Memorandum

MIAMI-DADE COUNTY

Date: July 7, 2011

To: Honorable Chairman Joe A. Martinez
and Members, Board of County Commissioners

Agenda Item No. 8(J)(1)(B)

From: Alina T. Hudak
County Manager

Subject: Resolution Adopting the 2011 Transit Development Plan Covering the Period from 2012-2021

RECOMMENDATION

It is recommended that the Board of County Commissioners (Board) adopt the Miami-Dade Transit (MDT) submission of the 2011 Transit Development Plan (TDP) covering the ten-year period from 2012-2021.

SCOPE

The updates delineated in this item benefit the riding public and therefore have a county-wide impact.

FISCAL IMPACT

There is a positive fiscal impact associated with the development of this report. Once the report is adopted by the Board, it will be forwarded to the Florida Department of Transportation (FDOT) for their consideration, approval and release of Public Transit State Block Grant funds to MDT in excess of $19,000,000.

This is a planning document and, therefore, there is no unanticipated current or future impact on the annual County budget, as all projects will be carried out in conformance with allocations and funding sources approved by the Board through the annual budget process.

TRACK RECORD/ MONITOR

In 1989, the Florida Legislature established the Public Block Grant Program to provide assistance to public transit providers that are eligible for Federal Transit Administration (FTA) formula funds. MDT has received funding under this program for more than twenty years. The program monitor responsible for the TDP is Maria Batista, Principal Planner, MDT.

DELEGATED AUTHORITY

In accordance with Section 2-8.3 of the Miami-Dade County Code related to identifying delegation of Board authority, there are no authorities beyond that specified in the resolution which include authority for the Mayor, or his designee, to submit the attached Plan to FDOT.

BACKGROUND

The TDP is required for State Block Grant program recipients such as MDT as described in Section 341.052, F.S. A TDP shall be the provider's planning, development, and operational guidance document. A TDP or an annual update shall be used in developing the Department's ten-year Work Program and the Transportation Improvement Program.

Public transit funds will be considered by the State on the basis of public transit needs as identified in the TDP. The FDOT is authorized to fund up to such percentages as are designated for each type of public transportation project by Chapter 341, F.S., for the respective state and federal projects described therein.

This item represents a Minor Administrative Update of the Transit Development Plan and was prepared to fulfill State of Florida statutory requirements, which required that all transit properties receiving Public Transit Block Grants prepare or update annually a ten-year TDP. This mandate is spelled out under Sections 341.052 and 341.071 of the Florida Statutes. With the new ruling published in February 2007, a major update is required every five years, with minor Administrative Updates required every year. The last Major MDT Update submittal was presented and approved in November 2009 through Resolution No. R-1282-09.

This 2011 Minor Administrative Update to the TDP presents the operating environment, committed improvements/adjustments, a new 10-year Recommended Service Plan (RSP), and the financial analysis of proposed transit improvements/adjustments for the ten-year period ending in 2021. Finally, it also includes a Public Involvement section which is a compilation of the local public information/input gathered to formulate the 10-year RSP.

Assistant County Manager

MEMORANDUM

(Revised)

TO: Honorable Chairman Joe A. Martinez and Members, Board of County Commissioners

DATE: July 7, 2011

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 8(J)(1)(B)

Please note any items checked.

_____ **"3-Day Rule" for committees applicable if raised**

_____ **6 weeks required between first reading and public hearing**

_____ **4 weeks notification to municipal officials required prior to public hearing**

_____ **Decreases revenues or increases expenditures without balancing budget**

_____ **Budget required**

_____ **Statement of fiscal impact required**

_____ **Ordinance creating a new board requires detailed County Manager's report for public hearing**

_____ **No committee review**

_____ **Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**

_____ **Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor
Veto _____
Override _____

Agenda Item No. 8(J)(1)(B)
7-7-11

RESOLUTION NO. _____

RESOLUTION ADOPTING THE MIAMI-DADE TRANSIT (MDT) SUBMISSION OF THE ANNUAL UPDATE OF THE 2011 TRANSIT DEVELOPMENT PLAN (TDP) COVERING THE TEN-YEAR PERIOD FROM 2012-2021

WHEREAS, on February 20, 2007, the State of Florida Department of Transportation issued new regulations regarding the adoption of local Transit Development Plans; and

WHEREAS, Transit Development Plans are required for grant recipients, such as Miami-Dade Transit and as described in Section 341.052, F.S.; and

WHEREAS, Transit Development Plans are to be adopted by the provider's governing body, and Miami-Dade Transit's governing body is the Board of County Commissioners; and

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board hereby adopts the Annual Minor Administrative Update of the 2011 Transit Development Plan covering the period from 2012-2021.

The foregoing resolution was offered by Commissioner ,

who moved its adoption. The motion was seconded by Commissioner

and upon being put to a vote, the vote was as follows:

Joe A. Martinez, Chairman
Audrey M. Edmonson, Vice Chairwoman

Bruno A. Barreiro	Lynda Bell
Esteban L. Bovo, Jr.	Jose "Pepe" Diaz
Sally A. Heyman	Barbara J. Jordan
Jean Monestime	Dennis C. Moss
Rebeca Sosa	Sen. Javier D. Souto
Xavier L. Suarez	

The Chairperson thereupon declared the resolution duly passed and adopted this 7th day of July, 2011. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By:_____
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Bruce Libhaber

September 2011

FY 2012 TO FY 2021

DRAFT

Transit Development Plan

ANNUAL ADMINISTRATIVE UPDATE

Miami-Dade Transit

MIAMI-DADE COUNTY TRANSIT

DRAFT

TRANSIT DEVELOPMENT PLAN

ANNUAL UPDATE

September 2011

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1.0 Introduction

The State of Florida Public Transit Block Grant Program was enacted by the Florida Legislature to provide a stable source of state funding for public transportation. The Block Grant Program requires public transit service providers to develop and adopt a Transit Development Plan (TDP). A TDP major update is required every five years and TDP annual updates are required in interim years. TDP updates must be submitted to the Florida Department of Transportation (FDOT) by September 1st of each year.

The TDP Annual Update presents the operational and capital improvement needs of Miami-Dade Transit (MDT) and also serves as a planning tool to project future MDT needs for the implementation and operation of transit service. This TDP Annual Update meets the requirements and is in accordance with Rule Chapter 14-73.001, Florida Administrative Code (FAC). This Plan is to be used by transit agencies as a planning and guidance tool, as delineated in Section 341-052:

> *Transit Development Plans (TDPs) are required for grant program recipients in Section 341.052, F.S. A TDP shall be the provider's planning, development, and operational guidance document, based on a ten-year planning horizon and covers the year for which funding is sought and the nine subsequent years. A TDP or an annual update shall be used in developing the Department's five-year Work Program, the Transportation Improvement Program, and the Department's Program and Resource Plan. A TDP shall be adopted by a provider's governing body. Technical assistance in preparing TDPs is available from the Department. TDPs shall be updated every five years.*

This fiscal year (FY) 2012 – 2021 TDP Annual Update is being prepared to report the level of progress on the FY 2011 – 2020 TDP Annual Update. The TDP Annual Update was completed by MDT in December 2010. Furthermore, any revisions that have been made to the ten year implementation plan of the FY 2011 – 2020 TDP Annual Update are provided to include additional recommendations for a new tenth year or FY 2021.

This TDP Annual Update represents planning the efforts undertaken by MDT in 2010 and includes a forecast of operational and capital needs for FY 2012 - 2021. This TDP has been prepared on the basis of expenditure and revenue assumptions included within the Miami-Dade County FY 2010 – 2011 Pro Forma and the capital budget as approved by Miami-Dade County Board of County Commissioners in September 2010. It is important to emphasize that the needs forecasts and applied financial assumptions as presented in this TDP Annual Update are subject to change due to the volatility in gas prices and pressure to reduce the tax roll which would have impacts to the general fund share MDT receives and the availability of federal and state grants. An updated FY 2011 - 2012 Pro Forma and Capital Plan will be adopted by the Board in September 2011 that will reflect additional adjustments not included in the previous Pro Formas.

MDT has been under a federal funding freeze since November 2010. As a result, the County has been carrying the funding gap for Federal Transit Administration (FTA) eligible expenditures pending lifting of the freeze. MDT has been preparing service adjustment scenarios that would have a countywide impact as a result of the ongoing freeze. FTA has indicated that they will consider a limited draw-down for funds in order to avoid service disruptions, but as of May 2011, no specific commitments have been made. FTA has indicated previously that they would work with MDT to exempt municipal American Recovery and Reinvestment Act (ARRA) projects from the freeze (FTA is reviewing a procedure submitted by MDT to allow municipal ARRA reimbursement) and specific

capital grant funded projects (for the University Overpass project and Quail Roost Park and Ride) that were due to expire in September 2011. This TDP does not contemplate service adjustments that may result if the funding freeze is prolonged.

The Miami-Dade County Board of County Commissioners, on May 3, 2011, approved a motion to fund Cutler Bay, Doral, and Miami Gardens out of the County's 80% share of the surtax. Further legislation regarding this matter will be reviewed by the Board in the coming months prior to the end of the FY 2010 - 2011; at which time, work will commence to amend the Citizen's Independent Transportation Trust (CITT) Ordinance and develop an Interlocal Agreement with the new municipalities.

1.1 Purpose

FDOT has established guidelines stating that a TDP annual update contain the following information and content:

- Past year's accomplishments compared to the original implementation program;
- Analysis of any discrepancies between the plan and its implementation for the past year and steps that will be taken to attain original goals and objectives;
- Any revisions to the implementation program for the coming year (FY 2011);
- Revised implementation program for the tenth year;
- Added recommendations for the new tenth year (FY 2021) of the updated plan;
- A revised financial plan; and
- A revised list of projects or services needed to meet the goals and objectives, including projects for which funding may not have been identified.

1.2 TDP Adoption Process

Following the completion of the TDP Annual Update, per rule requirement, the TDP must officially be adopted by the agency's governing body. Customarily, County and local commissioners adopt the TDPs of the transit agencies operating as a part of those general purpose governments.

The TDP Annual Update will be presented to the Miami-Dade County Board of County Commissioners for formal adoption in 2011.

2.0 Miami-Dade Transit System Overview

Miami-Dade Transit operates the 14th largest transit system in the United States and is the largest transit system in the State of Florida. MDT is one of the largest departments in Miami-Dade County government. MDT operates four (4) transit modes of service: bus (Metrobus), heavy rail (Metrorail), automated people-mover (APM) (Metromover), and demand-response service (Special Transportation Services or STS). Metrobus service includes local, circulator, limited-stop, express, and Bus Rapid Transit (BRT) (Arterial Busway).

Together these modes comprise an integrated multi-modal transit system for Miami-Dade County and record more than 326,000 daily (weekday) boardings on the MDT system while STS's average daily boardings is approximately 5,231. Table 2-1 presents MDT service characteristics by transit mode.

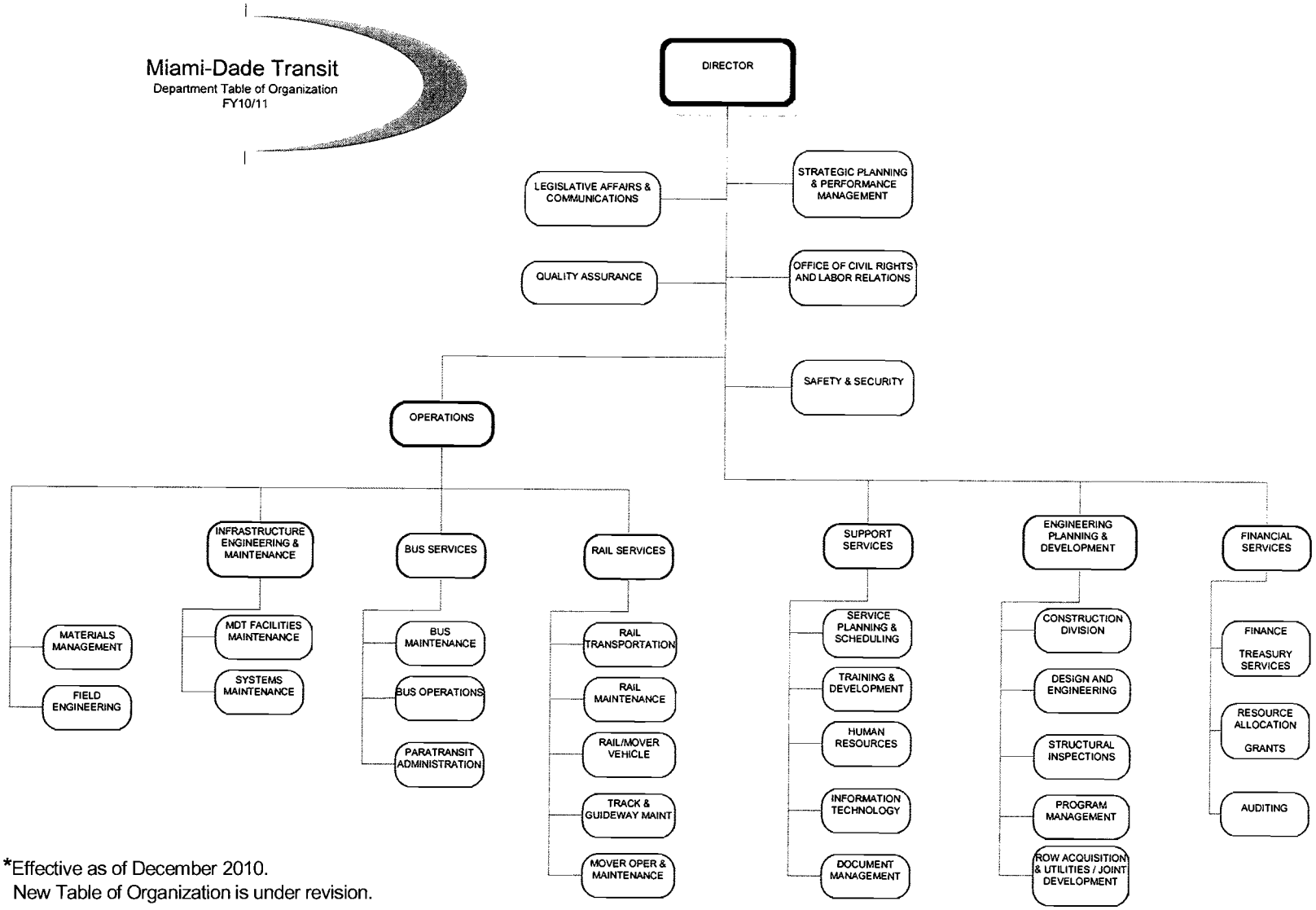
Table 2-1: MDT Service Characteristics by Transit Mode, 2010

System Characteristics	Metrobus	Metrorail	Metromover	STS
Operating Hours	24 hours[1]	5:30am - 12:45am	5:30am - 12:30am	24 hours
Number of Routes	93[2]	1	3	Demand Response
No. of Stations/Stops*	8,943	22	20	N/A
Peak Headways*	7½ - 60 minutes	7½ -10 minutes	1½ - 3 minutes	(Pick up +/-30 minutes of scheduled time)
Midday Headways*	12 - 60 minutes	15 minutes	1½ - 3 minutes	
Weekend Headways*	12 - 60 minutes	30 minutes	1½ - 3 minutes	
Routes Miles	2576 (Round Trip Miles)	22.4 miles	4.4 miles	N/A
Peak Vehicle Requirements	691	84	21	360
Total Fleet Size (Section 15 Report)	817 - (742 full-size/ 75 minibus)	136	29	360 (181 sedans, 70 vans, 109 lift equipped vans)
Annual Revenue Miles*	29,727,843	6,743,641	1,126,255	13,260,276
Annual Boardings* (unlinked passenger trip)	70,291,985	17,371,553	8,013,220	1,553,561
Park-Ride Spaces	2,671	9,658	0	N/A
Annual Operating Expenses*	$306,828,479	$76,836,442	$24,019,311	$43,339,199
Annual Operating Revenues*	$78,409,774	$17,694,751	$0	$3,990,359
Annual Revenues (Other)*	$11,316.680	$0	$0	N/A
Base Fare	$2.00	$2.00	Free	$3.00

Source *: National Transit Database, Miami-Dade Transit, Revised FY 2010 Working Data – May 31, 2011

[1] Seven Metrobus routes (L, S, 3, 11, 27, 38/Busway MAX, 77) operate 24 hours per day. Two other routes, 246/Night Owl and 500/Midnight Owl, provide hourly bus service approximately between 12:00 am - 5:30 am.
[2] 91 Metrobus operated routes plus two contracted routes.

Figure 2-1: MDT Table of Organization



*Effective as of December 2010.
New Table of Organization is under revision.

2.1 Metrobus

Metrobus is a fixed route bus service that MDT operates seven days a week, twenty-four hours per day. A total of ninety-three (93) routes comprise MDT's regular bus service structure as served by a total fleet of 817 buses and two (2) contracted routes with seven (7) buses. Metrobus includes local, circulator, limited-stop, express, and BRT (Arterial Busway) services. Figure 2-2 illustrates the MDT Metrobus system route map as of November 2010 and Figure 2-3 presents the current MDT service area coverage map. Figure 2-4 illustrates park-and-ride locations.

2.2 Metrorail

Metrorail provides service to 22 stations on a 22.4-mile heavy rail electrified line. The Metrorail system operates primarily on elevated structure and interfaces with two other passenger rail systems at the Tri-Rail (Commuter Rail), Brickell and Government Center Stations (Metromover). MDT maintains a total fleet of 136 Metrorail vehicles. Metrorail currently operates weekday service between 5:00 a.m. and 12:45 a.m. (total trip time is 48 minutes from terminus to terminus) with 7½-minute AM/PM peak headways, and 15 minutes during the midday and 30 minutes during evening hours (7:30 PM to close). Weekend and holiday service operates with headways of 30 minutes. Figure 2-4 illustrates park-and-ride locations and Figure 2-5 illustrates the MDT Metrorail system map as of November 2010.

2.3 Metromover

The MDT automated people mover (APM) or Metromover includes an elevated system that services 20 stations which include three loops: the downtown Miami central business district (Inner/Downtown Loop), the Adrienne Arsht Center to the north (Outer/Omni Loop); and the Brickell area to the south (Outer/Brickell Loop). MDT maintains a fleet of 29 Metromover vehicles. Metromover operates free of charge and stops at 20 wheelchair-accessible stations from the School Board area to Brickell, serving major destinations throughout Downtown Miami. Metromover's Downtown/Inner, Omni and Brickell/Outer loops operate from 5:00 a.m. to 12:30 a.m. During the AM/PM peak period, service frequency is every 90 seconds, and every three minutes during the off-peak hours, as well as weekends and holidays. Figure 2-6 illustrates the MDT Metromover system map as of November 2010.

2.4 Special Transportation Services

MDT also operates a demand-response service known as Special Transportation Service (STS). STS is a shared-ride, door-to-door transportation service for qualified individuals with disabilities who are unable to utilize the accessible fixed-route transit system. Service is provided by sedans, vans and lift-equipped vehicles, seven days a week, 24 hours per day.

Presently, there are 360 vehicles (sedans, standard vans, minivans, and wheelchair lift-equipped vans) available for ambulatory transportation. Currently, these vehicles are privately contracted. There are 26,891 eligible clients enrolled in the STS program including both ambulatory and non-ambulatory clients, as of November 2010.

Figure 2-2: MDT Metrobus Route Map 2010

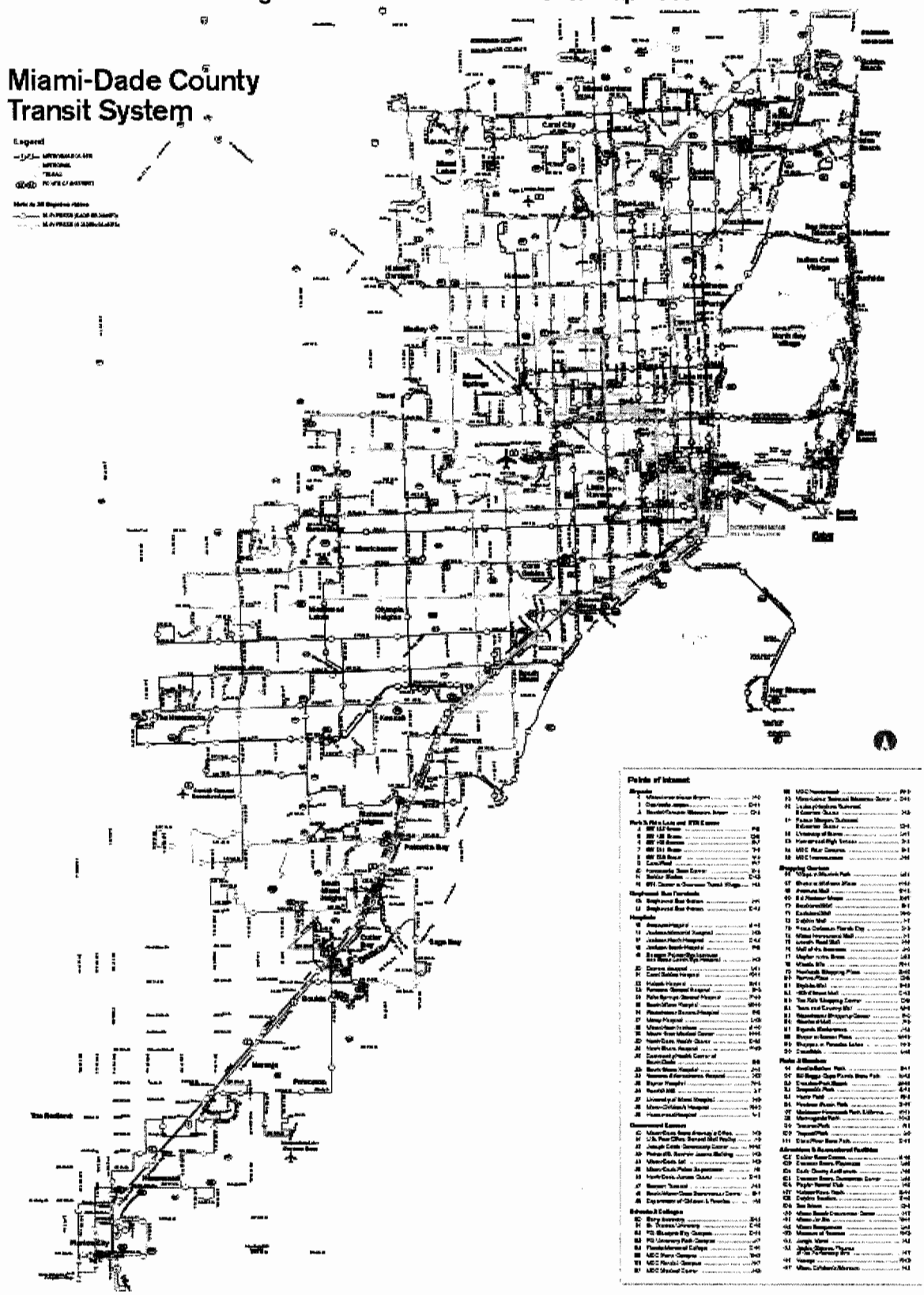
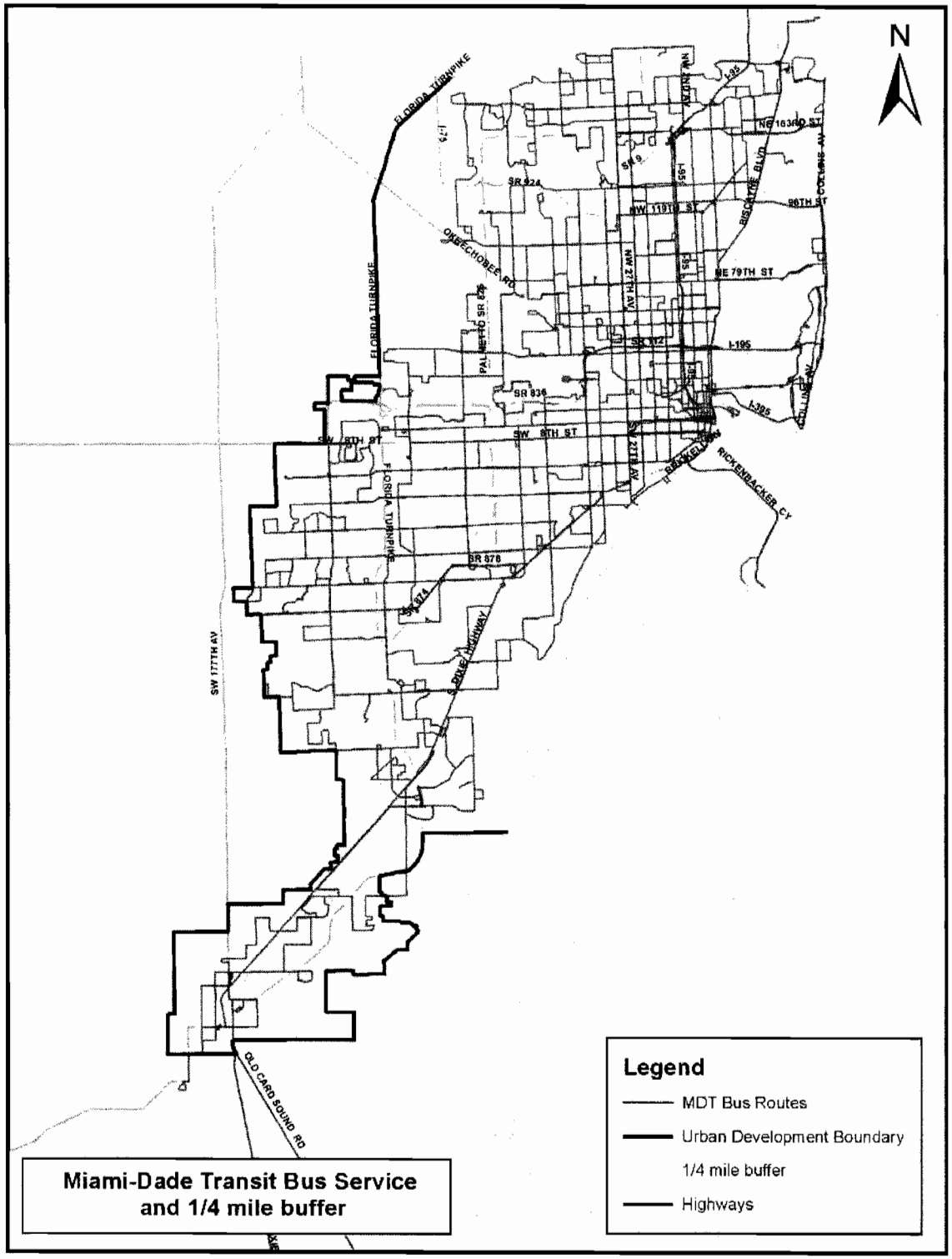
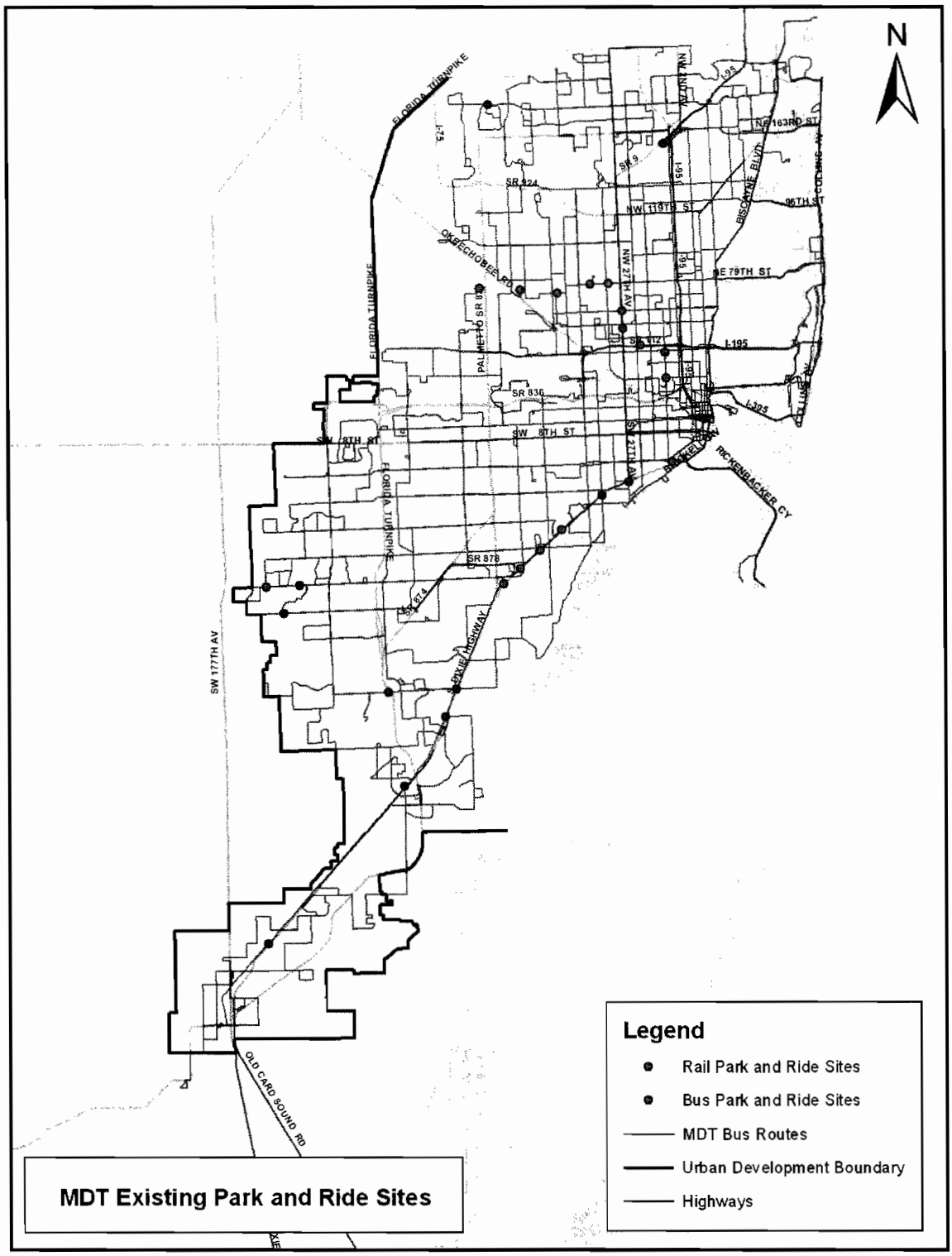


