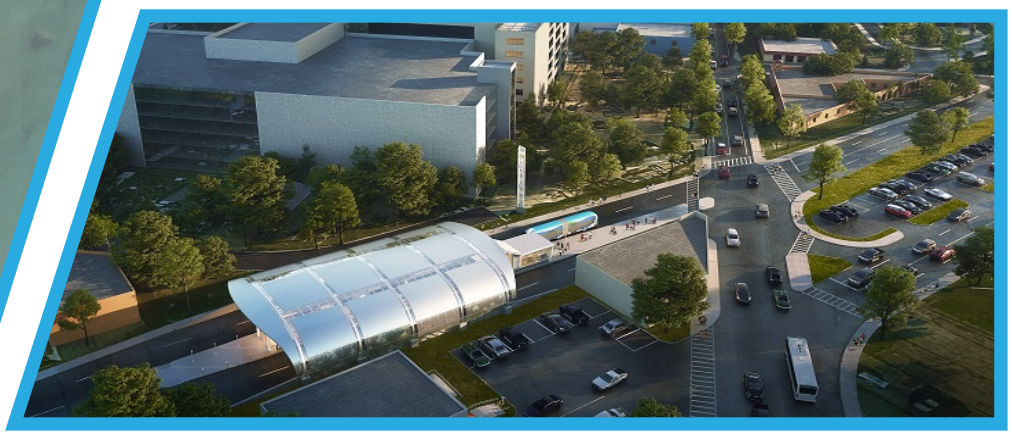
GPC VII- Work Order #44

US-1 Multimodal and Roadway Analysis

Dadeland South Metrorail Station to SW 344th Street/Palm Drive

Final **Report**

TPO
Miami-Dade Transportation
Planning Organization



September 2022

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1 Introduction

On October 21, 2021, the Miami-Dade Transportation Planning Organization (TPO) Governing Board adopted Resolution #50-2021 to conduct a study along the US-1 corridor. The objective of this study is to develop an analysis along US-1 from the Dadeland South Metrorail Station just north of SW 95th Street to SR 9336/SW 344th Street/Palm Drive, and provide recommendations to maximize the future capacity based on demand/need of this corridor via multimodal and/or roadway improvements.

US-1 is an important north-south corridor in Miami-Dade County, linking residential communities to Miami's urban core. The study corridor includes the following municipalities: Village of Pinecrest, Village of Palmetto Bay, Town of Cutler Bay, City of Homestead, and City of Florida City, and other census designated areas such as Goulds, Princeton, Naranja and Leisure City. **Figure 1** presents the study corridor location along with the proposed South Dade Transitway stations and municipalities' boundaries.

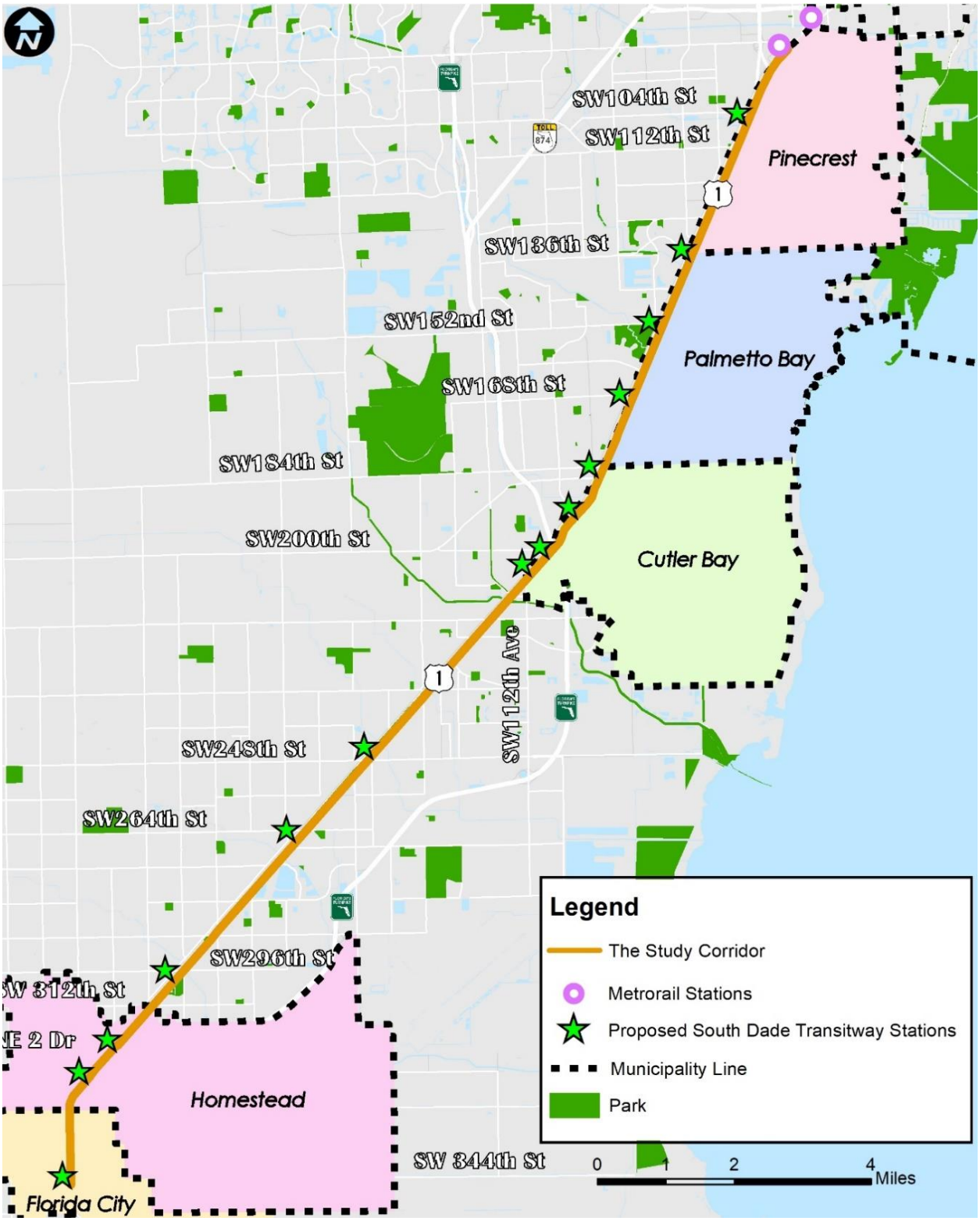

Figure 1: Study Area

2 Literature Research & Data Gathering

To complete this task, relevant and recent studies from the Florida Department of Transportation (FDOT) and Miami-Dade Transportation and Public Works (DTPW) were reviewed.

2.1 Transportation Studies Proposing Major Improvements

This study builds upon prior efforts that have addressed traffic, transit, land use, and first mile/ last mile accessibility in the study area.

2.1.1 US-1 South Corridor Rapid Transit Project VISSIM analysis

Miami-Dade DTPW is implementing a Bus Rapid Transit (BRT) within the existing Busway along a 20-mile segment of SR 5/US-1/South Dixie Highway. The BRT project is currently under construction and jointly funded by the Miami-Dade County, FDOT, and FTA (Federal Transit Administration).

The BRT corridor extends from Dadeland South Metrorail Station near SR 94/SW 88 Street/Kendall Drive to SR 9336/SW 344 Street/East Palm Drive. To assess the potential operational impacts along the US-1/South Dixie Highway and existing Busway resulting from the BRT Signal preemption, FDOT performed an independent VISSIM microscopic simulation analysis in December 2020. This study analyzed the study corridor with and without the proposed implementation of BRT and the corresponding signal preemption, and captured the traffic operational impacts to the Busway and US-1/South Dixie Highway. The FDOT microsimulation study also identified future bottlenecks at some of the intersections of future congestion locations that may impede mobility within the study area. A copy of the VISSIM study is included in **Appendix A.**

Methodology

The VISSIM study analyzed 89 signalized intersections along the US-1 corridor and nearby cross streets. The study corridor was subdivided into two segments as the growth rates (historical growth rate, travel demand model estimates, and population and employment data) and land use patterns were different along northern and southern half of the US-1/South Dixie Highway as one travels from North to South. The northern section (from SR 94/SW 88 Street/Kendall Drive to SW 232 Street/SW 127 Avenue) is a relatively dense/urban environment. This segment is considered as built out and a 0.5% growth rate was identified as appropriate for this segment based on historical growth rate, travel demand model estimates, and population and employment data. The southern section (from south of SW 232 Street/SW 127 Avenue to SR 9336/SW 344 Street/Palm Drive) is less dense. This segment is characterized by a suburban development pattern and a 1.5% growth rate was identified as appropriate for this segment. Out of the 89 signalized intersections, 44 of them falls into the northern segment while other 45 falls into the southern segment.

For this study, AM and PM peak hour turning movement counts were collected for all 89 intersections between November 2018 and January 2020. Systemwide AM peak hour was

identified as 7:45 AM to 8:45 AM (northern segment) / 7:30 AM to 8:30 AM (southern segment) and PM peak hour was identified as 4:45 PM to 5:45 PM (for both northern and southern segments). Turning movement counts were balanced along the US-1 first, and then a growth factor was applied to determine the future year volume. The study considered 2018 as the base year, 2022 as the opening year, and 2042 as the design year. It was assumed that there will be a 2.14% mode shift to transit in the opening year and 2.84% mode shift to transit in the design year. BRT implementation resulted in slightly different (higher) traffic along US-1 in the no-build condition compared with the build condition. The mode shift was developed by the DTPW and approved by the FTA.

BRT Operation

Since the proposed BRT would operate at-grade, 'gate crossing' and 'signal preemption' features will be installed to restrict crossing vehicular traffic and enable BRT vehicles to travel through the at-grade intersections without interruption. Gate crossing arms will operate at all times of the day for both BRT Limited stop buses as well as Local Service buses to increase the safety and efficiency of bus travel through the intersections. However, only BRT buses would be able to make a request for signal preemption in the peak direction of travel (northbound for AM Peak and southbound for PM Peak) to minimize impacts to general traffic on US-1. Detailed steps along with an estimated amount of time for each step to activate signal preemption and gate crossing sequence is provided in **Appendix B.**

Roadway Improvement Location

In order to assess the potential operational impacts, the study identified a list of intersections that are anticipated to operate at overcapacity, which is Level of Service (LOS) F, in the 2022 Build condition during either morning, afternoon, or both peak hours. Twelve (12) out of the 44 intersections in the North segment are anticipated to operate at overcapacity (LOS F) in the 2022 Build condition while 4 out of the 45 intersections in the South segment are anticipated to operate at overcapacity (LOS F) in the 2022 Build condition. Potential capacity improvement recommendations will be primarily based on the failing intersections listed below.

North Segment:

1. US-1 and SW 104th Street
2. Palmetto Road and SW 104th Street
3. US-1 and SW 112th Street/Killian Drive
4. US-1 and SW 128th Street
5. US-1 and SW 132nd Street
6. US-1 and SW 136th Street
7. US-1 and SW 144th Street
8. US-1 and SW 152nd Street
9. US-1 and SW 184th Street
10. SW 10900 Block and Caribbean Boulevard
11. SW 117th Avenue and SW 114th Court
12. SW 11300 Block and SW 211th Street

South Segment:

1. US-1 and NE 15th Street/NE 12th Avenue
2. Old Dixie Highway and NE 11th Street
3. SW 177th Avenue and N Flagler Avenue
4. US-1 and SW 344th Street/Palm Drive

2.1.2 South Dade Transitway Intersection Areas Analysis

The Miami-Dade TPO conducted a study in 2021 to document existing infrastructure along the South Dade Transitway Corridor and parallel US-1/S Dixie Highway at cross street intersection areas in advance of the South Dade Transitway BRT capital improvement project. The inventory is conducted to serve as a baseline for identifying the future traffic improvement needs, particularly for the safety and traffic operations of cross street intersections along the South Dade Transitway.

Intersection Inventory

The inventory was created by analyzing existing infrastructure of roadways, pedestrian facilities, and bicycle facilities within one-half mile to the Transitway. Based on the literature review of several prior studies along the corridor, a list of 55 intersection areas were initially identified for the inventory which represents every major cross street along these two roadways. Some intersection areas were removed as they did not intersect with the Transitway. Finally, a list of 48 intersection areas were selected to document existing pedestrian and bicycle features. It should be noted that an intersection area can be comprised of multiple intersections.

Within these 48 intersection areas, 116 intersections were identified between the Transitway and major cross streets. Additional intersections between these cross streets and other major roads such as US-1/S Dixie Highway were also included. For each studied intersection, the following features were collected, in each traffic flow direction, based on a field review using a tablet-based GIS data collection application. Field collected GIS data was supplemented with corresponding photos, which allowed for desktop confirmation of the inventoried data.

- Number of Through Lanes
- Number of Turn Lanes
- Presence of Median
- Crosswalk
- Sidewalks
- ADA Accessibility
- Pedestrian Signals
- Amenities
- Bicycle Facilities

Connectivity and Accessibility Gaps

To provide a more connected pedestrian and bicycle network in the vicinity of the South Dade Transitway Corridor and transit stations, connectivity and accessibility gaps were identified. First, GIS data and aerial maps were utilized to identify existing sidewalks, crosswalks, and bicycle facilities along the roadways, which provided direct access to the transitway. Second, field reviews were conducted to confirm the presence or absence of existing sidewalks, crosswalks, and bicycle facilities.

A tier-based process identified viable improvements based on the priority of sidewalk gaps, bicycle facility improvements, and non-tier improvements. **Table 1** below provides the number of improvement project by each tier along with planning level cost estimates, which includes cost for construction, maintenance of traffic, mobilization, engineering/design, and construction engineering inspection.

Table 1: Connectivity and Accessibility Gaps Improvement Projects

Tier	Tier Description	Improvements Projects	Total Costs
Tier 1	Missing sidewalk on one or both sides of the road that directly connects to a transit station and/or an urbanized area	100	$6.2 Million
Tier 2	Missing sidewalk on one or both sides of the road that does not directly connect to a transit station and/or an urbanized area	47	$4.5 Million
Tier 3	All other sidewalk gaps	14	$1.7 Million
Bicycle Facilities	Improvements to bicycle facilities	44	$9.0 Million
Non-Tier Improvements	Crosswalk striping and curb ramps along existing sidewalks	72	$0.7 Million
Total		277	$22.1 Million

Figure 2 below graphically presents the location of all Tier 1, Tier 2, and Tier 3 improvements for the three types of sidewalk gaps. **Figure 3** represents recommended bicycle facilities and non-tier improvements.

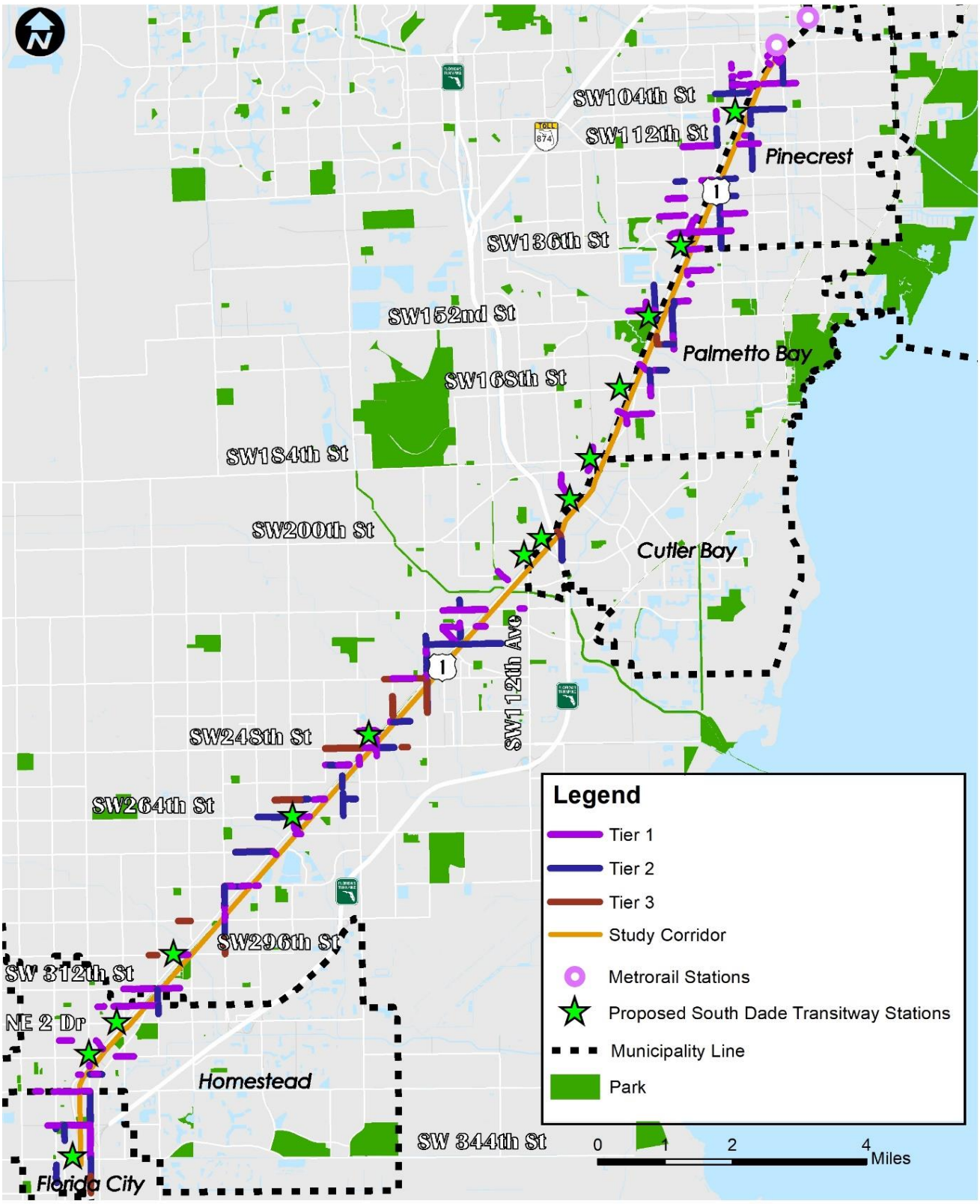

Figure 2: Sidewalk Gaps Priority Improvements

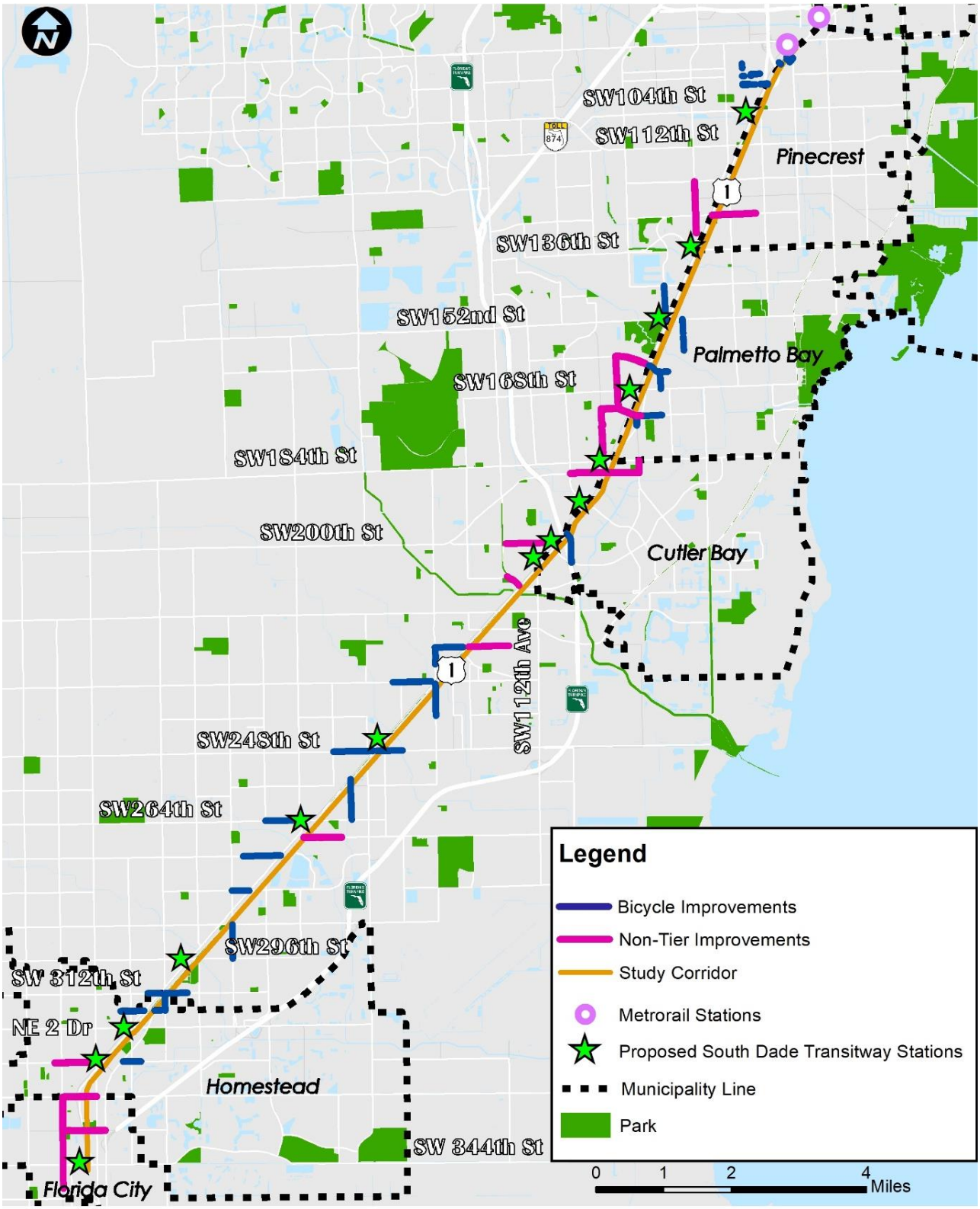

Figure 3: Bicycle Facilities and Non-Tier Improvements

2.1.3 Miami-Dade County State Road Arterial Reversible Lane Assessment

In response to interests from Miami-Dade DTPW and TPO, the FDOT District Six (D-6) conducted an extensive study to assess if any State Roads in Miami-Dade County is a potential candidate for implementing a reversible lane. The study adopted a tiered approach for identifying potential roadway segments that would meet the basic criteria, as defined in the *2004 National Council Highway Research Program (NCHRP) Synthesis 340 Convertible Roadways and Lanes*.

Directional traffic flow (a ratio of 2:1 for the peak direction to off-peak direction flow) was considered as the primary criteria to identify potential roadway segments for reversible lanes implementation. Tier 1 criteria require 2:1 directional flow in any hour during both AM (6:00 AM to noon) and PM (noon to 7:00) periods in at least one of the five analysis years. Tier 2 criteria focused on extended peak periods over a prolonged period of time. To capture prolonged period of time, Tier 2 required taking the average volume for all five years. It also required 2:1 directional flow during both AM peak period (4-hr period from 6:00 AM to 10:00 AM or 2-hr period from 7:00 AM to 9:00 AM) and PM peak period (4-hr period from 3:00 PM to 7:00 PM or 2-hr period from 4:00 PM to 6:00 PM). Besides directional flow, there were also 4 other criteria prescribed by the NCHRP as follows:

- Volumes at or near capacity
- Predictable patterns of high demand and/or congestion
- Limited right-of-way (or ability to acquire it) to construct additional lanes
- Inadequate capacity or mobility on adjacent parallel streets

The FDOT D-6 study analyzed all Miami-Dade County arterials on the State Highway System (SHS), which consists of 47 State Roads and more than 300 miles of roadway. Traffic volume data for each one of the 359 traffic count stations, including 351 Portable Traffic Monitoring Sites (PTMS) and 8 Telemetered Traffic Monitoring Site (TTMS), were analyzed for the five continuous years (2015-2019).

The tier 1 screening analysis identified that only 44 out of the 316 stations experienced directional traffic flow during both AM and PM hours. A more detailed analysis was conducted in Tier 2 on these 44 segments of which only 12 roadway segments in 10 State Roads met the Tier 2 criteria as listed below.

1. SR 25 (US 27/Okeechobee Road) - Krome Avenue (SR 997) to Homestead Extension of Florida's Turnpike (HEFT) (SR 821)
2. SR 825 (SW 137 Avenue) - SW 8 Street (SR 90) to NW 12 Street
3. SR 886 (Port Boulevard) - US-1/Biscayne Boulevard (SR 5) to Caribbean Way
4. SR 887 (Port of Miami Tunnel) - Macarthur Causeway (SR A1A) to Port Boulevard
5. SR 90 (US 41/Tamiami Trail) - Miami-Dade/Collier County Line to Krome Avenue (SR 997)
6. SR 90 (Beacom Boulevard) - SW 7 Street (SR 90) to SW 8 Street (SR 90) (the two-way segment that joins the SW 7 Street/SW 8 Street one-way pair at its western terminus)
7. SR 9336 (Ingraham Highway) - Everglades National Park Entrance to SW 344 Street/Palm Drive
8. SR 934 (NE 79 Street) - NW 6 Avenue/I-95 to US-1/ Biscayne Boulevard (SR 5)
9. SR 969 (Milam Dairy Road) - Flagler Street (SR 968) to NW 7 Street (End of State Road Section)
10. SR 997 (Krome Avenue) - Kendall Drive (SR 94) to SW 8 Street (SR 90)

When four (4) additional basic criteria were assessed on these 12 roadway segments, none fulfilled all basic criteria. Though none of the Miami-Dade State Road arterials qualify for the reversible lane implementation, NCHRP 340 recommends following requirements for effective reversible lane operations.

- Ability to maintain at least two lanes in the off-peak direction
- Adequate available distance for full reversible configuration (segments less than two miles in length are not recommended)
- Sufficient time of operations to justify investment
- Predominately through traffic
- Relatively low percentage of heavy vehicles in the minor-flow direction

In addition to the basic criteria, tier 2 roadway segments do not meet these aforementioned effective reversible lane operations criteria. The study also concluded that implementation of reversible lanes on these roadway segments will not be beneficial in terms of safety and existing transit conditions.

Therefore, the FDOT D-6 study concluded that none of the State Road arterials in Miami-Dade County qualify for the reversible lane implementation. It should be mentioned that not any of the Tier 2 qualified State Road segments fall within the limits of this study corridor (SR 5/US-1/South Dixie – From SR 94/SW 88 Street/Kendall Drive to SR 9336/SW 344 Street/East Palm Drive).

2.2 Local Government Plans Review

2.2.1 LRTP+TDP+TIP

The Miami-Dade 2045 Long-Range Transportation Plan (LRTP), DTPW 2022-2031 Transit Development Plan (TDP), and the latest 2022 Transportation Improvement Program (TIP) were reviewed as part of this study.

Table 2 lists all the project identified from LRTP, TDP and TIP. All projects are summarized in section 2.2.3 (Local Government Plans Summary) and shown on **Figure 7** through **Figure 9** and **Table 7** through **Table 9.**

Table 2: Types of Projects Identified from LRTP, TDP and TIP

	Transportation Projects
LRTP	• Transit Projects • FDOT Strategic Intermodal System (SIS) Projects • Florida's Turnpike Enterprise (FTE) Projects • DTPW Roadway Projects • Bicycle and Pedestrian Projects
TDP	• Transit Operations Projects • Capital Projects • 2031 and Beyond Transit Vision Plan
TIP	• Strategic Miami Area Rapid Transit (SMART) Plan – South Dade Transitway • Federally-Funded Projects • Primary State Highways and Intermodal (FDOT Projects) • FTE Projects • Miami-Dade DTPW Projects • Non-Motorized Component

2.2.2 Corridor Municipalities Plans

As shown on **Figure 1**, there are five municipalities within in the study corridor. The following city staff were contacted to get the up-to-date transportation master plan for each municipality:

- City of Florida City: Richard Stauts Richard.Stauts@floridacityfl.gov
- City of Homestead: Julio Brea, Public Works Director jbrea@cityofhomestead.com
- Town of Cutler Bay: Alfredo Quintero, Public Works Director aquintero@cutlerbay-fl.gov
- Village of Palmetto Bay: Edward Silva, Village Manager esilva@palmettobay-fl.gov
- Village of Pinecrest: Stephen R. Olmsted, Planning Director solmsted@pinecrest-fl.gov

Table 3 summarizes all the transportation plans received from each municipality.

Table 3: Corridor Municipalities Plans

Municipalities	Transportation Plans
City of Florida City	• No response was received
City of Homestead	• No response was received
Town of Cutler Bay	• Transportation Master Plan Update 2021 • Mobility Hubs Plan 2021
Village of Palmetto Bay	• Multi-Use Trail & SMART Plan Connectivity Study 2021 • Mobility Hubs & Transit Infrastructure Plan 2020
Village of Pinecrest	• Strategic Plan 2021 • Transportation Master Plan 2018

Following section describes the transportation plans summary for each of the municipality (no response was received from Florida City and Homestead).

2.2.2.1 Cutler Bay

Based on the Mobility Hubs Plan 2021, the Town of Cutler Bay plans to provide the community with a comprehensive system of Transit Mobility Hubs connecting the South Dade Transitway and the Town of Cutler Bay. This Plan seeks to improve connectivity, mobility and safety for pedestrians, bicyclists, and transit users through the identification of Neighborhood, Community, and Regional Mobility Hubs throughout the Town's roadway network. Shown as **Figure 4**, a total of 12 Mobility Hubs were identified throughout the Town of Cutler Bay and four (4) of them are located along the study corridor.

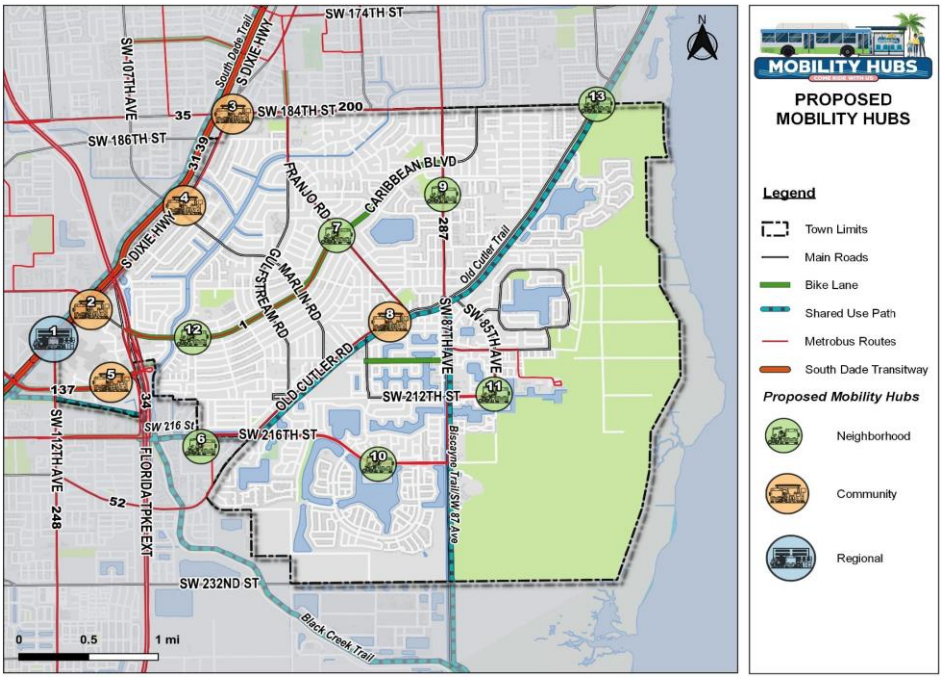

Figure 4: Proposed Mobility Hubs Map in Cutler Bay
(Source: Mobility Hubs Plan, Town of Cutler Bay, 2020)

Table 4 lists the four (4) Mobility Hubs which are located along the study corridor. Two levels (Regional Hub and Community Hub) of Mobility Hubs were identified along the study corridor. The Cutler Bay Mobility Hub has been identified as a Regional Hub, which is a large-scaled hub serviced by two or more transit routes, near mix-use development, including multi-family residential, employment hubs, and regional commercial uses. The remaining three hubs are identified as Community Hubs. Community Hubs are medium-scaled hubs serviced by one or more transit routes, near residential and retail uses.

Table 4: Mobility Hubs Located along the Study Corridor

No.	Mobility Hub	Type	Location	Owner	Project Type
1	Cutler Bay	Regional	At the existing Miami-Dade County Park & Ride facility at SW 112th Ave	DTPW	Arterial/Collector
2	Caribbean Boulevard	Community	Caribbean Blvd& US-1	DTPW	Bridge Construction
3	Eureka Drive West	Community	SW 184th St & East of US-1	DTPW	Bridge Construction
4	Marlin	Community	Marlin Road & US-1	DTPW	Bridge Construction

The Town of Cutler Bay also provided the Transportation Master Plan Update 2021, which developed a guideline for multimodal transportation projects and policy initiatives that can be undertaken in the upcoming years. Several roadway, bicycle, and pedestrian projects were found along the study corridor as shown in **Table 5**.

Table 5: Roadway, Bicycle and Pedestrian projects located along the study corridor

Project	Purpose	Need
Marlin Rd from US-1 to Old Cutler Rd	Complete Streets for multimodal uses	• Providing safe and connected transportation facilities for users of all ages and abilities
US-1 Pedestrian Promenade	Pedestrian Promenade along the east side of US-1	• Improve access to transit and provides for better pedestrian safety, especially for the disabled and elderly near the Assisted Living Facilities (ALFs)
Bike Lane	• SW 184th St • Marlin Rd • SW 97th Ave	• Providing cyclists with safe paths for longer and shorter trips through the community, connecting with regional facilities, desirable local origins, and destinations such as shopping, entertainment, and recreational uses, eventually encouraging cycling trips. • Providing connections between parks and schools, and residential neighborhoods

2.2.2.2 Palmetto Bay

The Village of Palmetto Bay provided two reports: the Multi-Use Trail & SMART Plan Connectivity Study and the Mobility Hubs & Transit Infrastructure Plan. Both reports proposed SW 152nd Street and SW 184th Street as Multi-Use Paths to connect to the Transitway, shown as purple lines in **Figure 5**.

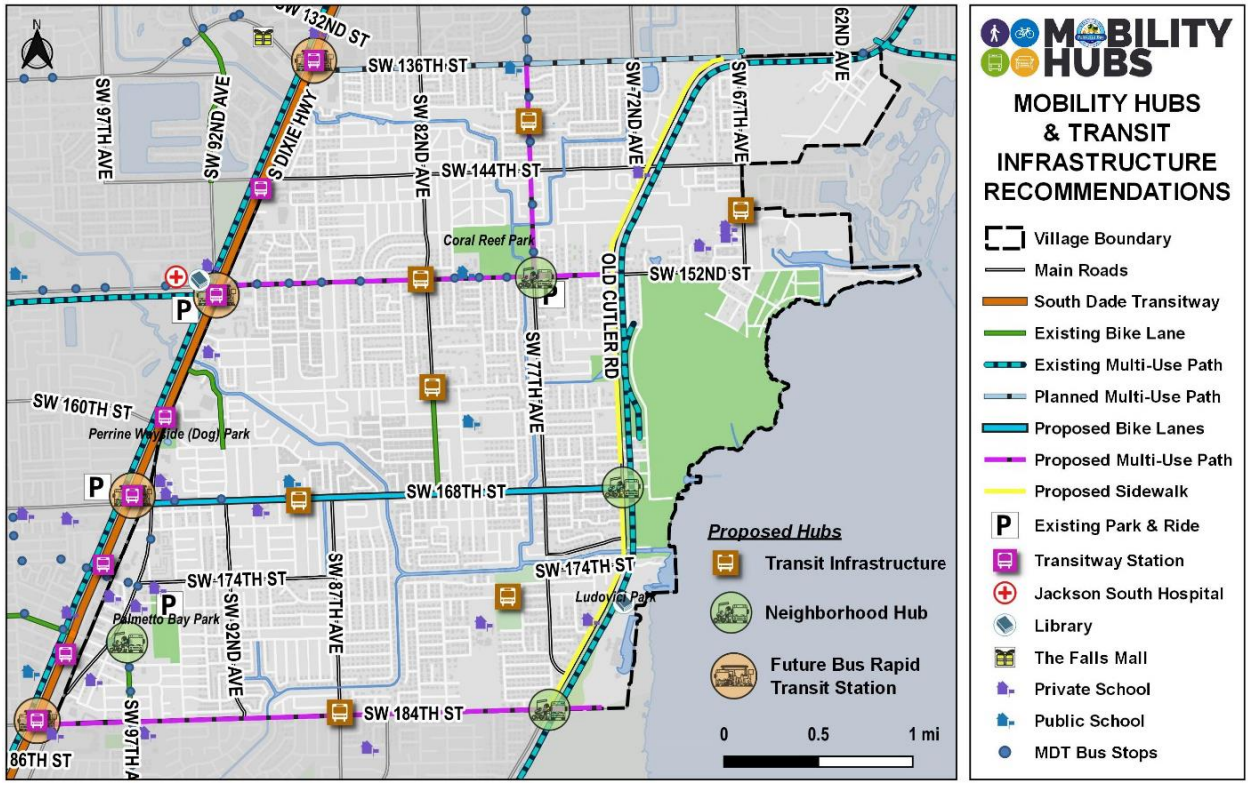

Figure 5: Map of Proposed Multi-Use Trail Recommendations
(Source: Mobility Hubs & Transit Infrastructure Plan, Village of Palmetto Bay, 2020)

Village of Palmetto Bay also proposed two alternative transit routes (iBus) to enhance connectivity and accessibility to the South-Dade Transitway and Village schools. The proposed routes could operate during peak traffic times and stop at proposed transit infrastructure locations, proposed Mobility Hubs, and existing Transitway Stations and/or future BRT stations. As shown in **Figure 6**, Proposal A is a single route option, ideally with two buses operating in clockwise and counter-clockwise movement whereas Proposal B is a three routes option, similar to Proposal A but separating the routes into smaller sections for better efficiency. Both Proposal A and Proposal B will go along US-1 in the Village of Palmetto Bay between SW 184th Street and SW 136th Street.

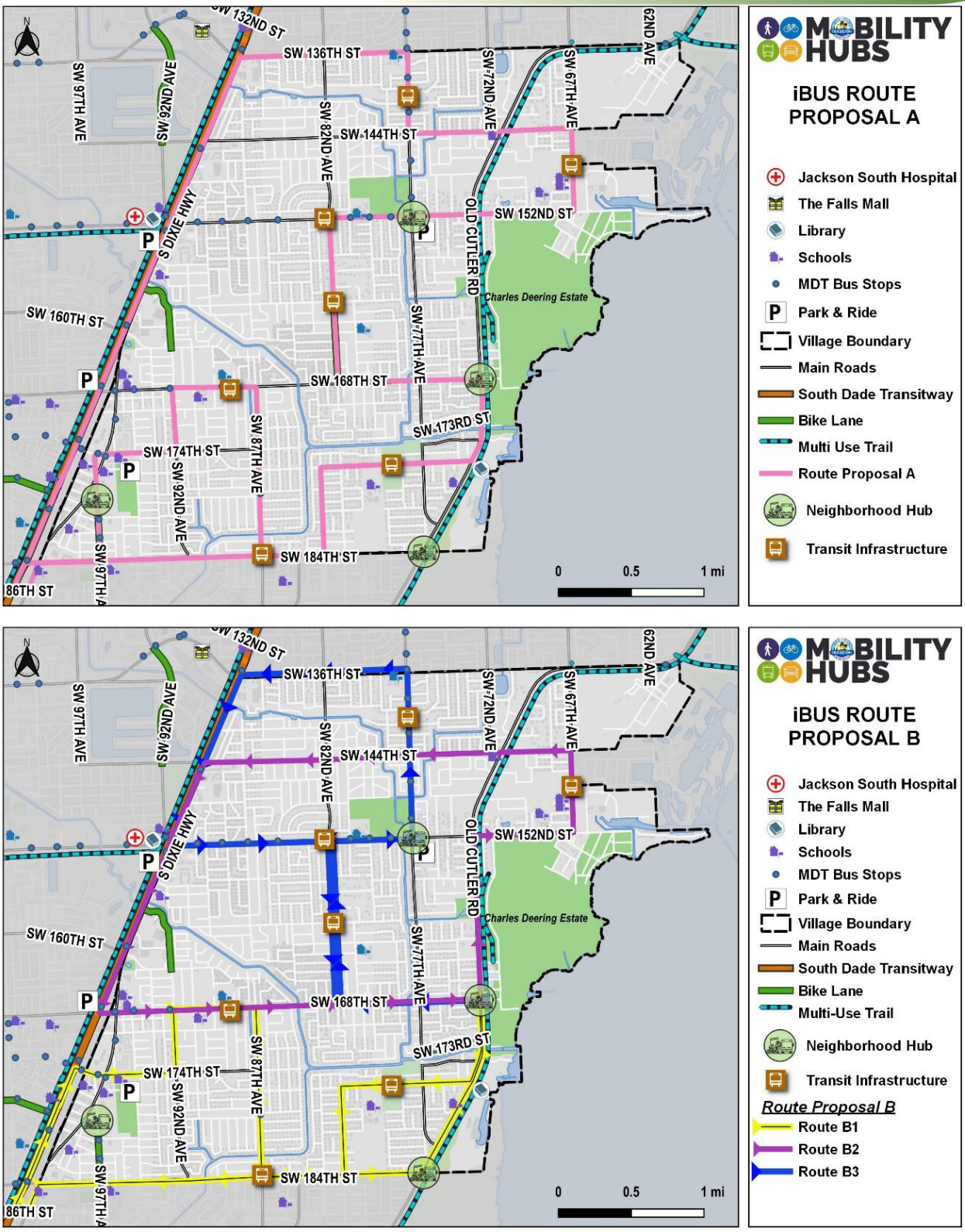

Figure 6: Proposed iBus Route Options

(Source: Mobility Hubs & Transit Infrastructure Plan, Village of Palmetto Bay, 2020)

2.2.2.3 Pinecrest

The Village of Pinecrest developed a Transportation Master Plan which included public outreach, data collection, analysis, conceptual design, and preliminary cost estimating. The Master Plan recommendations are divided into three improvements: pedestrian/bicycle facility improvements, traffic operations improvements, and traffic calming improvements. Serval traffic operations improvements and pedestrian/bicycle facility improvements (Shown in **Table 6**) were located along the study corridor.

