

# Organizational Review & Peer Comparison



Miami-Dade County Transit  
Performance Metrics

January 2010



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## **Introduction**

Miami-Dade Transit (MDT) approached the Center for Urban Transportation (CUTR) at the University of South Florida (USF) and asked for assistance in an effort to examine MDT's past performance based on metrics not only within MDT but also at select peer agencies. In addition, MDT requested a review of the impact of organizational realignments that had been undertaken by MDT over the past several years on overall performance of the agency. Data contained in the National Transit Database (NTD) for MDT and five select peer agencies for years 2003 through 2007 were targeted for use. Peer agencies, as defined by MDT, were those agencies most similar in size to MDT that directly operated three different modes of public transportation service. At a minimum, peer agencies were required to operate heavy rail and transit bus service. Since MDT purchased demand response (paratransit) service rather than operating it directly, demand response was excluded as one of the three modes of service. Data related to staffing allocation by type/function of position and transit performance measures were to serve as the basis for comparison of MDT with peer agencies, with the level of detail of the analysis contingent upon available data within NTD. Employee-related information provided by NTD contained four broad areas: vehicle operations, vehicle maintenance, non-vehicle maintenance, and general administration. Service metrics for comparison included: vehicles operated in maximum service, vehicle miles and hours, passenger trips and miles traveled, employee work hours, revenue vehicle maintenance performance, passenger fares, and revenue recovery ratio. The basis of comparison focused on staffing allocations by type/function and transit performance parameters.

In the original scope of work, CUTR was also tasked with conducting an inventory of technological tools employed by peer agencies that impacted efficiency and effectiveness. After careful review of preliminary findings generated from the peer review, MDT replaced this task with a task that focused on an in-depth analysis of MDT's organizational structure in relationship to performance metrics. MDT was interested in assessing the impact of recent reorganization on agency performance in terms of operating efficiency, reliability and customer service.

## **Miami-Dade Transit**

Of almost 600 public transit agencies reporting in the Federal Transit Administration's (FTA) National Transit Database for 2007, MDT ranks as the 13<sup>th</sup> largest in overall size based on the number of vehicles operated by an agency during peak service (VOMS). MDT was the 11<sup>th</sup> largest agency based on directly operated VOMS.

MDT directly operates an automated guideway (Metromover), a heavy rail system (Metrorail), and a rather extensive system of bus routes (Metrobus) within the greater Miami-Dade County area. MDT also provides demand response service (paratransit) through a purchased transportation arrangement.

MDT's public transportation service has shown regular, consistent growth over the years that has resulted in a heavy-rail system and a bus system that ranked 9<sup>th</sup> in the nation in terms of VOMS in 2007. MDT's Metromover is the largest of only three directly operated people mover systems in the country.

MDT, like other public agencies, is faced with rising operating costs in the face of declining

revenues. Efficiency, consolidation, effectiveness, streamlining, and cost savings have all gained new significance as county governments try to provide the highest quality of service possible with fewer tax dollars gleaned from reduced property taxes and declining tax rolls.

Approval of the half penny sales tax by the voters of Miami-Dade County in 2002 promised significant growth in public transit service in the form of additional bus routes, reduced headways, expanded heavy rail service, and free Metromover service.

A review of data for years 2002 through 2007 contained in the Integrated National Transit Database Analysis System<sup>1</sup> (INTDAS) revealed that by 2005, Metrorail provided 27 million more passenger miles and Metrobus logged more than 13 million additional passenger trips than in 2002, representing growth rates of 25.1 percent and 21.1 percent, respectively. Combined Metrorail and Metrobus revenue hours had grown by more than 740,000 hours in 2005 compared with 2002. Vehicles operated in maximum service increased from 672 to 873 (29.9% increase) with 93.0 percent of the additional vehicles assigned to Metrobus.

Service increases were also accompanied by the need for additional staff. The number of full-time equivalent employees<sup>2</sup> (FTEs) grew from

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<sup>1</sup> The Integrated National Transit Database Analysis System is a web database system, developed and maintained by the Florida Department of Transportation and Florida International University, that was designed for retrieval and analysis of data contained in the NTD.

<sup>2</sup> All references to FTE in this report are based on data from the INTDAS. The use of full-time equivalent (FTE) is contained in the Florida Standard Performance Variables (FSV) and equates the number of payroll employees of the transit agency

2,692 in 2002 to a new high of 4,031 in 2005. Almost 1,400 (an increase of 49.7%) new employees were brought on board to assist with additional service mandates. Of the 1,339 new employees, 884 (66.0%) were assigned to vehicle operations, 307 (22.9%) were assigned to vehicle maintenance, and the remaining 147 (11.0%) were administrative employees.

Along with the record increases in service and staffing came a significant escalation in operating costs. Combined operating costs of \$353 million for Metrorail, Metrobus, and Metromover in 2005 exceeded 2002 costs by \$110 million, representing a 45.3 percent increase.

Service expansion continued in most areas through 2006, but at a constrained pace compared to the growth observed from 2002 through 2005. Metrorail passenger miles declined from 134 million in 2005 to 131 million in 2006; nonetheless, Metrobus passenger trips rose to 81.6 million, an increase of almost 5 million more trips (a 6.4% increase) than those logged in 2005. Combined revenue hours, which grew by 7.3 percent, increased to 3.4 million. An additional 72 VOMS, which were all assigned to Metrobus, were incorporated and raised the combined VOMS to 945, an 8.2 percent increase versus 2005.

The number of FTEs peaked at 4,234 in 2006, when 203 FTEs were added, representing a 5.0 percent increase in comparison with 2005. The number of vehicle operations FTEs rose from 2,453 to 2,600 (147 additional FTEs), maintenance FTEs totaled 1,213 versus 1,128 (85 additional FTEs), and the number of

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with full-time equivalents. The minimum number of work hours for determination of an FTE is not contained in the definition.

administrative FTEs was reduced from 449 to 421 (28 fewer FTEs).

Combined operating costs of \$404 million for Metrorail, Metrobus, and Metromover in 2006 exceeded 2005 costs by \$50 million, a 14.2 percent increase.

In 2007, MDT provided increased service despite a reduction in revenue hours and an elimination of slightly more than 200 full-time employees. Metrorail passenger miles, which had declined in 2006, returned to 2005 service levels. Metrorail passenger trips grew by 2.2 percent, and the 14.2 percent increase in operating costs noted in 2006 was reduced to a 4.3 percent increase to \$421 million in 2007.

MDT operated 12 additional vehicles during maximum service; Metrorail VOMS fell from 104 to 96, Metrobus increased from 823 to 839, and Metromover grew from 18 to 20. MDT's VOMS from 2002 through 2007 by mode are presented in Table 1.1.

**Table 1.1 – VOMS over Time**

<i>Vehicles Operated in Maximum Service</i>						
	2002	2003	2004	2005	2006	2007
Metrorail	90	96	103	104	104	98
Metrobus	564	506	663	751	823	839
Metromover	18	18	17	18	18	20

MDT eliminated 207 full-time positions; the number of operating employees fell from 2,600 to 2,500, the number of maintenance employees was reduced from 1,213 to 1,154, and the number of administrative employees was reduced from 421 to 373. An overview of the number of full-time employees by function from 2002 through 2007 is presented in Table 1.2.

**Table 1.2 – Staffing over Time**

<i>Full-time Employees by Function</i>						
	2002	2003	2004	2005	2006	2007
Operations	1,569	2,065	2,352	2,453	2,600	2,500
Maintenance	821	930	1,071	1,128	1,213	1,154
Administrative	302	309	422	449	421	373
Total	2,692	3,304	3,845	4,031	4,234	4,027

The staffing reductions that occurred in 2006 and 2007 slightly changed the composition of the organization as shown in Table 1.3.

**Table 1.3 – Change in Employees by Function**

<i>Full-time Employees</i>	<i>Actual #</i>		<i>% of Total</i>	
	2002	2007	2002	2007
Operating	1,569	2,500	58.3%	62.1%
Maintenance	821	1,154	30.5%	28.7%
Administrative	302	373	11.2%	9.3%
Total	2,692	4,027		

Increased emphasis on vehicle operations was offset by reductions in employee allocations to maintenance and administration.

Transit riders rely on transit to arrive at the station on-time and transport them to their destinations without incident. Failure of a vehicle during service disrupts the trip and often results in delay and inconvenience to customers. A critical measure that is commonly used to illustrate the effectiveness of the service provided by a transit agency is the number of times a vehicle fails to provide uninterrupted service, i.e., the number of vehicle system failures. While the total number of failures is relevant to performance as an output, the meaningful significance of the measure lies in the relationship between the number of system failures and the number of revenue miles. If fewer failures occur and fewer revenue miles are logged from one year to the next, system effectiveness could remain unchanged. The three charts presented as Table 1.4 illustrate MDT's service effectiveness from 2002 through 2007 by mode.

**Table 1.4 – Measures of Effectiveness**

<i>Number of Vehicle System Failures</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	2,219	1,506	1,506	1,506	1,840	1,749
Metrobus	17,137	12,157	12,157	12,157	18,951	15,248
Metromover	378	790	790	790	901	730

<i>Revenue Miles (000s)</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	7,376	7,701	9,112	9,346	9,690	8,354
Metrobus	26,294	27,506	31,100	34,223	36,825	35,654
Metromover	1,011	1,031	954	935	942	935

<i>Revenue Miles Between Failures</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	3,324	5,114	6,051	6,206	5,266	4,777
Metrobus	1,534	2,263	2,558	2,815	1,943	2,338
Metromover	2,676	1,305	1,207	1,184	1,045	1,281

While all three modes reported fewer vehicle system failures in 2007 as compared with 2006, only Metrobus and Metromover showed improved effectiveness. Metrorail’s effectiveness declined in 2007 as reduced failures were offset by an even more significant reduction in revenue miles, resulting in fewer revenue miles between failures.

Measures of system efficiency are often tied to the level of resources committed to provide service. Common efficiency measures generally reflect the costs associated with resource allocation. Operating costs typically include all costs associated with running the agency, including salaries and fringe benefits, services, fuel, maintenance materials, utilities, insurance, and other items like conferences and marketing. Just as agencies must balance costs to conform to budget appropriations, select operating costs are adjusted to offset nondiscretionary expenditures. As service is expanded or retracted, changes in the scope of allocated resources are made to ensure cost-effective use of budgeted dollars.

The charts presented as Table 1.5 detail four distinct measures of efficiency, including cost per passenger mile, cost per passenger trip, operating expense per revenue mile, and maintenance expense per revenue mile.

**Table 1.5 – Measures of Efficiency**

<i>Operating Expense per Passenger Mile</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	\$0.57	\$0.60	\$0.50	\$0.53	\$0.57	\$0.60
Metrobus	\$0.60	\$0.77	\$0.77	\$0.80	\$0.89	\$0.75
Metromover	\$3.59	\$3.02	\$2.36	\$2.21	\$2.34	\$2.38

<i>Operating Expense per Passenger Trip</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	\$4.47	\$4.61	\$3.93	\$4.22	\$4.35	\$4.61
Metrobus	\$2.59	\$3.32	\$3.05	\$3.40	\$3.79	\$3.83
Metromover	\$3.69	\$3.10	\$2.40	\$2.21	\$2.33	\$2.44

<i>Operating Expense per Revenue Mile</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	\$8.34	\$8.56	\$6.74	\$7.69	\$7.74	\$9.65
Metrobus	\$6.25	\$7.80	\$7.38	\$7.62	\$8.40	\$8.96
Metromover	\$17.37	\$18.74	\$19.58	\$22.34	\$20.37	\$22.46

<i>Maintenance Expense per Revenue Mile</i>						
	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Metrorail	\$4.47	\$4.36	\$3.21	\$3.47	\$3.42	\$4.10
Metrobus	\$1.74	\$1.96	\$1.74	\$1.86	\$2.16	\$2.44
Metromover	\$10.61	\$11.30	\$11.88	\$13.14	\$11.32	\$12.24

While Metrorail’s operating expense per passenger mile was consistent over time, Metrobus reported the lowest cost since 2002. Metromover showed modest growth after 2006 and held the operating costs per passenger mile and passenger trip well below costs in 2002 and 2003.

Operating costs per revenue mile grew in all areas and coincided with reductions in revenue miles. In times of rising costs, as revenue miles decline, the actual cost of each of those miles increases.

Metrobus' maintenance expense accounted for about 28 percent of the total operating expense per revenue mile, while Metrorail's maintenance expense was 42 percent and the Metromover maintenance expense was 54 percent of the total operating expense per revenue mile.

MDT made some rather substantial changes in operations from 2002 through 2007 that changed service effectiveness, such as, reducing costs or increasing service.

Following are the results of the peer review that was conducted. This information is invaluable in setting the contextual stage for understanding MDT's operations over time in relationship to the operations of other major transit agencies.

### Peer Selection and Review

Peer selection was limited to those agencies that directly operate three modes of public transportation service, including at a minimum heavy rail and bus. The nine agencies that operate at least three modes of public transportation service are presented in Table 1.1. Five of those nine agencies met parameters regarding direct operation of a heavy-rail system as established by MDT for selection as peers.

**Table 1.6 – Agencies with >3 Modes Directly Operated Transportation Service**

Agency	≥3 Modes Directly Operated							
	Heavy Rail	Bus	Automated Guideway	Light Rail	Cable Car	Trolley Bus	Commuter Rail	Inclined Plane
MDT	X	X	X					
LACMTA	X	X		X				
MBTA	X	X		X			X	
MTA	X	X		X				
GCRTA	X	X		X				
SEPTA	X	X		X			X	
MUNI		X		X	X	X		
NJ TRANSIT		X		X			X	
Port Authority		X		X				X

Peer agencies selected for comparison included: Los Angeles County Metropolitan Transportation Authority (LACMTA), Massachusetts Bay Transportation Authority (MBTA), Maryland Transit Administration (MTA), Greater Cleveland Regional Transit Authority (GCRTA), and Southeastern Pennsylvania Transportation Authority (SEPTA). The three modes used for comparison of MDT and selected peers included motorbus, heavy rail, and light rail for the selected peers as compared with MDT's motorbus, heavy rail and automated guideway. Following is a brief overview of each of the peer agencies selected.

#### ***Los Angeles County Metropolitan Transportation Authority (LACMTA)***

LACMTA serves as a transportation planner and coordinator, designer, builder and operator for Los Angeles County and is governed by a 13-member Board of Directors. In 2007, LACMTA provided service to the Los Angeles – Long Beach – Santa Ana service area in California spanning 1,668 square miles with a population in excess of 11 million residents. LACMTA logged 2 billion miles of passenger service with almost 500 million passenger trips at a cost of \$1.2 billion. Directly operated service provided by LACMTA included: bus, heavy rail, light rail and vanpool. In 2007, LACMTA was the 4<sup>th</sup> largest transit agency in the U.S. based on total VOMS and directly operated VOMS.

#### ***Massachusetts Bay Transportation Authority (MBTA)***

MBTA was formed in 1964 to finance and operate most bus, subway, commuter rail and ferry systems in the greater Boston, Massachusetts area and is governed by a 7-member Board of Directors, chaired by the Secretary of Transportation. In 2007, MBTA provided service to the Boston, Massachusetts

– New Hampshire – Rhode Island service area of 1,736 square miles with a population of more than 4 million residents. MBTA reported 1.7 billion miles of passenger service with 350 million passenger trips at a cost of \$987 million. Directly operated service provided by MBTA included: bus, heavy rail, commuter rail, light rail and trolley bus. In 2007, MBTA was the 8<sup>th</sup> largest transit agency in the U.S. based on total VOMS and directly operated VOMS.

#### ***Maryland Transit Administration (MTA)***

MTA, an agency of the State of Maryland, services the public transportation needs of the greater Baltimore, Maryland area. In 2007, MTA provided service to the Baltimore service area of 683 square miles with a population of more than 2 million residents. MTA logged 692 million miles of passenger service with 108 million passenger trips at a cost of \$463 million. Directly operated service provided by MTA included: bus, heavy rail, and light rail. In 2007, MTA was the 14<sup>th</sup> largest transit agency in the U.S. based on total VOMS and the 22<sup>nd</sup> largest based on directly operated VOMS.

#### ***Greater Cleveland Regional Transit Authority (GCRTA)***

GCRTA, a regional transit authority, serves as a political subdivision of the State, managed and governed by a 10-member Board of Trustees. In 2007, GCTRA provided service to the Cleveland, Ohio service area spanning 647 square miles with a population of almost 1.8 million residents. GCRTA provided 255 million miles of passenger service with 60 million passenger trips at a cost of \$229 million. Directly operated service provided by GCRTA included: bus, heavy rail, and light rail. In 2007, GCRTA was the 24<sup>th</sup> largest transit agency in the U.S. based on total VOMS and the 28<sup>th</sup> largest based on directly operated VOMS.

#### ***Southeastern Pennsylvania Transportation Authority (SEPTA)***

The Southeastern Pennsylvania Transportation Authority was established by the Pennsylvania General Assembly to provide public transit services and is governed by an 11-member Board of Directors. In 2007, SEPTA provided service to Bucks, Chester, Delaware, Montgomery and Philadelphia Counties. SEPTA's service area spanned 1,800 square miles with a population in excess of 5 million residents. SEPTA reported 1.4 billion miles of passenger service with 322 million passenger trips at a cost of \$916 million. Directly operated service provided by SEPTA included: bus, heavy rail, commuter rail, light rail, and trolleybus. In 2007, SEPTA was the 7<sup>th</sup> largest transit agency in the U.S. based on total VOMS and directly operated VOMS.

Peer agencies used for comparison of MDT's automated guideway system included the Jacksonville Transportation Authority (JTA) and the Detroit Transportation Corporation (DTC). JTA and DTC are the only other public agencies that currently operate automated guideway systems.

#### ***Jacksonville Transportation Authority (JTA)***

JTA, governed by a 7-member Board of Directors, is tasked with providing the public transit system for the City of Jacksonville, Florida and developing the roadway infrastructure interconnecting Northeast Florida. JTA's service area spans 411 square miles with a population of 882,000 residents. In 2007, JTA provided 63.9 million miles of passenger service with 11.2 million passenger trips at a cost of \$84 million. Directly operated service provided by JTA included bus and automated guideway.

### **Detroit Transportation Corporation (DTC)**

DTC, owned and operated by the City of Detroit, serves as Detroit’s people mover system. In 2007, DTC provided service to the Detroit Michigan Central Business District. DTC’s service area includes 3 square miles with a population of 3.9 million residents. In 2007, DTC provided 3.5 million miles of passenger service with 2.3 million passenger trips at a cost of \$12.8 million. Directly operated service provided by DTC was provided by automated guideway.

### **Consolidated Peer Metrics – 2007**

Following is an overview of a variety of general indicators in addition to effectiveness and efficiency measures for MDT, and identified peers based on 2007 NTD data. Peer maximum, minimum, and average metrics for the previously selected peer groups by mode were established and compared with MDT’s reported metrics. (MDT’s figures are not included in peer maximum, minimum, or average for more accurate comparison). Peer agency general service indicators are presented in Table 1.7.

**Table 1.7 – Peer Agency General Indicators – 2007**

<i>Directly Operated Heavy Rail</i>	Peer			MDT
	Maximum	Minimum	Average	
Passenger Trips	143,666,785	7,450,341	58,724,079	17,504,736
Passenger Miles	514,157,854	53,399,716	244,414,457	134,407,819
Revenue Miles	21,063,667	2,112,786	9,938,520	8,354,432
Revenue Hours	1,464,328	78,658	561,796	359,326
Route Miles	108.0	34.0	63.6	55.9
Total Employee FTEs	1,914.1	250.4	871.1	631.6
Employee Operating FTEs	958.4	90.6	411.1	147.0
Maintenance Employee FTEs	866.5	148.7	407.1	370.3
Administrative Employee FTEs	89.2	11.1	52.9	114.3
VOMS	320	22	149	98

<i>Directly Operated Bus</i>	Peer			MDT
	Maximum	Minimum	Average	
Passenger Trips	398,953,604	49,195,637	158,588,056	83,458,376
Passenger Miles	1,491,338,894	178,890,643	519,176,476	427,626,902
Revenue Miles	85,424,151	19,246,242	37,908,763	35,654,448
Revenue Hours	7,125,180	1,650,089	3,335,371	2,923,018
Route Miles	3,419.5	1,486.3	2,322.7	1,932.7
Total Employee FTEs	7,638.9	1,747.5	3,610.0	3,228.1
Employee Operating FTEs	5,317.9	1,161.5	2,418.6	2,340.0
Maintenance Employee FTEs	1,810.6	379.2	907.1	668.6
Administrative Employee FTEs	510.4	88.9	284.4	219.5
VOMS	2,094	510	1,013	839

<i>Directly Operated Automated Guideway</i>	Peer			MDT
	Maximum	Minimum	Average	
Passenger Trips	2,307,804	619,414	1,463,609	8,622,729
Passenger Miles	3,543,035	255,898	1,899,467	8,840,136
Revenue Miles	552,640	254,228	403,434	934,906
Revenue Hours	56,932	19,013	37,973	91,657
Total Employee FTEs	82.1	41.4	61.8	167.1
Employee Operating FTEs	33.8	14.4	24.1	13.2
Maintenance Employee FTEs	27.0	24.2	25.6	115.0
Administrative Employee FTEs	21.3	2.8	12.0	38.9
VOMS	10	7	9	20

In 2007, MDT’s heavy rail system operated fewer VOMS than the peer average, provided less than one-third of the peer average passenger trips, and logged slightly over one-half of the peer average passenger miles; however, MDT’s administrative employee FTEs exceeded not only the peer average but also the peer maximum.

A similar trend was noted with bus operating employee FTEs but to a lesser degree.

MDT’s automated guideway operated twice the number of VOMS as the peer maximum, but required more than five times the number of maintenance employee FTEs.

Peer agency effectiveness measures are detailed in Table 1.8.

**Table 1.8 – Peer Agency Effectiveness Measures – 2007**

<i>Directly Operated Heavy Rail</i>	Peer			MDT
	Maximum	Minimum	Average	
Passenger Trips per Capita	31.85	4.81	14.99	7.29
Passenger Trips per Revenue Mile	6.83	2.78	5.11	2.10
Average Headway (in minutes)	10.36	6.04	8.34	6.95
Average Age of Fleet (in years)	24.93	11.02	19.42	25.00
Number of Vehicle System Failures	2,034	129	992	1,749
Revenue Miles Between Failures	36,889.08	2,943.11	15,514.86	4,776.69
Weekday Span of Service (in hours)	22.35	19.92	21.02	19.25

<i>Directly Operated Bus</i>	Peer			MDT
	Maximum	Minimum	Average	
Passenger Trips per Capita	51.39	21.62	38.36	34.74
Passenger Trips per Revenue Mile	4.67	2.43	3.86	2.34
Average Headway (in minutes)	18.69	8.20	12.67	11.33
Average Age of Fleet (in years)	7.45	5.66	6.51	5.16
Number of Vehicle System Failures	30,511	1,456	9,932	15,248
Revenue Miles Between Failures	13,876.89	2,799.78	6,422.66	2,338.30
Weekday Span of Service (in hours)	24.00	23.13	23.82	24.00

<i>Directly Operated Automated Guideway</i>	Peer			MDT
	Maximum	Minimum	Average	
Passenger Trips per Capita	24.96	0.75	12.86	3.59
Passenger Trips per Revenue Mile	4.18	2.44	3.31	9.22
Average Headway (in minutes)	3.46	1.79	2.63	3.69
Average Age of Fleet (in years)	21.00	8.60	14.80	16.43
Number of Vehicle System Failures	28	10	19	730
Revenue Miles Between Failures	25,422.80	19,737.14	22,579.97	1,280.69
Weekday Span of Service (in hours)	17.50	17.00	17.25	19.00

For all three modes in 2007, MDT exceeded peer average revenue vehicle system failures and fell significantly below the average number of revenue miles between failures achieved by the peer agencies.

Peer agency efficiency measures are presented in Table 1.9.

**Table 1.9 – Peer Agency Efficiency Measures – 2007**

<i>Directly Operated Heavy Rail</i>	Peer			MDT
	Maximum	Minimum	Average	
Operating Expense per Passenger Trip	\$3.84	\$1.62	\$2.54	\$4.61
Operating Expense per Passenger Mile	\$0.77	\$0.36	\$0.51	\$0.60
Operating Expense per Revenue Mile	\$14.59	\$9.10	\$11.66	\$9.65
Maintenance Expense per Revenue Mile	\$7.09	\$3.24	\$5.44	\$4.10
Farebox Recovery (%)	51.1%	22.0%	34.6%	16.7%
Vehicle Miles per Peak Vehicle	97,366.00	57,714.87	80,472.86	87,789.39
Revenue Miles per Vehicle Mile	0.99	0.96	0.98	0.97
Revenue Hours per Employee FTE	765.03	314.15	541.33	568.89
Revenue Mile per Kilowatt Hour	0.18	0.07	0.11	0.12
Average Fare	\$0.94	\$0.58	\$0.79	\$0.77

<i>Directly Operated Bus</i>	Peer			MDT
	Maximum	Minimum	Average	
Operating Expense per Passenger Trip	\$3.50	\$2.15	\$2.84	\$3.83
Operating Expense per Passenger Mile	\$1.47	\$0.58	\$0.97	\$0.75
Operating Expense per Revenue Mile	\$12.04	\$8.51	\$10.69	\$8.96
Maintenance Expense per Revenue Mile	\$3.37	\$2.13	\$2.88	\$2.44
Farebox Recovery (%)	32.1%	20.6%	26.5%	22.3%
Vehicle Miles per Peak Vehicle	48,677.36	36,307.67	42,453.82	50,078.75
Revenue Miles per Vehicle Mile	0.88	0.84	0.87	0.85
Revenue Hours per Employee FTE	944.24	863.88	918.69	905.49
Average Fare	\$0.89	\$0.61	\$0.74	\$0.85

<i>Directly Operated Automated Guideway</i>	Peer			MDT
	Maximum	Minimum	Average	
Operating Expense per Passenger Trip	\$7.44	\$5.56	\$6.50	\$2.44
Operating Expense per Passenger Mile	\$18.02	\$3.62	\$10.82	\$2.38
Operating Expense per Revenue Mile	\$23.21	\$18.14	\$20.68	\$22.46
Maintenance Expense per Revenue Mile	\$11.70	\$11.37	\$11.54	\$12.24
Farebox Recovery (%)	8.3%	7.3%	7.8%	0.0%
Vehicle Miles per Peak Vehicle	55,264.00	36,503.86	45,883.93	47,447.15
Revenue Miles per Vehicle Mile	1.00	0.99	1.00	0.99
Revenue Hours per Employee FTE	693.38	458.77	576.08	548.48
Revenue Mile per Kilowatt Hour	0.23	0.11	0.17	0.16
Average Fare	\$0.54	\$0.46	\$0.50	\$0.00

In 2007, MDT's heavy rail operating expense per passenger mile exceeded the peer average, while the operating cost per passenger trip exceeded not only the peer average but also

the peer maximum. MDT did provide more revenue hours per employee FTE than the peer average.

