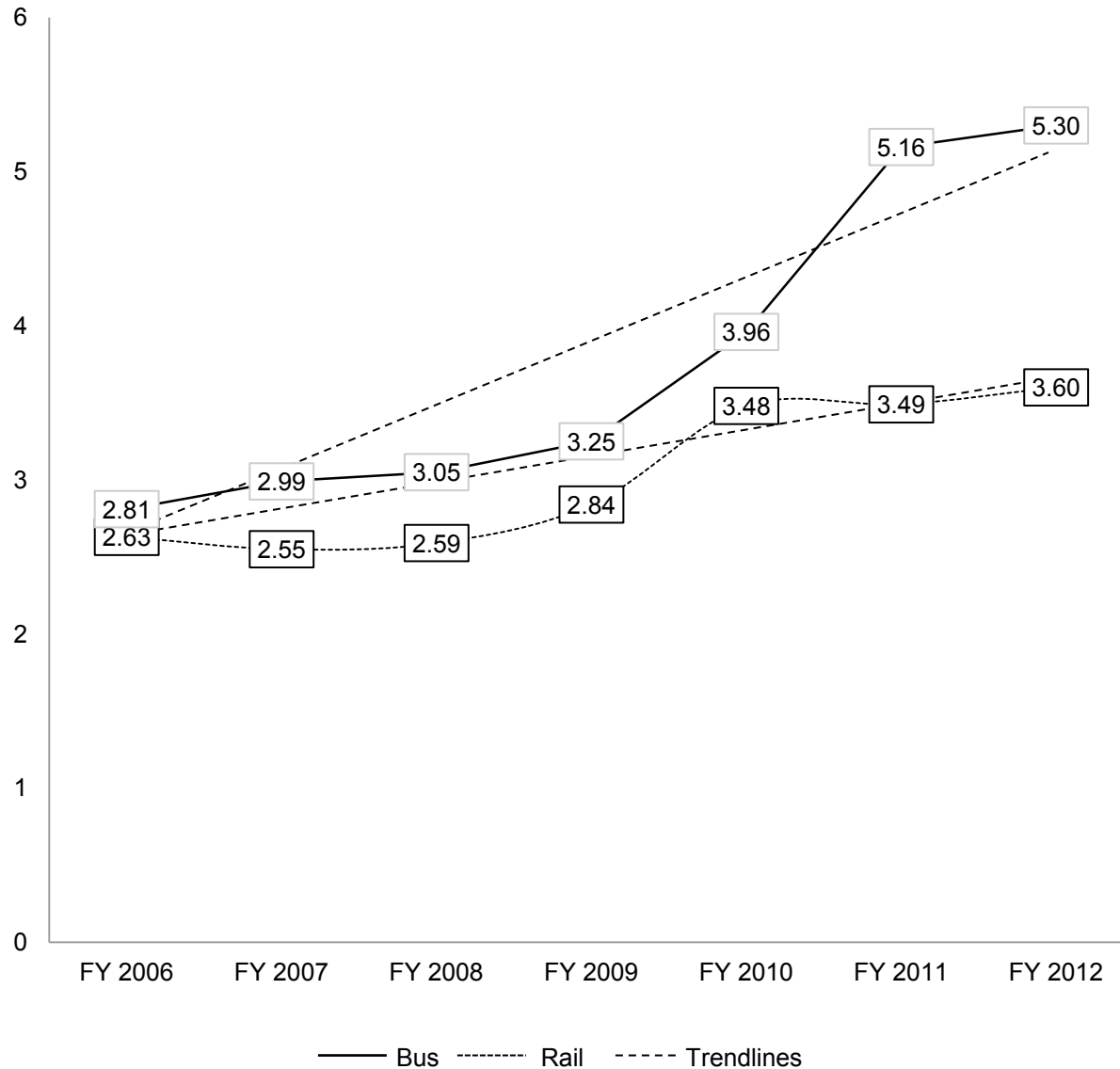
*Neutral*

**Purpose** To reduce accidents through effective operator training programs as well as effective accident follow-up training.