Table 6: Improvement Plan along the Study Corridor in Village of Pinecrest

Intersection/Street	Limits	Type
US-1 at SW 98th St	Isolated Intersection	Install westbound right-turn lane
SW 120th St	US-1 to SW 57th Ave	Both sides Bicycle Lane
SW 100th St	East of US-1 to SW 72nd Ave	South side Sidewalk
SW 102nd St	East of US-1 to west of SW 75th Pl	South side Sidewalk
SW 132nd St	US-1 to SW 57th Ave	North side Sidewalk
SW 104th St	US-1 to SW 57th Ave	Sharrows

2.2.3 Local Government Plans Summary

All improvement projects collected from local government plans along the study corridor are divided into three categories as shown below.

1. Roadway Improvements (**Figure 7**)
2. Transit Improvement Plans (**Figure 8),** and
3. Pedestrian & Bicycle Improvement Plans (**Figure 9**)

In these figures, a map ID with a white circle represents a single location project while a map ID with a colorful circle and line represents a road segment or a group of intersections or transit stations with improvement projects. **Table 7, Table 8,** and **Table 9** provide a list with detail information for each project, which includes map ID, project name, projects limits, description, and sources. It should be noted that some of these projects may be included in multiple government plans.

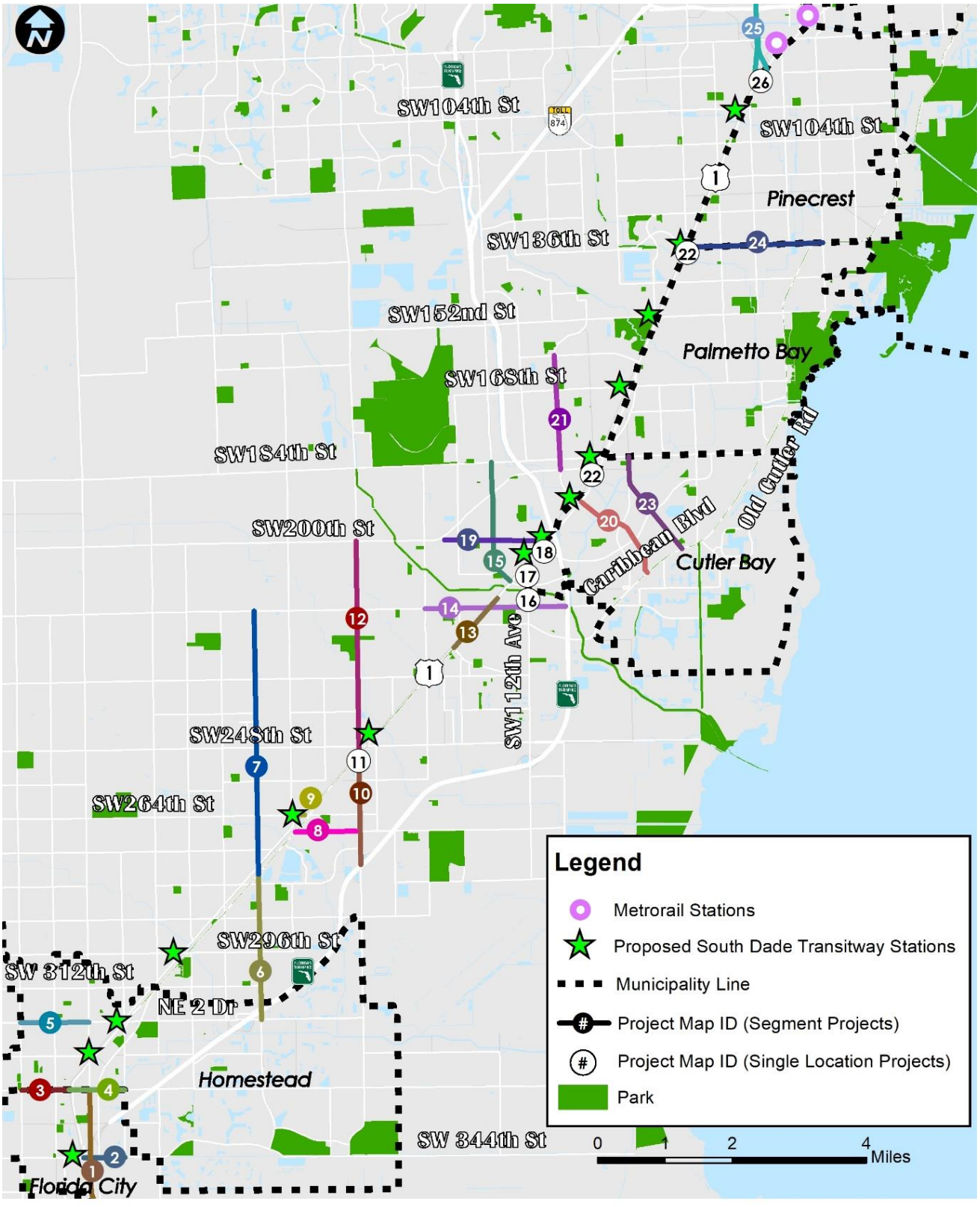

Figure 7: Roadway Improvement Plans Map

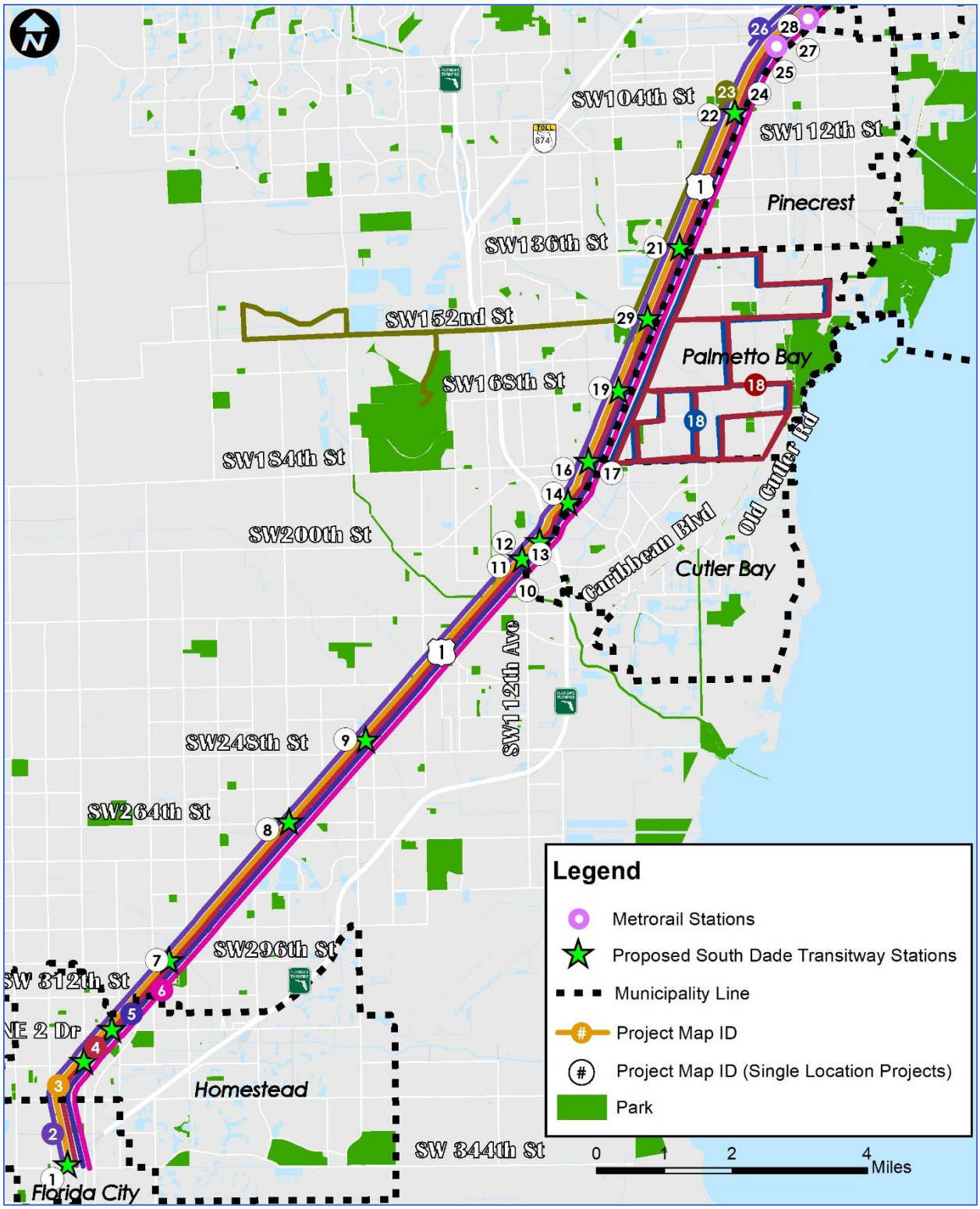

Figure 8: Transit Improvement Plans Map

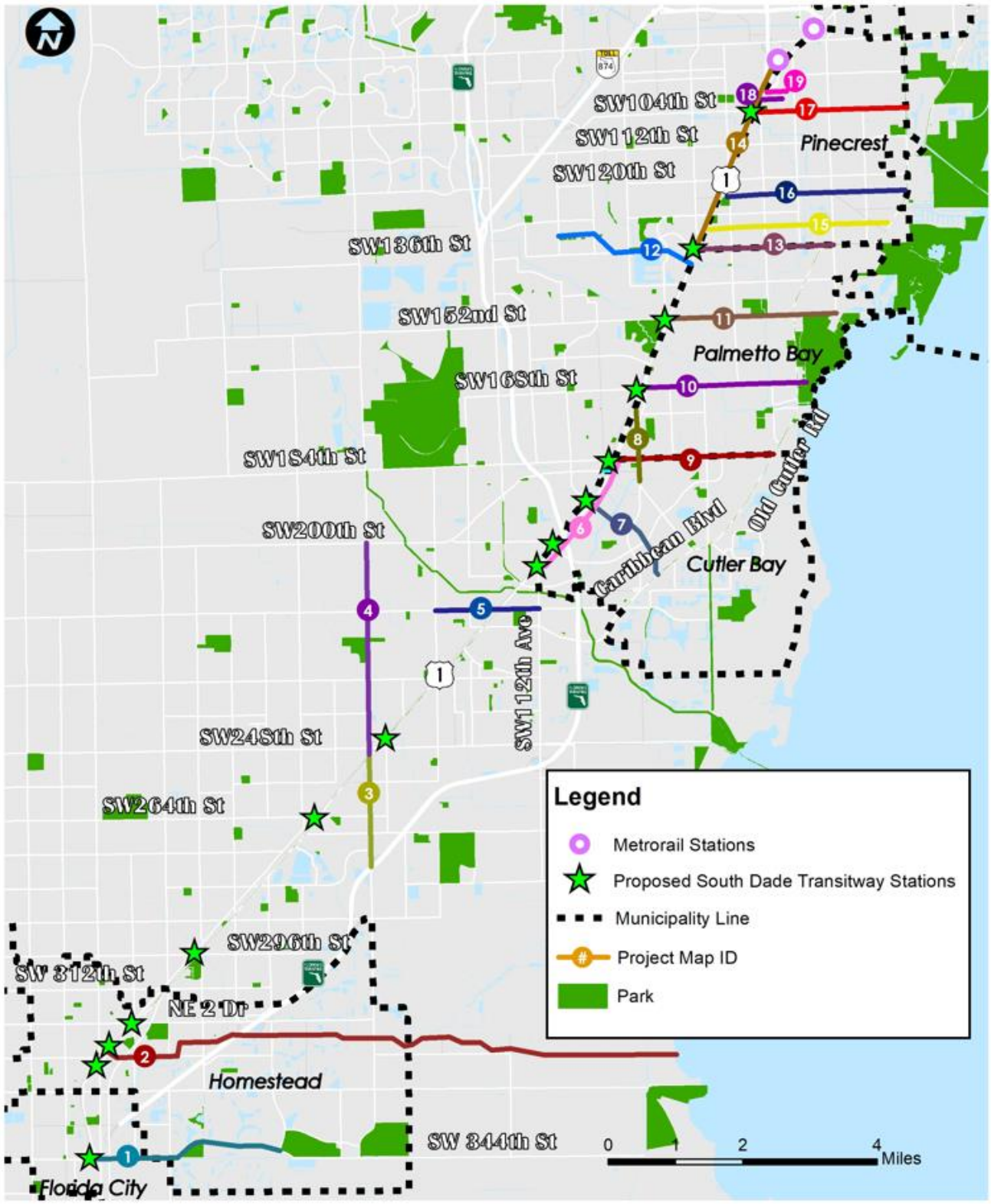

Figure 9: Pedestrian & Bicycle Improvement Plans Map

Table 7: Roadway Improvement Plans

ID	Facility	Limits From	Limits To	Description	Source
1	Krome Ave	US-1	Lucy St	Add Lanes & Reconstruct	TIP
2	SW 344th St	US-1	SW 172nd Ave	Roadway improvements	TIP
3	SW 328th St	US-1	SW 162nd Ave	Widen from 2 to 4 lanes	TIP
4	SW 328th St	SW 187th Ave	US-1	Roadway improvements	TIP
5	SW 312th St (Campbell)	SW 187th Ave	SW 177th Ave	Widen to 5 lanes	TIP
6	SW 152nd Ave	SW 312th St	US-1	Widen from 2 to 4 lanes	TIP/LRTP
7	SW 152nd Ave	US-1	Old Cutler Rd	Congestion Management	TIP
8	SW 268th St	SW 147th Ave	SW 139th Ave	Continuous left turn lane along SW 268th Street	TIP
9	SW 264th St	SW 147th Ave	US-1	New 2 lane road with center turn lane	TIP
10	SW 137th Ave	Turnpike	US-1	Widen from 2 to 4 lanes	TIP
11	US-1 at SW 137th Ave			Intersection Improvement	TIP
12	SW 137th Ave	US-1	SW 200th St	Completion as two (2) continuous lanes	TIP/LRTP
13	US-1	Bailes Rd	SW 214th St	Intersection Improvement	TIP
14	SW 216th St	SW 127th Ave	Turnpike	Curb & Gutter, Traffic Operational Improvement	TIP
15	SW 117th Ave	US-1	SW 184th St	Road reconstruction/Traffic operational improvements	TIP/LRTP
16	Allapattah Rd at SW 211th St			Intersection Improvement	TIP
17	US-1 AT SW 112th Ave			Intersection Improvement	TIP
18	US-1 at Caribbean Blvd			Intersection Improvement	TIP
19	SW 200th St	Quail Roost Dr	US-1	Widen from 2 to 4 lanes	TIP/LRTP
20	Marlin Rd	US-1	Old Cutler Rd	Provide safe and connected transportation facilities	Cutler Bay
21	SW 107th Ave	Quail Roost Dr	SW 160th St	Widen from 2 to 4 lanes	TIP
22	US-1 & SW 136th St and US-1 & Quail Roost Intersections			Intersection Improvement	TIP/TDP
23	Franjo Rd	Old Cutler Rd	SW 184th St	Widen from 2 to 3 lanes	TIP
24	SW 136th St	US-1	SW 67th Ave	Congestion Management	TIP
25	SR 826	US-1	SR 836	Prelim. Eng. For Future Capacity/Managed Lanes	TIP/LRTP
26	US-1 at SW 98th St			Install westbound right-turn lane	Pinecrest

Table 8: Transit Improvement Plans

ID	Facility	Limits From	Limits To	Description	Source
1	Transitway Park-and-Ride at SW 344th St			Increase the number of parking spaces by 96 to a total of 344.	TDP/LRTP/TIP
2	South Miami-Dade Express (BERT)	SW 344th St/SW 288th St	Dadeland North Metrorail Station	Express bus service	TDP
3	South Dade Transitway	SW 344th Street	Dadeland South Metrorail Station	Implement Gold Standard BRT along the Transitway	TDP
4	South Miami Dade Corridor	SW 344th Street	Dadeland South Metrorail Station	Extend Metrorail	TDP
5	TOD Master Plan for the South Corridor			Boost smart economic development and mobility through mixed-use development around transit stations.	TDP
6	Drop-off/Pick- up at South Dade Transitway Stations	SW 344th St & Transitway	Dadeland South Metrorail Station	Drop-off/Pick-up at all (30) Transitway Stations	LRTP
7	Transitway Lot (SW 296th St)			Improve Existing park-and-ride facility with a 400-space parking garage.	TDP/LRTP/TIP
8	Transitway Park-and-Ride at SW 264th Street			Construct Park-and-Ride facility with 100 surface parking spaces	TDP/LRTP/TIP
9	South Dade Transitway Park-and-Ride at SW 244th St (244 St Station)	South Dade Transitway & SW 244th St	South Dade Transitway & SW 244th St	Reconstruct existing facility and increase the number of leased parking spaces from 101 spaces to 111 spaces.	LRTP
10	Southland Mall (SW 205th St and South Dixie Highway)			Lease 100 parking spaces and construct four bay terminal	TDP/TIP
11	Transitway Park-and-Ride at SW 112th Ave			Upgrade existing facility	TDP/LRTP/TIP
12	Reginal Hub at SW 112th Ave			Bus Rapid station; Rehabilitation of Existing Transitway Stations; Addition of Dedicated Left Turn Lane from U.S. 1 to SW 112th Ave. Enhanced Landscaping; Pedestrian, bicycle and ADA improvements	Cutler Bay
13	Community Hub - Caribbean Blvd			Park & Ride Lot; Bus Rapid station; Rehabilitation of Existing Transitway Stations; Addition of Lanes on SW 200 St. W. of US-1; Enhanced Landscaping; Pedestrian and bicycle improvements. Sign removal and refurbishment.	Cutler Bay
14	Transitway Park-and-Ride at Marlin Road			Construct Park-and-Ride facility with 100 surface parking spaces	TDP/LRTP/TIP
15	Community Hub – Marlin Rd Park & Ride Lot			Bus Rapid station; Rehabilitation of Existing Transitway Stations; 4' Bike Lanes; Traffic Calming;	Cutler Bay

ID	Facility	Limits From	Limits To	Description	Source
				Enhanced Landscaping; Pedestrian, bicycle and ADA improvements. Relocate existing bus stop	
16	Construct a Park and Ride at Quail Roost Dr			Station Construction	TIP
17	Community Hub – Eureka Drive West			Park & Ride; Rehabilitation of Existing Transitway Stations; 4' Bike Lanes on SW 184 St; Enhanced Landscaping; Pedestrian, bicycle and ADA improvements	Cutler Bay
18	iBus - Village of Palmetto Bay			Proposal A & Proposal B	Palmetto Bay
19	Transitway Park-and-Ride at SW 168th St			Upgrade the existing park-and-ride facility	TDP/LRTP
20	South Dade Transitway Park-and-Ride at SW 152nd St (Coral Reef Dr)	South Dade Transitway & SW 152nd St	South Dade Transitway & SW 152nd St	Upgrade park-and-ride, Phase 1- reconstruct / provide 196 leased spaces, Phase 2 - modernized 511 space parking garages	LRTP
21	South Dade Transitway Park-and-Ride at SW 136th St			Lease 100 parking spaces	TDP/LRTP
22	Transitway at SW 104th St Park-and-Ride			Lease park-and-ride facility with 100 parking spaces	TDP/LRTP
23	252 Coral Reef Express*	Coral Reef Drive	Dadeland South Metrorail Station	Express bus service	TDP
24	Direct Ramps	South Dade Transitway	SR 826 Express Lanes	Construct ramps connecting the South Miami-Dade Transitway and SR 826 Express Lanes	TDP
25	Dadeland South Intermodal Station	Dadeland South Metrorail Station		Construction of direct ramps between the Transitway BRT service and the Metrorail service. Construct a new 1,000 space parking garage	TDP/LRTP
26	South Dade Transitway Extension	Dadeland South Metrorail Station	Dadeland North Metrorail Station	Extend Transitway from Dadeland South to Dadeland North Metrorail Station	TDP
27	Dadeland South Intermodal Station - Ramps	Dadeland South Metrorail Station	Dadeland South Metrorail Station	Construct direct ramps to/ from elevated Bus Rapid Transit (BRT) platform, improvements and refurbishment of existing Metrorail station	LRTP
28	Park-and-Ride Facility at Dadeland North			Construct a new 1,000-space parking garage with ground-floor retail and office space.	TDP/LRTP

* Transit route is currently unfunded

Table 9: Pedestrian & Bicycle Improvement Plans

ID	Facility	Limits From	Limits To	Description	Lead Agency
1	SMART Terminal Connector - SW 344th St	South Transitway	SW 152nd Ave	Protected On-Road Bicycle Facility and Pedestrian Improvements	Miami-Dade County
2	Biscayne- Everglades Greenway (Seg 6)	South Transitway	Biscayne National Park	Trail Improvements	Miami-Dade County
3	SW 137th Ave	Turnpike	US-1	Dedicated On-Road Bicycle Facility Improvement	Miami-Dade County
4	SW 137th Ave	US-1	SW 184th St	Dedicated On-Road Bicycle Facility Improvement	Miami-Dade County
5	SW 216th St	SW 127th Ave	SW 112th Ave	Dedicated On-Road Bicycle Facility Improvement	Miami-Dade County
6	US-1	SW 112th Ave	SW 184th St	Pedestrian Promenade along the east side of US-1	Cutler Bay
7	Marlin Rd	US-1	Old Cutler Rd	Off-Road Bicycle and Pedestrian Facility Improvement	Cutler Bay
8	SW 97th Ave	US-1	Franjo Rd	Bike Lane	Cutler Bay
9	SW 184th St	US-1	Old Cutler Rd	Dedicated On-Road Bicycle	Palmetto Bay /Cutler Bay
10	SW 168th St	US-1	Old Cutler Rd	Dedicated On-Road Bicycle Facility Improvement	Miami-Dade County
11	SW 152nd St	US-1	SW 67th Ave	Dedicated On-Road Bicycle Facility Improvement	Palmetto Bay
12	SMART Trails – FPL Easement	SW 107 Ave	South Dade Transitway	Off-Road Bicycle and Pedestrian Facility Improvement	Miami-Dade County
13	SW 136th St	US-1	Old Cutler Rd	Dedicated On-Road Bicycle Facility Improvement	Miami-Dade County
14	US-1	SW 136th St	Dadeland North Station	Pedestrian Facility Enhancement or Expansion	Miami-Dade County
15	SW 132nd St	US-1	SW 57th Ave	North side Sidewalk	Pinecrest
16	SW 120th St	US-1	SW 57th Ave	Both sides Bicycle Lane	Pinecrest
17	SW 104th St	US-1	SW 57th Ave	Sharrows	Pinecrest
18	SW 102nd St	US-1	SW 75th Pl	South side Sidewalk	Pinecrest
19	SW 100th St	US-1	SW 72nd Ave	South side Sidewalk	Pinecrest

2.3 Existing First Mile/Last Mile Services

The first mile/last mile connection refers to a seamless transition from one place to another through multiple modes. In this modern technology-based era, there are many state-of-the-art practice to provide first mile/last mile connectivity. Some widely used options are described below.

- Shared Mobility: Shared mobility is an umbrella term that encompasses a variety of transportation modes including car sharing, bike sharing, Transportation Network Companies (TNC), and scooter sharing. Shared mobility programs often yield a variety of environmental, social, and transportation system benefits.
- Mobility as a Service (MaaS): Maas refers to a mobile app platform that brings all of the transportation modes and providers together in one app to allow the user to plan and pay for their trips. The DTPW offers an EASY Pay application for transit ticket purchases and tracking of all transit modes on one application.
- Smart Bicycle Parking: An app-based parking system for bicycles. Parking activity is launched through a mobile app that identifies free spaces, keeps track of the time parked, and collects payment. They are often placed at bus or train stations to help with first mile/last mile connections.
- Dockless Bicycles and Scooters: Dockless options for bicycle and scooter rentals improve mobility and expand access to public transportation, as users are not limited to picking up or dropping off in any designated area. The locations for dockless bicycle and scooter rentals are determined based on where first mile/last mile connections are lacking.

Three municipalities (Town of Cutler Bay, Village of Palmetto Bay, and Village of Pinecrest) developed their own first mile/last mile connection options to serve the proposed BRT system as described below.

Cutler Bay

- Cutler Bay in partnership with DTPW provides GO Connect rides to the South Dade Transitway and within the Town of Cutler Bay, which serves first mile/last mile connections. It can be reserved through a mobile app and is free. Cutler Bay also plans to provide smart bicycle parking and dockless options for bicycle and scooter rentals as a way to improve the first mile/last mile connections.

Palmetto Bay

- A new first mile/last mile connection service to the South-Dade Transitway and the Dadeland South Metrorail Station for Village of Palmetto Bay is included in the 3-year Demonstration Program of the SMART Plan.

Pinecrest

- A new first mile/last mile connection service to the South-Dade Transitway and the Dadeland South Metrorail Station for Village of Pinecrest is included in the 3-year Demonstration Program of the SMART Plan.

- A free on-demand service “Freebee” was lunched to connect with the most popular destinations in the Village of Pinecrest and the South Dade Transitway and Metrorail stations. The “Freebee’ service can be requested from a smart phone and available from Monday through Friday, 7:00 a.m. to 7:00 p.m., and Saturday, 10:00 a.m. to 10:00 p.m. The service was paused since the COVID pandemic started.

2.4 Literature Research & Data Gathering Summary

2.4.1 Potential Roadway Improvements

An extensive list of relevant and recent studies were reviewed and summarized. Based on the literature review, the following intersections along the study corridor were selected to determine potential capacity improvements.

North Segment (from north of SW 95th Street to SW 232 Street/SW 127 Avenue):

1. US-1 and SW 104th Street
2. Palmetto Road and SW 104th Street
3. US-1 and SW 112th Street/Killian Drive
4. US-1 and SW 128th Street
5. US-1 and SW 132nd Street
6. US-1 and SW 136th Street
7. US-1 and SW 144th Street
8. US-1 and SW 152nd Street
9. US-1 and SW 184th Street
10. SW 10900 Block and Caribbean Boulevard
11. SW 117th Avenue and SW 114th Court
12. SW 11300 Block and SW 211th Street

South Segment (from south of SW 232 Street/SW 127 Avenue to SR 9336/SW 344 Street/Palm Drive):

1. US-1 and NE 15th Street/NE 12th Avenue
2. Old Dixie Highway and NE 11th Street
3. SW 177th Avenue and N Flagler Avenue
4. US-1 and SW 344th Street/Palm Drive

2.4.2 Multimodal Transportation Improvement Concepts

This study reviewed local government transportation plans for pedestrian, bicycle, and transit improvement. State-of-the-art tools to improve first mile/last mile connectivity were also reviewed. Some municipalities in the study corridor currently offer first mile/last mile connectivity options to a certain extent.

A detailed analysis is presented in later sections of this report to identify the multimodal connectivity and accessibility gaps (sidewalk gaps, bicycle facility improvements, first mile/last mile connectivity gaps, etc.) with respect to access to the South-Dade Transitway and to provide recommendations for developing multimodal transportation improvement concepts.

3 Existing and Proposed Traffic and Multimodal Conditions

This section includes the existing and proposed traffic and multimodal conditions. The traffic analysis documented in this section of the report is based on both the No-Build and Build 2022 Scenarios analyzed and summarized in the US-1 South Corridor Rapid Transit Project VISSIM Analysis report completed by the FDOT in December 2020. It should be noted that the build alternative included the same geometric conditions as the existing conditions. When compared to the existing conditions, the build alternative included slightly different traffic along US-1 due to a mode shift of 2.14% in 2022 because of increased transit utilization. Therefore, the primary differences between the existing and the build alterative are related to the proposed changes in transit operations and the operation of the gates at the intersections.

3.1 Existing Roadway Conditions LOS and Delay

This section summarizes existing roadway conditions, including LOS, recurring congestion and documentation of existing transit/multimodal facilities in the study area. **Table 10** below shows a summary of the LOS for the major intersections along the study area.

Table 10: No Build (2022) LOS from VISSIM Report

Intersection Number	Intersecting Roads	AM Peak		PM Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
1	US-1 & Kendall Dr	47	(D)	39	(D)
2	US-1 & Dadeland Blvd	9	(A)	24	(C)
3	Busway & Dadeland Blvd	1	(A)	1	(A)
4	US-1 & Datran Dr	13	(B)	23	(C)
5	Old Dixie Highway & Datran Dr	7	(A)	7	(A)
6	SW 98th St @ SW 77th Ave	41	(D)	20	(C)
7	US-1 @ SW 98th St	34	(C)	30	(C)
8	US-1 @ SW 104th St	126	(F)	79	(E)
9	SW 104 St and Palmetto Rd	46	(D)	22	(C)
10	US-1 @ Killian Dr	111	(F)	78	(E)
11	US-1 @ SW 120th St	12	(B)	103	(F)
12	US-1 @ SW 124th Street/Chapman Field Dr	29	(C)	87	(F)
13	US-1 @ SW 128th St	31	(C)	86	(F)
14	US-1 @ SW 132nd St	36	(D)	92	(F)
15	SW 132nd St @ SW 87th Ave	11	(B)	21	(C)
16	US-1 @ SW 136th St	102	(F)	96	(F)
17	US-1 @ Mitchell Dr/ SW 144th St	120	(F)	113	(F)
18	US-1 @ SW 152nd St	154	(F)	105	(F)
19	US-1 and SW 15900 Block	32	(C)	17	(B)
20	US-1 @ SW 164th St/ SW 160th St	69	(E)	27	(C)
21	US-1 NB @ SW 168th St	24	(C)	30	(C)
22	US-1 SB @ SW 168th St	34	(C)	25	(C)
23	US-1 NB @ SW 174th St	32	(C)	28	(C)
24	US-1 SB @ SW 174th St	30	(C)	15	(B)
25	US-1 NB @ E Evergreen St	18	(B)	46	(D)

Intersection Number	Intersecting Roads	AM Peak		PM Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
26	US-1 NB @ E Hibiscus St	9	(A)	7	(A)
27	US-1 SB @ E Hibiscus St	14	(B)	10	(A)
28	US-1 @ SW 184th St	76	(E)	91	(F)
29	SW 184th St @ Homestead Ave	14	(B)	15	(B)
30	US-1 @ SW 186th St/ Quail Roost Dr	50	(D)	54	(D)
31	SW 186th St/ Quail Roost Dr @ Homestead Ave	9	(A)	10	(B)
32	US-1 @ Marlin Rd	45	(D)	45	(D)
33	US-1 @ SW 19500 Block	8	(A)	6	(A)
34	US-1 @ SW 200th St/ Caribbean Blvd	66	(E)	58	(E)
35	SW 200 St/Caribbean Boulevard and SW 10900 Block	37	(D)	20	(C)
36	US-1 @ SW 20400 Block	3	(A)	8	(A)
37	US-1 @ S Allapattah Rd/ SW 112th Ave	24	(C)	47	(D)
38	US-1 @ SW 211th St/ SW 117th Ave	62	(E)	62	(E)
39	SW 211 St at SW 11300 Block	5	(A)	51	(D)
40	SW 117th Avenue @ SW 114th Ct	23	(C)	23	(C)
41	US-1 @ SW 216th St	52	(D)	45	(D)
42	US-1 @ W Old Cutler Rd/ SW 220th St	27	(C)	21	(C)
43	US-1 @ SW 224th St	35	(C)	24	(C)
44	US-1 @ SW 232nd St/ SW 127th Ave	85	(F)	26	(C)
45	US-1 @ SW 132nd Ave	35	(D)	74	(E)
46	US-1 @ SW 244th St	32	(C)	32	(C)
47	US-1 @ SW 248th St	57	(E)	69	(E)
48	US-1 @ SW 137th Ave & Tropical Ave	8	(A)	6	(A)
49	US-1 @ SW 252nd St	30	(C)	32	(C)
50	US-1 @ SW 260th St	29	(C)	30	(C)
51	US-1 @ SW 264th St/ Bauer Dr	35	(D)	33	(C)
52	SW 264th St/ Bauer Dr @ Old Dixie Hwy	37	(D)	37	(D)
53	South Miami-Dade Busway @ SW 146th Ct	14	(B)	14	(B)
54	US-1 @ SW 268th St/ Moody Dr	24	(C)	18	(B)
55	US-1 @ SW 272nd St	22	(C)	16	(B)
56	SW 272nd St @ Old Dixie Hwy	27	(C)	25	(C)
57	US-1 @ SW 280th St	19	(B)	16	(B)
58	SW 280th St @ Old Dixie Hwy	48	(D)	49	(D)
59	US-1 @ SW 157th Ave	20	(B)	16	(B)
60	SW 157th Ave @ Old Dixie Hwy	28	(C)	27	(C)
61	SW 157th St @ SW 288th St	39	(D)	66	(E)
62	US-1 @ SW 288th St	26	(C)	28	(C)
63	SW 288th St @ Old Dixie Hwy	38	(D)	42	(D)
64	US-1 @ SW 296th St	92	(F)	48	(D)
65	SW 296th St @ Old Dixie Hwy	38	(D)	42	(D)
66	US-1 @ NE 15th St/NE 12th St	189	(F)	64	(E)
67	NE 15th St @ Old Dixie Hwy	32	(C)	37	(D)
68	US-1 @ NE 11th St	24	(C)	16	(B)
69	NE 11th St @ N Flagler Ave	36	(D)	40	(D)
70	NE 11th St @ Old Dixie Hwy	49	(D)	73	(E)
71	US-1 @ Campbell Dr	44	(D)	53	(D)
72	Campbell Dr @ NE 1st Rd	6	(A)	17	(B)
73	Campbell Dr @ N Flagler Ave	49	(D)	16	(B)
74	Campbell Dr @ Old Dixie Hwy	7	(A)	9	(A)
75	US-1 @ E Mowry Dr/ NE 2nd Dr/SE 3rd St	52	(D)	57	(E)
76	NE 2nd Dr @ N Flagler Ave	19	(B)	21	(C)
77	SW 320th St/ Mowry Dr @ N Flagler Ave	24	(C)	20	(B)

Intersection Number	Intersecting Roads	AM Peak		PM Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
78	SW 320th St/ Mowry Dr @ SW 177th Ave	27	(C)	24	(C)
79	S Flagler Ave @ SW 177th Ave	24	(C)	43	(D)
80	SW 4th St/SW 324th St @ N Flagler Ave	22	(C)	27	(C)
81	US-1 @ SW 328th St/ Lucy St	37	(D)	45	(D)
82	SW 328th St/Lucy St @ SW 177th Ave	29	(C)	28	(C)
83	SW 328th St/Lucy St @ South Miami-Dade Busway	2	(A)	4	(A)
84	US-1 @ north of NE7th St/ West Davis Pkwy (SW 33300 Blk)	28	(C)	24	(C)
85	US-1 @ NE 7th St/ West Davis Pkwy	16	(B)	27	(C)
86	NE 7th St/ West Davis Pkwy @ SW 177th Ave	36	(D)	47	(D)
87	NE 7th St/ West Davis Pkwy @ South Miami-Dade Busway	3	(A)	5	(A)
88	US-1 @ SR 9336/SW 344 Street/East Palm Drive	61	(E)	172	(F)
89	SR 9336/SW 344 Street/East Palm Drive @ SW 177th Ave	24	(C)	30	(C)

The following intersections operate at overcapacity (LOS F) in the existing conditions model during either morning, afternoon, or both peak hours:

1. US-1 and SW 104th Street (AM LOS: F)
2. US-1 and SW 112th Street /Killian Drive (AM LOS: F)
3. US-1 and SW 120th Street (PM LOS: F)
4. US-1 and SW 124th Street (PM LOS: F)
5. US-1 and SW 128th Street (PM LOS: F)
6. US-1 and SW 132nd Street (PM LOS: F)
7. US-1 and SW 136th Street (AM LOS: F / PM LOS: F)
8. US-1 and SW 144th Street (AM LOS: F / PM LOS: F)
9. US-1 and SW 152nd Street (AM LOS: F / PM LOS: F)
10. US-1 and SW 184th Street (PM LOS: F)
11. US-1 and SW 232nd Street (AM LOS: F)
12. US-1 and SW 296th Street (AM LOS: F)
13. US-1 and NE 15th Street/NE 12th Avenue (AM LOS: F)
14. US-1 and SR 9336/SW 344 Street/East Palm Drive (PM LOS: F)

3.2 Transit and Multimodal Facilities

There are several transit and multimodal facilities located along the study area. The Miami-Dade County Transit Map for the Metrobus system was utilized to identify bus stop locations for routes which either travel along the US-1 corridor within the study area or have a connection within walkable distance from US-1. This study defined walkable distance as the distance between one bus connection along a cross street and the South Dade Transitway facility. Based on the discussion with some of the project stakeholders, walkable distance was assumed as 250 feet. **Figure 10** illustrates the bus stops along the corridor and also eight (8) transit and multimodal facilities:

1. Metrorail Dadeland North Station
2. Metrorail Dadeland South Station
3. Park & Ride @ SW 152nd Street
4. Park & Ride @ SW 168th Street
5. Park & Ride @ SW 112th Avenue
6. Park & Ride @ SW 244th Street
7. Park & Ride @ SW 296th Street
8. Park & Ride @ SR 9336/SW 344th Street/East Palm Drive

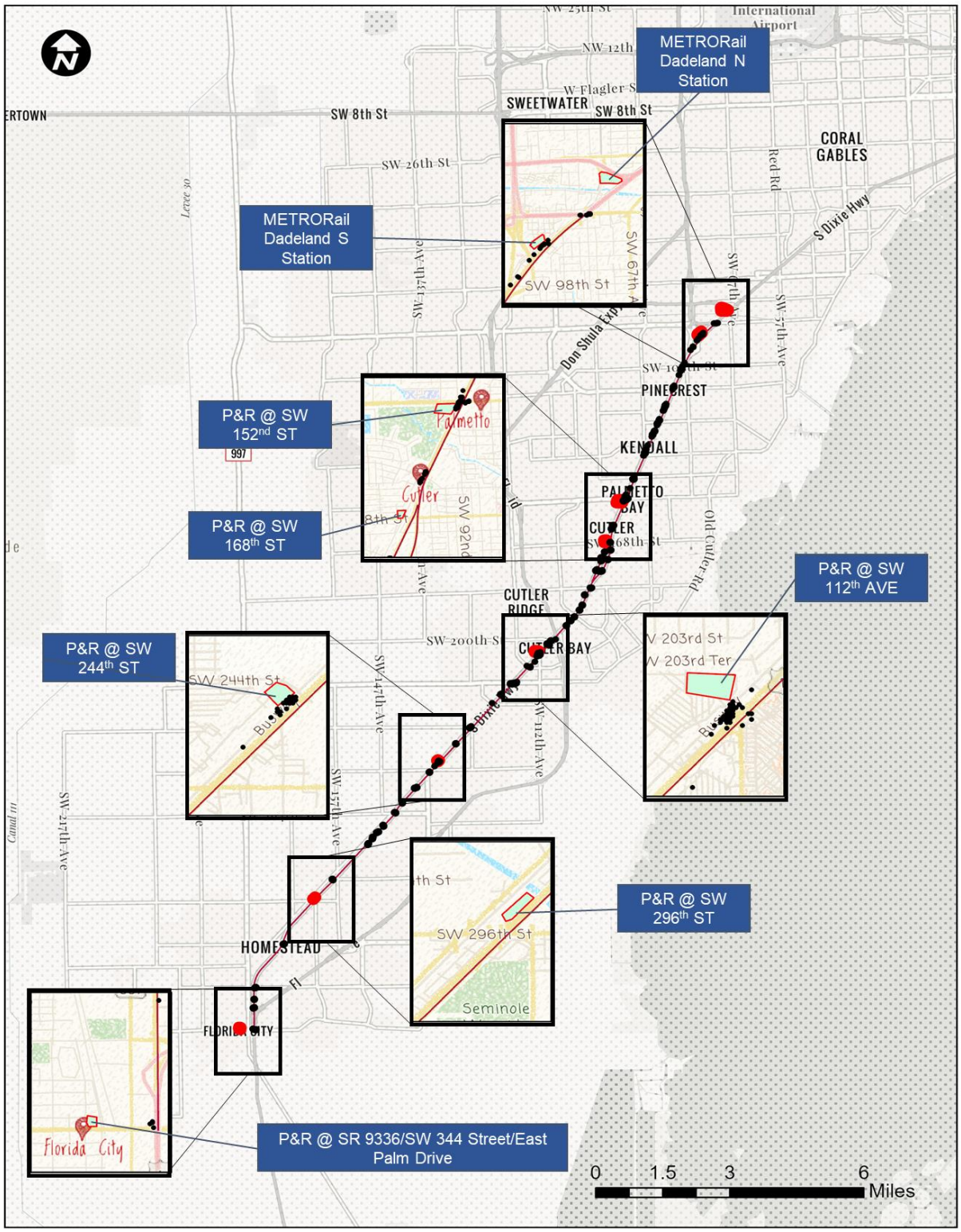

Figure 10: Transit and Multimodal Facilities Around Study Corridor

3.3 Multimodal Transportation Data

This section summarizes the information on vehicular, transit and non-motorized users' data.

