



Miscellaneous Improvements Related to Rail Operations

6. Metromover Rehabilitation/Refurbishment (Phases I and II)

The Metromover Phase I Fleet of 12 rail cars went into service in 1986 with a life expectancy of 20 years. Continued use beyond the 20 year life would require extensive overhaul (remanufacturing); an engineering analysis determined that it was more cost effective to replace the Phase I cars in lieu of overhaul. In addition, during the contract negotiations with Bombardier, MDT determined that it would be technically and commercially advisable to replace the Phase 2 vehicles also in the same contract. The PTP amendment (R-1240-04) approved by the Board to replace the 12 Phase I cars was subsequently expanded by Board action (R-486-08) to include replacement of the remaining 17 Phase II vehicles.

The project is 90% complete overall (Phase I and II). All 12 Phase I replacement vehicles have been delivered, tested and commissioned to revenue service, February 2008 to April 2009. The option was included in the Phase I contract with Bombardier for the 17 Phase II vehicles, and Notice to Proceed was issued effective July 17, 2008. Delivery of the first two vehicles was July 2010. Fourteen vehicles have been delivered to date as of June 2012 (this is an additional four since June 2011). The remaining cars are manufactured and the last was delivered by September 2012; previously expected to complete delivery in April 2012 in FY12 Five Year Plan Update and mid-2011 in FY11 Initial Five Year Plan. Last vehicle is currently in acceptance testing. Expected acceptance completion is March 2013 with warranty projected to end March 2014.



Current estimate for total project cost remains at \$69.0 million (compared to \$75.4 million shown in FY11 Initial Plan) and \$64.7 million expended as of June 2012. Balance to complete Phase II is \$4.3 million of the \$37.462 million budgeted (same cost estimate as shown in FY12 Plan Update and reduced from FY11 Initial Plan \$38.196 million). Project includes 1 year warranty period, which is excluded from above implementation date. Following is more detailed information from Approved Capital Plan, for Phase II currently in progress.

From 2012-2013 Adopted Capital Plan

MOVER VEHICLES REPLACEMENT PHASE II (17 CARS)

PROJECT # 675590

Description: Replace 17 Metromover vehicles

LOCATION: Various

Various Sites

DISTRICT LOCATED: 5

ESTIMATED ANNUAL OPERATING IMPACT: Minimal

DISTRICT(S) SERVED: Countywide

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
PTP Bonds	37,333	129	0	0	0	0	0	0	37,462
TOTAL REVENUE:	37,333	129	0	0	0	0	0	0	37,462
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Equipment Acquisition	30,895	0	0	0	0	0	0	0	30,895
Project Administration	842	129	0	0	0	0	0	0	971
Project Contingency	1,524	0	0	0	0	0	0	0	1,524
Capital Maintenance	4,072	0	0	0	0	0	0	0	4,072
Total Expenditures:	37,333	129	0	0	0	0	0	0	37,462

Contract SS1908-0/7 (See Appendix for fuller listing of Trust-approved contracts)

7. Test Track for Metrorail

Due to budgetary constraints, the test track and additional storage tracks were not included in the Lehman Center facilities contract which was awarded prior to 1983. In 2002, the test track and storage tracks were included in MDT's Capital Improvement Plan approved by the Board for financing by the PTP Bond Program. A Metrorail test track is critically important to test railcar reliability and for acceptance testing of replacement vehicles. A 2,500 ft. test track with the ability to accelerate Metrorail vehicles to 38 mph is planned for the William Lehman Center Maintenance Facility. The length of the test track was reduced from the previously planned 4,000 feet and the County no longer needs to acquire additional land adjacent to the Lehman Center for this track construction. Once completed, the track will be used to test automatic train operations, program station stops and door operations, test propulsion systems, diagnose electric brake faults and perform safe brake testing. Also, the acceptance testing for new vehicles can be accomplished without affecting normal rail service operations. This project is necessary to provide the required test facility in support of the procurement of the new Rail Vehicle fleet with delivery beginning in second quarter of 2014. After acceptance of the new vehicles, the test track will be used for ongoing maintenance.

This project is overall 1% complete (based on amount expended out of total estimated cost). It will be implemented using a Design/Build Procurement method in conjunction with the Lehman Yard Rehabilitation-Expansion (Phase I) project (page 120, including description of Design/Build project scope). Total estimated cost increased to \$18.287 million (was \$16.6 million in FY11 Plan Update), about \$937,371 expended as of June 2012, and 100% PTP funded. A Test Track S&I Building and a Siding Track were added to the project by MDT Operations to facilitate the movement of vehicles to the Test Track from both ends of the S&I Building. Thus the cost estimate increased from the previous 2009 budget of \$12.23 million with timing deferred from April 2012. The original \$4 million cost estimate was revised to account for inflation among other costs. Project is currently in procurement (RFP advertisement was scheduled February 2010, actual June 2010, contract award November 2012) and Design/Build Firm Selection Phase is approximately 59% complete (as of June 30, 2011). The BCC awarded this contract November 2012, with project completion including testing and startup by October 2014 (previously was April 2013 in last year's Plan).

The following is more detailed information from 2012-2013 Adopted Capital Plan. The combined contract for Test Track and Yard Rehab is \$25.3 million and revised costs will be reflected in FY14 Capital budget.

From 2012-2013 Adopted Capital Plan

TEST TRACK FOR METRORAIL

PROJECT # 678220

DESCRIPTION: Construct a test track at the Lehman Center for Metrorail

LOCATION: 6601 NW 72 Ave, Unincorporated Miami-Dade County

DISTRICT LOCATED: 3

ESTIMATED ANNUAL OPERATING IMPACT: \$685

DISTRICT(S) SERVED: Countywide

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
PTP Bonds	7,614	7,959	2,714	0	0	0	0	0	18,287
TOTAL REVENUE:	7,614	7,959	2,714	0	0	0	0	0	18,287
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Construction	6,472	7,566	2,564	0	0	0	0	0	16,602
Construction Management	138	285	100	0	0	0	0	0	523
Project Administration	1,004	108	50	0	0	0	0	0	1,162
Total Expenditures:	7,614	7,959	2,714	0	0	0	0	0	18,287

Contracts: (See Appendix for fuller listing of Trust-approved contracts)

CIP028-CT1-TR09 Design-Build Services for the Lehman Center Test Track / Lehman Yard Rehabilitation - Expansion Phase 1

CIP030-CT1-TR09 Construction Engineering and Inspection Services for the Lehman Center Test Track, Palmetto Station Traction Power Sub-Station, Metrorail Central Control Upgrade and Lehman Yard Rehabilitation & Expansion Phase 1



MDT has identified the project's annual electrical cost estimate is \$480,000 (\$360,000 for Test Track, \$120,000 for Yard Rehab-Expansion, and identified the annual preventive maintenance and repair cost estimate is \$585,000 (\$325,000 for Test Track, \$260,000 for Yard Rehab-Expansion).

