4.0 Past Year's Accomplishments (FY 2009)

Throughout FY 2009 MDT has achieved a number of notable accomplishments that seek to improve customer convenience while also assuring the operation of an efficient, responsive, and financially sustainable transit system. The following achievements are categorized as part of this TDP Annual Update according to the type of improvement related to service operations, capital investment, and passenger information/convenience.

4.1 Service Operations

4.1.1 New Bus Service Routes

Airport Flyer: In December 2009, MDT unveiled an express bus service route from Miami International Airport (MIA) to the area's most popular tourist destination -- Miami Beach. The new express bus route known as the Airport Flyer provides bi-directional service between MIA and Miami Beach, with an additional stop at the Earlington Heights Metrorail station. Funded with grant monies from the Federal Transit Administration (FTA), the Airport Flyer provides the nearly 4.8 million South Florida visitors traveling to Miami Beach with access to a rapid, affordable, and reliable transportation option. The Airport Flyer operates daily on 30 minute headways between the hours of 6 AM and 11:30 PM, and costs the rider $2.35 per boarding.

I-95 Dade-Broward Express: In January 2010, Miami-Dade Transit partnered with Broward County Transit (BCT) to provide commuter express transit service to increase connectivity between the two counties. MDT operates express routes in Broward County from the Broward Boulevard Park and Ride Lot and the Sheridan Street Park and Ride Lot with direct service to Downtown Miami. The I-95 Dade-Broward Express Bus routes are especially geared towards working commuters and departures are scheduled every 15 minutes during morning and evening peak travel period. The cost to the rider is $2.35 per boarding.

Kendall Cruiser: The project will extend 9.5 miles from Dadeland North Metrorail station to SW 162nd Avenue along Kendall Drive (SW 88th Street). The alignment will have a total of 22 stops. The service will feature nine stylized distinctly branded environmentally friendly sixty foot hybrid diesel-electric New Flyer buses. The vehicles will also have Wi-Fi service available for patrons. Solar powered real-time passenger information will be provided at certain stops along the corridor. The cost to the rider is $2.35 per boarding. Implementation is set to begin in June 2010.

4.1.2 Metrobus On-Time Performance

Metrobus on-time performance has increased with an almost 10 percent (10%) improvement from 2008.

Mean distance between failures has increased for Metrobus due to an enhanced preventive maintenance program that identifies mechanical issues before failures result. For FY 2008-2009 the mean distance between failures has increased by 6.4 percent. For FY 2009-2010, to date, the mean distance between failures has increased to 25.6 percent.

4.1.3 Bus Service Restructuring

A major initiative being undertaken by MDT is to improve Metrobus service efficiency through a restructuring of the Metrobus route system while minimizing the impact to customers. In

December 2009, MDT implemented service route adjustments to improve overall service performance while maintaining existing service area coverage. The estimated transit operating cost savings as a result of this effort is approximately $12.3 million annually. The new modified grid system was based upon ridership data obtained from the Automated Passenger Counter (APC), Easy Card as well as coordination with local municipal transit services and the Metropolitan Planning Organization (MPO) to maximize interconnectivity and efficiency.

4.1.4 Miami-Dade Transit Service Standards

Miami-Dade Transit established specific transit service standards for bus service to assess annual operational performance. These newly revised service standards were adopted by the Miami-Dade Board of County Commissioners in November 2009.

4.2 Capital Improvements

4.2.1 Miami Intermodal Center-Earlington Heights Connector

Construction of the 2.4-mile Miami Intermodal Center (MIC)-Earlington Heights Metrorail extension continues to proceed on schedule and will be open for service in 2012. This project will provide a Metrorail connection between the MIC at the Miami International Airport and the existing Earlington Heights Metrorail Station. Included in the project is a new Metrorail Station located at the MIC to serve as a multimodal transfer hub for Metrobus, Metrorail, Tri-Rail, future expansion of Amtrak, and other chartered services such as an intercity bus line. The building of the track is progressing vertically with columns and elevator walls. Plumbing and electrical roughing is under way at columns, bent beams and intermediate slabs. As of December 2009, work accomplished so far includes the following: assembly and installation of steel forms, installation of new concrete poles, field and laboratory testing of drilled shaft and augercast pile grout and concrete materials, and density compaction testing on the backfill around the pile caps. The Preliminary Design Train Control (excluding EHT) is 60% complete. Preliminary Design Power Distribution System is also at 60% completion. Project completion date is scheduled for May 2012.

4.2.2 Procurement of New Metrobus Vehicles

A purchase order for Phase 1 of the procurement of thirteen 40 foot hybrid buses was released by MDT in June 2009. Production of hybrid buses has begun and a delivery schedule rate of four hybrid buses per week is anticipated. Phase 2 includes the procurement of twenty-five 60 foot hybrid buses. Of this amount, sixteen will be used for the I-95 Express Bus project and nine for the Kendall Enhanced bus service. Hybrid vehicles will be purchased to replace all future bus fleet as they reach retirement age.

4.2.3 Metrorail New Vehicle Replacement

Miami-Dade County made the decision to pursue the procurement of new Metrorail cars as opposed to rehabilitation of the existing 136 rail car fleet. The Board of County Commissioners has approved procurement of 136 new Metrorail vehicles at a cost of $401.4 million. The new Metrorail vehicles will include more passenger inspired comfort interior features and a self-diagnostic system for early identification of mechanical issues. By December 2009, the RFP 654 proposals were received (9/25/09) and the selection Committee Team members met to evaluate Commercial, Systems Descriptions, Management Support, Inspection and testing, Communications, Software Systems, Systems Support and Systems Assurances Sections.

Work is about 22% complete. The replacement of the entire fleet will occur over the next nine years, with vehicles scheduled to begin arriving in the second quarter of 2013. The project is expected to be completed by March 2019.

4.2.4 Metromover Replacement Cars

Miami-Dade Transit has completed the replacement of its original 12 Metromover cars. This has contributed to improved Metromover reliability and passenger comfort. Since implementation, Metromover cars now travel on average about 40 percent further before experiencing any mechanical failures. There has also been a decrease in the percentage of Metromover vehicles that were inoperable at any given time. In addition, another seventeen vehicles are expected for Phase 2 of procurement for a total of twenty-nine new vehicles. The vehicles will begin arriving in July 2010 through the beginning of 2012. The additional seventeen cars are scheduled to be put into service by mid FY 2012.