For all three modes, MDT logged more vehicle miles per peak vehicle than the peer average. Bus also exceeded the peer maximum for vehicle miles per peak vehicle.

Bus outperformed heavy rail in farebox recovery. Bus fell below the peer average but exceeded the peer minimum, while heavy rail recovered less revenue from the farebox than the peer average and the peer minimum.

Bus operating expenses and maintenance expenses per revenue mile exceeded the peer average.

Researchers then conducted a detailed peer review using individual agency data obtained directly from NTD for years 2003 through 2007. MDT provided relevant data for 2008, and it is also included in the review.

## Peer Agency Comparison, 2003 – 2007

During the course of the project, MDT requested a change in direction that focused more on MDT's organization and less on peer comparisons. MDT had received the results of an internal analysis conducted by the Miami-Dade County Office of Strategic Business Management (OSBM) and asked that those results be reviewed alongside the re-focused organizational analysis.

OSBM relied heavily on three county-operated agencies in their review of MDT's staffing levels and organizational structure. MDT operates as a department within county government, while peers selected for review operate either as an independent transportation authority or as an

agency within state government. OSBM also focused on operational benefits available to MDT consistent with county governmental services.

In order to consider peer agencies operated within county government, the study was then revised to expand the peer comparison to include Broward County Transit (BCT) and King County Metro (KCM) for bus. JTA and DTC are the only other public agencies that currently operate automated guideway systems. No additional peers were added for heavy rail, as no other county operates a heavy rail transportation mode.

***Broward County Transit (BCT)***

BCT serves as Broward County’s public transit system. In 2007, BCT provided service to Broward County with links to Miami-Dade County and Palm Beach County transit systems. BCT’s service area spanned 410 square miles with a population of 1.7 million residents. In 2007, BCT provided 188 million miles of passenger service with 42 million passenger trips at a cost of \$121 million. Directly operated service provided by BCT was provided by bus.

***King County Metro (KCM)***

KCM serves as King County’s public transit system. In 2007, KCM provided service to King County and the greater Seattle, Washington area. KCM’s service area spanned 954 square miles with a population of 2.7 million residents. In 2007, KCM provided 572 million miles of passenger service with 113.9 million passenger trips at a cost of \$497 million. Directly operated service provided by KCM included: bus, trolleybus, and vanpool. In 2007, KCM was the 6<sup>th</sup> largest transit agency in the U.S. based on total VOMS and directly operated VOMS.

Consistent with the original scope of work, specific emphasis in the comparison of MDT with identified peer agencies centered on the four distinct functions identified in the National Transit Database: vehicle operations, vehicle maintenance, non-vehicle maintenance, and general administration.

The following tables contain MDT data along with the agency maximum, which represents the peer agency with the highest metric in the functional area. The maximum metric of the combined MDT and peer reporting is presented in white. In cases where MDT reported the maximum, the peer with the highest metric is included. In cases where different agencies reported the maximum for only a portion of the study period, those agencies are included.

MDT’s heavy rail operating expenses per VOMS consistently fell below the peer maximum cost depicted in Table 1.10. LACMTA recorded the maximum costs (highest cost per VOMS) for vehicle operations and general administration from 2003 through 2007, while GCRTA recorded the maximum costs for vehicle maintenance and non-vehicle maintenance.

**Table 1.10 – Operating Expense per VOMS – Peer Maximum versus MDT / Heavy Rail**

<i>Operating Expenses (000s) per VOMS by Function - Rail</i>								
Year	Vehicle Operations		Vehicle Maintenance		Non-vehicle Maintenance		General Administration	
	LACMTA	MDT	GCRTA	MDT	GCRTA	MDT	LACMTA	MDT
	2003	\$394.43	\$259.64	\$245.34	\$177.74	\$435.28	\$172.00	\$159.63
2004	\$406.93	\$243.32	\$248.82	\$141.39	\$435.89	\$142.58	\$200.90	\$69.20
2005	\$477.01	\$285.20	\$221.14	\$157.08	\$416.59	\$154.77	\$204.29	\$93.66
2006	\$488.23	\$305.86	\$224.42	\$154.66	\$389.50	\$163.55	\$211.18	\$97.34
2007	\$505.31	\$347.94	\$258.22	\$163.50	\$422.82	\$186.22	\$232.63	\$125.08
2008		\$355.95		\$168.56		\$202.02		\$114.11

MDT’s bus operating expense per VOMS exceeded the peer maximum in vehicle operations in 2003, 2005 and 2006, as shown in Table 1.11. Although costs declined in 2007, preliminary data indicate an increase in 2008.

**Table 1.11 – Operating Expense per VOMS – Peer Maximum versus MDT / Bus**

Operating Expenses (000s) per VOMS by Function - Bus										
Year	Vehicle				Non-vehicle			General Administration		
	Operations		Vehicle Maintenance		Maintenance					
	BCT	MDT	MBTA	MTA	MDT	SEPTA	MDT	LACMTA	SEPTA	MDT
2003	\$217.64	\$261.58	\$76.66	\$84.08	\$80.27	\$38.39	\$26.33	\$68.72	\$58.84	\$55.57
2004	\$245.45	\$221.45	\$76.35	\$72.31	\$61.23	\$36.63	\$20.40	\$71.31	\$61.29	\$42.97
2005	\$215.52	\$234.12	\$81.76	\$82.54	\$65.57	\$34.67	\$19.09	\$61.19	\$68.96	\$28.43
2006	\$246.68	\$248.71	\$99.56	\$83.61	\$76.47	\$36.77	\$20.18	\$61.97	\$69.54	\$30.56
2007	\$252.66	\$245.72	\$101.01	\$102.96	\$80.79	\$39.36	\$22.77	\$71.85	\$70.58	\$31.33
2008		\$261.25			\$87.30		\$23.14			\$37.88

MDT's rail employee work hours per VOMS exceeded the peer maximum in vehicle maintenance in 2003 and general administration from 2004 through 2007. General administration work hours reported by Metrorail are easily two times GCRTA, the maximum peer.

**Table 1.12 – Employee Work Hours per VOMS – Peer Maximum versus MDT / Heavy Rail<sup>3</sup>**

Employee Work Hours per VOMS by Function - Rail									
Year	Vehicle Operations			Vehicle Maintenance		Non-vehicle Maintenance		General Administration	
	MTA	GCRTA	MDT	GCRTA	MDT	GCRTA	MDT	GCRTA	MDT
2003	7,777	6,369	2,667	3,984	4,164	7,307	3,987	1,818	1,634
2004	7,454	7,675	2,823	3,887	2,683	7,984	4,876	1,233	2,078
2005	7,382	8,442	2,635	4,245	2,848	8,281	4,321	1,617	2,221
2006	7,721	8,270	2,893	4,610	2,665	9,090	5,154	962	2,517
2007	7,423	8,568	3,121	5,073	3,088	8,988	4,772	1,044	2,426

For bus, MDT's employee work hours per VOMS exceeded the peer maximum in vehicle maintenance from 2003 through 2007, vehicle maintenance from 2004 through 2006, and general administration from 2003 through 2004. Despite the high rates observed, MDT's employee work hours declined in most areas

<sup>3</sup> NTD requires employee data to be categorized and reported by full-time and part-time employees according to definitions used by each transit agency. NTD specifies that full-time employees usually must work a minimum of hours, such as at least 30 hours per week or 1,000 hours per year. Full-time employees also usually receive a full benefits package. All references to full-time and part-time employees in this report are data obtained directly from NTD. All work hours reported by full-time and part-time employees were used in this analysis.

over time. A significant reduction from 7,910 to 5,801 work hours per VOMS occurred in vehicle operations as delineated in Table 1.13.

**Table 1.13 – Employee Work Hours per VOMS – Peer Maximum versus MDT / Bus**

Employee Work Hours per VOMS by Function - Bus											
Year	Vehicle			Non-vehicle			General Administration				
	Operations		Vehicle Maintenance		Maintenance						
	LACMTA	MDT	LACMTA	MBTA	MDT	SEPTA	MDT	GCRTA	MTA	MDT	
2003	5,205	7,910	1,597	1,267	1,555	1,131	276	246	818	888	
2004	4,661	6,884	1,349	1,352	1,549	1,127	238	515	849	921	
2005	5,067	6,381	1,384	1,350	1,555	940	223	968	950	862	
2006	5,092	6,172	1,455	1,590	1,495	937	300	831	897	663	
2007	5,282	5,801	1,516	1,528	1,355	974	302	824	1,032	544	

The overview of employee work hours per VOMS within MDT presented in Table 1.14 yields expected results in the areas of vehicle operations and non-vehicle maintenance. Bus operations are labor intensive due to the number of bus operators required as compared to rail and automated guideway, while infrastructure needs are rather limited. Automated guideway appears to require significant employee resources for vehicle maintenance and general administration.

**Table 1.14 – Employee Work Hours per VOMS – MDT by Mode**

Employee Work Hours per VOMS by Function - MDT												
Year	Vehicle Operations			Vehicle Maintenance			Non-vehicle Maintenance			General Administration		
	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG
2003	2,667	7,910	2,026	4,164	1,555	7,865	3,987	276	4,630	1,634	888	2,079
2004	2,823	6,884	2,179	2,683	1,549	9,115	4,876	238	6,432	2,078	921	3,074
2005	2,635	6,381	2,005	2,848	1,555	8,651	4,321	223	6,128	2,221	862	3,141
2006	2,893	6,172	1,493	2,665	1,495	8,616	5,154	300	4,331	2,517	663	3,810
2007	3,121	5,801	1,375	3,088	1,355	8,009	4,772	302	3,949	2,426	544	4,046

MDT exceeded heavy rail peer agencies in the number of employee work hours per passenger trip in all functions with the exception of vehicle operations from 2003 through 2007, as illustrated in Table 1.15. It appears that MDT made significant strides in 2008 in reducing work hour requirements. The reductions in work hour allocation actually drove requirements in all four categories to the lowest levels recorded to date.

**Table 1.15 – Employee Work Hours per Passenger Trip – Rail**

<i>Employee Work Hours per Passenger Trip by Function - Rail</i>								
Year	Vehicle Operations		Vehicle Maintenance		Non-vehicle Maintenance		General Administration	
	MTA	MDT	GCRTA	MDT	GCRTA	MDT	GCRTA	MDT
2003	31.8	17.9	11.9	27.9	21.8	26.8	5.4	11.0
2004	32.4	18.6	11.7	17.7	24.1	32.1	3.7	13.7
2005	31.0	16.1	12.5	17.4	24.4	26.4	4.8	13.6
2006	32.4	17.5	14.2	16.1	27.9	31.1	3.0	15.2
2007	30.5	17.5	15.0	17.3	26.5	26.7	3.1	13.6
2008		14.8		14.0		24.7		8.3

MDT exceeded bus peer agencies in the number of employee work hours per passenger trip in vehicle operations from 2003 through 2005, vehicle maintenance from 2005 through 2007, and general administration from 2003 through 2004 as indicated in Table 1.16. Positive trends are apparent in all four functions.

**Table 1.16 – Employee Work Hours per Passenger Trip – Bus**

<i>Employee Work Hours per Passenger Trip by Function - Bus</i>									
Year	Vehicle Operations		Vehicle Maintenance			Non-vehicle Maintenance		General Administration	
	KCM	MDT	KCM	GCRTA	MDT	SEPTA	MDT	GCRTA	MDT
2003	58.2	62.0	15.0	12.6	12.2	7.3	2.2	2.8	7.0
2004	54.5	60.7	14.2	17.4	13.7	7.0	2.1	5.9	8.1
2005	57.3	62.4	13.6	14.4	15.2	5.9	2.2	9.2	8.4
2006	43.8	62.2	11.4	11.4	15.1	6.2	3.0	7.4	6.7
2007	44.6	58.3	10.4	13.3	13.6	6.7	3.0	8.7	5.5
2008		58.9			13.0		2.6		4.7

In the areas of vehicle operations and non-vehicle maintenance, employee work hours per passenger trip within MDT, as presented in Table 1.17, are consistent with expectations; however, rail appears to require significantly more employee resources for general administration. Positive trends were noted in all functions for all modes.

**Table 1.17 – Employee Work Hours per Passenger Trip – MDT by Mode**

<i>Employee Work Hours per Passenger Trip by Function - MDT</i>												
Year	Vehicle Operations			Vehicle Maintenance			Non-vehicle Maintenance			General Administration		
	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG
2003	17.9	62.0	5.9	27.9	12.2	22.7	26.8	2.2	13.4	11.0	7.0	6.0
2004	18.6	60.7	4.8	17.7	13.7	19.9	32.1	2.1	14.1	13.7	8.1	6.7
2005	16.1	62.4	3.8	17.4	15.2	16.5	26.4	2.2	11.7	13.6	8.4	6.0
2006	17.5	62.2	3.3	16.1	15.1	18.9	31.1	3.0	9.5	15.2	6.7	8.3
2007	17.5	58.3	3.2	17.3	13.6	18.6	26.7	3.0	9.2	13.6	5.5	9.4
2008	14.8	58.9	4.9	14.0	13.0	16.9	24.7	2.6	9.1	8.3	4.7	6.3

Based on data contained in Table 1.18, the only area in which MDT exceeded heavy rail peer agencies in the number of employee work hours per revenue mile was general administration, which is consistent with all factors examined thus far. Work hour requirements for most functions remained stable or escalated slightly; although, 2008 general administration work hours did fall below the 2007 record high.

**Table 1.18 – Employee Work Hours per Revenue Mile (000s) – Rail**

<i>Employee Work Hours per Revenue Mile by Function - Rail</i>												
Year	Vehicle Operations			Vehicle Maintenance			Non-vehicle Maintenance		General Administration			
	MTA	MBTA	MDT	LACMTA	GCRTA	MDT	GCRTA	MDT	LACMTA	MDT		
2003	92.5	83.7	33.2	46.7	40.0	51.9	73.3	49.7	18.0	20.4		
2004	88.8	84.5	31.9	37.0	35.7	30.3	73.3	55.1	19.6	23.5		
2005	84.5	98.8	29.3	41.8	39.4	31.7	76.8	48.1	19.7	24.7		
2006	89.1	99.2	31.1	40.3	52.3	28.6	103.0	55.3	19.6	27.0		
2007	84.6	94.6	36.6	44.2	52.8	36.2	93.6	56.0	21.0	28.5		
2008			38.3			36.2		64.1		21.5		

As shown in Table 1.19, MDT fell below bus peer agencies in the number of employee work hours per revenue mile in all functions from 2004 through 2007. Work hour allocations for vehicle operations and vehicle maintenance increased in 2008.

**Table 1.19 – Employee Work Hours per Revenue Mile (000s) – Bus**

Employee Work Hours per Revenue Mile by Function - Bus										
Year	Vehicle Operations			Vehicle Maintenance			Non-vehicle Maintenance		General Administration	
	MTA	MDT	AG	Rail	Bus	AG	Rail	Bus	AG	MDT
	2003	140.8	145.5	35.4	42.4	28.6	32.3	5.1	26.9	16.3
2004	151.8	146.8	36.6	47.4	33.0	32.8	5.1	27.1	19.6	
2005	141.2	140.0	40.7	39.6	34.1	28.0	4.9	29.2	18.9	
2006	159.4	137.9	39.5	49.4	33.4	27.8	6.7	27.3	14.8	
2007	157.0	136.5	40.4	47.6	31.9	28.5	7.1	27.4	12.8	
2008		151.2			33.3		6.7		12.1	

Bus required the most significant number of employee work hours per revenue mile for vehicle operations, and the 2008 level was significantly higher than previous years. Automated guideway employee work hours per passenger mile led MDT’s allocations for vehicle maintenance, non-vehicle maintenance, and general administration; however, significant reductions occurred in all three functions in 2008 as illustrated in Table 1.20.

**Table 1.20 – Employee Work Hours per Revenue Mile (000s) – MDT by Mode**

Employee Work Hours per Revenue Mile (000s) by Function - MDT												
Year	Vehicle Operations			Vehicle Maintenance			Non-vehicle Maintenance			General Administration		
	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG
	2003	33.2	145.5	35.4	51.9	28.6	137.3	49.7	5.1	80.8	20.4	16.3
2004	31.9	146.8	38.8	30.3	33.0	162.5	55.1	5.1	114.6	23.5	19.6	54.8
2005	29.3	140.0	38.6	31.7	34.1	166.5	48.1	4.9	117.9	24.7	18.9	60.4
2006	31.1	137.9	28.5	28.6	33.4	164.7	55.3	6.7	82.8	27.0	14.8	72.8
2007	36.6	136.5	29.4	36.2	31.9	171.3	56.0	7.1	84.5	28.5	12.8	86.6
2008	38.3	151.2	38.8	36.2	33.3	133.2	64.1	6.7	71.4	21.5	12.1	49.6

Based on data provided in Table 1.21, the only area in which MDT exceeded heavy rail peer agencies in salary cost per passenger trip was general administration. MDT’s salary cost per passenger trip, which has grown over time, is consistently double that of LACMTA, the peer agency with the highest salary cost per passenger trip.

**Table 1.21 – Salary Cost per Passenger Trip (000s) – Rail**

Salary Cost per Passenger Trip (000s) by Function - Rail										
Year	Vehicle Operations		Vehicle Maintenance		Non-vehicle Maintenance			General Administration		
	MTA	MDT	GCRTA	MDT	GCRTA	MTA	MDT	LACMTA	MDT	
	2003	\$1,229	\$719	\$536	\$646	\$950	\$817	\$893	\$154	\$343
2004	\$1,316	\$620	\$536	\$406	\$958	\$866	\$752	\$164	\$291	
2005	\$1,217	\$610	\$527	\$443	\$891	\$877	\$721	\$158	\$354	
2006	\$1,291	\$717	\$571	\$444	\$927	\$906	\$796	\$145	\$375	
2007	\$1,312	\$776	\$602	\$464	\$938	\$939	\$761	\$163	\$418	

MDT fell below bus peer agencies in salary cost per passenger trip in all functions from 2003 through 2007. MDT’s salary cost per bus passenger trip has remained relatively stable over the past five years, as illustrated in Table 1.22.

**Table 1.22 – Salary Cost per Passenger Trip (000s) – Bus**

Salary Costs per Passenger Trip (000s) by Function - Bus											
Year	Vehicle Operations		Vehicle Maintenance		Non-vehicle Maintenance			General Administration			
	KCM	MDT	KCM	MBTA	MDT	SEPTA	MDT	GCRTA	MTA	MDT	
	2003	\$2,042	\$1,673	\$624	\$370	\$400	\$284	\$80	\$361	\$306	\$209
2004	\$2,042	\$1,623	\$599	\$389	\$339	\$280	\$67	\$355	\$302	\$168	
2005	\$2,058	\$1,797	\$539	\$359	\$437	\$248	\$76	\$335	\$370	\$189	
2006	\$2,004	\$1,830	\$538	\$542	\$453	\$267	\$89	\$326	\$375	\$188	
2007	\$1,989	\$1,779	\$538	\$570	\$476	\$295	\$96	\$407	\$374	\$192	

As shown in Table 1.23, bus reported the highest salary cost per passenger trip for vehicle operations. Automated guideway recorded the highest salary cost per passenger trip for vehicle maintenance, but that cost fell significantly from 2003 to 2007. Rail reported the highest salary cost per passenger trip for non-vehicle maintenance and general administration. Rail’s salary cost per passenger trip was 8 to 11 times greater than bus and automated guideway costs for non-vehicle maintenance and two times greater than bus and automated guideway costs for general administration. While non-vehicle maintenance salary costs did decline, salary costs for general administration grew to an all-time high in 2007.

**Table 1.23 – Salary Cost per Passenger Trip (000s) – MDT by Mode**

<i>Salary Cost per Passenger Trip (000s) by Function - MDT</i>												
Year	Vehicle Operations			Vehicle Maintenance			Non-vehicle Maintenance			General Administration		
	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG	Rail	Bus	AG
2003	\$719	\$1,673	\$385	\$646	\$400	\$904	\$893	\$80	\$461	\$343	\$209	\$194
2004	\$620	\$1,623	\$293	\$406	\$339	\$669	\$752	\$67	\$364	\$291	\$168	\$155
2005	\$610	\$1,797	\$254	\$443	\$437	\$574	\$721	\$76	\$326	\$354	\$189	\$155
2006	\$717	\$1,830	\$192	\$444	\$453	\$671	\$796	\$89	\$287	\$375	\$188	\$236
2007	\$776	\$1,779	\$206	\$464	\$476	\$677	\$761	\$96	\$303	\$418	\$192	\$274

Table 1.24 indicates that MDT continued to outperform only one peer, i.e., LACMTA, despite declining revenue miles between failures.

**Table 1.24 – Revenue Miles between Failures – Rail**

<i>Revenue Miles Between Failures - Rail</i>						
Year	MBTA	SEPTA	MTA	GCRTA	LACMTA	MDT
2003	33,080	39,818	12,789	20,677	3,941	5,114
2004	32,933	39,584	12,776	22,616	3,554	6,051
2005	32,470	38,680	13,284	22,388	3,869	6,206
2006	28,789	12,318	20,900	17,645	3,626	5,266
2007	36,889	8,496	12,868	16,378	2,943	4,776
2008						4,198

While improvement was noted in revenue miles between failures for bus in 2007, as shown in Table 1.25, MDT bus remained well below peer agencies. Bus revenue miles between failures did decline in 2008.

**Table 1.25 – Revenue Miles between Failures – Bus**

<i>Revenue Miles Between Failures - Bus</i>								
Year	KCM	MBTA	SEPTA	MTA	BCT	GCRTA	LACMTA	MDT
2003	28,196	3,994	6,503	4,350	22,329	8,293	4,926	2,263
2004	34,312	3,830	6,496	4,485	21,985	7,950	4,565	2,558
2005	24,393	4,719	6,430	4,450	22,624	8,426	5,141	2,815
2006	2,382	2,964	3,660	5,600	15,622	9,113	2,756	1,943
2007	2,594	5,598	4,005	5,834	19,371	13,877	2,800	2,338
2008								2,151

Automated guideway, which functions well below peer agencies, did show significant improvement in revenue miles between failures in 2007 and 2008, as shown in Table 1.26.

**Table 1.26 – Revenue Miles between Failures – Automated Guideway**

<i>Revenue Miles Between Failures - Automated Guideway</i>			
Year	JTA	DTC	MDT
2003	4,698	18,981	1,305
2004	4,869	16,657	1,207
2005	4,580	51,036	1,184
2006	8,374	27,646	1,045
2007	25,423	19,737	1,281
2008			1,650

## Peer Review: Summary of Findings

### *Operating expenses per VOMS, 2003 - 2008*

- Heavy rail expenses consistently fell below all peers in all functions.
- Bus expenses exceeded the peer maximum in vehicle operations prior to 2007.
- Heavy rail and bus reported increased costs in most areas in 2008.

### *Employee Work Hours per VOMS, 2003 – 2007*

- Heavy rail work hours consistently exceeded the peer maximum in general administration.
- Bus work hours frequently exceeded the peer maximum in vehicle operations and vehicle maintenance.
- Bus vehicle operations work hours per VOMS declined significantly over time.
- Automated guideway required significant employee resources for vehicle maintenance and general administration.

### *Employee Work Hours per Passenger Trip, 2003 – 2008*

- Heavy rail and bus work hours exceeded peer maximums in most functions from 2003 through 2007.
- Heavy rail, bus, and automated guideway reduced work hours per passenger trip in most areas in 2008.

### ***Employee Work Hours per Revenue Mile, 2003 – 2008***

- Heavy rail 2008 general administration work hours per revenue mile fell below the 2007 record high.
- Bus work hours per revenue mile increased in 2008.
- Automated guideway work hours per revenue mile exceeded most bus and heavy rail levels, but did decline in 2008.

### ***Salary Cost per Passenger Trip, 2003 – 2007***

- Heavy rail costs exceeded the peer maximum in general administration and were consistently double that of LACMTA.
- Bus costs fell below all peer agencies in all functions, but remained relatively stable.
- Heavy rail's non-vehicle maintenance cost was 8 to 11 times greater than bus and automated guideway and 2 times greater than automated guideway administration cost.

### ***Revenue Miles between Failures, 2003 – 2008***

- Heavy rail outperformed only LACMTA
- Bus improved in 2007, but remained well below all peers.
- Heavy rail and bus revenue miles between failures declined in 2008.
- Automated guideway, which performs well below peers, showed significant improvement in 2007 and 2008.

## **Organizational Review**

During the course of the review, MDT asked that CUTR focus efforts on an examination of the impact of organizational changes on agency performance. Following enactment of the People's Transportation Plan, MDT's

organization grew significantly to enable the agency to provide for record increases in additional service. The number of full-time employees grew to 4,059 in FY 2005/2006, and vehicles operated in maximum service peaked at 957 in FY 2006/2007. As growth in service became unsustainable due to escalating costs, beginning in FY 2006/2007, MDT responded with cuts not only in service but also in staff.

Miami-Dade County had already initiated several performance-related programs and MDT focused on meeting the challenges of the newly established measures. CUTR reviewed a variety of information related to MDT's organization and overall performance published by MDC, including Business Plans from FY 2005/2006 through FY 2009/2010; adopted Resource Allocation Plans for FY 2007/2008 and FY 2008/2009; and, Scorecard/Performance Reports from FY 2005/2006, Quarter 3 through FY 2008/2009, Quarter 3.

MDT provided signed Tables of Organization for FY 2007/2008 and FY 2008/2009 and several versions of the proposed Table of Organization for FY 2009/2010. The proposed FY 2009/2010 Table of Organization dated September 18, 2009 was used for the organizational analysis.

A document of particular relevance provided for review was the Miami-Dade Transit Reorganization Analysis completed by the Miami-Dade County Office of Strategic Business Management. During the summer of 2008, as part of the FY 2008/2009 budget preparation process, OSBM was directed to undertake a countywide administrative organizational review. According to OSBM, the project team focused on:

- “developing logical reporting relationships that would facilitate excellent service delivery and internal responsiveness, and
- identifying opportunities for further resource reductions, reallocations or other adjustments at the major work unit level.”

Since MDT had already conducted a reorganization initiative in the spring of 2008, OSBM modified its evaluation of MDT to include the following objectives:

- evaluate MDT’s reorganization efforts prior to OSBM’s involvement;
- facilitate the remainder of the reorganization initiative; and,
- develop a revised Table of Organization.

OSBM presented MDT with its final report on April 24, 2009. A detailed review of the findings is discussed throughout the Staffing Allocation section of this report.

Other materials provided by MDT included:

- June 2009 analysis of overtime usage
- Summary of FY2009/2010 organizational efficiencies and approach
- July 2009 MDT administrative and operational efficiencies
- April 2009 action item matrix (MDC OSBM)
- May 2009 draft efficiency analysis completed following training in “The Accelerated Approach to Operations Improvement”
- Information related to participation in the Deferred Retirement Option Program (DROP) along with years of service and longevity data

## Structure of the MDT Organization

A review of peer agency tables of organization provides a wide range of differences in just how each individual organization is structured. The number of direct reports to the chief executive officer ranges from three at MTA to 16 at MBTA. The departmental structure within each of the organizations differs as well. MTA allocates all functions under three broad categories: Finance & Administration, Operations, and Planning & Engineering. Each agency’s direct reports to the agency director along with MDT’s reporting relationships for fiscal years (FY) 2007/2008, 2008/2009, and 2009/2010 are outlined in Table 1.27.

