



To: Honorable Mayor and Village Council	Date: July 11, 2016
From: Edward Silva, Village Manager	Re: Comprehensive Operational Analysis Report (COA)

A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA; RELATING TO THE IBUS COMPREHENSIVE OPERATIONAL ANALYSIS (COA) FINAL REPORT; ACCEPTING THE RECOMMENDATIONS OF THE IBUS COA FINAL REPORT DOCUMENTS AND RECOMMENDATIONS, AS PREPARED BY THE CORRADINO GROUP, INC.; FURTHER AUTHORIZING THE VILLAGE MANAGER TO ACQUIRE CONCURRENCY FROM MIAMI-DADE TRANSPORTATION AND PUBLIC WORKS DEPARTMENT PRIOR TO PROCEEDING WITH IMPLEMENTATION OF REPORT FINDINGS; AND PROVIDING FOR AN EFFECTIVE DATE.

BACKGROUND AND ANALYSIS:

Per Resolution No. 04-101 (copy attached as Exhibit A), the Village of Palmetto Bay contracted with The Corradino Group for specialized transit services to potentially support the specific needs of our seniors and youth. In 2006, the Village of Palmetto Bay launched a bus service in full compliance with Miami-Dade County policy, as directed by the staff of the Citizens' Independent Transportation Trust (CIT) and the County Attorney's Office. The service was designed to increase the number of destinations that can be reached via fixed public routes throughout Palmetto Bay and the surrounding neighborhood areas, as well as to connect with Miami-Dade Transit routes and the busway. Today, the Village offers free shuttle bus transportation services within municipal limits via the IBus circulator. The IBus route system has two routes that cover the boundaries of the Village and provide transportation from US-1, the busway, and major points within Palmetto Bay. Each bus carries 25 passengers inclusive of driver and is equipped with a wheelchair lift and bike rack to make riding comfortable and convenient for residents and visitors of all ages and needs. Information for routes and bus stops are listed on the Village's website and printed in brochures for the public. Several changes to improve ridership and provide better connectivity to Miami Dade Transit routes have been made to the IBus route over the past nine years. The demographics and implementation of transit routes in the neighboring communities has not increased ridership on the Village's IBus circulator system. The majority of residents depend on their own cars for transportation as mass transit, although provided, is not as well received in Palmetto Bay as in our neighboring communities to the north and south.

The Corradino Group was commissioned by the Village Palmetto Bay to provide a Comprehensive Analysis for the Palmetto Bay transit system. This operational analysis examined the entire IBus transit system. It does so by placing the service into context, by looking at the land use and development patterns in Miami Dade County. It explores transit in general, its purpose, and the typical markets it serves, and why it serves them. As part of the analysis a significant amount of data was collected. This includes the location, timing, and spacing of transit in the area. Local accessibility to transit was examined, and compared to surrounding communities. Alternative ridership populations were sought, specifically the youth population. Service to downtown was evaluated and planned. A discussion of the necessity and impacts of a park and ride facility has been provided in accordance with Palmetto Bay requirements. The existing IBus service was evaluated. Passengers who currently ride the system were surveyed, and the system was compared with other circulator systems in Miami Dade County. In light of this data collection and analysis, service options have been presented as options for each route. These options were combined into 4 alternatives, from which recommendations were made.

The COA final report (copy attached as Exhibit B) details that the Village's transit service functions poorly due to maintenance and operational issues, in particular underperforming routes. The community is naturally not transit accessible, and this situation is exacerbated through the duplication of MDT routes and ridership markets. The comprehensive operational analysis as prepared by The Corradino Group provides opportunities for enhancement of the Village's transit operation that can easily and quickly be implemented to gain significant improvements.

Based on the findings of the report, it is recommended that the Village consider the following:

- Immediate reconfiguration of existing services with new buses and marketing;
- Review ridership, customer satisfaction, and financial metrics within a 12 month period;
- Increase service if ridership improves by either reconfiguring the routes, implementing routes servicing the schools at various levels, and or adding weekend service.

FISCAL/BUDGETARY IMPACT:

None.

RECOMMENDATION:

It is recommended that the Village Council accept the recommendations of the attached Comprehensive Operational Analysis (COA) final report and authorize the Village Manager to acquire concurrency from both the Citizens Independent Transportation Trust prior to proceeding with the implementation and recommendations of the final report findings.

Attachments:

Exhibit A (Resolution No. 04-101)

Exhibit B (COA Final Report)

RESOLUTION NO. 04-101

A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA, RELATING TO A CIRCULATOR ASSESSMENT STUDY IN THE VILLAGE OF PALMETTO BAY; AUTHORIZING THE VILLAGE MANAGER TO ENTER INTO CONTRACT WITH THE CORRADINO GROUP, INC. TO PROVIDE THIS SPECIALIZED TRANSIT STUDY AND TO APPROVE EXPENDITURE OF FUNDS IN AN AMOUNT NOT TO EXCEED \$33,000.00; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Village wants to examine the need and cost of a potential circulator transit service in the Village of Palmetto Bay; and

WHEREAS, the legislative requirement of the Peoples Transportation Plan is the expenditure of twenty percent of the funding is designated for transit use; and,

WHEREAS, the Administration has determined that The Corradino Group, Inc., is a capable firm and qualified to provide transit recommendations, and cost for the circulator services that meet the needs of the Village of Palmetto Bay and implementation strategies in accordance with approved recommendations; and

WHEREAS, the Administration desires to select The Corradino Group, Inc., to study the need and the desire for a circulator bus service within the boundaries of the Village; and

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA, AS FOLLOWS:

Section 1: The Village Manager is authorized to contract for Traffic Engineering Services with The Corradino Group, Inc. and approve expenditure of funds in an amount not to exceed \$33,000 on a study to evaluate potential circulator transit services in the Village of Palmetto Bay.

Section 2: This Resolution shall take effect immediately upon approval.

PASSED and ADOPTED this 6th day of December, 2004.

ATTEST: Meighan Pier
Meighan Pier
City Clerk

APPROVED: Eugene P. Flinn
Eugene P. Flinn
Mayor

READ AND APPROVED AS TO FORM:

Eve A. Boutsis
Eve A. Boutsis
Village Attorney

FINAL VOTE AT ADOPTION:

Council Member Ed Feller	<u>YES</u>
Council Member Paul Neidhart	<u>YES</u>
Council Member John Breder	<u>YES</u>
Vice-Mayor Linda Robinson	<u>YES</u>
Mayor Eugene P. Flinn	<u>YES</u>

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The CORRADINO Group

SCOPE of WORK

Village of Palmetto Bay Circulator Assessment

OBJECTIVE:

The goal of this study is to assess the need and cost of potential circulator transit services in the Village of Palmetto Bay

BACKGROUND:

As specified in the Palmetto Bay Transportation Master Plan and with the advent of the Peoples Transportation Plan, municipalities in Miami-Dade County have been charged by the citizens of the county to improve local transportation service and options. One of the legislative requirements of the PTP is the expenditure of at least 20% of annual revenues from this tax for transportation projects specifically related to transit.

PREVIOUS WORK:

Palmetto Bay has not studied the provision of specialized transit within its boundaries. The City believes that the provision of such service, if needed and cost effective, can add to the quality of life of the community.

COST:

This study can be provided for a cost of \$33,000

METHODOLOGY

TASK 1: Existing Conditions

This task will assess the existing conditions in Palmetto Bay as they relate to transportation and transit.

