Rail Convertibility Study

Submitted to:

Miami-Dade Metropolitan Planning Organization

Submitted by:

THE CORRADINO GROUP, INC.

November 2004

Executive Summary

The Miami-Dade County Metropolitan Planning Organization (MPO) conducted the Rail Convertibility Study from January to November, 2004. The purpose of the study was to:

- Update the Railroad Rights-of-Way Assessment[1] conducted in 1993, and present an assessment of the existing rail corridors and facilities in the County;
- Assess the potential in both the short- and long-term for using the corridors for public transportation and/or bicycle/pedestrian activities; and
- Identify innovative strategies that can maximize the potential benefits of these corridors.

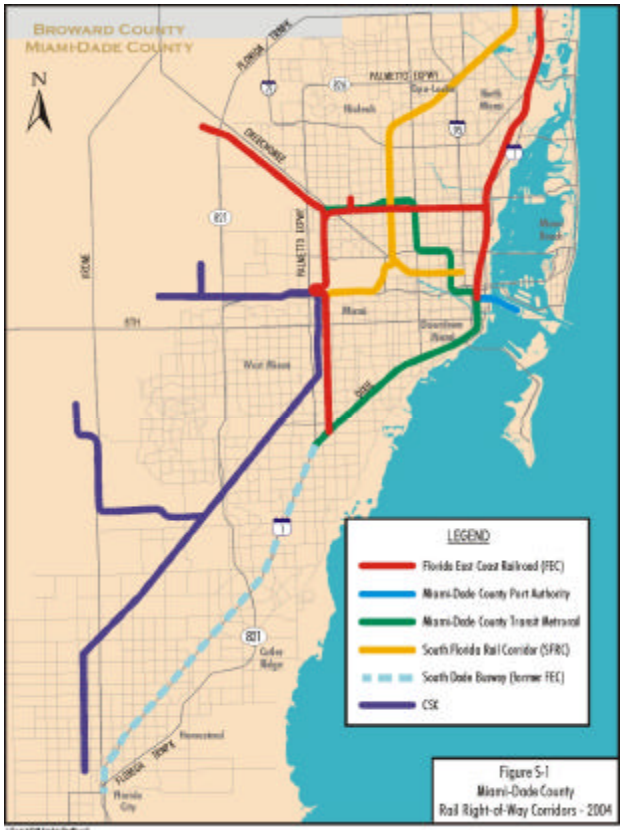
The reuse, or conversion, of rail corridor rights-of-way (ROW) has considerable precedent in Florida and nationally. In 1978, Dade County purchased Florida East Coast (FEC) Railroad ROW and built part of the Metrorail system on it, from Downtown to Dadeland. In the early 1990's, the Florida Department of Transportation (FDOT) purchased CSX Railroad ROW from West Palm Beach to the Miami International Airport, and a State-established agency, South Florida Regional Transportation Authority (SFRTA, formerly Tri-Rail) operates a commuter service in this corridor. Also in the last decade, and since the last ROW corridor assessment was completed, Miami-Dade Transit has completed the South Dade Busway in former FEC ROW. Bicycle/pedestrian considerations have also been addressed as bikeway facilities have been built and are planned that coexist with Metrorail and the South Dade Busway.

Inventory of Rail Corridors

Miami-Dade County is served by two operating railroad companies: the Florida East Coast Railway (FEC) and the Seaboard Coast Line (CSX). However, sections of right-of-way are now owned by the South Florida Rail Corridor (SFRC), the Port of Miami, and Miami-Dade County. Figure S-1 presents the existing rail corridors in the County. Also identified is the South Dade Busway, which operates in a former FEC-owned rail corridor. Table S-1 summarizes the key characteristics of each corridor. Full descriptions of each corridor are presented in the project final report. Several points are key. The FEC and CSX lines shown carry freight exclusively. The SFRC (which is owned by the Florida Department of Transportation), accommodates freight, SFRTA/Tri-Rail, and Amtrak under a cooperative agreement under all parties. As noted earlier, the South Dade Busway operates in former FEC right-of-way. The busway is being extended south to Florida City.

[1] Railroad Rights-of-Way Assessment, prepared by ICF Kaiser Engineers, prepared for the Metropolitan Dade County (now Miami-Dade County) Metropolitan Planning Organization, August 1993.

Figures S-2 through S-4 present the levels of activity and physical characteristics of the rail corridors in Miami-Dade County. As can be seen in Figure S-2, there are a number of corridor segments that have very limited service. Many of the corridor segments have 100 feet of ROW, which is a tremendous opportunity when considering joint use of these corridors. Finally, as shown on Figure S-4, there is more single-track than double-track, which also supports the possibility of adaptive re-use of these corridors.



Corridor Assessment

When examining the corridors from the perspective of converting them to use for either exclusive or shared with freight public transit or bicycle-pedestrian use, several conclusions are clear. Corridor ROW, land use, and the coexistence with train operations, all have significant impact. Corridors with sufficient right-of-way and light freight use are clear candidates for multi-use. Most important though is identifying the suitability of a corridor to meet a specific need. Does the corridor link areas where people live to where they want to go? Does the corridor have the potential to generate the ridership that will be required to warrant federal funding? Are there fatal flaws that will obviate a desired use.

The FEC corridor south of 72nd Street to downtown Miami clearly should be a priority corridor. There is very little train traffic and it connects downtown, the Cultural District, and North Miami neighborhoods. The City of Miami is considering on-street transit such as light rail on Biscayne Boulevard. If this occurs, the addition of a bicycle/pedestrian pathway along the existing FEC would be a natural use of the corridor ROW and would be compatible with preserving those tracks for future rail passenger transit or freight use. In western Miami-Dade County, there should be a focus on preservation of the CSX ROW particularly in the Kendall area. This area has experienced tremendous growth and has the densities that can support rail transit. Opportunities for creating transit opportunities in this area are discussed in the next section. Finally, the CSX and SFRC corridors that comprise the primary linkages between the western part of Miami-Dade County and the downtown area should be monitored and preserved for future use. These are already the subject of a number of studies (as discussed in the next section) and their priority is key.

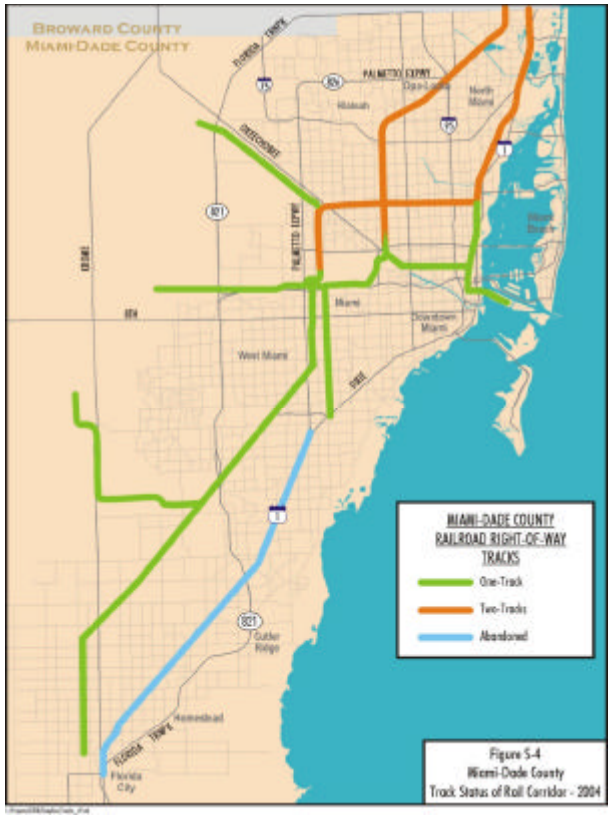


Figure S-4
Miami-Dade County
Track Status of Rail Corridor - 2004

Figure S-3
Miami-Dade County
Rail Corridor Right-of-way - 2004

Figure S-2
Miami-Dade County
Rail Corridor Utilization - 2004

Operating Options

There are a number of ways that joint use of rail corridors can be accomplished. Most traditionally the rail corridor has been purchased outright like the SFRC property, which was purchased from the CSX and the Metrorail-Busway alignment that was purchased from the FEC. Operating agreements can be made with the railroads so that they continue operating in the corridor, like the CSX operations on the SFRC or operations are completely abandoned as they were on the FEC prior to construction of Metrorail.

A second method of providing joint use is through an operating agreement where transit is operated on the rail line and a fee is paid to the railroad operator/owner for every train mile that the transit operator runs on the tracks. This is fairly common for commuter rail operations. When only a portion of the right-of-way is needed then for a greenway or separate transit facilities, then the necessary land could either be leased or purchased from the railroads with rail operations maintained in the corridor. A key consideration is the width of the right-of-way and whether the rail is single- or double-tracked.

One additional operating scenario would include freight consolidation as identified previously in the discussion regarding the CSX Oleander-Metrozoo Connector.

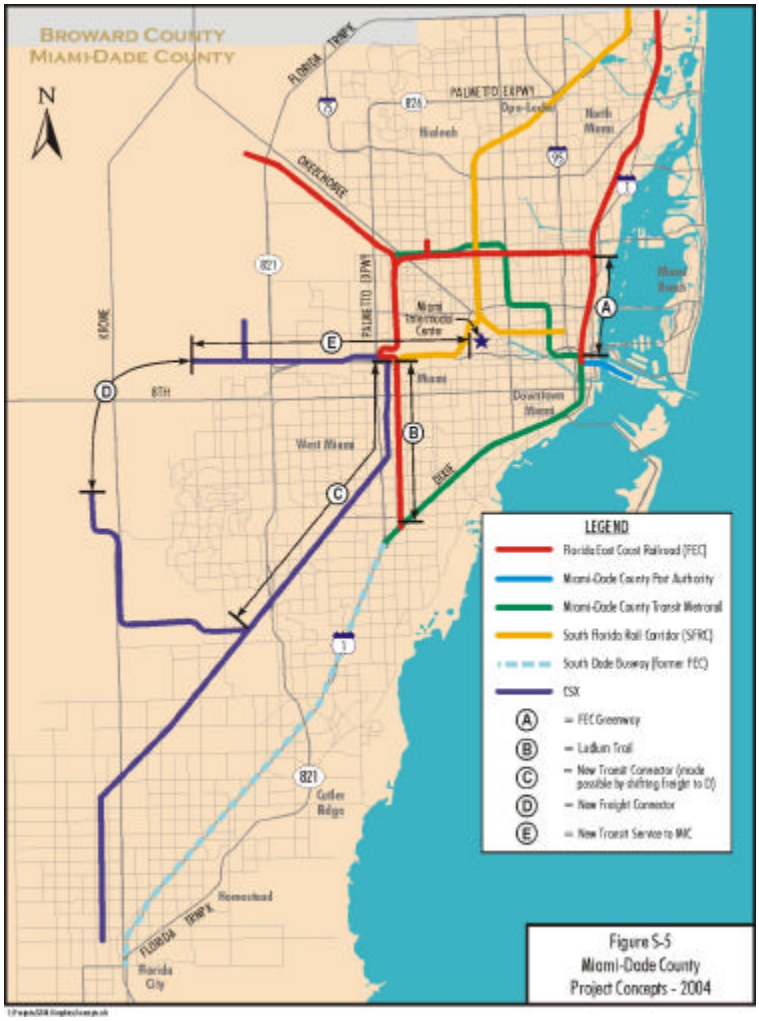
There is also strong sentiment in South Florida that the FEC and CSX operations should be consolidated onto the SFRC to free up the FEC tracks. In north Broward and Southern Palm Beach County the FEC and the SFRC are less than a mile apart and could easily be connected to restore FEC operations in their corridor north of that connection. This consolidation would make transit operations in the FEC corridor much more feasible.

Recommendations

The People's Transportation Plan essentially dictates which rail corridors will be the highest priority for transit use. These corridors, the FEC Northeast, the Dolphin, and the SFRC MIC to Oleander, will be the focus of multi-use or transit projects in the next two decades. Likewise, the County's bicycle/pedestrian plans have focused on the development of the Flagler Trail in the FEC Corridor, the Ludlam Trail in the FEC Ludlam Corridor, and other projects such as the East-West Trail in the North Dade Greenways Plan. Finally, the FDOT has authorized a multi-county study examining the entire FEC corridor and transit possibilities. In addition, there are a variety of transit technologies being used in other parts of the country that can be accommodated into a multi-use operating environment. These include Bus Rapid Transit (BRT) and Diesel Multiple Units (DMU) as well as the more traditional Light Rail Transit (LRT) and commuter rail. All of this information suggests that the MPO should prioritize the corridors discussed in the next paragraphs for development as multi-use facilities (Figure S-5).

FEC Northeast Corridor

The FEC Northeast Corridor is at the top of the list of every discussion about rail transit. It is the highest priority corridor for future multi-use activity. Given that implementation of a major transit improvement is not likely in the near-term (5-10 years), it is recommended that the MPO focus its activities on the section of the corridor south of 72nd Street. The FEC Northeast Corridor has minimal train traffic south of 72nd Street. A bicycle/pedestrian path from 72nd Street to downtown Miami should be put into place alongside the current FEC track with reservation that it may be used for a future transit corridor. In addition, a linear park should be created along the corridor. This facility could offer great benefits to the local communities and also offers good connectivity between downtown and unique areas such as the Cultural Center and the many neighborhoods along the corridor. This project should be developed in coordination with the City of Miami's proposed LRT development along Biscayne Boulevard.



FEC Ludlam Corridor

This corridor has been designated as high priority for non-transit use. Given that a bicycle-pedestrian corridor is approved and programmed for development in this corridor it should be carried forward and viewed as a priority by the MPO.

CSX Dolphin Corridor

The CSX Dolphin Corridor is identified as having strong potential as a transit corridor. It connects the far west of Miami-Dade County with the MIC and can accommodate high capacity train operations. It could be suited to either Metrorail or light rail type service.

SFRC MIC to Oleander

This corridor is identified as having strong potential as a transit corridor although a limiting factor may be its proximity to the Miami International Airport fuel storage facilities. It provides good east-west connectivity to the MIC Earlington Heights Metrorail Connection, which is a high priority for the County.

CSX Oleander - Metrozoo Connector

This operating scenario would include freight consolidation. This could occur in South Dade by consolidating all of the rock trains through the quarries west of Krome Avenue and constructing new tracks to the western end of the Lehigh Spur of the CSX. The new tracks would negate the need for the Homestead Branch tracks from the Oleander Junction to the Metrozoo thus freeing up that set of tracks for non-freight activities in that corridor. CSX would benefit from consolidation by reducing the number of miles of tracks that needed to be maintained. A planning study to assess the feasibility of this concept is recommended.

Funding and Implementation

The transformation of freight railroad right-of-way (ROW) into multi- or alternative use transportation corridors needs to be properly planned so as to ensure the greatest flexibility for obtaining grant funding for the program. Clearly, as referenced early, extensive planning is underway on most of the major rail corridor segments in the County. But, opportunities to support this development, particularly beyond the already dedicated resources of the Peoples Transportation Plan, remain. These include opportunities to fund countywide greenways from transportation enhancement funds associated with the federal transportation roads and transit bill as state programs and local bonding initiatives.