Figure 2-3: MDT Bus Service and ¼ Mile Buffer Map 2010



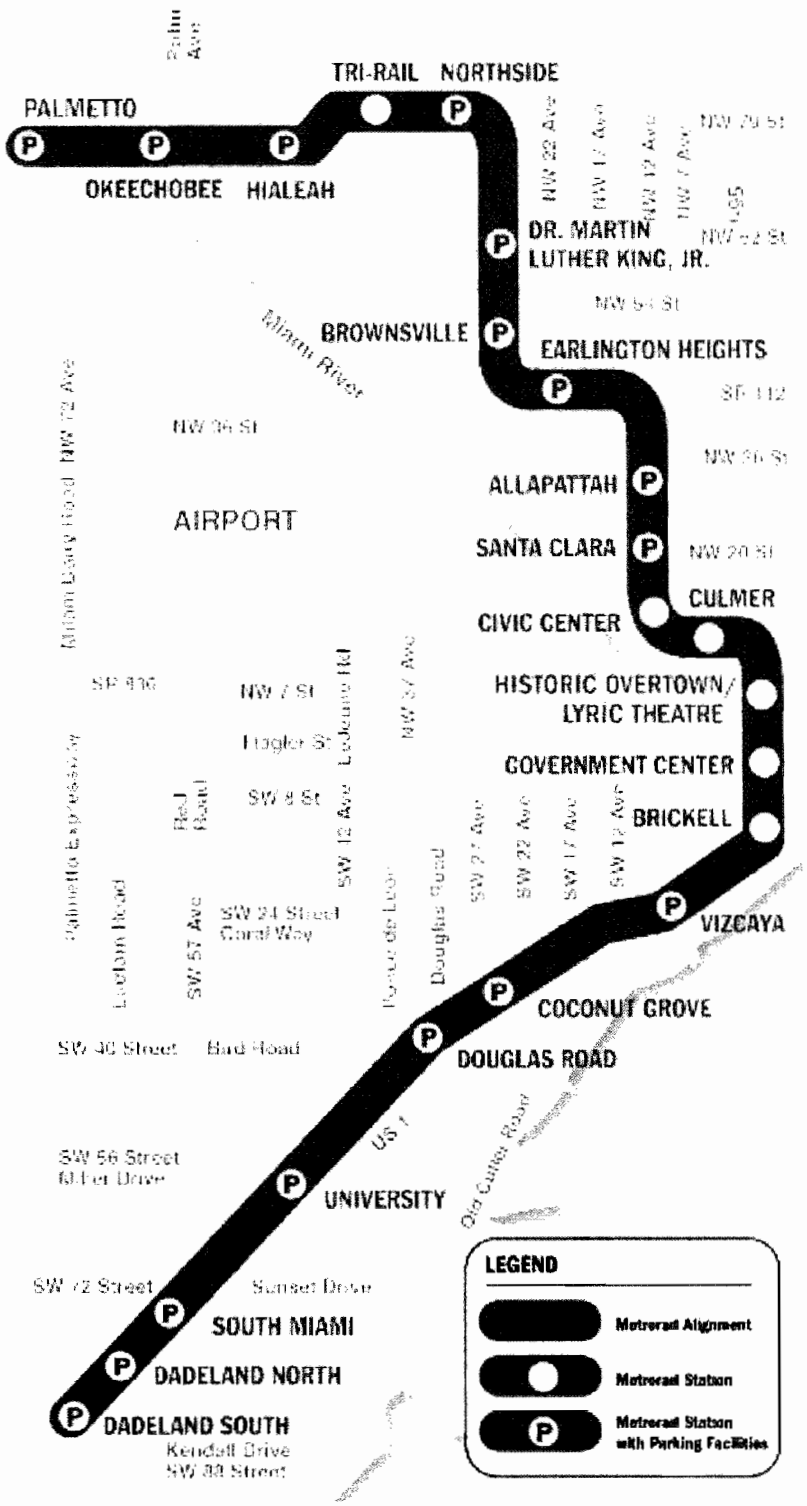
Source: Miami-Dade Transit, November 2010

Figure 2-4: MDT Existing Park-and-Ride Sites 2010



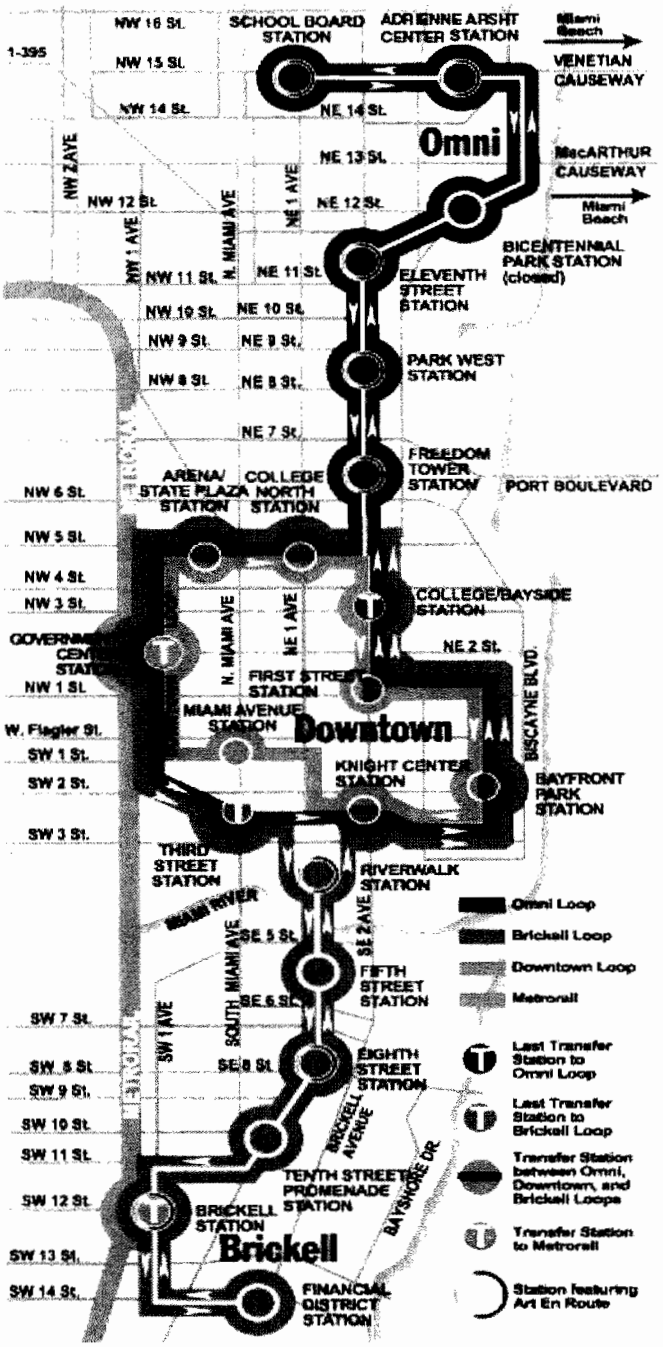
Source: Miami-Dade Transit, 2010

Figure 2-5: MDT Metrorail System 2010



Source: Miami-Dade Transit, November 2010

Figure 2-6: MDT Metromover System 2010



Source: Miami-Dade Transit, November 2010

2.5 Miami-Dade Transit Passenger Fare Structure

In June 2009, MDT transitioned to a new passenger fare collection system which no longer accepts tokens or currency as fare payment for Metrorail and Metrobus known as the EASY Card. The EASY Card is an automated fare collection system and the first of its kind in the State of Florida. Additionally, cash fare payments may also be made on Metrobus. MDT passengers are now required to purchase and load the contactless MDT EASY Card. These cards are purchased at a fee of $2 and loaded with appropriate fare amounts for passage. Table 2-2 presents the current fare structure as of December 2010.

Table 2-2: MDT Fare Structure Summary, December 2010

	Regular Fare	Discount Fare[1]
Metrobus	$2	$1
Express Bus	$2.35	$1.15
Shuttle Bus[2]	25¢	10¢
Metrorail	$2	$1
Metrorail daily parking fee	$4	No Discount Available
Metrorail monthly parking permit	$10[3]	No Discount Available
Metromover	Free	Free
Special Transportation Service (STS)	$3	No Discount Available
Bus-to-Bus Transfer	Free[4]	Free [4]
Bus-to-Express Bus Transfer	35¢ upgrade [4]	15¢ upgrade [4]
Bus-to-Rail Transfer	50¢ [4]	25¢ [4]
Rail-to-Bus Transfer	50¢ [4]	25¢ [4]
Shuttle Bus-to-Bus Transfer	$1.75 upgrade [4]	90¢ upgrade [4]
Shuttle Bus-to-Express Bus Transfer	$2.10 upgrade [4]	$1.05 upgrade [4]
1-Month Pass	$100	Not applicable
Discount 1-Month Pass	$50	Not applicable
1-Month Pass - Group Discount 4-99 passes	$90	Not applicable
1-Month Pass - Group Discount 100 or more passes	$85	Not applicable
7-Day Pass	$26	$13
1-Day Pass	$5	$2.50
College/Adult Education Center Monthly Pass	$50	Not applicable
Golden Passport or Patriot Passport	Free	Free
EASY Card	$2	Not applicable
EASY Ticket	Free	Not applicable

Source: Miami-Dade Transit, December 2010

[1] Discount fare is available for Medicare recipients, most people with disabilities, and students in grades K-12 when using an EASY Card for discount fare rides, which replaces all previous discount IDs and permits. Preschool children less than 42 inches in height can ride Metrobus and Metrorail free at all times with an accompanying adult. Parents or guardians of pre-schoolers are encouraged to present proof of age to bus operators and rail personnel to access the system. EASY Cards are not issued to pre-schoolers.
[2] Nine shuttles: 123/South Beach Local, 132/Doral-Tri-Rail Shuttle, 133/Airport-Tri-Rail Shuttle, 211/Overtown Circulator, 212/Sweetwater Circulator, 248/Brickell Key Shuttle, 249/Coconut Grove Circulator, 254/Brownsville Circulator, and 286/North Pointe Circulator. There is no fare for routes 132 (Doral-Tri-Rail Shuttle) and 133 (Airport-Tri-Rail Shuttle).
[3] Only available with the purchase of a monthly pass.
[4] Transfer fee is free within three hours of first boarding up to two buses traveling in the same direction.

3.0 Public Involvement

Miami-Dade Transit fully encourages public involvement and participation in the development of the People's Transportation Plan (PTP) and other transportation-related issues, conducting interactive presentations with communities across the county. MDT's mission includes developing a proactive public involvement process that provides complete information, timely public notice, and full public access to key decisions.

The MDT TDP Public Involvement Plan (PIP) outlines the various coordination efforts that MDT employs to obtain both public and stakeholder input. This input facilitates public consensus and direction for the TDP development. Throughout the development of the TDP Annual Update, efforts were made by MDT to include and actively engage Miami-Dade County citizens to identify the mobility needs of residents and visitors. The TDP PIP includes several different elements, including formal meetings with technical advisory committees, and coordination with the workforce board within Miami-Dade County. This chapter identifies and summarizes specific public involvement activities conducted for the TDP Annual Update.

3.1 Public Involvement Objectives

For the preparation and development of the TDP Annual Update Miami-Dade Transit's TDP PIP includes the following objectives:

- Ensure early, frequent and continuous communication with the public and other stakeholders.
- Provide meaningful opportunities for public input and systematic follow-through to address issues and ideas identified by the public.
- Promote MDT project benefits to the community.
- Promote an on-going public partnership to ensure transportation benefits are considered within the context of the communities directly impacted by MDT's projects.

3.2 Stakeholder Coordination

MDT actively engages transportation related stakeholders throughout the development of the TDP. The intent is to provide comprehensive county and regional perspectives on issues directly related to the nature of the review committee. These stakeholders share input, recommendations, and technical guidance on transportation related issues within the TDP. The stakeholders are comprised of government appointees, elected officials, as well as, citizens from various areas of the county.

MDT will attend the following regularly scheduled meetings as informational agenda or action items to present the TDP Annual Update, seek stakeholder input, address questions and comments related to its development:

- Citizens Transportation Advisory Committee (CTAC)
- Transportation Planning Technical Advisory Committee (TPTAC)
- Regional Transportation Committee (RTC)
- Miami-Dade County Board of County Commissioners (BCC)

Table 3-1 provides a summary of meetings scheduled for review and discussion of the TDP Annual Update.

Table 3-1: TDP Review Stakeholder Meeting Schedule (2011)

Review Committee	Meeting Date
CTAC	May 25, 2011
TPTAC	June 1, 2011
RTC	June 13, 2011
BCC	July 7, 2011

3.3 Community Involvement

Through coordinated county-wide efforts MDT continues to provide early and ongoing public involvement opportunities to the residents of Miami-Dade County. Opportunities for community outreach take the form of many different forums and outlets already set in place by the County. The TDP PIP ensures that the perspectives, opinions, and concerns of the public will be heard and addressed. The following list provides the various community outreach opportunities MDT conducted that has assisted in the development of the TDP Annual Update:

- Presentations and outreach at Senior Centers, local High Schools, Colleges, Universities, County Facilities, Municipalities, Commissioners' District Offices, Public Libraries, Miami International Airport, Neighborhood Associations and Community Based Organizations.
- Presentations to Miami-Dade Metropolitan Planning Organization (MPO) Committees
- Outreach at select MDT Metrobus Transfer Points and Metrorail stations
- EASY Card Implementation Outreach
- Participated in Miami-Dade County Television (MDTV) providing information about the MDT Airport Link project (Aired weekly from April 16, 2010 until May 1, 2010)
- Participated on various Spanish-radio shows throughout 2010.
- 95 Express Presentations
- Census Presentations
- Participation in Community Outreach events by MDT to customers, including senior pass holders (Golden Passport) from March 4, 2010 to March 1, 2011.
- Sisters and Brothers Forever: January 26, 2011
- The Latin American Foundation: February 7, 2011
- Transition, Inc.: February 17, 2011
- Stella Maris Condominium Association: February 17, 2011
- We Count! (Immigration Rights Organization): March 2, 2011
- GALATA: March 10, 2011
- New Providence Missionary Church: March 14, 2011

- Tuesday Morning Breakfast Club (Non-partisan Activist Club) March 22, 2011
- Local Festivals

3.3.1 South Florida Workforce Coordination

The South Florida Workforce Board (SFWB) was enacted in 2000 by the Florida Legislature under the Workforce Innovation Act to provide youth, employment, and business enterprise development services. The SFWB coordinates workforce planning and quality training services for job seekers and businesses located in Miami-Dade County. MDT will actively seek agency input from the SFWB through direct coordination with the Executive Director and organizational members. The SFWB has been provided hard copies of the Draft TDP Annual Update for review and comment.

Additional coordination efforts with the SFWB continue to occur regularly through the Welfare-to-Work Program, which includes the provision of transit service to areas not usually served by MDT. Through this program, MDT receives input regarding specific transit needs for consideration of adjustment and/or implementation of existing transit services in response to these needs.

3.3.2 3-1-1 Information System

The Government Information 3-1-1 Answer Center provides county residents with information regarding government services and available programs. Callers receive personal service in English, Spanish, or Creole, to answer questions and provide information on non-emergency issues such as trash collection days, property taxes, after school programs, transit routes, transit trip planning, and other countywide services. The 3-1-1 Answer Center is free of charge and available six (6) days a week at varying operation times. Calls are received Monday through Friday from 7:00 am to 8:00 pm and on Saturdays 8:00 am to 5:00 pm.

This system serves as a main point of telephone contact for residents to inquire about MDT transit services and provide feedback. This feedback has allowed MDT to continue to make customer service a priority and to better understand the transportation needs of its ridership while planning for the future. This input is then utilized for the development of the TDP.

3.3.3 Miami-Dade Transit Website

MDT maintains a comprehensive website to provide the community with easily accessible up-to-date system information (www.miamidade.gov/transit/). Furthermore, the website provides the public the ability to contact MDT, learn about services, and provide input. MDT utilizes the website to post the TDP document for public review and reference.

4.0 Past Year's Accomplishments (2010)

Throughout 2010 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

I-95 Dade-Broward Express: On January 25, 2010, MDT in partnership with Broward County Transit (BCT) implemented commuter express transit service to increase connectivity between the two counties. MDT operates express routes in Broward County from designated park-and-ride lots located at Broward Boulevard and Sheridan Street with direct service to Downtown Miami via the I-95 express lanes. The service features 60-foot diesel-electric hybrid buses with free Wi-Fi service. The I-95 Dade-Broward Express Bus routes are geared towards working commuters with departures scheduled every 15 minutes during three hours in the morning and three hours in the evening on weekdays only. The cost to the rider is $2.35 per boarding.

Kendall Cruiser: On June 28, 2010, the Kendall Cruiser limited-stop route opened to provide frequent weekday rush-hour service along Kendall Drive between the Dadeland North Metrorail station and SW 162nd Avenue. The service features stylized 60-foot diesel/electric hybrid buses with free Wi-Fi service. The cost to the rider is $2.35 per boarding. MDT is also providing a new Bus Tracker system that allows passengers to check next bus arrival times via the Internet or on web-enabled mobile devices. As part of a second phase for this project, selected bus shelters on the route will provide real-time "Next Bus" information via electronic signs. This route also benefits from Transit Signal Priority (TSP) along the corridor.

4.1.2 Metrobus Service Performance

Mean distance between failures has increased for Metrobus due to an enhanced preventive maintenance program that identifies mechanical issues before failures result. For FY 2009-2010 the mean distance between failures has increased by 21.5 percent.

4.1.3 Bus Service Adjustments

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 was approximately $12.3 million annually. In 2010, this effort continued the improvements made in the June and November 2010 line-ups resulting in approximately an additional $170,900 in savings. 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 Miami-Dade 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 (BCC) in November 2009.

MDT continues to implement route changes in accordance with service standards resulting in more efficiencies and lower operating costs.

4.2 Capital Improvements

4.2.1 Airport Link Metrorail Extension

Construction of the 2.4-mile Airport Link Metrorail extension continues to proceed on schedule and will be open for service in the spring of 2012. This project will provide a Metrorail connection between the Miami Intermodal Center (MIC) east of 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, the MIA-MIC Connector, and other chartered transportation services such as an intercity bus.

As of December 2010, construction of the Airport Link Metrorail Extension was nearing 70 percent completion. A majority of the supporting guideway columns and elevated guideway is in place and includes the crossing over State Road 112. Construction continued to extend the new guideway to connect with the existing tracks just west of the Earlington Heights Metrorail station while construction on the Miami River guideway crossing remains. Progress was also made on the installation of new drainage structures, utility relocations, and the design of a new guideway operating system. Construction of the new Metrorail station at the MIC is also making progress including the installation of the underground foundations, supporting columns and walls, guideway deck and tracks, and roof panels over the station. Project completion date is scheduled for spring of 2012.

4.2.2 Metrobus New Vehicle Replacement

Miami-Dade Transit continues to implement its bus replacement program with the replacement of 43 buses during this calendar year. Funding for this program is provided through various sources including the People's Transportation Plan (PTP), Florida Department of Transportation (FDOT) and Federal funding sources.

In August 2010, MDT took delivery of thirteen (13) 40-foot diesel/electric hybrid buses for fleet replacement which were put into service in the fall of 2010. In addition, twenty-five (25) 60-foot diesel/electric hybrid buses are currently in service as of the summer 2010 – sixteen (16) are being used on the inter-county I-95 Dade-Broward Express bus route and nine on the Kendall Cruiser bus route. MDT also ordered five 40-foot diesel/electric hybrids which began delivery in late 2010, and are now in service. Hybrid vehicles will be purchased by MDT to replace the future bus fleet as they reach retirement age.

4.2.3 Metrorail New Vehicle Replacement

Based on the final negotiated price to rehabilitate the existing 136 rail car fleet, current operating and market conditions, and the results of life cycle cost analyses of new versus rehab, Miami-Dade County has determined that the procurement of new rail cars in lieu of rehabilitation would

present a best value procurement option at this time. The Miami-Dade BCC and the Citizens' Independent Transportation Trust (CITT) approved the $401 million procurement of 136 new Metrorail vehicles featuring more comfortable interiors and a self-diagnostic system to address mechanical issues before they result in failures. The Request for Proposals (RFP No. 654) was issued on March 31, 2009. Car manufacturers Alstom, Ansalado Breda, and CAF submitted proposals on September 25, 2009. The MDT Project Team completed evaluation of the proposals and negotiations with the two responsive proposers. The Department of Procurement Management has completed its Responsibility Reviews and the County Manager's memorandum to recommend award to the selected car builder (Ansalado Breda) is currently being finalized. The delivery of six prototype vehicles is scheduled to begin in the last quarter of 2013 with the last vehicle scheduled to arrive in 2016.

4.2.4 Metromover New Vehicle Replacement

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 17.5 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 17 vehicles were ordered for Phase II of procurement for a total of 29 new vehicles. Four of the 17 Phase II vehicles have been delivered to MDT with the remaining 13 vehicles expected to be delivered to MDT by August 2011. The additional seventeen cars are scheduled to be put into service by mid-2011.

4.2.5 Lehman Yard Rehabilitation – Expansion Phase 1

Miami-Dade Transit 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 vehicles scheduled to be delivered beginning in the last quarter of 2013. The project is scheduled for completion in August 2013.

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. The test track will provide the necessary support for the existing and new Metrorail fleet of 136 vehicles to be delivered beginning in 2013. The project is scheduled for completion in August 2013.

4.2.7 Metrorail Central Control Upgrade

This project will update the existing Metrorail portion of the MDT Control Center replacing the existing 26 year old system. This upgrade and expansion will ensure that switches and communications are automatically executed by the train control system for safe and reliable service operations for the Metrorail system including the future rail corridors such as the Airport Link Metrorail Extension. This project is scheduled for completion by mid-2013.

4.2.8 Dadeland South Metrorail Station Comfort Station

This new rail operator comfort station was completed in May 2010 and is open for service. The new comfort station replaces an existing comfort station at the platform level for the Dadeland South Metrorail Station.

4.2.9 Northeast Passenger Activity Center

Miami-Dade Transit has worked with the City of North Miami Beach and other stakeholders for the last several years to develop a transit hub near the Mall at NW 163rd Street. The plans for the preferred site include an enhanced bus hub that would provide connections to local circulator service as well as a premium and regional bus service route hub and serve as the catalyst for joint development at this location. However, after numerous meetings and several attempts to reach an agreement with the City of North Miami Beach on the project scale, scope and capital cost of the preferred site, MDT has determined that this project is no longer feasible and will not be implemented.

4.2.10 Northeast Transit Hub Enhancements

Since determining that the Northeast Passenger Activity Center project is no longer feasible, MDT has identified a feasible project alternative and is proposing transit hub improvements at two existing transit hubs – the Mall at NE 163rd Street and Aventura Mall. Currently both of these transit hubs which serve the northeast portion of the County and are major destinations with important bus connections have multiple deficiencies (e.g., capacity, drainage, pavement, shelters, lighting, access, signage etc.). Therefore, MDT has created a new project which is referred to as the Northeast Transit Hub Enhancements (NETHE). This new project will upgrade both transit hub sites to improve bus and passenger access as well as upgrade area drainage, lighting, signage, shelters and other station area amenities. The completion date is estimated for October 2013.

4.2.11 Brownsville Metrorail Station Transit Oriented Development

On June 23, 2010, MDT broke ground for the construction of the Brownsville Transit Village, a 5.8-acre, joint-development project next to the Brownsville Metrorail station. The project will include approximately 467 workforce housing units, with five mid-rise apartment buildings, townhomes and a parking garage. Ground-floor commercial space and Metrorail station improvements, such as an additional passenger drop-off lane and attractive landscaping are also planned. The project is scheduled for completion in November 2011.

The project will be built in five phases, each geared toward providing housing for workforce families, the elderly and the entire Brownsville community. Brownsville Transit Village residents will benefit from immediate access to Metrorail and amenities such as a community center, a computer lab and an exercise room. In addition, onsite community programs will offer literacy training, health and nutrition classes, and first-time homebuyer seminars.

4.2.12 Pedestrian Overpass at University Metrorail Station

Miami-Dade Transit plans to construct a pedestrian overpass over US-1/South Dixie Highway at Mariposa Court, at the University Metrorail Station. This low profile pedestrian bridge structure will be comprised of two vertical circulation towers providing access/egress to the pedestrian bridge that spans across US-1/South Dixie Highway. The project is scheduled for completion in December 2013.

4.2.13 Systemwide Safety and Security Upgrades

Miami-Dade Transit has programmed funding to purchase security equipment to upgrade and install closed circuit camera television (CCTV) systems and its respective software components, and to continue the replacement of fire detection and reporting systems. MDT's commitment to

the safety and security of the MDT system, patrons, and employees is of the highest of priorities. The installation of digital monitoring equipment at several key locations throughout the MDT system is complete. In an effort to further complement its existing security infrastructure, MDT continues to aggressively add state-of-the art technology to both reduce crime and to aid law enforcement in proactively securing and safeguarding the transit system. FDOT Rule 14-15.017(2.2.1), however, prevents MDT from disclosing these improvements/installations in greater detail.

4.2.14 Park-and-Ride Lots

Dadeland South Metrorail Station Park-and-Ride Lot Expansion: In March 2010, MDT opened an additional 93 parking spaces to the existing surface lot at Dadeland South Metrorail station.

NW 27th Avenue and NW 215th Street: A 14-acre vacant parcel adjacent to the intersection of the Turnpike and NW 27th Avenue has been identified as a strategic park-and-ride location for the NW 27th Avenue Enhanced Bus Service project. Up to 350 parking spaces are proposed for this facility which would serve the northern most station for new enhanced bus or BRT service in the corridor. This park-and-ride also provides strategic transit-oriented development (TOD) opportunities. This facility is anticipated to open in June 2016.

NW 27th Avenue and NW 95th Street: A 3-acre parcel located on the southwest corner of NW 27th Avenue and NW 95th Street has been identified as a strategic park-and-ride location for the NW 27th Avenue Enhanced Bus Service project. Up to 150 parking spaces are proposed for this facility which would serve as a mid-station for the new enhanced bus or BRT service in the corridor. This facility is anticipated to open in June 2016.

SW 88th Street/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. The completion date is estimated for October 2013.

SW 88th Street/Kendall Drive and SW 150th Avenue: On June 28, 2010, MDT opened a new 109 space park-and-ride lot to provide free, convenient parking for customers who commute using the Kendall Cruiser bus route.

West Kendall Transit Terminal at Kendall Town Center (Kendall Drive and SW 162nd Avenue): This terminal includes a 40 space park-and-ride lot with six bus bays for service and a restroom facility for operators. This facility is scheduled to open in February 2011.

Busway and SW 168th Street: For the last ten years MDT has leased a parking lot adjacent to the Busway, located north of SW 168th Street and east of SW 97th Avenue. The lot is filled to capacity. MDT is purchasing this existing 1.68-acre parking lot with 149 spaces. The facility includes fencing, landscaping, and lighting. Estimated date for completing this purchase is the end of April 2011.

NW 186th Street/Miami Gardens Drive and 73rd Avenue: The construction of a new 124 parking space park-and-ride lot is scheduled for completion in May 2011.

Quail Roost (Busway and SW 184th Street): MDT is pursuing the purchase of approximately 3.5 acres of vacant property adjacent to the Busway (located between SW 184th Street and SW 186th Street) for a proposed park-and-ride lot. Up to 350 parking spaces and six kiss and ride spaces are

proposed for this facility. The facility will also include fencing, landscaping, lighting and a canopy for waiting passengers. The completion date is scheduled for June 2014.

Busway and SW 344th Street (Florida City): Miami-Dade Transit is planning to build a 266 space parking lot with bus bays and shelters, located west of the southern end of the Busway between NW 2nd Avenue and NW 3rd Avenue at SW 344th Street (Palm Drive), in Florida City. In March 2011, 30 percent final design plans were submitted to MDT. This facility is scheduled to open in March 2013.

West Dade (NW 107th Avenue and NW 12th Street): This facility will be developed in two phases. Phase 1 will include 189 surface parking spaces. Phase II includes a garage with 260 parking spaces, 10 bus bays, and a driver's comfort station. MDT staff held several negotiation meetings with the developer and has worked closely with the Miami-Dade Department of Planning and Zoning. Throughout the development approval process MDT's needs were conveyed to the developer to have the surface lot completed to coincide with the implementation of the SR 836 Express Bus project. The developer is anticipating completion in August 2012.

NW 7th Avenue Transit Village (NW 7th Avenue and NW 62nd Street): This proposed MDT joint development project is expected to provide opportunities for an enhanced transit facility within the context of an active, mixed-use development including space for housing, community-serving activities and functions in addition to retail use. This project was advertised in September 2010. The developer selection and ground lease is scheduled for Miami-Dade Board of County Commission approval in March 2011. The estimated completion date is July 2016.

Douglas Road Metrorail Station Park-and-Ride Lot: Miami-Dade Transit is planning to repair and restore the park-and-ride lot under the Metrorail guideway located just south of the Douglas Road station. The work includes paving, re-striping the parking spaces, fence repairs, tree trimming and miscellaneous safety upgrades. Procurement of the construction contractor for this lot, with approximately 50 spaces, is scheduled to begin in June 2011.

SW 147th Avenue and SW 8th Street: An 8-acre vacant parcel on the SW corner of the intersection at SW 8th Street and SW 147th Avenue has been identified as a strategic park-and-ride location for the East-West/SR836 Express Enhanced Bus Service project. Up to 350 parking spaces are proposed for this facility which would serve the western most station for the new enhanced bus or BRT service in the corridor. This park-and-ride lot also provides strategic transit-oriented development (TOD) opportunities. The estimated completion date is June 2016.

4.2.15 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 through 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). Scheduled completion date is in May 2011.

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 scheduled for completion in February 2011.

Secondary Guiderails for Bus Washes: This project includes the installation of secondary guide rails in the bus washes at the Central, Northeast and Coral Way Bus Facilities. Bid

specification was completed in October 2009. Preliminary designs were drawn for review of roller style guides. Design is to be compatible with all MDT buses. The project is scheduled for completion in January 2012.

Coral Way Garage Hurricane Panels: At the Coral Way Bus Transportation and Maintenance Facilities and other buildings on the property MDT will furnish and install (58) perforated stainless steel hurricane barriers and five (5) high performance Accordion Shutters. Bid specifications were developed on October 2009 and the project has been completed.

Metrorail HVAC Replacement: In 2010, MDT 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.

4.2.15.1 ARRA Funded Projects

Palmetto Station Traction Power Sub Station: This will be a Design/Build procurement to install a new Traction Power Substation at the existing Palmetto Metrorail station. This implementation is necessary to provide the required minimum higher 600 Volts Direct Current (VDC) for the 136 new Metrorail vehicles starting delivery 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. The project is scheduled for completion in February 2013.

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, replacement of 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. Construction is scheduled to be completed in March 2013.

Metrorail Track and Guideway Refurbishment and Mainline Turnout Replacement: This includes 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 25 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 by 50% as well as increase the safety of the system. The installation of frogs began in July 2010 and the project is scheduled for completion in March 2012.

Metromover Inner/Downtown Loop Stations Escalator Replacement and New Canopies: The 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. The primary function of these canopies is to provide passengers weather protection on stairs and escalators at Metromover stations.

The project contract is scheduled for award in April 2011. The project is scheduled for completion in October 2012.

Transit Operations System (TOS) Replacement Project: MDT is looking to acquire a system that will 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.

The system will be open in nature, mature, and capable of interfacing with other MDT systems including its fixed-route scheduling system, automated fare collection-smart card system, Miami-Dade County payroll system, Computer-Aided Dispatch/Automated Vehicle Location System (CAD/AVL), Consumer Information Network (CIN), Enterprise Asset Management System (EAMS), random drug and alcohol substance abuse system, disciplinary action reporting system, and the Automatic Passenger Counter (APC) system. MDT will be paying particular attention to how well this system meets its operational needs and can be integrated seamlessly with existing systems as this will be of critical importance to a successful implementation. The project is scheduled for completion in June 2014.

Metromover Fiber Optic Cable Replacement: The replacement of fiber optic cable equipment throughout the Metromover system at all stations and at Central Control has been scheduled for implementation in June 2013. 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 include the cost of the PLC within the available ARRA Grant allocation.

Metromover Closed Circuit Television Camera Replacement and Installation: MDT has set forth the installation of new digital cameras at all Metromover Station platforms with Network Video Recorders (NVR) for independent 24/7 recording. The new recorders will be networked into the MDT Video System and new digital displays will be installed at the Mover Central Control. The project is scheduled for completion in December 2012.