- 1.1 Regional
This will include a brief history of the City and previous transportation initiatives.
- 1.2 Comprehensive Plan
An examination of the current Comprehensive Plan particularly the Transportation Element.
- 1.3 Future Growth
Population projections will be examined to determine potential need.
- 1.4 Current Demographics:
An examination of demographic and socio-economic conditions will influence transit planning and service delivery issues.
- 1.5 Transit Propensity Analysis:

The CORRADINO Group

This sub-task will provide an understanding of the spatial arrangement of certain demographic characteristics that typically influence transit use. Given resource constraints, transit service will focus where there is the greatest overall need.

- 1.6 Currently MDT Service Level
An understanding of the existing MDT service is imperative. The idea of this circulator is to enhance existing service, not to duplicate it.
- 1.7 Traffic Generators
An understanding of land uses, developments, facilities, activity centers, institutions that attract people is important in the location of transit routing.

TASK 2: Recommend Circulator System

Based on the examination of the existing and background conditions, and meetings held with stakeholders, a system will be recommended. The operational characteristics of this system will be developed.

- 2.1 System Routing and Operating Characteristics
The systems rout will be mapped, headways will be estimated as well as the duration of travel time, and cost in man power and rolling stock, that the system would take to operate.

TASK 3: Implementation Strategy

The general parameters of the proposed system will be examined in greater detail. This will include an analysis of:

- Vehicle Fleet Requirements
- Personnel Requirements

- 3.1 Cost Estimates
- 3.2 Service Options
This will deal with the examination of options varying from self operation, utilization of a private operator, or contracting nearby systems, combining systems with adjacent communities or contracting with MDT.

TASK 4: Public Involvement

This task will focus on stakeholder meetings to be held individual or in small groups. Stakeholders may include City staff, administration or leadership, concerned citizens or community activists. Public presentations for discussion will be held before the City Council. A

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public opinion survey may be developed to gauge desire for such a system.

TASK: 5 Final Report

A final report will be produced as will a PowerPoint presentation of that report. Drafts will be delivered to the City for review. After the final presentation, 10 bound copies will be made available.

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RESOLUTION NO. 2016-____

A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA; RELATING TO THE IBUS COMPREHENSIVE OPERATIONAL ANALYSIS (COA) FINAL REPORT; ACCEPTING THE RECOMMENDATIONS OF THE IBUS COA FINAL REPORT DOCUMENTS AND RECOMMENDATIONS, AS PREPARED BY THE CORRADINO GROUP, INC.; FURTHER AUTHORIZING THE VILLAGE MANAGER TO ACQUIRE CONCURRENCY FROM MIAMI-DADE TRANSPORTATION AND PUBLIC WORKS DEPARTMENT PRIOR TO PROCEEDING WITH IMPLEMENTATION OF REPORT FINDINGS; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Village entered into an agreement with The Corradino Group, Inc. for the purposes of a Comprehensive Analysis for the Palmetto Bay transit system; and

WHEREAS, this operational analysis examined the entire IBus transit system; and

WHEREAS, it explores transit in general, its purpose, and the typical markets it serves, and why it serves them; and

WHEREAS, the final report findings details that the Village's transit service functions poorly due to maintenance and operational issues, in particular underperforming routes; and

WHEREAS, the comprehensive operational analysis as prepared by The Corradino Group provides opportunities for enhancement of the Village's transit operation that can easily and quickly be implemented to gain significant improvements in ridership.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND VILLAGE COUNCIL OF THE VILLAGE OF PALMETTO BAY, FLORIDA, AS FOLLOWS:

Section 1. It is recommended that the Village Council accept the recommendations of the Comprehensive Operational Analysis Final Report and authorize the Village Manager to acquire concurrency from both CITT and Transportation and Public Works Department prior to proceeding with the implementation and recommendations of the final report findings. A copy of the COA Final Report findings is attached.

Section 2. This Resolution shall become effective upon the date of its adoption herein.

PASSED AND ADOPTED this ____ day of July 2016.

1 Attest: _____
2 Missy Arocha
3 Village Clerk
4

Eugene Flinn
Mayor

5
6 APPROVED AS TO FORM AND LEGAL SUFFICIENCY FOR THE USE
7 AND RELIANCE OF THE VILLAGE OF PALMETTO BAY, FLORIDA ONLY:
8
9

10 _____
11 Dexter W. Lehtinen
12 Village Attorney
13
14

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16 FINAL VOTE AT ADOPTION:

17
18 Council Member Karyn Cunningham _____
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20 Council Member Tim Schaffer _____
21
22 Council Member Larissa Siegel Lara _____
23
24 Vice-Mayor John DuBois _____
25
26 Mayor Eugene Flinn _____



VILLAGE OF PALMETTO BAY

iBUS Comprehensive Operational Analysis

Final Report

Route Analysis/Potential Service Improvements

September, 2015



Eugene Flinn

Mayor

John DuBois

Vice Mayor

Karyn Cunningham

Councilmember District 1

Tim Schaffer

Councilmember District 2

Larissa Siegel

Lara

Councilmember District 3

Edward Silva

Village Manager

PALMETTO BAY

9495 SW 180th Street
Palmetto Bay, FL 33157

www.palmettobay-fl.gov

305.969.5011

Executive Summary:

This Comprehensive Operations Analysis has examined the entire IBus transit system. It does so by placing the service into context, by looking at the land use and development patterns in Miami Dade County. It explores transit in general, its purpose, and the typical markets it serves, and why it serves them.

As part of the analysis a significant amount data was collected. This includes the location, timing, and spacing of transit in the area. Local accessibility to transit was examined, and compared to surrounding communities. Alternative ridership populations were sought, specifically the youth population. Service to the Downtown was evaluated and planned. A discussion of the necessity and impacts of a park and ride facility has been provided. The existing IBus service was evaluated. Passengers who currently ride the system were surveyed, and the system was compared with other circulator systems in Miami Dade County.

In light of this data collection and analysis, service options have been presented as options for each route. These options were combined into 4 alternatives, from which recommendations were made for how to proceed with the service.

In short, the service currently functions poorly do to maintenance and operational issues, in particular due to Route A. The community is naturally not transit accessible, and this situation is exacerbated through the duplication of MDT routes and ridership markets. All of this however presents opportunities for enhancement that can easily and quickly be implemented to gain significant improvements.

Ultimately it is recommended that the Village:

- Immediately Reconfigure the Existing Service, With New Buses and Marketing
- Review Ridership, Customer Satisfaction, and Financial Metrics within 12 Months.
- If Improvements are Shown (Which They Will Be) then Consider, Increasing Service, by either Reconfiguring the routes, implementing routes servicing the schools at various levels, and or adding weekend service.

This option can be done for the same budget as service are being provided for today.

To implement these suggestions it is recommended that the Village Immediately:

- Market the System
- Purchase Buses
- Operate internally

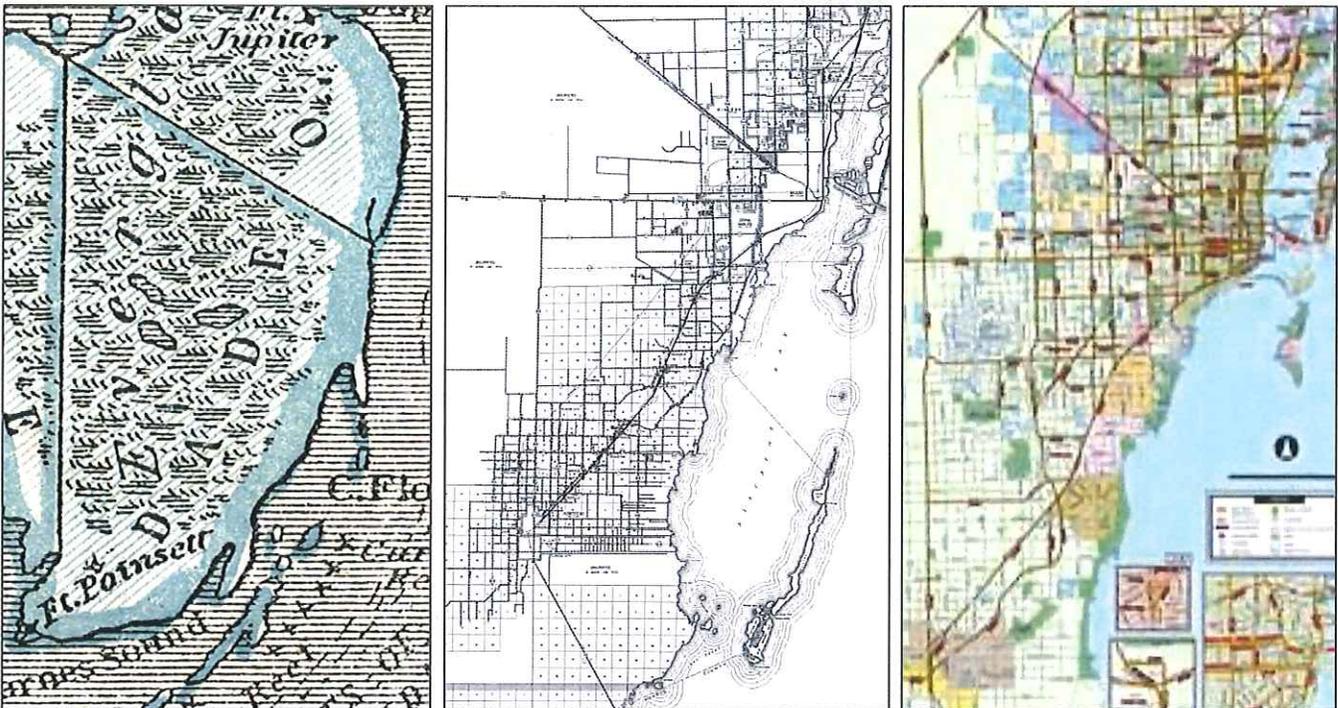
If after a year it is decided to continue then we should:

- Purchase Tracking Equipment



Transit In Miami Dade County

Miami Dade County is young in terms of development. Just over 100 years ago, Flagler's Railway cut a path along what is now US-1. Our communities then began to develop in the 1950's. Today Florida is one of the fastest growing states in the Union, but we have an immature transportation system almost completely reliant on roadways. Our development occurred in a post-World War II era; the transit systems that developed in the Northeast of the United States, never developed here. Development is going to continue, and as we can clearly see, the roads can't handle additional travel demand. South Dade is relatively uncongested compared to other locations in the region; however, South Dade will soon look like North East Miami Dade County. A drive to the Aventura Mall on a weekday afternoon is a perfect example of what is coming.



In South Dade we are fortunate. Flagler's Railway has already been repurposed. It is the Metrorail and Busway. We have the beginnings of high level transit already, while other communities, like Miami Beach do not. The Palmetto Bay Circulator is a progressive, forward thinking concept, fitting of one of the most desirable, well run places to live in our region. Perpetuating it is an investment in the future.

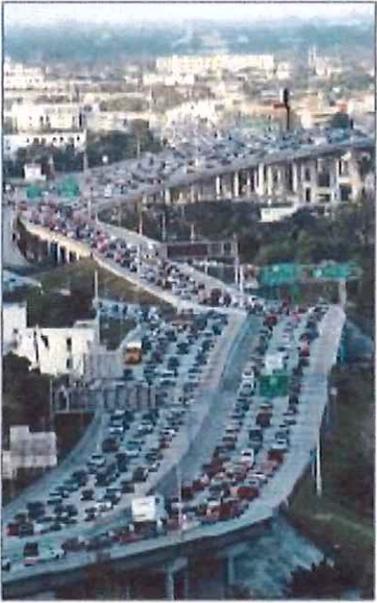
Today, regionally, we find ourselves at a crisis point. The decisions we make in the next few years will take us in a direction that will shape the way our children function within the area. Other communities have been here before. In some areas they have chosen to predominantly rely on roadways to service the mobility needs. Others have diversified the transportation systems. Only personal preference can determine which option is correct for each community.



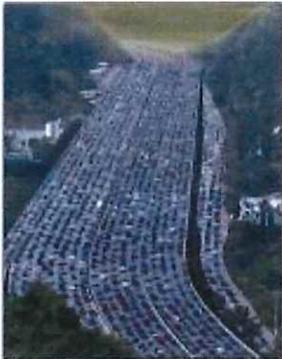
WHAT DO WE WANT TO BE?



Yesterday



Today



Tomorrow



Communities that diversify their systems with transit, are supply capacity in a different form. They take advantage of higher capacity vehicles to move more people in the same physical space, therefore making the system more efficient. This can be done on the existing roadways or by using the funding currently used for roadways to build future right of ways that are purposed for transit.

IT'S ALL ABOUT CAPACITY



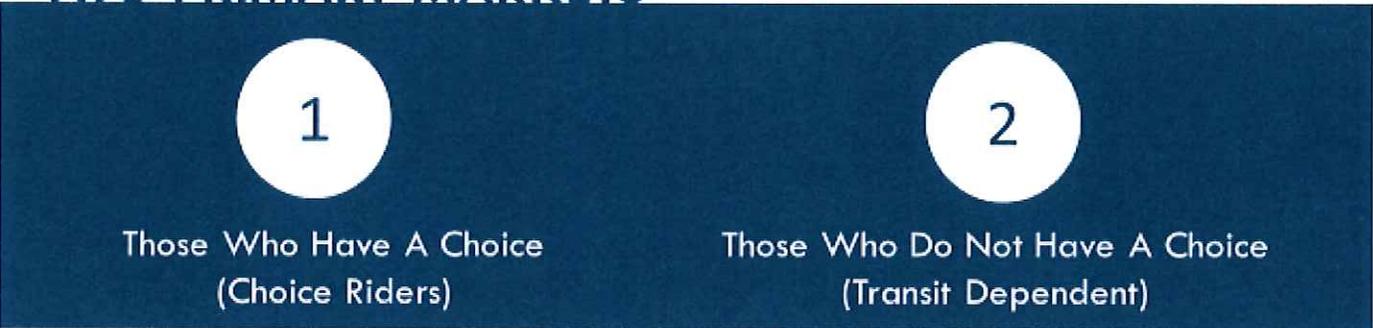
Who Rides Transit

There are two primary markets for transit riders, 1) transit dependents (those without regular access to personal vehicles), and 2) choice riders (those who have access to personal vehicles, yet choose to use transit). In Miami Dade County, the preponderance of the transit system is focused on transit dependent populations. Yet in our area of the County, we are fortunate to be served by the Busway, which is appealing to choice riders. Choice ridership is most likely to be attracted when transit travel times and costs are competitive with the private auto. These factors must be considered when targeting a particular ridership market. Choice ridership is best served through the provision of frequent, high amenity, service with a guaranteed seat (versus standing).