Converting part of these corridors to recreation use as bicycle/pedestrian type areas is likely the initial most probable non-PTP opportunity for making use of the corridors. As noted above, the corridor south of 72nd Street is a priority corridor. The inclusion of a greenway and pedestrian/non-motorized trail as part of the ROW area would encourage the greatest potential for outside funding. Over the last several years, the State of Florida has facilitated the granting of funds for greenways and trails through the Office of Greenways and Trails (OGT) within the Department of Environmental Protection. This office administers three grant programs and offers technical assistance to eligible governments for planning, designing, constructing, funding and maintaining greenways and trails.

Historically, these funds have been utilized much more for traditional style trails for hiking, biking, and horse riding through the more rural areas of the State which have been included in Florida's Statewide Master Greenways and Trails Plan. Recently however, there has been increasing recognition of the need to fund urban trails and recognition of the more costly efforts for an urban trail over that of a more traditional, rural trail. It would be imperative that the County seek designation of any proposed corridor as part of the Statewide Greenways and Trails Map. Additionally, the Corridor should be added to the County's Bikeway Plan to ensure its inclusion in the County program.

The recreational characteristics of such a trail would also lead to potential funding by another State source – the Florida Recreation and Development Assistance Program (FRDAP). While FRDAP funding is limited to $200,000 per application, each government can have two open grants and there is no reason why several municipalities along the corridor cannot combine projects to forward the goals of an overall plan.

One way to increase funding capabilities of an alternative transportation corridor would be to follow a model used by the cities along the US 441/SR-7 Corridor in Broward County, the formation of a coalition of interested governments along the route. This SR-7 Collaborative has combined the resources of 14 municipalities, Broward County, the South Florida Regional Planning Council and the Seminole Tribe of Florida to obtain other grants. The SR-7 Collaborative was able to secure a $2

million planning grant from the US Department of Transportation through this joint approach. Surely, the funds would not have been available to any of the Collaborative members if they had sought the funds on their own or even if the County alone had made an attempt.

The power of all of the entities along the a coalition corridor could also lead to direct appropriation through the Florida Legislature as well as through the U.S. Congress. The project is for the public good and could serve as an excellent pilot project for an urban trail and alternative transportation route through an urban setting. These are not traits that go unnoticed by governing bodies nor by public grant program administrators. Furthermore, the portability of the urban trail model has potential to lead to private foundation funding as well. It is often the case that private foundations seek to fund projects that can be used as this type of model to forward the foundation's goals and the public programs and policies they try to shape.

From the standpoint of public transit, the planning efforts associated with the PTP will dominate the public transportation landscape for decades. The information in this report can be used to support consideration of various corridors. But, there are other opportunities which could be explored. The Florida Department of Transportation (FDOT) sponsors a service development program, which is a program to support start-up of transit services. Prominent start-ups in recent years include the Electrowave on Miami Beach and the Hialeah Transit Circulator. Funds may be used for both capital and operations expenses. As with the trails program identified above, a coalition may be able to bring together enough funding to create a demonstration service in a rail corridor that may serve a short-term need and eventually get knit into the County transportation framework.

CORRADINO

Table of Contents

Executive Summary ES - 1

1. Project Statement 1

2. Inventory of Rail Corridors 3
   - General Description 3
     - FEC Corridors 3
     - The South Florida Rail Corridor 6
     - CSX Rail Lines 7
     - Port of Miami 8
     - Public R-O-W 8
     - Former Department of Defense (DOD) Right-of-way 9
   - Miami-Dade Train Operations 9
   - Corridor Right-of-way 13
   - Railroad Grade Crossings 13
   - Land Use along the Corridors 17
   - Corridor Assessment 19

3. Current Projects/Adopted Plans Affecting Rail Corridors 21
   - The Miami Intermodal Center 21
     - The People's Transportation Plan 23
     - The SFTRA Long Range Plan 24
   - Miami-Dade County Bicycle/Pedestrian Plans and Proposals 24
   - Miami-Dade County Long Range Transportation Plan 24

4. Proposed Projects for Rail Corridors in Miami-Dade County 25
   - Projects Currently Considered in Rail Corridors 25
     - FEC – Northeast Corridor 26
     - CSX/SFRC – Dolphin Corridor 27
     - CSX – Kendall Corridor 28
     - SFRC – MIC/Earlington Heights Connector 29
     - FEC – 72nd Street Extension 29
     - US 1 Extension to Florida City 30
     - South Florida Regional Transportation Authority/Tri-Rail Master Plan 31
     - South Florida Rail Corridor 31

CORRADINO

Table of Contents (continued)

Greenways and Bicycle Paths 32
Potential Opportunities for New Project or Joint Multi-use Project Development 34
Bay Link Extension 34
Metrorail Extension through Medley 34
Connectors 35
Operating Options 35
Project Feasibility Analysis 36
Corridor Evaluation and Presentation to Project Steering Committee 39
FEC Northeast Corridor 39
FEC 72nd Street Corridor 42
FEC Okeechobee Corridor 42
FEC Milam Dairy Corridor 42
FEC Ludlam Corridor 43
CSX Dolphin Corridor 43
CSX Kendall Corridor 43
South Florida Rail Corridor/Tri-Rail 43
SFRC MIC to Downtown 44
SFRC MIC to Oleander 44

5. Recommendations 45
FEC Northeast Corridor 45
FEC Ludlam Corridor 45
CSX Dolphin Corridor 45
SFRC MIC to Oleander 46
CSX Oleander – Metrozoo Connector 46
Funding and Implementation 46

I:\projects\3388\wp\reports\finalRpt\finalreport.doc

CORRADINO

List of Figures

Figure 2-1	Composite Rail Corridor Map	4
Figure 2-2	FEC Rail Lines	3
Figure 2-3	South Florida Rail Corridor (SFRC) Right-of-way	6
Figure 2-4	CSX Corridor	7
Figure 2-5	Rail Corridor Utilization – 2004	12
Figure 2-6	Rail Corridor Right-of-way – 2004	12
Figure 2-7	Track Status of Rail Corridor – 2004	12
Figure 2-8	Possible Right-of-way Utilization, Joint-use Requirements	14
Figure 3-1	Current Proposed Rapid Transit Concepts	22
Figure 4-1	Track Status of Rail Corridors in Miami-Dade County	35
Figure 4-2	Rail Corridors Considered for Prioritization	40
Figure 5-1	Priority Project Concepts	46

CORRADINO

List of Tables

Table 2-1	Tri-Rail and CSXT/SFRC Operating Agreement	9
Table 2-2	CSXT Scheduled Operations	9
Table 2-3	Amtrak Operations	10
Table 2-4	Tri-Rail Operations	10
Table 2-5	FEC Schedule North Bound	11
Table 2-6	FEC Schedule South Bound	11
Table 2-7	Rail Corridor Rights-of-way	13
Table 2-8	Rail Corridor Grade Crossings, FEC Broward County Line to Downtown Miami	15
Table 2-9	Rail Corridor Grade Crossings, FEC Biscayne Boulevard to the Florida Turnpike	15
Table 2-10	Rail Corridor Grade Crossings, FEC Yard to U.S. 1	15
Table 2-11	Rail Corridor Grade Crossings, SFRC Broward County Line to MIA	16
Table 2-12	Rail Corridor Grade Crossings, SFRC MIA to Downtown Miami	16
Table 2-13	Rail Corridor Grade Crossings, CSX MIA to NW 145 Avenue	16
Table 2-14	Rail Corridor Grade Crossings, CSX Oleander Junction to Homestead	16
Table 2-15	Rail Corridor Land Uses, SFRC from County Line to MIA	17
Table 2-16	Rail Corridor Land Uses, SFRC from MIA to Downtown Miami	17
Table 2-17	Rail Corridor Land Uses, FEC from County Line to Downtown Miami	18
Table 2-18	Rail Corridor Land Uses, FEC along 79th Street	18
Table 2-19	Rail Corridor Land Uses, FEC Hialeah Yard to Dadeland South	18
Table 2-20	Rail Corridor Land Uses, CSX MIA to NW 137th Avenue	19
Table 2-21	Rail Corridor Land Uses, CSX Oleander Junction to Homestead	19
Table 4-1	Project Feasibility Assessment	37
Table 4-2	Coordination with Existing Plans and Policies	38
Table 4-3	Rail Convertibility Evaluation Matrix	41

1. Project Statement

The Miami-Dade County Metropolitan Planning Organization (MPO) conducted the Rail Convertibility Study from January to November, 2004. The purpose of the study was to:

- Update the Railroad Rights-of-Way Assessment,[2] and present an updated inventory assessment of the existing rail corridors and facilities in the County;
- Assess the potential in both the short- and long-term for using the corridors for either public transportation or bicycle/pedestrian activities; and
- Identify innovative strategies that can maximize the potential benefits of these corridors.

The study was conducted within the context of the desire of the MPO to identify realistic transportation improvements as a result of the County's passage of the People's Transportation Plan (PTP). This plan is based on a sales tax that will raise approximately $150,000,000 annually, most of which must be used for major public transportation improvements.

The study was conducted by Miami-Dade County MPO staff, with support from a consulting firm, The Corradino Group. A Steering Committee including representatives of major departments in Miami-Dade County as well as representatives of the South Florida Regional Transportation Authority/Tri-Rail, CSX Railroad, Florida East Coast Railroad, Florida Rails to Trails, and others met during the study to provide input to the planning process.

The reuse, or conversion, of rail corridor rights-of-way (ROW) has considerable precedent in Florida and nationally. In 1978, Dade County purchased Florida East Coast (FEC) Railroad ROW and built part of the Metrorail system on it, from Downtown to Dadeland. In the early 1990's, the Florida Department of Transportation (FDOT) purchased CSX Railroad ROW from West Palm Beach to the Miami International Airport, and a State-established agency, South Florida Regional Transportation Authority (SFRTA, formerly Tri-Rail) operates a commuter service in this corridor. Also in the last decade, and since the last ROW corridor assessment was completed, Miami-Dade Transit has completed the South Dade Busway in former FEC ROW. Bicycle/pedestrian considerations have also been addressed as bikeway facilities have been built and are planned that coexist with Metrorail and the South Dade Busway. It should be noted that this study did not preclude or de-emphasize the need and priority of having rail corridors for freight. The ability of the rail corridor network to efficiently move freight is equally vital to the region's economy and as a way to accommodate increasing traffic as public transportation and other uses.

[2] Railroad Rights-of-Way Assessment, prepared by ICF Kaiser Engineers, prepared for the Metropolitan Dade County (now Miami-Dade County) Metropolitan Planning Organization, August 1993.

2. Inventory of Rail Corridors

General Description

Miami-Dade County is served by two operating railroad companies, the Florida East Coast Railway (FEC) and the Seaboard Coast Line (CSX). However numerous sections of right-of-way are now owned by the South Florida Rail Corridor (SFRC), the Port of Miami, Miami-Dade Transit and the Department of Defense. Below is a description of the rail corridors in the County.

Figure 2-1 (see next page) presents the existing rail corridors in the County. Also identified is the South Dade Busway, which operates in a former privately owned rail corridor.

Figure 2-2
FEC Rail Lines

FEC Corridors

The FEC rail lines are shown in Figure 2-2. The main FEC line runs parallel to the coast roughly along U.S. 1. The line segment from the Broward County line to downtown Miami is approximately 14 miles long. Operationally, this line segment breaks into two smaller units: north and south of the wye at NE 72nd Street. The line north of the wye is the mainline to and from the Hialeah yard and carries heavy volumes of freight. The line south of the wye is used sporadically with only one scheduled train per week. The line north of the wye only has 1.4 grade crossings per mile, while the southern portion of the segment has 4.5 grade crossings per mile. The line south of the wye passes through the Buena Vista Yard, which is located between NE 36th St and NE 28th Street. The Buena Vista Yard property was recently sold to a developer.

The FEC Corridor along U.S. 1 in Northern Miami-Dade County

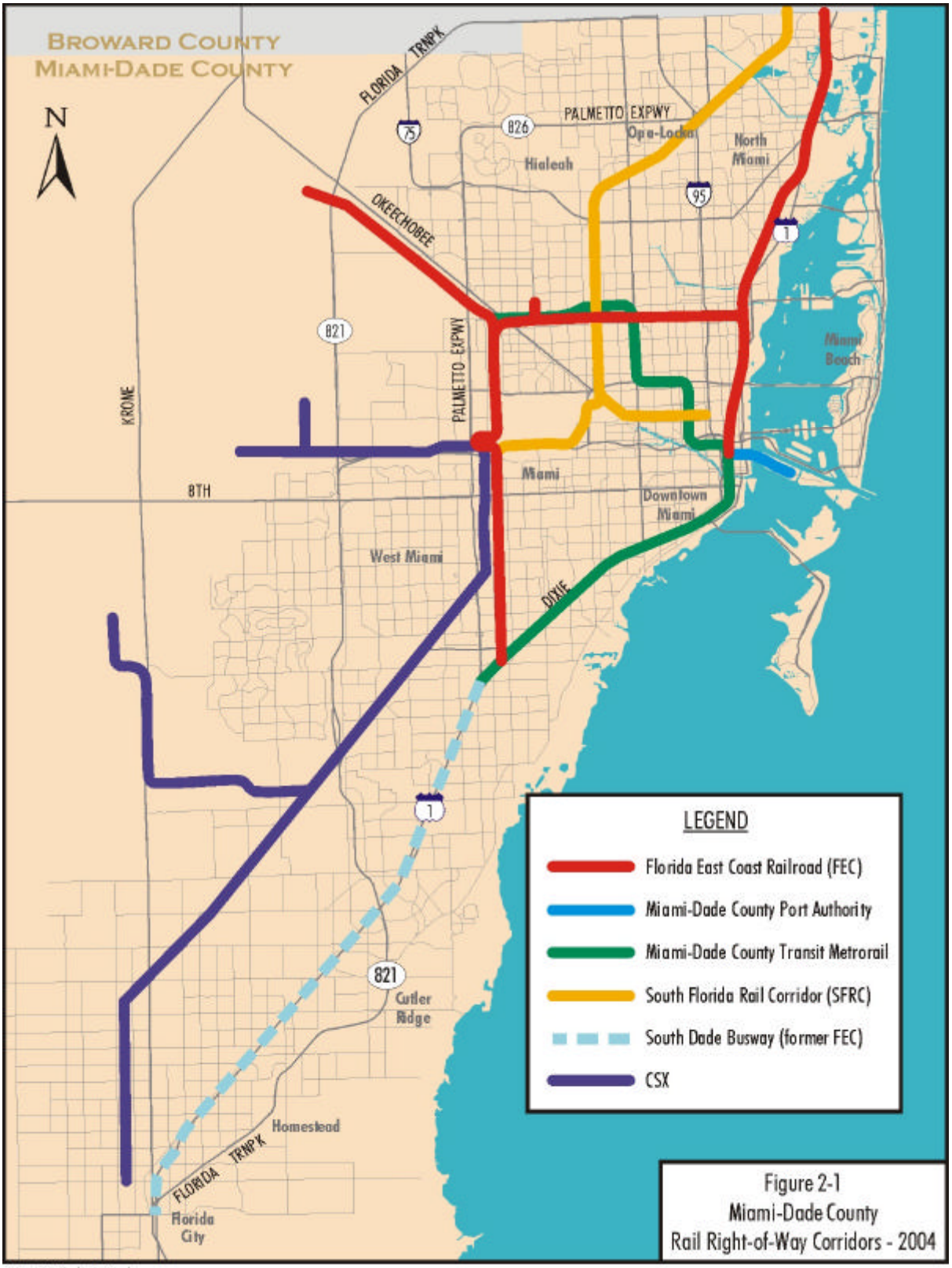


Figure 2-1
Miami-Dade County
Rail Right-of-Way Corridors - 2004

The next segment of the FEC lines parallels NW 73rd Street between Biscayne Boulevard and the FEC Yard adjacent to Milam Dairy Road. This segment is approximately seven miles of FEC mainline track. The line is double tracked and passes through an interlocking (Iris) with the SFRC . This line is heavily used for freight traffic and has at least six spurs. There are two grade crossings per mile along this segment of the line. This segment terminates in the Yard, which is located between NW 74th Street and NW 46th Street.

