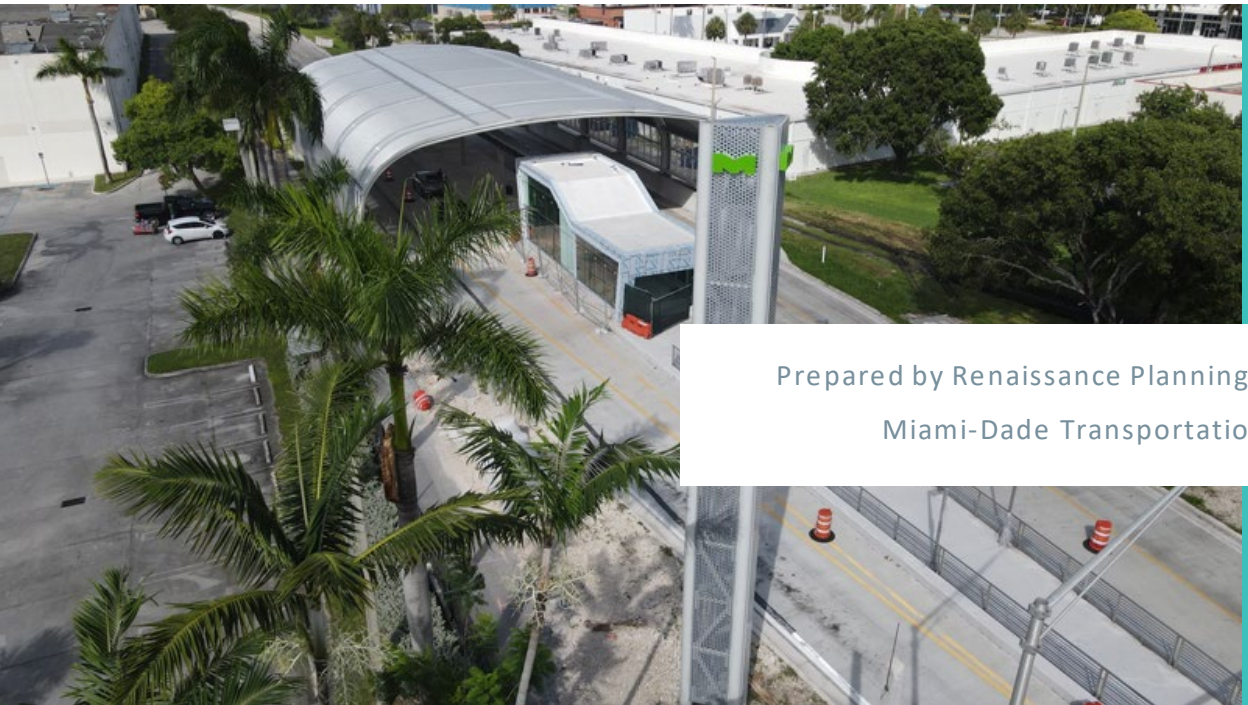
FIRST LAST-MILE (FLM) CONNECTIVITY SERVICES TO FEED INTO THE SOUTH DADE TRANSITWAY

Final Report



Prepared by Renaissance Planning Group on behalf of the
Miami-Dade Transportation Planning Organization

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ACRONYMS

Abbreviation	Meaning
ATMS	Advanced Traffic Management System
BPP	Bicycle Pedestrian Program
BRT	Bus Rapid Transit
CAV	Connected and Automated Vehicles
CRA	Community Redevelopment Agency
DTPW	Department of Transportation and Public Works
FDOT	Florida Department of Transportation
FLM	First Last-Mile
HEFT	Homestead Expansion of Florida's Turnpike
LPA	Locally Preferred Alternative
LRTP	Long-Range Transportation Plan
MDT	Miami-Dade Transit
MPO	Metropolitan Planning Organization
OD	Origin Destination
PD&E	Project Development & Environmental
ROW	Right of Way
SMART	Strategic Miami Area Rapid Transit [Plan]
SRTS	Safe Routes to Schools
TD	Transit-Dependent
TDP	Transit Development Plan
TIP	Transit Improvement Program
TOD	Transit Oriented Development
TPO	Transportation Planning Organization
UPWP	United Planning Work Program

INTRODUCTION

Project Context

In 2016, the Miami-Dade Transportation Planning Organization (TPO) officially adopted the Strategic Miami Area Rapid Transit (SMART) Plan. The SMART Plan is actively advancing rapid transit initiatives to address mobility needs throughout Miami-Dade County. It encompasses six major rapid transit corridors and a Bus Express Rapid Transit Network for Miami-Dade County. One of the corridors identified in the Plan is the South Dade TransitWay, located in the southernmost portion of Miami-Dade County's Urban Development Boundary. Beginning at the Dadeland South Metrorail station and spanning 20 miles south, it connects the incorporated municipalities of Pinecrest, Palmetto Bay, Cutler Bay, Homestead, and Florida City.

Strengthening transportation connectivity to and from the South Dade TransitWay is integral to fulfilling the corridor's social, cultural, and economic goals. The SMART Plan aims to implement Bus Rapid Transit (BRT) service along the corridor, representing a significant investment in transit infrastructure to enhance transportation connectivity within the corridor and to points south and north. To maximize ridership on the future BRT, it is essential to have robust first and last-mile transportation options in place to connect BRT stations to rider origins and destinations.

On October 4, 2022, the TPO Governing Board passed Resolution No. 41-2022, requesting a feasibility study to provide first and last-mile transit services enhancing feeder connectivity to current and future BRT transit stations on the South Dade TransitWay. This final report comprehensively addresses the resolution in a complete narrative, encompassing preliminary literature research and data gathering, the selection and evaluation of recommendations, and guidance for implementation.

What is First Last-Mile?

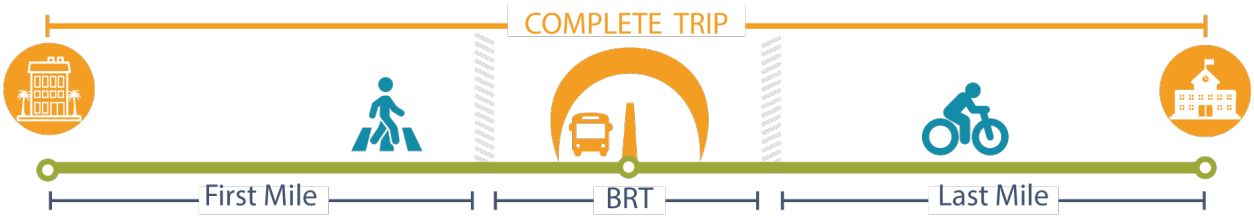


Figure 1 Illustration of the parts of a complete trip, demonstrating the First Last-Mile connections to BRT

First Last-Mile (FLM) connections are one part of complete BRT trips. The BRT leverages high speeds and frequencies to transport riders most of the way, but short connections are necessary at the beginning and end to complete the trip. BRT can be thought of as the “trunk” of the trip and FLM as the “branches.” Unlike other modes, transit involves significant capital and operating costs borne directly by the public sector. Offering a quality of transit service comparable to (or better than) other mode choices will help attract strong ridership and make sure the most is made of these investments.

Summary

The study uses a three-step process to assess feasible transit service changes to expand FLM access and improve connectivity to the BRT.

I. **Literature Review & Data Gathering**
II. **Station Area Evaluation & Needs Assessment**
III. **Recommendations and Roadmap to Implementation**

A Stakeholder Advisory Committee of local and regional staff and stakeholders provided expertise, citizen perspectives, and policy guidance that informed every step of the study. This Final Report details the findings of each phase and how the discoveries inform the subsequent tasks.

Methodology

The project team reviewed completed and ongoing projects and analyzed existing transit services in the corridor to inform this project. This was followed by rich technical analysis of the best available information in two main approaches:

1. **Origin Destination Analysis** – identified travel patterns, trip distances, trip durations, and mode share within each BRT station area.
2. **Accessibility Analysis** – identified how many job and housing opportunities fall within a 20-minute transit, automobile, biking, or walking trip from BRT stations. This analysis compared the relative usefulness of each mode for FLM trips and identified activity centers needing greater coverage by transit access.

Appendix B – Methodology Details provides details on the data sources, methodologies, and data processing of the technical analysis.

Engagement

A Stakeholder Advisory Committee guided this study throughout the project by way of four virtual meetings where stakeholders provided local expertise, citizen perspectives, and policy guidance. Stakeholders included:

- Florida Department of Transportation (FDOT), District 6
- Miami-Dade Department of Transportation and Public Works (DTPW)
- Miami-Dade Citizens' Independent Transportation Trust (CITT)
- Miami-Dade Department of Regulatory and Economic Resources (RER)
- Cutler Bay
- Florida City
- Homestead
- Palmetto Bay
- Pinecrest

Findings

The literature review and technical analysis revealed several key findings about travel in the corridor:

1. Most trips take place within the South Dade Corridor.
2. Trip lengths increase further south in the corridor.
3. Travelers have a limited time budget with which to complete FLM trips.

4. Transfers and wait times are the greatest barriers to transit FLM access to BRT stations.
5. Bicycle accessibility outperforms transit accessibility but has low mode share.
6. On-demand services are capacity-constrained and have volatile wait times.

Recommendations

The result of this study are six policy recommendations and eleven service recommendations. These recommendations for consideration are suggested as ways to improve first last-mile connections to the TransitWay.

Policy Recommendations

Schedule Alignments with BRT & Local Routes	Partner with Rideshare Providers	Ensure Safe Connections to BRT Stations	Promote Bike/ Ped. Infrastructure	Encourage High-Density Mixed-Use TOD	Create Transit Marketing Plan & Campaigns
Coordinate feeder service and BRT schedules.	Outsource on-demand service to private rideshare providers.	Consider all modes in BRT station design and access across US-1.	Expand access and improve ridership by addressing gaps in infrastructure.	Support the development and jobs within the travelsheds.	Encourage the use of on-demand service to support all ridership.

Service Recommendations

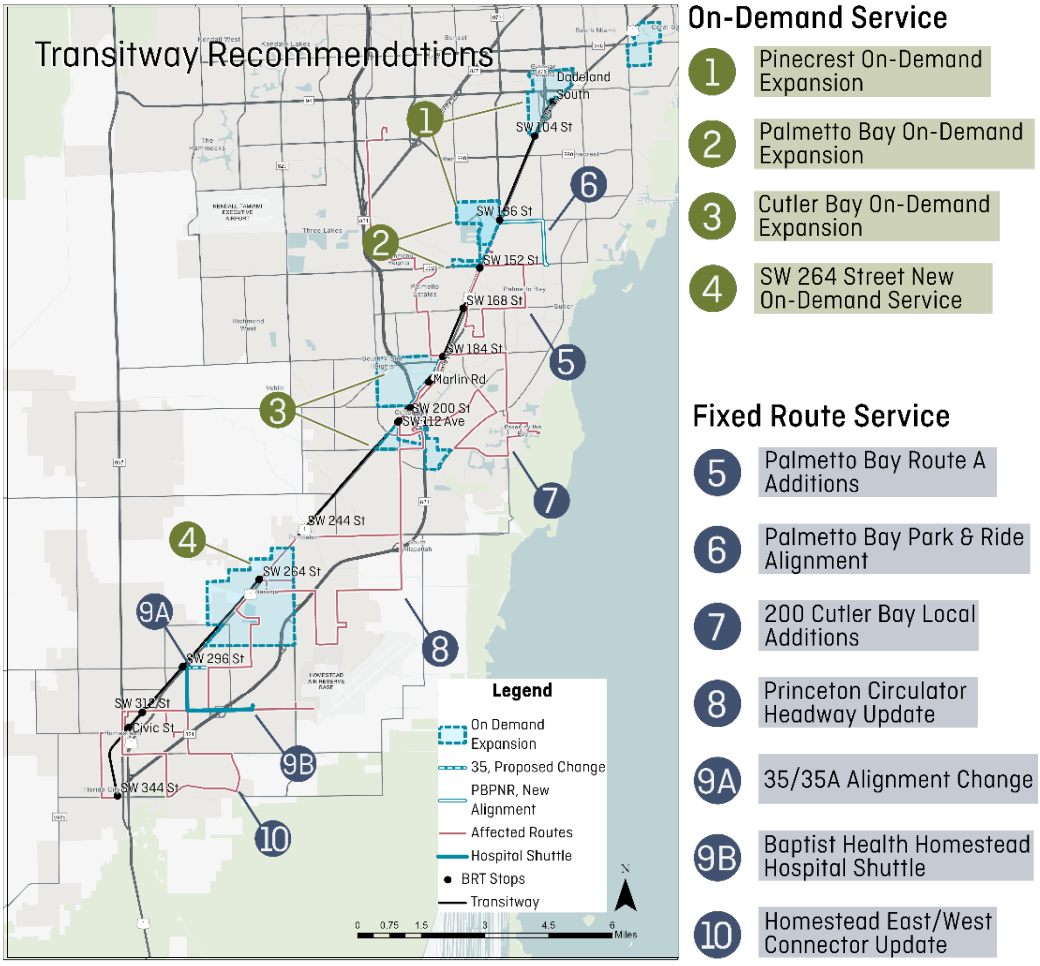
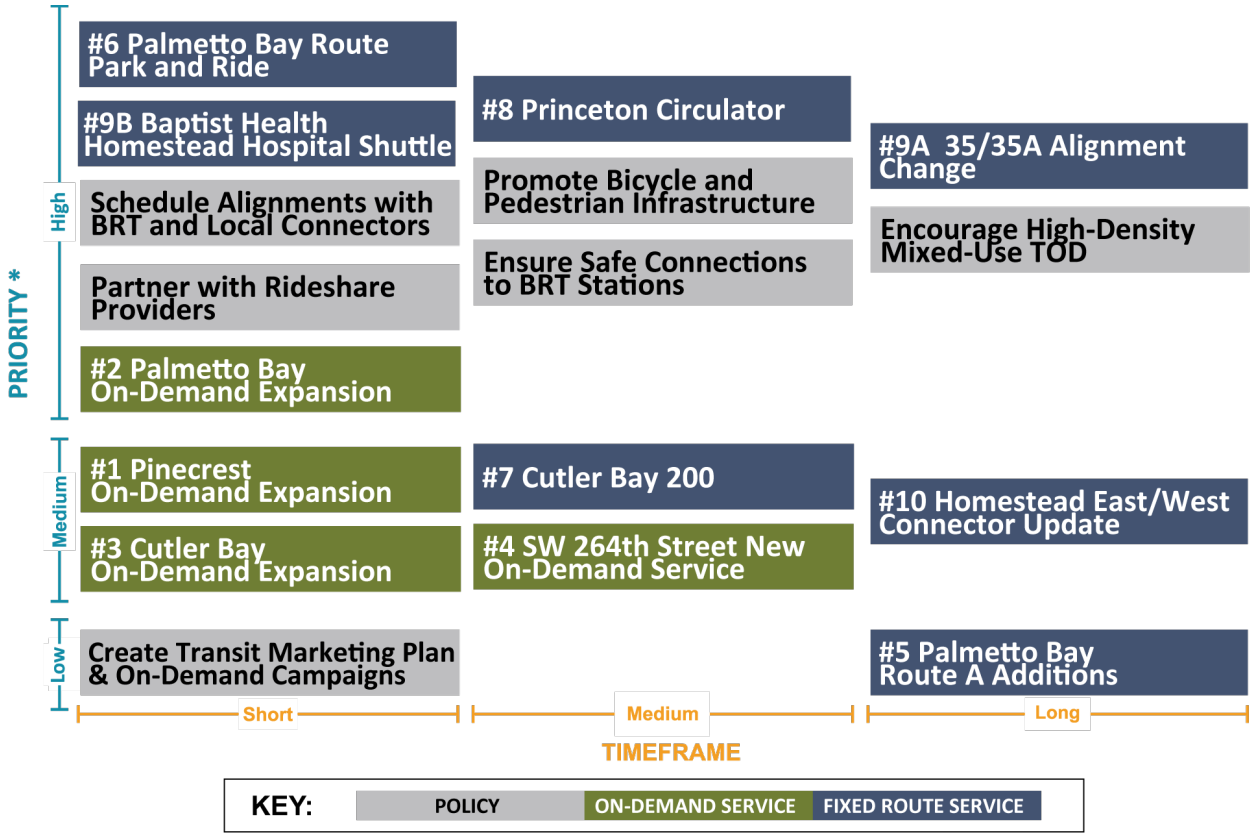


Figure 2 Recommendations Map

The Recommendations Map (Figure 2) shows the priority ranking and timeframe estimate for the policy recommendations, and Recommendations Timeline and Priority Summary, Figure 3, shows the service recommendations. Note that *either* 8A or 8B are recommended for implementation.



**Recommendations are designated high,medium, or low priority. There is no hierarchy within the categories.*

Figure 3 Recommendations Timeline and Priority

I. LITERATURE REVIEW & DATA GATHERING

The initial review of the literature and projects confirmed an abundance of planning and engineering projects relating to the South Dade TransitWay Corridor. Significant findings that informed this project include existing on-demand service; traffic programs, projects, and reports; existing and planned programs and infrastructure for bikes and pedestrians; and existing conditions near TransitWay stations and along the corridor.

Visioning exercises with residents of the South Dade TransitWay Corridor identified primary long-range goals, the most desired of which were:

- **Enhance Transit Service**
- **Increase Job Opportunities**
- **Create Walkable Communities.**

Residents in the South Dade TransitWay Corridor selected Bus Rapid Transit (BRT) as the Locally Preferred Alternative Mode because it allows for flexibility in routes, same or improved travel time compared to rail, high-capacity service, and is cost-effective. Initial BRT traffic analysis identified two key strategies to manage impacts: (1) Advanced Traffic Management System (ATMS) and (2) targeted off-peak direction diversion of transit vehicles to parallel facilities. Together, these strategies help ensure the necessary fleet size and efficiency to serve the needs of high-ridership areas during rush hours. These flexible BRT strategies will be important considering the predicted 50 percent growth of the South Corridor from 2010 to 2050.

Several of the reviewed documents analyze socioeconomic conditions at various scales within the corridor. At the corridor scale, income-levels are higher in the northern third, and the number of vacant buildings is greater in the southern two-thirds. While there are transit-dependent populations throughout the entire corridor, the highest dependency is seen in the south from the SW 312th station to the end of the service at SW 344th.

The most notable regional context throughout these findings is connectivity, particularly, the value of connecting residents along the South Dade TransitWay with opportunities in the rest of Miami-Dade County. US 1 is a strong north-south connector, but the SMART South Project Development & Environmental Study identifies “severe congestion” in the northern parts of the corridor during rush hour. There are currently no funded roadway expansion projects for US-1 in the Southern Corridor of the TransitWay, which underscores the importance of transit and the South Dade TransitWay in helping alleviate congestion and expand regional access. The TransitWay sits on the west side of US 1, while most of the development is on the east side, posing a challenge in providing station access to residents along the corridor.

Multimodal conditions along the corridor and in proximity to stations are imperative when considering FLM routes. The safety of bicyclists and pedestrians is a recurring concern throughout the reports, and various ongoing and future planning programs focus on bicyclist and pedestrian safety, connectivity, and access. Safe Routes to School, Vision Zero, South Dade Trail Bike Plan, the 2045 Bicycle Pedestrian Program, and BikeSafe & WalkSafe Educational Programs aim to make the region more walkable and bikeable through education and infrastructure improvements. The SMART Plan South Dade TransitWay Existing Conditions Intersection Inventory investigates the areas surrounding the corridor to prioritize existing and desired sidewalks, map proposed bike paths/ lanes, and identify critical corridors. The South Dade TransitWay Corridor Economic Mobility and Accessibility Final Report includes an analysis of each station’s existing local/regional

transit, bike-ability, and walkability, then proposes specific multimodal improvements, including bike lanes/paths, sidewalks, crosswalks, etc. In addition to this corridor-wide analysis, secondary documents reviewed include a deep dive into conditions at Princeton Station and Florida City Station.

Studies Explored	Visioning and Long Range Planning	Establish LPA Mode Choice (BRT)	Socio-Economic Conditions	Regional Context	Station Deep Dive	Multi-Modal First-Last Mile Conditions	Transit First/Last Mile Conditions
Better Bus Network Resilience Plan & Network Book						○	○
SMART Plan South Dade Transitway Corridor Land Use Scenario & Visioning Planning	●						
2045 Long-Range Transportation Plan	●						
SMART South Corridor Project Development & Environmental (PD&E) Study		●				●	○
South Corridor Rapid Transit Project LPA Selection		●		○			
SMART Plan Corridor Inventory: South Dade Transitway Corridor			●				
Evacuation Planning Assessment for the US 1 and SW 344 Street Intersection Area				●			
US-1 Multimodal and Roadway Analysis: Dadeland South Metrorail Station to SW 344th Street/Palm Drive				●			
SW 244th Street (Princeton Station) Mobility & Accessibility Study			○		●	○	
Florida City HUB Mobility and Accessibility Study			○		●	○	
South Dade Transitway Corridor Economic Mobility and Accessibility: Final Report			●			●	
SMART Plan South Dade Transitway Existing Conditions Intersection Areas Inventory				○		●	
First Last-Mile (FLM) Connectivity Services to Feed into The South Dade TransitWay							●

● Primary Study Focus
○ Secondary Study Focus

Figure 4 Literature and Studies

Summary of Literature Findings

Building a successful transit system requires studying various planning, land use, and engineering considerations. The full review of primary and secondary documents, ongoing/future planning, and engineering projects can be found in APPENDIX A – Literature & Project Review.

The primary findings and needs from the literature include:

Three municipalities (Pinecrest, Palmetto Bay, and Cutler Bay) have implemented their own on-demand public transit service to address first last-mile connectivity.

The DTPW operates key fixed-route services within the corridor; the most utilized service is the 38 route, connecting local bus stops along the entire length of the South Dade Transitway.

The varying needs of residents in each area is clear as the service varies between local operators.

Pinecrest's service shows the most pronounced commuter trip pattern with strong AM and PM peaks, suggesting untapped service capacity to meet mid-day travel needs.

Palmetto Bay's service has the highest average wait times throughout the day, suggesting the need for on-demand fleet expansion if the service is to grow.

Cutler Bay's GO Connect is the only service with origin and destination data showing a clear commute pattern to and from the Busway (at the Marlin St. Station).

As demonstrated in Figure 4, most of these considerations are either primary or secondary focuses of the studies reviewed in the literature review. This study intends to expand this body of research by focusing more closely than other studies on **opportunities to improve transit first last-mile connections** to the South Dade TransitWay's BRT stations.

Planning & Engineering Projects

Current and planned studies coming down the pipeline will build on the completed studies and help understand future expected changes in the study area. The detailed findings regarding ongoing and planned engineering projects impacting the transportation network and built environment are detailed in APPENDIX A – Literature & Project Review.

The planning and engineering projects are further classified into short- and long-range projects.

> **Short-range** projects usually address immediate needs, such as improving pedestrian crossings, new or safer bike lanes, different traffic configurations, or changes in transit stops.
>
> **Long-range** plans describe and align strategic objectives in the region. Consequently, long-range projects usually consider the fundamental elements of the transportation network and the connectivity between homes and destinations and are composed of short-range projects.

This study has reviewed the following resources for crucial planning and engineering projects that will inform the basis of the future condition of the TransitWay study area.

Document	Planning Horizon	Short-Range	Long-Range
Transportation Improvement Program (TIP). The TIP summarizes the metropolitan region's funded and likely-to-be-funded transportation projects for the five-year fiscal period. The TPO maintains the TIP.	**2023-27**		●
Unified Planning Work Program for Transportation Planning Activities (UPWP). The UPWP describes transportation priorities and activities managed by the TPO.	**FY 2023-24**	●	
Transit Development Plan (TDP) for Miami-Dade Transit (MDT). The TDP expresses MDT's ten-year strategic vision, evaluates DTPW's existing transit system, identifies service improvements, and identifies capital investments.	**2023-32**		●
Five-Year Work Program – FDOT. The FDOT Work Program lists all transportation improvements funded through the FDOT for the five-year horizon.	**2023-2027 (*Adopted with Amendments*)**	●	
Miami-Dade **Long Range Transportation Plan** (LRTP) published by the TPO. The LRTP is a comprehensive transportation infrastructure plan. The LRTP informs projects that ultimately become part of the TIP.	**Through 2045**		●

Table 1 Planning and Engineering Projects

Figure 5 maps the corridor with the DTPW recent Capital Improvement Projects (CIP) in red and the FDOT Work Programs in orange. The data is filtered only to include projects within one mile of the South Miami-Dade TransitWay.

Figure 5 Corridor CIPs and Work Program

The Engineering Projects section in APPENDIX A – Literature & Project Review includes the FDOT Work Programs and additional relevant development projects. The DTPW CIP consists of a cluster south of the TransitWay in Homestead, which are completed sidewalk repair projects from hurricane damage; the others are Traffic Signal Improvement Projects and Safe Routes to School, included in the Ongoing and Future Planning Projects section.

Existing Transit Service Conditions

On-Demand Service

Three municipalities in the South Corridor have implemented their own on-demand public transit service to address first last-mile connectivity. Through a partnership with DTPW and Via Transportation, Cutler Bay launched GoConnect in December 2020, connecting residents to the TransitWay and around town. Palmetto Bay launched Freebee with the Miami-Dade TPO and the company Freebee in July 2019, transporting residents anywhere within the Village. Pinecrest also partnered with Freebee in January of 2019 for on-demand transport within their Village, including the South Dade TransitWay and Metrorail station.

Review of the existing on-demand services detailed in APPENDIX A – Literature & Project Review identified key findings to inform transit recommendations:

- Cutler Bay's GO Connect is the only service with origin and destination data showing a clear commute pattern to and from the Busway (at the Marlin St. Station). This could be due to more granular geospatial trip data provided by Via as compared to Freebee.
- Pinecrest's service shows the most pronounced commuter trip pattern with strong AM and PM peaks, while Palmetto Bay and Cutler Bay have more evenly distributed ridership. This suggests untapped service capacity to meet midday travel needs in Pinecrest.
- Cutler Bay's GO Connect service shows a more pronounced concentration of origins and destinations compared to the Pinecrest and Palmetto Bay services, reflecting higher volumes of more similar trip types. This could inform adjustments to fixed route services to serve these trips more cost-effectively.
- Palmetto Bay's service has the highest average wait times throughout the day, suggesting the need for on-demand fleet expansion if the service is to grow.

Fixed Route Service

The Miami-Dade DTPW operates key fixed route services within the study area. The most utilized service is the 38 route, which connects to local bus stops along the entire length of the South Miami-Dade Busway. The 34 operates on the same alignment on an express basis, but has much lower ridership than the 38. There are other local and regional routes connecting the study area, but the most important of these (based on reported ridership) is the 35 route, which connects Florida City, Homestead, Naranja, Cutler Bay, Perrine, Richmond Heights, and Miami-Dade College Kendall Campus.

Homestead, Cutler Bay, Palmetto Bay, and Pinecrest also operate local fixed route services tailored to the specific needs of residents. Homestead's service circulates residents on both sides of US 1 and connects to the Busway for transfers to Routes 34 and 38. Cutler Bay's trolley is focused on local circulation and connecting to transfer opportunities on the Busway. Palmetto Bay's service is focused on expanding commuter service from Park and Ride lots in the city to the Dadeland South Metrorail station. Pinecrest's service is focused primarily on transportation for students to and from local schools.

On-Demand Analysis

The Miami-Dade Transportation Planning Organization (TPO) has launched SMART Demonstration Projects throughout the county to increase first last-mile connectivity to existing

and future SMART Program transit stations. Within the South Dade TransitWay study area, three of these projects operate in the South Dade Corridor today:

Service	Operator	Launch	Operating Days/Hours
Cutler Bay GO Connect	Via	Dec, 2020	M-F 5:30am – 8:00pm
Palmetto Bay Freebee	Freebee	Jul, 2019	M-F 7:00am – 7:00pm
Pinecrest Freebee	Freebee	Jan, 2019	M-F 7:00am – 7:00pm, Sat 10:00am – 10:00pm

Table 2 Existing Fixed Route Service

These services operate as "on-demand" transit services, allowing transportation anywhere within the defined service area, which is currently the same as the incorporated boundaries of their respective cities. Passengers can request a ride through a mobile app associated with the service or by calling a dispatching center to place a request. Each request enters a queue to get dispatched out to vehicles operating within the service area. No advance reservations are required, and everyone is eligible to use the service.

Initial Data Analysis

To understand how these services are performing today, this section analyzes trip trend data, request wait-time data, and origin-destination data. Trip data informs when the busiest times of day are for each service. Wait-time data reflects the amount of time between when a passenger submits a trip request and when the vehicle arrives to pick that passenger up. Unlike fixed route buses which often have unutilized capacity on board the vehicles and can expand to accommodate growing ridership with no additional cost, on-demand services can quickly reach capacity, which is reflected in higher vehicle wait times. Origin and destination data reveals the location of major activity centers and trip generators. Note that the origin and destination heat maps depict relative activity; parts of the service area with no color do not reflect no activity, just less activity.

This analysis also classifies trips based on arrival time at the destination: AM Commute trips occur before 10am, Mid-Day trips are occurring between 10am and 4pm, and PM Commute trips are those occurring after 4pm. This helps to identify how transit patterns change over the course of the day.

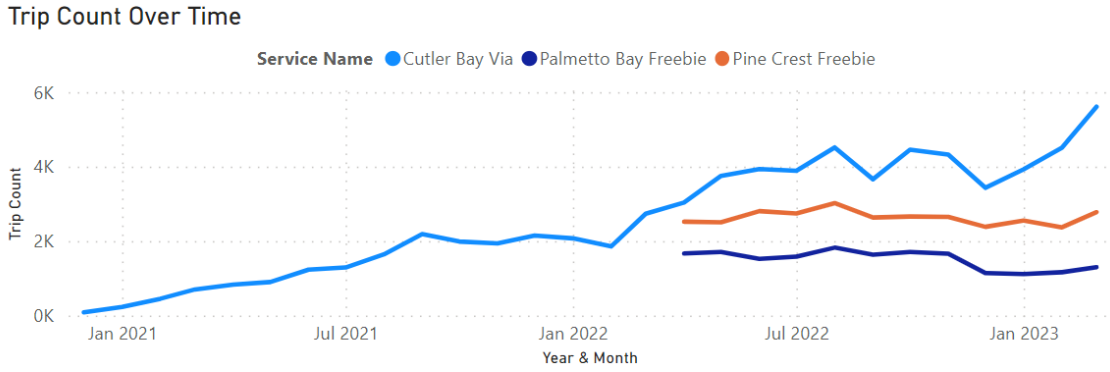


Figure 6 Trip Count Over Time by Transit Service Provider

Cutler Bay – GO Connect Operated by Via

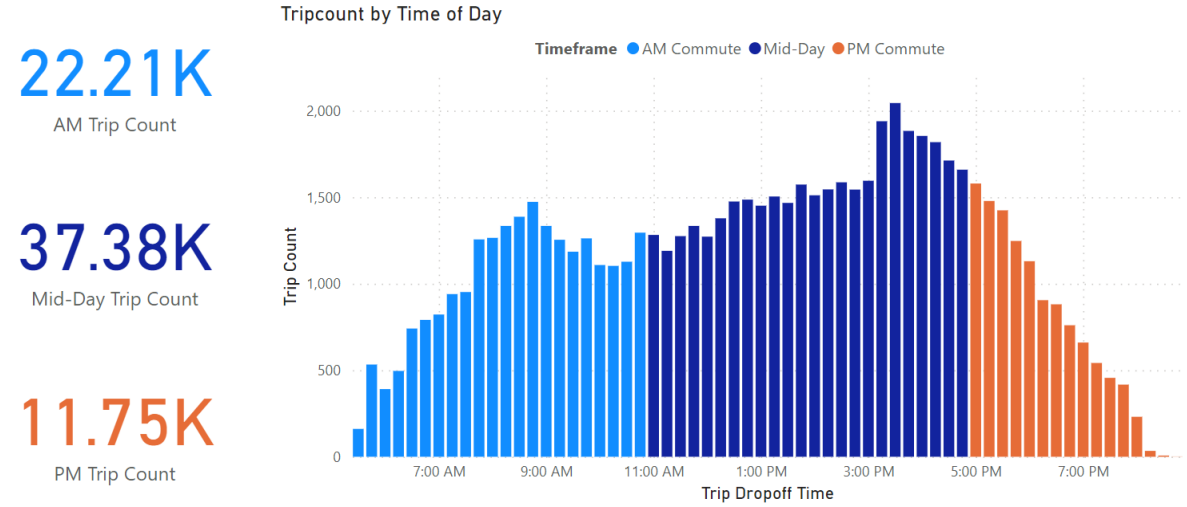


Figure 8 Cutler Bay, GO Connect- Trip Count by Time of Day

Trip Analysis: The GO Connect data provided by Via covers the timeframe from December 2020 (when the service launched) to March 2023. Over that period, monthly trips grew from 87 trips in its first month to 5,609 trips in March 2023, reflecting an average monthly growth rate of 16.7%. The daily trip distribution reflects three patterns: (1) lower demand at the beginning and end of the service window, (2) steadily increasing demand over the course of the day, and (3) a mild "dual peak" pattern at 9am and 4pm.

Wait Time Analysis: Average wait times for GO Connect service fluctuate between 10 and 28 minutes. Morning peak wait times occur at 7am, 2 hours before trip drop-offs peak at 9am. This suggests a growing surge of demand around 7am that gets processed over the next two hours. A similar request surge around 3pm compounds with steadily growing demand over the course of the day, resulting in peak wait times.

Destination Analysis: Morning Origin-Destination (OD) analysis identifies a few neighborhood hotspots: SW 93rd Ave, Martinique Dr, and The Isles at Bayshore. The most significant AM destination is Marlin Road transit stop and the Point Royale shopping center.

The Mid-Day OD analysis reveals one very strong trip pattern from Cutler Bay Senior High School to the Southland Mall. This explains why the 3pm wait time surge coincides perfectly with the end of the school day.

The evening analysis identifies the Marlin Road transit stop, Point Royale shopping center, and the Old Cutler Town Center as important pickup locations. The most important drop off locations are commercial shopping centers including Southland Mall, Old Cutler Town Center, South Dade Plaza, and Point Royale shopping center.

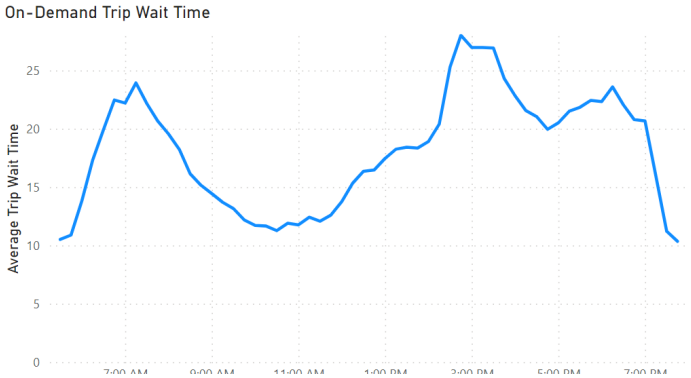


Figure 7 Cutler Bay, GO Connect- On-Demand Trip Wait Time

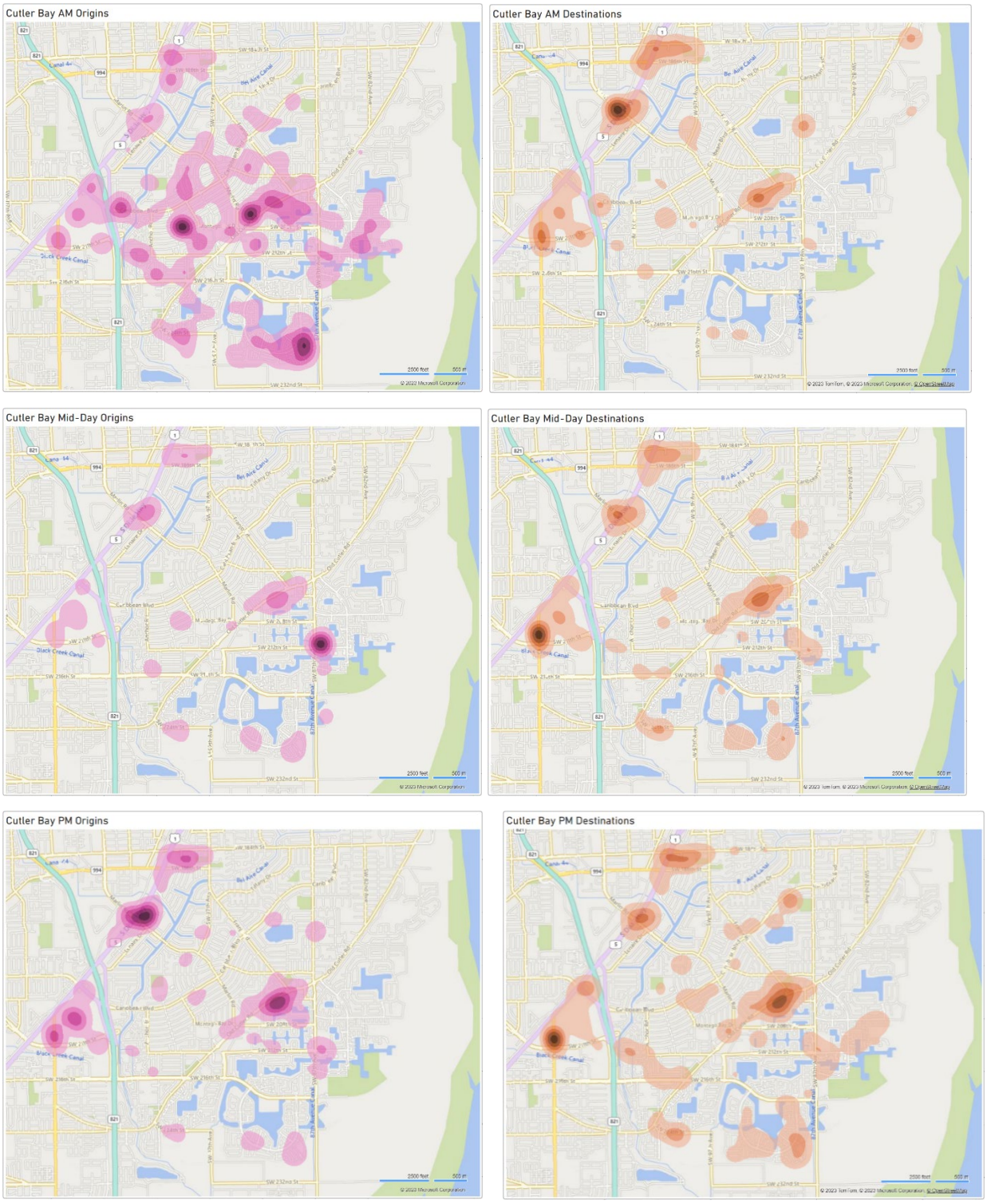


Figure 9 Cutler Bay, Go Connect- O/D by Time of Day

Palmetto Bay – Operated by Freebee

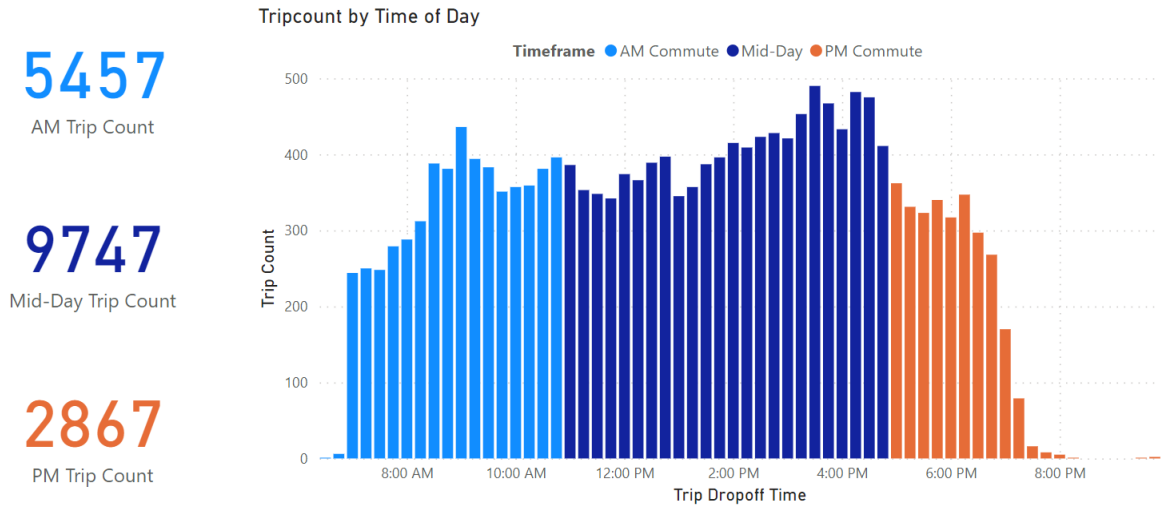


Figure 10 Palmetto Bay, Freebee- Trip Count by Time of Day

Trip Analysis: The Palmetto Bay data provided by Freebee covers the timeframe from April 2022 to March 2023. Over the spring, summer, and fall, monthly trips stayed around 1,700 per month. Starting in December and lasting through March, trip volume fell to 1,300 trips per month. Without more historical data, it's difficult to determine whether this is a recurring seasonal pattern. The daily trip distribution reflects lower demand at the beginning and end of the service window, and very subtle "dual peak" pattern at 9am and 4pm.

