Village of Palmetto Bay Multi-Use Trail & S.M.A.R.T Plan Connectivity Study Feasibility Study

Prepared by: MARLIN Engineering, Inc. 3633 W. Commercial Boulevard Suite 115A Fort Lauderdale, FL 33309



VILLAGE OF PALMETTO BAY MULTI-USE TRAIL & SMART PLAN CONNECTIVITY STUDY

Karyn Cunningham, Mayor

Leanne Tellam, Vice Mayor

Patrick Fiore, District 1

Steve Cody, District 2

Marsha Matson, District 3

Nick Marano, Village Manager

MANAGEMENT TEAM:

Christina Fermin, AICP, LEED Green Associate MARLIN Project Manager

Dionisio Torres, P.E. Public Works Director & Village Project Manager

Jenny Polynice-Hall Village Grant Coordinator

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The preparation of this report has been financed in part by the Miami-Dade Transportation (TPO) via the U.S. Department of Transportation (USDOT) through the Federal Highway Administration (FHWA) and/or the Federal Transit Administration (FTA), the State Planning and Research Program (Section 505 of Title 23, U.S. Code) and Miami-Dade County, Florida. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation and/or the Miami-Dade TPO.

This project was paid in partnership through the Miami-Dade TPO SMART Moves Grant Funding Program and the Village of Palmetto Bay.

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EXECUTIVE SUMMARY

The Village of Palmetto Bay's Multi-Use Trail & SMART Plan Connectivity Study is a feasibility study for multimodal improvements to enhance mobility, safety and accessibility to the South Dade Transitway between Old Cutler Road and US 1/ South Dixie Highway.

This study was funded by the Miami-Dade Transportation Planning Organization (TPO) who provided 80% funding of this study through the SMART Move Program which supports the Strategic Miami Area Rapid Transit (SMART) Plan and prioritizes and programs planning studies in Miami-Dade County that will support the delivery of projects which support the SMART Plan's identified corridors. The remaining 20% was funded by the Village of Palmetto Bay.

The South Dade Transitway, formerly known as the Busway, is the first corridor identified in the SMART Plan to be implemented and is currently under construction for Bus Rapid Transit (BRT) improvements between Dadeland South and Homestead. Four of the 14 stations will be located adjacent to the Village of Palmetto Bay, allowing residents access to BRT to/from Dadeland South. This study included a review, analysis, and eval-uation of four primary east/west corridors within the Village of Palmetto Bay:

SW 144 Street SW 152 Street SW 168 Street SW 184 Street

Although all four corridors could benefit from multimodal improvements, two corridors were selected for further analysis and conceptual de-sign development.

Through evaluation, public, and stakeholder out-reach, SW 152 Street and SW 184 Street were se-lected as the two corridors in most need of multimodal improvements.

See Figure 1 and 2, on the next page, for the proposed chosen alternative typical sections for both SW 152 Street and SW 184 Street. (Alternative 2)





Figure 1: SW 152 Street Alternative 2 Typical Section



Figure 2: SW 184 Street Alternative 2 Typical Section

CORRIDOR	ALTERNATIVE	ESTIMATED COST
SW 152 STREET	2	\$2,872,000
SW 184 STREET	2	\$2,844,000

Table 1: Cost Estimate for Preferred Alternative

This project included six tasks: Project Management and Public Involvement, Existing Conditions and Data Collection, Conceptual Design Development, Recommendations, and Documentation. The team held two virtual public meetings, two in-person walking audits, distributed two surveys for public feedback, held one stakeholder meeting, and presented before the Bicycle and Pedestrian Advisory Committee (BPAC) for approval of the preferred alternative.

Through a review of existing planning documents, data collection and analysis, and public feedback; our team identified three alternatives for both of the selected corridors. Two of the alternatives were presented to the public for the selection of a preferred alternative. Alternatives were developed and refined through surveying of residents which revealed that 42% of residents surveyed in Palmetto Bay fall into the "interested, but concerned" type of bicycle user, an additional 42% fall into the "somewhat confident" or " highly confident" type of user, and 16% are "not interested or able".

The two alternatives presented were:

- Alternative 1: Multi-use Pathway (aka Shared-Use Path)
- Alternative 2: Separated Bicycle lanes (aka Protected bike lanes)

Alternative 3 included bicycle lanes adjacent to vehicular traffic. This alternative was eliminated early in the process since this option did not meet the goals of the project and expectations of the community. The data collected highlights that a majority of people interested in riding a bicycle do not feel safe using these facilities. Bike lanes adjacent to traffic provide the least amount of protection and share mode impact.

Alternative 1 includes a 10-foot multi-use pathway (or shared use pathway) on one side. This alternative was proposed off-street and provided a separated facility which could accommodate non-motorized use.

Although this alternative has the potential to increase ridership and walking, it presented an elevated level of impact to existing trees and utilities. In the context of Palmetto Bay, Alternative 1 would have to cross the road in several locations, which may lower the level of ridership.

Additionally, a wide path may also be used illegally by golf carts, which poses a safety concern.

Alternative 2 includes a separated or protected bicycle lane, which was the preferred alternative selected for both SW 152 Street and SW 184 Street. This alternative has the least impact on the existing right-of-way, and was also the preferred alternative selected through public input, the Village staff, and a resolution of support from the BPAC.

Conceptual design plans were developed and include 15% design plans for each of the selected corridors. A planning cost estimate for each corridor was also developed for the preferred alternative. Table 1 on page 6, includes the estimated cost of Alternative 2 for both SW 152 Street and SW 184 Street.

Alternative 2 includes 5-foot wide bicycle lanes with a 3-foot physical concrete barrier that provides a separated facility for users. This alternative provides a low-stress facility, separated and protected from vehicular traffic. Furthermore, this alternative increases safety, and has the greatest potential to attract the "interested, but concerned" and "somewhat confident" bicycle users, while simultaneously acting as a traffic calming countermeasure. It is important to note that the proposed concrete physical barrier is expensive, and as the Village moves this study onto the next phase, they can explore the use of other types of barriers such as vertical delineators, zebra delineators, or planters to save money. As more multimodal transportation and connectivity projects come online to support the Transitway in the area, we hope that the undergoing efforts to implement safe bicycle facilities incentivize and attract the remaining 16% of Palmetto Bay users which currently fall under "Not Interested or Able" category.

This study has resulted in a total of 35 recommendations which include seven (7) policy recommendations, six (6) recommendations as it relates to multi-agency coordination, ten (10) recommendations related to studies and planning, two (2) recommendations to advance to preliminary design, six (6) recommendations related to infrastructure improvements/projects, and three (3) recommendations for signage and pavement markings.

The recommendations for the Village of Palmetto Bay are categorized into :

- General Recommendations
- Bicycle & Pedestrian Recommendations
- Intersection Improvements.

Recommendations were ranked low, medium and high as it relates to "impact" which we defined as meeting the purpose and need of this study, "feasibility" as it relates to the likelihood of implementation, and "prioritization" as it relates to the impact and feasibility combined for each recommendation.

Table 2 below includes a summary of the proposed recommendations, a full table of recommendations are in Appendix 10.

Figure 3, on page 11, includes a map of the proposed improvements. The conceptual plan sheets can be found in Appendix 9.

RECOMMENDATIONS	ТҮРЕ	IMPACT	FEASIBILITY	PRIORITIZATION		
GENERAL						
COMPLETE STREETS POLICY	POLICY	HIGH	HIGH	HIGH		
BUDGET FOR PEDESTRIAN/BICYCLIST IMPROVEMENTS	POLICY	HIGH	HIGH	HIGH		
MAINTENANCE PLAN FOR PEDESTRI- AN/BICYCLIST INFRASTRUCTURE	POLICY	HIGH	HIGH	HIGH		
COORDINATION WITH DTPW	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH		
COORDINATION WITH CUTLER BAY	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH		
COORDINATION WITH FDOT	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH		
SLOW STREETS PILOT PROGRAM	POLICY	MEDIUM	HIGH	MEDIUM TO HIGH		
PEDESTRIAN BRIDGE STUDY	STUDY	MEDIUM	MEDIUM	MEDIUM		
BRANDING PLAN	PLAN	LOW	MEDIUM	LOW TO MEDIUM		

RECOMMENDATIONS	ТҮРЕ	IMPACT	FEASIBILITY	PRIORITIZATION		
PEDESTRIAN & BICYCLE						
BICYCLE FACILITIES & IMPROVEMENTS ARE INCORPORATED INTO ROUND- ABOUTS AT SW 152 STREET & SW 184 STREET	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH		
CONSIDER PROTECTED OR SEPARAT- ED BICYCLE FACILITIES FOR FUTURE IMPROVEMENTS ALONG MAIN THOROUGHFARES	POLICY	HIGH	HIGH	HIGH		
MID-BLOCK CROSSING TRAFFIC STUDY AT SW 78 PLACE & SW 152 STREET	STUDY	HIGH	HIGH	HIGH		
MID-BLOCK CROSSING TRAFFIC STUDY ON SW 184 STREET NEAR PALMER TRINITY SCHOOL	STUDY	HIGH	HIGH	HIGH		
MULTIMODAL FEASIBILITY STUDY FOR SW 144 STREET AND SW 168 STREET	STUDY	HIGH	HIGH	HIGH		
MULTIMODAL FEASIBILITY STUDY FOR SW 77 AVENUE, SW 82 AVENUE, SW 87 AVENUE AND SW 92 AVE	STUDY	HIGH	HIGH	HIGH		
INSTALL PROTECTED BICYCLE LANES ALONG SW 152 ST	DESIGN	HIGH	HIGH	HIGH		
INSTALL PROTECTED BICYCLE LANES ALONG SW 184 ST	DESIGN	HIGH	HIGH	HIGH		
PEDESTRIAN AMENITIES	INFRASTRUC- TURE	HIGH	HIGH	HIGH		
PLANT SHADE TREES ALONG PATHWAYS	POLICY	HIGH	MEDIUM	MEDIUM TO HIGH		
MID-BLOCK CROSSING TRAFFIC STUDIES FOR SW 144 STREET AND SW 184 STREET	STUDY	HIGH	MEDIUM	MEDIUM TO HIGH		

RECOMMENDATIONS	ТҮРЕ	ІМРАСТ	FEASIBILITY	PRIORITIZATION		
PEDESTRIAN & BICYCLE						
WIDEN EXISTING SIDEWALK BETWEEN US-1 & FRANJO RD ALONG SW 184 ST	INFRASTRUCTURE	HIGH	MEDIUM	MEDIUM TO HIGH		
FILL-IN SIDEWALK GAPS ALONG SW 144 STREET, SW 168 STREET AND SW 184 STREET	INFRASTRUCTURE	HIGH	MEDIUM	MEDIUM TO HIGH		
PEDESTRIAN PATHWAY ORDINANCE	POLICY	MEDIUM	MEDIUM	MEDIUM		
	INTERSE	CTIONS				
LEAD PEDESTRIAN INTERVAL (LPI) TRAFFIC STUDY AT SIGNALIZED INTER- SECTIONS	STUDY	HIGH	HIGH	HIGH		
RE-STRIP FADED STANDARD CROSS- WALKS AT ALL T-INTERSECTIONS ALONG SW 152 STREET	PAVEMENT MARKINGS	HIGH	HIGH	HIGH		
UPGRADE PEDESTRIAN PUSH-BUT- TONS FOR ADA COMPLIANCE AT ALL SIGNALIZED INTERSECTIONS ALONG SW 152 STREET	INFRASTRUCTURE	HIGH	HIGH	HIGH		
INSTALL PEDESTRIAN SIGNAL HEADS PER ADA CRITERIA AND INCLUDE AUDIBLE SIGNALS.	INFRASTRUCTURE	HIGH	HIGH	HIGH		
LIGHTING	INFRASTRUCTURE	HIGH	HIGH	HIGH		
BICYCLE SIGNALS AT SIGNALIZED INTERSECTIONS ALONG SW 152 STREET AND SW 184 STREET	MULTI-AGENCY COORDINATION	HIGH	LOW	MEDIUM TO LOW		
INSTALL BICYCLE BOX AT ALL MAJOR SIGNALIZED INTERSECTIONS ALONG US-1, SW 87 AVE AND OLD CUTLER ROAD	MULTI-AGENCY COORDINATION	HIGH	MEDIUM	MEDIUM TO HIGH		

RECOMMENDATIONS	ТҮРЕ	IMPACT	FEASIBILITY	PRIORITIZATION			
INTERSECTIONS							
HIGH-EMPHASIS OR TEXTURED PAVEMENT FOR ALL CROSSWALKS AT SIGNALIZED INTERSECTIONS	PAVEMENT MARKINGS	HIGH	MEDIUM	MEDIUM TO HIGH			
INSTALL PEDESTRIAN CROSSING SIGNAGE AT ALL SIGNALIZED INTERSECTIONS.	SIGNAGE	MEDIUM	HIGH	MEDIUM TO HIGH			
RAISED INTERSECTION AT SW 80 AVE & SW 152 STREET	STUDY	MEDIUM	MEDIUM	MEDIUM			
REDUCE TURN RADIUS (WHERE FEASIBLE)	STUDY	MEDIUM	LOW	LOW TO MEDIUM			

Table 2: Summary of Recommendations



Figure 3: Map of improvements

INTRODUCTION

In 2020 the Miami-Dade Transportation Planning Organization (TPO) awarded seven municipal program projects for fiscal year 2021 and 2022 under the Unified Planning Work Program (UPWP) for the SMART Moves Program Task. The Village of Palmetto Bay was included in this round of awards.

The SMART Moves Program supports the Strategic Miami Area Rapid Transit (SMART) Plan, it also prioritizes and programs planning studies in Miami-Dade County that will support the delivery of projects including first/last mile connections, connected and autonomous vehicles and other priority projects that enhance mobility, safety, accessibility, and integration of community-based methods and cost-effective solutions that will lead to increased accessibility to transit and new congestion relief options for residents. The SMART Moves Program has two main components:

•*Municipal Program:* Encourages Miami-Dade County municipalities to participate in a competitive program for the implementation of relevant transportation planning studies and plans that will lead to improved mobility, safety, and accessibility.

• **Public Input:** Solicits transportation planning ideas from the general public and other agencies that will promote mobility, safety, and accessibility.

Once awarded, the Village of Palmetto Bay assigned a task work order to their Traffic, Engineer and Design consultant MARLIN Engineering, Inc. to complete this study.

The SMART Plan

In April of 2016 the Miami-Dade TPO Governing Board officially adopted and endorsed the Strategic Miami Area Rapid Transit (SMART) Plan. The SMART Plan proposed to advance six of the People's Transportation Plan (PTP) rapid transit corridors, along with a network of Bus Express Rapid Transit (BERT) service, to implement mass transit projects in Miami-Dade County, see Figure 4 on the following page.

The PTP is part of the 2002 voter approved one half percent local surtax with the purpose of improving rapid transit corridors, among other things, throughout the county. The PTP is a locally funded initiative administrated by the Citizen's Independence Transportation Trust (CITT), a 15-member body created to oversee the PTP.

The South Dade Transitway is the first of six corridors to receive approval and funding for development in Miami-Dade County. The Transitway is an existing 20-mile-long corridor developed along Flagler's former Florida East Coast Railway, running parallel to US 1/South Dixie Highway from Kendall Drive in Miami to SW 344th Street in Florida City. The Transitway is the only transportation asset in Miami-Dade County that is fully dedicated to transit bus operations.

Once implemented BERT service will be provided along the Transitway with buses operating every 10-to-15-minutes. Patrons would be able to travel from Dadeland South to Florida City in approximately 30-minutes. The Transitway BERT service is expected to increase transit ridership by at least 10,000 people. Vehicle Miles Traveled (VMT) will be reduced by at least 160,000 miles¹

¹South Corridor Rapid Transit Project Preliminary Engineering & Environmental Report (2018)



Figure 4 SMART Plan Corridor Map

In August 2018, the TPO selected Bus Rapid Transit (BRT) as the preferred alternative for the south corridor at which it could then be retrofitted for rail once ridership reaches a certain criterion. The BRT alternative includes:

- Bi-directional service
- Branded vehicles and iconic stations
- Prepaid fares for speedy boarding
- Real-time arrival information
- Near-level boarding
- Overlaid service with BRT All Stop, BRT Limited Stop and BRT Zonal Express Service
- Transit signal preemption and crossing gate arms
- Peak period service at 10-minutes and offpeak 15-minutes
- Maintains all stop service to all 30 existing stations along the Transitway
- Circulator and feeder bus plan
- Shared-use path for the entire 20 miles
- Span of service would be from 5:30 AM until 12:30 AM; BRT All Stop 24-hour operation remains
- The project aims at the gold standard of BRT quality, as defined by the Institute for Transportation and Development Policy (ITDP).

Construction for the south corridor improvements is currently underway. BRT Stations are proposed at the following locations along the Transitway:

- Dadeland South
- SW 104th Street (Target)
- SW 136th Street (Howard Drive/The Falls)
- SW 152nd Street (SR-992/Coral Reef Drive)
- SW 168th Street (Richmond Drive)

- SW 184th Street (Eureka Drive)
- Marlin Road
- SW 200th Street (Caribbean Boulevard)
- SW 112th Avenue (SR-989 / Allapattah Road / Target)
- SW 244th Street (Coconut Palm Drive)
- SW 264th Street (Bauer Drive)
- SW 296th Street
- SW 312th Street (Campbell Drive)
- Civic Court
- SW 177th Avenue (SR-997 / Krome Avenue / Homestead Multimodal)
- SW 344th Street (SR-9336 / Palm Drive / Florida City)

Stations depicted in blue fall within or near the Village of Palmetto Bay.

Project Description

The Multi-use Trail & SMART Plan Connectivity Study is located within the Village of Palmetto Bay. The project will include a review of four primary east/west corridors between the South Dade Transitway / South Dade Trail and Old Cutler Road / Old Cutler Trail:

- SW 144th Street
- SW 152nd Street
- SW 168th Street
- SW 184th Street

Analysis will focus on two corridors for bicycle and pedestrian improvements that will be recommended for design. The corridors will be selected through an evaluation criterion that will review existing conditions and data collected to determine which corridors are in most need of improvements.

The Village of Palmetto Bay is characterized as a suburban community in the South Dade metropolitan area. Palmetto Bay owns and maintains SW 144th Street, while Miami-Dade County's Department of Transportation & Public Works (DTPW) owns and maintains SW 152nd Street, SW 168th Street and SW 184th Street. This project is intended to improve connectivity, accessibility and mobility between the Village of Palmetto Bay and the South Dade Transitway with the purpose of decreasing single-occupant vehicles, while increasing walking, biking and transit within the Village.

Palmetto Bay is uniquely situated in South Miami-Dade County bordered by Pinecrest to the North, Cutler Bay to the South, the Biscayne Bay and Coral Gables to the east and unincorporated areas of the county with the South Dade Transitway to the west, see Figure 5.



Figure 5: Palmetto Bay Location Map

Purpose & Need

Purpose: Improve mobility, safety, and accessibility to the South Dade Corridor Transitway and the South Dade Trail to/from the Village of Palmetto Bay.

Need: There is a lack of continuous east-west bicycle and pedestrian facilities connecting the South Dade Trail and Old Cutler Trail.

The **goal** of this study is to increase pedestrian and bicycle accessibility for all users in the Village of Palmetto Bay.

Population & Traffic Growth

The Village of Palmetto Bay is part of Miami-Dade's Transportation Planning Area 5, which covers a total of 233 square miles and includes Cutler Bay, Florida City, Homestead, Kendall, Pinecrest and Zoo Miami. Miami-Dade County as a whole is expected to see a 34% increase in population through 2045, with the South Planning Area to experience the most growth at an increase of approximately 32%, in comparison to the other 6 transportation planning areas². Employment growth in the area is projected at approximately 27% and every year the county experiences increases in tourism. This growth in population, employment and tourism will bring additional traffic and demand to an already congested and built out transportation network.

Additionally, Palmetto Bay is home to five public schools and nine private schools. School traffic accounts for an additional 18% in traffic on local roadways when in session³. Today 80% of Palmetto Bay residents drive alone by car⁴. Providing alternatives to single-occupancy vehicles through multimodal opportunities, will help mitigate future traffic growth and congestion. In addition to providing additional benefits related to sustainability, health, and well-being; alternative solutions to the vehicle are an important component to improving the quality of life for Palmetto Bay residents as outlined in the goals of the Village of Palmetto Bay Strategic Plan (2019).



Source: Census American Community Survey, 2013 - 2019

Figure 6: Commuting Characteristics of Palmetto Bay

² Miami-Dade 2040 Long Range Transportation Plan (2014)

³ Palmetto Bay FY 2019-2020 Proposed Operating & Capital Budget

⁴American Community Survey (2013-2019)

Literature Review

Prior to beginning this study, a literature review was conducted to identify recommendations, projects, goals, and objectives for the study corridors. The team reviewed the following plans and studies:

- Village of Palmetto Bay Budget FY 2020-2021 and 2019-2020
- Palmetto Bay Mobility Hubs and Transit Infrastructure Plan (2020)
- Village of Palmetto Bay Strategic Plan (2019)
- Village of Palmetto Bay Neighborhood Access Traffic Study (2019)
- Village of Palmetto Bay Old Cutler Road Intersection Improvements Traffic Study (2019)
- Miami-Dade Long-Range Transportation Plan (2019)
- Village Wide Traffic Calming Study (2018)
- South Corridor Rapid Transit Project PD&E (2018)
- SW 152 Street Mobility Solutions (2017)
- Complete Streets Design Guidelines (2017)
- Evaluation of Multimodal Mobility Options in the South Miami-Dade Area (2017)
- South Dade Corridor South Link Study (2016)
- Village of Palmetto Bay Comprehensive Plan (2015)
- Transportation Improvements Program
- Palmetto Bay Safe Routes to School (2010)
- Village of Palmetto Bay Bicycle & Pedestrian Master Plan (2009)

Data Collection and Design Considerations

Introduction

Prior to developing alternatives, it is first necessary to document the existing physical, environmental, operation and land use conditions. This was accomplished through a cursory evaluation of the various features within the project area using readily available resources as well as fieldbased observations and measurements.

The following section describes the results of this data gathering. A more detailed summary of existing conditions within specific segments of the project is provided in the Conceptual Design Alternatives sections to follow.

Summary of Data Collection

BASE MAPS

A full ground survey was not conducted during this Feasibility Study phase due to budgetary constraints. Instead, a desktop review utilizing existing GIS data and aerial mapping was conducted, followed by a field visit to verify above ground utilities, sidewalks, traffic control devices and trees. A full ground survey will be completed as part of the Preliminary Design.

FIELD REVIEW

Engineering Technicians conducted a field visit to verify the desktop review of existing digital data and take measurements. MARLIN's Planning Team also conducted a field review to evaluate and document existing conditions. This work included collecting photographs of existing conditions along the corridors, assessment of key features, and conversations with local officials and residents. A map of existing conditions for each of the study roadways can be found in Appendix 1.

WETLANDS

Wetland GIS Mapping was obtained through Miami-Dade County's GIS portal and reviewed to determine the potential location of wetlands within the project area. Based on the information, no wetlands were identified. Therefore, wetland impacts, if any, will be minimal and have not been identified at this time but would be confirmed as part of a preliminary design phase.