4.2.5 Lehman Yard Rehabilitation – Expansion Phase 1

MDT will construct five storage tracks and two Maintenance of Way (MOW) tracks at the existing Metrorail Lehman Center Facility. This expansion is necessary to provide the required storage and transition facility in support of the new 136 Metrorail fleet. During 2009 the 30% Design Criteria was completed by the PMC consultant. The project is part of Contract # CIP028, Design Build. The project is currently at the Assistant County Manager's office pending approval to advertize for construction. It is schedule to be advertized by June 4, 2010. The Notice to proceed is anticipated to be issued by April 2011.

4.2.6 Lehman Center Test Track

Miami-Dade Transit is planning to construct a new test track (2,500 feet) at the existing Metrorail Lehman Center Facility using a Design/Build Procurement method. The test track will provide the necessary support for the existing and new Metrorail fleet. This project is also part of Contract for Design Build # CIP028. During 2009 the 30% Design Criteria was also completed by the PMC consultant. As part of the same contract, the project is currently at the Assistant County Manager's office pending approval to advertize for construction. It is schedule to be advertized by June 4, 2010. The Notice to proceed is anticipated to be issued by April 2011.

4.2.7 Dadeland South Metrorail Station Comfort Station

This new rail operator comfort station will replace the existing one at the platform level of the Dadeland South Metrorail Station. The scope of work includes the evaluation of the existing structural capacity of the platform to accept the new loads, the actual design of the comfort station, the preparation of construction drawings and specifications, dry run process, preparation of construction costs estimates and construction of the proposed comfort station. Estimated completion date is May 2010.

4.2.8 Northeast Passenger Activity Center

Miami-Dade Transit is presently working with the City of North Miami Beach to develop a transit hub near NW 163rd Street Shopping Center. The hub will accommodate 12 existing bus routes and be a catalyst for joint development.

4.2.9 Brownsville Metrorail Station Transit Oriented Development: The Brownsville Metrorail Station Transit Oriented Development is a phased workforce housing project which will include approximately 466 housing units, incidental retail space and covered vehicle parking for

transit patrons. Building permit has been issued to the Developer for Phase I. The County Planning and Zoning Board approved the Phase II of the project on March 4, 2010. Application for Phases III, IV, and V is anticipated in mid-2010.

4.2.10 Park and Ride Lots

New Busway Park and Ride Lot at SW 112th Avenue: Miami-Dade Transit opened a new 450-space park and ride lot at SW 112th Avenue (approximately SW 204th Street) in Cutler Bay in July 2009. The new lot replaces the 95-space lot at SW 200th Street to provide additional parking capacity to meet passenger demand along the South Miami-Dade Busway.

Dadeland South Metrorail Station Park and Ride Lot Expansion: The expansion of the existing surface lot to include an additional 93 parking spaces was completed and opened for service in March 2010.

Kendall Drive and SW 127th Avenue: Miami-Dade County is currently in negotiations with Florida Power and Light to lease approximately three acres of land for purposes of developing a 180 parking space facility.

Kendall Drive and SW 124th Avenue: Negotiations for a park and ride facility in conjunction with the Kendall Cruiser project are currently underway and set for implementation in the summer of 2010.

Kendall Drive and SW 150th Avenue: Negotiations for a park and ride facility in conjunction with the Kendall Cruiser project are currently underway and set for implementation in the summer of 2010.

Kendall Town Center (Kendall Drive and SW 162nd Avenue): Miami Dade Transit is in coordination with a private developer as part of a development agreement for the construction and conveyance of a transit hub that includes a 40 space park and ride lot and 6 bus bays. Hub is scheduled to be completed and open for service in December 2010.

NW 186th Street/73rd Avenue Park and Ride Lot: The permits to allow construction of a new 125 parking space lot have been finalized. Construction of the park and ride lot is began in March 2010 and is anticipated to be completed by March 2011.

Busway and SW 344th Street (Florida City): Proposed Park and Ride facility with 261 spaces anticipated for opening in late 2012. FTA granted MDT approval on November 23, 2009. to proceed with the advertisement of the Environmental Assessment Report for public review and comment. Newspaper notice, letters to appointed and elected officials and flyers to the owners have been prepared. Public meeting held on January 20, 2010 at the Florida City Public Library.

Dolphin Station (NW 107th Avenue and NW 12th Street): To include a proposed 189 surface parking spaces. Held several negotiation meetings with Developer and their lawyers, and included the Planning and Zoning Department. Strides were made to convince the Developer of MDT's need to have the surface lot completed to coincide with the 836 Express Bus project. Construction of the park and ride facility is anticipated for opening in 2012.

NW 7th Avenue Transit Village (NW 7th Avenue and NW 62nd Street): Miami-Dade Transit has proposed 25 transit patron parking spaces at the planned mixed use development project. Project status to-date (Dec. 2009) includes: the right-of-way acquisition services are on-going, relocation has begun, RFP is being finalized and the title transfer on Transit Village Parcels occurred on 12/21/09.

4.2.11 Infrastructure Renewal Projects (IRP)

Hialeah Metrorail Station Concrete and Asphalt Repairs: The parking lot at the Hialeah Metrorail Station has extensive asphalt damage due to overgrown tree roots and daily heavy traffic thru the years. The storm drainage system also needs to be evaluated to ensure that it is functioning properly. MDT has reviewed and approved the scope of work, schedule and cost proposal provided by the Public Works Department (PWD). Schedule completion date is December 2010.

Omni Bus Terminal Concrete Repairs: The repair and renovation of pavement and drainage in an area of heavy bus traffic at the Omni Bus Terminal is being planned. Public Works is in the process of preparing a scope of work, fee estimate and project schedule to perform the work.

Douglas Road Metrorail Station Park and Ride Lot Under Guideway Repair and Restoration: The project goal is to place back in service the Douglas Road Metrorail Station parking lot located under the guideway. The project scope includes the preparation of a complete set of biddable documents, design, construction, and design services during construction. The work includes paving, re-striping the parking spaces, fencing repairs, tree trimming and miscellaneous safety upgrades. A proposed additional 50 parking spaces are anticipated for this lot. Construction completion date is scheduled for September 2010.