Wait Time Analysis: Average wait times for the Palmetto Bay Freebee service fluctuate between 16 and 33 minutes. Morning peak wait times occur at 8am, 1 hour before trip drop-offs peak at 9am. This suggests a growing surge of demand around 8am that gets processed over the next hour. After the early morning slump in demand, wait times steadily increase over the course of the day, scaling proportionally with demand.

Destination Analysis: Morning Origin-Destination (OD) analysis identifies the majority of trip generation starting in the neighborhoods immediately east of US 1. The most significant AM destinations are commercial centers on US-1, key neighborhood in central Palmetto Bay, and the Royal Harbor Yacht Club.

The OD analysis for Mid-Day and evening trips is relatively consistent, showing both origins and destinations predominately occur at commercial centers on US-1, with the other ends of those trips spread out relatively evenly through the city. The Grove at Old Cutler neighborhood is one noticeable point of origin for mid-day trips.

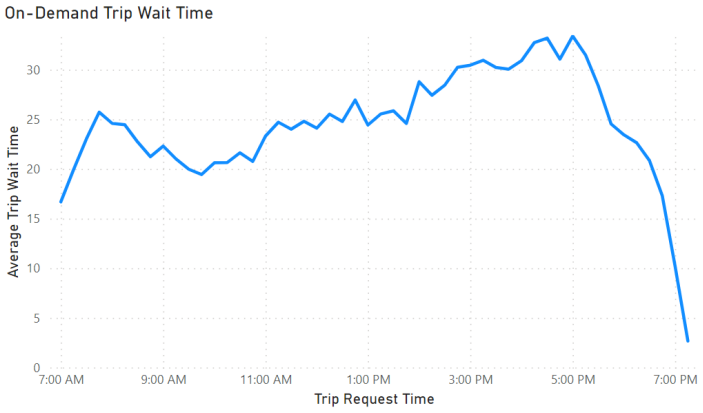


Figure 11 Palmetto Bay, Freebee- On-Demand Trip Wait Time

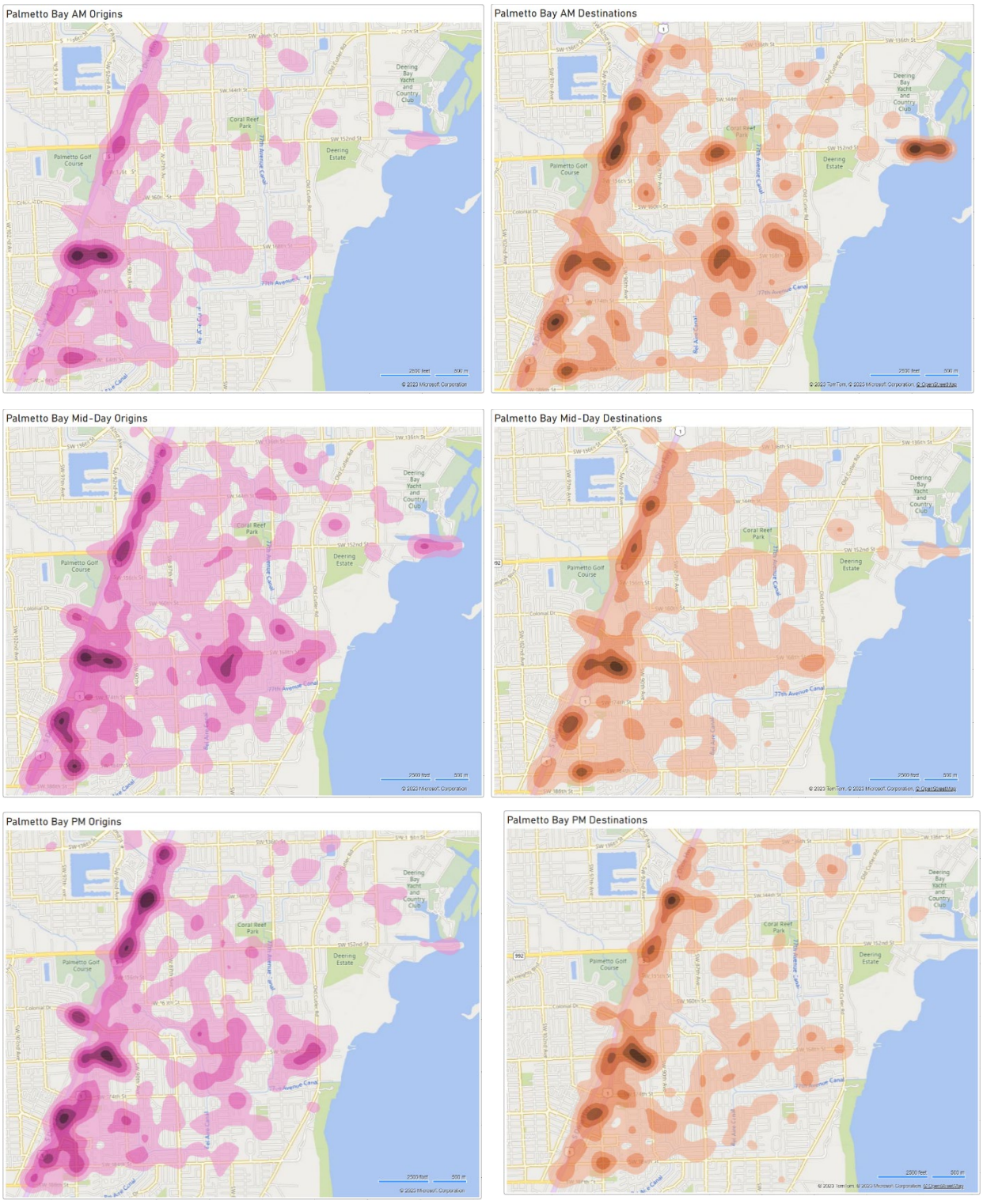


Figure 12 Palmetto Bay, Freebee- O/D by Time of Day

Pinecrest – Operated by Freebee

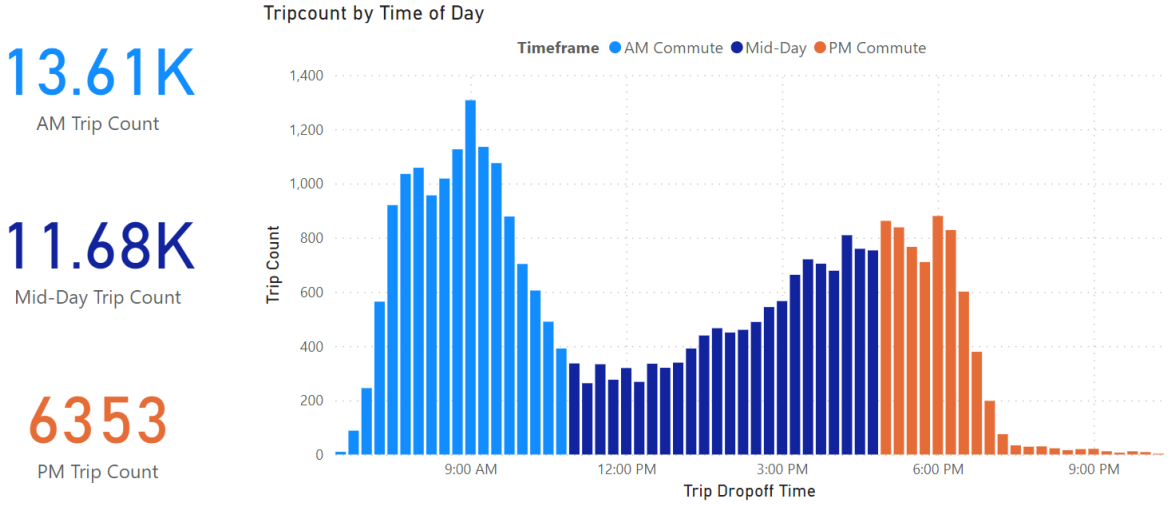


Figure 13 Pinecrest, Freebee- Trip Count by Time of Day

Trip Analysis: The Pinecrest data provided by Freebee covers the timeframe from April 2022 to March 2023. Over that time period, monthly trip counts have stayed relatively constant around 2,700 trips per month. Of all three services, the Pinecrest Freebee service shows the most pronounced "dual peak" commuter pattern at 9am and 5pm, suggesting a higher proportion of commuter ridership compared to the other services. This also suggests potential untapped capacity during the midday time period.

Wait Time Analysis: Average wait times for the Pinecrest Freebee service fluctuate between 12 and 28 minutes. Interestingly, PM peak wait times are higher than the AM peak, despite the AM trip peak being larger than the PM peak, suggesting that the volume of AM trips are being processed more quickly than the PM trips. This could be due to shorter AM trips are more aligned trips allowing for greater vehicle sharing.

Destination Analysis: Morning origin patterns are relatively diffuse throughout Pinecrest, with one hotspot at Dadeland South Plaza and another at the Swan Lake Townhome development. Similarly, destinations are spread throughout the county with key hotspots at Dadeland South Plaza, Pinecrest by the Sea, and at 112th St and 72nd Ave.

During the mid-day and PM time periods, the most popular destinations are the commercial centers along US 1, especially South Dadeland Plaza and Village Plaza. Outside these centers, the most notable mid-day origin is Pinecrest by the Sea and the most notable PM origins are 96th St and 62nd Ct, and 112th St and 72nd Ave.

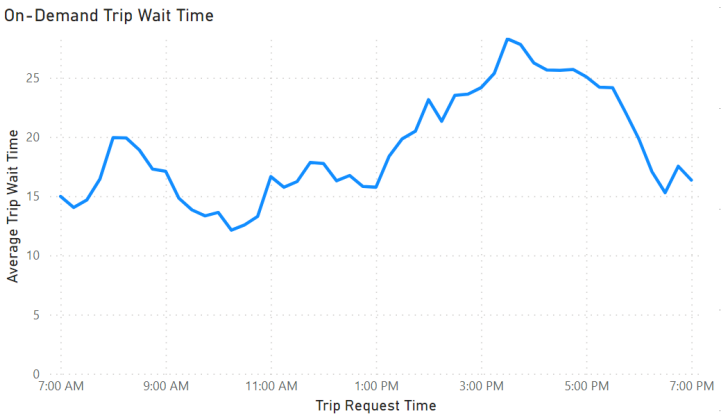


Figure 14 Pinecrest, Freebee- On-Demand Trip Wait Time

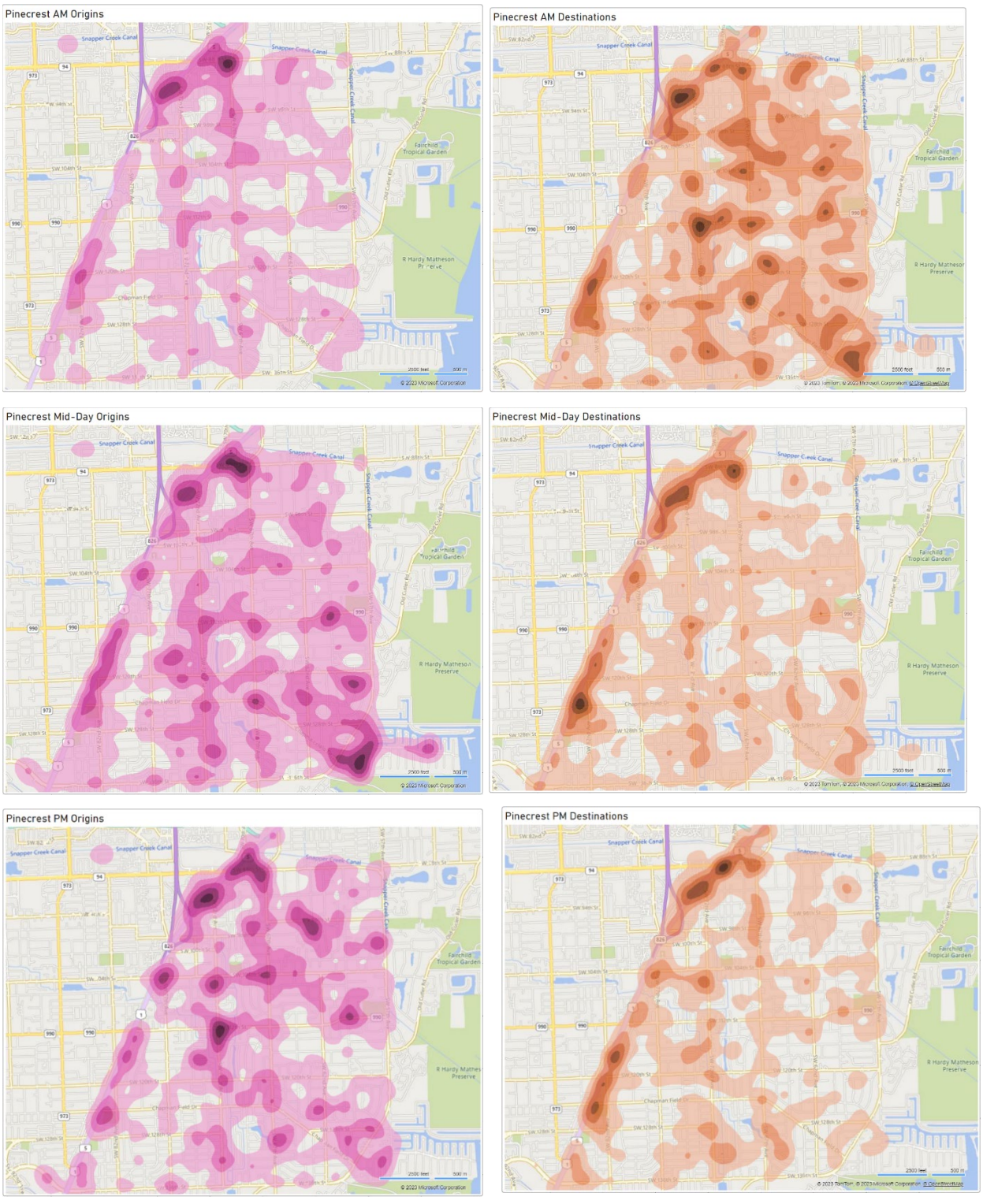


Figure 15 Pinecrest, Freebee- O/D by Time of Day

Fixed Route Transit Service Inventory

The Miami-Dade Department of Transportation and Public Works operates several traditional, fixed route transit services near the South Dade TransitWay. In addition, four of the five incorporated cities in the study area offer local circulator transit services to meet local transportation needs.

The most important services across the corridor are the 38 route, which operates as a local fixed route service on the South Dade TransitWay. The 34 complements that service by operating on an express basis along the same alignment. Other important regional routes include the 35 and 137.

This transit service inventory includes the total monthly ridership of fixed route services in each incorporated city. Note that DTPW changed their passenger counting and reporting methodologies in October of 2022, which resulted in a 45% increase in reported Metrobus ridership from the prior month. Because of the murkiness this casts over the total impact of fixed route ridership, it is still feasible to assess the relative significance of transit routes to each other since the increase was observed across the board.

This inventory does not include ridership data for local circulator services except where that ridership was reported alongside DTPW ridership data.

Florida City Fixed Route Transit

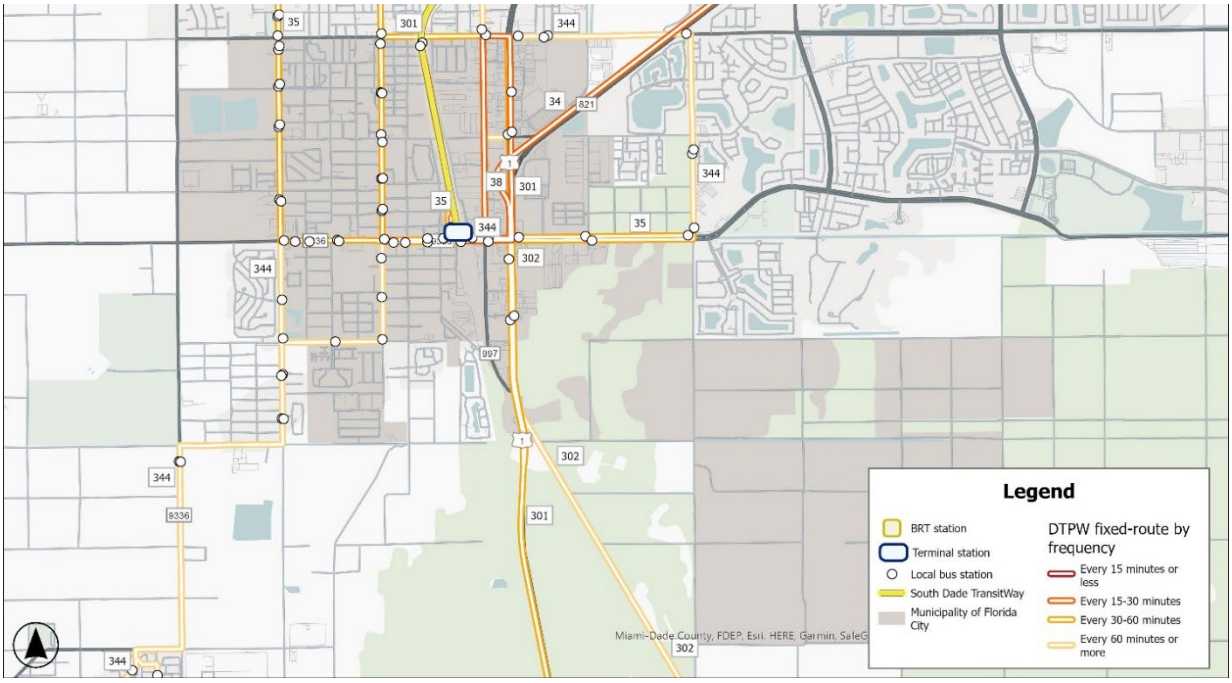


Figure 16 Florida City- Fixed Route Service

Florida City serves as the southern terminus of the South Dade TransitWay. The most used fixed route transit service in Florida City is the **38**, which serves local, north-south transit on the TransitWay, and the **34**, which operates as an express route on the same alignment. The **301** and **302** serve as important feeder routes bringing riders from points south and transfers them to local destinations or the TransitWay to continue north. The **344** serves as a local circulator for Florida City and nearby Homestead, while the **35** connects Florida City to points North including Cutler Bay and Miami-Dade College Kendall Campus.

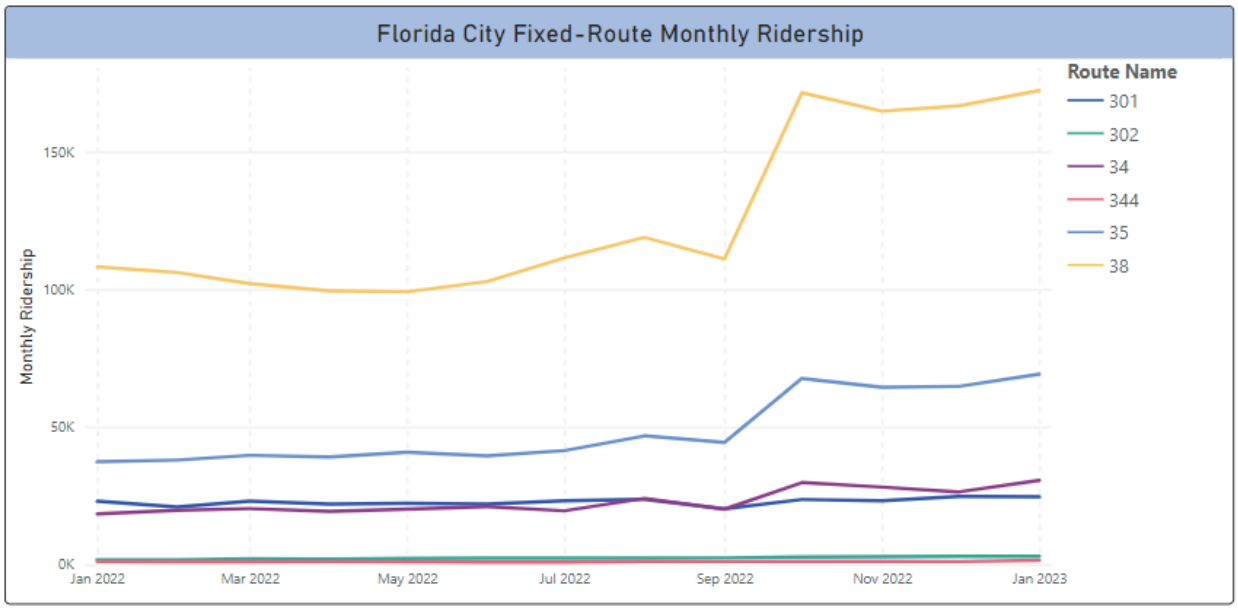


Figure 17 Florida City Fixed Route Monthly Ridership

Homestead Fixed Route Transit

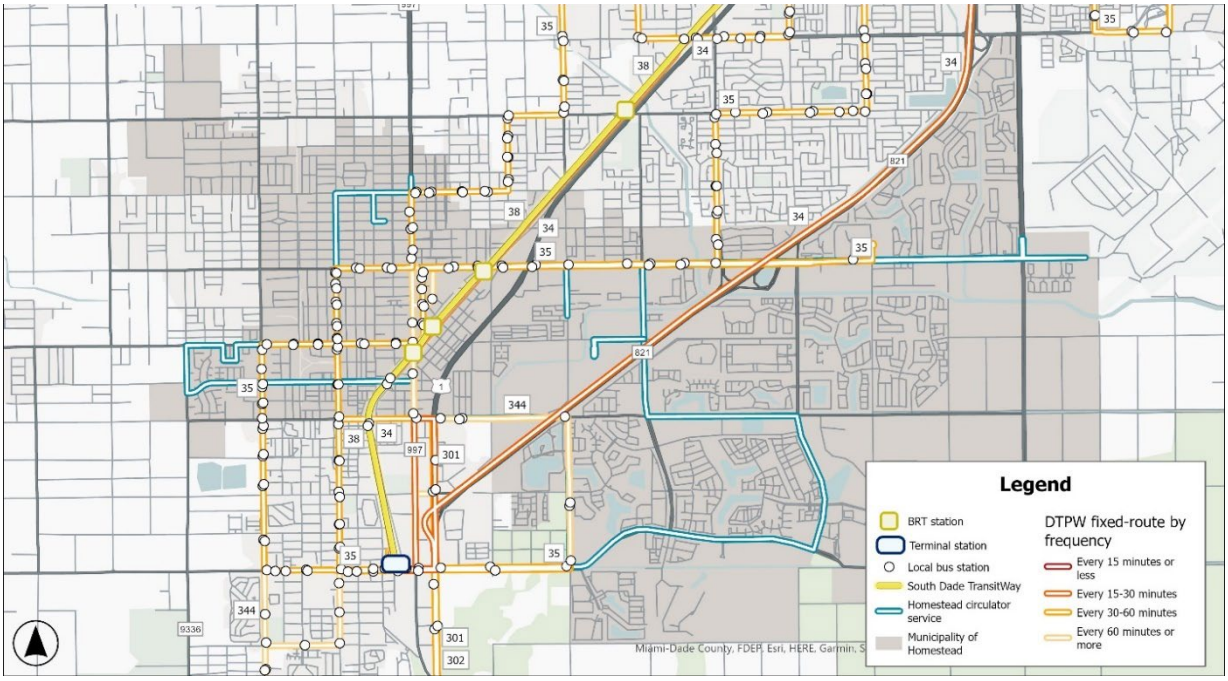


Figure 18 Homestead- Fixed Route Service

Homestead lies adjacent to Florida City, just north of the South Dade TransitWay's southern terminus. The most-used transit route is the **38**, which serves local, north-south transit on the TransitWay, and the **34**, which operates as an express route on the same alignment. The **344** serves as a local circulator Homestead and nearby Florida City, while the **35** connects Homestead to points North including Cutler Bay and Miami-Dade College Kendall Campus. In addition to DTPW transit services, Homestead operates its own fixed route circulators which operate as dual loops serving residents on either side of US 1 and meeting in the middle.

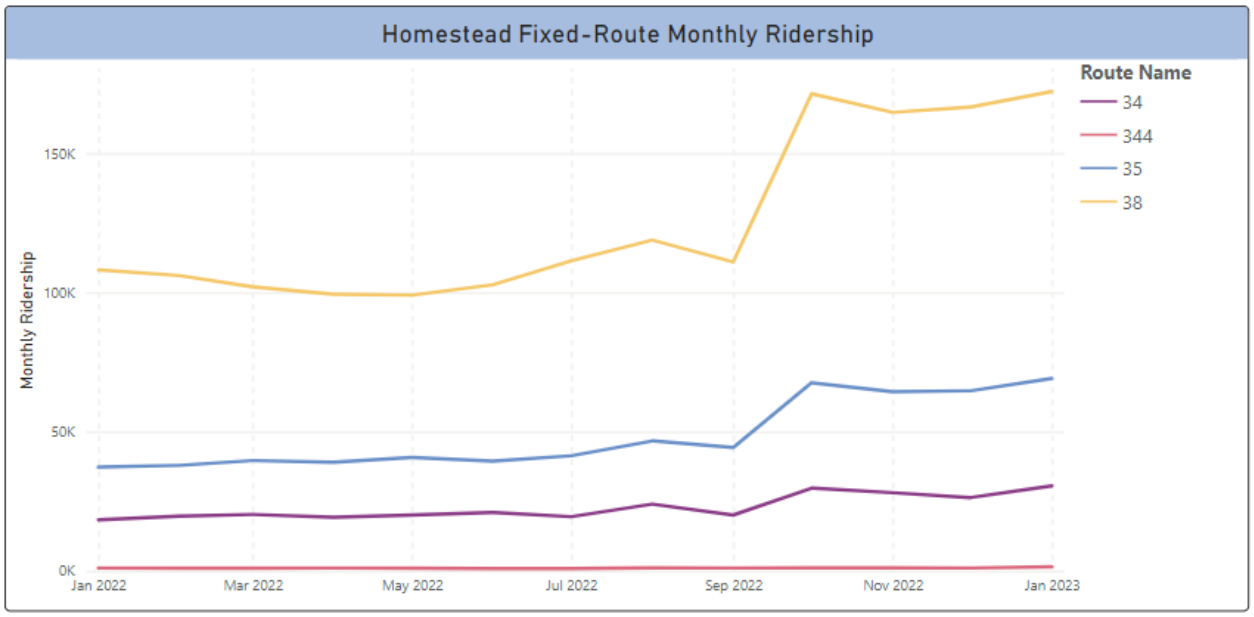


Figure 19 Homestead Fixed Route Monthly Ridership

Mid-Corridor Fixed Route Transit

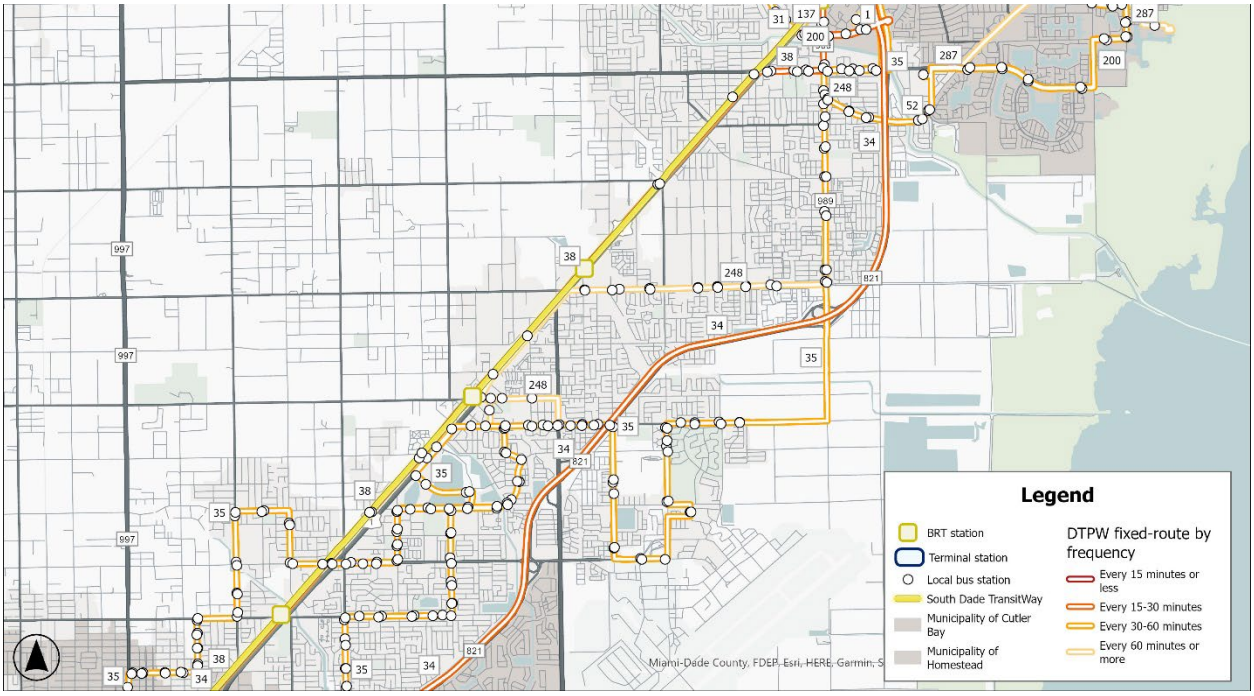


Figure 20 Mid-Corridor- Fixed Route Service

Although there are no incorporated cities, residents and jobs exist between Homestead and Cutler Bay, particularly on the east side of US 1. Local and express stops on the South Dade TransitWay provide access to the **38** and **34** routes, respectively, allowing connections north and south. Service on the **35** connects to Homestead and Florida City in the south, as well as to points North including Cutler Bay and Miami-Dade College Kendall Campus. The **248** route connects the Naranja community with Southland Mall in Cutler Bay.

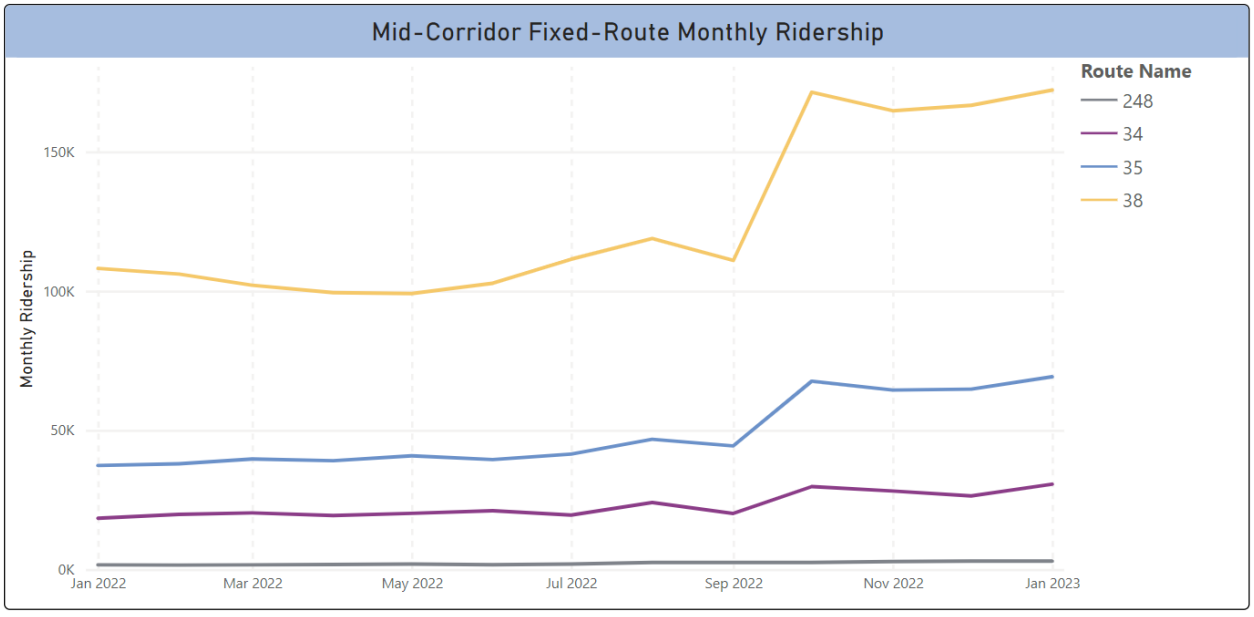


Figure 21 Mid-Corridor Fixed Route Monthly Ridership

Cutler Bay Fixed Route Transit

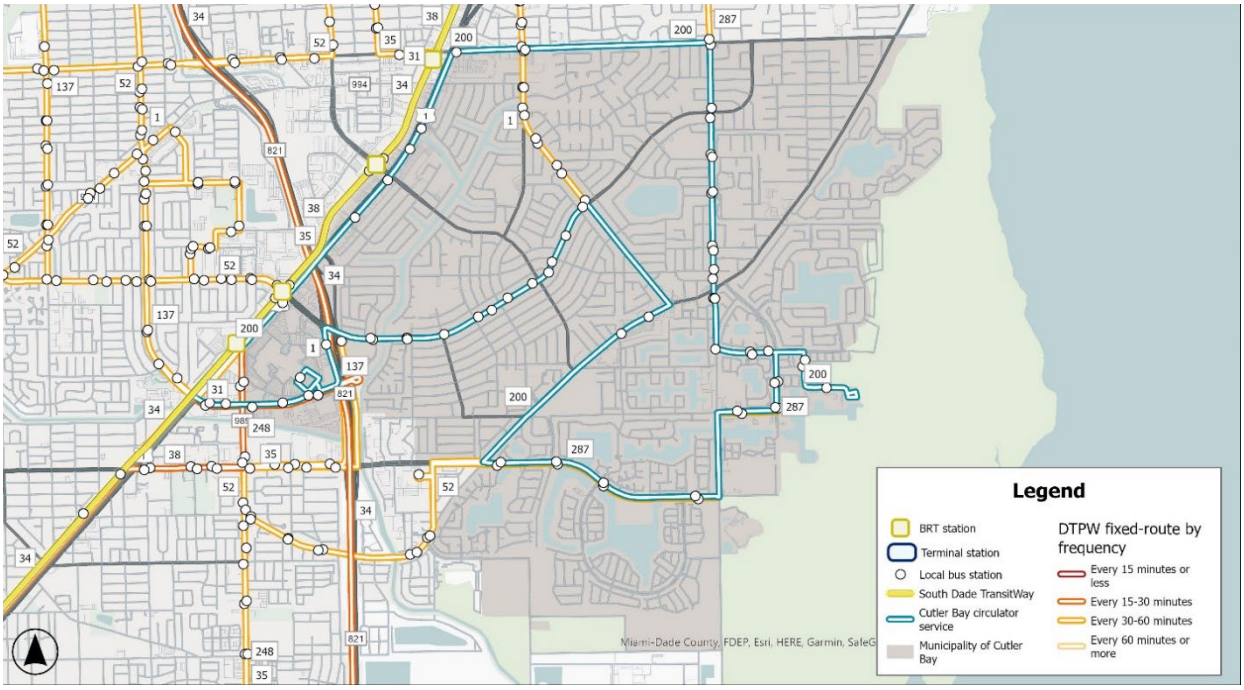


Figure 22 Cutler Bay- Fixed Route Service

Like the rest of the corridor, Cutler Bay's most used service is the **38**, which serves local, north-south transit on the TransitWay, and the **34**, which operates as an express route on the same alignment. The **31** and **287** act as supplements, connecting the South Dadeland station to the South Dade Government Center and South Dade Health Center, respectively. Routes **137** and **52** provide connectivity northwest of US 1. The **248** route provides connections south to Naranja while the **35** goes South all the way to Florida City. The **1** and **200** routes provide local connectivity around Cutler Bay. The **39** service was suspended indefinitely as of January 2022.

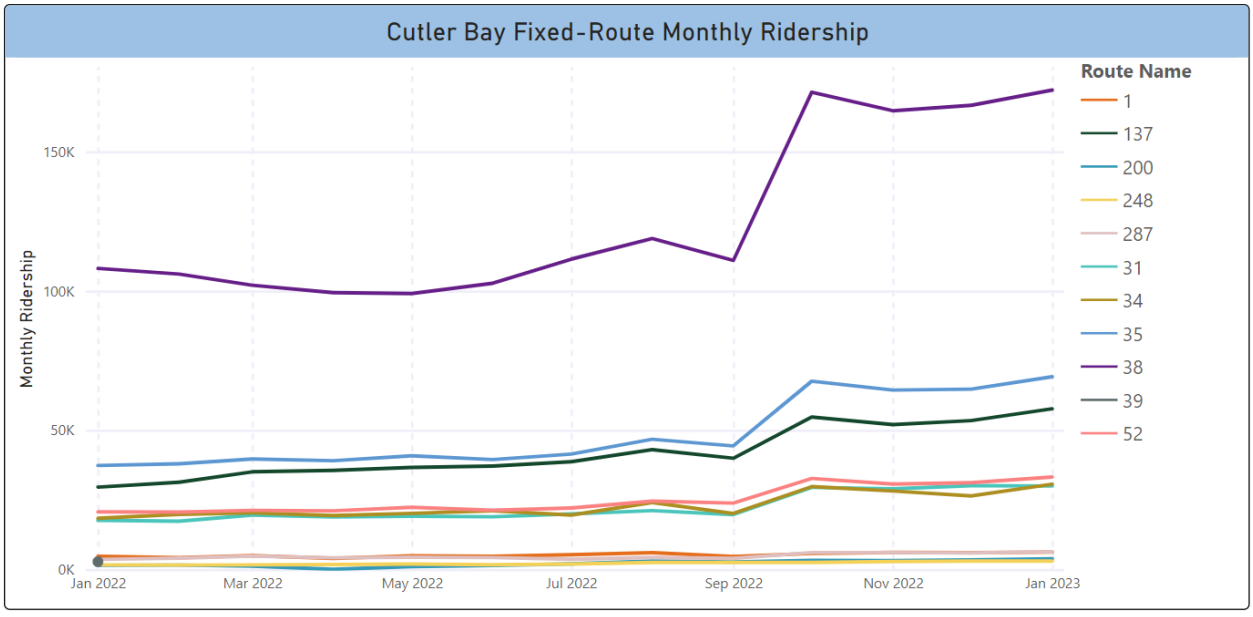


Figure 23 Cutler Bay Fixed Route Monthly Ridership

Palmetto Bay Fixed Route Transit

Figure 24 Palmetto Bay- Fixed Route Service

Palmetto Bay's most used service is the **38**, which serves local, north-south transit on the TransitWay, complimented by the **34**, which operates as an express route on the same alignment. The **31** and **287** act as supplements, passing south from the South Dadeland station to destinations in Cutler Bay. Routes **52** and **252** provide connectivity west of US 1, while route **57** provides access to Miami International airport. The **39** service was suspended indefinitely as of January 2022. Palmetto Bay operates a local connector service called I-Bus, which connects from a local Park and Ride lot to the Dadeland South metro station.