REGISTERED HISTORIC PROPERTIES

Two properties have been identified along SW 152nd Street on the Miami-Dade County GIS portal as having historical significance, including the coral rock walls between SW 89 Avenue and SW 86 Avenue. Additionally, Old Cutler Road was designated as a State Historic Highway by the Florida Legislature in 1974. These become relevant when considering the recommended alternative of a proposed improvements along SW 152 Street and/or Old Cutler Road.

TRAFFIC

Existing traffic statistics, including Average Annual Daily Traffic (AADT) counts and crash statistics were obtained using previously collected traffic data from FDOT and Signal 4 Analytics. Data collected from previous traffic studies were also reviewed, this included Turning Movement Count (TMC), approach counts and some bicycle and pedestrian data. No on-site traffic counts were made during this phase of the project.

RIGHT-OF-WAY

Right-of-way lines of the corridors, along with property lines of abutting parcels were obtained from Miami-Dade County's online GIS portal. A desktop review of the right-of-way was conducted and found potential constraints along portions of SW 144 Street, SW 152 Street and SW 184 Street. Additional constraints include the bridge crossings over the canals. These lines will be confirmed by ground survey and further research at a later phase of the project.

Design Considerations

DESIGN PARAMETERS

Surface: Sidewalks, bicycle lanes and multi-use pathways should be paved, as they provide a better surface for a wide range of users, including roller blades, wheelchairs, baby strollers and cyclists. The existing South Dade Trail and Old Cutler Trail that this project will connect to is paved. Additional recommended improvements are expected to form a link in the regional pedestrian and bicycle network.

Width: Sidewalks are proposed to be 5-feet in width to fill-in sidewalk gaps, but are recommended to be at least 6-feet in width. Bicycle lanes will be proposed at 5 feet in width with a 3-foot minimum buffer which may or may not be separated from vehicular traffic. Multi-use trails are proposed at a minimum of 10-feet in width. These widths are generally considered an acceptable width for sidewalks, bicycle lanes and multi-use trails.

The existing South Dade Trail and Old Cutler Trail is paved with asphalt to a width of 10-feet.

The South Dade Trail runs parallel to the South Dade Transitway through commercial, industrial, and residential uses. The Old Cutler Trail runs parallel to Old Cutler Road through primarily residential uses.

The proposed pedestrian and bicycle improvements included in this study along SW 144th Street, SW 152nd Street, SW 168th Street and SW 184th Street run through primarily residential neighborhoods. A mix of pedestrian and bicycle traffic similar to the existing trails is expected, therefore the 10-foot width is expected to be adequate.

SIDEWALK, BICYCLE AND MULTI-USE DESIGN STANDARDS AND GUIDELINES

The geometric design will generally follow the applicable principles in the 2012 AASHTO Guide for the Development of Bicycle Facilities, 4th Edition.

Signage and pavement markings will follow the applicable guidance contained in the 2009 Manual on Uniform Traffic Control Devices (MUTCD), as amended.

Accessibility design criteria will follow the applicable principles in the Americans with Disabilities Act Accessibility Guidelines (ADAAG).



Figure 7: Bicyclist Operating Space (2012 AASHTO 4th Edition)

Existing Conditions

SW 144 Street, SW 152 Street, SW 168 Street and SW 184 Street are all existing corridors with primarily residential uses. The segments between US 1 / South Dixie Highway and Old Cutler Road are included in this study to connect residents to the South Dade Transitway future BRT, South Dade Trail and Old Cutler Trail.

Once data was collected and a desktop review was completed, several site visits were conducted to verify the desktop review and confirm existing conditions. A photo summary of the site visits is available in Appendix 2.

SW 144 Street

SW 144 Street is a Village maintained corridor classified as an urban collector with single-family residential homes facing the street and Alexander Montessori near Old Cutler Road. The segment included in this study is +/-1.84 miles in length. The corridor is lined with large canopy trees within the swale providing a shaded corridor for walking and biking.

The right-of-way of SW 144 Street varies between +/-63-feet and +/-72-feet and consists of two travel lanes approximately 11-feet in width, 5-foot concrete sidewalks on each side, setback from traffic by a landscaped buffer that ranges between +/-10 and +/-20-feet. Figure 8 on the following page, is a typical section of the existing conditions of the corridor.

The posted speed limit of SW 144 Street is 30 mph. There are +/-147 linear feet of missing sidewalks throughout the corridor between US 1 / South Dixie Highway and Old Cutler Road due

to right-of-way constraints and potential missing easements. Sidewalks are in large part missing east of Old Cutler Road. The overall condition of the sidewalk is good.

Utilities include electric power poles for transmission lines which are primarily located along the south side of SW 144 Street. The concrete power poles are partially blocking pedestrian accessibility to the sidewalk. Other utilities include fire hydrants, mast arms at intersections and utility boxes which at times also obstruct the sidewalk. There are no bicycle or transit facilities along SW 144 Street. During our site visit, pedestrians and bicyclists were seen utilizing the sidewalk and roadway.

SW 144 Street does not include mid-block crossings, therefore, the safest crossings for non-motorized users are at the signalized intersections of SW 82 Avenue, SW 77 Avenue and Old Cutler Road. There are standard crosswalks at each of these intersections that are in overall poor condition due to the pavement markings fading. Many of the push-buttons do not meet ADA standards for the type and distance, tactile surfaces are missing in several areas.

SW 82 Avenue is missing pedestrian signal beacons. There are two bridge crossings over canals in our study segment which narrows the sidewalk to approximately 46-inches.

Roadway signage is in overall good condition, maintenance could be improved as there were some areas with overgrown grass and trees blocking some of the street signs. Average daily traffic is approximately 6,200 vehicles. The Village Wide Traffic Calming Study recommended a roundabout at SW 87 Avenue, SW 82 Avenue, SW 77 Avenue and Old Cutler Road.





SW 152 Street

SW 152 Street is a county-maintained corridor and is classified as an urban collector with single-family residential homes, Coral Reef Park and Coral Reef Elementary. The segment included in this study is +/- 1.86 miles in length. The corridor is lined with palm trees and shade trees within the swale throughout the corridor providing shade for pedestrians and bicyclists. The right-of-way along SW 152 Street varies between +/-73-feet and +/-96-feet and consists of two 11-foot travel lanes with sharrows, 5-foot concrete sidewalks on both sides which is separated from traffic by a landscape swale that varies +/-15 to +/-25 feet, there are some right-of-way constraints at the approach to US 1 / South Dixie Highway. Figure 9 on the following page, is a typical section of the existing conditions along SW 152 Street.

The posted speed limit of SW 152 Street is 35 mph. Pavement condition along SW 152 Street was in overall fair condition. The condition of the sidewalks was fair to poor due to several cracks and uplifting, especially as you approach Old Cutler Road. Along portions of SW 152 Street is a Coral Rock Wall, which may have historic significance and present challenges to expanding existing sidewalks and pavement.

Utilities include electric power poles for transmission lines which are primarily located on the north side of SW 152 Street. The concrete power poles are partially blocking pedestrian accessibility to the sidewalk. Other utilities include fire hydrants, mast arms at intersections and utility boxes which at times also obstruct the sidewalk. Bicyclists can share the road as there is signage and sharrows provided throughout the corridor, during our site visit, some bicyclists were observed utilizing the roadway and sidewalks. There is a lot of bicycle and pedestrian activity near Coral Reef Park. Transit is provided between SW 77 Avenue and South Dixie Highway with transit stops located throughout this segment. Transit stops are bare and include signage, few transit stops had seating or other amenities. Many of the transit stops along this segment do not have sidewalk access or a concrete pad for ADA accessibility.

The Village operates a Park and Ride lot at the southeast corner of SW 77 Avenue and SW 152 Street adjacent to St. Richard's Catholic Church for the iBus, an express bus service providing non-stop service between the Village of Palmetto Bay and Dadeland South.

SW 152 Street includes one intersection crossing at SW 80 Street and one mid-block crossing near Coral Reef Elementary. There are also signalized intersections of SW 87 Avenue, SW 82 Avenue, SW 77 Avenue and Old Cutler Road. There are standard crosswalks at each of these intersections that are in overall poor condition due to the pavement markings fading. The crosswalks at Old Cutler Road are made of stamped asphalt and is also in poor condition as the color is fading. Many of the push-buttons do not meet ADA standards for the type and distance, tactile surfaces are missing in several areas. Pedestrian signals may not allot enough time for crossing. There is one bridge crossing over a canal in our study segment which narrows the sidewalk to approximately 42-inches. Coral Reef Park has two pedestrian bridge crossings over the canal as an alternative to crossing the bridge on SW 152 Street.

Roadway signage is in overall good condition, maintenance could be improved as there were some areas with overgrown grass and trees blocking some of the street signs. Average daily traffic is approximately 12,500 vehicles. Planned improvements include a roundabout at Old Cutler Road and Safe Routes to School improvements.

The Mobility Hubs and Infrastructure Master Plan recommended a raised intersection at SW 77 Avenue and shared use pathway along SW 152 Street as recommendations for pedestrian improvements.

The Village Wide Traffic Calming Study recommended roundabouts at SW 87 Avenue, SW 82 Avenue, SW 77 Avenue and Old Cutler Road and complete streets improvements between SW 67 Avenue and Old Cutler Road. The SW 152 Street Mobility Solutions recommends the installation of roundabouts east of US 1 / South Dixie Highway, bicycle lanes, ADA improvements, replace damaged sidewalks, install signage and push-button pedestrian signals in all directions at signalized intersections.

All of these plans identify the need for safety improvements for non-motorized users and the need for traffic calming along SW 152 Street.



Figure 9: SW 152 Street Existing Typical Section

SW 168 Street

SW 168 Street is a county-maintained corridor and is also classified as an urban collector with single-family residential homes, Perrine Academy and commercial near both South Dixie Highway and Old Cutler Road. The segment included in this study is +/- 2.25 miles in length. The corridor is lined with palm trees within the swale throughout the corridor providing little shade to pedestrians and bicyclists. The right-of-way along SW 168 Street varies between +/-75-feet and +/-80-feet and consists of two 11-foot travel lanes with sharrows, 5-foot concrete sidewalks on both sides which is separated from traffic by a landscape swale that varies +/-15 to +/-25 feet. Figure 10 on the following page, is a typical section of the existing conditions along SW 168 Street.

The posted speed limit for SW 168 Street is 35 mph. Pavement condition along SW 168 Street was in overall fair condition. The condition of the sidewalks was poor due to several cracks and uplifting, throughout the corridor. There is +/-1400 linear feet of missing sidewalks on the south side as you approach Old Cutler Road and near the South Dade Trail.

Utilities include electric power poles for transmission lines which are primarily located on the south side of SW 168 Street and cross over to the north side east of SW 76 Avenue. The concrete power poles are partially blocking pedestrian accessibility to the sidewalk. Other utilities include fire hydrants, mast arms at intersections and utility boxes which at times also obstruct the sidewalk.

Bicyclists can share the road as there is signage and sharrows provided throughout the corridor, during our site visit, some bicyclists were observed utilizing the roadway, most utilized the sidewalks. Transit is provided between SW 87 Avenue and US 1 / South Dixie Highway with transit stops located throughout this segment. Transit stops are bare and include signage, few transit stops had seating or other amenities. Many of the transit stops along this segment do not have sidewalk access or a concrete pad for ADA accessibility.

SW 168 Street includes two mid-block crossings with high emphasis crosswalks near Perrine Academy which includes a traffic light and another near SW 80 Avenue with rapid flashing beacons. There are also two roundabouts at SW 87 Avenue and SW 82 Avenue. Old Cutler Road is a signalized intersection with standard crosswalks in poor condition as the pavement markings are fading; during our site visit, some of the tactile surfaces were underwater, highlighting a possible grading or drainage issue. The roundabout at SW 87 Avenue includes high emphasis crosswalks in good condition, while the roundabout at SW 82 Avenue includes textured pavement also in good condition. There are two bridge canal crossings in our study segment which narrows the sidewalk to approximately 42-inches.

Roadway signage is in overall good condition. Average daily traffic is approximately 6000 vehicles. There are no planned improvements for SW 168 Street. The Mobility Hubs and Transit Infrastructure Plan recommended SW 168 Street for complete streets improvements, which include a 4-foot bicycle lane. The Village Wide Traffic Calming Study recommended a roundabout at Old Cutler Road.







SW 184 Street

SW 184 Street is a county-maintained corridor and is classified as a minor arterial. SW 184 Street is the southernmost boundary for the Village of Palmetto Bay. The southside of SW 184 Street is the northernmost boundary for the Town of Cutler Bay. The corridor is divided into two segments due to the land uses, right-of-way and land configuration.

The first segment is between South Dixie Highway and SW 97 Avenue/Franjo Road, which includes commercial uses and is a 5-lane roadway, the second segment is between SW 97 Avenue/Franjo Road and Old Cutler Road with single-family residential homes, St. Richard's Catholic School, a county Trash and Recycling Facility, and Palmer Trinity School.

Both segments together included in this study is +/- 2.35 miles in length. The corridor is lined with palm trees within the swale throughout the corridor providing little shade to pedestrians and bicyclists. The right-of-way along SW 184 Street varies between +/-75-feet and +/-90-feet. The first segment consists of four 11-foot travel lanes and a 10-foot turn lane, 6-foot concrete sidewalks on both sides which is sometimes separated from traffic by a landscape swale on each side of the sidewalks that varies +/-3 to +/-5 feet with curb and gutter. This segment also includes roadway lighting. The second segment consists of two 11foot travel lanes, 5-foot concrete sidewalks on both sides which is separated from traffic by a landscape swale that varies +/-20-feet. Figure 11 on the following page, is a typical section of the existing conditions along SW 184 Street.

The posted speed limit is 40 mph along the corridor. Pavement conditions along SW 184 Street was in overall good condition. The condition of the sidewalks was poor due to several cracks and uplifting, throughout the corridor. There is +/-1900 linear feet of missing sidewalks on the north side throughout the corridor.

Utilities include electric power poles for transmission lines which are primarily located on the south side of SW 184 Street. Other utilities include fire hydrants, mast arms at intersections and utility boxes which at times also obstruct the sidewalk.

Local transit is provided between SW 87 Avenue and US 1 / South Dixie Highway with transit stops located on the south side of this segment. Transit stops include signage, seating, and trash receptacles with some shade.

SW 184 Street includes one mid-block crossing near SW 95 Court. SW 97 Avenue / Franjo Road, SW 87 Avenue, and Old Cutler Road are signalized intersections. The crosswalks at SW 97 Avenue and SW 87 Avenue are primarily standard crosswalks which are in good condition. The crosswalks at Old Cutler Road are primarily high-emphasis crosswalks also in good condition. The push-buttons do not meet ADA standards for the type and distance, tactile surfaces are missing in several areas. There is one bridge within our study segment which does not narrow the sidewalk.

Roadway signage is in overall good condition. Average daily traffic is approximately 5,900 vehicles. There is a planned roundabout at Old Cutler Road which is currently under preliminary design. The Mobility Hubs and Transit Infrastructure Plan identified SW 184 Street for a roundabout and shared use pathway.

In 2019, the Village of Palmetto Bay passed Resolution 2019-32 to facilitate the design of a multiuse pathway along SW 184 Street, which is designated as the south leg of the 'Palmetto Bay Path,' see Figure 12 on page 28. The Palmetto Bay Path traverses the Village via the Old Cutler Trail (existing), South Dade Trail (existing), SW 184 Street (proposed), and SW 136 Street (under construction).





Figure 11: SW 184 Street Existing Typical Section (Bottom: Segment 1, Top: Segment 2)



Figure 12: Proposed Palmetto Bay Path

Source: Village of Palmetto Bay

Data Analysis

An analysis of existing conditions and data collected includes land use, average daily traffic, crash data, bicycle and pedestrian data, points of interest, population, employment, transit, traffic calming, infrastructure and future improvements. The data was reviewed within a ¼-mile of each study roadway. The data collected was reviewed, analyzed and included in the evaluation criteria to select which two corridors to focus pedestrian and bicycle improvements.

Land Use

All four study roadways are surrounded by primarily single-family residential land uses. Land uses surrounding South Dixie Highway include commercial, office, industrial and mixed use.

SW 144 Street is surrounded by single-family residential uses.

SW 152 Street is also surrounded by primarily single-family residential uses, but also includes direct access to Coral Reef Park and Coral Reef Elementary School.

SW 168 Street is also surrounded by primarily single-family residential uses, but also includes direct access to Perrine Academy and the Charles Deering Estate, located east of Old Cutler Road. SW 168 Street and US 1 / South Dixie Highway is also the northernmost boundary of Palmetto Bay's Downtown. There is a small area of commercial and offices at SW 168 Street and Old Cutler Road which has become a popular area for bicyclists who stop and rest.

SW 184 Street near US 1 / South Dixie Highway is the southernmost boundary of Palmetto Bay's Downtown. The first segment of SW 184 Street, between US 1 / South Dixie Highway and SW 97 Avenue / Franjo Road, included commercial, office and entertainment uses. East of SW 97 Avenue / Franjo Road it is primarily single-family residential uses, St. Richard's Catholic School and Palmer Trinity School. Figure 13, on the following page, is a map of general land uses of the area.



Figure 13: Land Use Map

Traffic

Table 3 includes a review of the annual average daily traffic (AADT), annual daily traffic (ADT), level-of-service (LOS) and the posted speed limit for each study corridor.

The Village's Comprehensive Plan has identified LOS "D" as the required LOS for all major roadways within the Village. Therefore, the study corridors are currently operating at an acceptable LOS.

For SW 144 Street, SW 168 Street, and SW 184 Street - AADT is relatively similar, and all provide a LOS "C". SW 152 Street has more than double the AADT than the other study corridors and is operating at an LOS "D".

SW 184 Street has the highest posted speed limit at 40 mph of all the study corridors, while SW 144 Street has the lowest posted speed limit at 30 mph. This is important because we know that vehicle speed is the primary cause of pedestrian and bicyclists' fatalities. A pedestrian (or bicyclists) involved in a collision with a motor vehicle traveling at 40 mph has a 10% chance of survival, while a vehicle traveling at 30 mph has a 50-60% change of survival, vehicles traveling at 25 mph or less have a 90% chance of survival⁴, see Figure 14.

CORRIDOR	AADT (2019)	MAX ADT*	LOS	POSTED SPEED LIMIT
SW 144 ST.	6,200	13,320	С	30 mph
SW 152 ST.	12,500	13,320	D	35 mph
SW 168 ST.	6,000	13,320	С	35 mph
SW 184 ST	5,900	15,930	С	40 mph

*Maximum capacity is based on LOS "D"

Table 3: Traffic Data for Study Corridors



Source: Vision Zero Plan Miami-Dade County

⁵ Miami-Dade Transportation Planning Organization. Vision Zero Plan Miami-Dade County (2018).

Complete Streets Design Guidelines

Three of the four study corridors are county roadways and include SW 152 Street, SW 168 Street and SW 184 Street. SW 144 Street is a village roadway. The Miami-Dade County Complete Streets Design Guidelines identify the three county roadways as 'Feeder Roads,' which is defined as 'a key roadway that connects thoroughfares and civic streets to provide access between urban centers, between neighborhoods and urban center or between neighborhoods themselves'.

The guidelines recommend feeder roads provide sidewalks for pedestrian mobility and a furnishing zone buffer of trees or landscaping, especially where land uses abut the sidewalk, see Table 4.

A furnishing zone is the area between the curb and pedestrian zone, this zone contains street trees and landscaping, benches and transit shelters, lighting and signal poles, utility boxes, parking meters and trash cans. Furnishing zones should be maximized to provide space to create as great a buffer as possible between traffic and pedestrians.

SW 144 Street would be classified as a 'Neighborhood Street' and is defined as 'local streets with low vehicle volumes and slow speeds with the primary function of serving local trips. May provide access to parks, schools or institutional facilities as well as local retail and services'.

The guidelines recommend neighborhood streets provide sidewalks and a well-lit pedestrian realm to allow for a perception of safety in areas where activity at night may be too low to provide ample "eyes on the street." Pedestrian Zone is the area dedicated to walking or moving along the sidewalk and should provide a logical, straight path and line up with crosswalks if possible. Obstructions, displays, planting, and furniture should not extend into the pedestrian zone. Lighting and width are important in creating a welcoming environment that accommodates all users.

CONTEXT ZONE		FRONTAGE ZONE	PEDESTRIAN ZONE	FURNISHING ZONE	TOTAL WIDTH	
		FEEDER	ROADS			
RESIDENTIAL	PREFERRED	0	8	8	16	
(RS)	MINIMUM	0	6	0	6	
SUBURBAN COMMERCIAL /	PREFERRED	4	6	6	16	
MIXED USE (MU)	MINIMUM	1	6	5	12	
NEIGHBORHOOD STREET						
RESIDENTIAL	PREFERRED	0	6	5	12	
SUBURBAN (RS)	MINIMUM	0	5	4	9	
SUBURBAN COMMERCIAL /	PREFERRED	1	5	5	11	
MIXED USE (MU)	MINIMUM	0	5	2	7	

Table 4: Pedestrian Realm Recommended Widths (in Feet)

Non-Motorized

Figure 15 below, includes a map of non-motorized facilities within the Village of Palmetto Bay. Most local streets within the Village do not have sidewalks. Sidewalks are available along most of the primary corridors with some sidewalk gaps highlighted along our study corridors.

The Old Cutler Trail and South Dade Trail are north/south multi-use trails that connect to a wider regional network within Miami-Dade. There are few bicycle lanes within the Village providing a 4-foot bicycle lane along portions of SW 97 Avenue / Franjo Road, SW 92 Avenue, and SW 82 Avenue. Palmetto Bay is intersected by six canals which separate the Village into various segments, disconnecting the local roadway network and in some instances isolating neighborhoods in Palmetto Bay, such is the case with the neighborhood east of SW 82 Avenue and north of SW 184 Street. This provides a challenge for residents who walk and/or bike.

Strava heat maps were reviewed to identify pedestrian and bicycle activity. Figures 16 and 17 on the following page, illustrate the heat maps from Strava depicting pedestrian and bicycle activity within the Village.

(Note: Data is from Strava, taken March 20, 2021, data is aggregated over 2 years by user activities, the heat map is updated monthly.)



Figure 15: Non-Motorized Facilities

The pedestrian heat map below, highlights the pedestrian activity surrounding Coral Reef Park, SW 152 Street, SW 77 Avenue, SW 67 Avenue, SW 168 Street, SW 144 Street, SW 136 Street, Old Cutler Road, SW 174 Street, and SW 82 Avenue. The whiter the lines the more heavily used by walkers and runners. Near US 1 / South Dixie Highway there is a clear boundary which shows little to no pedestrian activity, demonstrating the potential need for sidewalks, safety improvements and traffic calming. Figure 17 below, paints a different story, highlighting

the bicycle activity along Old Cutler Trail, the Chinese Trail, SW 67 Avenue, SW 168 Street, SW 174 Street, SW 184 Street, SW 87 Avenue and Caribbean Boulevard which shows the most activity although all the study corridors including the South Dade Trail also show bicycle activity.

Along both SW 168 Street and SW 184 Street as one approaches US 1 / South Dixie Highway, the activity appears to lessen, in comparison to the activity further east, especially near Old Cutler Road.



Figure 16: Pedestrian Heat Map

Figure 17: Bicycle Heat Map

Safety Analysis

The main purpose of the pedestrian and bicycle crash analysis is to identify trends of the crashes and any geometric issues that might be dangerous for pedestrians and bicyclists. This crash analysis will assist to improve the safety of the four corridors (SW 144 St, SW 152 St, SW 168 St, and SW 184 St) that connects the South Dade Corridor Transitway and the South Dade trail to/ from the Village of Palmetto Bay.