Coral Way Maintenance Facility- Employee Access to Parking: MDT recently completed this project which includes a new entrance and exit of vehicles to the Coral Way parking facility, an air conditioned guard house with security cameras, Closed Caption Television monitors and a toilet room.

Secondary Guiderails for Bus Washes- Installation of secondary guide rails in the bus washes at Central, Northeast and Coral Way Bus Facilities. Bid specification was completed in 10/27/09. Preliminary designs were drawn for review of roller style guides. Design is to be compatible with all MDT buses. Project is to be completed by 1/31/2012.

Coral Way Garage Hurricane Panels- Coral Way Bus Transportation and Maintenance Facilities and other buildings in the property. Furnish and install (58) perforated stainless steel hurricane barriers and five (5) high performance Accordion Shutters. Bid specifications were developed on 10/27/09 and the project is to be completed by September 31, 2011.

Metrorail HAVC Replacement- Completed the overhaul of the heating, ventilation and air condition (HVAC) system of the rail vehicles. The overhaul will maintain system reliability and customer comfort for the remainder of the rail vehicle life.

As of January 2010 the overhaul was completed on 68 vehicles. The remaining rail cars will be overhauled during 2010.

4.2.11.1 ARRA Funded

Palmetto Station Traction Power Sub-Station: This will be a Design/Build procurement to implement a new Traction Power Substation at the existing Palmetto Station. This implementation is necessary to provide the required minimum higher 600 Volts Direct Current (VDC) for the 136 new Metrorail vehicles starting in 2013. The present system provides lesser voltage at the Palmetto Station and will not be able to operate new vehicles. The Planning, Pre-Design and Engineering has been completed. MDT is working with OCI to re-advertise the project. Schedule completion date is March of 2012.

Metromover Bicentennial Park Station Rehabilitation: The construction of a new Museum facility adjacent to this Station will foster the reopening of the Station for service. The scope of work to reopen this Station includes: the rehabilitation of the elevator and escalators, replacement of lamps throughout the Station, replacement of aluminum ceiling slats with new support system at ground level, repair the communication system, replace stair metal plates, testing of electrical circuits to assure proper function, new fire cabinets and ancillary devices, replacement of floor tiles, repair cracks at exterior walls, painting and landscaping. The ARRA funding available for this project is $1,300,000. This is $786,800 short of the estimated project budget. A Project Prioritization and Budget Approval Form was submitted for the shortfall of $767,800. As of December 2009 the detail project scope of work was completed for selection of the consultant. Construction is set to begin in mid 2011 and completed by April 30, 2012.

Metrorail Track and Guideway Refurbishment and Mainline turnout Replacement: The replacement of twenty-five (25) mainline turnouts. This will include the #10 Rail Bound Manganese frog, set of insulated plates, ties, concrete, and train control cables. The Metrorail system is over twenty-five years old; the frogs are the critical point of the mainline turnouts. These frogs have been welded and rebuilt countless times. They are a primary reason for noise issues in residential areas that are adjacent to the crossovers. The new frogs with new composite ties and insulated plates will reduce noise as well as increase the safety of the system. Begin installation of frogs in July 2010 and complete project by end of March 2012.

Metromover Inner Loop Stations Escalator Replacement and New Canopies: Scope of work consists of the preparation of a complete set of biddable documents and construction work required for the installation of canopy covers over the existing escalators/stairs at the following seven Metromover stations: Government Center Station, Miami Avenue Station, Bayfront Park Station, First Street Station, College Bayside Station, College North Station and Arena/State Plaza Station. The scope of work also includes replacement of the existing escalators at the aforementioned locations. Although the primary function of these canopies is to provide protection from the elements for the mechanical components of the escalators, they will also provide protection to persons using the escalators and stairs. NTP to the Design Consultant was issued on March 18, 2010. Kick-off meeting was held on March 30, 2010.

Transit Operations System (TOS) Replacement Project: MDT is looking to acquire a system that shall support a seamless integration of transit operations related information and simultaneously achieve the management of this information in a timely manner. This system shall consist of a comprehensive system package with advanced automated bidding functions daily dispatch functions, advanced vehicle assignment functions, vehicle availability, workforce management, performance and discipline, absence tracking functions, operators incentives, service incidents, timekeeping and property specific reports, and interfaces with other systems. As of December 2009 the Capital Project Cash Flow spreadsheet for FY2009-FY10 and FY 11-FY12 was updated. The Scope of Services document was finalized. Project implementation is scheduled for April 30, 2012.

Metromover Fiber Replacement: The replacement of Fiber Optic Cable equipment throughout the Metromover system at all stations and at Central Control has been scoped for implementation in April 2012. The installation of Giga-Bit Ethernet and wireless networking capability at all stations is also included in the scope of work. The Scope of Work was modified based on a revised estimate for the Programmable Logic Controller (PLC) replacement portion of the project. The objective is to attempt to include the cost of the PLC within the available ARRA Grant allocation. A project schedule is being prepared with preliminary completion date of 10/01/2010

Metromover Closed Caption Television Replacement and Installation: MDT has set forth the installation of new digital cameras at all Metromover Stations with Network Video recorders (NVR). The new recorders will be networked into the MDT Video System. Site surveys, design and scope of work have been completed.

Existing Metrorail Stations (Phase 1) Graphics and Signage Retrofit: The project requires the selected Design-Builder to design, furnish, install and test a complete way finding signage and graphics system for the existing twenty-two (22) Metrorail Stations in accordance with Contract Documents and industry standards. The work of the project includes providing a complete way finding signage and graphics system for all twenty-two (22) existing Metrorail Stations. As of December 2009, the advertisement process was on-going. Construction completion date is March 30, 2012.

4.3 Customer Information/Convenience

4.3.1 EASY Card Implementation

In October of 2009, MDT successfully implemented a new Automated Fare Collection System called EASY Card as a fare card for passenger use on Metrobus and Metrorail. This fully automated system provides improved passenger convenience through the provision of a reusable, and readable stored value fare card. The implementation of EASY Card is also anticipated to reduce the level of fare evasion on MDT services further improving the collection of passenger fare revenue. Furthermore, the EASY Card will enable MDT to generate more accurate ridership data improving MDT's ability to adjust service based on passenger demand.