**Table 1.27 – Direct Reports to Agency Director**

Direct Reports to Agency Director	MDT							
	07/08	08/09	09/10	LACMTA	MBTA	MTA	GCRTA	SEPTA
Administration	X			X	X			
Advertising & Media	X							
Civil Rights & Labor Rel	X	X	X		X			
External Affairs	X	X					X	
Operations	X	X	X	XX	X	X	X	X
Planning & Development	X	X	X	XX	XXXX	X	X	X
Quality Assurance	X	X	X					
Safety & Security	X	X	X		XX			X
Service Quality	X							
Legislative Affairs & Comm			X					
Performance Management			X					
Finance & Administration						X	X	
Chief Financial Officer					X			X
Financial Services		X	X	X				
Support Services		X	X					
Communications				X				
Economic Development				X				
Management & Audit Services				X				
Deputy General Manager					X			
General Counsel					X			X
Govt Affairs & Public Policy					X			X
Press Secretary					X			
Strat Plan, Perform & Acctbly		X			X			
Systemwide Access					X			
Human Resources							X	X
Internal Audit							X	
Legal Affairs							X	
Management & Budget							X	
Marketing & Communications							X	
Audit & Investigative Services								X
Customer Service								X
Business Services								X
<b>Total Direct Reports</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>16</b>	<b>3</b>	<b>9</b>	<b>10</b>

MDT’s restructuring of the organization over the past three years held constant with nine direct reports to the agency director.

Four MDT functions fall outside of the functions that are direct-reports at the peer agencies:

- Quality Assurance
  - Quality Assurance & Quality Control Oversight on Transit Projects
  - Internal Quality Assurance Systems Audits
  - Continuous Improvement Programs using Lean Six Sigma Methodology
- Legislative Affairs & Communication
  - Agency Coordination
  - Government Affairs
  - Marketing & Advertising
- Performance Management
  - Performance Reporting
  - Knowledge Management
  - Warranty Reliability & Analysis
- Support Services
  - Information Technology
  - Service Planning & Scheduling
  - Document Management & Training
  - Human Resources

The above-mentioned functions are contained within divisions that are common to the peer agencies, and in some cases constitute direct reports. Terminology appears to be the constrictor in designation rather than the actual function. Direct-report functions at the other agencies that are not currently direct-reports at MDT are delineated in Table 1.28 along with the function to which the other agency functions report.

**Table 1.28 – MDT Reporting Structure**

Function	MDT Reporting Structure Reports to:	Direct Reports to Agency Director					
		MDT	LACMTA	MBTA	MTA	GCRTA	SEPTA
Administration	Support Services		X	X			
Advertising & Media	Leg Affairs & Comm						
Civil Rights & Labor Rel		X		X			
External Affairs	Leg Affairs & Comm					X	
Operations		X	XX	X	X	X	X
Planning & Dev		X	XX	XXXX	X	X	X
Quality Assurance		X					
Safety & Security		X		XX			X
Service Quality	Performance Mgmt						
Leg Affairs & Comm		X					
Performance Mgmt		X					
Financial Services		X	X				
Support Services		X					
Communications	Leg Affairs & Comm		X				
Economic Dev	Planning & Dev		X				
Mgmt & Audit Services	Financial Services		X				
Govt Affairs & Public Pol	Leg Affairs & Comm			X			X
Strat Plan, Perform & Acct	Performance Mgmt			X			
Human Resources	Support Services					X	X
Legal Affairs	Leg Affairs & Comm					X	
Management & Budget	Financial Services					X	
Marketing & Comm	Leg Affairs & Comm					X	
Audit & Investigative Serv	Financial Services						X
Customer Service	Leg Affairs & Comm						X
Business Services	Support Services						X

Agencies develop and modify their organizational structures to serve the organization and meet needs in the most effective and efficient way. As seen from the above examples, all six major transit agencies share common functions structured differently. While there is no industry standard that specifies the appropriate number of direct reports, modern management practice suggests seven direct reports with no more than nine as a maximum.

Figures 1.1 through 1.5 illustrate the changes that MDT made in its organizational structure from FY 2007/2008 through FY 2009/2010. For ease in identifying the changes that occurred at each stage of the reorganization process, the charts are color-coded to show where a relocated work unit originated.

In the FY 2007/2008 Table of Organization, Figure 1.1, there were nine direct reports to the MDT Director: External Affairs, Service Quality, Quality Assurance, Civil Rights & Labor Relations, Safety & Security, Advertising & Media, Deputy Director Operations, Deputy Director Planning & Development, and Deputy Director Administration. Only the Deputy Director Operations, Deputy Director Planning & Development, and Deputy Director Administration managed multiple divisions within the organization. The Director's Office consisted of the MDT Director and seven administrative staff. MDT's complement of full-time staff totaled 3,720 (339 fewer full-time staff than MDT's peak staffing year of FY 2005/2006).

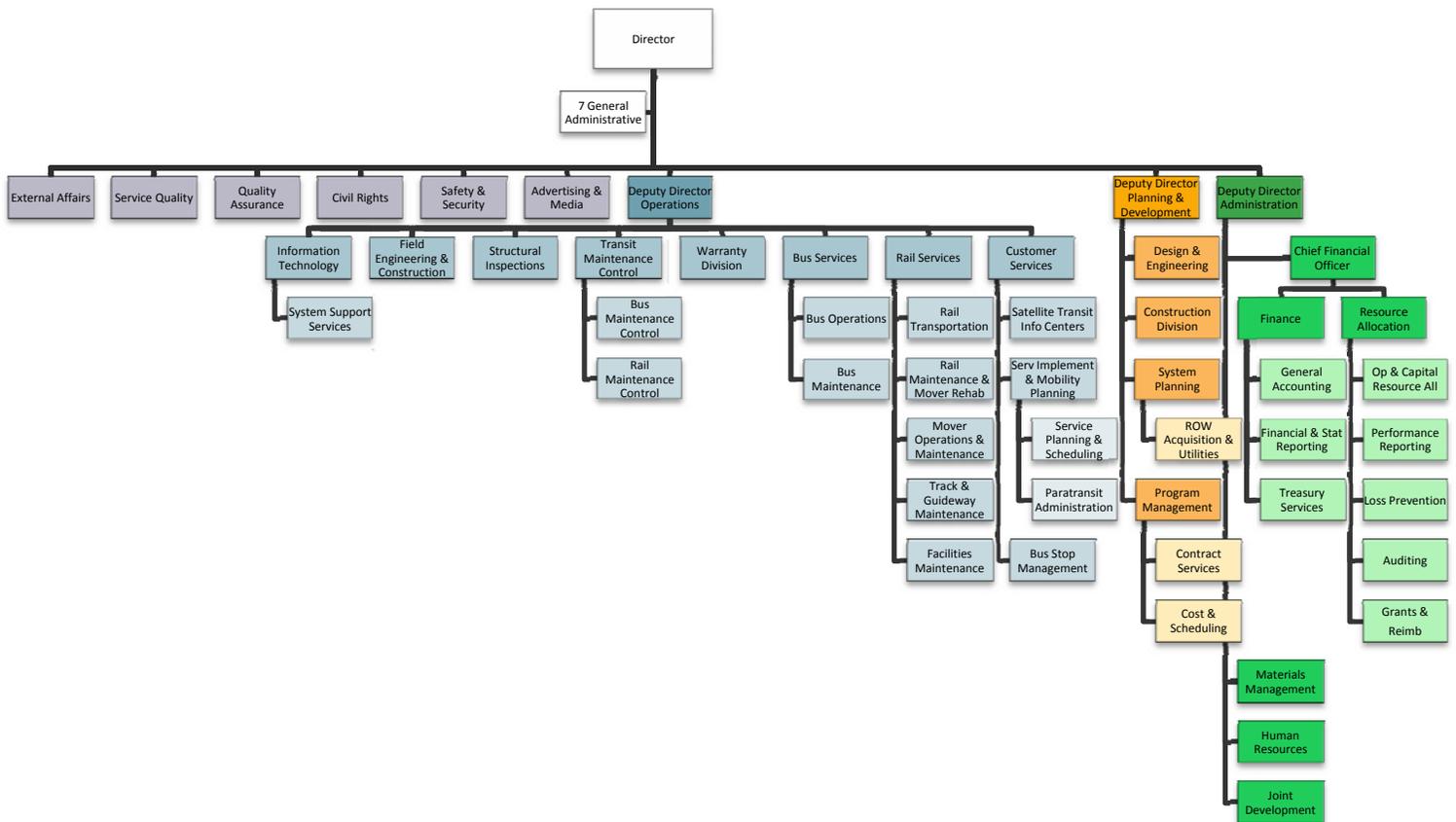


Figure 1.1 – MDT Table of Organization, FY 2007/2008

Figure 1.2 illustrates the changes that were made to the FY 2007/2008 Table of Organization for FY 2008/2009. Service Quality, as a direct report was eliminated. The Deputy Director Planning and Development Area was renamed Engineering, Planning & Development. The Engineering Planning & Development Area assumed responsibility for all functions of the former deputy in addition to Joint Development, which was transferred from Administration. Strategic Planning & Performance Management was created as a new division, and Support Services was established as a new area. Strategic Planning & Performance Management assumed control of Performance Reporting (from Administration) and a newly created division called Knowledge Management. Support Services assumed responsibility for Information Technology, Service Planning & Scheduling, and a new centralized Training area. The Human Resources Division (from Administration) was assigned to Civil Rights & Labor Relations. Materials Management (from Administration) was assigned to the Deputy Director Operations along with two new divisions: Rail/Mover Vehicle and Easy Card Center. The former Administration Area became Financial Services, responsible for Resource Allocation and Finance.

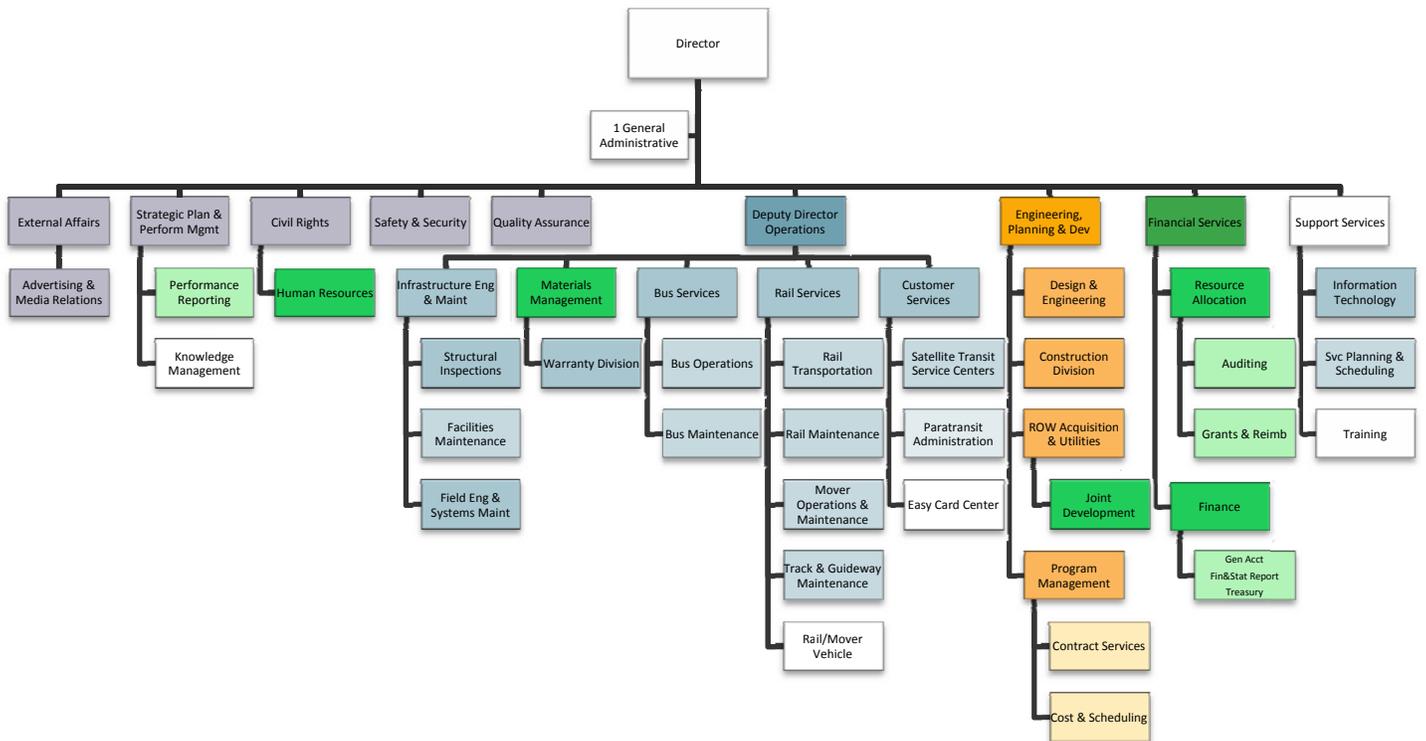


Figure 1.2 – MDT Table of Organization, FY 2007/2008 to FY 2008/2009

In the final FY 2008/2009 Table of Organization, Figure 1.3, there were nine direct reports to the MDT Director: External Affairs, Strategic Planning & Performance Management, Quality Assurance, Civil Rights & Labor Relations, Safety & Security, Deputy Director Operations, Engineering Planning & Development, Financial Services, and Support Services. Seven of the nine direct reports managed multiple divisions. The Director's Office consisted of the MDT Director and an executive secretary. MDT's complement of full-time staff totaled 3,301, a reduction of 419 full-time staff as compared to the FY 2007/2008 organization.

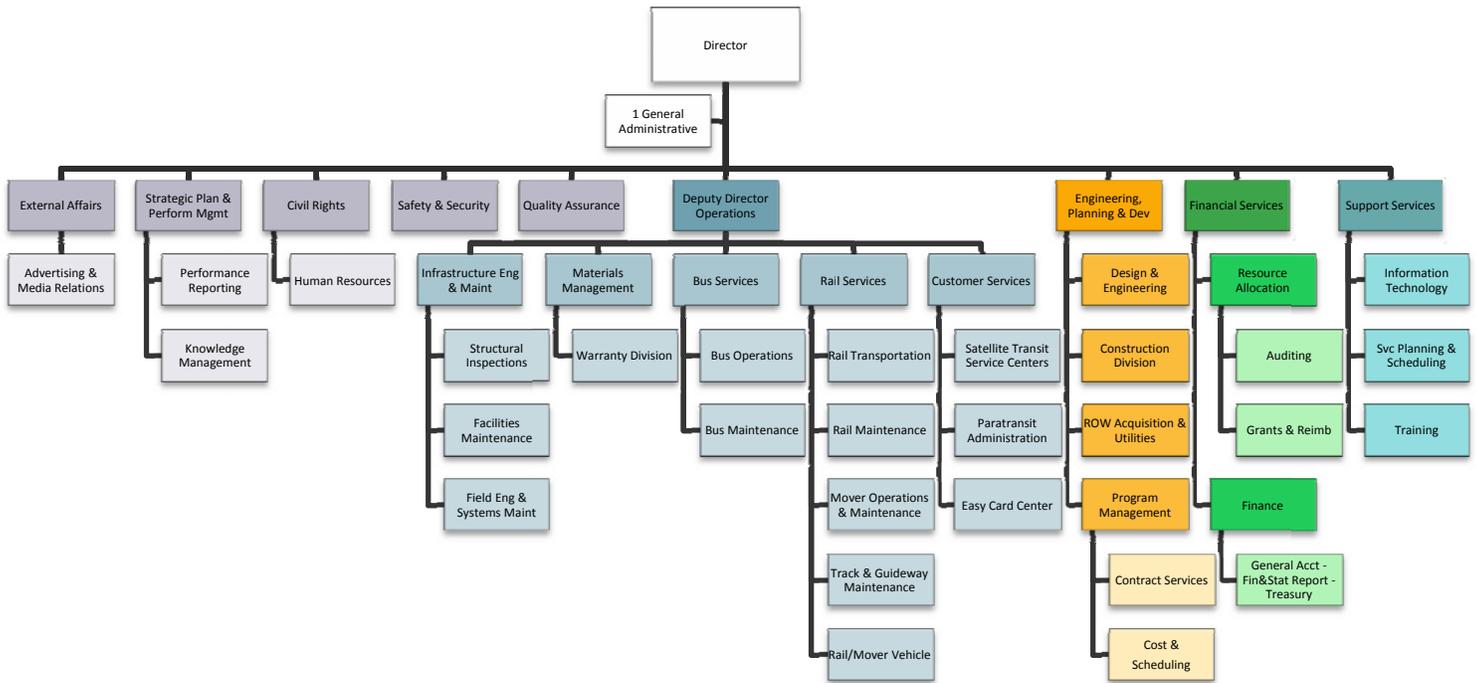


Figure 1.3 – MDT Table of Organization, FY 2008/2009

MDT continued its restructuring moving forward and proposed the modified Table of Organization for FY 2009/2010, as illustrated in Figure 1.4. External Affairs was replaced with Legislative Affairs & Communications, absorbing Marketing & Advertising, and establishing two new divisions called Agenda Coordination and Government Affairs. A new division called Performance Management replaced Strategic Planning and Performance Management and assumed responsibility for Warranty Reliability & Analysis (from Operations). With Customer Services eliminated, responsibility for the Easy Card Center was transferred to Support Services, and Paratransit Administration was transferred to Bus Services. The Human Resources Division was transferred to Support Services, where a new division called Document Management & Training was established.

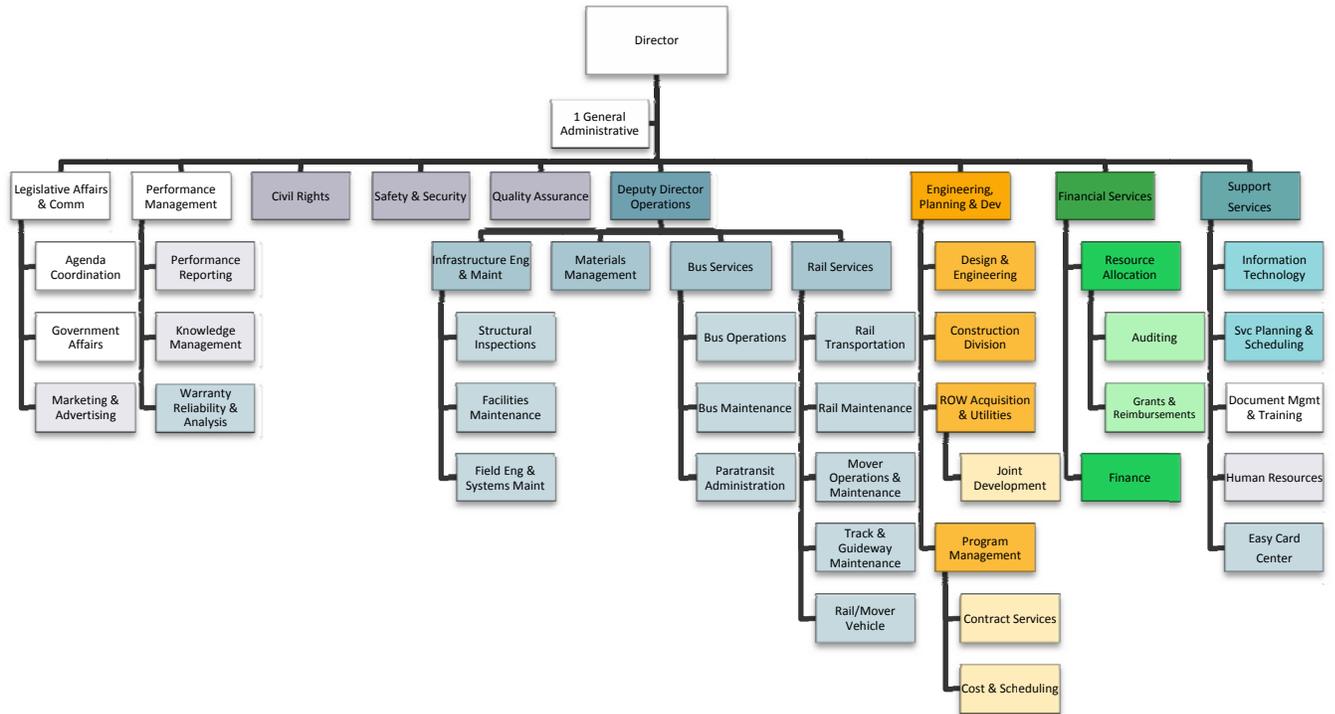


Figure 1.4 – MDT Table of Organization, FY 2008/2009 to FY 2009/2010

In the proposed FY 2009/2010 Table of Organization, Figure 1.5, there are nine direct reports to the MDT Director: Legislative Affairs & Communications, Performance Management, Quality Assurance, Civil Rights & Labor Relations, Safety & Security, Deputy Director Operations, Engineering Planning & Development, Financial Services, and Support Services. Six of the nine direct reports manage multiple divisions. The Director's Office consists of the MDT Director and an executive secretary. MDT's complement of full-time staff totals 3,201 (100 fewer full-time staff than FY 2008/2009 and 858 fewer staff than MDT's peak staffing year FY 2005/2006).

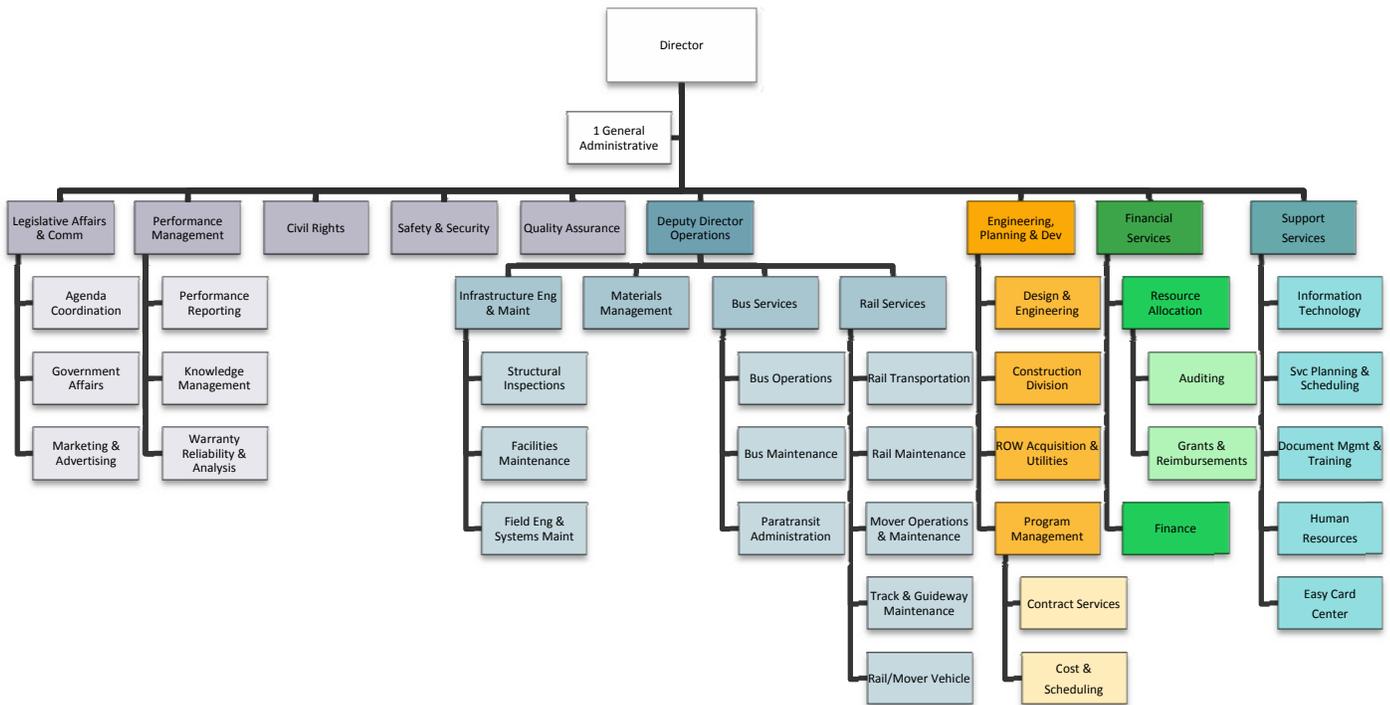


Figure 1.5 – MDT Table of Organization, FY 2009/2010

## Staffing Allocation

### MDT Director's Office

In FY 2007/2008, the MDT Director was assisted by seven administrative staff, including three special project administrators, one quality assurance specialist, and one section chief. All positions with the exception of an executive secretary were reassigned in FY 2008/2009, and no additional staff was assigned in FY 2009/2010, as summarized in Table 1.29. Director's Office staff functions as general administration staff.

**Table 1.29 – Director's Office Staffing by Function**

Director's Office	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
General Administration	8	2	-6	-75.0%	2	0	0.0%
FY 09/10 versus FY 07/08			-6	-75.0%			

### Legislative Affairs & Communications

In FY 2007/2008, External Affairs reported directly to the MDT Director with an allocation of four employees. In FY 2008/2009, the work unit was expanded to include a management position and two administrative positions, and assumed responsibility for Advertising & Media (a direct report to the MDT Director in FY 2007/2008).

OSBM found that other transit agencies surveyed either had fewer employees than MDT or relied on the county for these services and recommended that MDT implement additional staff reductions in this work unit.

In the proposed staffing allocation for FY 2009/2010, all functions of External Affairs were incorporated into two new work units: Legislative Affairs & Communication and Governmental Affairs. Legislative Affairs & Communications is a direct report to the MDT Director. Three work units report to Legislative Affairs & Communication:

- Marketing & Advertising (former Advertising & Media Relations; reported to External Affairs in FY 2008/2009)
- Agenda Coordination (new work unit established in FY 2009/2010)
- Governmental Affairs (new work unit established in FY 2009/2010)

All staff assigned to Legislative Affairs & Communication function as general administration staff as indicated in Table 1.30.

**Table 1.30 – Legislative Affairs & Communication Staffing by Function**

Legislative Affairs & Communication	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
General Administration	39	24	-15	-38.5%	22	-2	-8.3%
FY 09/10 versus FY 07/08			-17	-43.6%			

The proposed FY 2009/2010 staffing allocation and changes in the staffing over time are detailed in Table 1.31.

**Table 1.31 – Legislative Affairs & Communication Staffing by Work Unit**

Legislative Affairs & Communication	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Legislative Affairs & Communication	12	11	-1	-8.3%	6	-5	-45.5%	-6	-50.0%
Agenda Coordination	0	0	0	0.0%	2	2	100.0%	2	100.0%
Government Affairs	0	0	0	0.0%	2	2	100.0%	2	100.0%
Marketing & Advertising	27	13	-14	-51.9%	12	-1	-7.7%	-15	-55.6%
Total	39	24	-15	-38.5%	22	-2	-8.3%	-17	-43.6%

The new division significantly expanded the role of the former External Affairs Division with 17 fewer employees versus FY 2007/2008.