Various crash data sources such as FDOT's Crash Analysis Reporting (CAR) System, the State Safety Office GIS (SSOGIS), and the University of Florida's Signal Four Analytics (S4A) were accessed to capture all the crashes within a 5-year period. Crash data was collected from Signal Four Analytics (S4A) and reviewed from 2015 to 2019. A detailed crash analysis can be found in Appendix 3 for each corridor.

A total of 1367 crashes, or an average of 273 crashes per year, occurred along the four study corridors within the Village of Palmetto Bay between 2015 and 2019. The data depicts an increased trend in the number of crashes between 2017 and 2019. Rear-end crashes were the dominating crash type, accounting for approximately 41 percent of crashes within the four study corridors. A total of 12 crashes were related to alcohol and 1 crash was drug-related. Most crashes (81.1%) were property damage-only, 18.2% of crashes resulted in injuries, and 0.7% of crashes were fatal between this time period.

There was a total of 12 pedestrian crashes and 14 bicycle crashes in the five-year period within the Village of Palmetto Bay, including one pedestrian fatality. More bicycle crashes occurred along SW 168 Street (42.9%), than any other study road. Most of the (24) pedestrian and bicycle crashes happened on the roadway, one crash occurred off the roadway, and one crash occurred outside of the right-of-way.

Approximately 46% of bicycle and pedestrian crashes occurred on portions of the study roadways which are unpaved. More than 92% of pedestrian and bicycle crashes happened on a dry road surface condition.

Over 53% of all pedestrian and bicycle crashes happened at intersections, highlighting the need for safety improvements at intersections. Figure 18 on the following page, is a pedestrian and bicycle crash map to illustrate the locations of the pedestrian and bicycle crashes within the Village of Palmetto Bay between 2015 and 2019.

As the map depicts, crashes along SW 144 Street are concentrated near US 1/South Dixie Highway, 3 out of the 4 pedestrian crashes along SW 152 Street occurred within the vicinity of the Coral Reef Elementary School and Coral Reef Park, crashes were spread across SW 168 Street, and 3 of the 4 bicycle crashes along SW 184 Street occurred between SW 82 Avenue and Caribbean Boulevard.

From field observations we know that SW 152 Street is a popular roadway for pedestrian activity, while SW 168 Street and SW 184 Street are also popular corridors for bicyclists. Strava heat maps discussed previously illustrates heavy bicycle usage along SW 168 Street between Old Cutler Road and SW 87 Avenue, and along SW 184 Street between SW 82 Avenue and Caribbean Boulevard.

For further analysis of the crash data, it is recommended to perform an in-depth crash analysis by using police reports for detailed information on pedestrian and bicycle crashes. This type of analysis would provide additional insights, in-depth crash analyses are best suited to recommend countermeasures to minimize crashes and improve roadway safety for both pedestrians and bicyclists.





Points of Interest

The Village of Palmetto Bay has several points of interest within and surrounding the Village. These points of interest include schools, parks, libraries, places of worship, grocery and department stores, medical offices and hospitals, shopping centers or plazas are just to name a few.

Figure 19 provides a map of the different areas of interest within and surrounding the Village of Palmetto Bay. These points of interest include shopping centers, schools, public facilities, parks, cultural venues, and commercial areas.

As the map illustrates many of these places are located along South Dixie Highway, while schools and parks are scattered throughout the area.



Figure 19: Points of Interest Map
Population

Census data from 2010 was used and adjusted to 2019 population growth estimates. For this study, population numbers were adjusted to highlight a 'serving' population. Those most likely to walk or ride a bicycle in the community, this includes children between 5 and 17 years, seniors age 65 and older, and people with a disability which represents 4.3% of the general population within the Village. Table 5 provides a breakdown of the total population and serving populations who live within a ¼-mile of each study corridor.

ROADS	TOTAL	% OF TOTAL POPULATION	5-17 Y	'EARS	OVER 6	5 YEARS	DISABLED*
SW 144 ST.	5410	15%	1084	20%	648	12%	232
SW 152 ST.	4445	12%	996	22%	558	13%	192
SW 168 ST.	6629	19%	1350	20%	663	10%	285
SW 184 ST	6524	18%	1057	16%	673	10%	281
ROADWAY TOTAL	23008	64%	4487	20%	2542	11%	990

Disclaimer: Numbers adjusted from 2010 Census data to reflect 4.7% population change *Number based on 4.3% total population disabled under 65 years

Table 5: Population Statistics

Employment

Employment data was extracted utilizing Census on the Map which uses Longitudinal Employer-Household Dynamics (LEHD), labor market information and data, provided by the Census Bureau and U.S. States. The data collected is from 2018 and represents jobs within and surrounding the Village of Palmetto Bay. Table 6 provides an estimate of jobs within a ¼-mile of each study corridor, while Figure 20 is a heat map of jobs within Palmetto Bay. Again, jobs are concentrated along the South Dixie Corridor. There are also heat points between SW 152 Street SW 144 Street, east of Old Cutler Road which includes several private schools in that area. There is another heat point near SW 184 Street, east of Old Cutler Road which is a mixed-use complex housing office, institutional and other uses. An approximate total of 30% of available jobs within Palmetto Bay are located within ¼-mile of the study corridors.

LOCATION	TOTAL JOBS	%
SW 144 ST.	1,306	8%
SW 152 ST.	871	5%
SW 168 ST.	858	5%
SW 184 ST	2,000	12%
STUDY CORRIDORS TOTAL	5,035	30%

Table 6: Employment Statistics



Figure 20: Employment Heat Map (2018)

Transit

While primary access to transit is available along the South Dade Transitway, local service is provided on portions of the study roadways.

Route 57 which provides weekday service intersects SW 144 Street at SW 77 Avenue, and traverses SW 152 Street between SW 77 Avenue and Jackson South Hospital near US 1/ South Dixie Highway.

The Palmetto Bay iBus is also available at SW 77 Avenue and SW 152 Street. The iBus provides non-stop service between Palmetto Bay and Dadeland South.

Route 287 provides limited stop weekday peakhour service along SW 168 Street between US 1/South Dixie Highway and SW 87 Avenue.

Route 200, the Cutler Bay Local, provide local service along SW 184 Street between US 1 / South Dixie Highway and SW 87 Avenue.

Additional service located along the South Dade Transitway and US 1 / South Dixie Highway includes:

Route 1 provides service near SW 168 Street and US 1 / South Dixie Highway, and at SW 184 Street and SW 97 Avenue/Franjo Road.

Route 31 provides service along the South Dade Transitway at all stops between Dadeland South and the South Dade Government Center in Cutler Bay.

Route 38 provides service at all stops along the South Dade Transitway.

Route 39 provides peak hour express service at SW 168 Street and SW 152 Street to Dadeland South.

Route 252 provides local and limited-stop service seven days a week at the SW 144 Street and SW 152 Street Transitway stop.

Future BRT service was taken into consideration at SW 152 Street, SW 168 Street and SW 184 Street.

Traffic Calming

Existing and future traffic calming treatments or devices were also taken into consideration. This includes roundabouts, textured crossing at intersections, speed tables, rapid flashing beacons and planned traffic calming techniques for each of the study roadways.

There are no traffic calming elements present or planned along SW 144 Street.

SW 152 Street includes a planned roundabout at Old Cutler Road, which is currently under design, and a planned roundabout or raised intersection at SW 77 Avenue. Existing traffic calming elements include two mid-block crossings near Coral Reef Elementary, one of which has a traffic light and textured pavement at Old Cutler Road.

SW 168 Street includes two mid-block crossings, one with a rapid flashing beacon at SW 80 Avenue and one near Perrine Elementary with a traffic light, which is controlled by a pedestrian push-button. Additional existing traffic calming elements include two roundabouts at SW 82 Avenue and SW 87 Avenue.

SW 184 Street includes a mid-block crossing at SW 95 Court and a planned roundabout at Old Cutler Road, which is currently under design.

Public Outreach

An important step in the process includes input from the local community, offering public officials, residents, and various other groups the opportunity to present their interests and opinions about the project. This provides both the Village and the Consultant Team an understanding of the public's vision for the project, their concerns, and any local information they are willing to share.

An initial public meeting was held on April 6, 2021, which was conducted virtually as an online interactive webinar. A stakeholder meeting was held on June 18, 2021, which was also conducted virtually and included bicyclists, residents, Village staff, TPO staff, the consultant, and members of Village committees.

A second public meeting was held on September 22, 2021, which was also conducted virtually. Finally, presentation to the Miami-Dade Bicycle and Pedestrian Advisory Committee (BPAC) was completed on November 16, 2021, which resulted in a Resolution of Support from committee members, see Appendix 4.

The BPAC reviews transportation plans and projects for non-motorized mobility and safety, provides a forum for the discussion of issues affecting bicyclists and pedestrians, and reports to the TPO Governing Board on bicycle and pedestrian-related issues.

Due to low attendance to the virtual public meetings, each public meeting was augmented with a survey to solicit additional public input, the results of the surveys are in the next section.

Public Meeting #1

The first public meeting was held virtually via GoToWebinar on Tuesday, April 6, 2021 at 7 pm. The presentation covered the scope of the study, schedule, purpose, existing conditions, and opportunities. Opportunities were gauged through polling questions related to pedestrian improvements, bicycle improvements, community improvements, intersection improvements, and ranking of study roadways.

The first public meeting was augmented with a public survey mirroring the same polling questions used during the virtual meeting.

Results of the survey are discussed in the survey section of this report. A copy of the meeting presentation and questions/comments are available in Appendix 5.

SURVEY 1

A survey utilizing the polling questions during the first public meeting was released about one week after the initial public meeting. Survey 1 was opened for approximately 6 weeks and garnered 147 responses from residents.

A summary of the survey results is listed on the following page in Table 7 . A complete review of questions and responses can be found in Appendix 6.

Q. NUMBER	QUESTION	TOP RESPONSE
1	Do you walk or bike one or more of these streets: (Select one) SW 144 STREET, SW 152 STREET, SW 168 STREET OR SW 184 STREET	NO 14% YES 86%
2	Which street do you live or work closest to? (Select one)	SW 184 St. 19% SW 168 St. 25% SW 152 St. 32%
3	What is your greatest community asset? (Select up to three)	 The Neighborhoods (88%) Parks, Natural Areas & Historic Resources (86%) The Biscayne Bay (46%)
4	I would walk/bicycle more if (Select up to three)	 There was more walking/bicycle infrastructure (80%) There was less/slower traffic on nearby streets (74%) It were safer/more secure (69%)
5	Would you like to see sidewalks in your community? (Select one)	NO 22% NO SIDEWALKS 27% YES 51%
6	What is your most common mode of transportation to/from work and/or school? (Select all that apply)	 Solo driving for entirety of trip in a personal vehicle (77%) I telecommute to work (24%) Public Transit/Walking (13%)

Table 7: Survey 1 Summary

Q. NUMBER	QUESTION	TOP RESPONSE	
7	What type of pedestrian improvements would you like to see? (Select one or more)	 Pedestrian Amenities (63%) High Visibility Crosswalks (42%) More trails and walking paths and/or wider sidewalks (41%) 	
8	What type of bicycle facilities do you prefer? (Select one)	ON ROAD or BUFFERED BIKE LANE 19% SEPARATED BIKE LANE 81%	
9	What type of community improvements would you like to see? (Rank)	1. Street Trees 2. Bioswales / Raingardens 3. Community Signage	
10	What types of intersection improvements would you like to see? (Select one or more)	1. Lighting (52%) 2. Street Trees (52%) 3. Pedestrian Bulb-Outs (43%)	
11	Please rank the roadways in order of preference for improvements:	 SW 152 Street SW 152 Street SW 168 Street SW 184 Street 	

Table 7: Survey 1 Summary (continued)

Walking Audits

Two walk audits were held on Thursday, April 15, 2021, at 6 pm and Saturday, April 17, 2021, at 8 am. The first walk audit included a 1-mile walk on SW 144 Street and SW 152 Street.

The group was transported to the intersection of SW 144th Street and SW 82nd Avenue by electric bus. Once the 1-mile walk was completed, the group was picked up at SW 77th Avenue and transported to SW 152nd Street and SW 77th Avenue for another 1-mile walk to SW 87th Avenue. At the terminus of the walk audit, participants were encouraged to fill-out a walk audit survey to record their experience while walking both SW 144th Street and SW 152nd Street.

The second walk audit included a 1-mile walk on SW 168th Street and a ½-mile walk on SW 184th Street. The group was transported to SW 168th Street and Old Cutler Road intersection via electric bus. Once the 1-mile walk was completed, the group was picked up at SW 82nd Court and then transported to SW 184th Street and SW 79th Court near Palmer Trinity School. At the terminus of the walk audit, participants were again encouraged to fill-out a walk audit survey to record their experience while walking both SW 168th Street and SW 184th Street.

A copy of the attendance sheet, walk audit survey, and survey results can be found in Appendix 7. There was a total of 15 questions related to types of users, existing elements, preferred elements, vehicle travel speed, sidewalk condition, bus stops, public areas, average number of trees and crosswalks per block, safety and accessibility.

The most desired elements reported for all corridors included bike lane, sidewalk and multi-use trail. When asked if participants felt safe walking the corridor, most responses included 'Somewhat Safe' or 'Not Very Safe.'



Figure 21: Photos from the Walking Audit

Public Meeting #2

The second public meeting was held virtually via GoToWebinar on Wednesday, September 22, 2021, at 7 pm. The presentation included a quick overview of the scope, schedule, purpose, and existing conditions. This meeting included the evaluation criteria which was used to narrow the four study corridors to two. The two corridors were the focus of the presentation and included two alternatives for conceptual design development.

The alternatives for both SW 152 Street and SW 184 Street were presented and included a public poll for residents to choose their preferred alternative for both SW 152 Street and SW 184 Street.

The second public meeting was augmented with a public survey mirroring the same polling questions used during the virtual meeting. Results of the survey are discussed in the survey section of this report. A copy of the meeting presentation and questions/comments are available in Appendix 5

SURVEY 2

A survey utilizing the polling questions during the first public meeting was released shortly after the second public meeting. Survey 2 was opened for approximately four weeks and garnered a total of 99 responses. A copy of the survey and responses can be found in Appendix 6. A summary of the survey results are provided in Table 8.

THE MOST DESIRED ELEMENTS REPORTED FOR ALL CORRIDORS INCLUDED BIKE LANE, SIDEWALK AND MULTI-USE TRAIL.

WHEN ASKED IF PARTICIPANTS FELT SAFE WALKING THE CORRIDOR, MOST RESPONSES INCLUDED: 'SOMEWHAT SAFE' OR 'NOT VERY SAFE.'

WALKING AUDIT SURVEY RESULTS





Q. NUMBER	QUESTION	TOP RESPONSE
1	Which street do you live or work closest to? (Select one)	N/A sw 184 5t. 19% 5w 168 5t. 22% 5w 168 5t. 27%
2	Have you heard of the Strategic Miami Area Rapid Transit (SMART) Plan?	YES 66% NO 34%
3	What type of bicycle rider are you?	SOMEWHAT CONFIDENT 22% NOT ABLE OR NOT ABLE OR NOT ABLE OR INTERESTED BUT CONCERNED 42%
4	Which alternative do you prefer for SW 152 Street? Alt 1 Alt 2 Protected Path Bike Lane	50 40 30 20 28% 27% 2%
5	Which alternative do you prefer for SW 184 Street? Alt 1 Alt 1 Multi- Use Protected Bike Lane	50 40 30 20 20 26% 22% 2% 0

Table 8: Survey 2 Summary

Evaluation Criteria

We began this study with four corridors with the purpose of analyzing which two of the four corridors are in most need of multimodal improvements. The evaluation criteria was designed to provide a ranking order for the study corridors.

Table 9 provides a summary of each category and total score for each of the 5 categories discussed. The full table including factors, metrics and scoring can be found in Appendix 8.

The ranking order was utilized to focus our efforts on two of the four corridors for the team to develop conceptual design plans and recommendations. The team identified 5 categories with different datasets to include in the evaluation, this included:





Pedestrian and Bicycle -Crash Severity, Posted Speed Limit, Number of Existing and Future Traffic Calming Treatments



Density - Population and Employment Density within a ¼-mile





Infrastructure – Pedestrian and Bicycle Facilities, Shade, Bridges and Right-of-Way Availability



Connectivity - Schools, Transit, Key Destinations and Parks and Cultural Centers within a ½-mile



Resident and Stakeholder Support – Survey Rank Score and Stakeholder Preference Scores ranged from 0 to 4 depending on the category and ranked accordingly.

The ranking is as follows:

- 1. SW 152 Street
- 2. SW 184 Street
- 3. SW 168 Street
- 4. SW 144 Street

This ranking was presented to stakeholders, the TPO and the Village for approval. Therefore, SW 152 Street and SW 184 Street were selected to move forward for conceptual design development.

FACTOR	DATA	TOTAL POSSIBLE POINTS	144 ST.	152 ST.	168 ST.	184 ST.
	PEDESTRIAN CRASH SEVERITY	6	2	5	2	1
	BICYCLE CRASH SEVERITY	6	1	1	5	5
SAFETY	POSTED SPEED LIMIT	3	1	2	2	3
	TRAFFIC CALMING	6	4	6	3	4
SAFETY SCORE		21	8	14	12	13
	POPULATION	12	9	9	9	8
DENSIT	EMPLOYMENT	4	3	2	2	4
DENSITY SCORE		16	12	11	11	12
	PEDESTRIAN FACILITIES	11	6	3	7	9
	BICYCLE FACILITIES	7	1	6	5	4
	SHARED USE PATH / MULTI-USE TRAIL	2	1	2	1	2
INFRA- STRUCTURE	SHADE	1	1	1	0	0
	CANAL BRIDGES	1	0	1	0	1
	R.O.W	1	0	1	0	1
INFRASTRUCTURE	SCORE	23	9	14	13	17
	SCHOOLS	4	2	4	4	4
	TRANSIT	4	0	4	2	1
CONNECTIVITY	PLACES	4	2	3	2	3
	PARKS & CULTURAL CENTERS	4	1	2	3	4
CONNECTIVITY SCORE		16	5	13	11	12
RESIDENT &	RESIDENT RANKING PER SURVEY 1	4	2	4	3	1
SUPPORT	STAKEHOLDER PREFERENCE	2	0	2	2	0
RESIDENT & STAK	EHOLDER SUPPORT	6	2	6	5	1
TOTAL SCORE		82	36	58	52	55

Table 9: Evaluation Criteria

Conceptual Design Alternatives

Once the roadways were selected, the team collaborated on a strategy to move forward with two alternatives for the corridors. The alternatives were selected based on public and stakeholder input, as it related to Survey 1. The two alternatives team decided upon include:

A. Alternative 1 - Multi-Use Trail / Shared Use Pathway

Multi-Use Trails are also known as Trails, Shared Use Paths, Greenways, Bike Paths or Side Paths. Multi-Use Trails are typically made of asphalt or concrete with a standard width of 10 to 14-feet. When space is restricted, there is limited rightof-way or pedestrian/bicycle traffic is low, these pathways can then be 8-feet in width. Figure 22 includes some local examples of multi-use trails or shared use pathways within the region.









Figure 22: Examples of Multi-Use Trails or Shared Use Pathways

B. Alternative 2 - Protected or Separated Bicycle Lane

A separated or protected bicycle lane should have a physical barrier to protect users from vehicular traffic. Physical barriers may include curbing, landscape, zebra or armadillo delineators, vertical pole delineators, parallel parked vehicles or similar. The standard width of a bicycle lane is 4-feet with at least 3-foot barrier/buffer. Figure 23 includes some local examples of protected or separated bike lanes in the region.

These alternatives were developed primarily because of the feedback we had received from residents, stakeholders, and existing data available on the types of facilities people prefer. During the first survey, we found that 81% of respondents want a separated facility, Figure 24, on page 50, provides a breakdown of responses from the survey and polling questions.











WHAT TYPE OF BICYCLE FACILITY DO YOU PREFER?

Figure 24: Survey Responses to Preferred Bicycle Facility Type

Additionally, we asked residents what would encourage them to walk or bike more in Palmetto Bay, 80% of respondents indicated more walking or biking infrastructure and 69% of responses indicated if it was safe/more secure. Lastly, when we asked respondents what type of pedestrian related improvements, 41% indicated they want more trails/walking paths and/or wider sidewalks.

The Federal Highway Administration (FHWA) released the Bicycle Selection Guide in 2019 which includes information on the different types of users, including the different facilities that riders feel comfortable or safe using. It is important to understand the characteristics of the different users to ensure we recommend and design facilities that will be utilized by the majority rather than the minority of the residents in Palmetto Bay.

Characteristics include comfort level, bicycling skill and experience, age, and trip purpose. Figure 25 on the next page, includes a graphic from the Bicycle Selection Guide demonstrating the different bicycle user profiles and their level of comfort with the different types of facilities. This study is focused on capturing the "Interested but Concerned Bicyclists", which represent 51-56% of the total population per FHWA averages.

WE ASKED RESIDENTS WHAT WOULD ENCOURAGE THEM TO WALK OR BIKE MORE IN PALMETTO BAY: 80% OF RESPONDENTS INDICATED MORE WALKING OR BIKING INFRASTRUCTURE AND 69% OF RESPONSES INDICATED IF IT WAS SAFE/MORE SECURE.

SURVEY RESULTS

The interested but concerned bicyclists is the largest group identified by the research conducted by the FHWA, and has the lowest tolerance for traffic stress, individuals who fall into this group typically avoid bicycling except where they have access to networks of separated facilities or very low-volume streets with safe roadway crossings.



Source: Percentages represent the level of comfort that people feel bicycling, according to peer-reviewed surveys as recently as 2016. For more information: FHWA Bikeway Selection Guide

Figure 25: Facility Preferences

To capture this audience, it is important to design bicycle facilities that meet the needs of this group.

Village of Palmetto Bay's Bicycle User Profiles per the responses received from the second survey show a higher level of comfort and higher stress tolerance for the somewhat confident and highly confident bicycle user.

However, averages for Palmetto Bay are higher for the more confident cyclist due to existing infrastructure like Old Cutler Road, SW 152 St, SW 168 St, and the Old Cutler Trail which experiences high volumes of cycling traffic.

When designing facilities for safety and access, in an rapidly advancing technology landscape (self-driving vehicles) and distracted drivers (increase of hand held technology) it is crucial to aim to provide the highest level of comfort for all cyclists, as well as aim to capture those who are not at all comfortable or able at this time (16%).

Per the survey results, our target user (42%) is most comfortable with off-street facilities like trails and shared used paths, (22%) prefer bike boulevards and protected bike lanes, and (20%) feel confident riding in a shared lane with traffic.

Figure 26, on the next page, illustrates the different facilities and the types of users associated with these facilities, per our survey results for the Village of Palmetto Bay.

Comments and feedback from residents and stakeholders indicated that they wanted to feel safer and more secure to be able to walk or bike.

This information was taken into consideration as the team moved to the plan sheet development phase and recommendations.



LOW STRESS TOLERANCE

NOT INTERESTED OR ABLE: 16%

Source: Palmetto Bay Connectivity Feasibility Study Survey 2

HIGH STRESS TOLERANCE

Figure 26: Bicyclists Design User Profiles in Palmetto Bay



Source: https://www.planning.dot.gov

Figure 27: Connected and Automated Vehicles navigation

Alternative 1

Alternative 1 includes a 10-foot multi-use path (or shared use path) on the southside of SW 152 Street and the northside of SW 184 Street.