In January 2010, MDT and the South Florida Regional Transportation Authority (SFRTA) entered into an agreement for MDT to provide clearinghouse activities for back office functions for MDT's Automated Fare Collection System (i.e., EASY Card). This arrangement allows for seamless patron transfer between the two systems. In addition, this agreement allows the County to process transactions in the payment system on behalf of the SFRTA and provides the SFRTA the capability of using the EASY Card as a method of cashless fare collection on SFRTA's fixed-route service.

4.3.2 Wireless Service on Rail and Bus Vehicles

Miami-Dade Transit launched an innovative free wireless service pilot program on select Metrorail cars and I-95 Dade-Broward Express buses. The Wi-Fi access provides transit riders with the convenience of being able to work on laptops and other mobile internet devices while using transit to commute to and from work.

MDT is looking to implement wireless services in all rail vehicles, stations, express routes and the South Beach Local route. This project builds upon the pilot project as previously mentioned which is currently having an overwhelmingly positive impact for our riders. The deployment of this service will be done in phases to minimize the financial impact. However, dedicated spare vehicles are not Wi-Fi equipped. Wi-Fi will also be provided on the Kendall Cruiser bus service, and on the Airport Flyer vehicles (Route 150).

4.3.3 New Electronic Transit Rider Alert System

In July 2009, MDT implemented a new Rider Alert system to notify passengers about transit service delays as well as the operational status of Metrorail or Metromover station elevators and escalators. MDT customers can also receive updates for Special Transportation Service. Customers must sign-up to receive the electronic alerts to their cellular phones, email addresses, text pagers, and Blackberry devices or smart phones.

4.3.4 CAD/AVL System Replacement

The current MDT CAD/AVL System has been in production for 13 years and has reached its end-of-life cycle. The CAD/AVL software is also an antiquated system that needs to be replaced. Initial implementation of the replacement will include maintaining existing system. This project will facilitate integration with the ETSD OpenSky 800Mhz Radio Rebanding initiative.

MDT intends to prepare an infrastructure to support a "state of the art" real-time Bus Tracking System. The system will be accessible via the Internet, Cell Phone, PDA and Electronic Signs at select Bus Stops. This project also provides easier integration to the new critical systems, such as Transit Operations System (TOS) and Fare Collection currently being implemented. A conditional pilot will be included in the RFP.

This project will also implement onboard vehicle Traffic Signal Priority (TSP) which allows communication with each of the thirty-three traffic signal controllers along the corridors. The traffic signal equipment in the corridor will be equipped to enable TSP operation and integrated into the Miami-Dade County (MDC) Automatic Traffic Management System (ATMS). Implementation is scheduled for mid 2012.

4.4 Monitoring Program to Track Annual Performance of MDT Services

The preparation of the FY 2010 – 2019 TDP Major Update resulted in the development of eight major goals, each with various objectives and corresponding measures. Monitoring the previous period results against current measures, will validate MDT's attainment of these goal's for that period. This TDP Annual Update provides MDT an opportunity to report monitoring results for each major goal according to those objectives and corresponding evaluation measures for which data is available to support. These measures are the Key Performance Indicators (KPI) that will be evaluated annually, using the most recent twelve-month period for which data is available. The evaluation compares the current values of productivity standards versus those from the previous year. A few examples include:

- Performance measures such as On-Time Performance (OTP) and Mean Distance Between Failures (MDBF) reflecting transit reliability are monitored monthly on the Active Strategy Enterprise (ASE) Scorecard.

- Review transit routes to ensure service is being provided within a ¼ mile to major trip generators.
- Automated Fare Collection data to monitor ridership by route.
- Alignment of capital projects to goals.
- Public Involvement events to disseminate transit information and promote transit usage.

4.4.1 Goal 1: Improve the Quality of Transit Services

Objective: Improve the accessibility to major health care, recreation, education, employment cultural and social services facilities: Transit service miles providing connections to major medical and educational facilities were evaluated. In the future this measure will also evaluate recreation, employment, cultural and social service facilities. Approximately 60 transit service route miles operate within a ¼ mile of major medical facilities while more than 130 transit service miles operate within ¼ mile of all colleges and universities within Miami-Dade County. This has remained virtually unchanged from the previous year.

Objective: Improve transit level of service on major roadway corridors and between major origins and destinations: This measure will be assessed in future TDP Updates according to the recently adopted MDT Service Standards and the process to evaluate service performance.

Objective: Maximize service reliability and efficiency: The on-time performance for the various MDT transit modes are provided in Table 4-1. Metrorail has excellent on-time performance and continues to exceed the Agency goal of 95 percent. Metrobus operates at about 79 percent on-time performance, which is a good result given the congested traffic conditions under which most of the routes operate, in many corridors throughout the day, as well as the high load factors on many of the routes. On-time performance for Metrobus also exceeds the agency goal of 75 percent.

Table 4-1: MDT Annual On-Time Performance

	On-Time Performance	
	Metrorail	**Metrobus**
FYTD 2009-2010	97.7%	79.4%
FY2008-2009	95.6%	79.2%
Goal	95%	75%

Source: Miami-Dade Transit, March 2010

Objective: Maximize multimodal travel options and provide travel choices: MDT, with its Metrorail and Metromover services, is among the few US transit agencies to offer heavy rail and Downtown People Mover Systems. The convenience of Metrorail will be further extended by the completion of the MIC-Earlington Heights Metrorail service, which will connect downtown Miami and the other locations along the Metrorail system with MIA and the vibrant employment center that surrounds the airport. Miami-Dade Transit continues to implement an initiative to operate more efficient bus service through a grid operational network of service routes. The resulting bus adjustments that occurred in June and December 2009 attribute to a decrease in route miles as presented in Table 4-2.