8. Station refurbishment

The original project was completed in FY2007. Station refurbishments include emergency bench repairs and refurbishment of station lighting, billboard lights, chain link fences, bathrooms, exit doors, roll-up gates, and automatic doors. The cost for this project was originally estimated at \$12 million, funded via \$3 million in Sunshine State Loans and \$9 million from the PTP. A total of \$12.2 million was expended on this project reflecting a \$6.122 million credit reconciling expenses in FY08.



Work is ongoing and includes repairs to damaged pole lights at bus bays, lighting in parking areas, fire sprinklers, Metromover tactile, Heating, Ventilation and Air Conditioning (HVAC) installation at train control and mechanical rooms, and miscellaneous repairs due to vandalism. The project is 5% complete based on \$503,000 expended out of total \$12M estimated cost. The \$11.5 million remainder is currently an unfunded project as part of the Infrastructure Renewal Plan (page 123).

The following is from the Unfunded Priority Needs section of the 2010 TIP. The project is not listed as a line item of Transit projects in the 2010 Capital Budget's Unfunded Needs.

MPO Project Num.	Facility/Project Name		Type of Work	Project Cost (\$000s)	Unfunded Projects		
Agency Project Num.	From/Location	To/Location	Remarks				
Detailed Project Description							
TA0000080	Metrorail Station Refurbishment		Maintenance	20	Activity /Phase	Required Project Funding by Phase (where available)	
	Systemwide	Systemwide	This was an approved PTP project. Due to budgetary con			(in \$000s)	
0000080	Refurbish metrorail stations and Lehman Center including emergency lighting, safety systems, restrooms, irrigation, landscape, benches, building systems and controls.						
					MNT	0	

The PTP included a number of renovation and refurbishment projects at Metrorail and Metromover Stations. These stations are over 25 years old and in need of capital investment to replace escalators, elevators, etc. The work on these projects has only been partially completed and the remainder is unfunded. The Trust had recommended for the 2011 Plan that a group of Rail/Mover Capital Improvements (these Metrorail Station Refurbishments, along with Metromover Station Canopies and Escalator Replacement for remaining one Inner Loop Metromover and 21 Metrorail stations [page 102]; Facilities Painting for remaining 30 of 43 total stations [page 101]; Metrorail Piers Grounding [page 105]; and Facilities Roof Project [page 109]) be prioritized in the upcoming budgeting and planning cycle by funding as capital projects within bonding and cash flow capacity, with plan to complete by 2016. The surtax impact in this period would include adding \$42.9 million to capital program and beginning 2014 slightly higher debt service. The capital increase is offset by some expenditure shifted from Miami-Dade Transit operating expenses.

9. Paint Facilities

This project is now an ongoing effort to maintain the appearance of Metrorail and Metromover stations and maintenance facilities as a long term customer focused priority. A painting program was established using in-house painters and purchasing materials, and to date MDT has painted the following stations: Bayfront, Brownsville, Civic Center, College North, Financial District, Freedom Tower, Knight Center, Martin Luther King, Jr., Overtown, Park West, Riverwalk, Tenth Street, Wilkie D. Ferguson, Earlington Heights, Culmer and Third Street (about 42%, 18 complete of 43 total stations).

The cost for this project was originally estimated at \$4 million as a one-time effort. The total expended to date is \$1.4 million as of June 2011. As this is now an ongoing project, the annual cost is approximately \$250,000 and will be funded in the MDT Operating Budget requiring several years to complete a first pass for the remaining 65% of stations. PTP funding under the unified transit system represents a portion of overall funding for MDT operations and maintenance since the March 2009 BCC approval Resolution R-222-09. For FY 2012-13, the total PTP funding established during the budget process was \$99,204,000, which is approximately 20 percent of MDT's total operating budget.

The 2003 PTP Amendment also included Metrorail and Metromover maintenance facilities. However, painting MDT's administrative facilities and maintenance garages is currently an unfunded project.

The following is from the Unfunded Priority Needs section of the 2010 TIP. The project is not listed as a line item of Transit projects in the 2010 Capital Budget's Unfunded Needs.

MPO Project Num.	Facility/Project Name		Type of Work	Project Cost (\$000s)	Unfunded Projects	
Agency Project Num.	From/Location	To/Location	Remarks			
Detailed Project Description						
TA0000076	Paint/Refinish Transit Facilities Systemwide			4,000	Activity /Phase	Required Project Funding by Phase (where available)
	Systemwide	Systemwide	The project was initially an approved PTP project. Due to			(in \$000s)
0000076	Paint and refinish transit facilities					MNT

The PTP included a number of renovation and refurbishment projects at Metrorail and Metromover Stations. These stations are over 25 years old and in need of capital investment to replace escalators, elevators, etc. The work on these projects has only been partially completed and the remainder is unfunded. The Trust had recommended for the 2011 Plan that a group of Rail/Mover Capital Improvements (this Facilities Painting for remaining 30 of 43 total stations, along with Metrorail Station Refurbishments [page 100]; Metromover Station Canopies and Escalator Replacement for remaining one Inner Loop Metromover and 21 Metrorail stations [page 102]; Metrorail Piers Grounding [page 105]; and Facilities Roof Project [page 109]) be prioritized in the upcoming budgeting and planning cycle by funding as capital projects within bonding and cash flow capacity, with plan to complete by 2016. The surtax impact in this period would include adding \$42.9 million to capital program and beginning 2014 slightly higher debt service. The capital increase is offset by some expenditure shifted from Miami-Dade Transit operating expenses.



10. Replace Escalators (Mover and Rail)

The escalators in 21 Metrorail Stations and the nine inner loop Metromover Stations are on average 18 years old. While the useful life of an escalator is approximately 25 years, major components have begun to fail and it is no longer feasible or economical to continue to overhaul the units. The County is planning to implement a comprehensive escalator replacement program to include installation of 66 waterproof, heavy duty transit escalators with state-of-the-art safety devices and to upgrade existing electrical facilities and interfaces.

For the inner loop stations, the scope of work for the Metromover Escalator Covers Replacement and New Canopies Project consists of the preparation of a complete set of bid documents and construction work required for the replacement of escalators and the installation of canopy covers over existing escalators/stairs at seven Metromover stations to include: Government Center Station, Miami Avenue Station, Bayfront Park Station, First Street Station, College/Bayside Station, College North Station and Wilkie D. Ferguson, Jr., Station. This subset of the project is funded by federal stimulus revenues as noted below.