The figures on the following page include the existing typical sections for each corridor, in addition to the proposed shared use pathway for both SW 152 Street and SW 184 Street.

Table 10 below is a review of the advantages and disadvantages of the proposed shared use pathway. While the proposed alternative provides a separated facility that has the potential to attract non-motorized users. There are potential negative impacts to existing trees and utilities which can delay the project further, or make it cost prohibitive throughout the entire corridor.

ADVANTAGES

Separated dedicated facility for all nonmotorized users

Will attract the somewhat confident and interested bicycle users

Protected and low traffic stress

May increase walking and biking

Fills in missing network along SW 184 Street

DISADVANTAGES

Impact to trees and utilities

Will not attract the highly confident bicyclists

Cost and maintenance

May need to cross the road in several locations along SW 152 Street

May be used illegally by golf carts

Right-of-way is built out west of Franjo Road along SW 184 Street

Table 10: Pros and Cons of Alternative 1



SW 152 Street Existing Typical Section. (For reference only, identical to Figure 9 on page 23)



Figure 28: SW 152 Street Proposed Typical Section for Alternative 1





SW 184 Street Existing Typical Section (Bottom: Segment 1, Top: Segment 2) (For reference only, identical to Figure 11 on page 27)



Figure 29: SW 184 Street Proposed Typical Section for Alternative 1

Alternative 2

Alternative 2 includes a 5-foot protected or separated bicycle lane with a 3-foot physical barrier. The barrier would provide a separated facility for bicycle use away from vehicular traffic, providing a low-stress facility for users. Our proposed alternative includes a 3-foot concrete barrier, but the Village can explore other options as discussed on page 49. The figures on the following pages include the existing typical section and proposed alternative for both SW 152 Street and SW 184 Street.

Table 11 includes the advantages and disadvantages of the proposed separated facility which includes a separated low stress facility which improves safety for bicycle users, and has the potential to attract additional users. Some potential disadvantages include the cost and maintenance of this type of facility. It is important to note that this alternative may not be suited throughout the entire corridor without property acquisition.

ADVANTAGES	DISADVANTAGES
Separated and dedicated facility for bicyclists	May be used illegally by golf carts or motorbikes
Will attract the somewhat confident and interested bicycle users	May not attract the highly confident bicyclists
Protected and low traffic stress	Cost and maintenance
Less impact to trees and utilities	Right-of-way is built out west of Franjo Road along SW 184 Street
Increased safety for bicyclists	Less space for vehicles
Acts as a traffic calming countermeasure	

Table 11: Pros and Cons of Alternative 2



SW 152 Street Existing Typical Section. (For reference only, identical to Figure 9 on page 23)

75'/ 80' ROW



Figure 30: SW 152 Street Proposed Typical Section for Alternative 2





SW 184 Street Existing Typical Section (Bottom: Segment 1, Top: Segment 2) (For reference only, identical to Figure 11 on page 27)



Figure 31: SW 184 Street Proposed Typical Section for Alternative 2

Alternative 3

Alternative 3 was eliminated early in the process as the team believed it did not meet the desires of the community as indicated in the survey, the survey highlighting the desire of residents to feel safe and comfortable, including dedicated facilities for walking and bicycling.

One of the goals of this project was to target the 'Interested but Concerned' bicycle user for the purpose of reducing single-occupant vehicle trips. Alternative 3 was removed from consideration to focus efforts on Alternatives 1 and 2, which met the expectations of the community, will attract the most users and meets the goals of our study. Table 12 is an analysis of the three alternatives.

	ALTERNATIVE 1 MULTI-USE PATHWAY	ALTERNATIVE 2 SEPARATED BICYCLE LANES	ALTERNATIVE 3 BICYCLE LANES	
SATISFIES PURPOSE & NEED	Yes	Yes	Yes	
SAFETY & MOBILITY	Dedicated path for bikes and peds	Dedicated path for bikes	Dedicated path for bike	
ROW & UTILITY IMPACTS	Moderate to High	Low to Moderate	Low	
CONSTRUCTIBILITY	Moderate Construction Limited Traffic Impacts	Moderate Construction Moderate Traffic Impacts	Low Construction Moder- ate Traffic Impacts	
ESTIMATED COST*	\$345,000 per mile	\$554,000 per mile	\$479,000 per mile	
USERS	Pedestrian & Interested but Concerned User	Interested but Concerned User	Somewhat Confident User	
*Estimates are from FDOT cost per mile models for long range estimating				

Table 12: Alternative Analysis

Recommended Alternative

Alternative 2 was selected as the preferred alternative for both SW 152 Street and SW 184 Street. Alternative 2 was also the preferred facility selected through public input, Village staff, analysis, and a Resolution of Support from the BPAC.

The separated bicycle facilities are proposed at 5-feet bike lanes with a 3-foot physical barrier. The purpose of the barrier is to separate bicyclists from vehicular traffic to provide a low stress facility that can be utilized by all types of users. This alternative also had the least amount of impact to the right-of-way, trees and utilities.

There are some areas along both SW 152 Street and SW 184 Street where a separated bicycle facility was not feasible without property acquisition. Additionally, it is important that the Village work with FDOT and DTPW to extend the protected bicycle lanes across South Dixie Highway and connect into the South Dade Trail along both SW 152 Street and SW 184 Street.

Areas where a protected bicycle lane was not feasible along SW 152 Street includes sharrows +/-400 feet east of South Dixie Highway for westbound traffic. Between SW 87 Avenue and SW 84 Court a shared use pathway on the south side and again between SW 80 Avenue and SW 78 Place where there is a midblock crossing proposed to connect users to the existing shared use pathway in Coral Reef Park. Lastly, the pathway becomes a shared use pathway again on the south side between SW 73 Court and Old Cutler Road, where it will connect to the Old Cutler Trail. All other areas are protected bicycle lanes.

Along SW 184 Street areas where a separated bicycle lane was not feasible includes the area between South Dixie Highway and SW 97 Avenue/Franjo Road where the existing sidewalk is proposed to be widened to a 8 to 10-foot shared use pathway due to right-of-way constraints. This area needs to be verified by a survey to ensure there is adequate room for widening the sidewalk. Then on the north side between SW 98 Avenue/Franjo Road and SW 95 Court, the sidewalk is also proposed to be widened to a shared use pathway before separating into a protected bicycle lane, again a survey needs to be conducted to ensure there is enough right-of-way for widening the sidewalk.

Furthermore, on the southeast corner of SW 97 Avenue there is a hole that needs to be covered to ensure safety. Sharrows are proposed at the canal crossing between SW 92 Avenue and SW 89 Place, but the Village is encouraged to install concrete headwalls to widen the crossing and move or eliminate the guardrail to allow for a separated facility. Lastly, a shared use pathway is proposed on the north side of SW 184 Street east of Palm Trinity School to Old Cutler Road.

Additionally, SW 184 Street is also recommended to complete the missing sidewalk links along the north side and repair all uplifted and cracked sidewalks to ensure there is a complete sidewalk network for pedestrians. 15% conceptual plan sheets can be found in Appendix 9.

Summary of Recommendations

The team developed a total of 35 recommendations as a result of this study. Recommendations include general recommendations for the four study corridors, along with more detailed recommendations for SW 152 Street and SW 184 Street. Of the 35 recommendations there are seven (7) policy recommendations:

• Adoption of a Complete Streets Policy to ensure the right-of-way is prioritized for safer slower speeds for all people who use the road over high speeds for cars.

• Create a Budget for Pedestrian and Bicycle Improvements of existing facilities to ensure the Village sets aside annual funding for non-motorized projects. One way the Village could do this is by re-evaluating impact fees and/or property taxes.

• Create a Maintenance Plan for Existing Pedestrian and Bicycle Facilities to ensure the Village sets aside annual funding for the maintenance and upkeep of sidewalks, bike lanes, shared use pathways, and pedestrian amenities. One way the Village could do this is by re-evaluating impact fees and/or property taxes to ensure funding is allocated to maintenance of existing facilities.

• Consider a **"Slow Streets" Pilot Program** for all residential streets, these programs have been implemented in Miami Beach, Los Angeles and Washington D.C. Slow Streets restrict the road-way to local traffic only and reduce the speed limit to 15 MPH so that people can walk, bike, and run safely.

• Consider Protected or Separated Bicycle Facilities for all future non-motorized improvements along primary corridors with speeds over 25 MPH. Research conducted by the FHWA and survey participants have expressed their preferences for separated facilities, adopting such a policy will ensure projects capture the "Interested, but Concerned" users to maximize use of facilities.

• Marketing and Adoption of a Street Tree Program to ensure sidewalks are adequately shaded. Trees can improve property values, improve storm water runoff, provide shade and shelter, and improve mental health.

• Adoption of Pedestrian Pathway Ordinance can ensure future sidewalk improvements maintain a minimum clear zone for pedestrians to ensure utilities and sidewalk obstructions do not obstruct the walking path. Table 4 on page 31 provides guidance to the number of feet furniture zones and sidewalks should be for each type of roadway. Most primary corridors in Palmetto Bay are under the jurisdiction of Miami-Dade County's DTPW, and this includes SW 152 Street, SW 168 Street and SW 184 Street. In addition to Old Cutler Road, SW 77 Avenue, and SW 87 Avenue. Six (6) of the 35 recommendations relates to multi-agency coordination. Greater coordination can facilitate better communication, funding, maintenance and improved projects.

One important fact to consider is that the Village has completed 33% of the projects identified in the Village's Bicycle and Pedestrian Master Plan, while only 4% of the projects identified in the plan have been completed by the County. Coordination and advocacy between the Village, the TPO and DTPW is an important component of ensuring projects such as this are constructed.

The follow six (6) coordination recommendations are included in this study:

• Coordination with DTPW for incorporating proposed bicycle improvements into future roundabouts along Old Cutler Road. Both SW 152 Street and SW 184 Street are under design review by the county. Ensuring the proposed recommendations are incorporated into design plans is an important cost saving measure as well as integrated design of facilities.

• Coordination with DTPW for Maintenance and Improvements along SW 152 Street, SW 168 Street, and SW 184 Street. Include DTPW staff in planning, studies and preliminary design may increase further participation and allocation of resources for Palmetto Bay. Further coordination can facilitate the completion of projects identified in the Village's Bicycle and Pedestrian Master Plan and any programmed improvements for county roadways.

• Coordination with Cutler Bay for Improvements along SW 184 Street to ensure a cohesive and connected system for bicyclist and pedestrians. Municipal boundaries are a social construct, ensuring coordination with neighboring communities and agencies can create a holistic, intuitive and functional system in an equitable fashion for all users.

• Coordination with FDOT is important component of multimodal improvements. US-1/ South Dixie Highway is under the jurisdiction of the state; therefore, any improvements or recommendations would need FDOT approval. Improvements along any of the study corridors should include FDOT staff to ensure they are not only aware of the Village intent, but also the needs of the community.

• Bicycle Signals at all Signalized Intersections along SW 152 Street and SW 184 Street could improve safety for bicyclists crossing the intersection and restrict vehicle movements, which allow bicyclists to advance. Intersection signalization is under the jurisdiction of the county and FDOT, these types of improvements would require county and FDOT approval, and additional coordination with the county for Bike Boxes at signalized intersections along both corridors. One strategy could be a pilot program along Old Cutler Road to see how this would impact bicyclists' safety.

• Installation of Bicycle Boxes at Signalized Intersections along SW 152 Street and SW 184 Street would also need coordination with the county and FDOT for approval. The FHWA has provided interim approval for use of bicycle boxes as studies suggest a potential 35% reduction in through bicycle and right-turn vehicle conflicts. The City of Fort Lauderdale is currently experimenting this strategy on their local streets. Additional coordination with the county for Bike Boxes at signalized intersections along both corridors could provide increased safety for users.

An additional eleven (11) of the 35 recommendations include additional studies or plans as it relates to improving bicycle and pedestrian facilities along all main thoroughfares. Conducting plans and studies opens the door for federal and state grant funding related to multimodal transportation and community improvements. Planning studies can also advance projects to design and construction. Recommendations for further studies and plans include:

• A Pedestrian Bridge Study to identify key locations for pedestrian bridges throughout the Village, which would create a cohesive and connected system of walking paths and trails. There are six (6) canals that intersect the Village and currently provide challenges for connectivity and movement. Residents who live in the southeastern most part of the Village are forced to cross at SW 184 Street due to several canals interrupting the roadway network.

• A Branding Plan can help the Village create an identity and sense of place. Branding typical incorporates community sign standards which allow for the installation of a uniform design for community, neighborhood, and wayfinding signs.

• Mid-block Crossings are recommended near SW 152 Street/SW 78 Place, along SW 184 Street near Palmer Trinity School and SW 144 Street. Mid-block crossings require a traffic study for identification of locations and implementation. Safe Routes to School Funding can be utilized for crossings identified near a school or school walking route. They also provide a safe area to cross the street when intersections are spaced far apart, potentially reducing pedestrian crashes.

• Multimodal Feasibility Study for SW 144 Street and SW 168 Street are recommended to implement multimodal improvement along these other two study corridors. County coordination would be required for SW 168 Street.

• Multimodal Feasibility Study for north/south corridors including SW 77 Avenue, SW 82 Avenue, SW 87 Avenue and SW 92 Avenue. Many of these corridors were identified for bicycle lanes in the Village's Bicycle and Pedestrian Master Plan. Completing a feasibility study could ad-

vance these projects to preliminary design. Coordination with the county would be required for improvements related to SW 77 Avenue and SW 87 Avenue. Separated facilities are recommended to capture the "interested, but concerned" users.

• Traffic Study for a Lead Pedestrian Interval (LPI) at all signalized intersections along the study corridors. LPI provides a head start for pedestrians and bicyclists at intersections and can provide increased visibility, reduced conflicts, increased yielding and safety as traffic is restricted for vehicles, allowing pedestrians and bicyclists to advance safely. Coordination with the county would be required as traffic signals are under the jurisdiction of the county.

• Study to Reduce the Turn Radius of intersections along our study corridors. Reducing the turn radius forces vehicles to slow down when turning, improves safety for pedestrians and bicyclists. SW 152 Street, SW 168 Street and SW 184 Street are under the jurisdiction of the county, thus county coordination would be required to identify which intersections would be suitable for this type of improvement.

• Traffic Study for a Raised Intersection at SW 152 Street/SW 80 Avenue intersection and SW 152 Street/SW 77 Avenue to reduce speeding and alert motorist to slow down. This segment along SW 152 Street is heavily utilized by pedestrians and bicyclists. It is also the location of Coral Reef Elementary, implementing traffic calming measures in this area could reduce pedestrian and bicyclist crashes.

Two (2) of the 35 recommendations include advancing projects to preliminary design to determine the limits of work, property impacts, and further evaluate other key items. Once the limits of the project are defined, the estimated cost of the project may be such that funding the project in its entirety for construction may present a challenge. To maximize federal and municipal funding resources, one consideration would be to construct the project in two segments for each corridor. Conceptual plan sheets for both SW 152 Street and SW 184 Street can be found in Appendix 9. Recommendations for preliminary design include:

• Advancement of the Proposed Protected Bicycle Lanes along SW 152 Street to preliminary design for construction documents and cost.

• Advancement of the Proposed Protected Bicycle Lanes along SW 184 Street to preliminary design for construction documents and cost.

Six (6) of the 35 recommendations related to infrastructure improvements and projects and include:

• Pedestrian Amenities along walking paths, this includes signage, seating, lighting, trash and recycling receptacles which are all an important component of the walking environment as they can provide guidance, rest areas, improved safety, litter prevention and an increased sense of place. The first survey conducted during this study identified pedestrian amenities as the most desired pedestrian improvement among respondents with a 63% approval.

• Widening the Existing Sidewalk between US-1/ South Dixie Highway and Franjo Road/SW 97 Avenue. The existing right-of-way in this segment is maximized, but 2 to 3-feet is available through parts of this segment to widen the sidewalk. Widening the sidewalk would encourage more walking and biking along SW 184 Street, providing better accessibility to the Transitway. If the sidewalk can be widened to 8-feet, it may meet the criteria for a shared use pathway.

• Upgrade Pedestrian Push-buttons for ADA compliance at all signalized intersections along both SW 152 Street and SW 184 Street. Many of the existing push-buttons are not ADA compliant, bringing these items into compliance allows for greater accessibility for all users. Push-buttons should be mounted at a height of 36 to 42 inches

and located no further than 5-feet from the crosswalk, and ten (10) feet of the curb line. Coordination with the county is required since intersection signals are under the jurisdiction of the county.

• Install Pedestrian Signal Heads to meet ADA requirements and include audible signals. Signal heads should be installed adjacent to the cross-walk at a height of 7 to 10-feet and include a countdown timer. Coordination with the county is required since intersection signals are under the jurisdiction of the county.

• Install Lighting at all intersections along SW 152 Street and SW 184 Street to increase driver awareness of the presence of the intersection, which can reduce nighttime crashes and increase the perception of safety.

The Village may also want to consider pedestrian lighting along popular corridors. Coordination with the county is required since the corridors and intersections are under the jurisdiction of the county.

Lastly, three (3) of the 35 recommendations are related to signage and pavement markings. Many of the pavement markings along SW 152 Street are faded and most intersections along SW 152 Street and SW 184 Street do not include standard pedestrian crossing signs. Recommendations for signage and pavement markings include:

• **Re-stripe Faded Crosswalk Markings** at T-intersections along SW 152 Street to increase visibility to motorists, coordination with the county would be required to ensure this is programmed for future improvements.

• Provide High-Emphasis or Textured Pavement for crosswalks at signalized intersections along SW 152 Street and SW 184 Street. Textured pavement is utilized as a traffic calming measure and designates the space for pedestrians and bicyclists alerting motorists that there may be pedestrians and bicyclists crossing. Coordination with the county would be required for both corridors.

• Install Pedestrian Crossing Signage (W-11) at all signalized intersections to alert motorist of upcoming crosswalks and the presence of pedestrians. Signage proposed near schools or a school walking path are eligible for Safe Routes to School Funding and would require county coordination.

Table 13 on the following is a summary of the above proposed recommendations prioritized. The full table is available in Appendix 10. Recommendations are ranked high, medium and low for their impact, meaning they meet the purpose and need of this study; as well as feasibility, the likelihood of implementation. Impact and feasibility are combined for a prioritization ranking so that the Village may focus on which recommendations to advance first. The figure on page 68 is a map of proposed improvements. You can find a list of potential funding sources for implementation in Appendix 11.

RECOMMENDATIONS	ТҮРЕ	IMPACT	FEASIBILITY	PRIORITIZATION	
GENERAL					
COMPLETE STREETS POLICY	POLICY	HIGH	HIGH	HIGH	
BUDGET FOR PEDESTRIAN/BICYCLIST IMPROVEMENTS	POLICY	HIGH	HIGH	HIGH	
MAINTENANCE PLAN FOR PEDESTRI- AN/BICYCLIST INFRASTRUCTURE	POLICY	HIGH	HIGH	HIGH	
COORDINATION WITH DTPW	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH	
COORDINATION WITH CUTLER BAY	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH	
COORDINATION WITH FDOT	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH	
SLOW STREETS PILOT PROGRAM	POLICY	MEDIUM	HIGH	MEDIUM TO HIGH	
PEDESTRIAN BRIDGE STUDY	STUDY	MEDIUM	MEDIUM	MEDIUM	
BRANDING PLAN	PLAN	LOW	MEDIUM	LOW TO MEDIUM	
	PEDESTRIAN	& BICYCLE			
BICYCLE FACILITIES & IMPROVEMENTS ARE INCORPORATED INTO ROUND- ABOUTS AT SW 152 STREET & SW 184 STREET	MULTI-AGENCY COORDINATION	HIGH	HIGH	HIGH	
CONSIDER PROTECTED OR SEPARAT- ED BICYCLE FACILITIES FOR FUTURE IMPROVEMENTS ALONG MAIN THOROUGHFARES	POLICY	HIGH	HIGH	HIGH	
MID-BLOCK CROSSING TRAFFIC STUDY AT SW 78 PLACE & SW 152 STREET	STUDY	HIGH	HIGH	HIGH	
MID-BLOCK CROSSING TRAFFIC STUDY ON SW 184 STREET NEAR PALMER TRINITY SCHOOL	STUDY	HIGH	HIGH	HIGH	
MULTIMODAL FEASIBILITY STUDY FOR SW 144 STREET AND SW 168 STREET	STUDY	HIGH	HIGH	HIGH	

RECOMMENDATIONS	ТҮРЕ	IMPACT	FEASIBILITY	PRIORITIZATION
MULTIMODAL FEASIBILITY STUDY FOR SW 77 AVENUE, SW 82 AVENUE, SW 87 AVENUE AND SW 92 AVE	STUDY	HIGH	HIGH	HIGH
INSTALL PROTECTED BICYCLE LANES ALONG SW 152 ST	DESIGN	HIGH	HIGH	HIGH
INSTALL PROTECTED BICYCLE LANES ALONG SW 184 ST	DESIGN	HIGH	HIGH	HIGH
PEDESTRIAN AMENITIES	INFRASTRUC- TURE	HIGH	HIGH	HIGH
PLANT SHADE TREES ALONG PATHWAYS	POLICY	HIGH	MEDIUM	MEDIUM TO HIGH
MID-BLOCK CROSSING TRAFFIC STUDIES FOR SW 144 STREET AND SW 184 STREET	STUDY	HIGH	MEDIUM	MEDIUM TO HIGH
WIDEN EXISTING SIDEWALK BETWEEN US-1 & FRANJO RD ALONG SW 184 ST	INFRASTRUCTURE	HIGH	MEDIUM	MEDIUM TO HIGH
FILL-IN SIDEWALK GAPS ALONG SW 144 STREET, SW 168 STREET AND SW 184 STREET	INFRASTRUCTURE	HIGH	MEDIUM	MEDIUM TO HIGH
PEDESTRIAN PATHWAY ORDINANCE	POLICY	MEDIUM	MEDIUM	MEDIUM

Table 13: Summary of Recommendations Continued

Marlin Engineering

RECOMMENDATIONS	ТҮРЕ	IMPACT	FEASIBILITY	PRIORITIZATION
	INTERSE	CTIONS		
LEAD PEDESTRIAN INTERVAL (LPI) TRAFFIC STUDY AT SIGNALIZED INTER- SECTIONS	STUDY	HIGH	HIGH	HIGH
RE-STRIP FADED STANDARD CROSS- WALKS AT ALL T-INTERSECTIONS ALONG SW 152 STREET	PAVEMENT MARKINGS	HIGH	HIGH	HIGH
UPGRADE PEDESTRIAN PUSH-BUT- TONS FOR ADA COMPLIANCE AT ALL SIGNALIZED INTERSECTIONS ALONG SW 152 STREET	INFRASTRUCTURE	HIGH	HIGH	HIGH
INSTALL PEDESTRIAN SIGNAL HEADS PER ADA CRITERIA AND INCLUDE AUDIBLE SIGNALS.	INFRASTRUCTURE	HIGH	HIGH	HIGH
LIGHTING	INFRASTRUCTURE	HIGH	HIGH	HIGH
BICYCLE SIGNALS AT SIGNALIZED INTERSECTIONS ALONG SW 152 STREET AND SW 184 STREET	MULTI-AGENCY COORDINATION	HIGH	LOW	MEDIUM TO LOW
INSTALL BICYCLE BOX AT ALL MAJOR SIGNALIZED INTERSECTIONS ALONG US-1, SW 87 AVE AND OLD CUTLER ROAD	MULTI-AGENCY COORDINATION	HIGH	MEDIUM	MEDIUM TO HIGH
HIGH-EMPHASIS OR TEXTURED PAVEMENT FOR ALL CROSSWALKS AT SIGNALIZED INTERSECTIONS	PAVEMENT MARKINGS	HIGH	MEDIUM	MEDIUM TO HIGH
INSTALL PEDESTRIAN CROSSING SIGNAGE AT ALL SIGNALIZED INTERSECTIONS.	SIGNAGE	MEDIUM	HIGH	MEDIUM TO HIGH
RAISED INTERSECTION AT SW 80 AVE & SW 152 STREET	STUDY	MEDIUM	MEDIUM	MEDIUM
REDUCE TURN RADIUS (WHERE FEASIBLE)	STUDY	MEDIUM	LOW	LOW TO MEDIUM



Multi-Use Trail & SMART Plan Connectivity Study

Assessment of Probable Costs

Table 14 and 15 are cost estimates from FDOT's Cost Per Mile Models for Long-Range Estimating which has provided us with conceptual cost estimates for the alternatives, sidewalks and midblock crossings. A more detailed cost estimate for SW 152 Street and SW 184 Street can be found in Appendix 12.

