

San Diego Association of Governments

FY13-FY15 Triennial Performance Audit of the Metropolitan Transit System (MTS)

FINAL AUDIT REPORT



In Association With
MATT & ASSOCIATES

May 31, 2016

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EXECUTIVE SUMMARY

Transit operators that receive Transportation Development Act (TDA) funds are required to undergo triennial performance audits in the State of California. Triennial performance audits are a requirement for the continued receipt of State TDA funds for public transit under California Public Utilities Code (PUC) Section 99246. The performance audit is administered by the San Diego Association of Governments (SANDAG) and prepared by CH2M HILL. This report represents the State-mandated performance audit of the San Diego Metropolitan Transit System (MTS) for Fiscal Years 2013, 2014, and 2015, the period from July 1, 2012 through June 30, 2015.

The TDA triennial performance audit of MTS includes evaluations of:

- Compliance with pertinent sections of the Public Utilities Code
- Progress to implement prior performance audit recommendations
- Agency goals and objectives and performance monitoring systems
- Systemwide and functional area performance trends.

The objective of the performance audit is to assess compliance with PUC requirements, identify significant achievements as well as opportunities for improvement, and develop recommendations for short- and long-term efficiency and effectiveness improvements.

Several audit period accomplishments and challenges were noted. Major accomplishments include:

- Implementation of improvement to labor contract
- Continued installation of cameras on buses and Trolleys
- Virtual completion of Trolley Renewal Project
- Initiation of Rapid service
- Continued progress on the East County maintenance facility improvements
- Completed South Bay maintenance facility

MTS is in compliance with Public Utilities Code (PUC) requirements and the implementation of prior audit recommendations:

- Compliance with PUC Requirements: MTS is in compliance with all PUC requirements.
- Progress to Implement Prior Audit Recommendations: There were no prior audit recommendations regarding PUC requirements.

Performance indicator trends show the following:

- Systemwide operating cost per service hour, a measure of cost efficiency, increased by 2.1% during the audit period from \$98.70 in FY12 to \$100.73 in FY15. This was roughly one-half the 4.4% rate of inflation. The trend is a result of a 10.2% growth in operating costs and an 8.0% increase in vehicle service hours during the audit period. These costs reflect, in large part, the cost reductions negotiated in the prior audit period and implementation of employee cost sharing to a defined contribution plan for new employees. Operating cost per passenger, a measure of cost effectiveness, increased by only 1.4% from \$2.31 in FY12 to \$2.34 in FY15. This is a result of a 10.2% increase in operating costs and an 8.7% increase in ridership. The increase in ridership is primarily the result of the economic recovery, and the increased rail service.
- Service productivity remained relatively stable during the audit period. Passengers per service hour increased by 0.6% while passengers per service mile decreased by 0.9%. Despite the gains in ridership, this is a result of an 8.0% increase in vehicle service hours and a 9.7% increase in vehicle service miles coupled with an 8.7% increase in ridership.

- Service hours per employee FTE, a measure of labor productivity, decreased by 0.5% during the audit period from 1,109 in FY12 to 1,103 in FY15. This trend is a result of an 8.0% increase in vehicle service hours and an 8.6% increase in employee FTEs.
- The MTS systemwide farebox recovery ratio fluctuated during the audit period, moving from 43.7% in FY12 to 41.9% in FY13, and moving back up to 42.6% in FY15. MTS farebox recovery during the audit period was still significantly higher than the farebox recovery requirement of 31.9%.
- The average fare per passenger trip decreased by 1.2% during the audit period, from \$1.01 to \$1.00.
- The net cost per passenger trip increased by 3.4%, from \$1.30 in FY12 to \$1.34 in FY15, still below the inflation rate of 4.4% over the audit period.

The systemwide TDA performance trends overall are indicative of the continued attention that MTS placed on cost containment during the audit period. MTS' accomplishments position it well for continued cost containment in the future. There are no recommendations for MTS.

SECTION I: INTRODUCTION

The TDA triennial performance audit of the San Diego Metropolitan Transit System (MTS) follows state guidelines. Triennial performance audits are a requirement for the continued receipt of State Transportation Development Act (TDA) funds for public transit under California Public Utilities Code (PUC) Section 99246. The San Diego Association of Governments (SANDAG) is responsible for administering the conduct of performance audits in the San Diego Region. SANDAG has retained CH2M HILL to conduct the performance audit of MTS. This report represents the State-mandated performance audit of MTS for Fiscal Years 2013, 2014, and 2015, the period from July 1, 2012 through June 30, 2015.

The TDA triennial performance audit of MTS includes evaluations of:

- Compliance with pertinent sections of the Public Utilities Code
- Progress to implement prior performance audit recommendations
- System wide performance trends for efficiency and effectiveness
- Functional area performance results
- Opportunities to improve the efficiency and effectiveness of operations.

The objective of the performance audit is to identify significant achievements as well as opportunities for improvements, and to provide recommendations for short- and long-term efficiency and effectiveness improvements.

The methodology for the MTS audit included site visits, interview, and data collection and analysis. Interviews were conducted with personnel responsible for the management and oversight of MTS services:

- Chief Executive Officer
- Chief Financial Officer
- Chief Operating Officer, Trolley
- Chief Operating Officer, Transit
- Chief Technology Officer
- Chief of Staff
- Director of Human Resources and Labor Relations
- Director of Marketing and Communications
- Director of Traffic Enforcement/Chief of Police
- General Counsel
- Internal Auditor
- Director of Financial Planning & Analysis
- Procurement Manager
- Manager of Planning
- Manager of Capital Projects
- Superintendent of Transportation
- Superintendent of Light Rail Vehicle Maintenance
- Schedules/Operations Analyst, Trolley
- Director of Transportation

- Director of Maintenance
- Manager of Training
- Manager of Transportation Communication and Technology
- Transit Operations Specialist
- Manager of Bus Rapid Transit and East County Operations
- Manager of Support Services
- Quality Assurance Supervisor
- Senior Transportation Planner
- Associate Transportation Planner

Background documents and other written information including those identified in Exhibit I-1 were collected and reviewed:

Exhibit I-1: MTS Background Documents and Written Information Reviewed

Organization and staffing charts	National Transit Database Reports, FY13-FY15	Data provided by operating units to support specific analyses
Labor agreements in effect during the audit period	State Controller Reports, FY13-FY15	Performance Objective Plans, FY13-FY15
Current MTS Policies and Procedures	Comprehensive Annual Financial Reports, FY13-FY15	Annual Performance Monitoring Reports, FY13-FY15
FY10-FY12 performance audit report and responses to recommendations	Adopted Budgets, FY13-FY15	Service maps and brochures
Form C and Related Reports, FY13-FY15	CHP Transit Operator Compliance Certificates	MTS website: www.sdmts.com SANDAG website: www.sandag.org

The audit team also:

- Conducted on-site interviews with MTS management and staff responsible for administering, managing, and operating the transit system, including staff from MTS Bus Operations, MTS Rail Operations, and other functions (e.g., marketing, finance, planning, human resources, and legal).
- Assessed compliance with applicable Public Utilities Code Sections, including progress and performance results relative to prior audit recommendations.
- Compiled and analyzed performance indicator trend information for the system and the individual operations, as well as for major functional areas.

I.1. Overview

MTS operates motorbus, light rail, and demand response services throughout the southern portion of the urbanized areas of San Diego County, as well as rural parts of east San Diego County not served by the North County Transit District (NCTD). The name MTS began being used in 2005, reflecting a name change of the former Metropolitan Transit Development Board (MTDB). The MTS transit system includes three light rail lines with 53 stations, 93 fixed bus routes, which include the three re-branded *Rapid* routes, and complementary ADA paratransit (MTS Access). MTS operates more than 2.3 million vehicle service hours and serves more than 94.4 million passenger trips annually in a total service area of about 3,240 square miles. The service area includes the cities of San Diego, Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, Santee and a portion of the unincorporated area of San Diego County.

MTS responsibilities include service planning, performance monitoring and analysis, and the activities required to administer, fund and deliver transit services within this service area either directly or through contracts with other service providers. These services include:

- Directly Operated Bus
- Trolley
- Contracted Fixed Route, including Chula Vista Transit through January 15, 2015
- Commuter Express
- Rural Service
- General Public Paratransit - Sorrento Valley Coaster Connection (SVCC)
- Americans with Disabilities Act (ADA) Demand Response Service.

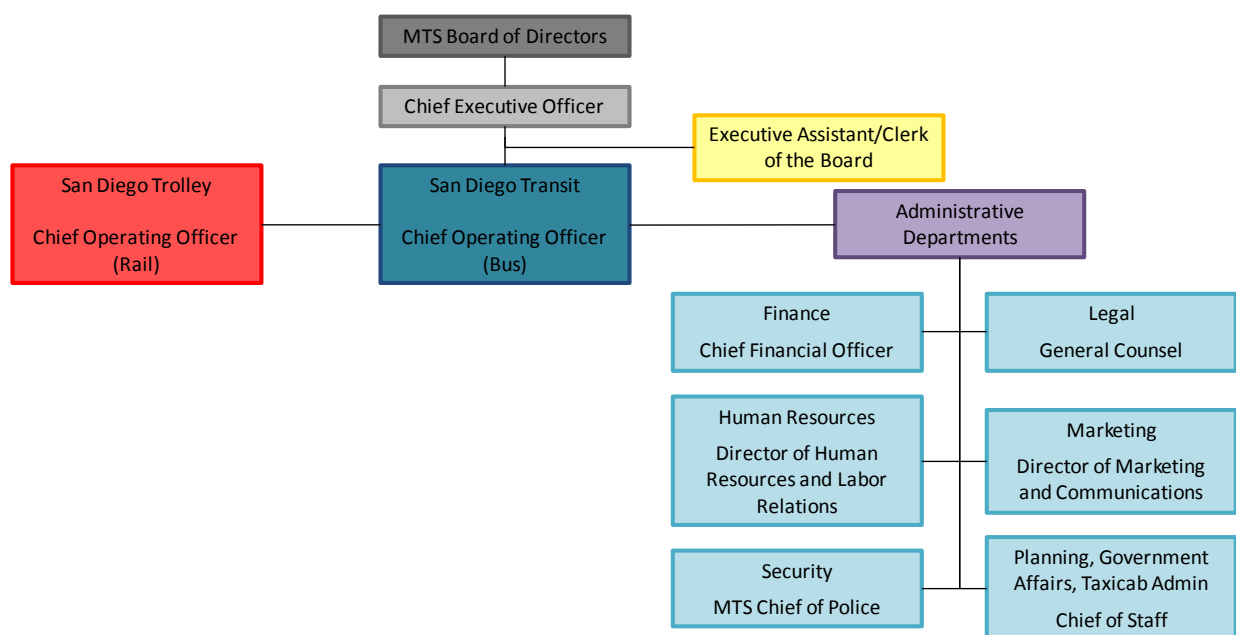
Each of these services that MTS provides is described in Section IV: Performance Trends and Functional Review. The section provides TDA performance indicators for the MTS system as a whole, as well as performance indicators for each service type individually.

MTS is governed by a 15-member Board of Directors that includes:

- Four appointed from the San Diego City Council
- Nine total (one each from the City Councils of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, and Santee)
- One from the San Diego County Board of Supervisors
- One resident of San Diego County selected by other Board members to serve as the Board Chair.

Exhibit I-2 shows the high level MTS organization chart. San Diego Transit includes all motorbus (directly operated and contracted) and demand response services. San Diego Trolley is the light rail system.

