

Session 35

Isabel Padron

Miami-Dade Transit

South Dade Busway Design

Topic Description

The South Miami-Dade Busway or BRT facility is a limited access roadway used for Miami-Dade Transit buses. This 20 mile facility is dedicated to express bus service and includes free parking, landscaping and 31 bus stops along the Busway's alignment.

The Busway also includes a bike path along its entire length. Through the Busway Extension Citizen Advisory Committee, residents, business owners, public officials and commuters in the area have provided invaluable advice and guidance to Miami-Dade Transit. They have given a great deal of their personal time and have participated in meetings and discussions and are very proud of what they have done for the community.

Phase I (first 8.5 miles) first opened in 1997, connecting the Cutler Ridge area to the Metrorail system. This opening came with a promise to the community that the Busway would be extended to Florida City to provide even greater mobility choices to the people of South Miami-Dade.

Phase II (the remaining 11.5 miles) was designed in three Segments. Two of the three Segments (a 5.0 mile extension) opened for revenue service on May 2005 and connected the Cutler Ridge area to S.W. 264 Street. The last Segment (the last 6.5 miles) is under construction and is scheduled to open for revenue service on July 2007.

The Busway has been very successful. Ridership continues to increase. Since its inception in 1997, the South Miami-Dade Busway has experienced a 184% increase in bus ridership.

Speaker Biography

Isabel Padron has twenty-four (24) years of experience in the planning, design, design management, construction management and supervision of technical personnel for rail transit facilities, transportation and commercial projects. Isabel is a Professional Engineer and holds a Master in Civil Engineering from the University of Miami. Isabel heads the Design and Engineering Division of Miami-Dade Transit. She has been with Miami-Dade Transit since 1995.

As head of the Miami-Dade Transit Design and Engineering Division, she is currently involved in the management and supervision of a group of professional staff that negotiates, manage and administor engineering service contracts of transit projects for hte People's Transportation Plan. Major projects currently under development include twenty-one (21) miles of Metrorail extension under design and the extension of the South Miami-Dade Busway under construction.

South Miami-Dade Busway 2006 Design Conference

Presented by:
Miami-Dade Transit

August 1, 2006



General Description

Miami-Dade Transit's state-of-the-art alternative to daily traffic congestion

- **Limited access roadway used for Miami-Dade Transit Buses**
- **Built in the former Florida East Coast Railroad corridor**
- **20-mile long facility, 13.5 miles in operation**
- **Runs, for its most part, parallel to US-1**
- **Includes free parking, landscaping, twenty-nine bus stops & bike path throughout entire length**
- **Connects at its north end to the Metrorail system**



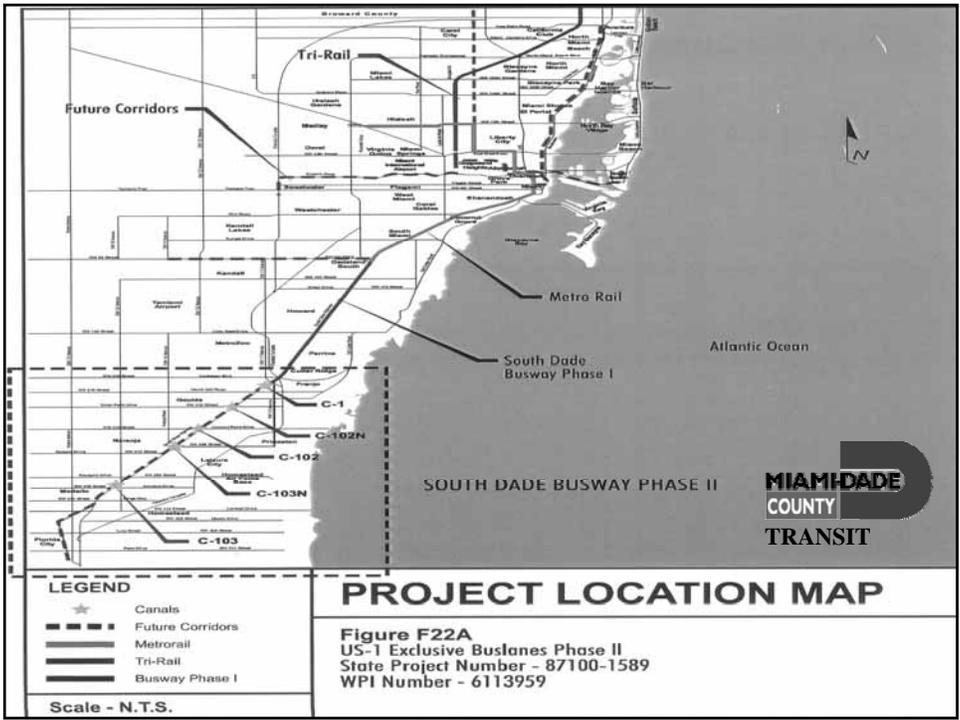


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Aerial Photography, Inc. 544-555-0454