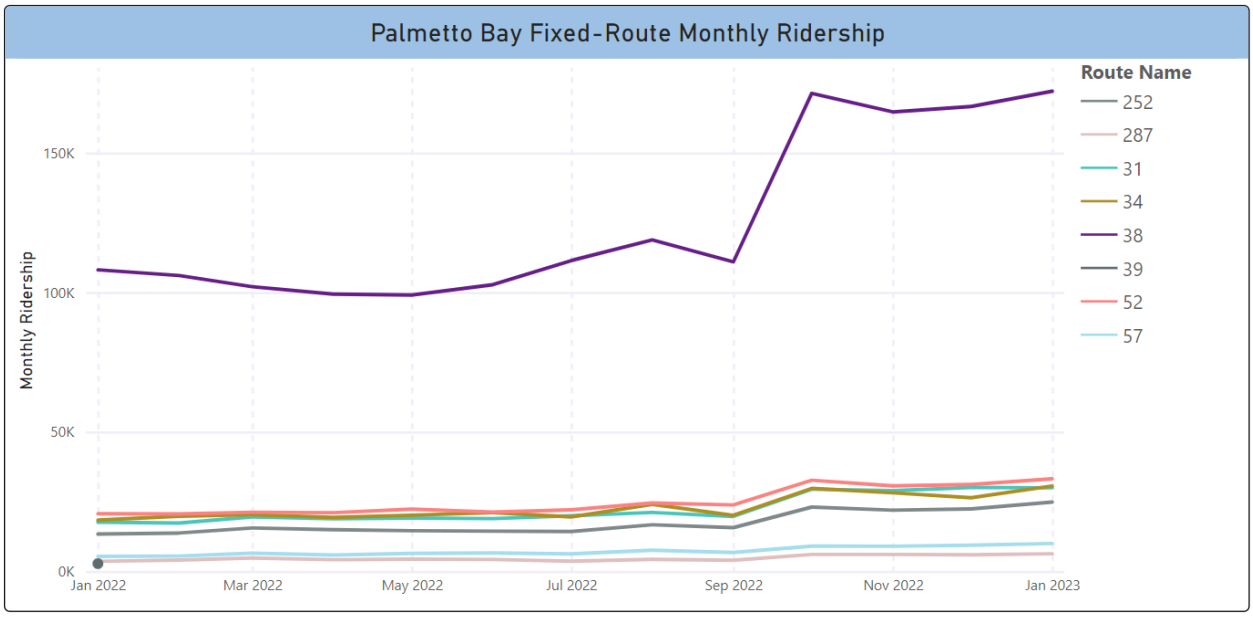


Figure 25 Palmetto Bay Fixed Route Monthly Ridership

Pinecrest Fixed Route Transit

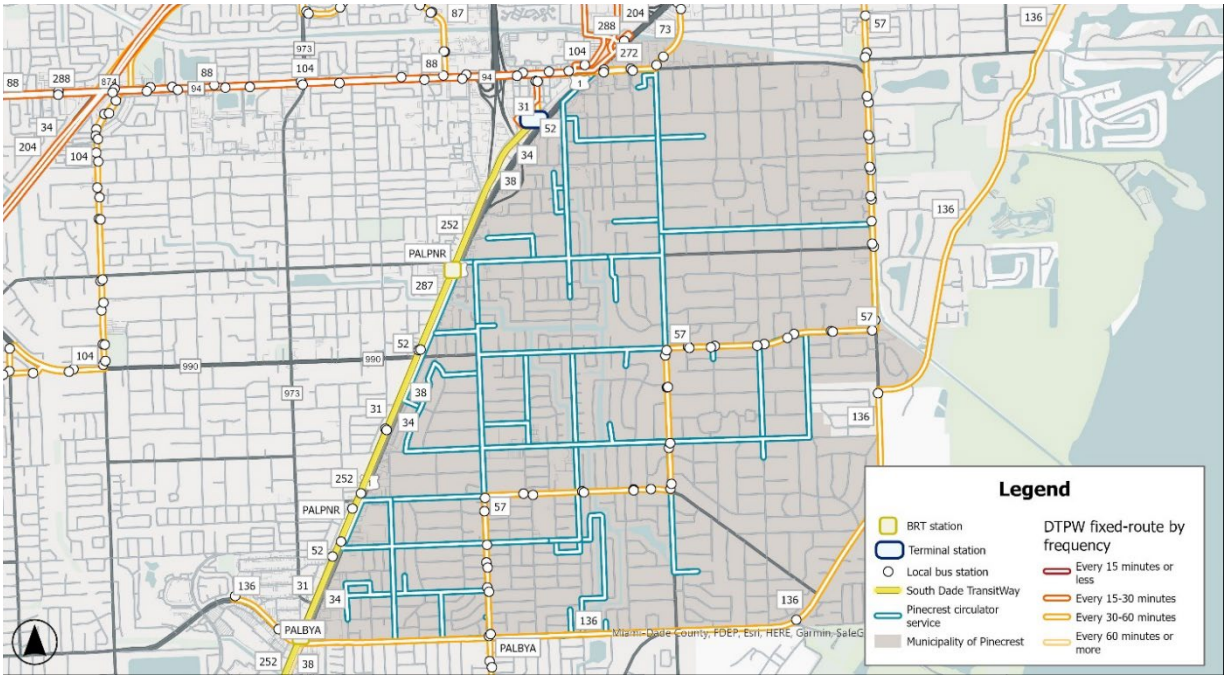


Figure 26 Pinecrest- Fixed Route Service

Pinecrest's most used service is the **38**, which serves local, north-south transit on the TransitWay, and the **34**, which operates as an express route on the same alignment. The **31** supplements those routes, providing additional bus options on the TransitWay to the Metrorail station or south to Cutler Bay. Routes **52**, and **252** provide connectivity west of US 1 and route **57** connects Pinecrest Bay to the airport. Route **136** connects northwest to the Douglas Road Metrorail station. The **39** service was suspended indefinitely as of January 2022. Pinecrest also operates the Pinecrest People Mover, a local circulator service open to the public but designed around connecting students to the local schools.

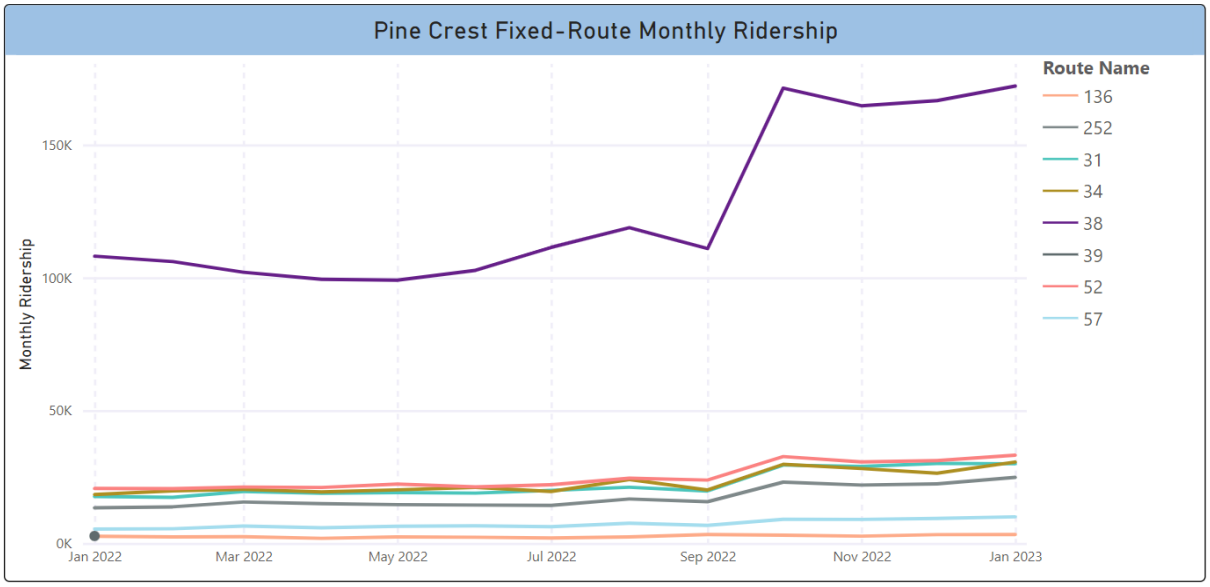


Figure 27 Pinecrest Fixed Route Monthly Service

Planned Service Changes

The Better Bus Network effort redesigns Miami-Dade County's public transit by providing riders with more bus services at a higher frequency. Within the South Dade Corridor, the Better Bus Network breaks some routes into multiple new routes, merges others together, and leaves some the same as they operate today.

Both the Better Bus Network and this First Last-Mile Study focus on coverage and frequency, just at different scales and for different operators. The Better Bus Network and this study examine Miami-Dade County transit, but this FLM study also includes local operators. The Better Bus Network modifies existing Miami-Dade County service and adds new services to the greater South Dade Region; this FLM study recommends new services and improvements to current service in relation to the South Dade TransitWay and future BRT trips. Both efforts identified similar recommendations for transit operated by Miami-Dade County DTPW.

The community engagement for the Better Bus Network has been in the works for a few years and the first phase of service changes was implemented in July 2023, after the initial literature review of this study.

Due to the timeline of this study and the new network, this FLM study could only consider the best available information at the time, thus the recommendations in Section III are based on the current transit network and not the Better Bus Network. A high-level cross-comparison suggests general alignment between this study's recommendations and the implemented changes as part of the Better Bus Network.

On-Demand Service

The Better Bus Network introduces "MetroConnect", an on-demand service that extends services to zones across Miami-Dade County. Along the South Dade TransitWay it re-brands Cutler Bay's "GO Connect" service. Additionally, MetroConnect includes four new service zones connection to the TransitWay- South Dade, TransitWay, Dadeland North, and Dadeland South. The launch of this new on-demand service occurred in October 2023.

Service	Operating Hours
South Dade	M-F 6:30am – 7:00pm
TransitWay, Cutler Way	M-F 5:30am – 8:00pm
Dadeland North, Dadeland South	M-F 6:30am – 7:00pm Sat 8:00am – 6:00pm Sun 8:00am – 5:00pm

Figure 29 MetroConnect Service Schedules Along the TransitWay

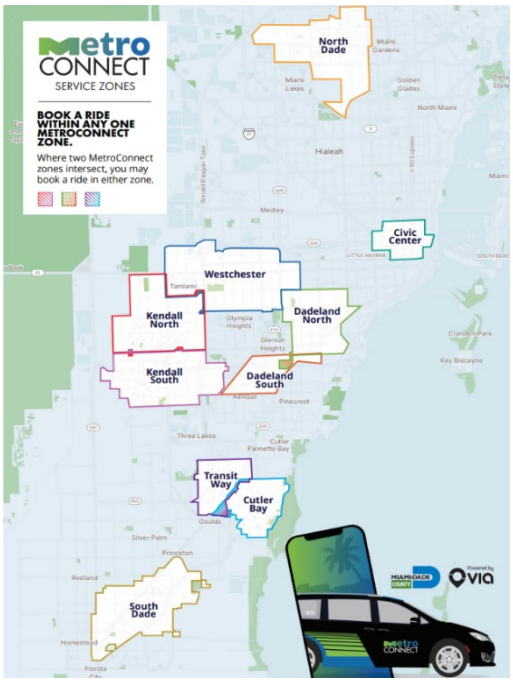


Figure 28 DTPW MetroConnect Service Zones Flyer

Fixed Route Service

In November 2023, the Better Bus Network changed fixed route service in the Miami-Dade region, adding two new routes, adjusting current schedules and routes, and renumbering the system.

Figure 30 provides an overview of the Better Bus Network system updates, courtesy of Miami-Dade Transit.

Service Changes

As described above, the recommendations of this study are based on the best information available at the time, which does not include the Better Bus Network. That being said, a high-level assessment is included in Section III. Recommendations & Implementation which explores the alignment between the Better Bus Network updates and the recommendations of this study.

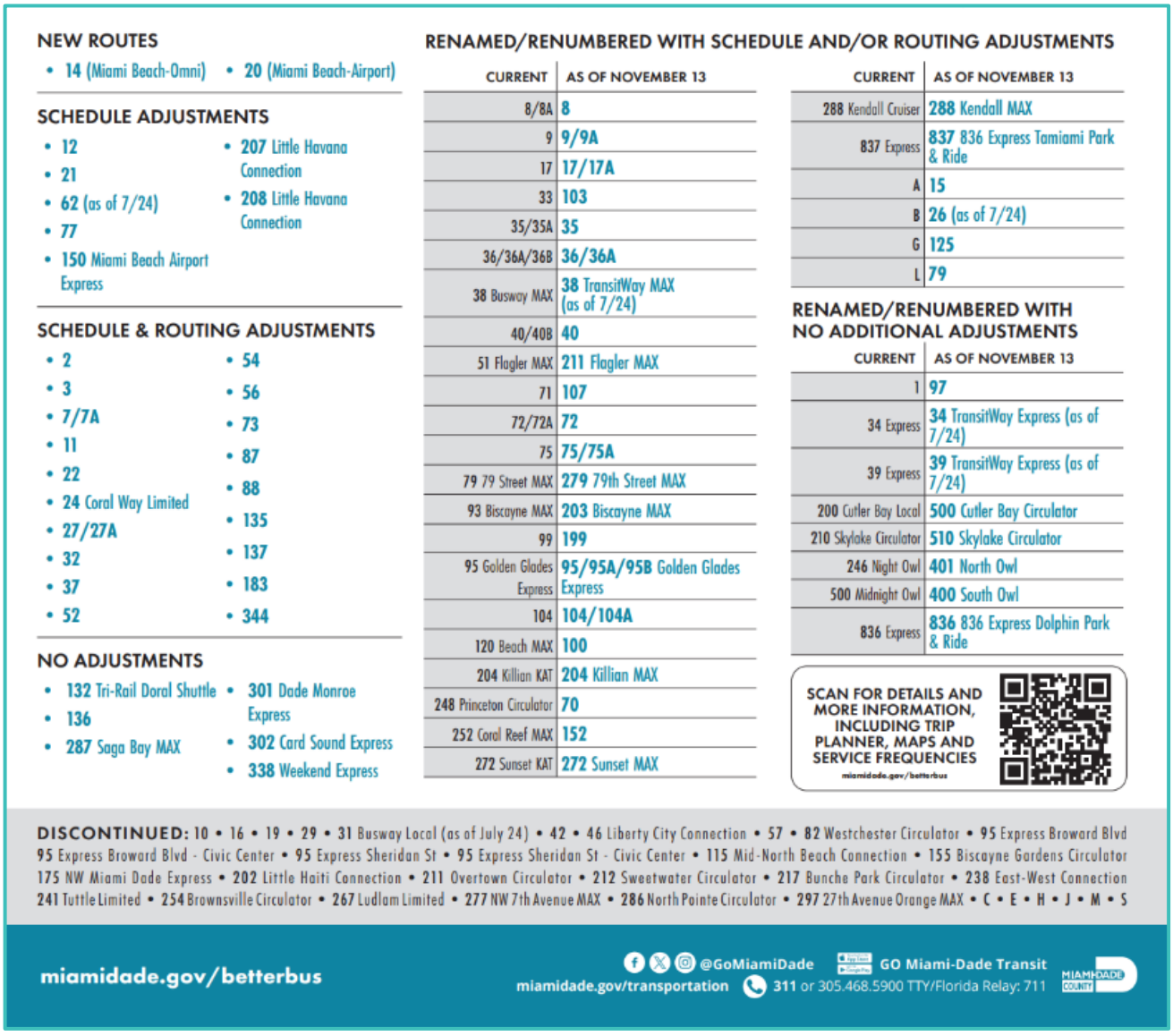


Figure 30 Fixed Route Changes, Better Bus Network

II. STATION AREA EVALUATION & NEEDS ASSESSMENT

The second phase of the study includes technical analysis to build on the current and ongoing studies identified in Section I. Literature Review & Data Gathering. This section outlines the methodology, major findings, and station area profiles resulting from this analysis. The needs identified inform the recommendations made in Section III. Recommendations & Implementation.

Methodology

The technical analysis included two primary methodologies: **Origin and Destination (OD) Analysis and Accessibility Analysis.**

OD Analysis

The **OD analysis** was used to characterize the existing travel patterns to, from, and within the corridor, including average trip distance, duration, and mode share. This analysis shed light on which stations were trip importers/exporters, where existing activity centers lay, how large transit's existing mode share is, and how long riders are willing to travel for their trips.

Thes key insights about FLM rider behavior informed the necessary assumptions to complete the Accessibility Analysis.

Figure 33 details the assumptions determined from the OD Analysis and applied to the Accessibility Analysis. The assumptions include travel budget, travelshed times, and factors related to biking and walking.

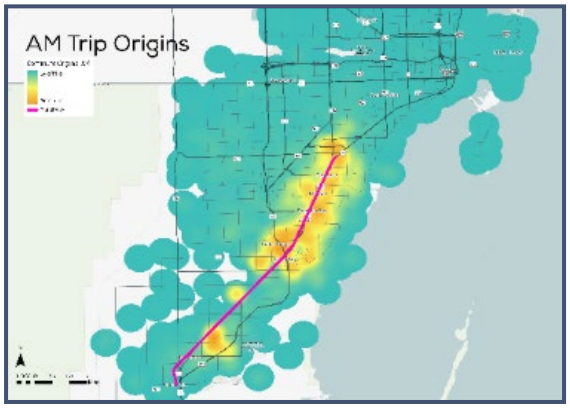


Figure 31 O/D analysis corridor activity centers

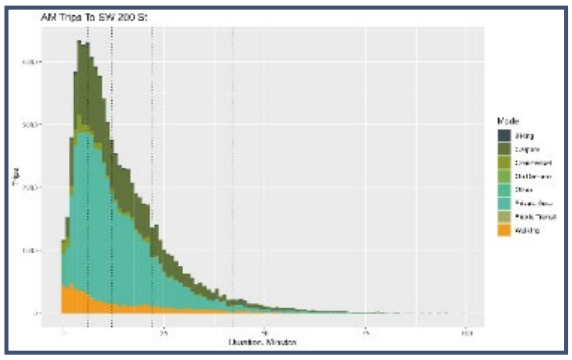


Figure 33 O/D analysis station area trip travel times and mode share

Travel Budget	FLM Travelers are assumed to have taken a trunk trip and have limited remaining time in their travel budget. This analysis assumes 20 minutes.
Fixed Route Travelshed Times	Transit travelsheds must be analyzed by choosing a specific time. We chose the average departure time within an hour of peak service at each stop. After the BRT schedule is finalized, travelsheds should be reanalyzed.
Bike/Ped Experiential Factors	Accessibility analysis looks at what is possible on a bike or by walking, not what feels safe or comfortable. These experiential factors should be explored in future work.

Figure 32 Assumptions informed by the O/D analysis which informed the subsequent accessibility analysis.

Accessibility Analysis

The technical analysis effort included an **Accessibility Analysis**Figure 34 measuring the number of jobs and housing within a certain travel time from each BRT station to determines accessibility scores. The study measures accessibility for each mode from each station within a 20-minute FLM travel budget.

Travel by automobile far surpasses every other mode for all station areas. Bike is the second most efficient mode of travel, although this does not account for the effect of infrastructure and weather on experiential factors such as comfort or perceived. Figure 34 shows the accessibility scores for each station area along the TransitWay and highlights which have the highest and lowest transit access scores, especially compared to other modes at those stations. This comparison, along with each station's accessibility maps, identified opportunities for strengthening access through transit service recommendations.

Figure 34 Station Area Accessibility Scores by Mode

Summary of Corridor Findings

After creating profiles for each station area, corridor-wide trends and patterns were determined by comparing and contrasting station areas. This process determined the key areas of need along the corridor:

- The majority of trips take place within the BRT corridor; efficient short trips are needed.
- Wait times are the greatest deterrent to transit access.
- Routes with unidirectional circulator loops are the second greatest deterrent.
- US-1 impedes transit, bicycle, and pedestrian station eastern access to the BRT station.

Dadeland South

Dadeland South is the northern terminus of the BRT and the first station within Pinecrest, with approximately half of the station area falling within the city limits. This station facilitates transfers to the Metrorail system, providing access to Downtown Miami and other destinations further north. The one-mile station area has the most trip generation and activity units (jobs and housing) of any station area in the BRT corridor with a jobs to housing ratio of approximately 2.5 to 1. The majority of commercial development is immediately north and west of the station area, with large concentrations of residential housing in the south-eastern half and western edges of the station area. During AM and PM peak hours the station area generates 283,000 trips making the station area the densest and most active in the corridor.

Station Area Stats

Jobs:

18,800

Dwelling Units:

7,300

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.90	17.9
PM	1.05	16.3

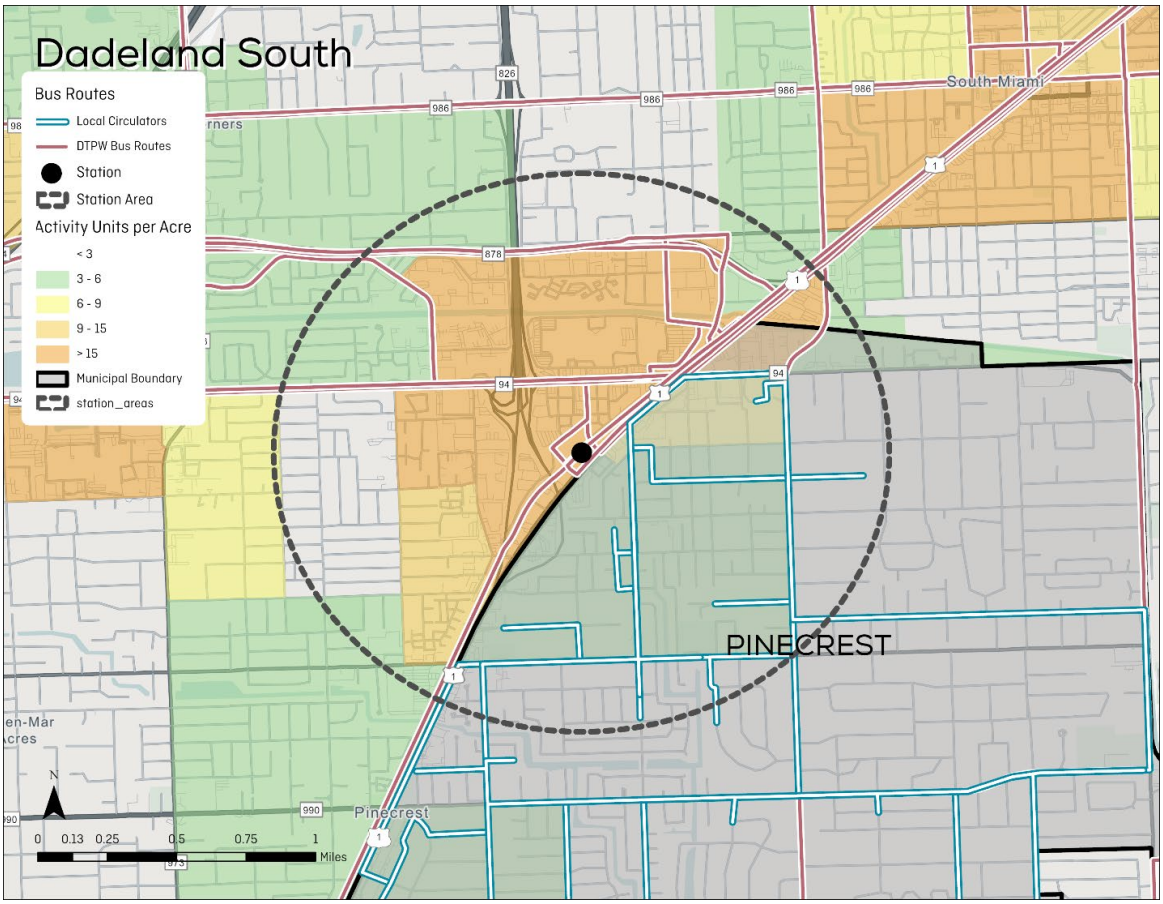


Figure 35: Dadeland South, Station Area

Fixed Route Assessment

The station area is served by Metrobus Routes: 31, 34, 38, 52, 73, 88, 252, 287, 500, as well as the Palmetto Park and Ride, the Pinecrest local circulators, and Metrorail, giving Dadeland south the highest fixed route transfer options in the corridor, almost doubling the next closest station.

Recommendations

Follow the policy recommendations to enhance and strengthen existing service.

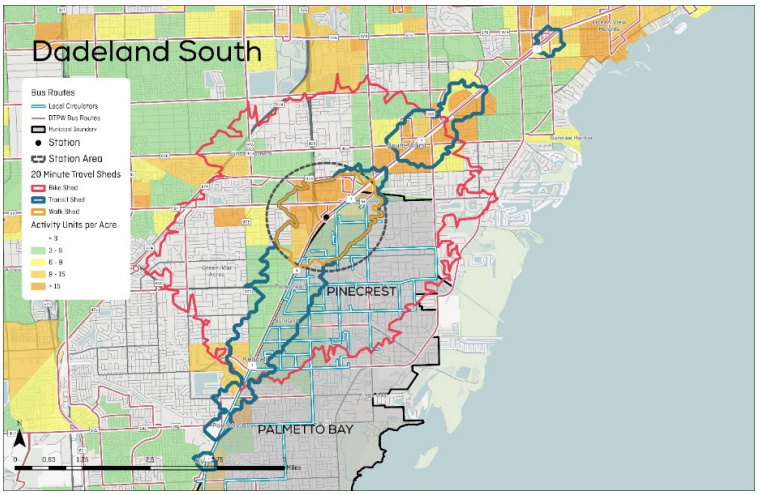


Figure 36: Dadeland South, Fixed Route Travelshed

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	466,000	76,000	24,000	56,000	30,000	N/A
Mode Share	86.5%	0.9%	8.4%	1.6%	0.4%	2.2%

Table 3: Dadeland South, Access Scores and Mode Share

On-Demand Assessment

Dadeland South is served by the Pinecrest and Dadeland on-demand services, although the Dadeland service is outside this project's study area. Currently the Pinecrest service area is limited to Pinecrest city limits and averages 348 riders per week. Currently both services do not cover areas of high density across US 1 from their service areas to the west for Pinecrest and to the east for Dadeland. See the map for existing on-demand access.

Recommendations

#1 Pinecrest On-Demand Expansion

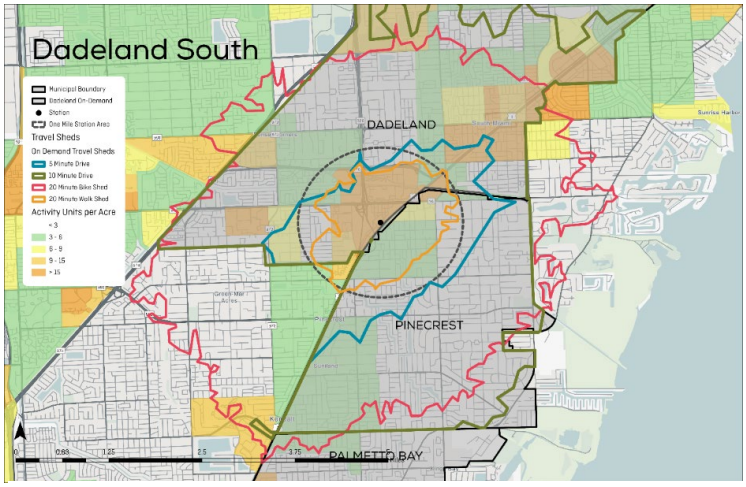


Figure 37: Dadeland South, On-Demand Travelshed

SW 104th St

SW 104 is the second station within Pinecrest, with approximately half of the station area falling within the city limits. The one-mile station area is generally average in terms of density for the corridor and has jobs housing ratio of approximately 2 to 1. Most of the commercial development within the station area is adjacent to the station and along the BRT alignment to the north and south. Moving east and west from the BRT brings you into residential areas with the densest residential located just north west of the station and the least dense to the south east.

During AM and PM peak hours the station area generates 249,000 trips, making it the 5th most active in the corridor and the 8th most dense. Like other jobs-heavy stations, this one is a work destination for residents from other parts of the region.

Station Area Stats

Jobs:

7,400

Dwelling Units:

4,100

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.70	16.2
PM	1.01	18.2

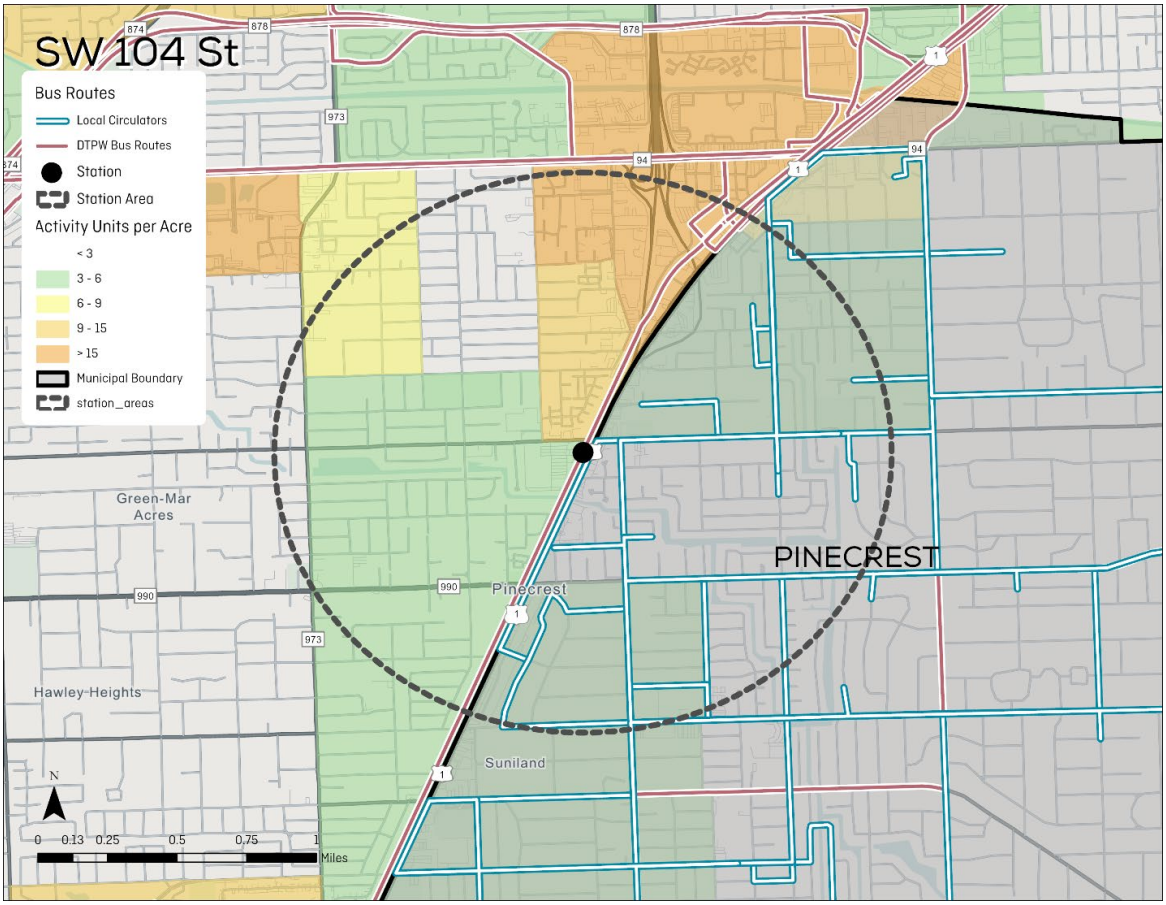


Figure 38: SW 104th St, Station Area

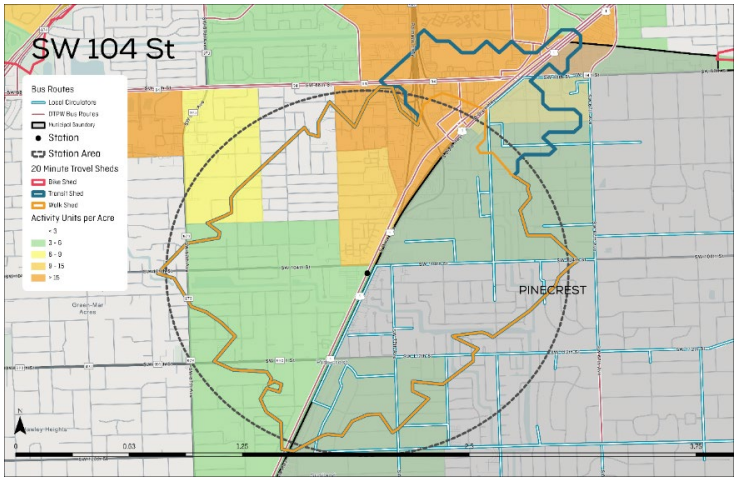
Fixed Route Assessment

SW 104 St has a large number of transit routes running through the station area, in part because of its proximity to Dadeland South (a major transit hub). Despite the number of options available, the transit shed for SW104 St is small. This highlights the importance of frequent headways and schedule alignment, since travel times of 10 to 15 minutes will easily consume the assumed 20 minute travel budget and drive down transit access.

Recommendations

Follow the policy recommendations to enhance and strengthen existing service.

Figure 39: SW 104th St, Fixed Route Traveled



Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	526,000	72,000	11,000	22,000	10,000	N/A
Mode Share	86.1%	1.0%	8.9%	1.3%	0.3%	2.4%

Table 4: SW 104th St, Access Scores and Mode Share

On-Demand Assessment

SW 104 St is currently served by the Pinecrest on-demand service, which averages 348 riders per week. Currently the service area is limited to the Pinecrest city limits, which limits the usability of the on-demand services for accessing nearby activity centers outside of Pinecrest near Dadeland South on the western side of US 1. Consequentially, only 6,900 activities are reachable with a 20-minute trip. See the map for existing on-demand access.

Recommendations

#1 Pinecrest On-Demand Expansion

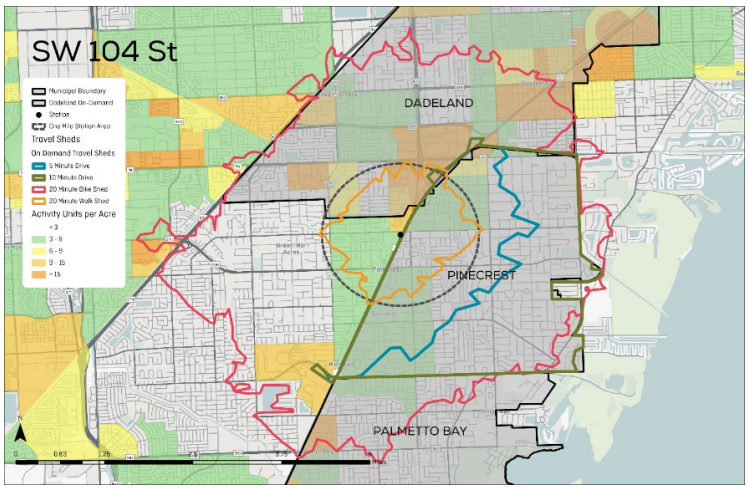


Figure 40: SW 104th St, On-Demand Travelshed

SW 136th St

SW 136 St is the southernmost station in Pinecrest, located right on the border with Palmetto Bay and having half the station area falling within their city limits. The one-mile station has jobs housing ratio of approximately 2 to 1. Much of the commercial development is located on the western side of the station area, with an especial concentration at The Falls shopping mall, though there are some shopping centers east of the BRT as well. The south western and eastern parts of the station are low-density residential with higher density residential concentrated in the north east.

During AM and PM peak hours the station area generates 203,000 trips making the station area the 8th most active and the 9th densest in the corridor. Like other jobs-heavy station areas, this one is a work destination for residents from other parts of the region.

Station Area Stats

Jobs:

6,500

Dwelling Units:

3,000

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.80	16.6
PM	1.03	16.8

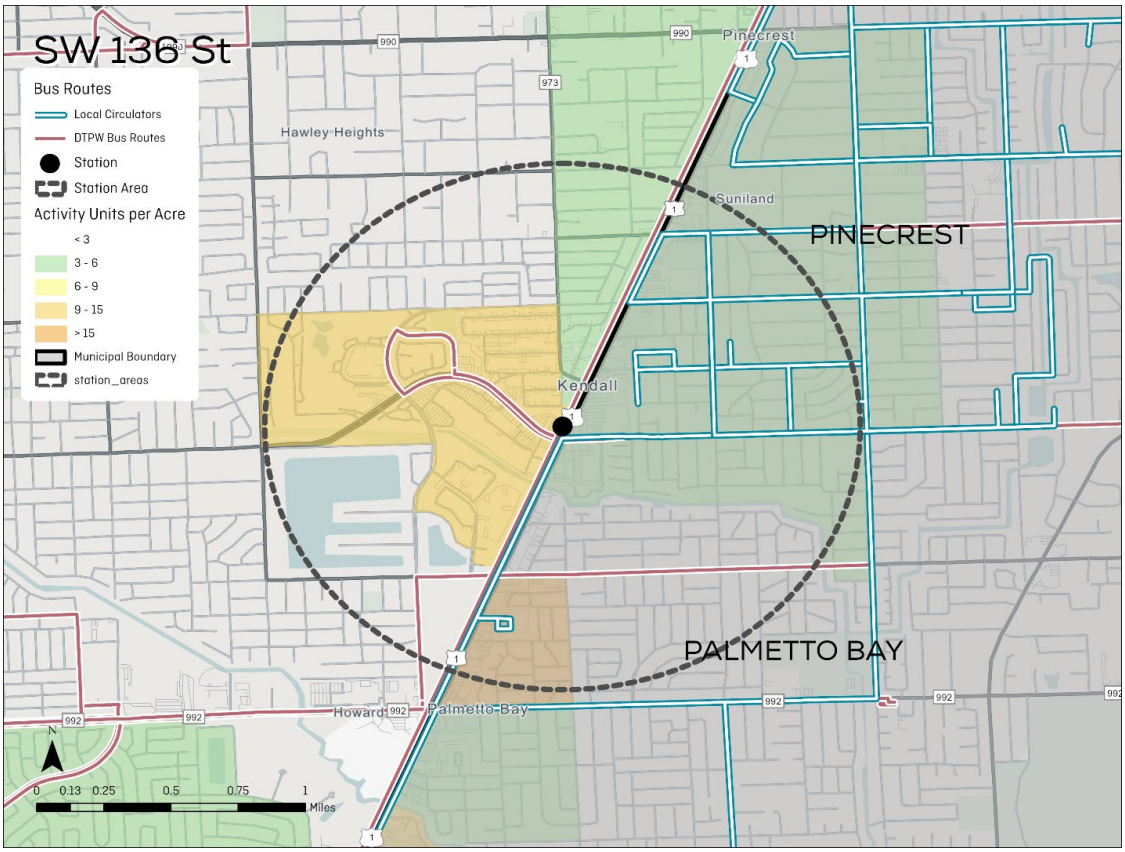


Figure 41: SW 136th St, Station Area

Fixed Route Assessment

SW 136 St is served by a variety of Metrobus routes that run along the bus way and provide strong north/south access, however there are few options to riders needing to travel east/west. While the Palmetto Bay Route A runs east of the station it only travels in a unidirectional (counterclockwise) loop and has limited hours from 10 AM and 1 PM providing little utility to peak hour trips.