Lightly used FEC line near downtown Miami.

Extending out of the yard to the northwest is a line that runs south of NW South River Drive under the Palmetto Expressway and the Turnpike and terminates in the Rinker Plant. This segment consists of five miles of single track with heavy switching activity in and out of the industrial area. The line serves 27 spurs. The line averages 1.4 grade crossings per mile.

Extending south from the Yard is a line that runs parallel to Milam Dairy Road then parallel to SR 836 then turns south through the Oleander Junction then runs parallel to the Palmetto Expressway to U.S. 1 in the vicinity of Dadeland North. The total length of this segment 7.6 miles. Three lines exit the yard at NW 46th Street then drop to two lines at NW 30th Street and then finally to one line at NW 25th Street. When the line turns to run east-west along SR 836 it is north of the CSX line. When it turns south the line is on the east side of the CSX and crosses a second CSX line coming into the Oleander Junction from the east. South of the Oleander Junction there is no scheduled rail service. The FEC switches trains and stores cars on the segment north of the Oleander Junction. This segment of FEC track has approximately 3.5 grade crossings per mile.

The South Florida Rail Corridor

The SFRC consists of three line segments, which are shown on Figure 2-3. The first segment was formerly the CSX mainline, and was sold to FDOT for operations by the South Florida Regional Transportation Authority (SFRTA), formerly Tri-Rail. CSX, Amtrak and SFRTA all operate in this corridor by agreement with FDOT. The rail line extends from the Broward County line for 14 miles to the future site of the Miami Intermodal Center (MIC) just east of Miami International Airport (MIA). The tracks are immediately adjacent to the west side of I-95 through the Golden Glades Interchange, where the alignment curves to the west and stays on the north side of SR 9 before curving to the south adjacent to NW 37th Avenue. The line passes through the Hialeah Yard which extends between NW 106th Street and NW 81st Street. There are several spurs that tie into the line north of the yard. The line crosses through the FEC interlocking at NW 73rd Street. The corridor is in the process of being double tracked for the entire distance. There are SFRTA passenger stations at Golden Glades, Opa-Locka, Metrorail Transfer, Hialeah Market, and Miami Airport. Amtrak operates a station in the Hialeah Yard. This segment of line carries a moderate level of CSX freight activity in addition to the passenger trains operated by SFRTA and Amtrak.

Figure 2-3
South Florida Rail Corridor (SFRC) Right-of-way

SFRC lines in Miami-Dade County.

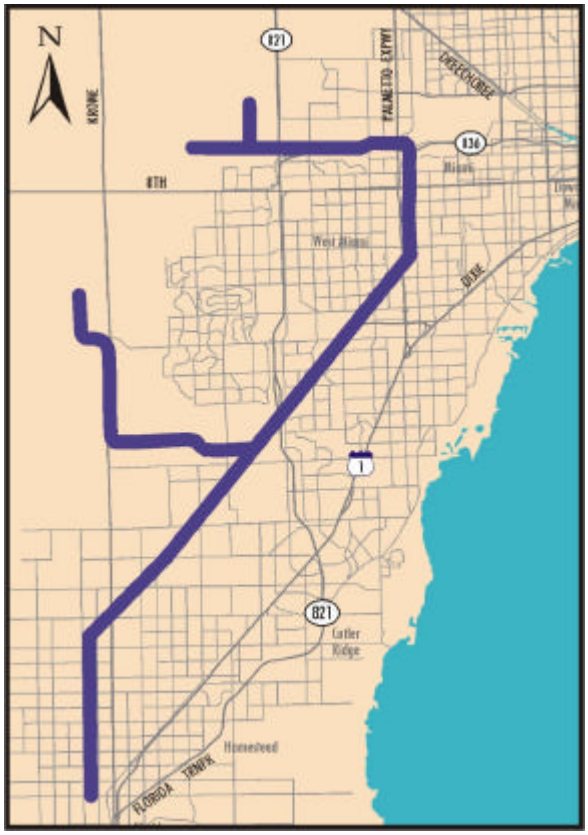
The second SFRC line runs from the MIC to downtown Miami. This single track line runs for five miles parallel to North River Drive then turns east at NW 23rd Street, and turns south just east of I-95. Between this point and downtown several portions of the right-of-way is used for Metrorail and I-95 and the tracks are completely missing. The track continues into downtown along NW 11th Street to the FEC tracks. There are 12 rail spurs in this corridor and there is unscheduled industrial service over a portion of the line. There are 4.8 grade crossings per mile along this segment.

The final SFRC line runs from the MIC to the Oleander Junction. This is a four-mile single track stretch of railroad that hugs the southeast quadrant of MIA along Perimeter Road. This portion of track has a direct connection to the CSX track running south to Kendall but no direct connection to the CSX extending due west toward the turnpike. All CSX trains must traverse this section of track. There are no spurs along this portion of the track and there is one grade crossing per mile along this section.

CSX Rail Lines

The Seaboard Coastal Rail Line has 3 active sections of track shown in Figure 2-4. The first segment of the CSX is an eight-mile length of track known as the Lehigh Spur running from the Oleander Junction west to NW 145th Avenue (extended). This single line track parallels SR 836 and is an active freight line. Traffic from this line cannot connect directly to the SFRC without maneuvering through the Oleander Junction. There is a project underway known as "the direct connect" that would result in construction of new track between the CSX track and the SFRC, by-passing the Oleander Junction. This section of track has 1.4 grade crossings per mile.

Figure 2-4
CSX Corridor



The second section of CSX track runs south from the Oleander Junction to Homestead and is known as the Homestead Subdivision. There is a single track that runs the 26-mile length of this segment. There is active freight service along most of the route. There is a signal controlled crossing on this line with the FEC line within the Oleander Junction. Traffic from the Homestead Subdivision can connect to both the Lehigh Spur and SFRC. This line is west of the FEC line and runs parallel to the Palmetto Expressway to SW 44th Street where the line turns southwest and runs on the south side of SR 874. It crosses under 874 at SW 87th Avenue and runs on the northside where it extends past the turnpike at the same angle to SW 182nd Avenue, where the line turns due south and runs into the City of Homestead. There are 2.1 grade crossings per mile along this segment of track.

The final section is an 11-mile segment of CSX track is the Portland Spur that extends westerly from the Homestead Subdivision via a wye located at SW 144th Street. A single track runs to Krome Avenue where it turns north and terminates at SW 58th Street. Two rock trains a day serve the Rinker Plant at the terminus of this spur.

Port of Miami

A two-mile segment of single track runs from the terminus FEC line at Biscayne Boulevard into the Port of Miami. There are 10 grade crossings along this section of rail. One train per week operates on this line. The Port of Miami has ownership of this section. Currently, it is used only for occasional shipments of heavy equipment. The Port has expressed interest in having its use for container traffic expanded by either adding facilities on the Port itself or shipping containers to a dry-dock in Miami-Dade County where trucks would go to pick up the containers. The Port of Miami is also seen as the eastern terminus of a transit project in the Dolphin corridor, although an exact routing or technology has not been determined.

FEC trucks running into Port of Miami.

Public ROW

The former FEC right-of-way extended from downtown Miami to the Monroe County line is currently in multiple public ownerships. The entire portion parallels the west side of U.S. 1. The portion from downtown to Dadeland South is occupied by MDT's Metrorail facility. The 100-foot ROW along the eight-mile segment from Dadeland South to Cutler Ridge is occupied by FDOT's South Dade Busway. The third stretch is 11 miles from Cutler Ridge to Florida City that will be occupied by FDOT's South Dade Busway, which is currently under construction (scheduled for completion in 2005).

South Dade Busway Extension construction.

Former Department of Defense (DOD) Right-of-way

A rail line formerly linked the Homestead Air Force Base at Homestead with U.S. 1. This line was abandoned about in the late 1980's and the tracks removed. The ROW was basically intact in 1993 when the MPO conducted its last rail corridor ROW inventory. Since then the Air Force has relinquished most of the property and is currently transferring the last parcels to Miami-Dade County.

Miami-Dade Train Operations

From an operating standpoint, the South Florida Rail Corridor (SFRC) is the most complex corridor in Miami-Dade County. The corridor is owned by FDOT but railroad services are operated by CSX, Amtrak, and Tri-Rail on the railroad throughout the corridor. The maintenance of freight service operations within the SFRC relies on a negotiated service agreement between the CSX, Tri-Rail and FDOT, which all share the railroad right-of-way. This agreement identifies daily operating windows for both dedicated and mixed use of passenger and freight service. Based on this agreement, CSX has exclusive operating rights between 8:00 PM and 4:20 AM. Tri-Rail has exclusive operating rights from 5:20 AM to 9:30 AM and from 3:00 PM to 8:00 PM. Rights are shared between 9:30 AM and 3:00 PM. Since the FEC tracks also cross the SFRC, careful scheduling with CSX and FEC is imperative for the implementation of a reliable, on-time commuter rail service on this active freight corridor. Table 2-1 presents the details of this agreement.

Table 2-1
Tri-Rail and CSXT/SFRC Operating Agreement

Hours of Operation	Tri-Rail Rights	CSX Rights
4:20 AM – 5:20 AM	X	X
5:20 AM – 9:30 AM	X	
9:30 AM – 3:00 PM	X	X
3:00 PM – 8:00 PM	X	
8:00 PM – 10:00 PM	X	X
10:00 PM – 4:20 AM		X

All of the CSX traffic feeds into the SFRC. Table 2-2 provides a current list of the regularly scheduled CSXT trains in the corridor. All of the trains listed below operate on 12-hour shifts between Hialeah Yard and the Lehigh and Stirling Branches, which diverge from the Homestead Branch.

Table 2-2
CSXT Scheduled Operations

Type of Train[1]	Days of Operation	Begin Corridor Operations
Switcher	Monday – Friday	7:00 AM
Switcher	Monday – Friday	11:00 AM
Extra Switcher	Monday – Thursday	As Needed
Rock	Monday – Sunday	10:30 AM
Extra Rock	Monday – Friday	As Needed

[1] A switcher is a train that is assigned to pull and transfers railcars. A rock train is a train carrying rock.

Amtrak operates interstate passenger trains in the SFRC. Currently train service terminates at the Hialeah Yard. Table 2-3 shows the Amtrak schedule.

Table 2-3
Amtrak Operations

South Bound Arrivals	North Bound Departures
12:10 pm	7:00 am
5:20 pm	10:35 am
9:46 pm	3:00 pm

The South Florida Regional Transportation Authority (SFRTA) operates Tri-Rail commuter service in the SFRC from Mangonia Park in Palm Beach County to a terminus station at the Miami International Airport. Currently, Tri-Rail operates trains approximately hourly. However, Tri-Rail is currently completing the double tracking of the rail line from Mangolia Park to the Hialeah Market Station. The double tracking is scheduled for completion in February 2005. At that time Tri-Rail will provide 20-minute headways during the peak periods. Table 2-5 shows Tri-Rail's current operating schedule in the SFRC.

Table 2-4
Tri-Rail Operations

South Bound Arrivals	North Bound Departures
6:19 am	4:13 am
7:39 am	5:13 am
8:39 am	6:13 am
9:39 am	7:13 am
10:39 am	8:13 am
11:39 am	9:13 am
12:39 pm	10:13 am
3:55 pm	11:13 am
4:55 pm	1:29 pm
5:55 pm	3:29 pm
6:55 pm	4:29 pm
7:55 pm	5:29 pm
8:55 pm	6:29 pm
9:55 pm	7:29 pm

FEC operations into Miami-Dade County come in along the main line parallel to Biscayne Boulevard. There are minor yards and switching areas along this line, but the majority of operations turn west just south of North 79th Street and operate over to Hialeah. Tables 2-5 and 2-6 show the scheduled operations of the FEC over this portion of the line. Many of these trains are rock trains that originate at quarries along the Okeechobee Branch.

Table 2-5
FEC Schedule
North Bound

Train #		Frequency	Depart	Load[1]
202	Hialeah to Jacksonville	Tue – Sat	7: 00am	Pig/Mix
206	Hialeah to Jacksonville	Tue – Sat	3:00 am	Pig/Auto
208	Hialeah to Jacksonville	Daily	3:00 pm	Rock/Auto
222	Hialeah to Jacksonville	Mon-Sat	7:30 pm	Pig/DS
222	Hialeah to Jacksonville	Sun	9:00 pm	Pig
226	Hialeah to Jacksonville	Mon-Sat	11:00 pm	Pig
290	Hialeah to Ft. Pierce	Mon-Fri	5:00 pm	Rock
294	Hialeah – West Palm Beach	Mon-Fri	8:30 pm	Rock
336	Hialeah to Cocoa Beach	Mon-Sat	1:00 am	Rock

[1] Pig is a railvan shipment or trailer (carried on a flat railroad car). Mix is a carload of different items. An "auto" load is a flat railcar with autos. A DS is a car carrying double-stacked trailers. "Rock" refers to railcars carrying rock.