The original cost for this project was \$4.7 million and has been revised to \$30 million (\$7.3 million funded for current phase at seven stations, \$22.7 million unfunded at 22 remaining stations) because of a change in project scope. The change in scope includes the installation of canopy covers and oil/water separators. Although the primary purpose of these canopies is to protect the mechanical components from the elements, they will also provide cover to commuters during inclement weather. Design is complete and construction Notice To Proceed issued January 2011 for the seven inner loop stations. The FY12 Capital Plan reflected project funding revised to be \$140,000 from PTP [IRP] and remainder ARRA. The project was 65% complete overall and total expended to date \$3,680,693, as of July 2012. Canopy installation began with Miami Avenue station in July 2011, and the seven-station project is expected complete by April 2013 (previously was September 2012 in FY12 Plan and November 2012 in FY11 Plan). For the remaining Metromover inner loop station and the 21 Metrorail stations, it remains currently an unfunded project.

Following is detailed information from 2012-2013 Adopted Capital Plan.

From 2012-2013 Adopted Capital Plan

METROMOVER STATION CANOPIES AND ESCALATOR REPLACEMENT

PROJECT # 672360

Description: Install canopies at Metromover stations and replace escalators

LOCATION: Various

City of Miami

DISTRICT LOCATED: 5

ESTIMATED ANNUAL OPERATING IMPACT: \$186

DISTRICT(s) SERVED: Countywide

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
FTA Section 5307/5309 Formula Grant	6,764	386	0	0	0	0	0	0	7,150
Total Revenue:	6,764	386	0	0	0	0	0	0	7,150
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Construction	5,958	0	0	0	0	0	0	0	5,958
Project Administration	452	21	0	0	0	0	0	0	473
Project Contingency	354	365	0	0	0	0	0	0	719
Total Expenditures:	6,764	386	0	0	0	0	0	0	7,150

The following is from the Unfunded Priority Needs section of the 2011 TIP. The project is not listed as a line item of Transit projects in the 2010 Capital Budget's Unfunded Needs.

MPO Project Num.	Facility/Project Name		Type of Work	Project Cost (\$000s)	Unfunded Projects			
Agency Project Num.	From/Location	To/Location	Remarks					
Detailed Project Description								
TA0000056	Metrorail Canopies		Purchase and Installation of Metrorail Canopies		3,200	Activity /Phase	Required Project Funding by Phase (where available)	
			This project was defunded based on FDOT Variance Rep					
0000056	Plan and install canopies at metrorail stations which will extend to bus stops.						(in \$000s)	
						PLN	0	
						PLN	0	

The PTP included a number of renovation and refurbishment projects at Metrorail and Metromover Stations. These stations are over 25 years old and in need of capital investment to replace escalators, elevators, etc. The work on these projects has only been partially completed and the remainder is unfunded. The Trust had recommended for the 2011 Plan that a group of Rail/Mover Capital Improvements (these Metromover Station Canopies and Escalator Replacement for remaining one Inner Loop Metromover and 21 Metrorail stations, along with Metrorail Station Refurbishments [page 100]; Facilities Painting for remaining 30 of 43 total stations [page 101]; Metrorail Piers Grounding [page 105]; and Facilities Roof Project [page 109]) be prioritized in the upcoming budgeting and planning cycle by funding as capital projects within bonding and cash flow capacity, with plan to complete by 2016. The surtax impact in this period would include adding \$42.9 million to capital program and beginning 2014 slightly higher debt service. The capital increase is offset by some expenditure shifted from Miami-Dade Transit operating expenses.



11. Replace Elevators (Mover and Rail stations and at MDT's bus facilities)

As with the escalators described above, it has become uneconomical to continue to overhaul these 18 year old units. The planned elevator replacement program will include design and installation of state-of-the-art transit quality elevators and required electrical interface upgrades. The original estimate for this project was \$2.9 million, which has been revised to \$8.1 million as a result of rapidly increasing costs. When the PTP amendment was approved in 2003, the installation of a new elevator was estimated to cost \$100,000. The average replacement cost in FY 2009-10 was approximately \$400,000 per elevator. Therefore, to minimize cost while optimizing service life, the project now entails replacing major wear components such as the custom made cab, seals and motors, and refurbishing the shaft and other items.

Since 2003, the following cabs have been replaced: School Board, Omni, Eleventh Street, Park West, Freedom Tower, College/Bayside, Riverwalk, Bayfront Park and Douglas Road overpass #1 & #2. Since 2005, the following cab platforms were replaced: First Street, Eighth Street, Financial District, Tenth Street, College North and Government Center #3. Project is approximately 10% complete and total amount expended to date is \$652,000. The new estimated project completion date is FY 2035. It is funded from MDT Operations budget instead of as a separate item in the Approved Capital Plan. For FY 2012-13, the total PTP funding established during the budget process was \$99,204,000, which is approximately 20 percent of MDT's total operating budget.



The following is from the Unfunded Priority Needs section of the 2010 TIP. The project is not listed as a line item of Transit projects in the 2010 Capital Budget's Unfunded Needs.

MPO Project Num.	Facility/Project Name		Type of Work	Project Cost (\$000s)	Unfunded Projects	
Agency Project Num.	From/Location	To/Location	Remarks			
Detailed Project Description						
TA0000078	Replace Elevators		Procurement and Installation	6,170	Activity /Phase	Required Project Funding by Phase (where available)
	Systemwide	Systemwide	This project was a PTP approved project. Due to budget			
0000078	Replace and/or refurbish elevators at 21 metrorail stations, nine inner loop metromover stations, Coralway and Northeast facilities.					(in \$000s)
					OTHER	0

12. Guideway Painting

This includes painting of all steel girders on the Metrorail (total estimated cost \$17.4 million) and the entire original loop of the Metromover (\$12.7 million). These structures have been in service for more than 23 years and have only received remedial touch-up painting. The Long Term Painting for Metromover extensions (\$10.61 million for Brickell, \$9.68 million for Omni) are currently unfunded IRP projects, see page 123. The Short Term Painting for Metromover Brickell is included with the Metrorail Piers Coating component of the Track and Guideway Rehabilitation Subset, as discussed in following item.

13. Metrorail Piers Grounding

This project was originally a separate line item in the 2003 PTP Amendment. This is a system reliability issue. Metrorail train tracks and the guideway are electrically isolated. Testing needs to be performed to prevent deterioration of the guideway and the utilities (metal piping) to assure system integrity and lightning protection. Testing should be performed on a 4 to 6 year cycle and corrective work performed. The project is not yet started and total cost is now revised to \$5.0 million (previously estimated \$2.5 million). It is an unfunded item, Conduit Grounding Rebuild (Infrastructure Renewal Plan on page 123) , estimated to take two years to implement.

The PTP included a number of renovation and refurbishment projects at Metrorail and Metromover Stations. These stations are over 25 years old and in need of capital investment to replace escalators, elevators, etc. The work on these projects has only been partially completed and the remainder is unfunded. The Trust had recommended for the 2011 Plan that a group of Rail/Mover Capital Improvements (this Metrorail Piers Grounding project, along with Metrorail Station Refurbishments [page 100]; Metromover Station Canopies and Escalator Replacement for remaining one Inner Loop Metromover and 21 Metrorail stations [page 99]; Facilities Painting for remaining 30 of 43 total stations [page 98]; and Facilities Roof Project [page 106]) be prioritized in the upcoming budgeting and planning cycle by funding as capital projects within bonding and cash flow capacity, with plan to complete by 2016. The surtax impact in this period would include adding \$42.9 million to capital program and beginning 2014 slightly higher debt service. The capital increase is offset by some expenditure shifted from Miami-Dade Transit operating expenses.