Transit dependent persons in our area are: the elderly, the young (middle school, high school, college), and commuters without access to personal vehicles. The community is young and affluent and highly mobile. This mobility is overwhelmingly satisfied by the personal automobile. The greatest transit dependent population numerically are the youth, followed by the elderly. Meanwhile the iBUS almost exclusively serves a transit dependent commuter population that lives outside the community, but works in the community.

|TRANSIT, WHO RIDES

TWO PRIMARY MARKETS



- ✓ Who Do We Want To Serve?
- ✓ Who Should We Serve?
- ✓ We Have Opportunities For Both

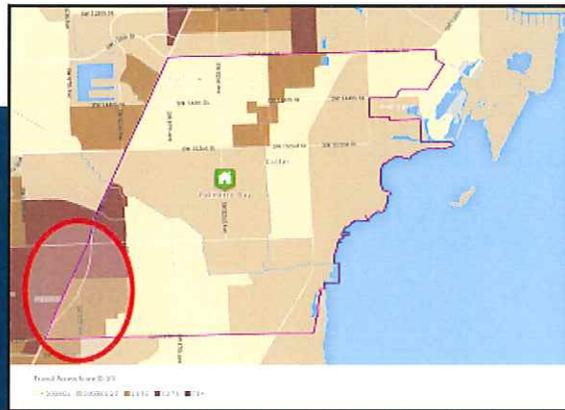
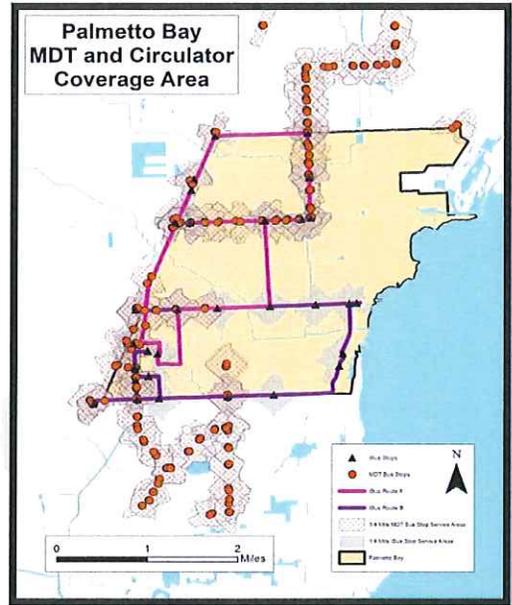
To make transit attractive to choice riders it must be:

- As fast as door-to-door trip times and as expensive as an automobile
- It must compete with the car
- The community must be willing to tolerate the subsidy

Transit dependent populations are typically served by buses as opposed to rail. This is the primary market for transit in Miami Dade County.



The analysis shows that Palmetto Bay does not have good transit access. It is less accessible than both Pinecrest and Cutler Bay, yet this presents significant opportunities. The primary reasons for this are that the community is low density, and that 1 bus routes serve the same population and cover much of the same routing as MDT, by duplicating 65% of MDT Routes. Also the Downtown Area is not well developed.



ACCESS TO TRANSIT

- ✓ Palmetto Bay 1.85 Cars/House
Transit Access Score 1.1
- ✓ Pinecrest 1.77 Cars/House
Transit Access Score 5.7
Pinecrest - 7x more likely
- ✓ Cutler Bay 1.79 Cars/House
Transit Access Score 1.5
Cutler Bay - 2.5x more likely

The Youth Population

An examination of the youth population shows significant ridership potential. Twenty seven percent (27%) of the population are school children within two miles of a school, and not serviced by school buses. The policy of requiring middle and high school students to get to school on their own, if they live within a two-mile radius of the school, has created a transit dependent population of youth.

An examination of this topic finds that, historically, students and the general public on the same bus are not a good mix, especially where students are in the majority. Students may be more spirited than the general public in ways that the general public can find offensive. By the same token, some parents have misgivings about having their children ride on a bus with adult strangers. For this reason planners have generally kept service to schools separate from service to the general public.



SERVICE OPTIONS

ROUTE B

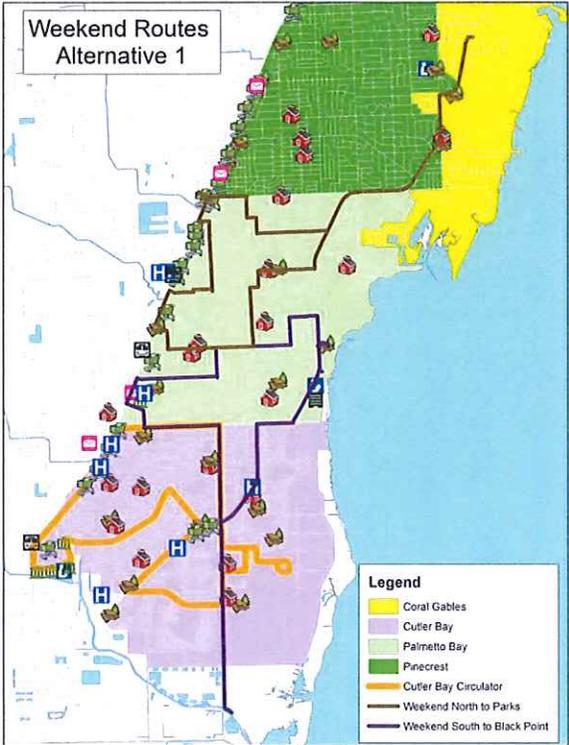
- ✓ Continue to Provide Transit Dependent Commuters Access from Busway to Palmetto Bay Employment
- ✓ Modify the Route,
- ✓ Extend Service Hours (which will support the Development of the Triangle)

DESTINATION	SW 68 Street / US1	SW 68 Street / Avenue	SW 68 Street / Avenue	SW 68 Street / Avenue	SW 68 Street / Cutler Road	SW 68 Street / OHN	Deering Estate Veterans Center	Palmetto Bay Branch Library	Palmetto Bay Village Center	SW 64 Street / Avenue	SW 64 Street / Avenue	SW 64 Street / US1	SW 64 Street / AV	SW 64 Avenue / Terrace	SW 67 Avenue / Games Street	SW 67 Avenue / Bay Park	Bay Park Avenue	Palmetto Bay Municipal Ctr.	Palmetto Bay Public Works	SW 64 Street / Avenue
P.M. Schedule	7:05 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM	7:04 AM
	8:26 AM	8:01 AM	8:00 AM	7:58 AM	7:56 AM	7:51 AM	7:53 AM	7:49 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM	7:45 AM
	8:08 AM	8:12 AM	8:11 AM	8:09 AM	8:07 AM	8:01 AM	8:03 AM	8:07 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM	8:10 AM
P.M. Schedule	2:38 PM	2:34 PM	2:33 PM	2:32 PM	2:28 PM	2:26 PM	2:23 PM	2:21 PM	2:20 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM	2:18 PM
	2:48 PM	2:43 PM	2:42 PM	2:41 PM	2:37 PM	2:35 PM	2:32 PM	2:30 PM	2:29 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM	2:27 PM
	3:16 PM	3:12 PM	3:11 PM	3:10 PM	3:06 PM	3:04 PM	3:01 PM	2:59 PM	2:58 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM	2:56 PM
	4:14 PM	4:18 PM	4:17 PM	4:16 PM	4:12 PM	4:10 PM	4:07 PM	4:05 PM	4:04 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM	4:02 PM
	5:10 PM	5:14 PM			5:14 PM		5:09 PM	5:06 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM	5:04 PM

No Bus Service Between 8:57 AM - 2:10 PM • Out of Service @ 5:20 PM

Weekends/Summer and Special Services

No service on the iBUS is currently provided in the evening, or on Saturdays, Sundays, and the following holiday's: New Year's Day; Martin Luther King, Jr. Day; President's Day; Memorial Day; Independence Day; Labor Day; Columbus Day; Veteran's Day; Thanksgiving Day; Day after Thanksgiving; and Christmas.



The Route A bus could provide a variety of services outside of school hours, and when schools are not in session. There are 180 days in the 2015-16 Miami-Dade Public School system calendar. So there are many weekdays, weekends, and evenings when a bus would be available for other uses, especially during the summer. The Route B bus could also be available on weekends in modified form. All service would a function of available funding. Public events could be served at these times.