Existing Metrorail Stations (Phase 1) Graphics and Signage Retrofit: The project requires the selected Design-Build firm to design, furnish, install and test a complete wayfinding signage and graphics system for the existing 22 Metrorail Stations and the MIC station (in construction), in accordance with contract documents and industry standards. Also, included are all required materials to furnish signage, all equipment, labor, services, and all incidental items required to complete the work, as per the contract document. The scope of work for this project includes providing a complete wayfinding signage and graphics system for all existing Metrorail Stations. The construction completion date is scheduled for February 2012.

4.3 Customer Information/Convenience

4.3.1 EASY Card Implementation

On October 29 2010, MDT celebrated the one-year anniversary of the successful implementation of a new Automated Fare Collection System called EASY Card as a fare card for passenger use on Metrobus and Metrorail. MDT's EASY Card system became Florida's first

transit smart card system, following a 15-month installation. This fully automated system provides improved passenger convenience through the provision of a reusable, and readable stored value fare card by allowing customers to pay their fares with a single reloadable EASY Card or EASY Ticket. MDT has recorded more than 41 million EASY Card taps at its Metrorail fare gates and Metrobus fareboxes since the system's 2009 launch. The EASY Card also enables MDT to generate more accurate ridership data improving MDT's ability to adjust service based on passenger demand.

In mid-January 2011, MDT successfully completed the back office infrastructure upgrades required to integrate Tri-Rail to the Miami-Dade Transit Automated Fare Collection System (AFCS). The Zone-based integration for all 18 Tri-Rail stations (Approximately 72 miles and traversing Palm Beach, Broward and Miami Dade County) was completed in February 2011; to include, 59 full service ticket vending machines, 17 cashless ticket vending machines, 85 rail station validators, six ticket office machines and five photo ID machines.

4.3.2 Wireless Service on Rail and Bus Vehicles

In February 2011, MDT implemented wireless services in all Metrorail and Metromover vehicles, in addition to 140 Metrobus vehicles servicing select premium service routes including the I-95 Dade-Broward Express buses and the Kendall Cruiser. 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.

This project builds upon the initial pilot project launched in 2009 which has resulted in an overwhelmingly positive impact for MDT passengers. The public acceptance has been overwhelming with countless positive reviews. As a complement to this initiative, a separate project (Electronic Signage Information System) will provide free public Wi-Fi service at all Metrorail station platforms (by the end of 2012), while the rest of the bus fleet will be equipped with Wi-Fi devices as an option under the CAD/AVL Replacement Project.

4.3.3 Electronic Transit Rider Alert System

Miami-Dade Transit continues to implement customer convenience enhancements to their Rider Alert system that notifies passengers about transit service delays. Registered users receive electronic alerts on detours, route changes, and updates for Metrobus as well as service interruptions for Metrorail, Metromover, Metrobus and Special Transportation Services. The Rider Alert system also provides the operational status of Metrorail or Metromover station elevators and escalators. Customers must sign-up to receive these electronic alerts to their cellular phones, email addresses, text pagers, and Blackberry devices or smart phones. This project was completed in 2010.

4.3.4 CAD/AVL System Replacement

The existing 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 the existing system. This project will facilitate integration with the ETSD OpenSky 800Mhz Radio Rebanding initiative.

Miami-Dade Transit intends to prepare 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 Transit Signal Priority (TSP) which allows communication with traffic signal controllers. The traffic signal equipment 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.

MDT is in the final design phase for the OpenSky Radio Infrastructure required to support the CAD/AVL implementation. MDT has renewed support for the existing system and is in the process of procuring spare parts sufficient until the system replacement is implemented. MDT in conjunction with the Department of Procurement Management (DPM) released an industry review on MDT's CAD/AVL technical specifications in September 2010. MDT is currently finalizing the specifications in accordance with industry responses; in addition the MDT is updating the interface requirements to existing systems.

4.3.5 MDT Website Redesign

Miami-Dade Transit recently redesigned their website (www.miamidade.gov/transit) with a new streamlined look and more user-friendly design to make it easier for transit passengers to find transit service information. The new website design features large color-coded icons for easy navigation of information about Metrobus, Metrorail, Metromover and STS services. Basic subject headers with more detailed topic dropdown lists, as well as universal headers letting users link back to Miami-Dade County's main web portal and other department websites, are found at the top of every page.

The new home page now features popular interactive rider tools like the Google-powered automated transit Trip Planner; Train Tracker for next-train arrival times; and Service Updates, including bus detours and changes to the Metrorail or Metromover schedule. MDT's website is also now mobile-enabled for smart phone users.

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. The monitoring of previous results against current measures will validate MDT's attainment of these goals. This TDP Annual Update provides MDT an opportunity to report results for each major goal according to the 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.

Currently, the Miami-Dade County MPO is performing a Transit Service Evaluation Study that will seek to develop an on-going performance monitoring program that could be utilized by MDT. This study is scheduled to be complete in 2012.

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 61 transit service route miles operate within a ¼ mile of major medical facilities while more than 135 transit service miles operate within ½ 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 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 of 97 percent and continues to exceed the Agency goal of 95 percent. Metrobus operates at about 80 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**
FY 2009-2010	97.3%	80.5%
FY2008-2009	95.6%	79.2%
Goal	95%	75%

Source: Miami-Dade Transit, December 2010 (Also includes first quarter of FY2010-2011)

Objective: Maximize multimodal travel options and provide travel choices: Miami-Dade Transit, 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 Airport Link Metrorail Extension, which will connect downtown Miami and other locations along the Metrorail system with Miami International Airport (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 November 2010 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	
	2009	2010
Metrorail	22.4	22.4
Metrobus	2,615	2,576
Metromover	4.4	4.4

Source: National Transit Database, Miami-Dade Transit, Revised FY 2010 Working Data – May 31, 2011

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.

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. During the past fiscal year MDT reduced the number of bus service miles by 1.5% and as shown in Table 4-3 experienced a reduction in ridership (11.2%).

Table 4-3: MDT Systemwide Boardings

Transit Mode	Annual Boardings (000's)	
	FY2008-2009	FY2009-2010
Metrorail	18,244	17,372
Metrobus	75,608	70,292
Metromover	8,100	8,013

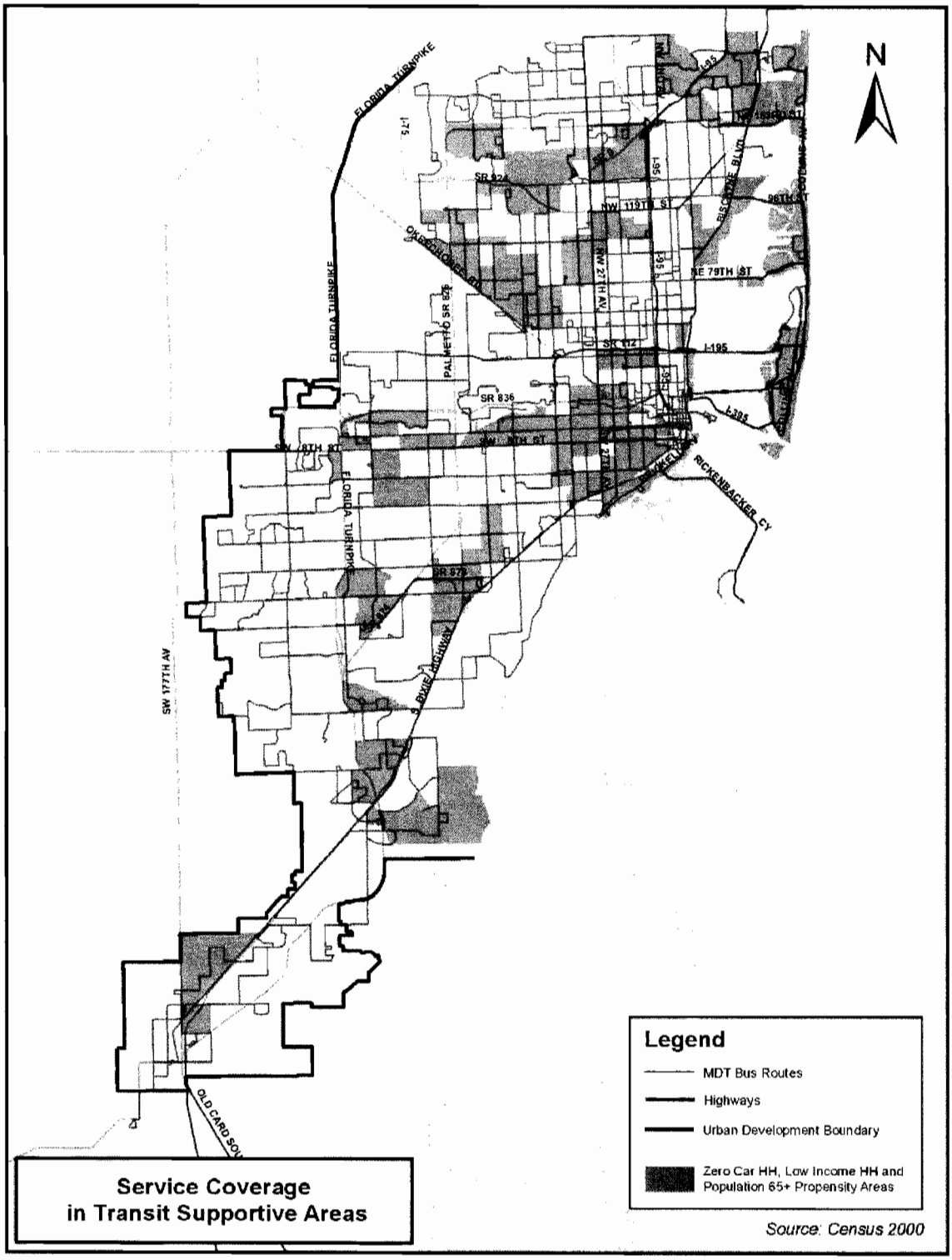
Source: National Transit Database, Miami-Dade Transit, Revised FY 2010 Working Data – May 31, 2011

Table 4-4: 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	2,576	3.47

Source: National Transit Database, Miami-Dade Transit, Revised FY 2010 Working Data – May 31, 2011

Figure 4-1: Service Coverage in Transit Supportive Areas



Source: Miami-Dade Transit, 2011

Objective: Improve transportation facilities' and services' regional connectivity:

Table 4-5 shows the number of transit route miles (including miles of overlapping bus service) in each of more than a dozen key regional corridors. As the table indicates, MDT provides high concentrations of service on South Dixie Highway (the Busway), A1A, Biscayne Boulevard and Flagler Street.

Table 4-5: Transit Route Miles in Corridors of Regional Significance

Corridors of Regional Significance	Transit Route Miles in Corridor
Interstate-95	158.47
South Dixie Highway/US-1	177.47
NW 27th Avenue	76.70
SR A1A	160.98
Flagler Street	93.70
Coral Way (SW 24th Street)	46.53
Biscayne Boulevard/US-1	114.45
Tamiami Trail (SW 8th Street)	52.28
Kendall Drive (SW 88th Street)	31.76

Source: Miami-Dade County GIS files, 2011

MDT's system offers stations along the Metrorail and Metromover system, and bus stops, shelters and benches along Metrobus routes. Table 4-4 shows bus stops and station spacing. MDT's standard calls for an average of 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 1,000 feet). More detailed analysis is being conducted by MDT to adjust stop spacing depending on the type of service being provided, thus increasing the efficiency of each bus route.

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

The Metrorail bike path (M-PATH) consists of approximately eight miles of asphalt and concrete surfaces running within MDT's right-of-way under the existing elevated Metrorail Guideway. MDT is moving forward with two M-PATH projects to include rehabilitation of the existing path and adding a new extension.

The M-Path needs infrastructure repairs and improvements to enhance the safety and performance for the M-Path users. The rehabilitation project consists of repairs to the asphalt and concrete surfaces, installation of traffic and way finding signs, installation of crosswalk pavement markings, pedestrian signals and other safety improvements in accordance with the M-Path Master Plan. Project funding was approved in December 2010.

The M-Path extension project includes the design and construction of a proposed 10-foot wide bike path along the Metrorail Corridor to connect with the existing bike path from SW 67th Avenue to the Snapper Creek Canal and from the Dadeland North Metrorail station to the Dadeland South Metrorail station. The design phase of this Design/Build Project is on-going.

Objective: Improve transit services that provide access to educational facilities: The number of transit service route miles within a ½ mile of colleges and universities throughout Miami-Dade County is approximately 135 miles. All of the major colleges and universities located within Miami-Dade County are served by transit service within a ¼ mile of their campuses. This has remained unchanged since last year's TDP Annual 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 is 3.60 per 100,000 miles. In FY 2010, MDT reported that the number of accidents was 3.25 accidents per 100,000 miles of transit service. This represents a 10% improvement over the set goal.

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. MDT 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 reported that the MDT fleet was involved in 1.04 preventable accidents per 100,000 miles for FY 2010, which is 30% below the MDT goal of 1.50 accidents per 100,000 miles.

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 616. Upon the completion of future projects the MDT video surveillance system will consist of 956 active cameras.

Objective: Increase security at transit stops and intermodal stations and connections: For 2010, the number of criminal incidents on-board transit has been reduced from the previous year by thirty-seven percent (37%).

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 ¼ 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. This includes 53 route miles with a ¼ mile of the Downtown area. Dadeland has a more focused center of activity with direct connections from Metrorail and the South Miami-Dade Busway which results in thirty route miles within a ¼ mile. The regional activity center at NW 107th Avenue and NW 12th Street has approximately nine transit route miles within a ¼ mile. 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	52.9
Dadeland	30.3
NW 107th Avenue and NW 12th Street	8.9

Source: Miami-Dade GIS, 2011

Objective: Enhance major tourist travel and access opportunities within the Urban Development 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 located 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, and Barnacle Historic State Park.

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	Route Miles Operating within 1/4 Mile
Ancient Spanish Monastery	2.46
Barnacle Historic State Park	0.82
Bass Museum of Art	4.99
Bayside Marketplace	6.36
Billy Baggs State Park	0.66
Biscayne National Park	0.00
Calder Race Track	1.11
Coconut Grove	42.50
Coral Castle	2.00
Coral Gables Merrick House	0.50
Fairchild Tropical Botanic Garden	0.48
Haulover Beach	12.02
Hialeah Race Track	0.68
Jungle Island	3.68
Key Biscayne	4.95
Matheson Hammock Park	1.46
Zoo Miami	1.50
Miami Art Museum	16.23
Miami Beach Convention Center	156.97
Miami Children's Museum	4.36
Miami Science Museum	2.36
Miami Seaquarium/Key Biscayne	0.89
Oleta River State Park	18.28
The Wolfsonian Museum	3.00
Tropical Park	3.48
Venetian Pool	0.28
Vizcaya Museum and Gardens	1.66

Source: Miami-Dade GIS, 2011

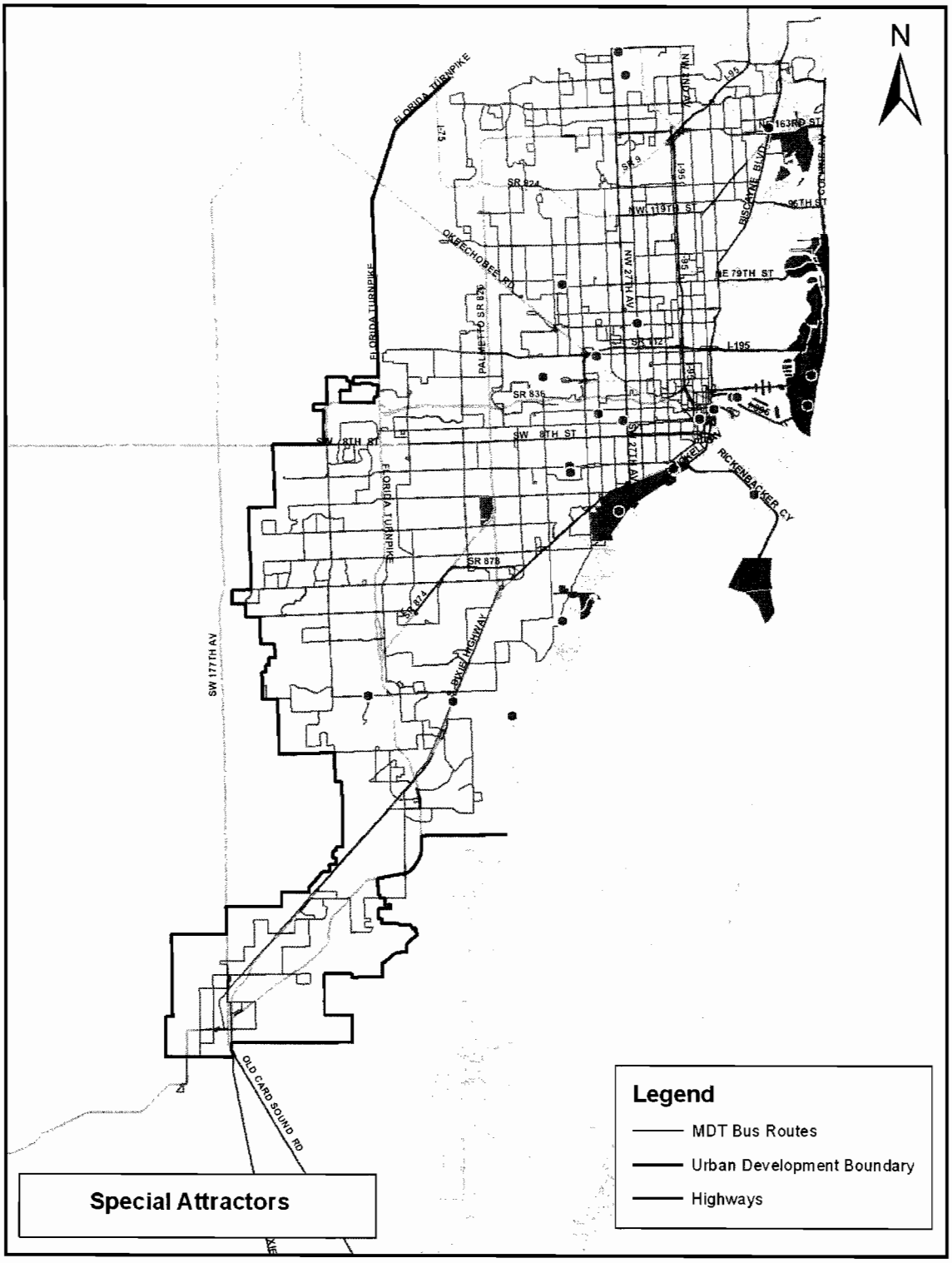
Analysis measuring the adequacy of transit services continues to be conducted to identify major trip generators and major attractors in Miami-Dade County. Table 4-8 through Table 4-12 presents the various transit services provided for each identified major trip generator in terms of number of routes and accessibility of these facilities. Furthermore, maps that illustrate the locations of these attractors are provided according to the type of major trip generator presented in each of the following tables.

Table 4-8: MDT Major Trip Generators: Special Attractors, December 2010

MAJOR GENERATORS	ROUTES					COMMENTS
Special Attractors						
Adrienne Arsht Center	A 16	M 32	S 93	3 95	10 Mover	Service on local roadways
Calder Race Course/Casino	99	27	97			Service on adjacent roadways
Coconut Grove	6	22	27	48	249	Service on local roadways
Dade County Auditorium	11	27	51			Service on adjacent roadways
Downtown Miami	C 7 24 120 246	S 8 51 207 277	2 9 77 208 500	3 11 93 211 Mover	6 21 95 243 Rail	Service on local roadways and within walking distance of Government Center and Historic Overtown/Lyric Theatre stations and the various Metromover stations
Flagler Kennel Club-Magic City Casino	6	7	37	238		Service on adjacent roadways
Hialeah Race Track	L Rail	29	37	54	135	Service on local roadways
Jackie Gleason Theater of the Performing Arts	A 115	C 117	L 120	M 123	S	Service on local roadways
Joseph Caleb Community Center	22	46	54	246	254	Service on local roadways
Jungle Island/Miami Children's Museum	C	M	S	120		Service on local roadways
Miami Beach Convention Center	A 115	C 117	L 120	M 123	S	Service on local roadways
Miami International Airport	J 150	37 238	42	57	133	Bus terminal on site; shuttle to Tri-Rail Station
Miami Jai-Alai	J	36	37			Service on adjacent roadway
Miami Seaquarium	B					Service on adjacent roadway
Museum of Science	12	17	24	48		Service on adjacent roadway
	Rail					Located within walking distance from Vizcaya station
Port of Miami	243					On-site service via local roadways
South Beach	A 120	C 123	L 150	M	S	Service on local roadways
Sunlife Stadium	27	97	99			Service on adjacent roadways
Vizcaya	12	17	24	48		Service on adjacent roadway
	Rail					Located within walking distance from Vizcaya station
Zoo Miami	252					On-site service to entrance

Source: Miami-Dade Transit, 2011
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within the vicinity of the trip generator.

Figure 4-2: MDT Major Trip Generators: Special Attractors, December 2010



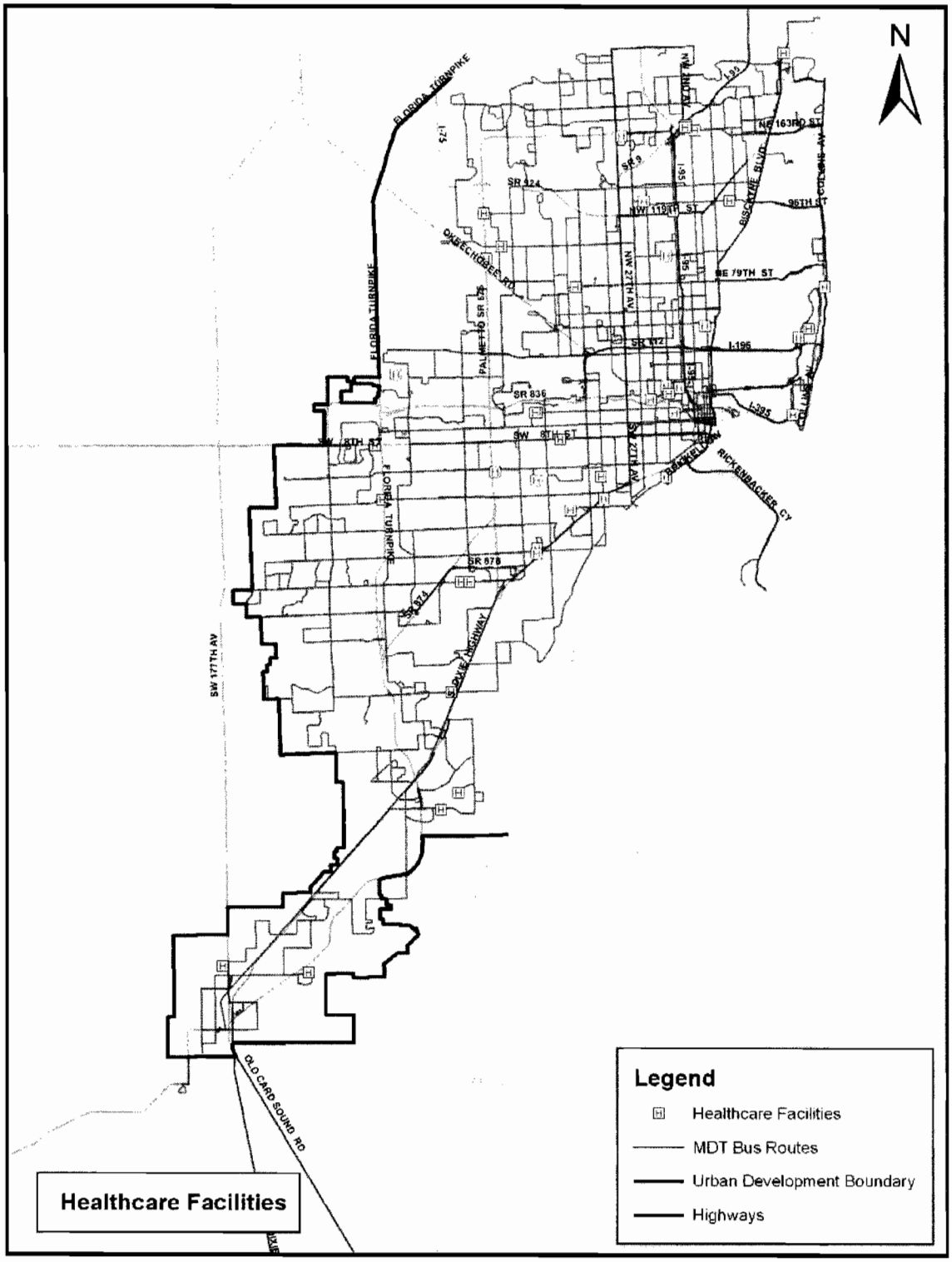
Source: Miami-Dade Transit, 2011

Table 4-9: MDT Major Trip Generators: Healthcare Facilities, December 2010

Health Care Facilites						
Aventura Hospital	E					Service on adjacent roadway
Baptist Hospital	88	104				Service on adjacent roadways
Bascom Palmer Eye Institute	M	12	21	246		Service on adjacent roadways
	77	277				Service on local roadways
Coral Gables Hospital	37					Service on adjacent roadways
Doctors' Hospital	56					Service on adjacent roadway
HealthSouth Rehabilitation Hospital	70					Service on adjacent roadway
Hialeah Hospital	L	42	135	Rail		Service on adjacent roadways
Homestead Hospital	35					Service on adjacent roadway
Jackson Memorial / U.M. / V.A. Hospitals	M	12	21			Service on adjacent roadways and within walking distance from Civic Center station
	32	95	246	Rail		
Jackson North Hospital	E	2	22	246		Service on adjacent roadways
Jackson South Hospital	31	34	38	52	57	Service on adjacent roadway
	252	287				
Kendall Regional Medical Center	40					Service on adjacent roadway
Kindred Hospital South Florida - Coral Gables	8					Service on adjacent roadway
Larkin Community Hospital	37	52	72			Service on adjacent roadway
	57	Rail				Service on local roadways
Mercy Hospital	12	48				On-site service with shelters
Metropolitan Hospital of Miami	7					Service on adjacent roadway
	238					Service on local roadway
Miami Children's Hospital	56					On-site service with shelters
Miami Jewish Home & Hospital for the Aged	2	9	10	202		Service on adjacent roadway
	54					Service on local roadway
Miami Heart Institute	115	117				Service on adjacent roadway
Mount Sinai Medical Center	C	M	115	117		On-site service
	62	J	150			Service on adjacent roadway
North Dade Health Center	G	17	22	27	97	Service on adjacent roadway
	246					
North Shore Hospital	33	77	277			Service on adjacent roadways
Palmetto General Hospital	29					On-site service with shelters
Palm Springs General Hospital	33	54				On-site service with shelters
	29	73				Service on adjacent roadways
Selected Speciality Hospital	7					Service on adjacent roadway
	12	211				Service on local roadway
Sister Emmanuel Hospital	12	48				On-site service with shelters
South Dade Health Center	35	52	70	287		On-site service and service on adjacent roadways
South Florida Evaluation & Treatment Center	77	277				Service on adjacent roadway
South Miami Hospital	37	57	72	500	Rail	Service on adjacent roadways and within walking distance from South Miami station
Westchester General Hospital	24					Service on adjacent roadway

Source: Miami-Dade Transit, 2011
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within the vicinity of the trip generator.

Figure 4-3: MDT Major Trip Generators: Healthcare Facilities, December 2010



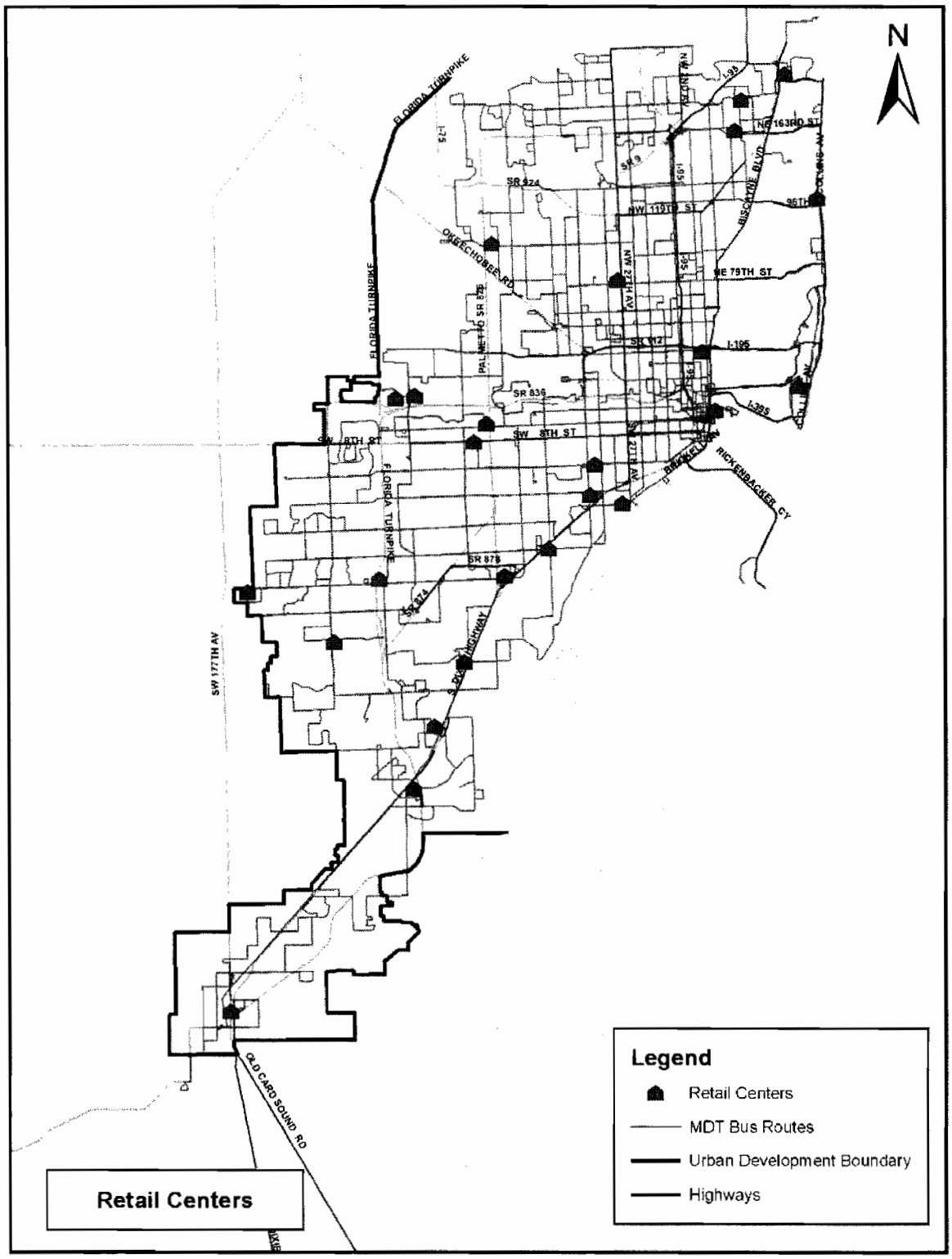
Source: Miami-Dade Transit, 2011

Table 4-10: MDT Major Trip Generators: Retail Centers, December 2010

MAJOR GENERATORS	ROUTES					COMMENTS
Retail Centers						
Aventura Mall	E 99	S 120	3 183	9	93	On-site service
Bal Harbour Shops	G	H	S	120		Service on adjacent roadways
Bayside Market Place	C 243	S Mover	3	93	95	Service on adjacent roadways and the Mover
Coco Walk/ Mayfair in the Grove	37	48	136	249		Service on adjacent roadways
	6	500				Service on local roadways
	Rail					Located within walking distance of the Coconut Grove station
Dadeland Mall	52 204	73 272	87 288	88 500	104 Rail	Service on adjacent roadways. Pedestrian walkway to Dadeland North station
Diplomat Mall	E					Service on adjacent roadway
Dolphin Mall	7	36	71	137	238	On-site terminal with shelters
Kendall Village	88	288				Service on adjacent roadway
(The) Falls	31 252	34 287	38	52	136	Service on adjacent roadway and at Busway station at SW 136 Street
Lincoln Road Mall	A 115	C 117	L 120	M 123	S 150	Service on adjacent roadways
London Square	136	137				Service on adjacent roadways
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
Miracle Mile	24	37	42	56		On-site and adjacent roadway service
Northside Shopping Plaza	L 79	12 97	21 Rail	27	32	On-site and adjacent roadway service
Palms at Town and Country	56	88	288			Service on adjacent roadways
Perrine Plaza	1	31	34	38	50	Service on adjacent roadways
	Busway					Located within walking distance of the Busway (park & ride lot at SW 168 St.)
Prime Outlets at Florida City	35	70	344			On-site and adjacent roadway service
Shops at Midtown Miami	2 16	3 32	6 93	9	10	On-site and adjacent roadway service
Shops at Sunset Place	37 Rail	52	57	72	500	On-site and adjacent roadway service
Shops at Paradise Lake	104	204	272			Service on adjacent roadways
	288					Service on local roadway
Skylake Mall	H	9	10	183		Service on adjacent roadways
Southland Mall	1 52	31 70	34 137	35	38	Service on adjacent roadways
Village at Merrick Park	37 249	40 500	42 Rail	48	136	Service on adjacent roadways and within walking distance of Douglas Road station
Westchester Shopping Center	8	24	87			Service on adjacent roadways
Westland Mall	29	33	54			Service on adjacent roadways
163rd Street Mall	E 10 246	H 16	2 19	3 22	9 75	Service on adjacent roadways and off-site terminal

Source: Miami-Dade Transit, 2011
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within the vicinity of the trip generator.