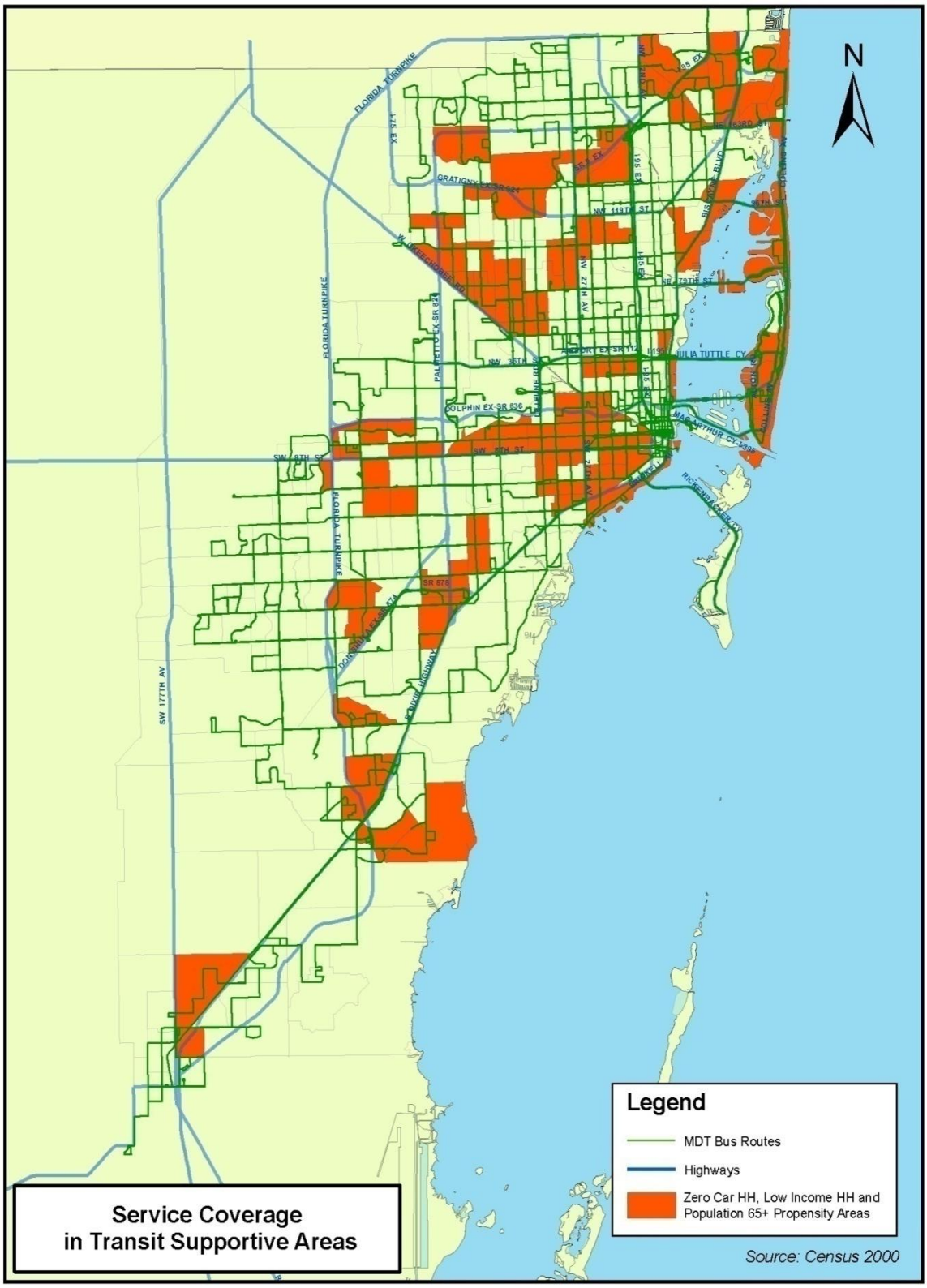
Table 4-2: Number of Transit Route Miles by Transit Mode

Transit Mode	Route Miles	
	2008	2009
Metrorail	22.4	22.4
Metrobus	2,866	2,615
Metromover	4.4	4.4

Source: National Transit Database, Miami-Dade Transit, February 2010

Objective: Fill transit service coverage gaps: The number of miles of MDT bus routes within the transit-supportive service areas (Figure 4-1) is approximately more than 700 miles. This is virtually unchanged from last year's measure of just over 710 miles.

Figure 4-1: Service Coverage in Transit Supportive Areas



Source: Miami-Dade Transit, 2010

Objective: Promote transit reliability: One method to measure transit reliability is through annual systemwide ridership. MDT will be able to further improve upon existing ridership through the provision of efficient transit service that improves transit travel time and on-time performance. Due to the economic downturn, large transit agencies nationwide are reporting an average 8-10% decline versus a year ago in bus ridership. Notwithstanding the 6% reduction of bus service miles (30.5 to 28.5 million miles), MDT is in line with the ridership decline that other nationwide agencies are experiencing with a 10% overall reduction in ridership.

Table 4-3: MDT Systemwide Boardings

Transit Mode	Annual Boardings (000's)	
	FY2008-2009	FY2009-2010
Metrorail	18,539	18,244
Metrobus	85,790	75,608
Metromover	8,839	8,100

Source: National Transit Database, Miami-Dade Transit, February 2010

Objective: Improve transportation facilities' and services' regional connectivity: Table 4-4 shows the number of transit service miles (including miles of overlapping bus service) in each of more than a dozen key regional corridors. As the table indicates, MDT provides multiple bus routes operating segments of all of these corridors, with high concentrations of service on South Dixie Highway (the Busway), A1A, Biscayne Boulevard and Flagler Street.

Table 4-4: Transit Revenue Miles in Corridors of Regional Significance

Corridors of Regional Significance	Transit Revenue Miles in Corridor
I-95	156.38
S Dixie Highway	154.93
NW 27th Avenue	76.7
A1A	149.23
Flagler Street	95.04
Coral Way	46.53
Biscayne Boulevard	114.64
8th Street	51.69
Kendall Drive (88th Street)	62.52

Source: Miami-Dade County GIS files, 2010

MDT's system offers stations along the Metrorail and Metromover system, and bus stops, shelters and benches along Metrobus routes. Table 4-5 shows, bus stops and station spacing. MDT's standard calls for on average five stops per mile for local bus. This would indicate a slightly more frequent spacing of stops, on average, than five stops per mile (about one stop every 1,050 feet). More detailed analysis is being conducted to adjust stop spacing depending on the type of service being provided, thus increasing the efficiency of the bus route.