**Definition** Track reduction in accidents as a result of more effective operator training and accident retraining.

**Method** Number of reportable revenue service accidents. Data will be reported to the Board on a quarterly basis.

**C4 Safety (Falls on Board per 100,000 Miles)**

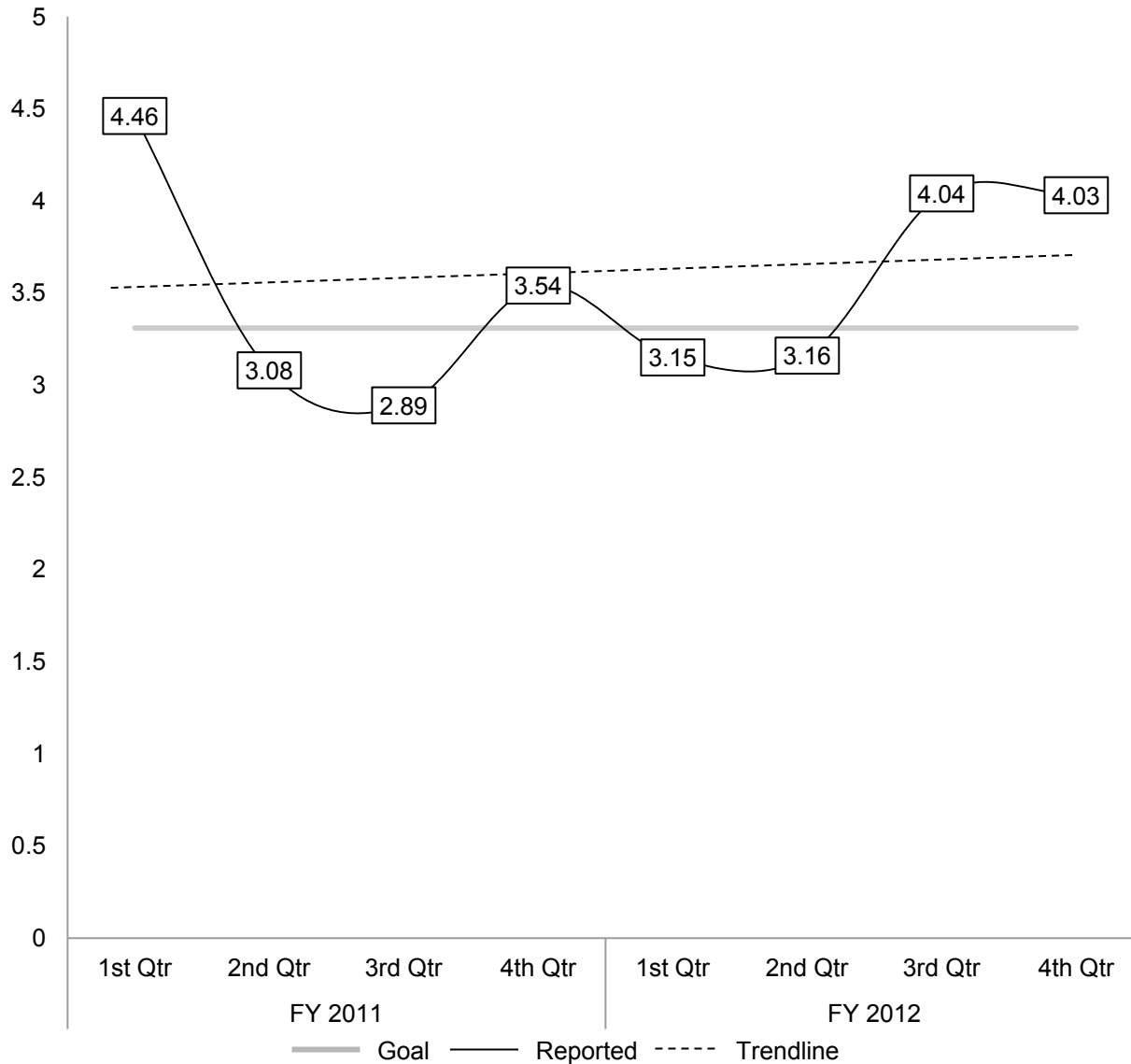


**Systemwide (Audit Period & Historic)**

Since FY 2006, when falls on board data were first reported, rates have generally trended upward. In FY 2011 there was a significant increase in falls on board for bus which rose to 5.16 per 100,000 miles, an increase of 30%. During this same time period falls on board for rail increased slightly. Fall on board increased again in FY 2012, rising to 5.30 for buses and 3.60 for rail, increases of 3%.



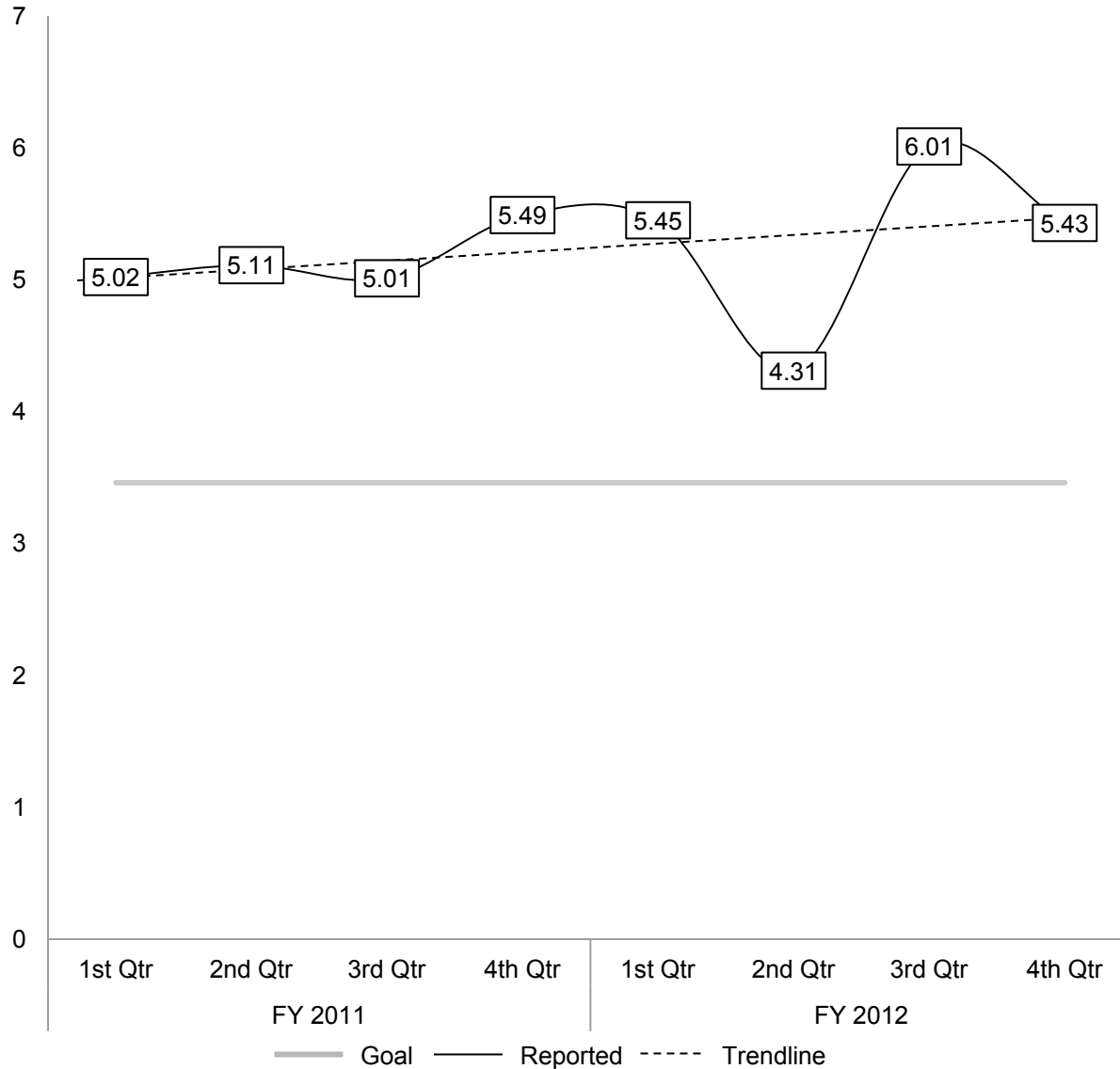
**C4 Safety (Falls on Board per 100,000 Miles)**



**Rail (Audit Period)**

The rate of falls on board for rail varied throughout FY 2011 and FY 2012. In the 2<sup>nd</sup> and 3<sup>rd</sup> quarters of FY 2011 the rate of falls on board dropped below the target ceiling of 3.31 only to increase to 3.54 in the 4<sup>th</sup> quarter. During the first half of FY 2012 the rate of falls on board fell below the target ceiling only to go above it during the second half of the year.