STREET	IMPROVEMENT TYPE	ESTIMATED COST
SW 144 STREET		\$6,000
SW 168 STREET	Sidewalks	\$47,600
SW 184 STREET		\$62,300
SW 152 STREET	Alternative 1 - Multi-Use/	\$638,000
SW 184 STREET	Shared Use Path	\$690,000
SW 152 STREET	Alternative 2 - Separated/	\$1,025,000
SW 184 STREET	Protected Bike Lane	\$1,108,000

Table 14: General Cost Estimates

CORRIDOR	ALTERNATIVE	ESTIMATED COST
SW 152 STREET	2	\$2,872,000
SW 184 STREET	2	\$2,844,000

Table 15: Cost Estimate for Preferred Alternative

APPENDIX

Existing Conditions SW 144th st





Existing Conditions SW 152nd st


Existing Conditions SW 168th st



Existing Conditions SW 184th st





Figure 1 - Cross Section of the Right-of-way for SW 144 Street (ROW varies between 63' - 72')

EXISTING ROADWAY DATA (SW 144TH ST)											
STREET TYPE	URBAN COLLECTOR	BICYCLE FACILITY	NONE								
NUMBER OF LANES	2	TRANSIT	NONE								
SIDEWALKS	5' CONCRETE	ADT	6,200								
SIDEWALK GAPS	+/-174 LINEAR FEET	NUMBER OF BIKE/ PED CRASHES	5								



Utilities obstructing sidewalk, sidewalk cracked and uplifting, 'Do Not Enter' sign faded



Sidewalk does not continue to alert drivers of the prescense of people walking





Sidewalk gap near SW 86 Ave







Missing Tactile Mats & Missing Pedestrian Beacon Signals to Cross SW 82 Ave



Bridge narrows to approximately 46"



Sidewalks dead end - local streets missing sidewalks



Many push-buttons do not meet ADA Standards at Signalized Intersections





Utility pole obstructing sidewalk



Utility poles partially blocking sidewalk



Landscape partially blocking pedestrian signal beacon at SW 77 Ave



Utility block obstructing sidewalk



Sidewalk cracked and uplifting near Old Cutler Rd



Tripping hazard at Old Cutler Road Intersection



Missing sidewalk on west side of Old Cutler Rd



Tactile mats not correctly positioned at Old Cutler Rd Signalized Intersection



Fire Hydrant obstructing sidewalk; push-buttons are not ADA compliant at Old Cutler Rd Signalized Intersection



Tactile mats are missing, curb ramps are not to standard, and crosswalks are faded at Old Cutler Road Signalized Intersection





Figure 2 - Cross Section of the Right-of-way for SW 152 Street (ROW varies between 73' - 96')

EXISTING ROADWAY DATA (SW 152ND ST)										
STREET TYPE	URBAN COLLECTOR	BICYCLE FACILITY	SHARED LANE							
NUMBER OF LANES	2	TRANSIT	YES							
SIDEWALKS	5' CONCRETE	ADT	12,500							
SIDEWALK GAPS	NONE	NUMBER OF BIKE/ PED CRASHES	6							



Utility pole obstructing sidewalk, shade trees missing, bus stop missing signage and ADA access near US 1 South Federal Hwy



Bus stop missing signage and ADA access near SW 87 Ave Signalized Intersection



Share the road sign is blocked by landscaping, eastbound



Sidewalk cracks



Bus stop is not ADA accessible



Utility box obstructing sidewalk, debris in sidewalk may be challenging for people with disabilities



Bus stop is not ADA accessible, missing signage and shade, missing shade trees



Sidewalk is uninviting and debris makes it difficult to access



Sidewalk is well shaded, debris on the sidewalk can be challenging for people with disabilities



Bridge narrows sidewalk to approximately 42"



Shade trees missing, bus stop missing seating, shade and ADA access



Bus stop sign obstructing sidewalk, missing seating, sidewalk drop may be hazard



Share the road sign is missing



Sidewalk is cracked and lifted upwards.



Bus stop sign is leaning and is not ADA accessible, seating and shade are also missing



School zone sign has mold growth. Hard to read



Crosswalks are faded and curb ramps are not properly placed at Old Cutler Road Signalized Intersection



Local streets missing sidewalks



Utility pole obstructing sidewalk, bus stop sign faded, bus stop missing seating and shade, sidewalk cracks present



Landscape beginning to grow over sidewalks and obstructing the sidewalk, area is missing shade trees near Old Cutler Rd Signalized Intersection





Figure 3 - Cross Section of the Right-of-way for SW 168 Street (ROW varies between 72' - 82')

EXISTING ROADWAY DATA (SW 168TH ST)										
STREET TYPE	URBAN COLLECTOR	BICYCLE FACILITY	SHARED LANE							
NUMBER OF LANES	2	TRANSIT	YES							
SIDEWALKS	5' CONCRETE	ADT	6,000							
SIDEWALK GAPS	+/- 1,393 LINEAR FEET	NUMBER OF BIKE/ PED CRASHES	9							



Water pooling at ramp, tactile mats and ramp improperly placed, faded crosswalks at Old Cutler Rd Signalized Intersection



Missing sidewalk gap between SW 76 Ave and Old Cutler Rd





Utility box obstructing sidewalk at Old Cutler Rd





Local streets missing sidewalks

Bridge narrows sidewalks to approximately 42"



87



Missing ADA tactile mats at crosswalk



Signs and utilities obstructing sidewalk



Utility pole obstructing sidewalk



Sidewalk cracked, missing tactile mats at crosswalk



Sidewalk cracks and sidewalks narrow at bridge



Bus stop is not ADA accessible, missing shade and seating, no trees to provide shade



Sidewalk uplifting and cracked





Missing shahde trees





Missing shahde trees

Utility pole partially obstructing sidewalk



Sidewalk does not continue to alert drivers of the presence of people, missing shade trees, utility poles partially obstructing sidewalk



Exposed wire on utility pole near Elementary School



Missing shade trees



Sidewalk dead-ends on southside of SW 168 Street at US 1 South Dixie Highway, missing gap





Vehicle blocking sidewalk



Curb ramp improperly place, missing crosswalk





Figure 4 - Cross Section of the Right-of-way for SW 184 Street (ROW varies between 77' - 90')

EXISTING ROADWAY DATA (SW 184TH ST)											
STREET TYPE	MINOR ARTERIAL	BICYCLE FACILITY	NONE								
NUMBER OF LANES	5 TO 2	TRANSIT	YES								
SIDEWALKS	5' - 6' CONCRETE	ADT	5,900								
SIDEWALK GAPS	+/- 1,825LINEAR FEET	NUMBER OF BIKE/ PED CRASHES	6								



Utility pole obstructing sidewalk



Missing shade trees



Utility poles partially obstructing sidewalk



Missing shade trees



Signage and utility pole obstructing sidewalk on SW 97 Ave/Franjo Rd



Fire hydrant obstructing sidewalk



Exposed wire near SW 87 Ave



Existing trees do not provide adequate shade



Sidewalk blocked by construction, missing MOT for pedestrians, missing shade trees



Missing sidewalk gap, evidence of pedestrian pathway near SW 85 Ave



Missing sidewalk between SW 79 Ct and Old Cutler Rd



Missing sidewalk on west side of Old Cutler Rd

APPENDIX 4: CRASH ANALYSIS

Crash Analysis for SW 144 Street

Crash statistics and crash histograms (by time of day, month, crash type, and severity, lighting, and surface conditions) were created and presented in the below tables and figures.

	SW 144th Street		Num	ber of Cra	shes				
51	W 144th Street			Year			5 Year Total Crashes	Mean Crashes Per Vear	%
		2015	2016	2017	2018	2019	Crashes	rei ieai	
CRASH TYPE	Rear End	26	19	26	19	18	108	21.60	43.7%
	Head On	0	0	0	0	0	0	0.00	0.0%
	Angle	9	8	9	12	12	50	10.00	20.2%
	Left Turn	3	4	5	3	5	20	4.00	8.1%
	Right Turn	0	0	1	1	0	2	0.40	0.8%
	Sideswipe	7	0	7	1	3	18	3.60	7.3%
	Coll. w/ Pedestrian	0	0	0	2	1	3	0.60	1.2%
	Coll. w/ Bicycle	0	0	0	1	1	2	0.40	0.8%
	Ran Off Road	1	0	3	0	1	5	1.00	2.0%
	Rollover	0	0	0	0	1	1	0.20	0.4%
	Unknown	5	2	0	4	2	13	2.60	5.3%
	Other	5	9	5	4	2	25	5.00	10.1%
	Total Crashes	56	42	56	47	46	247	49.40	100.0%
SEVERITY	PDO Crashes	47	37	48	31	33	196	39.20	79.4%
	Fatal Crashes	0	0	1	0	1	2	0.40	0.8%
	Injury Crashes	9	5	7	16	12	49	9.80	19.8%
LIGHTING	Daylight	38	31	45	34	38	186	37.20	75.3%
CONDITIONS	Dusk	4	3	1	1	2	11	2.20	4.5%
	Dawn	0	0	0	1	0	1	0.20	0.4%
	Dark - Lighted	7	3	5	7	2	24	4.80	9.7%
	Dark - Not Lighted	7	4	5	3	4	23	4.60	9.3%
	Unknown	0	1	0	1	0	2	0.40	0.8%
SURFACE	Dry	47	36	50	44	41	218	43.60	88.3%
CONDITIONS	Wet	9	6	6	3	4	28	5.60	11.3%
	Mud	0	0	0	0	1	1	0.20	0.4%
MONTH	January	2	3	5	2	7	19	3.80	7.7%
OF YEAR	February	4	4	5	4	4	21	4.20	8.5%
	March	9	2	4	3	4	22	4.40	8.9%
	April	5	5	4	4	4	22	4.40	8.9%
	Мау	2	3	1	3	2	11	2.20	4.5%
	June	1	4	5	2	3	15	3.00	6.1%
	July	5	5	3	6	3	22	4.40	8.9%
	August	6	6	6	5	2	25	5.00	10.1%
	September	8	0	6	2	6	22	4.40	8.9%
	October	4	3	11	3	4	25	5.00	10.1%
	November	4	2	2	8	4	20	4.00	8.1%
	December	6	5	4	5	3	23	4.60	9.3%

	SW/ 1//th Street		Num	ber of Cra	shes				
SW	144th Street			Year		5 Year Total Crashes	Mean Crashes Per Year	%	
		2015	2016	2017	2018	2019			
DAY	Sunday	2	2	5	8	3	20	4.00	8.1%
OF WEEK	Monday	11	3	14	8	6	42	8.40	17.0%
	Tuesday	8	7	6	8	4	33	6.60	13.4%
	Wednesday	10	5	9	3	8	35	7.00	14.2%
	Thursday	8	11	8	12	12	51	10.20	20.6%
	Friday	11	8	10	6	10	45	9.00	18.2%
	Saturday	6	6	4	2	3	21	4.20	8.5%
HOUR	00:00-06:00	3	0	4	2	0	9	1.80	3.6%
OF DAY	06:00-09:00	6	8	10	6	5	35	7.00	14.2%
	09:00-11:00	4	4	4	7	5	24	4.80	9.7%
	11:00-13:00	5	5	11	4	5	30	6.00	12.1%
	13:00-15:00	8	3	4	6	3	24	4.80	9.7%
	15:00-18:00	15	13	14	11	15	68	13.60	27.5%
	18:00-24:00	15	9	9	11	13	57	11.40	23.1%

Notes:

1) Collision with Bicycle Crashes include Collision with Bicycle/Collision with Bicycle in Bike Lane (Codes 11 and 12).

2) Fixed Object Crashes include collisions with sign/sign post, utility/light pole, guardrail, fence, concrete barrier wall, bridge, pier,

abutment, rail, tree, shrubbery, construction barricade/sign, traffic gate, crash attenuators, other fixed objects (incl. above road).

3) Ran-off-Road Crashes include Ran in Ditch/Culvert and Ran off road into water (Codes 29 and 30).

4) Other crashes include crashes not categorized as the crash types shown in the table.

5) Dark Crashes include both scenarios - with and without street lighting.

Based on the crash data from 2015 to 2019, a total of 247 crashes occurred on SW 144 Street from US 1/South Dixie Highway to Old Cutler Road. A high number of rear-end (43.7%) crashes were recorded, followed by angled (20.20%) crashes. Two fatal crashes occurred in 2017 and 2019. Most crashes (79.4%) were property damage only. Also, the majority of crashes (75.3%) occurred during clear daylight conditions. Despite adverse weather conditions in Florida, there were 28 or 11.3% of crashes that occurred on wet pavement conditions.

During the 5-year period, August and October (10.1% each) were the months with the highest number of crashes. When compared to other days of the week Thursdays had the highest percentage of average crashes (20.6%) documented per year. Additionally, more crashes were recorded during the evening-time, particularly between 3 PM to 12 AM (50.6%). There were three (3) pedestrian crashes and two (2) bicycle crashes. Moreover, there is a decreasing trend in the number of crashes from 2017 to 2019.

Pedestrian and Bicycle crash analysis

There were three (3) pedestrian crashes on SW 144 Street from US 1/South Dixie Highway to Old Cutler Road. Two (2) pedestrian crashes occurred in 2018 and one (1) occurred in 2019. All three of the pedestrian crashes occurred during clear weather, two occurred during daylight conditions, and one occurred during the evening. Out of those three crashes, two crashes were

injury crashes, and one crash was property damage only. One crash happened at a four-way intersection and the other two did not occur at an intersection.

There were two (2) bicycle crashes on SW 144 Street from US 1/South Dixie Highway to Old Cutler Road. One bicycle crash occurred in 2018 and one (1) occurred in 2019. Both crashes occurred at the US 1 and SW 144 Street intersection. Both bicycle crashes occurred in clear weather, one of which occurred during daylight and the other occurred during the evening. Both crashes involved injuries. One crash happened on the outside right-of-way and the other did not occur at an intersection.

Crash Analysis for SW 152 Street

Crash statistics and crash histograms (by time of day, month, crash type, and severity, lighting, and surface conditions) were created and presented in the below tables and figures.

Ch	1152nd Street		Num	ber of Cra	shes				
51	/ 152nd Street			Year			5 Year Total Crashes	Mean Crashes Per Year	%
		2015	2016	2017	2018	2019			
CRASH TYPE	Rear End	55	49	51	34	50	239	47.80	50.7%
	Head On	0	0	0	1	0	1	0.20	0.2%
	Angle	3	4	2	6	10	25	5.00	5.3%
	Left Turn	5	4	5	6	13	33	6.60	7.0%
	Right Turn	1	4	2	0	4	11	2.20	2.3%
	Sideswipe	10	9	14	6	13	52	10.40	11.0%
	Coll. w/ Pedestrian	1	0	0	1	2	4	0.80	0.8%
	Coll. w/ Bicycle	0	1	0	1	0	2	0.40	0.4%
	Ran Off Road	3	1	2	4	2	12	2.40	2.5%
	Rollover	0	0	0	1	3	4	0.80	0.8%
	Unknown	2	0	1	20	3	26	5.20	5.5%
	Other	13	11	7	19	12	62	12.40	13.2%
	Total Crashes	93	83	84	99	112	471	94.20	100.0%
SEVERITY	PDO Crashes	83	68	65	86	93	395	79.00	83.9%
	Fatal Crashes	0	0	0	0	3	3	0.60	0.6%
	Injury Crashes	10	15	19	13	16	73	14.60	15.5%
LIGHTING	Daylight	66	67	74	71	90	368	73.60	78.1%
CONDITIONS	Dusk	4	1	3	4	3	15	3.00	3.2%
	Dawn	2	4	0	3	1	10	2.00	2.1%
	Dark - Lighted	11	8	3	13	7	42	8.40	8.9%
	Dark - Not Lighted	10	3	4	7	11	35	7.00	7.4%
	Unknown	0	0	0	1	0	1	0.25	0.2%
SURFACE	Dry	86	68	74	93	95	416	83.20	88.3%
CONDITIONS	Wet	7	15	10	6	17	55	11.00	11.7%
	Mud	0	0	0	0	0	0	0.00	0.0%
MONTH	January	8	9	12	4	12	45	9.00	9.6%
OF YEAR	February	6	5	7	7	7	32	6.40	6.8%
	March	6	10	11	6	8	41	8.20	8.7%

cw	SW 152nd Street		Num	ber of Cra	shes				
SW	152nd Street			Year			5 Year Total Crashes	Mean Crashes Per Year	%
		2015	2016	2017	2018	2019			
	April	5	11	9	7	11	43	8.60	9.1%
	May	8	9	4	9	11	41	8.20	8.7%
	June	17	6	9	6	5	43	8.60	9.1%
	July	6	7	4	8	6	31	6.20	6.6%
	August	8	11	9	9	10	47	9.40	10.0%
	September	11	1	4	17	12	45	9.00	9.6%
	October	3	2	5	12	14	36	7.20	7.6%
	November	7	2	6	9	11	35	7.00	7.4%
	December	8	10	4	5	5	32	6.40	6.8%
DAY	Sunday	1	5	3	7	10	26	5.20	5.5%
OF WEEK	Monday	16	15	11	19	12	73	14.60	15.5%
	Tuesday	21	20	22	7	27	97	19.40	20.6%
	Wednesday	16	9	15	19	21	80	16.00	17.0%
	Thursday	16	8	7	15	21	67	13.40	14.2%
	Friday	16	15	15	17	16	79	15.80	16.8%
	Saturday	7	11	11	15	5	49	9.80	10.4%
HOUR	00:00-06:00	5	2	0	5	2	14	2.80	3.0%
OF DAY	06:00-09:00	14	13	10	21	18	76	15.20	16.1%
	09:00-11:00	4	9	12	6	12	43	8.60	9.1%
	11:00-13:00	11	10	9	8	11	49	9.80	10.4%
	13:00-15:00	14	12	14	6	11	57	11.40	12.1%
	15:00-18:00	22	25	26	24	34	131	26.20	27.8%
	18:00-24:00	23	12	13	29	24	101	20.20	21.4%

Notes:

1) Collision with Bicycle Crashes include Collision with Bicycle/Collision with Bicycle in Bike Lane (Codes 11 and 12).

2) Fixed Object Crashes include collisions with sign/sign post, utility/light pole, guardrail, fence, concrete barrier wall, bridge, pier,

abutment, rail, tree, shrubbery, construction barricade/sign, traffic gate, crash attenuators, other fixed objects (incl. above road).

3) Ran-off-Road Crashes include Ran in Ditch/Culvert and Ran off road into water (Codes 29 and 30).

4) Other crashes include crashes not categorized as the crash types shown in the table.

5) Dark Crashes include both scenarios - with and without street lighting.

Based on the crash data, a total of 471 crashes occurred on SW 152 Street from US 1/South Dixie Highway to Old Cutler Road. A high number of rear-end (50.7%) crashes were documented, significantly more than any other crash type. Most crashes (83.90%) were property damage only, three (3) fatalities were recorded in 2019. The majority of crashes (78.1%) occurred during clear daylight conditions. Despite adverse weather conditions in Florida, there were 55 or 11.8% of crashes that occurred on wet pavement conditions.

During the 5-year period, August (10%) had the highest number of crashes. When compared to other days of the week Tuesdays had the highest percentage of average crashes (20.6%) documented per year. Additionally, more crashes were recorded during the early evening hours,

particularly between 3 PM to 6 PM (27.8%). Lastly, there were four (4) pedestrian crashes and two (2) bicycle crashes.

Pedestrian and Bicycle crash analysis

There were four (4) pedestrian crashes on SW 152 Street from US 1/South Dixie Highway to Old Cutler Road. Two (2) pedestrian crashes occurred in 2019 and one (1) occurred in both 2015 and 2018. All four of the pedestrian crashes occurred in clear weather with two occurring during daylight conditions, the other two occurred at night time. Of the four crashes, one crash was fatal, two crashes involved injuries, and one crash was property damage only. The fatal crash occurred on the roadway, but not at an intersection, near the intersection at SW 78 Avenue.

There were two (2) bicycle crashes on SW 152 Street from US 1/South Dixie Highway to Old Cutler Road. One bicycle crash occurred in 2016 and one (1) occurred in 2018. Both of the bicycle crashes occurred in clear weather and during daylight conditions. One of the crashes involved an injury and the other was property damage only. One crash happened at the T-intersection (SW 152 St. and SW 72 Ave.), and the other occurred at a four-way intersection.

Crash Analysis for SW 168 Street

Crash statistics and crash histograms (by time of day, month, crash type, and severity, lighting, and surface conditions) were created and presented in the below tables and figures.