Table 2-6
FEC Schedule
South Bound

Train #		Frequency	Arrive	Load
101	Jacksonville to Hialeah	Mon-Thurs	9:00 pm	Pig
101	Jacksonville to Hialeah	Fri-Sat	11:00 pm	Pig
105	Jacksonville to Hialeah	Mon-Thurs	10:15 pm	Pig/Auto
107	Jacksonville to Hialeah	Daily	1:30 am	Pig
121	Jacksonville to Hialeah	Daily	6:00 am	Pig/Mix
123	Jacksonville to Hialeah	Sat	11:00 pm	Empty Rock
125	Jacksonville to Hialeah	Tues-Fri	12:00 noon	Empty Rock
191	Ft. Pierce to Hialeah	Mon-Fri	1:00 am	Empty Rock
193	New Smyrna Beach to Hialeah	Mon-Thurs	3:30 am	Empty Rock
195	West Palm Beach to Hialeah	Mon-Fri	3:00 am	Empty Rock
335	Cocoa Beach to Hialeah	Mon-Sat	6:30 am	Rock

The FEC operates unscheduled service south of 79th Street toward downtown Miami through the Buena Vista yard. The FEC uses the tracks west of Miami International Airport for train storage. There are no scheduled operations on the FEC south of the Oleander Junction (in the vicinity of Perimeter Rd. and SR 836.)

Figures 2-5 through 2-7 present the levels of activity and physical characteristics of the rail corridors in Miami-Dade County.

Figure 2-5 summarizes the schedules along the various rail segments within Miami-Dade County. As shown in this graphic, there are several segments of rail corridor which are lightly used. There are a number of others which have significant levels of use but, in most of the corridors, discussions with the railroad companies have indicated the possibility of future multiple use.

Figure 2-7
Miami-Dade County
Track Status of Rail Corridor - 2004

Figure 2-6
Miami-Dade County
Rail Corridor Right-of-way - 2004

Figure 2-5
Miami-Dade County
Rail Corridor Utilization - 2004

Corridor Right-of-way

Table 2-7 and Figure 2-6 show the varying rights-of-way widths found along the various rail corridors. A setback of less than 30 feet from the center line of an active rail line would not supply a comfortable or safe separation between freight operations and some other use. As the ROW width increases the greater the options become for developing pedestrian, bicycle or transit facilities in the corridor. Figure 2-7 shows where there are single or double tracks in the rail corridors. Figure 2-8 shows the type of joint use options that are available on 50-foot and 100-foot ROW.

Table 2-7
Rail Corridor Rights-of-way

Corridor Segment	Right-of-way Width
FEC Broward County Line to NE 39th Street	100’
FEC at NE 39th Street	50’
FEC NE 39th Street to NE 20th Street	100’
FEC NE 20th Street to NE 11th Street	50’
FEC NE 11th Street South	100’
FEC Biscayne Boulevard to the Florida Turnpike	100’
FEC Yard to US 1	100’
MDT Dadeland South to Homestead	100’
SFRC Broward County Line to MIC	100’
SFRC MIC to Downtown Miami	50’
SFRC MIC to Oleander Junction	50’
CSX Oleander Junction to Turnpike	100”
CSX Oleander Junction to Tamiami Trail	50’
CSX Tamiami Trail to SW 11th Street	16’
CSX SW 11th Street to SW 40th Street	50’
CSX at SW 40th Street	25’
CSX SW 40th Street south	100’

Railroad Grade Crossings

One aspect of rail corridors that will impact their suitability for multiple transportation usages is the number of at-grade street crossing. The more street crossings that exist the greater the potential will be for conflicts with pedestrians, bicyclists, or transit. Additionally, grade separating and protecting these crossings will add significantly to the cost of a project. Finally, high volumes of conflicting traffic will greatly diminish service on either the cross-street or the alternative corridor.

The following tables summarize the rail crossings along the various rail corridors in Miami-Dade County.

Figure 2-8

Possible Right-of-way Utilization
Joint-use Requirements

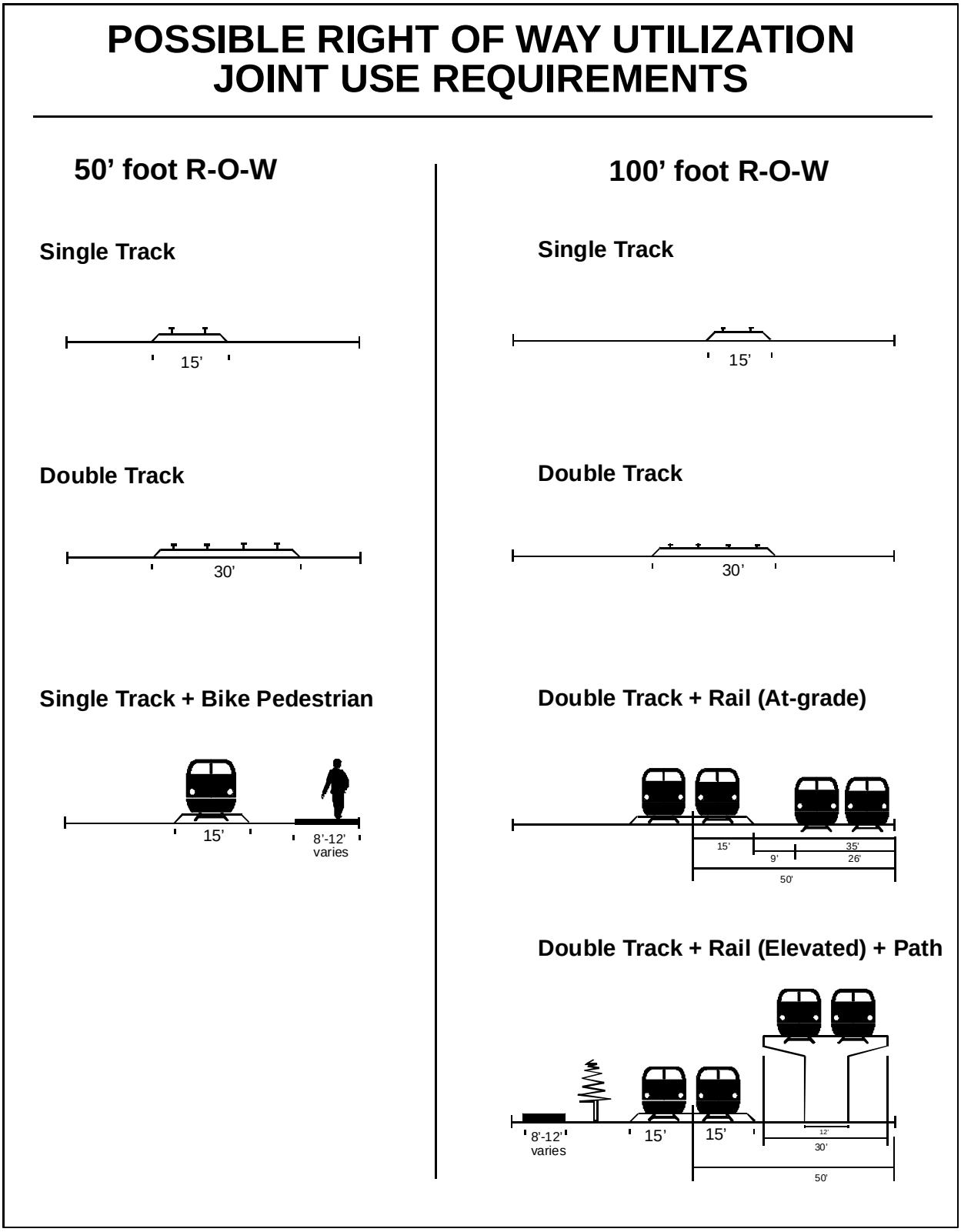


Table 2-8
Rail Corridor Grade Crossings
FEC Broward County Line to Downtown Miami

NE 215th St	NE 125th St	NE 59th St	NW 14th St
NE 179th St	NE 107th Ave	NE 54th St	NW 11th St
NE 172nd St	NE 96th St	NE 39th St	NW 10th St
NE 151st St	NE 6th Ave	NE 36th St	NW 8th St
NE 146th St	NE 87th St	NE 29th St	NW 1st Ave
NE 141st St	NE 82nd St	NE 27th St	N Miami Ave
NE 135th St	NE 71st St	NE 20th St	NE 1st Ave
NE 16th Ave	NE 61st St	N Miami Ave	NE 2nd Ave

Table 2-9
Rail Corridor Grade Crossings
FEC Biscayne Boulevard to the Florida Turnpike

NE 71st St	W 1st Ave	NW 74th Ave
NE 2nd Ave	Red Rd	NW 69th Ave
NE Miami Ct	W 22nd St	NW 93rd Ave
N Miami Ave	W 23rd St	NW 89th Ave
NW Miami Ct	W 8th Ave	NW 106th St
NW 2nd Ave	NW South River Dr	
NW 17th Ave	NW 72nd Ave	
NW 22nd Ave	NW 77th Ave	

Table 2-10
Rail Corridor Grade Crossings
FEC Yard to U.S. 1

36th St Access Rd	NW 25th Ter	SW 12th St	SW 56th St
NW 25th St	NW 25th St	SW 16th St	SW 60th St
NW 70th Ave	NW 16th St	SW 21st St	SW 64th St
NW 22nd St	NW 12th St	SW 22nd St	SW 72nd St
Milam Dairy Rd	W Flagler St	SW 24th St	SW 80th St
NW 31st St	SW 4th St	SW 32nd Ter	
NW 75th Ave	SW 8th St	SW 40th St	

Table 2-11
Rail Corridor Grade Crossings
SFRC Broward County Line to MIA

NW 2nd Ave	Dunad Ave	NW 71st St	NW North River Dr
NW 22nd Ave	NW 135th St	NW 62nd St	NW South River Dr
NW 27th Ave	NW 103rd St	NW 54th St	NW 25th St
Cododad St	NW 37th Ave	NW 46th St	
Opa Locka Blvd	Nw 79th St	NW 36th St	

Table 2-12
Rail Corridor Grade Crossings
SFRC MIA to Downtown Miami

NW N River Dr	NW 24th Ave	NW 21st Ave	NW 13th Ave	NW 11th Ave
NW 30th St	NW 24th Ct	NW 19th Ave	NW 12th Ave	NW 21st Ter
NW 23rd St	NW 23rd Ave	NW 18th Ave	NW 11th Ave	NW 11th Ave
NW 26th Ave	NW 22nd Ct	NW 17th Ave	NW 10th Ave	NW 12th Ave
NW 25th Ave	NW 22nd Ave	NW 14th Ave	NW 22nd St	

Table 2-13
Rail Corridor Grade Crossings
CSX MIA to NW 145 Ave

LeJeune Rd	Milam Dairy Rd	NW 12th St
SR 112 Ext	NW 78th Ave	NW 107th Ave
NW 15th St	NW 82nd Ave	NW 110th Ave
Red Rd	NW 84th Ave	NW 12th St
Perimeter Rd	NW 87th Ave	NW 122nd Ave

Table 2-14
Rail Corridor Grade Crossings
CSX Oleander Junction to Homestead

W Flagler St	SW 71st Ave	SW 137th Ave	SW 216th St	SW 288th St
SW 4th St	N Waterway Dr	Howard Dr	SW 167th Ave	SW 296th St
SW 8th St	SW 40th St	SW 104th St	SW 172nd Ave	SW 304th St
SW 9th St	SW 41st St	SW 177th Ave	SW 177 Ave	SW 312th St
SW 12th St	SW 42nd St	SW 144th St	SW 232nd St	NW 10th Ave
SW 13th St	SW 75th Ave	SW 152nd St	SW 182nd Ave	SW 320th St
SW 16th St	SW 56th St	SW 137th Ave	SW 248th St	SW 5th Ave
SW 21st St	SW 87th Ave	SW 147th Ave	SW 256th St	SW 4th Ave
SW 22nd St	SW 72nd St	SW 184th St	SW 264th St	SW 2nd Ave
SW 23rd St	SW 88th St	SW 200th St	SW 272nd St	SW 3rd Ave
SW 24th St	SW 112th Ave	SW 162nd Ave	SW 280th St	SW 2nd Ave

Land Use Along the Corridors

High density commercial and employment centers are generally found along the rail corridors in cities that grew up around the rail lines. The historic downtown areas are divided by rail lines with commercial on one side of the tracks and industrial uses on the other side of the tracks. Radiating out from the downtown the majority of the existing land use along the rail corridors is industrial. As cities grew residential areas would also fill in along rail lines, but the majority of railroad related land use remained industrial. In Miami-Dade County, there are many examples of this type of development, as well as examples of where the former interface activities between commercial and industrial development and the railroad have effectively been abandoned.

In looking to develop other transportation facilities in rail right-of-way, existing land uses must be examined. Since transit, bike paths and pedestrian trails are the most common uses to be superimposed on a rail corridor, land uses that either generate, attract or would benefit from heavy pedestrian activity would be desirable. For transit to be effective in a corridor, high density land uses are desirable. For bike and pedestrian uses, aesthetics become more important. The following tables (Tables 2-15 through 2-21) present the land uses along each of the rail corridors.

Table 2-15
Rail Corridor Land Uses
SFRC from County Line to MIA

Between	Land Use
Broward County Line to NW 199th Street	I-95 ROW and Industrial
NW 199th Street to NW 188th Street	Low and medium density residential
NW 188th Street to NW 185th Street	Park
NW 185th Street to NW 155th Street	Industrial
NW 155th Street to NW 151st Street	Low density residential
NW 151st Street to NW 22nd Avenue	Medium density residential
NW 22nd Avenue to NW 27th Avenue	Industrial
NW 27th Avenue to NW 35th Avenue	Commercial downtown Opa-Locka
NW 35 Avenue to NW 25th Street	Industrial

Table 2-16
Rail Corridor Land Uses
SFRC from MIA to Downtown Miami

Between	Land Use
MIA to NW 27th Avenue	Industrial
NW 27th Ave to NW 17th Ave	Medium density residential/Industrial
NW 17th Ave to NW 15th Ave	High density residential/Industrial
NW 15th Ave to SR 836	Industrial/Medical Center
SR 836 south to terminus	High density residential

Table 2-17
Rail Corridor Land Uses

FEC from County Line to Downtown Miami

Between	Land Use
Broward County Line to SR 826	Low and medium density residential
SR 826 to N 138th Street	Industrial
N 138th Street to N 135th Street	Park and medium density residential
N 135th Street to N119th Street	Industrial and medium density residential
N 119th Street to N 17th Avenue	Residential
N 17th Avenue to N 95th Street	Park and low density residential
N 95th Street to N 79th Street	Mixed residential and commercial
N 79th Street N 9th Street	Mixed commercial and industrial

Table 2-18
Rail Corridor Land Uses
FEC along 79th Street

Between	Land Use
Biscayne Blvd. to NW 15th Avenue	Industrial finger through residential
NW 15th Avenue to NW 25th Avenue	Medium density residential
NW 25th Ave to NW 39th Ave	Industrial
NW 39th Ave to Palm Ave	Medium density residential/Hialeah Racetrack
Ludlam West	Industrial

Table 2-19
Rail Corridor Land Uses
FEC Hialeah Yard to Dadeland South

Between	Land Use
NW 79 Street to NW 36th Street	Rail yard
NW 36th Street to Oleander Junction	MIA/Industrial and Office
Oleander Junction to NW 7th Street	Industrial Office
NW 7th Street to SW 12th Street	Industrial/Single Family Residential
SW 12th Street to SW 26th Street	Mixed Residential
SW 26th Street to SW 48th Street	Industrial/Single Family Residential
SW 48th to Snapper Creek	Residential
Snapper Creek to Dadeland South	Regional Commercial

Table 2-20
Rail Corridor Land Uses
CSX MIA to NW 137th Ave

Between	Land Use
MIC to Milam Dairy	Airport/ Freeway ROW
Milam Dairy to Turnpike	Mixed Industrial/Commercial
Turnpike West	Medium density residential/Rock quarries

Table 2-21
Rail Corridor Land Uses
CSX Oleander Junction to Homestead

Between	Land Use
Oleander Junction to NW 7th Street	Industrial Office
NW 7th Street to SW 12th Street	Industrial/Single Family Residential
SW 12th Street to SW 26th Street	Mixed Residential
SW 26th Street to Palmetto Expressway	Industrial/Single Family Residential
Palmetto to SW 56th Street	Park
SW 56th Street to SW 87th Avenue	Low density residential
SW 87th Avenue to SW 72nd Street	Public/Commercial
SW 72nd Avenue to Florida Turnpike	Low density residential
Florida Turnpike to SW 127th Avenue	Industrial/Residential
SW 127th Avenue to SW 152nd Street	Low density residential
SW 152nd Street to SW 137th Avenue	Residential/Metro Zoo
SW 137th Avenue to SW 184th Street	Low density residential
SW 184th Street to SW 290th Street	Agricultural
SW 290th South	Low density residential

Corridor Assessment

When examining the corridors from the perspective of the issues presented in this chapter, several conclusions are clear. Corridor ROW, land use, and the coexistence with train operations, all have significant impact. Most important though is identifying the suitability of a corridor to meet a specific need. Does the corridor link areas where people live to where they want to go? Does the corridor have the potential to generate the ridership that will be required to warrant federal funding? Are there fatal flaws that will obviate a desired use. These issues are the crux of detailed planning efforts that are being conducted now throughout the County. But, from the perspective of this more general analysis, there are several opportunities for consideration for joint use.