### Performance Management

In the FY 2007/08 allocation plan, various work units employed performance management staff. Following is an overview of employee allocations across the organization:

- Performance Reporting reported to Resource Allocation (9);

- Transit Maintenance Control reported to the Deputy Director Operations (33); and,
- Warranty Division reported to the Deputy Director of Operations (6).

MDT expressed concern that the process for collecting, organizing and distributing information was disjointed, cumbersome and time consuming. In FY 2008/2009, MDT moved all Maintenance Control employees and some Financial Services employees to the newly created Strategic Planning & Performance Management Division, which reported directly to the MDT Director.

The newly created Strategic Planning & Performance Management Division was composed of the work units:

- Strategic Planning & Performance (SPPM) work unit reporting directly to the MDT Director (7);
- Performance Reporting reported to SPPM (8);
- Transit Maintenance Control became the new Knowledge Management work unit (36); and,
- Warranty Division reported to Materials Management (5).

OSBM concurred with MDT’s decision to centralize the work unit and assign that work unit to report directly to the MDT Director; however, OSBM suggested that MDT consider incorporating Resource Allocation within the new work unit, even though OSBM acknowledged that it was uncommon for transit properties to house Resource Allocation and Strategic Planning within the same work unit.

OSBM also indicated that other transit agencies surveyed and the OSBM itself had fewer employees and suggested that MDT could

implement additional staff reductions in this area. The proposed FY 2009/2010 staffing allocation replaced the Strategic Planning & Performance Management Division with the Performance Management Division that reports directly to the MDT Director.

The consolidated performance management function included 35 vehicle operations employees and 21 general administration employees in FY 2008/2009, as illustrated in Table 1.32.

**Table 1.32 – Performance Management Staffing by Function**

Performance Management	FY07	FY08	vs FY07/08		FY09	vs FY08/09		
	/08	/09	+/-	% +/-	/10	+/-	% +/-	
General Administration	28	21	-7	0.0%	21	0	0.0%	
Vehicle Operations	30	35	5	16.7%	31	-4	-11.4%	
Total	58	56	-2	-3.4%	52	-4	-7.1%	
FY 09/10 versus FY 07/08							-6	-10.3%

Despite the additional responsibility for Warranty Reliability & Analysis, the staffing allocation for FY 2009/2010 includes four less employees (a decline of 7.1%) than FY 2008/2009, as indicated in Table 1.33.

**Table 1.33 – Performance Management Staffing by Work Unit**

Performance Management	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Performance Management	10	7	-3	100.0%	10	3	42.9%	0	100.0%
Performance Reporting	9	8	-1	0.0%	5	-3	100.0%	-4	100.0%
Knowledge Management	33	36	3	9.1%	32	-4	-11.1%	-1	-3.0%
Warranty Reliability & Analysis	6	5	-1	-16.7%	5	0	0.0%	-1	-16.7%
Total	58	56	-2	-3.4%	52	-4	-7.1%	-6	-10.3%

The Performance Management Division consolidated a variety of performance-related functions under one umbrella, which has the potential to eliminate unnecessary duplication, improve responsiveness, and enhance the quality of the final product. MDT chose to retain Resource Allocation within the Financial

Services. Providing the planning arm of the organization with control of Resource Allocation would seem to be contraindicated from a financial management perspective.

### Civil Rights & Labor Relations

Civil Rights & Labor Relations is another area within the organization for which similar services are provided by MDC.

In FY 2007/2008, Civil Rights/Labor Relations reported directly to the MDT Director with a complement of 20 employees.

Civil Rights/Labor Relations expanded its role in FY 2008/2009 to include Human Resources (from the former Deputy Director Administration), and continued its direct reporting relationship to the MDT Director.

OSBM indicated that MDT funded 12 employees in its Civil Rights/Labor Relations work unit in the FY 2008/2009 budget and reported that other transit agencies surveyed by OSBM either had fewer employees than MDT or relied on the county for services. OSBM suggested that an opportunity existed for MDT to use the county's offices for these services and reduce employee requirements accordingly.

In the proposed FY 2009/2010 staffing allocation, Civil Rights/Labor Relations added one additional employee after a 40 percent reduction in staff in FY 2008/2009. Support Services assumed responsibility for Human Resources. For consistency in this report, all references to Human Resources have been excluded from the following table, since that work unit will be discussed in conjunction with Support Services. Table 1.34 shows changes in personnel within Civil Rights/Labor Relations that includes an additional employee in FY

2009/2010 and a 35 percent reduction since FY 2007/2008.

**Table 1.34 – Civil Rights/Labor Relations Staffing by Function**

Civil Rights/Labor Relations	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
General Administration	20	12	-8	-40.0%	13	1	8.3%
FY 09/10 versus FY 07/08						-7	-35.0%

Consistent with OSBM's recommendation, efforts should be initiated to explore any possible duplication of services in this area that exists within MDC that could economically benefit MDT and enhance transit operations.

### Safety & Security

The Safety & Security Division has consistently reported directly to the MDT Director. The FY 2008/2009 and FY 2009/2010 staffing allocations show the addition of ten new employees. Seven of the ten positions are responsible for parking enforcement. Safety & Security staffing is summarized in Table 1.35.

**Table 1.35 – Safety & Security Staffing by Function**

Safety & Security	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
Vehicle Operations	5	5	0	0.0%	5	0	0.0%
General Administration	13	21	8	61.5%	23	2	9.5%
Total	18	26	8	44.4%	28	2	7.7%
FY 09/10 versus FY 07/08						10	55.6%

### Quality Assurance

The Quality Assurance Division has also consistently reported to the MDT Director. The FY 2009/2010 staffing allocation summarized in Table 1.36 reflects the elimination of two quality assurance engineers and a secretary.

**Table 1.36 – Quality Assurance Staffing by Function**

Quality Assurance	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
General Administration	9	10	1	11.1%	7	-3	-30.0%
FY 09/10 versus FY 07/08						-2	-22.2%

### Deputy Director Operations

The Deputy Director Operations has consistently reported directly to the MDT Director. The FY 2009/2010 staffing allocation, summarized in Table 1.37, reflects the addition of several engineers and a rail vehicle mechanic to the Deputy Director's staff. The technical assistance provided to the Deputy Director Operations could prove to be very useful.

**Table 1.37 – Deputy Director Operations Staffing by Function**

Deputy Director Operations	FY07	FY08	vs FY07/08		FY09	vs FY08/09		
	/08	/09	+/-	% +/-	/10	+/-	% +/-	
Vehicle Maintenance	0	0	0	0.0%	1	1	100.0%	
General Administration	7	6	-1	-14.3%	8	2	33.3%	
Total	7	6	-1	-14.3%	9	3	50.0%	
FY 09/10 versus FY 07/08							2	28.6%

In the FY 2007/2008 Table of Organization, a total of eight work units reported to the Deputy Director Operations. They are as follows:

- Information Technology Services
- Field Engineering & Construction
- Structural Inspections
- Transit Maintenance Control
- Warranty Division
- Bus Services
- Rail Services
- Customer Services

In MDT's FY 2008/2009 reorganization, a total of five work units reported to the Deputy Director Operations. They included:

- Infrastructure Engineering & Maintenance
- Materials Management
- Bus Services
- Rail Services
- Customer Services

The proposed FY 2009/2010 Table of Organization includes the following direct reports to the Deputy Director Operations:

- Infrastructure Engineering & Maintenance
- Materials Management
- Bus Services
- Rail Services
- Paratransit Administration

Changes that occurred within each of the units will be reviewed in detail. In order to ensure consistency in the presentation of material, the discussion is formatted to review the work units currently assigned to the Deputy Director Operations and the changes that have been implemented since FY 2007/2008.

### Infrastructure Engineering & Maintenance

This work unit was established in FY 2008/2009. The staffing allocation consists of a chief and administrative secretary and is summarized in Table 1.38.

**Table 1.38 – Infrastructure Engineering & Maintenance Staffing by Function**

Infrastructure Engineering & Maintenance	FY07	FY08	vs FY07/08		FY09	vs FY08/09		
	/08	/09	+/-	% +/-	/10	+/-	% +/-	
General Administration	0	2	2	100.0%	2	0	0.0%	
Total	0	2	2	100.0%	2	0	0.0%	
FY 09/10 versus FY 07/08							2	100.0%

Infrastructure Engineering & Maintenance oversees three work units:

- Structural Inspections (formerly a direct report to the Deputy Director Operations)
- Facilities Maintenance (formerly reported to the Assistant Director Rail Services)
- Field Engineering & Systems Maintenance (formerly a direct report to the Deputy Director Operations)

### Structural Inspections

In the FY 2007/2008 staffing allocation Structural Inspections was a direct report to the Deputy Director Operations. The unit was reassigned to the newly created Infrastructure Engineering & Maintenance Area in the FY

2008/2009 staffing allocation, where it reports today. The FY 2009/2010 Structural Inspections staffing allocation is summarized in Table 1.39.

**Table 1.39 – Structural Inspections Staffing by Function**

Structural Inspections	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
Non-vehicle Maintenance	7	6	-1	0.0%	6	0	0.0%
General Administration	1	2	1	100.0%	2	0	0.0%
Total	8	8	0	0.0%	8	0	0.0%
FY 09/10 versus FY 07/08						0	0.0%

### Facilities Maintenance

In the FY 2007/2008 staffing allocation Facilities Maintenance reported to Rail Services. The unit was reassigned to the newly created Infrastructure Engineering & Maintenance Area in the FY 2008/2009 staffing allocation, where it reports today. The FY 2009/2010 Facilities Maintenance staffing allocation is summarized in Table 1.40. Most of the 12 positions that were eliminated over time were non-vehicle maintenance positions, such as laborers, painters, equipment technicians, and control clerks.

**Table 1.40 – Facilities Maintenance Staffing by Function**

Facilities Maintenance	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
Non-vehicle Maintenance	71	59	-12	-16.9%	58	-1	-1.7%
General Administration	31	31	0	0.0%	28	-3	-9.7%
Total	102	90	-12	-11.8%	86	-4	-4.4%
FY 09/10 versus FY 07/08						-16	-15.7%

### Field Engineering & Systems Maintenance

In the FY 2007/2008 staffing allocation Field Engineering & Construction was a direct report to the Deputy Director Operations. The unit was renamed Field Engineering & Systems Maintenance and reassigned to the newly created Infrastructure Engineering & Maintenance Area in the FY 2008/2009 staffing allocation, where it reports today. The FY 2009/2010 Field Engineering & System Maintenance staffing allocation is summarized

in Table 1.41. Most of the 16 positions that were eliminated over time were non-vehicle maintenance positions, such as control clerks and electronic technicians.

**Table 1.41 – Field Engineering & Systems Maintenance Staffing by Function**

Field Engineering & Systems Maintenance	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
Non-vehicle Maintenance	99	80	-19	-19.2%	84	4	5.0%
General Administration	21	19	-2	-9.5%	20	1	5.3%
Total	120	99	-21	-17.5%	104	5	5.1%
FY 09/10 versus FY 07/08						-16	-13.3%

An overview of the Infrastructure Engineering & Maintenance Area staffing allocation from FY 2007/2008 through FY 2009/2010 is presented in Table 1.42.

**Table 1.42 – Infrastructure Engineering & Maintenance Staffing by Work Unit**

Infrastructure Engineering & Maintenance	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Infrastructure Engineering & Maintenance	0	2	2	100.0%	2	0	0.0%	2	100.0%
Structural Inspections	8	8	0	0.0%	8	0	0.0%	0	0.0%
Facilities Maintenance	102	90	-12	-11.8%	86	-4	-4.4%	-16	-15.7%
Field Engineering & Systems Maintenance	120	99	-21	-17.5%	104	5	5.1%	-16	-13.3%
Total	230	199	-31	-13.5%	200	1	0.5%	-30	-13.0%

Through reorganization and consolidation, MDT effectively reduced 30 staff within this area.

### Materials Management

In FY 2007/2008, Materials Management reported to the Deputy Director Administration. As a result of frequent delays in obtaining critical parts, MDT moved responsibility for Materials Management to the Deputy Director Operations. As with Human Resources, OSBM suggested that Materials Management be moved to either a location that reports directly to the Director or to a work unit that serves the entire organization. OSBM also indicated that other transit agencies that were surveyed had alternative reporting relationships and fewer

employees. OSBM recommended additional staff reductions in this area.

MDT chose to retain responsibility for Materials Management with the Deputy Director Operations given the critical importance of timely receipt of replacement parts on operations under the Deputy Director’s control.

Given that MDT has elected to continue management oversight within Operations, it might be prudent to establish additional financial oversight of materials management functions outside of the purview of Operations. Perhaps the Deputy Director Operations could work with Financial Services to establish a formal process of monitoring and oversight of procurement activities.

MDT did significantly reduce the Materials Management staffing allocation, which consists of non-vehicle maintenance and general administration employees, from 99 in FY 2007/2008 to 78 in FY 2009/2010 (a 21.1% decrease), as shown in Table 1.43. Non-vehicle maintenance employees fell from 63 to 54 (a 14.1% reduction), while general administration employees were reduced from 27 to 24 (an 11.1% reduction).

**Table 1.43 – Materials Management Staffing by Function**

Materials Management	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
	/08	/09	+/-	% +/-	/10	+/-	% +/-
Non-vehicle Maintenance	67	63	-4	-6.0%	54	-9	-14.3%
General Administration	32	27	-5	-15.6%	24	-3	-11.1%
Total	99	90	-9	-9.1%	78	-12	-13.3%
FY 09/10 versus FY 07/08						-21	-21.2%

**Bus Services**

In the FY 2007/2008 staffing allocation, the Assistant Director Bus Services reported to the Deputy Director Operations and provided oversight to Bus Operations and Bus Maintenance. Bus Services staffing totaled

2,321. Bus Services FY 2008/2009 allocation mirrored the FY 2007/2008 structure with a staffing allocation of 2,054 (a reduction of 267 employees).

The FY2009/2010 Bus Services proposed staffing allocation and incorporates Paratransit Administration, which historically reported to Customer Services.

In FY 2007/2008, Customer Services reported directly to the Deputy Director Operations. The following work units operated within the Customer Services work unit:

- Satellite Transit Info Centers
- Service Implementation & Mobility Planning
  - Service Planning & Scheduling
  - Paratransit Administration
- Bus Stop Management

In FY 2008/2009, Customer Services continued to report directly to the Deputy Director Operations; however, the composition of the unit was realigned. Service Implementation & Mobility Planning employees were reassigned, Service Planning and Scheduling was transferred to the newly created Support Services, Bus Stop Management employees were reassigned, and a new function called Easy Card Center was created within Customer Services. The following work units operated within Customer Services:

- Satellite Transit Service Centers
- Paratransit Administration
- Easy Card Center

In the proposed staffing allocation for FY 2009/2010, Customer Services and Satellite Transit Services Centers are consolidated; the Easy Card Center is relocated to Support

Services; and, Paratransit Administration reports to Bus Services.

Based on the planned changes detailed in the FY 2009/2010 Table of Organization, the Paratransit Administration staffing complement, as illustrated in Table 1.44, will be reduced by more than 36 percent in FY 2009/2010 versus FY 2007/2008.

**Table 1.44 – Paratransit Administration Staffing by Function**

<i>Paratransit Administration</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08</i>		<i>FY09 /10</i>		<i>vs FY08/09</i>	
			<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>
General Administration	49	32	-17	-34.7%	31	-1	-3.1%	
FY 09/10 versus FY 07/08						-18	-36.7%	

As indicated in Table 1.45, after incorporation of Paratransit Administration, Bus Services will reduce its complement of staff within non-vehicle maintenance by 35 percent and within general administration by more than 20 percent.

**Table 1.45 – Bus Services Staffing by Function**

<i>Bus Services</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08</i>		<i>FY09 /10</i>		<i>vs FY08/09</i>		<i>vs FY07/08</i>	
			<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>
Vehicle Operations	1,632	1,454	-178	-10.9%	1,460	6	0.4%	-172	-10.5%	
Vehicle Maintenance	477	420	-57	-11.9%	390	-30	-7.1%	-87	-18.2%	
Non-vehicle Maintenance	20	15	-5	-25.0%	13	-2	-13.3%	-7	-35.0%	
General Administration	241	197	-44	-18.3%	183	-14	-7.1%	-58	-24.1%	
Total	2,370	2,086	-284	-12.0%	2,046	-40	-1.9%	-324	-13.7%	

While the largest number of staff was eliminated from Bus Operations, the most significant reduction of 36.7 percent occurred within Paratransit Administration, as illustrated in Table 1.46.

**Table 1.46 – Bus Services Staffing by Work Unit**

<i>Bus Services</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08</i>		<i>FY09 /10</i>		<i>vs FY08/09</i>		<i>vs FY07/08</i>	
			<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>	<i>+/-</i>	<i>% +/-</i>
Bus Services	2	3	1	50.0%	3	0	0.0%	1	50.0%	
Bus Operations	1,756	1,561	-195	-11.1%	1,563	2	0.1%	-193	-11.0%	
Bus Maintenance	563	490	-73	-13.0%	449	-41	-8.4%	-114	-20.2%	
Paratransit Administration	49	32	-17	-34.7%	31	-1	-3.1%	-18	-36.7%	
Total	2,321	2,054	-267	-11.5%	2,015	-39	-1.9%	-306	-13.2%	

## Rail Services

In the FY 2007/2008 staffing allocation, the Assistant Director Rail Services reported to the Deputy Director Operations and consisted of the following work units, totaling 553 employees:

- Assistant Director Rail Services
- Rail Transportation
- Rail Maintenance/Rail Mover Rehab
- Mover Operations & Maintenance
- Track & Guideway Maintenance
- Facilities Maintenance (was reassigned to Infrastructure & Engineering Maintenance in FY 2008/2009))

In FY 2008/2009, Rail Services was restructured. A new work unit was established for Rail Mover Rehab, which existed previously within the Rail Maintenance work unit. This new work unit was dedicated to vehicle replacements. OSBM was unable to find any distinct work units dedicated to vehicle replacements in any of the organizations OSBM reviewed. OSBM recommended a variety of alternatives for MDT's consideration, including: evaluate alternatives for tracking vehicle replacement funds, consider using Financial Services for this function, or consider eliminating this work unit at the conclusion of the current vehicle replacement cycle.

MDT did continue the Rail/Mover work unit despite OSBM's recommendations. Possible recommendations for enhancing the effectiveness of this unit include replacing the administrative secretary or the special projects administrator with an employee experienced in and familiar with accounting practices and re-examining the need for two supervisors (one of which is a chief) to oversee four technicians.

No structural changes were made in Rail Services in the FY 2009/2010 staffing allocation; although, reduction of positions did continue. Rail Services' complement of staff was reduced to 495 and included the following work units.

- Rail Services
- Rail Transportation
- Rail Maintenance
- Mover Operations & Maintenance
- Track & Guideway Maintenance
- Rail/Mover Vehicle

Table 1.47 illustrates changes in the Rail Services. The staffing complement was reduced within several functions by more than 11 percent and within overall staff in excess of nine percent in FY 2009/2010 versus FY 2007/2008.

**Table 1.47 – Rail Services Staffing by Function**

Rail Services	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Vehicle Operations	93	86	-7	-7.5%	82	-4	-4.7%	-11	-11.8%
Vehicle Maintenance	250	228	-22	-8.8%	222	-6	-2.6%	-28	-11.2%
Non-vehicle Maintenance	105	94	-11	-10.5%	93	-1	-1.1%	-12	-11.4%
General Administration	101	94	-7	-6.9%	98	4	4.3%	-3	-3.0%
Total	549	502	-47	-8.6%	495	-7	-1.4%	-54	-9.8%

The largest number of staff was eliminated from Rail Maintenance, where the most significant reduction of 14.3 percent also occurred, as illustrated in Table 1.48.

**Table 1.48 – Rail Services Staffing by Work Unit**

Rail Services	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Rail Services	6	5	-1	-16.7%	6	1	20.0%	0	0.0%
Rail Transportation	123	113	-10	-8.1%	114	1	0.9%	-9	-7.3%
Rail Maintenance	210	185	-25	-11.9%	180	-5	-2.7%	-30	-14.3%
Mover Operations & Maintenance	78	70	-8	-10.3%	69	-1	-1.4%	-9	-11.5%
Track & Guideway Maintenance	132	121	-11	-8.3%	118	-3	-2.5%	-14	-10.6%
Rail/Mover Vehicle	0	8	8	100.0%	8	0	0.0%	8	100.0%
Total	549	502	-47	-8.6%	495	-7	-1.4%	-54	-9.8%

An overview of Operations staffing allocation from FY 2007/2008 through FY 2009/2010 is presented in Table 1.49.

**Table 1.49 – Operations Staffing by Work Unit**

Operations	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Deputy Director	7	6	-1	-14.3%	9	3	50.0%	2	28.6%
Infrastructure Engineering & Maintenance	230	199	-31	-13.5%	200	1	0.5%	-30	-13.0%
Materials Management	99	90	-9	-9.1%	78	-12	-13.3%	-21	-21.2%
Bus Services	2,370	2,086	-284	-12.0%	2,046	-40	-1.9%	-324	-13.7%
Rail Services	549	502	-47	-8.6%	495	-7	-1.4%	-54	-9.8%
Satellite Transit Information Centers	7	20	13	185.7%	0	-20	-100.0%	-7	-100.0%
Total	3,262	2,903	-359	-11.0%	2,828	-75	-2.6%	-434	-13.3%

Bus Services reduced the largest number of staff, while the Materials Management reduced the largest percentage of staff. Through reorganization and consolidation, MDT effectively reduced a total of 434 staff within this area.

### Engineering Planning & Development

In FY 2007/2008, the Deputy Director Planning & Development reported directly to the MDT Director with a complement of 59 employees. The four following work units reported to the Deputy Director Planning & Development:

- Design & Engineering
- Construction
- System Planning
  - Right-of-way (ROW) Acquisition & Utilities
- Program Management
  - Contract Services
  - Cost & Scheduling

In FY 2008/2009, MDT reclassified the Deputy Director Planning & Development to a new position called Assistant Director, Engineering Planning & Development, and the area was established as Engineering Planning & Development. The System Planning work unit was consolidated and the revamped ROW Acquisition & Utilities work unit reported directly to Engineering Planning &

Development. Joint Development (from Financial Services) was integrated into the ROW Acquisition & Utilities work unit.

The composition of the area was modified as follows:

- Engineering Planning & Development
- Design & Engineering
- Construction
- ROW Acquisition & Utilities
  - Joint Development
- Program Management
  - Contract Services
  - Cost & Scheduling

OSBM reported that MDT funded eight employees in its ROW & Utilities work unit in the FY 2008/2009 budget, while MDC's Public Works Department had a work unit that performed these services. MDT had indicated a planned transfer of two employees to the Public Works Department; however, OSBM recommended that MDT evaluate the need to transfer two employees to the Public Works Department to cover MDT's workload.

The proposed staffing allocation for FY 2009/2010 retained the same structure within the area but reduced the number of assigned employees.

Table 1.50 illustrates changes in the Engineering, Planning & Development Area. The staffing complement of general administration employees was reduced by more than 37 percent in FY 2009/FY2010 versus FY 2007/2008.

**Table 1.50 – Engineering, Planning & Development Staffing by Function**

<i>Engineering Planning &amp; Development</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08 +/- % +/-</i>	<i>FY09 /10</i>	<i>vs FY08/09 +/- % +/-</i>
General Administration	59	47	-12 -20.3%	37	-10 -21.3%
FY 09/10 versus FY 07/08					-22 -37.3%

As indicated in Table 1.51, the restructured area reduced its complement of staff by 20 percent in FY 2008/2009 and again by 20 percent in FY 2009/2010, with the largest reduction reported in Program Management.

**Table 1.51 – Engineering, Planning & Development Staffing by Work Unit**

<i>Engineering Planning &amp; Development</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08 +/- % +/-</i>	<i>FY09 /10</i>	<i>vs FY08/09 +/- % +/-</i>	<i>vs FY07/08 +/- % +/-</i>
Assistant Director	3	3	0 0.0%	3	0 0.0%	0 0.0%
Design & Engineering	9	8	-1 -11.1%	7	-1 -12.5%	-2 -22.2%
Construction Division	10	9	-1 -10.0%	10	1 11.1%	0 0.0%
ROW Acquisition & Utilities + Sys Plan FY08	16	8	-8 -50.0%	8	0 0.0%	-8 -50.0%
Program Management	21	19	-2 -9.5%	9	-10 -52.6%	-12 -57.1%
Total	59	47	-12 -20.3%	37	-10 -21.3%	-22 -37.3%

These actions are consistent with OSBM's recommendation that MDT explore additional staff reductions in this area following future planning alternatives explored at the 2008 Transit Summit.

**Financial Services**

In FY 2007/2008, financial services functions were consolidated in two work units - Finance and Resource Allocation. Oversight was provided by the Chief Financial Officer, who reported to the Deputy Director Administration. Following is the reporting relationship:

- Chief Financial Officer
  - Finance
    - General Accounting
    - Financial & Stat Reporting
    - Treasury Services
  - Resource Allocation
    - Operating & Capital Resource Allocation

- Performance Reporting
- Loss Prevention
- Auditing
- Grants & Reimbursements

In FY 2008/2009, MDT undertook a major restructuring of Administration that resulted in the creation of Financial Services as an area that reported directly to the Director. The new structure is as follows:

- Finance
  - General Accounting
  - Financial & Stat Reporting
  - Treasury Services
- Resource Allocation
  - Operating & Capital Resource Allocation
  - Auditing
  - Grants & Reimbursements

Performance Reporting was transferred to the new Strategic Planning & Performance Management Division, and Loss Prevention responsibilities were relocated to the Safety & Security Division.

OSBM indicated that other transit agencies surveyed either had a smaller percentage of financial services employees than MDT or relied on the county for services. OSBM recommended that MDT implement additional staff reductions in this work unit.

In the FY 2009/2010 staffing allocation, Financial Services was restructured as follows:

- Financial Services
- Finance (General Accounting/Financial & Stat Reporting)
  - Treasury Services
- Resource Allocation (Operating & Capital Resource Allocation)
  - Grants & Reimbursements

- Auditing

Table 1.52 illustrates changes in Financial Services. Vehicle operations employees declined by almost seven percent, while general administration employees increased by almost two percent in FY 2009/FY2010 versus FY 2007/2008.

**Table 1.52 – Financial Services Staffing by Function**

Financial Services	FY07	FY08	vs FY07/08		FY09	vs FY08/09		
	/08	/09	+/-	% +/-	/10	+/-	% +/-	
Vehicle Operations	50	45	-5	-10.0%	42	-3	-6.7%	
General Administration	44	40	-4	-9.1%	43	3	7.5%	
Total	94	85	-9	-9.6%	85	0	0.0%	
FY 09/10 versus FY 07/08							-9	-9.6%

Financial Services reduced its complement of staff over time, as illustrated in Table 1.53.