N. South Dade Busway, Segment 1

PISTORINO & ALAM
CONSULTING ENGINEERS, INC.



What's been done so far?



MDT & the FDOT jointly developed the Segment 1 Busway Extension to Florida City + US-1 Reconstruction project to save time, money, and optimize operational efficiencies



Segment 1 Busway Extension opened for Revenue service April 24th, 2005



US-1 reconstruction from SW 112th - Avenue - SW 266th Street was completed in April 2005

Segment II at a Glance

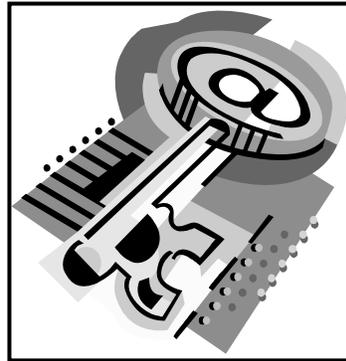


- **Notice-to-proceed: October 17th, 2005**
- **Project duration: 640 days**
- **Project completion: July 18, 2007**
- **8 Bus Stops**
- **Two Park & Rides**
- **6.5 BRT miles**



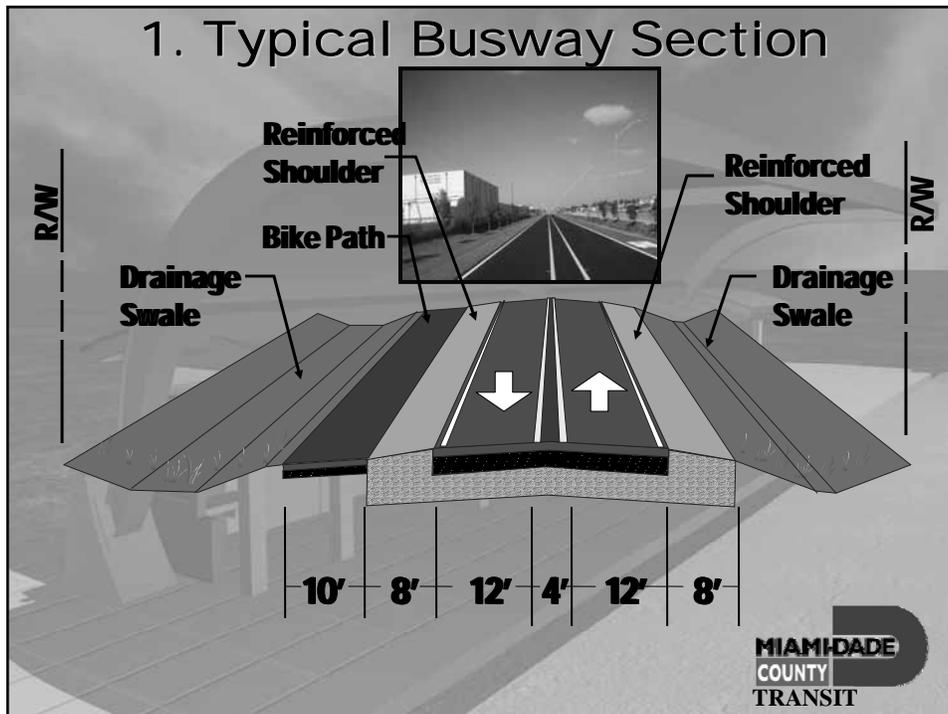
KEY ISSUES

1. Typical Section
2. Bus Stations
3. Landscaping
4. ADA (American Disabilities Act)
5. Bicycle Path
6. Traffic Controls
7. Lighting
8. Maintenance of Traffic
9. Community Outreach