3.3.1 Turning Movement Counts

DTPW collected AM and PM peak hour turning movement counts at 55 intersections along the US-1/South Dixie Highway corridor as part of their ongoing South Corridor Rapid Transit Study. This data was collected between November 2018 and January 2019. To augment this data and match the larger system of intersections (89 intersections) for this independent VISSIM analysis, an additional 34 peak hour turning movement counts were collected. This supplemental data collection effort was performed by FDOT on Thursday, November 14, 2019, and on Thursday, January 16, 2020. The peak hour intersection turning movement volumes are included in **Appendix C**.

3.3.2 Transit Ridership Data

Miami-Dade County issues a ridership technical report (monthly) which is used to gather transit data. The latest set of data corresponds to November 2021 average weekday/Saturday and Sunday boardings along Metrobus routes in the study area. **Appendix D** includes the Metrobus transit network map for Miami-Dade County and **Table 11** below summarizes the boarding information for bus routes along the study area. These routes either run along US-1 (within the study area) or cross US-1 but have a stop to connect to one of the routes along US-1.

Table 11: Transit Boarding Data (November 2021)

Route Number	Route Name	Nov 2021 Average Weekday Boarding	Nov 2021 Average Saturday Boarding	Nov 2021 Average Sunday Boarding
1	SO.MIAMI HTS-PERRINE VIA SOUTHLAND	148	162	126
31	BUSWAY LOCAL CUTLER BAY-DADELAND SOUTH	656	617	469
34	EXPRESS: FLA CITY TO DADELAND SOUTH	710	-	-
35	MDC KENDALL-FLA.CITY VIA CUTLER BAY	1658	979	762
38	BUSWAY MAX: FLA CITY TO DADELAND SOUTH	4298	3286	2611
39	EXPRESS: S.DADE GVT CTR-DADELAND SOUTH	192	-	-
52	GOULDS TO DADELAND SOUTH STATION	1081	607	371
57	MIA STATION TO SW 152 ST VIA 57 AVE	259	-	-
73	NW DADE-DADELAND SO. VIA 67/72 AVE	1696	870	417
136	DOUGLAS RD-OLD CUTLER-SW 136 ST	110	-	-
137	WEST DADE CONNECTION	1141	888	613
200	CUTLER BAY LOCAL	150	62	18
248	PRINCETON CIRCULATOR	57	-	-
252	CORAL REEF MAX	514	180	159
287	SAGA BAY MAX	173	-	-
301	DADE/MONROE EXPRESS	809	810	683
344	MDC HOMESTEAD TO FLA CITY	57	-	-

3.3.3 Pedestrian and Bicycle Activity

FDOT District 6 Planning & Environmental Management Office provided the UBR (Unified Basemap Repository) link which contained the raw Strava data from 2012 to mid-2018. Since the raw Strava data included all street network within Florida, a spatial GIS analysis was performed to only select facilities within Miami-Dade County that are part of the scope of the study.

The Strava dataset is the largest collection of human-powered transportation information in the world. Millions of people track their bicycle rides, runs, and walks at Strava every day with their phone or GPS device. The bicycle trips recorded in the Strava dataset in 2016 throughout Miami-Dade County were processed for this study to estimate bicycle activity. It is important to mention that most of the bicycle trips recorded in Strava are from recreational riders and not necessarily from commuters.

The yearly pedestrian trips from the Strava dataset made in 2017 throughout Miami-Dade County were processed to assess pedestrian activity. It is important to note that the yearly pedestrian trips are a recollection of trips made by people jogging and running.

Figure 11 and **Figure 12** show bicycle and pedestrian activity along the study area based on Strava latest available data sources, respectively.

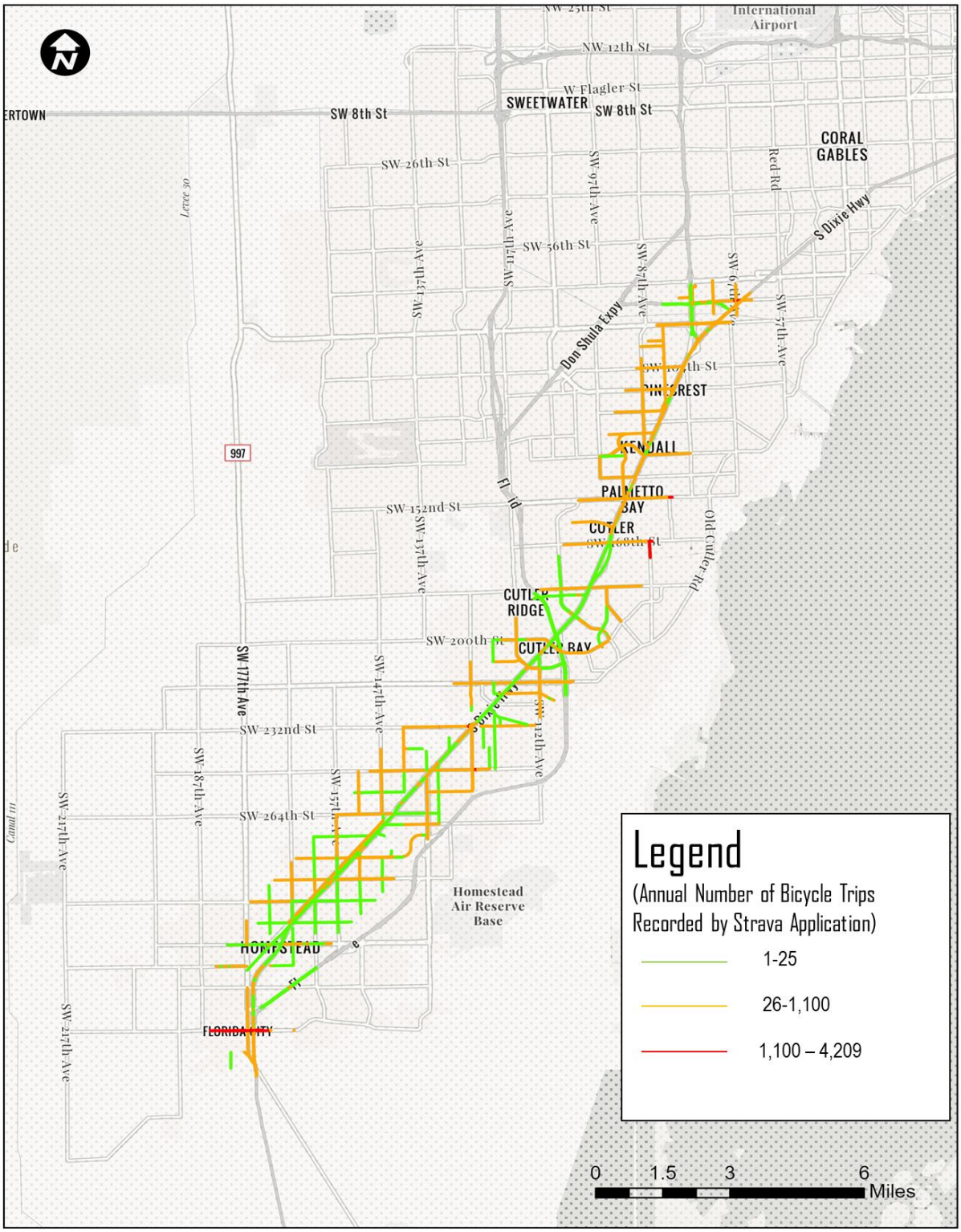

Figure 11: Bike Activity Based on Strava Data (2016)

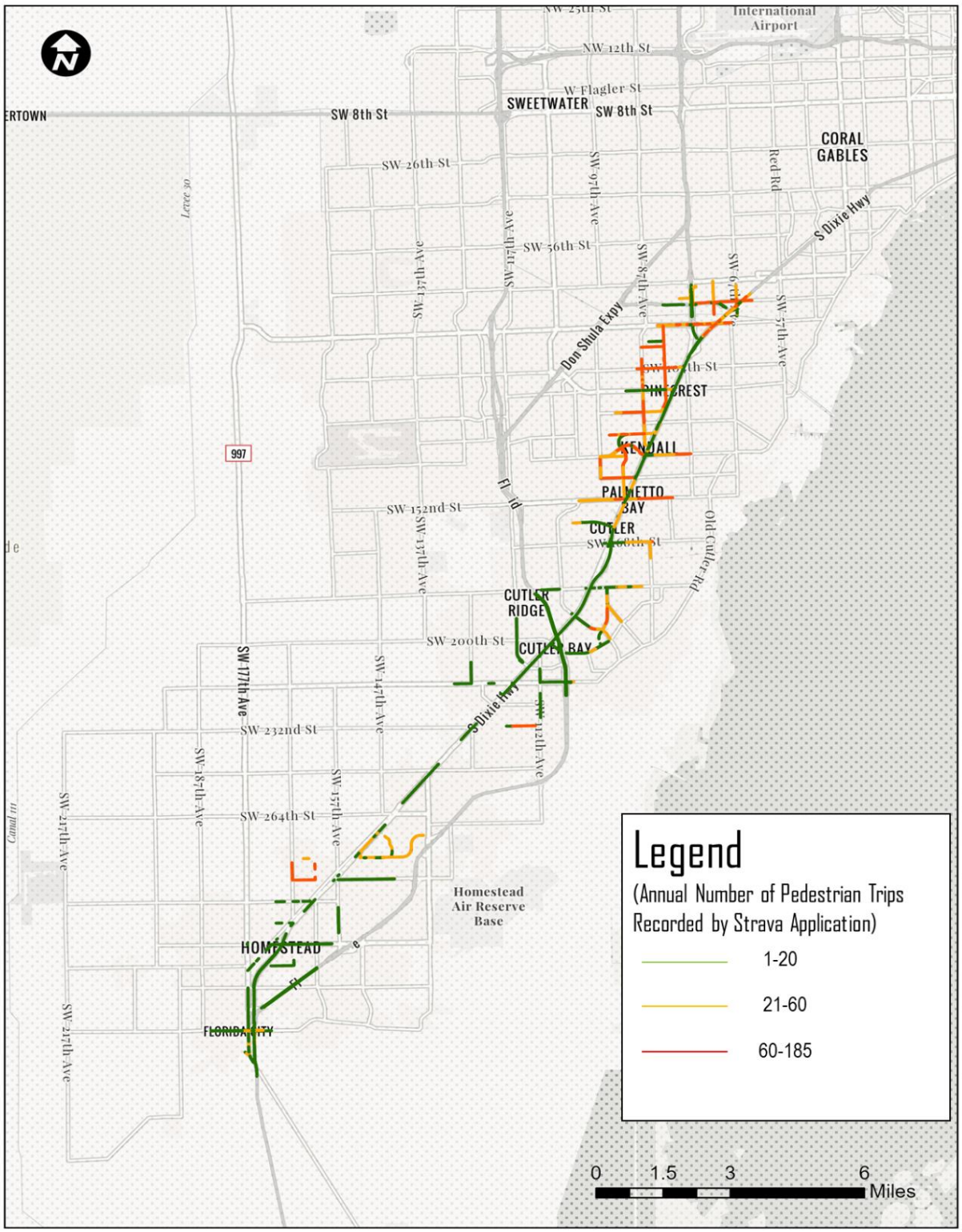

Figure 12: Pedestrian Activity Based on Strava Data (2017)

3.4 SMART Plan Signal Operational Plan (SOP)

The Miami-Dade County DTPW is currently installing SMART signals along US-1 and existing Busway. The SMART signal operational plans were not available at the time of this study. Hence, the signal timings used in the VISSIM model for the Build scenario (implemented signal preemption and closure at the gate) remained unchanged to analyze the roadway improvements as part of this study.

3.5 Proposed Signal Preemption and Gate Crossing Arm Operation

Since the proposed BRT would operate at-grade, gate crossing and signal preemption features will be installed to restrict crossing vehicular traffic and enable BRT vehicles travel through the at-grade intersections without interruption. Gate crossing arms will operate at all times of the day for both BRT Limited stop buses as well as Local Service buses to increase the safety and efficiency of bus travel through the intersections. However, only BRT buses would be able to make a request for signal preemption in the peak direction of travel (northbound for AM Peak and Southbound for PM Peak) to minimize impacts to general traffic on US-1. Detailed steps along with an estimated amount of time for each step to activate signal preemption and gate crossing sequence is provided in **Appendix B**.

3.6 Proposed Conditions LOS and Delay

The future conditions LOS and Delay were gathered from the FDOT South Corridor Rapid Transit Study report models for year 2022 build scenario. **Table 12** presents the delay and LOS for AM and PM peak periods along 89 intersections in the study area.

Table 12: Future Build (2022) Intersection Delay and LOS

Intersection Number	Intersecting Roads	AM Peak		PM Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
1	US-1 & Kendall Dr	46	(D)	37	(D)
2	US-1 & Dadeland Blvd	9	(A)	24	(C)
3	Busway & Dadeland Blvd	1	(A)	1	(A)
4	US-1 & Datran Dr	13	(B)	25	(C)
5	Old Dixie Highway & Datran Dr	10	(B)	19	(B)
6	SW 98th St @ SW 77th Ave	33	(C)	29	(C)
7	US-1 @ SW 98th St	48	(D)	68	(E)
8	US-1 @ SW 104th St	124	(F)	98	(F)
9	SW 104 St and Palmetto Rd	96	(F)	78	(E)
10	US-1 @ Killian Dr	81	(F)	63	(E)
11	US-1 @ SW 120th St	10	(B)	54	(D)
12	US-1 @ SW 124th Street/Chapman Field Dr	32	(C)	79	(E)
13	US-1 @ SW 128th St	37	(D)	92	(F)
14	US-1 @ SW 132nd St	27	(C)	93	(F)
15	SW 132nd St @ SW 87th Ave	11	(B)	19	(B)
16	US-1 @ SW 136th St	80	(F)	124	(F)

Intersection Number	Intersecting Roads	AM Peak		PM Peak	
		Delay (s/veh)	LOS	Delay (s/veh)	LOS
17	US-1 @ Mitchell Dr/ SW 144th St	95	(F)	121	(F)
18	US-1 @ SW 152nd St	125	(F)	104	(F)
19	US-1 and SW 15900 Block	7	(A)	17	(B)
20	US-1 @ SW 164th St/ SW 160th St	58	(E)	33	(C)
21	US-1 NB @ SW 168th St	24	(C)	26	(C)
22	US-1 SB @ SW 168th St	38	(D)	26	(C)
23	US-1 NB @ SW 174th St	19	(B)	25	(C)
24	US-1 SB @ SW 174th St	18	(B)	14	(B)
25	US-1 NB @ E Evergreen St	23	(C)	26	(C)
26	US-1 NB @ E Hibiscus St	12	(B)	8	(A)
27	US-1 SB @ E Hibiscus St	13	(B)	10	(A)
28	US-1 @ SW 184th St	75	(E)	87	(F)
29	SW 184th St @ Homestead Ave	16	(B)	18	(B)
30	US-1 @ SW 186th St/ Quail Roost Dr	35	(D)	58	(E)
31	SW 186th St/ Quail Roost Dr @ Homestead Ave	12	(B)	13	(B)
32	US-1 @ Marlin Rd	49	(D)	48	(D)
33	US-1 @ SW 19500 Block	9	(A)	6	(A)
34	US-1 @ SW 200th St/ Caribbean Blvd	79	(E)	62	(E)
35	SW 200 St/Caribbean Boulevard and SW 10900 Block	88	(F)	21	(C)
36	US-1 @ SW 20400 Block	3	(A)	8	(A)
37	US-1 @ S Allapattah Rd/ SW 112th Ave	32	(C)	38	(D)
38	US-1 @ SW 211th St/ SW 117th Ave	65	(E)	68	(E)
39	SW 211 St at SW 11300 Block	6	(A)	83	(F)
40	SW 117th Avenue @ SW 114th Ct	22	(C)	90	(F)
41	US-1 @ SW 216th St	54	(D)	45	(D)
42	US-1 @ W Old Cutler Rd/ SW 220th St	29	(C)	23	(C)
43	US-1 @ SW 224th St	37	(D)	20	(C)
44	US-1 @ SW 232nd St/ SW 127th Ave	58	(E)	34	(C)
45	US-1 @ SW 132nd Ave	37	(D)	38	(D)
46	US-1 @ SW 244th St	41	(D)	52	(D)
47	US-1 @ SW 248th St	54	(D)	50	(D)
48	US-1 @ SW 137th Ave & Tropical Ave	9	(A)	6	(A)
49	US-1 @ SW 252nd St	25	(C)	16	(B)
50	US-1 @ SW 260th St	32	(C)	31	(C)
51	US-1 @ SW 264th St/ Bauer Dr	34	(C)	39	(D)
52	SW 264th St/ Bauer Dr @ Old Dixie Hwy	40	(D)	76	(E)
53	South Miami-Dade Busway @ SW 146th Ct	20	(B)	23	(C)
54	US-1 @ SW 268th St/ Moody Dr	24	(C)	19	(B)
55	US-1 @ SW 272nd St	23	(C)	17	(B)
56	SW 272nd St @ Old Dixie Hwy	32	(C)	29	(C)
57	US-1 @ SW 280th St	20	(B)	15	(B)
58	SW 280th St @ Old Dixie Hwy	52	(D)	62	(E)
59	US-1 @ SW 157th Ave	20	(B)	16	(B)
60	SW 157th Ave @ Old Dixie Hwy	32	(C)	34	(C)
61	SW 157th St @ SW 288th St	39	(D)	67	(E)

Intersection Number	Intersecting Roads	AM Peak Delay (s/veh)	AM Peak LOS	PM Peak Delay (s/veh)	PM Peak LOS
62	US-1 @ SW 288th St	25	(C)	30	(C)
63	SW 288th St @ Old Dixie Hwy	42	(D)	61	(E)
64	US-1 @ SW 296th St	62	(E)	49	(D)
65	SW 296th St @ Old Dixie Hwy	42	(D)	61	(E)
66	US-1 @ NE 15th St/NE 12th St	162	(F)	68	(E)
67	NE 15th St @ Old Dixie Hwy	39	(D)	47	(D)
68	US-1 @ NE 11th St	25	(C)	17	(B)
69	NE 11th St @ N Flagler Ave	36	(D)	38	(D)
70	NE 11th St @ Old Dixie Hwy	56	(E)	82	(F)
71	US-1 @ Campbell Dr	41	(D)	47	(D)
72	Campbell Dr @ NE 1st Rd	9	(A)	20	(C)
73	Campbell Dr @ N Flagler Ave	29	(C)	15	(B)
74	Campbell Dr @ Old Dixie Hwy	10	(A)	12	(B)
75	US-1 @ E Mowry Dr/ NE 2nd Dr/SE 3rd St	32	(C)	40	(D)
76	NE 2nd Dr @ N Flagler Ave	27	(C)	22	(C)
77	SW 320th St/ Mowry Dr @ N Flagler Ave	39	(D)	44	(D)
78	SW 320th St/ Mowry Dr @ SW 177th Ave	37	(D)	29	(C)
79	S Flagler Ave @ SW 177th Ave	45	(D)	84	(F)
80	SW 4th St/SW 324th St @ N Flagler Ave	57	(E)	39	(D)
81	US-1 @ SW 328th St/ Lucy St	31	(C)	44	(D)
82	SW 328th St/Lucy St @ SW 177th Ave	29	(C)	28	(C)
83	SW 328th St/Lucy St @ South Miami-Dade Busway	10	(B)	11	(B)
84	US-1 @ north of NE7th St/ West Davis Pkwy (SW 33300 Blk)	28	(C)	23	(C)
85	US-1 @ NE 7th St/ West Davis Pkwy	16	(B)	24	(C)
86	NE 7th St/ West Davis Pkwy @ SW 177th Ave	36	(D)	34	(C)
87	NE 7th St/ West Davis Pkwy @ South Miami-Dade Busway	10	(A)	9	(A)
88	US-1 @ SR 9336/SW 344 Street/East Palm Drive	58	(E)	105	(F)
89	SR 9336/SW 344 Street/East Palm Drive @ SW 177th Ave	24	(C)	25	(C)

In order to assess the potential operational impacts, the study identified a list of intersections that are anticipated to operate at overcapacity (LOS F) in the 2022 Build condition during either morning, afternoon, or both peak hours. Twelve (12) out of the 44 intersections in the North segment are anticipated to operate at overcapacity (LOS F) in the 2022 Build condition while 4 out of the 45 intersections in the South segment are anticipated to operate at overcapacity (LOS F) in the 2022 Build condition.

Potential capacity improvement recommendations were based on the failing intersections as listed below.

North Segment:

1. US-1 and SW 104th Street
2. Palmetto Road and SW 104th Street
3. US-1 and SW 112th Street/Killian Drive
4. US-1 and SW 128th Street
5. US-1 and SW 132nd Street
6. US-1 and SW 136th Street
7. US-1 and SW 144th Street
8. US-1 and SW 152nd Street
9. US-1 and SW 184th Street
10. SW 10900 Block and Caribbean Boulevard
11. SW 117th Avenue and SW 114th Court
12. SW 11300 Block and SW 211th Street

South Segment:

1. US-1 and NE 15th Street/NE 12th Avenue
2. Old Dixie Highway and NE 11th Street
3. SW 177th Avenue and N Flagler Avenue
4. US-1 and SW 344th Street/Palm Drive

3.7 Multimodal LOS and V/C

3.7.1 Arterial LOS

The planning LOS for State facilities within Miami-Dade County were calculated based on 2019 Annual Average Daily Traffic (AADT) and the generalized LOS tables found in the FDOT Quality/Level of Service Handbook. The information was obtained from the FDOT District 6 Planning and Environmental Management Office. **Figure 13** presents the LOS based on this data.

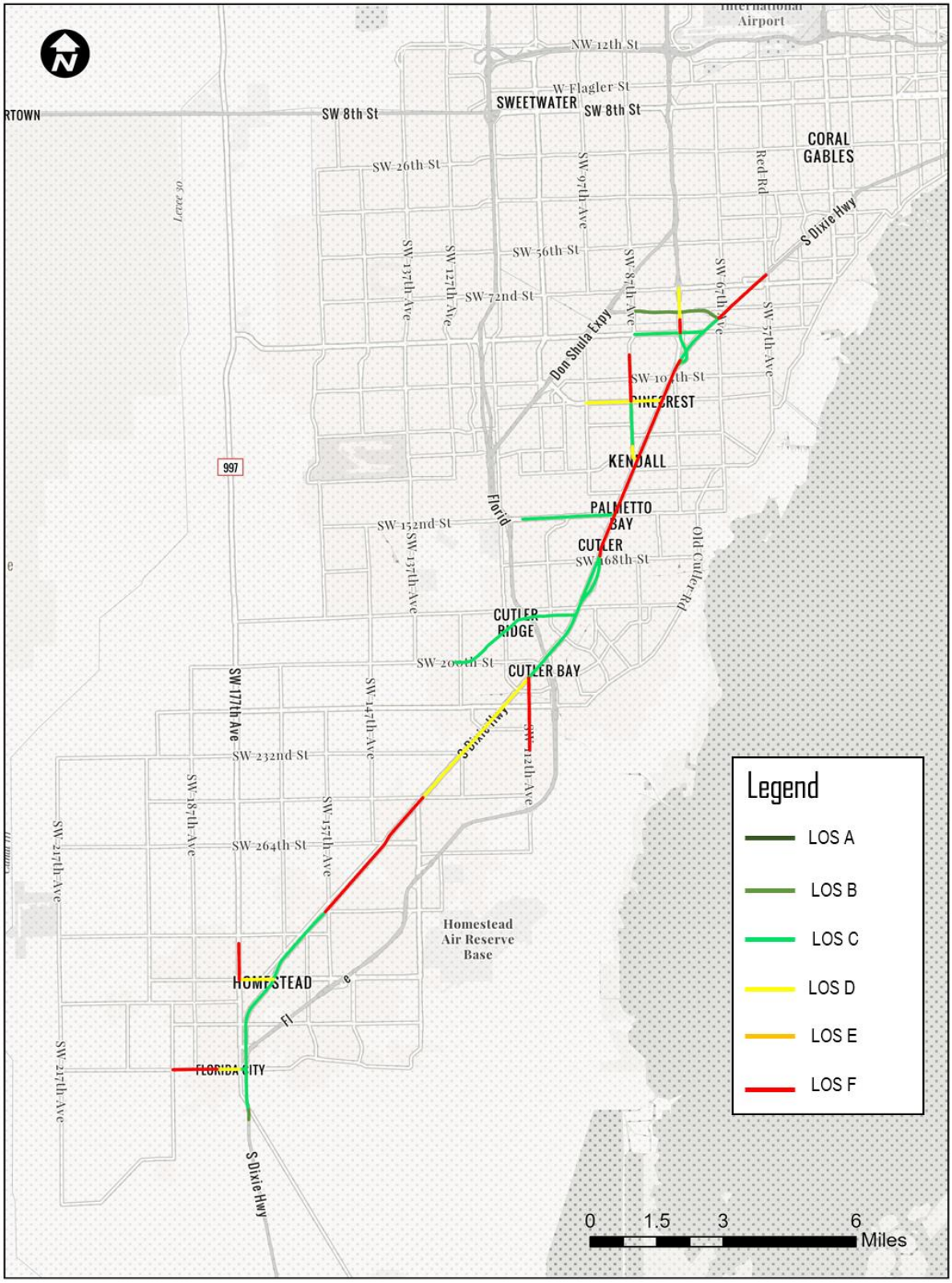

Figure 13: US-1 LOS Based on FDOT Database

3.7.2 Volume to Capacity Ratio (V/C)

The volumes in the V/C ratio calculation are 2019 AADTs obtained from the FDOT GIS database from the Transportation Data and Analytics Office. The capacity values were obtained from the 2015 base model in the Southeast Florida Regional Planning Model (SERPM 8). **Figure 14** shows the V/C map based on LOS along US-1.

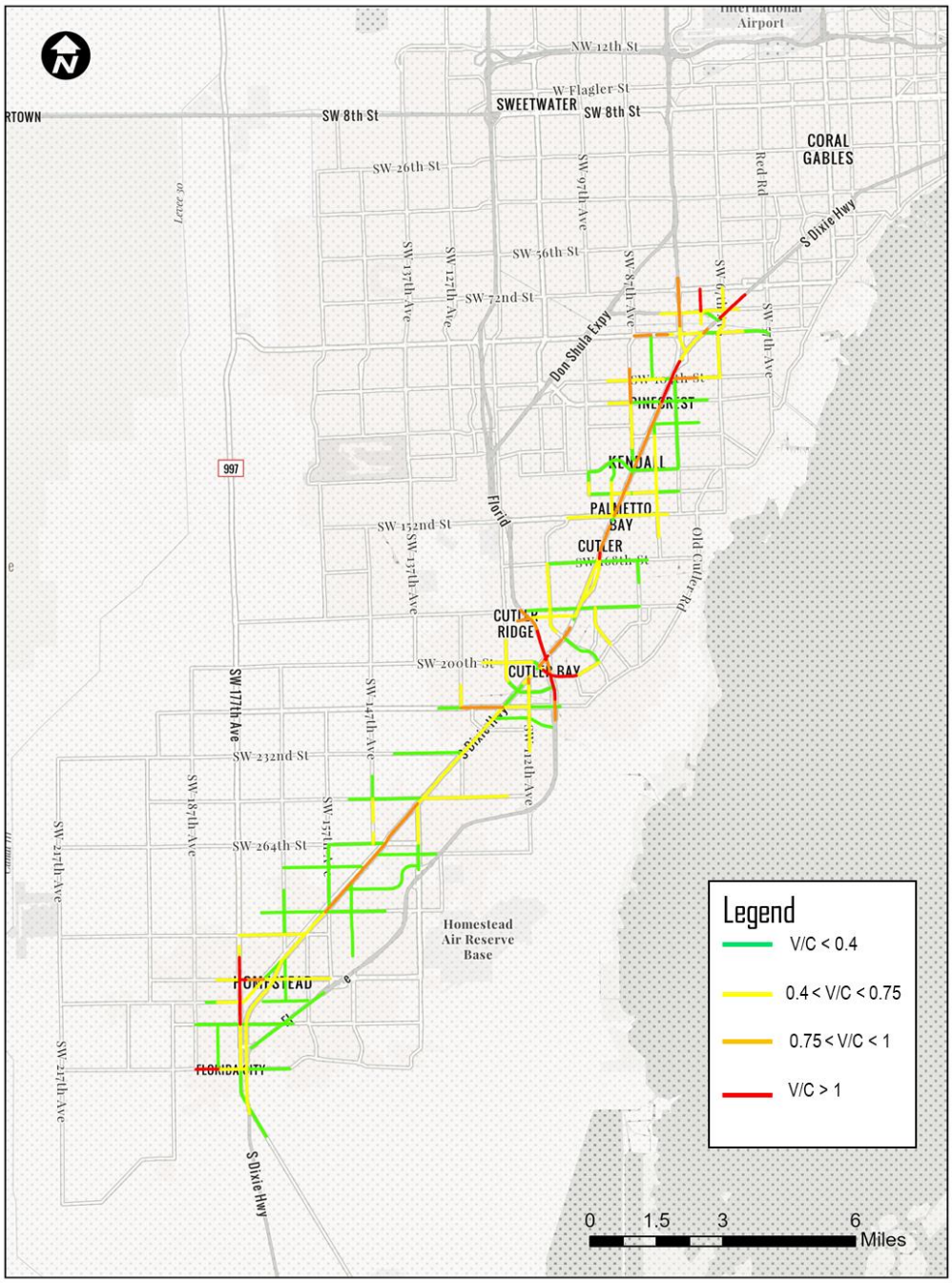

Figure 14: US-1 V/C Ratios

3.7.3 Transit LOS

A transit planning LOS was determined based on headways, and bus stop conditions. A provision was introduced for LOS A, so that exceptional LOS was given to routes that in addition to frequent service and adequate bus stops, provide connections to major destinations.

Information about bus routes alignment and bus stop's location and conditions were found in the Miami-Dade County Open Data Hub. Information about the headways were found in the General Transit Feed Specification (GTFS). The GTFS is a data specification that allows public transit agencies to publish their transit data in a format that can be consumed by a wide variety of software applications. The GTFS data format is used by thousands of public transportation providers. **Table 13** summarizes the transit planning LOS criteria. **Figure 15** presents the transit LOS along the study area. It should be noted that route 34 express use Florida Turnpike (FTE) as a non-stop service and that is the reason the LOS of transit system along FTE is A.

Table 13: Transit Planning LOS Criteria

LOS	Criteria
A	Bus headways of 20 min or less during peak hours with more than 75% of bus stops with adequate conditions and at least one transit stop connecting to a major destination (e.g., Downtown, shopping center) or transportation hub (e.g., Metrorail station)
B	Bus headways of 20 min or less during peak hours with more than 75% of bus stops with adequate conditions
C	Bus headways of 20 min or less during peak hours with less than 75% of bus stops with adequate conditions
D	Bus headways of more than 20 minutes during peak hours with less than 50% of bus stops with adequate conditions
E	Bus headways of more than 30 minutes during peak hours with more than 50% of bus stops with substandard conditions
F	Bus headways of more than 30 minutes during peak hours with more than 75% of bus stops with substandard conditions

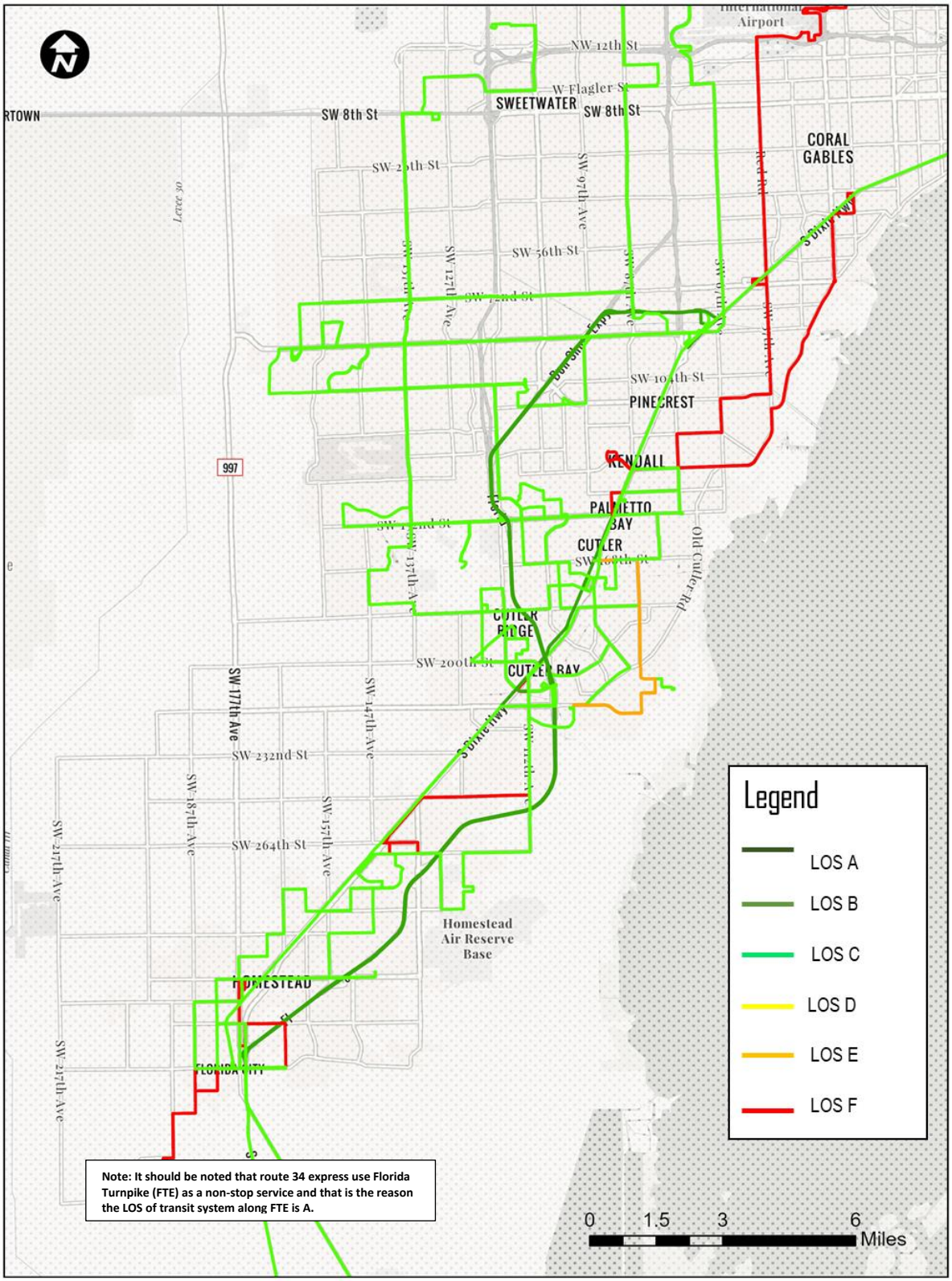

Figure 15: Transit LOS along Study Area

3.7.4 Bicycle LOS

A bicycle planning LOS was calculated based on criteria shown in **Table 14.** A standard bike line was defined based on information found in the FDOT Design Manual Chapter 223.2.1. Since there are certain conditions for which the minimum sidewalk width is 5 feet, a decision was made so that only bike lanes with a lane width of 5 feet or more were categorized as standard bike lanes. Posted speed limits on roads adjacent to the bicycle facilities was also taken into consideration as per guidance from the Highway Capacity Manual. The idea is that bicycle facilities near a high-speed roadway negatively impact the safety and comfort for bicyclists, therefore deteriorating the level of service. **Figure 16** illustrates the bicycle planning LOS along US-1.

Table 14: Bicycle Planning LOS Criteria

LOS	Criteria
A	Standard bike lane with speed limit of 35 mph or less outside the Downtown Development of Regional Impact (DDRI)
B	Standard bike lane with speed limit of 35 mph or less inside the DDRI
C	Standard bike lane with speed limit of 40 mph or more inside or outside of the DDRI
D	Substandard bike lane with speed limit of 35 mph or more outside the DDRI
E	Substandard bike lane with speed limit of 35 mph or more inside the DDRI/ No bike lane with speed limit of 35 mph or more
F	No LOS assigned

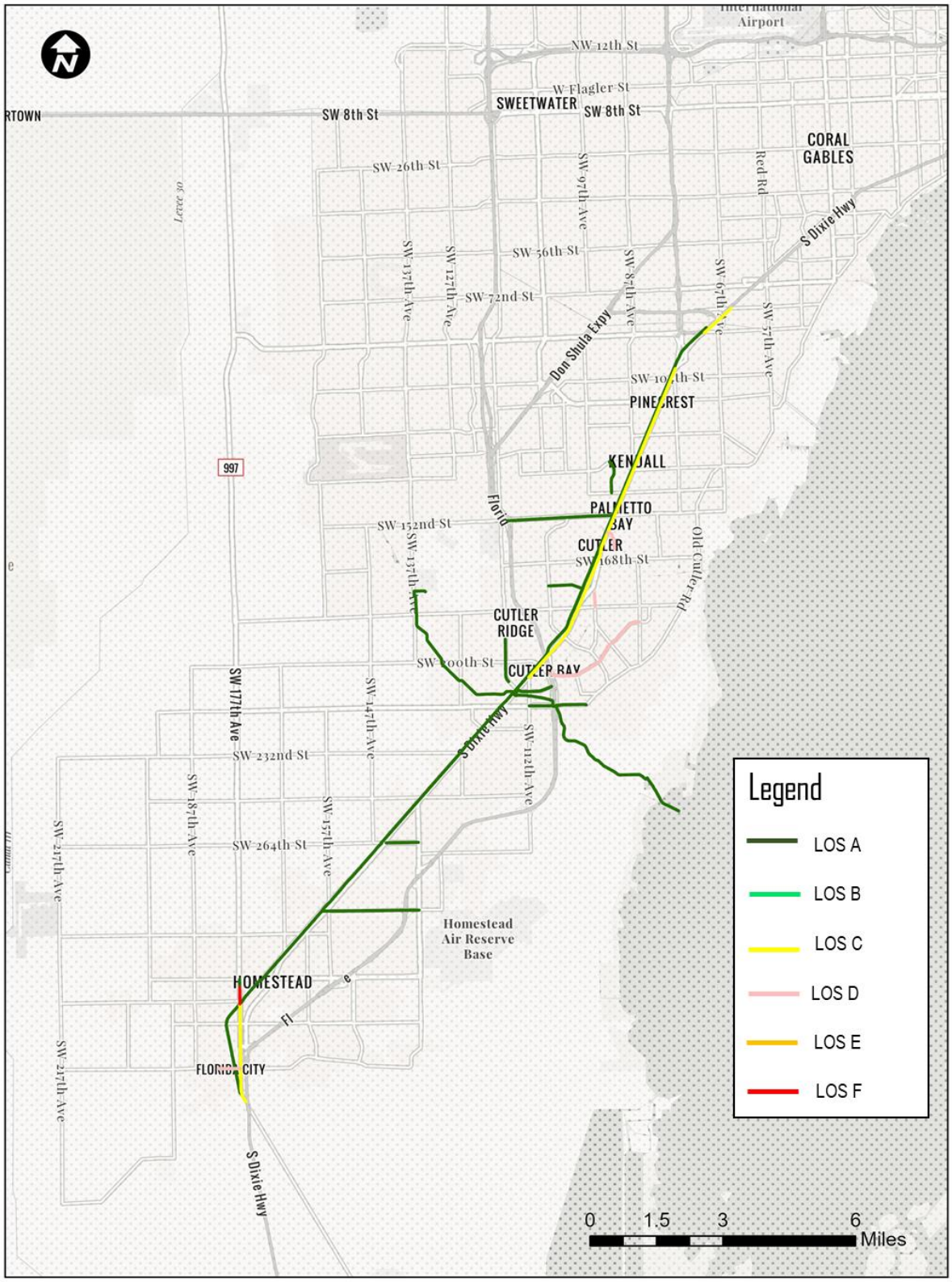

Figure 16: Bicycle LOS along Study Area

3.7.5 Pedestrian LOS

A pedestrian planning LOS was calculated based on the criteria shown in **Table 15.** Since there are certain conditions for which the minimum sidewalk width is 6 feet, a decision was made so that only sidewalks with a width of 6 feet or more were categorized as standard. Posted speed limits on roads adjacent to the pedestrian facilities were also taken into consideration in the LOS calculation as per guidance from the Highway Capacity Manual. The idea is that sidewalks near a high-speed roadway negatively impact the safety and comfort for pedestrians, therefore deteriorating the level of service. Sidewalk Barriers were also considered and included in the LOS A denomination when physical barriers were found separating motorized vehicle lanes from sidewalks. **Figure 17** shows the pedestrian planning LOS along US-1.