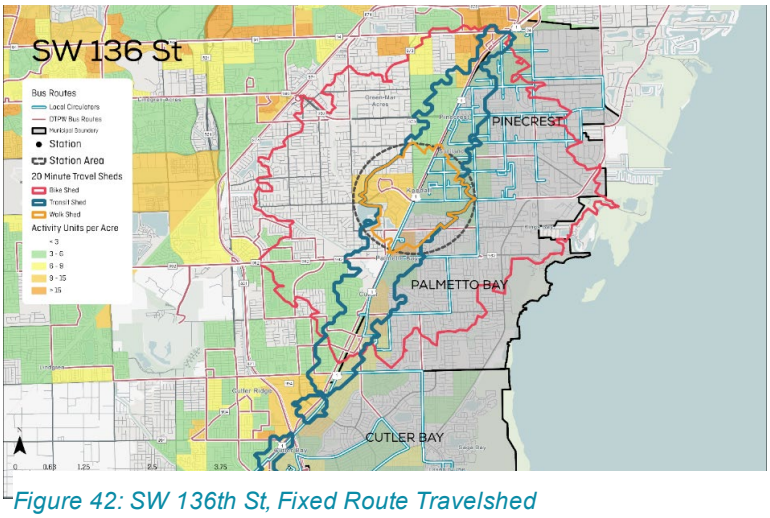


Figure 42: SW 136th St, Fixed Route Travelshed

Recommendations

#4 Palmetto Bay Route A Additions

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	179,000	54,000	7,000	31,000	6,000	N/A
Mode Share	88.2%	0.7%	7.7%	0.5%	0.1%	2.9%

Table 5: SW 136th St, Access Scores and Mode Share

On-Demand Assessment

SW 136 St is currently served by the Pinecrest and Palmetto on-demand service, which average 348 and 1,308 riders per week respectively. Currently the service areas are limited to their respective municipalities' city limits, this severely limits the usability of the on-demand services in the station area for cross-jurisdictional trips. Currently an area of high density directly west of the station across US 1 is not served by either on-demand service. See the map for existing on-demand access.

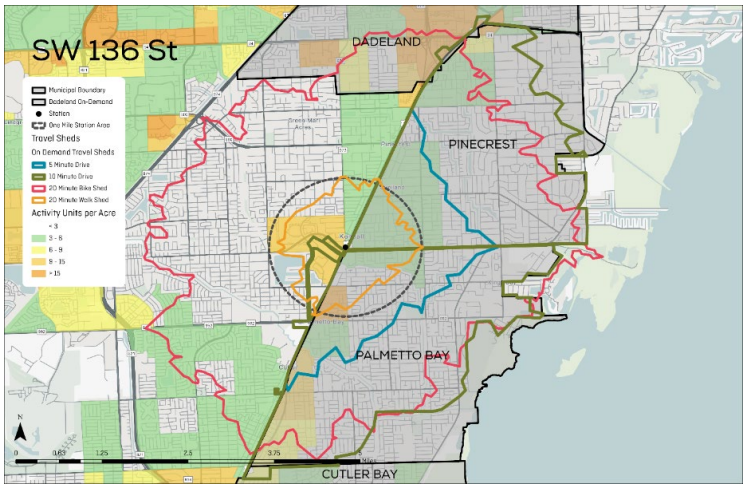


Figure 43: SW 136th St, On-Demand Travelshed

Recommendations

#1 Pinecrest On-Demand Expansion

#2 Palmetto Bay On-Demand Expansion

SW 152nd St

SW 152 St. is the second BRT station within Palmetto Bay, with approximately half of the station area falling within the city limits. The one-mile station area has jobs to housing ratio of almost 1 to 1 and is one of the least dense stations in the corridor. Part of this low density is caused by the Palmetto Golf Corse which is located directly southwest of the station and the Rockdale Pineland Preserve which is located directly north of the station. The remainder of the station is low density residential except for a smattering of strip-mall style shopping centers along the BRT.

During AM and PM peak hours the station area generates 155,000 trips, ranking 13th for both trip activity and density. This station area is a slight exporter of trips.

Station Area Stats

Jobs:

3,300

Dwelling Units:

3,900

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	1.06	16.7
PM	0.95	16.0

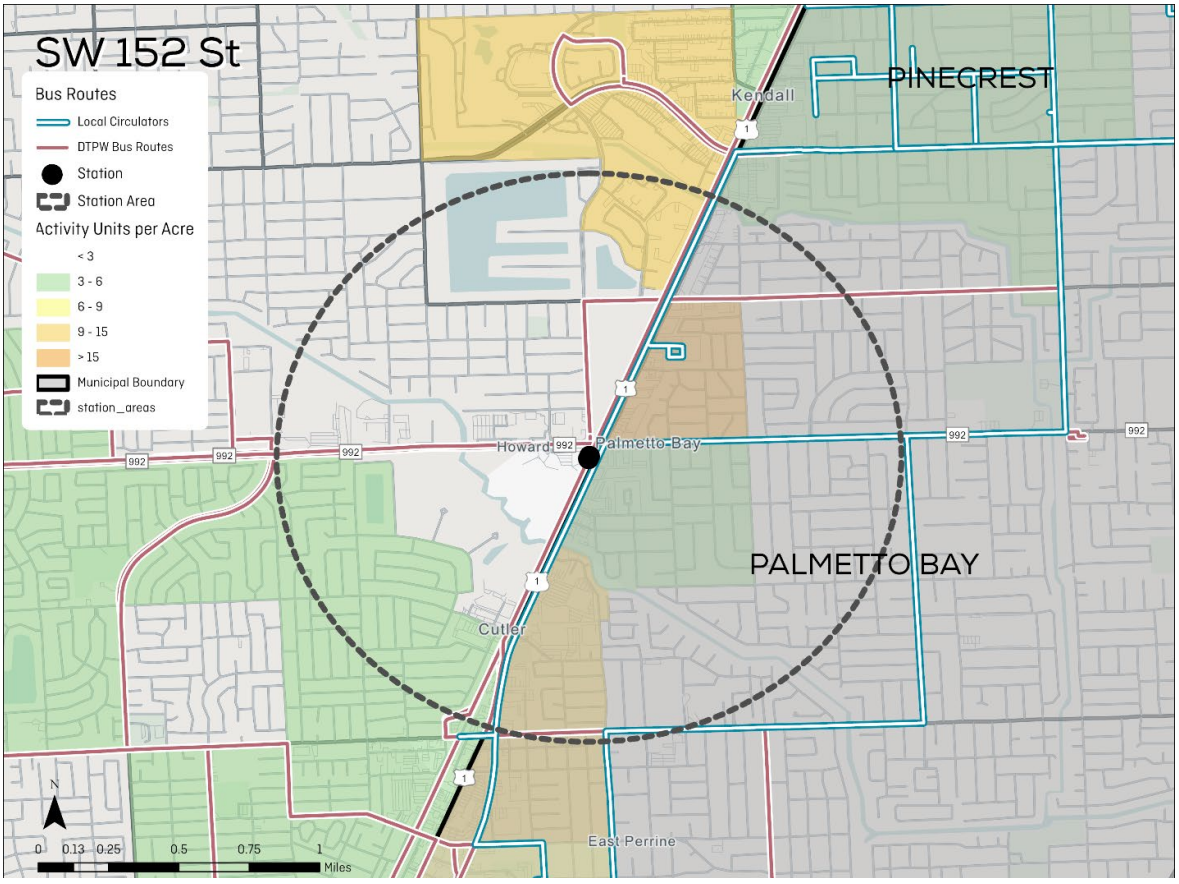


Figure 44: SW 152nd St, Station Area

Fixed Route Assessment

Like its northern neighbor SW 152nd St has strong access along the bus way, though the headways are more frequent traveling north during AM peak hours, and little access to the east and west., except along SW 152nd St. The Palmetto Bay Route A would provide access to eastern half of the station within the city limits; however, it only runs from 10 AM to 1 PM and only in a counterclockwise direction, making trips to the northeast of the station area require riding the full length of the route taking approximately 1 hour.

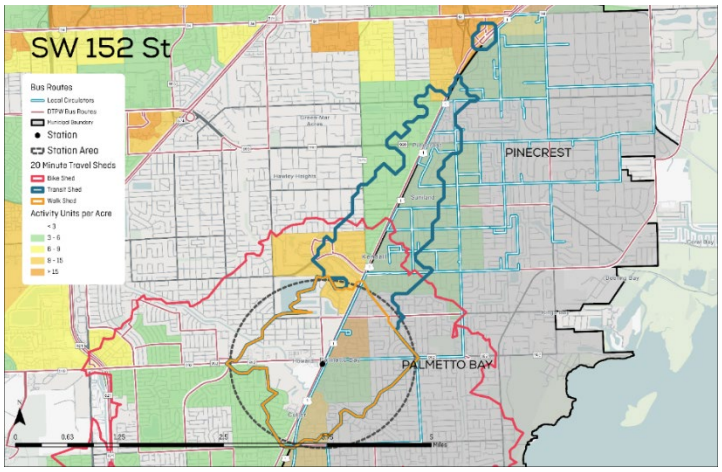


Figure 45: SW 152nd St Fixed Route Travelshed

Recommendations

#4 Palmetto Bay Route A Additions

#5 Palmetto Bay Park and Ride Alignment Change

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	180,000	38,000	6,000	16,000	9,000	N/A
Mode Share	89.6%	0.6%	7.3%	0.3%	0.2%	2.0%

Table 6: SW 152nd St, Access Scores and Mode Share

On-Demand Assessment

SW 152 St is currently served by the Palmetto on-demand service, which averages 307 riders per week. Currently the service area is limited to the city limits, this severely limits the usability of the on-demand services in the station area. Currently an area of high-density northwest of the station across US 1 is not served by the on-demand service. See the map for existing on-demand access.

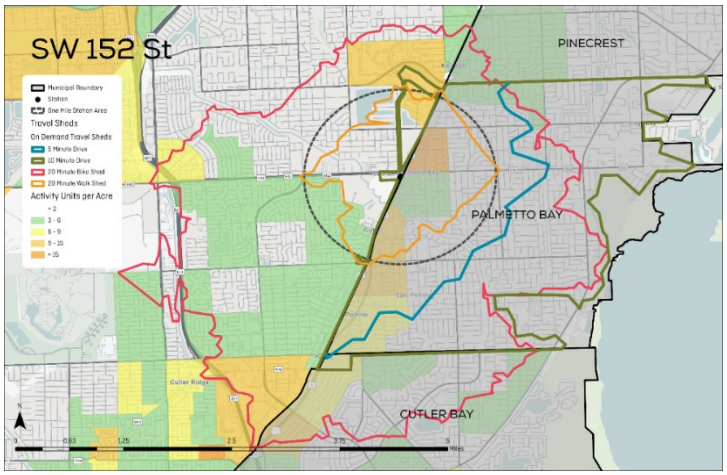


Figure 46: SW 152nd St, On-Demand Travelshed

Recommendations

#2 Palmetto Bay On-Demand Expansion

SW 168th St

SW 168 St. is the southernmost BRT station within Palmetto Bay, with approximately half of the station area falling within the city limits. The one-mile station area has a jobs to housing ratio of approximately 4 to 5. The station area has commercial development and car dealerships along US-1 flanked by residential to the east and west. The station area includes Palmetto Bay Park to the east and the Palmetto golf course at it's northern border.

During AM and PM peak hours the station area generates 158,000 trips, ranking 12th for station area activity and 10th for density. Despite having more housing than jobs, this station is a slight importer of commute trips.

Station Area Stats

Jobs:

4,200

Dwelling Units:

5,100

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	1.08	16.1
PM	0.93	15.6

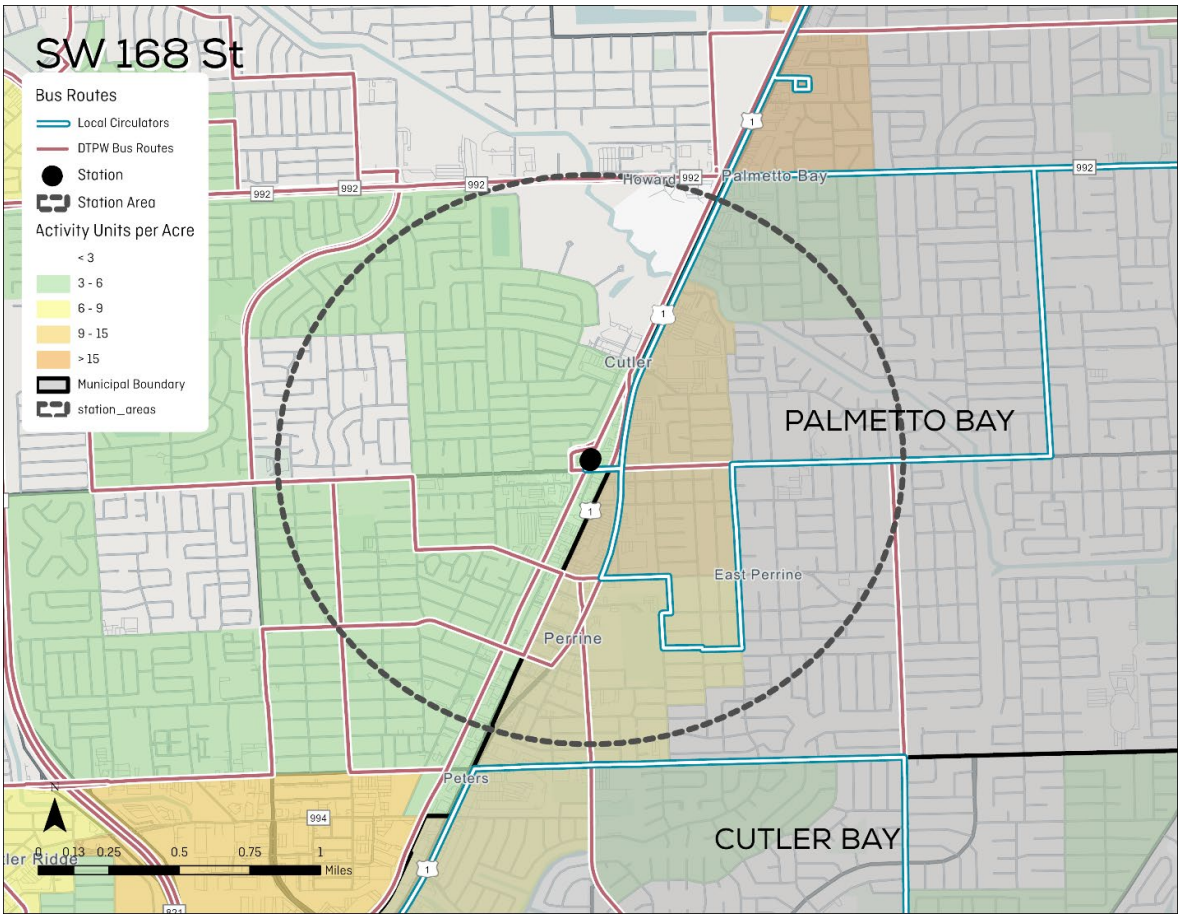


Figure 47: SW 168th St, Station Area

Fixed Route Assessment

The station has multiple routes running north south along the bus way but relatively few that run east/west. There is some access provided along SW 168 St to the east, but relatively little to the high-density areas just east of US 1. The Palmetto Bay Route A provides access to the eastern half of the station within the city limits; however, it only runs from 10 AM to 1 PM completely missing the peak periods of 7:10 AM to 8:20 AM.

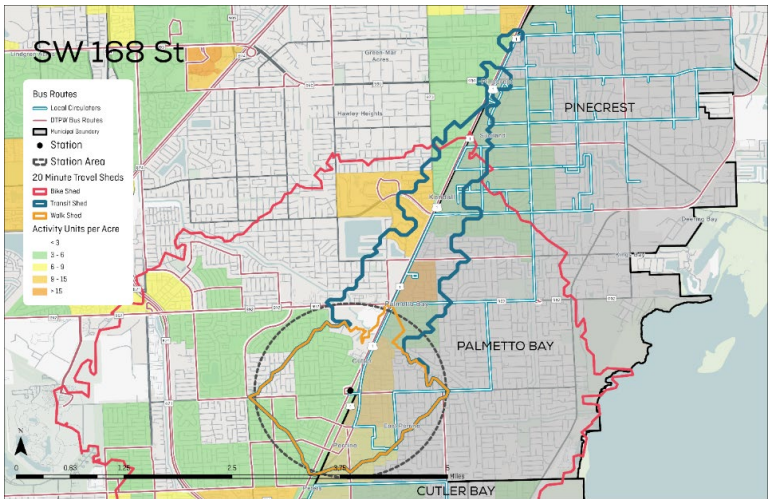


Figure 48: SW 168th St, Fixed Route Travelshed

Recommendations

#4 Palmetto Bay Route A Additions

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	171,000	56,000	7,000	13,000	7,000	N/A
Mode Share	89.2%	0.7%	7.2%	0.3%	0.2%	2.4%

Table 7: SW 168th St, Access Scores and Mode Share

On-Demand Assessment

SW 168 St is currently served by the Palmetto on-demand service, although service is limited to the municipal boundaries which reduces its usability for accessing activity centers outside Palmetto Bay. The service currently excludes an area of high-density northwest of the station across US 1. See the map for existing on-demand access.

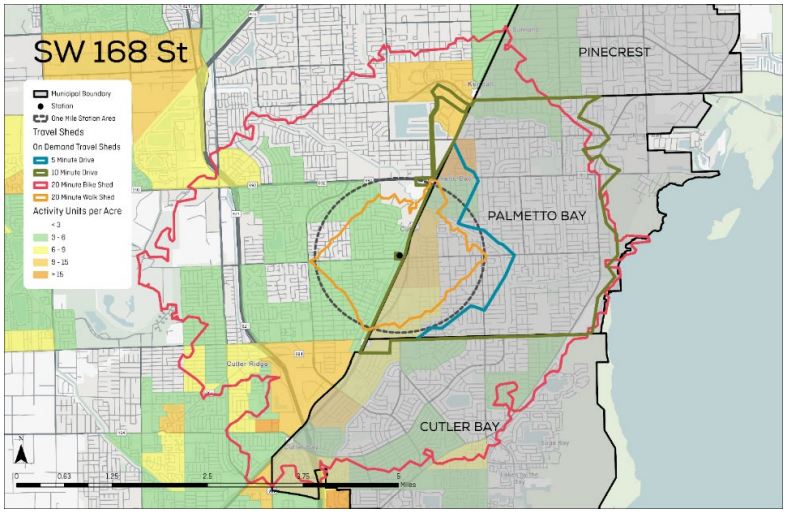


Figure 49: SW 168th St, On-Demand Travelshed

Recommendations

#2 Palmetto Bay On-Demand Expansion

SW 184th St

SW 184 St. is the northern most BRT station within Cutler Bay, with approximately two thirds of the station area falling within the city limits and roughly one sixth falling within Palmetto Bay's limits. The station area has significant commercial development to the southwest between US-1 and 186th St, with additional commercial land uses running north along US-1. The rest of the station area is comprised of low-density residential development.

During AM and PM peak hours the station area generates 203,000 trips making the station area the 5th most dense and 9th most active in the corridor. As is typical of jobs-heavy stations, this one is an importer of trips during the day.

Station Area Stats

Jobs:

7,300

Dwelling Units:

4,800

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.94	16.9
PM	1.01	15.8

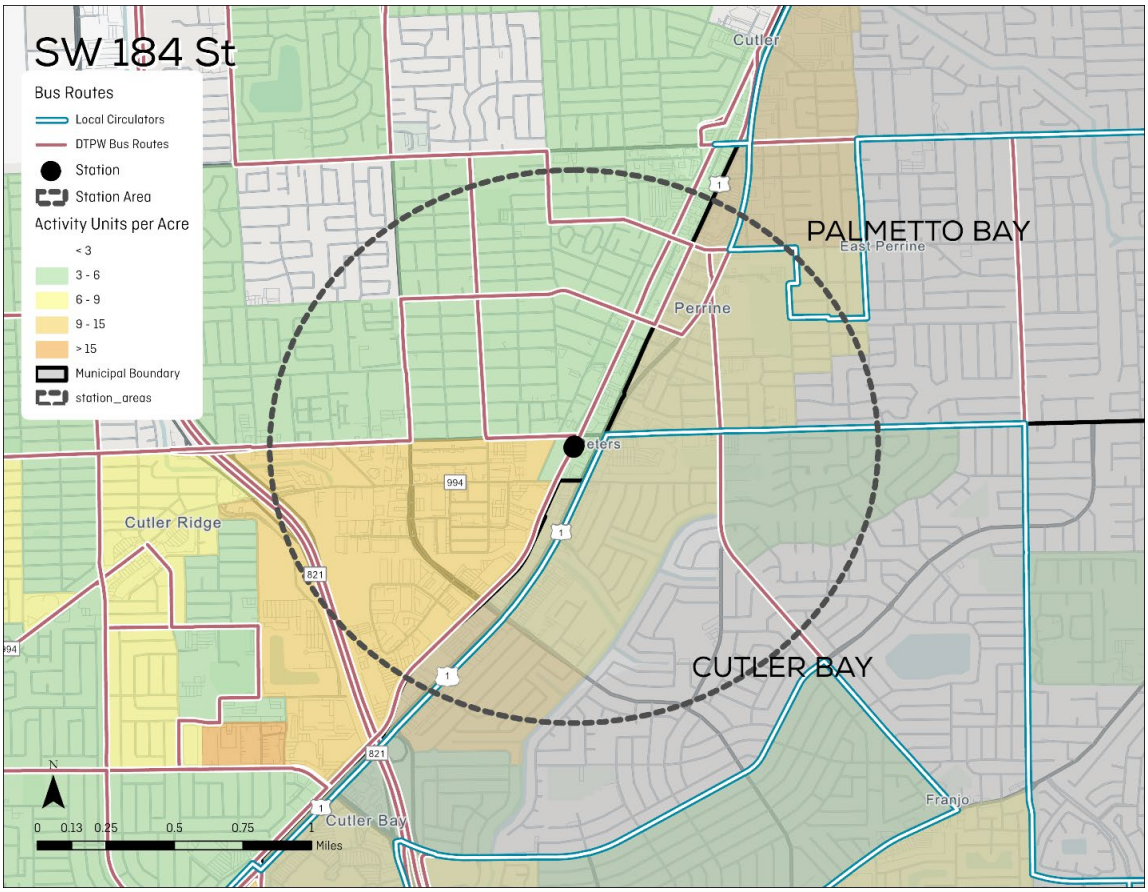


Figure 50: SW 184th St, Station Area

Fixed Route Assessment

The station has a variety of routes operating within the one-mile station area, however most of them are express routes or other north-south services operating along the busway. The 200 Cutler Bay service provides some access to the densest areas within the east half of the station area, but only operates between 8:37 AM and 5:07 PM which leaves peak travel hours underserved.

Recommendations

#6 200 Cutler Bay Local Additions

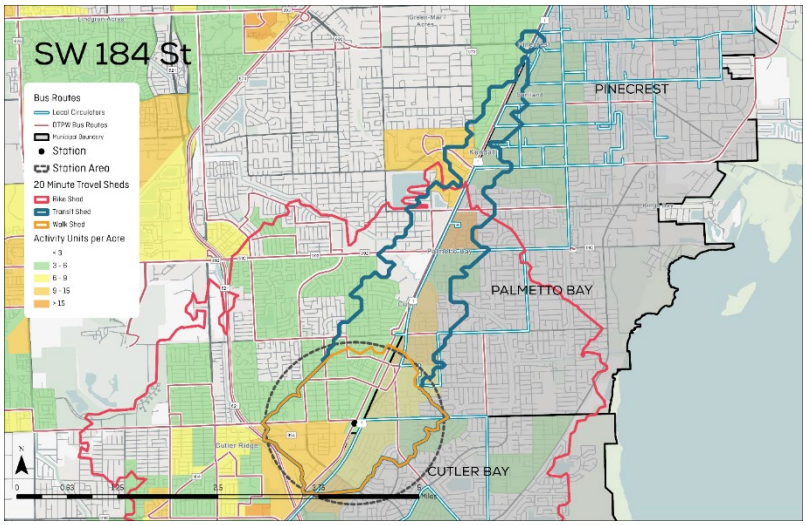


Figure 51: SW 168th St, Fixed Route Travelshed

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	191,000	63,000	9,000	18,000	12,000	N/A
Mode Share	88.1%	0.8%	7.2%	0.4%	0.1%	3.4%

Table 8: SW 168th St, Access Scores and Mode Share

On-Demand Assessment

SW 184 St is currently served by the Cutler Bay and Palmetto on-demand service, which averages 1,308 and 307 riders per week respectively. Currently the service areas are limited to their respective municipalities' city limits, limiting the usability of the on-demand service within half the station area. The service area currently excludes an area of high density directly west of the station across US 1 and a similarly dense area near Kendall. See the map for existing on-demand access.

Recommendations

#2 Palmetto Bay On-Demand Expansion
#3 Cutler Bay On-Demand Expansion

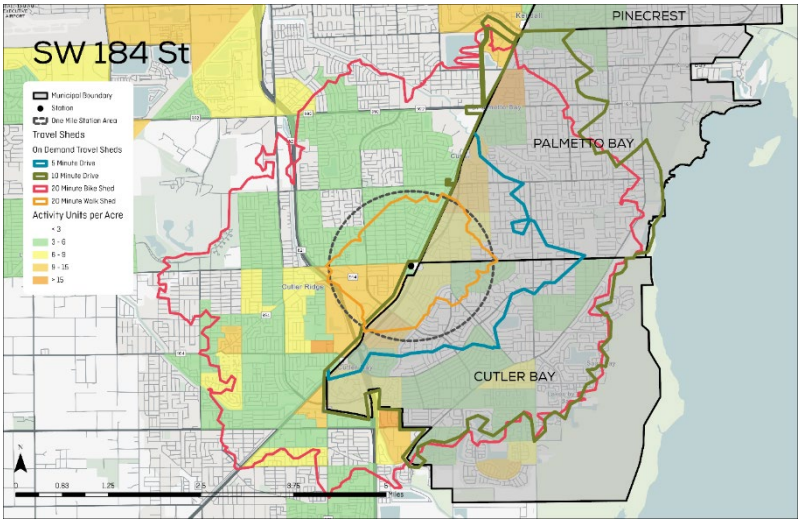


Figure 52 SW 168th St, On-Demand

Marlin Road

Marlin is the second most northern BRT station within Cutler Bay, with approximately half of the station area falling within the city limits. The one-mile station area includes slightly more jobs than housing. Land use within the station area is clearly divided, having commercial and industrial uses west of US-1 and residential uses east of US-1. The Ronald Reagan Highway cuts through the wester periphery of the station area, posing multimodal connectivity challenges.

During AM and PM peak hours the station area generates 264,000 trips making the station area both the 3rd most dense and 3rd most active in the corridor. During the AM Peak the station area imports more trips than it exports, suggesting this station is a work destination for residents from other parts of the region.

Station Area Stats

Jobs:

8,400

Dwelling Units:

6,200

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.87	16.7
PM	1.01	15.4

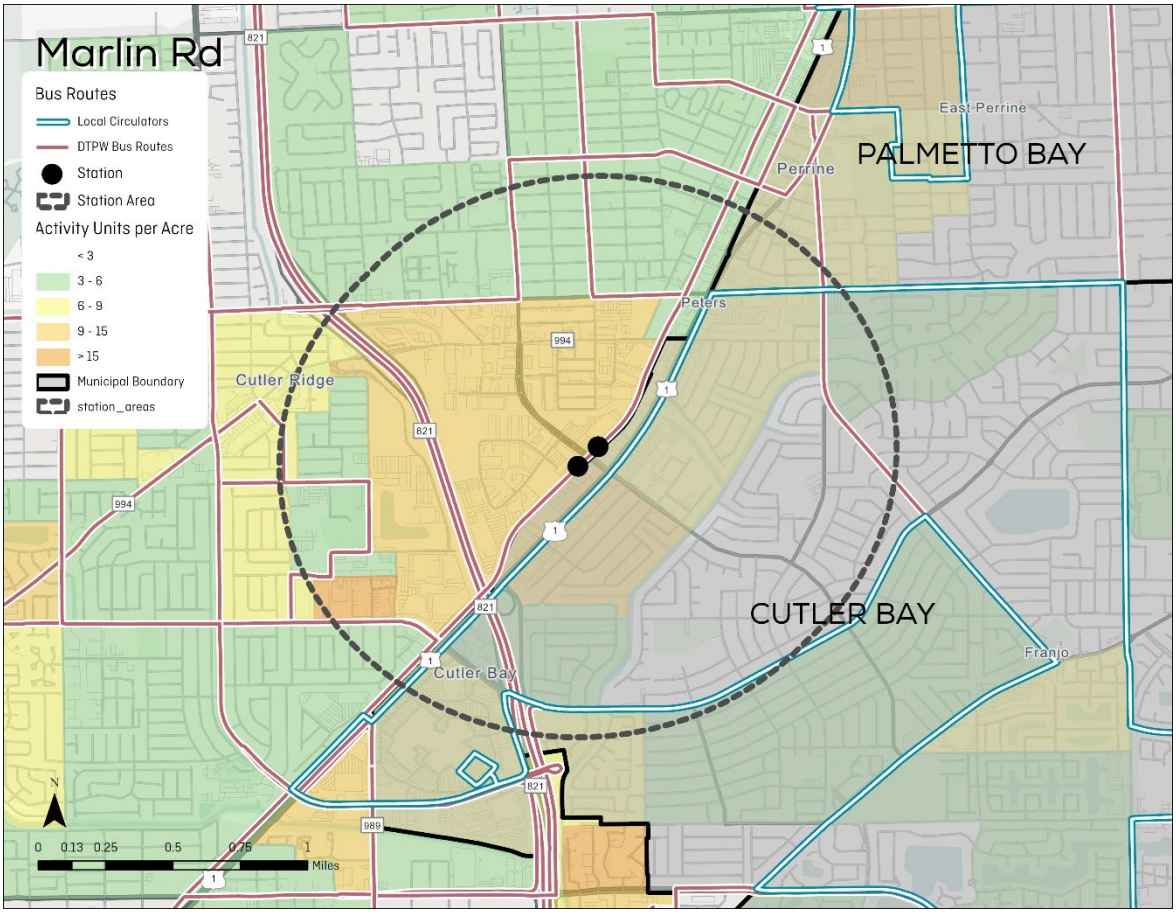


Figure 53: Marlin Dr, Station Area

Fixed Route Assessment

Marlin drive has some of the strongest fixed route access in the corridor. Despite this, activity centers south and southeast of the station area remain underserved. This gap could be strengthened by expanding the 200 Cutler Bay Local by adding bi-directional service and expanding operating hours to align with peak hours.

Recommendations

#6 200 Cutler Bay Local Addition

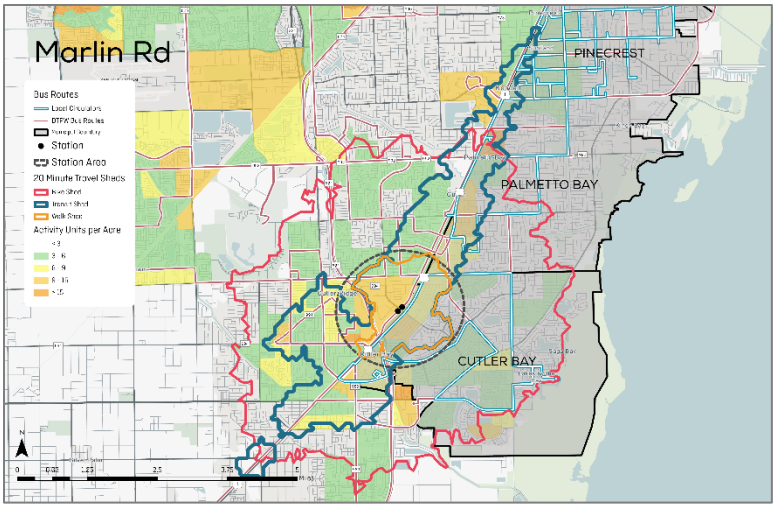


Figure 54: Marlin Dr, Fixed Route Travelshed

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	235,000	65,000	9,000	31,000	7,000	N/A
Mode Share	88.1%	0.8%	7.4%	0.5%	0.2%	3.1%

Table 9: Marlin Dr, Access Scores and Mode Share

On-Demand Assessment

Marlin is currently served by the Cutler Bay on-demand service, which averages 1,308 riders per week. Currently the service area is limited to the Cutler Bay city limits, severely limiting the usability of the on-demand services in half the station area and making only 6,900 activities reachable with a 20-minute trip. See the map for existing on-demand access.

Recommendations

#3 Cutler Bay On-Demand Expansion

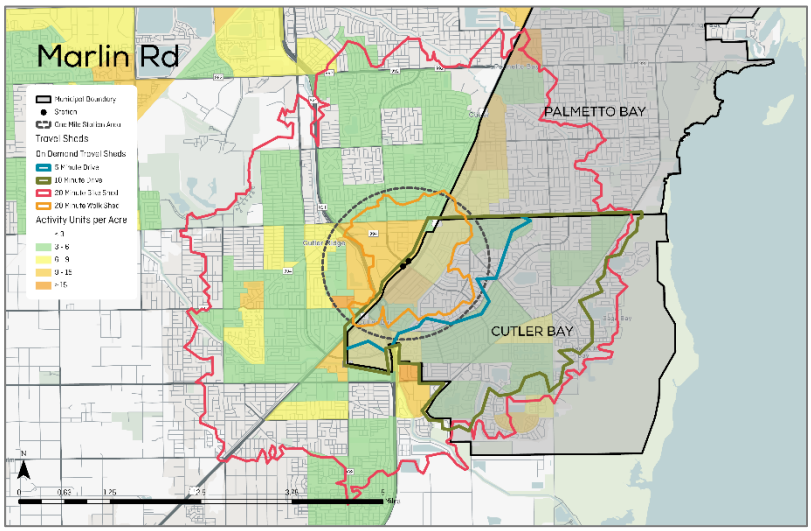


Figure 55: Marlin Dr, On-Demand Travelshed

SW 200th St

SW 200 St is the second most southern BRT station within Cutler Bay, with approximately two fifths of the station area falling within the city limits. The one-mile station area includes commercial and multi-family residential in the station core and single-family detached housing in the periphery. The station is just across US-1 from the Southland Mall. The station area is bisected by both US-1 and the Ronald Reagan Turnpike, posing greater challenges to multimodal connectivity.

During AM and PM peak hours the station area generates 268,000 trips making the station area both the 2nd most dense and 2nd most active in the corridor. Overall, the station area is a slight importer of trips.

Station Area Stats

Jobs:

7,600

Dwelling Units:

7,600

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.93	16.1
PM	0.97	15.4

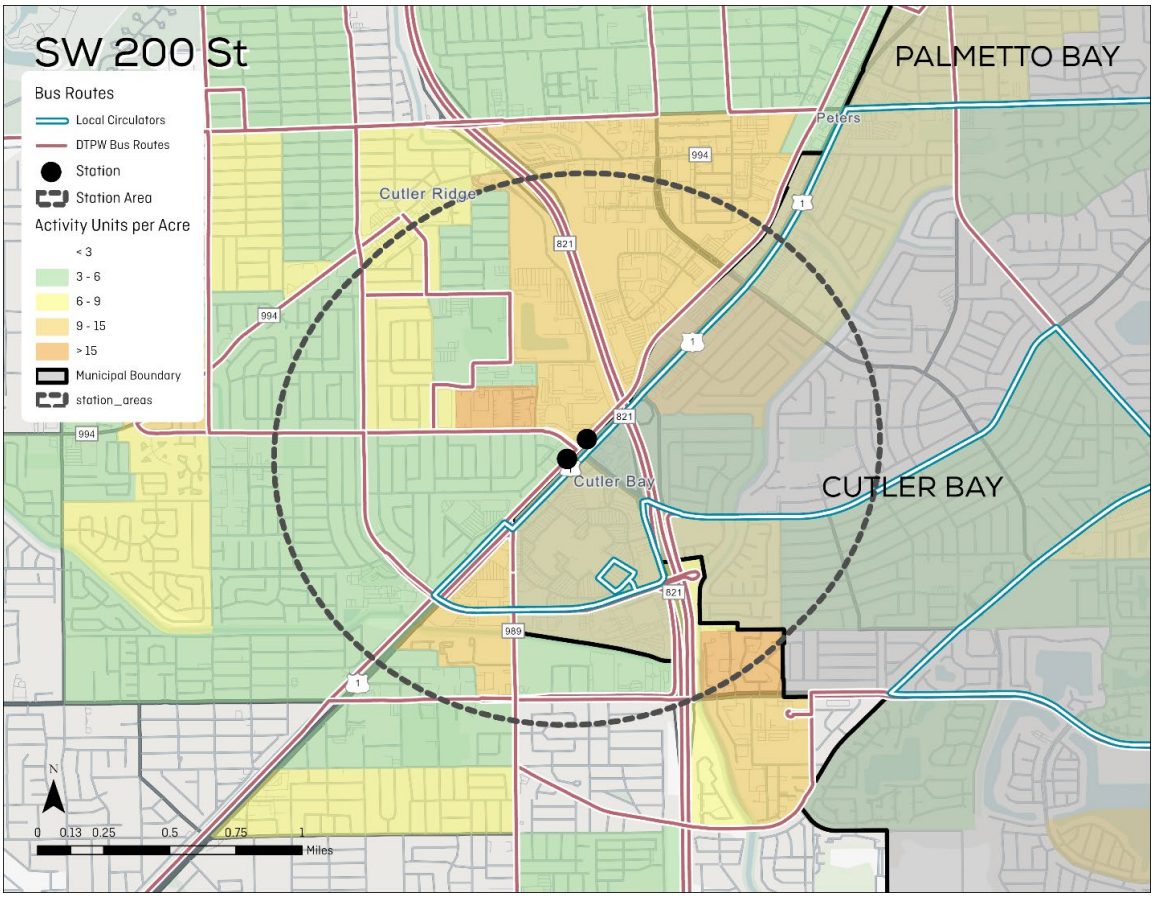


Figure 56: SW 200th St ,Station Area

Fixed Route Assessment

Currently, the station area has the 2nd highest fixed route access in the corridor, behind Dadeland South. The large transit travel sheds indicate that local bus schedules are highly aligned with the express routes. One gap that remains is fixed route access to the southeast of the station area, preventing access to most of Cutler Bay.

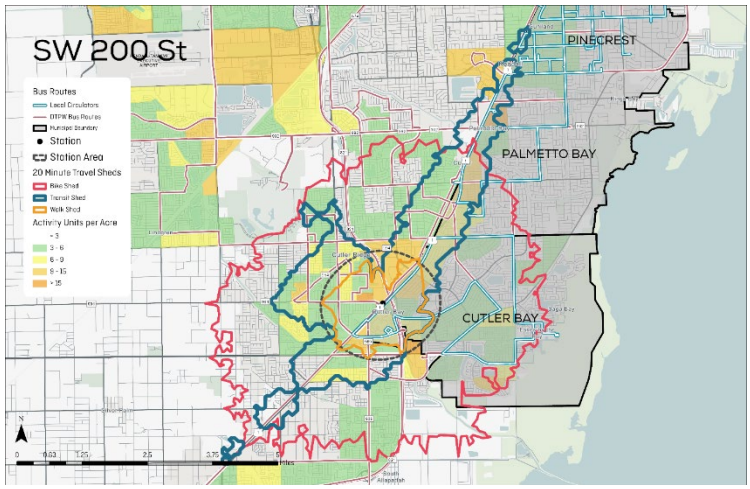


Figure 57: Marlin Dr, Fixed Route Travelshed

This coverage gap can be filled by adding a counterclockwise route to the 200 Cutler Bay local to serve these areas southeast of the station area. Additionally, service doesn't start until 8:28 AM and only runs until 4:58 PM, missing a large proportion of AM and PM peak trips. Expanded service hours should be considered to take advantage of peak travel times.