A number of destinations are candidates for service. And, MDT buses, including Cutler Bay Route 200 run on Saturdays, so transfers to more destinations are possible. Possible locations to serve are:

- Pinecrest Gardens;
- Pinecrest Farmers Market;
- Deering Estate;



- Thalatta Estates;
- Montgomery Botanical Center;
- Fairchild Tropical Botanic Garden;
- Palmetto Bay Village Center and the Library;
- Coral Reef Park summer events such as the Splash Bash;
- Black Point Marina;
- The Falls Shopping Center; and,
- Palmetto Bay Park.

As a specific example, an interest was expressed to have direct iBUS service to Dadeland from the Municipal Center area, with frequent headways.

Alternatives

From these options, 4 alternatives have been developed. These are combinations of various options for each route.

ALT 0

Minimal Action

ALT 1

Reconfigure Routes, Same Hours,
On Demand

ALT 2

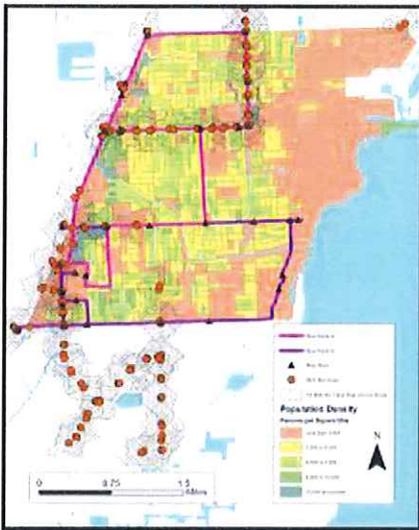
Alt 1 + School Service + More Hours

ALT 3

Alt 2 + 3rd Bus



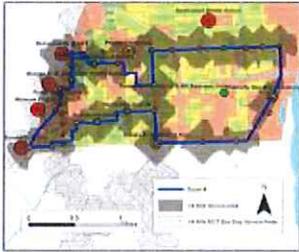
ALTERNATIVE 0



ALT 0 Minimal Action

Route A		
✓ Reconfigure 8.3 Miles		\$63,250
Route B		
✓ Reconfigure 8.9 Miles		<u>\$75,900</u>
Total		\$145,475
% of Current Bjt		100%
✓ Replace Buses		

ALTERNATIVE 1



ALT 1 Reconfigure Routes, Same Hours, On Demand

• Route A – On Demand Midday Service	\$56,925
• Route B – Reconfigure	\$75,900
• 8.3 Miles	
• On Demand Administrative Support	\$44,275
• Marketing	<u>\$ 2,500</u>
Total	\$179,600
% of Current Bjt	120%

- ✓ Reconfigure Route B, Add On Demand

Alternative 1 is the basis for each subsequent alternative. It would provide the following:

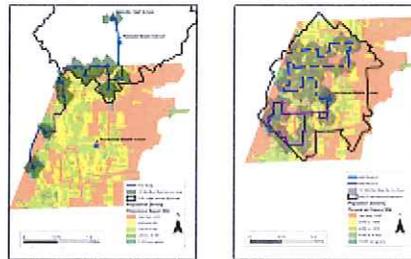
- Reconfigured Route B, will Increase Efficiency, and Improve Coverage in the Densest Areas
- Predictable “Clockwise” Service
- 1hr Headways

- All Stops will have Signs, Some Benches and Shelters Added
- Service Similar to Today (7am – 9am, 2pm – 5pm)
- Same Ridership (Transit Dependent Commuters)
- Connecting the Busway with More Service
- Convert Route A to On-Demand

ALTERNATIVE 2 Alternative 1 + School Service + More Time

Route A	
• AM School Service	\$44,275
• On Demand Midday Service	\$75,900
• PM School Service	\$56,925
Route B	
• Reconfigured (7am – 7pm)	\$170,775
On Demand Administrative Support	\$44,275
Marketing	<u>\$ 2,500</u>
Total	\$375,676

% of Current Budget 260%

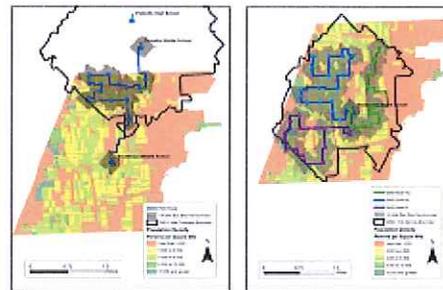


ALT 2
Alt 1 + School Service + More Hours

ALTERNATIVE 3 Alternative 2 + 3rd Bus

Route A	
• AM School Service	\$44,275
• On Demand Midday Service	\$75,900
• PM School Service	\$56,925
Route B	
• Reconfigured (7am – 7pm)	\$170,775
On Demand Administrative Support	\$44,275
3 rd Bus	\$88,550
Marketing	<u>\$ 2,500</u>
Total	\$455,400

% of Current Budget 310%



ALT 3
Alt 2 + 3rd Bus



Recommendations

It is believed that this can be a successful service, in terms of ridership, costs and intrinsic value to the community as a necessary basis to begin providing the ability for people to move without a car. In future iterations it will be an integral service to Palmetto Bay's Downtown, and a vital link to the remainder of the region via Busway, Metrorail. It is important that confidence be built back into the system.

Regardless of any other decisions, in looking at the future of the Palmetto Bay iBus system, it is essential to put new buses into service and to put up bus stop signs. Some form of marketing is also essential.

As is demonstrated by the experience with the bus air conditioning and other maintenance issues, owning buses and keeping them in good operating condition is challenging. The overwhelming reason for current maintenance issues is the age of the vehicles. New vehicles would greatly diminish maintenance issues; nevertheless, if the Village owns buses, the pattern could repeat at some future date.

A fundamental question is whether Palmetto Bay should own its vehicles, as it does today, or meet its vehicle needs as part of a lease or turnkey vendor.

In most business situations, owning is considered marginally cheaper than leasing, when equipment has a long service life. There are some tax advantages to owning, principally in claiming depreciation. And, operating costs may be marginally lower, if there is less deadhead getting buses to and from the beginning and ends of routes.

Another obvious advantage of the Village purchasing its own buses is it can get the vehicles it wants, rather than what is provided by a vendor. But in buying so few vehicles, there is no economy of scale, so the Village would likely pay a premium amount.

Table 2: Bus Ownership Pros and Cons

Owner	Advantage	Disadvantage
Palmetto Bay	<ul style="list-style-type: none"> Full control of bus features. Use of existing maintenance workers, if there are such Village staff. Tax advantages through depreciation. 	<ul style="list-style-type: none"> No economy of scale on purchases. Requires dedicated maintenance staff and facilities for bus storage and maintenance, or a reliable outside vendor. Full capital cost is paid up front. Money must be budgeted ahead to allow for future bus purchases.
Vendor	<ul style="list-style-type: none"> Village responsibilities reduce to managing the vendor contract. 	<ul style="list-style-type: none"> Little control over vehicle selection (if not stipulated in contract, old equipment could be provided) Operating costs could be marginally higher, if buses are housed and maintained at a distance.

Source: The Corradino Group



The decision on ownership is tied to operations. Operations can be managed wholly by Village staff, as is the case today, or it could be provided by a vendor – public or private (Table 3).