14. Track and Guideway Rehabilitation (formerly known as Guideway Painting/Refurbishment)

Several projects are now combined into a single grouping, which rehabilitates existing track and guideway equipment and fixtures. Total cost is \$45.699 million (revised slightly downward from previous \$46.786 million), funded solely by Surtax. Total expended as of June 2012 is \$20.55 million (\$25.2 M balance to complete). There are several components of this subset, each described further below, and all work performed by MDT staff. Two were originally a separate line item in the 2003 PTP Amendment: Metrorail Piers Coating; and Replacement of Metal Acoustical Barrier Panels. The remaining components were the original Guideway Refurbishment item: Coverboard Replacement, Palmetto Yard Road Crossing & Mainline Replacement, Mainline Miter Joint Replacement, Rail Fastener Replacement and Seal Gland Rehabilitation. (Note, cost estimates for individual components may be reallocated year to year within the \$45.7 million total.)

Metrorail Piers Coating- This project was a separate Amendment line item and is now included as part of the Track & Guideway Rehabilitation Subset. It entails the cleaning and coating of Metrorail piers, which are the vertical concrete columns supporting the concrete or steel girders and rail tracks. Coating will restore and improve the aesthetics of the structure and protect the concrete and reinforcement steel from deterioration. The Metrorail guideway has been in service since 1984 and is starting to weather and show its age. In addition to recoating the structure, drains will also be repaired to minimize guideway staining and facilitate easier removal of graffiti, mold and mildew. The long term project is not yet started and





total cost is \$4.3 million (estimate revised downward from \$5.0 million shown in FY12 Plan Update and FY11 Initial Plan). Expected completion is FY2016.

In addition, this item includes the Metromover Brickell extension short term painting project, which is to repaint the exterior areas of the steel girders and piers of the guideway and achieve an aesthetically acceptable appearance that will last until the guideway is repainted by a contractor, which is expected in approximately three years. The Brickell painting began July 2010 and was completed February 2011. Total expended as of June 2012 is about \$878,381 (\$3.4 million balance to complete).

Acoustical Barrier Replacement- This project was originally a separate line item in the 2003 PTP Amendment and is now included as part of the Track & Guideway Rehabilitation Subset. There are approximately 12,000 feet of metal acoustic barrier panels on the Metrorail guideway that have been in place since the beginning of passenger service. These panels act as sound barriers between the train and adjacent properties to ensure sound levels are within the acceptable limits set by cities and the County. The metal barrier connections are rusting and the panels need to be replaced for aesthetic and safety reasons. Acoustic barriers and hardware will be upgraded and an additional 8,000 feet will be installed in specific areas identified by Planning and Development (P&D) noise study to bring to total length of the noise barrier to 20,000 feet. Project is 15% complete with \$10,468 expended as of June 2012 of \$2.7 million total cost (\$2.69 m remaining). The cost estimate is slightly increased from \$2.5 million shown in FY12 Plan Update and FY11 Initial Plan.) Status is unchanged versus FY12 Plan: currently preparing bid package for materials, in house forces to perform the work. Scheduled completion remains September 2015.

Coverboard replacement - of safety items on curves that have deteriorated. Includes procurement of 53.3 miles of new coverboard and brackets, 28,150 insulators, and 800 hurricane anchors to be installed by in-house forces. Specification and bid package for material was completed March 17, 2007, and coverboard installation is underway (for example, completed Tracks 1 & 2 between I-95 and Culmer). Project remains 27% complete as shown in FY12 Plan Update (8 miles of 54 total), with \$3.23 million expended to date (\$13.16 million remaining) as of FY2012 and total cost revised estimate at \$16.4 million (revised downward slightly from \$17.0 million estimate shown in FY11 and FY12 Plans). Completion expected September 2014; completion was expected September 2013 in FY11 and FY12 Plans.

Palmetto Yard Road Crossing and Mainline Replacement – This project is to replace 32 at-grade road crossings, six mainline access crossings, and five concrete crossings in the Palmetto Yard. It was completed March 2011 (ahead of December 2011 expected per FY11 Plan), at \$2.1 million total cost (compared to previously estimated \$2.7 million in FY12 Plan Update and \$2.7M in FY11 Plan). All 32 road crossings in the Palmetto Yard are complete and the most cost effective material was selected and used for mainline crossing

Rail Fastener Replacement - Replacement of 50,000 rail fasteners and shims in mainline curves including core drilling and replacing anchor bolt inserts. This replacement is critical to maintain the mandated track safety standards established by MDT through FTA's approval. Material bid package completed December 2006 with in house forces performing the work. Replacement started August 2007 and is currently 60% complete (30,360 fasteners installed, or 6,478 more than reported in FY12 Plan). Of \$15.0 million total cost, \$11.12 million expended to date or \$3.74 million remaining. Completion is anticipated for September 2014 as of April 2013 status (FY12 Plan showed September 2013 expected completion).



Seal Gland Rehabilitation - The primary objective of the seal gland rehabilitation project (currently 45% complete, same as reported in FY12 Plan Update) is to ensure that rainwater does not intrude into the stations. This is accomplished by replacing the seal glands and clearing drains. Once the stations are watertight, the guideway will require the same work. Material bid package completed September 2007. Work began in January 2007; employees were hired and trained including five Structural Repairers. To date, all guideway transverse seal glands have been cleaned; \$1.985 million expended as of June 2012 (\$1.87 million remaining) of \$3.9 million total cost, as estimate increased from \$3.500 shown in FY11 Plan Update. Current completion date is December 2013 as of April 2013 project status; expected completion date was September 2012 in FY11 and FY12 Plans.

Mainline Miter Joint Replacement– This project was to replace (168) Standard Insulated Joints at stations with Mitered Insulated Joints to increase service life at joints including 56 to 60 rail fasteners and shims to level the joints. The standard joints required constant maintenance and are very noisy, while the mitered joints require no maintenance and create low noise. The mitered joints also increase the reliability of the system with fewer Train Control circuit problems. Total project cost was approximately \$601,000. This work was completed September 2008;

replacement equipment also now on hand in inventory.

Following is detailed information for this subset From 2012-2013 Adopted Capital Plan.