Figure 4-4: MDT Major Trip Generators: Retail Centers, December 2010



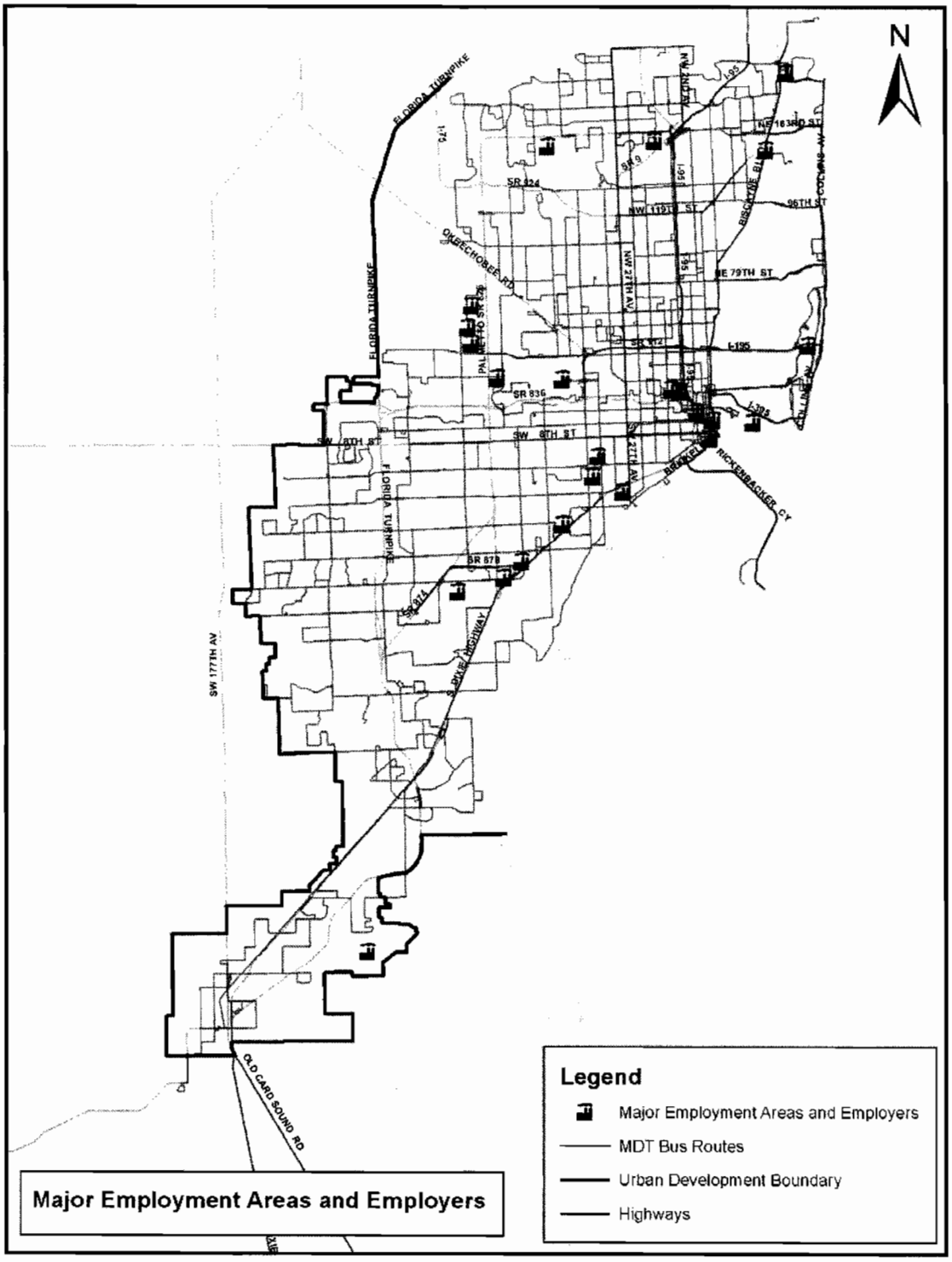
Source: Miami-Dade Transit, 2011

Table 4-11: MDT Major Trip Generators: Major Employment Areas and Employers, December 2010

MAJOR GENERATORS	ROUTES					COMMENTS
Major Employment Areas and Employers						
Aventura Mall	E 99	S 120	3 183	9	93	On-site service
Doral - Warehouse Area	36	87	95	132		Service on adjacent roadways
Downtown Miami	C 7 24 120 246	S 8 51 207 277	2 9 77 208 500	3 11 93 211 Mover	6 21 95 243 Rail	Service on local roadways and within walking distance of Government Center and Historic Overtown/Lyric Theatre stations and the various Metromover stations
Homestead Air Reserve Base	70					Service on adjacent roadway
Miami-Dade Jail	M 246	12 Rail	21	32	95	Service on local roadways and located within walking distance of Civic Center station
Miami-Dade Police Department	95	238				Service on adjacent roadway
Miami Dade State Attorney's Office	M 246	12 Rail	21	32	95	Service on local roadways and located within walking distance of Civic Center station
Miami International Airport	J 150	37 238	42	57	133	Bus terminal on site. Shuttle to Tri-Rail service.
North Dade Justice Center	3	75	93			Service on adjacent roadway
Port of Miami	243					On-site service via local roadways
Richard E. Gerstein Justice Building	M 246	12 Rail	21	32	95	Service on local roadways and located within walking distance of Civic Center station
South Miami-Dade Government Center	1 70 Busway	31 137	35	38	52	Service on adjacent roadway Located within walking distance of the Busway (park & ride lot at SW 112 Ave.)
Unicorporated Miami-Dade County Area bounded by NW 74 St. to the North, NW 58 St. to the South between SR-826 and NW 87 Ave.	87					Service on adjacent roadway
University of Miami	48	56	500	Rail		Service on adjacent roadways and within walking distance of University station
U.S. Post Office- General Mail Facility	73	238				Service on adjacent roadways

Source: Miami-Dade Transit, 2011
Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transite service within the vicinity of the trip generator.

Figure 4-5: MDT Major Generators: Major Employment Areas and Employers, December 2010



Source: Miami-Dade Transit, 2011

Table 4-12: MDT Major Trip Generators: Educational Centers, December 2010

MAJOR GENERATORS	ROUTES					COMMENTS
Educational Centers						
Barry University - Main Campus	2	9	10	19		Service on adjacent roadways
Barry University - Kendall Campus	104					Service on adjacent roadway
	88	288				Service on local roadway
Brown Mackie College	S 32	3 93	9 95	10	16	Service on adjacent roadways
	A	C	M	6	120	Service on local roadways
	Mover					Within walking distance of Adrienne Arsht Center station
Carlos Albizu University	95	238				Service on local roadway
City College	Rail					Within walking distance of Dadeland South station
College of Business and Technology - Cutler Bay	31	34	35	38		Service on adjacent roadway
College of Business and Technology - Flagler	11	51	87			Service on adjacent roadway
	7					Service on local roadway
College of Business and Technology - Kendall	71	88	288			Service on adjacent roadways
FIU - Center for Engineering & Applied Sciences	11	51	137	212		Service on adjacent roadways
FIU - University Park	8	11	24	71		On-site terminal with shelters
FIU - Biscayne Bay	75	135				On-site service
FIU - The Metropolitan Center	3 93	5 95	11	24	77	Service on adjacent roadways
	C 9 208	L 21 277	2 51	6 120	8 207	Service on local roadways
	Mover					Within walking distance of Knight Center station
FIU - The Wolfsonian	C	M	120			Service on adjacent roadway
Florida Atlantic University	8					Service on adjacent roadway
	87					Service on local roadway
Florida Career College	8	11	71			Service on adjacent roadway
Florida Memorial College	32					Service on adjacent roadway
Florida National College	24	40	51			Service on adjacent roadways
International Fine Arts College	S 32	3 93	9 95	10	16	Service on adjacent roadways
	A	C	M	6	120	Service on local roadways
	Mover					Within walking distance of Adrienne Arsht Center station
Johnson & Wales University	16					Service on adjacent roadway
	3	93				Service on local roadway
Jones College	88	288				Service on adjacent roadway
Keiser Career College	75	286				Service on local roadways
Keller Graduate School of Management	11	51	87			Service on adjacent roadways
Lindsey Hopkins Technical Education Center	M	21	77	277		Service on adjacent roadways
MDC - Homestead	34	35	344			Service on adjacent roadways
	38	70				Service on local 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	32	Rail	Service on adjacent roadways
MDC - North	19	27	32	97		On-site terminal with shelters
MDC - West	36					Service on adjacent roadway

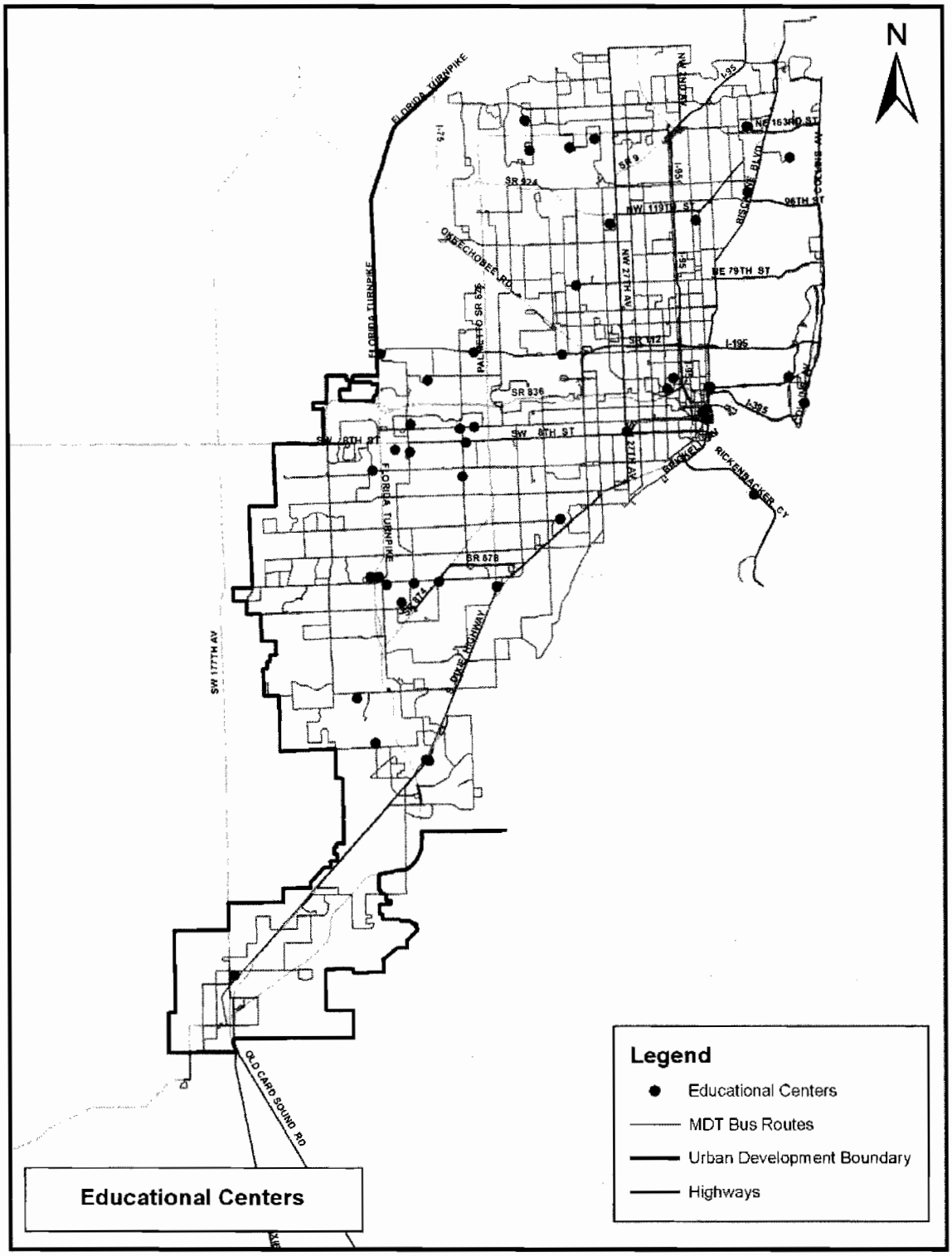
Source: Miami-Dade Transit, 2011 Note: Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transite service within the vicinity of the trip generator.

Table 4-12: MDT Major Trip Generators: Educational Centers, December 2010 (continued)

MAJOR GENERATORS	ROUTES					COMMENTS
Educational Centers						
MDC - Wolfson Campus	2 9	3 93	6 95	7 120	8	Service on adjacent roadways
	C 207 277	S 208	11 211	21 243	77 246	Service on local roadways
	Mover					Within walking distance of College/Bayside and College North stations
Miami Lakes Technical Education Center	29	75				Service on adjacent roadway
Nova Southeastern University	H					Service on local roadway
Polytechnic University of Puerto Rico	36	95	132			Service on adjacent roadway
Robert Morgan Technical Education Center	52	137				Service on adjacent roadways
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 station
University of Miami - Marine Campus	B					Service on adjacent roadway
University of Miami - South Campus	252					Service on adjacent roadway

Source: Miami-Dade Transit, 2011
Note: Rail stands for Metrorail. Adjacent refers to transit service immediately next to trip generators. Local roadways refer to transit service within the vicinity of the trip generator.

Figure 4-6: MDT Major Trip Generators, Educational Centers, December 2010



Source: Miami-Dade Transit, 2011

Objective: Increase and improve transit access to Miami International Airport (MIA) and the Port of Miami: The transit service route miles within a ¼ mile of MIA and the Port of Miami are presented in Table 4-13. Metrobus Routes 37, 42, 110, 132, 133 and 150 (Airport Flyer) connect 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 Airport Link Metrorail extension will greatly enhance transit service to the airport terminal over-and-above the current Metrobus service to the terminal.

Table 4-13: 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	68.4	66
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 were identified by Miami-Dade County as potential redevelopment areas based on their older development and infrastructure. As Table 4-14 shows, MDT provides service on multiple routes to most of these areas.

Table 4-14: Transit Route Miles within ¼ mile of Redevelopment Areas

Redevelopment Areas*	Transit Route Miles within ¼ mile
Homestead	13.93
Florida City	27.94
North Miami	63.19
Naranja Lakes	15.89
North Miami Beach	44.72
7th Avenue Corridor	23.58
Midtown Miami	12.31
Miami Beach	26.82
East Overtown	72.81
West Perrine	21.66
City of Miami - OMNI	46.30
South Miami	10.70

Source: *Information taken from the Miami-Dade County's GIS webpage. March 2011

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:

In an innovative move to improve energy efficiency and reduce operational costs, MDT has electrified key accessories on 13 new county buses - becoming one of the first transit agencies in the nation to electrify bus accessories. This modification is expected to make the buses 25 percent more fuel efficient.

Miami-Dade Transit currently operates 38 diesel-electric hybrid buses of which 25 are articulated buses that use 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 April 2011, MDT will be the first transit agency to place in service five diesel/electric Gillig buses with advanced hybrid technology featuring a beltless alternator, where the bus's electrical system pulls power from the hybrid batteries. MDT is also adding LED lighting at park-and-ride Lot locations.

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 4-15).

Table 4-15: Transit Route Miles Within ¼ mile of the Route Alignment

Other	Transit Route Miles within ¼ mile	
	2009	2010
Urban Infill Area (UIA) Boundary	1,332	1,356

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 a ¼ mile of Transit Analysis Zones (TAZ's) with a high proportion (20% or higher) of elderly is about 640 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 2010 cost per mile of MDT's Metrobus service is $8.91 as compared with the 2009 cost per mile of $9.02.

The 2010 cost per mile of MDT's Metrorail service is $11.03 as compared with the 2009 cost per mile of $11.35.

The 2010 cost per hour of MDT's Metrobus service is $114.57 as compared with the 2009 cost hour mile of $116.44.

The 2010 cost per hour of MDT's Metrorail service is $237.91 as compared with the 2009 cost per hour of $245.45.

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 space car garage and would eliminate the 189 space 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 is estimated for 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. This project was is scheduled for completion February 2011.

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 consists of the South Miami-Dade Busway which is approximately 20 miles in length. For 2010, the newly implemented managed lanes on I-95 increased transit's usage of Toll Managed Express 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 Intelligent Transportation System (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 transit operations. Newly implemented ITS projects include transit signal priority, wireless services, 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.

Objective: Maintain the operational functionality of transit vehicles to maximize reliability: MDT experienced 0.02 percent missed pullouts in FY 2010. The current goal set forth at the agency is zero percent. 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 of 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 achieved a compliance rate of 86.4% (Table 4-16).

Table 4-16: Percent of Adherence to Preventative Maintenance Program by Mode

	Metrobus	Metrorail	Metromover
FY 08/09	99.3%	99.9%	91.8%
FY 09/10	99.6%	99.9%	86.4%
Goal	90%	90%	90%

Source: Miami-Dade Transit, as of March 2011

Another measure of service reliability is the measure of the mean distance between service disruptions (rail) or breakdowns (buses). Disruptions are described as five minutes or more impact to the customer. Table 4-17 presents the mean number of miles for a breakdown according to MDT transit mode.

Table 4-17: Mean Distance between Failures by Mode

	Metrobus	Metrorail	Metromover
FY 08/09	3,951	45,475	6,359
FY 09/10	5,032	45,953	7,704
Goal	4,000	39,000	6,000

Source: Miami-Dade Transit, as of March 2011

5.0 Operating Service Improvements and Adjustments

For the FY 2011 – 2020 TDP Annual Update a listing of committed bus service improvements and adjustments planned for 2010 were included. A consistency analysis of these committed improvements is being performed for this TDP Annual update to assess and measure MDT's adherence for implementation.

The results of the consistency analysis for improvements implemented between January and December 2010 is presented in Table 5-1. Each of the service changes are identified according to whether it was a programmed commitment of the FY 2011 – 2020 TDP Annual Update as indicated with a check mark or an additional change not included in the TDP Annual Update as marked by an asterisk.

Between January and December of 2010, a total of 89 bus service improvements and adjustments were implemented by MDT. This includes the implementation of 44 additional improvements not planned in last year's TDP Annual Update. The FY 2011 – 2020 TDP Annual Update planned 62 committed bus service improvements and adjustments with 45 being implemented in 2010 resulting in a 73 percent level of consistency.

Table 5-1: 2010 TDP Consistency Analysis Summary

ROUTE	DESCRIPTION	IMPROVEMENT / ADJUSTMENT	START DATE	2010 TDP CONSISTENCY
√	Implemented service change committed to in previous TDP			
*	Implemented service change not included in previous TDP			
A	Miami Beach to Omni Terminal via Venetian Causeway	Realigned trips leaving the Omni area to run south on North Bayshore Drive, east on NE 14th Street, and north on Herald Plaza	June 27, 2010	*
E	Diplomat Mall to Golden Glades via 163rd Street Mall and Aventura Mall	Adjust weekend headway from 60 to 50 minutes.	June 27, 2010	√
E	Diplomat Mall to Golden Glades via 163rd Street Mall and Aventura Mall	Add a short trip at midnight seven days a week from Yacht Club Way to Aventura Mall	June 27, 2010	√
G	Opa-locka to Surfside via NW 22nd Avenue, NW 125th Street and Broad Causeway	Adjust running times to improve schedule reliability and modify evening headways after 8:00 PM	June 27, 2010	√
G	Opa-locka to Surfside via NW 22nd Avenue, NW 125th Street and Broad Causeway	Discontinue the 5:30 AM westbound trip and the 11:50 PM eastbound trip on weekdays	June 27, 2010	√
H	North Miami Beach to Miami Beach via NE 163rd Street and Collins Avenue	Adjust southbound running times to improve schedule reliability and modify evening headways	June 27, 2010	√
J	Miami International Airport to Miami Beach via 36th Street	Extend the eastbound loop to 44th Street via Collins Avenue and Indian Creek Drive before reaching recovery zone at Indian Creek and 40th Street	June 27, 2010	√
J	Miami International Airport to Miami Beach via 36th Street	Discontinue service to Tri-Rail Airport station until the Miami Intermodal Center is completed.		
M	Civic Center to Miami Beach via Omni Terminal, MacArthur Causeway and Mt. Sinai Hospital	Revise the west end turnaround and recovery zone to NW 21st Street	June 27, 2010	√
M	Civic Center to Miami Beach via Omni Terminal, MacArthur Causeway and Mount Sinai Hospital	Extend route to 44th street and Indian Creek Drive on southbound trips to Mount Sinai Hospital	Nov. 28, 2010	*

Table 5-1: 2010 TDP Consistency Analysis Summary (continued)

ROUTE	DESCRIPTION	IMPROVEMENT / ADJUSTMENT	START DATE	2010 TDP CONSISTENCY
√	Implemented service change committed to in previous TDP			
*	Implemented service change not included in previous TDP			
S	Aventura Mall to CBD via Miami Beach	Adjust first weekday southbound trip to arrive at CBD earlier to provide better connections with first westbound Route 24 trip	June 27, 2010	√
1	South Miami Heights, Perrine, West Goulds and Cutler Bay	Discontinue first roundtrip on weekdays	June 27, 2010	√
7	Dolphin Mall to downtown Miami via Miami International Mall, Fontainebleau, NW 7th Street and Little Havana	Discontinue last westbound trip on weekdays	June 27, 2010	√
9	Miami Shores, Miami Garden, North Miami, North Miami Beach	Add an additional weekday morning southbound trip to the schedule leaving the 167th Street Terminal at 9:00 AM	Nov. 28, 2010	*
12	Northside station to Mercy Hospital via Liberty City, Allapattah, Civic Center, Little Havana and Coconut Grove	Discontinue the 5:00 AM southbound trip on weekdays	June 27, 2010	√
12	Northside station to Mercy Hospital via Liberty City, Allapattah, Civic Center, Little Havana and Coconut Grove	Discontinue Saturday 11:33 PM southbound trip from Northside Station. The Sunday 11:34 PM northbound trip from Mercy Hospital will be discontinued.	Nov. 28, 2010	*
17	Norwood to Vizcaya Metrorail station via 17th Avenue	Discontinue the 12:30 AM northbound trip on weekdays	June 27, 2010	√
17	Norwood to Vizcaya Metrorail station via 17th Avenue	Adjust Sunday evening schedule after 6pm northbound and after 9:00 PM southbound	Nov. 28, 2010	*
17	Norwood to Vizcaya Metrorail station via 17th Avenue	Adjust Sunday evening schedule after 6pm northbound and after 9:00 PM southbound	Nov. 28, 2010	*
19	163 Street Mall to MDC North Campus via 119th Street and West Dixie Highway	Improve peak headway from 30 to 24 minutes, adjust running times and improve recovery at MDC North Campus	June 27, 2010	*
29	Miami Gardens to Hialeah via NW 57th Avenue/NW 56th Avenue/NW 60th Avenue/W 8th Avenue/W 16th Ave/Palm Avenue	Realign southbound trips to West 68th Street. Portion of the route on West 68th Street Service Road will be discontinued.	June 27, 2010	*
31 (Busway Local)	Cutler Bay to Dadeland South station via the Busway	Add two AM northbound trips	June 27, 2010	√
33	Hialeah Gardens to Miami Shores via 103rd Street (49th St) and 95th Street	Discontinue the last round trip on weekdays	June 27, 2010	√
33	Hialeah Gardens to Miami Shores via 103rd Street (49th St) and 95th Street	Discontinue the last Sunday eastbound trip	Nov. 28, 2010	*
35	Kendall, Perrine, Southland Mall, Goulds, Naranja, Homestead, Florida City	Southbound trips will no longer enter the mall. Adjust weekday running times to improve schedule reliability	Nov. 28, 2010	*
37	Hialeah to South Miami via Palm Avenue and Douglas Road	Discontinue the last northbound trip on weekdays	June 27, 2010	√
40	West Miami-Dade to Douglas Road station via Bird Road	Adjust the early morning peak headway from 15 to 20 minutes	June 27, 2010	√
42	Opa-locka to Douglas Road station via LeJeune Road and Miami Springs	Discontinue the first weekday round trip from Miami Springs	June 27, 2010	√
42	Opa-locka to Douglas Road station via LeJeune Road and Miami Springs	Discontinue the last Saturday northbound trip	Nov. 28, 2010	*
46 (Liberty City Connection)	Caleb Center to NW 7th Avenue/NW 62th Street via NW 46th Street, NW 54th Street and NW 10th Avenue	Discontinue the first round trip on weekdays	June 27, 2010	√

Table 5-1: 2010 TDP Consistency Analysis Summary (continued)

ROUTE	DESCRIPTION	IMPROVEMENT / ADJUSTMENT	START DATE	2010 TDP CONSISTENCY
√	Implemented service change committed to in previous TDP			
*	Implemented service change not included in previous TDP			
52	Dadeland North Station to South Miami Station	Additional sevice to include four weekday morning trips and five wekday afternoon trips	Nov. 28, 2010	*
54	Miami Lakes to Liberty City via 54th Street	Adjust the Sunday headway from 30 to 40 minutes	June 27, 2010	√
54	Miami Lakes to Liberty City via 54th Street	Extended westbound trip to NW 87 Avenue and 186 Street	June 27, 2010	*
56	Coral Gables, South Miami, Kendall	Adjust westbound running times leaving Miami Children's Hospital and eastbound trips from SW 56th Street/162nd Avenue to improve schedule reliability	Nov. 28, 2010	*
57	NW 21 Street to SW 152 Street	Discontinue segment serving Tri-Rail Airport Station until the Miami Intermodal Center is completed.	Nov. 28, 2010	*
59	Golden Glades to Aventura	Discontinue route	Nov. 28, 2010	*
62	Hialeah to Miami Beach via NW 62nd Street and Biscayne Boulevard	The first AM Sunday eastbound trip will be discontinued. The Saturday and Sunday	Nov. 28, 2010	*
62	Hialeah to Miami Beach via NW 62nd Street and Biscayne Boulevard	Extend route to 44th Street and Indian Creek Drive on westbound route	Nov. 28, 2010	*
71	Dolphin Mall to MDC Kendall Campus via 107th Avenue and Sweetwater	Restore weekday midday service to SW 107th Street	June 27, 2010	√
71	Dolphin Mall to MDC Kendall Campus via 107th Avenue and Sweetwater	Adjust midday headway from 60 to 65 minutes	June 27, 2010	√
72	Miami Lakes to Dadeland Mall via NW 67 Avenue, Milam Dairy Road, and Kendall Drive	Adjust weekday route alignment. Service on SW 127th Avenue will be discontinued.	June 27, 2011	*
73	NW 186th Street to Dadeland South Metrorail Station via NW 67th Avenue/NW 60th Avenue/Okeechobee Road/NW 72nd Avenue/SW 67th Avenue/Dadeland Boulevard	Add an earlier Sunday morning trip to schedule	Nov. 28, 2010	*
79 (MAX)	Northside Station to NW 73rd Street via NW/NE 79th Street/NW 71st Street	Discontinue 5:30 AM eastbound trip from Northside station	Nov. 28, 2010	*
88	Dadeland North station to Kendall via Kendall Drive	Adjust peak headway from 15 to 20 minutes	June 27, 2010	√
95 Express (Golden Glades)	Downtown Miami, Golden Glades, Civic Center	Add a 4:00 PM trip from Civic Center to Golden Glades	Nov. 28, 2010	√
95 Express (Golden Glades)	Downtown Miami, Golden Glades, Civic Center	Three morning and three afternoon trips will be extended to serve Aventura Mall replacing Route 59	Nov. 28, 2010	*
95 Express (Dade-Broward Express)	Downtown Miami, Golden Glades, Civic Center	The 5:47 PM trip southbound from the Fort Lauderdale Station will be discontinued. A 6:17 PM trip will be added to replace the discontinued route.	Nov. 28, 2010	*
97 (27 Avenue MAX)	NW 211th Street to NW 64th Street via NW 27th Avenue	Adjust midday frequencies from 40 to 45 minutes	Nov. 28, 2010	*
99	Miami Lakes to Aventura Mall via Carol City, California Club and North Miami Beach	Extend weekday peak short turn trips to NW 68th Avenue	June 27, 2010	√
99	Miami Lakes to Aventura Mall via Carol City, California Club and North Miami Beach	Add a PM westbound trip from Aventura Mall	Nov. 28, 2010	√
99	Miami Lakes to Aventura Mall via Carol City, California Club and North Miami Beach	Extend route to Miami Gardens Drive/NW 73rd Avenue.	Nov. 28, 2010	*

Table 5-1: 2010 TDP Consistency Analysis Summary (continued)