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1. Typical Busway Section



2. Bus Stations

Phase 1

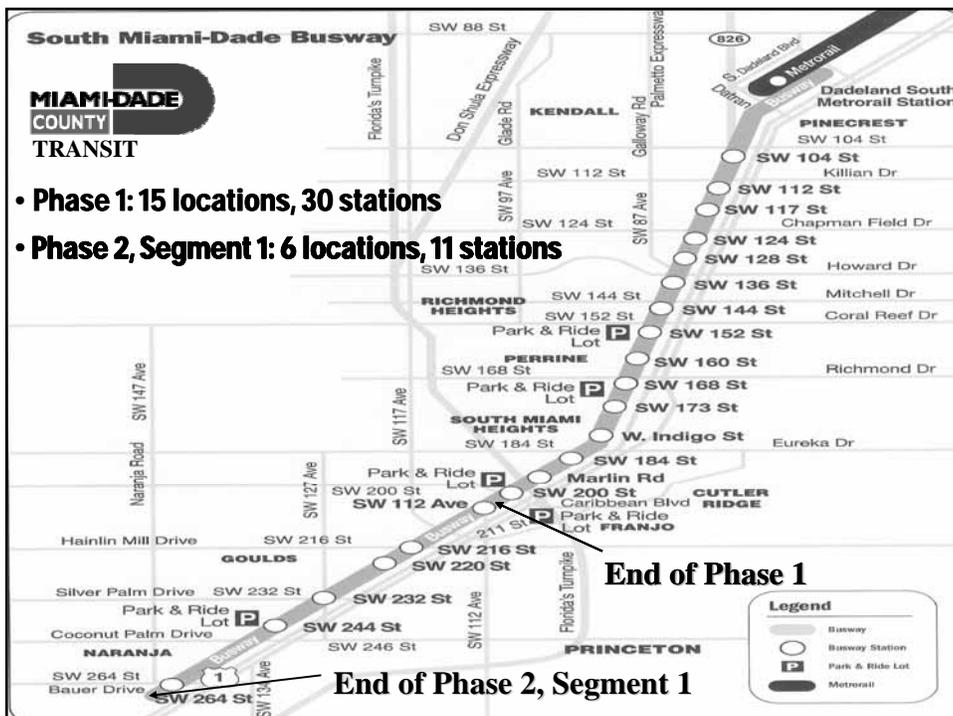


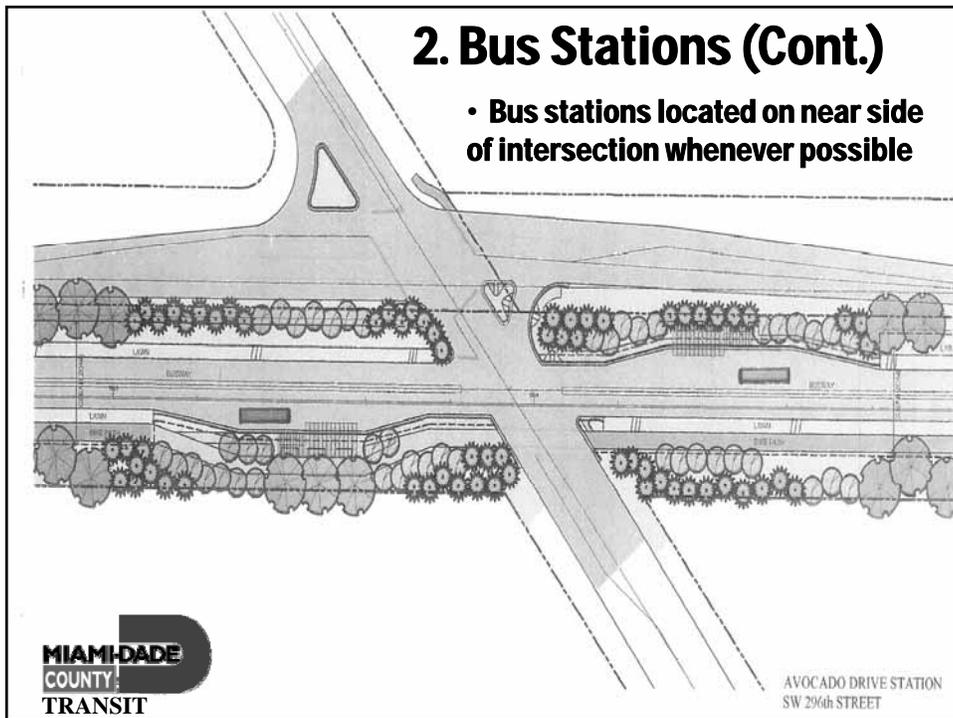
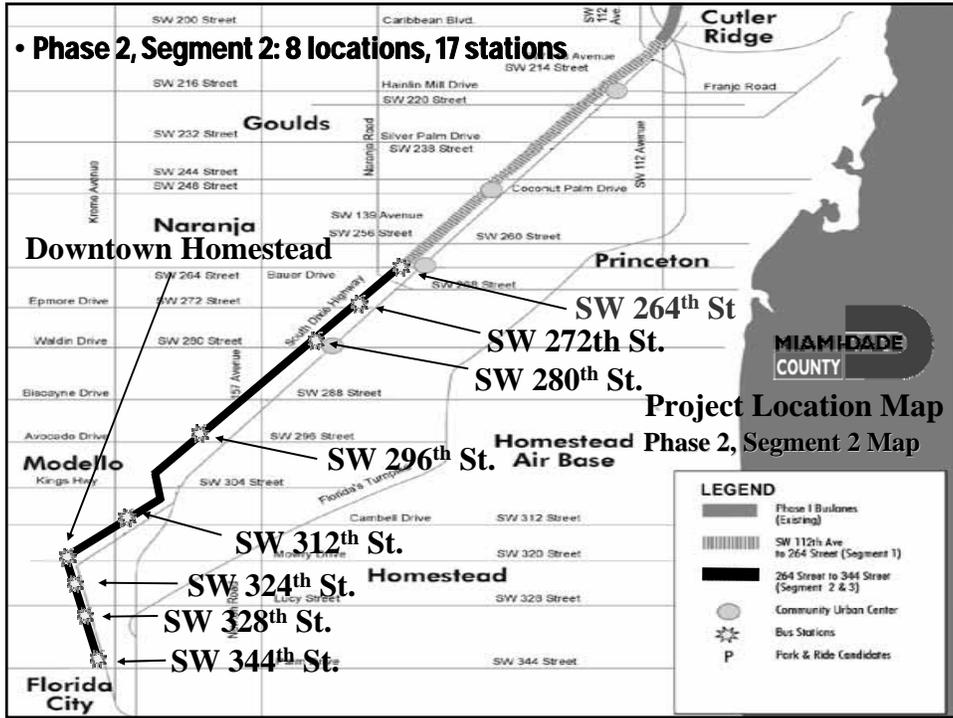
1. Better protection from the elements
2. Better shelter from flooding
3. More durable material

Phase 2



4. Reflect community flavor
5. ADA compliant
6. Lighting
7. Landscaping





2. Bus Stations (Cont.)

- Bus Station's will convey each areas unique community flavor
- Station colors & pavement textures compatible with neighborhoods



SW 232nd Street Passenger Bus Shelter floor panel design



Goulds Bus Station will sport the design (above) at the SW 220th Street Busway Extension Station

3. Landscaping

- Minimize Impacts to Native Plant Communities – Pine Rocklands

- Maximize use of canopy- shade trees

- Intersperse flowering trees for color



- Adhere to FDOT safety criteria-visibility and setbacks

- Emphasize use of native plant materials
- Use drought tolerant plant materials

3. Landscaping (Cont.)

- Buffering corridor from residential areas



- Use native palms for accents at intersection
- Keep existing vegetation when possible



4. ADA Elements

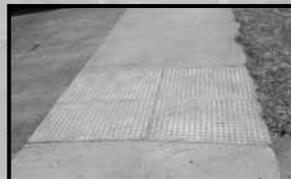
All features of the Busway are in compliance with the American Disabilities Act (ADA)



TTY – Teletypewriter for deaf and speech impaired



Buses are equipped with wheel chair lifts



Truncated domes



Dedicated spacing for wheel-chair within bus shelters



- **The Busway Bike Path will be extended a combined 20.7 miles from Kendall all the way to Florida City**

6. Traffic Controls

- Provide Signals only if:
 1. Warranted
 2. Within 300 ft. of an existing signal
- Stop control at non signalized intersections
- Traffic calming devices