Table 3: Operations Pros and Cons

Operator	Advantage	Disadvantage
Palmetto Bay Staff	Full control of routes and flexibility to change. Full control of drivers and courtesy expectations.	Requires dedicated transit staff, including backups. Requires adequate driver and maintenance staff training, and facilities. For future school and demand-response options, someone must take calls and schedule rides.
Vendor	Hands off operations. Reliable spare vehicles and drivers Control of routes and flexibility to change, if in contract provisions. Control of drivers through contract language.	Requires understanding of service negotiations and contracting. Need to manage non-municipal staff. Need to establish performance criteria and monitor same.
MDT	Full integration with MDT system, including Cutler Bay. Elimination of redundancy with MDT routes. Reliable spare vehicles and drivers. User friendly for riders making transfers and using the MDT system.	Potentially higher cost of service. Different system objectives. Lack of control.

Source: The Corradino Group

the system does continue, marketing will need to be provided as will bus stop amenities, including up to 27 signs and 5 shelters. Eventually a bus tracking system will need to be put in place.

Finally it is recommended that the Village implement Alternative 0, which would immediately reconfigure the existing service, with new buses and marketing.

ALTERNATIVE 0

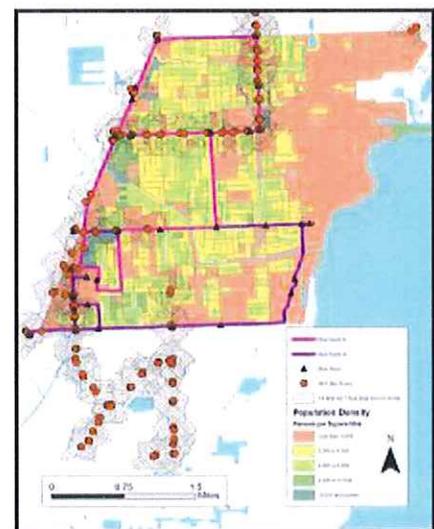
This option can be done for the same budget as service are being provided for today.

Within 12 months it is recommended that the Village review ridership, customer satisfaction, and financial metrics. If improvements are shown, then consider, increasing service, by either reconfiguring the routes, implementing routes servicing the schools at various levels, and or adding weekend service.

To implement these suggestions it is recommended that the Village Immediately:

- Market the System
- Purchase Buses
- Operate Internally

If after a year it is decided to continue then we should:
Purchase Tracking Equipment



Introduction:

Miami Dade County is young in terms of development. Just over 100 years ago, Flagler's Railway cut a path along what is now US-1. Our communities then began to develop in the 1950's. Today Florida is one of the fastest growing states in the Union, but we have an immature transportation system almost completely reliant on roadways. Our development occurred in a post-World War II era; the transit systems that developed in the Northeast of the United States, never developed here. Development is going to continue, and as we can clearly see, the roads can't handle additional travel demand. South Dade is relatively uncongested compared to other locations in the region; however, South Dade will soon look like North East Miami Dade County. A drive to the Aventura Mall on a weekday afternoon is a perfect example of what is coming.

In South Dade we are fortunate. Flagler's Railway has already been repurposed. It is the Metrorail and Busway. We have the beginnings of high level transit already, while other communities, like Miami Beach do not. The Palmetto Bay Circulator is a progressive, forward thinking concept, fitting of one of the most desirable, well run places to live in our region. Perpetuating it is an investment in the future.

SUMMARY OF FINDINGS

The iBUS system currently operates Route A: 10 AM–2 PM, and Route B: 7-9 AM and 2–5PM, Monday to Friday, except holidays. Ridership has declined in recent years.

iBUS duplicates MDT route coverage, but does not share stops, making transfers difficult. Bus stops are not marked and buses have long outlived their useful lifespan, compromising service reliability. Most riders are commuters traveling to/from the Busway to domestic service and are Spanish speaking. Schedules and web site communications should be bilingual.

The way the iBUS routes are currently routed and scheduled allows them to be modified in beneficial ways:

- Route A can be kept in service through the day, serving students in the morning and afternoon, while maintaining circulator or on demand service during the midday.
- Route B can be run consistently in one direction with more service hours and possibly serving a park and ride lot.

The key is to target the correct populations and implement a service that is efficient, effective and affordable. This report puts these issues into context, exploring the current state of the service, and benchmarking it with other systems, so we can manage our expectations. This Final Report explores the demography of the Village and suggests potential service population's and routes. Finally it suggests potential operational characteristics. It is the goal of



this report to provide the Village with quality information in order for it to make the best decision possible.

Corradino understands the purpose of this Comprehensive Operational Analysis is to evaluate the iBus shuttle service and provide insight into how it can best evolve to serve the residents of and visitors to Palmetto Bay. Corradino has evaluated iBus service and its relationship to transit circulators in the Village of Pinecrest and the Town of Cutler Bay, and connectivity to Metro-Dade Transit (MDT) service. This study explores the existing service and potential market for shuttle service within the Village of Palmetto Bay in order to

- Determine whether its two existing routes should be reconfigured, discontinued, or consolidated.
- Evaluate the current operating model in light of fiscal and market needs.

For this project it is understood that the Village wants to explore expanded transit populations. One targeted population is younger residents. For this to occur it is important to understand all relevant city and county services, the interfaces among them, and who Palmetto Bay's iBus is serving today. To understand the existing and potential ridership, we evaluated the demographic make-up of Palmetto Bay as well as the geographic dispersion of the student population, and conducted an on-board survey of the iBus ridership.

This is the Final Report on a comprehensive operational analysis of Palmetto Bay's iBus system. designed to make recommendations to improve Palmetto Bay iBUS service. The first TM covered Task 1 - Data Collection and Task 3 – Market Analysis; more specifically, the topics covered were:

- Staffing Operations and Vehicle Stock

- Routes A and B Hours of Operation and Routes
- Information and Marketing
- School Data Related to New Service to Students
- New Technology
- Demographics/Transit Generators/Transit Propensity
- On-board Transit Survey

TM 2 focused on Task 4 – Route Analysis and Potential Service Improvements.

The data collection efforts and findings are discussed first.



Existing iBUS Conditions

Palmetto Bay owns three functioning buses, each with a capacity of 20 seated passengers. The buses are wheelchair lift equipped and carry bike racks on the front. Two buses are available for service and one is used as a spare. Having a spare is a necessity under any circumstance; however, the spare does not serve its function adequately, as it sometimes breaks down itself when put into service. Drivers are employed by the Village of Palmetto Bay and work part time.

Bus stops are generally unmarked, and many are located in areas with no sidewalks. Thus, persons requiring wheelchair assistance do not always have a dedicated concrete landing pad onto which they would alight from the bus.

The buses were purchased when the iBus service was initiated in 2006, so the buses are almost a decade old, compared to a recommended service life for that type of bus of 5 years (Table 1). Bus breakdowns are a recurring issue. During the study, the need to repair the air conditioning units put bus

operations entirely out of service from June 29, 2015 to July 1, 2015.

iBus service is now provided on Routes A and B (Figure 1). There is significant overlap between iBus and MDT's routes. The background of the graphic shows population density as a reference. The denser areas (darker green and blue) are near US 1.

Historical ridership data indicate a decline from approximately 12,000 in 2008 to 5,376 in 2013. Recent ridership reports indicate a daily average of 25 for April through June 2015. Route A's ridership ranged from a high of 69 persons in April 2015 (3.4 riders per day) to 12 (fewer than 1 rider per day) for the month of June 2015. Route B garners more riders, ranging from 511 in April 2015 (over 25 riders per day) to 549 for the month of June 2015 (over 27 riders per day).