**C4 Safety (Falls on Board per 100,000 Miles)**



**Bus (Audit Period)**

The rate of falls on board for buses stayed relatively steady throughout the audit period, with the exception of the 2<sup>nd</sup> Quarter of FY 2012, when the rate fell to 4.31 falls per 100,000 miles.

## C5 Security Incidents

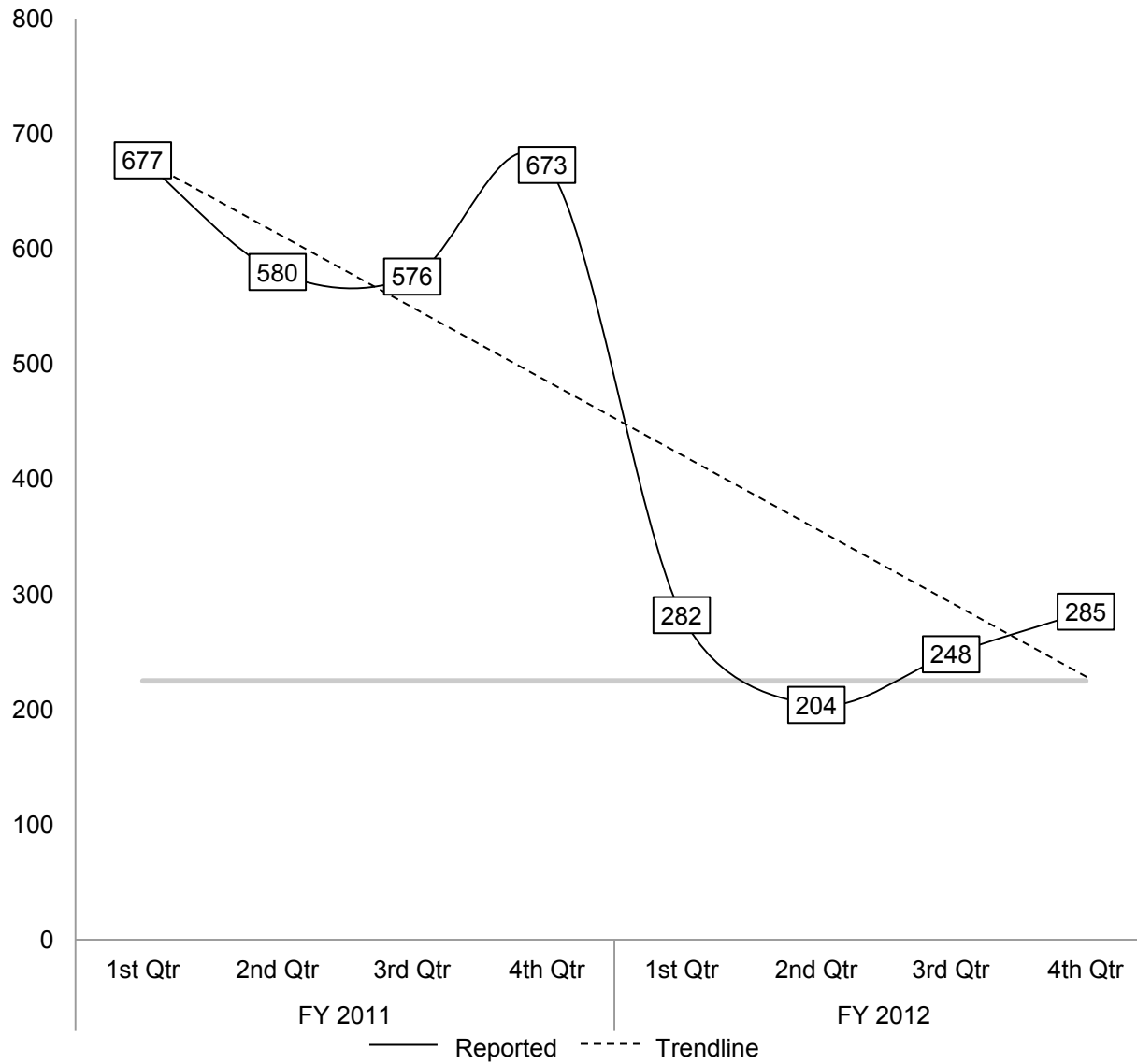
**Goal** < 900 SFPD Crimes      **FY11-12 Performance** N/A      **Trend** N/A