- Phase 1:
All 19 intersections are signalized



- Phase 2:
20 intersections are signalized;
7 intersections are non signalized



Previous Phase 1 Experience

19 Signalized Busway Intersections

Types

US 1 / Busway Intersections

Isolated Busway Intersection

67 Crashes Recorded In Almost 4 Years

Isolated Busway Intersections Experienced A Crash Rate 7 Times Greater

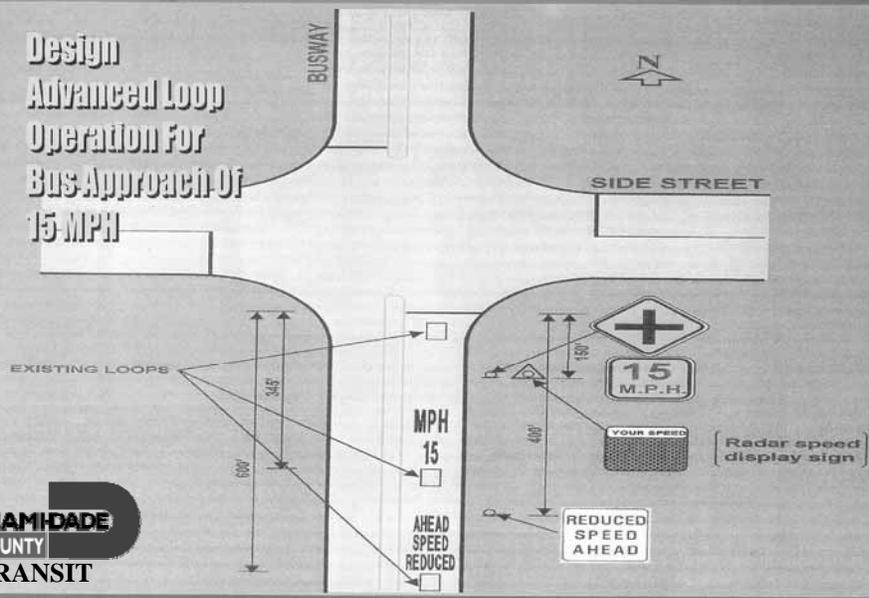
82% Of The Crashes Involved Eastbound Vehicles

Bus Approaches Are Equipped With Advance Loop Detectors (ALD). The Crash Rate Was 7 Times Higher When ALD Were Activated



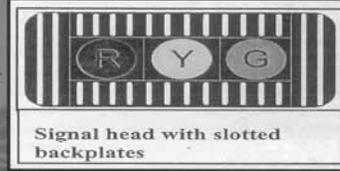
Recommended Improvements

Design Advanced Loop Operation For Bus Approach Of 15 MPH



Recommended Improvements

Install Backplates On Eastbound & Westbound Signal Heads For Added Visibility



Signal head with slotted backplates



Install Signal Ahead & Busway Ahead Signs To Provide Additional Emphasis To The Primary Traffic Control Device