From 2012-2013 Adopted Capital Plan

TRACK AND GUIDEWAY REHABILITATION

PROJECT # 6710900

LOCATIONS: Various Sites

DISTRICT LOCATED: 2, 3, 5, 6, 7, 12, 13

ESTIMATED ANNUAL OPERATING IMPACT: Minimal

DISTRICT(s) SERVED: Countywide

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
PTP Bonds	25,284	7,430	5,911	5,549	1,525	0	0	0	45,699
Total Revenue:	25,284	7,430	5,911	5,549	1,525	0	0	0	45,699
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Planning and Design	1,864	0	0	0	0	0	0	0	1,864
Construction	13,890	4,459	3,459	2,924	540	0	0	0	25,272
Equipment Acquisition	968	385	320	260	51	0	0	0	1,984
Project Administration	8,563	2,586	2,131	2,365	934	0	0	0	16,579
Total Expenditures:	25,285	7,430	5,910	5,549	1,525	0	0	0	45,699



15. Replace Rail Vehicle Wash

This project has been completed. The project entailed replacement of the Metrorail vehicle wash system at the Lehman Center maintenance facility. The old automatic wash was inoperable and required extensive repairs. The project cost approximately \$150,000 (previously was identified as \$1 million), funded by the PTP Surtax.

16. Rail F & G Inspections

This project is considered complete. Thorough periodic maintenance inspection of the 136 railcars (68 married pairs) is required to increase reliability and ensure passenger comfort. F and G Inspections are comprehensive vehicle maintenance inspections that are required every four and eight years respectively. To date, 32 pairs of railcars have undergone a G-Inspection and 58 pairs of railcars have undergone an F-Inspection. Vehicles in the fleet have exceeded the mileage and interval for the G-Inspection which includes braking systems; Heating, Ventilation and Air Conditioning (HVAC) equipment; couplers; gearboxes and wheels. Mean Distance between Disruptions for the 28-year old fleet was 43,041 miles in FY12.

Through MDT's regular maintenance cycles all the major components of the F & G inspection are addressed. The overhauls include the braking systems; doors; Heating, Ventilation and Air Conditioning (HVAC) equipment; couplers; draft gears; truck components including the gearboxes; traction motors; tread brake actuators; parking brake portions; axles; journal bearings and wheels. Equipment overhaul is performed by personnel at William Lehman Center with the assistance from selected outside vendors. Several campaigns that MDT has performed have also addressed F & G inspection components. Most recently the fleet has undergone an OEM vendor HVAC overhaul, performed to increase HVAC reliability and passenger comfort. Due to budget limitations the prescribed F & G inspections were halted after 58 pairs having undergone a complete four year, F-PM inspection and 32 pairs of rail cars having undergone a complete 8-10 year, G-PM inspection.

The cost of the project was \$2.7 million. Funding included \$54,250 in Sunshine State loans and \$2.6 million from the PTP Surtax revenues. The remaining 10 pairs of F-Inspections and 36 pairs of G-Inspections are not planned in light of improved maintenance results and approaching delivery of replacement rail vehicles (see page 112) in only a few years.

17. Facilities Roof Project

This project ,now 77% complete (same as FY11 and FY12 Plans) based on amount expended of current estimated total cost, involved ongoing replacement of roofs, upgraded lightning protection and sealing of skylights at all Metrorail Stations and other facilities. The project was halted because of Hurricanes Katrina and Wilma after roof replacements except lightning protection were completed at several facilities. Primarily the lightning protection remains in process to complete all station post-hurricane roof repairs and replacements.

The original cost for this project was \$6.5 million which has since been revised to \$7 million. As of end of FY2010, \$5.4 million has been expended. Total of \$6.0 million is funded for this project (Sunshine State Loans totaling \$201,000 and \$5.8 million from the PTP Surtax). The remaining \$1.0 million is currently an unfunded need, however proposed for next year's IRP in addition to the following roof project.

Note the scope of the above project excludes the Bus Roofs project included in IRP (see page 123). The original scope of work for the IRP project was for a contractor to furnish and install new roofing at the Central Bus Garages and Offices; A/C and fan roof curbs to be resealed and insulated. Some roof ventilators and curbs may be necessary to replace as part of this project. The current cost estimate is \$300,000 and is currently 0% complete (both unchanged from FY11 and FY12 Plans). Scope of work is in the process of being evaluated and to match allocated funds.

The following is from the Unfunded Priority Needs section of the 2010 TIP. The project is not listed as a line item of Transit projects in the 2010 Capital Budget's Unfunded Needs.

MPO Project Num.	Facility/Project Name		Type of Work	Project Cost (\$000s)	Unfunded Projects	
Agency Project Num.	From/Location	To/Location	Remarks			
	Detailed Project Description					
TA0000075	Transit Facilities Roof Replacement		Construction	6,000	Activity /Phase	Required Project Funding by Phase (where available)
	Systemwide	Systemwide	This project was an approved PTP project. Due to budget			
0000075	Replace roofs on transit facilities including metrorail, metromover and bus facilities.					
					(in \$000s)	
					CST	2,657

The PTP included a number of renovation and refurbishment projects at Metrorail and Metromover Stations. These stations are over 25 years old and in need of capital investment to replace escalators, elevators, etc. The work on these projects has only been partially completed and the remainder is unfunded. The Trust had recommended for the 2011 Plan that a group of Rail/Mover Capital Improvements (this Facilities Roof Project, along with Metrorail Station Refurbishments [page 100]; Metromover Station Canopies and Escalator Replacement for remaining one Inner Loop Metromover and 21 Metrorail stations [page 102]; Facilities Painting for remaining 30 of 43 total stations [page 101]; and Metrorail Piers Grounding [page 105]) be prioritized in the upcoming budgeting and planning cycle by funding as capital projects within bonding and cash flow capacity, with plan to complete by 2016. The surtax impact in this period would include adding \$42.9 million to capital program and beginning 2014 slightly higher debt service. The capital increase is offset by some expenditure shifted from Miami-Dade Transit operating expenses.



18. Fare Collection System Replacement

This project is complete (not including closeout installation of fire panels). The new Automated Fare Collection System (AFCS) – EASY Card, was implemented on October 1, 2009. The EASY Card is a smart-card based system installed on the Metrobus fleet and at the Metrorail Stations for significant customer convenience. The AFCS meets the needs of the present fare structure with sufficient flexibility for future service. More information is available also about passenger movements, allowing MDT to refine its services, offer loyalty products and fight fraud. The system accepts cash and credit cards to purchase an EASYCard or EASY ticket at Ticket Vending Machines, Point of Sale locations or on-line. The new system utilizes new fareboxes for all Metrobuses, new faregates installed at all Metrorail stations, new revenue island equipment and computers at the garages and a new consolidated backend computer system. The system features open-ended architecture that will accommodate future integration with other local transportation agencies. The AFCS also has an Automatic Passenger Counter (APC) capability on all buses and at all Metromover stations. The system will also provide boarding and alighting data by bus stop. The AFCS ensures improved ridership data accuracy and enables MDT to better allocate resources and improve service planning. The new system is also expected to reduce fare evasion and fraud. Total cost as reflected in the FY13 Capital Plan is \$60.65 million, reflecting the fire panels now shown as a separate \$3.0 million Capital Budget project. Total expended is \$58.95 million, and remaining balance reflects pending closeout items.