Route A

Route A operates only during the midday (10 AM to 2 PM), making four one hour runs, each comprised of two loops: 1) a northern counter-clockwise loop

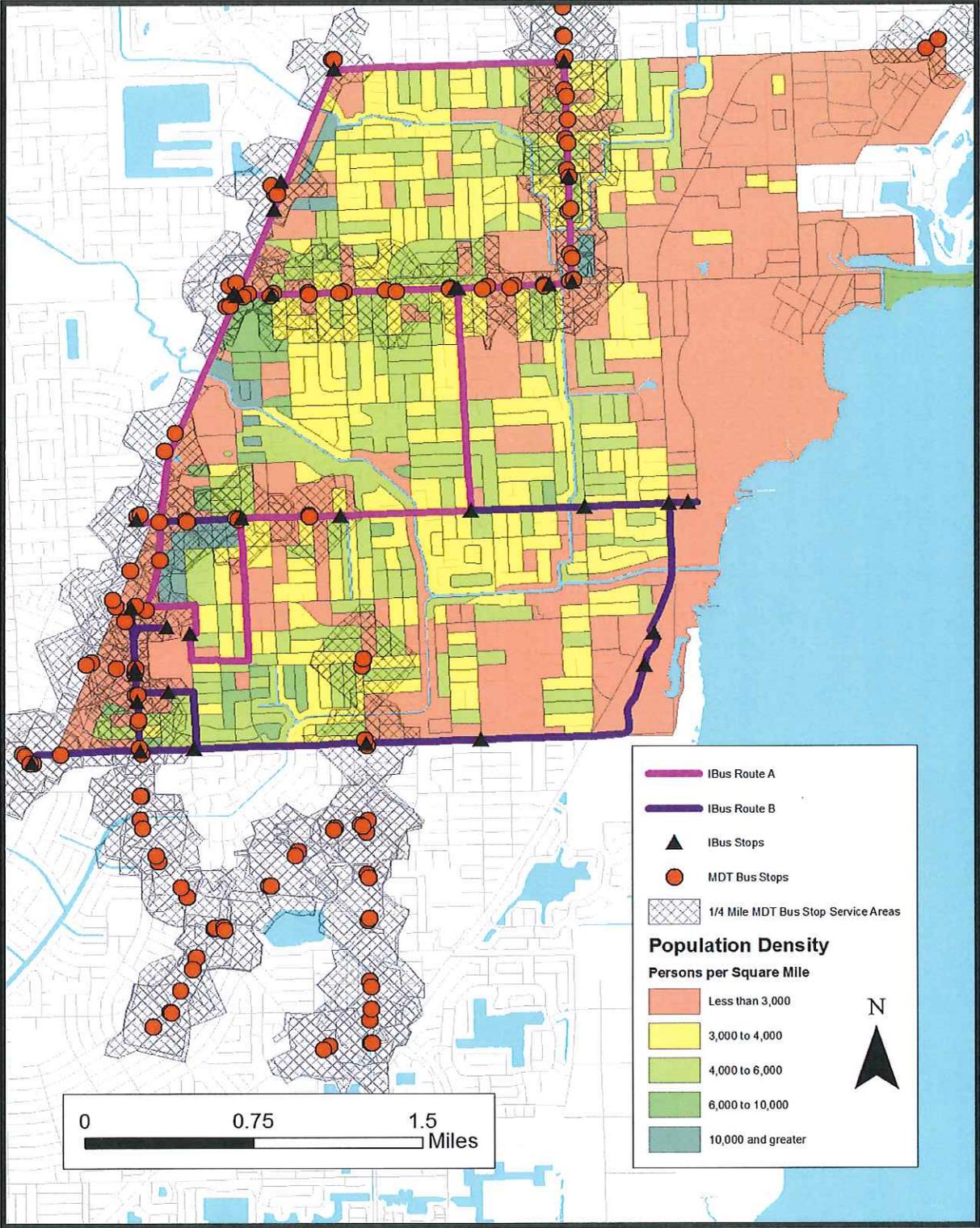
Table 1: Minimum Service-life categories for Buses and Vans

Category	Typical Characteristics			Minimum Life (Whichever comes first)	
	Length	Approx. GVW	Seats	Years	Miles
Heavy-Duty Large Bus	35 to 48 ft /60 ft artic.	33,000 to 40,000	27 to 40	12	500,000
Heavy-Duty Small Bus	30 ft	26,000 to 33,000	26 to 35	10	350,000
Medium-Duty and Purpose-Built Bus	30 ft	16,000 to 26,000	22 to 30	7	200,000
Light-Duty Mid-Sized Bus	25 to 35 ft	10,000 to 16,000	16 to 25	5	150,000
Light-Duty Small Bus, Cutaways, and Modified Van	16 to 28 ft	6,000 to 14,000	10 to 22	4	100,000

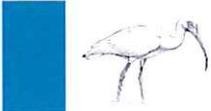
Source: Useful Life of Transit Buses and Vans, http://www.fta.dot.gov/documents/Useful_Life_of_Buses_Final_Report_4-26-07_rv1.pdf



Figure 1: Existing Palmetto Bay iBUS Routes and MDT Route Coverage



Source: Village of Palmetto Bay and The Corradino Group



starting at the Busway and SW 152nd and following SW 152nd east, SW 77th north, SW 136th west, and US 1 south; then 2) a southern clockwise loop starting at the Busway and SW 152nd and following SW 152nd east, SW 82nd south, and SW 168th west, and then working through the Franjo Triangle/Municipal Center area back north to the Busway and SW 152nd. There are only 16 designated stops over the length of the two loops. Stops are not marked by bus stop signs and buses stop only at designated points (as shown on the web system map and iBus pamphlet). Even if an individual looks at the map (provided on the web), he would not know where to go to catch the bus, as a dot on a map is not equivalent to a sign that indicates exactly where to stand and not miss the bus.

Figure 1 shows that several MDT bus stops are present along the same roadway section where there may be only one iBus stop. (An option would be to make all MDT stops iBus stops also.) Some transit systems have up to ten stops in a mile. The 16 stops shown on the route map brochure may not produce an adequate coverage area for the route. Based on the standard assumed walk distance to transit of ¼ mile, there should be at least three stops per mile. Route A with a length of over 10 miles has only 1.5 per mile, about half of the minimum standard.

Route B

Route B operates in the morning (7 AM to 9 AM) prior to the beginning of Route A service and in the afternoon (2 PM to 5 PM) after Route A service ends for the day.

- The first morning runs clockwise beginning at the Busway and SW 168th and following SW

168th east, Old Cutler Road south (via the Branch Library and Palmetto Bay Village Center), and SW 184th back west to the Franjo Triangle area. It then reverses and runs backwards, counter-clockwise, via SW 184th, Old Cutler Road, and SW 168th to the Busway. It then runs that pattern clockwise again, then counterclockwise ending at Village Center and not getting back to the Busway.

- The first afternoon run is counter-clockwise beginning at the Municipal Center, then east on SW 184th, north on Old Cutler Road (via Village Center and the Branch Library), and west on SW 168th to the Busway. That bus then retraces its route clockwise. It makes two more clockwise runs, then ends the day with skip-stop service counter-clockwise to the Busway.

The clockwise/counterclockwise pattern of Route B is confusing. With bus stops marked only on maps, it is likely that riders find out by word of mouth where to go to catch the bus, and where it goes. There are just over two stops per mile (19 stops /8 miles). This is 1 stop per mile below the standard.

No service on the iBUS is provided on Saturdays or Sundays or on the following holiday's observed by the Village of Palmetto Bay: New Year's Day; Martin Luther King, Jr. Day; President's Day; Memorial Day; Independence Day; Labor Day; Columbus Day; Veteran's Day; Thanksgiving Day; Day after Thanksgiving; and Christmas Day.

Information and Marketing

Route information for the iBUS is provided on the Palmetto Bay website web site:

(<http://www.palmettobay-fl.gov/content/ibus-bus-circulator-service#>).