The FEC corridor south of 72nd Street to downtown Miami clearly should be a priority corridor. There is very little train traffic, it connects downtown, the Cultural District, and North Miami neighborhoods. The City of Miami is considering on-street transit such as light rail on Biscayne Boulevard. If this occurs, the addition of a bicycle / pedestrian pathway along the existing FEC would be a natural use of the corridor ROW and would be compatible with preserving those tracks for future rail passenger transit or freight use.

In western Miami-Dade County, there should be a focus on preservation of the CSX ROW particularly in the Kendall area. This area has experienced tremendous growth and has the densities that can support rail transit. Opportunities for creating transit opportunities in this area are discussed in the next section.

Finally, the CSX and SFRC corridors that comprise the primary linkages between the western part of Miami-Dade County and the downtown area should be monitored and preserved for future use. These are already the subject of a number of studies (as discussed in the next section) and their priority is key.

3. Current Projects/Adopted Plans Affecting Rail Corridors

There are a two key initiatives that affect the consideration of existing rail corridors for future multi-use or exclusive use as transit or pedestrian corridors. These are the ongoing development of the Miami Intermodal Center (MIC), which will become a focal point for transportation for decades and the passage of the People's Transportation Plan (PTP), a multi-modal commitment to development of enhanced multi-modal transportation facilities.

The importance of this plan is that it provides the funds needed for creation of a truly multi-modal transportation system in the County. In addition, the update of the Long Range Transportation Plan (LRTP) for Miami-Dade County is occurring and in conjunction with the PTP will provide direction on projects likely to receive priority in the future.

Figure 3-1 shows the primary rapid transit projects under consideration in Miami-Dade County. Obviously, the rail corridor network in the County is a valued resource. The following sections discuss some these key initiatives.

The Miami Intermodal Center (MIC)

The Miami Intermodal Center is designed to serve as a major multi-modal facility that will provide transfers for users of various rail systems, buses, taxis, privately owned automobiles and bicycles. It will connect all of these modes to the Miami International Airport (MIA) via an automated people mover (APM). The MIC consists of two major structures: the Rental Car Facility (RCF) and the Central Station (MIC Core). The project was developed in phases with the first phase, the RCF, is currently under construction. The MIC is located east of MIA in an area bounded by NW 25th Street on the north, NW 37th Avenue on the east, NW 21st Street on the south, and NW 38th Ct on the west.

The MIC Core provides the interior space through which passengers will connect between local and regional transit services and MIA. Air passengers will transfer from the MIC to MIA via the MIC/MIA Mover or APM. The MIC Core will be served by Airport/Seaport, Greyhound and MDT buses. It will also be served with rail service provided by Amtrak, South Florida Regional Transportation Authority (SFRTA or Tri-Rail) and proposed service from Metrorail and Florida's High Speed Rail. All of the rail service will be focused north of NW 25th Street. Currently there are two planned Metrorail lines that connect to MIC.

Figure 3-1
Current Proposed Rapid Transit Concepts

Source: Miami-Dade County.

The MIC/Earlington Heights Connector is a Metrorail extension from the Earlington Heights station. The line runs from the Earlington Heights station west along SR 112 before turning south to run along the SFRC to the MIC. The other proposed Metrorail project that will impact the MIC is the east-west line that was intended to connect the area around FIU to the MIC then into the Port of Miami via Government Center in downtown Miami.

The People's Transportation Plan

In November 2002 the citizens of Miami-Dade County passed a referendum to assess themselves an additional half-cent sales tax that would be dedicated to the transit development within the County. The PTP, as it is called, consisted of very specific improvements that included the following:

- Increase the bus fleet from 700 vehicles to 1,335.
- Provide 15-minute or better bus service during rush hour
- Implement a grid system for bus service on major streets with circulator service feeding the main-line routes.
- Develop the North Corridor Metrorail Extension, a 9.5-mile heavy rail line from the current MLK station north along NW 27th Avenue to the Broward County line. The FEIS for this project is nearly complete.
- Develop the East-West Corridor, which consists of two segments that stretch from the Florida Turnpike east to the Palmetto Freeway to the MIC, downtown Miami and the Port of Miami. The total project is 17.2 miles long. The portion from the Palmetto to the Port of Miami has a completed FEIS and the federal government has issued a Record of Decision for this part of the project.
- Develop the MIC/Earlington Heights Connector, which is a 2.5-mile Metrorail extension from the Earlington Heights station to the MIC. This project has a signed DEIS and the MPO has selected a Locally Preferred Alternative.
- Develop the Bay Link, which is a 5.1-mile Light Rail Line planned to connect downtown Miami to Miami Beach. This project has a completed DEIS and the MPO has selected a Locally Preferred Alternative.
- Develop the Kendall Corridor, which is a 15-mile premium transit corridor with both east-west and north-south segments. An Alternatives Analysis was completed that recommended a busway be implemented in this corridor.
- Develop the Northeast Corridor, which is a 13.6-mile premium transit corridor from downtown Miami, through Little Haiti to the Broward County Line. The project could run generally along the Biscayne Boulevard/U.S. 1 Corridor and the FEC railroad right-of-way. Miami-Dade Transit currently has a planning study underway in this corridor to determine an alignment and mode.
- Develop the rail extension to Florida City, which is a 21-mile heavy rail extension along U.S. 1. It consists of two segments: one from Dadeland South Metrorail station to Cutler Ridge, and a second segment from Cutler Ridge to Florida City.
- Develop the Douglas Road Extension, which is 4.5-mile premium transit corridor that connects the Douglas Road Metrorail station to the MIC.

The sales tax passed by the residents of the County to fund the PTP is anticipated to generate over $150 million per year. These funds will support the development of the projects in the PTP along with Federal and State funds.

In addition, 20 percent of the PTP tax generated funds are allocated to the municipalities in the County for use on transportation-related projects. Each municipality must use (or lose) twenty percent of their allocation for mass transit. The remaining eighty percent can be used for other transportation projects.

The SFRTA Long Range Plan

In February 2002 the SFRTA (then Tri-Rail) Governing Board adopted a Long Range Plan that recommended the development of commuter rail in two corridors that would affect Miami-Dade County. The number one priority of the plan was to convert the CSX/SFRC line from the MIC to the Florida Turnpike into commuter rail service with 20-minute headways. This project includes stations and park and ride lots along the corridor. The plan also called for commuter rail service along the FEC corridor from the northern portion of Broward County to downtown Miami.

Miami-Dade County Bicycle/Pedestrian Plans and Proposals

There are a number of bicycle/pedestrian plans and proposals being considered in Miami-Dade County. The North Dade Greenways Master Plan proposed the following facilities along rail corridors:

- Ludlam Trail (FEC Oleander Junction to Dadeland South)
- Ludlam Trail (CSX from Bird Road to North Kendall Drive)
- Perimeter Trail (FEC yard to Oleander Junction)
- Gold Coast Trail (SFRC County line to MIC)
- Flagler Trail (FEC County Line to Downtown Miami)
- Unity Trail (FEC Flagler Trail to FEC Yard)

The plan recommends other trails that appear to be parallel to rail corridors but are not recommended to be directly in the ROW.

Miami-Dade County Long Range Transportation Plan

The Miami-Dade County Long Range Transportation Plan (LRTP) is currently being updated. This plan will provide guidance for transportation projects and development in the County for the next 20 years. The LRTP is updated every three years.

4. Proposed Projects for Rail Corridors in Miami-Dade County

This section presents possible projects that could be implemented using all or part of existing rail corridors in Miami-Dade County. The discussion is organized as follows:

- Identification of Projects included in the People's Transportation Plan
- Identification of Relevant Bicycle/Greenway Projects
- Identification of Potential Rail Corridor Multi-use or Re-use Projects
- Discussion of issues associated with Potential Rail Corridor Multi-Use or Re-Use Projects

Projects Currently Considered in Rail Corridors

All of the corridors listed below include projects specified in the People's Transportation Plan (PTP), which made available the proceeds of a ½ cent sales tax that would be used along with Federal and State funds to finance the projects. The funds are to be used only for a specific list of projects (refer to Chapter 3), some of which lie within the rail corridors being examined as a part of this study. Having a project listed in the PTP does not guarantee that it will be funded but it does improve its potential for funding. Likewise it does not guarantee that the project will get the political support necessary to implement the project, but it does improve its chances.

The Miami-Dade Transportation Plan for the Year 2025 summarizes the transportation improvement projects and their priorities for Miami-Dade County through the year 2025 and identifies a number of roadway improvements within the City of Hialeah. This plan included a Minimum Revenue Plan, developed from different revenue sources. As a result of the project evaluation process, projects were prioritized based upon composite average scores with respect to the long-range transportation plan's Goals and Objectives. The Minimum Revenue Plan is financially constrained and consists of Candidate Projects for which funding is projected to be available. The Candidate Projects are grouped into four Priority Categories. The Priority Categories are described as:

- Priority 1 projects are projects to be completed and opened to service by the Year 2010 or shortly thereafter. This group includes those projects needed to respond to the most pressing and current urban travel problems. Funds for many of these improvements are already programmed in the Miami- Dade MPO's Transportation Improvement Program.
- Priority 2 projects are improvements where project development efforts should commence before 2010, with construction of the projects to take place between 2010 and 2015.
- Priority 3 projects are improvements, which are to be completed between the years 2015 and 2020. Project development activities would need to commence before the Year 2015.
- Priority 4 projects are improvements, which are to be made in the latter part of the Plan horizon and completed by the Year 2025.

Cost estimates are included for potential project for each of the corridors. It is important to note that all cost estimates are based on the same assumptions. They are all 2004 dollars and they are all based on the same per mile cost. This methodology was used purely for comparison purposes. Different studies have been undertaken in different time frames and with different assumptions and are not always comparable.

Mode	Cost/mile
Greenway	$150,000
Commuter rail	$10 million
Busway	$30 million
Street car/ Light Rail	$35-$40 million
Heavy rail	$115 million

FEC - Northeast Corridor

The Northeast Transit Corridor lies between the Broward County line on the north and downtown Miami on the south. The FEC rail line runs down the center of the corridor. An Alternatives Analysis is underway for the corridor. Various transit alternatives are being considered including:

- Commuter Rail on the FEC tracks (included in the Tri-Rail Master Plan)
- Light-Rail operating down any number of north-south streets or within the FEC right-of-way.
- Heavy-rail operating on elevated tracks along any number of north-south streets or within the FEC right-of-way, or
- As part of the alternatives analysis, pedestrian/bicycle improvements within the FEC right-of-way (included in the Miami-Dade County Greenways Plan) will be considered.

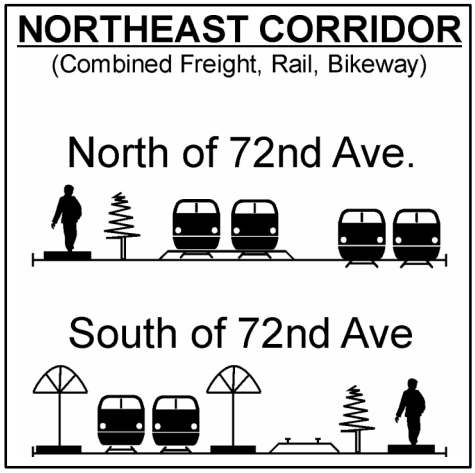
The Miami-Dade County Greenway plans call for development of the Flagler Trail within this corridor.

Conceptual cost estimates could run within the following costs:

Mode	Cost
Greenway	$2.1 million
Commuter rail	$140 million
Light rail/ street car	$490-$560 million
Heavy rail	$1.61 billion

There are no major transit projects in the Northeast Corridor currently programmed by MDT for implementation. However, the Northeast Corridor project is listed as a Priority 4 (beyond 2020) project in the LRTP and the greenway project is listed as a Priority 1 (scheduled for implementation in the next five years).

Of note, the City of Miami, in conjunction with the developer of the Buena Visa Yard is exploring the possibility of developing multi-modal options along the FEC corridor and downtown Miami. The project would be compatible with any other projects developed in the northeast corridor, and could well be a precursor to the development of the full corridor. This project has garnered strong political support and may be set up to take advantage of several sources of funds.