From 2012-2013 Adopted Capital Plan

FARE COLLECTION EQUIPMENT

LOCATIONS: Various Sites

DISTRICT LOCATED: 2,3,5,6,7,12,13

ESTIMATED ANNUAL OPERATING IMPACT: \$355

DISTRICT(s) SERVED: Countywide

PROJECT # 6730051

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
PTP Bonds	59,154	1,494	0	0	0	0	0	0	60,648
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Planning and Design	2,671	0	0	0	0	0	0	0	2,671
Construction	65	0	0	0	0	0	0	0	65
Furniture, Fixtures & Equip.	1	0	0	0	0	0	0	0	1
Equipment Acquisition	44,478	1,494	0	0	0	0	0	0	45,972
Project Administration	11,939	0	0	0	0	0	0	0	11,939
Total Expenditures:	59,154	1,494	0	0	0	0	0	0	60,648



From 2012-2012 Adopted Capital Plan

FIRE ALARM INSTALLATION AT RAIL STATIONS

PROJECT #673050

Description: Upgrade and replace the existing fire alarm panels at all Metrorail Stations with new SIMPLEX panels

LOCATION: Various-Miami-Dade County

DISTRICT LOCATED: 2,3,5,6,7,12,13

ESTIMATED ANNUL OPERATING IMPACT: Minimal

DISTRICT(s) SERVED: Countywide

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
PTP Bonds	1,500	1,500	0	0	0	0	0	0	3,000
Total Revenue:	1,500	1,500	0	0	0	0	0	0	3,000
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Construction	1,253	1,253	0	0	0	0	0	0	2,506
Project Administration	34	34	0	0	0	0	0	0	68
Project Contingency	180	180	0	0	0	0	0	0	360
Construction Management	33	33	0	0	0	0	0	0	66
Total Expenditures:	1,500	1,500	0	0	0	0	0	0	3,000

Note:

The PTP allocation for the Fire Alarm Installation at Rail Stations was originally under the above Fare Collection Equipment Installation – PG109 – OMB Project 6730051. The project consists of upgrading and replacing the existing fire alarm panels at all rail stations with new Simplex Panels.

19. Upgrade Illumination

This project involves improvements to, and replacement of the lighting system for existing Metrorail stations and parking garages. Station and parking facility lighting will be upgraded to newer energy efficient systems that provide better illumination and require less maintenance. There are two phases to this project. Phase 1 was to install new lamps at all Metrorail Stations and was completed. Phase 2 of this project is included in the IRP (page123), and scope is full replacement of lamps with either Light Emitting Diode (LED) or induction lighting for four Metrorail garages (Okeechobee, Martin Luther King, Jr., Dadeland North, South Miami) and one Metrobus Park and Ride (SW 244th Street). This project is separate from another proposal for LED replacements of all the Metrorail lighting fixtures at an estimated cost of \$7.5 million, which continues as currently an unfunded need.

Originally, the project was estimated to cost \$2.9 million and has been revised to cost \$2.7 million. The project is 56% completed and total expenditure is \$1.5 million (statuses unchanged from FY12 5 Year Plan Update).



20. Rail Midlife Rehabilitation (now Rail Vehicle Replacement)



This project originally involved mid-life (15-year) rehabilitation of 136 Metrorail vehicles which is past due. The existing vehicles and subsystems are more than 20 years old and parts are becoming obsolete and more difficult to obtain. Fleet modernization will include rebuilding and/or replacement of existing components and systems with newer technology.

However, the County began evaluating whether to replace the rail cars as opposed to completing mid-life rehabilitation and opted to purchase new car as opposed to rehabilitating the older units. This was after a careful review of the results of the Railcar Rehabilitation negotiations and undertaking a

thorough assessment of the marketplace in regard to new versus rehabilitated vehicles. Factors considered in this analysis included: the impact on existing service; the need for additional new vehicles for the planned Metrorail extensions; market options for providing the County the best rail service possible; a life cycle cost comparison of new versus rehabilitated vehicles; and cost factors related to maintenance and parts inventory showed that the procurement of new vehicles in lieu of rehabilitation would represent the best value procurement option for the County.

The selection process for the Rail Midlife Rehabilitation project (RFP-439) included negotiations with the top ranked proposer to obtain a Best and Final Offer (BAFO), which concluded in 2006 with a final price offer of \$274,495,000 or \$2.018 million per vehicle. A careful review of the negotiations results was conducted, along with a thorough assessment of the rail industry marketplace. County staff also conducted an evaluation of Miami Dade Transit's (MDT) existing rail service performance, future requirements for rail vehicles for the planned Metrorail extensions, as well as a life cycle cost analysis to ascertain whether it was more cost effective to continue the rehabilitation or purchase new replacement vehicles. The results of these analyses were detailed in a memorandum to the Board and resulted in the Board's approval on March 18, 2008 to reject all bids received for RFP 439.

A PTP amendment to approve the procurement of new rail vehicles in lieu of rehabilitation was approved by the Board on May 6, 2008 with the requisite funding (a not to exceed ceiling of \$401.5 million). The Request for Proposals (RFP No. 654) was issued March 31, 2009. Railcar manufacturers Alstom, AnsaldoBreda, and CAF submitted proposals on September 25, 2009. MDT Project Team reviewed proposals, and a County Mayor award recommendation was scheduled to be presented to the Trust and the Board late 2011. The County recommendation was to award the contract to AnsaldoBreda (an Italian affiliated company). The second bidder, CAF-USA (a Spanish affiliated company) filed a protest against the then County Manager's recommendation. A hearing was held by the County and the Hearing Examiner ruled in favor of the County. CAF then appealed the Hearing Examiner's ruling to the FTA. In November 2011, the FTA ruled that the County violated Federal procurement rules when it considered the location of the final assembly plant and its local job creation benefits in the Railcar procurement. The Mayor mandated the reconvening of the Selection Committee to "consider the BAFO (Best and Final Offer) proposals, and instruct them to carefully review the BAFO in accordance with FTA instructions". The Selection Committee reconvened on December 6, 2011, and their recommendation to the Mayor after reviewing the BAFO proposals retained AnsaldoBreda for award.

The County will purchase a total of 136 new cars, as the eight additional cars are no longer operationally required that were part of the Orange Line extension (PTP Exhibit 1 project item 15 page 49). NTP was issued by MDT Director on 12/13/12. Project was 22% complete as of June 2012, with \$28.0 million expended to date. Delivery

scheduled beginning with six pilot vehicles in the 2nd Quarter of 2015, followed after acceptance of the pilot vehicles by six per month through the 1st quarter of 2018. Project completion including 5 year warranty period is July 2023, per April 2013 status. Timing later than shown in FY12 PTP Five Year Plan Update (deliver initial six April 2014, six per month through March 2017, 5-year warranty period until May 2022) was due primarily to resolving bid protests, re-evaluation of BAFO submittals, and revisions to the award recommendation document as discussed above. The FY11 Plan showed vehicle delivery November 2013 to March 2019, and did not note the warranty period.