Table 15: Pedestrian Planning LOS Criteria

LOS	Criteria
A	Standard sidewalk with speed limit of 35 mph or less and presence of sidewalk/roadway separation or a sidewalk roadway barrier.
B	Standard sidewalk with speed limit of 35 mph or less
C	Standard sidewalk with speed limit of 40 mph or more
D	Substandard sidewalk with speed limit of 35 mph or less
E	Substandard sidewalk with speed limit of 40 mph or more
F	No sidewalk

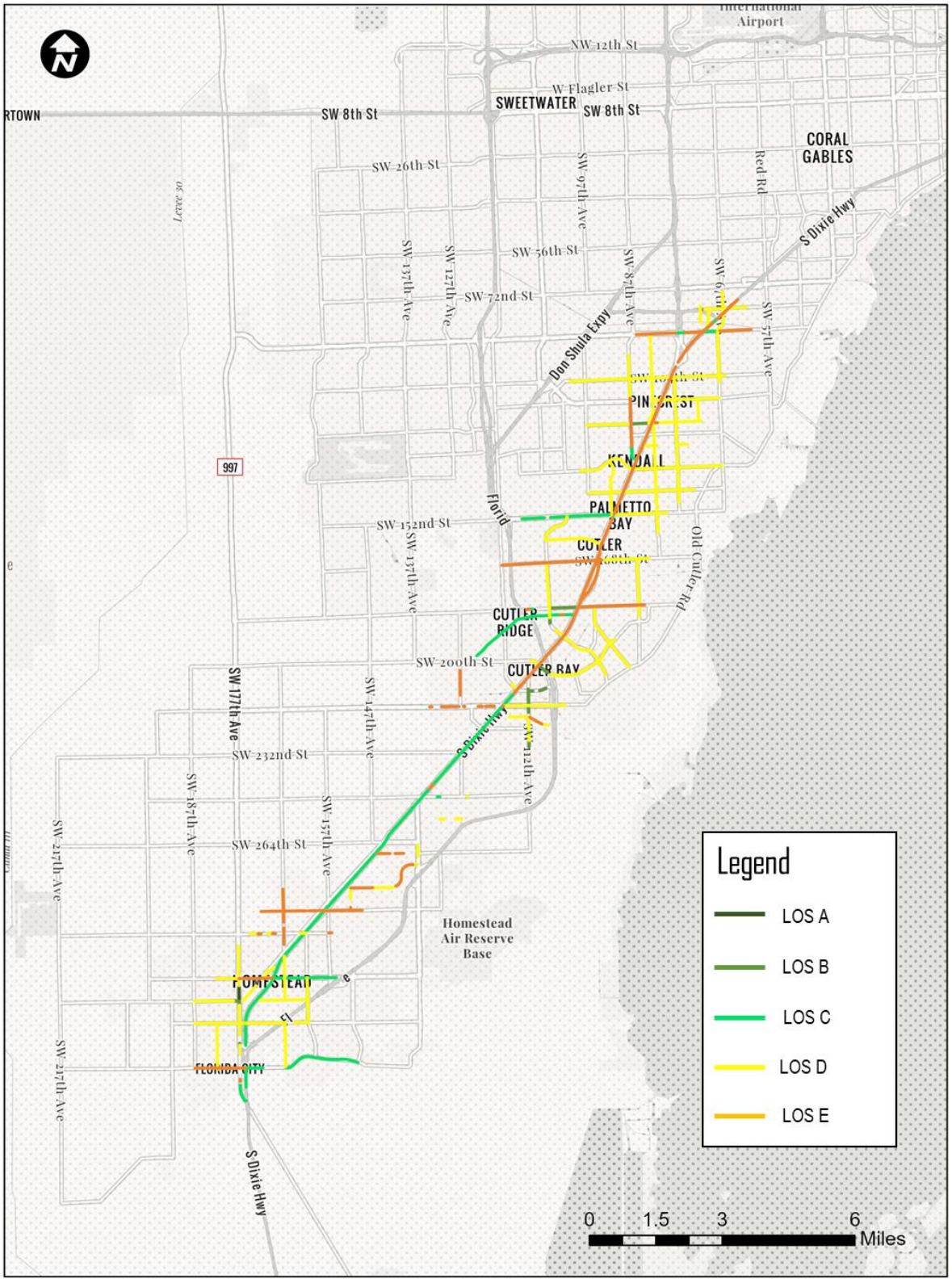

Figure 17: Pedestrian LOS along Study Area

3.7.6 Pedestrian and Bike Facility Coverage

The study corridor is 21.15 miles long and based on **Figure 16** and **Figure 17**, it can be estimated that the bike lane and sidewalk coverage along the corridor is 100%.

3.8 Transit Headway Data

Based on the General Transit Feed Specification (GTFS) files from January 2022, a minimum headway was calculated for routes which are either along US-1 or have a connection with a stop located within 250 feet of the corridors, which are summarized in **Table 16**.

Table 16: Minimum Headway based on GTFS

Route Number	Route Name	Minimum Headway (Minutes)
1	SOUTH MIAMI Heights-PERRINE VIA SOUTHLAND	15
31	BUSWAY LOCAL CUTLER BAY-DADELAND SOUTH	4
34	EXPRESS: FLA CITY TO DADELAND SOUTH	10
35	MDC KENDALL-FLA.CITY VIA CUTLER BAY	1
38	BUSWAY MAX: FLA CITY TO DADELAND SOUTH	1
39	EXPRESS: SOUTH DADE GVT CTR-DADELAND SOUTH	15
52	GOULDS TO DADELAND SOUTH STATION	1
57	MIA STATION TO SW 152 ST VIA 57 AVE	60
73	NW DADE-DADELAND SOUTH VIA 67/72 AVE	1
136	DOUGLAS RD-OLD CUTLER-SW 136 ST	40
137	WEST DADE CONNECTION	5
200	CUTLER BAY LOCAL	0
248	PRINCETON CIRCULATOR	60
252	CORAL REEF MAX	1
287	SAGA BAY MAX	30
301	DADE/MONROE EXPRESS	10
344	MDC HOMESTEAD TO FLA CITY	75

3.9 Queue Length Analysis

Queue lengths from the FDOT South Corridor Bus Rapid Transit Report were compared to available storage length (from Google Earth) to pinpoint deficiencies and assist in identifying potential capacity improvements. **Table 17** summarizes the maximum queue length and available storage length. Corresponding movements where queue length exceeds the storage length were highlighted in Table 17.

The below assumptions were made while collecting queue lengths and storage lengths.

- The storage length was measured from the stop line to a point in which if the queue backs up it will interrupt another approaching movement (it could be a median opening or upstream intersection).
- The storage length was rounded to the nearest tenth.
- If there is no dedicated right and/or left turn, the storage for these movements was assumed to be equal to the thru movement as they share lane(s).
- If there were multiple left or right turn lanes, the highest storage length was considered since we were comparing it with maximum queue lengths.
- The taper of the turn lanes was not included in the measurements.
- US-1 directionality was assumed to be North-South and East-West for the cross streets.

Table 17: Available Storage and Maximum Queue Based on Build 2022 VISSIM Model Reports

Intersection ID	Intersection Name	Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
1	South Dixie Highway & Kendall Dr	Maximum Queue Length, ft. (AM Peak)	553	553	342	401	432	447	0	491	576	175	335	186
		Maximum Queue Length, ft. (PM Peak)	481	481	213	380	418	432	0	524	610	141	732	356
		Available Storage	350	750	750	170	450	450	820	820	820	250	600	600
2	South Dixie Highway & Dadeland Blvd	Maximum Queue Length, ft. (AM Peak)	192	113	135	161	161	190	105	90	134	222	283	267
		Maximum Queue Length, ft. (PM Peak)	297	294	316	203	203	232	248	376	419	648	689	673
		Available Storage	100	100	100	140	140	140	230	450	450	70	650	650
3	Busway & Dadeland Blvd	Maximum Queue Length, ft. (AM Peak)	10	10	18	0	4	30	51	51	50	83	0	83
		Maximum Queue Length, ft. (PM Peak)	83	83	103	16	0	13	51	52	50	80	0	80
		Available Storage	75	75	75	90	90	90	500	500	500	75	75	75
4	South Dixie Highway & Datran Dr	Maximum Queue Length, ft. (AM Peak)	140	140	62	69	38	67	558	368	428	59	307	339
		Maximum Queue Length, ft. (PM Peak)	260	260	269	170	57	72	184	342	402	419	566	598
		Available Storage	200	200	200	125	125	125	200	340	340	75	470	470
5	Old Dixie Highway & Datran Dr	Maximum Queue Length, ft. (AM Peak)	0	60	0	0	307	0	0	54	0	0	177	0
		Maximum Queue Length, ft. (PM Peak)	0	442	0	0	187	0	0	50	19	0	224	0
		Available Storage	0	280	0	0	160	0	0	870	870	0	512	0
6	SW 98th St @ SW 77th Ave	Maximum Queue Length, ft. (AM Peak)	161	193	229	488	488	505	161	161	145	182	183	191
		Maximum Queue Length, ft. (PM Peak)	158	183	219	498	498	527	137	137	85	276	276	285
		Available Storage	60	1500	1500	100	100	100	650	650	650	800	800	800
7	South Dixie Hwy @ SW 98th St	Maximum Queue Length, ft. (AM Peak)	421	421	451	687	687	698	464	558	610	203	430	469
		Maximum Queue Length, ft. (PM Peak)	417	417	447	994	994	1005	388	480	533	1208	1544	1583
		Available Storage	185	185	185	350	350	350	670	670	670	110	485	485
8	South Dixie Hwy @ SW 104th St	Maximum Queue Length, ft. (AM Peak)	955	955	956	90	434	435	229	2855	56	1491	1503	322
		Maximum Queue Length, ft. (PM Peak)	1027	1027	1028	435	435	436	853	1144	61	1876	1888	845
		Available Storage	100	575	575	300	300	300	200	670	500	270	1000	300
9	SW 104 St and Palmetto Rd	Maximum Queue Length, ft. (AM Peak)	110	381	366	570	817	854	543	543	570	11	11	0
		Maximum Queue Length, ft. (PM Peak)	334	423	469	933	981	1018	538	538	292	49	49	38
		Available Storage	300	300	300	150	270	270	450	450	450	300	300	300
10	South Dixie Hwy @ Killian Dr	Maximum Queue Length, ft. (AM Peak)	997	997	1026	439	717	441	247	2273	2306	553	861	209
		Maximum Queue Length, ft. (PM Peak)	1011	1011	1040	288	443	66	260	650	682	206	2155	1961
		Available Storage	65	200	200	600	600	600	450	800	800	235	675	350

11	South Dixie Hwy @ SW 120th St	Maximum Queue Length, ft. (AM Peak)	0	0	0	277	0	307	0	995	1068	200	72	0
		Maximum Queue Length, ft. (PM Peak)	0	0	0	295	0	112	0	389	461	614	2054	0
		Available Storage	0	0	0	600	600	140	260	260	260	220	450	450
12	South Dixie Hwy @ SW 124th Street/Chapman Field Dr	Maximum Queue Length, ft. (AM Peak)	549	584	584	296	332	362	474	1329	1370	153	504	83
		Maximum Queue Length, ft. (PM Peak)	702	698	698	922	920	951	297	394	436	85	1381	267
		Available Storage	300	300	300	165	700	700	180	375	375	260	380	335
13	South Dixie Hwy @ SW 128th St	Maximum Queue Length, ft. (AM Peak)	634	634	661	344	336	138	918	1380	1438	103	360	169
		Maximum Queue Length, ft. (PM Peak)	735	752	779	823	815	408	654	849	907	219	1488	207
		Available Storage	250	250	250	85	500	120	195	635	635	160	425	350
14	South Dixie Hwy @ SW 132nd St	Maximum Queue Length, ft. (AM Peak)	291	0	330	0	0	0	1057	921	0	0	546	129
		Maximum Queue Length, ft. (PM Peak)	544	0	556	0	0	0	941	318	0	0	1751	71
		Available Storage	145	345	345	0	0	0	300	500	500	150	1000	200
15	SW 132nd St @ SW 87th Ave	Maximum Queue Length, ft. (AM Peak)	96	60	78	103	103	165	66	66	100	133	133	158
		Maximum Queue Length, ft. (PM Peak)	115	96	114	247	247	201	119	119	152	317	317	342
		Available Storage	110	300	300	150	350	350	225	225	255	350	350	350
16	South Dixie Hwy @ SW 136th St	Maximum Queue Length, ft. (AM Peak)	722	711	1042	191	369	405	1747	2435	2474	527	829	146
		Maximum Queue Length, ft. (PM Peak)	1497	1777	1801	1103	1101	1137	808	975	1014	571	1217	568
		Available Storage	280	600	600	170	170	170	275	500	500	220	500	350
17	South Dixie Hwy @ Mitchell Dr/ SW 144th St	Maximum Queue Length, ft. (AM Peak)	1088	1087	1099	699	711	730	2541	2581	2631	992	1015	87
		Maximum Queue Length, ft. (PM Peak)	1088	1087	1099	1081	1079	1097	1098	1124	1174	747	3022	91
		Available Storage	150	275	275	170	400	200	185	370	370	300	500	220
18	South Dixie Hwy @ SW 152nd St	Maximum Queue Length, ft. (AM Peak)	1566	1566	426	1052	1055	1079	2008	2139	2183	915	1185	545
		Maximum Queue Length, ft. (PM Peak)	1594	1594	1631	1048	1051	1074	510	697	741	107	2740	1709
		Available Storage	270	650	475	150	650	200	300	600	600	200	520	520
19	South Dixie Hwy and SW 15900 Block	Maximum Queue Length, ft. (AM Peak)	0	0	0	110	0	200	0	176	187	76	372	0
		Maximum Queue Length, ft. (PM Peak)	0	0	0	157	0	28	0	317	328	80	333	0
		Available Storage	0	0	0	120	0	400	0	700	700	100	700	700
20	South Dixie Hwy @ SW 164th St/ SW 160th St	Maximum Queue Length, ft. (AM Peak)	1180	1180	1180	411	411	276	143	790	833	133	524	184
		Maximum Queue Length, ft. (PM Peak)	510	510	510	541	541	49	421	407	451	117	642	522
		Available Storage	125	125	125	400	0	400	230	725	725	380	650	150
21	South Dixie Hwy NB @ SW 168th St	Maximum Queue Length, ft. (AM Peak)	194	194	0	0	192	216	121	679	699	0	0	0
		Maximum Queue Length, ft. (PM Peak)	192	192	0	0	303	327	168	286	306	0	0	0
		Available Storage	100	100	0	450	450	300	170	170	170	0	0	0

22	South Dixie Hwy SB @ SW 168th St	Maximum Queue Length, ft. (AM Peak)	0	744	769	221	221	0	0	0	0	224	224	257
		Maximum Queue Length, ft. (PM Peak)	0	609	634	211	211	0	0	0	0	703	703	742
		Available Storage	180	180	150	170	170	0	0	0	0	0	500	500
23	South Dixie Hwy NB @ SW 174th St	Maximum Queue Length, ft. (AM Peak)	255	255	0	0	258	284	699	699	760	0	0	0
		Maximum Queue Length, ft. (PM Peak)	440	440	0	0	252	279	529	529	590	0	0	0
		Available Storage	200	280	0	0	200	200	0	440	440	0	0	0
24	South Dixie Hwy SB @ SW 174th St	Maximum Queue Length, ft. (AM Peak)	0	449	474	284	284	0	0	0	0	423	423	461
		Maximum Queue Length, ft. (PM Peak)	0	378	404	250	250	0	0	0	0	437	437	475
		Available Storage	0	175	175	200	200	0	0	0	0	1300	1300	1300
25	South Dixie Hwy NB @ E Evergreen St	Maximum Queue Length, ft. (AM Peak)	57	24	0	475	475	475	721	721	741	0	114	191
		Maximum Queue Length, ft. (PM Peak)	113	0	85	503	503	503	529	529	549	0	317	394
		Available Storage	150	150	150	515	515	515	530	530	530	0	290	290
26	South Dixie Hwy NB @ E Hibiscus St	Maximum Queue Length, ft. (AM Peak)	119	119	0	0	146	177	742	742	795	0	0	0
		Maximum Queue Length, ft. (PM Peak)	210	210	0	0	116	147	242	242	295	0	0	0
		Available Storage	315	315	315	200	200	200	285	285	285	0	0	0
27	South Dixie Hwy SB @ E Hibiscus St	Maximum Queue Length, ft. (AM Peak)	0	150	168	284	284	0	0	0	0	388	388	411
		Maximum Queue Length, ft. (PM Peak)	0	178	196	193	193	0	0	0	0	256	256	279
		Available Storage	0	190	190	190	190	0	0	0	0	280	280	280
28	South Dixie Hwy @ SW 184th St	Maximum Queue Length, ft. (AM Peak)	669	669	702	1034	1034	1064	447	790	861	489	662	726
		Maximum Queue Length, ft. (PM Peak)	732	732	765	1043	1043	1073	412	415	482	1118	1295	1359
		Available Storage	330	330	330	200	450	450	180	280	280	130	275	275
29	SW 184th St @ Homestead Ave	Maximum Queue Length, ft. (AM Peak)	96	154	195	18	505	545	206	211	241	92	146	173
		Maximum Queue Length, ft. (PM Peak)	60	173	214	12	509	549	93	152	182	341	355	383
		Available Storage	190	350	350	120	300	300	175	850	850	70	250	250
30	South Dixie Hwy @ SW 186th St/ Quail Roost Dr	Maximum Queue Length, ft. (AM Peak)	468	468	121	778	777	806	955	1043	1081	115	493	471
		Maximum Queue Length, ft. (PM Peak)	745	745	329	1046	1045	1074	488	695	733	105	660	638
		Available Storage	350	350	350	120	160	160	200	500	500	235	525	525
31	SW 186th St/ Quail Roost Dr @ Homestead Ave	Maximum Queue Length, ft. (AM Peak)	57	114	165	17	432	478	0	0	0	101	0	150
		Maximum Queue Length, ft. (PM Peak)	68	144	196	23	294	341	34	34	49	160	0	208
		Available Storage	180	400	400	150	300	300	40	40	40	850	850	850
32	South Dixie Hwy @ Marlin Rd	Maximum Queue Length, ft. (AM Peak)	409	568	490	535	545	570	535	813	856	111	500	560
		Maximum Queue Length, ft. (PM Peak)	819	835	840	420	419	444	298	585	628	200	757	816
		Available Storage	265	265	265	120	300	300	375	750	750	330	630	630

33	South Dixie Hwy @ SW 19500 Block	Maximum Queue Length, ft. (AM Peak)	72	9	33	39	36	52	82	932	968	16	126	167
		Maximum Queue Length, ft. (PM Peak)	125	119	142	115	104	120	42	440	473	27	129	173
		Available Storage	50	50	50	80	80	80	130	420	420	100	410	410
34	South Dixie Hwy @ SW 200th St/ Caribbean Blvd	Maximum Queue Length, ft. (AM Peak)	1038	1038	1071	325	325	345	144	1070	1114	215	363	256
		Maximum Queue Length, ft. (PM Peak)	874	874	892	323	325	345	243	624	667	841	1028	905
		Available Storage	60	60	60	100	200	200	300	1000	1000	190	470	470
35	SW 200 St/Caribbean Boulevard and SW 10900 Block	Maximum Queue Length, ft. (AM Peak)	135	135	159	164	663	699	37	37	47	294	294	307
		Maximum Queue Length, ft. (PM Peak)	20	76	105	47	352	388	199	199	224	229	229	242
		Available Storage	300	300	300	60	60	60	340	340	340	1000	1000	1000
36	South Dixie Hwy @ SW 20400 Block	Maximum Queue Length, ft. (AM Peak)	0	0	0	51	0	57	0	373	426	33	0	0
		Maximum Queue Length, ft. (PM Peak)	0	0	0	129	0	92	0	333	386	126	145	0
		Available Storage	0	0	0	140	140	140	0	700	700	300	1000	0
37	South Dixie Hwy @ S Allapattah Rd/ SW 112th Ave	Maximum Queue Length, ft. (AM Peak)	295	295	256	812	812	608	409	987	0	245	340	92
		Maximum Queue Length, ft. (PM Peak)	783	783	749	366	366	162	219	519	0	773	753	142
		Available Storage	65	65	65	120	700	700	330	750	430	700	700	700
38	South Dixie Hwy @ SW 211th St/ SW 117th Ave	Maximum Queue Length, ft. (AM Peak)	444	443	471	268	675	73	1061	1806	111	132	457	151
		Maximum Queue Length, ft. (PM Peak)	447	446	467	728	695	223	664	843	132	102	1092	283
		Available Storage	75	190	100	100	500	150	350	1100	1100	360	930	330
39	SW 211 St at SW 11300 Block	Maximum Queue Length, ft. (AM Peak)	25	123	180	65	198	0	176	0	208	0	0	0
		Maximum Queue Length, ft. (PM Peak)	172	176	233	519	1196	0	312	0	345	0	0	0
		Available Storage	240	550	150	230	500	500	130	1000	190	220	700	175
40	SW 117th Avenue @ SW 114th Ct	Maximum Queue Length, ft. (AM Peak)	693	702	0	137	191	218	75	75	115	149	132	143
		Maximum Queue Length, ft. (PM Peak)	840	839	0	246	243	290	13	13	37	713	714	721
		Available Storage	100	300	100	85	180	180	100	100	100	1800	1800	1800
41	South Dixie Hwy @ SW 216th St	Maximum Queue Length, ft. (AM Peak)	65	65	0	343	504	511	125	1101	1175	68	668	130
		Maximum Queue Length, ft. (PM Peak)	132	132	0	610	693	701	329	724	798	65	1356	117
		Available Storage	100	150	150	200	500	500	300	900	900	300	800	170
42	South Dixie Hwy @ W Old Cutler Rd/ SW 220th St	Maximum Queue Length, ft. (AM Peak)	575	575	595	327	327	343	106	984	1038	29	289	57
		Maximum Queue Length, ft. (PM Peak)	148	148	146	353	353	369	120	587	640	38	617	49
		Available Storage	150	150	150	450	450	450	275	720	720	275	730	175
43	South Dixie Hwy @ SW 224th St	Maximum Queue Length, ft. (AM Peak)	671	671	704	348	348	370	654	858	911	38	593	67
		Maximum Queue Length, ft. (PM Peak)	403	403	435	272	272	294	772	875	928	40	766	72
		Available Storage	100	100	100	1100	1100	1100	200	475	475	250	900	200

44	South Dixie Hwy @ SW 232nd St/ SW 127th Ave	Maximum Queue Length, ft. (AM Peak)	782	782	808	453	453	426	1208	1180	1232	78	846	469
		Maximum Queue Length, ft. (PM Peak)	887	887	904	279	279	126	415	501	552	119	467	118
		Available Storage	45	45	45	0	1000	100	200	1300	1300	225	675	200
45	South Dixie Hwy @ SW 132nd Ave	Maximum Queue Length, ft. (AM Peak)	366	0	426	0	0	0	733	777	0	0	564	81
		Maximum Queue Length, ft. (PM Peak)	867	0	927	0	0	0	483	830	0	0	255	33
		Available Storage	875	875	875	0	0	0	240	410	410	0	1800	170
46	South Dixie Hwy @ SW 244th St	Maximum Queue Length, ft. (AM Peak)	33	0	58	0	0	0	214	818	0	0	510	56
		Maximum Queue Length, ft. (PM Peak)	61	0	134	0	0	0	54	239	0	0	271	34
		Available Storage	170	170	170	0	0	0	160	320	320	0	1000	300
47	South Dixie Hwy @ SW 248th St	Maximum Queue Length, ft. (AM Peak)	537	607	593	1025	1017	1041	383	999	547	55	647	449
		Maximum Queue Length, ft. (PM Peak)	833	862	860	956	816	839	224	832	539	43	755	172
		Available Storage	20	350	90	175	260	260	290	350	230	200	1000	140
48	South Dixie Hwy @ SW 137th Ave & Tropical Ave	Maximum Queue Length, ft. (AM Peak)	125	0	58	0	0	66	0	614	682	375	375	333
		Maximum Queue Length, ft. (PM Peak)	198	0	130	0	0	64	0	385	453	255	255	141
		Available Storage	560	0	560	0	0	580	0	710	710	180	750	750
49	South Dixie Hwy @ SW 252nd St	Maximum Queue Length, ft. (AM Peak)	77	77	56	130	130	156	145	621	693	0	446	72
		Maximum Queue Length, ft. (PM Peak)	159	159	136	98	98	124	68	581	653	0	214	32
		Available Storage	20	500	20	500	500	500	200	985	985	0	685	190
50	South Dixie Hwy @ SW 260th St	Maximum Queue Length, ft. (AM Peak)	342	342	359	208	208	232	569	788	869	24	462	473
		Maximum Queue Length, ft. (PM Peak)	256	256	301	259	259	283	249	630	710	37	721	732
		Available Storage	20	165	20	765	765	765	220	550	550	250	2400	100
51	South Dixie Hwy @ SW 264th St/ Bauer Dr	Maximum Queue Length, ft. (AM Peak)	285	282	313	137	194	223	730	904	940	69	646	46
		Maximum Queue Length, ft. (PM Peak)	296	287	318	152	139	167	430	922	959	52	795	10
		Available Storage	170	170	170	215	475	475	190	750	750	190	900	250
52	SW 264th St/ Bauer Dr @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	527	527	536	346	346	389	164	144	145	35	130	112
		Maximum Queue Length, ft. (PM Peak)	1070	1070	1079	316	316	359	147	176	177	91	159	152
		Available Storage	135	200	200	215	475	475	190	800	800	190	900	250
53	South Miami-Dade Busway @ SW 146th Ct	Maximum Queue Length, ft. (AM Peak)	0	0	0	303	304	0	0	47	0	0	229	0
		Maximum Queue Length, ft. (PM Peak)	0	0	0	327	328	0	0	32	0	0	278	0
		Available Storage	0	0	0	45	45	45	0	2500	0	0	1200	0
54	South Dixie Hwy @ SW 268th St/ Moody Dr	Maximum Queue Length, ft. (AM Peak)	0	0	0	233	0	283	0	1040	80	75	429	0
		Maximum Queue Length, ft. (PM Peak)	0	0	0	183	0	234	0	639	103	86	494	0
		Available Storage	0	0	0	200	200	200	220	660	420	190	775	140

55	South Dixie Hwy @ SW 272nd St	Maximum Queue Length, ft. (AM Peak)	228	225	201	80	65	97	101	1237	68	88	683	93
		Maximum Queue Length, ft. (PM Peak)	164	164	194	156	156	186	72	815	61	157	445	68
		Available Storage	100	275	275	100	100	100	220	775	290	320	850	575
56	SW 272nd St @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	57	214	15	375	419	454	114	114	63	133	167	200
		Maximum Queue Length, ft. (PM Peak)	79	163	14	363	416	452	131	131	66	144	155	188
		Available Storage	480	130	60	250	250	250	1000	1000	140	90	250	250
57	South Dixie Hwy @ SW 280th St	Maximum Queue Length, ft. (AM Peak)	304	304	325	360	350	331	48	271	87	36	476	54
		Maximum Queue Length, ft. (PM Peak)	383	383	404	265	255	279	60	510	71	52	391	44
		Available Storage	350	350	350	160	550	550	320	730	370	230	1000	400
58	SW 280th St @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	244	244	292	493	461	458	13	230	230	442	442	492
		Maximum Queue Length, ft. (PM Peak)	315	315	363	519	487	484	50	353	353	552	552	602
		Available Storage	600	600	600	0	360	0	2000	2000	2000	1700	1700	1700
59	South Dixie Hwy @ SW 157th Ave	Maximum Queue Length, ft. (AM Peak)	264	264	316	313	313	367	73	259	2	104	590	18
		Maximum Queue Length, ft. (PM Peak)	515	515	566	300	300	355	38	416	2	116	245	13
		Available Storage	400	400	400	330	330	300	180	440	420	320	970	450
60	SW 157th Ave @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	210	249	122	523	532	532	70	186	186	224	235	279
		Maximum Queue Length, ft. (PM Peak)	524	563	288	410	420	420	137	252	252	243	241	273
		Available Storage	130	145	145	400	400	400	120	1300	1300	100	1000	1000
61	SW 157th St @ SW 288th St	Maximum Queue Length, ft. (AM Peak)	387	385	425	441	440	481	259	258	283	46	95	37
		Maximum Queue Length, ft. (PM Peak)	443	441	481	910	908	949	233	232	257	217	217	81
		Available Storage	100	300	300	80	260	260	80	300	300	75	550	550
62	South Dixie Hwy @ SW 288th St	Maximum Queue Length, ft. (AM Peak)	201	271	292	416	403	387	82	577	154	34	595	91
		Maximum Queue Length, ft. (PM Peak)	459	542	562	419	405	307	122	547	301	44	494	73
		Available Storage	140	350	350	150	270	270	227	375	530	220	575	575
63	SW 288th St @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	479	477	0	597	605	621	23	309	309	216	223	213
		Maximum Queue Length, ft. (PM Peak)	1005	1003	0	596	601	618	31	482	482	250	256	246
		Available Storage	95	270	270	145	365	365	165	835	835	100	1400	1400
64	South Dixie Hwy @ SW 296th St	Maximum Queue Length, ft. (AM Peak)	465	458	481	884	868	824	166	557	101	118	2555	27
		Maximum Queue Length, ft. (PM Peak)	474	465	489	479	574	528	90	1150	166	569	859	54
		Available Storage	100	225	225	160	160	160	320	725	400	315	1100	380
65	SW 296th St @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	474	474	20	561	483	522	271	271	136	422	431	478
		Maximum Queue Length, ft. (PM Peak)	772	775	6	556	479	518	468	468	362	1616	1626	1657
		Available Storage	135	1100	1100	50	225	225	100	2800	2800	80	3500	3500

66	South Dixie Hwy @ NE 15th St/NE 12th St	Maximum Queue Length, ft. (AM Peak)	417	411	427	411	887	887	891	915	659	659	659	448
		Maximum Queue Length, ft. (PM Peak)	442	436	459	436	390	390	538	563	1193	1193	1193	627
		Available Storage	200	200	200	200	275	275	380	935	935	200	800	200
67	NE 15th St @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	120	849	28	481	488	505	278	278	65	241	412	106
		Maximum Queue Length, ft. (PM Peak)	188	921	24	516	488	505	399	399	91	525	386	104
		Available Storage	200	275	275	95	200	200	200	1300	200	220	410	220
68	South Dixie Hwy @ NE 11th St	Maximum Queue Length, ft. (AM Peak)	410	406	422	142	454	487	80	423	471	312	521	594
		Maximum Queue Length, ft. (PM Peak)	437	431	457	140	313	346	65	223	270	81	211	283
		Available Storage	60	325	325	70	500	500	215	400	850	155	340	340
69	NE 11th St @ N Flagler Ave	Maximum Queue Length, ft. (AM Peak)	424	422	457	427	427	450	186	186	212	371	371	391
		Maximum Queue Length, ft. (PM Peak)	431	433	468	390	390	413	274	274	301	311	311	332
		Available Storage	100	200	200	300	300	300	465	465	465	600	600	600
70	NE 11th St @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	533	531	569	361	349	341	148	148	55	392	286	2
		Maximum Queue Length, ft. (PM Peak)	626	624	662	353	341	333	291	291	100	410	350	13
		Available Storage	100	300	300	70	220	220	600	600	165	100	260	125
71	South Dixie Hwy @ Campbell Dr	Maximum Queue Length, ft. (AM Peak)	454	444	0	736	736	766	169	440	96	86	438	81
		Maximum Queue Length, ft. (PM Peak)	631	622	0	625	625	656	173	504	243	205	436	83
		Available Storage	250	850	600	400	700	700	370	1000	1000	165	400	400
72	Campbell Dr @ NE 1st Rd	Maximum Queue Length, ft. (AM Peak)	0	245	271	290	284	0	85	0	62	0	0	0
		Maximum Queue Length, ft. (PM Peak)	0	234	260	393	387	0	158	0	134	0	0	0
		Available Storage	70	70	70	150	270	270	300	0	100	0	0	0
73	Campbell Dr @ N Flagler Ave	Maximum Queue Length, ft. (AM Peak)	211	211	15	231	224	247	256	250	55	692	731	752
		Maximum Queue Length, ft. (PM Peak)	210	210	5	237	230	254	258	268	299	280	288	89
		Available Storage	30	90	90	80	80	80	80	400	80	90	570	160
74	Campbell Dr @ Old Dixie Hwy	Maximum Queue Length, ft. (AM Peak)	75	271	0	0	291	286	0	0	0	0	0	158
		Maximum Queue Length, ft. (PM Peak)	70	513	0	0	295	290	0	0	0	0	0	135
		Available Storage	90	230	0	0	90	90	0	0	0	0	0	800
75	South Dixie Hwy @ E Mowry Dr/ NE 2nd Dr/SE 3rd St	Maximum Queue Length, ft. (AM Peak)	400	400	348	843	843	899	201	321	450	57	536	81
		Maximum Queue Length, ft. (PM Peak)	499	499	447	982	982	1,038	107	651	780	140	596	78
		Available Storage	280	280	280	650	650	650	260	870	870	330	1,250	260
76	NE 2nd Dr @ N Flagler Ave	Maximum Queue Length, ft. (AM Peak)	375	375	404	747	747	767	53	151	173	38	221	251
		Maximum Queue Length, ft. (PM Peak)	484	484	513	313	313	334	61	190	213	54	169	198
		Available Storage	170	170	170	190	80	80	150	400	400	100	400	400

77	SW 320th St/ Mowry Dr @ N Flagler Ave	Maximum Queue Length, ft. (AM Peak)	361	458	171	275	275	300	49	163	210	230	230	281
		Maximum Queue Length, ft. (PM Peak)	451	454	304	308	308	332	34	178	225	268	268	314
		Available Storage	125	125	125	185	185	185	190	350	350	370	370	185
78	SW 320th St/ Mowry Dr @ SW 177th Ave	Maximum Queue Length, ft. (AM Peak)	439	442	471	459	457	482	496	559	590	925	925	961
		Maximum Queue Length, ft. (PM Peak)	633	635	664	432	430	455	360	532	563	869	869	905
		Available Storage	80	625	625	80	230	230	100	250	250	100	625	625
79	S Flagler Ave @ SW 177th Ave	Maximum Queue Length, ft. (AM Peak)	247	273	304	89	140	153	747	747	745	16	552	477
		Maximum Queue Length, ft. (PM Peak)	219	245	277	105	157	170	962	962	960	11	552	478
		Available Storage	80	600	600	200	200	200	280	280	280	90	90	90
80	SW 4th St/SW 324th St @ N Flagler Ave	Maximum Queue Length, ft. (AM Peak)	737	737	743	219	219	251	156	156	182	105	105	138
		Maximum Queue Length, ft. (PM Peak)	503	503	508	248	248	280	113	113	140	103	103	136
		Available Storage	150	150	150	500	500	500	375	375	375	270	270	270
81	South Dixie Hwy @ SW 328th St/ Lucy St	Maximum Queue Length, ft. (AM Peak)	424	424	444	747	747	783	117	415	460	219	419	403
		Maximum Queue Length, ft. (PM Peak)	541	541	561	895	895	932	379	835	880	239	261	245
		Available Storage	550	550	550	830	1,950	1,950	250	370	370	240	600	600
82	SW 328th St/Lucy St @ SW 177th Ave	Maximum Queue Length, ft. (AM Peak)	443	514	554	665	665	710	133	383	367	371	472	511
		Maximum Queue Length, ft. (PM Peak)	447	605	646	517	517	562	384	768	752	487	540	578
		Available Storage	100	240	240	560	560	560	120	610	180	120	480	480
83	SW 328th St/Lucy St @ South Miami-Dade Busway	Maximum Queue Length, ft. (AM Peak)	0	301	0	0	384	0	0	35	0	0	45	0
		Maximum Queue Length, ft. (PM Peak)	0	334	0	0	388	0	0	40	0	0	49	0
		Available Storage	0	230	0	0	230	0	0	2,600	0	0	1,500	0
84	South Dixie Hwy @ north of NE7th St/ West Davis Pkwy (SW 33300 Blk)	Maximum Queue Length, ft. (AM Peak)	97	97	69	392	392	435	85	401	15	166	440	476
		Maximum Queue Length, ft. (PM Peak)	211	112	182	400	400	443	117	618	22	210	199	235
		Available Storage	280	280	280	220	220	220	260	480	245	550	745	350
85	South Dixie Hwy @ NE 7th St/ West Davis Pkwy	Maximum Queue Length, ft. (AM Peak)	206	0	194	264	264	142	82	195	0	0	513	455
		Maximum Queue Length, ft. (PM Peak)	297	0	130	307	307	174	104	387	0	0	493	436
		Available Storage	315	0	520	320	810	810	273	660	660	295	880	880
86	NE 7th St/ West Davis Pkwy @ SW 177th Ave	Maximum Queue Length, ft. (AM Peak)	413	413	462	653	653	705	201	201	251	251	251	319
		Maximum Queue Length, ft. (PM Peak)	425	425	475	688	688	740	473	473	523	365	365	433
		Available Storage	265	930	260	150	530	530	260	920	330	250	725	350
87	NE 7th St/ West Davis Pkwy @ South Miami-Dade Busway	Maximum Queue Length, ft. (AM Peak)	0	256	0	0	401	0	0	10	0	0	39	0
		Maximum Queue Length, ft. (PM Peak)	0	233	0	0	404	0	0	34	0	0	34	0
		Available Storage	0	210	0	0	110	0	0	500	0	0	500	0

88	South Dixie Hwy @ SW 344th St/Palm Dr	Maximum Queue Length, ft. (AM Peak)	479	479	140	971	982	981	107	229	277	1837	1837	1870
		Maximum Queue Length, ft. (PM Peak)	629	629	94	1,147	1,147	1,146	220	836	884	426	426	459
		Available Storage	205	570	570	220	750	750	250	550	550	350	450	450
89	SW 344th St/Palm Dr @ SW 177th Ave	Maximum Queue Length, ft. (AM Peak)	232	325	364	75	320	365	53	118	9	216	530	582
		Maximum Queue Length, ft. (PM Peak)	262	387	426	58	296	341	156	401	31	145	384	436
		Available Storage	170	335	335	190	550	160	230	790	245	200	680	680

3.10 Performance Measures

Travel times and speeds summaries are included in this section for existing and proposed scenarios. For existing data, the RITIS database was utilized whereas for proposed conditions, the build 2022 VISSIM models' reports from the South Corridor Bus Rapid Transit study were used. **Table 18** summarizes the existing travel times and speeds information, and **Table 19** lists the future conditions' travel times and speeds.