Exhibit I-2: MTS Organization Chart



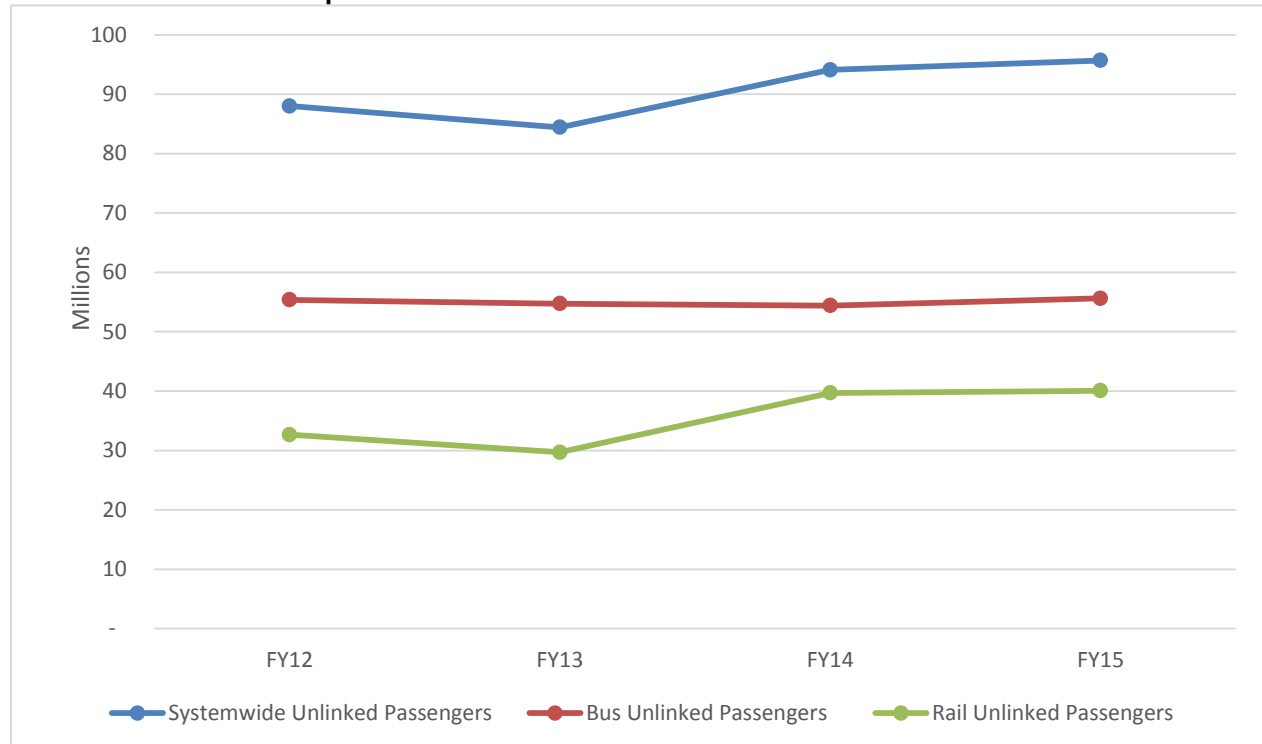
The MTS primary fare types as of June 30, 2015, are the cash fare (\$2.25 for local, *Rapid* route 215, urban and shuttle routes, \$2.50 for the Trolley, *Rapid* routes 235 and 237, and express routes, \$5.00 for

Rapid express routes, and \$5 to \$10 for rural routes); the Day Pass (\$5.00 for most services), and the Monthly Pass (\$72 for most services). Discounts are applicable for seniors and persons with disabilities, and special fare products for college students, youth, social service agencies, stadium services, and class trips. SANDAG is responsible for fare policy and fare setting in San Diego County.

I.2. Accomplishments and Challenges

With 95.7 million passenger trips for trolley and bus in FY15, ridership has risen 8.7% from the previous audit period and has broken ridership records.

Exhibit I-3: MTS Ridership from FY12 to FY15



Source: NTD Reports from FY 12 to FY15.

During this audit period, MTS prepared for the launch of its ERP software which went live on January 1, 2016. The endeavor involved all MTS departments with a particular emphasis on Finance.

MTS Trolley

Trolley Renewal Program was virtually completed during this audit period and invested \$700 million to rebuild the Orange and Blue Lines. The Orange Line portion of the project included renovating nine stations, as well as train signaling and grade-crossings improvements. Station platforms have been resurfaced, new shelters installed and fiber optic communication systems added, including next-arrival electronic signs and surveillance cameras.

To accommodate riders in wheelchairs, the program converted 100% of cars to low floor cars and rebuilt 35 stations for low floor car service. 65 new cars have replaced old ones. Additionally, MTS introduced real time next train arrival system on Blue, Green, Orange and downtown lines.

MTS Bus

MTS launched three new *Rapid* bus routes (Routes 215, 235 and 237) in 2014 which has contributed to a record breaking year in ridership during this audit period. Additionally, MTS installed CAD/AVL systems throughout its fleet, consolidated communication center at Imperial Avenue, and is nearly finished installing automatic announcement system on buses.

In May 2015, MTS won the APTA GOLD Award for Safety. MTS created the "Safety First, Every Trip, Every Day" campaign to renew focus on driving safety. The campaign included strategic data analysis, hazard elimination/mitigation, innovative and engaged communication and training, as well as enhanced recognition of safety success. This program has seen a 24% reduction in preventable accidents compared to the previous five year average and a 50% increase in the total number of customer compliments for safe operation.

MTS and the San Diego Association of Governments (SANDAG) completed construction of the South Bay Maintenance Facility which includes a new 48,000 square foot maintenance building, a new 14,000 square foot administration and operations building, a new bus wash facility, and renovations to the existing main building. The project also includes expanded CNG fueling stations, additional bus parking and a high-capacity bus wash capable of cleaning 250 buses every night. The two-story administrative and operations offices will host dispatching functions, administrative and driver support areas, and was built to California Green Building code and is certified as LEED Silver. This project is a Design-Build project with a budget of approximately \$30 million. Construction began in January 2013 and the new facilities opened at the end of 2014. The expanded capacity at this facility will accommodate the South Bay Bus Rapid Transit vehicles.

MTS and SANDAG have finished the design of the expanded East County operations and maintenance facilities. The existing site is 5.2 acres and currently accommodates 83 transit buses. The final layout will be able to accommodate up to 120 buses and 120 employee/support vehicles. A budget of approximately \$30 million is planned for the project. The total project is expected to be completed by June 2016.

Bus Shelters.

MTS executed a contract with Clear Channel for bus shelter installation, maintenance and advertising. This was the first step in MTS's two-step plan to replace the 444 MTS maintained shelters throughout the MTS transit system. The project included replacing the existing 20+ year old shelters and also potentially installing new shelters at stops where they are needed in the system. The advertising revenue from this new contract helped fund this shelter replacement project. MTS's revenue is based upon a revenue sharing percentage between Clear Channel Outdoor and MTS with an annual minimum guarantee (\$950,000 per year). Due to this program bus shelter revenues increased from approximately \$150,000 to \$1 million per year.

UC San Diego Pass Program

UC San Diego student associations recently approved the establishment of a new Student Transportation Fee of \$50 per student per quarter. The fee provides UC San Diego students with a Regional Transit Pass for all undergraduate, graduate and professional students who pay this fee. The Regional Transit Pass gives unlimited ridership during the fall, winter and spring quarters on all mass transit bus, trolley and light rail routes in the San Diego region provided by MTS and NCTD, excluding the MTS rural and premium express routes. The Student Transportation Fee went into effect Fall 2014.

Union Agreement

In fiscal year 2013, MTS staff negotiated and finalized a 3-year labor contract with three MTS affiliated unions, the Transit Enforcement Officers Association, Amalgamated Transit Union, and the International Brotherhood of Electrical Workers. These contracts contain significant pension reform and other concessions from employees that will help the organization run a more cost-effective operation.

MTS ACCESS

As of June 2014, paratransit operates using mobile data terminals that improves On Time Performance with upgraded maps, updated reservation requests, and a new radio system.

I.3. Report Outline

The remainder of the performance audit report is organized into four sections:

- II. Compliance Review: Assesses MTS compliance with specific PUC requirements and discusses the status of prior audit recommendations.
- III. Management Control and Reporting: Examines the management structure and performance monitoring systems in place to help reach MTS goals and objectives.
- IV. Performance Trends and Functional Review: Examines system wide performance trends as well as trends in the major functional areas: operations, maintenance, and planning and administration.
- V. Conclusions and Recommendations: Outlines recommendations and potential implementation strategies for MTS to capitalize on improvement opportunities.

SECTION II: COMPLIANCE REVIEW AND PRIOR AUDIT RECOMMENDATIONS

The compliance review assesses compliance with PUC requirements and implementation of prior audit recommendations. Activities conducted by MTS and each of the MTS service providers to comply with TDA requirements are described in this section. TDA performance indicator results and trends are discussed in Section IV – Performance Trends and Functional Review.

PUC requirements verified as part of this performance audit include the compliance requirements for transit operators stipulated in the California Department of Transportation TDA Performance Audit Guidebook for Transit Operators and Regional Transportation Planning Entities (2008) and TDA Statutes and California Codes of Regulations (2009).

With the consolidation of operations in the MTS service area, some of the compliance findings have been made for MTS as a whole. Where appropriate (e.g., where operators continue to file separate financial audits and State Controller reports), findings have been made for particular MTS services. Please note that Chula Vista Transit (CVT) information is provided where appropriate and merged with MTS Contracted Service, also where appropriate, due to the absorption of CVT by MTS in January 2015.

Compliance is assessed at three levels:

- Fully compliant.
- Partially compliant, with additional actions required to achieve full compliance.
- Non-compliant or not applicable.

Compliance to measure progress towards implementing prior audit recommendations has been measured in three categories:

- Fully implemented.
- Partially implemented but further progress is warranted.
- Not implemented or not applicable.

II.1. Compliance Review

MTS and its operators are in compliance with applicable PUC and CAC requirements for operators.

Code Reference	Operator Compliance Requirements, Findings, Verification	
PUC Section 99243	Requirement – Uniform System of Accounts and Records: Annual reports based on the Uniform System of Accounts and Records established by the State Controller are submitted to the RTPA within 90 days of the end of the fiscal year (September 30) or 110 days if submitted electronically (approx. October 20).	
	Findings	State Controller Report Submittal Dates
	MTS Bus: fully compliant Source: State Controller Annual Report All reports were submitted electronically, so the 110-day timeframe applied.	MTS Bus: FY13: 18-October-2013 FY14: 17-October-2014 FY15: 12-October-2015
	MTS Contracted Bus and Demand Response: fully compliant Source: State Controller Annual Report All reports were submitted electronically, so	MTS Contracted Bus: FY13: 18-October-2013 FY14: 17-October-2014 FY15: 12-October-2015

Code Reference	Operator Compliance Requirements, Findings, Verification	
	the 110-day timeframe applied.	
	<p>MTS Rail: fully compliant Source: State Controller Annual Report All reports were submitted electronically, so the 110-day timeframe applied.</p>	<p>MTS Rail: FY13: 17-October-2013 FY14: 17-October-2014 FY15: 12-October-2015</p>
	<p>Chula Vista Transit: fully compliant¹ Source: State Controller Annual Report All reports were submitted electronically, so the 110-day timeframe applied. Note: CVT merged with MTS on 1/1/2015 and absorbed into South Bay facility.</p>	<p>Chula Vista Transit: FY13: 16-October-2013 FY14: 15-October-2014 FY15: 19-October-2015</p>
PUC Section 99245	<p>Requirement – Annual Fiscal Audit: Certified annual fiscal and compliance audits are submitted to the RTPA and State Controller within 180 days of the end of the fiscal year (December 31), or receive 90 day extension (March 31).</p>	
	Findings	Annual Fiscal Audit Submittal Dates
	<p>MTS: fully compliant Source: Annual fiscal audits were included as part of the Comprehensive Annual Financial Report.</p>	<p>MTS: FY13: letter of transmittal dated 17-October-2013 FY14: letter of transmittal dated 31-October -2014 FY15: letter of transmittal dated 30-October -2015</p>
	<p>Chula Vista Transit: fully compliant² Source: Annual fiscal audits Note: CVT merged with MTS on 1/1/2015 and absorbed into South Bay Facility. Future CVT fiscal and compliance audits not required following merger.</p>	<p>Chula Vista Transit: FY13: auditor letter dated 13-December-2013 FY14: auditor letter dated 19-December -2014 FY15: Not Applicable</p>

¹ The City of Chula Vista was responsible for submitting financial statements to the State of California. MTS did not prepare, nor submit State Controller Annual Report(s) for the City of Chula Vista.