ROUTE	DESCRIPTION	IMPROVEMENT / ADJUSTMENT	START DATE	2010 TDP CONSISTENCY
√	Implemented service change committed to in previous TDP			
*	Implemented service change not included in previous TDP			
104	Dadeland North station to Kendall via SW 104th Street	Add a Saturday AM eastbound trip and AM westbound trip	June 27, 2010	*
115 (Mid-North Beach Connection)	Miami Beach	Extend to Lincoln Road for both directions	June 27, 2010	√
115 (Mid-North Beach Connection)	Miami Beach	Adjust weekday headway from 40 to 45 minutes	June 27, 2010	√
115 (Mid-North Beach	Miami Beach	Trips travelling counterclockwise will be renamed Route 117	June 27, 2010	*
115 (Mid-North Beach Connection)	Miami Beach	Discontinue the last eastbound trip on weekdays	June 27, 2010	√
120 (Beach MAX)	Aventura to CBD via Miami Beach and Omni Terminal	Extend cut-in and cutout trips to and from Aventura Mall to provide more capacity during rush hours in the Haulover to Aventura segment of Collins Avenue	June 27, 2010	√
120 (Beach MAX)	Aventura to CBD via Miami Beach and Omni Terminal	Adjust schedule so that there are no layovers at Haulover Park after 7:00 PM	June 27, 2010	√
120 (Beach MAX)	Aventura to CBD via Miami Beach and Omni Terminal	Discontinue the 5:30 AM northbound trip on weekdays, the 6:15 AM northbound trip on Saturday and extend the previous northbound trip to Aventura Mall	June 27, 2010	√
120 (Beach MAX)	Aventura to CBD via Miami Beach and Omni Terminal	Extend weekday northbound trip leaving Downtown at 8:33 PM to Aventura Mall. Add new evening weekday southbound trip from Aventura Mall to Lincoln Road.	Nov. 28, 2010	*
123 (South Beach Local)	Miami Beach	Revise the alignment to and from Belle Isle, extend in Collins Park to Collins Avenue and realign to Alton Road between 6th Street to 9th Street	June 27, 2010	√
123 (South Beach Local)	Miami Beach	Adjust peak headway from 12 to 13 minutes	June 27, 2010	√
123 (South Beach Local)	Miami Beach	Discontinue the Sunday 1:10 AM clockwise trip	Nov. 28, 2010	*
135	Miami Lakes to FIU Biscayne Bay Campus via 135th Street, Opa-locka	Discontinue the 5:23 AM eastbound trip on weekdays	June 27, 2010	√
137 (West Dade Connection)	Dolphin Mall to Cutler Bay via SW 137th Avenue	Improve Sunday running time to improve schedule reliability and adjust Sunday aftemoon headway from 40 to 45 minutes	June 27, 2010	√
137 (West Dade Connection)	Dolphin Mall to Cutler Bay via SW 137th Avenue	Adjust Saturday southbound morning running time from Dolphin Mall	Nov. 28, 2010	*
150 (Airport Flyer)	Miami International Airport to Miami Beach via Earlington Heights station, SR-112/I-195 and Collins Avenue	Portion of the route from 17th Street/Washington Avenue to Convention Center Drive/ 19th Street will be discontinued.	June 27, 2010	*
150 (Airport Flyer)	Miami International Airport to Miami Beach via Earlington Heights station, SR-112/I-195 and Collins Avenue	Minor schedule adjustments will be made to weekday schedule in both directions	Nov. 28, 2010	*

Table 5-1: 2010 TDP Consistency Analysis Summary (continued)

ROUTE	DESCRIPTION	IMPROVEMENT / ADJUSTMENT	START DATE	2010 TDP CONSISTENCY
√	Implemented service change committed to in previous TDP			
*	Implemented service change not included in previous TDP			
183	Miami Lakes to Aventura Mall via Miami Gardens Drive	Extend to later evening cut-out trips from NW 57th Avenue to NW 87th Avenue and two later evening eastbound trips to NE 183rd Street instead of deadheading	June 27, 2010	√
202 (Little Haiti Circulator)	Edison/Little River to Miami Design District via NE 2nd Avenue	Adjust running time to increase the recovery on the south end of the route	June 27, 2010	√
202 (Little Haiti Circulator)	Edison/Little River to Miami Design District via NE 2nd Avenue	Realign route along NW 71st Street to serve New Village Carver Development.	Nov. 28, 2010	*
202 (Little Haiti Circulator)	Edison/Little River to Miami Design District via NE 2nd Avenue	Extend weekday service to the Biscayne Shopping Plaza	Nov. 28, 2010	*
204 (Killian KAT)	Hammocks to Dadeland North station via Killian Drive	Discontinue PM low ridership trips in both directions	June 27, 2010	√
207/208 (Little Havana Connection)	Little Havana, Downtown Miami, Brickell	Extend route to serve the Brickell Station seven days a week.	Nov. 28, 2010	*
211 (Overtown Circulator)	Overtown, Culmer Metrorail Station	Minor schedule adjustments will be made to weekday schedule in both directions	Nov. 28, 2010	*
211 (Overtown Circulator)	Overtown, Culmer Metrorail Station	Service frequency will be adjusted from every 30 minutes to every 40 minutes.	Nov. 28, 2010	*
238 (East-West Connection)	Dolphin Mall, Miami International Mall, Tri-Rail Airport Station, Earlington Heights Metrorail Station	Discontinue 6:20 AM eastbound trip from Dolphin Mall	Nov. 28, 2010	*
249 (Coconut Grove Circulator)	Coconut Grove station to Douglas Road station via SW 27th Avenue, Grand Avenue and SW 37th Avenue	Discontinue two early AM weekday trips and one early AM weekend round trip	June 27, 2010	√
249 (Coconut Grove Circulator)	Coconut Grove station to Douglas Road station via SW 27th Avenue, Grand Avenue and SW 37th Avenue	Discontinue two PM weekday trips and three weekend round trips	June 27, 2010	*
249 (Coconut Grove Circulator)	Coconut Grove station to Douglas Road station via SW 27th Avenue, Grand Avenue and SW 37th Avenue	Discontinue Saturday eastbound trip from Douglas Road Station at 5:29 AM	Nov. 28, 2010	*
252 (Coral Reef MAX)	Dadeland South station to Country Walk via Coral Reef Drive	Begin first weekday eastbound trip from SW 162nd Avenue instead of SW 152nd Avenue	June 27, 2010	√
252 (Coral Reef MAX)	Dadeland South station to Country Walk via Coral Reef Drive	An earlier eastbound trip will be added to schedule	June 27, 2010	*
272 (Sunset KAT)	Kendall to Dadeland North station via Sunset Drive	Discontinue two PM low ridership weekday round trips	June 27, 2010	√
277 (7 Avenue MAX)	Golden Glades to CBD via NW 7th Avenue	Add two later morning southbound trips and one evening southbound trip to alleviate overcrowding on the Route 77	June 27, 2010	√
286 (North Pointe Circulator)	Miami Lakes and Palm Springs North	Discontinue the 8:24 AM trip.	June 27, 2010	√
288 (Kendall KAT)	Kendall to Dadeland North station via Kendall Drive	See the new Kendall Enhanced Bus Route.	June 27, 2010	√

Table 5-1: 2010 TDP Consistency Analysis Summary (continued)

ROUTE	DESCRIPTION	IMPROVEMENT / ADJUSTMENT	START DATE	2010 TDP CONSISTENCY
√	Implemented service change committed to in previous TDP			
*	Implemented service change not included in previous TDP			
344	Homestead via SW 177th Avenue, East Lucy Street, SW 167th Avenue, West/East Palm Drive	Discontinue the 6:39 PM northbound trip from Florida City	Nov. 28, 2010	*
Kendall Enhanced Bus	Kendall to Dadeland North station via Kendall Drive	Replace the Kendall KAT with this new service which will double the amount of service currently provided. Service will be operated from two branches during extended peak periods, by 60 ft. articulated hybrid buses and will provide enhanced technology services for passengers	Nov. 28, 2010	√

Source: Miami-Dade Transit, 2011

6.0 FY 2012 Committed Transit Improvements

This section presents transit improvement projects that are committed for the MDT transit system for the next year or FY 2012. The committed transit improvement initiatives are provided for capital, service, and infrastructure.

6.1 Capital Improvement Plan – Committed Transit Improvement Initiatives

On an annual basis MDT prepares a proposed capital budget (FY 2010 – 2011) and multi-year Capital Plan that outlays specific projects related to the expansion and improvement of MDT existing services. Table 6-1 presents the proposed capital budget for the next fiscal year. Please note that the following capital improvement table will be updated once MDT finalizes the proposed capital budget for FY 2011 – 2012.

6.1.1 Airport Link Metrorail Extension

In April 2009, MDT began the construction of a 2.4-mile extension of the existing Metrorail line to Miami International Airport via a new station at the Miami Intermodal Center. The Airport Link project is progressing on schedule and within budget. This project is scheduled to be completed by spring 2012 and will serve as a multimodal transfer hub for Metrobus, Metrorail, Tri-Rail, future expansion of Amtrak, rental car facilities, and other chartered services such as intercity bus. Connection to Miami International Airport (MIA) will be made possible from the MIC with the MIC-MIA Connector-People-Mover Project.

6.1.2 North Corridor and East-West Corridor (Incremental Improvements)

In recent years, public transit improvements have been adversely impacted due to unfavorable economic conditions. Several projects including the North Corridor and East-West Corridor heavy rail extensions have been placed on hold due to Miami-Dade County's inability to pay the cost to construct, operate and maintain these large and complex projects. Therefore, a coordinated effort among local transportation agencies was initiated to evaluate more affordable, cost effective alternatives.

Recommendations were made for the implementation of incremental transit improvements in the form of enhanced bus service along these corridors; with the NW 27th Avenue Enhanced Bus, and the SR 836 Express Enhanced Bus. These projects will increase mobility while continuing to build the ridership for a future Bus Rapid Transit and possibly heavy rail project for these corridors in the future.

6.1.2.1 North Corridor (NW 27th Avenue Enhanced Bus)

Miami-Dade Transit is pursing incremental improvements along the NW 27th Avenue corridor by providing approximately 13 miles of enhanced bus service from the MIC at Miami International Airport to NW 215th Street. This enhanced bus project will feature specially-branded diesel/electric hybrid articulated buses as well as strategic park-and-ride lot locations. This project is in the planning phase. Phase 1 is expected to be complete in 2012 and consists of short-term service with 12 minute peak/30 minute Mid-Day headways using five new 40-foot diesel-electric hybrid buses and two existing fleet buses, transit signal priority, WIFI, and real-time "Where is the Bus?" information. Phase 1 is funded.

Phase 2 is expected to be complete in 2016 and consists of long-term service with 10 minute peak/20 minute Mid-Day headways using 11 new 60-foot articulated diesel-electric hybrid buses, transit signal priority, robust stations, WIFI, real-time "Where is the Bus?" information, and branding of buses and stations. Phase 2 of this project has a capital cost of approximately $27 million. Approximately $5 million of the total project cost is unfunded.

6.1.2.2 East-West Corridor (SR-836 Express Enhanced Bus)

Miami-Dade Transit is pursuing incremental improvements along the SR 836 corridor by providing approximately 13 miles of enhanced bus service from SW 8th Street/SW 147th Avenue to the MIC at Miami International Airport. Phase 1 of this enhanced bus project is expected to begin in 2012 and features short-term service with 12 minute headways using existing fleet buses. Phase 1 is funded.

Revenue service is anticipated in 2016 as part of Phase 2 and includes long term service with 10 minute headways using 11 new 60-foot articulated diesel-electric hybrid buses, transit signal priority, robust stations, WIFI, real-time "Where is the Bus?" information, and branding of buses and stations. Phase 2 of this project has a capital cost of approximately $24.5 million and is unfunded.

Table 6-1: MDT FY 2011 – 2012 Proposed Capital Budget ($000's)

Project Name		FY 11-12
PROPOSED CORRIDOR PROJECTS & RELATED PROJECTS:		
Orange Line Phase 1, MIC-EHT Connector Project		$ 29,815
Orange Line Phase 1: MIC-EHT Connector (FDOT MIC Components - West Concourse, Vestibule, & Bus Plaza Rway)		$ 8,213
Metrorail Central Control Upgrade		$ 12,171
Existing Metrorail Station (Phase 1) - Graphics & Signage Upgrade		$ 715
	Subtotal	**$ 50,914**
VEHICLE PROCUREMENT & RELATED PROJECTS:		
Lehman Yard Rehabilitation & Expansion Phase 1 (5 storage and 2 MOW tracks)		$ 5,068
Rail New Vehicle Procurement (136 cars)		$ 28,878
Lehman Center Test Track		$ 9,241
Palmetto Station Traction Power Sub-Station		$ 2,453
Mover 17 Phase 2 Vehicle Replacement		$ 620
Bus Acquisition		$ 12,462
MDT Bus Tracker System & Computer Aided Dispatch/Automatic Vehicle Locator Replacement		$ 4,740
Infrastructure Renewal Plan (IRP)		$ 7,500
	Subtotal	**$ 70,962**

Source: Miami-Dade Transit, F-5 Report, 2010

Table 6-1: MDT FY 2011 – 2012 Proposed Capital Budget ($000's)(continued)

Project Name	FY 11-12
OTHER PROJECTS:	
Track & Guideway Rehabilitation Subset	$ 7,243
Park and Ride Facility at SW 344 Street and Busway	$ 452
Park and Ride Facility at Kendall Drive and SW 127 Avenue	$ 608
NW 7th Avenue Transit Village	$ 1,097
AMAG \ Proximity Access Control	$ 11,982
Metromover Tools & Equipment	$ 463
Busway ADA Improvements	$ 2,079
Facility and Equipment Rehabilitation	$ 252
Bus Tools and Equipment	$ 252
Passenger Amenities and Transit Enhancements	$ 545
Capitalization of Preventative Maintenance	$ 84,061
Metrorail Bike Path (M-Path)	$ 292
Metromover Station Canopies and Escalator Replacement	$ 2,007
Metromover Bicentennial Park Station Refurbishment	$ 971
ARRA Municipalities	$ 2,288
Security and Safety Equipment	$ 544
Metrorail WIFI Implementation	$ 4,759
Transit Operating System Replacement Project	$ 413
Sub Total	**$ 120,308**
Total	**$ 242,184**

Source: Miami-Dade Transit, F-5 Report, 2010

6.2 Committed Bus Service Adjustments (2011)

In an effort to continually match service capacity with ridership demand MDT routinely revises the existing bus route network to better meet the transportation needs of Miami-Dade County. These revisions seek to improve the operational efficiency of the overall transit system. A listing of the committed bus service improvements and adjustments planned to occur between January and December 2011 is presented in Table 6-2. Route improvements are assigned letters in the last column to describe the type of improvement made: Adjustments (A), Improvements (I), and Reductions (R).

Table 6-2: 2011 Committed Bus Service Adjustments

ROUTE	IMPROVEMENT / ADJUSTMENT	TYPE
1	Discontinue first weekday AM round trip Discontinue last Saturday round trip	R
12	Discontinue last weekday northbound trip	R
24	Modify first weekday AM eastbound trip	A
29	Modify headway to 50 minutes.	A
32	Modify weekday and midday headway.	A
35	Route realignment.	A
36	Additional weekday morning westbound trip to NW 87th Avenue/53rd Street	I
38 / 500	Additional Route 38 running time during late night (10 PM to 2 AM) on weekdays and Saturday. Route 500 will be realigned to remain on US 1 between Douglas Road and Bird Road.	I
56	Realign from Ponce De Leon to Salzedo in the downtown Coral Gables area.	A
57	Discontinue first weekday morning southbound trip.	R
62	Discontinue weekday two morning eastbound trips, last PM eastbound trip, and last two westbound trips. Discontinue last Saturday PM eastbound trip. Discontinue Sunday 11:19 PM westbound trip.	R
72, 88, 104	Realign westbound trips to serve / enter Terminal using SW 162nd Avenue West (by BJ's)	A

Table 6-2: 2011 Committed Bus Service Adjustments (continued)

ROUTE	IMPROVEMENT / ADJUSTMENT	TYPE
77 / 277	Route 77: weekday southbound from Golden Glades will add two AM trips keeping the 10 minute headway until 10 AM; a PM Southbound trip will be added leaving Golden Glades at 6:46 PM Route 277: discontinue last two AM southbound trips, last AM northbound trip, and last PM Southbound trip	R
95	AM schedule adjustment from Golden Glades to Civic Center	A
A	Discontinue first Sunday morning round trip.	A
B	Additional weekday morning trip from Brickell Station at 8:15 AM to Cape Park; adjust peak trips for better connection with Rail.	I
E	Modify weekday midday headway from 45 to 50 minutes.	A
G	Discontinue 2nd Sunday AM round trip and adjust Sunday running time.	R
133	Schedule adjustment for alignment to Hialeah Market Station.	A
249	Discontinue weekday first AM and last PM round trips. Discontinue last Saturday round trip.	R

Source: Miami-Dade Transit, 2011
Notes: Abbreviations for Type column: A=Adjustment, I=Improvement, R=Reduction

6.3 Infrastructure Renewal Program – Committed Projects

The following section lists those committed projects that are proposed to be implemented during the FY 2011 – 2012 timeframe. These project commitments are based on an Infrastructure Renewal Program (IRP) evaluation and prioritization process as performed by MDT. The IRP process results in the identification, evaluation, prioritization, and programming of capital improvement projects. Project commitments are based on the Infrastructure Renewal Program (IRP) evaluation and prioritization process. Table 6-3 presents a listing of the committed projects that are proposed for implementation during the FY 2011-2012 time period as provided by MDT.

Please note that at the time the TDP Annual Update was being prepared MDT had not finalized the IRP evaluation and prioritization process results for FY 2011 – 2012. Once these results are final the following table will be updated.

Table 6-3: FY 2011 – 2012 Prioritized New IRP Projects for Budget Approval

Classification	Project Name	FY 11-12
Passenger Facilities	Metromover Bicentennial Park Station Rehabilitation	$ 97,000
Systems	Uninterrupted Power Supplies - Mover	$ 1,000,000
Maintenance Facilities	Metrobus: A/C Replacement (CWF-TRB & Garage)	$ 35,000
Systems	Rebuild Switch Machines (M-3) - Mainline	$ 38,000
Safety & Security	Rail Public Address System Replacement	$ 87,000
Safety & Security	Metromover Public Address System Replacement	$ 89,000
Systems	Switch Logic Cabinet Overhaul (Metromover)	$ 1,740,000
Systems	Traction Power Cable Requirement	$ 1,260,000
TOTALS		**$ 4,346,000**

Source: Miami-Dade Transit, 2011

7.0 Ten Year Implementation Program

A ten year implementation plan for FY 2012 – 2021 has been prepared for the TDP Annual Update to include a new tenth year or FY 2021 as presented.

7.1 Capital Improvement Plan

Annually MDT prepares a proposed capital budget and a multi-year Capital Plan as previously mentioned. Funded Metrorail and Metrobus projects identified within the Capital Plan are expected to be implemented within the ten year planning period. The Capital Improvement Plan for FY 2012-2021 is presented in Table 7-1.

Please note that the year of expenditure (YOE) totals in this table are based upon the total project cost which includes annual dollar amounts previously expended prior to FY 2010 - 2011. Furthermore, the escalation applied is specific to each project as related to project conditions and contractual agreements. Each selected project corresponds to a committed funding source and is consistent with the Miami-Dade MPO's FY 2011 – 2015 Transportation Improvement Program (TIP).

Funded projects are expected to be implemented within the next ten years for the Metrorail and Metrobus system. There are no planned service extensions or expansion of the existing Metromover system under consideration at this time or within the planning horizon of this TDP Annual Update.

At the time the TDP Annual Update was being prepared the proposed FY 2011 – 2012 capital budget and multi-year capital plan were being finalized by MDT. Once MDT determines the final budget and capital plan, this section will be updated to reflect the most current information.

7.2 2021 Recommended Service Plan

The MDT Recommended Service Plan (RSP) serves as the needs plan for the MDT system. The 2021 RSP has been developed for the FY 2012-2021 TDP Annual Update and has been updated from the previous RSP as presented in last year's FY 2011 – 2020 TDP Annual Update. Any future project recommended in this section for implementation is contingent upon Miami-Dade County receiving the appropriate federal, state and local funding for its implementation.

Some of the improvements and adjustments reflected in the 2021 RSP are identified under the PTP one-half percent sales surtax approved by voters on November 5, 2002. Most of the improvements listed in the RSP beyond 2011 were not included in the original PTP improvements list, but may be funded with future PTP surtax funds. These improvements were deemed to be the most pressing or requested by the community after the original PTP list was completed. This section addresses the four modes of transit as operated by MDT to include Metrobus, Metrorail, Metromover and Special Transportation Services.

7.2.1 Recommended Service Plan – Existing Metrobus Routes

MDT is committed to provide a level of transit service that will provide efficient services to passengers throughout the Miami-Dade County service area. The provision of service is continuously considered while MDT seeks to properly address critical issues of generating revenue, managing operational budgets, and prioritizing capital expansion programs.

Table 7-1: MDT FY 2011 – 2012 Proposed Capital Budget and Multi-Year Capital Plan ($000's)

Project Name	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY18-19	FY 19-20	FY 20-21	YOE Total
PROPOSED CORRIDOR PROJECTS & RELATED PROJE											
Orange Line Phase 1, MIC-EHT Connector Project	$29,815	$29,815									$ 59,630
Orange Line Phase 1: MIC-EHT Connector (FDOT MIC Components - West Concourse, Vestibule, & Bus Plaza Rway)	$8,213	$0									$ 8,213
Metrorail Central Control Upgrade	$12,171	$1,185									$ 13,356
Existing Metrorail Station (Phase 1) - Graphics & Signage Upgrade	$715										$ 715
Subtotal	**$ 50,914**	**$ 31,000**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 81,914**
VEHICLE PROCUREMENT & RELATED PROJECTS:											
Lehman Yard Rehabilitation & Expansion Phase 1 (5 storage and 2 MOW tracks)	$ 5,068										$ 5,068
Rail New Vehicle Procurement (136 cars)	$ 28,878	$ 48,420	$ 108,685	$ 121,731	$ 31,260						$ 338,974
Lehman Center Test Track	$ 9,241										$ 9,241
Palmetto Station Traction Power Sub-Station	$ 2,453										$ 2,453
Mover 17 Phase 2 Vehicle Replacement	$ 620										$ 620
Bus Acquisition	$ 12,462	$ 27,534	$ 21,589	$ 16,589							$ 78,174
MDT Bus Tracker System & Computer Aided Dispatch/Automatic Vehicle Locator Replacement	$ 9,770										$ 9,770
Infrastructure Renewal Plan (IRP)	$ 7,500	$ 7,500	$ 12,500	$ 12,500	$ 12,500						$ 52,500
Subtotal	**$ 75,992**	**$ 83,454**	**$ 142,774**	**$ 150,820**	**$ 43,760**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 496,800**

Source: Miami-Dade Transit, F-5 Report, 2010

Table 7-1: MDT FY 2011 – 2012 Proposed Capital Budget and Multi-Year Capital Plan ($000's)(continued)

Project Name	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	FY 17-18	FY18-19	FY 19-20	FY 20-21	YOE Total
OTHER PROJECTS:											
Track & Guideway Rehabilitation Subset	$ 7,243	$ 6,377	$ 5,503	$ 3,589							$ 22,712
Park and Ride Facility at NW 168 St. and Busway											$ -
Park and Ride Facility at SW 344 Street and Busway	$ 452										$ 452
Park and Ride Facility at Kendall Drive and SW 127 Ave	$ 608										$ 608
NW 7th Avenue Transit Village	$ 1,097	$ 235									$ 1,332
AMAG \ Proximity Access Control	$ 11,982	$ 16,827									$ 28,809
Metrorail & Metromover Tools & Equipment	$ 463	$ 486	$ 510	$ 536	$ 563						$ 2,558
ADA Improvements and Equipment	$ 252	$ 265	$ 278	$ 292	$ 307						$ 1,394
Busway ADA Improvements	$ 2,079										$ 2,079
Bus and Bus Facilities											$ -
Facility and Equipment Rehabilitation	$ 252	$ 265	$ 278	$ 292	$ 307						$ 1,394
Bus Tools and Equipment	$ 252	$ 265	$ 278	$ 292	$ 307						$ 1,394
Passenger Amenities and Transit Enhancements	$ 545	$ 572	$ 601	$ 631	$ 662						$ 3,011
Capitalization of Preventative Maintenance	$ 84,061	$ 89,625	$ 93,163	$ 98,733	$ 103,021						$ 468,603
Kendall Enhanced Bus Service											$ -
Metrorail Bike Path (M-Path)	$ 292										$ 292
Metromover Station Canopies and Escalator Replacement	$ 2,007										$ 2,007
Metromover Bicentennial Park Station Refurbishment	$ 971										$ 971
ARRA Municipalities	$ 2,288										$ 2,288
Park and Ride Facility at Quail Roost Drive											$ -
Security and Safety Equipment	$ 544	$ 571	$ 600	$ 630	$ 661						$ 3,006
Northeast Passenger Activity Center		$ 2,373	$ 1,574	$ 1,050	$ 920						$ 5,917
Transit Operating System Replacement Project	$ 413										$ 413
Sub Total	**$ 115,801**	**$ 117,861**	**$ 102,785**	**$ 106,045**	**$ 106,748**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	$ 549,240
Total	**$ 242,707**	**$ 232,315**	**$ 245,559**	**$ 256,865**	**$ 150,508**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,127,954**

Source: Miami-Dade Transit, F-5 Report, 2010

Since the TDP Annual Update comprises part of MDT's operational foundation for the future, the importance of "rightsizing" the RSP cannot be over emphasized. Therefore, the following details both improvements and adjustments to achieve MDT's long term objectives.

Service route improvement and adjustment needs outlined in the RSP are proposed for implementation throughout the ten year planning horizon of FY 2012-FY 2021. Table 7-2 provides a summary description of all bus service improvements, impact of additional buses on the peak vehicle requirements (PVR), annual operating need per improvement, and programming of transit improvements by fiscal years; and corresponding funding needs by fiscal year. The estimated total need for improvements to existing transit routes over this ten year planning horizon is approximately $84 million (Table 7-2).

7.2.1.1 Transit Hubs and Feeder Routes for Existing Routes

The 2021 RSP improvements to the existing transit routes also include the development of a regional transit hub system. The current bus system generally operates on a modified grid pattern to provide feeder services to Metrorail and Metromover stations. Under the modified grid, bus routes will continue to serve their respective corridors and Metrorail stations, but will also provide connections to various routes within the general service area at a single location or transit hub.

Twelve transit hubs are proposed throughout Miami-Dade County. Passenger amenities will be provided at these locations such as the ability for transit riders to purchases transit passes, obtain transit schedule information, benches, shelters with weather protection, etc. Some of these proposed transit hubs already serve these functions (i.e., Dadeland stations) while other hubs continue to remain in the conceptual planning phase. In addition, the NW 7th Avenue Transit Village (at NW 62nd Street) and the Homestead terminals were added as proposed transit hub locations following the submittal of the 2009 MDT TDP Major Update. The Northeast Transit Hub Enhancements (NETHE) and the Florida City (Busway/SW 344th Street) transit hubs have the highest number of proposed routes, with twelve and five routes planned respectively.

Table 7-3 provides a list of the transit hubs with corresponding route connections planned to serve them. These hubs are also illustrated in Figure 7-1. In addition to those listed in this tables there are many other areas that serve as transit hubs. For example, Golden Glades, Aventura Mall, Douglas Road Metrorail station and other Metrorail stations, as well as the Omni serves as transit hubs. In addition, the City of Miami Beach has funding for a transit hub at 72nd Street and Collins/Harding Avenue.

Table 7-2: Recommended Service Plan Summary for Existing Transit Bus Routes (2021)

Route	Change Description	2012		2013		2014		2015		2016		2017		2018		2019		20120		2021	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
A (101)	No planned improvements.																				
B (102)	No planned improvements.																				
C (103	No planned improvements.																				
E (105)	No planned improvements.																				
G (107)	No planned improvements.																				
H (108)	No planned improvements.																				
J (110)	Extend route to serve the Miami Intermodal Center.	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0
L (112)	No planned improvements.																				
M (113)	No planned improvements.																				
S (119)	Improve headways. Monday-Sat. from 12 to 10 min and Sundays from 15 to 10 min.			$1,750,000	4	$1,750,000	4	$1,750,000	4	$1,750,000	4	$1,750,000	4	$1,750,000	4	$1,750,000	4	$1,750,000	4	$1,750,000	4
1	Extend Route to Dadeland South Metrorail Station							$500,000	3	$500,000	3	$500,000	3	$500,000	3	$500,000	3	$500,000	3	$500,000	3
2	Realign northern terminus to future Golden Glades Intermodal Terminal.							$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0
3	No planned improvements.																				
6	Extend route to serve the Miami Intermodal Center.	$221,623	0	$221,623	0	$221,623	0	$221,623	0	$221,623	0	$221,623	0	$221,623	0	$221,623	0	$221,623	0	$221,623	0
7	Extend service to the MIC, serving the Marlins Ballpark. Improve service frequency in the evening.	$85,000	0	$85,000	0	$85,000	0	$85,000	0	$85,000	0	$85,000	0	$85,000	0	$85,000	0	$85,000	0	$85,000	0
8	Extend Route to future terminal at SW 147th Avenue and SW 8 St.									$357,000	1	$357,000	1	$357,000	1	$357,000	1	$357,000	1	$357,000	1
9	No planned improvements.																				
10	No planned improvements.																				
11	Improve headways to 20 minutes during the Marlins 81 home-games.	$60,800	0	$60,800	0	$60,800	0	$60,800	0	$60,800	0	$60,800	0	$60,800	0	$60,800	0	$60,800	0	$60,800	0
12	Improve headways to 20 minutes during the Marlins 81 home-games.	$61,425	0	$61,425	0	$61,425	0	$61,425	0	$61,425	0	$61,425	0	$61,425	0	$61,425	0	$61,425	0	$61,425	0
16	No planned improvements.																				
17	Improve headways to 20 minutes during the Marlins 81 home-games.	$54,015	0	$54,015	0	$54,015	0	$54,015	0	$54,015	0	$54,015	0	$54,015	0	$54,015	0	$54,015	0	$54,015	0
19	No planned improvements.																				
21	No planned improvements.																				