**Purpose** To measure security incidents on transit vehicles and in facilities.

**Definition** All categories of crime incidents are reported by category on a quarterly basis.

**Method** Data is collected daily by Security and Enforcement. Data will be reported to the Board on a quarterly basis.

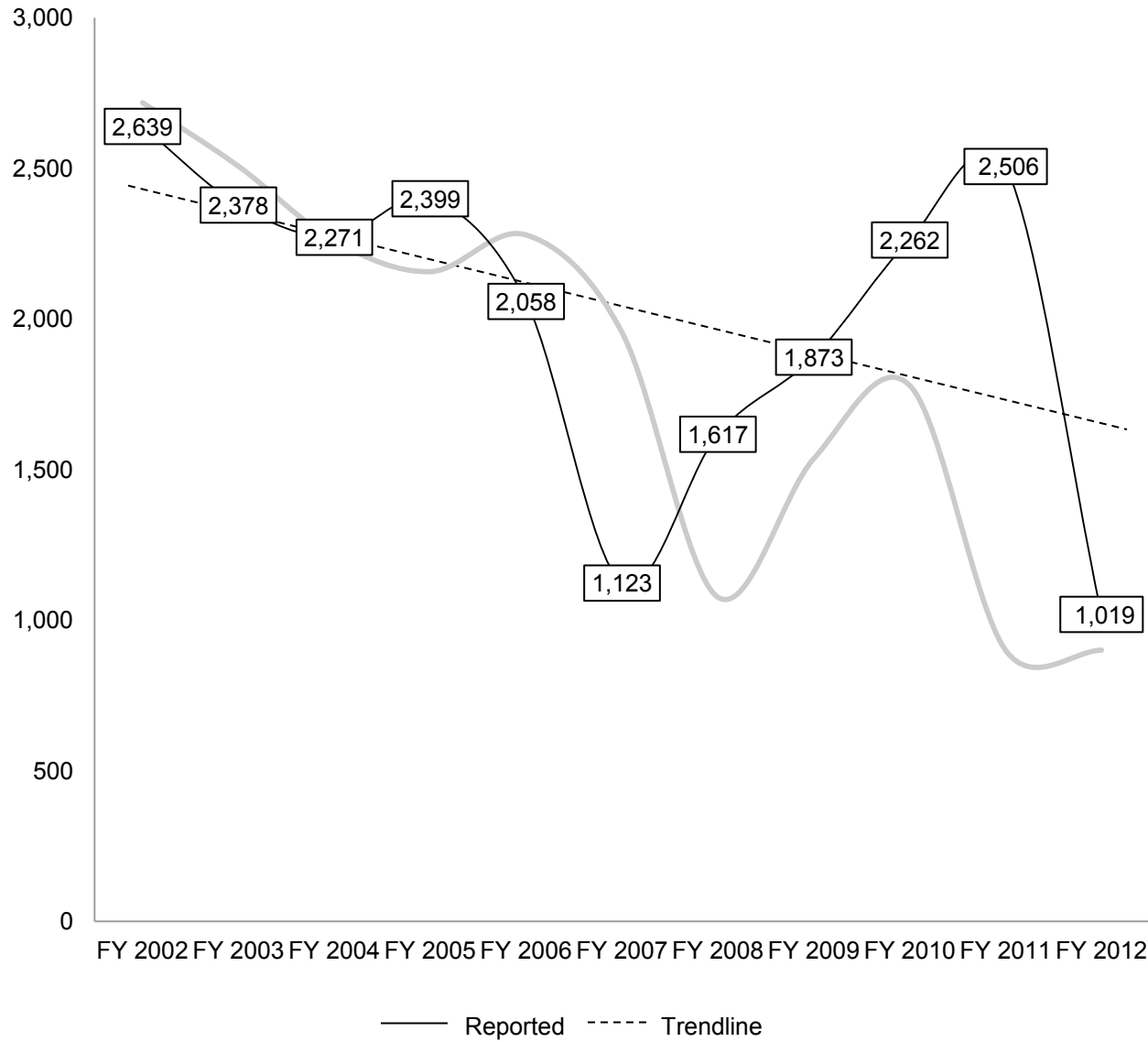
**C5 Security Incidents**



**SFPD Reported Crimes & Other Incidents (Audit Period)**

In FY 2011 SFMTA-reported security incidents include both crime on Muni property reported by SFPD to the SFMTA, as well as security incidents tracked internally by the SFMTA that do not result in a police report. However, in FY 2012 only crimes reported to the SFMTA were included, making it difficult to compare the data between FY 2011 and FY 2012.

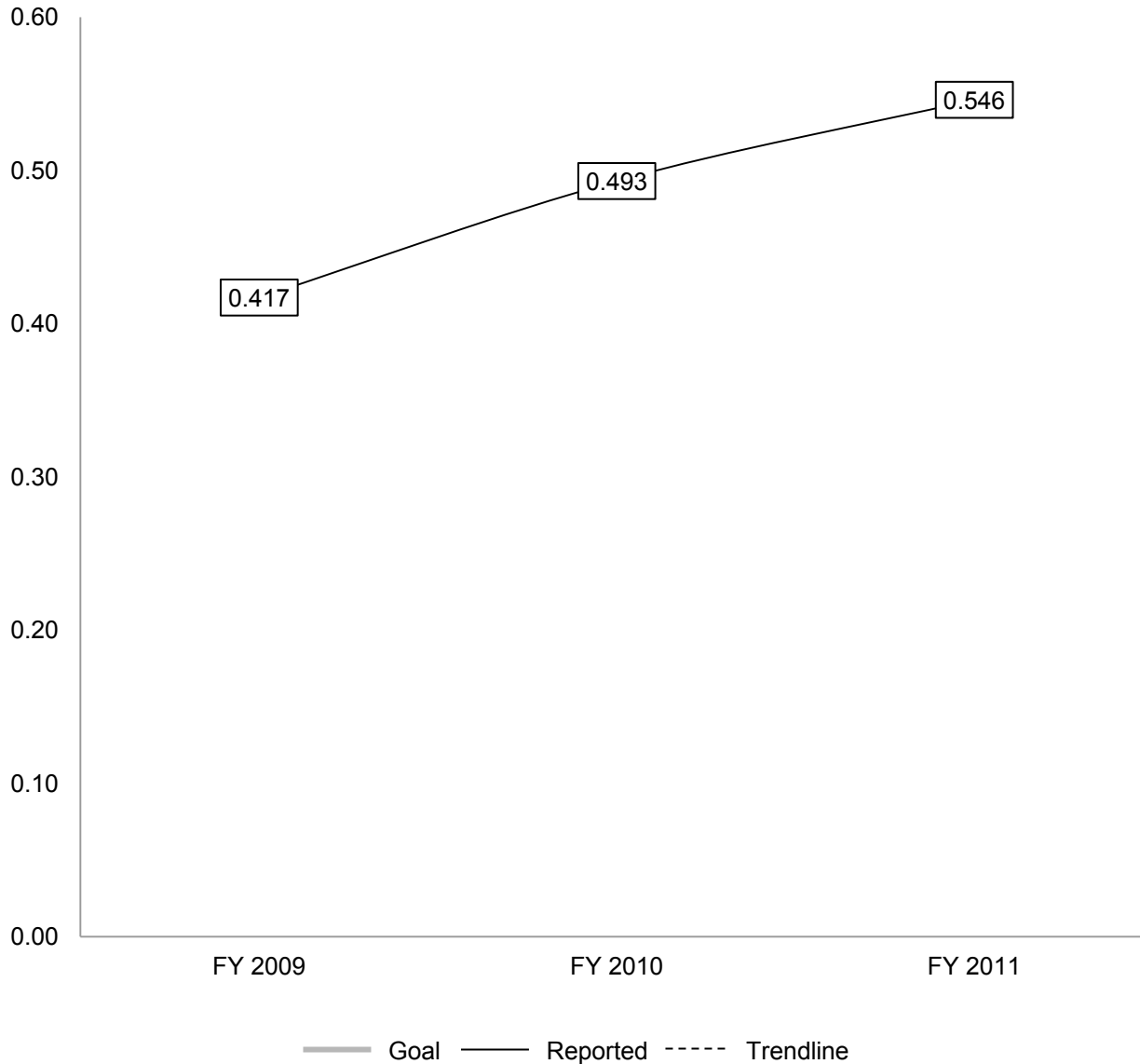
**C5 Security Incidents**



**SFPD Reported Crimes & Other Incidents (Historic)**

A staff transition at Muni during FY 2007 resulted in crime reporting for which reliability could not be confirmed (this issue was addressed in a previous Quality Review). In FY 2008, Muni's methodology for reporting security incidents was changed significantly. In FY 2012 only SFPD related crimes were reported. As a result, recent data cannot be compared to previous years' figures. (Moreover, the goal for this measure has changed from a 5% annual reduction to 900 incidents per year).