**Table 1.53 – Financial Services Staffing by Work Unit**

Financial Services	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Financial Services	5	3	-2	-40.0%	3	0	0.0%	-2	-40.0%
Finance/General Accounting/Financial & Stat Reporting	24	22	-2	-8.3%	23	1	4.5%	-1	-4.2%
Treasury Services	50	45	-5	-10.0%	42	-3	-6.7%	-8	-16.0%
Resource Allocation	11	12	1	9.1%	11	-1	-8.3%	0	0.0%
Auditing	4	3	-1	-25.0%	6	3	100.0%	2	50.0%
Total	94	85	-9	-9.6%	85	0	0.0%	-9	-9.6%

**Support Services**

In the FY 2008/2009 staffing allocation plan, Information Technology was re-established under Support Services, a direct report to the MDT Director. Responsibility for three existing work units and one new work unit was transferred to the new Support Services Area. Following are descriptions of the divisions.

**Information Technology**

OSBM indicated that the Information Technology Division was designed to serve the entire department and should not be assigned to a single, specialized operating division. Furthermore, OSBM recommended that MDT

relocate Information Technology to a location that either reported directly to the MDT Director or was housed within a work unit designed to serve the entire organization. MDT moved the Information Technology work unit to report to Support Services, a newly created area that served the entire organization.

Table 1.54 illustrates changes in the Information Technology work unit. The staffing complement of general administration employees was reduced by nearly ten percent in FY 2009/FY2010 versus FY 2007/2008.

**Table 1.54 – Information Technology Staffing by Function**

<i>Information Technology Services</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08</i>		<i>FY09 vs FY08/09</i>		
			<i>+/-</i>	<i>% +/-</i>	<i>/10</i>	<i>+/-</i>	<i>% +/-</i>
General Administration	41	37	-4	-9.8%	37	0	0.0%
FY 09/10 versus FY 07/08						-4	-9.8%

**Service Planning & Scheduling**

Service Planning & Scheduling was housed in Customer Services and reported to Service Implementation & Mobility Planning. The unit was transferred to Support Services.

Table 1.55 illustrates changes in the Service Planning & Scheduling work unit. FY 2007/2008 includes three general administration employees assigned to Implementation & Mobility Planning that were subsequently reassigned in FY 2008/2009. Reduction of Service Planning & Scheduling staff in all three functions resulted in a 31.4 percent decrease in FY 2009/FY2010 versus FY 2007/2008.

**Table 1.55 – Service Planning & Scheduling Staffing by Function**

<i>Service Planning &amp; Scheduling</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08</i>		<i>FY09 vs FY08/09</i>		
			<i>+/-</i>	<i>% +/-</i>	<i>/10</i>	<i>+/-</i>	<i>% +/-</i>
Vehicle Operations	18	14	-4	-22.2%	15	1	7.1%
Non-vehicle Maintenance	2	0	-2	100.0%	0	0	0.0%
General Administration	15	9	-6	-40.0%	9	0	0.0%
Total	35	23	-12	-34.3%	24	1	4.3%
FY 09/10 versus FY 07/08						-11	-31.4%

**Document Management & Training**

Training staff assigned throughout the agency were assembled into a new centralized training work unit assigned to Support Services.

In the FY 2009/2010 Support Services staffing allocation, MDT expanded the Training Division to include document management that was renamed “Document Management & Training Division.”

Consolidation of the training function within a single work unit assigned to an area that serves the entire organization would seem to be a positive move not only from an efficiency perspective but also to enhance training effectiveness. Training staff can work together to ensure relevant policies and procedures are consistently addressed and provide training programs developed by a cohesive group that are based on agency-wide needs and sensitive to agency priorities.

Table 1.56 illustrates changes in the Document Management & Training work unit. FY 2007/2008 includes all training instructors and training supervisors located within Bus and Rail Services. Reduction of staff resulted in a 9.4 percent decrease in FY 2009/FY2010 versus FY 2007/2008.

**Table 1.56 – Document Management & Training Staffing by Function**

<i>Document Management &amp; Training</i>	<i>FY07 /08</i>	<i>FY08 /09</i>	<i>vs FY07/08</i>		<i>FY09 vs FY08/09</i>		
			<i>+/-</i>	<i>% +/-</i>	<i>/10</i>	<i>+/-</i>	<i>% +/-</i>
General Administration	32	34	2	6.3%	29	-5	-14.7%
FY 09/10 versus FY 07/08						-3	-9.4%

MDT also relocated Human Resources to Support Services.

**Human Resources**

In FY 2007/2008, Human Resources reported to the Deputy Director Administration. As a result of frequent delays in filling vacancies, MDT

proposed assigning responsibility for Human Resources to the Deputy Director Operations. OSBM indicated that Human Resources should be moved to either a location that reports directly to the Director or to a work unit that serves the entire organization. In FY 2008/2009, MDT moved responsibility for Human Resources to the Office of Civil Rights & Labor Relations, which reported directly to the Director. OSBM also indicated that MDT funded 59 employees in its Human Resources Division along with 12 positions for payroll in MDC's centralized Human Resources Department, while other transit agencies surveyed either had a smaller percentage of Human Resources employees or relied on the county for services. OSBM concluded that the opportunity existed for MDT to implement additional staff reductions in this division.

After it was determined that Federal Transit Administration (FTA) rules required the separation of Labor Relations and Human Resources, MDT moved responsibility for Human Resources to the newly created Support Services area effective in the FY 2009/2010 Table of Organization. Since Support Services is a direct report and an area that serves the entire organization, the reassignment complied with OSBM's earlier recommendations.

Table 1.57 illustrates changes in the Human Resources Division. Reduction of Human Resources staff resulted in a 39.4 percent decrease in FY 2009/2010 versus FY 2007/2008.

**Table 1.57 – Human Resources Staffing by Function**

	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
Human Resources	/08	/09	+/-	% +/-	/10	+/-	% +/-
General Administration	33	24	-9	-27.3%	20	-4	-16.7%
FY 09/10 versus FY 07/08						-13	-39.4%

**Easy Card Center**

Two new work units, Pass Sales and the Easy Card Center, were consolidated as the Easy Card Center, and the newly created division was transferred from Customer Services to Support Services.

Table 1.58 illustrates changes in the Easy Card Center, where a reduction in staff resulted in a 11.1 percent decrease in FY 2009/2010 versus FY 2007/2008.

**Table 1.58 – Easy Card Center Staffing by Function**

	FY07	FY08	vs FY07/08		FY09	vs FY08/09	
Easy Card Center	/08	/09	+/-	% +/-	/10	+/-	% +/-
General Administration	9	16	7	77.8%	8	-8	-50.0%
FY 09/10 versus FY 07/08						-1	-11.1%

The consolidation of revenue generating services, such as Pass Sales and the Easy Card Center, within Support Services appears to be based on a need to ensure that extensive technological requirements of Pass Sales and the Easy Card Center are sufficiently met.

In the FY 2009/2010 staffing allocation, Support Services is structured as follows:

- Support Services
- Information Technology
- Service Planning & Scheduling
- Document Management & Training
- Human Resources
- Easy Card Center

As indicated in Table 1.59, restructured Support Services reduced its complement of staff by 16 percent in FY 2009/2010 in comparison to FY 2007/2008.

**Table 1.59 – Support Services Staffing by Work Unit**

Support Services	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Support Services	2	2	0	0.0%	3	1	50.0%	1	50.0%
Information Technology	41	37	-4	-9.8%	37	0	0.0%	-4	-9.8%
Service Planning & Scheduling	35	23	-12	-34.3%	24	1	4.3%	-11	-31.4%
Human Resources	33	24	-9	-27.3%	20	-4	-16.7%	-13	-39.4%
Document Management & Training	32	34	2	6.3%	29	-5	-14.7%	-3	-9.4%
Easy Card Center	9	16	7	77.8%	14	-2	-12.5%	5	55.6%
<b>Total</b>	<b>152</b>	<b>136</b>	<b>-16</b>	<b>-10.5%</b>	<b>127</b>	<b>-9</b>	<b>-6.6%</b>	<b>-25</b>	<b>-16.4%</b>

Consistent with OSBM’s recommendation, the Human Resources staffing allocation, which is composed entirely of general administration employees, was reduced from 33 in FY 2007/2008 to 20 in FY 2009/2010 (a 39.4% decrease).

MDT was clearly responsive to OSBM’s recommendation and went a step beyond in incorporating Services Planning & Scheduling within Support Services. Support Services developed an integrated unit of services for the entire organization, particularly since the Document Management & Training Division is also contained within Support Services.

**Impact of Restructuring**

An overview of the change in full-time positions by function is presented in Table 1.60. MDT eliminated a total of 518 full-time positions in FY 2009/2010 versus FY 2007/2008. While the largest number of those positions was gleaned from vehicle operations, general administration actually reduced the largest percentage. All functions within the organization were impacted by the downsizing.

**Table 1.60 – MDT Staffing by Function**

Miami-Dade Transit	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Vehicle Operations	1,828	1,639	-189	-10.3%	1,635	-189	-11.5%	-193	-10.6%
Vehicle Maintenance	727	648	-79	-10.9%	613	-79	-12.2%	-114	-15.7%
Non-vehicle Maintenance	371	317	-54	-14.6%	308	-54	-17.0%	-63	-17.0%
General Administration	793	697	-96	-12.1%	645	-96	-13.8%	-148	-18.7%
<b>Total</b>	<b>3,719</b>	<b>3,301</b>	<b>-418</b>	<b>-11.2%</b>	<b>3,201</b>	<b>-100</b>	<b>-3.0%</b>	<b>-518</b>	<b>-13.9%</b>

Changes in the composition of the MDT organization by function are detailed in Table 1.61. Allocations, as a percentage of total allocations, within vehicle maintenance, non-vehicle maintenance, and general administration all declined as vehicle operations, despite the most significant reduction in the number of positions, grew by almost two percent.

**Table 1.61 – MDT Staffing Composition by Function**

Miami-Dade Transit	FY07/08	FY08/09	FY09/10
Vehicle Operations	49.2%	49.7%	51.1%
Vehicle Maintenance	19.5%	19.6%	19.2%
Non-vehicle Maintenance	10.0%	9.6%	9.6%
General Administration	21.3%	21.1%	20.1%

Changes in composition by division are presented in Table 1.62. Operations accounted for the largest reduction in positions with 434 fewer than in FY 2007/2008. All divisions, with the exception of Safety & Security, reduced positions moving forward. In two years, MDT eliminated a total of 518 positions, producing an organization that is almost 14 percent smaller than the FY 2007/2008 organization as MDT moved to align its activities to try to match service needs with available funding.

**Table 1.62 – MDT Staffing by Division**

Miami-Dade Transit	FY07	FY08	vs FY07/08		FY09	vs FY08/09		vs FY07/08	
	/08	/09	+/-	% +/-	/10	+/-	% +/-	+/-	% +/-
Director's Office	8	2	-6	-75.0%	2	0	0.0%	-6	-75.0%
Legislative Affairs & Communication	39	24	-15	-38.5%	22	-2	-8.3%	-17	-43.6%
Performance Management	58	56	-2	-3.4%	52	-4	-7.1%	-6	-10.3%
Civil Rights & Labor Relations	20	12	-8	-40.0%	13	1	8.3%	-7	-35.0%
Safety & Security	18	26	8	44.4%	28	2	7.7%	10	55.6%
Quality Assurance	9	10	1	11.1%	7	-3	-30.0%	-2	-22.2%
Operations	3,262	2,903	-359	-11.0%	2,828	-75	-2.6%	-434	-13.3%
Engineering Planning & Development	59	47	-12	-20.3%	37	-10	-21.3%	-22	-37.3%
Financial Services	94	85	-9	-9.6%	85	0	0.0%	-9	-9.6%
Support Services	152	136	-16	-10.5%	127	-9	-6.6%	-25	-16.4%
<b>Total</b>	<b>3,719</b>	<b>3,301</b>	<b>-418</b>	<b>-11.2%</b>	<b>3,201</b>	<b>-100</b>	<b>-3.0%</b>	<b>-518</b>	<b>-13.9%</b>

## **Staffing Allocation: Summary of Findings**

- MDT's consolidation of a variety of performance-related functions within a new Performance Management Division has the potential to eliminate unnecessary duplication, improve responsiveness, and enhance the quality of the final product.
- MDT's decision to retain Resource Allocation within Financial Services seems to be prudent from a financial management perspective.
- Consistent with OSBM's recommendation, efforts should be initiated to explore further any possible duplication of services in the division of Civil Rights & Labor Relations within Miami-Dade County.
- The Safety & Security Division was the only division that expanded.
- The assignment of technical assistance positions to the Deputy Director Operations could prove to be very useful.
- Most of the Facilities Maintenance and Engineering & System Maintenance positions eliminated were non-vehicle maintenance positions.
- Through reorganization and consolidation, MDT effectively reduced 30 staff within Infrastructure Engineering & Maintenance.
- With responsibility for Materials Management assigned to the Deputy Director Operations, it might be prudent to establish additional financial oversight of materials management functions outside of the purview of Operations.
- Given OSBM's recommendations regarding the Rail/Mover Vehicle work unit, possible recommendations for enhancing the effectiveness of the Rail/Mover Vehicle work unit include the addition of personnel skilled in accounting and a review of supervisory requirements.
- Paratransit Administration, an operating unit, is now a direct report Bus Services.
- Through reorganization and consolidation, MDT effectively reduced a total of 434 staff within Operations.
- Consolidation and staff reductions undertaken in Engineering Planning & Development are consistent with OSBM's recommendation that MDT explore additional staff reductions in this area.
- The relocation of Information Technology to Support Services is in line with OSBM's recommendation.
- MDT 's consolidation of the training function within a single work unit assigned to an area that serves the entire organization would seem to be a positive move not only from an efficiency perspective but also to enhance training effectiveness.
- The assignment of Human Resources to Support Services, a direct report and an area that serves the entire organization, complies with OSBM's recommendations.
- Support Services has established an integrated unit of services for the entire organization.

## **Performance Metrics**

MDT asked CUTR to examine performance trends in relationship to changes in the structure of the organization over time. A detailed comparison of MDT's performance in relationship to peer agency performance was presented in an earlier section of the report. As there is generally a two year delay in the publication of transit agency data, the most recent data available for peer agencies was 2007, the first year that MDT enacted

significant staffing reductions and major organizational realignment, making it impossible to compare the impact of MDT's realignment on performance with peers beyond 2007.

In addition, since standardized performance measures for transit have yet to be developed for the industry, agencies must rely on an evaluation of performance through the use of established internal standards along with agency trends in recent years.

Some states have chosen to establish performance standards for transit agencies. The Institute for Transportation Research and Education at North Carolina State University developed a benchmarking guidebook for North Carolina Department of Transportation (NCDOT) public transportation systems.<sup>4</sup> The purpose of the guidebook was to provide public transportation managers with a process to conduct benchmarking within North Carolina transportation organizations with the goal of ensuring effective and efficient public services through prudent use of resources. Two sets of performance measures were designed to gauge quality and quantity of service, efficiency and effectiveness of service, vehicle/employee utilization, and customer satisfaction. The following benchmark measures were recommended for trend analysis and peer group analysis of fixed route service:<sup>5</sup>

- Quantity and Quality of Service

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<sup>4</sup> Benchmarking for North Carolina Public Transportation Systems Final Report, Institute for Transportation Research and Education, Public Transportation Group, June 2006.

<sup>5</sup> Benchmarking for North Carolina Public Transportation Systems Final Report, Institute for Transportation Research and Education, Public Transportation Group, June 2006, Page 35.

- Square miles/vehicle in peak service
- Vehicle miles/square miles
- Vehicle miles/capita
- Population/vehicle in peak service
- Passenger trips/capita
- Revenue miles between failures
- Accidents/100,000 vehicle miles
- Complaints/10,000 passenger trips
- Percent on-time performance
- Efficiency & Effectiveness of Service
  - Passenger trips/vehicle mile (total and/or Mon-Fri)
  - Passenger trips/vehicle hour (total and/or Mon-Fri)
  - Cost/passenger trip
  - Recovery ratio
  - Cost/vehicle mile
  - Cost/vehicle hour
- Vehicle/Employee Utilization
  - Passenger trips/vehicle
  - Vehicle miles/vehicle
  - Passenger trips/driver FTE
- Other
  - Customer satisfaction

Upon completion of the benchmarking process, the North Carolina Department of Transportation Public Transportation Division (NCDOT/PTD) was required to adopt minimum benchmark standards for all transit systems within North Carolina. In an attempt to ensure the methodology would be easy to understand and administer, NCDOT/PTD selected only ten of the measures identified in the benchmarking process for fixed route service. Since NCDOT/PTD's goal was to increase system productivity through the most effective use of limited state funding, all selected measures related to efficiency and effectiveness. Standards related to service coverage were not chosen due to NCDOT/PTD's concern about

their potential to lessen efficiency and effectiveness.

Following is a list of the minimum state standards recommended by NCDOT/PTD:

- Quantity and Quality of Service
  - Revenue miles between failures
  - Accidents/100,000 vehicle miles
- Efficiency & Effectiveness of Service
  - Passenger trips/vehicle mile
  - Passenger trips/vehicle hour
  - Cost/passenger trip
  - Recovery ratio
  - Cost/vehicle mile
  - Cost/vehicle hour
- Vehicle/Employee Utilization
  - Vehicle miles/vehicle
  - Passenger trips/driver FTE

It should be noted that while customer satisfaction was one of the four categories of performance to be measured, it was not included in the list of ten measures recommended for statewide application due to the costs associated with data collection.<sup>6</sup>

The Wisconsin Department of Transportation (WisDOT) is required to have cost efficiency standards for Wisconsin transit systems as specified in Administrative Rule TRANS 4, “The department shall assess the performance of each transit system receiving aid under the state {state operating assistance} program on an annual basis, using the six performance

indicators defined in sub. (2)...”<sup>7</sup> The six performance indicators are:

- Passenger trips/capita
- Operating expense/passenger trip
- Operating cost/revenue hour
- Recovery ratio (ratio of revenues to operating expenses)
- Passenger trips/revenue hour
- Vehicle revenue hours/capita

It is interesting to note the commonalities and differences in the metrics selected by North Carolina and Wisconsin. Both systems incorporated cost per passenger trip and recovery ratio. Only Wisconsin uses service area metrics (passenger trips per capita and vehicle revenue hours per capita). North Carolina relies on vehicle miles and hours, while Wisconsin focuses on the more productive service metric of revenue miles and revenue hours.

With the passage of House Bill 985 in 2007, the Florida Transportation Commission (Commission) was given an expanded oversight role that encompassed the monitoring and oversight of 15 transportation authorities created under Chapters 343 and 348, Florida Statutes. As a result of the legislative mandates, the Commission, in concert with the affected authorities, adopted performance measures and objectives, operating indicators and governance criteria to assess the overall responsiveness of each authority in meeting

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<sup>6</sup> TCRP Project G-11, A Methodology for Performance Measurement and Peer Comparison in the Public Transportation Industry, Appendix: Literature Review Addendum, Page 65.

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<sup>7</sup>In a letter to Members of Wisconsin Legislature from Chief, Public and Specialized Transit Section, October 8, 2007, the Chief wrote regarding 2007 Cost-efficiency Analysis for Wisconsin’s Public Transit Systems.

their responsibilities to their customers.<sup>8</sup> Two of the agencies, Central Florida Regional Transportation Authority (CFRTA, dba LYNX) and South Florida Regional Transportation Authority (SFRTA, Tri-Rail), are transit agencies. The Commission established the following performance measures specifically for the transit authorities:

- Average headway
- Operating expense/revenue mile
- Operating expense/revenue hour
- Operating revenue/operating expense
- Operating expense/passenger trip
- Operating expense/passenger mile
- Revenue miles between safety incidents (specific to LYNX)
- Major incidents (specific to Tri-Rail)
- Revenue miles between failures
- Revenue miles versus vehicle miles
- Average time from customer complaint to response
- Customer complaints/5,000 boardings
- On-time performance

For each of the measures, the Commission established an objective, i.e., a target for acceptable performance that is reviewed annually by the Commission. The Commission also established a rather extensive list of operating indicators (see Appendix A) that were not tied to performance objectives but do track agency trends and performance over time. The Commission's performance measures and operating indicators mirror those selected by both NCDOT/PTD and WisDOT.

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<sup>8</sup> Florida Transportation Commission, Transportation Authority Monitoring and Oversight, Fiscal Year 2008, March 2009.

## **MDT Performance Measures**

One of the methods that the Miami-Dade County Management Planning and Performance Analysis (MPPA) Division of OSBM uses to measure results and progress of MDT's performance and initiatives is the Performance Management System. A critical component of the system is the "Balanced Scorecard," which county departments, including Miami-Dade Transit, use to evaluate organizational performance from a variety of perspectives, including: financial, customer, internal, business process, and learning and growth. Results are posted on-line and are available to the departments to provide feedback on performance.

A review of MDT's balanced scorecards from the 3<sup>rd</sup> quarter of FY 2005/2006 through the 3<sup>rd</sup> quarter of FY 2008/2009 was conducted to identify and track MDT performance. An overview of each of the quarterly scorecards is presented in Appendix B. MDT established performance metrics to measure success in achieving priority outcomes in four broad areas:

- Customer
- Financial
- Internal
- Learning & Growth

The outcomes appear to be fluid from fiscal year to fiscal year with corresponding adjustments in the nature of the metrics used to evaluate performance.

## Customer Priority Outcomes

Customer priority outcomes currently in place include:

- Maximize use and efficiency of existing transportation system
- Maximize reliability of transit system vehicles and infrastructure
- Ensure transit system is safe and secure
- Provide excellent riding environment for transit passengers

A complete summary of MDT’s performance in customer priority outcomes from the 3<sup>rd</sup> quarter of FY 2005/2006 through the 3<sup>rd</sup> quarter of FY 2008/2009 is presented in Table 1.63. Actual results that meet and/or exceed established goals are highlighted.

**Table 1.63 – MDT Performance Measures: Customer Priority Outcomes**

Customer Performance Measures	FY06Q3	FY06Q4	FY07Q1	FY07Q2	FY07Q3	FY07Q4	FY08Q1	FY08Q2	FY08Q3	FY08Q4	FY09Q1	FY09Q2	FY09Q3
Bus service miles – yearly (millions)	34.2												
Average phone answer time	49												
Elevator/escalator availability	93												
Bus late runs	1.5												
Bus maintenance-related late runs	1.3												
Bus on-time performance	76												
Metrorail on-time performance	95	93.95%	86.28%	90.02%	95.77%	96.38%	94.02%	94.26%	96.25%	92.89%	96.05%	96.15%	95.72%
Metrorail survey ratings: service frequency	53.87%												
Number of TV Public Service Announcements (PSA) aired	200												
Number of bus stop signs with new style signage	4,000												
Secret shopper score	4.1												
Bus on-time performance (schedule adherence)		66.45%	61.02%										
STS on-time performance (new standard, FY07Q2)		80.46%	80.47%	92.89%	90.90%	87.27%	88.75%	89.26%	91.00%	92.89%	92.46%	92.11%	92.85%
Bus average weekday boardings	242,688	251,042	263,923	262,875	257,027								
Bus total monthly boardings	6,832,000	5,509,517	6,511,791	7,089,570	7,152,988								
Bus shelters system-wide		105	95										
Bus weekday on-time performance/schedule adherence				68.15%	75.67%	72.33%	73.28%	77.49%	81.66%	76.35%	78.29%	81.55%	82.12%
Bus Saturday on-time performance/schedule adherence				63.67%	73.44%	71.70%							
Bus Sunday on-time performance/schedule adherence				73.90%	78.48%	75.61%							
Percentage of Phase II Metromover car “facelift” completed				0%	0%		0%		0%	0%			
Number of routes evaluated for scheduled run times				3	3	3							
Maintenance of bus passenger shelters				57									
Number bus stop signs inspected				467	1,388	737							
Complaint ratio of total STS trips				0.26%	0.16%	0.17%							
Number new litterbins installed						23	1,100		1,100	1,100			
Bus mean distance between failures							3,935	3,432	3,901	3,413	3,677	4,017	4,171
Metrorail mean distance between disruptions							41,175	91,629	34,889	48,169	52,311	50,700	30,280
Metromover mean distance between failures							4,356	2,934	5,136	4,895	6,048	8,843	5,052
Metrorail & Metromover elevator availability							98.2%	98.4%	98.7%	98.1%	96.9%	98.0%	
Metrorail & Metromover escalator availability							90.8%	91.0%	93.1%	94.7%	91.1%	97.1%	
MDT CEV secret shopper score											76	76	76
MDT secret shopper phase 1											67	67	67
MDT secret shopper phase 2											78	78	78
Phase II Metromover cars “facelift” doors completed											1	9	6
Perform FTA mandated safety/security emergency drills											Yes	Yes	Yes
Phase II Metromover cars “facelift” A/C unit replaced											0	1	6
Total bus, rail & mover complaints												621	579
Bus operator discourtesy complaints												8	4
Rail complaints per 100k revenue miles												1.8	2.0
Mover complaints per 100k revenue miles												0.9	1.0
Rail complaints per 100k boardings												1.08	0.59
Mover complaints per 100k boardings												0.26	0.15
NTD reportable part 1 serious crimes												16	16
NTD reportable part 2 petty crimes												9	6

MDT performed exceptionally well in improving performance in the customer service priority area. MDT achieved and/or exceeded established targets in the following areas:

- On-time performance
  - Metrorail (FY 2008/2009, Quarters 1-3)

- STS (FY 2007/2008, Quarter 3 through FY 2008/2009, Quarter 3)
- Bus weekday (FY 2007/2008, Quarter 3 through FY 2008/2009, Quarter 3)
- Mean distance between failures/disruptions
  - Bus (FY 2008/2009, Quarters 2-3)
  - Metrorail (FY 2007/2008, Quarter 4 through FY 2008/2009, Quarter 2)
  - Metromover (FY 2008/2009, Quarters 1-2)
- Elevator availability
  - Metrorail & Metromover (FY 2007/2008, Quarter 1 through FY 2008/2009, Quarter 2)
- Escalator availability
  - Metrorail & Metromover (FY 2008/2009, Quarter 2)
- Customer complaints per 100,000 revenue miles (New measure, FY 2008/2009, Quarter 2)
  - Rail (FY 2008/2009, Quarters 2-3)
  - Mover (FY 2008/2009, Quarters 2-3)
- Customer complaints per 100,000 boardings (New measure, FY 2008/2009, Quarter 2)
  - Rail (FY 2008/2009, Quarters 2-3)
  - Mover (FY 2008/2009, Quarters 2-3)
  - Bus (FY 2008/2009, Quarters 2-3)

In contrast to performance measures that gauge outcome or the relationship between a set of variables, outputs report accomplishments. The performance measure identified as “customer complaints” provides a good example of an “output.” MDT tracks the number of customer complaints of bus operator discourtesy. Should the number of the incidents increase, the established target is most likely to be missed. If, however, the number of complaints falls below the target, success is achieved. The actual change in the number of customer complaints fails to measure performance. What is missing in understanding the outcome of the actual number of complaints is the context in which those complaints occur. The rise and fall in the number of complaints says little about performance, because it fails to account for fluctuation in the pool of customers or the overall size of the pool. Since bus does use a measure of performance regarding customer service, i.e., the number of complaints per 100,000 boardings, the number of complaints is reported in the context of the pool of bus customers, and the customer service performance target was achieved during Quarters 2 and 3, FY 2008/2009. Following is a list of outputs for which MDT achieved and/or exceeded targets:

- MDT CEV and Phase 2 secret shopper scores
- Perform FTA mandated safety and security emergency drills
- Phase II Metromover car “facelift” doors completed
- Bus operator discourtesy complaints
- NTD reportable part 1 serious crimes
- NTD reportable part 2 petty crimes

## Financial Priority Outcomes

Financial priority outcomes currently in use include:

- Meet transit budget targets
- Pursue financial and funding alternatives

A complete summary of MDT's performance in financial priority outcomes from the 3<sup>rd</sup> quarter of FY 2005/2006 through the 3<sup>rd</sup> quarter of FY 2008/2009 is presented in Table 1.64.