Table 18: Existing Travel Time and Speed Data (RITIS)

Intersection	Miles	Speed (mph)	Travel Time (sec)
Northbound (Segments are ordered from south to north)			
SR-821/FLORIDA'S TPKE SOUTH	0.32	27	44.5
CAMPBELL DR/8TH ST/312TH ST	1.71	22.9	275.7
AVOCADO DR/296TH ST	1.25	22.8	203.9
BISCAYNE DR/288TH ST	0.69	27.9	92.5
157TH AVE	0.11	25.6	5.4
157TH AVE	0.06	25.6	8.7
BAUER DR/264TH ST	1.94	29	245.1
OLD DIXIE HWY/HENDERSON ST	0.18	25.4	27.4
SW 137TH AVE/TALLAHASSEE RD	0.97	30.1	118.5
COCONUT PALM DR/248TH ST	0.18	27.1	25.7
SILVER PALM DR/232ND ST/127TH AVE	1.33	34.9	144.9
224TH ST	0.73	28	113.3
SW 216TH ST/HAINLIN MILL DR	0.69	19.4	146.8
211TH ST	0.47	20.3	87
SR-989/ALLAPATTAH RD/112TH AVE	0.36	20.5	68.1
CARIBBEAN BLVD/200TH ST	0.37	21.6	66.2
SR-821/FLORIDA'S TPKE NORTH	0.22	29.7	28.5
MARLIN RD/107TH AVE	0.53	26.4	77.4
EUREKA DR/184TH ST	0.74	21.6	133.6
RICHMOND DR/168TH ST	1.19	21.4	340.1
SR-992/CORAL REEF DR/152ND ST	1.10	19	334.2
MITCHELL DR/144TH ST	0.55	20.8	105.5
HOWARD DR/136TH ST	0.56	21	104
SR-973/132ND ST	0.23	23.8	36.3
CHAPMAN FIELD DR/124TH ST	0.62	23.5	102.6
SR-990/KILLIAN DR/112TH ST	0.84	21.3	171.7
KEYES DR/104TH ST	0.56	19	119.7
SR-826/PALMETTO EXPY	0.29	33.8	32
SR-826/PALMETTO EXPY	0.32	33.8	35.2
SR-94/KENDALL DR/88TH ST	0.65	23.1	121.5

Intersection	Miles	Speed (mph)	Travel Time (sec)
SR-878/SNAPPER CREEK EXPY	0.46	17.6	202.5
LUDLAM RD/67TH AVE	0.14	16.5	34.5
DAVIS RD/80TH ST	0.18	23.6	30.6
Southbound (Segments are ordered from north to south)			
LUDLAM RD/67TH AVE	0.16	28.8	21.7
SR-878/SNAPPER CREEK EXPY	0.08	32	9.3
SR-878/SNAPPER CREEK EXPY	0.13	32	15.7
SR-94/KENDALL DR/88TH ST	0.41	27.5	57.4
SR-94/KENDALL DR/88TH ST	0.06	27.5	8.6
SR-826/PALMETTO EXPY	0.59	25.9	92.6
SR-826/PALMETTO EXPY	0.34	25.9	53.9
KEYES DR/104TH ST	0.28	20.2	61.1
SR-990/KILLIAN DR/112TH ST	0.56	27.6	82
CHAPMAN FIELD DR/124TH ST	0.84	26.5	144.9
SR-973/132ND ST	0.61	19.2	171.4
HOWARD DR/136TH ST	0.22	18.3	51.1
MITCHELL DR/144TH ST	0.56	23.2	112.4
SR-992/CORAL REEF DR/152ND ST	0.48	23.3	81.1
RICHMOND DR/168TH ST	1.10	28.8	142.9
EUREKA DR/184TH ST	1.15	21.5	220.9
MARLIN RD/107TH AVE	0.73	24.8	111.5
107TH AVE	0.53	29.6	71.5
CARIBBEAN BLVD/200TH ST	0.23	17.8	57.4
SR-989/ALLAPATTAH RD/112TH AVE	0.37	19.7	74.8
211TH ST	0.36	16.9	91.2
SW 216TH ST/HAINLIN MILL DR	0.50	22.5	85.3
224TH ST	0.68	27.3	94.5
SILVER PALM DR/232ND ST/127TH AVE	0.72	31.4	86.9
COCONUT PALM DR/248TH ST	1.34	30.5	163.4
SW 137TH AVE/TALLAHASSEE RD	0.16	28.4	22.1
OLD DIXIE HWY/HENDERSON ST	0.91	27.8	130.8
BAUER DR/264TH ST	0.13	15.9	31.9
157TH AVE	1.92	29.5	228.6
BISCAYNE DR/288TH ST	0.13	19.6	27.8
AVOCADO DR/296TH ST	0.69	26.9	93.4
CAMPBELL DR/8TH ST/312TH ST	1.25	19.6	235.5
SR-821/FLORIDA'S TPKE SOUTH (between SW 312th ST and W Davis PKWY)	1.72	24.9	248.3
SR-821/FLORIDA'S TPKE SOUTH (between W Davis PKWY and TPKE Off-Ramp to NE 1st AVE)	0.40	24.9	58.1

Table 19: Opening Year Travel Time and Speed

Direction	Segment Start	Segment End	Distance (Ft.)	Distance (Miles)	AM, US-1 Travel Time (min:ss)	AM, US-1 Speed (mph)	PM, US-1 Travel Time (min:ss)	PM, US-1 Speed (mph)
Northbound	South of SW 344th St	SW 344th St	2,070	0.39	01:18	18	01:32	15
Northbound	SW 344th St	NE 7th St/Davis Pkwy	2,687	0.51	01:02	30	01:12	25
Northbound	NE 7th St/Davis Pkwy	SW 33300 Block	986	0.19	00:35	19	00:28	24
Northbound	SW 33300 Block	Lucy St/SW 328th St	1,661	0.31	00:42	27	01:18	15
Northbound	Lucy St/SW 328th St	NE 2nd Dr	3,057	0.58	01:14	28	01:14	28
Northbound	NE 2nd Dr	Campbell Dr	3,418	0.65	01:37	24	01:38	24
Northbound	Campbell Dr	NE 11th St	1,447	0.27	00:57	17	00:29	34
Northbound	NE 11th St	NE 15th St	1,577	0.3	01:13	15	01:41	11
Northbound	NE 15th St	SW 296th St	3,583	0.68	01:33	26	02:06	19
Northbound	SW 296th St	SW 288th St	3,666	0.69	01:35	26	01:39	25
Northbound	SW 288th St	SW 157th Ave	590	0.11	00:17	23	00:12	33
Northbound	SW 157th Ave	SW 280th St	2,994	0.57	01:05	31	01:05	32
Northbound	SW 280th St	SW 272nd St	3,232	0.61	01:25	26	01:15	29
Northbound	SW 272nd St	Moody Dr	2,274	0.43	01:15	21	01:12	22
Northbound	Moody Dr	SW 264th St	1,746	0.33	01:08	18	01:18	15
Northbound	SW 264th St	SW 260th St	1,636	0.31	00:58	19	01:02	18
Northbound	SW 260th St	SW 252nd St	3,581	0.68	01:16	32	01:17	32
Northbound	SW 252nd St	SW 137th Ave/Tropical Ave	883	0.17	00:23	26	00:20	30
Northbound	SW 137th Ave/Tropical Ave	SW 248th St	933	0.18	00:42	15	00:39	16
Northbound	SW 248th St	SW 244th St	1,469	0.28	00:31	32	00:31	33
Northbound	SW 244th St	SW 132nd Ave	1,784	0.34	00:42	29	00:52	24
Northbound	SW 132nd Ave	North of SW 132nd Ave	3,800	0.72	01:48	24	02:03	21
Northbound	South of SW 232 St	SW 232nd St	2,051	0.39	01:04	22	00:53	27
Northbound	SW 232nd St	SW 224th St	3,838	0.73	01:20	33	01:30	29
Northbound	SW 224th St	SW 220th St	1,821	0.34	00:43	29	00:56	22
Northbound	SW 220th St	SW 216th St	1,812	0.34	00:45	28	01:11	17
Northbound	SW 216th St	SW 211th St	2,628	0.5	01:39	18	01:45	17
Northbound	SW 211th St	SW 112th Ave	1,932	0.37	00:50	26	01:10	19

Direction	Segment Start	Segment End	Distance (Ft.)	Distance (Miles)	AM, US-1 Travel Time (min:ss)	AM, US-1 Speed (mph)	PM, US-1 Travel Time (min:ss)	PM, US-1 Speed (mph)
Northbound	SW 112th Ave	SW 20400 Block	841	0.16	00:18	31	00:25	23
Northbound	SW 20400 Block	SW 200th St	1,112	0.21	00:50	15	00:55	14
Northbound	SW 200th St	SW 19500 Block	3,652	0.69	01:18	32	01:16	33
Northbound	SW 19500 Block	Marlin Rd	836	0.16	00:41	14	00:45	13
Northbound	Marlin Rd	SW 186th St	2,973	0.56	01:17	26	01:50	18
Northbound	SW 186th St	SW 184th St	990	0.19	00:33	20	00:30	22
Northbound	SW 184th St	E Hibiscus St	2,335	0.44	00:53	30	00:49	33
Northbound	E Hibiscus St	E Evergreen St	1,004	0.19	00:32	22	00:29	23
Northbound	E Evergreen St	SW 174th St	839	0.16	00:30	19	00:31	18
Northbound	SW 174th St	SW 168th St	2,092	0.4	00:57	25	00:51	28
Northbound	SW 168th St	SW 164th St	1,922	0.36	00:48	27	00:59	22
Northbound	SW 164th St	SW 15900 Block	746	0.14	00:16	32	00:18	29
Northbound	SW 15900 Block	SW 152nd St	3,146	0.6	01:57	18	01:22	26
Northbound	SW 152nd St	SW 144th St	2,920	0.55	02:09	15	01:41	20
Northbound	SW 144th St	SW 136th St	2,977	0.56	01:45	19	01:52	18
Northbound	SW 136th St	SW 88th Pl	1,203	0.23	00:36	23	00:31	26
Northbound	SW 88th Pl	SW 128th St	1,779	0.34	01:06	18	01:02	20
Northbound	SW 128th St	SW 124th St	1,491	0.28	00:46	22	00:42	24
Northbound	SW 124th St	SW 120th St	1,498	0.28	00:41	25	00:35	29
Northbound	SW 120th St	Killian Dr	2,959	0.56	02:31	13	01:09	29
Northbound	Killian Dr	SW 104th St	2,947	0.56	03:29	10	01:46	19
Northbound	SW 104th St	SW 98th St	2,306	0.44	01:47	15	01:10	22
Northbound	SW 98th St	Datran Dr	1,836	0.35	00:40	31	00:51	25
Northbound	Datran Dr	Dadeland Blvd	570	0.11	00:12	33	00:19	21
Northbound	Dadeland Blvd	Kendall Dr	2,055	0.39	01:19	18	01:08	21
Northbound	Kendall Dr	North of Kendall Dr.	2,263	0.43	00:43	36	00:45	34
Southbound	North of Kendall Dr	Kendall Dr	2,340	0.44	00:57	28	01:03	25
Southbound	Kendall Dr	Dadeland Blvd	1,989	0.38	00:39	35	00:58	23
Southbound	Dadeland Blvd	Datran Dr	573	0.11	00:14	29	00:33	12
Southbound	Datran Dr	SW 98th St	1,876	0.36	00:47	27	01:09	19
Southbound	SW 98th St	SW 104th St	2,310	0.44	02:00	13	01:38	16

Direction	Segment Start	Segment End	Distance (Ft.)	Distance (Miles)	AM, US-1 Travel Time (min:ss)	AM, US-1 Speed (mph)	PM, US-1 Travel Time (min:ss)	PM, US-1 Speed (mph)
Southbound	SW 104th St	Killian Dr	2,945	0.56	01:03	32	01:33	22
Southbound	Killian Dr	SW 120th St	2,938	0.56	00:46	44	02:15	15
Southbound	SW 120th St	SW 124th St	1,521	0.29	00:53	20	02:09	8
Southbound	SW 124th St	SW 128th St	1,495	0.28	00:47	22	02:35	7
Southbound	SW 128th St	SW 88th Pl	1,747	0.33	01:01	20	03:33	6
Southbound	SW 88th Pl	SW 136th St	1,219	0.23	01:15	11	01:50	8
Southbound	SW 136th St	SW 144th St	2,990	0.57	01:28	23	02:38	13
Southbound	SW 144th St	SW 152nd St	2,921	0.55	01:48	18	01:48	18
Southbound	SW 152nd St	SW 15900 Block	3,114	0.59	00:59	36	01:08	31
Southbound	SW 15900 Block	SW 164th St	747	0.14	00:31	17	00:29	17
Southbound	SW 164th St	SW 168th St	1,977	0.37	00:38	35	00:39	34
Southbound	SW 168th St	SW 174th St	2,117	0.40	00:43	33	00:40	36
Southbound	SW 174th St	E Hibiscus St	1,655	0.31	00:30	38	00:28	40
Southbound	E Hibiscus St	SW 184th St	2,305	0.44	01:09	23	01:30	17
Southbound	SW 184th St	SW 186th St	980	0.19	00:25	27	00:21	33
Southbound	SW 186th St	Marlin Rd	2,926	0.55	01:21	25	01:09	29
Southbound	Marlin Rd	SW 19500 Block	837	0.16	00:14	41	00:13	44
Southbound	SW 19500 Block	SW 200th St	3,642	0.69	01:19	31	01:36	26
Southbound	SW 200th St	SW 20400 Block	1,120	0.21	00:18	43	00:23	34
Southbound	SW 20400 Block	SW 112th Ave	841	0.16	00:26	22	00:31	18
Southbound	SW 112th Ave	SW 211th St	1,931	0.37	01:18	17	00:59	22
Southbound	SW 211th St	SW 216th St	2,672	0.51	01:16	24	00:57	32
Southbound	SW 216th St	SW 220th St	1,809	0.34	00:39	32	00:35	36
Southbound	SW 220th St	SW 224th St	1,813	0.34	01:08	18	00:34	37
Southbound	SW 224th St	SW 232nd St	3,807	0.72	01:52	23	01:05	40
Southbound	SW 232nd St	South of SW 232 St	2,050	0.39	00:32	43	00:34	41
Southbound	North of SW 132nd Ave	SW 132nd Ave	3,817	0.72	01:33	28	01:17	34
Southbound	SW 132nd Ave	SW 244th St	1,794	0.34	00:40	31	00:34	36
Southbound	SW 244th St	SW 248th St	1,498	0.28	00:53	19	00:50	21
Southbound	SW 248th St	SW 137th Ave/Tropical Ave	897	0.17	00:23	27	00:19	32

Direction	Segment Start	Segment End	Distance (Ft.)	Distance (Miles)	AM, US-1 Travel Time (min:ss)	AM, US-1 Speed (mph)	PM, US-1 Travel Time (min:ss)	PM, US-1 Speed (mph)
Southbound	SW 137th Ave/Tropical Ave	SW 252nd St	914	0.17	00:28	22	00:20	31
Southbound	SW 252nd St	SW 260th St	3,575	0.68	01:25	29	01:29	27
Southbound	SW 260th St	SW 264th St	1,649	0.31	00:50	22	00:50	22
Southbound	SW 264th St	SW 146th Ct	1,485	0.28	00:31	33	00:31	32
Southbound	SW 146th Ct	Moody Dr	256	0.05	00:12	14	00:08	22
Southbound	Moody Dr	SW 272nd St	2,229	0.42	01:00	25	00:52	29
Southbound	SW 272nd St	SW 280th St	3,292	0.62	01:18	29	01:12	31
Southbound	SW 280th St	SW 157th Ave	2,892	0.55	01:15	26	01:03	31
Southbound	SW 157th Ave	SW 288th St	683	0.13	00:27	17	00:31	15
Southbound	SW 288th St	SW 296th St	3,670	0.70	02:49	15	01:43	24
Southbound	SW 296th St	NE 15th St	3,587	0.68	06:40	6	01:59	21
Southbound	NE 15th St	NE 11th St	1,564	0.30	00:43	25	00:41	26
Southbound	NE 11th St	Campbell Dr	1,450	0.27	00:50	20	01:07	15
Southbound	Campbell Dr	NE 2nd Dr	3,430	0.65	01:27	27	01:27	27
Southbound	NE 2nd Dr	Lucy St/SW 328th St	3,043	0.58	01:23	25	01:06	31
Southbound	Lucy St/SW 328th St	SW 33300 Block	1,662	0.31	01:03	18	00:39	29
Southbound	SW 33300 Block	NE 7th St/Davis Pkwy	989	0.19	00:35	19	00:47	14
Southbound	NE 7th St/Davis Pkwy	SW 344th St	2,684	0.51	01:35	19	01:22	22
Southbound	SW 344th St	South of SW 344th St	2,071	0.39	00:40	35	00:39	36

4 Analysis of Alternatives

The Miami-Dade TPO adopted the following three-tiered analysis approach to identify multimodal/roadway improvements for this corridor:

- Tier 1: Multimodal (Nonmotorized) Improvements
- Tier 2: Roadway Improvements
- Tier 3: Technology (SMART Signals)

The study analysis and recommendations were reviewed and acknowledged by a Project Working Group (PWG), which includes representatives from the Miami-Dade Department of Transportation and Public Works, Florida City, City of Homestead, Town of Cutler Bay, Village of Palmetto Bay, Village of Pinecrest, The Florida Department of Transportation (FDOT) District 6, Florida's Turnpike Enterprise (FTE) and their corresponding supporting teams.

Three PWG meetings were held on March 29th, May 25th, and June 22nd, 2022. Minutes of each of the three PWG meetings are provided in **Appendix E.**

4.1 Multimodal (Nonmotorized) Improvements

Multimodal improvements builds upon prior efforts that have addressed pedestrian and bicycle improvements, and first mile/ last mile accessibility in the study area.

4.1.1 Pedestrian and Bicycle Improvements

Pedestrian and bicycle improvements were identified utilizing the following three major sources:

1. Improvements proposed in a transportation plan (LRTP/TIP) or by one of the municipalities along the corridor (summarized in Table 9)
2. Connectivity and accessibility gaps improvement projects from South Dade Transitway Intersection Areas Analysis study
3. Bicycle connections identified in the TPO's Systemwide Level of Service analysis report

Figure 18 through **Figure 23** present maps with pedestrian and bicycle improvements identified from each of the three sources mentioned above. The maps were developed for each of the municipalities along the corridor.

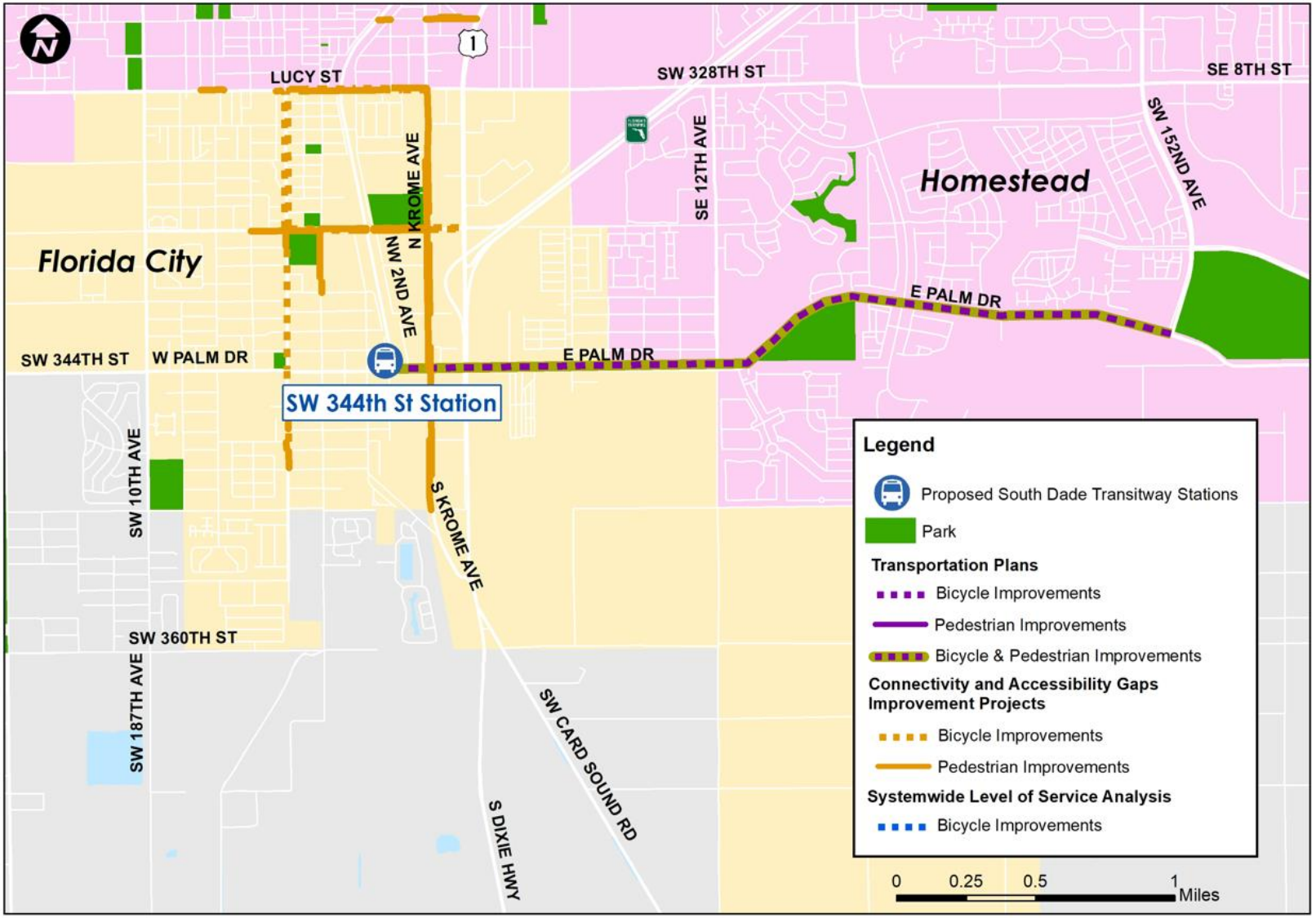

Figure 18: Pedestrian and Bicycle Improvements – Florida City

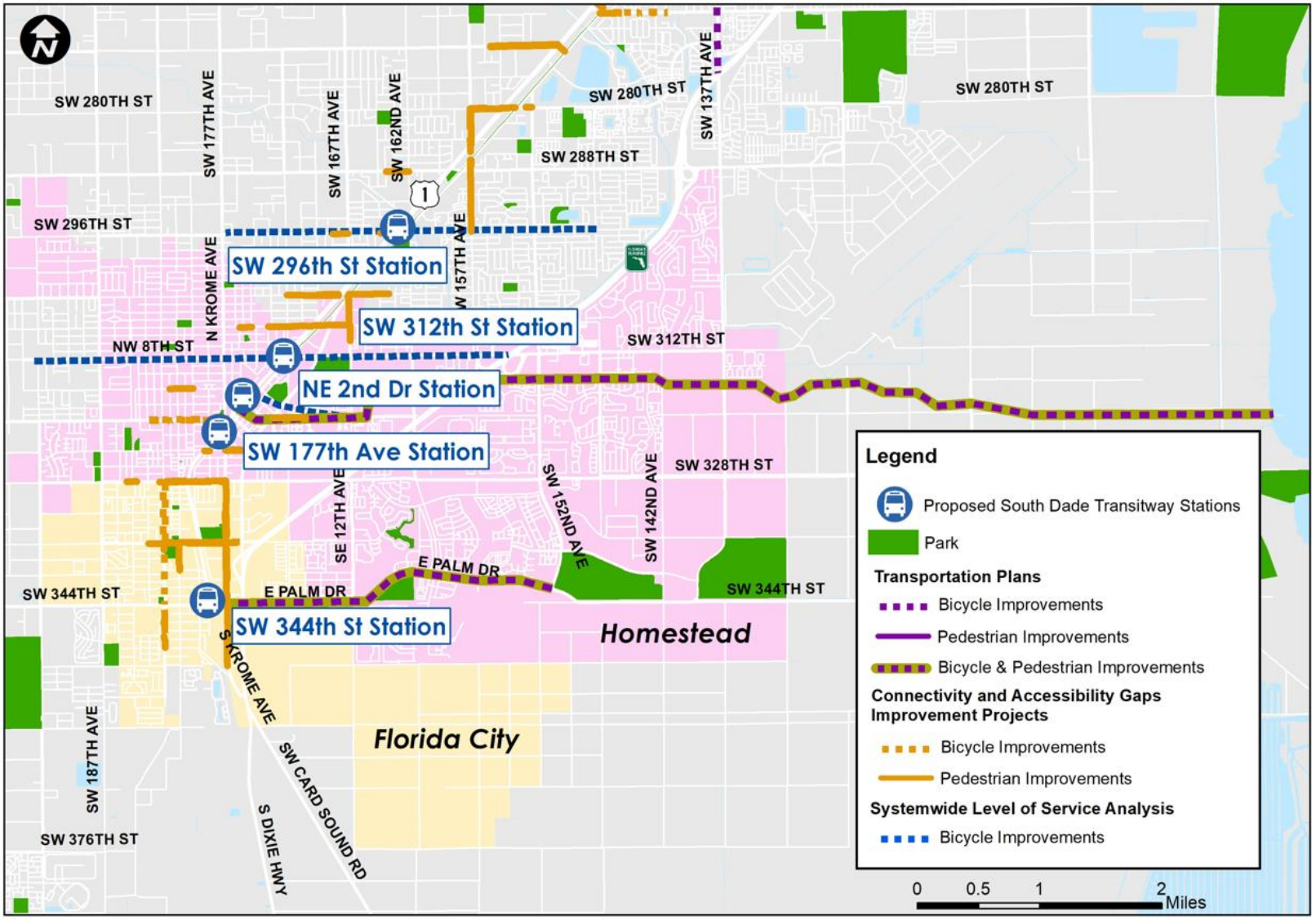

Figure 19: Pedestrian and Bicycle Improvements – Homestead

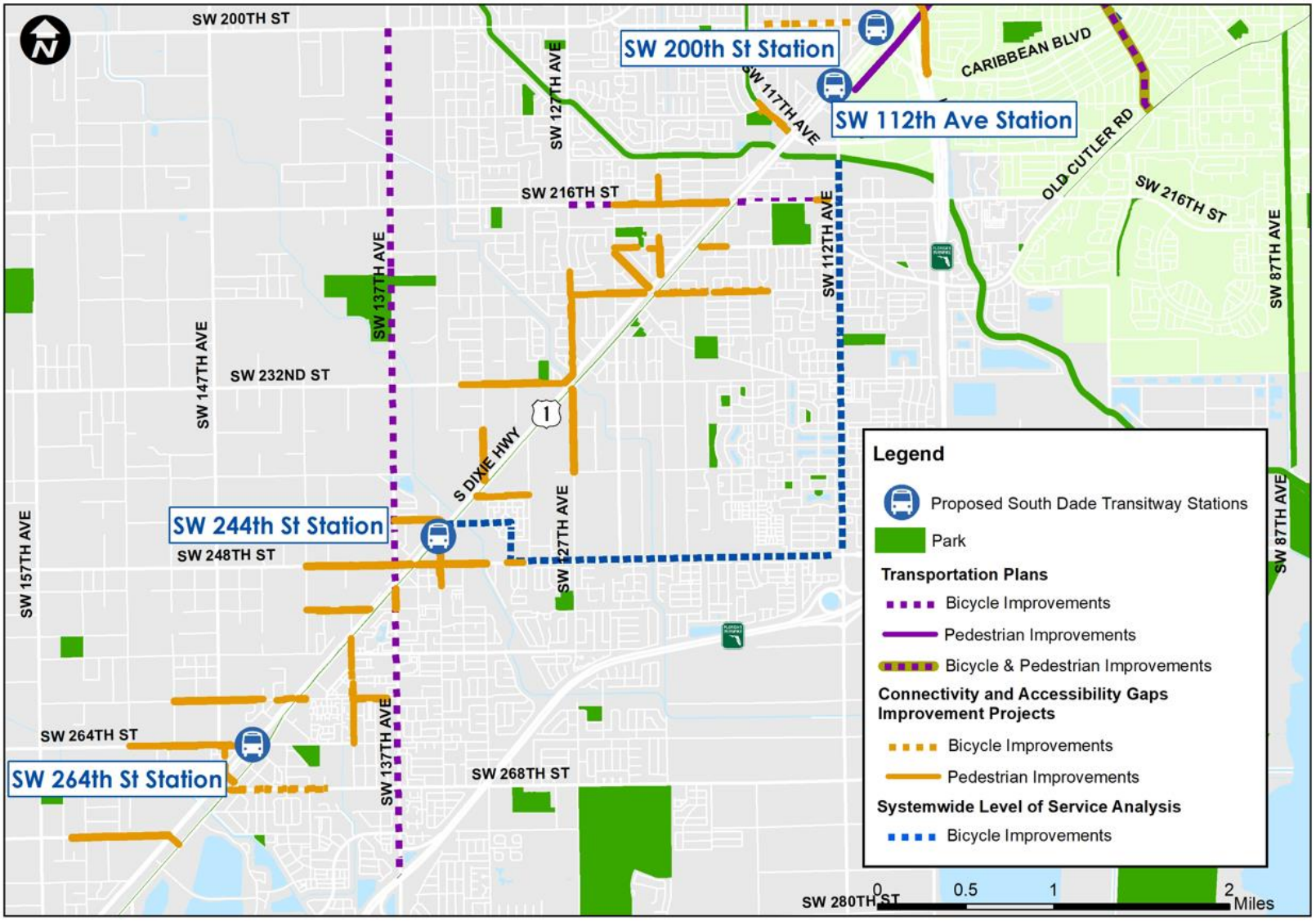

Figure 20: Pedestrian and Bicycle Improvements – Unincorporated Miami-Dade

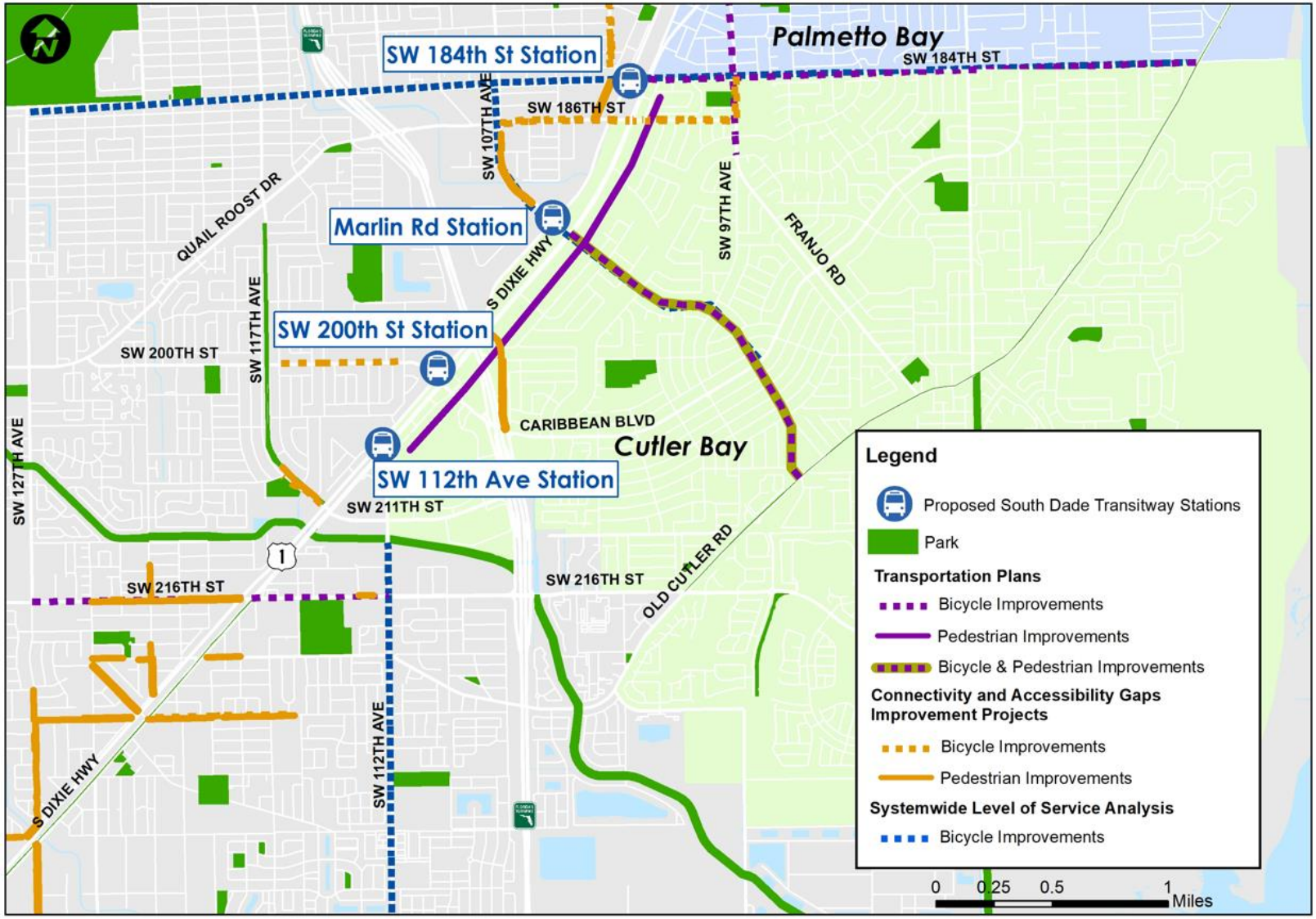

Figure 21: Pedestrian and Bicycle Improvements – Cutler Bay

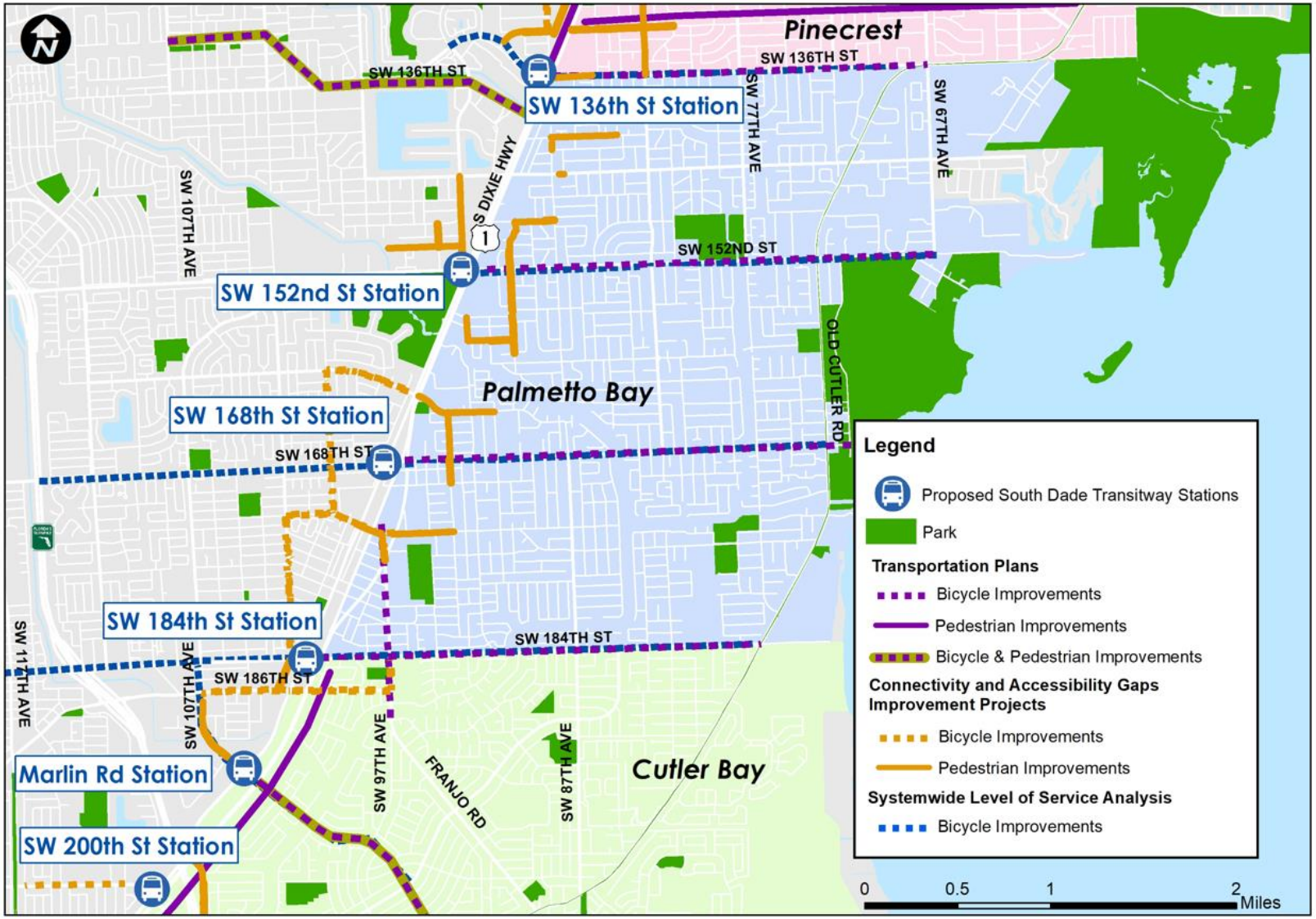

Figure 22: Pedestrian and Bicycle Improvements – Palmetto Bay

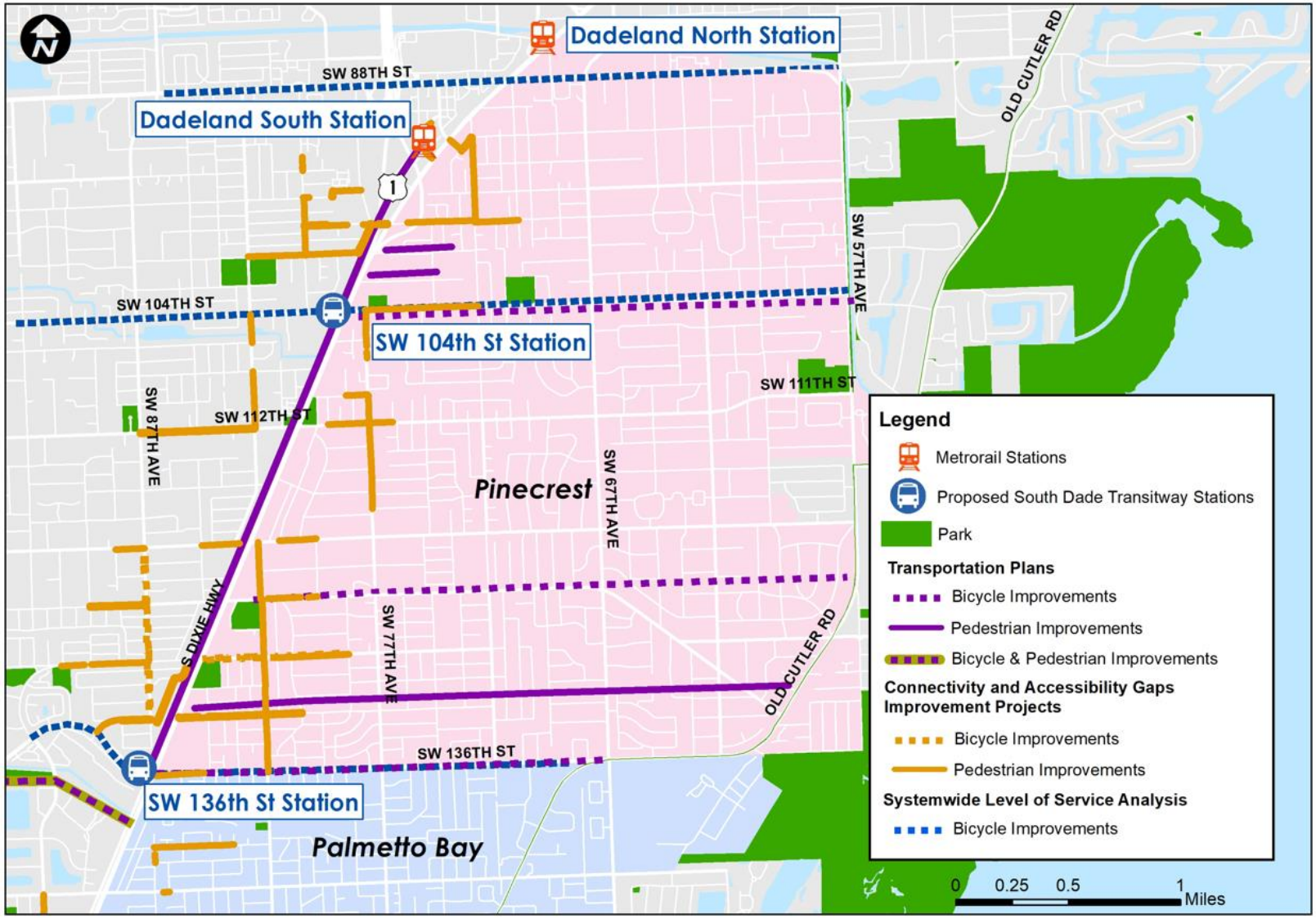

Figure 23: Pedestrian and Bicycle Improvements – Pinecrest

4.1.2 First Mile/Last Mile Connection

The first mile/last mile connection is a well-known transit issue. This study aimed at exploring two particular first mile/last mile concepts to provide connections to and from the South Dade Transitway Stations – (i) On-Demand Services and (ii) E-Scooter.