CSX/SFRC - Dolphin Corridor

The Dolphin Corridor runs east-west through central Miami-Dade County and lies between the Miami Intermodal Center (MIC) and NW 145th Avenue. SR 836 and the CSX Lehigh spur lie within the corridor. The corridor was part of a Major Investment Study completed in 1999. The Locally Preferred Alternative (LPA) for the study was a heavy-rail line to be operated between the Port of Miami, through the MIC to the Palmetto Expressway (SR 826). The majority of the LPA alignment did not use the rail right-of-way. In 2003 an Alternatives Analysis was initiated to examine transit extensions from the MIC to the west. The alternatives examined included:

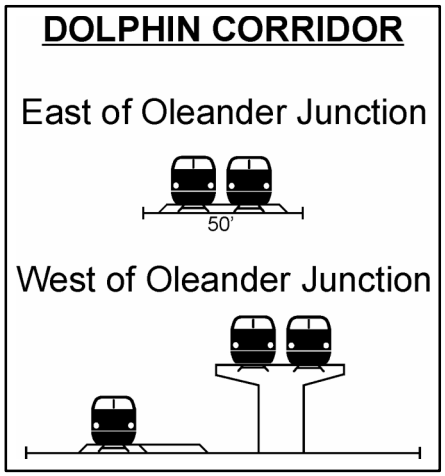
- Commuter rail within the CSX right-of-way (included in the Tri-Rail Master Plan)
- Heavy rail possibly within the CSX right-of-way, and
- Busway in the median of SR 836.

The study was placed on hold before cost estimates for the alternatives were finalized, but the costs could fall within the following range.

Project	Cost
Commuter Rail	$120 million
Heavy Rail	$1.38 billion
Busway	$240 million

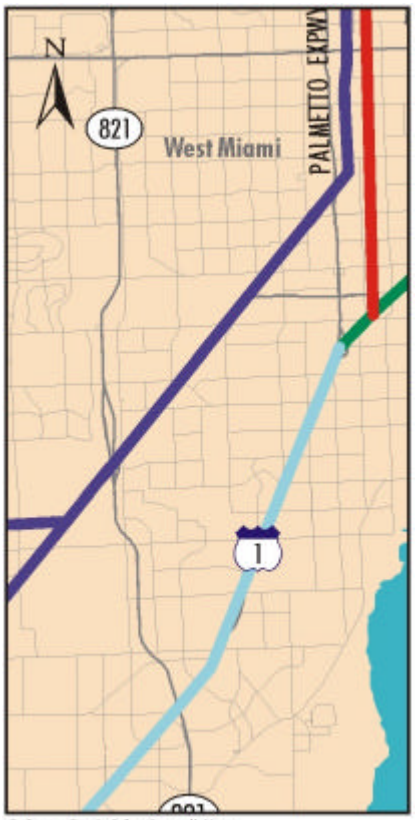
MDT is initiating an alternatives analysis for this corridor. The Dolphin corridor was recently upgraded to a Priority 1 project in the LRTP.

Refer to Fig 2-1 for Overall Map



CSX - Kendall Corridor

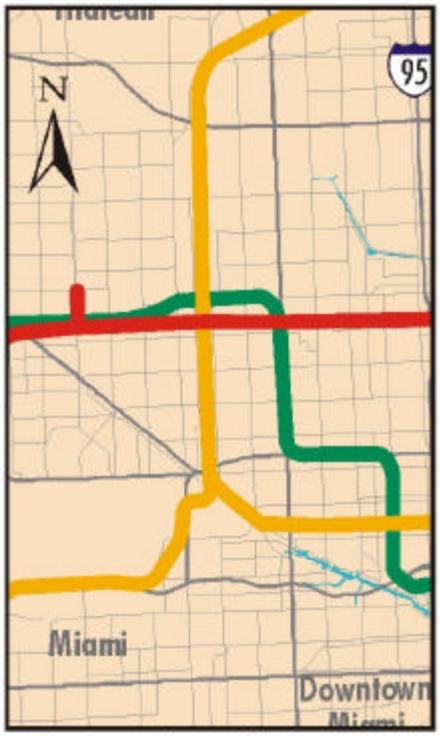
The Kendall Corridor was the subject of a major investment study in the late 1990's, which resulted in the selection of a Locally Preferred Alternative (LPA). The LPA that was selected was a busway on Kendall Drive, tying into the Metrorail at Dadeland. One of the original alternatives in the MIS utilized the CSX right-of-way for a rail line from the Airport, south to the Turnpike. The Kendall Corridor as it is defined in the PTP runs along Kendall Drive and along the Florida Turnpike. Thus it is not directly related to this study. If the corridor is re-studied there are a number of alternatives that could use existing rail rights-of way. The CSX right-of-way between Oleander and Kendall remains a prime candidate for conversion to public use and should be preserved for future public acquisition.



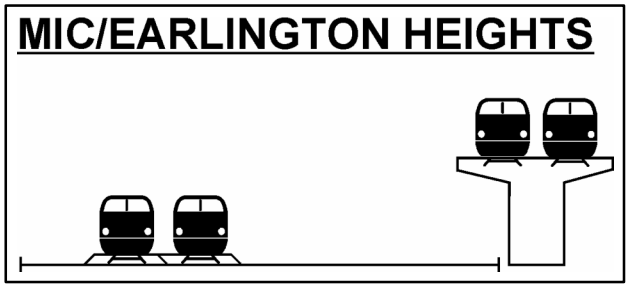
Refer to Fig 2-1 for Overall Map

SFRC - MIC/Earlington Heights Connector

The MIC/Earlington Heights Connector is a 2.5-mile heavy rail connection proposed between the existing Metrorail station at Earlington Heights and the Miami Intermodal Center (MIC). A DEIS has been completed on the project and an LPA has been selected. The LPA runs along SFRC right-of-way from the SR 112 to the MIC. The project would cost in the vicinity of $285,000,000. It is programmed as a Priority 1 project in the LRTP and is projected to be implemented by 2012.



Refer to Fig 2-1 for Overall Map

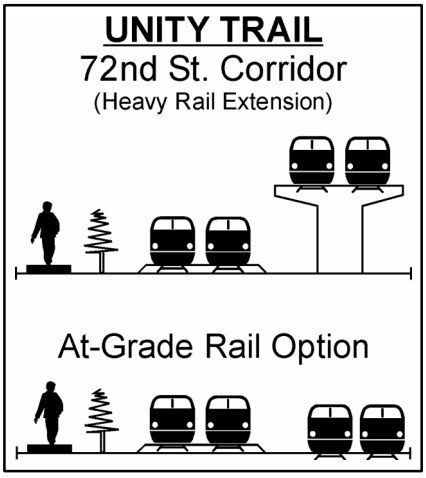


FEC - 72nd Street Extension

This project is identified in the PTP as a "Rapid Transit Line under Consideration." No studies have been scheduled on this line to date. The line on the plan follows the FEC line from the existing Metrorail alignment on NW 27th Avenue to its terminus at approximately Biscayne Boulevard. The proposed line actually extends further east across the JFK Causeway to Miami Beach. Depending upon the technology selected the project costs could fall within the following range.

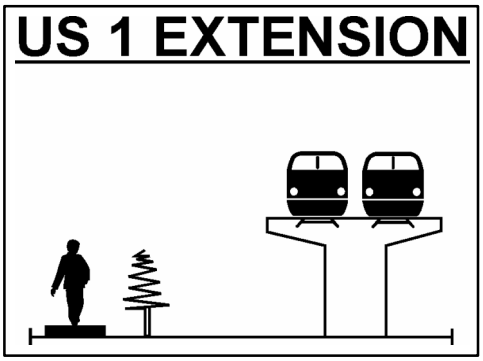
Mode	Cost
Greenway	$600 thousand
Busway	$240 million
Light rail/ street car	$280-$340 million
Heavy rail	$ 920 million

The cost estimate above includes an entry for a 4-mile long portion of the Unity Greenway, which is one of the projects adopted in the North Dade Greenway Master Plan. The LRTP contains no priority status for the transit project.



US 1 Extension to Florida City

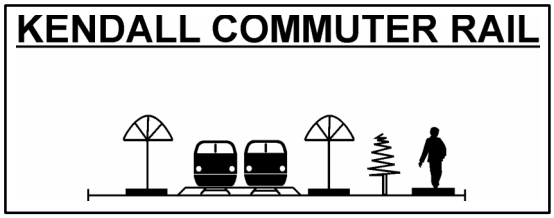
The former FEC corridor from Dadeland South (the southern terminus of the Metrorail) to Florida City is in public ownership and accommodates the current South Dade Busway to Cutler Ridge and the busway extension from Cutler Ridge to Florida City, which is under construction. In 2004 Miami-Dade Transit initiated an Alternative Analysis to convert the busway to an extension of the Metrorail system. The capital cost of the conversion could be in the vicinity of $2.2 billion. This project was recently upgraded to a priority 1 in the LRTP.



South Florida Regional Transportation Authority/Tri-Rail Master Plan

The South Florida Regional Transportation Authority (SFRTA)/Tri-Rail Master Plan includes three commuter rail projects that affect Miami-Dade County. Two of the projects coincide with PTP projects and are included in the discussion above for the Northeast Corridor and the Dolphin Corridor.

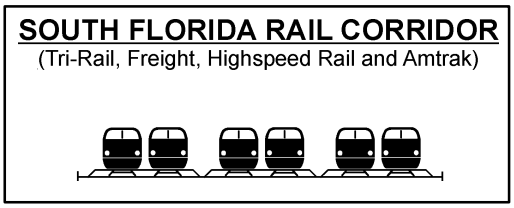
The remaining corridor in the Master Plan is for commuter rail service from the MIC to Metrozoo via the CSX rail line. This corridor replicates one of the alternatives that was originally rejected in the Kendall Corridor MIS. The corridor is 20 miles long and it is estimated to cost $200 million. This corridor is not included in the LRTP and was listed as a lower priority in the Tri-Rail plan.



South Florida Rail Corridor

The SFRTA is in the process of double-tracking the SFRC from West Palm Beach to the MIC. The project is fully funded and will enable combined freight and increased levels of passenger (from 60 to 20 minute headways) service within the corridor. The corridor is also used by Amtrak. The corridor is also one of the possible alignments for the Florida High Speed Rail Line. The right-of-way is already in public ownership and land use policies need to be changed to support intensification of rail service in the corridor. The North Dade Greenway Master Plan includes the Gold Coast Greenway (see discussion below) in this corridor.

Refer to Fig 2-1 for Overall Map



Greenways and Bicycle Plans

The Miami-Dade Bike Facility Plan includes three projects that could be constructed in rail corridors.

- One project is a bike facility on Okeechobee from NW 103rd Street to NW 79th Street. This project could either be in the public ROW along Okeechobee or along the FEC right-of-way. The Okeechobee Road pedestrian improvements are listed as a Priority 1 in the LRTP.

- The second bike facility is along Krome Avenue and is intended to be built in the public ROW. The Krome Trail was one of ten greenway projects proposed in the South Dade Greenway Plan. There are several portions of different CSX spurs where the right-of-way could be part of a bike trail. The Krome Avenue project is listed as a Priority 4 in the LRTP.

- The third bike facility identified in the Bike Facilities Plan is the South Dixie Highway Greenway from I-195 to Homestead. The South Dade Trail was also one of ten greenways proposed in the 1994 South Dade Greenways Plan. This greenway could utilize part of the same abandoned FEC right-of-way that the Metrorail and the South Dade Busway are occupying. Pedestrian improvements along the South Dixie Corridor are listed as both Priority 1 and Priority 2 in the LRTP.

As previously mentioned there are six greenways that utilize existing rail rights-of-way recommended in the North Dade Greenways Master Plan.

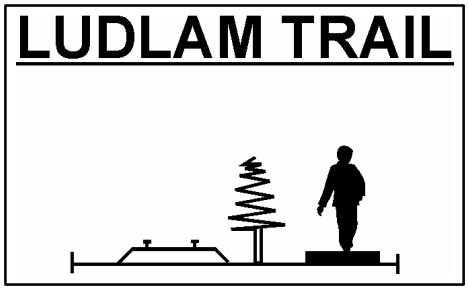
- The Flagler Trail is discussed above in the Northeast Corridor. The LRTP includes pedestrian improvements along Biscayne Boulevard in both Priority 1 and Priority 2. The greenway along the FEC right-of-way is not listed in the LRTP as a priority.

- The Unity Trail is also discussed above as a part of the NW 72nd Street corridor that was under consideration for rapid transit improvements. This greenway in the FEC right-of-way, like the transit project is not listed in the LRTP.

- The Ludlam Trail is similar to the Tri-Rail project discussed above. The Ludlam Trail extends along the FEC right-of-way from Oleander Junction to Dadeland North and connects to the CSX line at Bird Road to connect to North Kendall Drive. This project, like the SFRTA/Tri-Rail project, is not included in the LRTP.

- The Perimeter Road Greenway is located along the FEC right-of-way from the NW 79th Avenue to Oleander Junction. The LRTP includes an on-road bikeway along Milam Dairy Road from 79th Street to NW 7th Street as a Priority 4 unfunded project.

- The Gold Coast Greenway is located along the SFRC between the Broward County line and the MIC occupying state-owned right-of-way adjacent to the current Tri-Rail commuter service. The Gold Coast Greenway is also a priority 4 unfunded project in the LRTP.



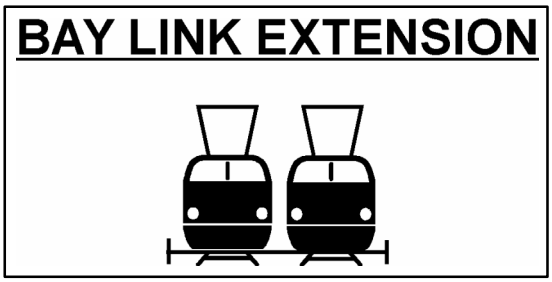
Potential Opportunities for New Project or Joint Multi-Use Project Development

The following discussion identifies projects that may represent additional opportunities for multi-use development in or along existing rail corridors in Miami-Dade County.

Bay Link Extension

The Bay Link project is a Priority 2 transit project in the LRTP. The project is a light-rail/street car connection between the Miami Beach Convention Center and downtown Miami. The line would continue along the FEC tracks to a yard and shop facility in the vicinity of the Buena Vista Yard. The line could easily be extended to connect directly to the MIC by turning to the west at NW 17th street and tying directly into the SFRC that runs between the MIC and downtown Miami. The tracks are in place except for the few blocks between I-95 and the FEC line and an under-crossing is available at NW 17th Street under I-95. This corridor from the MIC to NW 17th Street and I-95 should be preserved for future transit use to connect future transit along the FEC corridor to the Airport. This connection is very important because it ties directly to the Medical Center/Civic Center area.

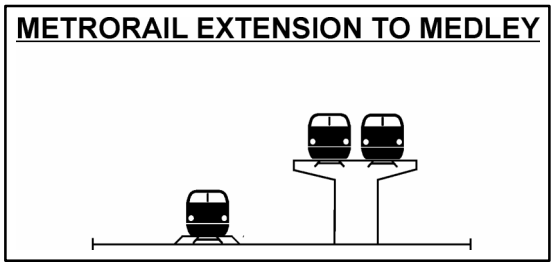
Refer to Fig 2-1 for Overall Map



Metrorail Extension through Medley

Medley has a very high employment concentration and Hialeah Gardens, north of Okeechobee Road is developing higher density residential areas. This area may be ideal for a future Metrorail extension from the Palmetto Station into Medley. Again the FEC right-of-way in this area needs to be reserved for a future transit link.