Recommendations

#6 200 Cutler Bay Local Additions

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	260,000	65,000	10,000	32,000	6,000	N/A
Mode Share	87.5%	0.9%	7.7%	0.5%	0.2%	3.2%

Table 10: SW 200 St, Access Scores and Mode Share

On-Demand Assessment

SW 200 St is currently served by the Cutler Bay on-demand service, which averages 1,308 weekly riders. Currently, the service area is limited to the Cutler Bay city limits, severely limiting the usability of the on-demand services in 60% of the station area. As a result, only 6,300 activities reachable with a 20-minute trip. See the map for existing on-demand access.

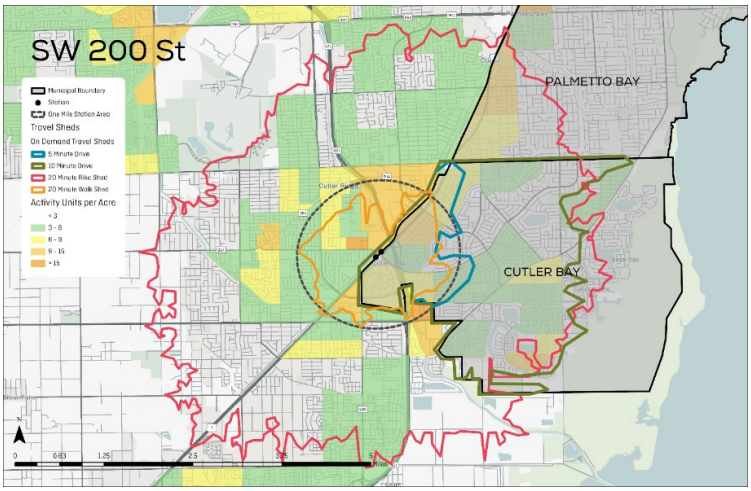


Figure 58: Marlin Dr, On-Demand Travelshed

Recommendations

#3 Cutler Bay On-Demand Expansion

SW 112th Ave

SW 112 Ave is the southernmost BRT station within Cutler Bay, located just 1/3 of a mile south of SW 200 St. The one-mile station area includes robust commercial development around the station core and lots of single-family detached housing in the periphery. Notable activity centers include the Southland Mall, South Dade Regional Library, and the Social Security Administration. The station area is bisected by US-1 and the Ronald Reagan Turnpike, posing greater challenges to multimodal connectivity.

During AM and PM peak hours, the station area generates 259,000 trips, making the station area both the 4th most dense and 4th most active in the corridor. The station area has a relative balance of trip origins and destinations.

Station Area Stats

Jobs:

5,300

Dwelling Units:

8,300

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.96	17.7
PM	0.96	15.6

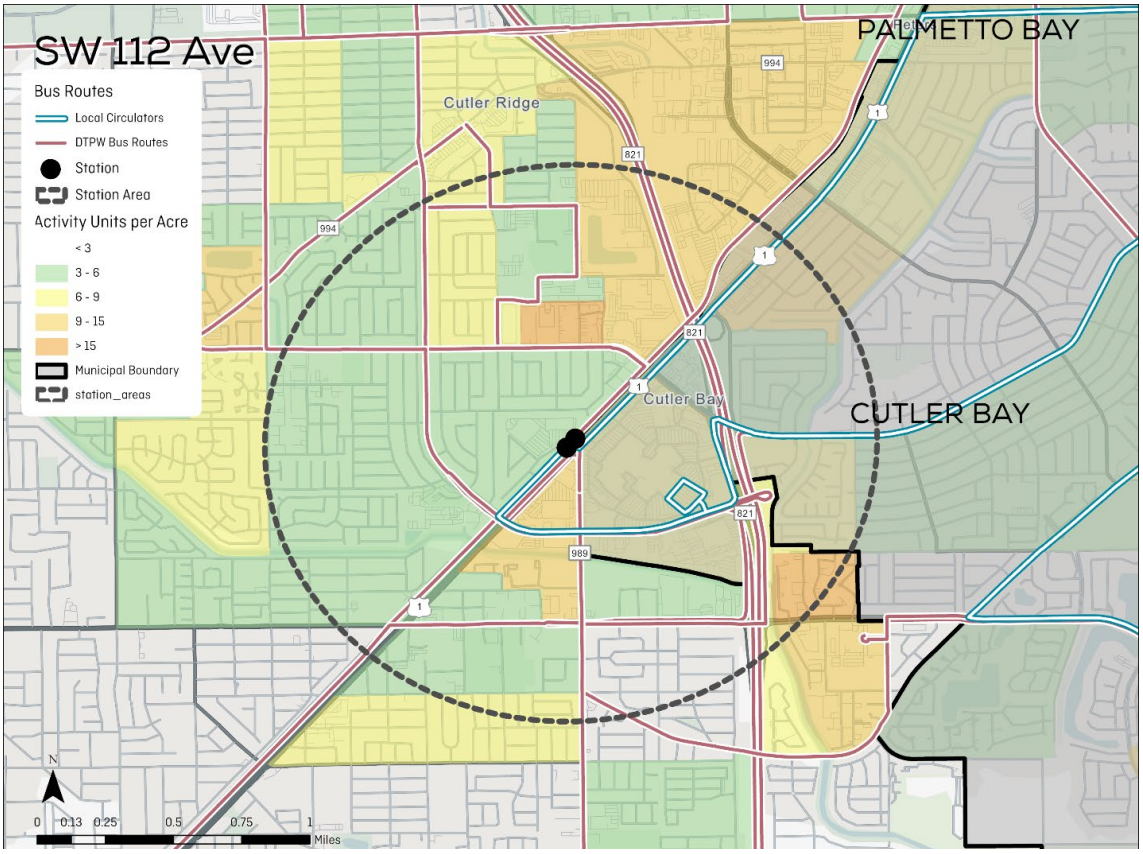


Figure 59: SW 112th Ave, Station Area

Fixed Route Assessment

The station has strong fixed route access compared to many in the corridor, but not as strong as its northern neighbors. Activity centers to the southeast of the station area remain underserved.

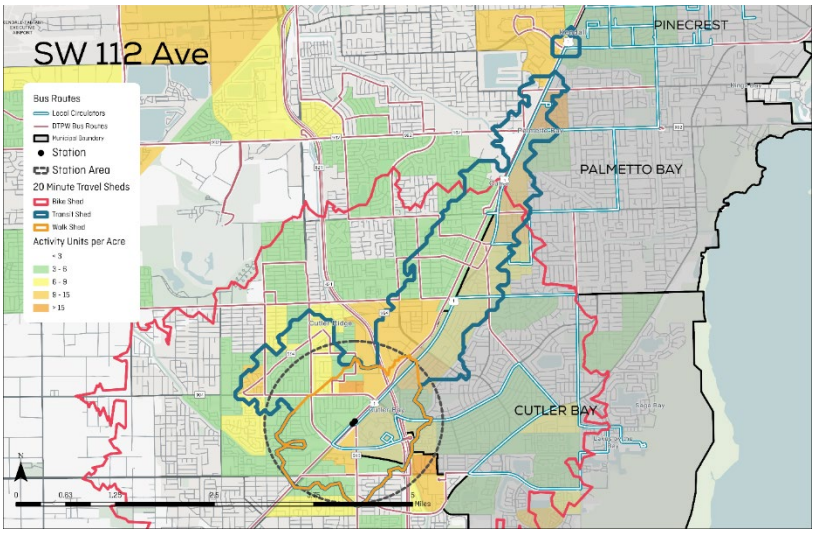


Figure 60 SW 112 Ave, Fixed Route Travelshed

These activity centers are already aligned with the 200 Cutler Bay Local but, because that service only travels clockwise, a rider would need to ride the entire route just to arrive one mile south of the station. Additionally, the first 200 bus does not arrive at the station until 8:26 AM well after the AM peak of between 7:15 and 8:15 AM and the last bus in the PM peak leaves at 4:56 PM missing a large proportion of PM peak trips between 4:45 and 5:45 PM. These service gaps can be improved by adding bi-directional service and by expanding operating hours to cover peak commute times.

Recommendations

#6 200 Cutler Bay Local Additions

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	261,000	60,000	9,000	13,000	5,000	N/A
Mode Share	87.5%	0.9%	7.9%	0.5%	0.2%	3.0%

Table 11 SW 112 Ave, Access Scores and Mode Share

On-Demand Assessment

SW 112 Ave is currently served by the Cutler Bay on-demand service, which averages 1,308 riders per week. Currently the service area is limited to the Cutler Bay city limits, limiting the usability of the on-demand services in half the station area. As a result, only 5,000 activities are reachable with a 20-minute trip. See the map for existing on-demand access.

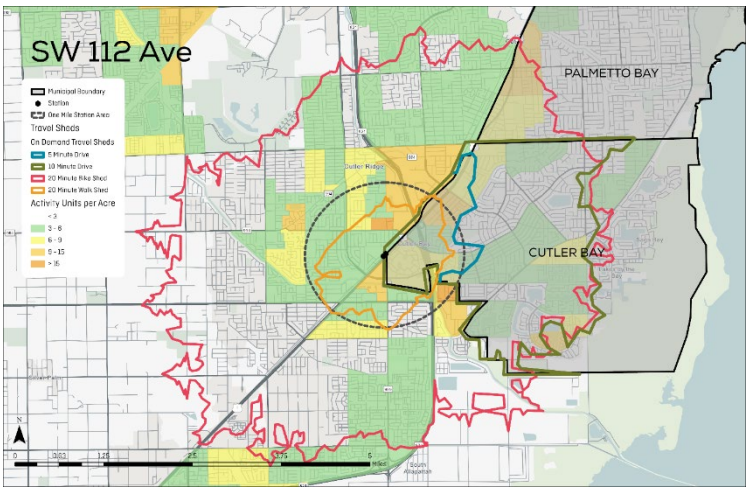


Figure 61 SW 112 Ave, On-Demand

Recommendations

#3 Cutler Bay On-Demand Expansion

SW 244th St

SW 244 St lies in the unincorporated part of Miami-Dade County south of Cutler Bay. This station area has the lowest density of jobs and housing in the corridor. Agricultural uses are prevalent on the northwestern half of the station area and most of the residential development lies to the southeast, on the opposite side of US-1. Road connectivity to this station is poor, since SW 244 St. does not cross US-1 to provide access to the east.

During AM and PM peak hours the station area generates 103,000 trips making the station area both the least dense and least active station in the corridor. Because of the prevalence of residential land use in the station area, this stop is a net exporter of trips, suggesting most residents in the station area work elsewhere.

Station Area Stats

Jobs:

1,100

Dwelling Units:

3,500

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	1.48	21.1
PM	0.71	18.9

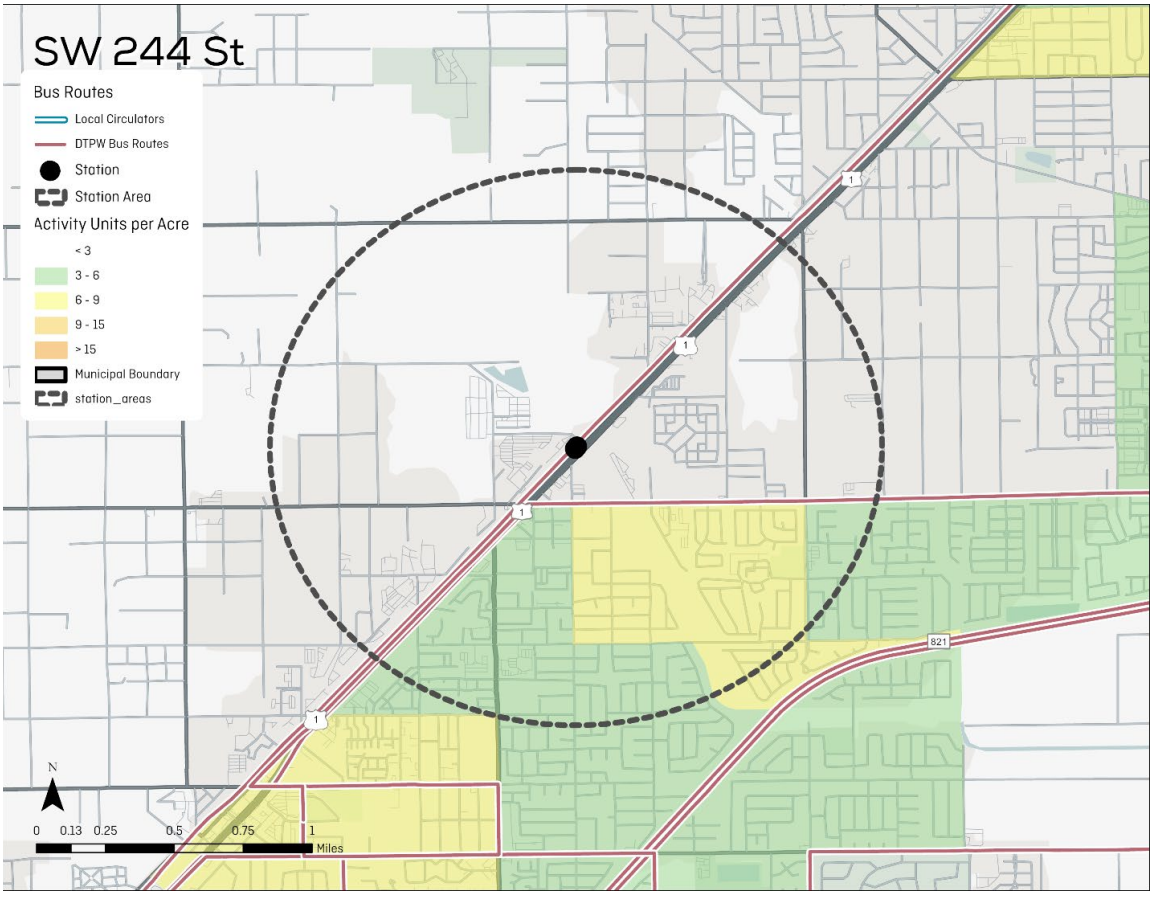


Figure 62 SW 244 St, Station Area

Fixed Route Assessment

Despite its relatively low density, the station has high fixed route access by virtue of the express buses connecting the station to both Homestead and Cutler Bay. The Princeton circulator connects to residential areas south and east, but provides limited access because of long, one-hour headways during peak hours.

Recommendations

#7 Princeton Circulator Headway Updates

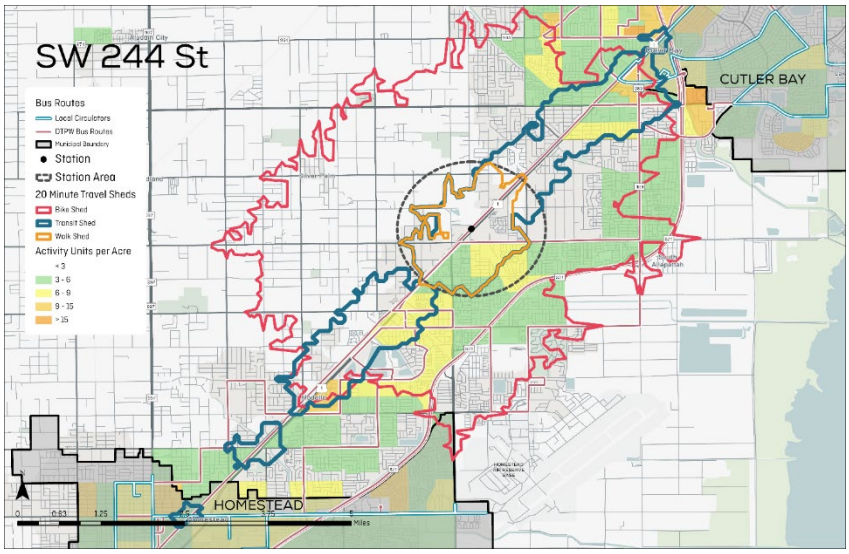


Figure 63 SW 244 St, Transit

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	128,000	38,000	3,000	14,000	N/A	N/A
Mode Share	86.6%	1.9%	6.9%	0.4%	0.2%	4.0%

Table 12 SW 244 St, Access Scores and Mode Share

On-Demand Assessment

There is no on-demand service serving the station area.

Recommendations

The limited complete trip opportunities within the station area and strong access provided by fixed routes to activity centers elsewhere reduce the stations suitability for on-demand access.

SW 264th St

SW 264 St is the second unincorporated station area on the BRT and is located north of Homestead. The one-mile station area is relatively inconsistent in its land use. Agricultural uses and water bodies in the station area reduce the total number of jobs and housing, but the core immediately around the transit station has relatively high density of commercial and multi-family residential housing. This focused core makes the station area a strong candidate for multi-modal infrastructure investments.

During AM and PM peak hours the station area generates 135,000 trips, ranking 14th for station activity and 11th for density. The station follows the typical pattern for residential station areas as a trip importer, suggesting that most residents living within the station area work elsewhere.

Station Area Stats

Jobs:

1,500

Dwelling Units:

6,600

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	1.53	19.8
PM	0.81	17.6

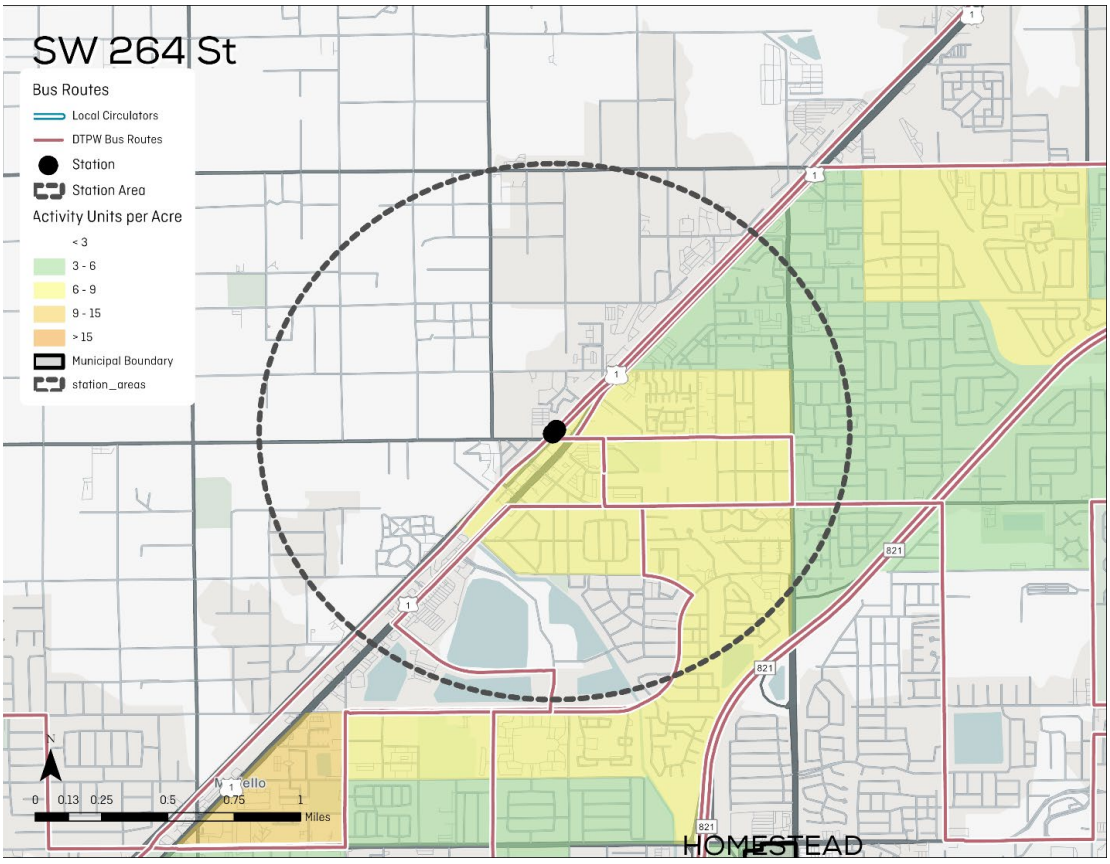


Figure 64 SW 264 St, Station Area

Fixed Route Assessment

Currently the express routes and other services using the busway provide access to the highest density areas within the station area. However, the main routes traveling directly south have infrequent service, with the 35/35A having a roughly 45 minutes headway during peak hours and the 248 Princeton Circulator arriving once an hour.

Recommendations

#7 Princeton Circulator Headway Updates

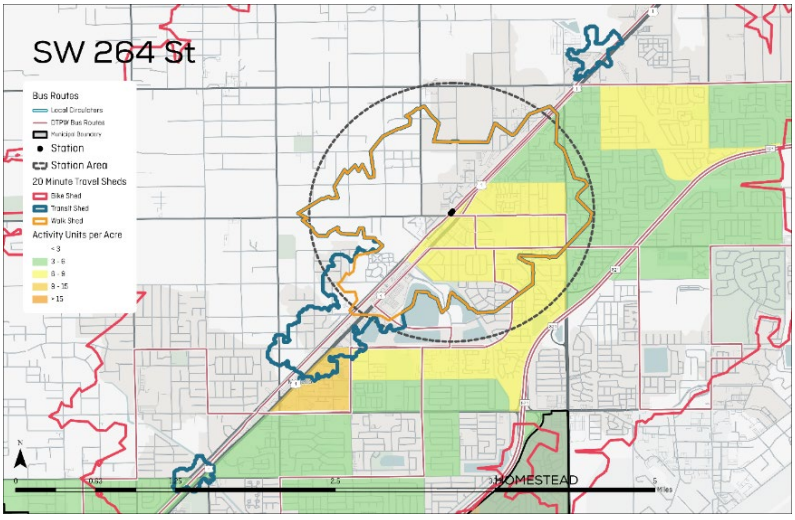


Figure 65 SW 264th St, Fixed Route Travelshed

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	125,000	36,000	7,000	7,000	N/A	N/A
Mode Share	84.8%	3.5%	6.9%	0.6%	0.2%	4.0%

Table 13: SW 264th St, Access Scores and Mode Share

On-Demand Assessment

There is no on-demand service serving the station area.

Recommendations

The lack of a municipal government to plan for its residents presents a unique challenge for the BRT stops in unincorporated Miami Dade County, this manifests here as a lack of local circulator options limiting access to the stations to bike and pedestrian modes. On demand transit offers a way to expand the accessible areas of these stops while minimizing the investment in parking infrastructure at the stops. As the densest of the unincorporated stops SW 264th St would be an ideal area to being on-demand service in the unincorporated parts of the BRT with the potential to expand to cover the other stops.

SW 296th St

SW 296 St lies within the unincorporated parts of Miami-Dade County, located just north of Homestead with roughly one eighth of the station area within Homestead City limits. Activity density within the station area is low, with more housing than jobs. The bulk of the station area is low-density residential, along with some parkland, agricultural land, and a small amount of commercial development towards Homestead. The station is notable for having a Park and Ride, as well as vacant and underdeveloped parcels near the BRT station.

During AM and PM peak hours the station area generates 189,000 ranking 10th for trip activity and 14th for density. Overall, the station area has a balance of trip origins and destinations.

Station Area Stats

Jobs:

2,500

Dwelling Units:

4,400

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.96	17.1
PM	0.93	15.9

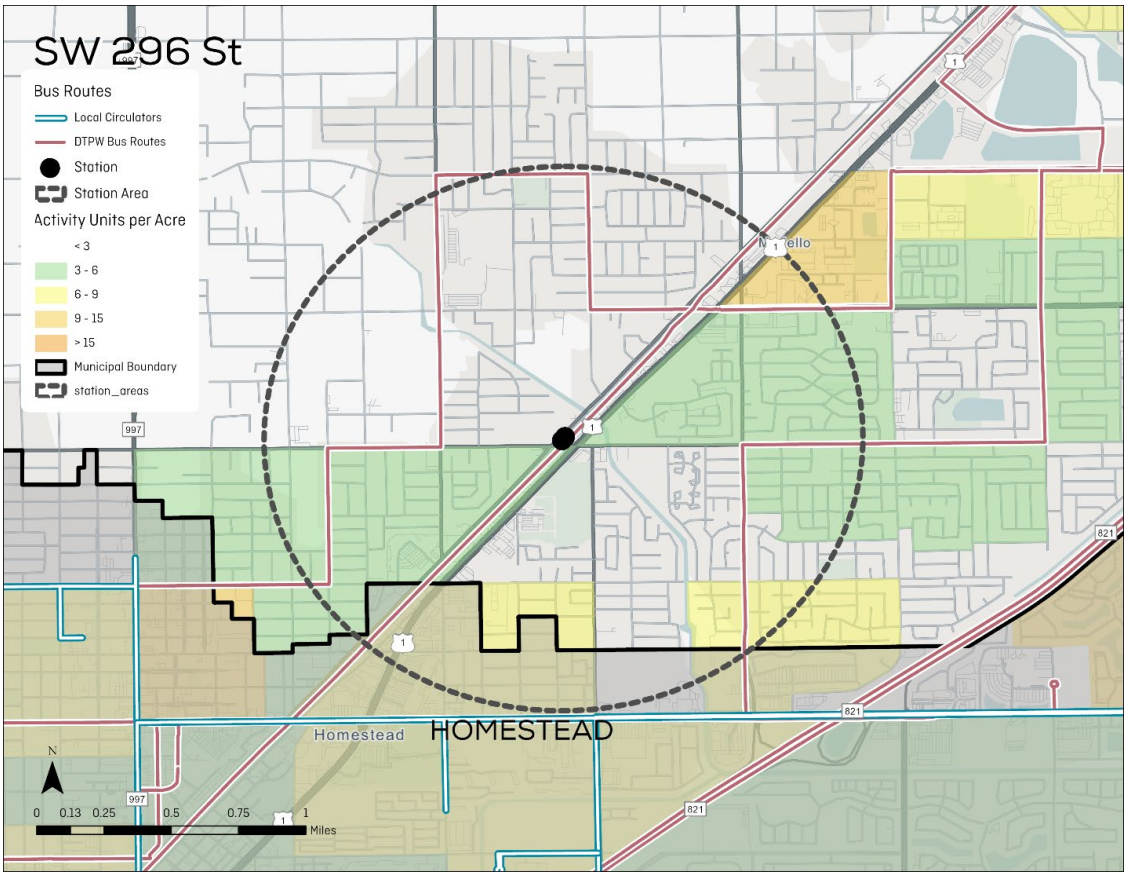


Figure 66 SW 296 St, Station Area

Fixed Route Assessment

While multiple routes operate within the station area only the express routes running along the bus way provide any access directly to the station. The other routes all require a half-mile (roughly 10-minute) walk before reaching a stop. Unlike other stations with similar issues there are no local circulator services operating in the station who could be adjusted to fill the need meaning an alignment change would be necessary to cover nearby areas.

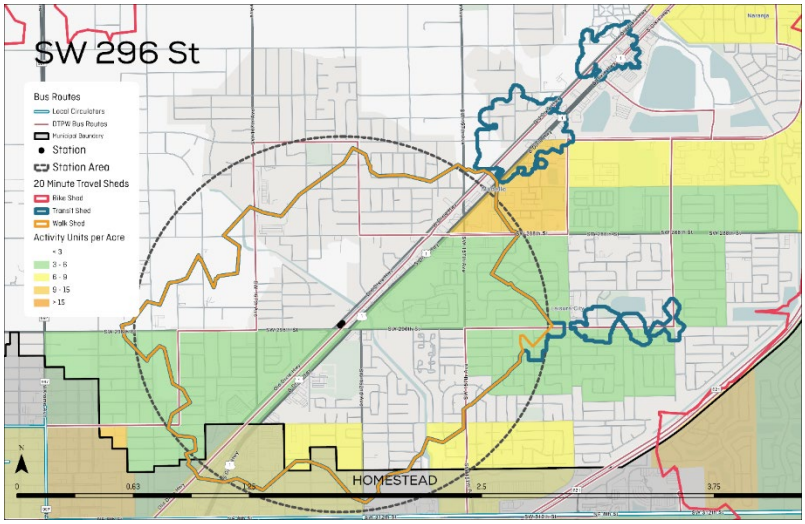


Figure 67: SW 296th St, Fixed Route Travelshed

Recommendations

#8A 35/35A Alignment Change

#8B Baptist Health Homestead Hospital Shuttle Service

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	98,000	50,000	5,000	6,000	N/A	N/A
Mode Share	84.9%	4.5%	7.5%	0.4%	0.1%	2.6%

Table 14: SW 296th St Access Scores and Mode Share

On-Demand Assessment

There is no on-demand service serving the station area.

Recommendations

The limited complete trip opportunities within the station area, strong access provided by fixed routes to activity centers elsewhere, and availability of park and ride for private automobile usage reduce the stations suitability for on-demand access.

SW 312th St

SW 312 St is the northern most station in Homestead on the BRT with roughly eighty percent of the station area within the city limits. The one-mile station area includes slightly more jobs than housing. Commercial development is prominent along N Homestead Boulevard and Campbell drive with low-density residential around the periphery of the station area. Notable destinations include Miami Dade College Homestead Campus, J.D. Redd Park, Harris Field Park, and a variety of Homestead government services buildings including general services, customer service, and energy.

During AM and PM peak hours the station area generates 226,000 trips making the station area the 7th most dense and 6th most active station in the corridor. Overall, the station area is a slight importer of trips in both the AM and PM peaks.

Station Area Stats

Jobs:

5,100

Dwelling Units:

6,700

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.91	17.5
PM	0.97	15.7

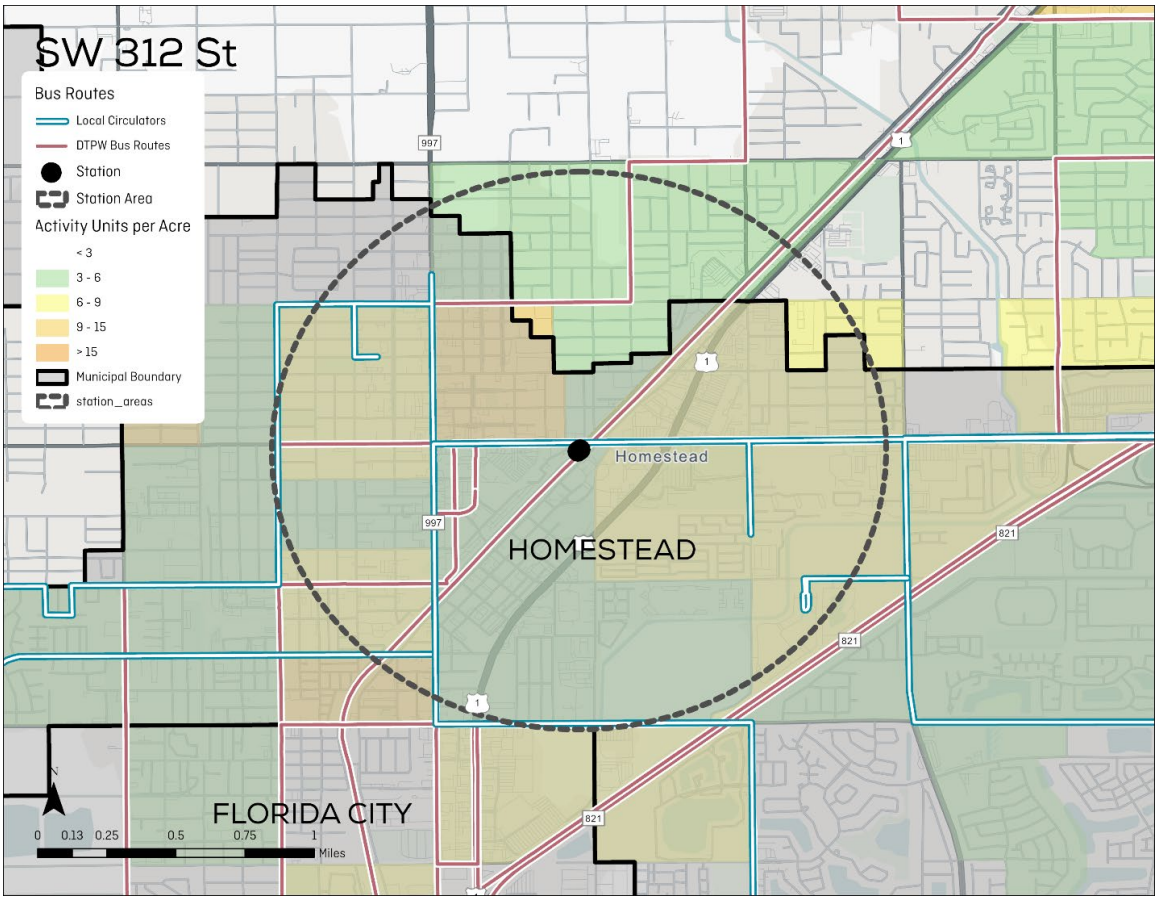


Figure 68 SW 312 St, Station Area

Fixed Route Assessment

Like many stations along the corridor, frequent express routes contribute to strong fixed route access concentrated along the BRT. Homestead also operates two circulators within the station area, albeit with infrequent ~75-minute headways in only one direction. Riders wishing to travel West must ride almost the entire loop.

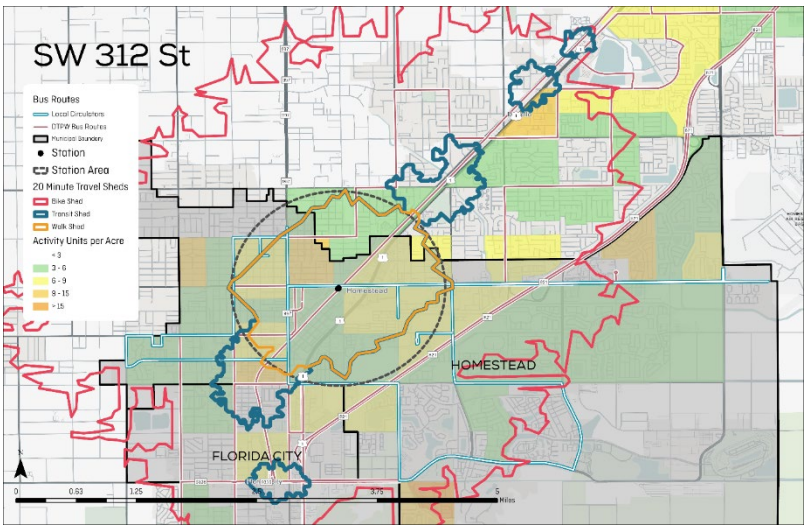


Figure 69 SW 312 St, Transit

The GTFS feeds describing these local circulators have only been published on a lesser-known wayfinding platform called Moovit and may be out of date. Publishing the feeds on Google maps, Waze, and other popular wayfinding services would allow riders using these services to find the local connections more easily and could increase ridership.

Recommendations

#9 Homestead East/West Connector Update

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	87,000	47,000	10,00	16,000	N/A	N/A
Mode Share	83.1%	5.0%	8.5%	0.4%	0.2%	2.8%

Table 15 SW 312th St, Access Scores and Mode Share

On-Demand Assessment

There is no on-demand service serving the station area.

Recommendations

Homestead is already providing strong FLM access to the BRT station through fixed route transit. New on-demand service would strengthen that access, but may do so at a higher cost per trip compared to fixed-route transit. Although it is not included as a recommendation of this study, on-demand service will be coming to Homestead as a part of the Better Bus Network. It is recommended that cost and operational analysis be conducted in the future to ensure each transit service is meeting its operational goals.

Civic St

Civic St is the southernmost station in Homestead on the BRT with almost the entire station area falls within the city limits. The station area includes a balance of jobs and housing, with commercial development along the busway and low-density residential on the station area periphery. Notable activity centers within the station area include the Homestead City Hall, Miami Dade College Homestead Campus, Losner Perk, and J.D. Redd Park.

During AM and PM peak hours the station area generates 222,000 trips making the station area the 6th most dense and 7th most active station in the corridor, an inverse of SW 312 St. During the AM peak hours, the station imports more trips than it exports, suggesting that this station area is a work destination for commuters in the region.

Station Area Stats

Jobs:

5,500

Dwelling Units:

6,500

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	0.83	17.9
PM	1.03	16.3

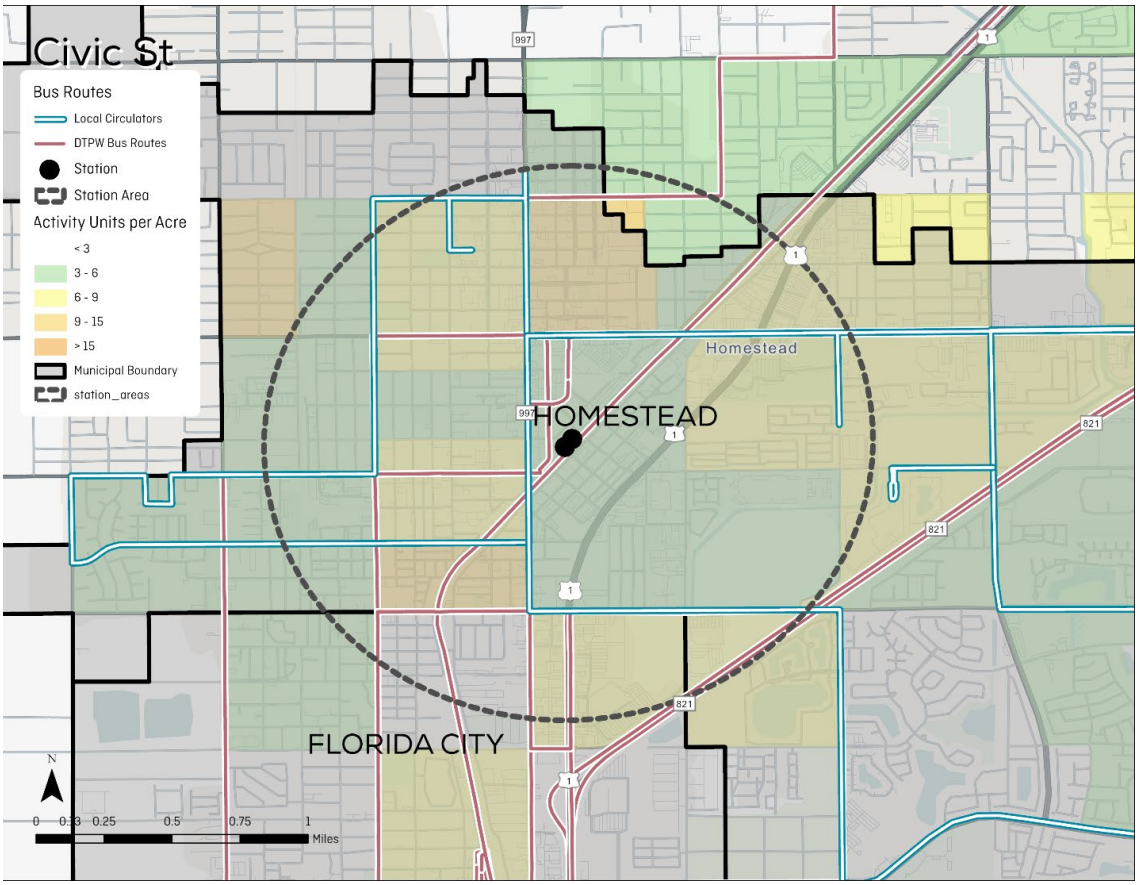


Figure 70 Civic St, Station Area

Fixed Route Assessment

Similar to its northern neighbor and many stations within the corridor, the transit access along the busway is strong in this station. Because of the unidirectional nature of the local circulator, several areas to the west are harder to reach. Expanding local access with bi-directional service would help address these coverage gaps.