### C5 Security Incidents



#### **SFPD Reported Crimes & Other Incidents per 100,000 Boardings (Historic)**

In FY 2009, Muni began reporting rates of SFPD-reported crimes per 100,000 boardings. The rate has steadily increased from 0.417 crimes per boardings in FY 2009 to 0.546 in FY 2011. No data for 2012 were publicly available.

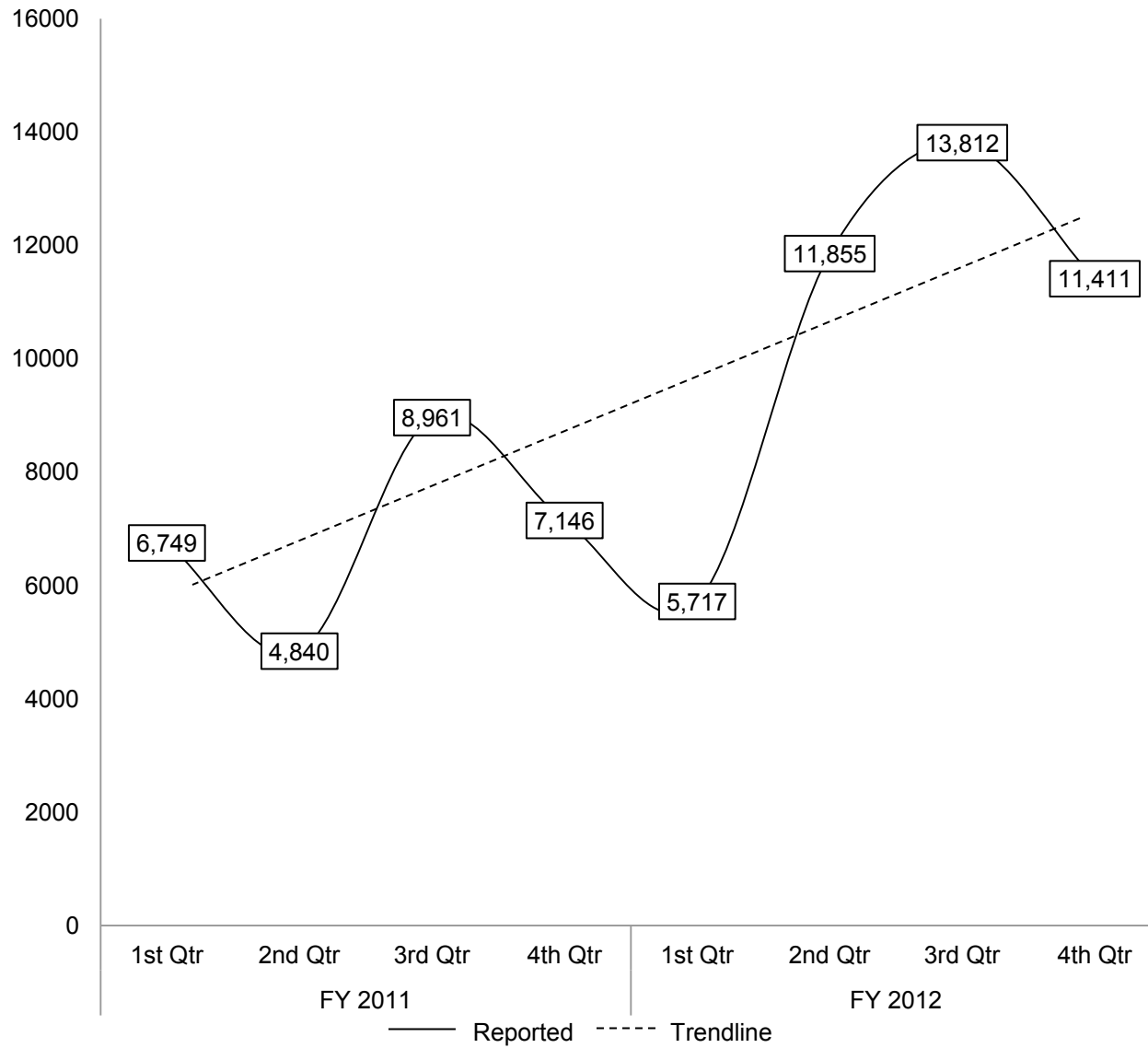
## C6 Proof-of-Payment Program

<b>Goal</b>	<i>N/A</i>	<b>FY11-12 Performance</b>	<i>No Goal For This Standard</i>	<b>Trend</b>	<i>N/A</i>
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**Purpose** To measure the incidence and rate of fare evasion on transit vehicles.

Note: citation data are incomplete for FY 2012, so an audit period trend cannot be identified.