Install Post Mounted Signals At Stop Line To Make Intersection More Conspicuous

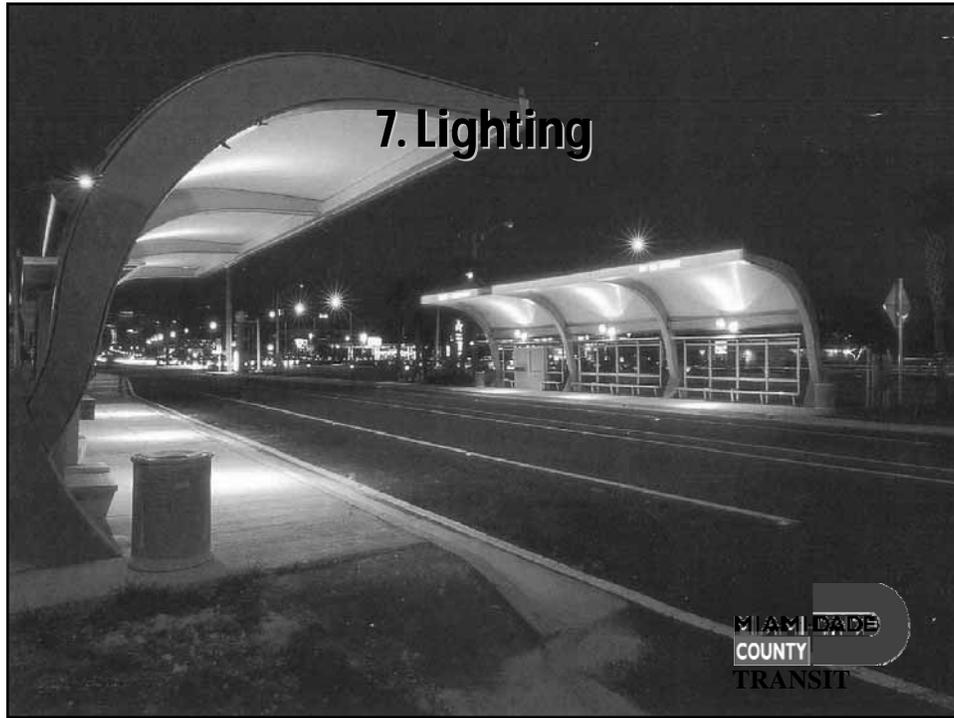


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7. Lighting



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8. Maintenance of Traffic

MOT ISSUES AND OBJECTIVES

I. Minimize impacts to surrounding neighborhoods.

- A. Notification of local news media.**
- B. Placement of signs to provide notice of pertinent information (eg. Road closure, parking).**
- C. Placement of signs providing the name, address, and telephone number of Miami Dade County Contact Person.**
- D. Materials stored at project site will be temporary and will be handled in strict accordance with the FDOT and Miami Dade County procedures and methods.**



8. Maintenance of Traffic (Cont.)

MOT ISSUES AND OBJECTIVES

I I. Minimize impacts to businesses.

- A. Minimize traffic delays.**
- B. Maintain on street parking.**
- C. Provide signs to nearby parking facilities.**
- D. Maintain access.**



8. Maintenance of Traffic (Cont.)

MOT ISSUES AND OBJECTIVES

I I I. M.O.T. Plan

- A. Maintain traffic in existing right of way.**
- B. Phase construction desired.**
- C. Detour traffic where required.**
- D. Minimize construction time at intersection.**



9. Community Outreach

- Intensive community outreach program during design and during construction to keep the general public, governmental officials, businesses and organizations abreast of the project
- Held over 100 public meetings during the design phase of the project
- Citizen Advisory Committee was established during design
- Economic Relief Program established during construction



Ribbon cutting at Busway Segment 1
Grand Opening



What is the Economic Relief Program?

A pilot program developed by Miami-Dade Transit, the office of the County Mayor and County Commissioners in order to aid business owners impacted by the Busway Extension to Florida City/US-1 Reconstruction Project



What does the Economic Relief Program provide?

On-site loan application assistance

Installation of business entrance signs

Tips for businesses on how to lessen the impact of roadway construction projects.

Establishes partnerships between businesses and sources of assistance.



Phase 1 versus Phase 2



Phase 1



Phase 2



Stations	30	28
Miles	8.5	11.5
Intersections	19	27
Traffic Signals	19	20
Park & Rides	3	3
Kiss & Rides	0	6
Cost	\$42.9 million	\$106 million (Est.)

South Miami-Dade Busway

Now the South Miami-Dade Busway connects the Dadeland South Metrorail station to 13.5 miles of BRT roadway

The South Miami-Dade Busway offers local and limited-stop service on the Busway and in the neighborhoods between Florida City and the Dadeland South Metrorail Station

28 buses an hour travel on the Busway during morning and evening rush hours running approximately every 2 minutes

A trip from SW 244th Street to Dadeland South can take as little as 35 minutes

Busway fares are \$1.50 and passengers can request a free transfer to Metrorail when boarding

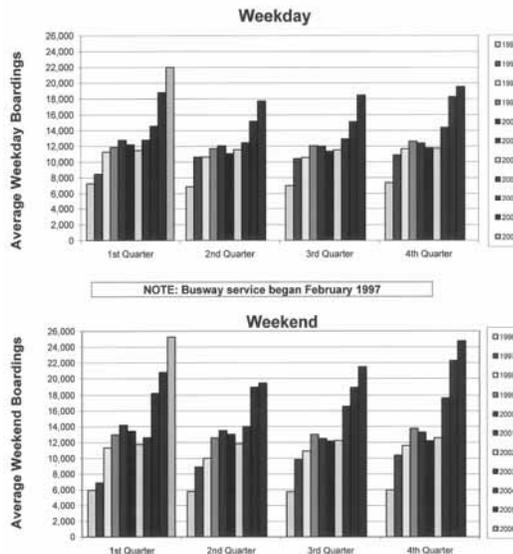


Busway Ridership

Since its inception in 1996, the South Miami-Dade Busway has experienced a 220% increase in bus ridership!!!



Exhibit 1A
Busway Corridor
Average Quarterly Ridership



Development

The project has played an integral part in spurring the development of the following Community Urban Centers