² The City of Chula Vista was responsible for submitting Annual Fiscal Audit(s) to the State of California. MTS did not prepare, nor submit Annual Fiscal Audit(s) for the City of Chula Vista.

Code Reference	Operator Compliance Requirements, Findings, Verification																		
PUC Section 99251	Requirement – CHP Certifications: Following inspection of the operator’s terminal, CHP has certified operator's compliance with Vehicle Code 1808.1 within 13 months prior to each TDA claim submittal.																		
	Findings		CHP Certification Dates																
	MTS Bus: fully compliant Source: CHP Transit Operator Compliance Certificates		MTS Bus: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">FY13</th> <th style="text-align: center;">FY14</th> <th style="text-align: center;">FY15</th> </tr> </thead> <tbody> <tr> <td>Imperial</td> <td style="text-align: center;">27-Jun-13</td> <td style="text-align: center;">12-Jun-14</td> <td style="text-align: center;">17-Jun-15</td> </tr> </tbody> </table>			FY13	FY14	FY15	Imperial	27-Jun-13	12-Jun-14	17-Jun-15							
		FY13	FY14	FY15															
	Imperial	27-Jun-13	12-Jun-14	17-Jun-15															
	MTS Contracted Bus and Demand Response: fully compliant Source: CHP Transit Operator Compliance Certificates		MTS Contracted Bus: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">FY13</th> <th style="text-align: center;">FY14</th> <th style="text-align: center;">FY15</th> </tr> </thead> <tbody> <tr> <td>First Transit, Copley Park</td> <td style="text-align: center;">3-Oct-12</td> <td style="text-align: center;">16-Oct-13</td> <td style="text-align: center;">8-Oct-14</td> </tr> <tr> <td>Transdev, East County</td> <td style="text-align: center;">7-Sep-12</td> <td style="text-align: center;">11-Sep-13</td> <td style="text-align: center;">5-Sep-14</td> </tr> <tr> <td>Transdev, South Bay</td> <td style="text-align: center;">6-Mar-13</td> <td style="text-align: center;">11-Dec-13</td> <td style="text-align: center;">10-Dec-14</td> </tr> </tbody> </table>			FY13	FY14	FY15	First Transit, Copley Park	3-Oct-12	16-Oct-13	8-Oct-14	Transdev, East County	7-Sep-12	11-Sep-13	5-Sep-14	Transdev, South Bay	6-Mar-13	11-Dec-13
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Transdev, East County	7-Sep-12	11-Sep-13	5-Sep-14																
Transdev, South Bay	6-Mar-13	11-Dec-13	10-Dec-14																
MTS Rail: not applicable		MTS Rail: Vehicle Code 1801.1 does not apply to rail operators.																	
Chula Vista Transit: fully compliant Source: CHP Transit Operator Compliance Certificate Note: CVT merged with MTS on 1/1/2015 and absorbed into South Bay Facility.		Chula Vista Transit: FY13: 30-November-2012 FY14: 4-December-2013 FY15: 10-December-2014																	
PUC Section 99261	Requirement – Transportation Planning Agency Regulations: Claims for TDA funds are submitted in compliance with RTPA's rules and regulations for such claims.																		
	Findings		Verification																
Fully compliant – MTS submits its TDA claims and proper documentation to SANDAG each year.																			

Code Reference	Operator Compliance Requirements, Findings, Verification	
PUC Section 99266	Requirement – Budget Changes: Operating budget has not increased by more than 15% over the preceding year unless reasonable justification has been provided.	
	Findings	Percent Growth in Budget
	MTS Bus: fully compliant Source: State Controller Reports, minus depreciation	MTS Bus: FY13: +9.3% FY14: -7.5% FY15: +0.8%
	MTS Contracted Bus and Demand Response: fully compliant Source: State Controller Reports, minus depreciation	MTS Contracted Bus: FY13: +2.3% FY14: +5.4% FY15: +15.5%
	MTS Rail: fully compliant Source: State Controller Reports, minus depreciation	MTS Rail: FY13: +3.9% FY14: +7.9% FY15: +2.1%
	Chula Vista Transit: fully compliant Source: State Controller Reports, minus depreciation Note: CVT merged with MTS on 1/1/2015 and absorbed into South Bay Facility.	Chula Vista Transit: FY13: -0.5% FY14: +7.6% FY15: -39.1%
PUC Section 99247	Requirement – Performance Measures Definitions: The operator’s definition of performance measures are consistent with Public Utilities Code Section 99247, including (a) operating cost, (b) operating cost per passenger, (c) operating cost per vehicle service hour, (d) passengers per vehicle service hour, (e) passengers per vehicle service mile, (f) total passengers, (g) transit vehicle, (h) vehicle service hours, (i) vehicle service miles, and (j) vehicle service hours per employee.	
	Findings	Verification
	Fully compliant	MTS operating statistics are collected and performance measures are calculated in accordance with PUC requirements.

Code Reference	Operator Compliance Requirements, Findings, Verification													
PUC, Sections 99268.2 99268.3 99268.4 99268.5 99269	Requirement – Revenue Ratios: Operator has maintained a ratio of fare revenues to operating costs at least equal to: 20% for urban areas, 10% for non-urban areas, 10% for services for elderly and handicapped persons. For MTS operators, the systemwide ratio shall be not less than the ratio achieved in FY79 (31.9%).													
	Findings	Farebox Recovery Ratios												
	MTS Systemwide: fully compliant Exceeded the systemwide 31.9% ratio annually.	FY13: 43.1% FY14: 41.3% FY15: 42.0%												
	MTS Bus: fully compliant Exceeded the 20% urban area ratio annually.	MTS Bus: FY13: 29.3% FY14: 30.6% FY15: 29.7%												
	MTS Contracted Bus and Demand Response: fully compliant Exceeded the 20% urban area ratio annually; exceeded the 10% rural area ratio annually.	MTS Contracted Bus Operations: <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td></td> <td style="text-align: center; border-bottom: 1px solid black;"><u>Urban</u></td> <td style="text-align: center; border-bottom: 1px solid black;"><u>Rural</u></td> </tr> <tr> <td>FY13:</td> <td style="text-align: center;">52.0%</td> <td style="text-align: center;">17.6%</td> </tr> <tr> <td>FY14:</td> <td style="text-align: center;">48.7%</td> <td style="text-align: center;">11.7%</td> </tr> <tr> <td>FY15:</td> <td style="text-align: center;">46.7%</td> <td style="text-align: center;">12.1%</td> </tr> </table>		<u>Urban</u>	<u>Rural</u>	FY13:	52.0%	17.6%	FY14:	48.7%	11.7%	FY15:	46.7%	12.1%
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	FY13:	52.0%	17.6%											
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FY15:	46.7%	12.1%												
MTS Rail: fully compliant Exceeded the 20% urban area ratio annually.	MTS Rail: FY13: 53.6% FY14: 56.1% FY15: 56.3%													
Chula Vista Transit: fully compliant Exceeded the 20% urban area ratio annually. Note: CVT merged with MTS on 1/1/2015 and absorbed into South Bay Facility.	Chula Vista Transit: FY13: 45.4% FY14: 41.1% FY15: Not Applicable													
PUC Section 99271	Requirement – Employee Retirement System: The current cost of the operator's retirement system fully funded with respect to the officers and employees of its public transportation system, or the operator is implementing an RTPA-approved plan to fully fund the retirement system within 40 years.													
	Findings	Verification												
	MTS: fully compliant	Comprehensive Annual Financial Report												
Chula Vista Transit: fully compliant	Chula Vista participates in CALPERS													
CAC Section 6754(a)(3)	Required Findings: If the operator received STA funds, the operator makes full use of funds available from the Federal Transit Administration before TDA claims are granted.													
	Findings	Verification												
	MTS: fully compliant	MTS utilizes federal funds that are available to the agency, as reported in the annual financial reports.												
Chula Vista Transit: Not applicable; CVT did not receive FTA funds	Note: Refer to SANDAG TDA Allocation Resolutions													

II.2. Prior Audit Recommendations

MTS has implemented the prior performance audit recommendation:

Prior Audit Recommendation #1: MTS should identify ways to maintain and improve the cost efficiency of MTS directly operated bus service.

Compliance Finding: Completed.

Understanding of the Issue: During the past audit cycle, bus service was cut due to the recessionary environment. With costs increasing 8.6% during the period, and 10+% reductions in service hours and service miles, TDA cost efficiency indicators suffered. Operating cost per service hour shot up 21%. The recommendation was framed as follows. MTS should review cost drivers for directly operated bus service and consider options to control costs going forward. Such drivers may include work rules, policies and procedures, legislative mandates, vehicle performance, and equipment performance. It was also noted in July 2013, when the last TDA audit was finalized, that through the recent contract negotiation, MTS had already addressed many of these cost drivers.

MTS Actions: In the current audit period, SANDAG has addressed the cost efficiency of directly operated bus from several angles.

- First, coming off the recession from the prior audit period, MTS restored bus service with approximately 6.5% more service hours and 16.3% more service miles than the base period.
- MTS also moved aggressively on pension reform and efficiency measures within the collective bargaining agreement. MTS was successful at moving non-management staff from a benefit plan to a defined contribution plan. All new ATU and IBEW employees joining MTS automatically join on a defined contribution plan basis. MTS consolidated bus operating contracts down to two, TransDev and First Transit. Finally, overtime regulations changed from time and half after eight hours in the day to after 40 hours in the week. Each of these measures contributes to operating cost containment.
- MTS continued its innovative plans for fuel and energy purchases directly affecting the Operating Cost bottom line. It continues to acquire its Compressed Natural Gas (CNG) from third party. In 2015, MTS became 100% “bio-gas” fueling, which generates state credits, and the market price of state credits have gone up substantially. Though not directly related to bus, MTS has pursued other innovative energy purchase strategies benefitting Trolley power use by going directly to the State instead of relying exclusively on the local SDGE utility. Those savings of \$1 million in 2015 are expected to grow in future years.
- From FY12 to FY15, total MTS bus operating costs went up 3.6%, less than inflation.

SECTION III: MANAGEMENT CONTROL AND REPORTING

On June 23, 2005, the MTS Board of Directors approved the following vision for MTS services.