## C6 Proof-of-Payment Program

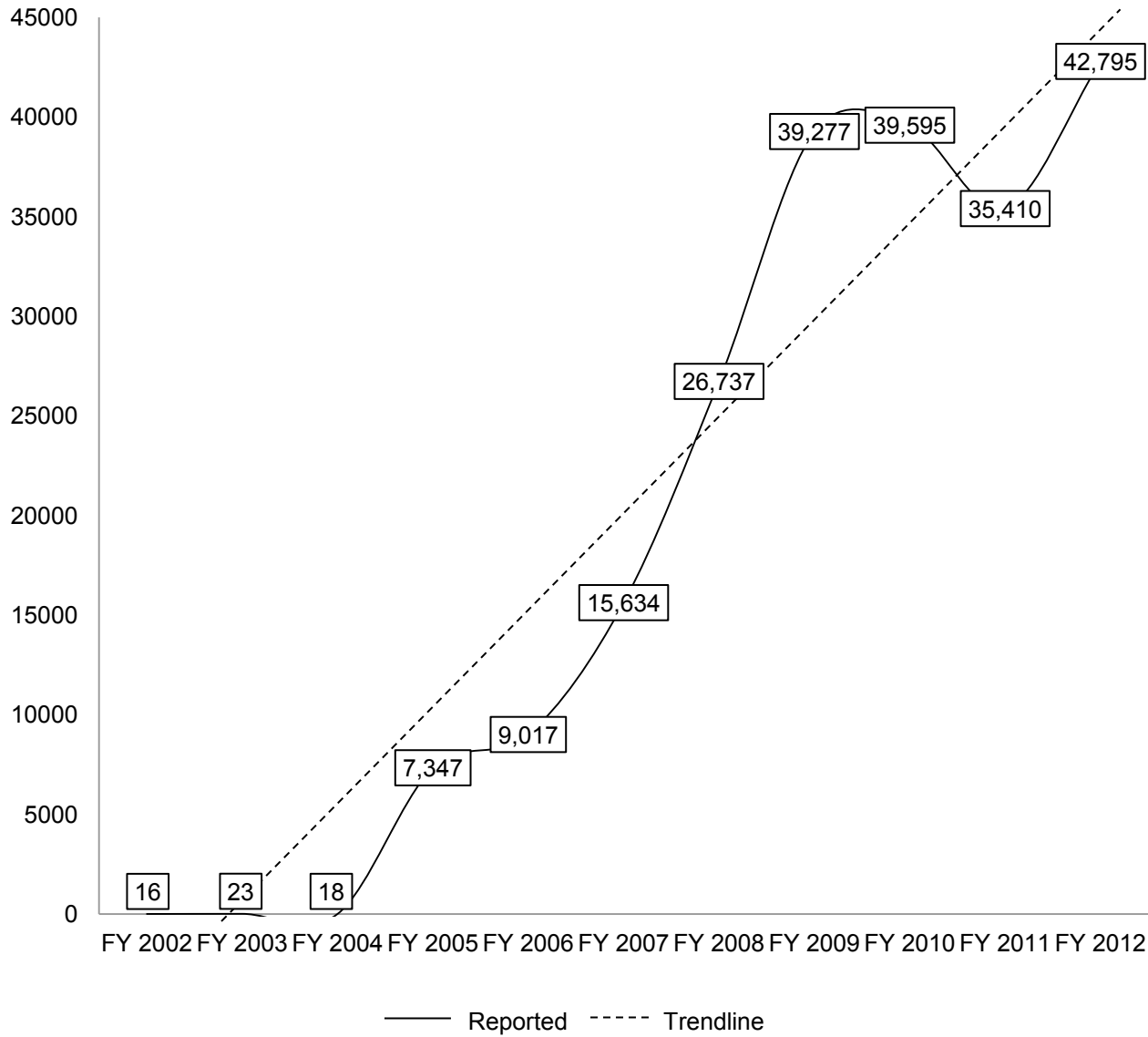


### Fare Evasion Citations (Audit Period)

The number of fare evasion citations increased noticeably in FY 2012 as compared to FY 2011. Starting in the 2<sup>nd</sup> quarter of FY 2012, the number of fare evasion citations that were issued more than doubled compared to the 1<sup>st</sup> quarter. The number of citations reached an audit period high in the 3<sup>rd</sup> quarter of FY 2012 when approximately 13,800 citations were issued.