**Table 1.64 – MDT Performance Measures – Financial Priority Outcomes**

<i>Financial Performance Measures</i>	<i>FY06Q3</i>	<i>FY06Q4</i>	<i>FY07Q1</i>	<i>FY07Q2</i>	<i>FY07Q3</i>	<i>FY07Q4</i>	<i>FY08Q1</i>	<i>FY08Q2</i>	<i>FY08Q3</i>	<i>FY08Q4</i>	<i>FY09Q1</i>	<i>FY09Q2</i>	<i>FY09Q3</i>
Quarterly revenue (\$000s)	\$26,433	\$243,427											
Quarterly expenditures (\$000s)	\$100,545	\$82,868											
Procedures manual for MDT Finance Division	50												
NTD Report	100												
MDT total revenue (\$000s)			\$50,233	\$48,741	\$55,282	\$55,282	\$58,330	\$32,856	\$59,873	\$292,527	\$33,542	\$35,589	\$85,841
MDT total expenditures (\$000s)			\$116,287	\$111,464	\$18,268	\$18,268	\$102,530	\$131,419	\$126,358	\$69,592	\$93,557	\$131,256	\$110,688
Revenue/Expenditures*			0.43	0.44	3.03	3.03	0.57	0.25	0.47	4.20	0.36	0.27	0.78
Accounts payable aging percentage >30 days			0%										
Transit full-time positions filled				3,679	3,615								
Average days accounts payable aging				23	22	15							
Percentage accounts payable aging invoices paid within 30 days							59%	81%	81%	95%			
Payment of DBE firms on PMC contract to date							21.1	22.2	23.2	23.6			
FY07 department-wide unanticipated employee absenteeism							7.53%	9.28%	10.00%	8.48%			
Potential funding opportunities sought during FY 09/10 (annual)											13	13	13
FYTD number applications submitted for federal, state and local funding											1	15	15

MDT performed well in improving performance in the financial priority area and achieved and/or exceeded established targets in the following areas:

- Percentage accounts payable aging invoices paid within 30 days (FY 2007/2008, Quarter 4)
- Department-wide unanticipated employee absenteeism (FY 2007/2008, Quarters 1-4)

Following is a list of outputs for which MDT achieved and/or exceeded targets:

- MDT total expenditures (\*included in Table 1.63 is the relationship of expenditures to revenue, which turns this output into an outcome)
- Potential funding opportunities sought
- Applications submitted for federal, state, and local funding

## Internal Priority Outcomes

Internal priority outcomes currently in use include:

- Emphasize performance accountability among workforce and partners
- Continue improvement of business systems and work processes
- Enhance public perception of MDT through outreach and community involvement

A complete summary of MDT's performance in internal priority outcomes from the 3<sup>rd</sup> quarter of FY 2005/2006 through the 3<sup>rd</sup> quarter of FY 2008/2009 is presented in Table 1.65.

**Table 1.65 – MDT Performance Measures – Internal Priority Outcomes**

<i>Internal Performance Measures</i>	FY06Q3	FY06Q4	FY07Q1	FY07Q2	FY07Q3	FY07Q4	FY08Q1	FY08Q2	FY08Q3	FY08Q4	FY09Q1	FY09Q2	FY09Q3
Bus breakdowns & roadcalls	2,297												
Metromover cars	14.0												
Metromover car procurement milestones	2.0												
Metrorail vehicle rehabilitation project	10.0												
Preventive maintenance adherence	99.4												
Universal Automated Fare Collection Project	13.00												
Metrobus survey ratings: reliability of service	29.76%												
Metrorail survey ratings: reliability of service	56.66%												
STS Interactive Voice Response System	10												
STS mobile data terminals and automated vehicle locator	10												
Disciplinary Action Reporting (DAR) system	95												
Security Post inspections	339	222	279	377	653								
Installation of new bus shelters	924												
Bus shelters system-wide	113												
STS on-time performance	80.6												
STS average phone answer time	42.0												
STS average phone wait time	21.0												
STS employee absenteeism	14.0												
Metrorail & Metromover elevator availability		98.3%	96.5%	97.4%	98.4%	98.9%							
Metrorail & Metromover escalator availability		86.3%	91.3%	90.6%	90.8%	91.4%							
Bus fleet system reliability		2,453	2,757	3,003	2,921	3,009							
Metrorail weekday peak vehicle requirement		92.4%	94.7%	95.0%	93.0%	99.4%							
Metrorail total number of mainline occurrences, service disruptions, and vehicles removed from service		546	624	539									
Metromover weekday peak vehicle requirement		100%	95.00%	98.0%	98.00%	91.0%							
Bus transit-related accidents per 100k miles		4.26%	3.70%	3.60	3.79	3.28							
Monthly rail critical parts percent stockout							6.51%	11.57%	5.04%	10.55%		3.06%	1.41%
Bus down pending parts – Materials Management								2.1	2.4	1.3	2.6	2.20%	1.75%
Transit full-time positions filled									3,440	3,407			
Monthly bus critical parts percent stockout										17.17%	15.09%	11.14%	4.72%
Payment of DBE firms on PMC contract to date											24.9	25.3	25.6
Job descriptions completed monthly											16	3	5
FYTD monthly press releases and articles for publication to enhance perception of MDT												5	
FYTD quarterly public presentations made to community organizations												2	2
Monthly Advertising & Media public presentations												4	6

MDT achieved success in improving performance in the internal priority area and achieved and/or exceeded established targets in the following areas:

- Monthly rail critical parts percent stockout (FY 2008/2009, Quarters 2-3)
- Bus down pending parts (Materials Management) (FY 2008/2009, Quarters 1-3)
- Monthly bus critical parts percent stockout (FY 2008/2009, Quarters 2-3)

Following is a list of outputs for which MDT achieved and/or exceeded targets:

- Payment of DBE firms on PMC contract to date
- Quarterly public presentations made to community organizations
- Monthly advertising & media public presentations

**Learning & Growth Priority Outcomes**

Learning & Growth priority outcomes currently in use include:

- Evaluate and measure employee performance consistently and effectively
- Ensure qualified employees are available to fill mission-critical positions
- Develop an effective and capable workforce

A complete summary of MDT’s performance in learning & growth priority outcomes from the 3<sup>rd</sup> quarter of FY 2005/2006 through the 3<sup>rd</sup> quarter of FY 2008/2009 is presented below as Table 1.66.

**Table 1.66 – MDT Performance Measures – Learning & Growth Priority Outcomes**

<i>Learning Performance Measures</i>	FY06Q3	FY06Q4	FY07Q1	FY07Q2	FY07Q3	FY07Q4	FY08Q1	FY08Q2	FY08Q3	FY08Q4	FY09Q1	FY09Q2	FY09Q3
Acts of vandalism and assaults	49												
Levels of petty and serious crimes in system	213												
Number of counterfeit passes confiscated	434												
System-wide transit related accidents	4.71												
Department-wide unanticipated employee absenteeism		7.68%	7.68%	6.62%							9.11%	9.78%	9.43%
FY07 department-wide unanticipated employee absenteeism				11.21%	10.11%	7.38%							
Paratransit absenteeism				12.80%	12.80%	12.70%							
Monthly number completed updates of outdated MDT job descriptions									56	9			
FYTD number of courses, initiatives, interventions, topic-specific sessions											18	64	
Specialized needs assessment interviews conducted with MDT divisions												9	
Training sessions conducted on utilizing Six Sigma Methodologies and QA/QC applications												3	
Monthly departmental percentage of past due evaluations													6.0%
Specialized needs assessment interviews conducted with MDT divisions													0
Number MDT bus operators who participated in semi-annual pre-lineup instructional classes													1,699

MDT achieved success in improving performance in the learning & growth priority area by exceeding the established target in the following area:

- Department-wide unanticipated employee absenteeism (FY 2008/2009, Quarters 1-3)

Following is a list of outputs for which MDT achieved and/or exceeded targets:

- Number of courses, initiatives, interventions, and topic-specified sessions
- Specialized needs assessment interviews conducted with MDT divisions
- Training sessions conducted on using Six Sigma Methodologies and QA/QC applications
- Number of MDT bus operators who participated in semi-annual pre-lineup instructional class

### **Standardized Performance Measures**

Researchers consolidated state-wide standardized performance measures currently in use. An overview of the standardized performance metrics is detailed in Table 1.67. The standardized measures enable a transit agency to evaluate performance in three distinct areas:

- Quantity and quality of service
- Efficiency and effectiveness of service
- Vehicle and employee utilization

**Table 1.67 – Overview of Standardized Performance Metrics**

<i><b>Adopted Performance Measures</b></i>	<i><b>Agency</b></i>		
<i><b>Quantity &amp; Quality of Service</b></i>			
Revenue miles between failures (disruptions)	NCDOT	FTC	MDT
Accidents/100,000 vehicle miles	NCDOT		
Average headway		FTC	
Average time from complaint to response		FTC	
Customer complaints/5k boardings		FTC	MDT
On-time performance		FTC	MDT
<i><b>Efficiency &amp; Effectiveness of Service</b></i>			
Passenger trips/vehicle mile	NCDOT		
Passenger trips/vehicle hour	NCDOT		FTC
Passenger trips/revenue hour		WisDOT	
Passenger trips/capita		WisDOT	
Operating cost/passenger trip	NCDOT	WisDOT	FTC
Operating cost/passenger mile			FTC
Recovery ratio	NCDOT	WisDOT	
Operating cost/vehicle mile	NCDOT		
Operating cost/revenue mile			FTC
Operating cost/vehicle hour	NCDOT		
Operating cost/revenue hour		WisDOT	FTC
Operating revenue/operating expense			FTC
<i><b>Vehicle/Employee Utilization</b></i>			
Vehicle miles/vehicle	NCDOT		
Vehicle revenue hours/capita		WisDOT	
Passenger trips/driver FTE	NCDOT		
Revenue miles/vehicle miles			FTC

### **MDT Performance**

The three measures from the consolidated list that MDT has incorporated into its performance management program all relate to quantity and quality of service, where MDT has made significant improvement. Focusing solely on improving quantity and quality limits the agency’s appreciation for and understanding of the true cost of the service. In the absence of careful monitoring of other factors, such as operating costs, level of service provided within the service area, and utilization of employees and the fleet, quantity and quality of service can become unattainable and unaffordable.

FY 2005/2006 represented MDT’s peak year in terms of staffing allocation. The FY 2006/2007 budget saw a reduction of 183 staff and 2.5 million revenue miles, which was followed by a further reduction of 156 staff and 3.3 million revenue miles in FY 2007/2008. Despite significant reductions in staff, MDT achieved most internal performance measures.

Using data from the National Transit Database for years 2003 through 2007, data provided by MDT for FY 2007/2008, and metrics contained in MDT’s balanced score card for FY 2007/2008 and FY 2008/2009, outcomes for each mode were calculated for the standardized performance measures to which MDT currently does not subscribe.

Consolidated performance measures for Metromover are presented in Table 1.68. Outcomes in FY 2007/2008 and FY 2008/2009 that show improvement over previous years are highlighted.

**Table 1.68 – Metromover Consolidated Performance Measures**

<i>Mover Performance Measures</i>	2003	2004	2005	2006	2007	2008	2009
Revenue miles/failures	1,305	3,324	2,719	1,045	1,281	1,650	
MDT Balanced Scorecard						4,895	5,052
Average headway (minutes)	3.18				3.69		
Complaints/100k boardings		0.41	0.49	0.66	0.71	0.29	
MDT Balanced Scorecard							0.15
Passenger trips/vehicle mile	5.9	8.0	9.9	8.7	9.1	7.9	
Passenger trips/vehicle hour	64.8	81.4	101.5	87.5	92.7		
Passenger trips/revenue hour	65.8	83.1	103.0	89.1	94.1	80.2	
Passenger trips/capita	1.3	1.6	1.9	1.7	1.8	1.8	
Operating cost/passenger trip	\$3.10	\$2.40	\$2.21	\$2.33	\$2.44	\$2.58	
Operating cost/passenger mile	\$3.02	\$2.36	\$2.21	\$2.34	\$2.38	\$2.58	
Recovery ratio	0.25%	NA	NA	NA	NA	NA	
Operating cost/vehicle mile	\$18.43	\$19.18	\$22.01	\$20.21	\$22.13	\$20.35	
Operating cost/revenue mile	\$18.74	\$19.58	\$22.34	\$20.37	\$22.46	\$20.38	
Operating cost/vehicle hour	\$200.89	\$195.69	\$224.53	\$204.13	\$225.73		
Operating cost/revenue hour	\$204.24	\$199.68	\$227.90	\$207.80	\$229.12	\$207.23	
Operating rev/operating exp	32.30%	40.46%	42.17%	43.49%	43.27%	39.41%	
Vehicle miles/vehicle	58,251	57,254	52,746	52,742	47,447	56,130	
Vehicle revenue hours/capita	0.0192	0.0190	0.0186	0.0188	0.0186	0.0224	
Revenue miles/vehicle miles	0.98	0.98	0.99	0.99	0.99	1.00	

Metromover performance improved in both areas currently targeted by MDT, including revenue miles between failures and customer complaints per 100,000 boardings. Metromover also posted high scores in several standardized measures that are not currently tracked by MDT. Operating costs per vehicle and revenue mile in 2008 mirrored 2006 levels, and costs per revenue hour were below the 2006 cost.

Vehicle utilization increased both in terms of vehicle miles per vehicle and the relationship between revenue miles and vehicle miles.

**Table 1.69 – Metrorail Consolidated Performance Measures**

<i>Rail Performance Measures</i>	2003	2004	2005	2006	2007	2008	2009
Revenue miles/failures	5,114	4,806	4,773	5,266	4,777	4,199	
MDT Balanced Scorecard					41,175	48,169	30,280
Average headway (minutes)	6.56				6.95		
Complaints/100k boardings		1.88	1.97	2.28	1.70	1.07	
MDT Balanced Scorecard							0.59
On-time performance	MDT Balanced Scorecard			94.0%	96.4%	92.9%	95.7%
Passenger trips/vehicle mile	1.8	1.7	1.8	1.7	2.0	2.5	
Passenger trips/vehicle hour	42.6	38.2	40.4	39.6	45.0		
Passenger trips/revenue hour	46.1	40.5	43.1	42.5	48.7	58.2	
Passenger trips/capita	2.9	3.2	3.5	3.5	3.6	3.8	
Operating cost/passenger trip	\$4.61	\$3.93	\$4.22	\$4.35	\$4.61	\$4.44	
Operating cost/passenger mile	\$0.60	\$0.50	\$0.53	\$0.57	\$0.60	\$0.58	
Recovery ratio	14.7%	16.3%	15.9%	26.2%	16.7%	16.1%	
Operating cost/vehicle mile	\$8.38	\$6.63	\$7.76	\$7.54	\$9.37	\$11.12	
Operating cost/revenue mile	\$8.56	\$6.74	\$7.69	\$7.74	\$9.65	\$11.51	
Operating cost/vehicle hour	\$196.00	\$150.08	\$170.48	\$172.40	\$207.26		
Operating cost/revenue hour	\$212.43	\$158.96	\$181.83	\$185.00	\$224.39	\$258.44	
Operating rev/operating exp	51.1%	68.7%	56.9%	55.2%	53.4%	49.0%	
Vehicle miles/vehicle	81,934	89,918	89,012	95,689	87,789	75,564	
Vehicle revenue hours/capita	0.0631	0.0786	0.0803	0.0824	0.0730	0.0648	
Revenue miles/vehicle miles	0.98	0.98	1.01	0.97	0.97	0.97	

Metrorail performance improved in the three areas currently targeted by MDT, including revenue miles between failures, customer complaints per 100,000 boardings, and on-time performance. Metrorail also posted high scores in several standardized measures that are not currently tracked by MDT. An increase in the number of passengers was apparent when viewed from several perspectives, including passengers per vehicle mile, vehicle hour, vehicle revenue hour, and per capita. Furthermore, the increases appear to have been significant enough to reduce the operating cost per passenger trip and passenger mile.

**Table 1.70 – Bus Consolidated Performance Measures**

<i>Bus Performance Measures</i>	2003	2004	2005	2006	2007	2008	2009
Revenue miles/failures	2,263	2,375	2,165	1,943	2,338	2,098	
MDT Balanced Scorecard						3,413	4,171
Average headway (minutes)	17.61				11.33		
Complaints/100k boardings		9.20	11.13	11.42	11.80	8.45	
MDT Balanced Scorecard							9.32
On-time performance	MDT Balanced Scorecard				72.3%	76.4%	81.1%
Passenger trips/vehicle mile	2.0	2.1	1.9	1.9	2.0	2.2	
Passenger trips/vehicle hour	24.7	26.9	25.7	25.4	26.1		
Passenger trips/revenue hour	27.6	29.6	28.1	27.7	28.6	31.2	
Passenger trips/capita	13.1	15.3	15.6	16.6	17.0	17.4	
Operating cost/passenger trip	\$3.32	\$3.05	\$3.40	\$3.79	\$3.83	\$3.94	
Operating cost/passenger mile	\$0.77	\$0.77	\$0.80	\$0.89	\$0.75	\$0.79	
Recovery ratio	25.1%	25.3%	28.1%	22.4%	22.3%	21.2%	
Operating cost/vehicle mile	\$6.68	\$6.37	\$6.54	\$7.21	\$7.60	\$8.64	
Operating cost/revenue mile	\$7.80	\$7.38	\$7.62	\$8.40	\$8.96	\$10.11	
Operating cost/vehicle hour	\$81.98	\$82.21	\$87.46	\$96.24	\$99.75		
Operating cost/revenue hour	\$91.78	\$90.48	\$95.45	\$104.87	\$109.25	\$122.75	
Operating rev/operating exp	45.2%	60.7%	53.1%	46.8%	50.2%	48.0%	
Vehicle miles/vehicle	63,391	54,356	53,131	52,115	50,079	47,410	
Vehicle revenue hours/capita	0.4749	0.5155	0.5554	0.5997	0.5942	0.5596	
Revenue miles/vehicle miles	0.86	0.86	0.86	0.86	0.85	0.85	

Metrobus performance improved in the three areas currently targeted by MDT, including revenue miles between failures, customer complaints per 100,000 boardings, and on-time performance. Metrobus also posted high scores in several standardized measures that are not currently tracked by MDT. An increase in the number of passengers was apparent when viewed from several perspectives, including per passenger trips per vehicle mile, vehicle hour, vehicle revenue hour, and per capita. Nonetheless, the increase in passengers was not significant enough to reduce operating costs per passenger trip or passenger mile.

**Performance Metrics: Summary of Findings**

- OSBM uses balanced scorecards on a quarterly basis to measure MDT’s success in achieving priority outcomes within four areas, including customer, financial, internal, and learning & growth.
- MDT performed exceptionally well in the area of customer service.
- Few measures were reported over the long-term, as performance measures frequently changed from quarter to quarter.
- Measures often focused on outputs rather than outcomes; however, there appeared to be a recent change in focus.
- Operating costs are not tracked.

- MDT has incorporated three of the standardized measures that were found to be in use by other transit agencies.
- Standardized measures incorporated by MDT focus on quantity and quality of service.
- Measures of efficiency and effectiveness were not identified as measures of performance.
- Based on the standardized performance measures, all three MDT modes improved performance in FY 2008/2009.
- Metromover not only exceeded MDT targets but also achieved high scores in cost efficiency, effectiveness, and vehicle utilization.
- Metrorail exceeded MDT targets and improved efficiency and effectiveness.
- Bus achieved MDT targets and improved efficiency.
- MDT could benefit from developing additional measures of performance that focus on outcomes and target efficient and effective operations.
- The standardized list of performance measures identified within the report provides a good selection for MDT's consideration.

## **Potential Financial Impact of Re-organization**

Researchers attempted to quantify the impact of MDT's reorganization in order to determine the potential financial impact of MDT's efforts. Given the absence of actual data for FY 2008/2009, a variety of assumptions were required to project what FY 2009/2010 might actually look like.

Since MDT had identified staffing levels by function for FY 2008/2009 and FY 2009/2010, the analysis was built upon the potential cost of projected staff. Employee counts and work hours by function from FY 2002/2003 through FY 2005/2006 were obtained from the National Transit Database. Employee counts for FY 2007/2008 through FY 2009/2010 were assembled from MDT's table of organization and then classified by function by MDT staff. Employee work hours for FY 2007/2008 were provided by MDT.

Actual and projected work hours per full-time employee are presented in Table 1.71. Employee work hours by function were used to calculate the average number of hours a full-time employee worked in FY 2007/2008 (2,114 hours), which becomes the projected number of hours a full-time employee will work in FY 2008/2009 and FY 2009/2010.

**Table 1.71 – Work Hours per Full-time Employee by Function**

<b>Actual &amp; Planned Full-time Employee Count</b>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	1,844	638	311	295	3,088
2004	783	1,852	665	380	440	3,337
2005	873	2,302	777	342	455	3,876
2006	945	2,143	797	363	466	3,769
2007	957	2,013	764	362	401	3,540
2008	943	2,318	742	373	325	3,758
2009		1,639	648	317	697	3,301
2010		1,635	613	308	645	3,201
FY10vs08		-683	-129	-65	320	-557
%vs 08		-29.5%	-17.4%	-17.4%	98.5%	-14.8%
<b>Actual &amp; Projected Full-time Employee Work Hours</b>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	3,833,098	1,328,098	605,737	597,244	6,364,177
2004	783	4,409,097	1,458,248	769,694	828,898	7,465,937
2005	873	4,698,403	1,620,123	726,955	924,547	7,970,028
2006	945	5,055,921	1,662,497	860,522	865,593	8,444,533
2007	957	4,786,835	1,599,981	800,145	775,297	7,962,258
2008	943	4,899,554	1,519,765	763,304	614,217	7,796,840
<b>Actual &amp; Projected Work Hours per Full-time Employee</b>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	2,079	2,082	1,948	2,025	2,061
2004	783	2,381	2,193	2,026	1,884	2,237
2005	873	2,041	2,085	2,126	2,032	2,056
2006	945	2,359	2,086	2,371	1,857	2,241
2007	957	2,378	2,094	2,210	1,933	2,249
2008	943	2,114	2,048	2,046	1,890	2,075
2009P		2,114	2,048	2,046	1,890	2,075
2010P		2,114	2,048	2,046	1,890	2,075
FY10vs08		0	0	0	0	0
%vs 08		0.0%	0.0%	0.0%	0.0%	0.0%

Since MDT employs part-time staff in addition to full-time staff, an adjustment was required to represent part-time staff as a full-time staff equivalent. Work hours per part-time employee were calculated, as presented in Table 1.72. Actual FY 2007/2008 work hours per part-time employee (1,374 hours) were then used to determine projected part-time employee work hours for FY 2008/2009 and FY 2009/2010. Since FY 2006/2007, all part-time employees have been assigned solely to vehicle operations.

**Table 1.72 – Work Hours per Part-time Employee by Function**

<b>Actual &amp; Planned Part-time Employee Count</b>							
<b>Fiscal Year</b>	<b>VOMS</b>	<b>Vehicle Operations</b>	<b>Vehicle Maintenance</b>	<b>Non-veh Maintenance</b>	<b>General Administration</b>	<b>Total Operating</b>	
2003	620	444	0	0	45	489	
2004	783	306	0	0	28	334	
2005	873	302	0	0	8	310	
2006	945	489	0	0	6	495	
2007	957	324	0	0	0	324	
2008	943	342	0	0	0	342	
2009		327	0	0	0	327	
2010		321	0	0	0	321	
FY10vs08		-21	0	0	0	-21	
%vs 08		-6.1%	0.0%	0.0%	0.0%	-6.1%	
<b>Actual &amp; Projected Part-time Employee Work Hours</b>							
<b>Fiscal Year</b>	<b>VOMS</b>	<b>Vehicle Operations</b>	<b>Vehicle Maintenance</b>	<b>Non-veh Maintenance</b>	<b>General Administration</b>	<b>Total Operating</b>	
2003	620	462,052	0	0	46,235	508,287	
2004	783	482,872	0	0	48,209	531,081	
2005	873	403,994	0	0	10,111	414,105	
2006	945	351,190	0	0	10,701	361,891	
2007	957	413,609	0	0	0	413,609	
2008	943	469,879	0	0	0	469,879	
2009P		449,298	0	0	0	449,298	
2010P		441,054	0	0	0	441,054	
FY10vs08		-28,825	0	0	0	-28,825	
%vs 08		-6.1%	0.0%	0.0%	0.0%	-6.1%	
<b>Actual &amp; Projected Work Hours per Part-time Employee</b>							
<b>Fiscal Year</b>	<b>VOMS</b>	<b>Vehicle Operations</b>	<b>Vehicle Maintenance</b>	<b>Non-veh Maintenance</b>	<b>General Administration</b>	<b>Total Operating</b>	
2003	620	1,041	0	0	1,027	1,039	
2004	783	1,578	0	0	1,722	1,590	
2005	873	1,338	0	0	1,264	1,336	
2006	945	718	0	0	1,784	731	
2007	957	1,277	0	0	0	1,277	
2008	943	1,374	0	0	0	1,374	
2009P		1,374	0	0	0	1,374	
2010P		1,374	0	0	0	1,374	
FY10vs08		0	0	0	0	0	
%vs 08		0.0%	0.0%	0.0%	0.0%	0.0%	

Part-time employee work hours were divided by the average work hours of a full-time employee (2,114) in order to determine how many full-time equivalent positions were represented by part-time employee work hours. This exercise is illustrated in Table 1.73.