A Vision for MTS Services

- Develop a **Customer-Focused System**: Provide services that reflect the travel needs and priorities of our customers.
- Develop a **Competitive System**: Provide services that are competitive with other travel options by meeting market segment expectations.
- Develop an **Integrated System**: Develop transit services as part of an integrated network rather than a collection of individual routes.
- Develop a **Sustainable System**: Provide appropriate types and levels of service that are consistent with market demands and are maintainable under current financial conditions.

To achieve this vision of a customer-focused, competitive, integrated, and sustainable system, MTS Board Policy No. 42 establishes a process for evaluating existing transit services. The policy provides a set of measures for annual evaluation, listed in Exhibit III-1.

Exhibit III-1: MTS Transit Service Performance Indicators

CUSTOMER FOCUSED/COMPETITIVE				INTEGRATED			SUSTAINABLE												
PRODUCTIVITY		QUALITY		CONNECTIVITY			RESOURCES		EFFICIENCY										
Total Passengers	Average Weekday Passengers	Passengers/Revenue Hour	Passengers/In Service Hour	Passenger Load Factor	On-Time Performance	Mean Distance between Failures	Accidents/100,000 Miles	Comments/100,000 Passengers	Route Headway	Span of Service Consistency	Service Availability	In-Service Miles	In-Service Hours	Peak Vehicle Requirement	In-Service Speeds	In-Service/Total Miles	In-Service/Total Hours	Farebox Recovery Ratio	Subsidy/Passenger

BOLD - Key Indicators used for ranking route performance

Source: MTS Policies and Procedures: Transit Service Evaluation and Adjustment (Revised June 20, 2013)

For each indicator, MTS establishes performance targets every three years. These targets represent aggressive yet realistic service expectations based on service design, route characteristics, and operating environments. At the conclusion of each fiscal year, MTS conducts an annual service evaluation to compare actual performance of the system with the targets and to identify opportunities for adjustments and improvements based on this analysis. Overall system performance is documented in the Annual Performance Monitoring Report.

Routes in the bottom quartile for each route group for passengers per in service hour and subsidy per passenger are identified for further analysis on a segment basis (temporal and geographic) as well as closer look at other aspects of the route’s performance. MTS has established policies and procedures for service changes.

MTS departments develop departmental goals and objectives annually as part of the budget process, and the department managers also discuss and establish overall goals for the agency as a whole. Executive

sponsor, lead roles, participants, and deliverables are established as part of this agency plan. The statuses of the objectives are reported annually. In FY15, MTS had eight performance incentive goals at an overall organizational level:

1. Achieve a favorable MTS Organization expense budget variance for fiscal year 2015 (excluding energy costs).
2. Exceed the combined MTS Organization passengers per revenue hour ratio as compared to fiscal year 2014 (excluding new *Rapid* services).
3. Exceed the fiscal year 2015 MTS Organization budgeted farebox recovery ratio (excluding energy and debt service costs) of 44.46%.
4. Improve system-wide on-time performance compared to fiscal year 2014 (excluding new *Rapid* services).
5. Reduce the number of combined MTS preventable accidents per 100,000 miles ratio as compared to fiscal year 2014 (excluding new *Rapid* services).
6. Completion of FTA Triennial audit with no audit findings as a result.
7. Assure that consistent and high service quality is planned, scheduled and operated for *Rapid* services by exceeding the overall fixed route Bus Operations fiscal year 2015 results in the areas:
 - On Time Performance
 - Preventable Accidents per 100,000 miles
 - Customer Service Complaints per 100,000 passenger trips
 - Mean Distance Between Failures
 - Customer Satisfaction Survey Results
8. Resolve the issue of insufficient track capacity at Santa Fe depot.

The goals are then tailored to all major departments. The goals are by design “stretch goals”. Performance is measured each year and features directly into staff compensation as part of the annual assessment process.

SECTION IV: PERFORMANCE TRENDS AND FUNCTIONAL REVIEW

This section of the report provides results of the analysis of TDA and functional performance indicators. This section of the audit report discusses performance results, beginning with the five TDA performance indicators required under Section 99246 (c) of the Public Utilities Code:

- Operating Cost per Service Hour: a measure of cost efficiency
- Operating Cost per Passenger: a measure of cost effectiveness
- Passengers per Service Hour: a measure of service productivity
- Passengers per Service Mile: another measure of service productivity
- Vehicle Service Hours per Employee Full-Time Equivalent (FTE): a measure of labor productivity.

TDA performance indicators are provided for MTS at the systemwide level (i.e., MTS Bus, MTS Contracted Bus (including Chula Vista Transit), and MTS Rail combined), as well as for each individual service type. Functional level performance is reviewed at the service type level. The performance trends cover the audit period, from FY13 through FY15, with FY12 used as a base year to provide a point of reference for the analysis.

Most primary data elements for this analysis are extracted from the National Transit Database. Other sources (e.g., MTS Annual Performance Monitoring Reports, State Controller, financial audit, and internal reports) have been used as necessary to improve data accuracy and availability.

Data collection and reporting procedures for the five TDA performance indicators were reviewed to verify that the data reported are consistent with data definitions. TDA performance indicators are used to assess service efficiency and effectiveness and to provide a point of departure to drill down into functional performance indicators and trends, to provide additional clarification of performance results.

IV-1. Systemwide Performance

Exhibit IV-1 shows MTS systemwide TDA performance indicators during the audit period.

Exhibit IV-1: MTS Systemwide TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY12	Audit Review Period			% Change FY13- FY15
		FY13	FY14	FY15	
Operating Costs	\$202,964,736	\$214,795,079	\$215,386,043	\$223,754,516	10.2%
Unlinked Passengers	88,021,290	84,423,007	94,096,304	95,687,214	8.7%
Vehicle Service Hours	2,056,429	2,112,976	2,174,527	2,221,322	8.0%
Vehicle Service Miles	25,180,699	25,288,237	26,385,674	27,618,912	9.7%
Employee FTEs	1,854	1,932	1,897	2,014	8.6%
Operating Cost per Service Hour	\$98.70	\$101.66	\$99.05	\$100.73	2.1%
Operating Cost per Passenger	\$2.31	\$2.54	\$2.29	\$2.34	1.4%
Passengers per Service Hour	42.80	39.95	43.27	43.08	0.6%
Passengers per Service Mile	3.50	3.34	3.57	3.46	-0.9%
Service Hours per Employee FTE	1,109	1,094	1,146	1,103	-0.5%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports for FY12-FY15

The main findings from Exhibit IV-1 are as follows:

- Operating cost per service hour, a measure of cost efficiency, increased by 2.1% during the audit period from \$98.70 in FY12 to \$100.73 in FY15.
- Operating cost per passenger, a measure of cost effectiveness, increased slightly by 1.4% from \$2.31 in FY12 to \$2.34 in FY15.
- Service productivity remained relatively stable during the audit period. Passengers per service hour increased by 0.6% while passengers per service mile decreased by 0.9%.
- Service hours per employee FTE, a measure of labor productivity, increased by 0.6% during the audit period from 1,049 in FY12 to 1,112 in FY15. This trend is a result of a 3.5% increase in vehicle service hours and a 2.4% decrease in employee FTEs.

Exhibit IV-2 shows MTS systemwide fare revenue indicators during the audit period.

Exhibit IV-2: MTS Systemwide Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12- FY15
		FY13	FY14	FY15	
Operating Costs	\$202,964,736	\$214,795,079	\$215,386,043	\$223,754,516	10.2%
Farebox Revenues	\$88,771,152	\$90,092,803	\$93,208,064	\$95,328,675	7.4%
Net Cost	\$114,193,584	\$124,702,276	\$122,177,979	\$128,425,841	12.5%
Unlinked Passenger Trips	88,017,596	84,423,007	94,096,304	95,687,214	8.7%
Farebox Recovery Ratio	43.7%	41.9%	43.3%	42.6%	-2.6%
Average Fare per Passenger Trip	\$1.01	\$1.07	\$0.99	\$1.00	-1.2%
Net Cost per Passenger Trip	\$1.30	\$1.48	\$1.30	\$1.34	3.4%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports for FY12-FY15

The main findings from Exhibit IV-2 are as follows:

- The MTS systemwide farebox recovery ratio fluctuated during the audit period from a high of 43.7% in FY12 to a low of 41.9% in FY13. MTS farebox recovery during the audit period was significantly higher than the MTS systemwide farebox recovery requirement of 31.9%.
- The average fare per passenger trip decreased by 1.2% during the audit period, from \$1.01 to \$1.00.
- The net cost per passenger trip increased by 3.4%, from \$1.30 in FY12 to \$1.34 in FY15.

The rest of this chapter includes the following sections:

- MTS Bus Operations
- MTS Contracted Bus Operations, including Chula Vista and paratransit services.
- MTS Rail Operations

Each section includes an overview of performance against TDA performance indicators, followed by a discussion of performance at the functional level.

IV-2. MTS – Directly Operated Bus Operations Performance

Exhibit IV-3 shows MTS Bus Operations TDA performance indicators during the audit period.

Exhibit IV-3: MTS Bus TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$88,239,698	\$97,680,972	\$90,641,253	\$91,410,940	3.6%
Unlinked Passengers	28,801,745	28,926,914	28,541,485	27,263,712	-5.3%
Vehicle Service Hours	756,651	786,934	795,089	806,048	6.5%
Vehicle Service Miles	8,220,685	8,557,356	8,694,695	9,561,390	16.3%
Employee FTEs	726	746	677	719	-1.1%
Operating Cost per Service Hour	\$116.62	\$124.13	\$114.00	\$113.41	-2.8%
Operating Cost per Passenger	\$3.06	\$3.38	\$3.18	\$3.35	9.4%
Passengers per Service Hour	38.06	36.76	35.90	33.82	-11.1%
Passengers per Service Mile	3.50	3.38	3.28	2.85	-18.6%
Service Hours per Employee FTE	1,042	1,056	1,174	1,122	7.7%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports for FY12-FY15

Main findings from Exhibit IV-3 are as follows:

- MTS Bus Operations incurred growth in operating costs but lagged behind the growth in the CPI. Costs increased by 3.6% from FY12 through FY15 while the CPI grew by 4.4%.
- Cost efficiency increased as the operating cost per service hour decreased by 2.8%. Cost effectiveness also decreased as the operating cost per passenger increased by 9.4%.
- Although ridership decreased by 5.3%, service hours and miles increased by 6.5% and 16.3%, resulting in a net decrease in service productivity. Passengers per service hour and per service mile decreased by 11.1% and 18.6%, respectively. A decrease in passengers per service mile was primarily due to the increase in capacity and mileage from the new *Rapid* services implemented in 2014. Mileage increased due to added service frequency and span, and also because *Rapid* service along the new I-15 *Rapid* corridor travels a significant amount of mileage, approximately 30 miles each way.
- Service hours per employee FTE, a measure of labor productivity, increased over the audit period by 7.7%.

Exhibit IV-4 shows MTS Bus Operations fare revenue indicators during the audit period.