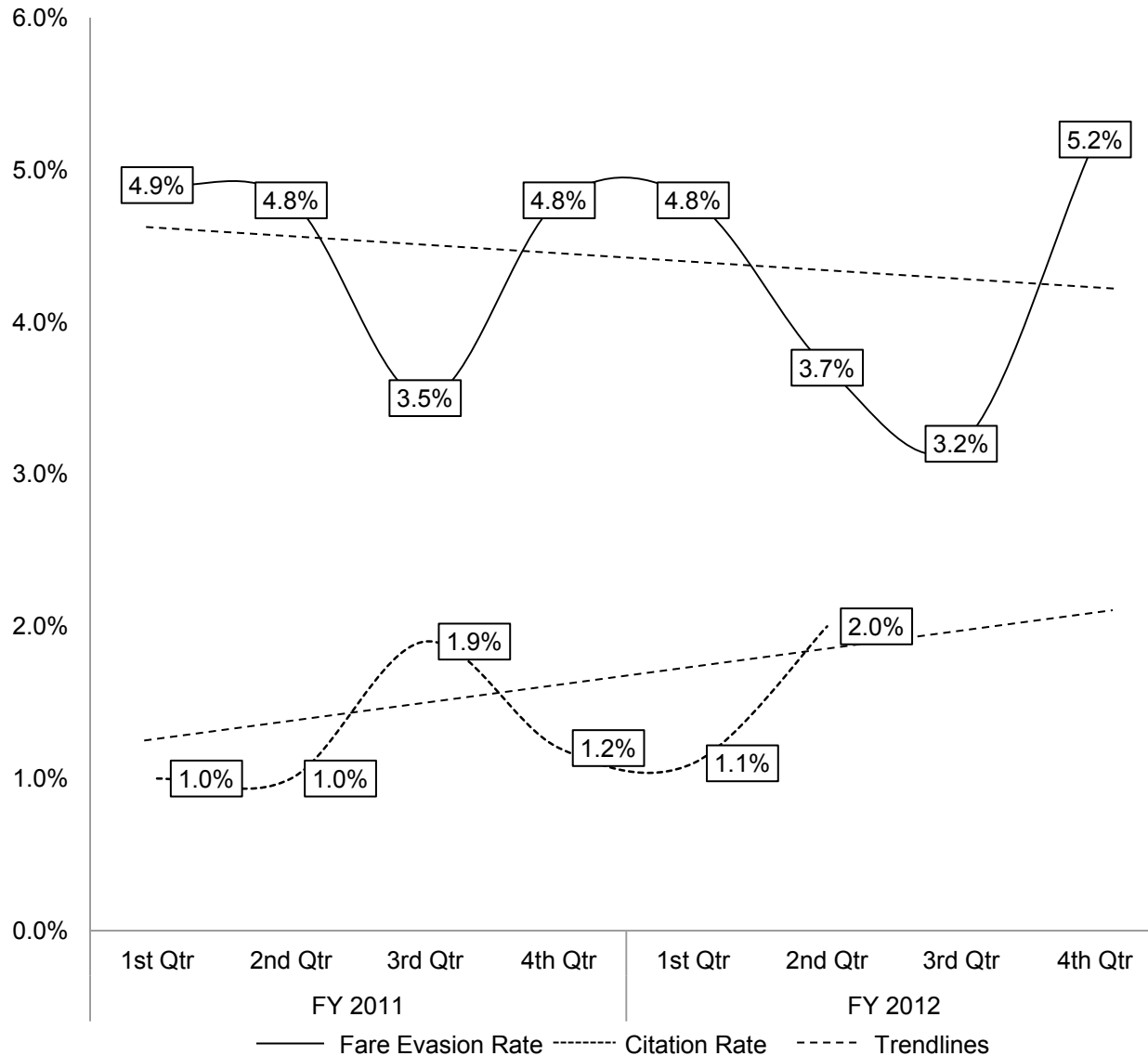
## C6 Proof-of-Payment Program



### Fare Evasion Citations (Historic)

Between FY 2004 and FY 2009, Muni's fare enforcement program was steadily and rapidly expanded. However, in FY 2010 the number of fare evasion citations remained near the previous year's figure of approximately 39,000. In FY 2011 the number of citations issued dropped to approximately 35,000 but in FY 2012 the number of citations issued reached the highest level yet with almost 48,000 citations.

## C6 Proof-of-Payment Program



### Fare Evasion Citation and Warning Rates (Audit Period)

In FY 2010, acting on a Quality Review recommendation, the SFMTA began tracking fare evasion rates (based on number of “contacts,” or checks made), as well as citation rates. In FY 2011 average around 4.8% with the exception of the 3<sup>rd</sup> Quarter when it dropped to 3.5%. In FY 2012 the fare evasion rate dropped to 3.2% in the 3<sup>rd</sup> Quarter but reached a high of 5.2% in the 4<sup>th</sup> Quarter. Citation rates ranged from 1% to 2% throughout the audit period. Citation rate data for the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2012 was not publicly available.

## **D Employee Satisfaction**

Service standards in this category measure, both directly and indirectly, the morale of Muni workers – an essential factor in the organization's health and ultimate success.

Following are brief summaries of Muni's FY 2009-2010 performance for each of the Employee Satisfaction service standards, including arrows indicating general trends (up for "positive," facing right for "neutral," and turned down for "negative") in terms of both historic patterns and performance over the course of the audit period. More detailed information about each service standard can be found on the following pages, including historic trends and data from recent quarters since the end of the audit period. Recommendations and issues identified in the data collection and reporting processes can be found at the end of the sections for some service standards.

### **N/A D1 Grievances**

Grievance data for FY 2011 or FY 2012 were not available for review.



### **D1 Grievance Resolution Rate**

The timeline for resolution of grievances has been extended from 30 to 90 days, and the target rate of resolution from 75% to 90%. Throughout the audit period, this goal was rarely met, despite having been easily met in previous years.

### **N/A D3 Employee Satisfaction**

In 2009, the SFMTA did not conduct an employee satisfaction survey. In 2010, high-level results from a reconstituted survey were reported: most SFMTA employees strongly agreed with the statement, "At work, I have the opportunity to do what I do best every day."

## D1 Grievances

<b>Goal</b>	<i>N/A</i>	<b>FY11-12 Performance</b>	<i>No Goal For This Standard</i>	<b>Trend</b>	<i>NA (no data publicly released for this audit period)</i>
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**Purpose** To record and monitor the status of all grievances.

**Definition** Quarterly reports include the number of new grievances (filed, resolved, and active).

Note: no data for this metric were available for FY 2011 or FY 2012.