SIM	SW 168th Street		Num	ber of Cra	shes				
30				Year		5 Year Total Crashes	Mean Crashes Per Year	%	
		2015	2016	2017	2018	2019			
CRASH TYPE	Rear End	20	22	18	17	17	94	18.80	30.0%
	Head On	0	1	1	0	0	2	0.40	0.6%
	Angle	7	17	17	11	26	78	15.60	24.9%
	Left Turn	8	5	5	7	3	28	5.60	8.9%
	Right Turn	0	2	2	3	3	10	2.00	3.2%
	Sideswipe	3	11	7	1	6	28	5.60	8.9%
	Coll. w/ Pedestrian	0	2	0	1	0	3	0.60	1.0%
	Coll. w/ Bicycle	1	2	1	2	0	6	1.20	1.9%
	Ran Off Road	2	1	1	2	2	8	1.60	2.6%
	Rollover	0	0	0	0	2	2	0.40	0.6%
	Unknown	0	2	0	9	1	12	2.40	3.8%
	Other	8	9	6	9	10	42	8.40	13.4%
	Total Crashes	49	74	58	62	70	313	62.60	100.0%
SEVERITY	PDO Crashes	40	60	51	51	55	257	51.40	82.1%
	Fatal Crashes	0	2	0	0	1	3	0.60	1.0%
	Injury Crashes	9	12	7	11	14	53	10.60	16.9%
LIGHTING	Daylight	38	59	43	42	52	234	46.80	74.8%
CONDITIONS	Dusk	1	3	2	5	4	15	3.00	4.8%
	Dawn	0	0	1	2	0	3	0.60	1.0%
	Dark - Lighted	4	8	5	5	7	29	5.80	9.3%

C M	1169th Street		Num	ber of Cra	shes				
30	100th Street			Year			5 Year Total Crashes	Mean Crashes Per Year	%
		2015	2016	2017	2018	2019			
	Dark - Not Lighted	6	4	7	8	7	32	6.40	10.2%
SURFACE	Dry	43	65	51	60	59	278	55.60	88.8%
CONDITIONS	Wet	6	9	7	2	11	35	7.00	11.2%
	Mud	0	0	0	0	0	0	0.00	0.0%
MONTH	January	8	5	6	8	3	30	6.00	9.6%
OF YEAR	February	3	4	8	7	7	29	5.80	9.3%
	March	10	12	8	5	3	38	7.60	12.1%
	April	2	6	2	6	13	29	5.80	9.3%
	Мау	3	8	1	11	7	30	6.00	9.6%
	June	3	7	4	2	4	20	4.00	6.4%
	July	4	5	0	1	6	16	3.20	5.1%
	August	4	8	6	5	6	29	5.80	9.3%
	September	3	2	7	1	6	19	3.80	6.1%
	October	4	7	10	5	6	32	6.40	10.2%
	November	4	6	2	9	2	23	4.60	7.3%
	December	1	4	4	2	7	18	3.60	5.8%
DAY	Sunday	4	7	5	4	9	29	5.80	9.3%
OF WEEK	Monday	11	10	9	10	9	49	9.80	15.7%
	Tuesday	6	9	9	12	17	53	10.60	16.9%
	Wednesday	5	15	9	13	12	54	10.80	17.3%
	Thursday	12	9	7	11	6	45	9.00	14.4%
	Friday	8	15	14	7	11	55	11.00	17.6%
	Saturday	3	9	5	5	6	28	5.60	8.9%
HOUR	00:00-06:00	3	2	3	4	3	15	3.00	4.8%
OF DAY	06:00-09:00	8	19	12	18	16	73	14.60	23.3%
	09:00-11:00	4	3	4	7	5	23	4.60	7.3%
	11:00-13:00	2	9	6	2	5	24	4.80	7.7%
	13:00-15:00	8	8	9	3	7	35	7.00	11.2%
	15:00-18:00	15	16	16	16	15	78	15.60	24.9%
	18:00-24:00	9	17	8	12	19	65	13.00	20.8%

Notes:

1) Collision with Bicycle Crashes include Collision with Bicycle/Collision with Bicycle in Bike Lane (Codes 11 and 12).

2) Fixed Object Crashes include collisions with sign/sign post, utility/light pole, guardrail, fence, concrete barrier wall, bridge, pier,

abutment, rail, tree, shrubbery, construction barricade/sign, traffic gate, crash attenuators, other fixed objects (incl. above road).

3) Ran-off-Road Crashes include Ran in Ditch/Culvert and Ran off road into water (Codes 29 and 30).

4) Other crashes include crashes not categorized as the crash types shown in the table.

5) Dark Crashes include both scenarios - with and without street lighting.

Based on the crash data, a total of 313 crashes occurred on the SW 168 Street from US 1/South Dixie Highway to Old Cutler Road. A high number of rear-end (30%) crashes were recorded followed by angle crashes (24.9%). Most crashes (82.1%) were property damage only, three crashes resulted in fatalities, over the five-year period. The majority of crashes (74.8%) occurred

during clear daylight conditions. Despite adverse weather conditions in Florida, there were 35 or 11.2% of crashes which occurred during wet pavement conditions.

During the 5-year period, March (12.1%) was the month with the highest number of crashes. When compared to other days of the week, Friday (17.6%) and Wednesday (17.3%) had the highest percentage of average crashes per year documented. Additionally, early evening (24.9%), from 3 PM to 6 PM, and early morning (23.3%), from 6 AM to 9 AM, crashes occurred more than any other timeframe. Lastly, there were three (3) pedestrian crashes and six (6) bicycle crashes.

Pedestrian and Bicycle crash analysis

There were three (3) pedestrian crashes on SW 168 Street from US 1/South Dixie Highway to Old Cutler Road. Two (2) pedestrian crashes occurred in 2016 and one (1) occurred in 2018. One pedestrian crash occurred during the weekend. All three of the pedestrian crashes occurred in clear weather, two occurred at night time, and one occurred at day time. All three crashes involved injuries and 'sideswipe' was the dominating crash type (2 crashes) followed by an angled crash (1 crash). The road surface was dry during all three crashes.

There were six (6) bicycle crashes on SW 168 Street from US 1/South Dixie Highway to Old Cutler Road, higher than any other study roadway. One bicycle crash occurred in 2015, two (2) in 2016, one (1) in 2017, and two (2) in 2018. All six of the crashes occurred during the weekdays specifically Wednesday and Thursday (4 crashes occurred on these two days). One bicycle crash was due to distracted driving. Four bicycle crashes occurred during clear weather conditions, one occurred during cloudy daylight conditions, and one occurred on a rainy day. Four of the crashes involved injuries, and the other two were property damage only. One bicycle crash occurred on wet surface conditions. One crash occurred at the SW 87 Avenue roundabout, two crashes occurred at a four-way intersection, two did not occur at an intersection, and one occurred at SW 83 Court T-intersection.

Crash Analysis for SW 184 Street

Crash statistics and crash histograms (by time of day, month, crash type, and severity, lighting, and surface conditions) were created and presented in the below tables and figures.

CINI 197th Streat			Num	ber of Cra	shes				
SW	184th Street			Year		5 Year Total Crashes	Mean Crashes Per Year	%	
		2015	2016	2017	2018	2019			
CRASH TYPE	Rear End	24	27	25	24	23	123	24.60	36.6%
	Head On	2	1	1	0	2	6	1.20	1.8%
	Angle	8	6	7	11	8	40	8.00	11.9%
	Left Turn	11	8	12	12	14	57	11.40	17.0%
	Right Turn	1	1	1	1	1	5	1.00	1.5%
	Sideswipe	3	7	6	4	8	28	5.60	8.3%
	Coll. w/ Pedestrian	0	0	1	1	0	2	0.40	0.6%
	Coll. w/ Bicycle	1	0	1	0	2	4	0.80	1.2%

C M	1194th Street		Num	ber of Cra	ishes				
SV	/ 184th Street			Year			5 Year Total Crashes	Mean Crashes Per Year	%
		2015	2016	2017	2018	2019			
	Ran Off Road	2	2	2	5	2	13	2.60	3.9%
	Rollover	1	0	0	1	2	4	0.80	1.2%
	Unknown	1	4	0	15	3	23	4.60	6.8%
	Other	7	5	4	8	7	31	6.20	9.2%
	Total Crashes	61	61	60	82	72	336	67.20	100.0%
SEVERITY	PDO Crashes	46	52	43	62	58	261	52.20	77.7%
	Fatal Crashes	0	1	0	0	0	1	0.20	0.3%
	Injury Crashes	15	8	17	20	14	74	14.80	22.0%
LIGHTING	Daylight	49	47	49	68	55	268	53.60	79.8%
CONDITIONS	Dusk	2	2	1	1	3	9	1.80	2.7%
	Dawn	1	1	0	0	1	3	0.60	0.9%
	Dark - Lighted	6	4	6	7	10	33	6.60	9.8%
	Dark - Not Lighted	3	7	4	6	3	23	4.60	6.8%
SURFACE	Dry	50	58	56	71	63	298	59.60	88.7%
CONDITIONS	Wet	11	3	4	11	9	38	7.60	11.3%
MONTH	January	2	5	7	8	3	25	5.00	7.4%
OF YEAR	February	2	1	5	7	5	20	4.00	6.0%
	March	4	9	3	11	8	35	7.00	10.4%
	April	3	7	11	6	11	38	7.60	11.3%
	May	8	9	3	9	8	37	7.40	11.0%
	June	4	5	3	5	4	21	4.20	6.3%
	July	5	7	4	2	7	25	5.00	7.4%
	August	7	3	3	7	4	24	4.80	7.1%
	September	6	3	7	12	9	37	7.40	11.0%
	October	10	1	5	8	6	30	6.00	8.9%
	November	3	7	5	4	4	23	4.60	6.8%
	December	7	4	4	3	3	21	4.20	6.3%
DAY	Sunday	3	5	3	6	6	23	4.60	6.8%
OF WEEK	Monday	5	10	5	14	8	42	8.40	12.5%
	Tuesday	5	9	11	18	13	56	11.20	16.7%
	Wednesday	10	11	11	10	9	51	10.20	15.2%
	Thursday	13	12	12	12	12	61	12.20	18.2%
	Friday	13	8	11	12	17	61	12.20	18.2%
	Saturday	12	6	7	10	7	42	8.40	12.5%
HOUR	00:00-06:00	4	2	2	2	0	10	2.00	3.0%
OF DAY	06:00-09:00	8	8	12	9	12	49	9.80	14.6%
	09:00-11:00	6	7	9	8	6	36	7.20	10.7%
	11:00-13:00	7	4	5	11	10	37	7.40	11.0%
	13:00-15:00	14	8	12	18	7	59	11.80	17.6%
	15:00-18:00	14	18	12	18	20	82	16.40	24.4%
	18:00-24:00	8	14	8	16	17	63	12.60	18.8%

Notes:

1) Collision with Bicycle Crashes include Collision with Bicycle/Collision with Bicycle in Bike Lane (Codes 11 and 12).

2) Fixed Object Crashes include collisions with sign/sign post, utility/light pole, guardrail, fence, concrete barrier wall, bridge, pier,

abutment, rail, tree, shrubbery, construction barricade/sign, traffic gate, crash attenuators, other fixed objects (incl. above road).

4) Other crashes include crashes not categorized as the crash types shown in the table.

5) Dark Crashes include both scenarios - with and without street lighting.

Based on the crash date, a total of 336 crashes occurred on SW 184 Street from US 1/South Dixie Highway to Old Cutler Road. A high number of rear-end (36.6%) crashes were recorded, more than any other crash type. Most crashes (77.7%) involved property damage only, there was one (1) fatal crash recorded during the five-year period. The majority of crashes (79.8%) occurred during clear daylight conditions. Despite adverse weather conditions in Florida, there were 38 or 11.3% of crashes on wet pavement.

During the 5-year period, April (11.3%), May and September (11.0% each), were the months with the highest number of crashes. When compared to other days of the week Thursday and Friday had the highest percentage (18.2% each) of average crashes documented. Additionally, more crashes were recorded during the early evening hours, particularly from 3 PM to 6 PM (24.4%). Lastly, there were two (2) pedestrian crashes and four (4) bicycle crashes.

Pedestrian and Bicycle crash analysis

There were two (2) pedestrian crashes on SW 184 Street from US 1/South Dixie Highway to Old Cutler Road. One (1) pedestrian crash occurred in 2017 and one (1) occurred in 2018. Of the two pedestrian crashes, one occurred during the weekend. Both of the pedestrian crashes occurred in clear weather, one occurred during nighttime, and one occurred during day time. Both crashes involved injuries. The road surface conditions were dry during the crashes. One crash occurred at a four-way intersection, and one did not occur at an intersection.

There were four (4) bicycle crashes on SW 184 Street from US 1/South Dixie Highway to Old Cutler Road. Two (2) bicycle crashes occurred in 2019, one (1) bicycle crash occurred in 2015, and one (1) occurred in 2017. Two (2) bicycle crashes occurred during the weekend. Two (2) bicycle crashes occurred because of distracted driving. All four (4) of the bicycle crashes occurred in clear daylight weather conditions. All four (4) of the crashes involved injury crashes. Two (2) bicycle crash types were "front to rear" with vehicles. All four (4) bicycle crashes occurred on dry surface conditions. Two (2) crashes occurred at the T-intersection of SW 82 Avenue and Caribbean Boulevard, one crash occurred at a four-way intersection, and one did not occur at an intersection.

³⁾ Ran-off-Road Crashes include Ran in Ditch/Culvert and Ran off road into water (Codes 29 and 30).

RESOLUTION RECOMMENDING THE MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION GOVERNING BOARD SUPPORT ALTERNATIVE #2 – PROTECTED BIKE LANES, AS THE RECOMMENDED ALTERNATIVE FOR THE VILLAGE OF PALMETTO BAY'S MULTI-USE TRAIL & SMART PLAN CONNECTIVITY STUDY ON SW 152ND STREET AND SW 184TH STREET

WHEREAS, the Interlocal Agreement creating and establishing the Metropolitan Planning Organization (MPO) for the Miami Urbanized Area requires that the Miami-Dade Transportation Planning Organization (TPO), in its role as the MPO, provide a structure to evaluate the adequacy of the transportation planning and programming process; and

WHEREAS, the TPO has established the Bicycle Pedestrian Advisory Committee (BPAC) to advise it on bicycle and pedestrian related plans and projects; and

WHEREAS, the Village of Palmetto Bay presented its Multi-Use Trail & SMART Plan Connectivity Study to the BPAC; and

WHEREAS, the purpose of the study is to improve mobility, safety, and accessibility to the SMART Plan's South Dade Corridor between US-1/South Dixie Highway and Old Cutler Road; and

WHEREAS, the Village of Palmetto Bay has held public and stakeholder meetings throughout 2021 obtaining survey data and public input of the proposed four study roadway corridors on SW 144th, SW 152nd, SW 168th, and SW 184th Streets; and

WHEREAS, the corridors on SW 152nd and SW 184th Streets were selected pursuant to Evaluation Criteria and Scoring and the preferred alternative for both corridors was Alternative #2 – Protected Bike Lane; and

WHEREAS, the BPAC believes that selected corridors will promote bicycle pedestrian connectivity to the South Dade Transitway,

NOW, THEREFORE, BE IT RESOLVED BY THE BICYCLE PEDESTRIAN ADVISORY COMMITTEE OF THE MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION that this committee hereby recommends that the Miami-Dade Transportation Planning Organization Governing Board support Alternative 2 – Protected Bike Lanes, as the recommended alternative for the Village of Palmetto Bay's Multi-Use Trail & SMART Plan Connectivity Study on SW 152nd Street and SW 184th Street.

The foregoing resolution was offered by Hank Sanchez-Resnik who moved its adoption. The motion was seconded by Dr. Mickey Witte and upon being put to a vote was as follows:

Chairperson Francisco Arbelaez	- Aye
Vice Chair Mike Fleming	- Absent
5	

Brett Bibeau	- Absent	Hank Sanchez-Resnik	- Aye
Webber Charles	- Absent	Eric Tullberg	- Aye
Charles Fischer	- Absent	Dr. Mickey Witte	- Aye
Cibelis Rosado-Mota	- Absent		

The Chairperson thereupon declared the resolution duly passed and approved this 16th day of November 2021.

BICYCLE PEDESTRIAN ADVISORY COMMITTEE (BPAC)

ANNING By <u>Unput</u> Vivian G. Villaamil, Clerk Miami-Dade TPO 0 ORTATION IN ITS ROLE AS MIAMI-DADE MPO

357C

Bicycle Pedestrian Advisory Committee of the Miami-Dade Transportation Planning Organization

> **Chairperson** Francisco Arbelaez

Vice-Chairperson Mike Fleming

Members Brett Bibeau Webber Charles Charles Fischer Cibelis Rosado-Mota Hank Sanchez-Resnik Eric Tullberg Dr. Mickey Witte



BPAC Coordinator Kevin C. Walford Miami-Dade TPO 150 West Flagler Street Suite 1900 Miami, Florida 33130 (305) 375-2642 T (305) 375-4950 F Kevin.Walford@mdtpo.org

#MiamiSMARTPlan Mobility Today & Tomorrow www.mlamidadetpo.org

MEETING OF TUESDAY, NOVEMBER 16, 2021 5:30 PM

BICYCLE PEDESTRIAN ADVISORY COMMITTEE

MIAMI-DADE TPO GOVERNING BOARD CHAMBERS 150 WEST FLAGLER STREET, SUITE 1924 MIAMI, FL 33130

AGENDA

- I. CALL TO ORDER
- II. APPROVAL OF AGENDA
- III. APPROVAL OF MINUTES Meeting of October 12, 2021
- IV. CITIZEN COMMENTS 3 Minutes Each Speaker
- V. VILLAGE OF PALMETTO BAY MULTI-USE TRAILS & SMART PLAN CONNECTIVITY STUDY Christina Fermin, Marlin Engineering
- VI. FDOT NW 36TH STREET MULTIMODAL STUDY Carlos Castro – FDOT District 6
- VII. FDOT DISTRICT 6 PROJECT UPDATE REPORT Tiffany Gehrke, FDOT District 6

VIII. INFORMATION

- 1) BPAC Attendance 2021 Report + Requirements for 2022
- 2) BPAC Calendar Dates for 2022
- **IX. MEMBER COMMENTS 3** Minutes Each Speaker

X. ADJOURNMENT

Next Meeting Date – December 14, 2021

It is the policy of the Miami-Dade TPO to comply with all of the requirements of the Americans with Disabilities Act (ADA). The facility is accessible. For sign language interpreters, assistive listening devices, or materials in accessible format, please call 305-375-1888 at least five business days in advance of the workshop.



Multi-Use Trail & SMART Plan Connectivity Study

Bicycle & Pedestrian Advisory Committee Meeting

November 16, 2021







Multi-Use Trail & SMART Plan Connectivity Study: Appendix 4
01 Project Overview





Purpose & Intent

To improve mobility, safety and accessibility to the SMART Plan's South Dade Corridor Transitway between US 1/South Dixie Highway and Old Cutler Road

Study Roadways

- SW 144 Street
- SW 152 Street
- SW 168 Street
- SW 184 Street



Project Tasks

Task 1: Public Involvement & Coordination

- ✓ Tuesday, April 6, 2021 First Public Meeting
- ✓ Survey # 1 April to May 2021
- ✓ June 2021 Stakeholder Meeting
- ✓ August 2021 Second Public Meeting
- ✓ November 2021 BPAC Meeting
- February 2022 Presentation to City Council

Task 2: Existing Conditions & Data Collection

- ✓ Review existing plans, documents and programs
- ✓ Field inventory and site visit of the 4 corridors
- ✓ Analysis of collected traffic, bicycle and pedestrian data
- ✓ Walking Audits: April 15 & 17

Task 3: Conceptual Design

- ✓ Evaluation Criteria
- ✓ Two corridors will be selected
- \checkmark Up to 2 alternatives will be presented
- ✓ Analysis of alternatives
- \checkmark Selection of preferred alternative
- Cost estimates for the preferred alternative

Task 4: Recommendations

- Multimodal improvements prioritized
- \checkmark Table of available funding options

Task 5: Documentation

• Final Study

6

Project Schedule



SMART PLAN South Corridor BRT

- Bus Rapid Transit Coming 2022
- 10 and 15-minute Arrivals
- 14 State of the Art Stations
- Real-Time Arrival Information
- Public Art
- Intersection Improvements
- New Stations at SW 136 St, SW 152 St, SW 168 St & SW 184 St



02 Survey #1 Results





147 Responses

• 86% walk and/or bike the study's roadways

Key Takeaways

- People would walk/bike more if there was **infrastructure available**, less or slower traffic, and it was safer/more secure
- 78% want or have sidewalks in their neighborhoods
- Pedestrian amenities (63%) are the most desired pedestrian improvements, followed by high visibility crosswalks (42%) and more trails/walking paths and/or wider sidewalks (41%)
- 81% of respondents want a **separated bicycle facility** (i.e., shared use path, separated bicycle lane(s), protected bicycle lane(s))
- Street trees are the #1 desired community improvement, followed by bioswales and pocket parks
- Street trees and lighting (52%) are the most desired intersection improvement



03 Evaluation Criteria



Multi-Use Trail & SMART Plan Connectivity Study: Appendix 4



Evaluation Criteria & Scoring

Factor	Total Possible Points	SW 144 Street	SW 152 Street	SW 168 Street	SW 184 Street
Safety (i.e. crash, speed, traffic calming)	21	8	14	12	13
Density (i.e., population, employment)	16	12	11	11	12
Infrastructure (i.e., sidewalks, bike lanes, pathways, trees, ROW)	23	9	14	13	17
Connectivity (i.e., schools, transit, destinations)	16	5	13	11	12
Public & Stakeholder Preference (i.e., resident survey ranking and stakeholder support)	6	2	6	5	1
TOTAL	82	36	58	52	55

04 Conceptual Alternatives



Multi-Use Trails

Multi-Use Trails are also known as Trails, Shared Use Paths, Greenways, Bike Paths or Side Paths.

Typically made of asphalt or concrete.

Standard width is 10 to 12-Feet, may be 8-Feet in areas where space is restricted or if it is not heavily used.

Must be at least 6-Feet from roadway and have a 2-Foot clearance on each side.



Separated or Protected Bicycle Lane

Should have a physical barrier to protect users from vehicular traffic.

Adjacent to vehicular traffic, but has a physical barrier. This may include the use of curbing, zebra or armadillo delineators, vertical pole delineators, parallel parking, or landscaping.

Standard includes a 4-Foot Bicycle Lane with 3-Foot Buffer (Total 7 Feet).



Appendix 4: BPAC

SW 152 Street Existing Conditions



Street Character

• Tree-lined residential street

Right-of-Way & Travel Lanes

- ROW Varies 73' 96'
- 2 Lanes

Multimodal Access

- Sidewalks: 5-FT, Concrete, Fair Condition
- Bicycle: Sharrows/Shared Lane
- Transit: Route 57 & iBus

Traffic Volumes

• Average Daily Traffic - 12,500



- Separated Facility for all Non-Motorized Users (i.e., walking, jogging, bicyclists, skating, etc.)
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- May increase walking and biking

- Impact to trees and utilities
- Cost / Maintenance
- Will not attract highly confident bicyclists
- Will need to cross the road in several locations
- May be used by golf carts

SW 152 Street Alternative 2



<u>Pros</u>

- Separated and most direct Facility for bicyclists
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- Less impact to trees and utilities
- Increased safety for bicyclists
- Acts as a traffic calming technique

<u>Cons</u>

- Cost/Maintenance
- Less space for cars
- May be used by motorbikes or golf carts
- May not be used by highly confident riders

Existing Typical Section

- Right-of-way varies
- Complete Sidewalk
- Posted Speed 35 MPH
- Well-shaded, lots of canopy trees

Alternative 1

- Multi-Use Trail / Shared Use Pathway
- Will need to cross the street to minimize impact to trees and utilities
- Average cost is \$327,000 per mile

Alternative 2

- Protected Bicycle Lanes
- Average cost is \$560,000 per mile



SW 184 Street Existing Conditions



Street Character

• Few shade trees, residential and commercial. Commercial buildings are setback with parking in front.