Exhibit IV-4: MTS Bus Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY2-FY15
Operating Costs	\$88,239,698	\$97,680,972	\$90,641,253	\$91,410,940	3.6%
Farebox Revenues	\$27,497,861	\$28,621,363	\$27,781,183	\$27,156,322	-1.2%
Net Cost	\$60,741,837	\$69,059,609	\$62,860,070	\$64,254,618	5.8%
Unlinked Passenger Trips	28,801,745	28,926,914	28,541,485	27,263,712	-5.3%
Farebox Recovery Ratio	31.2%	29.3%	30.6%	29.7%	-4.7%
Average Fare per Passenger Trip	\$0.95	\$0.99	\$0.97	\$1.00	4.3%
Net Cost per Passenger Trip	\$2.11	\$2.39	\$2.20	\$2.36	11.8%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports for FY12-FY15

Main findings from Exhibit IV-4 are as follows:

- MTS directly operated bus services decreased by 4.7%. However, MTS Bus Operations continues to exceed the TDA-mandated farebox recovery ratio (20% for urban systems) and contributed to the achievement of the systemwide recovery requirement (31.9%).
- As a result of the fare changes, the average fare per passenger trip peaked in FY15 at \$1.00 and increased over the audit period by 4.3%.
- Due to increasing operating costs and decreasing ridership, the net cost per passenger trip increased by 11.8% over the audit period.

During the audit period, MTS reduced its directly operated bus operations services. This is shown in Exhibit IV-5.

Exhibit IV-5: MTS Bus Operations Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operations FTEs	512.9	528.5	498.6	529.3	3.2%
Total Operating Costs	\$51,551,357	\$58,332,005	\$53,048,294	\$52,045,813	1.0%
Vehicle Service Hours (VSH)	756,651	786,934	795,089	806,048	6.5%
Vehicle Service Miles (VSM)	8,220,685	8,557,356	8,694,695	9,561,390	16.3%
Total Vehicle Hours	797,809	834,184	844,935	861,908	8.0%
Total Vehicle Miles	9,400,422	9,896,707	10,097,999	11,142,180	18.5%
Unlinked Passenger Trips	28,801,745	28,926,914	28,541,485	27,263,712	-5.3%
Passenger Miles	106,803,639	108,221,833	110,008,892	117,585,084	10.1%

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12- FY15
		FY13	FY14	FY15	
VSH per Operations FTE	1,475	1,489	1,595	1,523	3.2%
VSM per Operations FTE	16,027	16,192	17,439	18,063	12.7%
Service Miles per Service Hour	10.9	10.9	10.9	11.9	9.2%
Service Hours / Total Hours	94.8%	94.3%	94.1%	93.5%	-1.4%
Service Miles / Total Miles	87.5%	86.5%	86.1%	85.8%	-1.9%
Operating Cost per Passenger Trip	\$1.79	\$2.02	\$1.86	\$1.91	6.7%
Operating Cost per Passenger Mile	\$0.48	\$0.54	\$0.48	\$0.44	-8.3%
In-Service Speed	13.3	13.5	14.5	14.6	9.8%
Average Passenger Miles per Passenger Trip	3.7	3.7	3.9	4.3	16.3%
Preventable Accidents per 100,000 Miles	1.47	1.42	1.39	1.17	-20.4%
Percentage Change Consumer Price Index (CPI-All)		1.0%	2.3%	2.2%	4.4%

Source: NTD Reports, MTS Annual Performance Monitoring Reports for FY12-FY15

Main findings from Exhibit IV-5 are as follows:

- Operations staffing increased by 3.2%. As a result operations FTEs per service hours and miles increased.
- Vehicle service hours and miles increased in line with total hours and miles. Service hours per total hours and service miles per total miles decreased slightly by 1.4% and 1.9%, respectively.
- Operating costs increased by 1.0% over the audit period. With the new routes, ridership increased by 22.7%. Due to increasing operating costs and passenger mile increases, operating cost per passenger trip increased by 6.7% while operating cost per passenger mile decreased by 8.3% over the audit period.
- Average in-service speeds increased by 9.8% to 14.6 miles per hour due to introduction of *Rapid* service in 2014.
- Passenger trip lengths increased as the average passenger miles per passenger trip increased by 16.3%. The average trip ranged from 3.7 to 4.3 miles. Most notably, the average passenger miles per passenger trip increased from 3.7 in FY12 and FY13 to 3.9 and 4.3 in FY14 and FY15 respectively.
- Preventable accidents per 100,000 miles decreased significantly by 20.4%. Miles/Hours increased for Directly Operated bus as service was reinstated after the recession, and with implementation of *Rapid* service. MTS makes an effort to improve safety operations year over year with continued operator training.

During the audit period, MTS increased its directly operated bus maintenance staffing and costs. This is shown in Exhibit IV-6.

Exhibit IV-6: MTS Bus Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Maintenance FTEs	189.5	183.7	150.3	159.1	-16.0%
Maintenance Costs	\$22,084,928	\$24,022,447	\$22,060,807	\$21,303,522	-3.5%
Total Vehicle Hours	797,809	834,184	844,935	861,908	8.0%
Total Vehicle Miles	9,400,422	9,896,707	10,097,999	11,142,180	18.5%
Peak Vehicles	199	209	215	215	8.0%
Total Vehicles	266	261	309	286	7.5%
Vehicle Hours per Maintenance FTE	4,209	4,540	5,621	5,416	28.7%
Vehicle Miles per Maintenance FTE	49,599	53,867	67,177	70,016	41.2%
Maintenance Cost per Active Vehicle	\$83,026	\$92,040	\$71,394	\$74,488	-10.3%
Maintenance Cost per Vehicle Hour	\$27.68	\$28.80	\$26.11	\$24.72	-10.7%
Maintenance Cost per Vehicle Mile	\$2.35	\$2.43	\$2.18	\$1.91	-18.6%
Vehicle Hours per Active Vehicle	2,999	3,196	2,734	3,014	0.5%
Vehicle Miles per Active Vehicle	35,340	37,918	32,680	38,959	10.2%
Mean Distance between Failures (MDBF)	9,706	11,759	12,861	12,943	33.4%
Spare Ratio	33.7%	24.9%	43.7%	33.0%	-1.9%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports, MTS Annual Performance Monitoring Reports for FY12-FY15

Main findings from Exhibit IV-6 are as follows:

- Maintenance staffing decreased by 16.0%, while total vehicle hours and miles increased by 8.0% and 18.5% respectively. As a result service hours and miles per maintenance FTE increased by 28.7% and 41.2% respectively.
- Maintenance costs decreased by 3.5% over the audit period, well below the growth in the CPI of 4.4%.
- Due to the increase in service, the number of vehicles used during the peak increased by 8.0%.
- MTS increased its total number of buses from FY12 to FY15, for a total of 286 active vehicles.
- Maintenance cost per active vehicle decreased by 10.3. Active vehicles increased by 7.5%, with costs being relatively flat due to the influx of new 40 and 60 foot buses, led to the decrease in this metric.
- Maintenance cost per vehicle hour and mile decreased by 10.7% and 18.6% respectively. Vehicle hours and miles increased by 8.0% and 18.5% respectively for MB-DO, with costs being relatively flat due to the influx of new 40 and 60 foot buses, led to the decreases in these metrics.
- Vehicle hours and miles per active vehicle increased by 0.5% and 10.2%.
- Mean distance between failures (MDBF) increased by 33.4%.
- Spare ratio decreased by 1.9%.

During the audit period, MTS decreased its directly operated bus administration staffing, while administration costs increased. This is shown in Exhibit IV-7.

Exhibit IV-7: MTS Bus Administration Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change FY12- FY15
	FY12	FY13	FY14	FY15	
Administration FTEs	24.0	33.3	28.2	30.1	25.4%
Administration Costs	\$14,603,413	\$15,326,520	\$15,532,152	\$18,061,605	23.7%
Vehicle Service Hours (VSH)	756,651	786,934	795,089	806,048	6.5%
Vehicle Service Miles (VSM)	8,220,685	8,557,356	8,694,695	9,561,390	16.3%
Vehicle Service Hour per Administration FTE	31,514	23,617	28,176	26,770	-15.1%
Vehicle Service Mile per Administration FTE	342,386	256,823	308,120	317,549	-7.3%
Complaints per 100,000 Passengers	5.7	7.2	7.0	7.8	36.8%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports, MTS Annual Performance Monitoring Reports for FY12-FY15

Main findings from Exhibit IV-7 are as follows:

- Administration staffing increased by 25.4%. Reinstatement of services, and new *Rapid* service led to increase in overall system FTE's. This increase in staffing outpaced the service increases. As a result, the service hours and miles per administration FTE decreased by 15.1% and 7.3%, respectively.
- Administration costs increased by 23.7% over the audit period. Costs increased due to the addition of three new *Rapid* bus routes. Other remaining increases were due to higher fringe costs, which are allocated to administration costs.
- Customer satisfaction decreased as complaints per 100,000 passengers increased by 36.8% over the audit period. MTS centralized the comments for all of MTS garages (bus, rail, and general) at a single call center in FY 2014, as well as re-organized and classified complaints so they could be investigated in a more efficient manner. The rate of complaints increased due to the new centralized system properly recording complaints that would have been previously categorized incorrectly or that went directly to departments/garages/personnel. Additionally, the implementation of new *Rapid* service and related service changes in those corridors generated significant passenger feedback as riders adapted to new routes and schedules. MTS expects that this rate should stabilize going forward.

IV-3. MTS – Contracted Bus Operations

Performance reporting for MTS Contracted Bus Operations is reported in the annual MTS NTD reports and is identified by service type:

- Fixed Route Services
- Commuter Express Bus
- Rural Bus Services
- General Public Demand Response - DART
- ADA Demand Response Service

This structure has been followed for this and prior performance audits. Rural is maintained as a separate service because SANDAG’s TDA Claims Manual has retained the State’s 10% farebox recovery requirement for Rural Services. For each service type, there is a review of TDA-mandated performance indicators and revenue performance indicators. A separate section also reviews combined contracted bus services (Fixed Route, Commuter Express, and Rural transit services). In January 2015, all Chula Vista Transit service and supporting functions were absorbed by the MTS and relocated to the MTS South Bay facility. As a result, all Chula Vista Transit NTD data for the audit period has been combined with MTS Fixed Route NTD data and will no longer be identified as a separate service type.

IV-3.1. MTS – Contracted Bus Fixed Route Services

Overall performance of MTS Contracted Fixed Route Bus Operations was mixed during the audit period in large part due to the merger of Chula Vista Transit (CVT) which experienced significant decreases in all TDA indicators. If CVT were not included, the results for Fixed Route Operations would reflect more positive findings. Exhibit IV-8 provides TDA performance indicators for MTS Contracted Fixed Route Services exclusive of Commuter Express and Rural services.

Exhibit IV-8: MTS Contracted Fixed Route Bus Operations TDA Performance Indicators

TDA Performance Data	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$51,141,796	\$50,763,391	\$53,152,622	\$59,241,625	15.2%
Unlinked Passengers	26,564,932	25,796,727	25,860,187	28,341,041	6.7%
Vehicle Service Hours	872,175	854,363	875,349	919,590	5.4%
Vehicle Service Miles	9,415,775	8,972,792	9,174,767	9,461,379	0.5%
Employee FTEs	672	696	733	798	18.8%
TDA Performance Indicators					
Operating Cost per Service Hour	\$58.95	\$59.42	\$60.72	\$64.42	9.3%
Operating Cost per Passenger	\$1.74	\$1.97	\$2.06	\$2.09	20.2%
Passengers per Service Hour	30.46	30.19	29.54	30.82	1.2%
Passengers per Service Mile	2.82	2.87	2.82	3.00	6.2%
Service Hours per Employee FTE	1,298	1,228	1,194	1,152	-11.2%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Main findings from Exhibit IV-8 are as follows:

- Operating costs for contracted fixed route services increased by 15.2% over the audit period. MTS indicates that this increase, in large part, is due to a combination of factors including higher hourly labor costs and the absorption of Chula Vista Transit into overall contracted services. When adjusted for service consumed (cost per passenger) cost increased significantly by 20.2% compared to a growth in the CPI of 4.4%.
- A 6.7% increase in passenger boardings coupled with a 5.4% increase in service hours and a slight increase in miles of 0.5% resulted in service productivity improvements. Passengers per service hour and passengers per service mile increased by 1.2% and 6.2% respectively.
- Service hours per Employee FTE decreased as a result of an increase in vehicle service hours and implementation of California Wage Order 9 which required increased contract services staffing to implement mandatory minimum scheduling requirements. Therefore, although Employee FTEs increased by 18.8% the increase in service hours and implementation of enhanced scheduling requirements resulted in a decrease in service hours per Employee FTE of 11.2%.