Table 7-2: Recommended Service Plan Summary for Existing Transit Bus Routes (2021) (continued)

Route	Change Description	2012		2013		2014		2015		2016		2017		2018		2019		20120		2021	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
22	No planned improvements.																				
24	Convert to limited-stop service east of Ponce de Leon due to City of Miami Coral Way Trolley.			-$600,000	-2	-$600,000	-2	-$600,000	-2	-$600,000	-2	-$600,000	-2	-$600,000	-2	-$600,000	-2	-$600,000	-2	-$600,000	-2
24	Discontinue segement on Coral Way from SW147th Ave to 153rd Avenue and extend Route to future terminal at SW 147th									$0	0	$0	0	$0	0	$0	0	$0	0	$0	0
27	No planned improvements.																				
29	No planned improvements.																				
31 (Busway Local)	Extend service to Florida City/Homestead along South Miami-Dade Busway Extension.					$2,411,848	5	$2,411,848	5	$2,411,848	5	$2,411,848	5	$2,411,848	5	$2,411,848	5	$2,411,848	5	$2,411,848	5
32	No planned improvements.																				
33	No planned improvements.																				
34 (Busway Flyer)	No planned improvements.																				
35	Improve peak headway from 30 to 20 minutes.					$642,620	4	$642,620	4	$642,620	4	$642,620	4	$642,620	4	$642,620	4	$642,620	4	$642,620	4
36	No planned improvements.																				
37	Route to be re-aligned to serve the MIC	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0	$0	0
38 (Busway MAX)	Improve peak headway from 12 to 10 minutes.			$255,396	1	$255,396	1	$255,396	1	$255,396	1	$255,396	1	$255,396	1	$255,396	1	$255,396	1	$255,396	1
40	Extend Route to future terminal at SW 147th Avenue and SW 8 St.									$80,000	0	$80,000	0	$80,000	0	$80,000	0	$80,000	0	$80,000	0
42	Route to be re-aligned to serve the MIC	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0	$36,658	0
46 (Liberty City Connection)	No planned improvements.																				
48	No planned improvements.																				
49	Extend this route to the Miami Gardens Park & Ride	$120,000	1	$120,000	1	$120,000	1	$120,000	1	$120,000	1	$120,000	1	$120,000	1	$120,000	1	$120,000	1	$120,000	1
51 (Flagler MAX)	Route to be transformed to Flagler Rapid Bus (see New Routes table).					$330,000	0	$330,000	0	$330,000	0	$330,000	0	$330,000	0	$330,000	0	$330,000	0	$330,000	0

Table 7-2: Recommended Service Plan Summary for Existing Transit Bus Routes (2021) (continued)

Route	Change Description	2012		2013		2014		2015		2016		2017		2018		2019		20120		2021	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
51 (Flagler MAX)	Extend Route to future terminal at SW 147th Avenue and SW 8 St.									$70,000	0	$70,000	0	$70,000	0	$70,000	0	$70,000	0	$70,000	0
52	No planned improvements.																				
54	No planned improvements.																				
56	No planned improvements.																				
57	Route to be re-aligned to serve the MIC	$12,788	0	$12,788	0	$12,788	0	$12,788	0	$12,788	0	$12,788	0	$12,788	0	$12,788	0	$12,788	0	$12,788	0
62	No planned improvements.																				
70	Truncate Route at Southland Mall when Cutler Bay Circulator begins service.			($82,000)	0	($82,000)	0	($82,000)	0	($82,000)	0	($82,000)	0	($82,000)	0	($82,000)	0	($82,000)	0	($82,000)	0
71	Extend Route to Palmetto Station via 74 St.	$500,000	2	$500,000	2	$500,000	2	$500,000	2	$500,000	2	$500,000	2	$500,000	2	$500,000	2	$500,000	2	$500,000	2
72	No planned improvements.																				
73	No planned improvements.																				
75	No planned improvements.																				
77	No planned improvements.																				
79 (79 Street MAX)	Extend Route to Tri-Rail Metrorail Extension					$153,000	1	$153,000	1	$153,000	1	$153,000	1	$153,000	1	$153,000	1	$153,000	1	$153,000	1
87	Extend to Flagler Station in Medley	$400,000	1	$400,000	1	$400,000	1	$400,000	1	$400,000	1	$400,000	1	$400,000	1	$400,000	1	$400,000	1	$400,000	1
88	No planned improvements.																				
93 (Biscayne MAX)	Route to be transformed to Biscayne enhanced Bus (see New Routes table).																				
95X	No planned improvements.																				
97 (27Avenue MAX)	Route to be transformed to 27 Avenue Enhanced Bus, connecting to MIC (see New Routes table).																				
99	No planned improvements.																				
104	No planned improvements.																				
115 -Mid-Beach Local	Re-structure into a Mid Beach Circulator																				
117 -North Beach Local	Re-structure into a North Beach Circulator																				

Table 7-2: Recommended Service Plan Summary for Existing Transit Bus Routes (2021) (Continued)

Route	Change Description	2012		2013		2014		2015		2016		2017		2018		2019		20120		2021	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
120 (Beach MAX)	Improve weekday headways from 12 to 10 minutes.			$765,000	3	$765,000	3	$765,000	3	$765,000	3	$765,000	3	$765,000	3	$765,000	3	$765,000	3	$765,000	3
123 (South Beach Local)	No planned improvements.																				
132 (Tri-Rail Doral Shuttle)	Extend West in Doral Area to NW 97 Ave. and North to NW 74 Street; East to MIA/MIC	$750,000	2	$750,000	2	$750,000	2	$750,000	2	$750,000	2	$750,000	2	$750,000	2	$750,000	2	$750,000	2	$750,000	2
133 (Tri-Rail Airport Shuttle)	No planned improvements.																	$175,000	1	$175,000	1
133 (Tri-Rail Airport Shuttle)	To be discontinued after Tri Rail finishes the double tracking to the MIC.			($400,000)	-1	($400,000)	-1	($400,000)	-1	($400,000)	-1	($400,000)	-1	($400,000)	-1	($400,000)	-1	($400,000)	-1	($400,000)	-1
135	No planned improvements.																				
136	No planned improvements.																				
137 (West Dade Connection)	No planned improvements.																				
150 - Airport Flyer	Extend north to 44th St. / Collins Ave. and South to South Pointe Dr.	$600,000	1	$600,000	1	$600,000	1	$600,000	1	$600,000	1	$600,000	1	$600,000	1	$600,000	1	$600,000	1	$600,000	1
183 Local	No planned improvements.																				
195 (I-95 Dade Broward Express)	Add midday Service			$217,000	0	$217,000	0	$217,000	0	$217,000	0	$217,000	0	$217,000	0	$217,000	0	$217,000	0	$217,000	0
202 Little Haiti Connection	No planned improvements.																				
204 (Killian KAT)	No planned improvements.																				
207 (Little Havana Circulator)	No planned improvements.																				
208	No planned improvements.																				
211 (Overtown Circulator)	No planned improvements.																				
212	No planned improvements.																				

Table 7-2: Recommended Service Plan Summary for Existing Transit Bus Routes (2021) (Continued)

Route	Change Description	2012		2013		2014		2015		2016		2017		2018		2019		20120		2021	
		Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
238 (East-West Connection)	Extend westward to Beacon Lakes.					$250,000	1	$250,000	1	$250,000	1	$250,000	1	$250,000	1	$250,000	1	$250,000	1	$250,000	1
243 (Seaport Connection)	No planned improvements.																				
246 (Night Owl)	No planned improvements.																				
248 (Brickell Key Shuttle)	Discontinue service once City of Miami Shuttle begins service.	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1	($130,000)	-1
249 (Coconut Grove Circulator)	No planned improvements.																				
252 (Coral Reef MAX)	Operate later evening service into the Metrozoo Entertainment complex.															$81,004	1	$81,004	1	$81,004	1
254 (Brownsville Circulator)	No planned improvements.																				
272 (Sunset KAT)	No planned improvements.																				
277 (7th Avenue MAX)	No planned improvements.																				
287 (Saga Bay MAX)	Improve peak headway from 30 to 20 minutes.					$153,213	1	$153,213	1	$153,213	1	$153,213	1	$153,213	1	$153,213	1	$153,213	1	$153,213	1
286 North Pointe Circulator	No planned improvements.																				
288 (Kendall Enhanced Bus)	No planned improvements.																				
344	No planned improvements.																				
500 (Midnight Owl)	No planned improvements.																				
INCREMENTAL TOTALS		$2,808,967	9	$4,714,363	5	$8,655,044	12	$9,155,044	3	$9,662,044	1	$9,662,044	0	$9,662,044	0	$9,743,048	1	$9,918,048	1	$9,918,048	0
(MINI-BUSES)			0		0		0		0		0		0		0		0		0		0
(FULL SIZE BUSES)			9		5		12		3		1		0		0		1		1		0
CUMULATIVE TOTALS		$2,808,967	9	$7,523,330	14	$16,178,374	26	$25,333,418	29	$34,995,462	30	$44,657,506	30	$54,319,550	30	$64,062,598	31	$73,980,646	32	$83,898,694	32
(MINI-BUSES)			0		0		0		0		0		0		0		0		0		0
(FULL SIZE BUSES)			9		14		26		29		30		30		30		31		32		32

Source: Miami-Dade Transit, 2010

Table 7-3: Future Transit Hub Locations and Feeder Routes for Existing Bus Routes

TERMINALS	ROUTES																	
	A	B	C	E	G	H	J	L	M	S	1	2	3	6	7	8	9	10
Flagler Marketplace			■							■		■	■		■		■	
Dadeland North Station																		
Dadeland South Station																		
Northeast Transit Hub Enhancements (NETHE) Mall at 163rd Street						■						■	■				■	
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura				■						■			■				■	
West Kendall Transit Terminal																		
Miami Intermodal Center							■											
West Dade (NW 107th Ave & 12 Street)															■			
Florida City Busway at SW 344th Street																		
NW 27th Avenue and NW 215th Street																		
SW 147th Avenue and SW 8th Street																■		
NW 7th Avenue and 62nd Street																		

TERMINALS	ROUTES																	
	11	12	16	17	19	21	22	24	27	29	31*	32	33	34*	35	36	37	38*
Flagler Marketplace	■					■												
Dadeland North Station																		
Dadeland South Station											■			■				■
Northeast Transit Hub Enhancements (NETHE) Mall at 163rd Street			■		■		■											
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura																		
West Kendall Transit Terminal																		
Miami Intermodal Center																	■	
West Dade (NW 107th Ave & 12 Street)																■		
Florida City Busway at SW 344th Street														■	■			■
NW 27th Avenue and NW 215th Street									■									
SW 147th Avenue and SW 8th Street								■										
NW 7th Avenue and 62nd Street																		

Table 7-3: Future Transit Hub Locations and Feeder Routes for Existing Bus Routes (continued)

TERMINALS	ROUTES																	
	40	42	46*	48	49	51*	52	54	56	57	62	70	71	72	73	75	77	79*
Flagler Marketplace						■											■	
Dadeland North Station							■											
Dadeland South Station							■								■			
Northeast Transit Hub Enhancements (NETHE)																■		
Northeast Transit Hub Enhancements (NETHE)																		
West Kendall Transit Terminal														■				
Miami Intermodal Center		■								■								
West Dade (NW 107th Ave & 12 Street)													■					
Florida City Busway at SW 344th Street												■						
NW 27th Avenue and NW 215th Street																		
SW 147th Avenue and SW 8th Street	■					■												
NW 7th Avenue and 62nd Street			■								■						■	

TERMINALS	ROUTES																	
	87	88	93*	95X	97*	99	104	115*	117*	120*	123*	132*	133*	135	136	137*	150*	183*
Flagler Marketplace			■	■						■								
Dadeland North Station	■	■					■											
Dadeland South Station															■			
Northeast Transit Hub Enhancements (NETHE)																		
Northeast Transit Hub Enhancements (NETHE)			■	■		■				■								■
West Kendall Transit Terminal		■					■											
Miami Intermodal Center													■				■	
West Dade (NW 107th Ave & 12 Street)																■		
Florida City Busway at SW 344th Street																		
NW 27th Avenue and NW 215th Street					■	■												
SW 147th Avenue and SW 8th Street																		
NW 7th Avenue and 62nd Street																		

Table 7-3: Future Transit Hub Locations and Feeder Routes for Existing Bus Routes (continued)

TERMINALS	ROUTES																	
	195*	202*	204*	207*	208*	211*	212*	238*	243*	246*	248*	249*	252*	254*	272*	277*	286*	287*
Flagler Marketplace	■			■	■					■						■		
Dadeland North Station			■												■			
Dadeland South Station													■					■
Northeast Transit Hub Enhancements (NETHE)										■								
Northeast Transit Hub Enhancements (NETHE)																		
West Kendall Transit Terminal			■												■			
Miami Intermodal Center																		
West Dade (NW 107th Ave & 12 Street)								■										
Florida City Busway at SW 344th Street																		
NW 27th Avenue and NW 215th Street																		
SW 147th Avenue and SW 8th Street																		
NW 7th Avenue and 62nd Street																■		

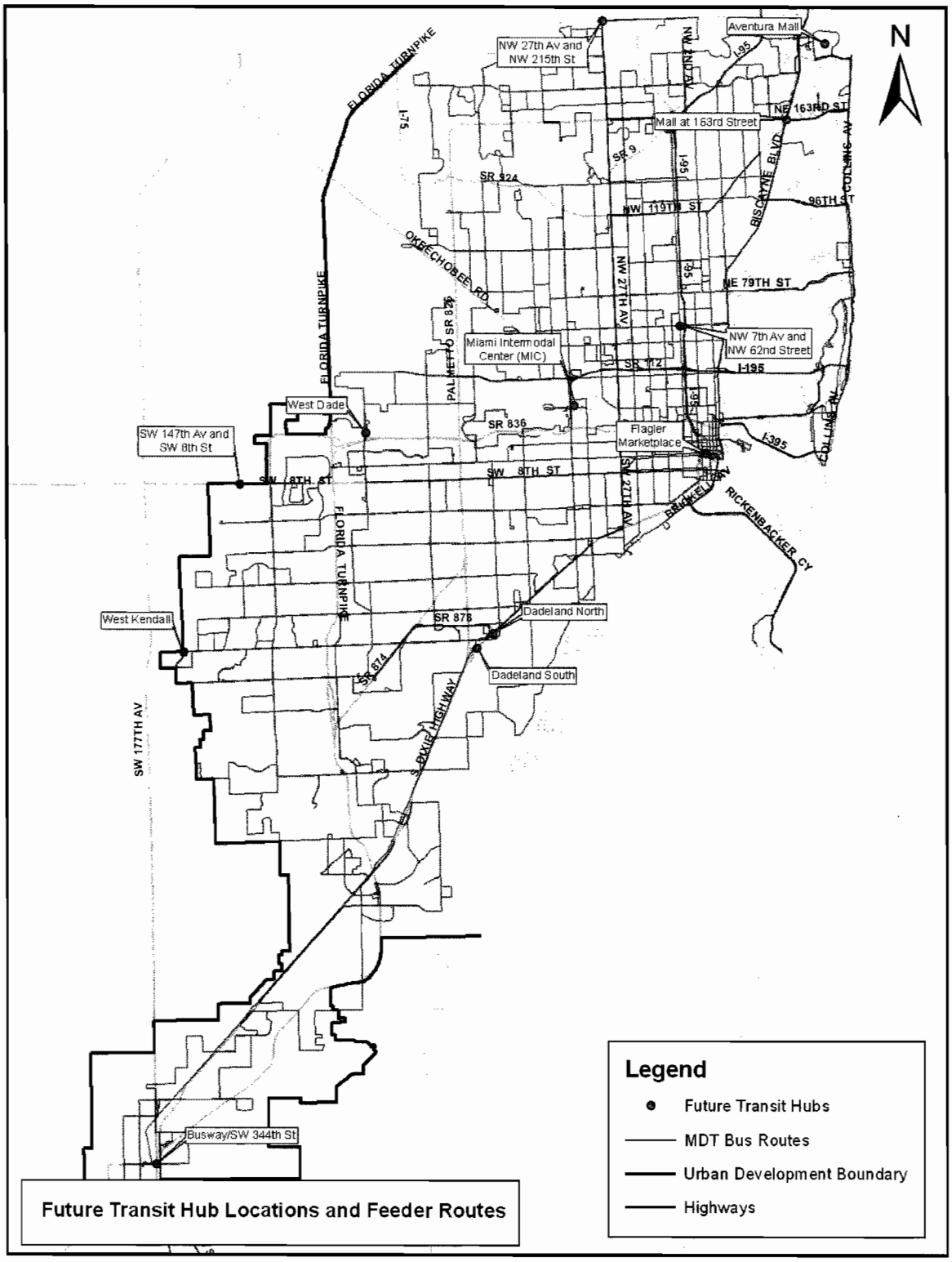
TERMINALS	ROUTES				
	288*	301	302	344	500*
Flagler Marketplace					■
Dadeland North Station	■				■
Dadeland South Station					■
Northeast Transit Hub Enhancements (NETHE)					
Northeast Transit Hub Enhancements (NETHE)					
West Kendall Transit Terminal	■				
Miami Intermodal Center					
West Dade (NW 107th Ave & 12 Street)					
Florida City Busway at SW 344th Street		■	■	■	
NW 27th Avenue and NW 215th Street					
SW 147th Avenue and SW 8th Street					
NW 7th Avenue and 62nd Street					

Source: Miami-Dade Transit, 2010

***Route Descriptions**

Route 31: Busway Local
Route 34: Busway Flyer
Route 38: Busway Max
Route 46: Liberty City Connection
Route 51: Flagler MAX
Route 79: 79 Street MAX
Route 93: Biscayne MAX
Route 97: 27 Avenue MAX
Route 115: Mid-North Beach Connection (CW)
Route 117: Mid-North Beach Connection (CCW)
Route 120: Beach MAX
Route 123: South Beach Local
Route 132: Tri-Rail Doral Shuttle
Route 133: Tri-Rail Airport Shuttle
Route 137: West Dade Connection
Route 150: Airport Flyer
Route 183: 183 Street Local
Route 195: Dade-Broward Express
Route 202: Little Haiti Connection
Route 204: Killian KAT
Route 207: Little Havana Connection (CW)
Route 208: Little Havana Connection (CCW)
Route 211: Overtown Circulator
Route 212: Sweetwater Circulator
Route 238: East-West Connection
Route 243: Seaport Connection
Route 246: Night Owl
Route 248: Brickell Key Shuttle
Route 249: Coconut Grove Circulator
Route 252: Coral Reef MAX
Route 254: Brownsville Circulator
Route 272: Sunset KAT
Route 277: 7 Avenue MAX
Route 286: North Pointe Circulator
Route 287: Saga Bay MAX
Route 288: Kendall Cruiser
Route 500: Midnight Owl

Figure 7-1: Future Transit Hub Locations and Feeder Routes



Source: Miami-Dade Transit, 2011

7.2.2 Recommended Service Plan – New Metrobus Routes

Six (6) new transit routes have been proposed under the 2021 RSP to replace old existing routes or add new service (Table 7-4). The table presents the proposed new transit routes with associated service levels, peak vehicle requirements for buses, annual operating funding needs, and proposed implementation schedule. The preliminary programming of these routes was conducted in a systematic and regional approach based on coordination with major transit capital projects. These new routes represent MDT's response to citizens' request for additional enhanced bus service throughout Miami-Dade County. These new transit routes are also illustrated in Figure 7-2.

- **NW 27th Avenue Enhanced Bus (North Corridor):** This route will provide premium transit service from the MIC to the Broward County line (NW 215th Street) along NW 27th Avenue. A transit center/park-and-ride lot is proposed for the northern terminus at NW 27th Avenue and NW 215th Street. This enhanced bus service will provide frequent service along the NW 27th Avenue corridor and connect with Metrorail and the MIC.

  Funding: $1.0 million from Route 97 and $1.0 million from JARC for FY 2008 and FY 2009.

- **SR 836 Express Enhanced Bus (East-West Corridor):** This route will provide premium transit service from west Miami-Dade County (SW 8th Street and SW 147th Avenue) to the MIC via NW 107th Avenue and SR 836. The route will also provide service to strategically park-and-ride lot locations. Bus stops or stations will be spaced approximately every mile along the service route. This service will provide commuters direct access to Metrorail, Tri-Rail commuter rail service, and MIA from the MIC.

  Funding: Approximately $1.34 million to be funded by JARC and $1.25 million to be funded by efficiencies and restructuring.

- **Biscayne Enhanced Bus:** This route will provide enhanced bus service from downtown Miami to Aventura Mall and northeast Miami-Dade County along Biscayne Boulevard and US 1. This route provides service to the Adrienne Arsht Performing Arts Center, and a direct connection to the cities of Little Haiti, Miami Shores, North Miami and North Miami Beach.

  Funding: $2.3M from Route 93 and $1.2M to be funded by efficiencies and restructuring.

- **Ludlam Limited bus:** This route will provide a limited stop route from the new Miami Gardens park-and-ride lot at the intersection of Miami Gardens Drive and SW 73rd Avenue to Okeechobee Station via Ludlam Road.

  Funding: To be funded by efficiencies and restructuring.

- **Marlins Ballpark Shuttle:** This route will provide shuttle service during 81 home games for 1.5 hours prior to game start time and 1.5 hours after game end time as well as service during the game. This service will connect the proposed Marlins Ballpark and the Metrorail Culmer Station with 8 buses operating during pre-game time, 10 buses operating during post game time and 4 buses operating during the game, each providing 3 to 4 minute headways.

  Funding: To be funded by MDT's Operating Budget.

- **Flagler Enhanced Bus:** This route will provide enhanced bus service from west Miami-Dade County to downtown Miami and Metrorail. This service will also connect the new Marlins Ballpark along NW 7th Street as well as serve the Miami-Dade College Wolfson Campus, American Airlines Arena, the Metropolitan Hospital and the Magic City Casino. This route will also serve a proposed park-and-ride lot at SW 8th Street and SW 147th Avenue.

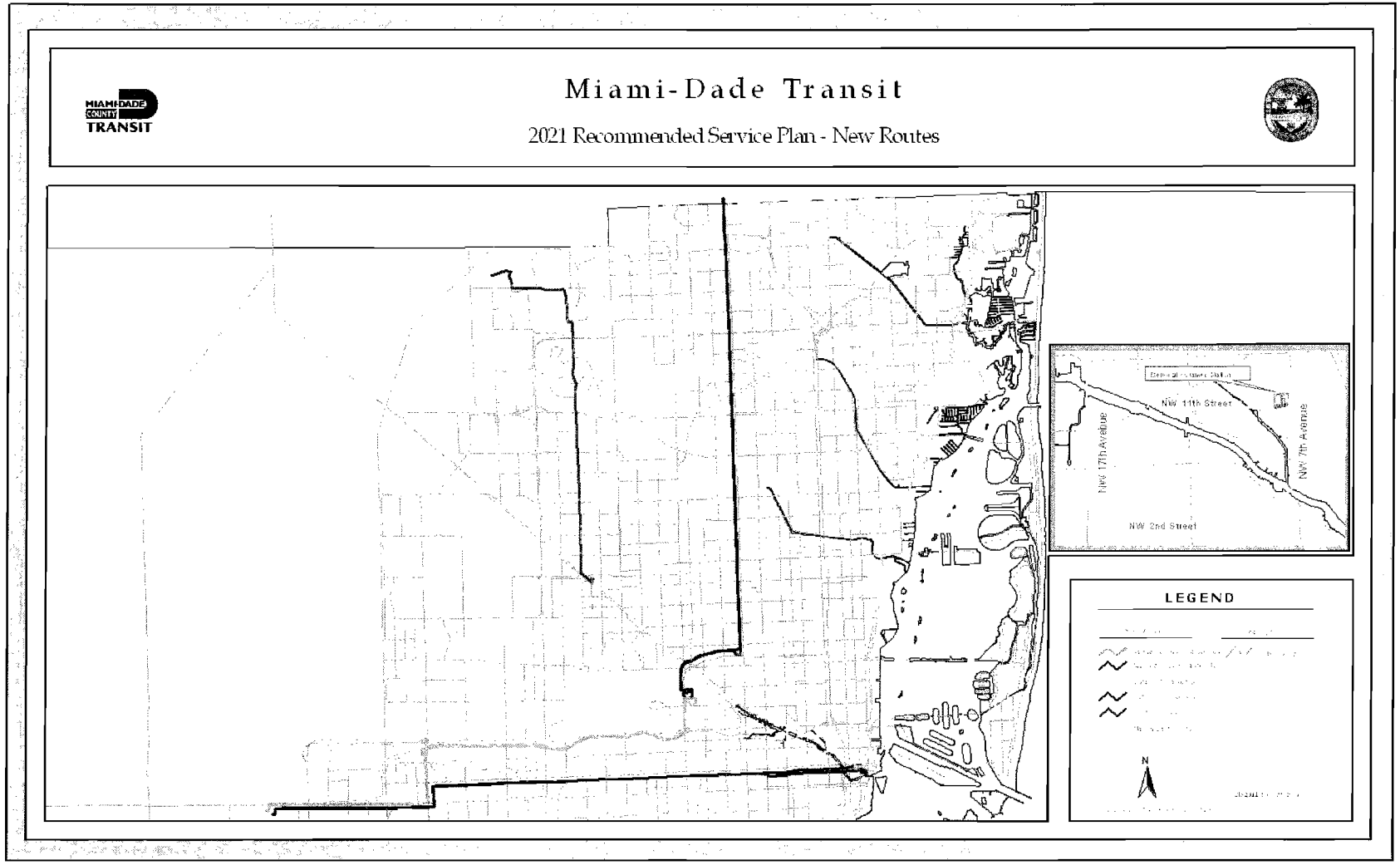
  Funding: $425,000 to be funded by JARC and $425,000 to be funded by efficiencies and restructuring. Funding is also derived from Route 51.

Table 7-4: Recommended Service Plan Summary New Metrobus Routes

New Route	Description	Headways			2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
		Peak	Mid Day	Week End	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR	Cost	PVR
NW 27 Avenue Enhanced Bus (old route 97)	This route would provide limited-stop service along NW 27 Avenue between the Broward/Miami-Dade county line and the MLK Metrorail station.	12	30	N/S	$500,000	5	$500,000	5	$500,000	5	$500,000	5	$0	-5	$0	-5	$0	-5	$0	-5	$0	-5	$0	-5
NW 27 Avenue Enhanced Bus (old route 97)	This route would provide limited-stop service along NW 27 Avenue between the Broward/Miami-Dade county line and the MLK Metrorail station.	10	20	N/S		0		0		0		0	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A
SR 836 Express Enhanced Bus	This route would provide Express service between west Miami-Dade County (SW 8 Street, approximately SW 147 Avenue) and the MIC via the Dolphin	15	N/S	N/S	$500,000	6	$500,000	6	$500,000	6	$500,000	6	$0	-6	$0	-6	$0	-6	$0	-6	$0	-6	$0	-6
SR 836 Express Enhanced Bus	This route would provide Express service between west Miami-Dade County (SW 8 Street, approximately SW 147 Avenue) and the MIC via the Dolphin Expressway (SR836) during the morning and afternoon peak periods every 10 minutes.	10	N/S	N/S		1A		1A		1A		1A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A	$1,000,000	11A
Biscayne Enhanced Bus (old Route 93)	This route would provide limited-stop service with articulated buses, along Biscayne Boulevard between Aventura and Downtown Miami, and would be created by adjusting the Biscayne MAX with peak headways improvements from 20 to 15 minutes.	15	20	N/S					$1,200,000.0	7A	$1,200,000	7A	$1,200,000	7A	$1,200,000	7A	$1,200,000	7A	$1,200,000	7A	$1,200,000	7A	$1,200,000	7A
Flagler Enhanced Bus (old Route 51)	This route would provide limited-stop service with articulated buses, along Flagler Street between west Miami-Dade County and Downtown Miami, and would be created by adjusting the	12	30	N/S					$1,200,000	4A	$1,200,000	4A	$1,200,000	4A	$1,200,000	4A	$1,200,000	4A	$1,200,000	4A	$1,200,000	4A	$1,200,000	4A
Flagler Enhanced Bus (old Route 51)	Extend the western limits of this route to SW 8 Street and 147th Avenue.	12	30	N/S									$330,000	0	$330,000	0	$330,000	0	$330,000	0	$330,000	0	$330,000	0
Marlins Ballpark Shuttle	Shuttle to be scheduled for 81 home games for 1.5 hrs. pre-game and 1.5 hrs post game. Bus requirements: 8 pre-game; 10 post game; and 4 during game.				$500,000	0	$500,000	0	$500,000	0	$500,000	0	$500,000	0	$500,000	0	$500,000	0	$500,000	0	$500,000	0	$500,000	0
Ludlam Limited	New Limited stop bus route from the new Miami Gardens Park & Ride to Okeechobee Station via Ludlam Road	20	N/S	N/S	$350,000	3	$350,000	3	$350,000	3	$350,000	3	$350,000	3	$350,000	3	$350,000	3	$350,000	3	$350,000	3	$350,000	3
INCREMENTAL TOTALS					$1,850,000	15	$1,850,000	0	$4,250,000	11	$4,250,000	0	$5,580,000	10	$5,580,000	0	$5,580,000	0	$5,580,000	0	$5,580,000	0	$5,580,000	0
(ARTICS)						1		0		11		0		21		0		0		0		0		0
(FULL SIZE BUSES)						14		0		0		0		-11		0		0		0		0		0
CUMULATIVE TOTALS					$1,850,000	15	$3,700,000	15	$7,950,000	26	$12,200,000	26	$17,780,000	36	$23,360,000	36	$28,940,000	36	$34,520,000	36	$40,100,000	36	$45,680,000	36
(ARTICS)						1		1		12		12		33		33		33		33		33		33
(FULL SIZE BUSES)						14		14		14		14		3		3		3		3		3		3

Source: Miami-Dade Transit, 2010

Figure 7-2: 2021 Recommended Service Plan - New Routes



Source: Miami-Dade Transit, 2011

The 2010 MDT TDP Annual Update RSP included six (6) proposed new transit routes of which two (2) were unfunded or partially funded. For this TDP Annual Update, five proposed routes are listed in Table 7-4 and serve as replacements for old existing routes. In total, five (5) of the nine (9) recommended new transit routes were implemented following the 2009 MDT TDP Major Update.

Transit Hubs and Feeder Routes for New Routes

The 2021 RSP provided that twelve (12) transit hubs were proposed for implementation in locations throughout Miami-Dade County. As a result, these new bus routes would serve local corridors and stations, while also providing connecting service to transit hubs. Table 7-5 provides a summary overview of the new routes that have been added to provide additional service to identified transit hub locations.