The project is 22% complete overall, including for time during solicitation phase; it is 5% accounting only as of NTP.

The MDT test track essential for overall rail operations will support vehicle acceptance testing and is discussed under PTP amendment project item 7 on page 99. The rehabilitation and expansion necessary to provide storage capacity and transition process facility supporting the vehicle procurement is discussed under PTP post-unification project item 2 on page 120. The new vehicles are more sensitive to the existing marginal third rail voltage and low power at the Palmetto Station, and PTP post-unification project item 6 on page 128 describes the Traction Power Substation required for correcting the low voltage situation.

Current \$375.8 million cost estimate (same as FY12 Plan Update and significant reduction from previous \$407 million budgeted amount shown in FY11 Initial Five Year Plan) with \$348.6 million. A Letter of No Prejudice for \$300 million, that is valid until November 19, 2014, has been received from the FTA and allows the County to apply for federal funding after contract award.

The original Orange Line project included eight additional Metrorail cars to be procured at the same time as the replacement of the existing 136 car Metrorail fleet. The Trust had recommended for the 2011 Plan that the County carefully consider adding the additional railcars as an option to the current railcar procurement (to hedge against potential long term risks such as capacity to handle increased ridership on operating characteristics), pending determination that this is legally permissible and will not adversely affect the current procurement process. The County Attorney's Office advised that adding the option for eight additional cars is a material change to RFP specifications and thus not permissible. Lacking the option is a potential concern; adding the cars in the future may not be possible or possible only at a significant increase in cost.

From 2012-2013 Adopted Capital Plan

RAIL VEHICLE REPLACEMENT

DESCRIPTION: Overhaul and modernize existing fleet and purchase 136 new heavy rail vehicles

LOCATION: Unincorporated Miami-Dade County

PROJECT # 6733001

DISTRICT LOCATED: Countywide

ESTIMATED ANNUAL OPERATING IMPACT: \$500

DISTRICT(s) SERVED: Countywide

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
PTP Bonds	59,176	25,881	39,552	75,986	106,033	56,510	698	11,950	375,786
Total Revenue:	59,176	25,881	39,552	75,986	106,033	56,510	698	11,950	375,786
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Equipment Acquisition	26,900	20,548	31,757	62,169	96,839	51,707	0	8,967	298,887
Project Administration	15,971	3,773	5,596	10,337	4,432	2,390	698	2,749	45,946
Project Contingency	2,119	1,160	1,799	3,166	4,762	2,413	0	234	15,653
Capital Maintenance	14,186	400	400	314	0	0	0	0	15,300
Total Expenditures:	59,176	25,881	39,552	75,986	106,033	56,510	698	11,950	375,786



21. Enhancements (Central Control Modernization)

The existing Central Control facility consists of 20-year old obsolete electromechanical controls with no capacity for expansion. This modernization project will provide a modern, expandable Central Control facility with state-of-the-art computers and projection screens. The initial project was to cost the County \$14.5 million for Metrorail systems only. The revised scope includes installation of a system wide facility encompassing buses and Metromover which increased the project cost to \$32.4 million. Funding includes FDOT and PTP Funds. This project is currently 15% complete (\$3.48 million expended and \$28.3 million remaining as of June 2012 based on previous \$31.78 million budget). Advertisement was in May 2010. In November 2011, Board and Trust approved Mayor's Recommendation to Award. Construction, testing and startup estimated to complete by July 2014 (previously anticipated June 2013).

This project is for the complete overhaul and modernization of the Metrorail Control Center (MRCC) with control and movement of the trains, control of power to the trains, and communications and data between the stations and Control Center. The upgrade will replace obsolete hardware and software, and add remote redundancy at Lehman Yard



facility to minimize risk of failure which would impact the safety, management and supervision of the Metrorail System operation. This project will integrate the Orange Line (PTP Exhibit 1 project item 15-page 49) with the existing mainline (Green Line) as one unified system. A single system display showing the location of the trains will be provided. The new display will allow MDT to make changes or add additional lines without hardware expansion. Another upgrade feature is the ability of the trains to communicate with Central Control in real time. This feature is required since MDT will be operating multiple lines. Additionally it integrates with the public address and variable messaging sign systems at the stations. Also included is the development of existing office space to accommodate the modernization of the existing Central Control facility and systems. The modernization includes the heating, ventilation and air conditioning (HVAC) system on Government Center 3rd, 4th, and 5th floors, workstations, power distribution units, uninterruptible power supplies, electrical systems, existing systems hardware and software, design, construction and necessary equipment for the Control Center. The contract includes a three year warranty period, however excludes an option for a five-year renewal period identified in the solicitation (because the County will own the source code and perform its own maintenance and support – a significant cost savings). The updated project cost will be reflected in next year's Capital Budget and PTP Five Year Plan.

From 2012-2013 Adopted Capital Plan

CENTRAL CONTROL OVERHAUL

PROJECT # 6733181

LOCATION: 111 NW 1 St
City of Miami

DISTRICT LOCATED: 5
DISTRICT(S) SERVED: Countywide

ESTIMATED ANNUAL OPERATING IMPACT: Minimal

Revenue Schedule	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
FDOT Funds	2,686	0	0	0	0	0	0	0	2,686
PTP Bonds	11,854	11,740	0	0	0	0	0	0	23,594
Total Revenue:	14,540	11,740	0	0	0	0	0	0	26,280
Expenditure Schedule:	Prior Years	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Future	Total
Construction	10,424	7,519	0	0	0	0	0	0	17,943
Furniture, Fixtures & Equip.	784	0	0	0	0	0	0	0	784
Construction Management	270	2,623	0	0	0	0	0	0	2,893
Project Administration	3,062	1,598	0	0	0	0	0	0	4,660
Total Expenditures:	14,540	11,740	0	0	0	0	0	0	26,280

Contract (See Appendix for fuller listing of Trust-approved contracts)

CIP030-CT1-TR09 Construction Engineering and Inspection Services for the Lehman Center Test Track, Palmetto Station Traction Power Sub-Station, Metrorail Central Control Upgrade and Lehman Yard Rehabilitation & Expansion Phase 1