Refer to Fig 2-1 for Overall Map



Connectors

When portions of a corridor are used for transit, such as development of rail along the CSX between the MIC and Metrozoo, logical bikeway connections need to be made. Using the Metrozoo as a southern transit terminus, greenways should be extended to Florida City and over to Krome Avenue to tie those areas to transit. Similarly terminating the Unity Greenway at FEC does not make sense when the greenway corridor should logically extend across the JFK Causeway and into Miami Beach. A perfect example of this type of connector already exists along Coral Reef Drive where a bikeway was developed between the Metrozoo and the Busway Extension to facilitate transit to bike connections. A more detailed study of off-rail corridor bike connections to transit needs to be undertaken.

Operating Options

There are a number of ways that joint use of rail corridors can be accomplished. Most traditionally the rail corridor has been purchased outright like the SFRC property, which was purchased from the CSX and the Metrorail-Busway alignment that was purchased from the FEC. Operating agreements can be made with the railroads so that they continue operating in the corridor, like the CSX operations on the SFRC or operations are completely abandoned as they were on the FEC prior to construction of Metrorail.

A second method of providing joint use is through an operating agreement where transit is operated on the rail line and a fee is paid to the railroad operator/owner for every train mile that the transit operator runs on the tracks. This is fairly common for commuter rail operations. When only a portion of the right-of-way is needed then for a greenway or separate transit facilities, then the necessary land could either be leased or purchased from the railroads with rail operations maintained in the corridor. A key consideration is the width of the right-of-way and whether the rail is single- or double-tracked. Figure 4-1 illustrates the existing condition in Miami-Dade County.

Figure 4-1
Track Status of Rail Corridors in Miami-Dade County

One additional operating scenario would include freight consolidation. This could occur in South Dade by consolidating all of the rock trains through the quarries west of Krome Avenue and constructing new tracks to the western end of the Lehigh Spur of the CSX. The new tracks would negate the need for the Homestead Branch tracks from the Oleander Junction to the Metrozoo thus freeing up that set of tracks for non-freight activities in that corridor. CSX would benefit from consolidation by reducing the number of miles of tracks that needed to be maintained.

There is also strong sentiment in South Florida that the FEC and CSX operations should be consolidated onto the SFRC to free up the FEC tracks. In north Broward and Southern Palm Beach County the FEC and the SFRC are less than a mile apart and could

easily be connected to restore FEC operations in their corridor north of that connection. This consolidation would make transit operations in the FEC corridor much more feasible.

Project Feasibility Analysis

Table 4-1 assesses the feasibility of different types of projects in the identified corridors in Miami-Dade County and summarizes the findings for each of the projects under consideration for the various rail corridors. The table presents actual data on train operations, ROW widths, and the number of grade crossings.

- The higher the number of train operations on a rail corridor the greater the potential impact on a project that would require joint use of the rails. If a project is only going to use the right-of-way then the number of train operations is not as important.

- Right-of-way constraints severely limit the joint use options within the right-of-way and is a major factor in the feasibility of using the rail corridor.

- The number of grade crossing has multiple impacts on any project considered within the rail corridor. Street crossings create a safety hazard for vehicles, pedestrians, bicycles and rail cars. Protection at the grade crossings becomes a cost factor that must be considered. Additionally the more grade crossings involved the more potential the project will have for impacting traffic, which will increase the potential for public opposition.

- The land use and connectivity categories relate to the relative success of a project. Corridors that connect high density locations have a greater potential to attract a large number of users. Corridors that run through predominantly industrial neighborhoods have a very low likelihood of attracting users. Corridors that run through single-family neighborhoods are likely to attract a considerable amount of community opposition from homeowners that see any change in their neighborhood as threat to their security and property values.

The remainder of the categories that rate the projects use subjective and comparative ratings of “high”, “medium” and “low”. Engineering feasibility is a combined rating reflecting issues such as number of train operations, grade crossings, and right-of-way. User benefits reflect the Federal Transit Administration (FTA) analysis relating costs to patronage. Funding potential is a combined rating that reflects whether the project is in the PTP, overall costs, priority, and potential for alternative funding sources

Table 4-2 indicates the level of coordination that must occur to implement any of the projects. The more groups, plans and policies that a project must be coordinated with the greater that chance that political opposition will occur, either from competing priorities or from neighborhood opposition. In all cases agreements must be reached with the owners and the operators within each corridor before a project can be advanced.

Table 4-1
Project Feasibility Assessment

Project	Rail Segment	Train Operations	R-O-W	# Crossings	Land Use	Connectivity	Engineering Feasibility	Community Impacts	Potential Patronage	Costs	User Benefit	Funding Potential
Northeast Corridor AA	FEC / NE 215 to Downtown	18	100’	32	High Density Mixed Use	Aventura to CBD						
- Commuter Rail							Med	High	Med	Med	High	Med/ High
- Light Rail							Med	Med	High	Med	High	Med
- Flagler Trail Bikeway							High	Low		Low	Low	High
- Heavy Rail							High	Med	High	High	Med	Low/ Med
City of Miami Joint Use Corridor	FEC NW 79th to Downtown	0	100’	18	High Density Mixed use	Little Haiti to CBD	High	Low	High	High	High	Med/ High
Unity Trail Bikeway	FEC Biscayne to Milam Dairy	18	100’	12	Single Family	Hialeah to Little Haiti	High	Low	Low	Low	Low	Low
72nd St. Transit Corridor	FEC Biscayne to NW 27th Ave.	18	100’	12	Single Family	Metrorail to Little Haiti	High	Low	Low	High	Low	Low
Dolphin Corridor AA - East-West Metrorail -Tri-Rail Commuter	SFRC MIC to Oleander CSX Oleander to Turnpike	5 4	50’ 100’	14	Industrial	FIU to MIA	High	Low	Med Med	High Med	Med Med	M/H High
Ludlam Trail	FEC Oleander Jct. to Dadeland South	1	100’	15	Single Family	Dadeland to Blue Lagoon	High	Low	Low	Low	Low	High
Perimeter Trail	FEC Yard to Oleander	1	100’	10	Commercial/ Industrial		High	Low	Low	Low	Low	Med
Bay Link Extension to MIC	SFRC to 17th Ave.	0	50’	21	Industrial	Airport to Civic Ctr.	High	Low	Med	Med	Med	Low
Kendall Corridor AA	CSX -Oleander Jct. to Metrozoo	1	100’	23	Single Family	Kendall		Med	Med		Med	Med
- Commuter Rail							High			Low/ Med		
- Light Rail							High			Low		
Florida City to Metrozoo Connector Trail	CSX Florida City to Metrozoo	1	100’	32	Residential/ Agricultural		High	Low	Low/ Med	Low	Med	Med
South Dade Busway Conversion	Abandoned line Dadeland South to Florida City	0	100’		Mixed	Homestead to Metrorail	High	Low	Low	High	Low	Med
Medley Metrorail Extension	FEC Palmetto to Turnpike	10+	100’	5	Industrial	Medley to Metrorail	High	Low	Low	High	Low	Low
Okeechobee Trail	FEC Palmetto to Turnpike	10+	100’	5	Industrial	Medley to Metrorail	High	Low	Low	Low	Low	Med
Krome Ave Trail					Agricultural Residential		High	Med	Low	Med	Low	Med

Table 4-2
Coordination with Existing Plans and Policies

	FDOT	CSX	FEC	LRTP/MPO	Tri-Rail Long Range Plan	PTP/MDT	City of Miami Comp Plan	County Comp Plan	Greenway Master Plan	Hialeah Comp Plan	North Miami Beach Comp Plan	North Miami Comp Plan	Miami Shores Comp Plan	Aventura Comp Plan	Medley Comp Plan	Opa-locka Comp Plan
Northeast Corridor AA	X		X	X		X	X	X			X	X	X	X		
- Commuter Rail					X											
- Light Rail																
- Flagler Trail Bikeway									X							
- Heavy Rail																
City of Miami Joint Use Corridor	X		X	X		X	X	X								
Unity Trail Bikeway	X		X	X			X	X	X	X						
NW 72nd St Transit Corridor	X		X	X		X	X	X								
Dolphin Corridor AA - East-West Metrorail -Tri-Rail Commuter	X	X		X	X	X	X	X								
Ludlum Trail	X	X	X	X				X	X							
Perimeter Trail	X		X	X				X	X							
Bay Link Extension to MIC	X			X		X	X	X								
Kendall Corridor AA	X	X		X		X		X								
- Commuter Rail					X											
- Metrorail																
- Light Rail																
Florida City to Metrozoo Connector	X	X		X				X	X							
Medley Connector to Metrorail	X		X	X		X		X		X					X	
Okeechobee Trail	X		X	X				X	X	X					X	
Gold Coast Trail	X			X	X			X	X	X						X
Metrozoo to Busway Connector				X				X	X							
Krome Ave Trail	X	X		X				X	X							

Corridor Evaluation and Presentation to Project Steering Committee

As stated at the beginning of this report, the purpose of the study is to identify rail corridors in Miami-Dade County where particular emphasis should be placed for future transit and bicycle/pedestrian activity. To facilitate this "prioritization," the consultant team engaged a Steering Committee established for the project in a dialogue that reviewed each corridor. The data shown in Tables 4-1 and 4-2, as well as corridor maps, were used to facilitate the discussion. The following were emphasized to the Steering Committee:

- Most sections of the major rail corridors in Miami-Dade County are currently the focus of some level of regional or local planning effort;
- When referencing "conversion," the emphasis is on joint or multi-use rather than exclusive use for one use or another;
- Some corridors may be suitable for transit, but not bicycle/pedestrian use, and vice versa;
- The analysis did not focus on the desirability of a particular mode, with the exception of "transit" or bicycle/pedestrian; and
- The results of this work will be to allow the MPO staff and other entities to identify, and perhaps move forward in the planning process, projects in other rail corridors.

Figure 4-2 displays the corridors considered for evaluation for priority for conversion. Note that the analysis did not consider the existing Metro Rail or busway corridors. Table 4-3 presents the results of the evaluation of the steering committee. Information relating to the specifics that led to this evaluation is presented next.

FEC Northeast Corridor

- Critical to Freight Operations
  - Heavy freight use north of 72nd Street
  - Nominal (or almost no) freight use below 72nd Street
- Potential for moving people
  - Near term opportunity to cerate bicycle/pedestrian connection south of 72nd Street with reservation for future transit
  - Passes through most urban part of Miami-Dade County
- Potential for Implementation
  - Passes through many communities
  - High number of grade crossings
- Priority for Joint Use
  - Considered in both local and regional studies for transit

CORRADINO

Figure 4-2
Rail Corridors Considered for Prioritization

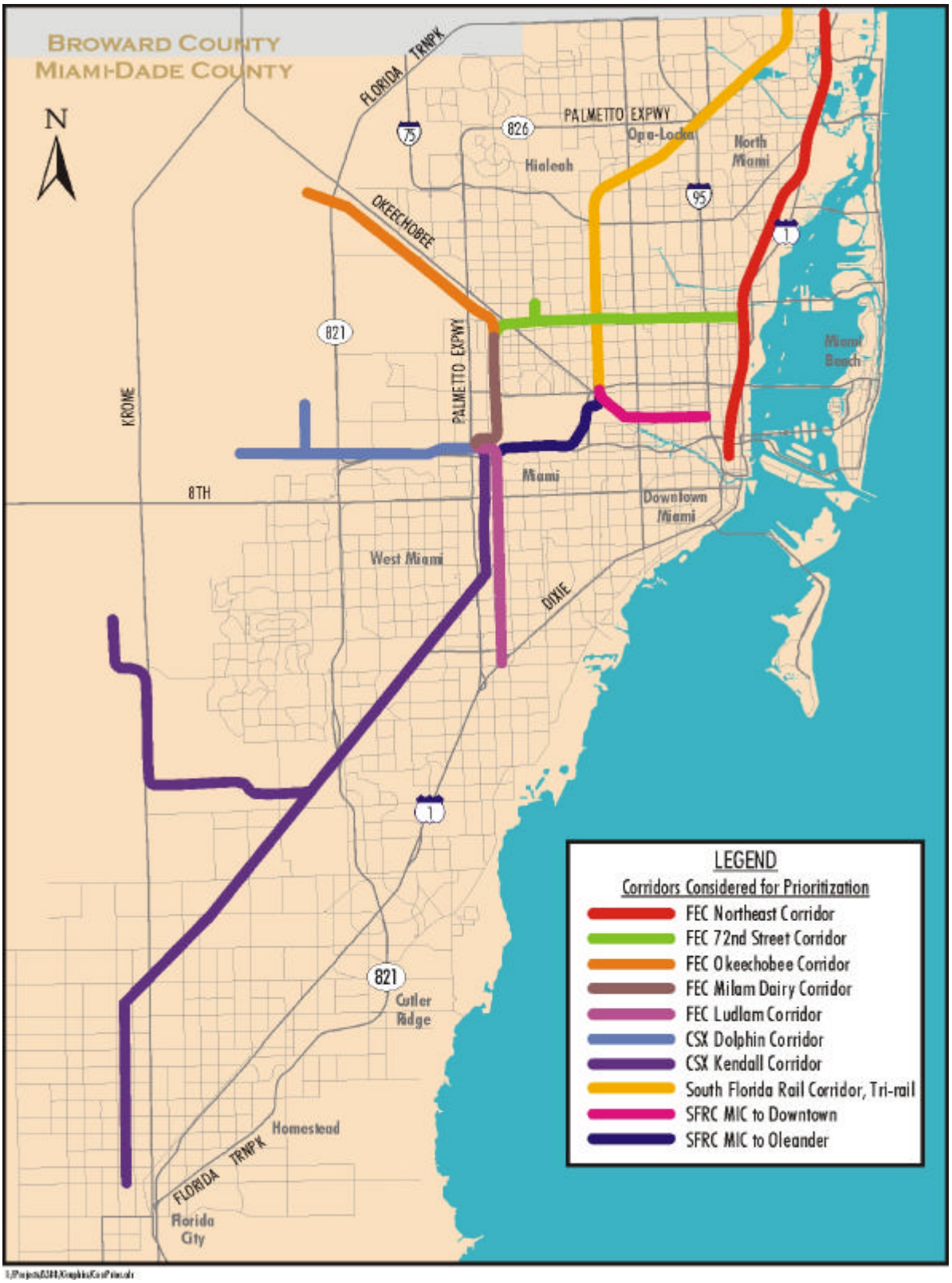


Table 4-3
Rail Convertibility Evaluation Matrix

Rail Corridors	Critical to Freight	Potential for Moving People	Potential for Implementation	Priority for Joint Use	Other Comments
FEC Northeast Corridor (North of 72nd Street)	Yes	High	Medium	HIGH	Need advance community awareness. Passes through many communities and has a high number of grade crossings. Is considered in both local and regional studies for transit, including a proposed multi-County study examining the feasibility of a Jupiter to Miami transit line.
FEC Northeast Corridor (South of 72nd Street)	No	High (particularly bicycle/pedestrian with reservation for future transit) from 72nd Street to downtown through cultural center.	High		
FEC 72nd Street Corridor(East-West Corridor	Yes	Transit - Low Bike/Ped - High (because of the number of schools and related institutions in the corridor).	Low High (as a future freight/bicycle-pedestrian corridor).	LOW	Critical to freight operations for both current and future needs.
FEC Okeechobee Corridor	Marginal The corridor is used by rock trains.	Low - The corridor does not pass through heavily residential neighborhoods and does not have significant attractors or travel generators.	Low	LOW	
FEC Milam Dairy Corridor (North of 36th Street)	Yes	High	Low	MEDIUM	The corridor is not currently on any transit plans.
FEC Milam Dairy Corridor (South of 36th Street)	No	High	Transit - Low Bike/Ped - High		
FEC Ludlam Corridor	No	High	High (for non-transit) - The Ludlam bicycle-pedestrian trail is approved for this corridor.	HIGH	
CSX Dolphin Corridor	No	High - This corridor has potential to be a strong transit corridor.	High - The corridor has particularly strong support from locally elected officials.	HIGH	Offers good potential for joint use, particularly for transit.
CSX Kendall Corridor	No	High - There is good potential to supply a transit connector between Oleander and the Metro Zoo and bicycle-pedestrian link from the Zoo to Florida City.	Medium - The rail corridor is not being considered in any current planning efforts.	MEDIUM	
South Florida Rail Corridor (SFRC) Tri-Trail	Marginal Already is being used for freight and transit.	High	Low - It is already being used for freight and transit. Adding a bicycle-pedestrian activity is unlikely.	LOW	
SFRC MIC to Downtown	No	Low	Low	LOW	Although evaluated as low in terms of moving people or implementation, the corridor should be "kept on the table" for further study because of the natural link between the MIC and downtown.
SFRC MIC to Oleander	Yes	High - This corridor is a natural transit corridor.	Medium - There may be concerns with transit (I.e. train) because of the proximity to the airport and the airport's fuel storage facilities.	HIGH	