Table 4-5: Number of Station Stops Per Route Mile

Mode	Number of Stations/Stops	Total Route Miles	Stations/Stops per Route Mile
Metrorail	22	22.4	.98
Metromover	20	4.4	4.55
Metrobus	8,943	1,837	3.42

Source: National Transit Database, Miami-Dade Transit, February 2010

Objective: Include provisions for non-motorized modes in new projects and in reconstructions: Provisions that support non-motorized modes of transportation are included land use and transportation elements of the Miami-Dade County CDMP. Future capital improvements shall also seek to integrate non-motorized infrastructure upon the implementation of new transit services.

Objective: Improve transit services that provide access to educational facilities: The number of transit service route miles within a ¼ mile of colleges and universities throughout Miami-Dade County is approximately 130 miles. All of the major colleges and universities of the county are served by transit service within ¼ mile of their campuses. This has remained unchanged since reported in last year's TDP Major Update

4.4.2 Goal 2: Improve Customer Convenience, Comfort and Safety on Transit Service and within Facilities

Objective: Improve safety on vehicle service operations: MDT regularly assesses operational safety for workers and passengers according to level of investment and compliance of regularly updated safety plan. As part of MDT's Infrastructure Renewal Program, safety projects are evaluated and prioritized for implementation on an annual basis.

Objective: Reduce roadway and multi-modal crashes: The goal that MDT has set forth for the reduction of the number of accidents/incidents is 3.60 per 100,000 miles. Similarly to FY 2008, MDT reported for FY 2009 the same figures of 3.15 accidents per 100,000 miles of transit service. This is a 14% improvement over the set goal.

MDT suffered an employee fatality on June 19, 2009. As a result of this tragic and unfortunate incident, MDT senior management conducted an extensive review of its procedures for actions which surround the fatality's governance. Numerous revisions were incorporated into the aforementioned procedures and extensive training was conducted throughout the agency to raise the awareness level of the divisions involved.

Objective: Enhance outreach opportunities to educate the community on transportation issues and highlight transit service benefits such as service reliability, passenger cost savings, and environmental benefits: MDT continually seeks to educate the public as well as provide opportunities for public input through various public outreach strategies. In November 2009, Miami-Dade County held the 2nd Annual Transit Summit to further educate the public about various transportation projects as well as provide an opportunity for all public stakeholders to provide input on existing and future plans. MDT also is active in attending civic and community events and meetings to continually inform the public about MDT services. In addition, MDT uses various forms of media (e.g., internet, radio and televised advertisements, news paper ads, etc.,) for public outreach.

Objective: Maintain convenient, clean, safe transit passenger facilities and vehicles: MDT is committed to maintaining shelters, stations, and vehicles clean, showing a 3 percent reduction of passenger complaints from the previous year.

Miami-Dade Transit reported 114 safety related incidents in 2009 as compared to 1,191 safety related accidents and incidents for 2008.

4.4.3 Goal 3: Increase the Security of Transit Vehicles and Facilities

Objective: Ensure transit vehicles and facilities provide a secure environment for customers: The total number of active video cameras systemwide is 590. Upon the completion of future projects the MDT video surveillance system will consist of 684 active cameras.

Objective: Increase security at transit stops and intermodal stations and connections: For 2009, the number of criminal incidents on-board transit has been reduced from the previous year by thirty-nine percent (39%).

4.4.4 Goal 4: Support Economic Vitality

Objective: Provide transit access to urban centers at a minimum of 30-minutes during the peak: Table 4-6 lists urban centers as identified in the CDMP Land Use Element that were evaluated to determine the amount of transit service within 1/4 mile. Downtown Miami has the highest concentration of transit service as evident from the operation of Metrorail, Metromover and Metrobus providing service coverage throughout the downtown area. Dadeland has a more focused center of activity with direct connections from Metrorail and the South Miami-Dade Busway. This is consistent as to what was reported in the TDP Major Update.

Table 4-6: Transit Route Miles within ¼ mile of Urban Centers

Regional Activity Centers	Route Miles within ¼ mile
Downtown Miami CBD	52.5
Dadeland	28.9
NW 107 Avenue and NW 12 Street	8.9

Source: Miami-Dade GIS, 2010

Objective: Enhance major tourist travel and access opportunities within the Urban Growth Boundary: Table 4-7 shows the number of miles of transit service that operates within close proximity to various tourist attractions in Miami-Dade County. As the table indicates, most of the attractions have transit service, with only relatively isolated locations such as Biscayne National Park and Everglades National Park lying beyond walking distance of MDT bus or rail service. However, a number of locations have relatively little service, including such diverse attractions as the Deering Estate, the Venetian Pool, Barnacle Historic State Park and Monkey Jungle. In many cases, the locations of these attractions in outlying areas of the county do not lend themselves to extensive transit connections, and most are located along one or two routes that operate on an adjacent arterial street, rather than being in the center of a hub of transit service (such as in downtown Miami or Miami Beach).

Table 4-7: Transit Route Miles within ¼ Mile of Tourist Attractions

Tourist Attraction	Routes Miles	
	2009	2010
Miami Art Museum	15.6	16.2
Miami Children's Museum	4.4	4.4
Vizcaya Museum and Gardens	1.7	1.7
Ancient Spanish Monastery	2.5	2.5
Barnacle Historic State Park	0.8	0.8
Bass Museum of Art	4.3	3.8
Bayside Marketplace	8.1	6.4
Biscayne National Park	NA	NA
Coral Castle	2.5	2.0
Coral Gables Merrick House	1.0	0.5
Deering Estate at Cutler	0.0	0.0
Everglades Safari Park	NA	NA
Fairchild Tropical Botanic Garden	0.5	0.5
Jungle Island	3.7	3.7
Metro Zoo	1.7	1.5
Miami Beach	168	134
Miami Science Museum	2.4	2.4
Miami Seaquarium/Key Biscayne	0.9	0.9
Monkey Jungle	0.0	0.0
The Wolfsonian Museum	4.0	3.0
Venetian Pool	0.6	0.3

Source: Miami-Dade GIS, 2010

Analysis measuring the adequacy of transit services was conducted to identify major trip generators and major attractors in Miami-Dade County. Table 4-8 presents the various transit services provided for each identified special generators in terms of number of routes and accessibility of these facilities.