Right-of-Way & Travel Lanes

- ROW Varies 77' 90'
- 5 to 2 lanes

Multimodal Access

- Sidewalks: 5 to 6-FT, Concrete, various missing gaps
- Bicycles: None
- Transit: Cutler Bay Local (Route 200)

Traffic Volumes

• Average Daily Traffic – 5,900

SW 184 Street Alternative 1



<u>Pros</u>

- Separated Facility for all Non-Motorized Users (i.e., walking, jogging, bicyclists, skating, etc.)
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- Fills in missing network (sidewalk gaps)
- May increase walking and biking

<u>Cons</u>

- Impact to trees and some utilities
- Cost / Maintenance
- Will not attract highly confident bicyclists
- May be used by golf carts
- Right-of-way restricted west of Franjo Rd

SW 184 Street Alternative 2



- Separated Facility Increased safety for bicyclists
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- Less impact to trees and utilities
- May act as traffic calming

- Cost/Maintenance
- Less space for cars
- May be used by motorbikes or golf carts

Roadway was recently resurfaced

- May not be used by highly confident riders
- Will need to coordinate with County and Cutler Bay

Existing Typical Section

- Right-of-way varies
- Sidewalk Network Incomplete
- Posted Speed 40 MPH
- Mostly Palm Trees minimal shade

Alternative 1

- Multi-Use Trail / Shared Use Pathway
- Placed on the North Side
- Average cost is \$327,000 per mile

Alternative 2

- Protected Bicycle Lanes
- Average Cost is \$560,000 per mile



05 Survey #2 Results



Key Takeaways



66% have heard of the SMART Plan and Live in

Palmetto Bay

- 14% Live & work in Palmetto
 Bay
- 7% Have a physical disability
- 42% are the "Interested but

Concerned" type of rider

102 Responses



Alternative Preferences



Preferred Alternative for SW 152 Street:





I like the alternatives views provided.

Bike lanes serve both drivers and the cyclists. It also preserves the tree canopy.

Major corridors like these need protected bike lanes.

We need to make it safer for bikers who use roads.

Keeping lots of shade trees is critical to keep Palmetto Bay beautiful and a pleasant place to recreate.

Please fix the street for safe bike rides.

Lighting on the trails on old Cutler and along of 152 are important.

Bike lanes add the usefulness of the road.

06 Recommendations



Overall Pedestrian Recommendations

- Fill sidewalk gaps
- Shade trees
- Pedestrian amenities
- Restripe Crosswalks
- ADA Upgrades
- Clear Pedestrian Path
 Ordinance
- Midblock Crossings at Key areas









Overall Intersection Recommendations

- ADA Upgrades
- Bulb outs / Reduce Turn Radius
- Lead Pedestrian Interval (LPI)
- Signage
- Textured Crosswalks
- Lighting



- A. Visible/Textured Crosswalks E.
- B. Shade Trees
- C. Crossing Aids
- D. Tight Curb Radii

- Curb Extensions
- F. Median Refuge
- G. Lighting
- H. Streetscape Elements

Overall Bicycle Recommendations

- Feasibility Study for SW 168 Street and SW 144 Street
- Feasibility Study for SW 92 Ave, SW 87 Ave, SW 82 Ave, SW 77 Ave
- Separated Bicycle Facilities
- Bicycle Box at Intersections





Additional Recommendations

- Adopt Branding Plan
 - Wayfinding / Community Signage
- Adopt Complete Streets Policy
- Consider Slow Streets Pilot
 Program
- Pedestrian Bridge at Key Locations
- Transportation Demand Management (TDM) Program
- Maintenance of Bike/Ped Facilities

- Green Infrastructure
 - Bioswales/Raingardens
 - Street Trees
 - Permeable Pavement
 - Green Roofs
 - Downspout Planters
 - Rain water harvesting
 - Pocket Parks
- Curbside Management
- Coordinate with Cutler Bay for 184 Street Improvements

11103

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Next Steps





Conceptual Design

- Graphics / Renderings
- Prioritized Recommendations
- Cost Estimates
- Conceptual Design Plans



Questions & Comments

Village Contact

Dionisio Torres, P.E. Public Services Director <u>Dtorres@palmettobay-fl.gov</u> 305.969.5086

Project Contact Christina Fermin, AICP, LEED GA Project Manager <u>Cfermin@marlinengineering.com</u> 954.870.5064





Multi-Use Trail & SMART Plan Connectivity Study


VILLAGE OF PALMETTO BAY **SMART Plan** Feasibility Study Connectivity **Multi-Use Trail &**

PURPOSE

to the South Dade Transitway (aka Busway) Village of Palmetto Bay from Old Cutler Road Improve mobility, safety and accessibility in the along key corridors.

SCOPE

Street between the South Dade Transitway and SW 152 Street, SW 168 Street and SW 184 mprovements. Old Cutler Road. The study will identify which wo (2) corridors are best suited for multi-modal Assess existing conditions for bicycle and edestrian connectivity along SW 144 Street

and input. Multi-use pathways, sidewalks and protected or buffered bicycle lanes will be improvements will be presented for feedback conceptual design of bicycle and pedestrian Once existing conditions have been analyzed, a considered for each concept.

developed for two (2) of the corridors. have been selected, 15% design plans will be roadways will be evaluated and analyzed for Two alternatives for each of the selected constructability. Once the preferred alternatives

BENEFITS

and water quality for the residents of Palmetto In addition to improving bicycle and pedestrian encourage healthier lifestyles, and improve air modal improvements improve livability, ay. afety, connectivity and accessibility, multi-





PROJECT TIMELINE

media. Public participation dates: friendly community. Project updates will be provided on social us by providing input and inspiration to create a more peoplecompleted by November 2021. Public involvement is essential. This study began in January 2021 and is anticipated to be We invite residents, businesses, and other stakeholders to join

TUESDAY, APRIL 6, 2021 | 7 PM

VIRTUAL PUBLIC WORKSHOP Meeting hosted on GoToWebinar,

website and social media. and registration available on the Village registration required. Meeting information





WALKING AUDIT

RSVP Required All ages and abilities welcomed



egistration Report

enerated /05/2021 04:07 PM EDT

eneral Information

ebinar Name (tual Public Workshop - Palmetto Bay's Multi-Use Trail Feasibility Study :heduled Start Date /06/2021 :heduled Start Time :00:00 PM EDT :heduled Duration (minutes)

egistrants

Webinar ID 291-884-475 Registered 17 **Opened Invitation** 0 Clicked Registration Link 46

GoToWebinar

st Name	Last Name	Email	Registration Date	Address	City	State/Province	Zip/Postal Code	Registrant's Status	Viewed Recording	Unsubscribec
th	Adler	jordaly@aol.com	04/06/2021 10:07 PM EDT	8140,SW 151 Street	Palmetto Bay	Florida	33158	Approved	Yes	No
ystal	Ramirez	crystalramirez10@gmail.com	04/06/2021 09:59 PM EDT	14435 SW 84 Court	Palmetto Bay	Florida	33158	Approved	Yes	No
seph	Cornely	cornelyj@gmail.com	04/06/2021 08:47 PM EDT	16298 SW 88th Ave Rd	Palmetto Bay	Florida	33158	Approved	No	No
levez,	mike	mikeest@aol.com	04/06/2021 08:04 PM EDT	15201 SW 88 court	Miami	Florida	33157	Approved	No	No
acey	Kaufman	staceydawn1@comcast.net	04/06/2021 07:54 PM EDT	14245 SW 68 Ave	Palmetto Bay	Florida	33158	Approved	No	No
en	Archer	Inthestars@bellsouth.net	04/06/2021 07:40 PM EDT	8425 SW 163rd Terrace	BAY	Florida	33157-3684	Approved	No	No
ryn	Cunningham	kicunningham016@gmail.com	04/06/2021 07:13 PM EDT	13985 SW 72nd Ct	Miami	Florida	33158	Approved	No	No
arsha	Matson	x4m2h5@gmail.com	04/06/2021 07:00 PM EDT	9300 SW 180 St.	Palmetto Bay	Florida	33157	Approved	No	No
ncy	Crair	crcrair@aol.com	04/06/2021 05:23 PM EDT	8190 SW 143 St	Palmetto Bsy	Florida	33158	Approved	No	No
gene	Flinn	eugeneflinn@bellsouth.net	04/06/2021 04:39 PM EDT	8261 SW 162nd Street	Palmetto Bay	Florida	33157	Approved	No	No
c	Tullberg	e341@bellsouth.net	04/06/2021 03:44 PM EDT	7884 SW 179 Tr.	Palmetto Bay	Florida	33157	Approved	No	No
onisio	Torres	dtorres@palmettobay-fl.gov	04/06/2021 03:17 PM EDT	9495 SW 180 Street	Palmetto Bay	Florida	33157	Approved	No	No
nnifer	Santino	jds3377777@aol.com	04/06/2021 02:10 PM EDT	14621 SW 78 ave	Palmetto Bay	Florida	33158	Approved	No	No
ward	Feller	edfellermd@aol.com	04/03/2021 01:32 PM EDT	7960 sw 144 St	Palmetto Bay	Florida	33158	Approved	No	No
са	Watts	ericaptsa@gmail.com	04/03/2021 12:20 PM EDT	9055 SW 160 Ter	Palmetto Bay	Florida	33157	Approved	No	No
cia	Gonzalez	AGONZALEZ@MRGMIAMI.COM	04/03/2021 08:12 AM EDT	14707 South Dixie Highway, Suite 404	Palmetto Bay	Florida	33176	Approved	No	No
atriz	Herrmann	balloon1@bellsouth.net	04/02/2021 09:58 PM EDT	17251 SW 86th. Ave.	Palmetto Bay	Florida	33157	Approved	No	No



Multi-Use Trail & SMART Plan Connectivity Study

Public Meeting #1 April 6, 2021



Presentation Format

- Virtual Meeting Today via SotoWebinar
- Microphones will be muted for the duration of the Presentation
- This Webinar is being Recorded
- Polling questions throughout the Presentation
- Q & A Session <u>After</u> the Presentation
 - Utilize the Raise Hand Feature or Question Box to ask questions and make comments (Located on the right side of your screen)
 - Staff will moderate questions and comments; questions and comments will be addressed at the end of the presentation, as applicable
 - A copy of this presentation will be made available on the Village's website



Agenda



3



Scope





Purpose & Intent

To improve mobility, safety and accessibility to the SMART Plan's South Dade Corridor Transitway between US 1/South Dixie Highway and Old Cutler Road

Study Roadways

- SW 144 Street
- SW 152 Street
- SW 168 Street
- SW 184 Street



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Poll #1

Do you walk or bike any of these roads: SW 144 Street, SW 152 Street, SW 168 Street, SW 184 Street? (select one)

- a) Yes, I walk one or more of those streets
- b) Yes, I bike one or more of those streets
- c) Yes, I walk and bike one or more of those streets
- d) No, I do not walk or bike any of those streets

Project Tasks

Task 1: Public Involvement & Coordination

- Thursday, April 1, 2021 First Public Meeting
- June 2021 Stakeholder Meeting
- August 2021 Second Public Meeting

Task 2: Existing Conditions & Data Collection

- Review existing plans, documents and programs
- Field inventory and site visit of the 4 corridors
- Analysis of collected traffic, bicycle and pedestrian data
- Walking Audits: April 15 & 17

Task 3: Conceptual Design

- Two corridors will be selected
- Up to 2 alternatives will be presented
- Analysis of alternatives
- Selection of preferred alternative with 15% design plans
- Cost estimate for final design

Task 4: Recommendations

- Multimodal improvements prioritized
- Table of available funding options
- Task 5: Documentation
 - Final Study

9

Project Schedule



Poll #2

Which corridor do you live or work closest to? (select one)

- a) SW 144 Street
- b) SW 152 Street
- c) SW 168 Street
- d) SW 184 Street

67TH AVE SW 104TH ST W 571 82ND Fairchild Tropical Botanic Gar SW 62ND AVE SW 112TH ST SW 112TH ST 12TH ST MS SW 97TH SW 107TH AVE WS W 72ND AVE KE W 102ND AVE 120TH ST AV SW SW 671 SW 112TH 774 SW 82 **SW 137TH** 个 AV AVE AVE SW 136TH ST THST AVE SW 14 m SW 152ND 3 SW 152ND ST W 82ND Zoo Miami Charles Deering Estate SW 160TH SW 160TH ST SW 107TH AVE SW 168TH ST FLORIDA TPKE EX AV 174TH ST SW 122ND AVE **Biscayne Bay** 一 BBEANBLYD SWK184TH ST 00000 AVE LEGEND SW 200TH ST SW 200TH ST Main Roads **Historic Site** SW 147TH AVE Southland Mall South Dade 俞 City Hall SW2 2TH S FLORIDA Transitway **Cultural Venue** SW 216TH ST SW 216TH ST WS SW 152ND AVE 1 Metrorail 0 P 5 BALLES RD \oplus Hospital 87 SW 112TH AVE ⊢++ Railraod TPKE EX The second secon Major Mall SW 232ND ST Golf Course . . . Kendall-Tamiami SW 240TH ST **MS** 1 Park Airport SW 248TH ST SW 248TH ST []]] Village Boundary SW 256TH ST

SW 104TH ST

W 1

SW 104TH ST

Area Map

2



Poll #3

What is your greatest community asset? (select up to 3)

- a) The Neighborhoods & Businesses
- b) Downtown Palmetto Bay
- c) Parks, Natural Areas & Historic Resources (i.e. Deering Estate, Biscayne Bay)
- d) South Dade Transitway
- e) Schools



Local & Regional Destinations

- Deering Estate
- The Falls Shopping Center
- Jackson Hospital South
- Zoo Miami
- Old Cutler Trail
- South Dade Trails (M-Path)
- Parks
- Schools



Poll #4

I would walk/bicycle more if...(select top three)

- a) There were more walking/bicycling infrastructure in my neighborhood (Sidewalks, Crosswalks, Bicycle Lanes)
- b) There was less/slower traffic on nearby streets
- c) Trees provided more shade to the sidewalks
- d) It was safer/more secure
- e) There were end-of-trip facilities such as lockers or showers available at my destination

02 Physical Conditions



SW 144 Street Existing Conditions

- Street Character
 - Tree-lined residential street

• Right-of-Way & Travel Lanes

- ROW varies between 63' 72'
- 2 Lanes

Multimodal Access

- Sidewalks: 5 FT, Concrete, Few Gaps
- Bicycle: None
- Transit: None
- Traffic Volumes
 - Average Daily Traffic 6,200





SW 152 Street Existing Conditions

Street Character

• Tree-lined residential street

• Right-of-Way & Travel Lanes

- ROW Varies 73' 96'
- 2 Lanes

Multimodal Access

- Sidewalks: 5-FT, Concrete, Cracks/Uplifting Throughout
- Bicycle: Sharrows/Shared Lane
- Transit: Route 57 & iBus

Traffic Volumes

• Average Daily Traffic – 12,500



SW 168 Street Existing Conditions

Street Character

• Few shade trees, residential and limited commercial. Commercial buildings are setback with parking in the front.

Right-of-Way & Travel Lanes

- ROW Varies 72'-82'
- 2 Lanes

Multimodal Access

- Sidewalks: 5-FT, Concrete, Some missing segments
- Bicycle: Sharrows/Shared Lane
- Transit: Route 287
- Traffic Volumes
 - Average Daily Traffic 6,000



SW 184 Street Existing Conditions

• Street Character

• Few shade trees, residential and commercial. Commercial buildings are setback with parking in front.

Right-of-Way & Travel Lanes

- ROW Varies 77' 90'
- 2 lanes

Multimodal Access

- Sidewalks: 5 to 6-FT, Concrete, various missing gaps
- Bicycles: None
- Transit: Cutler Bay Local (Route 200)
- Traffic Volumes
 - Average Daily Traffic 5,900



Bicycle Facilities Pedestrian &



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Multimodal Access

- Vehicular
- Transit
- Bicycle
- Pedestrian



Overall Pedestrian Conditions

- Sidewalk setback from roadway, well shaded on 144 and 152 St
- Various missing sidewalk gaps
- Missing sidewalks on local roads
- Utilities obstructing sidewalks
- No pedestrian lighting
- Crosswalks for local streets missing or faded
- Various cracks, but overall condition is good to fair



Poll #5

Would you like to see sidewalks in your community? (select one)

- a) Yes
- b) No
- c) N/A I already have sidewalks in my neighborhood

Overall Intersection Conditions

- Several missing pedestrian signals
- Push-buttons are not to standard
- Many missing tactile mats
- Crossing time is limited
- Many missing signs
- Faded crosswalks
- Wide turn radius



Multi-Use Trail & SMART Plan

Overall Bicycle Conditions

- Lack of dedicated bicycle facility for east-west travel
 - 136th Street Shared Use Pathway (Coming Soon)
- Adequate north-south facilities
 - South Dade Trail (10 FT)
 - Old Cutler Trail (8 10 FT)
- Sharrows (or Shared Lanes) are available on SW 152 St & SW 168 St





Overall Transit Conditions

- Transit stops are along SW 152 St and SW 168 St
 - Route 57 Hourly service
 - Route 287 Peak Period 30-minute service

• Transit Stop Deficiencies

- Lacking seating, signage and shelter
- Not ADA Accessible
- Several signs are faded, outdated, leaning or missing
- Transitway shelters are in poor condition
 - Express, Local and Limited Stop Service



Poll #6

What is your most common mode of transportation to/from work or school? (select all that apply)

- a) Solo driving in a personal car for entirety of trip
- b) Carpooling, Vanpooling or Ridesharing (Lyft, Uber, Freebee, Taxi)
- c) Public Transit (iBus, Metrobus, Metrorail)
- d) Walking or Bicycling
- e) I telecommute most days (Work from Home)

SMART Plan – South Corridor

- Bus Rapid Transit Coming 2022
- 10 and 15-minute Arrivals
- 14 State of the Art Stations
- Real-Time Arrival Information
- Public Art
- Intersection Improvements
- New Stations at SW 136 St, SW 152 St, SW 168 St & SW 184 St



03 Data Collection & Analysis



Traffic Data

Roadway Segment	AADT (2019)	Max ADT*	LOS	Posted Speed Limit (mph)	
SW 144 Street	6,200	13,320	С	30	
SW 152 Street	12,500	13,320	D	35	
SW 168 Street	6,000	13,320	С	35	
SW 184 Street	5,900	15,930	С	40	
*Max capacity based	on LOS "D"				
AADT = Annual Avera ADT = Annual Daily Tr LOS = Level-of-Servic MPH = Miles Per Hour	ge Daily Traffic affic e	10 chance of de severe inj	% 50% chance of death or severe injury	90% chance of death or severe injury	






Bicycle & Pedestrian Data

Bicycle Heat Map Pedestrian Heat Map

Strava – data is aggregated over 2 years by public activities, the map is updated monthly, some users have opted out. Heat map checked on March 20, 2021.

Study Roadway Analysis



Study Roadways Population

Serving Population (> 18 & < 65 years & People with Disabilities)

- Area Population: 64%
- 5 17 Years: 13%
- Over 65 Years: 7%
- People with a Disability: 4.3%

(Numbers based upon 2010 Census adjusted to 2019 population growth estimates)

Schools

Located within 1/2-mile of the study corridors:

- Alexander Montessori
- Howard Drive Elementary
- Coral Reef Elementary
- Westminster Christian
- Palmetto Bay Senior High
- Village Pines
- Henry Perrine
- Southwood Middle
- Christ Fellowship Academy
- Palmetto Bay Academy
- Lincoln Marti
- Carrie Brazer Center
- Madeline Montessori
- Palmer Trinity
- Robert Russa Moton Elementary
- Our Lady of the Holy Trinity



Transit

Primary access along US 1 / South Dade Transitway

Routes 1, 31, 34, 38, 39, 52, 252, 287

SW 152 Street

iBus

Route 57

Stops are missing basic transit amenities

SW 168 Street

Routes 57, 287

SW 184 Street

Routes 1, 200, 287



Employment

Heat Map

- Jobs primarily located along US
 1 South Dixie Hwy
- Hotspot near SW 184 and Old Cutler Road
- 30% of jobs are available within 1/4-mile of study roads



Opportunities



Pedestrian Improvements



Pedestrian Bridge



Trail/Walking Path





Midblock Crossing



Pedestrian Amenities: Signage, Seating, T/R Bins, Lighting

Poll #7

What type of pedestrian improvements would you like to see? (select one or more)

- a) Raised walking path/bridge over US 1 over one of the study roadways
- b) More trails and walking paths and/or wider sidewalks
- c) Midblock crossings
- d) Pedestrian amenities: Wayfinding signage, Trash/Recycling bins, Seating, Lighting, Shade Trees

Bicycle Improvements



Bicycle Lane



One-Way Separated Bicycle Lane



Striped Buffered Bicycle Lane



Two-Way Separated Bicycle Lanes



Protected Bicycle Lane



Multi-Use Trail/Shared Use Pathwey

Poll #8

What type of bicycle facility would you prefer? (select one)

- a) On-Road Bicycle Lane
- b) Buffered Bicycle Lane (Using Striping)
- c) Protected Bicycle Lane (Zebras, Delineators Poles)
- d) One-Way Separated Bicycle Lane
- e) Two-Way Separated Bicycle Lanes
- f) Multi-use Trail / Shared Use Pathway

Community Improvements



Public Art / Utility Box Wraps



Pocket Park



Community Signage: Gateway, directional, public facilities, & wayfinding



Bioswales / Raingardens



Street Trees

Poll #9

What type of community improvements would you like to see? (select one or more)

- a) Public Art
- b) Community Signage: Village gateway, directional, public facility & wayfinding
- c) Pocket Parks
- d) Bioswales / Raingardens
- e) Street Trees

Intersection Improvements



A. Pedestrian bulb-outs B. Wheelchair access ramps C. Pedestrian refuge islands D. Curb radii no greater than 15' E. Special paving in crosswalks F. Benches and other amenities G. Pedestrian-scale lighting H. 10'6" travel lanes I. Building articulation J. Street trees K. Accessible transit stops



Poll #10

What types of intersection improvements would you like to see? (select one or more)

- a) Pedestrian bulb-outs
- b) Pedestrian Refuge Islands
- c) Reduced Turning Radii
- d) Enhanced Paving for Crosswalks
- e) Lighting
- f) Street Trees

Study Roadways

- SW 144 Street
- SW 152 Street
- SW 168 Street
- SW 184 Street



Poll #11

Please select your preferred two roadways for improvements:

- a) SW 144 Street
- b) SW 152 Street
- c) SW 168 Street
- d) SW 184 Street

Appendix 5A: Meeting 1

05 Next Steps









Conceptual Design

- Graphics / Renderings
- Prioritized Recommendations
- Cost Estimates
- 15% Design Plans





Public Meeting 2

- August
- Proposal of design and improvements along selected corridors (2)
- Public feedback and polling on proposals
- Final product to be presented in October 2021





Questions & Comments

City Contact

Dionisio Torres, P.E.

Public Services Director

Dtorres@palmettobay-fl.gov

305.969.5086

Project Contact

Christina Fermin, AICP, LEED GA

Project Manager

Cfermin@marlinengineering.com

954.870.5064





Multi-Use Trail & SMART Plan Connectivity Study

Scan for Walking Audit Registration





VILLAGE OF PALMETTO BAY Multi-Use Trail & SMART Plan Connectivity Feasibility Study

PURPOSE

Improve mobility, safety and accessibility in the Village of Palmetto Bay from Old Cutler Road to the South Dade Transitway (aka Busway) along key corridors.

SCOPE

Assess existing conditions for bicycle and pedestrian connectivity along SW 144 Street, SW 152 Street, SW 168 Street and SW 184 Street between the South Dade Transitway and Old Cutler Road. The study will identify which two (2) corridors are best suited for multi-modal improvements.

Once existing conditions have been analyzed, a conceptual design of bicycle and pedestrian improvements will be presented for feedback and input. Multi-use pathways, sidewalks and protected or buffered bicycle lanes will be considered for each concept.