FEC 72nd Street Corridor

- Critical to Freight Operations
  - Current and future need for freight
- Potential for moving people
  - Not viewed as having high potential for moving people by transit, but with high potential by bicycle or walking because of the number of schools and related institutions in the corridor
- Potential for implementation
  - Assessed as having a high potential for having multi-use as a future freight/bicycle-pedestrian corridor
- Corridor Priority
  - Low

FEC Okeechobee Corridor

- Critical to Freight Operations
  - Used by rock trains
- Potential for moving people
  - Does not pass through heavily residential neighborhoods
  - Does not have significant attractors or travel generators
- Potential for Implementation
  - Low
- Corridor Priority
  - Low

FEC Milam Dairy Corridor

- Critical to Freight Operations
  - Critical to freight north of 36th Street
  - Not critical south of 36th Street
- Potential for moving people
  - Has a high potential for moving people
- Potential for implementation
  - Bike trail is already approved.
  - It is low for transit because it is not on any plans
- Priority for joint use
  - Low for transit
  - High for bike

FEC Ludlam Corridor

- Critical to Freight Operations
  - No
- Potential for moving people
  - Already has plans proposed as a bicycle/pedestrian project
  - This use is substantiated by the evaluation of the steering committee for the corridor as high for moving people (by bicycle and pedestrian) and high for implementation
- Potential for implementation
  - High for non-motorized
- Priority for joint use
  - High

CSX Dolphin Corridor

- Critical to Freight Operations
  - The corridor has minimal freight activity
- Potential for moving people
  - Has the potential to be a strong transit corridor
- Potential for implementation
  - High, has particularly strong support from locally elected officials
- Priority for joint use
  - High particularly for transit

CSX Kendall Corridor

- Critical to Freight Operations
  - The corridor has minimal freight activity
- Potential for moving people
  - Has potential to supply transit connector between Oleander and the Metro Zoo and pedestrian from the zoo to Florida City
- Potential for implementation
  - Medium because the rail corridor is not part of the plan
- Priority for joint use
  - Medium

South Florida Rail Corridor / Tri-Rail

- Critical to Freight Operations
  - Already used for both freight and transit
- Potential for moving people
  - Already used for both freight and transit
  - Potential bicycle/pedestrian link between Golden Glades and Snake Creek
- Potential for implementation
  - Low
- Priority for joint use
  - Low

SFRC MIC to Downtown

- Required for Freight Operations
  - No
- Potential for carrying person trips
  - Low
- Potential for implementation
  - Low
- Priority for joint use
  - Although evaluated as low in terms of moving people or implementation, corridor should be "kept on the table" for further study because of the natural link between the MIC and downtown

SFRC MIC to Oleander

- Required for Freight Operations
  - Yes, all CSX trains funneled through this portion of track.
- Potential for carrying person trips
  - High
- Potential for implementation
  - A natural transit corridor, considered to have high potential for moving people, may have issues for use as transit (i.e., train) because of proximity to airport and the airport's fuel storage facilities.
- Priority for joint use
  - High

As shown in Table 4-3 there are several rail corridors that are rated "high" for converting them to future joint use operations. These are the FEC, particularly south of 72nd Street, the FEC Ludlam (for bicycle/pedestrian), and the CSX Dolphin Corridor. As noted earlier, all of these corridors have been or will be subject to detailed major investment-level analysis.

5. Recommendations

The People's Transportation Plan will be the principal determinant of which rail corridors will be the highest priority for transit use. These corridors, the FEC Northeast, the Dolphin, and the SFRC MIC to Oleander, will be the focus of multi-use or transit projects in the next two decades. Likewise, the County's bicycle/pedestrian plans have focused on the development of the Flagler Trail in the FEC Corridor and the Ludlam Trail in the FEC Ludlam Corridor. Finally, FDOT has authorized a multi-county study examining the entire FEC corridor and transit possibilities. In addition, there are a variety of transit technologies being used in other parts of the country that can be accommodated into a multi-use operating environment. These include Bus Rapid Transit (BRT) and Diesel Multiple Units (DMU) as well as the more traditional Light Rail Transit (LRT) and commuter rail. All of this information suggests that the MPO should prioritize the following corridors for development as multi-use facilities (Figure 5-1).

FEC Northeast Corridor

The FEC Northeast Corridor is at the top of the list of every discussion about rail transit. It is the highest priority corridor for future multi-use activity. Given that implementation of a major transit improvement is not likely in the near-term, it is recommended that the MPO focus its activities for now on the section of the corridor south of 72nd Street. The FEC Northeast Corridor has minimal train traffic south of 72nd Street. A bicycle/pedestrian path from 72nd Street to downtown Miami should be put into place alongside the current FEC track with reservation that it may be used for a future transit corridor. In addition, a linear park should be created along the corridor. There is plenty of precedent for this type of proposal. This facility could offer great benefits to the local communities and also offers good connectivity between downtown and unique areas such as the Cultural Center and the many neighborhoods along the corridor. This project should be developed in coordination with the City of Miami's proposed LRT development along Biscayne Boulevard.

FEC Ludlam Corridor

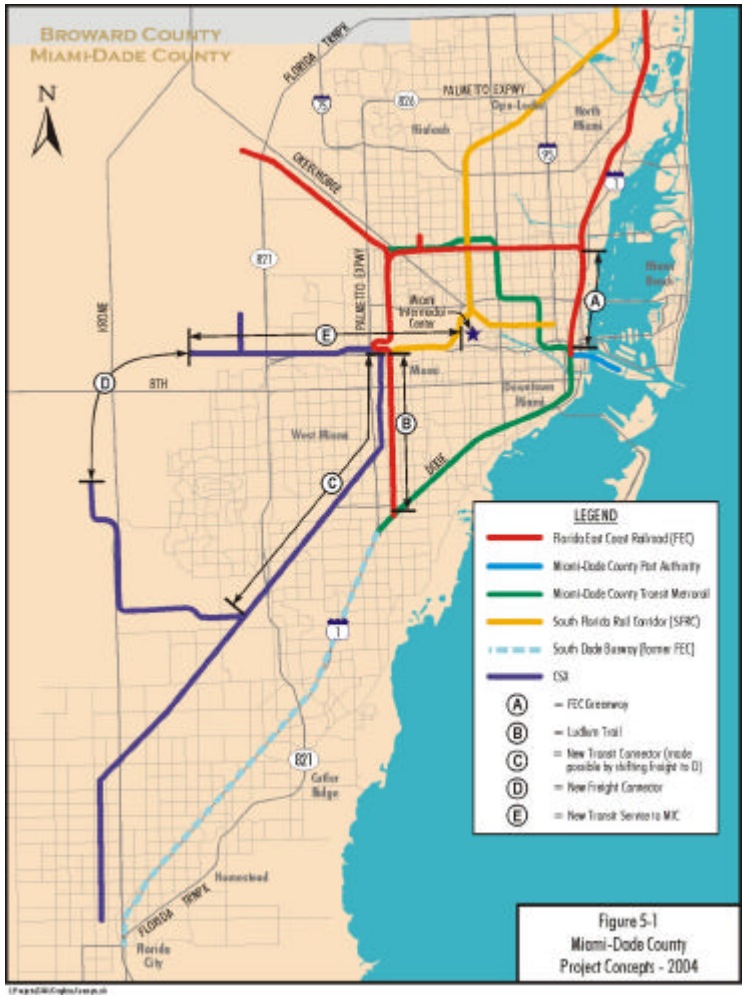
This corridor has been designated as high priority for non-transit use. Given that a bicycle-pedestrian corridor is approved and programmed for development in this corridor it should be carried forward and viewed as a priority by the MPO.

CSX Dolphin Corridor

The CSX Dolphin Corridor is identified as having strong potential as a transit corridor. It connects the far west of Miami-Dade County with the MIC and can accommodate high capacity train operations. It could be suited to either Metrorail or light rail type service.

SFRC MIC to Oleander

This corridor is identified as having strong potential as a transit corridor although a limiting factor may be its proximity to the Miami International Airport fuel storage facilities. It provides good east-west connectivity to the MIC Earlington Heights Metrorail Connection, which is a high priority for the County.



CSX Oleander - Metrozoo Connector

This operating scenario was not prioritized in the corridor evaluation but has been identified as a viable "partner" to the SFRC MIC to Oleander. It would include freight consolidation. This could occur in South Dade by consolidating all of the rock trains through the quarries west of Krome Avenue and constructing new tracks to the western end of the Lehigh Spur of the CSX. The new tracks would negate the need for the Homestead Branch tracks from the Oleander Junction to the Metrozoo thus freeing up that set of tracks for non-freight activities in that corridor. CSX would benefit from consolidation by reducing the number of miles of tracks that needed to be maintained. A planning study to assess the feasibility of this concept is recommended.

Funding and Implementation

The transformation of freight railroad right-of-way (ROW) into multi- or alternative use transportation corridors needs to be properly planned so as to ensure the greatest flexibility for obtaining grant funding for the program. The rail corridor right-of-way in Miami-Dade County are an invaluable resource and opportunity for future public transportation needs. As the transportation planning organization responsible for the development of the future transportation network in Miami-Dade County, the Miami-Dade County Metropolitan Planning Organization (MPO) must act as a steward for this resource.

On an annual basis, it is recommended that the MPO contact the owners of the railroad corridors and request information concerning any changes in usage, plans for future increases or decreases in usage, plans for selling or disposition of the corridor, and any other issues that may affect the development of multi-use projects in these corridors. In addition, as there are many projects associated with the

People's Transportation Plan and other initiatives that may depend on all or parts of corridors as transportation infrastructure, the MPO needs to monitor these numerous projects. In Broward County, the Moving Broward coalition represents a group of planners, private sector individuals, and representatives of local units of government who gather quarterly to review the various transportation projects underway. This is a simple and efficient mechanism for keeping people "up to speed" on the status of projects. The MPO could sponsor a similar initiative, either as part of an existing group or committee or as a new stand-alone organization.

Converting part of these corridors to recreation use as bicycle/pedestrian type areas is likely the initially most probable non-PTP opportunity for making use of the corridors. As noted above, the corridor south of 72nd Street is of particular note. The inclusion of a greenway and pedestrian/non-motorized trail as part of the ROW area would encourage the greatest potential for outside funding. Over the last few years, the State of Florida has facilitated the granting of funds for greenways and trails through the Office of Greenways and Trails (OGT) within the Department of Environmental Protection. This office administers three grant programs and offers technical assistance to eligible governments for planning, designing, constructing, funding and maintaining greenways and trails.

Historically, these funds have been utilized much more for traditional style trails for hiking, biking, and horse riding through the more rural areas of the State which have been included in Florida's Statewide Master Greenways and Trails Plan. Recently however, there has been increasing recognition of the need to fund urban trails and recognition of the more costly efforts for an urban trail over that of a more traditional, rural trail. It would be imperative that the County seek designation of any proposed corridor as part of the Statewide Greenways and Trails Map. Additionally, the Corridor should be added to the County's Bikeway Plan to ensure its inclusion in the County program.

The recreational characteristics of such a trail would also lead to potential funding from by another State source, the Florida Recreation and Development Assistance Program (FRDAP). While FRDAP funding is limited to $200,000 per application, each government can have two open grants and there is no reason why several municipalities along the corridor cannot combine projects to forward the goals of an overall plan.

One of the potentials to increase funding capabilities of an alternative transportation corridor would be to follow a model used by the cities along the US 441/SR-7 Corridor in Broward County, the formation of a coalition of interested governments along the route. This SR-7 Collaborative has combined the resources of 14 municipalities, Broward County, the South Florida Regional Planning Council and the Seminole Tribe of Florida to obtain other grants. The SR-7 Collaborative was able to secure a $2 million planning grant from the US Department of Transportation through this joint approach. Surely, the funds would not have been available to any of the Collaborative members if they had sought the funds on their own or even if the County alone had made an attempt.

The power of all of the entities along the a coalition corridor could also lead to direct appropriation through the Florida Legislature as well as through the U.S. Congress. The project is for the public good and could serve as an excellent pilot project for an urban trail and alternative transportation route through an urban setting. These are not traits that go unnoticed by governing bodies nor by public grant program administrators. Furthermore, the portability of the urban trail model has potential to lead to private foundation funding as well. It is often the case that private foundations seek to fund projects that can be used as this type of model to forward the foundation's goals and the public programs and policies they try to shape.

From the standpoint of public transit, the planning efforts associated with the PTP will dominate the public transportation landscape for decades. The information in this report can be used to support consideration of various corridors. But, there are other opportunities which could be explored. The Florida Department of Transportation (FDOT) sponsors a service development program, which is a program to support start-up of transit services. Prominent start-ups in recent years include the Electrowave on Miami Beach and the Hialeah Transit Circulator. Funds may be used for both capital and operations expenses. As with the trails program identified above, a coalition may be able to bring together enough funding to create a demonstration service in a rail corridor that may serve a short-term need and eventually get knit into the County transportation framework.