Table 7-5: Future Transit Hub Locations and Feeder Routes for New Routes

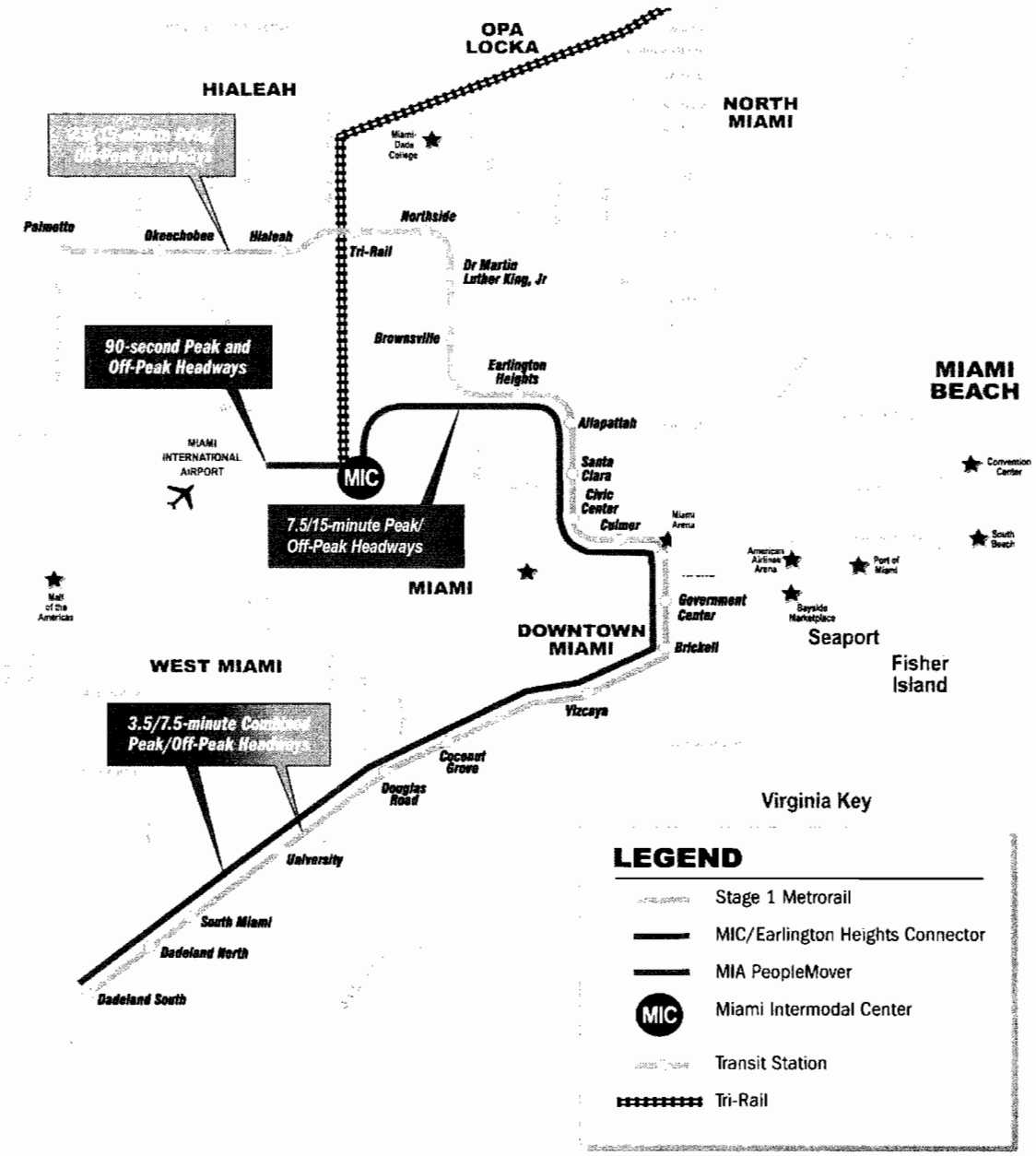
TERMINALS	ROUTES					
	NW 27 Avenue Enhanced Bus (old Route 97)	SR-836 Express Enhanced Bus	Biscayne Enhanced Bus (Old Route 93)	Flagler Enhanced Bus (old Route 51)	Ludlam Limited	Marlins Ballpark Shuttle
Flagler Marketplace						
Dadeland North Station						
Dadeland South Station						
Northeast Transit Hub Enhancements (NETHE) Mall at 163rd Street						
Northeast Transit Hub Enhancements (NETHE) Mall at Aventura						
West Kendall Transit Terminal						
Miami Intermodal Center						
West Dade (NW 107th Ave & 12 Street)						
Florida City Busway at SW 344th Street						
NW 27th Avenue and NW 215th Street						
SW 147th Avenue and SW 8th Street						
NW 7th Avenue and 62nd Street						

Source: Miami-Dade Transit, 2010

7.2.3 Recommended Service Plan – Metrorail

The Metrorail expansion program continues to progress with the construction of the Orange Line Phase 1: Airport Link Metrorail Extension. The service will operate on the new section of elevated tracks being constructed between the MIC and Earlington Heights station and share the existing elevated tracks currently used for the Stage 1 line from Palmetto to Dadeland South station (Figure 7-3).

Figure 7-3: Proposed Operating Plan with Airport Link Metrorail Extension in Service



Source: Miami-Dade Transit, 2010

Once in service this Metrorail extension will provide a premium transit service connection to the MIC with a proposed 7.5-minute headway during the peak AM and PM travel times. The Airport Link will operate to provide direct service between the MIC and Dadeland stations. For those passengers boarding at the MIC, a transfer will be required at the Earlington Heights station in order to reach the Palmetto station. The existing Stage 1 Metrorail will operate at 3.5/7.5 minute headways during the peak AM and PM travel times between the Palmetto station and Dadeland station (Figure 7-3).

This new Metrorail service will also provide rail connection to Miami International Airport via the MIA People-Mover line operated by Miami-Dade Aviation Department that will provide service between the Airport and the MIC at 90-second headways (Figure 7-3). In spring 2012, construction is scheduled to be complete with the Airport Link opening for passenger service. Service improvements to the Metrorail System are linked to the expansion program and to the Metrorail Vehicle Replacement Program as previously discussed in the capital improvement plan committed section of this chapter.

7.2.4 Recommended Service Plan – Special Transportation Services

Miami-Dade Transit is working towards administering a new contract for STS services. With this new contract, there will be some IT improvements including: deploying mobile data terminals that will facilitate automated estimated arrival times for Special Transportation Services customers, thus resulting in increased customer satisfaction and complaint reduction. This technology will also increase accuracy of on-time performance monitoring. MDT is committed to continue improvements of service reliability during this period.

7.3 Capital Needs

7.3.1 Transit Terminals

As identified in the 2019 RSP, the modified grid system requires the development of transit hubs throughout the region of service. All the projects listed are under different stages of project development. MDT will ensure that all local state and federal requirements are met for each of the projects. Table 7-6 lists the capital needs identified for transit hub locations along with their respective status and funding needs for the 2021 RSP. This is followed by a list of proposed park-and-ride locations as presented in Table 7-7 and illustrated in Figure 7-4.

Table 7-6: 2021 Recommended Service Plan Transit Hub Needs

Transit Hubs	Status	Unfunded Needs
Flagler Marketplace	The existing downtown Miami bus terminal site will be expanded one block to the north as part of the Flagler Street Marketplace project. Additional upgrades are needed to provide necessary passenger amenities. The 2021 RSP provides the need for added bus bays at this location.	$3,185,000
Dadeland Stations	Both the Dadeland North and Dadeland South Metrorail stations provide a high degree of passenger amenities which in turn offer passengers efficient and convenient transfers. The following is the cost for kiosks at the Dadeland North and Dadeland South Metrorail stations.	$46,000

Table 7-6: 2021 Recommended Service Plan Transit Hub Needs (continued)

Transit Hubs	Status	Unfunded Needs
Northeast Transit Hub Enhancements (NETHE)[1]	As a feasible project alternative to the Northeast PAC, MDT is proceeding with enhancements at two existing transit hubs – the Mall at NE 163rd Street and Aventura Mall. Both of these transit hubs serve the northeast portion of County with important bus connections and have multiple station area deficiencies. Therefore, this new MDT project, referred to as the Northeast Transit Hub Enhancements (NETHE), will upgrade both transit hub sites to improve bus and passenger access as well as upgrade area drainage, lighting, signage, shelters and other station area amenities.	Committed Improvement[2]
Miami Intermodal Center (MIC)	FDOT is managing this project. FDOT has over $400 million programmed for the MIC distributed among 17 projects. These include the rental car HUB, the MIC Core Roadway and intersection improvements, transit connections to the terminal building, utilities relocation, etc. Phase I (MIC Core) includes the bus terminal facilities and infrastructure to coordinate with other modes.	Committed Improvement
Florida City Busway at SW 344th Street	The facility is proposed to address the increased level of services planned in the south Miami area with the completion of the South Miami-Dade Busway extension. This facility includes 266 parking spaces with bus bays, shelters, and will be integrated with the Busway facility to offer a greater degree of passenger convenience.	Committed Improvement
NW 7th Avenue and NW 62nd Street	This facility will be developed as a multimodal Passenger Activity Center (PAC), and located on NW 7th Avenue and NW 62nd Street as proposed in the City of Miami's Transportation Corridor Study. This PAC will promote accessible public transportation within the context of an active, mixed-use development and will promote economic development throughout the City of Miami's Transportation Corridor (NW 7th Avenue between 54 Street and NW 95 Street) utilizing a "Transit Village Vision" concept. The center will provide much needed parking relief; promote the use of park-and-ride, and access to privately operated taxi and Jitney services.	Committed Improvement
NW 27th Avenue and NW 215th Street	A 14-acre vacant parcel adjacent to the intersection of the Turnpike and NW 27th Avenue has been identified as a strategic park-and-ride location for the NW 27th Avenue Enhanced Bus Service project. Up to 350 parking spaces are proposed for this facility which would serve the northern most station for the new enhanced bus or BRT service in the corridor. This park-and-ride also provides strategic transit-oriented development (TOD) opportunities.	Committed Improvement

Table 7-6: 2021 Recommended Service Plan Transit Hub Needs (continued)

Transit Hubs	Status	Unfunded Needs
SW 147th Avenue and SW 8th Street	An 8-acre vacant parcel on the SW corner of the intersection at SW 8th Street and SW 147th Avenue has been identified as a strategic park-and-ride location for the East-West/SR-836 Express Enhanced Bus Service project. Up to 350 parking spaces are proposed for this facility which would serve the western most station for the new enhanced bus or BRT service in the corridor. This park-and-ride lot also provides strategic transit-oriented development (TOD) opportunities.	Committed Improvement
West Dade	This facility is committed to be constructed by private developers. The location slated for the terminal is at NW 12 Street, west of NW 107th Avenue. Phase I will include 189 surface parking spaces and Phase II includes a garage with 260 parking spaces, 10 bus bays and a driver's comfort station.	Committed Improvement
West Kendall[3]	A West Kendall Transit Terminal hub at Kendall Town Center (Kendall Drive and SW 162nd Avenue) is sought to address regional service linkages and as a western terminus of the Kendall Cruiser bus route. Currently, private developers have included the construction of a transit terminal which includes a 40 space park-and-ride lot with six bus bays for service and a restroom facility for operators in their development proposal. This station will be constructed through private/public partnership.	Committed Improvement

[1] Miami-Dade Transit worked with the City of North Miami Beach and other stakeholders for the last several years to develop a transit hub near the Mall at NE 163rd Street. However, after numerous meetings and several attempts to reach an agreement with the City of North Miami Beach on the project scale, scope and capital cost of the preferred site, MDT has determined that this project is no longer feasible and will not be implemented. Subsequently, the NETHE is being studied.

[2] A committed improvement is defined as a project for which funds have been programmed in either a local, state or federal plan (Capital Improvement Plan (CIP), Transportation Improvement Plan (TIP), State Transportation Improvement Plan (STIP), and the 5-Year Florida Department of Transportation Working Program).

[3] Scheduled to open February 27, 2011.

Table 7-7: Proposed Park-and-Ride Sites

Map ID	Name	Sites
1	Busway Lot	Busway and SW 344th Street
2	Busway Lot	Busway and SW 216th Street
3	Busway Lot Quail Roost Park-and-Ride	Busway/SW 186th Street
4	Kendall South/Zoo Miami	Zoo Miami Park
5	FPL Lot	SW 104th Street and SW 127th Avenue
6	Church at Kendall and 150th Avenue (purchase)	Kendall Drive and 150th Avenue
7	Kendall Park-and-Ride	SW 127th Avenue and SW 88th Street
8	FPL Lot	SW 72nd Street and SW 136th Court
9	Bird Central Park-and-Ride	Tropical Park
10	West Miami-Dade/Tamiami Park-and-Ride	Tamiami Park
11	West Miami-Dade/SW 8th Street Park-and-Ride	SW 8th Street and SW 147th Avenue
12	West Dade Park-and-Ride	NW 107th Avenue and NW 12th Street
13	El Portal Park-and-Ride	Biscayne Boulevard and NE 79th Street
14	County Line Park-and-Ride	NW 27th Avenue and NW 215th Street
15	NW 27th Avenue and NW 95th Street Park-and-Ride	NW 27th Avenue and NW 95th Street

Source: Miami-Dade Transit, 2010

7.3.2 Enhanced Bus Corridors

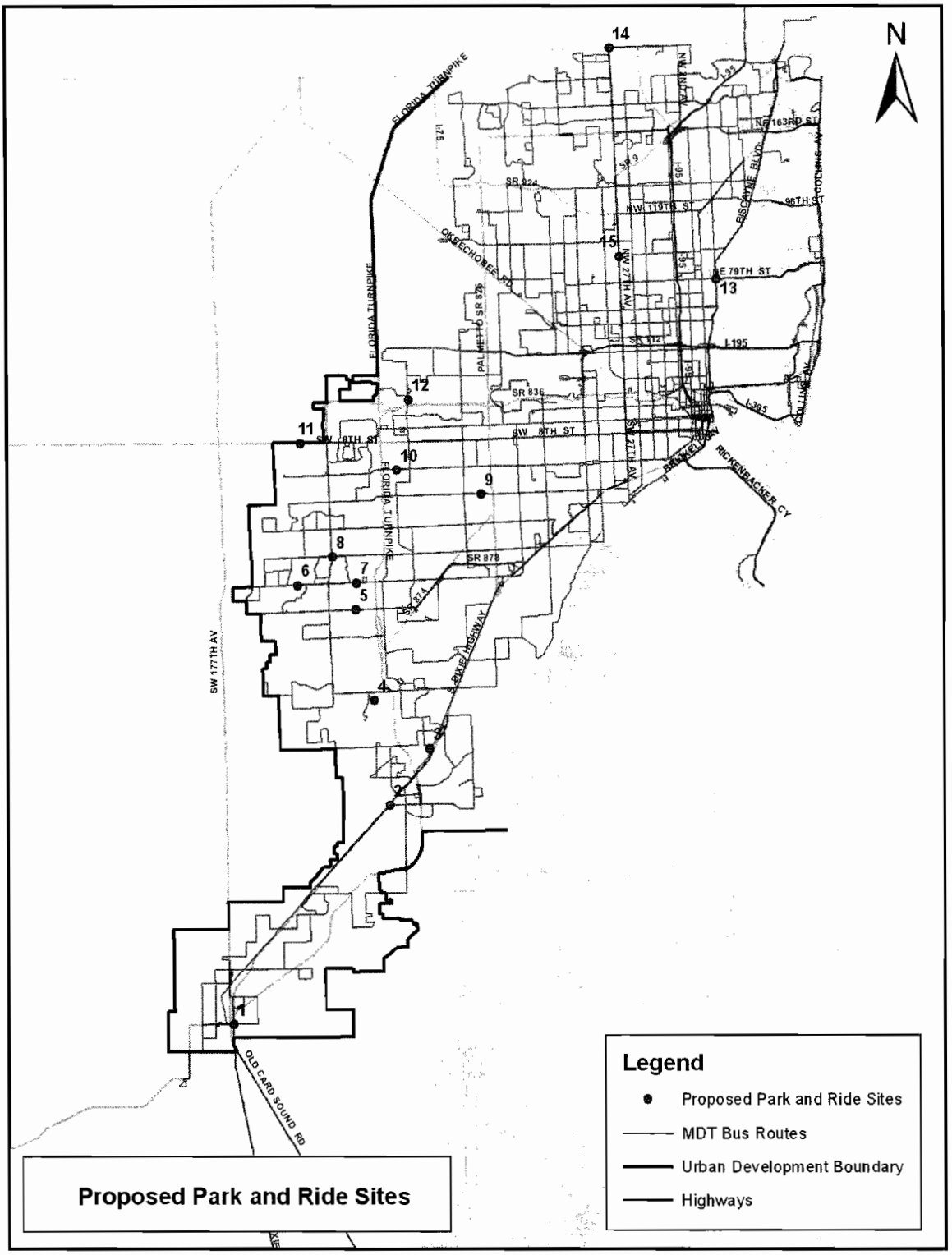
7.3.2.1 North Corridor (NW 27th Avenue Enhanced Bus)

Phase 2 is expected to be complete in 2016 and consists of long-term service with 10 minute peak/20 minute Mid-Day headways using 11 new 60-foot articulated diesel-electric hybrid buses, transit signal priority, robust stations, WIFI, real-time "Where is the Bus?" information, and branding of buses and stations. Phase 2 of this project has a capital cost of approximately $27 million. Approximately $5 million of the total project cost is unfunded.

7.3.2.2 East-West Corridor (SR-836 Express Enhanced Bus)

Revenue service is anticipated in 2016 as part of Phase 2 and includes long term service with 10 minute headways using 11 new 60-foot articulated diesel-electric hybrid buses, transit signal priority, robust stations, WIFI, real-time "Where is the Bus?" information, and branding of buses and stations. Phase 2 of this project has a capital cost of approximately $24.5 million and is unfunded.

Figure 7-4: Proposed Park-and-Ride Sites



Source: Miami-Dade Transit, 2010

7.3.3 Bus Fleet Expansion

The 2021 RSP service improvements identify the peak vehicle requirements (PVR) for designated bus routes. A determination of bus fleet needs based on the 2021 RSP, which accounts for a 20 percent (20%) vehicle spare ratio results in a total requirement of 82 buses. Table 7-8 shows how many buses are needed to include both 40-foot and 60-foot diesel-electric hybrid vehicles. This fleet need also includes new service routes. Based on the RSP, there will be no additional purchase needs of minibuses.

Table 7-8: Bus Fleet Vehicle Needs

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Additional PVR	Spare Ratio
Full size Existing	9	5	12	3	1	0	0	1	1	0		
Full size New	14	0	0	0	-11	0	0	0	0	0		
Total	23	5	12	3	-10	0	0	1	1	0	35	42
Artics New	1	0	11	0	21	0	0	0	0	0	33	40
TOTAL												82

Source: Miami-Dade Transit 2010

7.4 Infrastructure Renewal Program Needs

The following table identifies a number of proposed projects that have been determined by MDT as necessary for the upkeep and maintenance of existing infrastructure to ensure the MDT transit system operates in a state of good repair. The infrastructure renewal program (IRP) includes planned investments in the following program areas:

- Information technology, including data center modernization, network upgrades, and improved accident/incident reporting;
- Passenger amenities, including escalator covers and improved signage;
- Passenger facilities, including escalator and elevator replacements, Busway improvements, and platform refurbishments;
- Rolling stock, including bus maintenance component replacements (bus vehicle fleet replacement schedule is provided in the Appendix);
- Systems, including wayside overhauls, uninterrupted power supplies, AC unit substations, train control system replacement, traction power substations, and traction power cabling;
- Maintenance facilities, including bus garage lot resurfacing, emergency backup generators, and A/C replacement;
- Safety and security, including fire alarm replacement, railing replacements, and pedestrian safety improvements; and,
- Track and guideway, including guideway painting, frog replacement, and work vehicles.

The proposed year of implementation is also presented for the FY 2012-2021 planning horizon (Table 7-9).

Table 7-9: Proposed Infrastructure Renewal Program Need (2021)

Classification	Project Name	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total Estimated Cost YOE
Information Technology	Electronic Kiosks	$ 0.42										$ 0.42
Information Technology	Personal / Payroll Systems Replacement				0.35							$ 0.35
Maintenance Facilities	Lehman Center Yard Tower Upgrade			$ 1.13	$ 3.98		$ 1.34					$ 6.45
Maintenance Facilities	Bus Garages: Lot Resurfacing	$ 0.61	$ 0.64	$ 0.65								$ 1.90
Maintenance Facilities	Lift Replacement for WLF	$ 5.23										$ 5.23
Maintenance Facilities	Flood mitigation at William Lehman Facility	$ 0.09										$ 0.09
Maintenance Facilities	Mover Maintenance Facility - Lifts	$ 0.11										$ 0.11
Maintenance Facilities	Renovation of Drain field	$ 0.21										$ 0.21
Maintenance Facilities	Mover and Lehman Facility - Water Main	$ 0.44										$ 0.44
Maintenance Facilities	Lift Replacement Metrobus	$ 1.98										$ 1.98
Maintenance Facilities	Chiller Unit Replacement at William Lehman Field (WLF)	$ 2.23										$ 2.23
Maintenance Facilities	Emergency Backup Generators	$ 3.13										$ 3.13
Maintenance Facilities	Lehman Facility Lot Resurfacing					$ 0.09						$ 0.09
Passenger Amenities	Metrorail Parking Fare Payment Signage	$ 0.02										$ 0.02
Passenger Amenities	Metrorail & Metromover Regulatory Signage Replacement	$ 0.05										$ 0.05
Passenger Amenities	Metrorail Station Identifier Sign Panel Replacement	$ 0.07										$ 0.07
Passenger Amenities	South Dade Bus way Stations	$ 0.10										$ 0.10
Passenger Amenities	Metrorail/Metromover Vehicle Signage Replacement	$ 0.14										$ 0.14
Passenger Amenities	Metromover Station Ceiling Signage Cabinet Replacement	$ 0.27	$ 0.38									$ 0.65
Passenger Amenities	Dadeland South Metrorail Station Signage Service	*										$ -
Passenger Facilities	Facility Painting Program	$ 0.39	$ 0.41	$ 0.43	$ 0.44	$ 0.46	$ 0.47					$ 2.60
Passenger Facilities	Metrorail Station Refurbishment / Door Replacement at Metromover	$ 2.08	$ 2.17	$ 2.24	$ 2.32		$ 2.47					$ 11.28
Passenger Facilities	Escalators Replacement / Elevators Refurbishment	$ 3.43	$ 3.59	$ 3.73	$ 3.86	$ 3.99	$ 4.12					$ 22.72
Passenger Facilities	Metrorail Lighting	$ 2.09	$ 2.19	$ 2.29	$ 2.38	$ 2.46						$ 11.41
Passenger Facilities	Parking Garages Overhaul	$ 1.03	$ 1.08	$ 1.12	$ 1.16	$ 1.20						$ 5.59
Passenger Facilities	Replace Elevator Machine Room & Cab Ventilation	$ 0.23										$ 0.23
Rolling Stock	Purchase of Service & Support Vehicles		$ 0.58	$ 0.29			1.36					$ 2.23
Rolling Stock	Bus Maintenance Component Replacement Plan	$ 7.53	$ 5.62	$ 4.92	$ 4.07	$ 6.08	$ 6.22					$ 34.44
Rolling Stock	Bus Replacement Plan	$ 3.20	$ 26.84	$ 85.87	$ 52.00	$ 57.00	$ 107.00					$ 331.91
Rolling Stock	Bus Maintenance MH8 Mini Hybrid (EMP Electric Radiator / CAC Cooling Fans	$ 2.85										$ 2.85

Table 7-9: Proposed Infrastructure Renewal Program Need (2021) (continued)

Classification	Project Name	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total Estimated Cost YOE
Rolling Stock	Hybrid Battery Replacement Plan				$ 3.00							$ 3.00
Safety & Security	Replacement of Bus DVR		$ 4.00	$ 4.00								$ 8.00
Safety & Security	Pedestrian Safety Improvements at Coconut Grove Metrorail Station	$ 0.36	$ 1.36									$ 1.72
Safety & Security	Rebuild MLK Park-and-Ride Garage	$ 0.60										$ 0.60
Safety & Security	Rail Fire Alarm and Halon Replacement Project	1.71	$ 1.25									$ 2.96
Systems	Replace Switch Machines - Yard				$ 0.95	$ 0.98	$ 1.01					$ 2.94
Systems	Switch Machine Cable - Yard				$ 1.04	$ 1.08	$ 1.11					$ 3.23
Systems	Traction Power Gap Ties				$ 1.83	$ 1.90	$ 1.95					$ 5.68
Systems	AC Unit Substations - Palmetto Yard					$ 4.23	$ 4.36					$ 8.59
Systems	Traction Power Cabling				$ 5.06	$ 5.08	$ 5.05					$ 15.19
Systems	AC Unit Substations					$ 8.65	$ 8.94					$ 17.59
Systems	Traction Power Substations				$ 17.68	$ 18.26	$ 18.86					$ 54.80
Systems	Wayside Overhaul	$ 30.62	$ 20.15	$ 20.96			$ 32.98					$ 104.71
Systems	Train Control Systems Replacement			$ 0.50	$ 1.05	$ 32.10	$ 34.80					$ 68.45
Systems	Metrorail Redundant Track Circuit System	$ 0.60	$ 6.25	$ 3.83								$ 10.68
Systems	Data Transmission System - Mover	$ 2.50	$ 2.50									$ 5.00
Systems	Traction Power Substation - Palmetto Yard				$ 2.91	$ 3.00						$ 5.91
Systems	Switch Machine Cable- Mainline		$ 1.17	$ 1.22	$ 1.27	$ 1.38						$ 5.04
Systems	Uninterrupted Power Supply - Mainline (Metrorail)			$ 2.27	$ 2.35							$ 4.62
Track & Guideway	Fastener Replacement Station Areas				$ 1.42	1.4	$ 1.36					$ 4.18
Track & Guideway	Metrorail Steel Box Girder Guideway Painting		$ 0.29	$ 0.55	$ 0.52	$ 9.55	$ 6.49					$ 17.40
Track & Guideway	Metromover Brickell Extension Guideway Painting	$ 5.00										$ 5.00
Track & Guideway	Metromover Inner Loop Guideway Painting	$ 0.12	$ 0.52	$ 0.44	$ 11.63							$ 12.71
Track & Guideway	Metromover Omni Extension Guideway Painting		$ 0.09	$ 0.39	$ 0.38	$ 8.82						$ 9.68
	Door Replacement at Various Locations	$ 0.78										$ 0.78
	In-Vehicle Monitoring and Public Wi-Fi	$ 3.03										$ 3.03
	Train to Wayside Communications (TWC)	$ 4.13										$ 4.13
TOTAL		$ 87.38	$ 81.08	$ 136.83	$ 121.65	$ 167.71	$ 239.89	$ -	$ -	$ -	$ -	$ 834.54

Source: Miami-Dade Transit, Infrastructure Renewal Program Existing System FY 2011-12 (July 2010) (PRO-FORMA IRP) IRP is partially funded.

8.0 Financial Plan

8.1 Introduction

This TDP Annual Update represents planning efforts undertaken by Miami-Dade Transit (MDT) in 2010 to include a forecast of operational and capital needs for FY 2012 through FY 2021. The TDP financial section provides estimated costs and financial resources for MDT to maintain existing services and plan new services. It is through the development of this TDP Annual Update that MDT considers which service improvements can be achieved and when those service improvements should be implemented.

The source document that provides MDT's accounting of projected expenses and revenues is known as the "*People's Transportation Plan* (PTP) Pro Forma" (or the Pro Forma). The Pro Forma is regularly updated through collective efforts of both MDT and the County's Office of Strategic Business Management. The currently approved FY 2010 - 2011 Pro Forma projects MDT's expenses and revenues for thirty years, through FY 2040.

This TDP has been prepared on the basis of expenditure and revenue assumptions included within the Miami-Dade County Pro Forma capital budget as approved by Miami-Dade County Board of County Commissioners (BCC) in September 2010. This TDP Annual Update relies directly on the first ten years (FY 2012-2021) of Pro Forma projections. It is important to emphasize that the needs forecasts and applied financial assumptions as presented in this TDP Annual Update for FY 2012 through FY 2021 are subject to change given the current local political climate and transformation in Miami-Dade County governance.

8.2 Operating Expenses

In FY 2012 the direct operating budget for MDT is projected to be approximately $466 million. The primary components of the direct operating expenses are presented below to include the four transit modes and professional support.

Table 8-1: MDT Projected FY 2012 Direct Operating Expenses

Direct Operating Expense Category	Amount (000s)
Metrobus	$ 228,073
Metrorail	$ 54,539
Metromover	$ 9,114
STS/Paratransit	$ 44,350
Operational Support	$ 110,131
Customer Support	$ -
Executive Support	$ 1,365
Engineering	$ 14,975
Other	$ 3,262
TOTAL	$ 465,809

Source: Transit Pro Forma FY 2010-2011 and RFRO (Working)

In addition to these direct operating expenses, MDT will support over $127 million of other operating expenses, debt service payments, and funding of reserves in FY 2012 as detailed below.

Table 8-2: MDT Projected FY 2012 Other Operating Expenses

Direct Operating Expense Category	Amount (000s)
Municipal Contribution	$ 33,542
CITT Staff	$ 2,514
SFRTA Contribution	$ 4,235
Deficit & Loan Repayment	$ 6,290
Public Works Support	$ 3,003
Pre existing Debt	$ 7,439
Reserves	$ 20,723
Debt Service	$ 49,562
TOTAL	$ 127,308

Source: Transit Pro Forma FY 2010-2011

In FY 2012, MDT is projected to spend approximately $593 million for the operation of the transit system and support of MDT's other local and regional responsibilities.

8.2.1 Projected Operating Expenses

Apart from the expected 10 percent (10%) increase in Metrorail service associated with the opening of the Airport Link in 2012, MDT is not projecting any increase in service levels for bus, rail, or Metromover between FY 2012 – FY 2021. Therefore, nearly all growth in MDT operating expenses will come from inflationary cost increases. The key inflation assumptions that drive the cost projections, as included in the Pro Forma, are also summarized below.

Table 8-3: MDT Operating Expense Inflation Assumptions

Expense Iten	Annual Inflation Rate
Labor Increase- Merit	0% (2011) 2.0% thru 2015, and2.20% thereafter
Labor Increase-COLA	3% (2011) 2% (2012) 2% (2013) 3% (2014) 3% (2015 and after)
Health Insurance	10% (2010-2014) 3.5% (2015 and after)
Major Support Line Items	2.5%
Inventory	1%
Fuel	1%
Maintenance	3.5%

Source: Transit Pro Forma FY 2010-2011

8.2.2 Operating Revenues

MDT's transit operations are supported by a range of federal, state, local, and directly-generated revenue streams. Table 8-4 shows the projected agency operating revenues for FY 2012 by major category.

Table 8-4: MDT Projected FY 2012 Operating Revenues

Operating Revenue Category	Amount (000s)
Fare Revenues	$ 99,785
Other Operating Revenues	$ 12,618
Federal Grant Funds Used for PM	$ 69,284
State Block Grant	$ 19,139
Other State Operating Support	$ 5,989
PTP Surtax	$ 167,712
County General Funds	$ 158,486
Local Option Gas Tax	$ 14,777
Federal Grants	$ -
Interest, Reimbursement & Other	$ 47,294
TOTAL	$ 595,084

Source: Transit Pro Forma FY 2010-2011

8.2.3 Projected Operating Revenues

Future revenue growth is projected to fluctuate with a low level of tax revenue growth resulting from the existing state of the economy. However, in years without any major policy changes, total available funding for MDT is expected to grow at slightly over three percent (3%) annually. In addition, MDT does foresee two separate major policy actions related to funding during FY 2012 – FY 2021 to include:

- *Regular programmed fare increases*: The Pro Forma projects a 25 cent increase in the base fare (from its current level of $2.00 to $2.25) in 2013, with another 25 cent increase levied in 2017. These increases have the effect of increasing the overall revenue growth rate in those years. These programmed fare increases which occur every three years results from policies approved by the Miami-Dade County Board of County Commissioners that authorize MDT to implement regular fare increases to keep pace with inflation.

- *Additional local funding*: In 2014, MDT anticipates receipt of two additional local funding sources to support operations -- the local option gas tax (LOGT) and County General Funds. Miami-Dade County currently imposes three of the five cents allowed under the fuel tax, and Pro Forma assumes that the other two cents will be approved, levied, and collected for MDT's use in 2014. The value of those additional two cents from the LOGT is approximately $10 million annually. The second source is additional County General Funds, which is estimated at approximately $43.6 million in the first year.

The critical funding growth assumptions that drive the Pro Forma results are also outlined below.

Table 8-5: MDT Operating Revenue Growth Assumptions

Revenue Item	Annual Growth Rate
PTP Surtax	2011: 1.0% 2012: 3.0% 2013+: 5.0%
General Funds (Maintenance of Effort)	3.50%
Fare Revenue (Trip Growth)	2011: 0% 2012+: 1%
State Block Grant and Transp. Disadv. Funds	2011: 2% 2012+: 2%
Federal Funds	2011: 5% and after
Local Option Gas Tax	2011: 1.5% and after: 0.5%

Source: Transit Pro Forma FY 2010-2011

8.2.4 Summary of Operating Budget

The operating budget, as presented in the 2010 Pro Forma for the ten-year period from FY 2012 to FY 2021, is balanced. This means that projected operating expenses are covered by the forecasted revenues from various local and non-local sources. This operating budget is achieved by a combination of cost efficiencies and service restructuring in Metrobus; an avoidance of any major service expansion except for the Airport Link and aggressive use of available local funding sources (LOGT and general funds). However, this operating budget is based upon the budgetary assumptions that were applied within the FY 2010 - 2011 Pro Forma. These assumptions are subject to change resulting in a different budgetary outcome than presented in this TDP due to the volatility in gas prices and pressure from the public to reduce the tax roll which would have impacts to the general fund share MDT receives and the availability of federal and state grants.