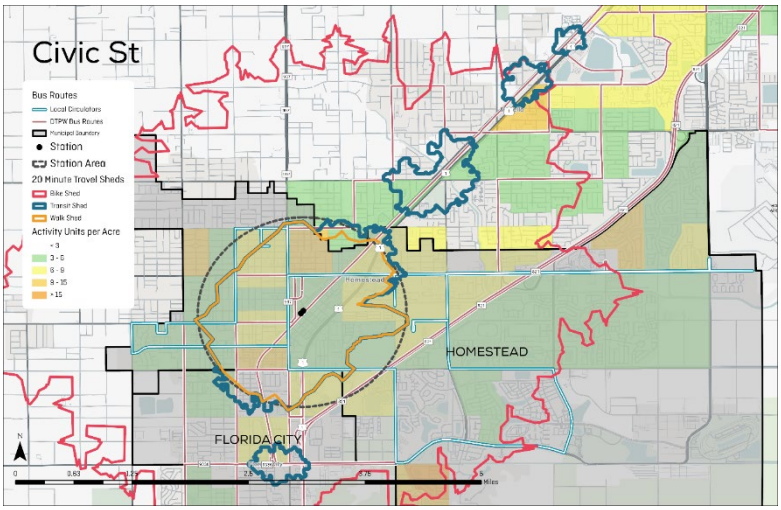


Figure 71 Civic St, Transit

The GTFS feeds describing these local circulators have only been published on a lesser-known wayfinding platform called Moovit and may be out of date. Publishing the feeds on Google maps, Waze, and other popular wayfinding services would allow riders using these services to find the local connections more easily and could increase ridership.

Fixed Route Recommendations

#9 Homestead East/West Connector Update

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	83,000	46,000	10,000	15,000	N/A	N/A
Mode Share	82.9%	4.6%	9.0%	0.7%	0.2%	2.7%

Table 16 Civic St, Access Scores and Mode Share

On-Demand Assessment

There is no on-demand service serving the station area.

Recommendations

Homestead is already providing strong FLM access to the BRT station through fixed route transit. New on-demand service would strengthen that access, but may do so at a higher cost per trip compared to fixed-route transit. Although it is not included as a recommendation of this study, on-demand service will be coming to Homestead as a part of the Better Bus Network. It is recommended that cost and operational analysis be conducted in the future to ensure each transit service is meeting its operational goals.

SW 344 St

SW 344 is the southern terminus of the BRT line and the only station in Florida City, with ninety percent of the station areas within the city limits. The station area is comprised primarily of low-density residential land uses with a small amount of commercial and warehouse space. As the southern-most station, SW 344 St. presents some access opportunities to natural amenities to the south.

During AM and PM peak hours the station area generates 165,000 trips making the station area the 11th most active and 12th most dense. During the AM peak the station produces more trips than it imports, suggesting that most residents of the station area work elsewhere. PM origin/destination ratios are more balanced, which could be due to the normalizing effect of after-work trips.

Station Area Stats

Jobs:

2,500

Dwelling Units:

5,200

Daily Trip Travel Patterns:

	O/D Ratio	Avg. Trip Time (minutes)
AM	1.13	20.7
PM	0.97	20.0

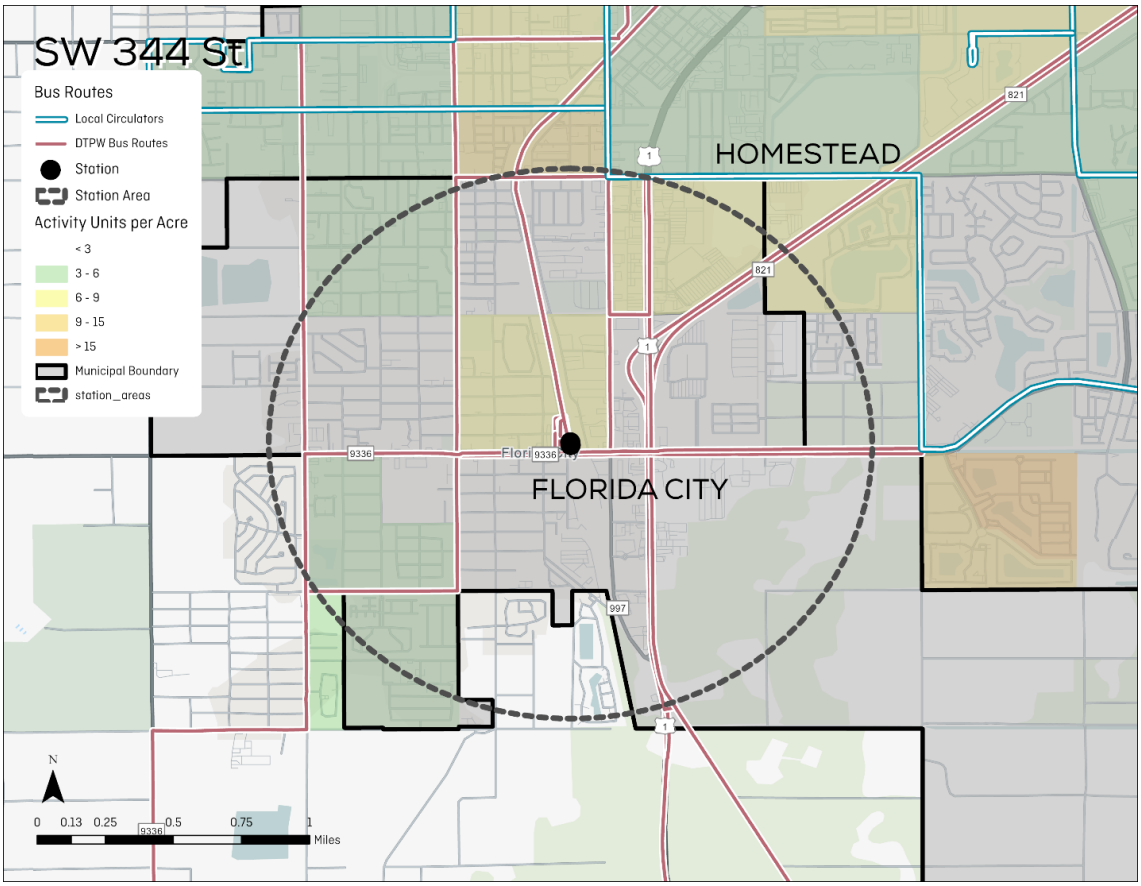


Figure 72: SW 344th St, Station Area

Fixed Route Assessment

As the southern terminus of the BRT much of the fixed route access is directed north with some coverage to the west, but the travelshed is limited by schedule alignment.

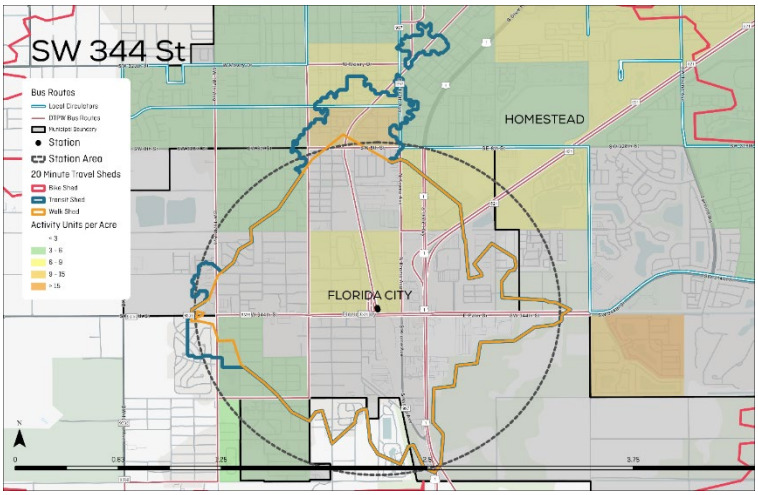


Figure 73 SW 344 St, Transit

The 301 bus does not run a north bound bus by the station until 8:35 AM, though south bound buses begin at 5 AM. The 302 Bus has northbound stops at 6:55 AM and 8:30 AM, entirely missing the AM peak, though the 4 PM bus does hit the PM peak, southbound does have any buses during the AM peak but does hit the PM peak exactly. The 344 bus also has a minimum of one-hour headway for both north and south bound buses. With the local buses having such significant headways or services outside of peak hours schedule alignment with the BRT is a major priority.

Recommendations

Follow the policy recommendations to enhance and strengthen existing service.

Travel Mode	Auto.	Bike	Ped.	Fixed Route	On-Demand	Other
Access Score	80,000	33,000	6,000	14,000	N/A	N/A
Mode Share	82.4%	4.3%	8.7%	0.9%	0.3%	3.4%

Table 17 SW 344 St, Access Scores and Mode Share

On-Demand Assessment

There is no on-demand service serving the station area.

Recommendations

The limited complete trip opportunities within the station area, strong access provided by fixed routes to activity centers elsewhere, and availability of park and ride for private automobile usage reduce the stations suitability for on-demand access.

Summary of Station Area Statistics

Station Area Activity

Station	Municipality	Station Area Jobs	Station Area Housing	Jobs to Housing Ratio	Total Activity Units	Activity Units/Acre
Dadeland South	Pinecrest	18,800	7,300	2.58	26,100	13.0
SW 104 St	Pinecrest	7,400	4,100	1.80	11,500	5.7
SW 136 St	Pinecrest/Palmetto Bay	6,500	3,000	2.17	9,500	4.7
SW 152 St	Palmetto Bay	3,300	3,900	0.85	7,200	3.6
SW 168 St	Palmetto Bay	4,200	5,100	0.82	9,300	4.6
SW 184 St	Palmetto Bay/Cutler Bay	7,300	4,800	1.52	12,100	6.0
Marlin Dr	Cutler Bay	8,400	6,200	1.35	14,600	7.3
SW 200 St	Cutler Bay	7,600	7,600	1.00	15,200	7.6
SW 112 Ave	Cutler Bay	5,300	8,300	0.64	13,600	6.8
SW 244 St	Unincorporated	1,100	3,500	0.31	4,600	2.3
SW 264 St	Unincorporated	1,500	6,600	0.23	8,100	4.0
SW 296 St	Unincorporated	2,500	4,400	0.57	6,900	3.4
SW 312 St	Homestead	5,100	6,700	0.76	11,800	5.9
Civic St	Homestead	5,500	6,500	0.85	12,000	6.0
SW 344 St	Florida City	2,500	5,200	0.48	7,700	3.8

Station Area Travel Patterns

Station	Municipality	Daily Trip Activity Volume	AM O/D Ratio	PM O/D Ratio	AM Avg. Trip Time	PM Avg. Trip Time
Dadeland South	Pinecrest	283,000	0.899	1.05	16.3	18.5
SW 104 St	Pinecrest	250,000	0.704	1.01	16.2	18.2
SW 136 St	Pinecrest/Palmetto Bay	203,000	0.795	1.03	16.6	16.8
SW 152 St	Palmetto Bay	155,000	1.06	0.949	16.7	16.0
SW 168 St	Palmetto Bay	158,000	1.08	0.926	16.1	15.6
SW 184 St	Palmetto Bay/Cutler Bay	201,000	0.939	1.01	16.9	15.8
Marlin Dr	Cutler Bay	264,000	0.866	1.01	16.7	15.4
SW 200 St	Cutler Bay	268,000	0.927	0.973	17.1	15.4
SW 112 Ave	Cutler Bay	259,000	0.960	0.962	17.7	15.6
SW 244 St	Unincorporated	103,000	1.48	0.771	21.1	18.9
SW 264 St	Unincorporated	135,000	1.53	0.810	19.8	17.6
SW 296 St	Unincorporated	189,000	0.962	0.932	17.1	15.9
SW 312 St	Homestead	226,000	0.914	0.974	17.5	15.7
Civic St	Homestead	222,000	0.833	1.03	17.9	16.3
SW 344 St	Florida City	165,000	1.13	0.973	20.7	20.0

Station Area Accessibility Scores

Station	Municipality	Auto Access	Bike Access	Ped Access	FR Transit Access	OD Transit Access
Dadeland South	Pinecrest	466,310	76,193	24,371	56,293	29,774
SW 104 St	Pinecrest	525,850	72,487	10,946	21,903	10,473
SW 136 St	Pinecrest/Palmetto Bay	178,630	54,103	7,355	30,945	6,138
SW 152 St	Palmetto Bay	180,356	38,303	5,833	15,588	9,432
SW 168 St	Palmetto Bay	170,686	56,422	7,040	12,779	7,448
SW 184 St	Palmetto Bay/Cutler Bay	190,663	62,906	9,434	18,268	12,017
Marlin Dr	Cutler Bay	235,221	65,561	9,168	31,114	6,933
SW 200 St	Cutler Bay	260,342	64,694	10,359	32,006	6,345
SW 112 Ave	Cutler Bay	261,359	60,326	9,171	13,143	5,101
SW 244 St	Unincorporated	127,818	37,618	3,362	14,378	N/A
SW 264 St	Unincorporated	124,679	35,649	6,506	7,232	N/A
SW 296 St	Unincorporated	97,711	49,987	5,146	6,269	N/A
SW 312 St	Homestead	87,166	46,862	9,766	15,999	N/A
Civic St	Homestead	82,620	46,299	10,132	14,545	N/A
SW 344 St	Florida City	80,116	32,706	5,733	14,376	N/A

III. RECOMMENDATIONS & IMPLEMENTATION

Policy Recommendations

Schedule Alignments with BRT and Local Connectors

Passengers have limited time available for travel, which make wait times for bus transfers one of the greatest obstacles to transit access in the first and last mile of travel.

To address this obstacle, transit operators should conduct an in-depth operations analysis of existing and future feeder services to/from BRT stations to align those schedules with the BRT schedule to minimize wait times during transfers (known as “timed transfers"). Ideally, stations that are trip exporters should have FLM services arrive just before the BRT departs in the morning and depart right after the BRT arrives in the afternoon. Stations that are trip importers should have the reverse; this will minimize wait times when transferring to and from the BRT, maximizing transit access.

For on-demand services, operational rules have the potential to deliver similar benefits. Restricting on-demand drop-offs to the BRT station areas in the morning will ensure capacity is available to feed the BRT network. During PM commute times, pickups can be similarly limited to ensure on-demand vehicles are available to transport passengers returning on the BRT. Furthermore, on-demand vehicles could be stationed at BRT stations during peak hours, ready and waiting to perform FLM trips as riders alight from the BRT.

Partner with Private Ride Share Providers

To address the current wait times and capacity of current on-demand service along the South Dade TransitWay, it is recommended that Pinecrest, Palmetto Bay, Cutler Bay, and any future on-demand services coordinate with rideshare service providers such as Uber or Lyft.

Uber Transit partners with over 70 public transit agencies to fill various coverage gaps, including first last-mile connections. The Uber Platform offers transit support through ride vouchers to be used in-app, directly through a locality's on-demand call center, or through integration with the municipality's on-demand service app.

For example, the City of Kyle in Texas partners with Uber to provide on-demand transportation within the city limits. A rider pays $3.14 for a qualifying trip, and the city subsidizes the remaining trip balance up to $10.

Lyft also offers partnerships with transit providers to support first-last mile connections and has previously partnered with transit agencies, including Monrovia, CA, and Charlotte, NC. As of 2020, the Lyft app includes real-time bus and train schedules for Miami-Dade alongside the bike, scooter, and rideshare services.

Ensure Safe Connections to BRT Stations

One of the most significant barriers to station access is the high volume of traffic using US-1, which runs adjacent to the South Dade TransitWay. US-1 impedes bicycle and pedestrian access and slows down any fixed route or on-demand FLM transit service attempting to access BRT stations. To encourage safe access to BRT Stations, all the recommended and future fixed route and on-demand services to BRT stations must drop off passengers as close to the station as possible, preferably on the same side of US-1 as the station.

In the site design process, BRT stations are recommended to include bays for buses, on-demand vehicles, and private automobile kiss-and-ride to maximize smooth intermodal transfers. Bike/ped access infrastructure, such as flyover bridges, are suggested to be considered for stations with high levels of pedestrian activity or where same-side intermodal transfer facilities are infeasible.

Promote Bicycle and Pedestrian Infrastructure

Bicycle and pedestrian modes offer significant advantages for FLM access because they occupy much less space than private automobiles and do not involve wait/transfer times or the capital and operating costs associated with public transit. In the accessibility analysis conducted as part of this study, bicycle accessibility outperformed public transit at every station.

Despite high accessibility, mode share for bicycling and walking remains low, partly due to gaps in sidewalks, inadequate lighting, lack of shade trees, and poor bicycle accommodations. The extreme heat also poses a challenge for bicycling and walking in this region. To capitalize on the high FLM accessibility of these modes and promote BRT ridership, researchers are recommended to conduct further studies in the South Dade TransitWay Corridor to identify and prioritize these opportunities. This will expand access (and improve ridership) directly on the BRT and the transit FLM feeder services connecting to it.

Encourage High-Density Mixed-Use Transit Oriented Development

To enhance accessibility to BRT stations, one alternative to expanding travelsheds through increased transit investment is to encourage the development of more jobs and housing within the existing travelsheds. This study suggests researchers examine land use, zoning, and development regulations along the South Dade TransitWay in relation to Transit Oriented Development best practices to encourage high-density, mixed-use development around transit stations. Miami-Dade County and the municipalities along the South Dade TransitWay are encouraged to pay particular attention to the ongoing South Corridor TOD Master Plan for policy recommendations to enhance their Future Land Use Maps and Zoning Maps to promote compact, integrated mixed-use development where suitable.

Create Transit Marketing Plans with Campaigns for On-Demand Service

To drive strong transit ridership, passengers must be aware of transit options and envision those options as a practical solution to their transportation needs. Via, an on-demand transit provider and software vendor, underscores the importance of building a strong brand to encourage ridership of on-demand service and increased trust and awareness of the greater transit system. Community partnerships can be leveraged to advertise transit services at community events and to host marketing materials at key activity centers, housing development, and businesses. Marketing strategies could include transit incentives like travel vouchers, and public of private-partnered parking discounts. In particular for the South Dade Corridor, marketing should explain to riders how on-demand, fixed route, and BRT services can be combined to form complete trips and how the transfer process has been streamlined.

Transit Service Recommendations

This section explores the eleven service recommendations to address the identified transit FLM needs in the corridor. The recommendations address needs throughout the corridor and include three on-demand and seven fixed route recommendations.

The **on-demand recommendations** focus on ensuring that significant areas of demand, especially those likely to be origins are destinations for BRT riders, are included in on-demand service areas. These adjustments should allow the on-demand services to function as effective "kiss and ride" services for the BRT, ensuring riders can access BRT stations without needing to drive themselves or utilize all-day parking at BRT stations.

The **fixed route recommendations** focus on increasing access within the station areas in a variety of ways including ensuring high density areas are served, headways are reduced, and riders have more choice in getting to their destination. The fixed route recommendations nearly double the access for riders traveling to and from the BRT, while the operating costs generally increase by around 50%. The Palmetto Bay Park and Ride is recommended to be shortened, allowing for cost savings by coordinating service with the future BRT.

#1 Pinecrest On-Demand Expansion

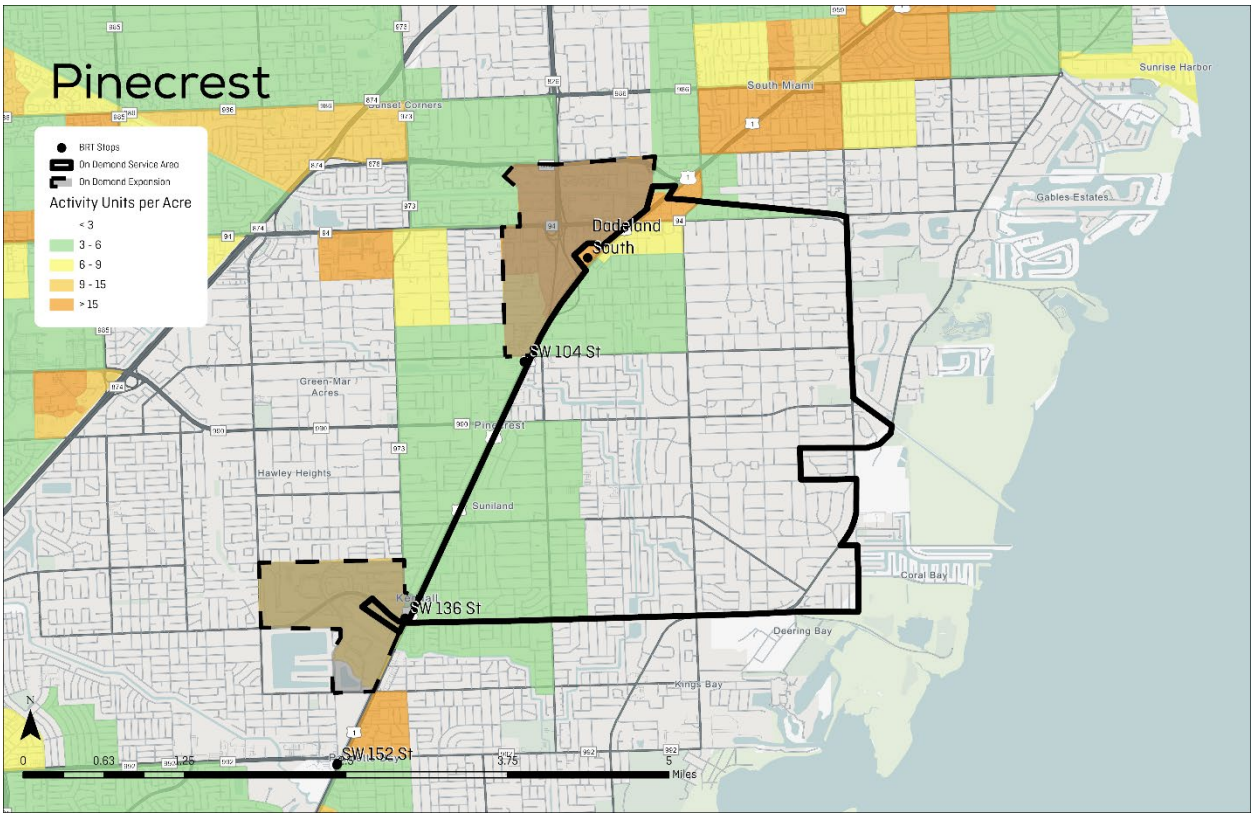


Figure 74 Pinecrest On-Demand Expansion

There are two areas of high density near the stations that fall outside the service area. The first is the area west of US 1 and between SW 104 St and SW 80 St, which includes the Dadeland Mall, Continental Park, and the Baptist Health Hospital. The second area is west of US 1 near Kendall, encompassing various condos, apartment complexes, The Falls shopping mall, and the South Dade YMCA Family Center. These areas are desirable destinations for BRT riders,

Pinecrest Residents, and potential hubs of activity that are currently not served by on-demand transit.

It is also imperative that on-demand service area includes each of the Pinecrest BRT stations, irrespective of whether they are strictly within the city limits of Pinecrest, as crossing US-1 to reach the station is time-consuming for on-demand vehicles, but safer than forcing riders to cross US-1 on foot.

Stops Effected

- Pinecrest
  - Dadeland South
  - SW 104 St
- Palmetto Bay and Pinecrest
  - SW 136 St

Table 18 Pinecrest On-Demand Expansion

Measure	Before	After
Covered Activity Units	~33,500	~50,000
Riders per Week	~740	~1100
Operating Costs	~$1.11m	~1.35m
Vehicle Hours per Week	~170	~200
Number of Vehicles	3 at peak	4 at peak
Target Average Wait Time	~15 minutes	~15 minutes
Percentage of Population in Poverty	8%	11%
Non-White or Hispanic/Latino Percentage	54%	65%

#2 Palmetto Bay On-Demand Expansion

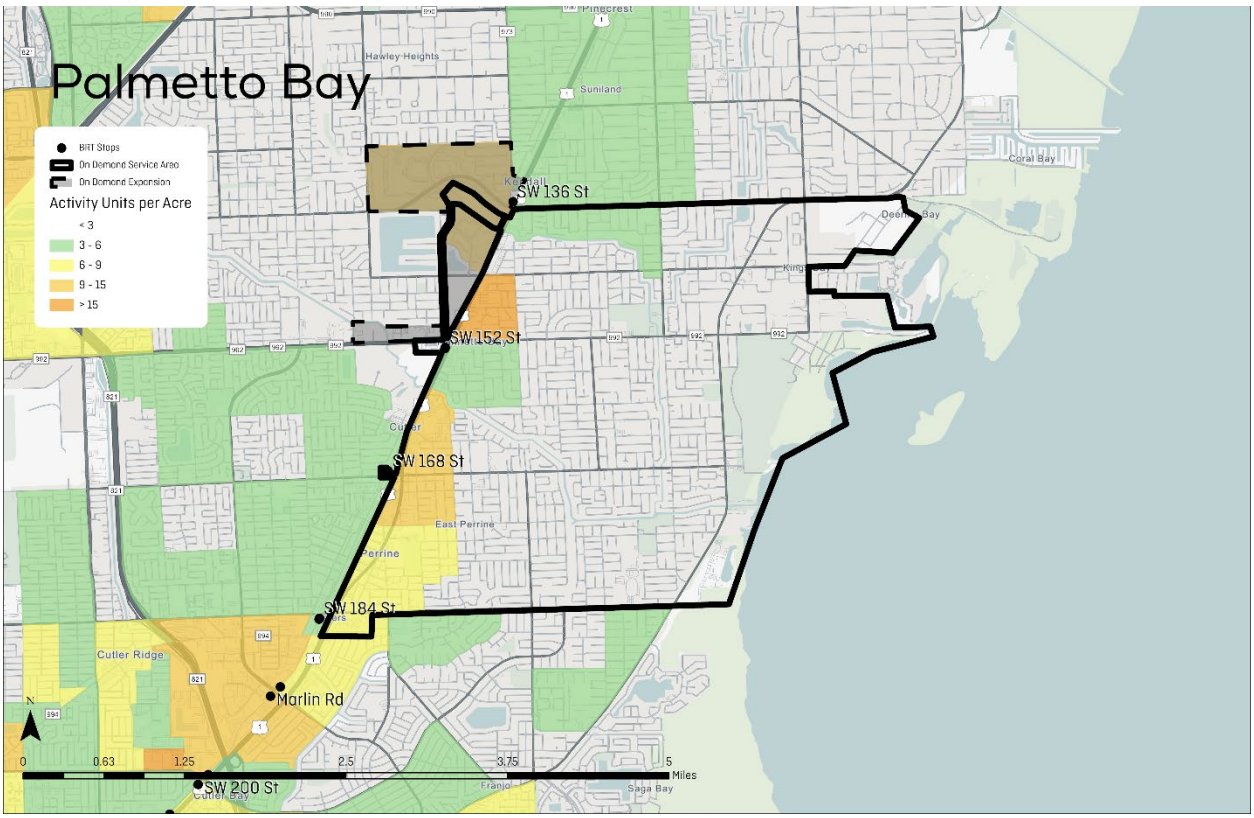


Figure 75 Palmetto Bay On-Demand Expansion

The largest service gap in Palmetto Bay is the area west of US 1 near Kendall, which includes various condos and apartment complexes, The Falls shopping mall, and the South Dade YMCA Family Center. These represent potential BRT riders not served by existing on-demand service, likely using SW 152 St or SW 136 St, as well as possible destinations for Palmetto Bay residents.

It is also critical that the on-demand service area includes each Palmetto Bay BRT station, irrespective of whether they are strictly within the city limits of Palmetto Bay, as crossing US-1 to reach the station is time-consuming for on-demand vehicles, but safer than forcing riders to cross US-1 on foot.

Stops Effected

- Palmetto Bay and Pinecrest
  - SW 136 St
- Palmetto Bay
  - SW 152 St
  - SW 168 St
  - SW 184 St

Table 19 Palmetto Bay On-Demand Expansion

Measure	Before	After
Covered Activity Units	~34,500	~37,500
Riders per Week	~350	~380
Operating Costs	~$210k	~210k
Vehicle Hours per Week	~200	~200
Number of Vehicles	2 at peak	2 at peak
Target Average Wait Time	~15 minutes	~15 minutes
Percentage of Population in Poverty	6%	6%
Non-White or Hispanic/Latino Percentage	61%	61%

#3 Cutler Bay On-Demand Expansion

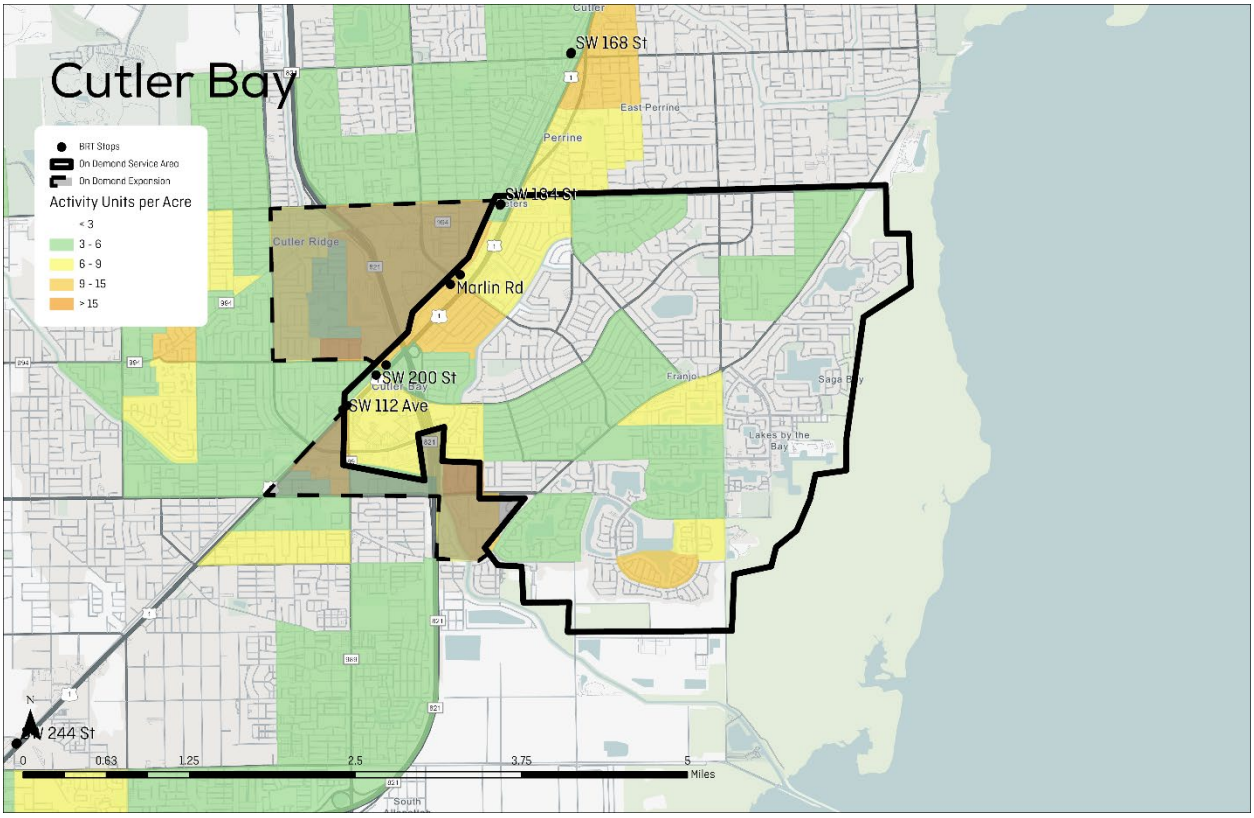


Figure 76 Cutler Bay On-Demand Expansion

The Cutler Bay on-demand area is the most active of the on-demand services included in this analysis. This study identified two key service gaps. One is the area west of US 1 from SW 184 St to Caribbean Blvd, which includes Quail Heights Plaza, Southridge Park, Center at Culter Bay, and various condo and apartment complexes. The other is east of US 1, south of the city limits,

and north of SW 216 St, which includes the Dennis C Moss Cultural Arts Center, South Dade Regional Library, and the Cutler Bay Wetlands Preserve. These additions will serve potential BRT riders and provide access to the library for transit-dependent residents of Cutler Bay.

Is it also imperative that the service area include each of the Cutler Bay BRT stations, regardless of whether they are strictly within the city limits of Cutler Bay, as crossing US-1 to reach the station is time-consuming for on-demand vehicles but safer than forcing riders to cross US-1 on foot.

Stops Effected

- Palmetto Bay and Cutler Bay
  - SW 184 St
- Cutler Bay
  - Marlin Dr
  - SW 200 St
  - SW 112 Ave

Table 20 Cutler Bay On-Demand Expansion

Measure	Before	After
Covered Activity Units	~37,500	~43,000
Riders per Week	~1550	~1750
Operating Costs	~$1.92m	~$2.05m
Vehicle Hours per Week	~450	~500
Number of Vehicles	5 at peak	6 at peak
Average Wait Time	~15 minutes	~15 minutes
Percentage of Population in Poverty	12%	16%
Non-White or Hispanic/Latino Percentage	79%	82%

#4 SW 264th Street New On-Demand Service

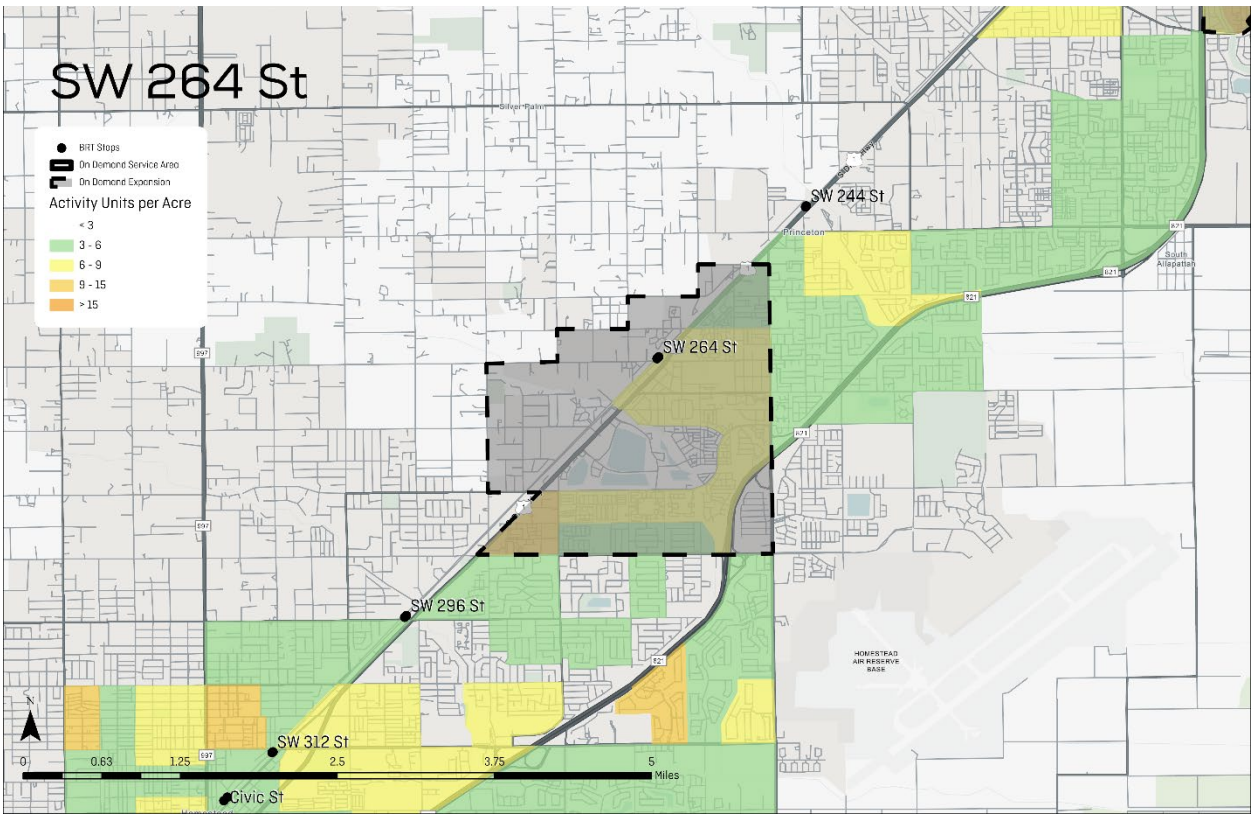


Figure 77 SW 264 St New On Demand Service

While much of the South Dade Corridor benefits from local circulators sponsored by the incorporated municipalities, the unincorporated part of Miami-Dade County between Homestead and Cutler Bay has no local service and correspondingly lower transit connectivity. To help address this gap, it is recommended that new transit services be implemented. Although none of the incorporated stations have densities high enough to recommend fixed-route circulators, on-demand service can help address the need in a flexible and cost-effective way. Because 264th St has the highest activity scores of the three unincorporated stations, it is recommended that this service be anchored on that station.

While most of the density in the service area is located south of US 1, the service area includes areas north of US 1 as there are a cluster of apartment complexes and shopping centers north of US 1. These are not highlighted on the map as they are included in large agricultural census blocks extending the service area just north ensure all these apartments are served by on-demand as crossing US-1 to reach the station is time-consuming for on-demand vehicles but safer than forcing riders to cross US-1 on foot.

There is also the opportunity to expand this on demand services to both SW 296th St and SW 244st, as the most densely populated areas of both those stations are directly adjacent to the potential service area. Further expansion could include SW 312th St and Civic Street, though this extension would require more service area north of US 1.

Stops Effected

- Unincorporated
  - SW 264 St
  - SW 244 St (Potential Future)
  - SW 312 St (Potential Future)

Table 21 SW 264 St New On Demand Service

Measure	Before	After
Covered Activity Units	NA	~11,000
Riders per Week	NA	~250
Operating Costs	NA	~$300k
Vehicle Hours per Week	NA	~130
Number of Vehicles	NA	2 at peak
Average Wait Time	NA	~15 minutes
Percentage of Population in Poverty	NA	Not Available
Non-White or Hispanic/Latino Percentage	NA	92%

#5 Palmetto Bay Route A Additions

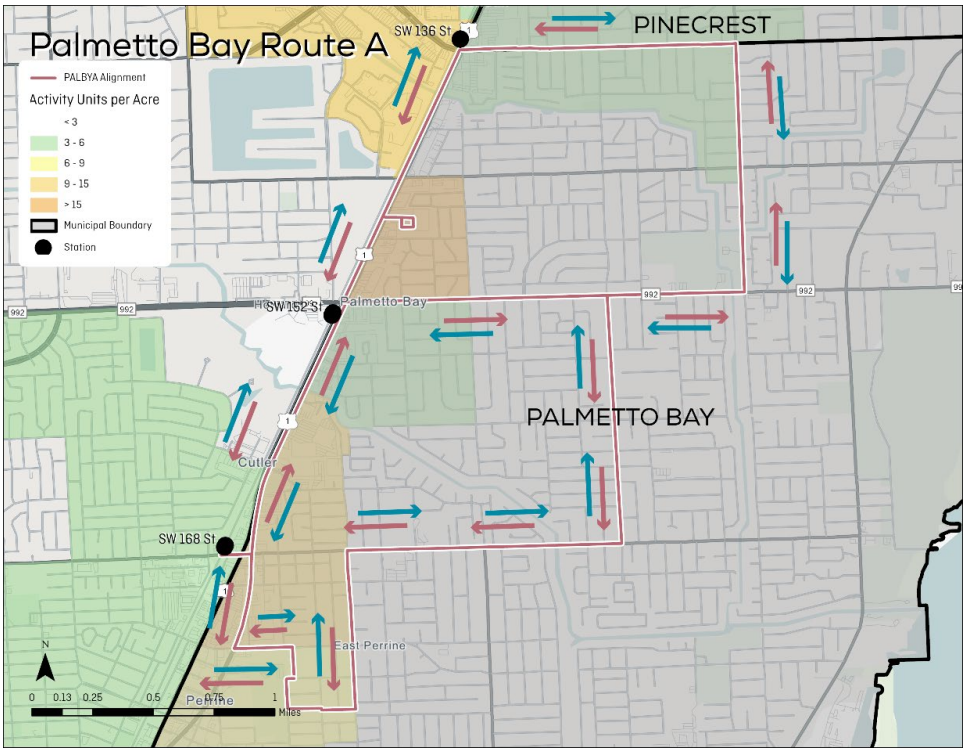


Figure 78 Palmetto Bay Route A Alignment

The Palmetto Bay Route A currently operates from 10 AM to 1 PM, which doesn't cover peak commuter hours during which 363,000 trips originate from the station area. The service also only operates clockwise service, offering limited access southeast of the station area without riding the entire loop. It is recommended to add peak hour service windows of 7:30 to 9:30 AM and 4:00 to 6:00 PM, as well as adding bi-directional service during these peak periods.