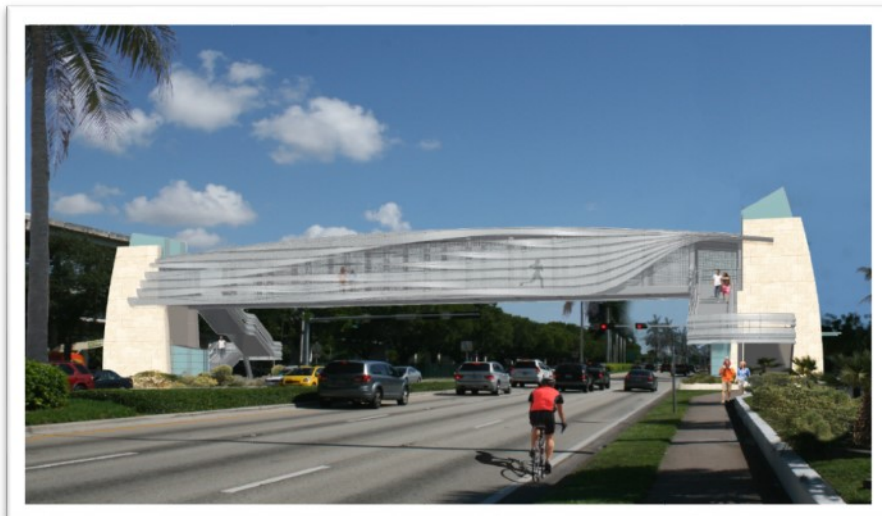
22. Additional Pedestrian Overpass (4)

The PTP amendment passed on October 2003 identified four Pedestrian Overpasses along US-1 at the following Metrorail Stations: Dadeland South, South Miami, University and Coconut Grove for a total value of \$10 million. In 2006 MDT proceeded with conceptual studies to evaluate alternatives to determine the optimum location and configuration for the pedestrian structures over US-1. The preliminary cost estimates as part of these studies indicated the funding required was approximately three times the PTP amendment budget amount.

In 2007 MDT completed a warrant and prioritization study, the "Pedestrian/Bicycle Crossing Study-Metrorail Stations along US-1 Corridor". The study established screening criteria including pedestrian counts and vehicle speeds to identify intersections that may justify the investigation of a pedestrian overpass as possible solutions to provide more pedestrian friendly crossing opportunities. Of the five locations studied – the four Amendment locations and one other proposed at Dadeland North – University and South Miami met the criteria. The other three did not and are currently not funded to move forward.

University Pedestrian Overpass: MDT moved forward with this overpass at Mariposa Court and US-1, the preferred alternative indicated in the March 2006 University Metrorail Station Conceptual Study. Miami-Dade County in coordination with FDOT and the University of Miami took short term corrective actions beginning the middle of 2006. Safety improvements included installing a fence to channel pedestrians to the signalized crosswalk to cross US-1, additional signage on the Metrorail parking lot side of the fence to direct pedestrians to the safe crossing location, and back plates on the traffic signal at the safe crossing location to bring more attention to the drivers; as well as modifying the traffic signal phasing at the Mariposa/US-1 intersection to provide a pedestrian crossing phase prior to the westbound left turn phase.

In September 2008, 100% of planning and approximately 40% of final design phases (approximately 45% the overall project) were complete for the overpass when it was placed on-hold due to reductions in FDOT funding sources and fiscal challenges faced by MDT. In April 2010, MDT in cooperation with FDOT has been able to reprogram funds for this project. The funds estimated to be required to complete the project is approximately \$5.8 million, with \$766,000 expended of current estimated \$6.6 million (reduced from previous \$7.5 million estimate) and thus approximately 10% complete; statuses are unchanged from FY11 Plan Update. The proposed new funding sources are as follows: 66% Federal, 17% State and 17% Local. In October 2010, the Metropolitan Planning Organization (MPO), via MPO Resolution #36-10, approved funding to complete the University Overpass project. This includes TIP amendments transferring funding from three other overpasses (South Miami and the two at Dadeland) as noted below. Revised funding sources and estimated cost are reflected in this year's Capital Plan.





FTA approval/concurrence of the re-evaluation of the project's 2007 Categorical Exclusion was received on February 2011. This allows MDT to apply for the federal component of the funds. Project resumed design October 2011. Design/permitting was anticipated by February 2013, Right of Way Acquisition was anticipated by November 2012, however, in February 2013 the property owner informed the County in writing of being unwilling to sell. The County is currently evaluating alternatives to identify a new location. Construction completion is anticipated for December 2015, assuming a decision is made on the alternative by April 2013. (Completion was indicated as December 2013 in last year's Plan.)

This overpass features a low profile pedestrian bridge that spans US1 and connects two vertical circulation towers, each with elevator and stairs. Estimated annual on-going maintenance and operations cost is \$17,317.

South Miami Pedestrian Overpass: MDT moved forward with the overpass at its optimum location at SW 72nd Street/Sunset Drive and US-1, as identified by the study performed by the City of South Miami in 2001 and confirmed by the 2006 MDT Conceptual Study. Design Notice To Proceed and coordination with various entities began April 2007, however this location became no longer feasible in December 2007 when the property identified for acquisition was deemed historical by the City of South Miami Commission.

Other locations within the area were analyzed in coordination with the City of South Miami. None were found to be effective. Design activities were placed on-hold in September 2008, like the University Overpass due to reductions in FDOT funding sources and fiscal challenges faced by MDT.

The City of South Miami began evaluating intersection improvements along US-1 including SW 72nd Street/Sunset Drive. FDOT is currently working with the City to gain a full understanding of the scope and cost for the proposed intersection improvements and evaluate other funding options that may be appropriate and available. In June 2009, the City confirmed the pedestrian overpass at the South Miami Metrorail Station was no longer desired. The South Miami Pedestrian Overpass previous scope was estimated at \$6.9 million and is not currently a funded project under the Miami-Dade County Capital Plan. MPO amended the TIP in October 2010 to transfer funding for this project to the University Overpass.

Dadeland South and North, and Coconut Grove Overpasses did not meet the 2007 warrant study's screening criteria. MPO amended the TIP in October 2010 to transfer funding for Dadeland projects to the University Overpass.

Total expenditures related to PTP Pedestrian Overpasses are \$1.495 million (\$766,000 University, \$729,000 all other such as South Miami). Funding has been primarily PTP (\$1.166 million), with the balance FDOT and FTA.

23. Additional Metrorail Crossovers

This project was for construction of two additional crossovers on the existing Metrorail line to facilitate system maintenance without impacting train schedules to support the Orange Line expansion. Due to increased passenger service and the anticipated increase in boarding once the now Orange Line became operational, these crossovers may have been required to help MDT maintain desired headways while maintaining rail facilities and allow multiple areas of rail tracks to be "single-tracked" without affecting service schedules. Because of the existing distance between crossovers, single tracking for maintenance could result in headways that were longer than desired. Constructing these additional crossovers between the Culmer and Earlington Heights Crossovers and Dadeland South and Douglas Road Crossovers could significantly improve service reliability and on-time performance.

However, revised estimates developed in 2007 indicated each crossover would cost \$50 million, or \$100 million total, which far exceeds the \$10 million budgeted for two crossovers in the PTP amendment as passed October 2003. Current operations for the Orange Line reduce the need for an additional crossover, however now that the extension is completed this project could be reevaluated and reinstated for the Capital Plan.