MDT has been under a federal funding freeze since November 2010. As a result, the County has been carrying the funding gap for Federal Transit Administration (FTA) eligible expenditures pending lifting of the freeze. MDT has been preparing service adjustment scenarios that would have a countywide impact as a result of the ongoing freeze. FTA has indicated that they will consider a limited draw-down for funds in order to avoid service disruptions, but as of May 2011, no specific commitments have been made. FTA has indicated previously that they would work with MDT to exempt municipal ARRA projects from the freeze (FTA is reviewing a procedure submitted by MDT to allow municipal ARRA reimbursement) and specific capital grant funded projects (for the University Overpass project and Quail Roost Park and Ride) that were due to expire in September 2011. This TDP does not contemplate service adjustments that may result if the funding freeze is prolonged.

The Miami-Dade County Board of County Commissioners, on May 3, 2011, approved a motion to fund Cutler Bay, Doral, and Miami Gardens out of the County's 80% share of the surtax. Further legislation regarding this matter will be reviewed by the Board in the coming months prior to the end of the FY 2010 - 2011; at which time, work will commence to amend the CITT Ordinance and develop an Interlocal Agreement with the new municipalities.

Table 8-6: MDT Operating Budget (FY 2011 - FY 2021)

Operating Revenues	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Fare Revenues	$99,785	$112,121	$113,242	$114,375	$115,518	$127,034	$128,304	$129,587	$141,336	$154,149	$ 1,235,452
Other Operating Revenues	$12,618	$12,744	$12,872	$13,000	$13,130	$13,262	$13,394	$13,528	$13,663	$13,800	$ 132,011
Federal Grant Funds Used for PM	$69,284	$72,748	$76,385	$80,204	$84,214	$86,319	$88,477	$90,689	$92,956	$95,280	$ 836,558
State Block Grant	$19,139	$19,522	$19,913	$20,311	$20,717	$21,131	$21,554	$21,985	$22,425	$22,873	$ 209,570
Other State Operating Support	$5,989	$5,989	$5,989	$5,989	$5,989	$5,989	$5,989	$5,989	$5,989	$5,989	$ 59,890
PTP Surtax	$167,712	$176,098	$184,902	$194,148	$203,855	$214,048	$224,750	$235,988	$247,787	$260,176	$ 2,109,463
County General Funds	$158,486	$163,969	$213,243	$220,424	$228,748	$237,398	$246,385	$255,724	$265,429	$275,503	$ 2,265,309
Local Option Gas Tax	$14,777	$16,877	$26,932	$32,135	$32,481	$32,644	$32,807	$32,971	$33,136	$33,301	$ 288,060
Federal Grants	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$ -
Interest, Reimbursements & Other	$47,294	$27,654	$28,925	$30,258	$31,657	$33,123	$34,662	$36,275	$37,968	$39,739	$ 347,555
Total Revenues	**$595,084**	**$607,721**	**$682,402**	**$710,843**	**$736,309**	**$770,947**	**$796,322**	**$822,737**	**$860,689**	**$900,810**	**$ 7,483,866**
Operating Expenses											
Metrobus	$228,073	$236,055	$244,317	$252,868	$261,719	$270,879	$280,359	$290,172	$300,328	$310,840	$ 2,675,609
Metrorail	$54,539	$56,448	$58,424	$60,469	$62,585	$64,776	$67,043	$69,389	$71,818	$74,332	$ 639,822
Metromover	$9,114	$9,432	$9,763	$10,104	$10,458	$10,824	$11,203	$11,595	$12,001	$12,421	$ 106,914
STS/Paratransit	$44,350	$45,902	$47,509	$49,171	$50,892	$52,674	$54,517	$56,425	$58,400	$60,444	$ 520,286
Operational Support	$110,131	$113,986	$117,975	$122,104	$126,378	$130,801	$135,379	$140,118	$145,022	$150,098	$ 1,291,993
Customer Support	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$ -
Executive Support	$1,365	$1,413	$1,462	$1,514	$1,567	$1,621	$1,678	$1,737	$1,798	$1,861	$ 16,015
Engineering	$14,975	$15,500	$16,042	$16,604	$17,185	$17,786	$18,409	$19,053	$19,720	$20,410	$ 175,682
SFRTA Contribution	$4,235	$4,235	$4,235	$4,235	$4,235	$4,235	$4,235	$4,235	$4,235	$4,235	$ 42,350
Deficit Repayment	$6,290	$6,290	$6,290	$6,290	$0	$0	$0	$0	$0	$0	$ 25,160
Debt Service	$49,562	$61,997	$86,614	$104,711	$116,526	$131,105	$152,098	$159,959	$171,681	$182,841	$1,217,093
Municipal Contribution	$33,542	$35,220	$36,980	$38,830	$40,771	$42,810	$44,950	$47,198	$49,557	$52,035	$421,893
PTP Reserve	$20,723	$20,724	$20,725	$20,726	$20,727	$20,728	$20,729	$20,730	$20,731	$20,731	$207,274
PWD Project Management (Pay Go)	$3,003	$3,094	$3,186	$3,282	$2,380	$2,452	$2,525	$2,601	$2,679	$2,760	$27,963
CITT Staff	$2,514	$2,514	$2,514	$2,514	$2,589	$2,667	$2,747	$2,830	$2,914	$3,014	$26,817
Pre Existing Debt Service	$7,439	$7,439	$2,494	$2,494	$2,494	$0	$0	$0	$0	$0	$22,360
Other	$3,268	$3,754	$4,027	$7,160	$7,101	$7,186	$7,430	$7,848	$9,058	$9,053	$65,887
Total Expenses	**$593,124**	**$624,002**	**$662,558**	**$703,076**	**$727,607**	**$760,543**	**$803,303**	**$833,889**	**$869,943**	**$905,075**	**$7,483,122**
Annual Operating Surplus/(Deficit)	**1,960**	**(16,281)**	**19,844**	**7,767**	**8,702**	**10,404**	**(6,981)**	**(11,153)**	**(9,253)**	**(4,265)**	
Cumulative Operating Surplus/(Deficit)	**2,278**	**(14,004)**	**5,841**	**13,608**	**22,310**	**32,714**	**25,733**	**14,580**	**5,327**	**1,062**	

Source: Transit Pro Forma FY 2010-2011 and RFRO (Working). *Total values presented may vary due to rounding.

8.3 Capital Expenditures and Funding Sources

8.3.1 Planned Capital Expenditures

MDT's planned capital expenditures for the period FY 2012 to FY 2021 are divided into two groups: 1.) Those projects which will be financed with PTP-backed debt; and, 2.) Those projects which will be paid for on a "cash" basis with funding from various sources. For large capital projects (e.g., Airport Link) or ongoing projects during FY 2012 – FY 2021 (such as bus acquisition and replacement), these may be funded by a combination of debt proceeds and cash. A summary of the two groups of projects is provided below.

Table 8-7: Planned MDT Capital Expenditures FY 2012-2021

PTP Debt-Financed Capital Projects	Total Cost FY12-FY21 (000s)
Bus Acquisition	$ 353,365
Mover Vehicle Replacement	$ 620
Central Control Overhaul	$ 13,356
MIC-EH Connector	$ 29,815
Rail Vehicle Replacement	$ 340,650
Track and Guideway Rehab	$ 22,712
IRP (Infra. Renewal Prog.)	$ 194,265
All Other Projects	$ 916,771
TOTAL	$ 1,871,554

Pay-as-you-go ("cash") Capital Projects	Total Cost FY12-FY21 (000s)
Bus Acquisition	$ -
MIC-EH Connector	$ -
All Other Projects (CI-LOGT)	$ 5,529
TOTAL	$ 5,529

Source: Transit Pro Forma FY 2010-2011

Many of the listed projects, such as the vehicle replacements (for bus, rail, and peoplemover) and the guideway rehabilitation, will greatly improve the quality and longevity of the existing MDT transit system. However, most of the projects shown above are scheduled for completion on or before 2015. After 2015, the capital program consists only of scheduled bus acquisitions and the Infrastructure Renewal Program (IRP), which is the agency's long-term projection of future rehabilitation and replacement needs throughout the MDT system.

8.3.2 Capital Funding Sources

As noted, MDT's capital projects between FY 2012 – FY 2021 will either be debt-financed or funded on a pay-as-you-go basis. The debt financing is backed by the PTP surtax revenues, as projected in the previous financial section. The "cash"-funded projects will be supported by a combination of funding sources, which are shown in the figure below. All of these funding sources for pay-as-you-go capital will be concluded by 2015.

Table 8-8: Projected "Cash" Revenue Sources for Capital Projects, FY 2012-2021

Capital Funding Source	Total Amount (000s)
BBC	$ -
Future Bus Financing	$ -
FTA Section 5307/5309 Formula Grant	$ 408,391
CI-LOGT PAY GO	$ 91,297
Pay Go Surtax	$ -
FDOT Funds	$ 35,226
TOTAL	**$ 534,914**

Source: F2 Report, Transit Pro Forma FY 2010-2011

8.3.3 Summary of Capital Plan

The capital budget as presented in the FY 2010 – FY 2011 Pro Forma for the ten-year period from FY 2012 to FY 2021. All projected capital expenditures could be funded with either PTP surtax debt proceeds or on a pay-as-you-go basis depending on the availability of funds. This capital budget is achieved by aggressive borrowing against the PTP surtax (ultimately requiring the inclusion of additional LOGT and general funds in MDT's budget, as described above, to guarantee debt coverage). This capital budget is based upon the budgetary assumptions that were applied within the FY 2010 – 2011 Pro Forma and these assumptions are subject to change resulting in a different budgetary outcome than presented in this TDP given the current local political climate and transformation in Miami-Dade County governance.

As discussed in Section 8.2.4, MDT has been under a federal funding freeze since November 2010. FTA has indicated previously that they would work with MDT to exempt municipal ARRA projects from the freeze (FTA is reviewing a procedure submitted by MDT to allow municipal ARRA reimbursement) and specific capital grant funded projects (for the University Overpass project and Quail Roost Park and Ride) that were due to expire in September 2011. The federal suspension of funding drawdown has impacted MDT's ability to continue with its $2 billion capital improvement program. Through May 2011, MDT has issued more than $1 billion in bonds, and another $1 billion is needed to cover projects programmed through March 2013. These bonds issuances have been placed on hold as a direct result of the FTA grant funding suspension. The two most important projects in MDT's capital improvement program are the acquisition of Metrorail replacement vehicles and the AirportLink project connecting MDT's Earlington Heights Metrorail station to the new Miami Intermodal Center. MDT is seeking a $100 million short-term loan to bridge MDT's fiscal needs until the FTA funding is restored. As previously stated on Section 8.2.4, the Miami-Dade County Board of County Commissioners, on their May 3, 2011, approved a motion to fund Cutler Bay, Doral, and Miami Gardens out of the County's 80% share of the surtax. Further legislation regarding this matter will be reviewed by the Board in the coming months prior to the end of the FY 2010 - 2011; at which time, work will commence to amend the CITT Ordinance and develop an Interlocal Agreement with the new municipalities.

Table 8-9: MDT Capital Budget (FY 2012 - FY 2021)

Capital Revenues	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TOTAL
PTP Bond Program	$ 110,158	$ 76,496	$ 148,090	$ 154,929	$ 44,620	$ 14,276					$ 548,569
Building Better Communities (BBC)											$ -
Future Financing											$ -
FTA Section 5307/5309 Formula Grant	$ 82,087	$ 77,247	$ 78,990	$ 82,986	$ 87,081						$ 408,391
Local Option Gas Tax	$ 17,720	$ 17,986	$ 18,255	$ 18,529	$ 18,807						$ 91,297
FDOT Funds	$ 20,557	$ 14,024	$ 224	$ 421							$ 35,226
Total Capital Project Revenues	**$ 230,522**	**$ 185,753**	**$ 245,559**	**$ 256,865**	**$ 150,508**	**$ 14,276**	**$ -**	**$ -**	**$ -**		**$1,083,483**
PTP Debt-Financed Projects											
Lehman Yard Rehab and Expansion Phase 1	$ 5,067										$ 5,067
Bus Acquisition	$ 8,434	$ 12,917	$ 21,402	$ 16,589							$ 59,342
Bus Tracker System/Computer Aided Dispatch	$ 9,770										$ 9,770
TOS Replacement	$ 413										$ 413
IRP	$ 7,500	$ 7,500	$ 12,500	$ 12,500	$ 12,500	$ 12,500					$ 65,000
Mover Bicentennial Park Station Refurbishment	$ 348										$ 348
Mover Vehicle Replacement Phase II (17 cars)	$ 620										$ 620
Central Control Overhaul	$ 12,171	$ 1,185									$ 13,356
Airport Link formerly known as EH-MIC Connector	$ 20,473										$ 20,473
Rail Vehicle Replacement	$ 28,878	$ 48,420	$ 108,685	$ 121,731	$ 31,260	$ 1,676					$ 340,650
Test Track for Metrorail	$ 9,241										$ 9,241
Track and Guideway Rehab Subset	$ 7,243	$ 6,377	$ 5,503	$ 3,589							$ 22,712
NETHE formerly known as NE Passenger Activity Ctr		$ 97	$ -	$ 520	$ 860	$ 100					$ 1,577
Total PTP Debt-Financed Project Expenditures	**$ 110,158**	**$ 76,496**	**$ 148,090**	**$ 154,929**	**$ 44,620**	**$ 14,276**	**$ -**	**$ -**	**$ -**		**$ 548,569**

Source: MDTD Capital Book, F2 (revenue) and F5 (expense) Reports

Table 8-9: MDT Capital Budget (FY 2012 - FY 2021) (Continued)

Capital Revenues	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TOTAL
Other Funding Sources Financed Projects											
Americans with Disabilities Act Improv&Equip	$ 252	$ 265	$ 278	$ 292	$ 307					$	$ 1,394
Busway ADA Improvements	$ 2,079									$	$ 2,079
Graphics and Signage Upgrade	$ 715									$	$ 715
Bus Acquisition	$ 4,028	$ 12,917	$ 187							$	$ 18,832
Bus and Bus Facilities										$	$ -
Facilities and Equip Rehab	$ 252	$ 265	$ 278	$ 292	$ 307					$	$ 1,394
TOS Replacement										$	$ -
Bus Tools and Equipm	$ 252	$ 265	$ 278	$ 292	$ 307					$	$ 1,394
Rail Tools and Equipm	$ 463	$ 486	$ 510	$ 536	$ 563					$	$ 2,558
Passenger Amenities and Enhancements	$ 545	$ 572	$ 601	$ 631	$ 662					$	$ 3,011
Capitalization Preventative Maintenance	$ 84,061	$ 89,625	$ 93,163	$ 98,733	$ 103,021					$	$ 468,603
EH-MIC Bus Plaza	$ 8,213	$ 80								$	$ 8,293
Kendall Enhanced Bus Service										$	$ -
Rail Bike Path	$ 92									$	$ 92
Mover Bicentennial Park Station Refurbishm	$ 623									$	$ 623
Mover Station Canopies	$ 2,007									$	$ 2,007
Central Control Overhaul										$	$ -
Airport Link formerly known as EH-MIC Connector	$ 9,342									$	$ 9,342
Mainline Turnout Replacement										$	$ -
Palmetto Station TPS	$ 2,453									$	$ 2,453
NETHE formerly known as NE Passenger Activity Ctr		$ 2,276	$ 1,574	$ 530	$ 60					$	$ 4,440
NW 7 Ave NW 62 St Passenger Activity Ctr	$ 1,097	$ 235								$	$ 1,332
Park and Ride lot Kendall Dr	$ 606									$	$ 606
ARRA Municipalities	$ 2,288									$	$ 2,288
Park and Ride lot Quail Roost Dr										$	$ -
Park and Ride lot SW 168 St and Busway										$	$ -
Park and Ride lot SW 344 St	$ 452									$	$ 452
Security and Safety Equipm	$ 544	$ 571	$ 600	$ 630	$ 661					$	$ 3,006
Total Other Funding Financed Projects	**$ 120,364**	**$ 109,257**	**$ 97,469**	**$ 101,936**	**$ 105,888**	**$ -**	**$ -**	**$ -**	**$ -**		**$ 534,914**
Total Project Expenditures	**$ 230,522**	**$ 185,753**	**$ 245,559**	**$ 256,865**	**$ 150,508**	**$ 14,276**	**$ -**	**$ -**	**$ -**		**$1,083,483**
Capital Funding Surplus/(Deficit)	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**		**$ -**

Source: MDTD Capital Book, F2 (revenue) and F5 (expense) Reports

8.4 Unfunded Needs for New Service Initiatives

MDT FY 2012 – FY 2021 TDP Annual Update is based upon four primary initiatives as identified by MDT that are currently unfunded, but which represent important areas of need to include:

- Bus route improvements, including modifications to existing routes and the introduction of new routes, which have both a capital cost component and an operating cost component;
- Additional Capital Improvement Program (CIP) projects that represent selective improvements to the existing transit network.

The estimated capital and operating costs to support these service expansion and capital investment initiatives between FY 2012 – FY 2021 are included. These unfunded project costs are presented in year-of-expenditure (YOE) dollars, according to the planned implementation schedules and inflation assumptions.

8.4.1 Bus Route Improvements

MDT has identified a number of service improvements to existing routes as well as the implementation of additional new routes based upon the availability of funding. The projected YOE costs of implementing these services are presented in Table 8-10. For all these replacement vehicles, a 20 percent (20%) vehicle spare ratio is assumed. Bus capital costs are assumed to be $680,000 per 40-foot diesel-electric hybrid vehicle and $950,000 per 60-foot diesel-electric hybrid vehicle in 2011 dollars.

Table 8-10: Proposed Bus Route Improvements (Unfunded)

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TOTAL
Existing Routes											
Operating Costs	$ 2.81	$ 4.71	$ 8.66	$ 9.16	$ 9.66	$ 9.66	$ 9.66	$ 9.74	$ 9.92	$ 9.92	**$ 83.90**
Capital Costs	$ 6.50	$ 3.60	$ 8.60	$ 2.20	$ -	$ -	$ -	$ -	$ 0.70	$ 0.70	**$ 22.30**
Total Existing	$ 9.31	$ 8.31	$ 17.26	$ 11.36	$ 9.66	$ 9.66	$ 9.66	$ 9.74	$ 10.62	$ 10.62	**$ 106.20**
New Routes											
Operating Costs	$ 1.85	$ 1.85	$ 4.25	$ 4.25	$ 5.58	$ 5.58	$ 5.58	$ 5.58	$ 5.58	$ 5.58	**$ 45.68**
JARC Funding Credit	$ (0.58)	$ (1.75)									**$ (2.34)**
Operating Funds Credit	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	$ (0.50)	**$ (5.00)**
Net Operating Cost	$ 0.77	$ (0.40)	$ 3.75	$ 3.75	$ 5.08	$ 5.08	$ 5.08	$ 5.08	$ 5.08	$ 5.08	**$ 38.34**
Capital Costs	$ 3.20	$ -	$ 11.90	$ 22.70	$ -	$ -	$ -	$ -	$ -	$ -	**$ 37.80**
TOTAL (Millons)	**$ 13.28**	**$ 7.91**	**$ 32.91**	**$ 37.81**	**$ 14.74**	**$ 14.74**	**$ 14.74**	**$ 14.82**	**$ 15.70**	**$ 15.70**	**$ 182.34**

Source: MDT; YOE capital costs assume a 0% annual cost inflation rate; YOE operating costs assume a 3.5% annual cost inflation rate. Note: Totals may vary due to rounding.

8.4.2 Capital Improvement Program Projects

MDT has identified four projects from the near-term Capital Improvement Program (CIP) that are important for the agency to achieve its service objectives. However, these projects are unfunded and should funding become available, these projects may be implemented around FY 2012, so that is the assumed implementation year shown here. Table 8-11 shows the unfunded capital cost associated with these CIP projects.

Table 8-11: Additional Capital Improvement Program (CIP) Projects (Unfunded) (millions)

Project Description	Total Cost (millions)
Flagler Market Place Transit Hub	$ 3.19
Electronic Information Kiosks at Dadeland Stations (North and South)	$ 0.05
North Corridor (NW 27th Avenue Enhanced Bus Service)	$ 27.03
East-West Corridor (SR 836 Express Enhanced Bus Service)	$ 24.56
TOTAL	**$ 54.83**

Source: MDT 2010

8.4.3 Total Unfunded Needs

MDT's total unfunded needs between FY 2012 – FY 2021 – covering bus service improvements, capital investment in priority travel corridors, and CIP projects – totals $237 million in YOE dollars.

Table 8-12: Total Unfunded Needs, FY2012-2021 (YOE millions)

Service Improvement Category	Total Funding Required FY12-20
Bus Improvements (Operating)	$ 122.2
Bus Improvements (Capital)	$ 60.1
CIP Projects (Capital)	$ 54.8
TOTAL UNFUNDED NEEDS	**$ 237.2**

Source: MDT 2010

Appendix

A.1 METROBUS SERVICE CHARACTERISTICS (DECEMBER 2010)

MDT METROBUS ROUTE HEADWAYS (December 2010)

ROUTE BRANCHES	PEAK (AM/PM)	OFF-PEAK (Midday)	EVENING (at 8 pm)	OVERNIGHT	SATURDAY	SUNDAY
1	30	40	70	n/a	40	40
2						
NW 2nd Avenue/ NW 79 Street	20	20	30	n/a	20	30
163rd Street Mall	60	60	55	n/a	n/a	n/a
3	18	18	30	60	15	20
6	60	60	n/a	n/a	60	60
7						
East of NW 60 Avenue	15	20	30	n/a	20	20
Dolphin Mall	30	40	30	n/a	40	40
8						
East of SW 57 Avenue	10	15	20	n/a	15	20
East of SW 82 Avenue	10/20	15	20	n/a	15	20
Westchester	n/a	n/a	n/a	n/a	15	20
FIU via SW 8 Street	30	30	n/a	n/a	n/a	n/a
FIU via Coral Way	30	30	30	n/a	n/a	n/a
9						
163rd Street Mall	12	30	30	n/a	30	30
Aventura Mall	24	30	60	n/a	30	30
10	30	30	30	n/a	30	30
11						
East of 79 Avenue	8	12	20	60	12	15
Mall of the Americas	16	24	40	60	24	30
FIU-University Park Campus	16	24	40	60	24	30
12	30	30	45	n/a	40	40
16	18	30	30	n/a	24	30
17						
Vizcaya	30	30	60	n/a	30	30
South of NW 95 Street & North of Flagler	15	30	60	n/a	30	30
NW 7 Avenue/105 Street	30	n/a	n/a	n/a	n/a	n/a
Norwood	30	30	60	n/a	30	30
19	24	24	40	n/a	n/a	n/a
21	30	30	60	n/a	40	40
22						
North of West Flagler Street	15	30	60	n/a	30	30
Coconut Grove Station	30	60	60	n/a	60	60
24						
Westchester	20	20	30	n/a	30	30
FIU-University Park Campus	40	40	30	n/a	60	60
SW 137 Avenue/26 Street	40	40	60	n/a	60	60
SW 147 Avenue/26 Street	40	n/a	n/a	n/a	n/a	n/a
27						
South of 183 Street	15	15	30	60	20	30
Calder via NW 27 Avenue	30	30	60	n/a	40	60
Calder via NW 37 Avenue	30	30	60	60	40	60
29	45	45	n/a	n/a	n/a	n/a
31 (Busway Local)	15	30	40	n/a	30	30
32	24	30	30	n/a	40	60
33	30	30	60	n/a	30	30
34 (Busway Flyer)	7½	n/a	n/a	n/a	n/a	n/a
35	30	30	60	n/a	60	60
36						
East of NW 57 Avenue	20	30	20	n/a	30	30
Doral Center	20/40	60	40	n/a	60	60
Miami Springs Circle	60	60	60	n/a	60	60
Dolphin Mall	60	60	40	n/a	n/a	n/a
37	30	30	30	n/a	30	30
38 (Busway MAX)	12	15	15	60	15	20
40						
East of SW 127 Avenue	15	30	40	n/a	60	60
SW 8 Street/SW 129 Avenue	30	60	60	n/a	n/a	n/a
Miller Drive/SW 152 Avenue	30	60	n/a	n/a	60	60

MDT METROBUS ROUTE HEADWAYS (December 2010)

ROUTE BRANCHES	PEAK (AM/PM)	OFF-PEAK (Midday)	EVENING (at 8 pm)	OVERNIGHT	SATURDAY	SUNDAY
42						
Miami Int'l Airport Terminal	15	30	60	n/a	30	30
South of NW 36 Street	15	30	n/a	n/a	30	30
Miami Springs Circle	30	60	n/a	n/a	60	60
Opa-locka Tri-Rail Station	30	60	n/a	n/a	60	60
46 (Liberty City Connection)	40	n/a	n/a	n/a	n/a	n/a
48	60	60	n/a	n/a	n/a	n/a
49	30	n/a	n/a	n/a	n/a	n/a
51 (Flagler MAX)	15	30	30	n/a	n/a	n/a
52	30	45	60	n/a	45	60
54						
Hialeah Gardens	25	25	30	n/a	30	40
Miami Gardens Drive/NW 87 Avenue	50	60	n/a	n/a	n/a	n/a
56						
East of SW 107 Avenue	30	60	48	n/a	n/a	n/a
MDC - Kendall Campus	60	n/a	n/a	n/a	n/a	n/a
Miller Road /SW 152 Avenue	60	60	n/a	n/a	n/a	n/a
57	40	60	n/a	n/a	n/a	n/a
62						
Dr. Martin Luther King, Jr. Station	10	15	30	n/a	20	30
Hialeah	30	30	30	n/a	20	30
Miami Beach	30	n/a	n/a	n/a	n/a	n/a
70						
South Dade Government Center	30	60	60	n/a	60	60
Saga Bay	n/a	60	n/a	n/a	60	60
71	30	60	50	n/a	60	60
72						
East of SW 137 Avenue	30	30	30	n/a	60	60
Miller Square	60	60	60	n/a	60	60
Kendall Drive/SW 162 Avenue	60	60	n/a	n/a	60	60
73	30	40	60	n/a	60	60
75	30	30	60	n/a	45	60
77						
South of NW 183 Street	8	15	30	n/a	15	30
NW 199 Street	15	30	30	n/a	30	60
79 (79 Street MAX)	24	n/a	n/a	n/a	n/a	n/a
87						
Koger Center	30	45	60	n/a	45	60
Palmetto Station	30	45	60	n/a	n/a	n/a
88						
East of SW 132 Avenue	20	30	30	n/a	24	30
Kendale Lakes	40	60	n/a	n/a	48	60
SW 162 Avenue/Kendall Drive	40	60	30	n/a	48	60
93 (Biscayne MAX)	20	30	n/a	n/a	n/a	n/a
95	5	n/a	n/a	n/a	n/a	n/a
97 (27 Avenue MAX)	20	45	n/a	n/a	n/a	n/a
99						
East of NW 47 Avenue	30	30	40	n/a	40	40
Miami Lakes	30	60	60	n/a	40	40
101 (Route A)	20	45	40	n/a	45	45
102 (Route B)						
East of Harbor Drive	10	30	30	n/a	30	30
Cape Florida State Park	15	60	30	n/a	60	60
Mashta Drive	60	60	n/a	n/a	60	60
103 (Route C)	20	20	30	n/a	20	30
104	24	60	60	n/a	60	60
105 (Route E)	30	45	60	n/a	50	50
107 (Route G)	30	30	60	n/a	30	30
108 (Route H)	24	24	40	n/a	30	30

MDT METROBUS ROUTE HEADWAYS (December 2010)

ROUTE BRANCHES	PEAK (AM/PM)	OFF-PEAK (Midday)	EVENING (at 8 pm)	OVERNIGHT	SATURDAY	SUNDAY
110 (Route J)	20	30	30/60	n/a	30	30
112 (Route L)						
Northside Station	12	12	20	60	15	20
Amtrak Station	24	24	60	n/a	sel	sel
Hialeah Station	24	24	20	n/a	30	40
113 (Route M)	45	60	60	n/a	60	60
115 (Mid-North Beach Connection CW)	45	45	n/a	n/a	60	60
117 (Mid-North Beach Connection CCW)	45	45	60	n/a	60	60
119 (Route S)	12	12	12	60	15	15
120 (Beach MAX)						
South of Collins Avenue/Haulover Park Entrance	12	12	30	n/a	15	30
Haulover Park Marina	24	24	n/a	n/a	30	n/a
Aventura Mall	24	24	30	n/a	30	30
123 (South Beach Local)	13	13	20	n/a	13	13
132 (Tri-Rail Doral Shuttle)	80/60	n/a	n/a	n/a	n/a	n/a
133 (Tri-Rail Airport Shuttle)	20/15	15	30	n/a	15/60	15/60
135						
East of LeJeune Road	20	30	30	n/a	60	60
Hialeah Station	40	60	70	n/a	60	60
Miami Lakes	40	60	70	n/a	n/a	n/a
136	60/45	n/a	n/a	n/a	n/a	n/a
137 (West Dade Connection)	30	45	60	n/a	40	45
150 (Airport Flyer)	30	30	30	n/a	30	30
183 (183 Local)						
East of NW 57 Avenue	12	20	20	n/a	20	24
Miami Gardens Drive/NW 87 Avenue	24	40	40	n/a	40	48
195 (I-95 Dade-Broward Express)	15	n/a	n/a	n/a	n/a	n/a
202 (Little Haiti Connection)	60	45	n/a	n/a	60	60
204 (Killian KAT)	7½	n/a	30	n/a	n/a	n/a
207 (Little Havana Connection CW)	15	20	n/a	n/a	20	20
208 (Little Havana Connection CCW)	15	20	20	n/a	20	20
211 (Overtown Circulator)	40	40	n/a	n/a	n/a	n/a
212 (Sweetwater Circulator)	n/a	30	n/a	n/a	n/a	n/a
238 (East-West Connection)	40/45	60	n/a	n/a	n/a	n/a
243 (Seaport Connection)	30	n/a	n/a	n/a	n/a	n/a
246 (Night Owl)	n/a	n/a	n/a	60	60ovn	60ovn
248 (Brickell Key Shuttle)	20	n/a	n/a	n/a	n/a	n/a
249 (Coconut Grove Circulator)	18	18	20/40	n/a	18	18
252 (Coral Reef MAX)						
East of SW 117 Avenue	15/20	60	50	n/a	60	60
Metrozoo	20	60	n/a	n/a	60	60
Country Walk	20	60	50	n/a	60	60
SW 162 Avenue	20/40	n/a	n/a	n/a	60	60
254 (Brownsville Circulator)	n/a	30	n/a	n/a	n/a	n/a
272 (Sunset KAT)	10	n/a	n/a	n/a	n/a	n/a
277 (7 Avenue MAX)	18	n/a	n/a	n/a	n/a	n/a
286 (North Pointe Circulator)	24	48	n/a	n/a	48	n/a
287 (Saga Bay MAX)	30	n/a	n/a	n/a	n/a	n/a
288 (Kendall Cruiser)	12	n/a	n/a	n/a	n/a	n/a
344	60	60	n/a	n/a	n/a	n/a
500 (Midnight Owl)	n/a	n/a	n/a	60	60ovn	60ovn

n/a = no service available or not applicable
Gray shaded cells are branches to routes
sel = selected trips only
ovn = overnight service only