**Table 1.73 – Part-time Employees as Full-time Equivalents**

<i>Actual &amp; Projected Work Hours per Full-time Employee</i>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	2,079	2,082	1,948	2,025	2,061
2004	783	2,381	2,193	2,026	1,884	2,237
2005	873	2,041	2,085	2,126	2,032	2,056
2006	945	2,359	2,086	2,371	1,857	2,241
2007	957	2,378	2,094	2,210	1,933	2,249
2008	943	2,114	2,048	2,046	1,890	2,075
2009P		2,114	2,048	2,046	1,890	2,075
2010P		2,114	2,048	2,046	1,890	2,075
FY10vs08		0	0	0	0	0
%vs 08		0.0%	0.0%	0.0%	0.0%	0.0%
<i>Actual &amp; Projected Part-time Employee Work Hours</i>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	462,052	0	0	46,235	508,287
2004	783	482,872	0	0	48,209	531,081
2005	873	403,994	0	0	10,111	414,105
2006	945	351,190	0	0	10,701	361,891
2007	957	413,609	0	0	0	413,609
2008	943	469,879	0	0	0	469,879
2009P		449,298	0	0	0	449,298
2010P		441,054	0	0	0	441,054
FY10vs08		-28,825	0	0	0	-28,825
%vs 08		-6.1%	0.0%	0.0%	0.0%	-6.1%
<i>Actual &amp; Projected Part-time Employees as Full-time Equivalents (Based on Full-time Hours per Employee)</i>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	222	0	0	23	247
2004	783	203	0	0	26	237
2005	873	198	0	0	5	201
2006	945	149	0	0	6	162
2007	957	174	0	0	0	184
2008	943	222	0	0	0	226
2009P		213	0	0	0	217
2010P		209	0	0	0	213
FY10vs08		-14	0	0	0	-14
%vs 08		-6.1%	0.0%	0.0%	0.0%	-6.1%

The number of part-time employees represented as full-time equivalents was then added to the number of actual full-time employees, as shown in Table 1.74.

**Table 1.74 –Actual & Projected Full-time Equivalents**

<i>Actual &amp; Projected Full-time Equivalents</i>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	2,066	638	311	318	3,335
2004	783	2,055	665	380	466	3,574
2005	873	2,500	777	342	460	4,077
2006	945	2,292	797	363	472	3,931
2007	957	2,187	764	362	401	3,724
2008	943	2,050	727	371	793	3,984
2009P		1,852	648	317	697	3,518
2010P		1,844	613	308	645	3,414
FY10vs08		-207	-114	-63	-148	-571
%vs 08		-10.1%	0.0%	0.0%	0.0%	-14.3%

Operating expenses were divided by the actual and projected number of full-time equivalents in order to determine the operating cost per employee, as illustrated in Table 1.75. Operating costs per employee ranged from \$58,557 per general administration employee to \$125,611 per vehicle operations employee. Given that all calculations were based on FY 2007/2008 data, an adjustment for an increase in cost is included in the bottom section of the table. The growth factor used represented growth from FY 2006/2007 to FY 2007/2008, was specific to the function, and was applied to the projected FY 2009/2009 operating costs and to the FY 2009/2010 operating costs.

**Table 1.75 –Actual & Projected Operating Cost per Full-time Equivalent**

<i>Actual &amp; Projected Full-time Equivalents</i>						
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-veh Maintenance</i>	<i>General Administration</i>	<i>Total Operating</i>
2003	620	2,066	638	311	318	3,335
2004	783	2,055	665	380	466	3,574
2005	873	2,500	777	342	460	4,077
2006	945	2,292	797	363	472	3,931
2007	957	2,187	764	362	401	3,724
2008	943	2,050	727	371	793	3,984
2009P		1,852	648	317	697	3,518
2010P		1,844	613	308	645	3,414
FY10vs08		-207	-114	-63	-148	-571
%vs 08		-10.1%	0.0%	0.0%	0.0%	-14.3%
<i>Actual &amp; Projected Operating Expenses per Employee (Based on FY 2008 Actual)</i>						
<i>Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-Vehicle Maintenance</i>	<i>General Administration</i>	<i>Total</i>
2003	620	\$78,682	\$102,583	\$108,413	\$119,208	\$89,854
2004	783	\$86,237	\$94,132	\$84,487	\$80,829	\$86,599
2005	873	\$84,576	\$94,163	\$102,750	\$73,373	\$86,695
2006	945	\$105,686	\$107,815	\$102,929	\$80,724	\$102,681
2007	957	\$112,642	\$119,153	\$114,815	\$104,789	\$113,042
2008	943	\$125,611	\$131,824	\$116,732	\$58,557	\$111,211
2009P		\$125,611	\$131,824	\$116,732	\$58,557	\$111,211
2010P		\$125,611	\$131,824	\$116,732	\$58,557	\$111,211
FY10vs08		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
%vs 08		0.0%	0.0%	0.0%	0.0%	0.0%
<i>Actual &amp; Projected Operating Expenses (Based on FY 2008 Actual)</i>						
<i>Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-Vehicle Maintenance</i>	<i>General Administration</i>	<i>Total</i>
2003	620	\$162,578,100	\$65,448,238	\$33,716,333	\$37,888,604	\$299,631,275
2004	783	\$177,202,117	\$62,597,553	\$32,105,156	\$37,633,085	\$309,537,911
2005	873	\$211,435,380	\$73,165,009	\$35,140,654	\$33,749,907	\$353,490,950
2006	945	\$242,216,080	\$85,928,915	\$37,363,251	\$38,082,457	\$403,590,703
2007	957	\$246,341,100	\$91,032,800	\$41,563,200	\$42,020,200	\$420,957,300
2008	943	\$257,539,900	\$95,836,300	\$43,307,400	\$46,435,800	\$443,119,400
Growth		4.5%	5.3%	4.2%	10.5%	5.3%
2009P		\$232,576,406	\$85,422,177	\$37,003,897	\$40,814,316	\$391,192,576
+Growth		\$243,042,344	\$89,266,175	\$38,669,072	\$42,650,960	\$408,796,242
2010P		\$231,584,047	\$80,808,324	\$35,953,313	\$37,769,346	\$379,629,531
+Growth		\$242,005,329	\$84,444,699	\$37,571,212	\$39,468,966	\$396,712,860
FY10vs08		-\$15,534,571	-\$11,391,601	-\$5,736,188	-\$6,966,834	-\$46,406,540
%vs 08		-6.0%	-11.9%	-13.2%	-15.0%	-10.5%

Since operating cost data by function were not available beyond FY 2007/2008, projected savings were limited to total operating costs. In order to restrict the analysis to staff-related costs, researchers determined the percentage of total costs represented by wages and fringe benefits as detailed in Table 1.76. Wages and fringe benefits, as a percentage of total costs fell from a high of 68.0 percent in FY 2004/2005 to 63.5 percent in FY 2006/2007. The most recent figure of 63.5 percent was applied to FY 2007/2008 through FY 2009/2010.

**Table 1.76 – Projected Savings – Wages + Fringe Benefits**

<i>Projected Savings - Wages+Fringe</i>				
<i>Fiscal Year</i>	<i>Total Operating Cost</i>	<i>Actual Wages + Fringe</i>	<i>Wages + Fringe as % of Total</i>	<i>Projected Wages + Fringe</i>
2003	\$299,631,275	\$201,769,189	67.3%	
2004	\$309,537,911	\$208,962,479	67.5%	
2005	\$353,490,950	\$240,450,478	68.0%	
2006	\$403,590,703	\$260,581,320	64.6%	
2007	\$420,957,300	\$267,194,200	63.5%	
2008	\$443,119,400		63.5%	\$281,380,819
2009P	\$391,192,576		63.5%	\$248,407,286
2010P	\$379,629,531		63.5%	\$241,064,752
FY10Pvs08	-\$63,489,869			-\$40,316,067
%vs 08	-14.3%			-14.3%
Growth 08 vs 07	5.3%			
FY09+5.3% Growth	\$411,925,782		63.5%	\$261,572,872
FY10+5.3% Growth	\$399,749,896		63.5%	\$253,841,184
FY10P+Growth vs 08	-\$43,369,504			-\$27,539,635
%vs 08	-9.8%			-9.8%

In the absence of growth in operating costs, MDT’s proposed organizational realignment for FY 2009/2010 represents a reduction of \$40 million in wages and fringe benefits versus FY 2007/2008. With a projected growth rate of 5.3 percent applied in FY 2008/2009 and in FY 2009/2010, the reduction in wages and fringe benefits is almost \$28 million. The potential impact on the actual and projected operating expense per revenue mile is detailed in Table 1.77.

Several assumptions upon which these projections are based do need to be reviewed in order to fully comprehend variables that could have a positive or negative impact on the eventual outcome.

- Revenue miles are projected to decline by more than five million from FY 2007/2008 to FY 2009/2010. At a present day cost of \$10.63 per revenue mile, this represents a savings of \$56.6 million. Fluctuation in the number of revenue miles provided could impact the level of savings generated.
- Projected work hours per full-time equivalent employee ranged from 1,890 for general administration to 2,114 for vehicle operations with a total average of 2,075 work hours. In light of reduced staffing, should MDT increase work hours per employee beyond the average of 2,075, cost savings could be nullified.

- Wages and fringe benefits represented 63.5 percent of total operating expenses. Should operating costs increase to a level that inflates this rate beyond projected expenditures, potential savings could be negatively impacted.
- The final assumption concerns the actual rate of growth in costs. Cost containment is critical in ensuring that MDT realizes cost savings from the organizational realignment.

**Table 1.77 – Projected Operating Expenses per Revenue Mile**

<i>Actual &amp; Projected Operating Expenses (Based on FY 2008 Actual)</i>									
<i>Fiscal Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-Vehicle Maintenance</i>	<i>General Administration</i>	<i>Total</i>	<i>Revenue Miles (000s)</i>	<i>Revenue Miles</i>	<i>Revenue Miles</i>
2003	620	\$162,578,100	\$65,448,238	\$33,716,333	\$37,888,604	\$299,631,275	36,239	36,238,800	36,238,800
2004	783	\$177,202,117	\$62,597,553	\$32,105,156	\$37,633,085	\$309,537,911	41,167	41,166,600	41,166,600
2005	873	\$211,435,380	\$73,165,009	\$35,140,654	\$33,749,907	\$353,490,950	44,504	44,503,600	44,503,600
2006	945	\$242,216,080	\$85,928,915	\$37,363,251	\$38,082,457	\$403,590,703	47,457	47,457,100	47,457,100
2007	957	\$246,341,100	\$91,032,800	\$41,563,200	\$42,020,200	\$420,957,300	44,944	44,943,700	44,943,700
2008	943	\$257,539,900	\$95,836,300	\$43,307,400	\$46,435,800	\$443,119,400	41,686	41,686,300	41,686,300
2009P		\$232,576,406	\$85,422,177	\$37,003,897	\$40,814,316	\$391,192,576		Estimated <sup>1</sup>	38,364,000
+ 5.3% Growth						\$411,925,782			
2010P		\$231,584,047	\$80,808,324	\$35,953,313	\$37,769,346	\$379,629,531		Estimated <sup>1</sup>	36,364,000
+ 5.3% Growth						\$399,749,896			
FY10P vs 08		-\$25,955,853	-\$15,027,976	-\$7,354,087	-\$8,666,454	-\$63,489,869			-\$5,322,300
%vs 08		-10.1%	-15.7%	-17.0%	-18.7%	-14.3%			-12.8%
<i>Actual &amp; Projected Operating Expense per Revenue Mile</i>									
<i>Year</i>	<i>VOMS</i>	<i>Vehicle Operations</i>	<i>Vehicle Maintenance</i>	<i>Non-Vehicle Maintenance</i>	<i>General Administration</i>	<i>Total</i>	<i>Revenue Miles (000s)</i>	<i>Revenue Miles</i>	<i>Revenue Miles</i>
2003	620	\$4.49	\$1.81	\$0.93	\$1.05	\$8.27	36,239	36,238,800	36,238,800
2004	783	\$4.30	\$1.52	\$0.78	\$0.91	\$7.52	41,167	41,166,600	41,166,600
2005	873	\$4.75	\$1.64	\$0.79	\$0.76	\$7.94	44,504	44,503,600	44,503,600
2006	945	\$5.10	\$1.81	\$0.79	\$0.80	\$8.50	47,457	47,457,100	47,457,100
2007	957	\$5.48	\$2.03	\$0.92	\$0.93	\$9.37	44,944	44,943,700	44,943,700
2008	943	\$6.18	\$2.30	\$1.04	\$1.11	\$10.63	41,686	41,686,300	41,686,300
2009P		\$6.06	\$2.23	\$0.96	\$1.06	\$10.20		Estimated <sup>1</sup>	38,364,000
+ 5.3% Growth						\$10.66			
2010P		\$6.37	\$2.22	\$0.99	\$1.04	\$10.44		Estimated <sup>1</sup>	36,364,000
+ 5.3% Growth						\$10.91			
FY10P vs 08		\$0.19	-\$0.08	-\$0.05	-\$0.08	-\$0.19			-5,322,300
%vs 08		3.1%	-3.3%	-4.8%	-6.8%	-1.8%			-12.8%

<sup>1</sup>FY09P: MB-30,500,000+MM-1,120,600+MR-6,744,000 (38,364,000) FY10P: MB-28,500,000+MM-1,120,600+MR-6,744,000 (36,364,000)

## Recap of Findings

As mentioned, Miami-Dade Transit engaged the Center for Urban Transportation Research to examine several issues related to the organization:

- Compare MDT to peer organizations
- Review organizational changes made over the last several years
- Analyze recent agency performance and performance measures
- Assess proposed new organizational changes in budgetary context

The findings in the body of the report are consolidated here.

## Peer Review

### Operating expenses per VOMS, 2003 - 2008

- Heavy rail expenses consistently fell below all peers in all functions.
- Bus expenses exceeded the peer maximum in vehicle operations prior to 2007.
- Heavy rail and bus reported increased costs in most areas in 2008.

### Employee Work Hours per VOMS, 2003 – 2007

- Heavy rail work hours consistently exceeded the peer maximum in general administration.
- Bus work hours frequently exceeded the peer maximum in vehicle operations and vehicle maintenance.
- Bus vehicle operations work hours per VOMS declined significantly over time.
- Automated guideway required significant employee resources for vehicle maintenance and general administration.

### Employee Work Hours per Passenger Trip, 2003 – 2008

- Heavy rail and bus work hours exceeded peer maximums in most functions from 2003 through 2007.
- Heavy rail, bus, and automated guideway reduced work hours per passenger trip in most areas in 2008.

### Employee Work Hours per Revenue Mile, 2003 – 2008

- Heavy rail 2008 general administration work hours per revenue mile fell below the 2007 record high.
- Bus work hours per revenue mile increased in 2008.
- Automated guideway work hours per revenue mile exceeded most bus and heavy rail levels, but did decline in 2008.

### Salary Cost per Passenger Trip, 2003 – 2007

- Heavy rail costs exceeded the peer maximum in general administration and were consistently double that of LACMTA.
- Bus costs fell below all peer agencies in all functions, but remained relatively stable.
- Heavy rail's non-vehicle maintenance cost was 8 to 11 times greater than bus and Automated guideway and 2 times greater than Automated guideway administration cost.

### ***Revenue Miles between Failures, 2003 – 2008***

- Heavy rail outperformed only LACMTA.
- Bus improved revenue miles in 2007, but remained well below all peers.
- Heavy rail and bus revenue miles between failures declined in 2008.
- Automated guideway, which performs well below peers, showed significant improvement in 2007 and 2008.

### **Staffing Allocation**

- MDT's consolidation of a variety of performance-related functions within a new Performance Management Division has the potential to eliminate unnecessary duplication, improve responsiveness, and enhance the quality of the final product.
- MDT's decision to retain Resource Allocation within the Financial Services Division seems to be prudent from a financial management perspective.
- Consistent with OSBM's recommendation, efforts should be initiated to explore further any possible duplication of services in the division of Civil Rights & Labor Relations within Miami-Dade County.
- The Safety & Security Division was the only division that expanded.
- The assignment of technical assistance positions to the Deputy Director Operations could prove to be very useful.
- Most of the Facilities Maintenance and Engineering & System Maintenance positions eliminated were non-vehicle maintenance positions.
- Through reorganization and consolidation, MDT effectively reduced 30 staff within Infrastructure Engineering & Maintenance.
- With responsibility for Materials Management assigned to the Deputy Director Operations, it might be prudent to establish additional financial oversight of materials management functions outside of the purview of Operations.
- Given OSBM's recommendations regarding the Rail/Mover Vehicle work unit, possible recommendations for enhancing the effectiveness of the Rail/Mover Vehicle work unit include the addition of personnel skilled in accounting and a review of supervisory requirements.
- Paratransit Administration, an operating unit, is now a direct report to Bus Services.
- Through reorganization and consolidation, MDT effectively reduced a total of 434 staff within Operations.
- Consolidation and staff reductions undertaken in Engineering Planning & Development are consistent with OSBM's recommendation that MDT explore additional staff reductions in this area.
- The relocation of Information Technology to Support Services is in line with OSBM's recommendation.
- MDT's consolidation of the training function within a single work unit assigned to an area that serves the entire organization would seem to be a positive move not only from an efficiency perspective but also to enhance training effectiveness.
- The assignment of Human Resources to Support Services, a direct report and an area that serves the entire organization, complies with OSBM's recommendations.
- Support Services has established an integrated unit of services for the entire organization.

## Performance Metrics

- OSBM uses balanced scorecards on a quarterly basis to measure MDT's success in achieving priority outcomes within four areas, including customer, financial, internal, and learning & growth.
- MDT performed exceptionally well in the area of customer service.
- Few measures were reported over the long-term, as performance measures frequently changed from quarter to quarter, and measures often focused on outputs rather than outcomes; however, there appeared to be a recent change in focus.
- Operating costs are not tracked.
- MDT has incorporated three of the standardized measures, which all focused on quantity and quality of service, and were found to be in use by other transit agencies.
- Measures of efficiency and effectiveness were not identified as measures of performance.
- Based on the standardized performance measures, all three MDT modes improved performance.
- Metromover not only exceeded MDT targets but also achieved high scores in cost efficiency, effectiveness, and vehicle utilization.
- Metrorail exceeded MDT targets and improved efficiency and effectiveness.
- Bus achieved MDT targets and improved efficiency.
- MDT could benefit from developing additional measures of performance that focus on outcomes and target efficient and effective operations.
- The standardized list of performance measures identified within the report provides a good selection for MDT's consideration.

## Potential Financial Impact of Re-organization

- Operating expenses were divided by the actual and projected number of full-time equivalents in order to determine the operating cost per employee.
- Operating costs per employee ranged from \$58,557 per general administration employee to \$125,611 per vehicle operations employee.
- A growth factor specific to organizational function, and was applied to the projected FY 2009/2009 operating costs and to the FY 2009/2010 operating costs.
- Since operating cost data by function were not available beyond FY 2007/2008, projected savings were limited to total operating costs.
- In the absence of growth in operating costs, MDT's proposed organizational realignment for FY 2009/2010 represents a reduction of \$40 million in wages and fringe benefits versus FY 2007/2008.
- ***With a projected growth rate of 5.3 percent applied in FY 2008/2009 and in FY 2009/2010, the reduction in wages and fringe benefits is almost \$28 million.***
- Fluctuation in the number of revenue miles provided, increases in projected work hours per full-time equivalent employee, and changes in wages and fringe benefits that increase them as a percentage of total operating expenses could all have negative impacts on the estimated savings.

## Appendix A - Florida Transportation Commission Operating Indicators, 2008

<b>Florida Transportation Commission FY 2008 Transit Authority Operating Indicators</b>	
<i>Operating Indicator</i>	<i>Detail</i>
Operating Expense per Capita (Potential Customer)	Annual operating budget divided by the service area population.
Farebox Recovery Ratio	Ratio of passenger fares to total operating expenses.
Service Area Population	Approximation of overall market size for comparison of relative spending and service levels among communities in the absence of actual service area population.
Service Area Population Density	Persons per square mile based on the service area population and service area size reported in the National Transit Database (NTD).
Operating Expense	Reported total spending on operations, including administration, maintenance, and operation of service vehicles.
Operating Revenue	All revenue generated through the operation of the transit authority.
Total Annual Revenue Miles	Number of annual miles of vehicle operation while in active service.
Total Annual Revenue Hours	Total hours of operation by revenue service vehicles in active revenue service.
Total Revenue Vehicles	Number of vehicles available for use by the transit authority to meet the annual maximum service requirement.
Operating Expense per Revenue Hour <sup>1</sup>	Cost of operating an hour of revenue service.
Peak Vehicles	Number of vehicles operated in maximum (peak) service. Represents the number of revenue vehicles operated to meet the annual maximum service requirements.
Ratio of Revenue Vehicles to Peak Vehicles (spare ratio)	Total revenue vehicles, including spares, out-of-service vehicles, and vehicles in or awaiting maintenance, divided by the number of vehicles operated in maximum service.
Annual Passenger Trips	Annual number of passenger boardings on the transit vehicles.
Average Trip Length	A number typically derived based on sampling and represents the average length of a passenger trip.
Annual Passenger Miles	Number of annual passenger miles multiplied by the system's average trip length (in miles).
Weekday Span of Service (hours)	Number of hours that transit service is provided on a representative weekday from first service to last service for all modes.
Average Fare	Passenger fare revenues divided by the total number of passenger trips.
Passenger Trips per Revenue Mile	The ratio of annual passenger trips to total annual revenue miles of service.
Passenger Trips per Revenue Hour	Ratio of annual passenger trips to total annual revenue hours of operation.
Passenger Trips per Capita	Passenger trips per capita.
Average Age of Fleet in Years	Age of fleet (years) average for bus and years since rebuild for rail.
Unrestricted Cash Balance	End of year cash balance from financial statement.
Weekday Ridership	Average weekday ridership.
Capital Commitment to System Preservation	% of capital spent on system preservation.
Capital Commitment to System Expansion	% of capital spent on system expansion.
Intermodal Connectivity	Number of intermodal transfer points available.

<sup>1</sup>Operating indicator specific to SFRTA.

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## Appendix B - MDT Balanced Scorecards

<i>FY 2005/2006, 3<sup>rd</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>
<b>1.0 Customer</b>		
<i>Dramatic improvement in level of bus service</i>		
Bus service miles – yearly (millions)	34.2	35.0
<i>Minimum wait time for transit passengers</i>		
Average phone answer time	49	80
Elevator/escalator availability	93	98
Bus late runs	1.5	1.0
Bus maintenance-related late runs	1.3	1.0
Bus on-time performance	76	75
Metrorail on-time performance	95	95
Metrorail survey ratings: service frequency	53.87%	70.00%
<i>Increase public knowledge/understanding of public transportation alternatives/benefits</i>		
Number of TV Public Service Announcements (PSA) aired	200	200
<i>Clear and informative transit/transportation signage</i>		
Number of bus stop signs with new style signage	4,000	4,000
<i>Enhance customer satisfaction</i>		
Secret shopper score	4.1	4.0
<b>2.0 Financial</b>		
<i>Meet transit budget targets</i>		
Quarterly revenue (\$000s)	\$26,433	\$16,850
Quarterly expenditures (\$000s)	\$100,545	\$115,000
Procedures manual for MDT Finance Division	50	50
NTD Report	100	100
<b>3.0 Internal</b>		
<i>Reliable transit vehicles, equipment &amp; facilities</i>		
Bus breakdowns & roadcalls	2,297	2,900
Metromover cars	14.0	14.0
Metromover car procurement milestones	2.0	3.0
Metrorail vehicle rehabilitation project	10.0	141.0
Preventive maintenance adherence	99.4	99.4
Universal Automated Fare Collection Project	13.00	110.00
Metrobus survey ratings: reliability of service	29.76%	40.00%
Metrorail survey ratings: reliability of service	56.66%	75.00%
<i>Improved accessibility to transit facilities/bus stops</i>		
STS Interactive Voice Response System	10	10
STS mobile data terminals and automated vehicle locator	10	10
<i>Retention of excellent employees</i>		
Disciplinary Action Reporting (DAR) system	95	95
<i>Ensure effective and efficient security devices</i>		
Security Post inspections	339	300
<i>Convenient, clean transit passenger facilities/vehicles</i>		
Installation of new bus shelters	924	1,000
Bus shelters system-wide	113	92
<i>Ensure effective and Special Transportation Services (STS)</i>		
STS on-time performance	80.6	85.0
STS average phone answer time	42.0	45.0
STS average phone wait time	21.0	120.0
STS employee absenteeism	14.0	15.0
<b>4.0 Learning &amp; Growth</b>		
<i>Safe transit facilities/vehicles</i>		
Acts of vandalism and assaults	49	42
Levels of petty and serious crimes in system	213	250
Number of counterfeit passes confiscated	434	431
System-wide transit related accidents	4.71	4.62

<i>FY 2005/2006, 4<sup>th</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Minimum wait time for transit passengers</i>				
Bus on-time performance (schedule adherence)	66.45%	85.00%	66.17%	85.00%
Metrorail on-time performance	93.95%	98.00%	93.29%	98.00%
STS on-time performance	80.46%	85.00%	81.03%	85.00%
<i>Dramatic improvement in level of bus service</i>				
Bus average weekday boardings	242,688	256,000	302,796	256,000
Bus total monthly boardings	6,832,000	6,415,212	54,386,232	50,988,633
<i>Convenient, clean transit passenger facilities/vehicles</i>				
Bus shelters system-wide	105	92	99	92
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
MDT quarterly revenue (\$000s)	\$243,427	\$286,472	\$346,780	\$337,022
MDT quarterly expenditures (\$000s)	\$82,868	-\$7,978	\$346,647	\$337,022
<b>3.0 Internal</b>				
<i>Improved accessibility to transit facilities/bus stops</i>				
Metrorail & Metromover elevator availability	98.3%	96.0%	1180.0%	96.0%
Metrorail & Metromover escalator availability	86.3%	95.0%	88.7%	95.9%
<i>Safe and reliable transit facilities/vehicles</i>				
Bus fleet system reliability	2,453	2,900	2,452	2,900
Metrorail weekday peak vehicle requirement	92.40%	100.00%	94.74%	100.00%
Metrorail total number of mainline occurrences, service disruptions, and vehicles removed from service	546	431	4,006	3,879
Metromover weekday peak vehicle requirement	100%	100%	100%	100%
Bus transit-related accidents	4.26%	3.60%	4.21%	3.60%
Security post inspections	222	300	2,580	2,460
<b>4.0 Learning &amp; Growth</b>				
<i>Maintain unanticipated absenteeism at/below satisfactory level</i>				
Department-wide unanticipated employee absenteeism	7.68%	16.50%	7.18%	16.50%