Fare revenue indicators for MTS Contracted Fixed Route Bus increased over the audit period. This is shown in Exhibit IV-9.

Exhibit IV-9: MTS Contracted Fixed Route Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$51,415,796	\$50,763,391	\$53,152,622	\$59,241,625	15.2%
Farebox Revenues	\$26,056,883	\$25,917,602	\$25,238,973	\$27,032,178	3.7%
Net Cost	\$25,358,913	\$24,845,789	\$27,913,649	\$32,209,447	27.0%
Unlinked Passenger Trips	26,564,932	25,796,727	25,860,187	28,341,041	6.7%
Farebox Recovery Ratio	50.7%	51.1%	47.5%	45.6%	-10.0%
Average Fare per Passenger Trip	\$0.98	\$1.00	\$0.98	\$0.95	-2.8%
Net Cost per Passenger Trip	\$0.95	\$0.96	\$1.08	\$1.14	19.0%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Although farebox revenue increased by 3.7% over the audit period this increase was significantly lower than the increase in operating costs. Nevertheless, contracted fixed route services have continue to significantly exceed the TDA 20% farebox recovery requirement and contributed to the achievement of MTS exceeding the systemwide recovery requirement (31.9%) in spite of this indicator experiencing a 10.0% decrease over the audit period.

IV-3.2. MTS – Commuter Express Services

Although operated by the same contractor, Commuter Express Services are treated separately for reporting purposes. Exhibit IV-10 provides Commuter Express TDA performance indicators.

Exhibit IV-10: MTS Contracted Commuter Express TDA Performance Indicators

TDA Performance Data	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$2,485,387	\$2,726,810	\$2,921,373	\$2,393,711	-3.7%
Unlinked Passengers	310,672	307,407	302,568	303,940	-2.2%
Vehicle Service Hours	12,887	13,249	14,018	11,255	-12.7%
Vehicle Service Miles	349,953	376,098	394,417	344,334	-1.6%
Employee FTEs	19	21	19	13	-31.6%
TDA Performance Indicators					
Operating Cost per Service Hour	\$192.86	\$205.81	\$208.40	\$212.68	10.3%
Operating Cost per Passenger	\$8.00	\$8.87	\$9.66	\$7.88	-1.6%
Passengers per Service Hour	24.11	23.20	21.58	27.00	12.0%
Passengers per Service Mile	0.89	0.82	0.77	0.88	-0.6%
Service Hours per Employee FTE	678	631	751	866	27.6%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Main findings from Exhibit IV-10 are as follows:

- TDA performance measures reflect mixed results in all key performance indicators. From FY12 through FY15, operating costs decreased by 3.7%, whereas the Consumer Price Index over the same period increased by 4.4%. This is in part a result of a 12.7% decrease in vehicle service hours and miles 12.7% and 1.6% respectively, and a ridership decrease of 2.2%.
- As a result of all of these factors, operating cost per passenger decreased 1.6% from \$8.00 in FY12 to \$7.88 in FY15, reversing the trend from the prior audit period FY09 to FY12.
- Operating costs per service hour experienced dramatic increases throughout the audit period increasing from \$192.86 per service hour in FY12 to \$212.68 per service hour in FY15 for an overall increase of 10.3%.
- Combined with the 12.7% decrease in vehicle service hours and the much smaller 2.2% decrease in passengers, passengers per service hour improved by 12.0% over the audit period.
- The number of Employee FTE's decreased significantly over the audit period from 19 to 13 for a decrease of 31.6%. However, as a result, service hours per employee FTE increased significantly at 27.6%.

Fare revenue indicators for MTS Contracted Commuter Express services increased over the audit period. This is shown in Exhibit IV-11.

Exhibit IV-11: MTS Contracted Commuter Express Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$2,485,387	\$2,726,810	\$2,921,373	\$2,393,711	-3.7%
Farebox Revenues	\$1,154,387	\$1,270,230	\$1,267,506	\$1,251,705	8.4%
Net Cost	\$1,331,000	\$1,456,580	\$1,653,867	\$1,142,006	-14.2%
Unlinked Passenger Trips	310,672	307,407	302,568	303,940	-2.2%
Farebox Recovery Ratio	46.4%	46.6%	43.4%	52.3%	12.6%
Average Fare per Passenger Trip	\$3.72	\$4.13	\$4.19	\$4.12	10.8%
Net Cost per Passenger Trip	\$4.28	\$4.74	\$5.47	\$3.76	-12.3%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Because of an 8.4% increase in farebox revenue coupled with a slight decrease in operating costs the overall farebox recovery ratio increased by 12.6% from 46.4% in FY12 to 52.3% in FY15. Commuter Express Services continues to significantly exceed both the TDA 20% farebox recovery requirement and contributed to the achievement of MTS exceeding the systemwide recovery requirement (31.9%).

The net cost per passenger trip decreased by 12.3% from \$4.28 in FY12 to \$3.76 in FY15 while the average fare per passenger increased by 10.8% over the audit period.

IV-3.3. MTS – Contracted Bus Rural Services

Rural transit services link the sparsely populated central and eastern portions of San Diego County to the San Diego urban core. Vehicle service hours and miles were relatively stable over the prior audit period and have increased significantly throughout the current audit period. These increases coupled with an even greater increase in passengers has resulted in vastly improved metrics over the current audit period. Exhibit IV-12 provides TDA performance indicators for MTS Contracted Bus Rural Services.

Exhibit IV-12: MTS Contracted Bus Rural Services TDA Performance Indicators

TDA Performance Data	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$679,013	\$716,379	\$798,031	\$795,080	17.1%
Unlinked Passengers	38,913	45,180	72,181	75,836	94.9%
Vehicle Service Hours	4,377	4,826	5,548	5,405	23.5%
Vehicle Service Miles	115,068	126,596	142,010	139,300	21.1%
Employee FTEs	6	6	5	3	-50.0%
TDA Performance Indicators					
Operating Cost per Service Hour	\$155.13	\$148.44	\$143.83	\$147.10	5.2%
Operating Cost per Passenger	\$17.45	\$15.86	\$11.06	\$10.48	-39.9%
Passengers per Service Hour	8.89	9.36	13.01	14.03	57.8%
Passengers per Service Mile	0.34	0.36	0.51	0.54	61.0%
Service Hours per Employee FTE	730	804	1,111	1,802	147.0%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Main findings from Exhibit IV-12 are as follows:

- Operating costs increased by 17.1% during the audit period, while service provided in terms of vehicle service hours and miles increased by even greater percentages at 23.5% and 21.1% respectively.
- Ridership however, increased at an even more significant rate increasing from 38,913 riders in FY12 to 75,836 in FY15 for an increase of 94.9%. As a result, operating cost per passenger has been reduced by 39.9% over the audit period.
- Coupled with more modest increases in vehicle service hours and service miles over the audit period and the significant increase in passengers, boardings per hour and per mile increased by 57.8% and 61.0%, respectively.
- The number of Employee FTE's decreased significantly by 50% from 6 to 3 FTE's over the audit period. As a result, service hours per employee FTE increased significantly at 147.0%.

Exhibit IV-13 provides revenue performance indicators for MTS Contracted Bus Rural Services.

Exhibit IV-13: MTS Contracted Bus Rural Services Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$679,013	\$716,379	\$798,031	\$795,080	17.1%
Farebox Revenues	\$140,292	\$122,906	\$93,077	\$96,090	-31.5%
Net Cost	\$538,721	\$593,473	\$704,954	\$698,990	29.7%
Unlinked Passenger Trips	38,913	45,180	72,181	75,836	94.9%
Farebox Recovery Ratio	20.7%	17.2%	11.7%	12.1%	-41.5%
Average Fare per Passenger Trip	\$3.61	\$2.72	\$1.29	\$1.27	-64.9%
Net Cost per Passenger Trip	\$13.84	\$13.14	\$9.77	\$9.22	-33.4%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

The 17.1% increase in operating costs coupled with a 31.5% decrease in farebox revenue has resulted in a 41.5% decrease in the Rural Services farebox recovery ratio. However, in spite of this decrease, the farebox recovery ratio continues to exceed the TDA-mandated farebox recovery ratio of 10% for non-urban areas over the audit period.

Due to the increase in ridership, the net cost per passenger decreased by 33.4% during the audit period from \$13.84 in FY12 to \$9.22 in FY15.

IV-3.4. MTS – All Fixed Route Contracted Services – Combined

Contracted services include Fixed Route including Chula Vista Transit, Commuter Express and Rural Bus services. Exhibit IV-14 provides TDA performance indicators for MTS Combined Contracted Fixed Route Services.

Exhibit IV-14: MTS Combined Contracted Fixed Route TDA Performance Indicators

TDA Performance Data	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$54,580,196	\$54,206,580	\$56,872,026	\$62,430,416	14.4%
Unlinked Passengers	26,914,517	26,149,314	26,234,936	28,720,817	6.7%
Vehicle Service Hours	889,439	872,438	894,915	936,250	5.3%
Vehicle Service Miles	9,880,796	9,353,716	9,574,732	9,811,118	-0.7%
Employee FTEs	697	720	757	804	15.4%
TDA Performance Indicators					
Operating Cost per Service Hour	\$61.36	\$62.13	\$63.55	\$66.68	8.7%
Operating Cost per Passenger	\$2.03	\$2.07	\$2.17	\$2.17	7.2%
Passengers per Service Hour	30.26	29.97	29.32	30.68	1.4%
Passengers per Service Mile	2.72	2.80	2.74	2.93	7.5%
Service Hours per Employee FTE	1,276	1,212	1,183	1,164	-8.7%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

When viewed as a whole, with the exception of total FTE's, all fixed route contracted services combined reflect mixed trends over the audit period.

- Operating costs for combined contracted fixed route services increased by 14.4% over the audit period compared to overall growth in the CPI of 4.4%.
- When adjusted for service consumed (operating cost per passenger) or service supplied (operating cost per service hour), costs increased at a smaller rate of 7.2% for operating cost per passenger and 1.4% for operating cost per hour.
- Additionally, coupled with a modest 5.3% increase in vehicle service hours the 6.7% increase in passengers resulted in a 1.4% increase in passengers per service hour and an 8.7% increase in operating cost per hour.
- Service hours per Employee FTE decreased as a result of an increase in vehicle service hours and implementation of California Wage Order 9 which required increased contract services staffing to implement mandatory minimum scheduling requirements. As a result, although Employee FTEs increased overall by 15.4% the increase in service hours and implementation of enhanced scheduling requirements resulted in a decrease in service hours per Employee FTE of 8.7%.

Exhibit IV-15 provides revenue performance indicators for MTS Combined Contracted Fixed Route Services.