Service changes and updates are listed under "Department News." Unlike some MDT routes, the iBUS does not have an online system allowing users to see the location or expected arrival times of the bus (see related information in Appendix A). Route information, including routes maps and schedules, together with instructions on how to ride the bus are on line, and on brochures available at the Village Center (Figure 2). The route map is shown in Figure 3. The brochures are not widely distributed.

While maps are provided, bus stops are not marked by signage nor are bus schedules available at the stop. Bus stop signage and infrastructure, as well as route timetables, advertise the system. Their lack limits knowledge of the system. Bus ridership is affected by the knowledge of the system. While the iBUS itself is clearly marked, this exposure is limited to those who see the bus. Knowledge of the shuttle's existence is hindered by its lack of visibility, and the lack of information negatively impacts user-friendliness of the system, and by extension, ridership retention and growth. The lack of transit infrastructure may also hinder ridership as the information prevents an individual from being able to plan a trip.

The on-board survey found almost all riders speak Spanish, and thus information provided should be bilingual, including service updates on the website, which is currently in English only.

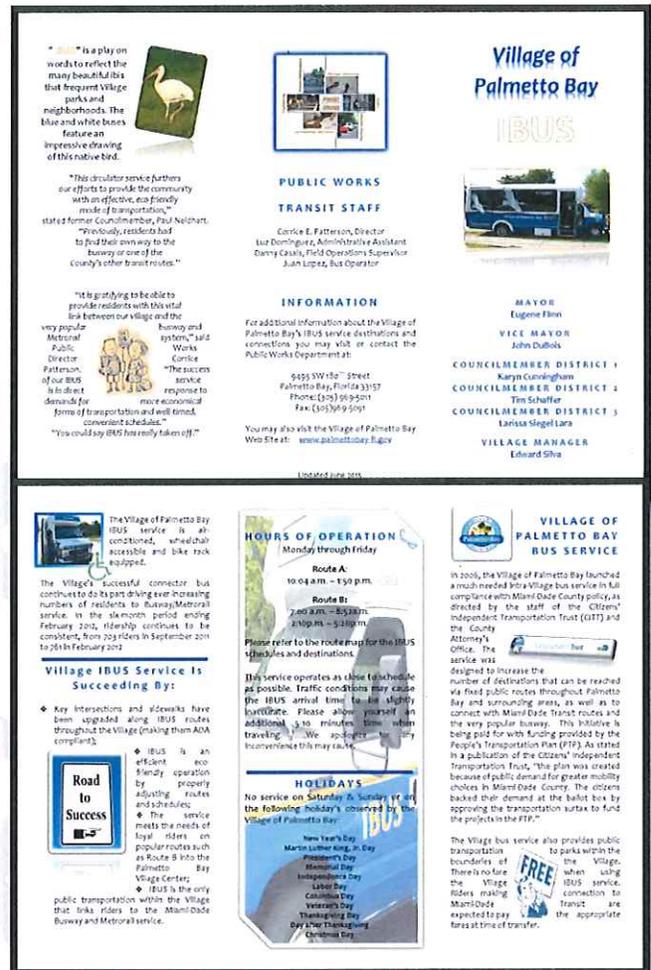
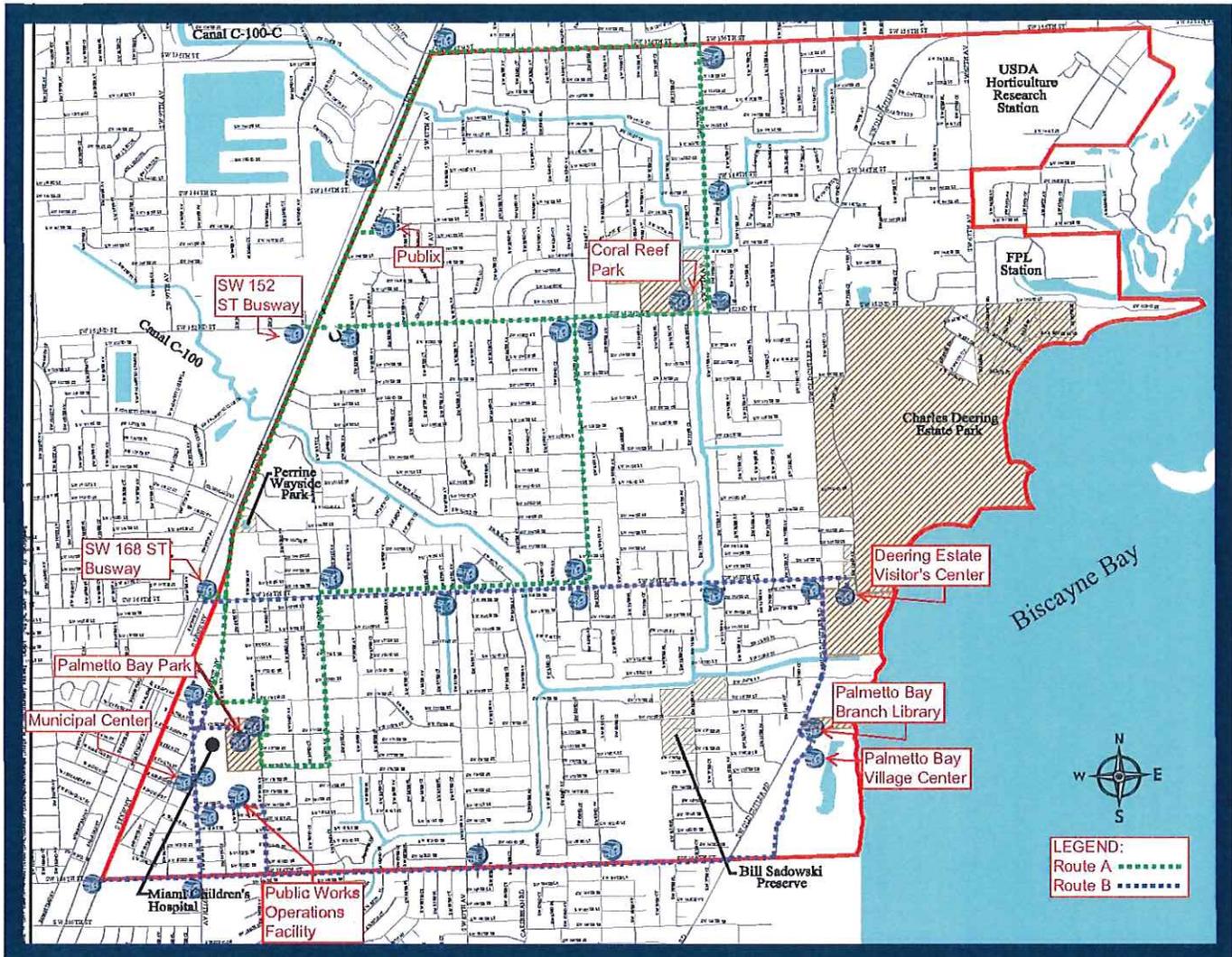


Figure 2: The Village's iBUS brochure

Source: Village of Palmetto Bay



Figure 3: Village of Palmetto Bay iBUS Routes



Source: Village of Palmetto Bay

Demographics/Transit-related Information

There are two primary markets for transit riders, 1) transit dependents (those without regular access to personal vehicles), and 2) choice riders (those who have access to personal vehicles, yet choose to use transit). In Miami Dade County, the preponderance of the transit system is focused on transit dependent

populations. Yet in our area of the County, we can be fortunate to be served by the Busway, which is appealing to choice riders. Choice ridership is most likely to be attracted when transit travel times and costs are competitive with the private auto. These factors must be considered when targeting a particular ridership market. Choice ridership is best served through the provision of frequent, high amenity, service with a guaranteed seat (versus standing).