<i>FY 2006/2007, 1<sup>st</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Minimum wait time for transit passengers</i>				
Bus on-time performance (schedule adherence)	61.02%	85.00%	63.45%	85.00%
Metrorail on-time performance	86.28%	98.00%	88.13%	98.00%
STS on-time performance	80.47%	85.00%	80.41%	85.00%
<i>Dramatic improvement in level of bus service</i>				
Bus average weekday boardings	251,042	256,000	260,500	256,000
Bus total monthly boardings	5,509,517	6,979,043	12,825,798	13,217,276
<i>Convenient, clean transit passenger facilities/vehicles</i>				
Bus shelters system-wide	95	92	100	92
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
MDT total revenue (\$000s)	\$50,233	\$50,000	\$50,233	\$50,000
MDT total expenditures (\$000s)	\$116,287	\$120,000	\$116,287	\$120,000
<i>Improve accounts payable backlog</i>				
Accounts payable aging percentage >30 days	0%	100%	0%	300%
<b>3.0 Internal</b>				
<i>Improved accessibility to transit facilities/bus stops</i>				
Metrorail & Metromover elevator availability	96.5%	96.0%	97.7%	96.0%
Metrorail & Metromover escalator availability	91.3%	95.0%	90.0%	95.0%
<i>Safe and reliable transit facilities/vehicles</i>				
Bus fleet system reliability	2,757	6,000	2,754	6,000
Metrorail weekday peak vehicle requirement	94.70%	100.00%	95.37%	100.00%
Metrorail total number of mainline occurrences, service disruptions, and vehicles removed from service	624	431	1,771	1,293
Metromover weekday peak vehicle requirement	95.0%	100.0%	97.0%	100.0%
Bus transit-related accidents	3.70%	3.60%	3.70%	3.60%
Security post inspections	279	300	947	900
<b>4.0 Learning &amp; Growth</b>				
<i>Maintain unanticipated absenteeism at/below satisfactory level</i>				
Department-wide unanticipated employee absenteeism	7.68%	16.50%	7.81%	16.50%

<i>FY 2006/2007, 2<sup>nd</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Minimum wait time for transit passengers</i>				
Bus weekday on-time performance/schedule adherence (overall system)	68.15%	85.00%	66.46%	85.00%
Bus Saturday on-time performance/schedule adherence (overall system)	63.67%	85.00%	62.62%	85.00%
Bus Sunday on-time performance/schedule adherence (overall system)	73.90%	85.00%	68.75%	85.00%
Metrorail on-time performance	90.02%	95.00%	90.19%	90.00%
STS on-time performance (new standard)	92.89%	98.00%	88.77%	98.00%
<i>Improve customer satisfaction for Metromover cars</i>				
Percentage of Phase II Metromover car "facelift" completed	0%	0%	0%	0%
<i>Dramatic improvement in level of bus service</i>				
Bus average weekday boardings	263,923	256,000	1,315,318	1,280,000
Bus total monthly boardings	6,511,791	6,596,309	32,810,279	33,946,768
Number of routes evaluated for scheduled run times	3	3	n/a	n/a
<i>Convenient, clean transit passenger facilities/vehicles</i>				
Maintenance of bus passenger shelters	57	92	96	92
<i>Provide clear/informative transit/transportation signage</i>				
Number bus stop signs inspected	467	900	609	900
<i>Reduce customer complaints</i>				
Complaint ratio of total STS trips	0.26%	2.00%	0.25%	2.00%
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
Transit total revenue (\$000s)	\$48,741	\$25,149	\$48,741	\$25,149
Transit total expenditures (\$000s)	\$111,464	\$109,441	\$111,464	\$109,441
Transit full-time positions filled	3,679	3,876	n/a	n/a
<i>Improve accounts payable backlog</i>				
Average days accounts payable aging	23	25	16	25
<b>3.0 Internal</b>				
<i>Improved accessibility to transit facilities/bus stops</i>				
Metrorail & Metromover elevator availability	97.4%	96.0%	97.4%	96.0%
Metrorail & Metromover escalator availability	90.6%	95.0%	90.3%	95.0%
<i>Safe and reliable transit facilities/vehicles</i>				
Security Post inspections	377	350	2,247	1,900
Bus fleet system reliability	3,003	6,000	2,862	6,000
Metrorail weekday peak vehicle requirement	95.00%	100.00%	94.85%	100.00%
Metrorail total number of mainline occurrences, service disruptions, and vehicles removed from service	539	431	3,178	2,586
Metromover weekday peak vehicle requirement	98.0%	100.0%	98.0%	100.0%
Bus transit-related accidents per 100k miles	3.60	3.60	3.64	3.60
<b>4.0 Learning &amp; Growth</b>				
<i>Maintain unanticipated absenteeism at/below satisfactory level</i>				
FY06 department-wide unanticipated employee absenteeism	6.62%	16.50%	6.02%	16.50%
FY07 department-wide unanticipated employee absenteeism	11.21%	16.50%	8.86%	16.50%
Paratransit absenteeism	12.80%	15.00%	11.40%	15.00%

<i>FY 2006/2007, 3<sup>rd</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Minimum wait time for transit passengers</i>				
Bus weekday on-time performance/schedule adherence (overall system)	75.67%	85.00%	68.81%	85.00%
Bus Saturday on-time performance/schedule adherence (overall system)	73.44%	85.00%	64.94%	85.00%
Bus Sunday on-time performance/schedule adherence (overall system)	78.48%	85.00%	71.18%	85.00%
STS on-time performance (new standard)	90.90%	90.00%	90.34%	90.00%
Metrorail on-time performance	95.77%	98.00%	92.52%	98.00%
<i>Improve customer satisfaction for Metromover cars</i>				
Percentage of Phase II Metromover car "facelift" completed	0%	0%	0%	0%
<i>Dramatic improvement in level of bus service</i>				
Bus average weekday boardings	262,875	256,000	263,242	256,000
Bus total monthly boardings	7,089,570	7,061,305	54,199,370	55,368,953
Number of routes evaluated for scheduled run times	3	3	n/a	n/a
<i>Convenient, clean transit passenger facilities/vehicles</i>				
Number bus passenger shelters inspected monthly	196	360	1,861	3,420
<i>Provide clear/informative transit/transportation signage</i>				
Number bus stop signs inspected	1,388	775	869	858
<i>Reduce customer complaints</i>				
Complaint ratio of total STS trips	0.16%	2.00%	0.23%	2.00%
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
Transit total expenditures (\$000s)	\$18,268	\$109,441	\$272,581	\$328,323
Transit total revenue (\$000s)	\$55,282	\$109,442	\$156,956	\$328,326
Transit full-time positions filled	3,615	3,876	n/a	n/a
<i>Improve accounts payable backlog</i>				
Average days accounts payable aging	22	25	19	25
<b>3.0 Internal</b>				
<i>Improved accessibility to transit facilities/bus stops</i>				
Metrorail & Metromover elevator availability	98.4%	96.0%	97.7%	96.0%
Metrorail & Metromover escalator availability	90.8%	95.0%	90.4%	95.0%
<i>Safe and reliable transit facilities/vehicles</i>				
Security Post inspections	653	350	3,949	2,950
Bus fleet system reliability	2,921	6,000	2,907	6,000
Metrorail weekday peak vehicle requirement	93.00%	100.00%	94.46%	100.00%
Metromover weekday peak vehicle requirement	98.00%	100.00%	97.00%	100.00%
Bus transit-related accidents per 100k miles	3.79	3.60	3.66	3.60
<b>4.0 Learning &amp; Growth</b>				
<i>Maintain unanticipated absenteeism at/below satisfactory level</i>				
FY07 department-wide unanticipated employee absenteeism	10.11%	16.50%	9.86%	16.50%
Paratransit absenteeism	12.80%	15.00%	11.20%	15.00%

<i>FY 2006/2007, 4<sup>th</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Minimum wait time for transit passengers</i>				
Bus weekday on-time performance/schedule adherence (overall system)	72.33%	85.00%	72.51%	85.00%
Bus Saturday on-time performance/schedule adherence (overall system)	71.70%	85.00%	70.74%	85.00%
Bus Sunday on-time performance/schedule adherence (overall system)	75.61%	85.00%	73.88%	85.00%
STS on-time performance (new standard)	87.27%	90.00%	89.08%	90.00%
Metrorail on-time performance	96.38%	98.00%	93.92%	98.00%
<i>Improve customer satisfaction with bus stops</i>				
Number new litterbins installed	23	50	39	100
<i>Dramatic improvement in level of bus service</i>				
Bus average weekday boardings	257,027	256,000	259,500	256,000
Bus total monthly boardings	7,152,988	6,969,995	74,535,790	75,452,665
Number of routes evaluated for scheduled run times	3	3	n/a	n/a
<i>Provide clear/informative transit/transportation signage</i>				
Number bus stop signs inspected	737	775	808	831
<i>Reduce customer complaints</i>				
Complaint ratio of total STS trips	0.17%	2.00%	0.21%	2.00%
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
Transit total expenditures (\$000s)	\$18,268	\$109,441	\$272,581	\$328,323
Transit total revenue (\$000s)	\$55,282	\$109,442	\$156,956	\$328,326
<i>Improve accounts payable backlog</i>				
Average days accounts payable aging	15	25	20	25
<b>3.0 Internal</b>				
<i>Improved accessibility to transit facilities/bus stops</i>				
Metrorail & Metromover elevator availability	98.9%	96.0%	98.5%	96.0%
Metrorail & Metromover escalator availability	91.4%	95.0%	91.1%	95.0%
<i>Safe and reliable transit facilities/vehicles</i>				
Bus fleet system reliability	3,009	6,000	2,956	6,000
Metrorail weekday peak vehicle requirement	99.4%	100.0%	n/a	n/a
Metromover weekday peak vehicle requirement	91.0%	100.0%	97.0%	100.0%
Bus transit-related accidents per 100k miles	3.28	3.60	3.55	3.60
<b>4.0 Learning &amp; Growth</b>				
<i>Maintain unanticipated absenteeism at/below satisfactory level</i>				
FY07 department-wide unanticipated employee absenteeism	7.38%	16.50%	9.54%	16.50%
Paratransit absenteeism	12.70%	15.00%	11.20%	15.00%

<i>FY 2007/2008, 1<sup>st</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Aggressive pursuit of on-time performance</i>				
Bus weekday on-time performance/schedule adherence (overall system)	73.28%	78.00%	72.25%	78.00%
Metrorail on-time performance	94.02%	98.00%	97.22%	98.00%
STS on-time performance (new standard)	88.75%	90.00%	88.65%	90.00%
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus mean distance between failures	3,935	4,000	3,589	4,000
Metrorail mean distance between disruptions	41,175	39,000	43,676	39,000
Metromover mean distance between failures	4,356	6,000	4,801	6,000
Metrorail & Metromover elevator availability	98.2%	96.0%	97.9%	96.0%
Metrorail & Metromover escalator availability	90.8%	95.0%	91.2%	95.0%
<b>2.0 Financial</b>				
<i>Ensure timely payment to vendors/contractors</i>				
Percentage accounts payable aging invoices paid within 30 days	59%	100%	61%	100%
Payment of DBE firms on PMC contract to date	21.1	21.9	n/a	n/a
<i>Meet transit budget targets</i>				
FY07 department-wide unanticipated employee absenteeism	7.53%	16.50%	7.99%	16.50%
Transit total expenditures (\$000s)	\$102,530	\$110,129	\$102,530	\$110,129
Transit total revenue (\$000s)	\$58,330	\$110,129	\$58,330	\$110,129
<b>3.0 Internal</b>				
<i>Maximize parts availability at MDT stockroom locations</i>				
Monthly rail critical parts percent stockout	6.51%	15.00%	9.40%	15.00%

<b>FY 2007/2008, 2<sup>nd</sup> Quarter Measures</b>	<b>Actual</b>	<b>Goal</b>	<b>FYTD Actual</b>	<b>FYTD Goal</b>
<b>1.0 Customer</b>				
<i>Increase customer satisfaction with transit</i>				
Phase II Metromover cars "facelift" percentage complete	0%	0%	0%	0%
Weekly cumulative number new litterbins installed	1,100	1,100	1,100	1,100
<i>Aggressive pursuit of on-time performance</i>				
Bus weekday on-time performance/schedule adherence (overall system)	77.49%	78.00%	72.93%	78.00%
Metrorail on-time performance	94.26%	98.00%	96.44%	98.00%
STS on-time performance (new standard)	89.26%	90.00%	89.07%	90.00%
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus mean distance between failures	3,432	4,000	3,669	4,000
Metrorail mean distance between disruptions	91,629	39,000	49,385	39,000
Metromover mean distance between failures	2,934	6,000	4,266	6,000
Metrorail & Metromover elevator availability	98.4%	96.0%	98.0%	96.0%
Metrorail & Metromover escalator availability	91.0%	95.0%	91.3%	95.0%
<b>2.0 Financial</b>				
<i>Ensure timely payment to vendors/contractors</i>				
Percentage accounts payable aging invoices paid within 30 days	81%	85%	64%	85%
Payment of DBE firms on PMC contract to date	22.2	23.1	22.2	23.1
<i>Meet transit budget targets</i>				
FY07 department-wide unanticipated employee absenteeism	9.28%	16.50%	8.53%	16.50%
Transit total expenditures (\$000s)	\$131,419	\$110,129	\$228,911	\$220,259
Transit total revenue (\$000s)	\$32,856	\$110,129	\$63,617	\$220,259
<b>3.0 Internal</b>				
<i>Maximize parts availability at MDT stockroom locations</i>				
Bus down pending parts – Materials Management	2.1	3.0	n/a	n/a
Monthly rail critical parts percent stockout	11.57%	15.00%	9.50%	15.00%

<i>FY 2007/2008, 3<sup>rd</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Increase customer satisfaction with transit</i>				
Phase II Metromover cars "facelift" percentage complete	0%	0%	0%	0%
Weekly cumulative number new litterbins installed	1,100	1,100	1,100	1,100
<i>Aggressive pursuit of on-time performance</i>				
Bus weekday on-time performance/schedule adherence (overall system)	81.66%	78.00%	75.21%	78.00%
Metrorail on-time performance	96.25%	98.00%	95.69%	98.00%
STS on-time performance (new standard)	91.00%	90.00%	89.73%	90.00%
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus mean distance between failures	3,901	4,000	3,745	4,000
Metrorail mean distance between disruptions	34,889	39,000	43,767	39,000
Metromover mean distance between failures	5,136	6,000	4,169	6,000
Metrorail & Metromover elevator availability	98.7%	96.0%	98.1%	96.0%
Metrorail & Metromover escalator availability	93.1%	95.0%	91.5%	95.0%
<b>2.0 Financial</b>				
<i>Ensure timely payment to vendors/contractors</i>				
Percentage accounts payable aging invoices paid within 30 days	81%	85%	70%	85%
Payment of DBE firms on PMC contract to date	23.2	24.6	23.2	24.6
<i>Meet transit budget targets</i>				
FY07 department-wide unanticipated employee absenteeism	10.00%	16.50%	8.30%	16.50%
Transit total expenditures (\$000s)	\$126,358	\$110,129	\$355,269	\$330,388
Transit total revenue (\$000s)	\$59,873	\$110,129	\$123,490	\$330,388
<b>3.0 Internal</b>				
<i>Minimize vacant positions</i>				
Transit full-time positions filled	3,440	(3,534-3,721)	n/a	n/a
<i>Maximize parts availability at MDT stockroom locations</i>				
Bus down pending parts – Materials Management	2.4	3.0	n/a	n/a
Monthly rail critical parts percent stockout	5.04%	15.00%	8.06%	15.00%
<b>4.0 Learning &amp; Growth</b>				
<i>Cultural change: develop winning attitude through accountability/teamwork</i>				
Monthly number completed updates of outdated MDT job descriptions	56	35	276	245

	<b>Actual</b>	<b>Goal</b>	<b>FYTD Actual</b>	<b>FYTD Goal</b>
<b>FY 2007/2008, 4<sup>th</sup> Quarter Measures</b>				
<b>1.0 Customer</b>				
<i>Increase customer satisfaction with transit</i>				
Phase II Metromover cars "facelift" percentage complete	0%	0%	0%	0%
Weekly cumulative number new litterbins installed	1,100	1,100	1,100	1,100
<i>Aggressive pursuit of on-time performance</i>				
Bus weekday on-time performance/schedule adherence (overall system)	76.35%	75.00%	76.35%	75.00%
Metrorail on-time performance	92.89%	95.00%	93.15%	95.00%
STS on-time performance (new standard)	92.89%	90.00%	92.89%	90.00%
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus mean distance between failures	3,413	4,000	3,413	4,000
Metrorail mean distance between disruptions	48,169	39,000	48,169	39,000
Metromover mean distance between failures	4,895	6,000	4,895	6,000
Metrorail & Metromover elevator availability	98.1%	96.0%	98.1%	96.0%
Metrorail & Metromover escalator availability	94.7%	95.0%	94.7%	95.0%
<b>2.0 Financial</b>				
<i>Ensure timely payment to vendors/contractors</i>				
Percentage accounts payable aging invoices paid within 30 days	95%	85%	95%	85%
Payment of DBE firms on PMC contract to date	23.6	25.0	23.6	25.0
<i>Meet transit budget targets</i>				
FY07 department-wide unanticipated employee absenteeism	8.48%	16.50%	8.48%	16.50%
Transit total expenditures (\$000s)	\$69,592	\$110,129	\$428,351	\$440,517
Transit total revenue (\$000s)	\$292,527	\$110,129	\$415,351	\$440,517
<b>3.0 Internal</b>				
<i>Minimize vacant positions</i>				
Transit full-time positions filled	3,407	(3,534- 3,721)	n/a	n/a
<i>Maximize parts availability at MDT stockroom locations</i>				
Bus down pending parts – Materials Management	1.3	3.0	1.3	3.0
Monthly bus critical parts percent stockout	17.17%	15.00%	17.17%	15.00%
Monthly rail critical parts percent stockout	10.55%	15.00%	10.55%	15.00%
<b>4.0 Learning &amp; Growth</b>				
<i>Cultural change: develop winning attitude through accountability/teamwork</i>				
Monthly number completed updates of outdated MDT job descriptions	9	35	279	280

<i>FY 2008/2009, 1<sup>st</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Increase customer satisfaction with transit</i>				
MDT CEV secret shopper score	76	75	n/a	n/a
MDT secret shopper phase 1	67	75	n/a	n/a
MDT secret shopper phase 2	78	75	n/a	n/a
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus weekday on-time performance/schedule adherence (overall system)	78.29%	75.00%	77.18%	75.00%
Metrorail on-time performance	96.05%	95.00%	94.10%	95.00%
STS on-time performance (new standard)	92.46%	90.00%	92.61%	90.00%
Bus mean distance between failures	3,677	4,000	3,667	4,000
Metrorail mean distance between disruptions	52,311	39,000	45,285	39,000
Metromover mean distance between failures	6,048	6,000	6,306	6,000
Phase II Metromover cars "facelift" doors completed	1	5	1	5
Metrorail & Metromover elevator availability	96.9%	96.0%	97.6%	96.0%
Metrorail & Metromover escalator availability	91.1%	95.0%	92.6%	95.0%
<i>Ensure transit system is safe/secure</i>				
Perform FTA mandated safety/security emergency drills	Yes	Yes	n/a	n/a
<i>Provide excellent riding environment for transit passengers</i>				
Phase II Metromover cars "facelift" A/C unit replaced	0	0	0	0
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
Transit total expenditures (\$000s)	\$93,557	\$115,942	\$93,557	\$115,942
Transit total revenue (\$000s)	\$33,542	\$115,942	\$33,542	\$115,942
<i>Pursue financing/funding alternatives, FY09</i>				
Potential funding opportunities sought during FY 09/10 (annual)	13	13	n/a	n/a
FYTD number applications submitted for federal, state and local funding	1	10	1	10
<b>3.0 Internal</b>				
<i>Emphasize performance accountability among workforce/partners, FY09</i>				
Payment of DBE firms on PMC contract to date	24.9	25.0	24.9	25.0
Job descriptions completed monthly	16	10	35	100
<i>Continue improvement of business systems/work processes, FY09</i>				
Monthly bus critical parts percent stockout	15.09%	15.00%	14.45%	15.00%
Bus down pending parts – Materials Management	2.6	3.0	1.9	3.0
<b>4.0 Learning &amp; Growth</b>				
<i>Ensure qualified employees are available to fill mission-critical positions</i>				
FY07-09 department-wide unanticipated employee absenteeism	9.11%	16.50%	8.85%	16.50%
<i>Develop effective/capable workforce, FY09</i>				
FYTD number of courses, initiatives, interventions, topic-specific sessions	18	9	18	9

<i>FY 2008/2009, 2<sup>nd</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Increase customer satisfaction with transit</i>				
Total bus, rail & mover complaints	621	606	635	n/a
MDT CEV secret shopper score	76	75	n/a	n/a
MDT secret shopper phase 1	67	75	n/a	n/a
MDT secret shopper phase 2	78	75	n/a	n/a
Bus operator discourtesy complaints	8	35	12	n/a
Rail complaints per 100k revenue miles	1.8	3.0	1.7	3.0
Mover complaints per 100k revenue miles	0.9	2.4	1.3	2.4
Rail complaints per 100k boardings	1.08	1.10	1.08	1.10
Mover complaints per 100k boardings	0.26	0.30	0.26	0.30
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus weekday on-time performance /schedule adherence (overall system)	81.55%	75.00%	78.43%	75.00%
Metrorail on-time performance	96.15%	95.00%	94.10%	95.00%
STS on-time performance (new standard)	92.11%	90.00%	92.38%	90.00%
Bus mean distance between failures	4,017	4,000	3,888	4,000
Metrorail mean distance between disruptions	50,700	39,000	50,315	39,000
Metromover mean distance between failures	8,843	6,000	6,250	6,000
Phase II Metromover cars "facelift" doors completed	8	7	8	7
Metrorail & Metromover elevator availability	98.0%	96.0%	97.9%	96.0%
Metrorail & Metromover escalator availability	97.1%	95.0%	94.5%	95.0%
<i>Ensure transit system is safe/secure</i>				
NTD reportable part 1 serious crimes	16	25	138	175
NTD reportable part 2 petty crimes	9	14	55	98
Perform FTA mandated safety/security emergency drills	Yes	Yes	n/a	n/a
<i>Provide excellent riding environment for transit passengers</i>				
Phase II Metromover cars "facelift" A/C units replaced	1	1	1	1
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
Transit total expenditures (\$000s)	\$131,256	\$115,940	\$224,813	\$231,882
Transit total revenue (\$000s)	\$35,589	\$115,940	\$69,131	\$231,882
<i>Pursue financing/funding alternatives, FY09</i>				
Potential funding opportunities sought during FY 09/10 (annual)	13	13	n/a	n/a
FYTD number applications submitted for federal, state and local funding	15	10	16	20
<b>3.0 Internal</b>				
<i>Emphasize performance accountability among workforce/partners, FY09</i>				
Payment of DBE firms on PMC contract to date	25.3	25.0	25.3	25.0
Job descriptions completed monthly	3	10	67	130
<i>Continue improvement of business systems/work processes, FY09</i>				
Monthly bus critical parts percent stockout	11.14%	15.00%	13.84%	15.00%
Monthly rail critical parts percent stockout	3.06%	15.00%	6.72%	n/a
Bus down pending parts – Materials Management	2.20%	3.00%	2.10%	3.00%
<i>Enhance public perception of MDT through outreach/community involvement, FY09</i>				
FYTD monthly press releases and articles for publication to enhance perception of MDT	5	3	24	18
FYTD quarterly public presentations made to community organizations	2	2	2	2
Monthly Advertising & Media public presentations	4	2	10	4
<b>4.0 Learning &amp; Growth</b>				
<i>Ensure qualified employees are available to fill mission-critical positions</i>				
FY07-09 department-wide unanticipated employee absenteeism	9.78%	16.50%	9.17%	16.50%
<i>Develop effective/capable workforce, FY09</i>				
Specialized needs assessment interviews conducted with MDT divisions	9	8	9	8
FYTD number of courses, initiatives, interventions, topic-specific sessions	64	21	216	84
Training sessions conducted on utilizing Six Sigma Methodologies and QA/QC applications	3	2	3	2

<i>FY 2008/2009, 3<sup>rd</sup> Quarter Measures</i>	<i>Actual</i>	<i>Goal</i>	<i>FYTD Actual</i>	<i>FYTD Goal</i>
<b>1.0 Customer</b>				
<i>Maximize use/efficiency of existing transportation system</i>				
Total bus, rail & mover complaints	579	606	620	n/a
MDT CEV secret shopper score	76	75	n/a	n/a
MDT secret shopper phase 1	67	75	n/a	n/a
MDT secret shopper phase 2	78	75	n/a	n/a
Bus operator discourtesy complaints	4	35	10	n/a
Rail complaints per 100k revenue miles	2.0	3.0	1.9	3.0
Mover complaints per 100k revenue miles	1.0	2.4	1.1	2.4
Bus complaints per 100k boardings	9.32	15.00	9.63	15.00
Rail complaints per 100k boardings	0.59	1.10	0.60	1.10
Mover complaints per 100k boardings	0.15	0.30	0.20	0.30
<i>Maximize reliability of transit system vehicles/infrastructure</i>				
Bus weekday on-time performance/schedule adherence (overall system)	82.12%	75.00%	79.19%	75.00%
Metrorail on-time performance	95.72%	95.00%	94.51%	95.00%
STS on-time performance (new standard)	92.85%	90.00%	92.45%	90.00%
Bus mean distance between failures	4,171	4,000	3,932	4,000
Metrorail mean distance between disruptions	30,280	39,000	47,095	39,000
Metromover mean distance between failures	5,052	6,000	6,099	6,000
<i>Ensure transit system is safe/secure</i>				
NTD reportable part 1 serious crimes	16	25	187	225
NTD reportable part 2 petty crimes	6	14	75	126
Perform FTA mandated safety/security emergency drills	Yes	Yes	n/a	n/a
<i>Provide excellent riding environment for transit passengers</i>				
Phase II Metromover cars "facelift" A/C units replaced	6	4	14	16
<b>2.0 Financial</b>				
<i>Meet transit budget targets</i>				
Transit total expenditures (\$000s)	\$110,688	\$115,940	\$335,501	\$347,822
Transit total revenue (\$000s)	\$85,841	\$115,940	\$154,972	\$347,822
<i>Pursue financing/funding alternatives, FY09</i>				
Potential funding opportunities sought during FY 09/10 (annual)	13	13	n/a	n/a
FYTD number applications submitted for federal, state and local funding	15	10	16	20
<b>3.0 Internal</b>				
<i>Emphasize performance accountability among workforce/partners, FY09</i>				
Payment of DBE firms on PMC contract to date	25.6	25.0	25.6	25.0
Job descriptions completed monthly	5	10	87	160
<i>Continue improvement of business systems/work processes, FY09</i>				
Monthly bus critical parts percent stockout	4.72%	15.00%	12.65%	15.00%
Monthly rail critical parts percent stockout	1.41%	15.00%	5.18%	n/a
Bus down pending parts – Materials Management	1.75%	3.00%	2.03%	3.00%
<i>Enhance public perception of MDT through outreach/community involvement, FY09</i>				
FYTD quarterly public presentations made to community organizations	2	2	2	2
Monthly Advertising & Media public presentations	6	2	22	8
<b>4.0 Learning &amp; Growth</b>				
<i>Evaluate/measure employee performance consistently/effectively</i>				
Monthly departmental percentage of past due evaluations	6.0%	1.0%	7.5%	1.0%
<i>Ensure qualified employees are available to fill mission-critical positions</i>				
FY07-09 department-wide unanticipated employee absenteeism	9.43%	16.50%	9.24%	16.50%
<i>Develop effective/capable workforce, FY09</i>				
Specialized needs assessment interviews conducted with MDT divisions	0	8	0	8
Number MDT bus operators who participated in semi-annual pre-lineup instructional classes	1,699	1,350	3,361	2,700

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