Exhibit IV-15: MTS Combined Contracted Fixed Route Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$54,580,196	\$54,206,580	\$56,872,026	\$62,430,416	14.4%
Farebox Revenues	\$27,351,562	\$27,310,738	\$26,599,556	\$28,379,973	3.8%
Net Cost	\$27,228,634	\$26,895,842	\$30,272,470	\$34,050,443	25.1%
Unlinked Passenger Trips	26,914,517	26,149,314	26,234,936	28,720,817	6.7%
Farebox Recovery Ratio	50.1%	50.4%	46.8%	45.5%	-9.3%
Average Fare per Passenger Trip	\$1.02	\$1.04	\$1.01	\$0.99	-2.8%
Net Cost per Passenger Trip	\$1.01	\$1.03	\$1.15	\$1.19	17.2%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Due to a 14.4% increase in operating costs over the audit period and a 3.8% increase in farebox revenues the farebox recovery ratio indicator decreased from 50.1% in FY12 to 45.5% in FY15. However, with a 45.5% farebox recovery ratio in FY15, the Combined Fixed Route Contract Services continue to easily exceed the TDA 20% farebox recovery requirement and continues to contribute to MTS exceeding the systemwide recovery requirement of 31.9%.

IV-3.5 MTS - Sorrento Valley Coaster Connection (SVCC)

The SVCC was designed to provide direct access to regional transit. Exhibit IV-16 provides SVCC TDA performance indicators for the audit period.

Exhibit IV-16: MTS Contracted Bus DART TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$269,974	\$281,097	\$298,684	\$289,717	7.3%
Unlinked Passengers	119,554	131,743	127,450	118,538	-0.8%
Vehicle Service Hours	5,490	5,523	5,961	5,416	-1.3%
Vehicle Service Miles	61,465	62,543	69,167	66,616	8.4%
Employee FTEs	5	5	5	5	0.0%
TDA Performance Indicators					
Operating Cost per Service Hour	\$49.18	\$50.90	\$50.11	\$53.49	8.8%
Operating Cost per Passenger	\$2.26	\$2.13	\$2.34	\$2.44	8.2%
Passengers per Service Hour	21.78	23.85	21.38	21.89	0.5%
Passengers per Service Mile	1.95	2.11	1.84	1.78	-8.5%
Service Hours per Employee FTE	1,098	1,105	1,192	1,083	-1.3%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

MTS Contracted SVCC Services show mixed results throughout the audit period. TDA performance indicators indicate operating costs increased by 7.3% while operating costs per service hour and per passenger increased by 8.8% and 8.2% respectively. Due to a small 0.8% decrease in passengers, a 1.3% decrease in service hours and an 8.4% increase in service miles the number of passengers per service mile decreased 8.5% over the audit period. However the number of passengers per service hour increased slightly by 0.5%.

Exhibit IV-17 provides revenue performance indicators for MTS SVCC Services.

Exhibit IV-17: MTS Contracted SVCC Revenue Performance Indicators

Base Data and Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$269,974	\$281,097	\$298,684	\$289,717	7.3%
Farebox Revenues	\$119,451	\$131,743	\$127,799	\$114,320	-4.3%
Net Cost	\$150,523	\$149,354	\$170,885	\$175,397	16.5%
Unlinked Passenger Trips	119,554	131,743	127,450	118,538	-0.8%
Farebox Recovery Ratio	44.2%	46.9%	42.8%	39.5%	-10.8%
Average Fare per Passenger Trip	\$1.00	\$1.00	\$1.00	\$0.96	-3.5%
Net Cost per Passenger Trip	\$1.26	\$1.13	\$1.34	\$1.48	17.5%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

All revenue performance indicators for SVCC services declined over the audit period including the SVCC farebox recovery ratio which decreased from 44.2% to 39.5% as a result of a 7.3% increase in operating costs compared to a 4.3% decrease in farebox revenue due to a 0.8% decrease in passengers over the audit period. The average fare per passenger trip decreased by 3.5% and the net cost per passenger trip increased by 17.5%.

IV-3.6 MTS – ADA Paratransit Services

MTS provides MTS Access Paratransit services in central and southern San Diego. Operating funding for these services is provided by local TDA and *TransNet* revenue sources. MTS Access provides the paratransit services required by the Americans with Disabilities Act (ADA).

Personal Care Attendants may travel without paying a fare. Children five years and younger travel free with a fare paying adult. Reservations are accepted from two days in advance up to 5:00 p.m. the day before travel.

Exhibit IV-18 provides TDA performance indicators for MTS Access services.

Exhibit IV-18: MTS Contracted Bus Access TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year	Audit Review Period			% Change
	FY12	FY13	FY14	FY15	FY12-FY15
Operating Costs	\$12,934,922	\$14,223,808	\$15,172,028	\$17,175,237	32.8%
Unlinked Passengers	355,300	379,415	417,717	475,322	33.8%
Vehicle Service Hours	171,052	183,238	200,364	231,650	35.4%
Vehicle Service Miles	2,948,808	3,227,333	3,568,721	4,083,491	38.5%
Employee FTEs	211	220	223	258	22.2%
TDA Performance Indicators					
Operating Cost per Service Hour	\$75.62	\$77.62	\$75.72	\$74.14	-2.0%
Operating Cost per Passenger	\$36.41	\$37.49	\$36.32	\$36.13	-0.7%
Passengers per Service Hour	2.08	2.07	2.08	2.05	-1.2%
Passengers per Service Mile	0.120	0.118	0.117	0.116	-3.4%
Service Hours per Employee FTE	811	833	901	898	10.8%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

MTS has achieved positive results in all aspects of meeting and managing ADA demand. Main findings from Exhibit IV-18 are as follows:

- Costs to provide ADA service increased by 32.8% over the audit period. However, operating cost per passenger decreased by 0.7%, from \$36.41 in FY12 to \$36.13 in FY15. At the same time, the cost per vehicle hour of service provided decreased by 2.0%, from \$75.62 to \$74.14, significantly less than the 4.4% growth in the CPI. By contrast, during the last audit period, these two indicators increased by 22.1% and 26.1% respectively.
- Reservation staff is 100% bi-lingual, and the zero-denial commitment has again been achieved over the audit period.
- Comparing FY15 to FY12, ADA ridership increased significantly by 33.8% over the audit period from 355,300 passengers in FY12 to 475,322 passengers in FY15.

Exhibit IV-19 provides revenue performance indicators for MTS Access Services.

Exhibit IV-19: MTS Contracted Bus Access Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$12,934,922	\$14,223,808	\$15,172,028	\$17,175,237	32.8%
Farebox Revenues	\$1,571,479	\$1,875,558	\$1,965,689	\$2,323,231	47.8%
Net Cost	\$11,363,443	\$12,348,250	\$13,206,339	\$14,852,006	30.7%
Unlinked Passenger Trips	355,300	379,415	417,717	475,322	33.8%
Farebox Recovery Ratio	12.1%	13.2%	13.0%	13.5%	11.3%
Average Fare per Passenger Trip	\$4.42	\$4.94	\$4.71	\$4.89	10.5%
Net Cost per Passenger Trip	\$31.98	\$32.55	\$31.62	\$31.25	-2.3%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports FY12-FY15

Operating costs increased annually throughout the audit period for a total increase of 32.8% from FY12 to FY15, while farebox revenue increased significantly by 47.8%. As a result, the farebox recovery ratio increased from 12.1% in FY12 to 13.5% in FY15.

At the same time, the total net cost after accounting for farebox revenue increased by 30.7%. However, because of the significant increase in ridership, the net cost per passenger trip still experienced a slight decrease of 2.3% over the audit period.

IV-4. MTS – Rail Operations Performance

Exhibit IV-23 shows MTS Rail Operations TDA performance indicators during the audit period.

Exhibit IV-23: MTS Rail TDA Performance Indicators

Verified TDA Statistics & Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$63,309,242	\$66,350,716	\$71,592,168	\$73,101,951	15.5%
Unlinked Passengers	32,654,613	29,699,366	39,694,632	40,082,461	22.7%
Vehicle Service Hours	427,603	471,679	504,089	495,684	15.9%
Vehicle Service Miles	7,544,239	7,758,089	8,516,212	8,596,143	13.9%
Employee FTEs	456	491	487	497	9.1%
Operating Cost per Service Hour	\$148.06	\$140.67	\$142.02	\$147.48	-0.4%
Operating Cost per Passenger	\$1.94	\$2.23	\$1.80	\$1.82	-5.9%
Passengers per Service Hour	76.37	62.97	78.75	80.86	5.9%
Passengers per Service Mile	4.33	3.83	4.66	4.66	7.7%
Service Hours per Employee FTE	938	961	1,035	997	6.3%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports for FY12-FY15

Main findings from Exhibit IV-23 are as follows:

- MTS Rail Operations incurred growth in operating costs well in excess of inflation. Costs increased by 15.5% from FY12 through FY15, while the CPI grew by 4.4%.
- Service hours increased by 15.9% and service miles increased by 13.9%. This was achieved primarily as a result of moving to three car consist trains all day long on the Blue line (from two cars in the mid-day).
- Unlinked passenger trips increasing an impressive 22.7% during the audit period. The vast majority of this increase took place between FY13 and FY14.
- With containment of operating cost, and the increase in service output, TDA indicators for operating cost per service hour and operating cost per passenger decreased 0.4% and 5.9%, respectively.
- Similarly, with the large increase in ridership, TDA measures for passengers per service hour and passengers per service mile increased 5.9% and 7.7%, respectively.
- Service hours per employee FTE, a measure of labor productivity, increased over the audit period by 6.3%. This is consistent with prior audit cycle increases.

Exhibit IV-24 shows MTS Rail Operations fare revenue indicators during the audit period.

Exhibit IV-24: MTS Rail Revenue Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operating Costs	\$63,309,242	\$66,350,716	\$71,592,168	\$73,101,951	15.5%
Farebox Revenues	\$35,216,408	\$35,553,838	\$40,187,908	\$41,140,175	16.8%
Net Cost	\$28,092,834	\$30,796,878	\$31,404,260	\$31,961,776	13.8%
Unlinked Passenger Trips	32,654,613	29,699,366	39,694,632	40,082,461	22.7%
Farebox Recovery Ratio	55.6%	53.6%	56.1%	56.3%	1.2%
Average Fare per Passenger Trip	\$1.08	\$1.20	\$1.01	\$1.03	-4.8%
Net Cost per Passenger Trip	\$0.86	\$1.04	\$0.79	\$0.80	-7.3%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports for FY12-FY15

Main findings from Exhibit IV-24 are as follows:

- During the recovery, operating costs increased 15.5%, but farebox revenues increased more, 16.8%. The biggest jump occurred between FY13 and FY14. As a result MTS Rail Operations experienced a modest increase in farebox recovery ratio, to 56.3%, a 1.2% increase compared to FY12.
- The average fare per passenger trip peaked in FY13 at \$1.20 but decreased over the audit period by almost 5%. Average cost per trip is just over \$1, at \$1.03 per trip.
- Ridership gains outstripped the increase in operating cost, resulting in a decrease in the net cost per passenger (7.3% over the audit period).

During the audit period, MTS reduced its rail operating costs while increasing its operations staffing. This is shown in Exhibit IV-25.