4.1.2.1 On-Demand Services

There are two existing on-demand services in the study area – Go Connect and Freebee. Miami-Dade County's DTPW partnered with Via to launch GO Connect in the region. Go Connect provides shared, first and last mile rides to and from Metrorail and Transitway stations within certain service zones. It currently offers services in the Cutler Bay, Palmetto Bay, Dadeland South, and Dadeland North area. Via's advanced algorithms will enable multiple riders to share the same vehicle, directing passengers seamlessly and safely to a nearby virtual bus stop within a short walking distance for pick up and drop off, allowing for quick and efficient shared trips without lengthy detours. Freebee is another mobile app based free on-demand services providing service in Palmetto Bay, Florida City, and Village of Pinecrest. Freebee service is green as it is provided by electric vehicles.

Both on-demand services are free in the study area and allow Transitway/Metrorail users to connect between South Dade Transitway/Metrorail stations and any location within the municipality. On-demand service hours varies by the municipalities. For instance, Go Connect is available in Cutler Bay between 05:30 AM to 8:00 PM from Monday to Friday, except holidays. Freebee operates at the Village of Pinecrest between 07:00 AM to 07:00 PM from Monday to Friday and 10:00 AM to 10:00 PM on Saturdays. The services are supported by discretionary statewide funding sources awarded on a competitive basis including the Public Transit Service Development Program, the Transit Corridor Program, and the State Park and Ride Lot Program.

Identification of Trip Generators

For better understanding of the distribution of high-trip generators within the First Mile/Last Mile service areas, seven maps were developed based on each proposed South Dade transitway station through Florida City to Pinecrest (as shown in **Figure 24** through **Figure 30**). Five types of high-trip generators are included on the maps which are colleges, commercial properties, major malls, libraries, and schools. The related GIS layers were extracted from Miami-Dade Open Data Hub. For each map, a one-mile radius service area was created for each transitway station based on accessible local street network. The density of commercial properties within service area is shown as heat map in red color. The other types of high-trip generators are shown as specific icons.

The following maps serve as a resource tool for the Miami-Dade County and municipalities to identify opportunities for pick-up/drop-off stations/locations to extent existing on-demand services or introduce new services.

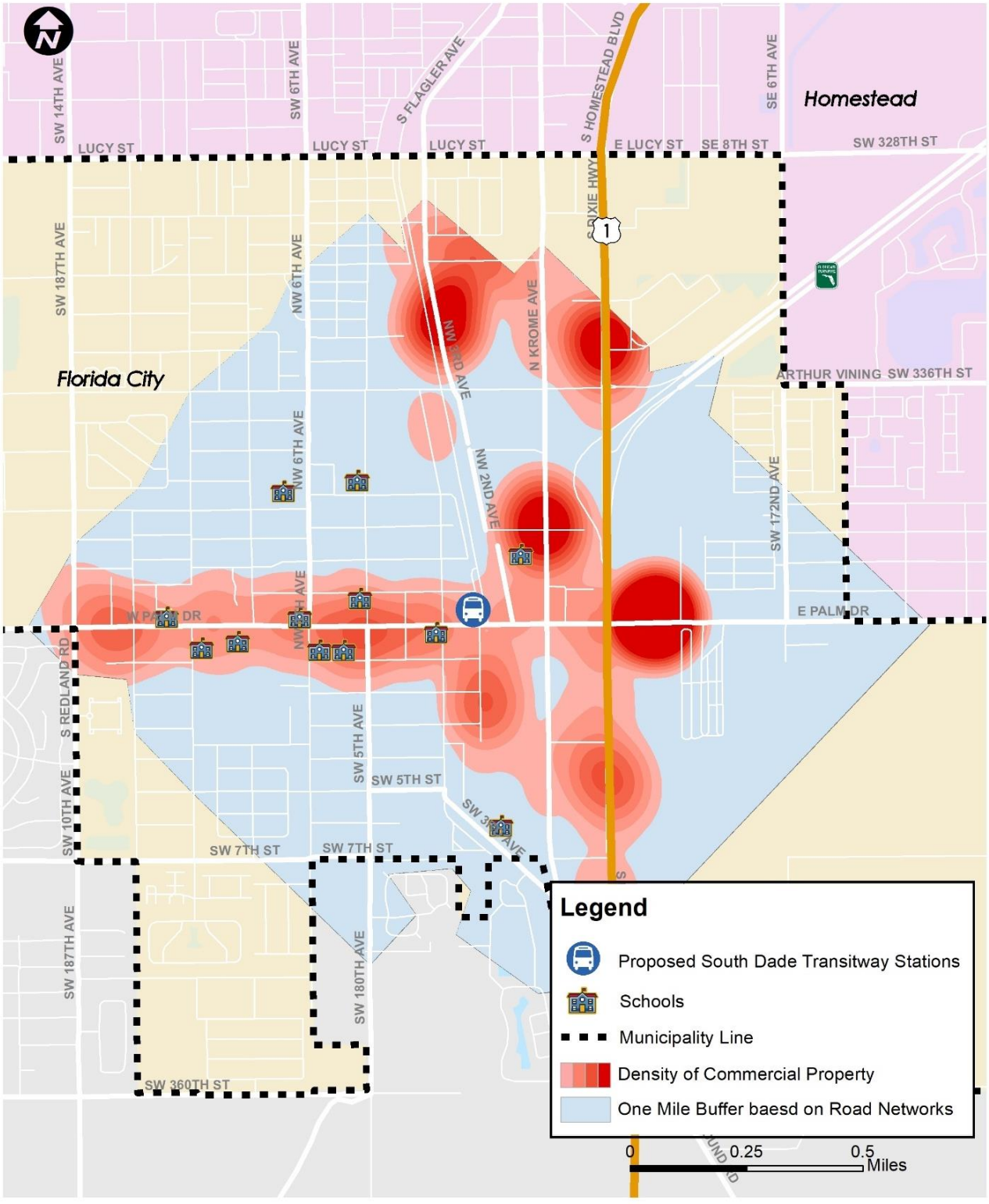

Figure 24: First Mile/Last Mile Connection – Florida City

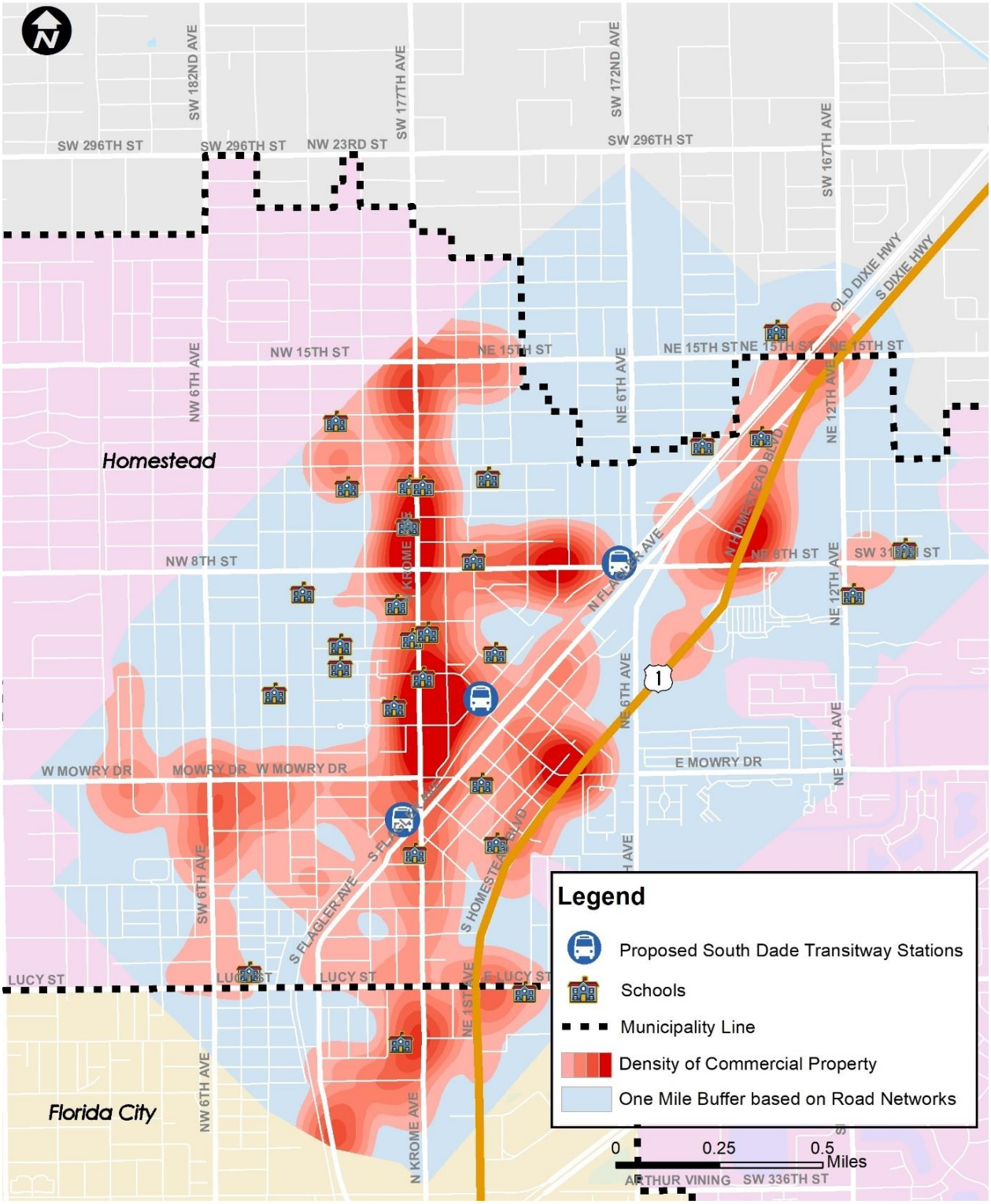

Figure 25: First Mile/Last Mile Connection – Homestead

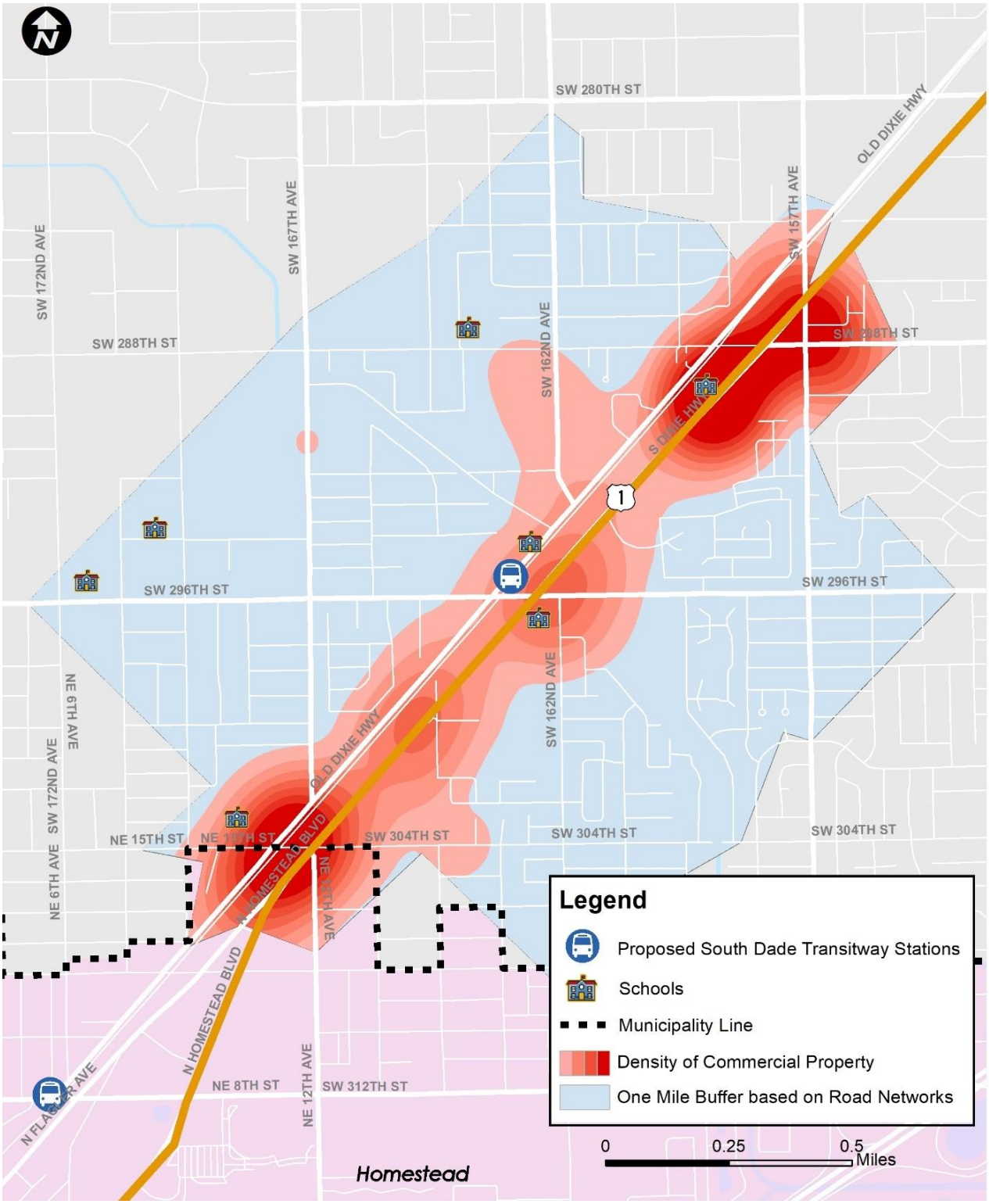

Figure 26: First Mile/Last Mile Connection – Unincorporated Miami-Dade - A

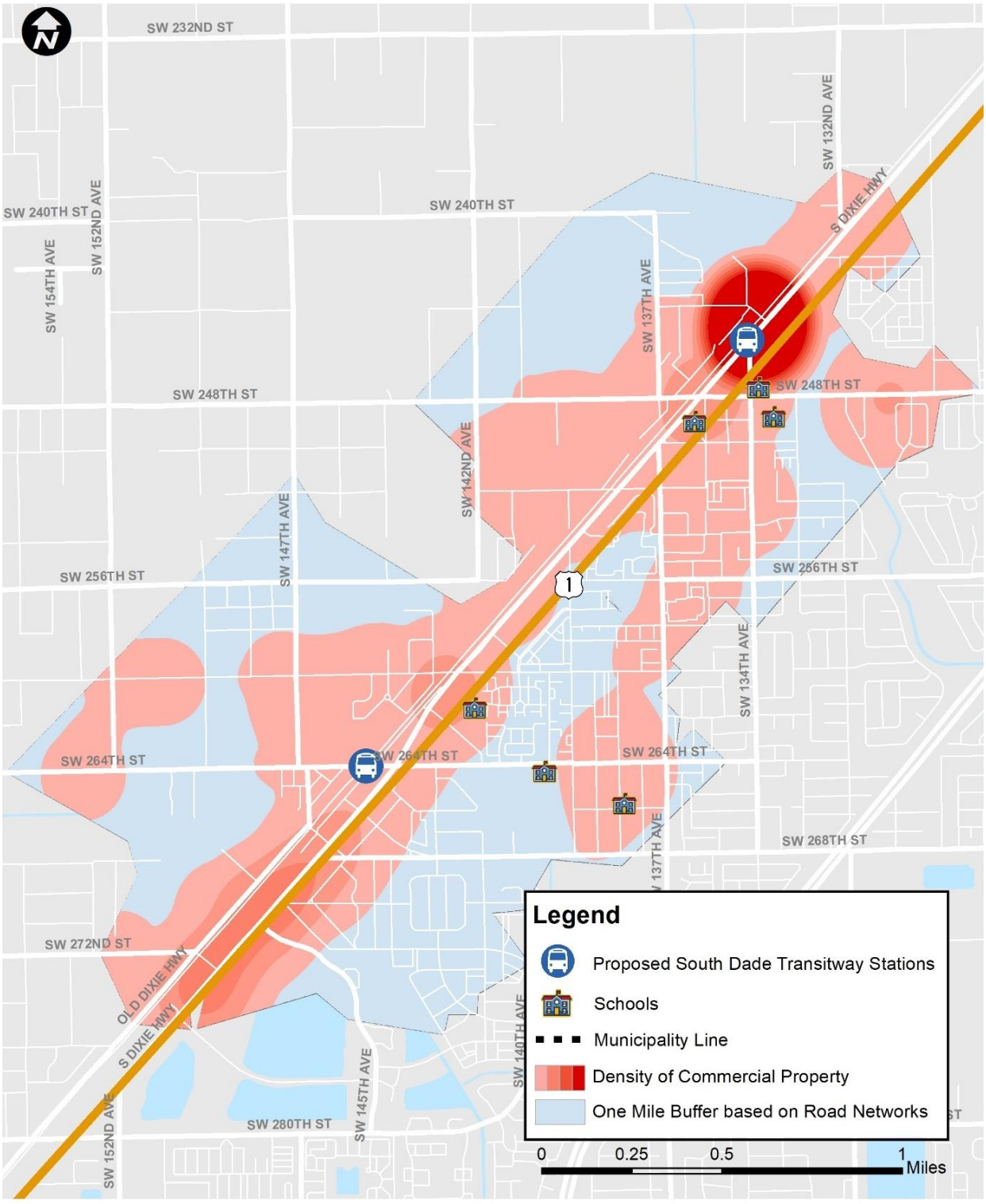

Figure 27: First Mile/Last Mile Connection – Unincorporated Miami-Dade - B

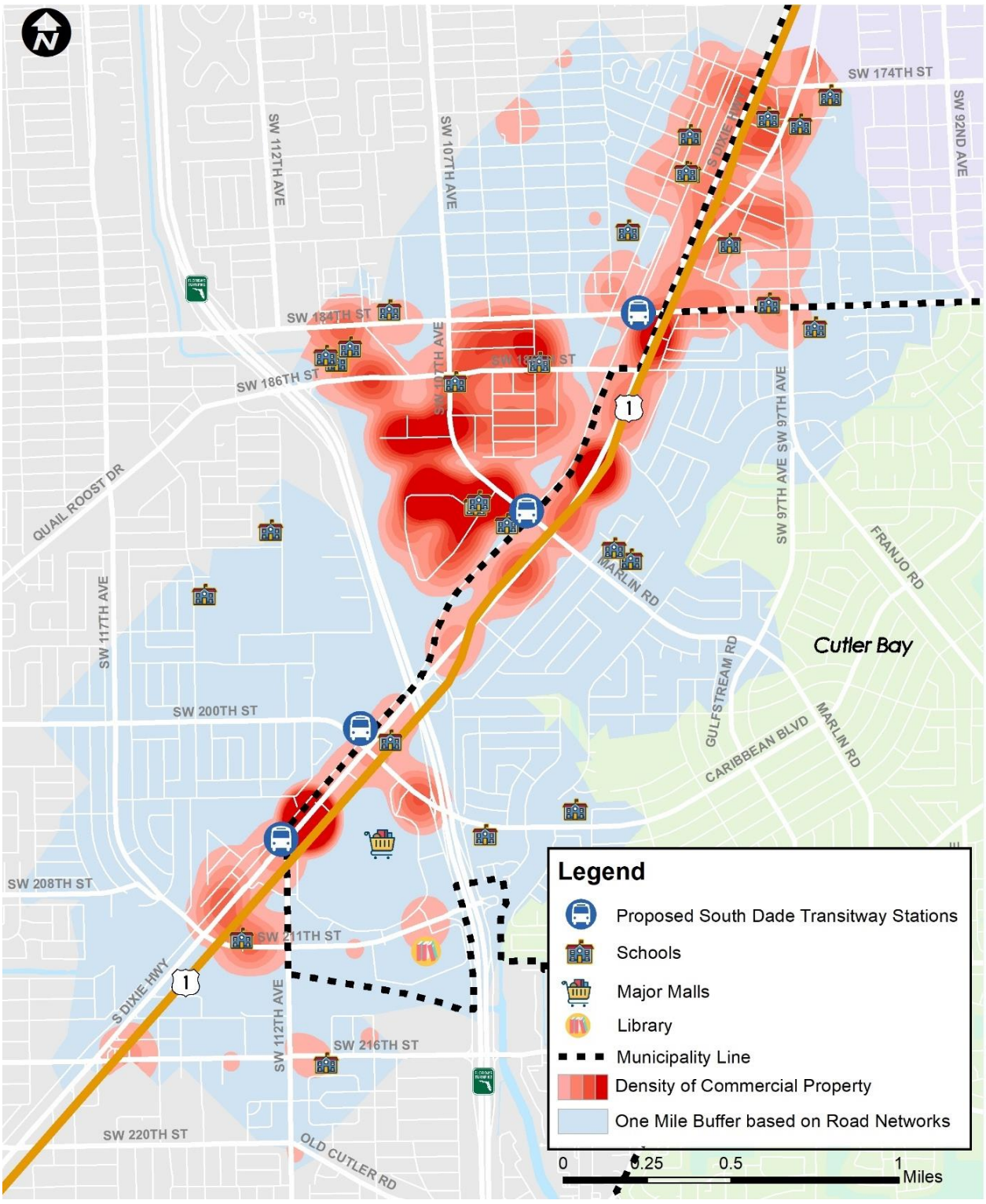

Figure 28: First Mile/Last Mile Connection – Cutler Bay

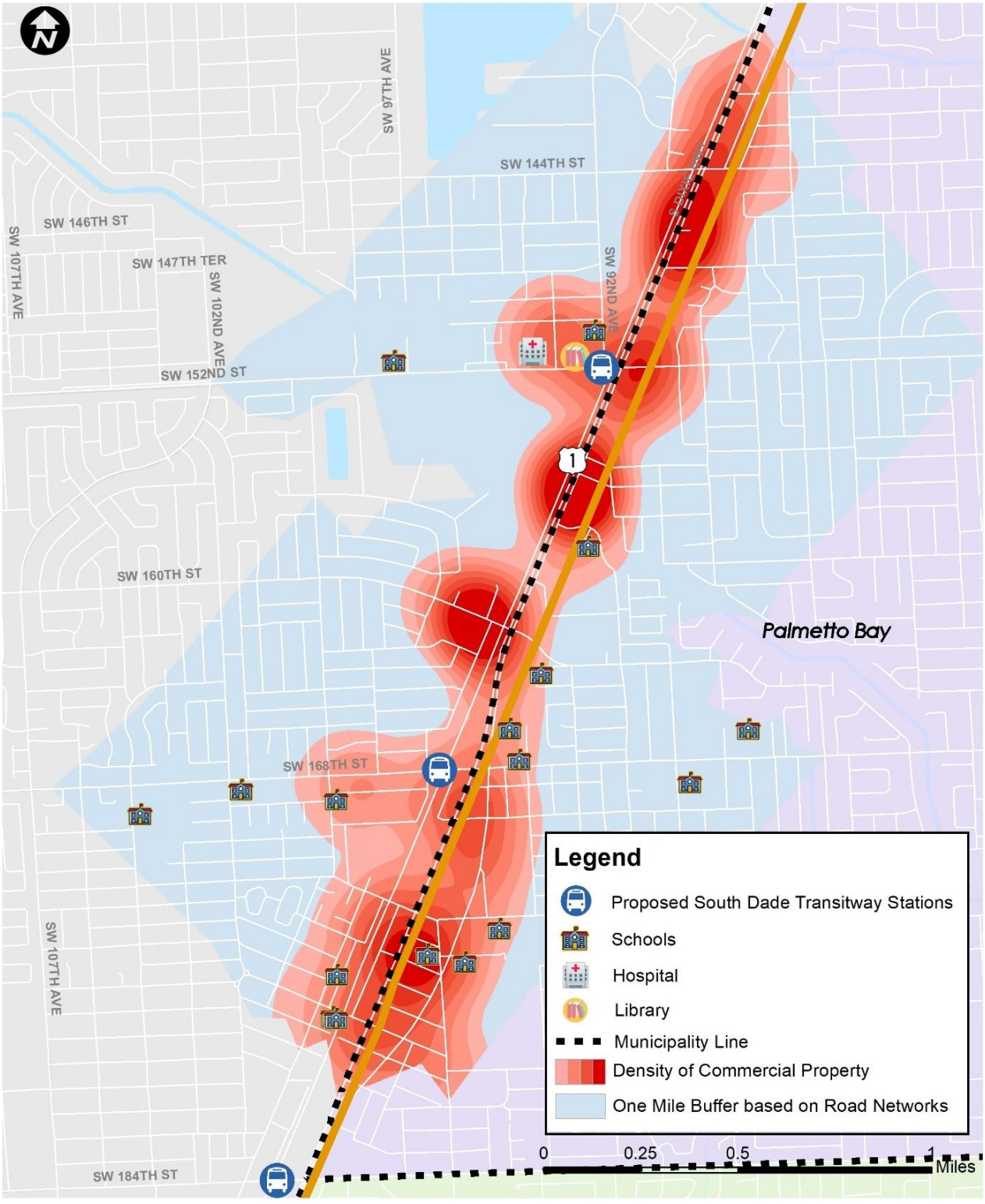

Figure 29: First Mile/Last Mile Connection – Palmetto Bay

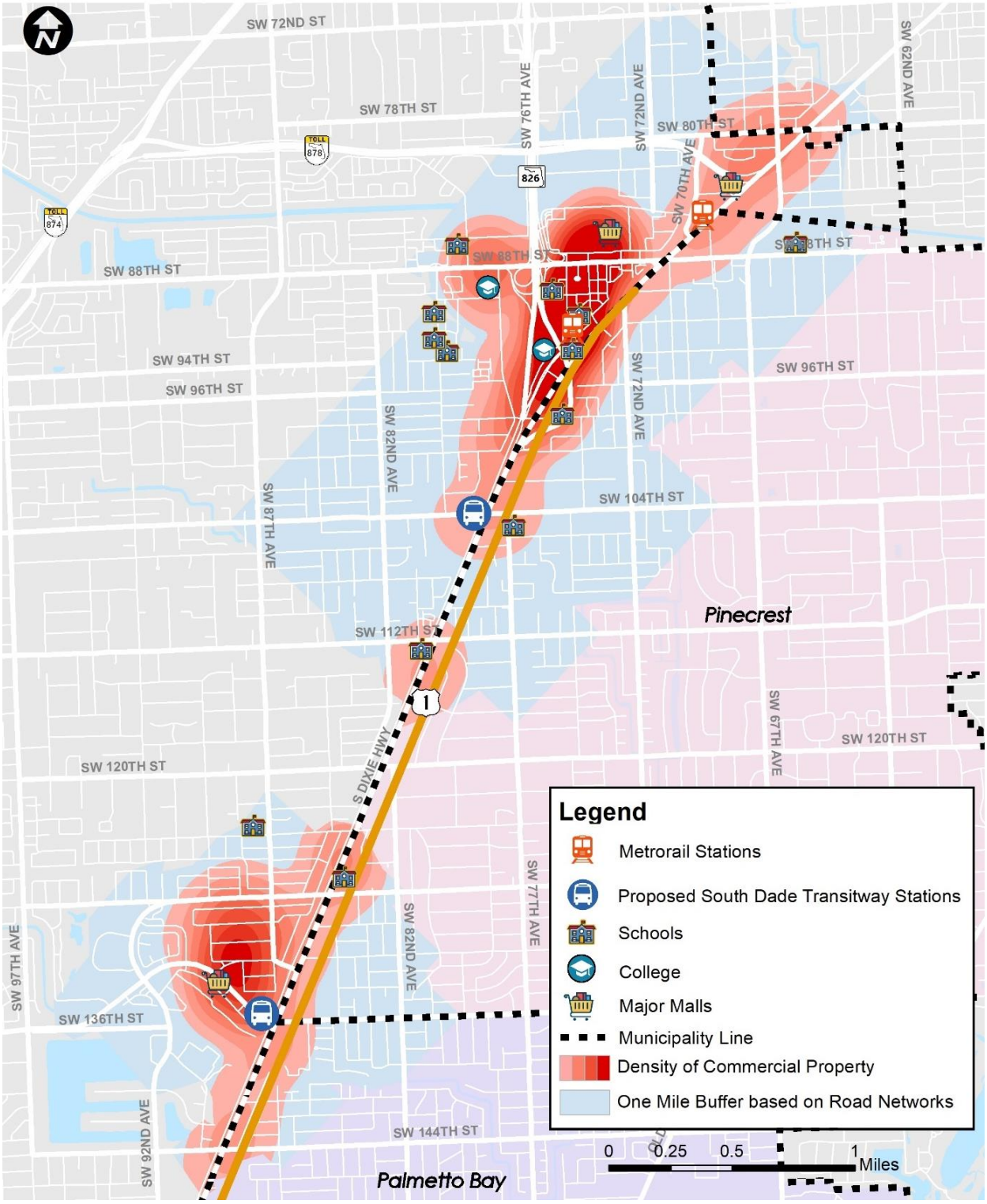

Figure 30: First Mile/Last Mile Connection – Pinecrest

4.1.2.2 Micromobility

E-Scooter is another first mile/last mile connection that is becoming increasingly popular in urbanized areas. The City of Miami approved a pilot program allowing nine private operators to offer motorized scooter rentals in Miami's urban core and surrounding neighborhoods. The pilot program provided residents and visitors access to this new transportation option while allowing the City to evaluate the effectiveness of scooters as part of an overall transportation and mobility program. However, the pilot program for motorized scooters within City of Miami was repealed on November 18, 2021. Miami-Dade County on the other hand, kicked off a pilot program for E-Scooter companies on March 18, 2022.

A micro-mobility survey was completed by Florida International University (FIU) as part of a larger research project being conducted by the Southeastern Transportation Research, Innovation, Development and Education (STRIDE) Center. The goal was to better understand mode choice behavior and attitudes around E-scooters. The survey was administered between September 29th, 2021, and November 8th, 2021, among South Florida micro-mobility users. The survey identified most E-Scooter users own their E-scooter as they perceived that while cost is not an initial barrier to use, it becomes unmanageable with continued use. The survey suggests that improving E-Scooter safety may help to encourage people to switch to using shared E-Scooters. Making E-Scooters more available and affordable would also increase usage.

Municipalities may consider implementing E-Scooter programs at the potential pick-up/drop-off stations/locations to provide first mile/last mile connection to and from the South Dade Transitway/Metrorail stations. Maps identifying major trip generators (**Figure 24** through **Figure 30**) could be used to define the location of E-Scooter hubs/locations along the corridor.

4.2 Roadway Improvements

A list of 16 intersections were selected in section 2.1.1 of this report to determine potential capacity improvements for the corridor under evaluation. The selected intersections experienced recurring congestion and exhibited clear deficiencies of traffic operations (LOS F) during the peak periods.

In order to recommend capacity improvements, observed maximum queue lengths from the VISSIM study were compared against the currently available storage length for each of the selected intersections. Right-of-way availability was also accounted for while determining the type and limit of the improvements. Eventually, only reasonable improvement options were considered in this study. Detail considerations for each of the proposed improvements are provided in **Appendix F**.

This section provides conceptual designs of the proposed roadway improvements, followed by a comparative analysis to capture the intersection operational impact of roadway improvements, and finally an evaluation of each of the proposed improvements.

4.2.1 Conceptual Design of Roadway Improvements

A conceptual design for each of the failing intersections (where improvements were recommended) is provided in this section. Out of the 16 intersections, improvements were initially considered for 15 intersections (no feasible improvements were identified for the intersection at US-1 and SW 132nd Street.). However, some initial improvements are not finally recommended due to various reasons, which are discussed below.

Palmetto Road and SW 104th Street

Adding a northbound left-turn lane of 100 feet was initially considered for the intersection at Palmetto Road and SW 104th Street but the proposed improvement increased westbound delay and degraded the overall intersection delay when coded in the VISSIM models. Hence the improvement is no longer recommended.

US-1 and SW 344th Street/Palm Drive

Several improvements were initially proposed at the US-1 and SW 344th Street/Palm Drive intersection. Through the agency coordination completed by the project working group, FTE advised against recommending any improvement at this location by the current study. Therefore, the analysis of this location was deferred to FTE.

FTE concluded the Florida's Turnpike (SR 821) widening from US-1 (south of Palm Drive) to Campbell Drive Project Development & Environment Study (FPID 439545-1) in December of 2021. A major element of FTE's selected alternative was a new Turnpike ramp over the US-1 and Palm Drive/SW 344th Street intersection. FTE's selected alternative was designed to: alleviate traffic congestion by giving motorists more options for travel; improve safety; improve accessibility; and enhance emergency evacuation and response. Based on public feedback, FTE suspended activity to further develop the proposed Turnpike ramp over the US-1 and Palm Drive/SW 344th Street intersection.

FTE has since committed to develop Transportation System Management and Operations (TSM&O) alternatives to improve operations at the US-1 and Palm Drive/SW 344th Street intersection. The US-1 segment between the Turnpike ramp and Palm Drive/SW 344th Street has a high number of crashes. The crash rate is contributed to by the short weave distance from the Turnpike ramp to the intersection. This weave area operation and the US-1 and Palm Drive intersection deficiencies often result in unsafe queuing into the high-speed Turnpike lanes. TSM&O uses traffic management strategies to address safety and capacity deficiencies. FTE's TSM&O Study (FPID 450394-1) will include consideration of improvements along US-1 from north of Davis Parkway to south of Palm Drive, along with community involvement.

The timeline for FTE's TSM&O Study is as follows and is subject to change:

- Notice to Proceed (NTP): January 2022
- Kick-off Meeting: February 2022
- Data Collection & Document Review: February – March 2022
- Sketch Level TSM&O Alternatives: March – October 2022
- Agency Coordination Meetings: October – November 2022

- Draft Technical Summary Report: December 2022 – January 2023
- Agency Coordination Meetings: February 2023
- Final Technical Summary Report: April 2023

Old Dixie Highway and NE 11th Street

Two improvements were originally considered at the Old Dixie Highway and NE 11th Street intersection (adding an eastbound right turn lane of 45 feet and reconfiguring the northbound approach with a new left-turn lane). After testing the recommended improvements in the VISSIM models, the improvement on the eastbound approach was discarded given that it does not result in reduction of queues. Only the lane reconfiguration on the northbound approach was recommended.

Figure 31 through **Figure 43** show a conceptual design, with roadway improvements identified, for the failing intersections. Each figure depicts the type and limits of the proposed improvement(s) along with the right of way boundary.