To demonstrate the impacts of this recommendation, consider that a rider living on SW 91st Ave would ride the entirety of the Palmetto Bay Route A to reach the stop on SW 92nd Ave, a fifty-minute trip that would be much faster walking, driving, or cycling. Adding bi-directional service would reduce the travel time to two stops, allowing the rider to transfer and travel much farther on the BRT in the same amount of time.

Stops Effected

- Pinecrest and Palmetto Bay
  - SW 136
- Palmetto Bay
  - SW 152
  - SW 168

Table 22 Palmetto Bay Route A Additions

Measure	Before	After
Covered Activity Units	~22,000	~34,500
Riders per Week	~125	~200
Operating Costs	~$75k	~$228k
Vehicle Hours per Week	~20	~60
Number of Vehicles	1	2
Average Headway	~60 minutes	~60 minutes
Percentage of Population in Poverty	7%	7%
Non-White or Hispanic/Latino Percentage	66%	66%

#6 Palmetto Bay Park and Ride Alignment Change

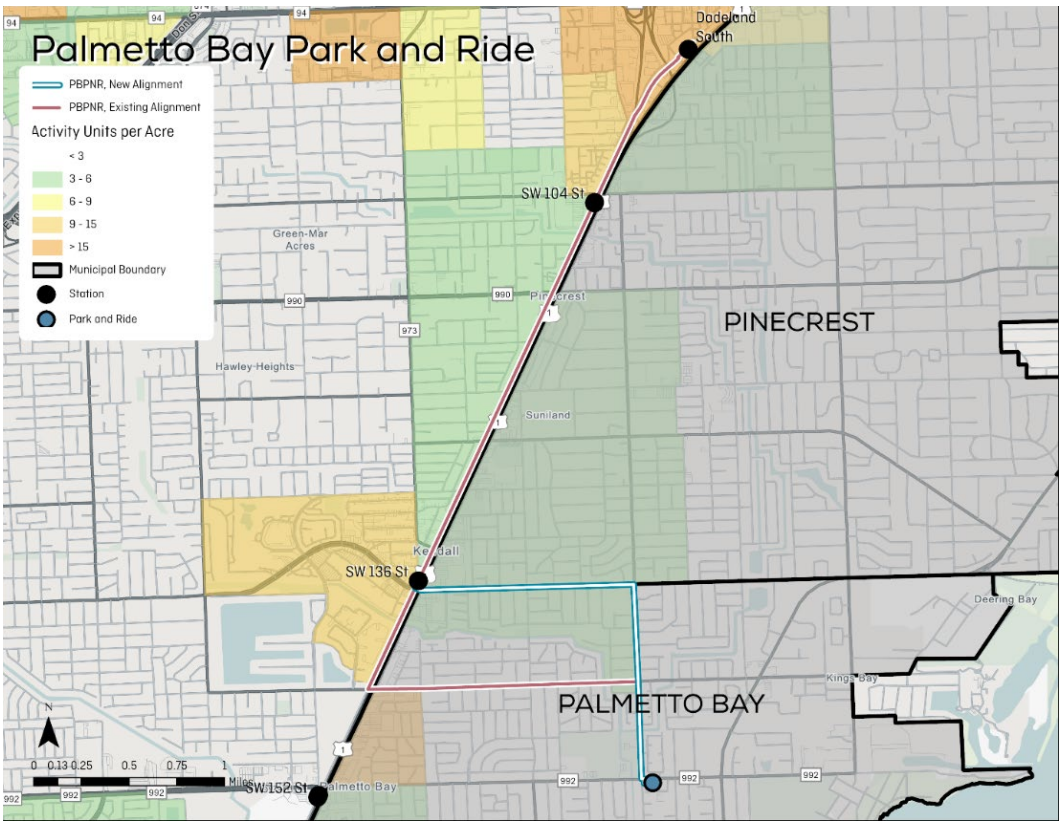


Figure 79 Palmetto Bay Park and Ride Alignment Change

Currently, the Palmetto Bay Park and Ride (PBPNR) runs from SW 152 St and SW 77 Ave straight to Dadeland South with no stops in between. Most of this service will be covered by the future BRT, which will have more frequent headways than the PBPNR. To avoid redundancy and capitalize on the investment of the BRT, it is recommended that the route transfer at the SW 136 St station and use the time savings to add additional stops along this route.

This shorter route will bring riders from the PBPNR directly to the BRT, and the BRT can complete the trip to Dadeland South, or riders can take the BRT south to access additional destinations. The additional stops will also allow pedestrians more access to the station area by essentially providing a short shuttle service. The reduction in trip lengths allows the entire route to be covered by one vehicle while maintaining the 15-minute headways from the original stop.

Stops Effected

- Palmetto Bay
    - SW 136 St

Table 23 Palmetto Bay Park and Ride Alignment Change

Measure	Before	After
Walkable Activity Units	~150	~725
Riders per Week	~ 250	~350
Operating Costs	~$70k	~$35k
Vehicle Hours per Week	~50	~25
Number of Vehicles	2	1
Average Headway	~15 minutes	~15 minutes
Moved Bus Stops	0	8
Percentage of Population in Poverty	7%	7%
Non-White or Hispanic/Latino Percentage	66%	66%

#7 200 Cutler Bay Local Additions

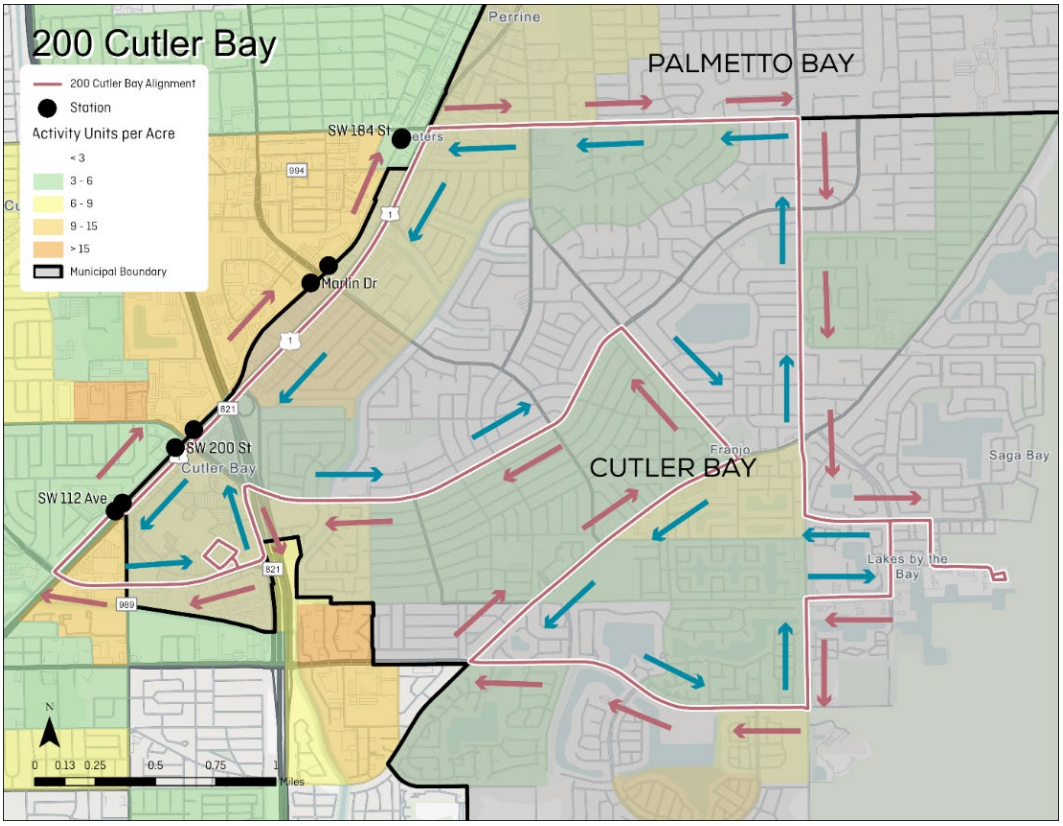


Figure 80 200 Cutler Bay Alignment

The current Cutler Bay service window begins at 8:15 AM and ends at 4:45 PM, which does not serve the 479,000 peak-hour trips that occur between 7:15 and 8:15 AM and between 4:45 and

6:45 PM. Additionally, the current clockwise direction provides limited access to the southeast of the station area without riding the entire loop, which takes roughly 1 hour. The proposed recommendation is to add peak hour service windows of 7:15 to 8:15 AM and 4:45 to 6:45 PM as well as adding bi-directional service during these periods.

To demonstrate the impacts of this recommendation, consider a BRT rider getting off at either SW 200 St or SW 112 Ave and going to either South Dade Regional Library or Dade County District Court. Under the current service model, they must either walk one mile through the mall parking lot or spend 40-50 minutes riding the entire 200 line. Bi-directional service would reduce the same trip to roughly 5 minutes, providing significantly more time for the trunk portion of their trip.

Stops Effected

- Palmetto Bay and Cutler Bay
  - SW 184 St
- Cutler Bay
  - Marlin Drive
  - SW 200 St
  - SW 112 Ave

Table 24 200 Cutler Bay Local Additions

Measure	Before	After
Covered Activity Units	~30,000	~50,000
Riders per Week	~750	~1250
Operating Costs	~$1.12m	~$1.96m
Vehicle Hours per Week	~110	~170
Number of Vehicles	2	4
Average Headway	~ 30 minutes	~ 30 minutes
Percentage of Population in Poverty	14%	14%
Non-White or Hispanic/Latino Percentage	66%	66%

#8 Princeton Circulator Headway Update

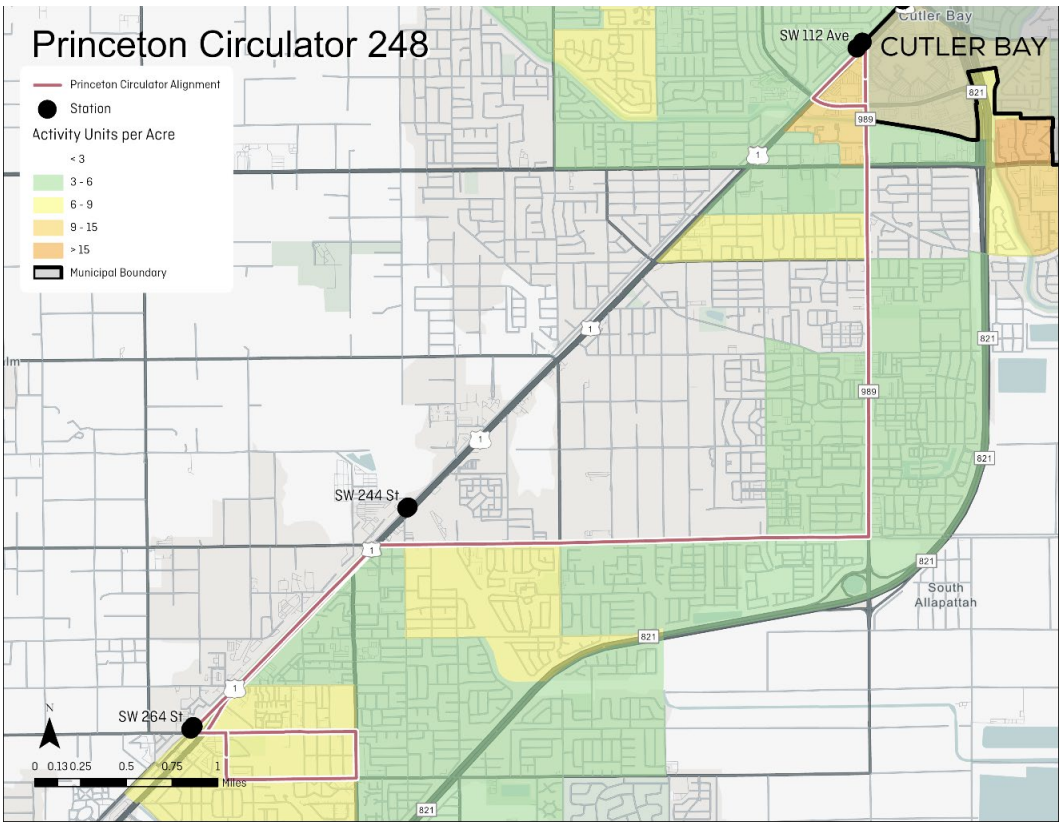


Figure 81 Princeton Circulator Alignment

Currently, the Princeton Circulator runs once an hour from 6:30 AM to 7:30 PM; while the route provides strong access for the BRT stations it serves, it only provides these once per hour in each direction during peak hours. As a result, riders on the Princeton Circulator are particularly vulnerable missed transfers, which could result in an hour's wait for the next bus. The proposed recommendation is to decrease the headway to 30 minutes during peak hours, 6:30 am to 8:30 am and 4 pm to 6 pm, to serve the 317,000 trips more frequently.

Stops Effected

- Cutler Bay
  - SW 112 Ave
- Unincorporated
  - SW 244 St
  - SW 264 St

Table 25 Princeton Circulator Headway Update

Measure	Before	After
Covered Activity Units	~30,000	~60,000
Riders per Week	~180	~300
Operating Costs	~$264k	~$348k
Vehicle Hours per Week	~85	~100
Number of Vehicles	1	2
Average Headway	~ 30 minutes	~15 minutes
Percentage of Population in Poverty	17%	17%
Non-White or Hispanic/Latino Percentage	89%	89%

#9A 35/35A Alignment Change

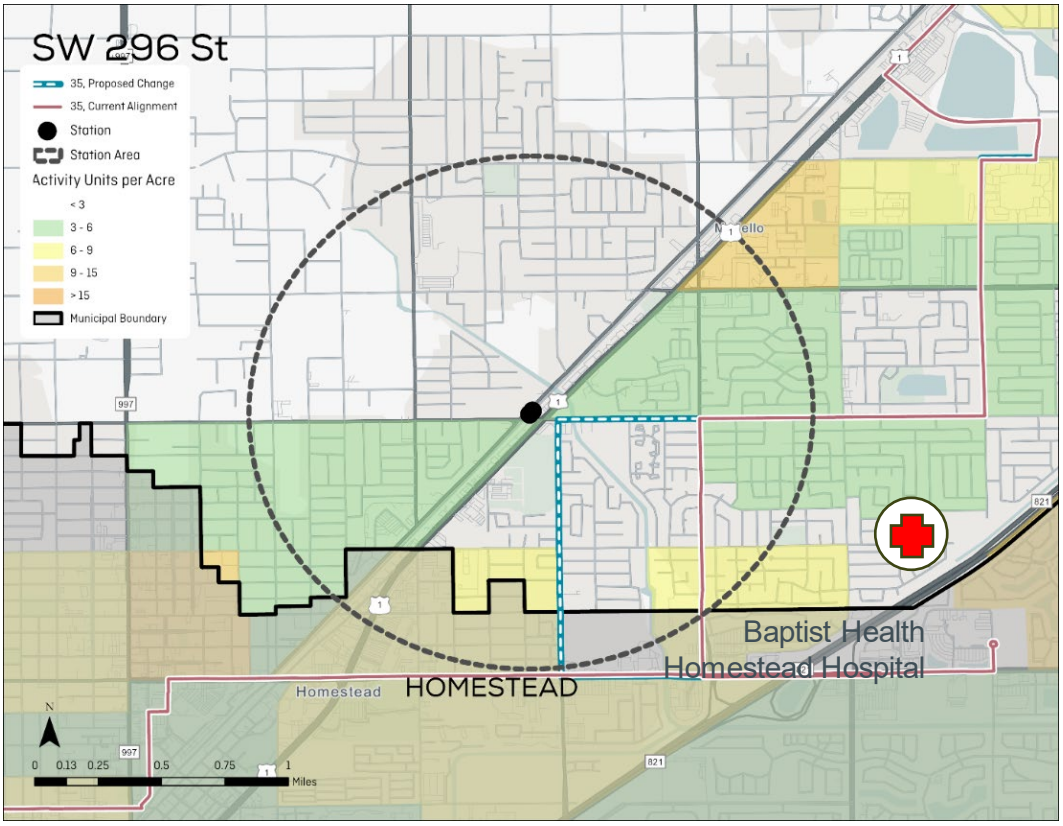


Figure 82 35/35A Alignment Change

Currently the 35/35A Route is the only bus service in the SW 296 St station area station area providing access off the TransitWay. The nearest 35/35A stop is roughly a half mile from the TransitWay station, requiring potential riders to walk a minimum of 10 minutes to use the 35 buses.

By adjusting the alignment to run down SW 162nd Ave instead of SW 157th Ave the walk time from SW 296th St could be reduced to roughly one or two minutes. Short-term, the most significant benefit of this reroute is to streamline access to the Baptist Health Homestead Hospital for passengers traveling from the north. Instead of traveling 25 minutes on the 35 bus from SW 264th St, they would need to travel only 10 minutes on the same bus from SW 296th St. The current road network makes service to both sides of US-1 impossible, so travelers will have to cross US-1 on foot to make connections between the 35 bus and the BRT. This reroute is anticipated only to add 2-4 minutes to the total route length, meaning the recommendation can be accommodated without additional operating costs (albeit a slight increase in bus headways). Additionally, riders using the stops on SW 157th Ave would be displaced and have to use stops ½-3/4 miles away. Direct engagement of these riders is outside the scope of this study, but it is suggested to engage prior to implementing this recommendation.

This recommendation may be more beneficial if future redevelopment around the station area increases activity density and new infrastructure facilitates bus turnarounds at the BRT station. Recommendation 8B provides a recommendation that may be more appropriate in the short term.

Stops Effected

- Unincorporated
    - SW 296 St

Table 26 35/35A Alignment Change

Measure	Before	After
Covered Activity Units	~3,000	~13,000
Riders per Week	~13,500	~13,500
Operating Costs	~$11.89m	~$11.89m
Vehicle Hours per Week	~1000	~1000
Number of Vehicles	15 at peak	15 at peak
Average Headway	~ 20 minutes	~20 minutes
Moved Stops	0	12
Percentage of Population in Poverty	23%	23%
Non-White or Hispanic/Latino Percentage	92%	92%

#9B Baptist Health Homestead Hospital Shuttle Service

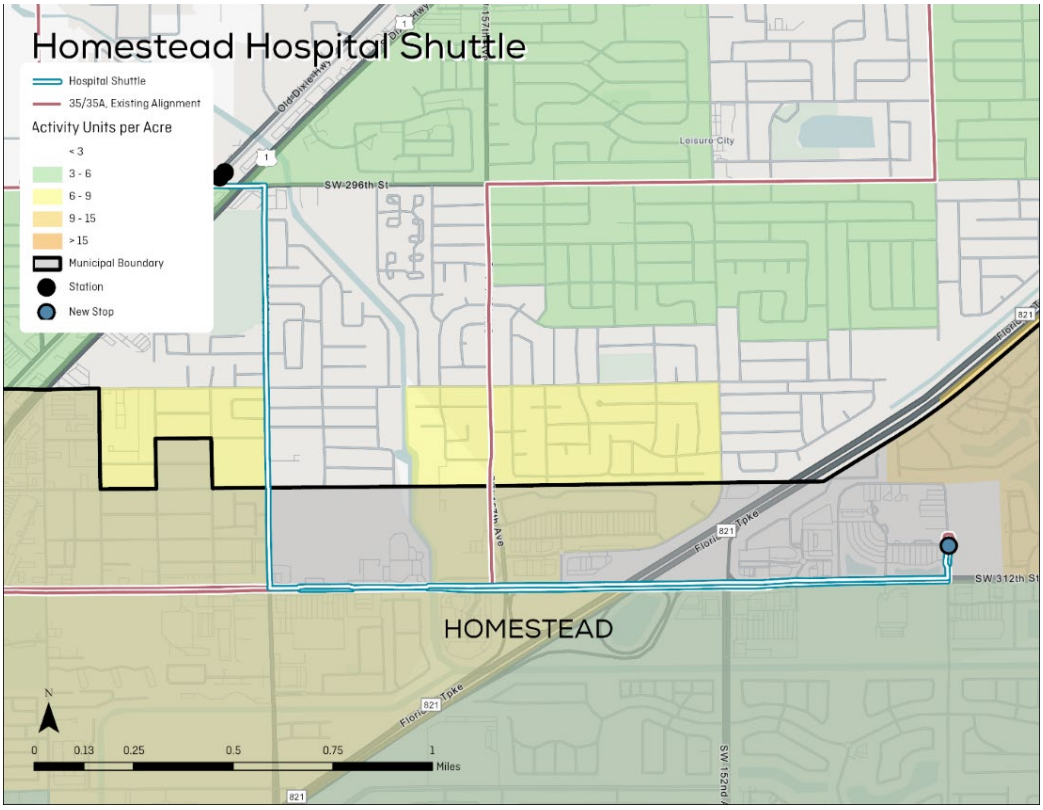


Figure 83 Baptist Health Homestead Hospital Shuttle

One of the most significant activity centers in the South Dade TransitWay Corridor is the Baptist Health Homestead Hospital. Transit riders traveling from the north must currently ride 25 minutes on the 35 bus to reach the hospital. Access could be streamlined by providing a shuttle between the hospital and the BRT station at SW 296th St.

By implementing this shuttle service, transit times could be reduced by 10-15 minutes for southbound riders as compared to the existing access via SW 264th St and the 35 bus. As compared to recommendation #8A, this shuttle service could utilize a smaller vehicle that could more easily turn around at SW 296th St, ensuring that riders can be picked up from the BRT station without having to cross US-1, an especially important consideration for transit riders heading to the hospital.

Stops Effected

- Homestead
  - SW 312 St

Figure 84 Baptist Health Homestead Hospital Shuttle

Measure	Before	After
Covered Activity Units	N/A	~10,500
Riders per Week	N/A	~100
Operating Costs	N/A	~$80k
Vehicle Hours per Week	N/A	~55
Number of Vehicles	N/A	1
Average Headway	N/A	30 minutes
Moved Stops	N/A	0
Percentage of Population in Poverty	N/A	14%
Non-White or Hispanic/Latino Percentage	N/A	89%

#10 Homestead East/West Connector Update

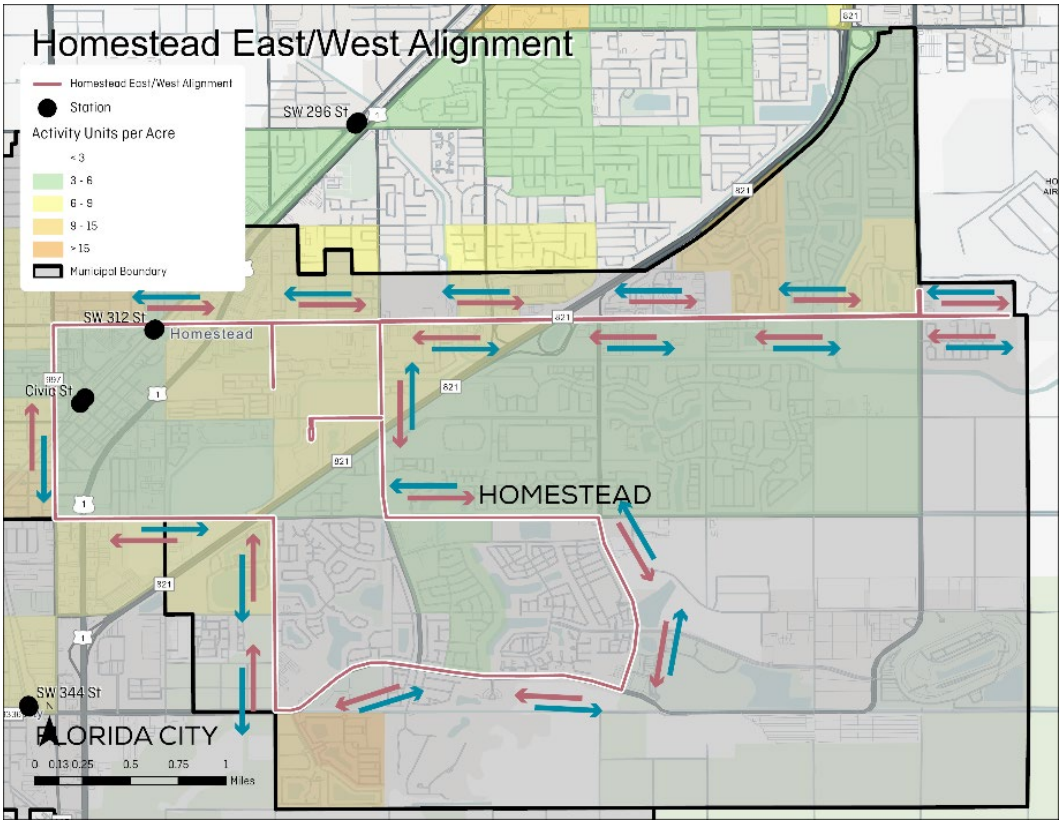


Figure 85 Homestead East/West Alignment

The current service window for the East/West Trolly is 6 AM to 6 PM with a roughly 75-minute headway. While this does capture the peak hours, the infrequency of service makes riders vulnerable to missed connections and long wait times for the next bus. The unidirectional (clockwise) service also limits access to other local routes, such as the downtown trolley, which would require a rider to complete the entire loop.

A rider departing at SW 312 St and attempting to connect to the Downtown Trolley would have to complete the 75-minute loop to travel roughly half a mile. Riders getting off at Civic Street and attempting to travel south down Krome Ave to reach Tatum Park or any hotels would also be required to complete the entire loop.

To address these service gaps, it is recommended that service frequencies be doubled and that bi-directional service be added. The service should also be better marketed to riders by creating and publishing a General Transit Feed Specification (GTFS) feed on services like Google Maps and Waze to help build awareness and increase ridership on the service.

Stops Effected

- Homestead
  - SW 312 St
  - Civic St

Table 27 Homestead East/West Connector Update

Measure	Before	After
Covered Activity Units	~15,000	~30,000
Riders per Week	~ 300	~600
Operating Costs	~$342k	~$555k
Vehicle Hours per Week	~70	~130
Number of Vehicles	1	2
Average Headway	~ 75 minutes	~37.5 minutes
Percentage of Population in Poverty	18%	18%
Non-White or Hispanic/Latino Percentage	91%	91%

Service Recommendations Cost Benefit Summary

This section presents planning-level estimates of ridership and operational costs for each recommendation. Ridership estimates were extrapolated from existing ridership patterns based on expanded jobs and housing access resulting from each recommendation. Cost estimates were determined using the Department of Transportation and Public Works' Remix transit planning software.

Recommendation		Change In Accessibility	Change In Annual Ridership	Peak Vehicles	Change In Annual Operating Cost	Est. Cost/Trip
#1	Pinecrest On-Demand Expansion	+16,500	+18,720	+1	$240k	$13
#2	Palmetto Bay On-Demand Expansion	+3,000	+1,560	+0	$0	$0
#3	Cutler Bay On-Demand Expansion	+5,500	+10,400	+1	$130k	$13
#4	SW 264th St. New On-Demand Service	+11,000	+13,000	+2	$300k	$23

Figure 86 On-Demand Recommendations Cost Benefit Summary

Recommendation		Change In Accessibility	Change In Annual Ridership	Peak Vehicles	Change In Annual Operating Cost	Est. Cost/Trip
#5	Palmetto Bay Route A	+12,500	+3,900	+1	$153k	$39
#6	Palmetto Bay Route Park and Ride	+575	+5,200	-1	$(35)k	$(7)
#7	Cutler Bay 200	+20,000	+26,000	+1	$840k	$32
#8	Princeton Circulator	+30,000	+6,240	+2	$84k	$13
#9A	35/35A Alignment Change	+10,000	+0	+0	$0	$0
#9B	Baptist Health Homestead Hospital Shuttle	+10,500	+5,000	+1	$80k	$16
#10	Homestead Trolly	+15,000	+15,600	+1	$238k	$14

Figure 87 Fixed Route Recommendations Cost Benefit Summary

Service Recommendations & The Better Bus Network

As described in Section 1 – Literature Review and Data Gathering, Miami Dade County is launching the Better Bus Network system redesign, which focuses on increased bus services and frequencies. Detailed information about the better but network was not available in time to be incorporated in this study, but this section provides a high-level cross comparison between the two.

First-Last Mile Recommendations #1 Pinecrest On-Demand Expansion, #2 Palmetto Bay On-Demand Expansions, and #3 Cutler Bay On-Demand Expansion recommend expanding On-Demand service to cover new activity centers outside the jurisdictional boundaries. The Better Bus Network includes an expanded suite of on-demand service areas in the corridor. Rebranded as "MetroConnect," the new service areas cover most of the gaps addressed by this study except for two areas: (1) the Falls commercial and business park west of Pinecrest and Palmetto Bay and (2) the Community Health of South Florida campus southwest of Cutler Bay.

First-Last Mile Recommendation #4 SW 264th Street New On-Demand Service is consistent with the better bus network, as the entire recommended services area is included in the new South Dade MetroConnect on-demand service area.

Recommendation #7 of FLM Study proposes an extension of service hours and multidirectional service for Cutler Bay 200. Better Bus Network Route #500, keeps the same route as Cutler Bay 200, with service 8:40 AM until 4:40 PM. This recommendation could still be implemented with the Better Bus Network and increase connectivity to the BRT.

Recommendation #8 of this Study proposes multidirectional service for Princeton Circulator 248 and more frequent service during peak hours. While the new BBN does not keep the original 248 Princeton Circulator, the area is now served by Route 70, covering an extended

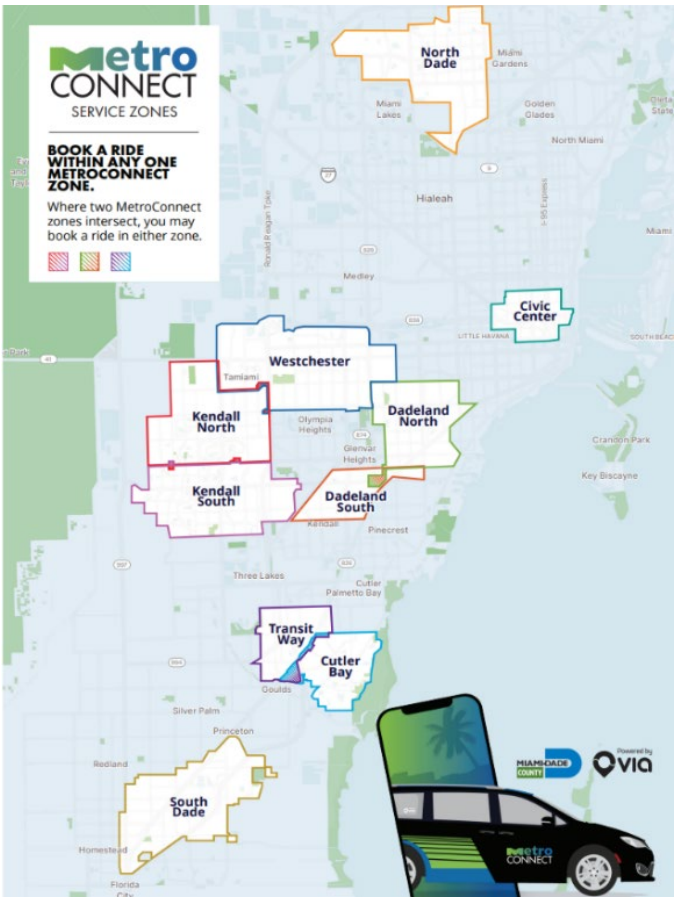


Figure 88 DTPW MetroConnect Service Zones Flyer

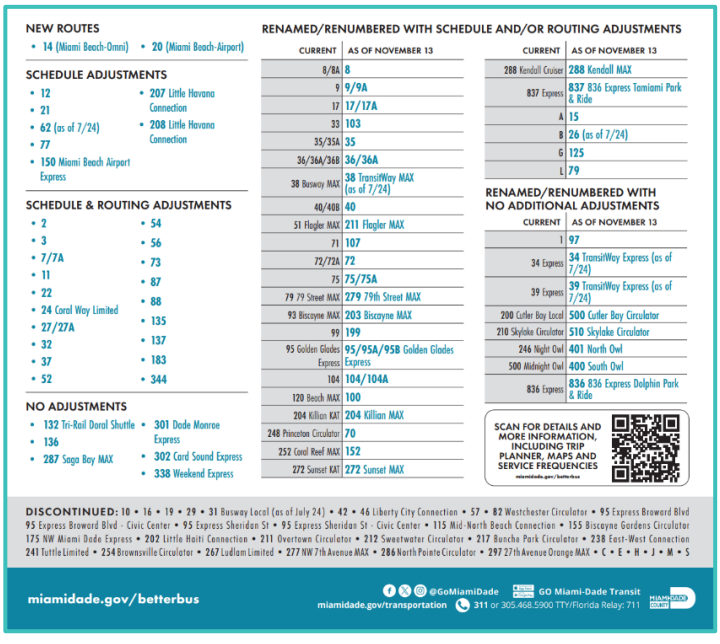


Figure 90 Fixed Route Changes, Better Bus Network

version of the former route and Route 35. Route 35 serves from the station at SW 112 Ave to the Florida City SW 344 St. Station, including the 312 St. Station. Route 70 continues to operate hourly on weekdays, and Route 35 operates seven days a week with off-peak service operating hourly and peak service operating every 20-30 minutes.

Potential Funding Sources

This section is intended as a primer on public transit funding sources and draws connections between those sources and the recommendations put forward by this study relevant to each funding source. Many of these sources are already being utilized by Miami Dade Department of Transportation & Public Works for existing programs and services.

		State of Good Repairs	RAISE	CIG	STBG	SMART	Urbanized Area Formula Grants	Grants for Buses and Bus Facilities
#1	Pinecrest On-Demand Expansion		$				$*	
#2	Palmetto Bay On-Demand Expansion		$				$*	
#3	Cutler Bay On-Demand Expansion		$				$*	
#4	SW 264th St. New On-Demand Service		$				$*	
#5	Palmetto Bay Route A	$	$				$	$!
#6	Palmetto Bay Route Park and Ride	$	$				$	
#7	Cutler Bay 200	$	$				$	$!
#8	Princeton Circulator	$	$	$			$	$!
#9A	35/35A Alignment Change	$	$				$	
#9B	Baptist Health Homestead Hospital Shuttle Service		$				$	$!
#10	Homestead East/West Connector Update	$	$			$!	$	

$ denotes funding that is only available if the on-demand provider is a contractor, Freebee, GO Connect, or similar cannot be a subrecipient; $! denotes financing that is only applicable to some element(s) of the project; $ denotes programs offering capital funding, $ denotes programs with funds available for planning related uses; $ demotes programs with funding available for capital and planning projects.*

Table 28 Recommendations Financial Feasibility

State of Good Repairs

The State of Good Repairs Grant, funded by the Federal Transit Administration, provides support for repairs and improvements to existing transit systems. The funds are available for eligible applicants' capital projects, including transit agencies, state and local governments, and Native American tribes. Form of Good Repair Grants funds are available for capital projects that "maintain a fixed guideway or a high-intensity motorbus system in a state of good repair, including projects to replace, rebuild, support, and rehabilitate: rolling stock; track; line equipment and structures; signals and communications; power equipment and substations; passenger stations and terminals; security equipment and systems; maintenance facilities and equipment; and operational support equipment, including computer hardware and software.

Eligible Recommendation(s)

Based on these eligible project requirements, Recommendations 5, 6, 7, 8, 9A and 10 would qualify.

RAISE

RAISE, Rebuilding American Infrastructure with Sustainability and Equity, is a discretionary grant program under the US Department of Transportation. Expanded under the Bipartisan Infrastructure Law, this program has awarded $2.2 Billion to rural and urban communities. The funding is awarded to capital and planning projects, with most of the money allocated towards capital projects. Eligible transit-supportive projects, including "transit-oriented development projects and mobility-on-demand projects that expand access and reduce transportation cost burden, are eligible for RAISE grant funding."

Eligible Recommendation(s)

According to RAISE's funding requirements, all service recommendations would be eligible for the RAISE discretionary grant program in some capacity.

CIG

CIG, Capital Investment Grants, is a discretionary grant program supported by the Federal Transit Administration. Eligible projects must fall into one of the three categories: New Starts, Small Starts, and Core Capacity projects, each with a unique set of requirements. To qualify for funding through the CIG program, transit agencies must complete specific phases before receiving a construction grant agreement, such as Project Development and Engineering for New Starts and Core Capacity projects and Project Development for Small Starts projects. The FTA evaluates projects based on criteria related to project justification and local financial commitment. Projects are required to have Traffic Signal prioritization, and the project must represent a substantial investment in a single route in a defined corridor or subarea; additionally, projects related to transit must meet the detailed definition for fixed guideway BRT in its State of Good Repair Circular. The eligibility of each recommendation depends on the progress of the Advanced Traffic Management System (ATMS) Project in the given areas, and the route must meet the minimum bidirectional requirements and the total service hour requirements.

Eligible Recommendations(s)

Recommendation 8 is the only qualifying recommendation for CIG funding; the Princeton Circulator meets the bidirectional and service span requirements.

SMART

SMART, Strengthening Mobility and Revolutionizing Transportation, is a discretionary grant offered by the US Department of Transportation. The grant aims to support "advanced smart city or community technologies and systems in a variety of communities to improve transportation efficiency and safety" through funding relevant projects. Funding is eligible for various efforts, including Systems Integration, the "integration of intelligent transportation systems with other existing systems and other advanced transportation technologies."

Eligible Recommendations(s)

The Homestead Shuttle Service, Recommendation 9B, could be partially funded through this discretionary grant for their General Transit Feed Specification (GTFS) feed of the final service, which allows services like Google Maps and Waze to use the trolly service in their routing services, ultimately increasing ridership as potential riders have a new avenue to discover the trolley service.

Urbanized Area Formula Grants (5307)

Urbanized Area Formula Grants, provided by the Federal Transit Administration, offer planning and capital funds to qualifying projects in urban areas. As an urban area with more than 200,000 people, Miami-Dade County cannot use funding for operating expenses. Projects eligible for Urbanized Area Formula Grants include: "PD&E of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement, overhaul and rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guideway systems including rolling stock, overhaul and rebuilding of vehicles, station infrastructure, track, signals, communications, and computer hardware and software."