Exhibit IV-25: MTS Rail Operations Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Operations FTEs	213.4	239.9	279.0	291.1	36.4%
Total Operating Costs	\$19,588,041	\$20,208,803	\$25,062,507	\$25,034,145	27.8%
Car Service Hours (CSH)	427,603	471,679	504,089	495,684	15.9%
Car Service Miles (CSM)	7,544,239	7,758,089	8,516,212	8,596,143	13.9%
Total Car Hours	433,420	475,972	511,648	509,243	17.5%
Total Car Miles	7,621,905	7,808,667	8,608,444	8,690,330	14.0%
Unlinked Passenger Trips	32,654,613	29,699,366	39,694,632	40,082,461	22.7%
Passenger Miles	194,821,533	173,151,068	228,531,751	224,422,021	15.2%
CSH per Operations FTE	2,004	1,966	1,807	1,703	-15.0%
CSM per Operations FTE	35,358	32,340	30,524	29,526	-16.5%
Service Miles per Service Hour	17.6	16.4	16.9	17.3	-1.7%
Service Hours / Total Hours	98.7%	99.1%	98.5%	97.3%	-1.3%
Service Miles / Total Miles	99.0%	99.4%	98.9%	98.9%	-0.1%
Operating Cost per Passenger Trip	\$0.60	\$0.68	\$0.63	\$0.62	4.1%
Operating Cost per Passenger Mile	\$0.10	\$0.12	\$0.11	\$0.11	10.9%
In-Service Speeds	13.3	18.2	18.1	18.1	36.1%
Average Passenger Miles per Passenger Trip	6.0	5.8	5.8	5.6	-6.2%
Preventable Accidents per 100,000 Miles	0.09 (0.04)*	0.10	0.10	0.13	44.4%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports, MTS Annual Performance Monitoring Reports for FY12-FY15

* Change in Methodology (see explanation below)

Main findings from Exhibit IV-25 are as follows:

- MTS hired 19 new employees at the beginning of the audit period, in FY12 when the rail system underwent an extensive system-wide rehabilitation and upgrade of the existing trolley system. This Trolley Renewal Project includes the rehabilitation and retrofit of stations and transit centers throughout the system, new crossovers and upgraded signaling, replacement of the overhead catenary wire, track work and rail replacement, slope repair, and traction power substation replacement and rehabilitation. This project extended through the entire duration of the audit period and really just finished, for the most part, at the end of 2015. The major increase in hours within Operations is due to Flag-person positions. In FY12, these positions totaled 73,312 hours. After FY12, the Roadway Worker Safety rules went into effect, requiring two Flag-persons at all times, and the hours for these positions increased to 128,543. This is primarily due to the rule change, but also due to the Trolley Renewal capital projects. Additionally, there was a department that changed classification when comparing FY12 and FY15. In FY12, there are 76,287 hours for the Revenue department which was included in the totals for Maintenance. In FY15, the 86,768 hours for that department is included in the Operations total, not Maintenance, which skews the comparison.
- Operating costs for Operations went up substantially during the period, by 27.8%. This is due to both an increase in service provided (e.g., additional cars in Blue line consists) and because the new cars brought into operation during the period use slightly more energy.

- Service hours and service miles per FTE decreased by 15% and 16.5%, respectively, in line with the increase in operating cost for Operations and the higher increase for overall labor effort.
- Service hours per total hours, a measure of efficiency of the operation, was stable with a 1.3% decrease. Service miles over total miles, which illustrates deadhead, was even more stable with a 0.1% reduction over the audit period.
- Cost effectiveness measures of operating cost per passenger trip and passenger mile went up 4.1 and 10.9%, respectively.
- Average in-service speeds increased from a low of 13.3 miles per hour in FY12 to 18.1 miles per hour, a 36.1% increase in speed. FY12 appears as an aberration year for service speeds, due to construction impacts caused by the Trolley Renewal Project. Average in service speeds between 18 and 20 miles per hour is more the norm.
- Passenger trip lengths declined as the average passenger miles per passenger trip decreased only by 6.2%. The average trip ranged from 6.0 to 5.6 miles.
- Preventable accidents per 100,000 miles increased significantly over the audit period from 0.09 to 0.13, a 44% increase. Since Trolley typically has had 3-5 accidents per year deemed "preventable" between the FY's of 2012 – 2015, this number is small enough that a difference in events of just 1-2 will have a large percentage impact. Note the previous audit report was using total car miles in lieu of train miles. MTS decided to use train miles, in order to be consistent with FTA reporting recommendations. By using the FY12 total preventable accidents of 3 divided by FY12 total train vehicle miles (NTD reported: 3,161,218) equates to 0.09.

During the audit period, MTS increased its rail maintenance staffing and costs. This is shown in Exhibit IV-26.

Exhibit IV-26: MTS Rail Maintenance Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY12-FY15
		FY13	FY14	FY15	
Maintenance FTEs	237.6	245.8	204.9	202.1	-14.9%
Maintenance Costs	\$25,530,788	\$27,114,384	\$25,768,695	\$25,026,539	-2.0%
Total Car Hours	433,420	475,972	511,648	509,243	17.5%
Total Car Miles	7,621,905	7,808,667	8,608,444	8,690,330	14.0%
Peak Cars	95	96	96	97	2.1%
Total Cars	154	175	162	130	-15.6%
Car Hours per Maintenance FTE	1,824	1,937	2,497	2,519	38.1%
Car Miles per Maintenance FTE	32,074	31,775	42,004	42,992	34.0%
Maintenance Cost per Active Car	\$165,784	\$154,939	\$159,066	\$192,512	16.1%
Maintenance Cost per Car Hour	\$58.91	\$56.97	\$50.36	\$49.14	-16.6%
Maintenance Cost per Car Mile	\$3.35	\$3.47	\$2.99	\$2.88	-14.0%
Car Hours per Active Car	2,814	2,720	3,158	3,917	39.2%
Car Miles per Active Car	49,493	44,621	53,139	66,849	35.1%
Mean Distance between Failures (MDBF)	476,369	4,711*	6,453	5,987	27.1%*
Spare Ratio	62.1%	82.3%	68.8%	34.0%	-45.2%
Percentage Change					
Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports, MTS Annual Performance Monitoring Reports for FY12-FY15

* Change in Methodology. Performance assessed from FY2013 to FY2015 for this indicator only

Main findings from Exhibit IV-26 are as follows:

- Maintenance staffing decreased by 14.9%, while total hours increased by 17.5% and total car miles decreased by 14%. As a result of both indicators going in the right direction, total car hours per maintenance FTE increased by 38.1%, total miles per maintenance FTE increased by 34%.
- The main explanation for the reduction in maintenance staffing is the shifting of the fleet to low floor vehicles; these low floor vehicles are less labor intensive to maintain.
- Maintenance costs decreased by 2% over the audit period, which is pretty remarkable since the CPI grew 4.4% during this period. During this time, the newer vehicles were still under warranty.
- As with the prior audit period, the numbers of peak cars remained stable over the audit period. There was a gradual increase in rail service, resulting in an increase in peak vehicles by 2.2% from 95 to 97 vehicles.
- The total car number actually shows a decrease, with the main reduction occurring in FY15 with the retirement of legacy U2 cars. Some of these rail cars were actually sold to Mendoza in Argentina. MTS also completed a second historic streetcar and has now two in service. And, with the reduction of cars, the maintenance cost per active car increased by 16.1%.
- Maintenance cost per car hour and mile decreased by 16.6% and 14%, respectively, given to stability in maintenance costs coupled with the increased output.
- Car hours and miles per active car increased by 39.2% and 35.1%, respectively.
- With MDBF, FY13 saw a change in methodology, which is why the performance is measured for FY13-15 for this indicator only (FY12 is not comparable). Between FY13 and FY15, then, the mean distance between failures improved by 27.1%, to almost 6,000 miles.
- The spare ratio for prior to the audit period and during the audit period exceeded 20%, with a high of 82% in FY13 and a low of 34% in FY15. The increased fleet size (and spare ratio) during the audit period is a temporary condition as a result of the transition to low-floor vehicles. In FY12, MTS received 30 new U2s, and had a spare ratio of 62.1%. During this audit period, in September 2012, MTS extended the Green Line eight additional Trolley stations into the Downtown area (immediately transitioning the requirement of 14 cars from a high-floor to low-floor model). In January 2013, the Orange Line was able to accommodate low-floor U2s (immediately transitioning a need for 24 more cars to be low-floor). As each of these transitions occurred, MTS expanded the retirement of cars within the older U2 vehicle fleet. In FY15, with the completion of the Trolley Renewal of the Blue Line, MTS retired the remaining U2 vehicles. With the retirement and sale of vehicles and new light rail lines such as Mid-Coast, the spare ratio is expected to decrease over time. MTS should monitor and lower its spare ratio, though it is now in a more normal range.

During the audit period, MTS decreased its rail administration staffing slightly, but administration costs increased. This is shown in Exhibit IV-27.

Exhibit IV-27: MTS Rail Administration Performance Indicators

Base Data and Performance Indicators	Base Year FY12	Audit Review Period			% Change FY02-FY15
		FY13	FY14	FY15	
Administration FTEs	4.9	5.0	3.1	4.0	-18.3%
Administration Costs	\$18,190,413	\$19,027,529	\$20,760,966	\$23,041,267	26.7%
Car Service Hours (CSH)	427,603	471,679	504,089	495,684	15.9%
Car Service Miles (CSM)	7,544,239	7,758,089	8,516,212	8,596,143	13.9%
CSH per Administration FTE	86,656	93,717	163,083	122,922	41.9%
CSM per Administration FTE	1,528,876	1,541,444	2,755,164	2,131,716	39.4%
Complaints per 100,000 Passengers	5.7	3.4	1.7	1.9	-66.7%
Percentage Change Consumer Price Index (CPI-All)		1.2%	2.1%	1.0%	4.4%

Source: NTD Reports, MTS Annual Performance Monitoring Reports for FY12-FY15

Main findings from Exhibit IV-7 are as follows:

- Administration staffing decreased significantly by close to 20%, but from a small base of 5 (i.e., loss of one FTE)
- Administration costs increased by 26.7% over the audit period, about \$5 million. This increase relates to a number of factors. Right of way and facility electric costs increased by \$1.5 million due to rate increases from San Diego Gas & Electric. Contracted Security costs increased by \$1.3 million due to added service along the rail lines (and \$700,000 of this increase was in Casualty and Liability Costs). Finally, there were also increased overhead allocation costs from MTS.
- Customer satisfaction had a significant decrease as complaints per 100,000 passengers decreased by 66.7% over the audit period. The decrease in complaints was specific to MTS Rail. In FY14 MTS centralized the comments for all MTS divisions (bus, rail, and general) to a single call center. Many complaints that had been taken in by Trolley in the past and counted towards their total were reclassified to "General System" comments, which is why you see those go up at the same time that Rail (and Contract Services Bus) decreased. An example of a complaint previously assigned to Trolley and now assigned to General System would be missed schedule connections between buses and Trolleys.

SECTION V: CONCLUSIONS AND RECOMMENDATIONS

MTS is in compliance with PUC requirements and has made satisfactory progress to implement prior audit recommendations:

- Compliance with PUC Requirements: MTS is in compliance with applicable PUC requirements.
- Progress to Implement Prior Audit Recommendations: MTS has taken appropriate steps to address the prior audit recommendation which related to maintaining and improving cost efficiency of MTS directly operated bus service. MTS initiated a number of cost efficiency steps, including measures on pension and deficiency measures in the collective bargaining agreement; implemented innovative plans for fuel and energy purchases. Finally, the restoration of service after the recession helped efficiency measures with a higher number of service hours operated.

The systemwide TDA performance trends overall are indicative of the continued attention that MTS placed on cost containment during the audit period. Actions have included implementation of improvements to labor agreements, consolidation of contracted services agreements, completion of South Bay facility construction, innovative procurement strategies for power, initiation of *Rapid* service, and virtual completion of the Trolley Renewal Project. These accomplishments position MTS well for expanded operations and continued responsible financial management in the future.

No auditor recommendations are offered for MTS at this time.