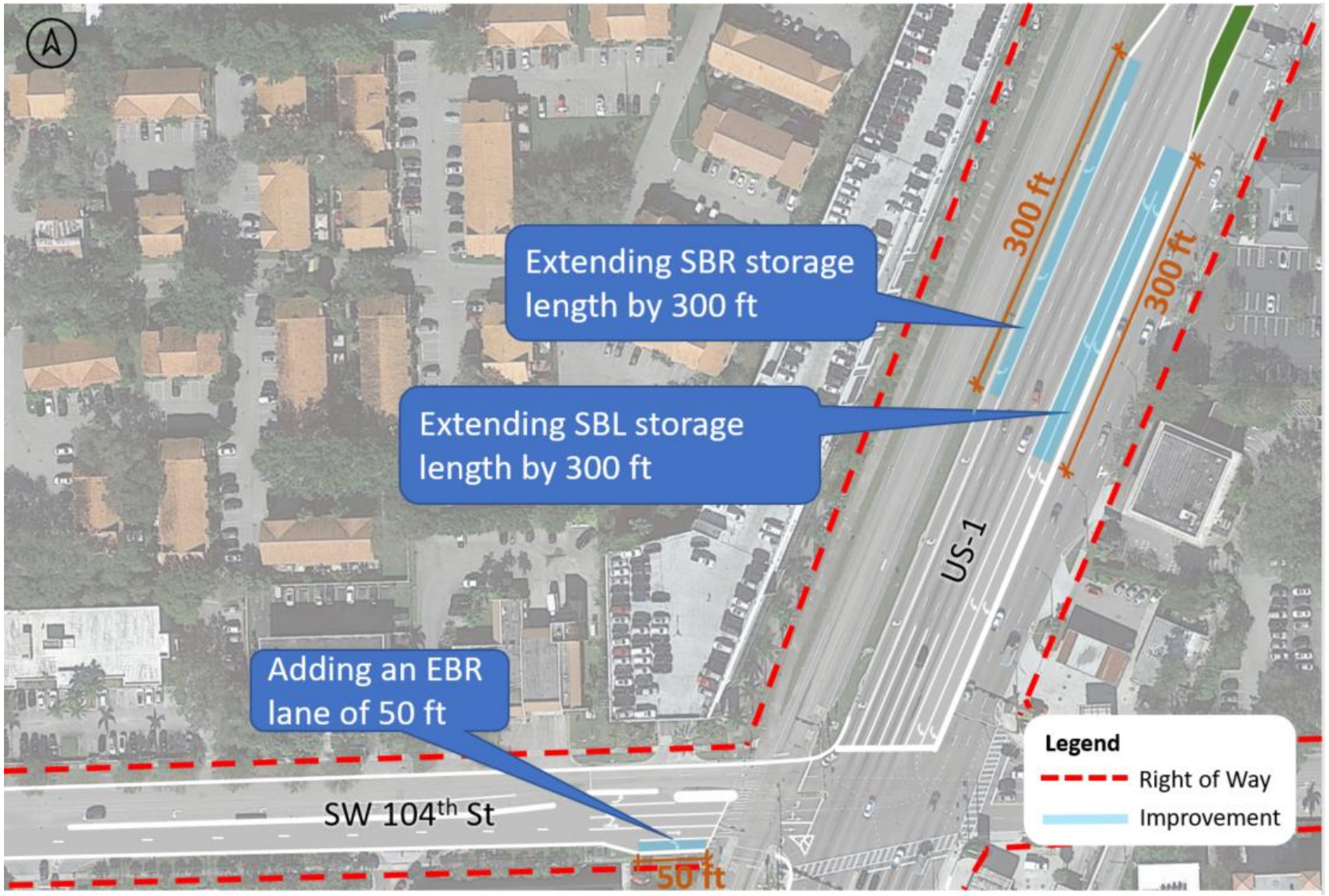

Figure 31: Conceptual Design Plan – US-1 and SW 104th Street

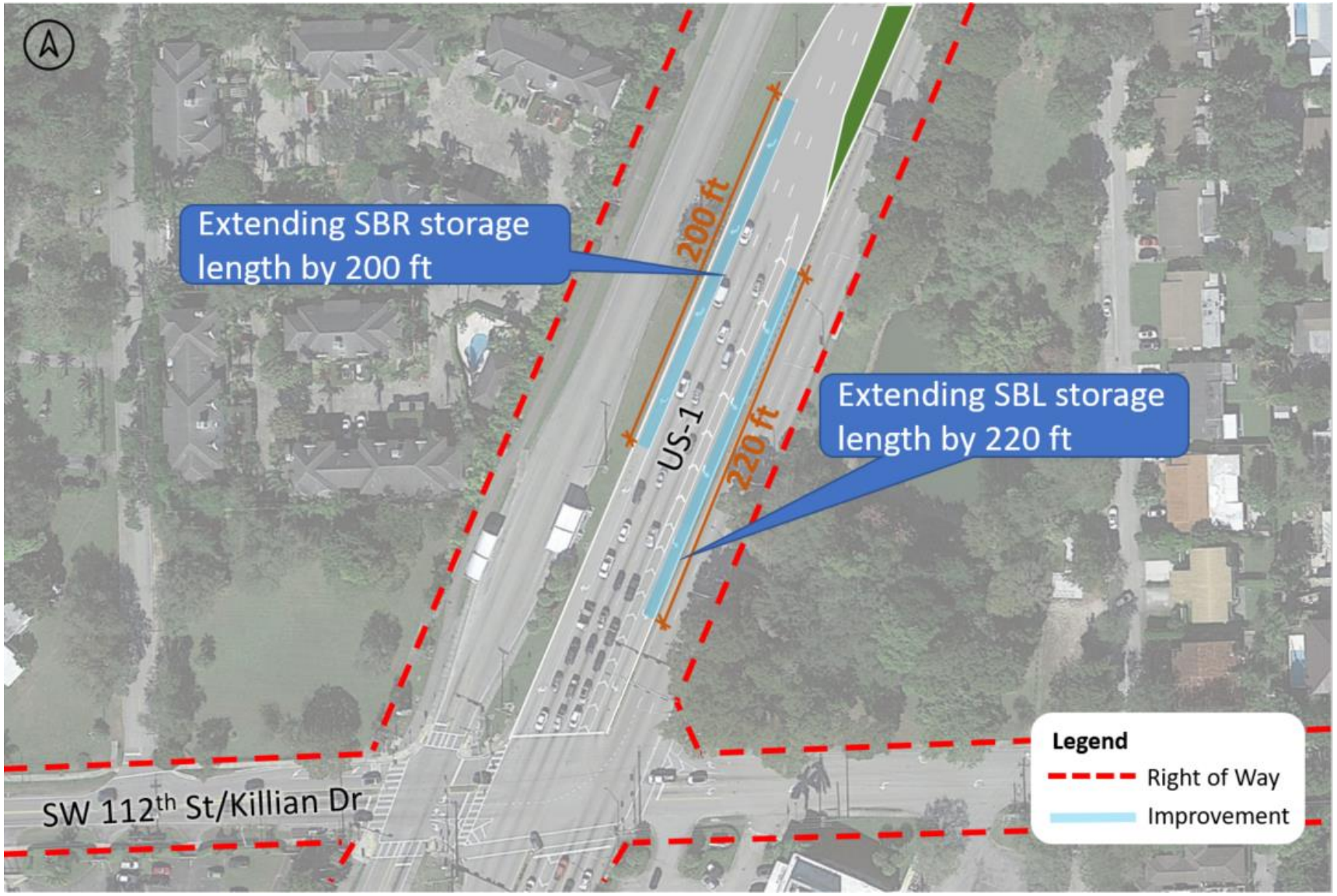

Figure 32: Conceptual Design Plan – US-1 and SW 112th Street/Killian Drive

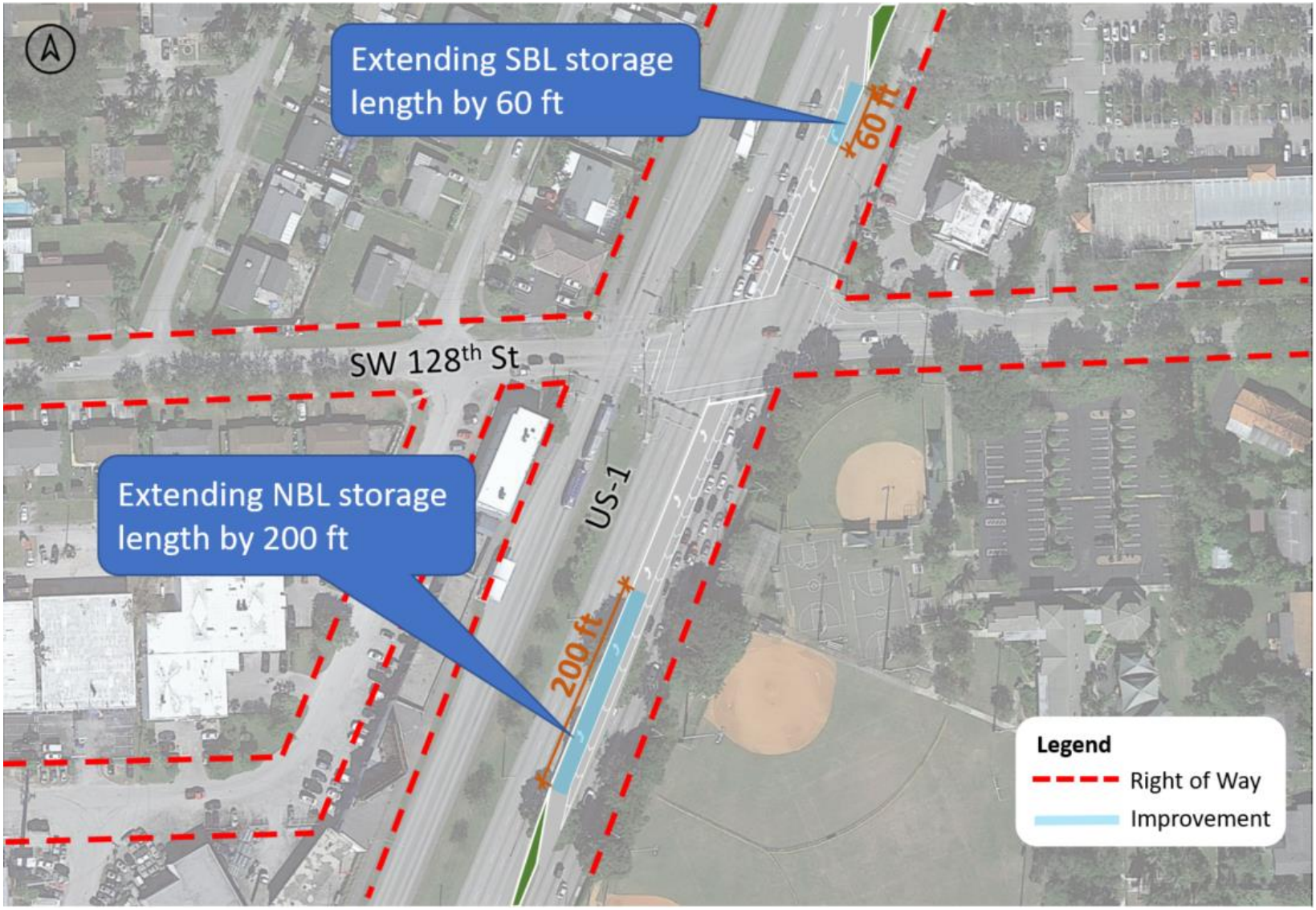

Figure 33: Conceptual Design Plan – US-1 and SW 128th Street

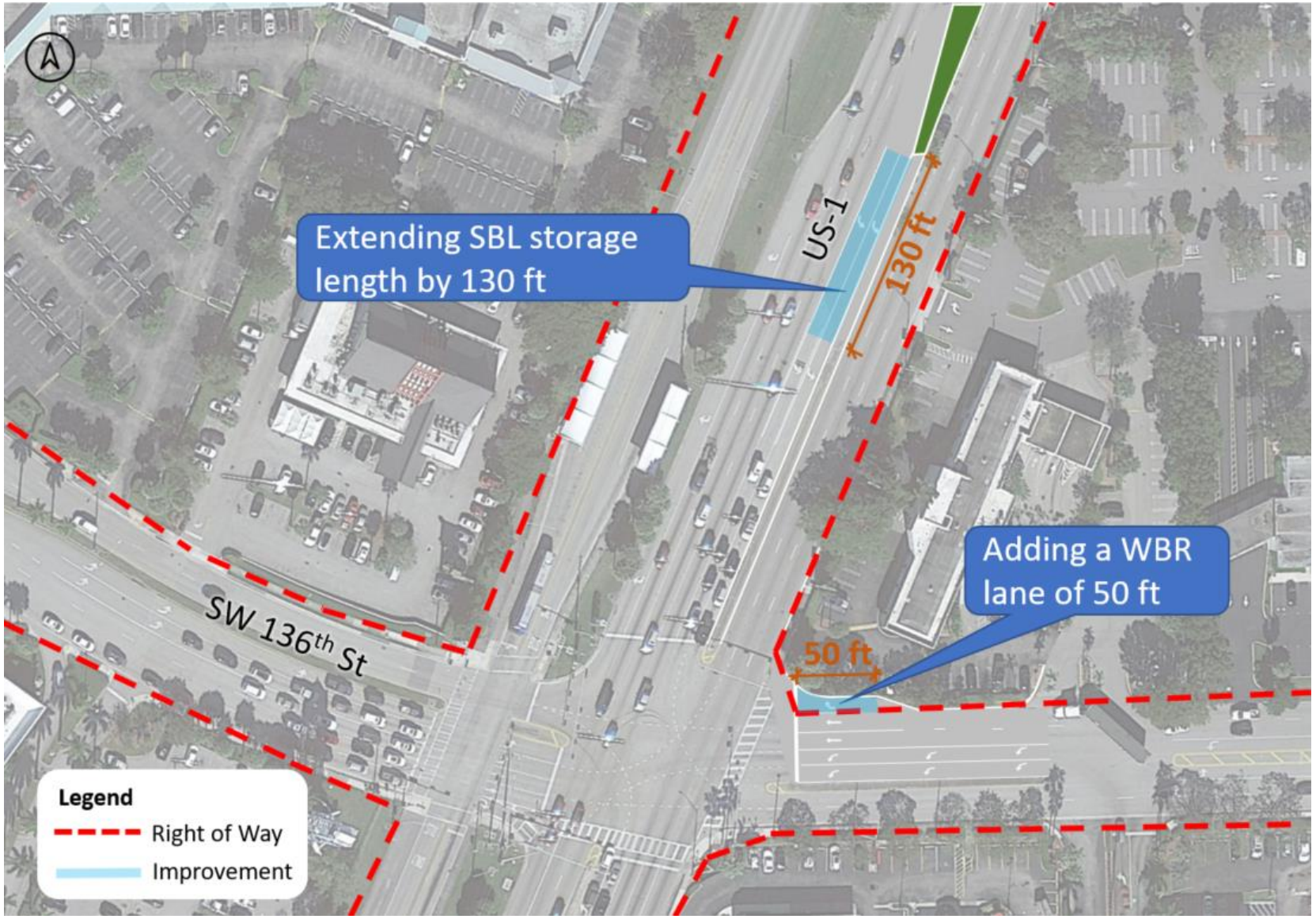

Figure 34: Conceptual Design Plan – US-1 and SW 136th Street

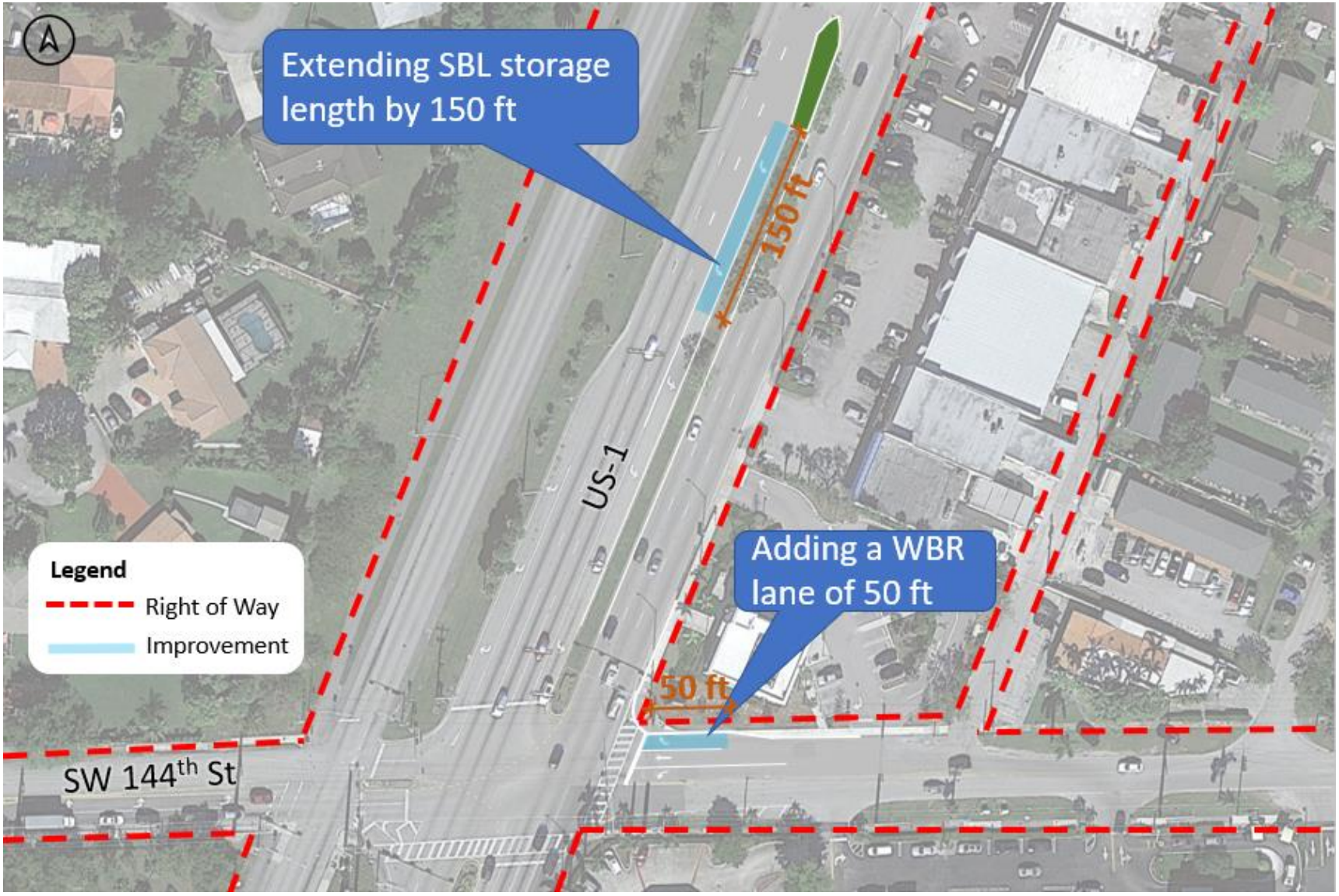

Figure 35: Conceptual Design Plan – US-1 and SW 144th Street

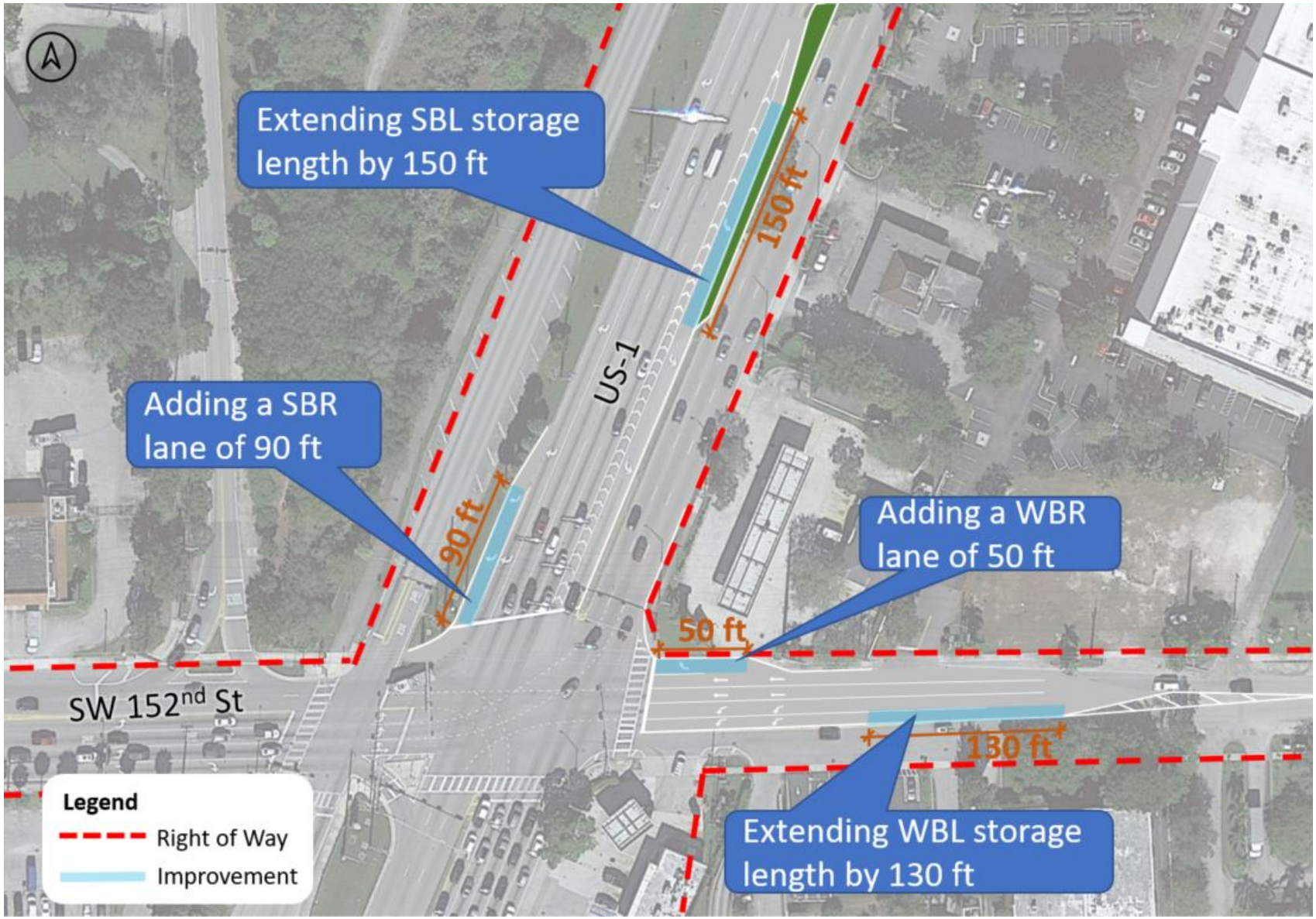

Figure 36: Conceptual Design Plan – US-1 and SW 152nd Street

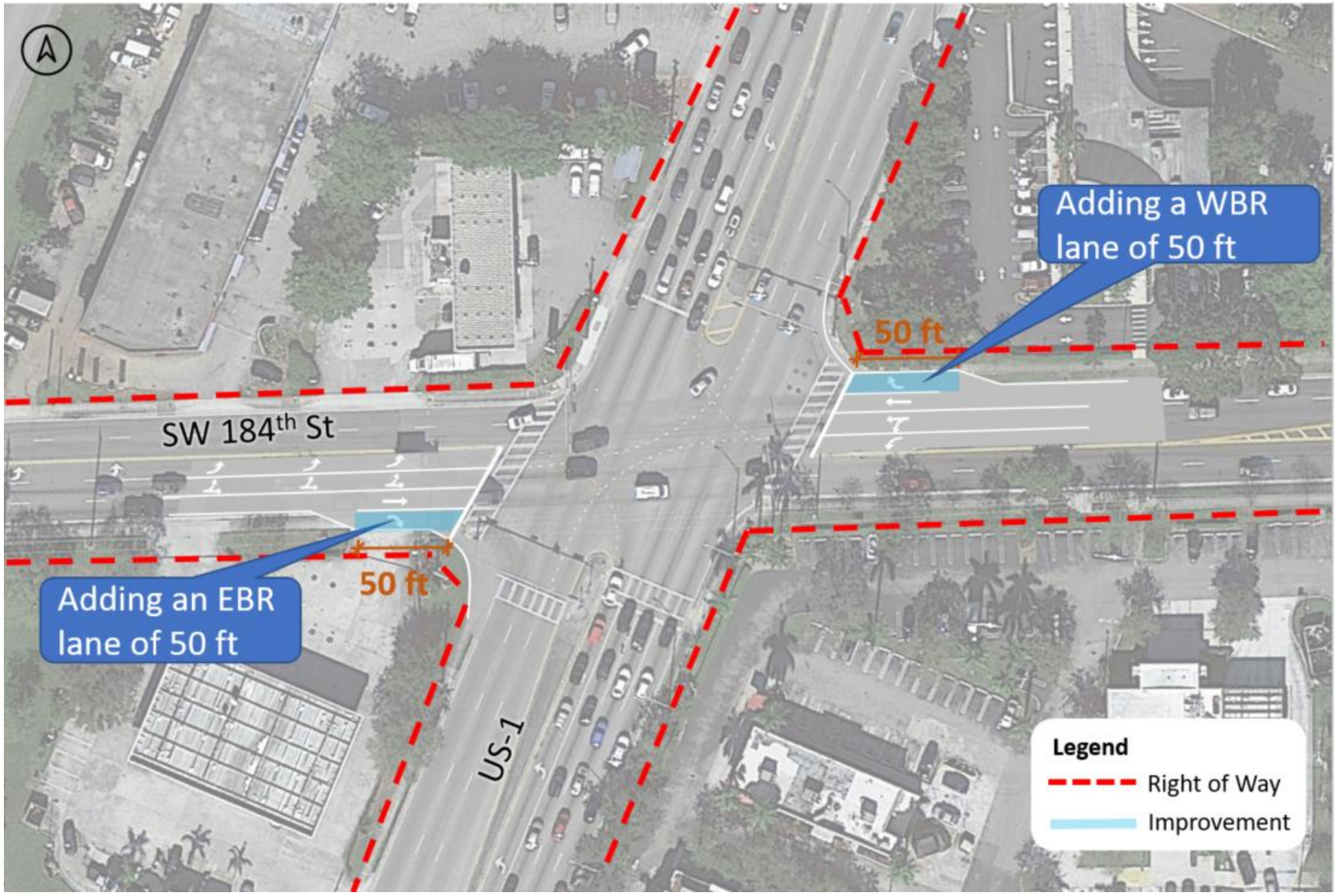

Figure 37: Conceptual Design Plan – US-1 and SW 184th Street

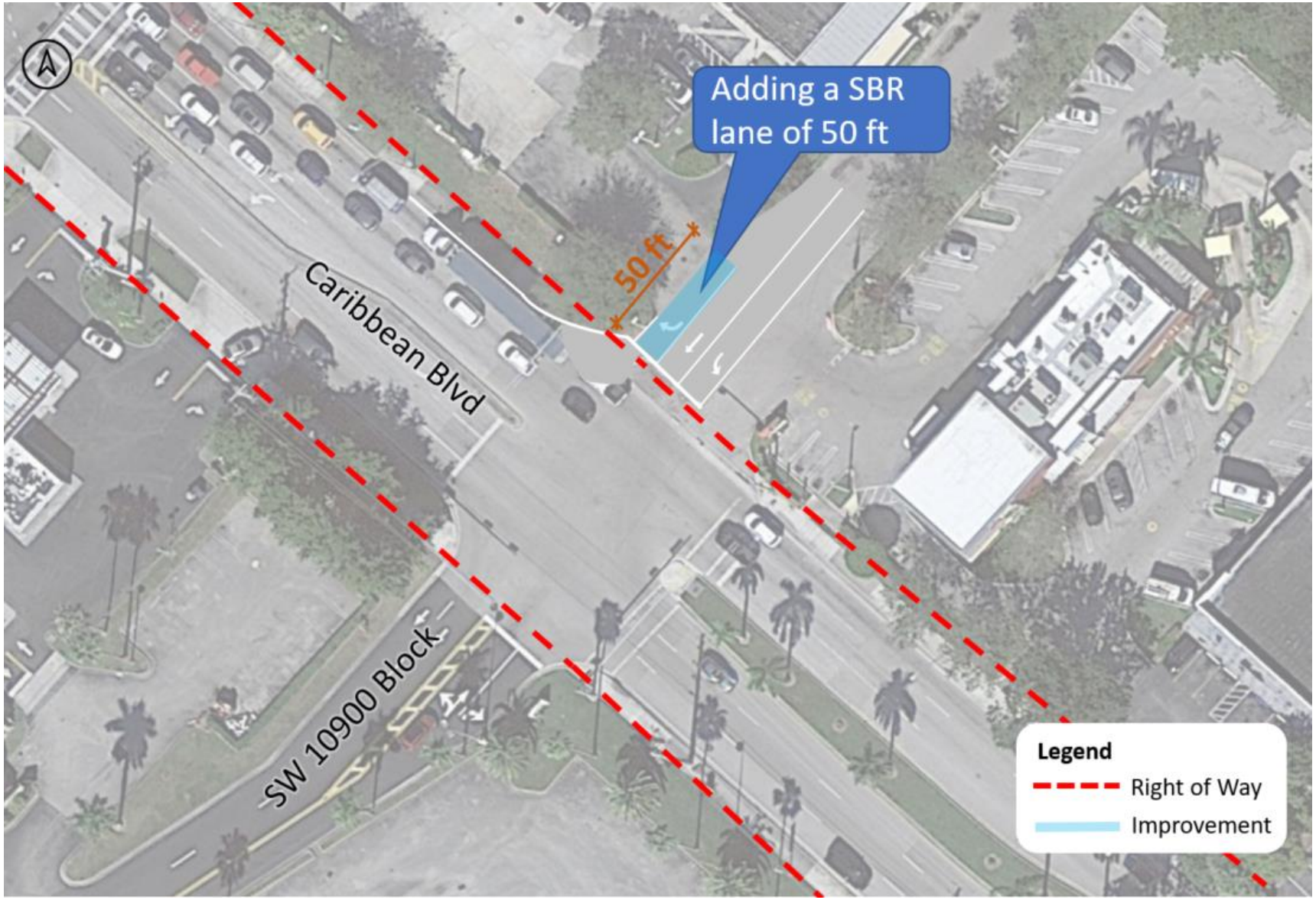

Figure 38: Conceptual Design Plan – SW 10900 Block and Caribbean Boulevard

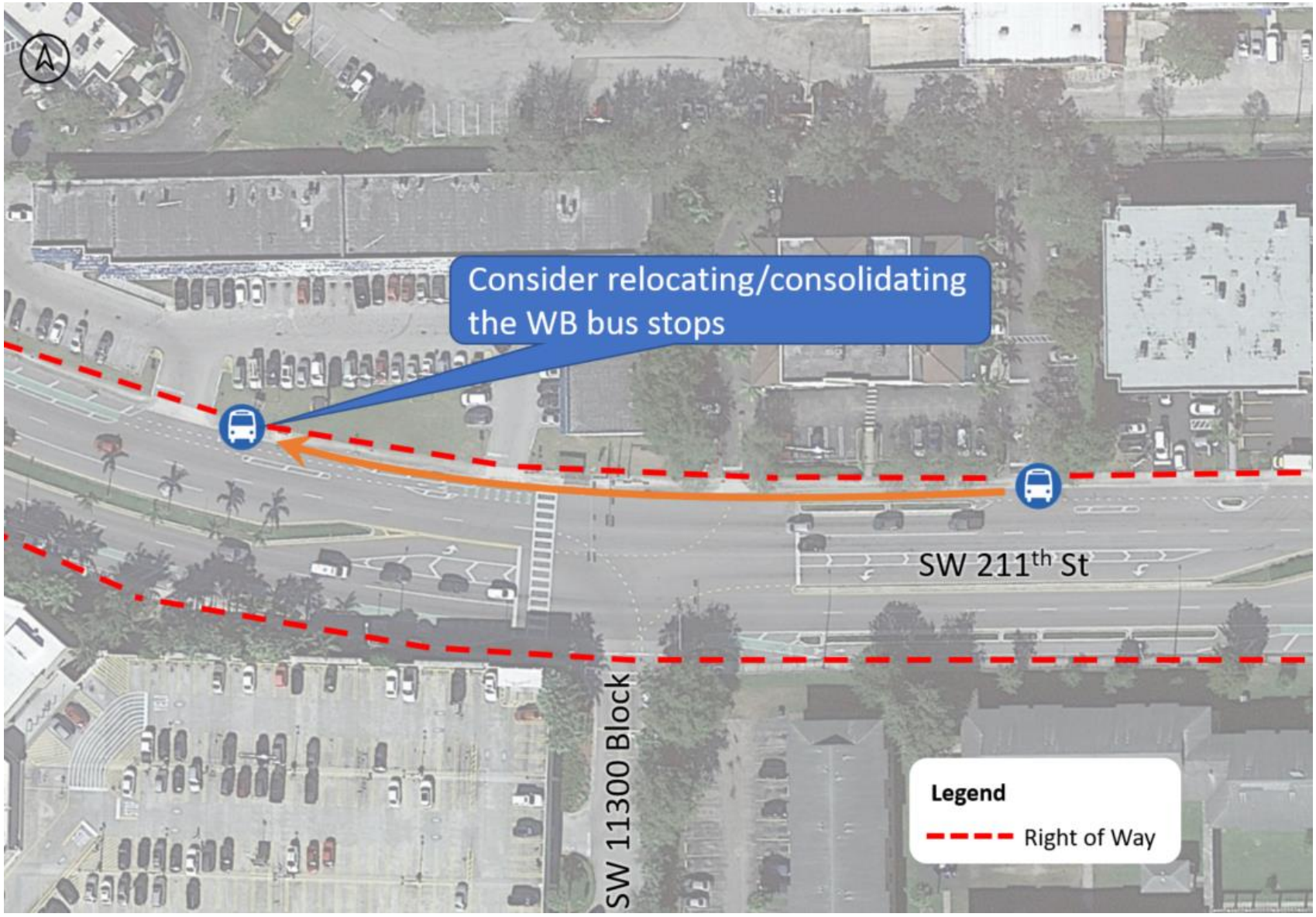

Figure 39: Conceptual Design Plan – SW 11300 Block and SW 211th Street

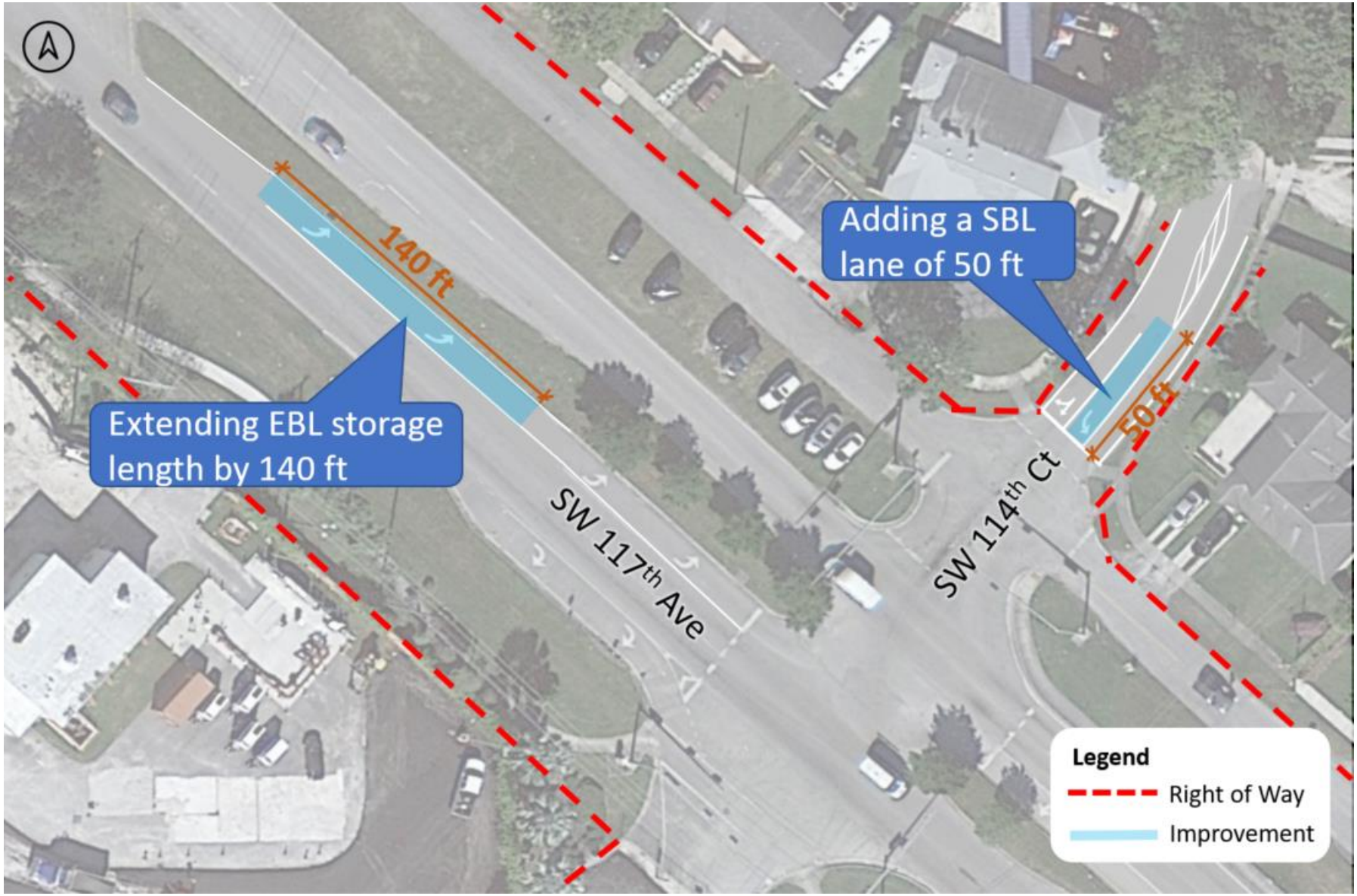

Figure 40: Conceptual Design Plan – SW 117th Avenue and SW 114th Court

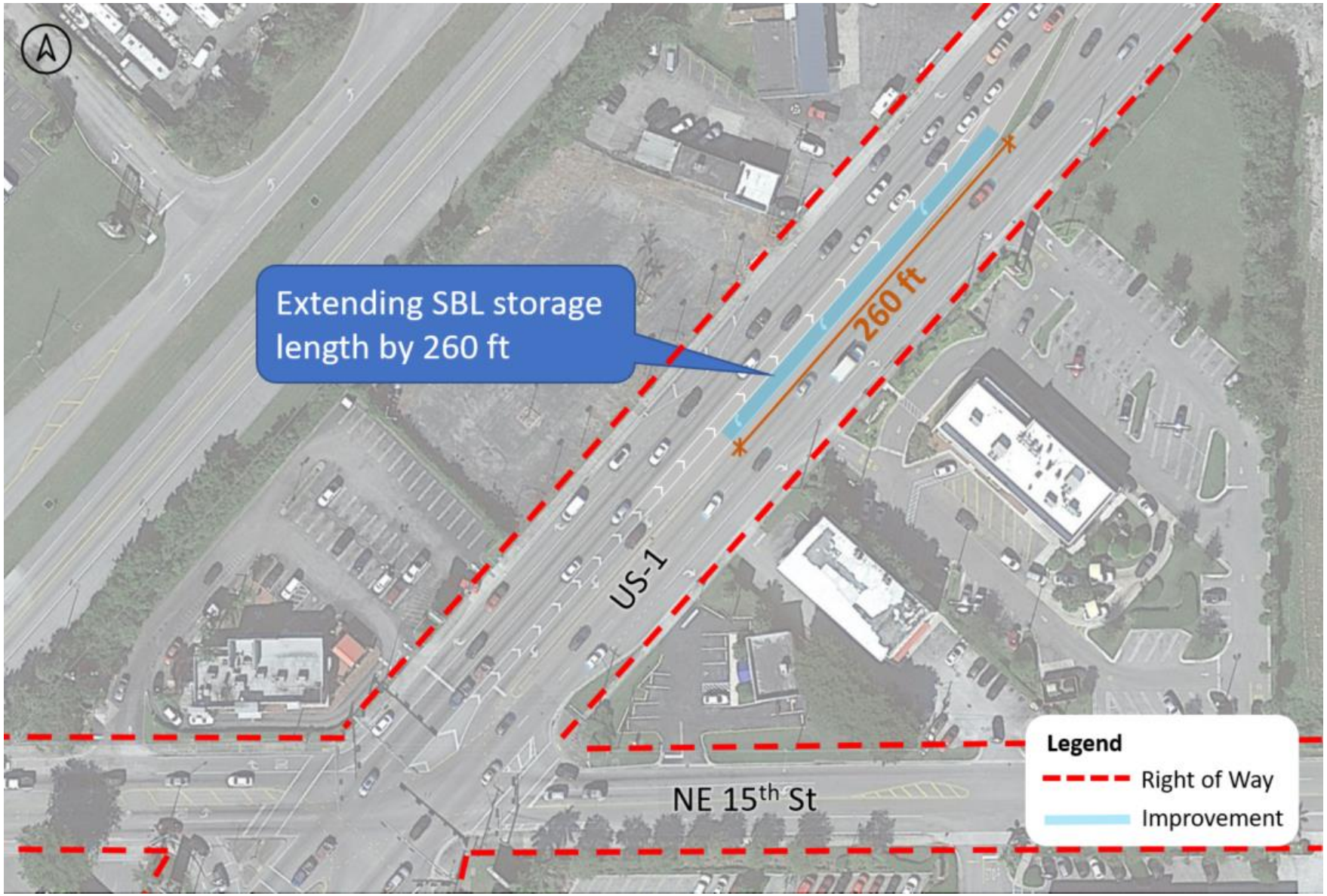

Figure 41: Conceptual Design Plan – US-1 and NE 15th Street/NE 12th Avenue

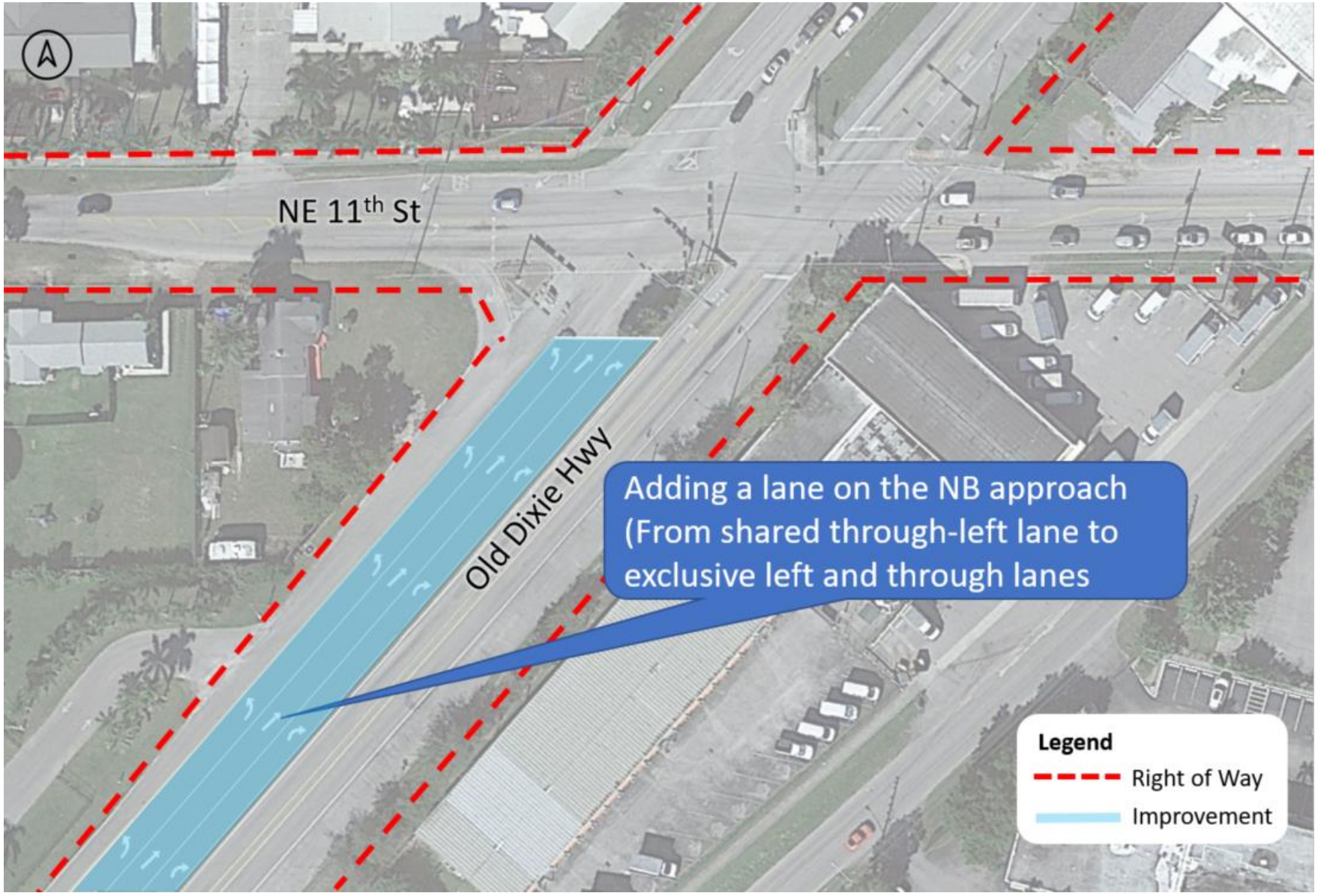

Figure 42: Conceptual Design Plan – Old Dixie Highway and NE 11th Street

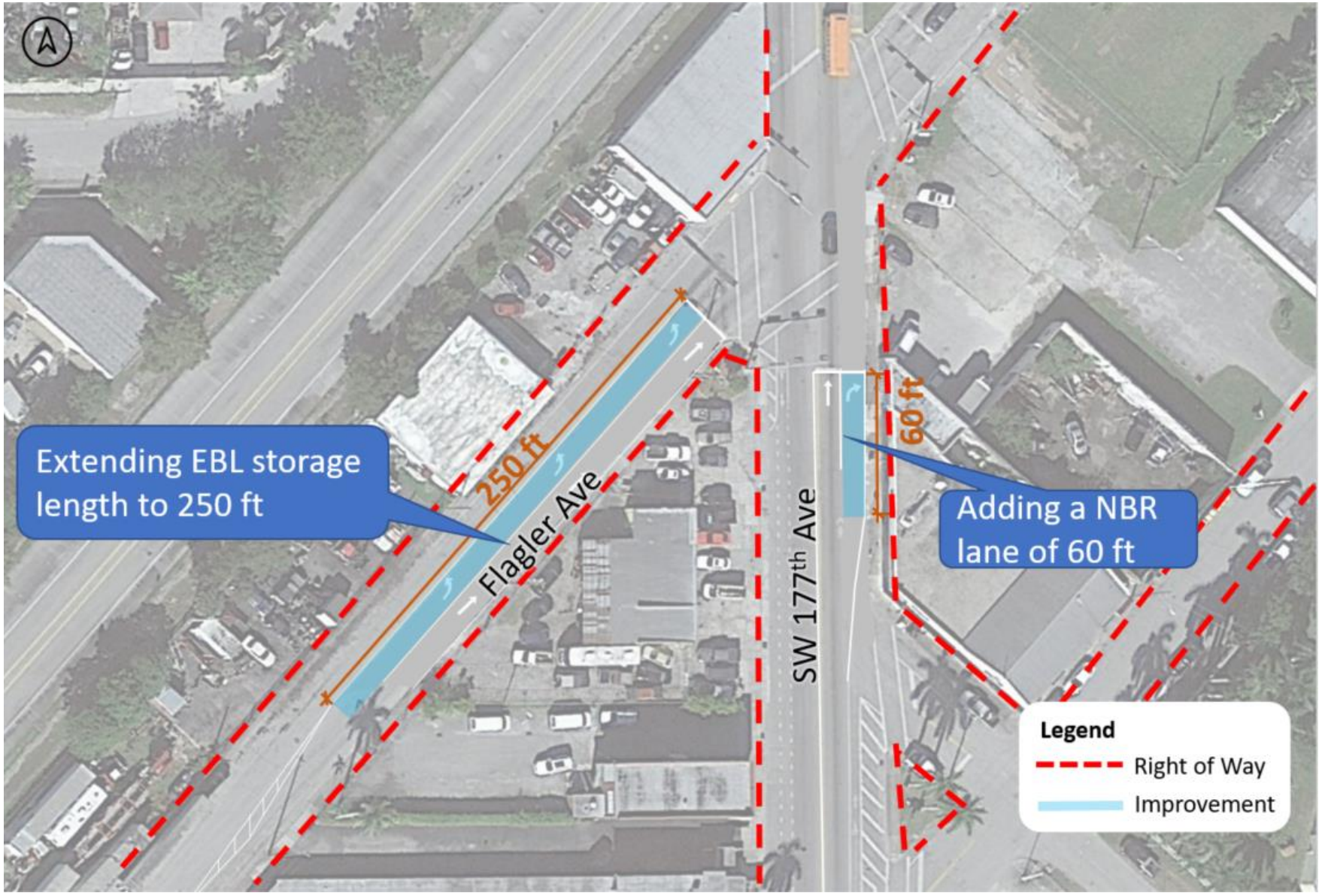

Figure 43: Conceptual Design Plan – SW 177th Avenue and N Flagler Avenue

4.2.2 Analysis of Roadway Improvements

The operational analysis of roadway improvements was performed using the microsimulation models developed for the US-1 South Corridor Rapid Transit Project VISSIM Analysis Traffic Analysis Report completed in September 2020. These models reflect the traffic operation plans included in DTPW's South Corridor Rapid Transit Project Concept of Operations dated September 6, 2019, and the existing roadway geometry at the time of model development (September 2020).