Table 4-8: MDT Major Trip Generators, December 2009

MAJOR GENERATORS	ROUTES					COMMENTS
Special Attractors						
Coconut Grove	6	22	27	48	249	Service on local roadways
Downtown Miami	C	S	2	3	6	Service on local roadways and within walking distance of Government Center and Historic Overtown/Lyric Theatre stations and the various Metromover stations
	7	8	9	11	21	
	24	51	77	93	95	
	120	207/208	211	243	246	
	277	500	Mover	Rail		
Joseph Caleb Community Ctr	22	46	54	246	254	Service on adjacent roadways
Miami International Airport	J	37	42	57	132	Bus terminal on site; shuttle to Tri-Rail Station
	133	150	238			
Metrozoo	252					On-site service to entrance
Miami Seaquarium	B					Service on adjacent roadway
Port of Miami	243					On-site service via local roadways
South Beach	A	C	L	M	S	Service on local roadways
	115	120	123	150		
Educational Centers						
Barry University	2	9	10	19		Service on adjacent roadways
FIU - University Park	8	11	24	71		On-site terminal with shelters
FIU - Biscayne Bay	75	135				On-site service
Florida Memorial	32					Service on adjacent roadway
MDC - Homestead	34	35	344			Service on adjacent roadways
MDC - Interamerican	8	27	207	208		Service on adjacent roadways
MDC - Kendall	35	56	71	104	204	On-site service with shelters
MDC - Medical Center	M	12	21	22	32	Service on adjacent roadways
MDC - North	19	27	32	97		On-site terminal with shelters
MDC - West	36					Service on adjacent roadway
St. Thomas University	32					Service on adjacent roadway
University of Miami	48	56	500	Rail		Service on adjacent roadways and within walking distance of University
Regional Retail Centers						
Aventura Mall	E	S	3	9	59	On-site service
	93	99	120	183		
Bal Harbour Shops	G	H	S	120		Service on adjacent roadways
Dadeland Mall	1	52	73	87	88	Service on adjacent roadways. Pedestrian walkway to Dadeland North station
	104	204	240	272	288	
	Rail					
Diplomat Mall	E					Service on adjacent roadway
Dolphin Mall	7	36	71	137	238	On-site terminal with shelters
(The) Falls	31	34	38	52	136	Service on adjacent roadway and at Busway Station at SW 136 Street
	252	287				
Mall of the Americas	7	11	51	87		On-site service with shelters
Miami International Mall	7	36	71	137	238	Service on adjacent roadways
Prime Outlets	35	70	344			On-site and adjacent roadway service
Skylake Mall	H	9	10	59	183	Service on adjacent roadways
Southland Mall	1	31	35	38	52	Service on adjacent roadways
	70	137				
Village at Merrick Park	37	40	42	48	136	Service on adjacent roadways and within walking distance of Douglas Road station
	249	500				
Westland Mall	29	33	54			Service on adjacent roadways
163 Street Mall	E	H	2	3	9	Service on adjacent roadways and off-site terminal
	10	16	19	22	75	
	246					

Table 4-8: MDT Major Trip Generators, December 2009 (Continued)

MAJOR GENERATORS	ROUTES					COMMENTS
Regional Hospitals						
Aventura	E					Service on adjacent roadway
Baptist	88	104				Service on adjacent roadways
Doctors'	56					Service on adjacent roadway
Hialeah	L	28	42	79	135	Service on adjacent roadways
Homestead	35					Service on adjacent roadway
Jackson Memorial / U.M. / Cedars of Lebanon / V.A.	M	12	17	21	22	Service on adjacent roadways and within walking distance from Civic Center station
	32	95	246	Rail		
Jackson North	E	2	22	246		Service on adjacent roadways
Jackson South	52	57	252			Service on adjacent roadway
Kendall AMI	40					Service on adjacent roadway
Mercy	12	48				On-site service with shelters
Miami Children's	56					On-site service with shelters
Miami Heart Institute	115					Service on adjacent roadway
Mount Sinai	C	M	115			On-site service
North Shore	33	77	277			Service on adjacent roadways
Palmetto General	29					On-site service with shelters
Palm Springs General	33	54				On-site service with shelters
South Miami	37	57	72	73	500	Service on adjacent roadways and within walking distance from South Miami station
	Rail					

Source: MDT, 2009, Note: Rail stands for Metrorail

Objective: Increase and improve transit access to Miami International Airport and the Port of Miami: The transit service route miles within a 1/4 mile of MIA and the Port of Miami are presented in Table 4-9. Metrobus Routes J, 37, 42, 57, 133 and 150 (Airport Flyer) connects directly to the airport terminal, in addition to the Tri-Rail commuter rail services which stops nearby and the Airport Flyer traveling to Miami Beach. Metrobus Route 243, the Seaport Connection, connects the Port of Miami to downtown Miami and to MDT's Metrobus and Metrorail systems.

The construction of the MIC and the MIC-Earlington Heights extension of Metrorail will greatly enhance transit service to the airport terminal over-and-above the already excellent Metrobus service to the terminal.

Table 4-9: Transit Service Route Miles within ¼ mile of MIA and Port of Miami

Facility	Transit Service Route Miles within 1/4 mile	
	2009	2010
Miami International Airport	70.0	68.4
Port of Miami	17.5	17.5

Source: Miami-Dade GIS, 2010

Objective: Implement projects that support economic development and redevelopment areas: A number of corridors in the county were identified by Miami-Dade County as potential redevelopment areas based on their older development and infrastructure. As Table 4-10 shows, MDT provides service on multiple routes to most of these corridors.

Table 4-10: Transit Route Miles within ¼ mile of Redevelopment Areas

Redevelopment Areas*	Transit Route Miles within ¼ mile
Homestead	13.93
Florida City	22.16
North Miami	63.19
Naranja Lakes	16.13
North Miami Beach	44.72
7 Avenue Corridor	22.91
Midtown Miami	12.25
Miami Beach	23.21
East Overtown	73.19
West Perrine	21.66
City of Miami - OMNI	46.82
South Miami	9.24

Source: *Information taken from the Miami-Dade County's GIS webpage.
Layer was last updated on 04/05/2010

Objective: Apply transportation and land use planning techniques, such as transit-oriented development (TOD), that support intermodal connections and coordination: Policy initiatives do exist within the CDMP Land Use element and Transportation Element related to development and population density.