**Method** An internal tracking system is used to provide data for the Board on a quarterly basis.

## D1 Grievance Resolution Rate

**Goal** > 90% within 90 days

**FY11-12 Performance**



*Goal Not Achieved*

**Trend**



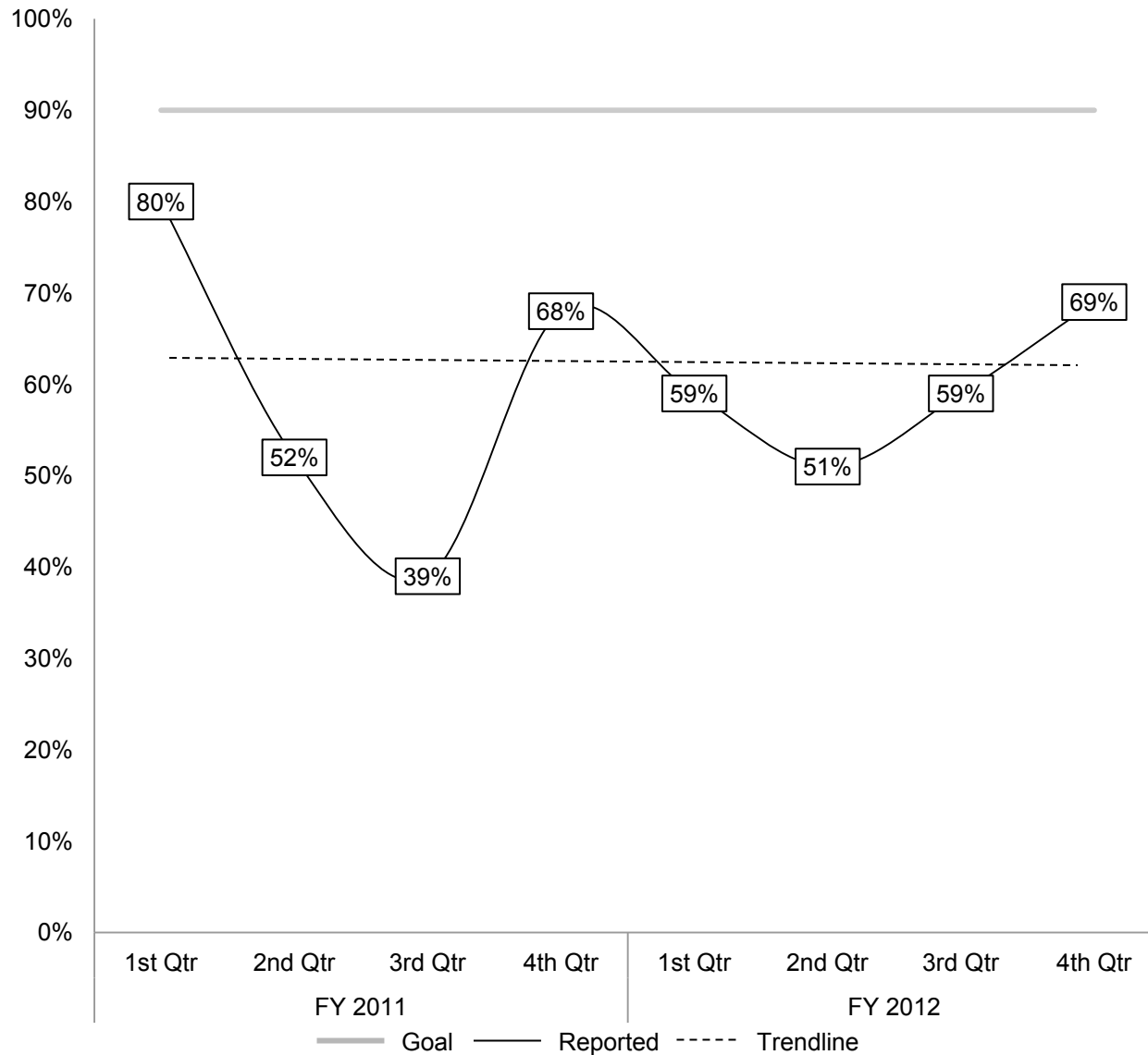
*Negative*

**Purpose** To measure the effectiveness of the Labor Relations in the resolution of grievances.

**Definition** An internal tracking system is used to provide data for the Board on a quarterly basis. Based on resolution rate for grievances resolved during the period.

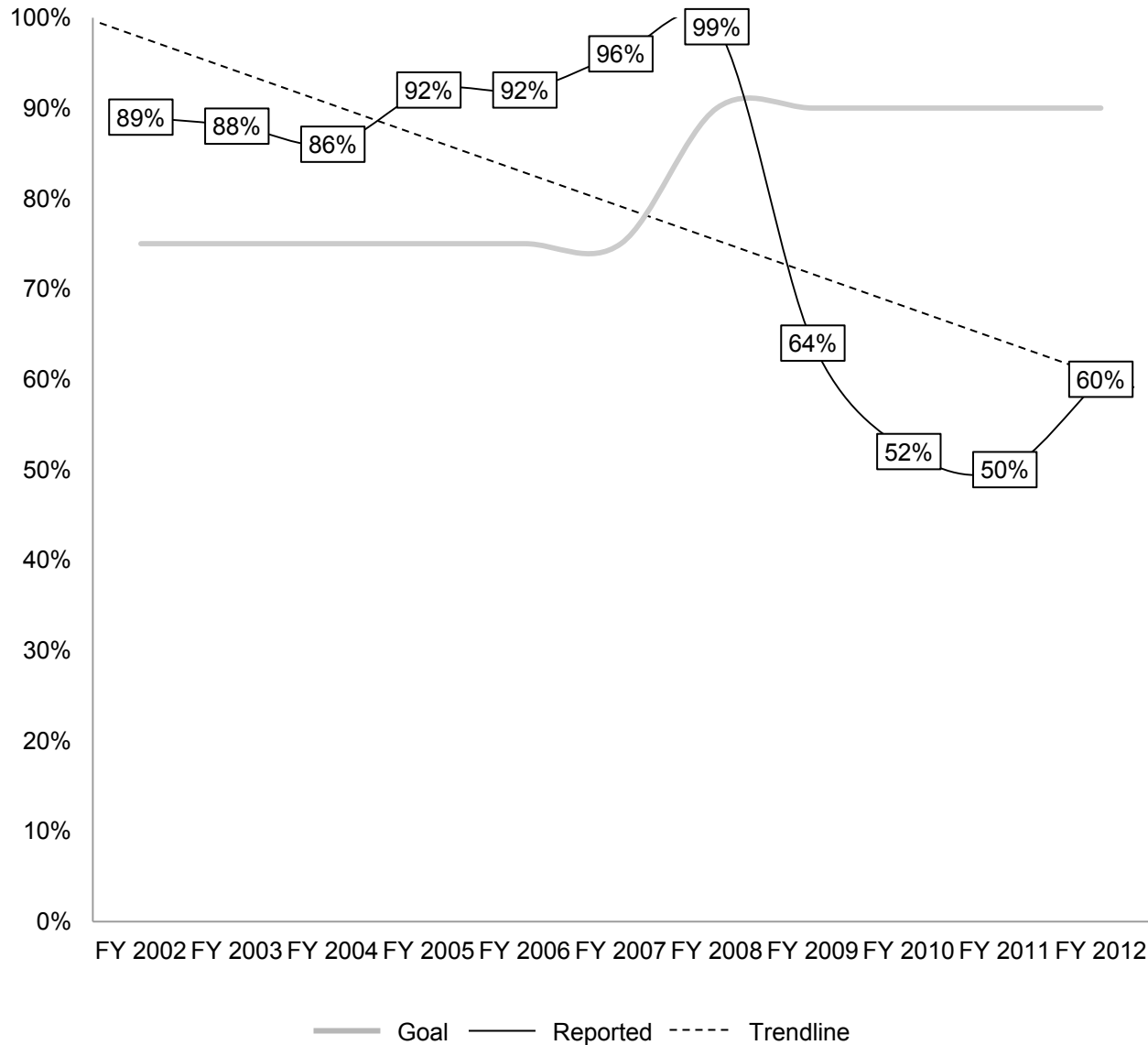
**Method** An internal tracking system is used to provide data for the Board on a quarterly basis. Based on resolution rate for grievances resolved during the period.

**D1 Grievance Resolution Rate**



**Percentage of Operator Grievances Resolved Within 90 Days (Audit Period)**  
 Resolution rates for operator grievances were below the target rate of 90% throughout the audit period.

**D1 Grievance Resolution Rate**



**Percentage of Operator Grievances Resolved Within 90 Days (Historic)**

Because the timeframe for resolution of operator grievances was changed from 30 to 45 days in 2007, then to 90 days in 2008, it is difficult to place the audit period in the context of historic trends. However, in FY 2008, before the staff transition and increase in the number of grievances filed, 99% of grievances were resolved within 90 days.

### **D3 Employee Satisfaction**

In 2009, the SFMTA did not conduct an employee satisfaction survey. In 2010, high-levels results from a reconstituted survey were reported: 55.4% of SFMTA employees strongly agreed and 32.9% agreed with the statement, "At work, I have the opportunity to do what I do best every day." Data for the current audit period were not available for review.