AM and PM peak period models were created for the No Build or Baseline model, and a Build scenario coding the intersection improvements identified as part of this study. The No Build or Baseline model was updated to reflect modifications constructed at the intersection of US 1 and SW 344 Street/Palm Drive after the completion of the US 1 South Corridor Rapid Transit Project Vissim Analysis in September 2020. The 2022 Build models—which included the gated preemption system for the Bus Rapid Transit (BRT) system were carried over to this study and represent the baseline (No Build) condition for this analysis. The 2022 Build models were created by coding the proposed improvements into the No Build models. At the intersection level, several measures of effectiveness (MOEs) including volume, queue length, delay and LOS were extracted from the No Build and Build models to assess the performance with and without the proposed improvements. Further details regarding VISSIM models development, methodology, performance measures, and model results comparisons are provided in **Appendix G**.

The following sections present delay, LOS and volume comparison by approach and for the overall intersection, for each of the intersections where improvements were considered. Queue comparison by movement is presented as well. Justifications for each of the improvement recommendation is also provided. It should be noted that the main benefit of the intersection improvements is the reduction of the queue lengths. A cost benefit analysis might be necessary to make a final determination on the feasibility of the improvements.

Intersection at US-1 and SW 104th Street

As shown in **Table 20** and **Table 21**, the proposed improvements at this intersection reduce queues considerably for most movements. Also, there is an important reduction of intersection delay (18%) during the PM peak period. Additionally, processed volumes increase during both the AM and PM peak periods, which is an indication of the added capacity. While there is a relatively small increase of intersection delay during the AM period and queue length for the southbound left, most of the MOEs demonstrate the improvements' benefits.

Table 20: Delay and Volume Comparison – US-1 and SW 104th Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	186.0/152.7	-18%	F/F	642/650	1%	124.0/126.4	2%	F/F	6155/6215	1%
	SB	93.0/116.1	25%	F/F	2335/2382	2%					
	WB	140.0/141.9	1%	F/F	521/513	-2%					
	NB	133.0/126.2	-5%	F/F	2657/2670	0%					
PM	EB	495.0/240.7	-51%	F/F	488/595	22%	98.0/79.9	-18%	F/E	6474/6595	2%
	SB	60.0/56.5	-6%	E/E	3439/3448	0%					
	WB	112.0/112.7	1%	F/F	537/536	0%					
	NB	62.0/63.7	3%	E/E	2010/2016	0%					

Table 21: Queue Comparison – US-1 and SW 104th Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	EBR	956	890	-7%
	SBR	322	225	-30%
	SBL	1491	1848	24%
PM	EBR	1028	984	-4%
	SBR	845	422	-50%
	SBL	1876	1040	-45%

Intersection at US-1 and SW 112th Street / Killian Drive

As shown in **Table 22** and **Table 23**, the proposed improvements at this intersection reduce the queues considerably for most of movements. While there is a modest reduction on the intersection delay, the intersection LOS is improved from LOS F to LOS E during the AM peak period. Additionally, processed volumes slightly increase during both AM and PM peak periods, which is an indication that the intersection maintains/adds capacity due to the improvements. While there is a relatively small increase of intersection delay during the PM period, most of the MOEs demonstrate the improvements' benefits.

Table 22: Delay and Volume Comparison – US-1 and SW 112th Street / Killian Drive

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	283.0/271.8	-4%	F/F	288/292	1%	81.0/79.5	-2%	F/E	5092/5175	2%
	SB	27.0/25.0	-8%	C/C	1991/2023	2%					
	WB	222.0/271.9	22%	F/F	300/288	-4%					
	NB	83.0/79.1	-5%	F/E	2513/2572	2%					
PM	EB	459.0/459.6	0%	F/F	273/273	0%	63.0/67.3	7%	E/E	5337/5368	1%
	SB	52.0/58.9	13%	D/E	2863/2893	1%					
	WB	82.0/84.5	3%	F/F	316/315	0%					
	NB	20.0/20.6	3%	B/C	1885/1887	0%					

Table 23: Queue Comparison – US-1 and SW 112th Street / Killian Drive

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBR	209	224	7%
	SBL	553	285	-48%
PM	SBR	1961	1066	-46%
	SBL	206	142	-31%

Intersection at US-1 and SW 128th Street

As shown in **Table 24** and **Table 25**, the proposed improvements at this intersection reduce the queues considerably for most of the movements. Also, there is a reduction of intersection delay (8%) during the AM peak period. Additionally, processed volumes slightly increase during both AM and PM peak periods, which is an indication that the intersection maintains/adds capacity due to the improvements. While there is a relatively small increase of intersection delay during the PM period, most of the MOEs demonstrate the improvements' benefits.

Table 24: Delay and Volume Comparison – US-1 and SW 128th Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	103.0/94.9	-8%	F/F	236/247	5%	37.0/34.1	-8%	D/C	4347/4444	2%
	SB	26.0/24.8	-5%	C/C	1481/1502	1%					
	WB	91.0/94.6	4%	F/F	178/190	7%					
	NB	34.0/29.1	-14%	C/C	2452/2505	2%					
PM	EB	149.0/148.8	0%	F/F	234/233	0%	92.0/96.2	5%	F/F	4381/4413	1%
	SB	129.0/137.3	6%	F/F	2033/2066	2%					
	WB	189.0/186.1	-2%	F/F	249/249	0%					
	NB	32.0/32.2	1%	C/C	1865/1865	0%					

Table 25: Queue Comparison – US-1 and SW 128th Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBL	103	113	10%
	NBL	918	187	-80%
PM	SBL	219	61	-72%
	NBL	654	273	-58%

Intersection at US-1 and SW 136th Street

As shown in **Table 26** and **Table 27**, the proposed improvements at this intersection reduce queues, especially for the southbound left-turn movement. There is an important reduction of intersection delay (9%) during the PM peak period. The reduction in intersection delays and queues demonstrate the improvements' benefits.

Table 26: Delay and Volume Comparison – US-1 and SW 136th Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	229.0/225.7	-1%	F/F	591/613	4%	80.0/79.8	0%	F/E	5321/5411	2%
	SB	61.0/58.8	-4%	E/E	1628/1665	2%					
	WB	95.0/81.3	-14%	F/F	359/368	3%					
	NB	58.0/59.9	3%	E/E	2743/2765	1%					
PM	EB	259.0/231.2	-11%	F/F	1067/927	-13%	124.0/113.2	-9%	F/F	6433/6344	-1%
	SB	94.0/90.6	-4%	F/F	2636/2686	2%					
	WB	184.0/152.7	-17%	F/F	870/871	0%					
	NB	67.0/68.4	2%	E/E	1860/1860	0%					

Table 27: Queue Comparison – US-1 and SW 136th Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBL	527	235	-55%
	WBR	405	399	-1%
PM	SBL	571	196	-66%
	WBR	1137	1098	-3%

Intersection at US-1 and SW 144th Street

As shown in **Table 28** and **Table 29**, the proposed improvements at this intersection enhance, in most cases, intersection delays, processed volumes and queues. There is only a relatively small increase in the queue length for the westbound right-turn movement during the AM peak period.

Table 28: Delay and Volume Comparison – US-1 and SW 144th Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	396.0/393.4	-1%	F/F	279/276	-1%	95/92.9	-2%	F/F	5010/5080	1%
	SB	65.0/56.4	-13%	E/E	1640/1668	2%					
	WB	164.0/147.8	-10%	F/F	253/269	6%					
	NB	77.0/80.1	4%	E/F	2838/2867	1%					
PM	EB	325.0/326.6	0%	F/F	320/320	0%	121.0/108.9	-10%	F/F	5340/5706	1%
	SB	114.0/104.8	-8%	F/F	3052/3098	2%					
	WB	455.0/301.8	-34%	F/F	289/300	4%					
	NB	52.0/51.1	-2%	D/D	1999/1988	-1%					

Table 29: Queue Comparison – US-1 and SW 144th Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBL	992	798	-20%
	WBR	730	778	7%
PM	SBL	747	152	-80%
	WBR	1097	1013	-8%

Intersection at US-1 and SW 152nd Street

As shown in **Table 30** and **Table 31**, the proposed improvements at this intersection enhance, in most cases intersection delays, processed volumes and queues. There is only a small increase (less than a vehicle) in the queue length for the southbound left-turn movement during the PM peak period.

Table 30: Delay and Volume Comparison – US-1 and SW 152nd Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	273.0/265.9	-3%	F/F	870/866	0%	125.0/118.9	-5%	F/F	5721/5785	1%
	SB	73.0/61.5	-16%	E/E	1747/1775	2%					
	WB	430.0/416.8	-3%	F/F	370/351	-5%					
	NB	69.0/72.5	5%	E/E	2734/2793	2%					
PM	EB	253.0/242.2	-4%	F/F	848/851	0%	104.0/96.6	-7%	F/F	6455/6535	1%
	SB	69.0/57.9	-16%	E/E	3263/3318	2%					
	WB	363.0/352.5	-3%	F/F	441/463	5%					
	NB	37.0/36.7	-1%	D/D	1903/1903	0%					

Table 31: Queue Comparison – US-1 and SW 152nd Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBR	545	404	-26%
	SBL	915	638	-30%
	WBR	1079	947	-12%
	WBL	1052	164	-84%
PM	SBR	1709	1059	-38%
	SBL	107	115	7%
	WBR	1074	1046	-3%
	WBL	1048	614	-41%

Intersection at US-1 and SW 184th Street

As shown in **Table 32** and **Table 33**, the proposed improvements enhance all the MOEs (intersection delays, processed volumes, and queues). It is important to mention that there is a modest reduction of the intersection delay for both peak periods while the number of processed volumes slightly increased, which is an indication of the improvements' benefits.

Table 32: Delay and Volume Comparison – US-1 and SW 184th Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	98.0/87.3	-11%	F/F	655/657	0%	75.0/72.1	-4%	E/E	4731/4832	2%
	SB	37.0/37.8	2%	D/D	1370/1400	2%					
	WB	273.0/260.3	-5%	F/F	729/744	2%					
	NB	22.0/21.8	-1%	C/C	1977/2031	3%					
PM	EB	99.0/82.2	-17%	F/F	713/712	0%	87.0/83.9	-4%	F/F	5411/5464	1%
	SB	56.0/58.5	4%	E/E	2336/2362	1%					
	WB	270.0/257.5	-5%	F/F	869/886	2%					
	NB	23.0/22.3	-3%	C/C	1493/1504	1%					

Table 33: Queue Comparison – US-1 and SW 184th Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	EBR	702	621	-12%
	WBR	1064	1025	-4%
PM	EBR	765	716	-6%
	WBR	1073	1065	-1%

Intersection at SW 10900 Block and Caribbean Boulevard

As shown in **Table 34** and **Table 35**, the proposed improvements reduce queues for both peak periods. Also, there is a modest reduction of intersection delay during the AM peak period while slightly increasing the number of processed volumes. While there is a relatively small increase of intersection delay during the PM period, most of the MOEs demonstrate the improvements' benefits.

Table 34: Delay and Volume Comparison – SW 10900 Block and Caribbean Boulevard

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	11.0/12.1	10%	B/B	361/369	2%	88.0/83.1	-6%	F/F	1193/1204	1%
	SB	132.0/128.2	-3%	F/F	134/131	-2%					
	WB	121.0/113.4	-6%	F/F	687/690	0%					
	NB	29.0/33.6	16%	C/C	11/14	27%					
PM	EB	2.0/1.7	-14%	A/A	610/613	0%	21.0/21.7	4%	C/C	1553/1558	0%
	SB	73.0/68.4	-6%	E/E	187/186	-1%					
	WB	21.0/23.3	11%	C/C	654/657	0%					
	NB	47.0/47.3	1%	D/D	102/102	0%					

Table 35: Queue Comparison – SW 10900 Block and Caribbean Boulevard

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBR	307	280	-9%
PM	SBR	242	225	-7%

Intersection at SW 11300 Block and SW 211th Street

The improvement for this intersection is recommended but cannot be modeled/quantified with the VISSIM models.

Intersection at SW 117th Avenue and SW 114th Court

As shown in **Table 36** and **Table 37**, the proposed improvements at this intersection reduce the queues considerably. However, there is no overall reduction of intersection delay or increase on processed volumes. Therefore, it is difficult to justify the intersection improvements. Hence, the proposed improvements at SW 117th Avenue and SW 114th Court are not recommended.

Table 36: Delay and Volume Comparison – SW 117th Ave and SW 114th Court

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	38.0/37.6	-1%	D/D	830/834	0%	22.0/24.2	10%	C/C	1852/1851	0%
	SB	104.0/80.8	-22%	F/F	57/53	-7%					
	WB	2.0/8.1	303%	A/A	947/945	0%					
	NB	112.0/82.3	-27%	F/F	18/19	6%					
PM	EB	96.0/145.6	52%	F/F	822/802	-2%	90.0/96.3	7%	F/F	1804/1789	0%
	SB	677.0/368.8	-46%	F/F	116/120	3%					
	WB	6.0/13.0	116%	A/B	865/866	0%					
	NB	48.0/68.0	42%	D/E	1/1	0%					

Table 37: Queue Comparison – SW 117th Ave and SW 114th Court

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	EBL	693	17	-98%
	SBL	149	137	-8%
PM	EBL	840	27	-97%
	SBL	713	571	-20%

Intersection at US-1 and NE 15th Street/NE 12th Avenue

As shown in **Table 38** and **Table 39**, the proposed improvements at this intersection reduce the queues considerably during the PM peak period for the southbound left-turn movement. There is a relatively small increase in the queues during the AM peak period (about two vehicles in length). The intersection delays for both peak periods also demonstrate the improvements' benefits.

Table 38: Delay and Volume Comparison – US-1 and NE 15th Street/NE 12th Avenue

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	32.9/34.4	4%	C/C	529/527	0%	169.5/159	-6%	F/F	3218/3224	0%
	SB	349.3/322.1	-8%	F/F	1158/1170	1%					
	WB	154.9/135.7	-12%	F/F	350/352	1%					
	NWB	135.8/129.2	-5%	F/F	137/134	-2%					
	NB	48.6/50.7	4%	D/D	1044/1041	0%					
PM	EB	53.3/55.8	5%	C/C	577/576	0%	73.6/69.2	-6%	E/E	3439/3449	0%
	SB	62.7/44.1	-30%	E/D	1200/1206	1%					
	WB	116.7/122.6	5%	F/F	287/288	0%					
	NWB	147.6/150.4	2%	F/F	115/114	-1%					
	NB	76.7/79.8	4%	E/E	1260/1265	0%					

Table 39: Queue Comparison – US-1 and NE 15th Street/NE 12th Avenue

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	SBL/SBU	102	138	35%
PM	SBL/SBU	578	198	-66%

Intersection at Old Dixie Highway and NE 11th Street

As shown in **Table 40** and **Table 41**, the proposed improvements for the northbound approach reduce queues considerably for both AM and PM peak periods while maintaining similar intersection delays. Since the improvement for the eastbound approach does not result in a reduction of queues, such improvement (adding an EBR lane of 45') is no longer recommended. This report recommends moving forward with the improvements for the northbound approach only.

Table 40: Delay and Volume Comparison – Old Dixie Highway and NE 11th Street

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	EB	54.9/54.9	0%	D/D	299/297	-1%	37.2/38.1	2%	D/D	1150/1145	0%
	SB	22/25.4	15%	C/C	352/353	0%					
	SWB	41.6/40.6	-2%	D/D	366/366	0%					
	NB	25.7/27	5%	C/C	133/129	-3%					
PM	EB	101.3/105.4	4%	F/F	242/241	0%	47.6/48.4	2%	D/D	1157/1155	0%
	SB	29.8/29.7	-1%	C/C	339/338	0%					
	SWB	41.2/39.9	-3%	D/D	306/306	0%					
	NB	29.1/30.8	6%	C/C	270/270	0%					

Table 41: Queue Comparison – Old Dixie Highway and NE 11th Street

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	EBR	545	585	7%
	NBL	157	27	-83%
PM	EBR	637	662	4%
	NBL	287	28	-90%

Intersection at SW 177th Avenue and Flagler Avenue

As shown in **Table 42** and **Table 43**, the proposed improvements enhance all the MOEs (intersection delays, processed volumes, and queues). There is a considerable reduction of the intersection delay during both periods while the number of processed volumes also increased for the PM peak period, which is a clear indication of the improvements' benefits.

Table 42: Delay and Volume Comparison – SW 177th Avenue and Flagler Avenue

Time	Approach	No Build/Build Approach Delay (sec/veh)	Approach Delay Difference (%)	No Build/Build Approach LOS	No Build/Build Approach Volume	Volume Difference (%)	No Build/Build Intersection Delay (sec/veh)	Intersection Delay Difference (%)	No build/build Intersection LOS	No build/build Intersection Volume	Volume Difference (%)
AM	NEB	93.3/92	-1%	F/F	140/142	1%	45.1/39.9	-12%	D/D	1302/1302	0%
	SB	36/35.9	0%	D/D	548/547	0%					
	SWB	30.8/33.7	9%	C/C	114/115	1%					
	NB	44.7/30.8	-31%	D/C	500/498	0%					
PM	NEB	94.3/91	-4%	F/F	150/150	0%	77.9/45	-42%	E/D	1414/1468	4%
	SB	30.7/29.8	-3%	C/C	543/545	0%					
	SWB	33.9/33.6	-1%	C/C	143/141	-1%					
	NB	129/49.9	-61%	F/D	578/632	9%					

Table 43: Queue Comparison – SW 177th Avenue and Flagler Avenue

Time	Movement	No Build Max Queue (ft)	Build Max Queue (ft)	Queue Difference (%)
AM	NEBL	254	100	-61%
	NBR	774	639	-17%
PM	NEBL	243	136	-44%
	NBR	958	937	-2%

4.2.3 Evaluation of Roadway Improvements

As illustrated in the previous section, most of the proposed roadway improvements exhibit considerable benefits in terms of reducing the maximum queue lengths. There are also modest reductions of delays and slight improvements of vehicle throughput (number of processed volumes or latent demand).

To evaluate roadway improvements, this study adopted a quantitative approach to convert operational benefits (delays, volumes, and queues) into a rating. Each of the three main operational parameters considered in this study, was assigned a rating of 0 (neutral), +1 (positive), or -1 (negative) based on their respective impacts. All the ratings assigned for each parameter were aggregated to calculate an overall rating for each of the intersections evaluated. Finally, a decision or recommendation was made based on the overall intersection rating. As shown in **Table 44**, this study recommends most of the proposed improvements. However, a cost benefit analysis might be necessary to make a final determination on the feasibility of the improvements.

Table 44: Evaluation Matrix – Roadway Improvements

Intersections	Delays Rating	Volumes Rating	Queues Rating	Overall Rating	Decision
Palmetto Road and SW 104th Street	*No improvement is recommended*[1]				
US-1 and SW 104th Street	1	1	1	3	Recommended
US-1 and SW 112th Street/Killian Drive	0	1	1	2	Recommended
US-1 and SW 128th Street	0	1	1	2	Recommended
US-1 and SW 132nd Street	No improvement is considered				
US-1 and SW 136th Street	1	0	1	2	Recommended
US-1 and SW 144th Street	1	1	1	3	Recommended
US-1 and SW 152nd Street	1	1	1	3	Recommended
US-1 and SW 184th Street	1	1	1	3	Recommended
SW 10900 Block and Caribbean Boulevard	0	1	1	2	Recommended
SW 11300 Block and SW 211th Street	*Improvement is recommended but cannot be quantified*[2]				
SW 117th Avenue and SW 114th Court	-1	0	1	0	Not Recommended
US-1 and NE 15th Street/NE 12th Avenue	1	0	0	1	Recommended
Old Dixie Highway and NE 11th Street	-1	0	1	0	Partially Recommended[3]
SW 177th Avenue and N Flagler Avenue	1	1	1	3	Recommended
US-1 and SW 344th Street/Palm Drive	No improvement is considered[4]				

[1] Adding a NBL of 100' was initially considered but the proposed improvement will likely increase westbound delay and degrade overall intersection delay. Hence the improvement is no longer recommended.

[2] Improvement (relocating/consolidating the WB bus stops) for this intersection cannot be modeled/quantified with the VISSIM models

[3] Two improvements were considered (adding an EBR lane of 45' and adding a NB lane) of which only NB lane improvement is recommended. The improvement for the eastbound approach does not result in reduction of queues, therefore it is no longer recommended.

[4] TSM&O improvements were initially proposed but decided that it is best not to interfere with the concepts being developed by the FTE in coordination with Florida City.

4.3 Technology (SMART Signals)

The Miami-Dade County DTPW through its Traffic Signals and Signs Division is currently working on installing a new Advanced Traffic Management System (ATMS), which will upgrade the ATMS central software and traffic controllers, and install additional detection systems to improve the flow of all transportation modes.

The new ATMS will have data collection protocols to support connected and automated vehicles (CAV) technology like the communication between vehicles and traffic signals. Collection of high-resolution data will position the County for future use of Automated Traffic Signal Performance Measures (ATSPM), which provides information to proactively manage and operate the traffic signals more efficiently.

High resolution data will capture location speed and turn movement of vehicles as well as pedestrians and bicycles. This enables to have optimized signal timings and improved capacity and safety at signalized intersections. The integration of data sources from different transportation modes, makes it possible to improve mobility for all users which is a strategic objective of DTPW. New controllers allow for deployment of new technology like Transit, Freight/Truck Signal Priority and Adaptive Signal Control Technology.

Based on the correspondence with the Miami-Dade County, the SMART signal operational plan is not finalized. Hence, the signal timings used in the VISSIM model for the Build scenario (implemented signal preemption and closure at the gate) will remain unchanged to analyze the roadway improvements as part of this study. New traffic signals along the Transitway will be installed following the South Dade TransitWay project schedule. New ATMS traffic signal controllers are scheduled to be installed in the fourth quarter of 2023 or first quarter of 2024.

5 Recommendations

This section provides an approximate cost estimation of the proposed intersection improvements along with a list of potential sources of funding for their implementation. The section concludes with recommending a list of multimodal/roadway projects to maximize the future capacity based on demand/need along the US-1 corridor.

5.1 Estimated Cost of the Proposed Improvements

The FDOT Long Range Estimates (LRE) was selected as the basis for developing the planning level cost estimate of the proposed improvements.

5.1.1 Roadway Improvements

This study utilized cost per mile models developed by the FDOT for long range estimates. In general, the proposed roadway improvements include adding exclusive right-turn and left-turn lanes and extending turn lane storage lengths.

LRE models are generic in nature. Hence, derived cost estimation for proposed roadway improvements using the LRE models are approximate. The following three LRE models were identified as the most suitable for the proposed improvements.

- U18 (Urban – Mill and Resurface 1 Additional Lane Urban Arterial): *$277,126.24*
- U19 (Urban – Add 2 Lanes to Existing 2 Lane Undivided Arterial): *$4,884,812.98*
- U24 (Urban – Widen 6 Lane Urban Divided Arterial to 8 Lane Urban Divided): *$6,004,966.83*

Since LRE cost estimates are per mile basis, the applicable cost was scaled down for the proposed estimates. For instance, the U19 model represents adding two lanes to an existing two-lane undivided arterial. Therefore, 50 feet turn lane cost estimate using the U19 model would be = (50/5280) *($4,884,812.98/2) = $23,128.85. Similarly, a 250 feet storage length extension using the U18 model would be = (250/5280)*$277,126.24 = $13,121.51.

Table 45 presents the roadway improvement costs for each of the projects as well as total intersection improvement costs, which is a summation of (i) construction cost and (ii) design and CEI costs. Design and Construction Engineering & Inspection (CEI) costs were assumed as 10% of the construction cost. It should be noted that total intersection improvement costs do not include utility coordination or right of way (ROW) acquisition costs. Total intersection improvement costs for all the recommended roadway improvements is approximately $1,755,097.58.

Table 45: FDOT LRE Cost Estimates - Roadway Improvements

Intersections	Reference Code	Construction Cost Per Mile	Improvement Type	Construction Cost	Design and CEI Costs[2]	Total Intersection Improvement Costs[1]
US-1 and SW 104th Street	U19	$4,884,812.98	Adding an EBR lane of 50 ft	$23,128.85	$2,312.88	$523,915.77
	U24	$6,004,966.83	Extending SBL storage length by 300 ft	$282,562.57	$28,256.26	
	U24	$6,004,966.83	Extending SBR storage length by 300 ft	$170,595.65	$17,059.56	
US-1 and SW 112th Street/Killian Drive	U24	$6,004,966.83	Extending SBL storage length by 220 ft	$125,103.48	$12,510.35	$262,717.30
	U24	$6,004,966.83	Extending SBR storage length by 200 ft	$113,730.43	$11,373.04	
US-1 and SW 128th Street	U24	$6,004,966.83	Extending SBL storage length by 60 ft	$34,119.13	$3,411.91	$162,634.52
	U24	$6,004,966.83	Extending NBL storage length by 200 ft	$113,730.43	$11,373.04	
US-1 and SW 136th Street	U24	$6,004,966.83	Extending SBL storage length by 130 ft	$122,443.78	$12,244.38	$160,129.89
	U19	$4,884,812.98	Adding a WBR lane of 50 ft	$23,128.85	$2,312.88	
US-1 and SW 144th Street	U24	$6,004,966.83	Extending SBL storage length by 150 ft	$85,297.82	$8,529.78	$119,269.34
	U19	$4,884,812.98	Adding a WBR lane of 50 ft	$23,128.85	$2,312.88	
US-1 and SW 152nd Street	U24	$6,004,966.83	Extending SBL storage length by 150 ft	$85,297.82	$8,529.78	$183,071.41
	U24	$6,004,966.83	Adding a SBR lane of 90 ft	$51,178.69	$5,117.87	
	U18	$277,126.24	Extending WBL storage length by 130 ft	$6,823.18	$682.32	
	U19	$4,884,812.98	Adding a WBR lane of 50 ft	$23,128.85	$2,312.88	
US 1 and SW 184th Street	U19	$4,884,812.98	Adding an EBR lane of 50 ft	$23,128.85	$2,312.88	$50,883.47
	U19	$4,884,812.98	Adding a WBR lane of 50 ft	$23,128.85	$2,312.88	
SW 10900 Block and Caribbean Boulevard	U19	$4,884,812.98	Adding a SBR lane of 50 ft	$23,128.85	$2,312.88	$25,441.73
US-1 and NE 15th Street/NE 12th Avenue	U24	$6,004,966.83	Extending SBL storage length by 260 ft	$147,849.56	$14,784.96	$162,634.52
Old Dixie Highway and NE 11th Street	U19	$4,884,812.98	Adding a lane of 170 ft in NB approach	$78,638.09	$7,863.81	$86,501.90
SW 177th Avenue and N Flagler Avenue	U18	$277,126.24	Extending EBL storage length to 250 ft	$13,121.51	$1,312.15	$17,897.74
	U18	$277,126.24	Adding a NBR lane of 60 ft	$3,149.16	$314.92	
Total Roadway Improvements Cost						**$1,755,097.58**

[1] *Total intersection improvement costs does not include utility coordination and ROW acquisition costs*

[2] *Design and CEI costs were assumed as 10% of the construction cost*

5.1.2 Multimodal (Nonmotorized) Improvements

This study recommends a list of 19 pedestrian and bicycle improvement projects (e.g., sidewalk gaps, trail improvements, bicycle facility improvements) to move forward to the next phase of implementation (**Table 9**). Pedestrian and Bicycle improvement costs associated with the South-Dade Transitway Bus Rapid Transit (BRT) stations were estimated in the Miami-Dade TPO South Dade Transitway Intersection Areas Analysis study.

The study also identified high trip generators (commercial properties, malls, libraries, schools and colleges) within the First Mile/Last Mile service areas for each municipality and unincorporated areas along the corridor. The trip generators will serve as a resource tool for the Miami-Dade County and municipalities to identify opportunities for pick-up/drop-off stations/locations to extent existing on-demand services or introduce new services (e.g., micro-mobility) along the corridor. The first mile/last mile connection service costs varies by the extent of service areas.

5.2 Potential Source of Funding

For the implementation of the recommended improvements, this study identified a list of potential sources of funding. Both federal and state funding sources were explored.

Federal funding sources include 5339 Bus and Bus Facilities, 5307/5311 Job Access and Reverse Commute (JARC), Flexible Funding Programs – Transferring Title 23 Funds from FHWA to FTA, Surface Transportation (STP) Funds and Transportation Alternatives Program (TAP) for Transit Projects, Congestion, Mitigation and Air Quality (CMAQ) Funds, and HSIP (Highway Safety Improvement Program).

5339 Bus and Bus Facilities

This Federal source of funding could be used, among other things, for bus facilities, new or refurbished operations and maintenance facility, signage, and associated transit capital equipment. For the most part, this Federal source provides up to 80 percent of the project cost and requires a 20 percent state/local match.

5307/5311 Job Access and Reverse Commute (JARC)

Eligible projects include an access-to-jobs project or a reverse-commute project. FTA defines an access-to-jobs project as one relating to the development of transportation services designed to transport welfare recipients and eligible low-income individuals to and from jobs and activities related to their employment.

Flexible Funding Programs – Transferring Title 23 Funds from FHWA to FTA

This refers to the transfer of highway funds to FTA for eligible transit projects to be administered under Chapter 53 of Title 49 or the transfer of transit funds to FHWA for eligible highway projects to be administered under Title 23. Section 104 of Title 23 U.S.C. preserves the option for FHWA to transfer funds to FTA for transit capital projects and eligible operating activities that have been designated as part of the metropolitan and

statewide planning and programming process. The project must be included in an approved State Transportation Improvement Program (STIP) before the funds can be transferred.

Surface Transportation (STP) Funds and Transportation Alternatives Program (TAP) for Transit Projects

FHWA STP funds are eligible for a variety of highway-related activities and are also available to cover the capital cost of any public transportation projects eligible for assistance under Chapter 53, which may include vehicles and facilities (publicly or privately owned) that are used to provide intercity passenger bus service. In addition, STP funds are available for surface transportation planning projects as well as activities under the newly authorized Transportation Alternatives Program (TAP), at 23 U.S.C. 101. TAP funds may be used to carry out a part of a program or project or used to carry out an independent program or project related to surface transportation.

Congestion, Mitigation and Air Quality (CMAQ) Funds

The CMAQ program continues to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Transit investments, including transit vehicle acquisitions and construction of new facilities or improvements to facilities that increase transit capacity, are eligible for CMAQ funds. Florida does not currently contain any nonattainment or maintenance areas. This means it has a greater amount of flexibility to use these funds for a wider variety of transportation projects, including mobility and premium high-capacity transit.

HSIP (Highway Safety Improvement Program)

The HSIP funds are for those locations which has a historically high crash record. The program aims to achieve a significant reduction in traffic fatalities and serious injuries. HSIP funds can be allocated to non-state owned roads.

State funding sources includes Intermodal Development Program, Public Transit Block Grant Program, Transit Corridor Program, County Incentive Grant Program (CIGP), and Transportation Regional Incentive Program (TRIP).

Intermodal Development Program

The Intermodal Development Program was developed to provide funding for major capital investments in fixed-guideway transportation systems; access to airports and other transportation terminals; and construction of intermodal or multimodal terminals. Eligible projects include major capital investments in public rail and fixed-guideway transportation facilities and systems which provide intermodal access; road, rail, intercity bus service, or fixed-guideway access to, from, or between seaports, airports, and other transportation terminals; construction of intermodal or multimodal terminals;

development and construction of dedicated bus lanes; and projects that otherwise facilitate the intermodal or multimodal movement of people and goods.

Public Transit Block Grant Program

The Public Transit Block Grant Program, as indicated in the FDOT Transit Resource Guide, was established by the Florida Legislature to provide a stable source of funding for public transit. Public Transit Block Grant funds may be used for eligible capital and operating costs of providing public transit service. Program funds may also be used for transit service development and transit corridor projects.

Transit Corridor Program

The Transit Corridor Program provides funding to Community Transportation Coordinators or transit agencies to support new services within specific corridors when the services are designed and expected to help reduce or alleviate congestion or other mobility issues within the corridor. Transit Corridor Program funds may be used for capital or operating expenses.

County Incentive Grant Program (CIGP)

The purpose of the program is to provide grants to counties to improve a transportation facility (including transit) that is located on the State Highway System or that relieves traffic congestion on the State Highway System. Municipalities are eligible to apply also and can do so by submitting their application through the county. CIGP funds are distributed to each FDOT district office by statutory formula.

Transportation Regional Incentive Program (TRIP)

State funds are available throughout Florida to provide incentives for local governments and the private sector to help pay for critically needed projects that benefit regional travel and commerce. FDOT will pay for 50 percent of project costs, or up to 50 percent of the non-Federal share of project costs for public transportation facility projects. This program can be used to leverage investments in regionally significant transportation facilities and must be linked to growth management objectives.

Table 46 presents a matrix of the funding sources along with fund eligible criteria, applicability of the funding by improvement type, and the matching likelihood of the funding. The list is intended to present a reference if the recommended projects move forward for implementation. However, this list is provided as a reference and other sources of funding should be explored when they become available.

Table 46: Potential Source of Funding

Funding Source	Funding Type	Funding Available?	Fund Eligible Criteria	Suitable for Improvement Type	Applicability?
5339 Bus and Bus Facilities	Federal	Yes	Re-construct bus related facilities	Bus	Unlikely
5307/5311 Job Access and Reverse Commute (JARC)		Yes	Transit improvements associated with mobility management programs	Multimodal	Maybe
Flexible Funding Programs – Transferring Title 23 Funds from FHWA to FTA		Yes	Intends to promote safer routes to transit	Multimodal	Maybe
Surface Transportation (STP) Funds and Transportation Alternatives Program (TAP) for Transit Projects		Yes	Highway-related activities to cover the capital cost of any public transportation projects	Roadway & Multimodal	Maybe
Congestion, Mitigation and Air Quality (CMAQ) Funds		Yes	To reduce congestion and improve air quality	Multimodal	Maybe
HSIP (Highway Safety Improvement Program)		Yes	To achieve a significant reduction in traffic fatalities and serious injuries	Roadway & Multimodal	Maybe
Intermodal Development Program	State	Yes	Major capital investments in public rail and fixed-guideway transportation facilities and systems	Multimodal	Maybe
Public Transit Block Grant Program		Yes	Capital and operating costs of providing public transit service	Multimodal	Maybe
Transit Corridor Program		Yes	To reduce or alleviate congestion or other mobility issues within the corridor	Roadway	Likely
County Incentive Grant Program (CIGP)		Yes	To relieve traffic congestion on the State Highway System	Roadway	Likely
Transportation Regional Incentive Program (TRIP)		Yes	To leverage investments in regionally significant transportation facilities	Roadway & Multimodal	Maybe

5.3 Recommendations

The Miami-Dade Transportation Planning Organization (TPO) completed a three-tiered analysis approach to maximize the future capacity along the US-1 corridor from the Dadeland South Metrorail Station to SW 344th Street/Palm Drive, which includes – multimodal (nonmotorized) improvements, roadway improvements, and adoption of technology (SMART signals). The study analysis and recommendations were reviewed and acknowledged by a PWG.

Regarding multimodal improvements, this study reviewed transportation plans such as the Long-Range Transportation Plan (LRTP) and master plans from some of the municipalities along the corridor to determine connectivity and accessibility gaps for accessing the South-Dade Transitway stations. Based on the reviewed plans, a list of 19 pedestrian and bicycle improvement projects (e.g., sidewalk gaps, trail improvements, bicycle facility improvements) are recommended to move forward to the next phase of implementation (**Table 9**). The study also identified high trip generators (commercial properties, malls, libraries, schools and colleges) within the First Mile/Last Mile service areas for each municipality and unincorporated areas along the corridor. The trip generators will serve as a resource tool for the Miami-Dade County and municipalities to identify opportunities for pick-up/drop-off stations/locations to extent existing on-demand services or introduce new services (e.g., micro-mobility) along the corridor.

Regarding roadway improvements, this study investigated existing operating condition of the 89 signalized intersections along the US-1 corridor and nearby cross streets. In order to maximize future roadway capacity, the study proposed 23 roadway improvements (e.g., adding left/right turn lanes or extending the length of the turn lane storage) at 12 signalized intersections along the corridor (**Table 47**). A before (without roadway improvements) and after (with roadway improvements) scenarios comparison was conducted in VISSIM to ensure the recommended improvements are likely to improve intersections delays, vehicle throughput, and queue lengths at the respective intersections. The study recommends moving roadway improvements projects into the next phase of implementation.

This study also recommends Miami-Dade County to prioritize the implementation of the SMART Signals along US-1 and busway. With upgraded ATMS central software, replacement of traffic controllers, and installation of additional detection systems, SMART Signals are expected to improve the flow of all transportation modes along the US-1 corridor and nearby cross streets.

Table 47: Roadway Improvements Recommendation

Intersections	Roadway Ownership/ Lead Agency	Improvement Type	LRE Cost Estimates
US-1 and SW 104th Street	County	Adding an EBR lane of 50 ft	$25,442
	State	Extending SBL storage length by 300 ft	$310,819
	State	Extending SBR storage length by 300 ft	$187,655
US-1 and SW 112th Street/Killian Drive	State	Extending SBL storage length by 220 ft	$137,614
	State	Extending SBR storage length by 200 ft	$125,103
US-1 and SW 128th Street	State	Extending SBL storage length by 60 ft	$37,531
	State	Extending NBL storage length by 200 ft	$125,103
US-1 and SW 136th Street	State	Extending SBL storage length by 130 ft	$134,688
	County	Adding a WBR lane of 50 ft	$25,442
US-1 and SW 144th Street	State	Extending SBL storage length by 150 ft	$93,828
	Municipal	Adding a WBR lane of 50 ft	$25,442
US-1 and SW 152nd Street	State	Extending SBL storage length by 150 ft	$93,828
	State	Adding a SBR lane of 90 ft	$56,297
	Municipal	Extending WBL storage length by 130 ft	$7,506
	Municipal	Adding a WBR lane of 50 ft	$25,442
US 1 and SW 184th Street	County	Adding an EBR lane of 50 ft	$25,442
	County	Adding a WBR lane of 50 ft	$25,442
SW 10900 Block and Caribbean Boulevard	Private	Adding a SBR lane of 50 ft	$25,442
SW 11300 Block and SW 211th Street	County	Relocating/consolidating WB bus stops	N/A
US-1 and NE 15th Street/NE 12th Avenue	State	Extending SBL storage length by 260 ft	$162,635
Old Dixie Highway and NE 11th Street	Municipal	Adding a lane of 170 ft in NB approach	$86,502
SW 177th Avenue and N Flagler Avenue	Municipal	Extending EBL storage length to 250 ft	$14,434
	State	Adding a NBR lane of 60 ft	$3,464