Eligible Recommendations(s)

According to Urbanized Area Formula Grants' specifications, most recommendations could qualify in some capacity. Recommendations 5, 6, 7, 8, 9A, 9B and 10 would qualify as is, and Recommendations 1, 2, 3, and 4 would qualify, provided that the on-demand provider is a contractor and is not themselves a sub-recipient of 5307 grant funding.

Grants for Buses and Bus Facilities

Grants for Buses and Bus Facilities is a competitive program overseen by the Federal Transit Administration. To qualify, the funds must support a fixed route system and use the capital funds provided to "rehabilitate and purchase buses and related equipment and to construct bus-related facilities, including technological changes or innovations to modify low or no-emission vehicles or facilities."

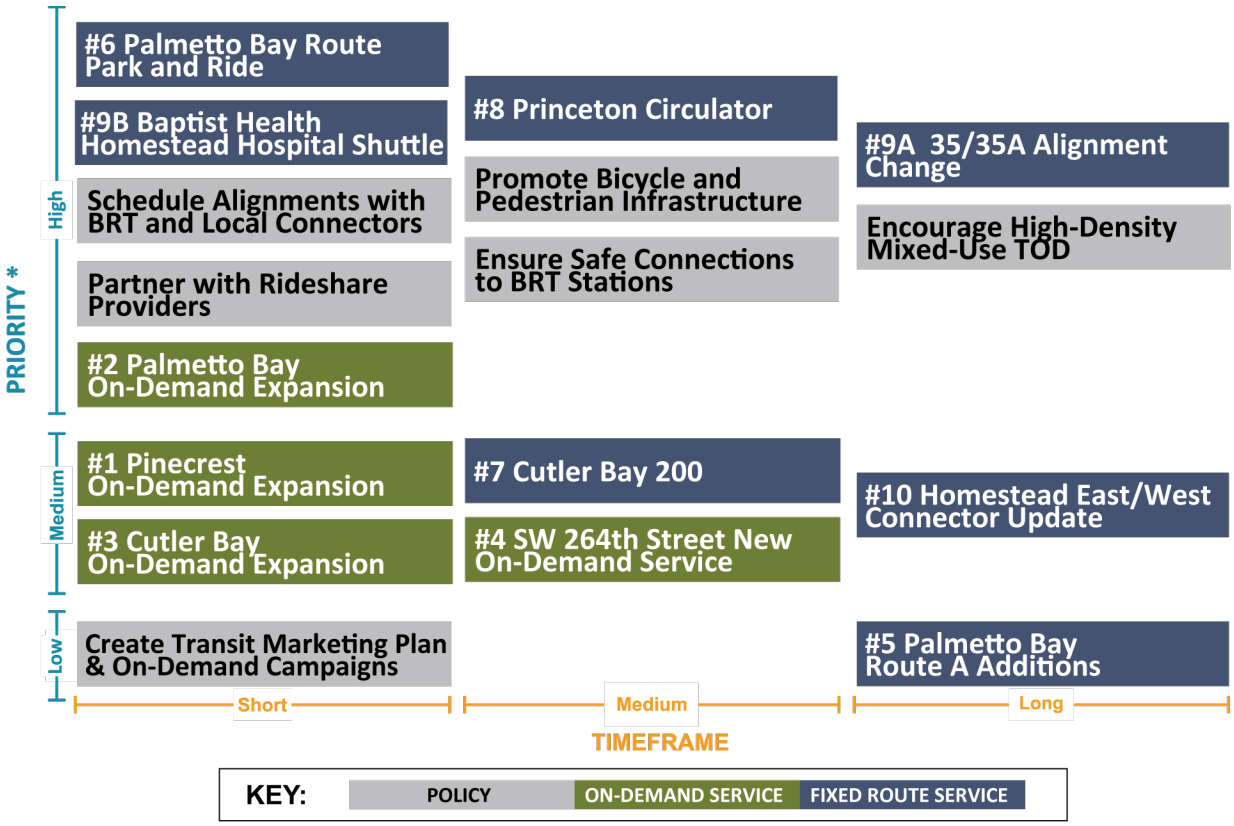
Eligible Recommendations(s)

Recommendations 5, 7, 8, and 9B are eligible for funding the additional buses needed, but additional funding would be required to support the other elements of the project.

Next Steps

The policy and service recommendations made by this study speak to the needs, impediments, and opportunities relating to first and last-mile transit access to BRT stations on the South Dade TransitWay. These recommendations are well-grounded in planning theory in technical analysis, but remain high-level recommendations. The timeline and prioritization, **Figure 92**, resulting from the study findings help inform the process for next steps.

While these recommendations are well supported by the analysis and findings, at the conclusion of this study, it will be up to the discretion of each locality and the transit operating agencies to decide which recommendations are worth pursuing. It is suggested that they determine the recommendations to pursue and further refine them with detailed technical analysis, public engagement, service planning, and implementation.



**Recommendations are designated high,medium, or low priority. There is no hierarchy within the categories.*

Figure 91 Recommendation Timeframe and Priority

APPENDIX A – LITERATURE & PROJECT REVIEW

Primary Documents

SMART Plan Corridor Inventory: South Dade TransitWay Corridor

Completed: December 2017
For: Miami-Dade TPO
Scale: Half-mile area surrounding TransitWay (primarily)

Purpose

This inventory examines the current demographic, economic, and land use conditions within the South Dade TransitWay Corridor and state, County, and local plans within a half-mile of the TransitWay. The overall purpose of the inventory is to "identify a complete picture of the existing conditions within the corridor area and identify needs and deficiencies to further support transit and transit-oriented development."

Major Findings

The *SMART Plan Corridor Inventory: South Dade TransitWay Corridor* ("the Inventory") characterizes the study area within one half-mile of the TransitWay.

Primary points of interest that drive traffic include Dadeland Mall, The Falls Mall, Jackson South Community Hospital, Southland Mall, Miami-Dade College Homestead Campus, and the Florida Keys Outlet Center.

An assessment of current land use data finds that **residential** (42.9%), **commercial** (13.6%), and **undeveloped** (10.6%) are the **three primary land uses** in the study area. Generalized zoning aligns with current land use, with areas zoned as Urban Center Districts and Residential Single-Family districts varying in densification and walkability. The TransitWay Corridor's housing stock is primarily single-family detached, but some multifamily housing exists.

There are significant transit-dependent (TD) populations throughout the entire corridor, and particular concentrations at the southern end and along the entire western side of the TransitWay. From the station at SW 216th to SW 264th, populations identified as medium transit dependency are consistent along the south of the TransitWay. Medium transit-dependency populations are seen on both the north and south at the SW 272nd St station before **high transit-dependent populations surround the TransitWay from SW 312th to the end of the route at SW 344th St station.**

The Inventory frequently notes that spatial differences and inequalities are present along the Corridor. The most notable takeaways include:

- The northern third of the study area has higher income-levels than the southern two-thirds;
- The block group at the southernmost stop on the TransitWay has the lowest household income in the study area;
- A majority of vacant parcels are in the southern two-thirds of the corridor.
- A large area in the northern quarter of the corridor has low building-to-land-value ratios, indicating that the parcels are priced for redevelopment.

Tying it Together

The inventory concludes that the TransitWay can sustain high-capacity transit and redevelop into a pattern that supports connectivity. The Inventory flags the immediate challenges that will be factored into this study: lower relative densities than the County, single-family detached housing, large transit-dependent populations surrounding the TransitWay, and the proximity of the Urban Development Boundary. These will inform the transit needs assessment driving the study recommendations.

SMART South Corridor Project Development & Environmental (PD&E) Study

Completed: August 2017
For: Miami-Dade DTPW
Scale: South Corridor

Purpose

The "SMART South Corridor Project Development & Environmental (PD&E) Study" was created to aid the selection of a Locally Preferred Alternative (LPA) for the South Corridor by the Miami-Dade County TPO.

Major Findings

A feeder bus network is included in this plan to provide optimal FLM connectivity and to reach as many neighborhood destinations and services as possible. The bus network consists of twelve circulator route alignments ranging between 7.8 to 21.4 miles during peak hour service. These routes were determined considering existing and future high-density population and employment areas, major activity centers, hospitals, community centers, parks, city halls, middle and high schools, and college/university campuses within a two-mile buffer on either side of the TransitWay. The visuals on pages 133-140 help comprehensively understand the suggested network.

In the existing conditions, deficiencies primarily fall into **regional connectivity** and **northern traffic:**

- Traffic increases steadily from south to north in the study area, with the northern portion of the corridor experiencing some of the region's worst traffic congestion,
- Lack of alternatives to US-1 during rush hour,
- Gap in service between the TransitWay and the Kendall Corridor

The current infrastructure addresses the safety of pedestrians and bicyclists along the corridor. Noting that the distance between formal pedestrian crossings can be as far as three-quarters of a mile along the TransitWay.

Additionally, the study predicts that traffic and the need for connectivity will increase, with an estimated 94,000 residents living along the corridor by 2040, a 53% increase from 2010.

Tying it Together

This PD&E study focuses on mobility and access to transit stations, concluding that biking and walking infrastructure improvements surrounding the stations would increase ridership and impact first-last mile connectivity. As the population of the South Corridor grows, there is local support for first last-mile access to the TransitWay. The study emphasizes the need for new and improved bike infrastructure and pedestrian amenities to improve connectivity and station access. Those amenities are also critical for ensuring connectivity to the transit infrastructure for feeder services being explored in this study.

South Corridor Rapid Transit Project LPA Selection

Completed: July, 2018
For: Miami-Dade TPO
Scale: ½ to two-mile area surrounding TransitWay

Purpose

This presentation summarizes the processes and factors that led to the selection of BRT as the locally preferred alternative (LPA).

Major Findings

During the transit technology selection process for the TransitWay, the proposed technology alternatives (heavy-rail transit, light-rail transit, and connected and automated vehicles), were all eliminated due to cost and flexibility concerns (and short-term feasibility in the case of CAVs). The LPA selection process identified the primary benefits of BRT as:

- Same or improved travel times compared to rail options, with crossing gates,
- "Right-sized" solution for ridership,
- Transit vehicle flexibility to go off the corridor route as needed,
- Federal and state funding opportunities,
- Function as a step toward rail by helping to develop ridership base and by partially, implementing infrastructure and ROW elements necessary for rail,

The study predicted that a BRT line and the feeder bus network would increase ridership to around 10,000 - 11,000 by 2040.

Tying it Together

The TransitWay is the primary alignment with which the FLM connections are under investigation in this effort. The LPA selection process will inform this criteria used by this study to evaluate FLM and feeder transit service adjustments.

South Dade TransitWay Corridor Economic Mobility and Accessibility: Final Report

Completed: December 2019
For: Miami-Dade TPO
Scale: 5–10-minute walking radius around each BRT station

Purpose

This report discusses the economic impact and accessibility of the South Dade TransitWay and potential multimodal improvements around each BRT station to increase ridership.

Major Findings

This report recognizes BRT as the Locally Preferred Alternative (LPA) for South Dade TransitWay. At the time of this report, it was estimated that **the BRT would attract 10,000-11,000 new transit trips per day in 2040**.

The analysis within this report closely studies each of the 15 recommended stations. Various analysis measures are used to rank the stations, including existing conditions and predicted future population growth and ridership. The final ranking places Cutler Bay/SW 112th Ave/ Southland Mall Station first as the station with the highest potential for future development (complete ranking on page 123). SW 244 St and MDC- Homestead were also identified as stations to analyze further for station area development.

The **top-ranking station** at **Cutler Bay/SW 112th Ave/ Southland Mall Station** has retail and business near the mall in addition to lower-density residential. A portion of the ½ mile radius from the station is located within an Opportunity Zone, presenting long-term future growth potential.

The key recommendations include walkable streets, crosswalks, and bike/ scooter/ride-share locations to improve pedestrian access and overall connectivity. Additionally, emphasis is placed on the perceived safety of modes, so the mere presence of bike or pedestrian infrastructure does not deem streets bikeable or walkable.

- **Walkable streets** require a minimum 5-foot sidewalk, street trees, pedestrian-scaled lighting, and parallel parking (focusing on the 5-minute walking radius of stations)
- The **desired bike infrastructure** is safe and convenient, connecting between places of interest and spanning beyond the 5-to-10-mile radius. The proposed bike infrastructure includes bike lanes (ideally designed as Buffer Bike Lanes) and bike paths (one-way raised cycle track with a 5-foot minimum width).
- The Station at Cutler Bay/SW 112th Ave/ Southland Mall Station has retail and business near the mall in addition to lower-density residential. A portion of the ½ mile radius from the station is located within an Opportunity Zone, presenting long-term future growth potential.
- Naranja Lakes is the only Traditional Neighborhood Development district in the and is located between SW 232 Street and SW 288 Street and is administered by the Naranja Lakes Community Redevelopment Agency (CRA). The CRA encourages TOD along U.S.-1.

Tying it Together

This Final Report recognizes the improvements to existing bicycle and pedestrian infrastructure surrounding the stations as contributions to increased ridership. Southeast Line Light Rail Stations' last-mile connectivity to workplaces were identified as a major barrier to utilizing transit.

SMART Plan South Dade TransitWay Existing Conditions Intersection Areas Inventory

Completed: September 2021
For: Miami Dade
Scale: ½ Mile of TransitWay

Purpose

This inventory consists of a literature review and field study to help determine the areas with the most infrastructural need surrounding the stations and where multimodal transportation is hindered. It was created to aid the South Dade TransitWay Corridor Rapid Transit Project.

Major Findings

Pedestrian and bicycle field reviews were conducted **for the forty-eight intersection areas** (116 total intersections). The document identifies future traffic improvement needs for the safety and operation of cross-street intersections along the South Dade TransitWay through field reviews of the intersection areas.

An inventory of the existing infrastructure of roadways, pedestrian facilities, and bicycle facilities within a half mile of the TransitWay was created using field reviews and a literature review. The inventory identified connectivity and accessibility gaps for pedestrians and bicyclists as **"critical corridors."** These critical corridors underwent further study to determine recommendations

based on **existing infrastructure, proximity to transit, and demand**. Improvement recommendations were then separated by priority or type of facility.

- 100 projects are considered Tier 1, corridors with a missing sidewalk on one or both sides of the road and the roadway connected directly to a transit station stop and/or urbanized area/development cluster,
- 47 projects are Tier 2, if a segment did not connect directly to a transit station or an urbanized area/development cluster,
- 14 projects are Tier 3, which encompasses all other sidewalk gaps,
- 44 projects are for Bicycle Facilities,
- 72 Non-Tier projects

The 277 total recommended projects are estimated at $22.1 million. "TransitWay Improvements" are mapped in the inventory (p. 23-27); location, recommendation, federal aid qualification, and cost are detailed in the document (p.129-132).

Tying it Together

This inventory details the existing conditions of the intersections along the South Dade TransitWay. Most accidents occur at intersections, and it is essential to determine the high-risk intersections. The existing conditions of each station's pedestrian and bike infrastructure will inform how well that infrastructure supports feeder transit service. Intersections with high transit ridership potential and poor infrastructure could be elevated in terms of funding prioritization.

SMART Plan South Dade TransitWay Corridor Land Use Scenario & Visioning Planning

Completed: October 2019
For: Miami-Dade TPO
Scale: South Dade TransitWay, ½ mile radius from stations

Purpose

The *Land Use Scenario and Visioning Plan for the South Dade TransitWay Corridor* provides a technical basis for transit-supportive land uses within the corridor. The project's primary purpose is to increase the number of passengers using the South Dade TransitWay to get to the urban core of downtown Miami.

Major Findings

In 2017 three Charettes involving 100 locals were conducted regarding the South Dade TransitWay Corridor. When asked about the "most important goals" for the future of the South Dade TransitWay Corridor, the three features ranked the most were **Enhance Transit Service, Increase Job Opportunities, and Create Walkable Communities**.

The study examined the preferred population for each of the 15 Station Areas relative to existing patterns, and six station areas do not meet or exceed the goal population vision. The six stations identified have industrial and office designations for parcels near the TransitWay. It is suggested that the County consider more mixed-use and additional housing opportunities.

A review of land use policy for the municipalities along the South Dade TransitWay was conducted to determine areas of opportunity, existing regulations, and community acceptance. The land use policy review (p. 109-142) reveals potential obstacles to development and discoveries of **inconsistencies between the Future Land Use Map and the Zoning Map.** The area near the current terminal in Florida City was noted because the designation is a combination of

Commercial and Low-Medium Density Residential future land use categories. These designations are intended to allow for low-intensity development and do not encourage compact, integrated mixed-use development.

Tying it Together

This source confirms the community's desire to use transit and walkable communities. The land use studies conducted for each station are helpful in identifying designation changes needed in the Town of Cutler Bay (allow for more residential), the City of Homestead (revisit parcels zoned Light Commercial for Transit Supported Residential or Mixed Use), and in Florida City to (increase densities for Transit Supported Residential near the TransitWay). Analysis of feeder transit service can further outline where zoning inconsistencies might inhibit ridership.

Secondary Documents

2045 Long-Range Transportation Plan

Completed: September 2019
For: Miami-Dade TPO
Scope: Miami-Dade

Purpose

The 2045 Long-Range Transportation Plan (LRTP) is a visioning and long-range document for the entire Miami-Dade Region. The plan aims to update the 2040 LRTP from 2014 and help residents, businesses, and policymakers envision the future of transportation in the Miami-Dade region from 2018 to 2045.

Major Findings

The following findings are most relevant to South Dade FLM Connectivity:

- The South Corridor's population is projected to experience the highest overall growth for the region, with a 50% population increase and a 65% employment increase from 2010 to 2040.
- Cutler Bay, Palmetto Bay, and Pinecrest implemented on-demand feeder routes to aid first last-mile connections.
- Park and Ride/intermodal terminals are multimodal and intermodal with uses for transit access and carpooling, encouraging transit ridership and providing opportunities for Transit Oriented Development (TOD).

The plan also includes regional planning programs, including Safe Routes to School (SRTS), Vision Zero, Dadeland South Intermodal Station Plan (& South Dade Bike Plan), GreenPrint, and BikeSafe WalkSafe.These programs are detailed in Ongoing and Future Planning Projects.

Tying it Together

This plan serves as an overview of the conditions across the County. Its primary importance to this FLM Project is its inclusion of regional planning programs that impact the South Dade Corridor and foster understanding of the SMART Plan at the regional scale.

Evacuation Planning Assessment for the US 1 and SW 344 Street Intersection Area

Completed: June 2012
For: Miami-Dade MPO
Scale: US 1 and SW 344 Street

Purpose

The "Evacuation Planning Assessment" proposes permanent operational and capacity improvements to the intersection of US 1 and SW 344 Street to accommodate future travel demand, especially during a Florida Keys evacuation event.

Major Findings

During a major hurricane event, such as a Category 3, 4, or 5 storm, over 73,000 residents and tourists must evacuate within 24 hours along the Monroe County evacuation route to reach the designated shelter of the Florida Keys, Florida International University. Along the evacuation route between the Upper Keys and the HEFT northbound on-ramp, the signalized intersection of **US 1 and SW 344 Street** is critical for evacuation events.

Tying it Together

The intersection of US-1 and SW 344 St in Florida City is the terminal station of the TransitWay. As First Last Mile connection improvements are planned around the terminal, we must ensure that changes do not adversely affect evacuation plans.

SW 244th Street (Princeton Station) Mobility & Accessibility Study

Completed: 2021
For: Miami-Dade TPO
Scale: About ½ mile walkshed from Princeton Station

Purpose

As part of planned BRT services, the TPO investigated replacing the existing Park and Ride at SW 244th Street with a BRT station. The study investigated strategies to improve access to the station and nearby Princeton and Naranja communities.

Major Findings

The *SW 244th Street (Princeton Station) Mobility & Accessibility Study* summarizes the results of a transportation preference survey conducted as part of the study of residents in Naranja and Princeton. The study area extends up to two-mile travelshed from the station when relating to overall connectivity; the report focuses on one mile or a half-mile radius when relating to pedestrian and bicycle infrastructure. Of the responding residents in the survey:

- Sixty percent (60%) indicated they'd like to walk to shopping, restaurants, and recreational activities,
- Sixty-five percent (65%) are concerned about walking and biking conditions,
- Less than ten percent (10%) named public transit itself as a concern for transportation
- Only six percent (6%) named high cost as a transportation concern
- Forty-nine (49%) said they would bike or walk more if there was more bicycle and pedestrian infrastructure
- When imagining what their "ideal" neighborhood looked like, seventy-five percent (75%) of respondents selected a walkable, urban setting
- Respondents ranked cost and availability equally when answering what would make them use micro-mobility more. Note that cost was the least-concerning item when residents were asked about transportation concerns, but it became one of the top concerns for micro-mobility.

The study shows that the population west of US-1 has lower household income and significantly less walk access than east.

The field review shows connectivity gaps in the sidewalks, poor lighting, and lack of bicycle accommodations, which aligns with other studies.

After combining survey results, design considerations, and areawide needs, the study concludes with short-, medium-, and long-term implementation steps that include highly specific facility improvements. Improvement types included addressing sidewalk gaps, deficiencies, resurfacing, retiming, wayfinding, and new/improved cycling facilities.

Tying it Together

While highly particular, the approach, framing, and implementation steps found in the *SW 244th Street (Princeton Station) Mobility & Accessibility Study* exemplify a station area study approach that could be repeated throughout the TransitWay to target weak points requiring more detailed attention.

Florida City Hub Mobility and Accessibility Study

Completed: March 2021
For: Miami-Dade TPO

Scale: Florida City Municipal Boundary

Purpose

The TPO created this mobility and accessibility study to identify the appropriate scale of "transportation technology, infrastructure, and amenities to facilitate the usage of the BRT station and efficient multimodal connections." The study focuses on the proposed Park and Ride station for the South Dade TransitWay BRT at Palm Drive/SW 344th Street within Florida City. To support access to the proposed station and the station area's development potential, the TPO conducted this study to identify the appropriate scale of transportation technology, infrastructure, and amenities to facilitate the usage of the BRT station and efficient multimodal connections necessary to achieve a comprehensive mobility network.

Major Findings

Similar to the SW244th Street study, this effort involved a transportation preference survey. This included understanding residents' transportation concerns and bike/ped improvement areas. The plan also includes a lit review of the relevant plans for the station area. An analysis of walking accessibility for all transit stops was conducted, as shown in Map 11. Nearly every parcel within the UDB is within a 15-minute walk of a transit stop; Florida City's compact design is ideal for bike and pedestrian commuting, but factors including transit cost and hours and first-last mile infrastructure prevent residents from utilizing transit. Opportunity areas for bike share locations BRT Terminal Station and the Florida Outlet Mall. Specific recommendations for pedestrian infrastructure, bicycle facilities, and shared mobility solutions are provided in a detailed table on pages 68 – 70. Estimated costs for these improvements are included on pages 73 – 76.

Tying it Together

This study examines station area mobility and accessibility for the terminal station of the BRT. It will inform FLM connections to/from that terminal station and models how similar analysis could be leveraged throughout the BRT corridor.

US-1 Multimodal and Roadway Analysis: Dadeland South Metrorail Station to SW 344th St./Palm Dr.

Completed: September 2022
For: Miami-Dade TPO
Scale: US-1 from Dadeland South to SW 344th St./Palm Dr.

Purpose

This study analyzes US-1, measures corridor needs and transportation-demand, and aims to provide recommendations to maximize future capacity of this important transportation corridor.

Major Findings

This Analysis seeks the maximal throughput along US-1, the main vehicular arterial supporting the local area. The process involved a three-tiered analysis for the study area along US-1: **multimodal** (nonmotorized) **improvements**, **roadway improvements**, and **adoption of technology** (SMART signals). Each level of analysis included a literature review of relevant transportation plans and municipality master plans to determine recommendations.

Three local municipalities are implementing on-demand transit demonstration projects to improve mobility within the municipality and connectivity to regional transit infrastructure. These pilots illustrate the potential for connecting the high-capacity busway to finer networks of bicycle and pedestrian connectivity. Pedestrian and bike activity, compiled from Strava data (mapped in Figures 11 and 12), shows that most of the corridor has non-auto activity centralized in the municipalities.

Visuals of FLM connections for each of the South Dade Municipalities and the Unincorporated Counties show the schools, density of commercial properties, and one-mile buffer based on road networks.

For bicycle and pedestrian (**multimodal**) improvements, a total of 19 plans are suggested. The various plans include the addition of bike lanes, trail improvements, and other improvements; six of the plans are related to **on-road bicycle facility improvements**. These projects are spread throughout Cutler Bay, Palmetto Bay, Pinecrest, and Miami-Dade County; nine of the total recommendations are within Miami-Dade Unincorporated County.

The **roadway improvements** in the study area focus on the 89 signalized intersections along the Corridor and at cross streets. After conducting scenario studies with various changes, the final recommendation proposes 23 roadway improvements at 12 intersections (Table 47, p. 126).

The **adoption of SMART signals** along US-1 was tested to determine the impact of signal prioritization on public transportation as well as local traffic. The study shows that SMART signals are expected to improve all traffic flow along the corridor and nearby cross streets.

Tying it Together

This document relates the South Dade corridor to its broader surrounding accessibility needs and requirements. One of the final recommendations offered intends to promote safer routes to transit through multimodal approaches. The Pilot services may be examples of potential alternatives supporting the entire TransitWay study area. Figure 24-30 provide a simplified yet effective visual of existing FLM conditions.

Ongoing & Future Planning Projects

Project	LRTP	TIP	UPWP	TDP	5-Yr Work Prg
Safe Routes to School	●	●	●	●	●
South Miami Dade TransitWay, SMART Program			●		●
Vision Zero Projects	●	●			
TOD South Corridor Master Plan		●			●
Advanced Traffic Management Systems (ATMS)				●	
Dadeland South Intermodal Station & Dade Bike Plan	●	●		●	
Bus Passenger Shelter Program, Miami-Dade County Expansion					
Miami-Dade County GreenPrint	●		●		
2045 Bicycle Pedestrian Program (BPP)	●	●			
BikeSafe & WalkSafe Educational Programs	●				

Table 29 Planning Projects and Associated Documents

South Miami Dade TransitWay, SMART Program

Status: Funded, Construction Phase
Start Date: 2017
End Date: ~March 2024

Purpose

This project introduces Bus Rapid Transit Corridors to South Dade County as part of the greater SMART Program. Part of the project is 14 brand new BRT locations, all of which are located between South Miami-Dade and Florida City. Construction began in June 2021; as of November 2022, construction to improve access to the TransitWay was underway at the following key locations: SW 104th Street, SW 168th Street, Marlin Road, SW 244th Street, SW 264th Street, Civic Court, Krome Avenue.

Vision Zero Projects

Status: Funded
Start Date: 2018
End Date: 2040

Purpose

This project strives to eliminate deadly crashes and make streets safer for all users. Pedestrian and bicycle facilities to improve first-last mile connections are a key component of this project. The County is applying for various grants to fund this project further. There are currently 23 projects being developed by the DTPW's Project Delivery Team utilizing various pedestrian/bike safety and traffic calming strategies. These 23 projects are funded through 2024, and construction is anticipated to start in Spring 2023.

TOD South Corridor Master Plan

Status: Funded
Start Date: 2020
End Date: 2023

Purpose

This project plans the South Miami Dade Corridor from the Dadeland South Metrorail Station to Florida City. The project aims to produce a Corridor Master Transit-Oriented Development (TOD) Plan for the South Corridor and inform the ongoing private and public development along the TransitWay. Work will focus more intensely on individual station areas.

Advanced Traffic Management System (ATMS)

Status: Funded
Start Date: 2002
End Date: 2027

Purpose

This project seeks to improve the experience of mobility commuters, transit users, pedestrians, and bicyclists throughout the County by using signal prioritization. In March 2021, this project was awarded to Yunex Traffic Contractor and is expected to be completed within seven years.

Dadeland South Intermodal Station Plan & South Dade Trail Bike Plan

Status: Funded
Start Date: 2019 (PD&E)
End Date: 2024

Purpose

The Dadeland South Intermodal Station Plan is intended to reduce transfer time between BRT and Metrorail service and ultimately improve the connectivity to Miami from South Dade municipalities and between South Dade municipalities. In addition to infrastructure improvements to renew and enhance the existing Dadeland South Metrorail Station, the plan tackles bike connectivity and the South Dade Bike Plan. This project will connect the County's Underline Bike Path to the South Dade Trail and promote bicycle accessibility in other ways like wayfinding signage.

Bus Passenger Shelter Program, Miami-Dade County Expansion

Status: Partially Funded
Start Date: 2020
End Date: 2023

Purpose

This project seeks to improve the rider experience at bus stops in the County using new bus passenger shelters, trash receptacles, bicycle racks, and better pedestrian access to and from bus shelters. The completed and planned improvements are spread across the Miami-Dade Region with some nearby TransitWay, including some West of the TransitWay with close proximity to the stations between SW 152 Street BRT Station and SW 200 Street, a few to the east and west of the TransitWay between SW 264 Street Station and the SW 296 Street. A full map is available at: https://www.miamidade.gov/transit/library/bus-passenger-shelter-locations.pdf

Safe Routes to School (SRTS)

Status: Partially Funded
Start Date: 2006
End Date: 2023

Purpose

The SRTS Program focuses on sidewalk connection, traffic control devices, and various minor improvements within a half-mile buffer of schools. In addition, the program aims to promote bicycle and pedestrian safety near schools, reduce speeds in school zones and neighborhoods by installing speed bumps, educate students on bicycle and pedestrian safety, and encourage parental involvement. The 2022-2023 Transportation Development Plan identifies a funding need for hiring two Road Construction Engineers.

Miami-Dade County GreenPrint

Status: Partially funded, funding through other projects
Start Date: December 2010
End Date: ~2050

Purpose

This 2010 plan details 137 specific sustainability initiatives for Miami-Dade County. The plan places a vibrant economy and clean, pedestrian-friendly, and tree-lined healthy communities at the forefront of a sustainable community. GreenPrint supports pedestrian and bike efforts for the environment as well as the health of the residents. One initiative is Land Use and Transportation, with goals including improving connectivity and mobility on the existing transit system, increasing bicycling & walking, and overall increasing transit ridership.

2045 Bicycle Pedestrian Program (BPP)

Status: Partially Funded
Start Date: September 2019
End Date: 2045

Purpose

The Miami-Dade Bicycle Pedestrian Master Plan is the nonmotorized component of the 2045 Long Range Transportation Plan. The plan strengthens bicycle and pedestrian-friendly communities and connections to enhance accessibility, safety, public health, social equity, and overall quality of life.

BikeSafe & WalkSafe Educational Programs

Status: Funded
Start Date: 2003
End Date: Funding Approval Required Every 3 Years

Purpose

This program has been a partnership for the past 16 years, led by the University of Miami KiDZ Neuroscience Center and supported by FDOT through funding and additional assistance. Every three years, the program identifies existing concerns and barriers to walking and biking to school and promotes infrastructure improvements through Safe Routes to School grants. In addition to supporting infrastructure, they provide mandatory safety education programs for elementary schoolers, advocate for walking and biking in school zones, and promote physical activity and wellness for youth.

Ongoing & Future Engineering Projects

Pinecrest

- Project development and environment project for SR 826/Palmetto Expwy from US-1/S. Dixie HWY to SR 836/Dolphin XWAY. The project is 7.224 miles long, fiscal year 2023, and includes prelim engineering for future capacity.

Cutler Bay

- Preliminary Engineering and Construction project for SR 5/US-1 from Marlin Road to SW 184 Street. The project is 0.99 miles long, fiscal years 2024-2026, and includes safety project.
- Redevelopment of 80-Acre Southland Mall in Cutler Bay along US-1. The project was announced in 2022 and is expected to take seven years, with the proposal including 4,000 residential units, and over 500,000 square feet of curated retail.
- US-1 Streetscape Improvements in Cutler Bay are anticipated to be completed in 2023. Construction began October 2022 and involves the beautification of US-1 through Cutler Bay with improved sidewalks, bike lanes, crosswalks, and landscaping.
- 10.6 Acre, Four Building, 760-unit mixed-use development in Cutler Bay. This project was approved in 2022 and is located directly along the TransitWay at 19500 S Dixie Hwy Cutler Bay, FL.
- Construction of a pedestrian overpass over Old Cutler Road, connecting the two sections of the Old Cutler Trail. The overpass will improve safety for pedestrians and bikers and is estimated to be completed in 2023.
- Preliminary Engineering and Construction project for SR 5/US-1 from Marlin Road to SW 184 Street. The project is 0.99 miles long, fiscal years 2024-2026, and includes safety project.
- Right of Way project for ATIS dynamic message signs, Highway advisory radio traffic management. The project is 123.1 miles long, fiscal years 2023-2027 and includes ITS freeway management.
- Environmental, Preliminary Engineering, and Construction project for HEFT & surface street improvements from Hainlin Mill to US 1(MP 5-12). The project is 0.4 miles long, fiscal year 2023-2025.

County/Mid-Corridor

- Caribbean Village TOD Project at SW 200th Street, 3.41-acre mixed-use development area to include minimum 170-unit affordable housing as well as 12,500 SF retail/commercial space and 100 parking spaces dedicated to transit patrons. Phase II was planned to be completed by the end of 2022.
- Railroad & utilities project for SR 990/SW 112 St. from West of SW 97 Ave. to W. of US 1/S Dixie Highway (West of Pinecrest). The project is 1.726 miles long, fiscal year 2023, and includes resurfacing.
- Contract incentives for SR 994/Quail Roost from West of SW 127 Ave. to west of SW 113 Ave (West of Cutler Bay). The project is 1.872 miles long, fiscal year 2023, and includes resurfacing.

- Contract incentives for SR 994/Quail Roost/SW 186 St from East of SR 821/HEFT to S. Dade Trnwy (West of Cutler Bay. The project is 0.823 miles long, fiscal year 2023, and includes resurfacing.
- Contract incentives for SR994/Quail Roost Dr signage improvements and lighting from SW 113 Ave. to Homestead Ave. The project is 1.098 miles long, fiscal year 2023, and includes lighting.
- Construction Project for SR 5/US 1/S Dixie Highway from South of SW 100 St. to South of SW 88 St. The project is 1.026 miles long, fiscal year 2023 and 2025, and includes resurfacing.
- Right of Way project for SR 5/us 1 at SW 112 Avenue. The project is 0.464 miles long, fiscal year 2023, and includes intersection improvement.
- Construction project for SR 5/US-1 at SW 137 Avenue. The project is 0.205 miles long, fiscal year 2024, and includes intersection improvement.
- Construction project for HEFT & Surface Street improvements from Hainlin Mill to US 1(MP 5-12). The project is 0.4 miles long, fiscal year 2025.
- Contract Incentives and Construction project for SR 5/US-1 from Bailes Road to SW 214 street. The project is 0.981 miles long, fiscal year 2023, and includes intersection improvement.
- Contract incentives and Construction project for SR 5/US-1/S Dixie HWY from S of SW 232S to S of SW 112 Ave/SW 208 Dr. The project is 2.247 miles long, fiscal year 2026, and includes resurfacing.
- Construction project for SR 5/US-1/S Dixie HWY from S of SW 264 street to S of SW 232 street. The project is 2.729 miles long, fiscal year 2024, and includes resurfacing.

Cutler Bay, Mid-Corridor, and Homestead

- Express Lane planned by FDOT Homestead Extension of Florida's Turnpike (HEFT) from Biscayne Drive to SR 836 (21 miles) and from I-75 to Turnpike Mainline (8 miles).

Homestead

- Right of Way, Railroad and Utilities, and Contract Incentive Project for SR 5/South Dixie Highway from N of SW 336 street to S of SW 304 Street. The project is 2.252 miles long, fiscal year 2023, and includes resurfacing.
- Express Lane planned by FDOT for HEFT from Campbell Drive to Biscayne (2 miles),

Homestead & Florida City

- Project development and environment project for TSM&O Study for SR 821 from US-1/S of Palm Dr to Campbell Dr. The project is 3.508 miles long, fiscal year 2023, and includes PD&E/EMO Study.
- Construction and Right of Way project for SR 5/US 1/S Dixie Highway from South of SW 100 S to the south of SW 88 St. The project is 1.026 miles long, fiscal year 2023 and 2025, and includes resurfacing.

Florida City

- Preliminary Engineering and Construction project for implementation of the Florida City Hub Mobility Study. The project is 0.372 miles long, fiscal years 2025 and 2027, and includes pedestrian safety improvement.
- Contract incentives project for SR 5/South Dixie Highway from Sard Sound Road to South of SW 336 street. The project is 1.344 miles long, fiscal year 2023, and includes resurfacing.
- Contract Incentives project for SR 9336/SW 344 St./ Palm Drive from SW 192 Ave. to W of SR 5/US-1. The project is 1.648 miles long, fiscal year 2025, and includes resurfacing.

APPENDIX B – METHODOLOGY DETAILS

Data Sources

The following data was used in the analysis:

- North and South Bound BRT Stations, point shapefile.
- 2021 American Community Survey (ACS) Data, Dwelling Units from table B25001, polygon shapefile.
- 2020 Longitudinal Employer-Household Dynamic (LEHD) Origin Destination Employment Statistics (LODES) Workplace Area Characteristics, polygon shapefile
- AM and PM Peak Origin Destination Trip Table from Replica, CSV file.
    - This trip table represents a typical weekday, specifically Thursday, during Quarter 4 2022.
    - Replica defines AM peak as between 6 and 10 AM and the PM peak between 4 and 7 PM.

All the polygon shapefiles are at the census block group level and the replica trip table represents origins and destinations as census block groups as well providing a consistent geographic scale for the analysis. Station area polygons were created by buffering the station points by one mile and then combing the north and south bound buffers to create one unified station area.

Data Processing

First the station area polygons were summarized to create base level statistics including counts of jobs, dwelling units, and AM and PM peak trips in the station area. Next station Origin Destination (OD) ratios were calculated for both AM and PM peak periods. These ratios are calculated by dividing the number of trips that have a given station area as an origin by the number of trips that have a given station as a destination, ignoring all trips that have a station as both origin and destination.

OD ratios higher than 1 indicate a station area has more travelers arriving to that station area during a given time frame than departing, for example a station with an OD ratio of 2.0 has twice as many travelers arriving in the station than departing. OD ratios lower than 1 indicate the opposite, for example a value of 0.5 indicated that twice as many travels arrive than depart. These ratios help us tune the needs of the first last mile access. A station with a high OD ratio needs local connections to arrive after the BRT to help riders getting off the BRT complete their trip home, while a station with a low ratio needs the opposite, local connections that allow travels to arrive before the BRT departs the station.

With the base line information created for each station, accessibility was measured using travelshed isochrones or a polygon shapefile that represents the area reachable within a given time frame from a specified location. This polygon can then be mapped using GIS to display the entire area reachable within the specified time frame and used to quantify the reachable area. Isochrones were created for walking, biking, driving, fixed route transit, and on-demand transit using the same departure time to allow for direct comparisons. For each mode an isochrone was created for both the north and south bound stations and then combined to assess the total station.

Each stations' departure time was chosen to minimize the wait for all fixed route transit reachable from the station as the Travel Time API includes wait time as a part of its isochrone. While stations

with frequent service and shorter headways had minimal wait times, stations with less frequent services ended up with significantly longer wait times. While a more idealized departure time could have been chosen for a specific route in each station our approach was chosen to better highlight the effects of longer headways and assess where headways could be decreased. All departure times were assigned to a Thursday to match the Replica trip table.

The walking, biking, and driving isochrones were created using the Mapbox Isochrone API, the fixed route transit isochrones were created using the Travel Time Isochrone API. The on-demand transit isochrone was created by limiting a drive isochrone created with Mapbox to the respective on-demand service area servicing a given station and adjusting the travel time by the average wait time, 15 minutes, making these isochrones essentially subsets of the five-minute drive isochrones. The final isochrones were then run through the same process as the station areas to assess the reachable activities.