4.4.5 Goal 5: Preserve the Environment and Promote Energy Conservation

Objective: Reduce fossil fuels consumption through the consideration of alternative fuel vehicle technology:

Miami-Dade Transit is currently procuring sixteen diesel-electric hybrid vehicles to be placed into service by 2010 for operation within the I-95 Express Lanes and nine vehicles for the Kendall Enhanced Bus service on Kendall Drive. Additionally 13 new 40-foot hybrid buses will be in service in 2010.

MDT currently uses a B5 blend (5 percent) of Biodiesel with Ultra Low Sulfur Diesel Fuel in its bus fleet. Biodiesel is non-toxic, biodegradable, and suitable for sensitive environments. In

addition, the Metromover Bayside College station, light poles were changed to economy savings light poles.

Objective: Promote transit service projects that support urban infill and densification: MDT operates transit service primarily within the urban infill area with the exception of various areas throughout the county that are not fully developed.

Table 4-11: Transit Route Miles Within ¼ mile of the Route Alignment

Other	Transit Route Miles within ¼ mile	
	2009	2010
Urban Infill Area (UIA) Boundary	1,419	1,332

Source: Miami-Dade GIS, 2010

4.4.6 Goal 6: Enhance the Integration and Connectivity of the Transportation System, Across and Between Modes and Transit Providers, for People and Freight

The number of transit service route miles within 1/4 mile of Transit Analysis Zones (TAZ's) with a high proportion (20% or higher) of elderly is 648 miles. This indicates that areas with a high concentration of elderly are well served by transit service and have full access to the Metrobus system, with some areas also well served by Metrorail.

4.4.7 Goal 7: Optimize Sound Investment Strategies for System Improvement and Management/Operation

Objective: Optimize operations and maintenance expenses:

The 2009 cost per mile of MDT's Metrobus service is $9.02 as compared with the 2008 cost per mile of $10.77.

The 2009 cost per mile of MDT's Metrorail service is $11.35 as compared with the 2008 cost per mile of $14.92.

The 2009 cost per hour of MDT's Metrobus service is $116.44 as compared with the 2008 cost hour mile of $130.28.

The 2009 cost per hour of MDT's Metrorail service is $245.45 as compared with the 2008 cost per hour of $237.46.

Objective: Identify Public, Private Partnership opportunities: Two projects are identified to include a public private partnership. The first project is divided into two phases. The first phase includes a 189 space surface parking at the intersection of NW 107th Avenue and NW 12th Street that will serve as a park and ride lot. The second phase will develop a 260 parking spaces car garage and would eliminate the 189 surface lot. The proposed project will be a turn-key operation including MDT owning the land, once the garage is completed. Phase I project completion estimated in 2012.

The second project is a bus station and surface park and ride lot with 40 parking spaces at the Kendall Town Center (Kendall Drive and SW 162nd Avenue). There is an existing commitment

in place as a result of the DRI/DIC process to meet transit concurrency. The project is estimated to be completed in December 2010.

Objective: Align MDT priorities and deliverables with available funding and resources: Miami-Dade Transit continually evaluates operational and capital priorities and assesses the viability of securing various funding sources.

4.4.8 Goal 8: Maximize and Preserve the Existing Transportation System

Objective: Continue to examine the provision and utilization of special-use lanes on the existing system for transit use: The existing special use lanes used by MDT is the South Miami-Dade Busway which is approximately 20 miles in length. For 2010, the newly implemented managed lanes on I-95 will increase transit's usage of special lanes from the operation of I-95 express service between Broward County and downtown Miami.

Objective: Identify and implement the best available technologies and innovations to improve the reliability and efficiency of the transportation system: Miami-Dade Transit continuously works to assess ITS needs through an organization of prioritized ITS projects for deployment that conform to regional ITS architecture while reflecting the local needs and preferences for the operation of transit. Newly implemented ITS projects include Transit Signal Priority (TSP), wireless bus and trains, additional signage on bus stops, and PDAs with real time next bus quotes.

Objective: Upgrade and maintain existing transit infrastructure and facilities in a state of good repair: Miami-Dade Transit has developed a procedure for identifying, evaluating, prioritizing, and programming capital improvement projects that will upgrade and maintain the existing transit infrastructure and facilities. This Infrastructure and Renewal Program (IRP) is updated annually to assure the existing transit system and facilities remain in a state of good repair. As of December 2009, for FY 2010, MDT has committed to spend $10.1 million on infrastructure and facility improvement projects.

Objective: Maintain the operational functionality of transit vehicles to maximize reliability: Generally, MDT's service reliability statistics are good, although there is always room for improvement. MDT experienced 171 missed pullout in 2009 compared to 204 missed pullouts in 2008, or fewer than one missed pullout per operating day. While even a single missed pullout can mean inconvenience and discomfort for hundreds of passengers, an average of less than one missed pullout per day is very good performance for a transit system the size of MDT.

Metromover plans to improve the adherence to its preventive maintenance program by implementing a mileage based maintenance program. Currently in use is a time based program requiring vehicle inspections to be performed regardless of the mileage. Implementation of a mileage based program will more effectively utilize the agency's man power by ensuring that all preventive maintenance inspections are completed within the allotted time frames. The current goal is set at a 90% adherence and according to the last fiscal year Metromover archived a compliance rate of 86.4%.

Table 4-12: Percent of Adherence to Preventative Maintenance Program by Mode

	Metrobus	Metrorail	Metromover
FY 08/09	99.3%	99.9%	91.8%
FYTD 09/10	99.8%	99.9%	86.2%
Goal	90%	90%	90%

Source: Miami-Dade Transit, as of March 2010

Another measure of service reliability is the measure of the average distance between service disruptions (rail) or breakdowns (busses). Disruptions are described as five minutes or more impact to the customer. The following table presents the average number of miles for a breakdown according to MDT transit mode.

Table 4-13: Mean Distance between Failures by Mode

	Metrobus	Metrorail	Metromover
FY 08/09	3,951	45,475	6,359
FYTD 09/10	4,857	41,660	8,557
Goal	4,000	39,000	6,000

Source: Miami-Dade Transit, as of March 2010