Two alternatives for each of the selected roadways will be evaluated and analyzed for constructability. Once the preferred alternatives have been selected, 15% design plans will be developed for two (2) of the corridors.

BENEFITS

In addition to improving bicycle and pedestrian safety, connectivity and accessibility, multimodal improvements improve livability, encourage healthier lifestyles, and improve air and water quality for the residents of Palmetto Bay.





PROJECT TIMELINE

This study began in January 2021 and is anticipated to be completed by November 2021. Public involvement is essential. We invite residents, businesses, and other stakeholders to join us by providing input and inspiration to create a more peoplefriendly community. Project updates will be provided on social media. Public participation dates:

1ST PUBLIC MEETING

1st Public Meeting discussed the project and existing conditions. Watch the meeting presentation on the Village's website or scan the QR code.



SCAN ME

WEDNESDAY, SEPTEMBER 22, 2021 I 6 PM

VIRTUAL PUBLIC WORKSHOP #2

Meeting hosted on GoToWebinar, registration required. Meeting information and registration available on the Village website and social media.



The public registration link is below: <u>https://tinyurl.com/ftfpt23b</u>

Attendee Report: Recort Generated 11/02/2021 11:31 Webinar ID 855-048-125 Irtual Public Workshop: Palmetto Bay's Multi-Use Feasibility Stuc x EDT Adul Stat DataTime Duration PResidented \$Attended CPU 00222002 CD2 17M EDT 1 hos 23 minute 11 6 20

Clicked Registration Link Opened Invitation 29 0

Attendee Details

Attendee Details																	
														Prior to today, have you heard of the Strategic Marni Area Banid Transit (SMART) Plan and the South Controls			
Attended	Interest Rating	Last Name	First Name	Email Address	Registration Date/Time	Join Time - Leave Time (Time in Session)	Time in Session	Address	City	State/Province	Zio/Postal Code	Unsubscribed	Which study roadway do you live closest to?	Improvements?	What type of rider are you?	Which alternative do you prefer for SW 152 Street?	Which alternative do you prefer for SW 184 Street?
Yes	46	Cunningham	Karyn	kcunningham@palmettobay-fl.gov	09/04/2021 11:27 AM EDT	09/22/2021 05:51 PM EDT - 09/22/2021 05:49 PM EDT (59 minutes)	50 minutes	13965 SW 72 Court	Palmetto Bay	Florida	33158	No	SW 144 Street	Yes	Interested but Concerned (Lenjoy riding my bike, especia		
Yes	82	Feler	Edward	edfellermd@sol.com	09/20/2021 05:58 PM EDT	09/22/2021 06:32 PM EDT - 09/22/2021 05:48 PM EDT (16 minutes)	16 minutes	7960 SW 144 St	Palmetto Bay	Florida	33158	No					
Yes	65	Flinn	Eugene	eugenefinn@bellsouth.ret	09/22/2021 03:47 PM EDT	09/22/2021 05:57 PM EDT - 09/22/2021 05:49 PM EDT (53 minutes)	53 minutes	8261 SW 162nd Street	Palmetto Bay	Florida	33157	No	SW 152 Street	Yes	Highly Confident (I feel comfortable biking on any street	Alternative 2 - Separated Bike Lane	Alternative 2 - Separated Bike Lane
Yes	35	Mataon	Marsha	mmatson@paimeticbay-f.gov	09/19/2021 12:32 PM EDT	09/22/2021 05:55 PM EDT - 09/22/2021 05:49 PM EDT (55 minutes)	55 minutes	9300 SW 180 St.	Palmetto Bay	Florida	33157	No					
Yes	87	Rahman	Moshiur	mrahman@marlinengineering.com	09/20/2021 05:09 PM EDT	09/22/2021 05:49 PM EDT - 09/22/2021 05:49 PM EDT (1 hour 1 minute)	1 hour 1 minute	3363 W Commercial Blvd, SUITE 115	Fort Lauderdale	Florida	33309	No					
Yes	90	Tulberg	Eric	e341@bellsouth.net	09/04/2021 04:23 PM EDT	09/22/2021 06:11 PM EDT - 09/22/2021 05:49 PM EDT (39 minutes)	39 minutes	7854 SW 179 Tr.	Palmetto Bay	Florida	33157	No			Highly Confident (I feel comfortable biking on any street	Alternative 1 - Multi-Use Trail aka Shared Use Pathway	Alternative 1 - Multi-Use Trail aka Shared Use Pathway
No	0	Esquenazi	Maguy	esquenzzi@man.com	09/20/2021 08:23 PM EDT	-		8345 xw 157 terrace	Palmetto Bay	Florida	33167	No					
No	0	Fermin	Christina	clemin@marlinengineering.com	09/20/2021 04:37 PM EDT	-	-	3363 W. Commercial Blvd, Suite 115	Fort Lauderdale	Florida	33309	No					
No	0	Gorzalez	Alicia	AGONZALEZ@MRGMIAMI.COM	09/19/2021 05:51 AM EDT	-	-	19941 Cutler Ct	Cutler Bay	Florida	33189	No					
No	0	Gorgalez	Oscar	oconzelez@mromiami.com	09/21/2021 05:42 AM EDT	-		14707 S Dixie Hwy, Suite 404	Palmetto Bay	Florida	33176	No					
No	0	Hall	James	immyderny@att.ret	09/22/2021 05:13 PM EDT	-		10990 Southwest 60th Street	Miami	Florida	33173	No					



Multi-Use Trail & SMART Plan Connectivity Study

Public Meeting #2

September 22, 2021



Presentation Format

- Virtual Meeting Today via 😽 GoTo Webinar
- Microphones will be muted for the duration of the Presentatic
- This Webinar is being Recorded
- Polling questions throughout the Presentation
- Q & A Session <u>After</u> the Presentation
 - Utilize the Raise Hand Feature or Question Box to ask questions and make comments (Located on the right side of your screen)
 - Staff will moderate questions and comments; questions and commen will be addressed at the end of the presentation, as applicable
 - A copy of this presentation will be made available on the Village's website







01 Project Overview





Purpose & Intent

To improve mobility, safety and accessibility to the SMART Plan's South Dade Corridor Transitway between US 1/South Dixie Highway and Old Cutler Road

Study Roadways

- SW 144 Street
- SW 152 Street
- SW 168 Street
- SW 184 Street



Poll #1

Which Roadway do you live closest to?

- a) SW 144 Street
- b) SW 152 Street
- c) SW 168 Street
- d) SW 184 Street



Project Tasks

Task 1: Public Involvement & Coordination

- ✓ Tuesday, April 6, 2021 First Public Meeting
- ✓ Survey # 1 April to May 2021
- ✓ June 2021 Stakeholder Meeting
- August 2021 Second Public Meeting
- November 2021 Presentation to City Council

Task 2: Existing Conditions & Data Collection

- ✓ Review existing plans, documents and programs
- ✓ Field inventory and site visit of the 4 corridors
- ✓ Analysis of collected traffic, bicycle and pedestrian data
- ✓ Walking Audits: April 15 & 17

Task 3: Conceptual Design

- ✓ Evaluation Criteria
- \checkmark Two corridors will be selected
- ✓ Up to 2 alternatives will be presented
- ✓ Analysis of alternatives
- Selection of preferred alternative
- Cost estimates for the preferred alternative

Task 4: Recommendations

- Multimodal improvements prioritized
- Table of available funding options

Task 5: Documentation

• Final Study

Project Schedule


SMART PLAN South Corridor BRT

- Bus Rapid Transit Coming 2022
- 10 and 15-minute Arrivals
- 14 State of the Art Stations
- Real-Time Arrival Information
- Public Art
- Intersection Improvements
- New Stations at SW 136 St, SW 152 St, SW 168 St & SW 184 St



Poll #2

Prior to tonight, have you heard of the Strategic Miami Area Rapid Transit (SMART) Plan and South Corridor Improvements?

- a) Yes
- b) No



02 Survey #1 Results







147 Responses

- 86% walk and/or bike the study's roadways
- People would walk/bike more if there was **infrastructure available**, less or slower traffic, and it was safer/more secure
- 78% want or have sidewalks in their neighborhoods
- Pedestrian amenities (63%) are the most desired pedestrian improvements, followed by high visibility crosswalks (42%) and more trails/walking paths and/or wider sidewalks (41%)
- 81% of respondents want a **separated bicycle facility** (i.e., shared use path, separated bicycle lane(s), protected bicycle lane(s))
- Street trees are the #1 desired community improvement, followed by bioswales and pocket parks
- Street trees and lighting (52%) are the most desired intersection improvement



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Note: Percentages represent the level of comfort that people feel bicycling, according to peer-reviewed surveys as recently as 2016. Source: FHWA Bikeway Selection Guide: https://safety.fhwa.dot.gov/ped_bike/tools_solve/docs/fhwasa18077.pdf For more information, please visit FHWA's Bicycle and Pedestrian Program webpage: https://www.fhwa.dot.gov/environment/bicycle_pedestrian/

Types of Bicyclists

Interested but Concerned

- 51% 56% of the total population
- Prefers off-street, separated facilities or quiet traffic calmed residential streets

Somewhat Confident

- 5% 9% of the total population
- Prefer separated facilities, but comfortable riding in bike lanes

Highly Confident

- 4% -7% of the total population
- Comfortable with riding with traffic, will use roads without bike lanes

No Way, No How!

- 33% of the total population
- Not interested in bicycling

Poll #3

What type of rider are you?

- a) Interested but Concerned
- b) Somewhat Confident
- c) Highly Confident
- d) Not interested or able



Interested but Concerned I enjoy riding my bike, especially on trails and shared use paths, but biking on roads makes me uncomfortable.

Somewhat Confident I feel comfortable riding on quieter streets with bike lanes.



Highly Confident I feel comfortable biking on any street.

Not interested or able I am not interested in riding a bike or am physically unable to ride a bike.

03 Evaluation Criteria





Evaluation Criteria & Scoring

Factor	Total Possible Points	SW 144 Street	SW 152 Street	SW 168 Street	SW 184 Street
Safety (i.e. crash, speed, traffic calming)	21	8	14	12	13
Density (i.e., population, employment)	16	12	11	11	12
Infrastructure (i.e., sidewalks, bike lanes, pathways, trees, ROW)	23	9	14	13	17
Connectivity (i.e., schools, transit, destinations)	16	5	13	11	12
Public & Stakeholder Preference (i.e., resident survey ranking and stakeholder support)	6	2	6	5	1
TOTAL	82	36	58	52	55

Appendix 5B: Meeting 2

04 Conceptual Alternatives



Multi-Use Trails

Multi-Use Trails are also known as Trails, Shared Use Paths, Greenways, Bike Paths or Side Paths.

Typically made of asphalt or concrete.

Standard width is 10 to 12-Feet, may be 8-Feet in areas where space is restricted or if it is not heavily used.

Must be at least 6-Feet from roadway and have a 2-Foot clearance on each side.



Separated or Protected Bicycle Lane

Should have a physical barrier to protect users from vehicular traffic.

Adjacent to vehicular traffic, but has a physical barrier. This may include the use of curbing, zebra or armadillo delineators, vertical pole delineators, parallel parking, or landscaping.

Standard includes a 4-Foot Bicycle Lane with 3-Foot Buffer (Total 7 Feet).





SW 152 Street Existing Conditions



Street Character

• Tree-lined residential street

Right-of-Way & Travel Lanes

- ROW Varies 73' 96'
- 2 Lanes

Multimodal Access

- Sidewalks: 5-FT, Concrete, Fair Condition
- Bicycle: Sharrows/Shared Lane
- Transit: Route 57 & iBus

Traffic Volumes

• Average Daily Traffic - 12,500



Pros

- Separated Facility for all Non-Motorized Users (i.e., walking, jogging, bicyclists, skating, etc.)
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- May increase walking and biking

Cons

- Impact to trees and utilities
- Cost / Maintenance
- Will not attract highly confident bicyclists
- Will need to cross the road in several locations
- May be used by golf carts

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SW 152 Street Alternative 2



Pros

- Separated and most direct Facility for bicyclists
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- Less impact to trees and utilities
- Increased safety for bicyclists
- Acts as a traffic calming technique

<u>Cons</u>

- Cost/Maintenance
- Less space for cars
- May be used by motorbikes or golf carts
- May not be used by highly confident riders

Existing Typical Section

- Right-of-way varies
- Complete Sidewalk
- Posted Speed 35 MPH
- Well-shaded, lots of canopy trees

Alternative 1

Comparison

Street

152

SW

- Multi-Use Trail / Shared Use Pathway
- Will need to cross the street to minimize impact to trees and utilities
- Average cost is \$327,000 per mile

Alternative 2

- Protected Bicycle Lanes
- Average cost is \$560,000 per mile



Poll #4

Which Alternative Do you prefer for SW 152 Street?

a) Alternative 1 – Multi – Use Trail b) Alternative 2 – Separated Bike Lane



SW 184 Street Existing Conditions



Street Character

• Few shade trees, residential and commercial. Commercial buildings are setback with parking in front.

Right-of-Way & Travel Lanes

- ROW Varies 77' 90'
- 5 to 2 lanes

Multimodal Access

- Sidewalks: 5 to 6-FT, Concrete, various missing gaps
- Bicycles: None
- Transit: Cutler Bay Local (Route 200)

Traffic Volumes

• Average Daily Traffic – 5,900

SW 184 Street Alternative 1



<u>Pros</u>

- Separated Facility for all Non-Motorized Users (i.e., walking, jogging, bicyclists, skating, etc.)
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- Fills in missing network (sidewalk gaps)
- May increase walking and biking

<u>Cons</u>

- Impact to trees and some utilities
- Cost / Maintenance
- Will not attract highly confident bicyclists
- May be used by golf carts
- Right-of-way restricted west of Franjo Rd

SW 184 Street Alternative 2



- Separated Facility Increased safety for bicyclists
- Will attract somewhat confident and interested bicycle users
- Protected and Low Traffic Stress
- Less impact to trees and utilities
- May act as traffic calming

- Cost/Maintenance
- Less space for cars
- May be used by motorbikes or golf carts

Roadway was recently resurfaced

- May not be used by highly confident riders
- Will need to coordinate with County and Cutler Bay
- 30

Existing Typical Section

- Right-of-way varies
- Sidewalk Network Incomplete
- Posted Speed 40 MPH
- Mostly Palm Trees minimal shade

Alternative 1

- Multi-Use Trail / Shared Use Pathway
- Placed on the North Side
- Average cost is \$327,000 per mile

Alternative 2

- Protected Bicycle Lanes
- Average Cost is \$560,000 per mile



Poll #5

Which Alternative Do you prefer for SW 184 Street?

a) Alternative 1 – Multi – Use Trail b) Alternative 2 – Separated Bike Lane



Recommendations



Overall Pedestrian Recommendations

- Fill sidewalk gaps
- Shade trees
- Pedestrian amenities
- Restripe Crosswalks
- ADA Upgrades
- Clear Pedestrian Path Ordinance
- Midblock Crossings at Key areas









Overall Intersection Recommendations

- ADA Upgrades
- Bulb outs / Reduce Turn Radius
- Lead Pedestrian Interval (LPI)
- Signage
- Textured Crosswalks
- Lighting



<u>KEY</u>

- A. Visible/Textured Crosswalks E.
- B. Shade Trees
- C. Crossing Aids
- D. Tight Curb Radii

- Curb Extensions
- F. Median Refuge
- G. Lighting
- H. Streetscape Elements

Overall Bicycle Recommendations

- Feasibility Study for SW 168 Street and SW 144 Street
- Feasibility Study for SW 92 Ave, SW 87 Ave, SW 82 Ave, SW 77 Ave
- Separated Bicycle Facilities
- Bicycle Box at Intersections





SEPARATED BIKE LANES

Overall Transit Recommendations

- ADA Upgrades
- Canopy Trees
- Adopt Bus Shelter Design
- Basic Transit Amenities
 - Seating
 - Shelter
 - Signage
 - Trash/Recycling
 - Lighting



Source: DART (Dallas Area Rapid Transit)

Additional Recommendations

- Adopt Branding Plan
 - Wayfinding / Community Signage
- Adopt Complete Streets Policy
- Consider Slow Streets Pilot
 Program
- Pedestrian Bridge at Key Locations
- Transportation Demand Management (TDM) Program
- Maintenance of Bike/Ped Facilities

- Green Infrastructure
 - Bioswales/Raingardens
 - Street Trees
 - Permeable Pavement
 - Green Roofs
 - Downspout Planters
 - Rain water harvesting
 - Pocket Parks
- Curbside Management
- Coordinate with Cutler Bay for 184 Street Improvements





Next Steps





Conceptual Design

- Graphics / Renderings
- Prioritized Recommendations
- Cost Estimates
- Conceptual Design Plans



Questions & Comments

Village Contact

Dionisio Torres, P.E. Public Services Director <u>Dtorres@palmettobay-fl.gov</u> 305.969.5086

Project Contact Christina Fermin, AICP, LEED GA Project Manager <u>Cfermin@marlinengineering.com</u> 954.870.5064





Multi-Use Trail & SMART Plan Connectivity Study



Multi-Use Trail Feasibility Study Stakeholder Meeting Notes

June 23, 2021

Attendance:

Village Grant Writer; Oscar Camejo, Miami-Dade TPO Verteran's Park Committee; Fanny Carmona, Village Parks & Recreation Director; Jenny Polynice-Hall, Committee; Tony Rodriguez, Village Police Department; Dana Pezoldt, Resident & Art in Public Places / Dionisio Torres, Village Public Works Director; Jennifer Santino, Resident & Neighborhood Protection

Presentation – 25 minutes

Discussion – 30 minutes

or separated facilities? are not adequate and many do not offer shade. Wanted to know if we are looking at on road bike lanes bays can be incorporated onto the roadways with Transit. Transit amenities are needed, current benches Dana: Agrees with moving forward with SW 168 Street and SW 184 Street, wants to know if bus pull-in

survey response amount. Concerned with 87 Ave bridge and the amount of traffic that will come to the decisions until after the bridge? Village, particularly SW 144 Street and SW 152 Street. Is it possible to hold off on recommendations or Jennifer: Participated in meeting to discuss proposed roundabouts along Old Cutler Road, disappointed at

online, it would provide an even distribution throughout the Village. Oscar: Recommends moving forward with SW 152 Street and SW 184 Street, with SW 136 Street coming

and people who use transit are in the southern portion of the Village. Dana: Believes most pedestrian and bicycle traffic is along SW 168 Street and SW 184 Street, many schools

amongst the 4 corridors, which should be considered in evaluation and bike/ped connectivity with filling in sidewalk gaps on SW 184 Street. Also highlighted that SW 184 Street had the highest speed incorporated into the next pavement and resurfacing of the roadway and the Village can move forward consider SW 168 Street which needs pavement and resurfacing, planned improvements can be the fact that SW 184 Street recently went through paving and resurfacing, therefore, we may want to Dionisio: Discussed safe routes to school (SRTS) improvements coming to SW 152 Street soon. Highlighted

Discussion on incorporating speed and paving/resurfacing into the evaluation matrix.

Street, assuming that the Village will move forward with filling in sidewalk gaps Dana: In light of this information, agrees that we should move forward with SW 152 Street and SW 168

Fanny and Oscar both agreed.



Multi-Use Trail & SMART Plan Connectivity Study

Stakeholder Meeting

June 2021



Agenda



2
Scope





Purpose & Intent

To improve mobility, safety and accessibility to the SMART Plan's South Dade Corridor Transitway between US 1/South Dixie Highway and Old Cutler Road

Study Roadways

- SW 144 Street
- SW 152 Street
- SW 168 Street
- SW 184 Street



Project Tasks

Task 1: Public Involvement & Coordination

- Tuesday, April 6, 2021 First Public Meeting
- June 23, 2021 Stakeholder Meeting
- September 22, 2021 Second Public Meeting

Task 2: Existing Conditions & Data Collection

- Review existing plans, documents and programs
- Field inventory and site visit of the 4 corridors
- Analysis of collected traffic, bicycle and pedestrian data
- Walking Audits: April 15 & 17, 2021

Task 3: Conceptual Design

- Two corridors will be selected
- Up to 2 alternatives will be presented
- Analysis of alternatives
- Selection of preferred alternative with 15% design plans
- Cost estimate for final design

Task 4: Recommendations

- Multimodal improvements prioritized
- Table of available funding options
- Task 5: Documentation
 - Final Study

Project Schedule



SMART Plan – South Corridor

- Bus Rapid Transit Coming in 2022
- 10 and 15-minute Arrivals
- 14 State of the Art Stations
- Real-Time Arrival Information
- Public Art
- Intersection Improvements
- New Stations at SW 136 St, SW 152 St, SW 168 St & SW 184 St



02 Physical Conditions



Pedestrian Facilities

- Sidewalk gaps on 144 St, 168 St and 184 St
- Sidewalks in fair to poor condition
- No street or pedestrian lighting
- Wide turn radius'
- No street furniture
- ADA compliance
- Transit stop deficiencies throughout



Bicycle Facilities

- Lack of dedicated bicycle facilities for east-west travel
 - 136th Street Shared Use Pathway (Coming Soon)
- Adequate north-south facilities
 - South Dade Trail (10 FT)
 - Old Cutler Trail (8 10 FT)
- Sharrows (or Shared Lanes) are available on SW 152 St & SW 168 St





SW 144 Street Existing Conditions

- Street Character
 - Tree-lined residential street

Right-of-Way & Travel Lanes

- ROW varies between 63' 72'
- 2 Lanes

Multimodal Access

- Sidewalks: 5 FT, Concrete, Few Gaps
- Bicycle: None
- Transit: None
- Traffic Volumes
 - Average Daily Traffic 6,200





Walk Audit Results SW 144 Street

HIGHLIGHTS

DESIRED OR NEEDS UPGRADE ELEMENTS: Bike Lane, Sidewalk, Seating, Buffer, Lighting

SIDEWALK CONDITION: Good to Fair – Some Cracks

PED SAFETY & COMFORT: Safe & Secure

ROADWAY ACCESSIBILITY: Somewhat



SW 152 Street Existing Conditions

Street Character

• Tree-lined residential street

• Right-of-Way & Travel Lanes

- ROW Varies 73' 96'
- 2 Lanes

Multimodal Access

- Sidewalks: 5-FT, Concrete, Cracks/Uplifting Throughout
- Bicycle: Sharrows/Shared Lane
- Transit: Route 57 & iBus

Traffic Volumes

• Average Daily Traffic – 12,500





Walk Audit Results SW 152 Street

HIGHLIGHTS

DESIRED OR NEEDS UPGRADE ELEMENTS: Seating, Transit Stop, Sidewalk, Bike Lane, Buffer, Lighting, Shade Trees, Vehicle Lane, Multi-Use Trail

SIDEWALK CONDITION: Fair to Poor - Many Cracks

BUS STOP CONDITION: Bare

PED SAFETY & COMFORT: Somewhat Safe & Secure

PUBLIC PARKS AVAILABLE & INVITING: Somewhat Inviting

TREES PER BLOCK: 3 - 5

ROADWAY ACCESSIBILITY: Somewhat to Not Really



SW 168 Street Existing Conditions

Street Character

• Residential and limited commercial. Commercial buildings are setback with parking in the front. Few shade trees.

• Right-of-Way & Travel Lanes

- ROW Varies 72'-82'
- 2 Lanes

Multimodal Access

- Sidewalks: 5-FT, Concrete, Some missing segments
- Bicycle: Sharrows/Shared Lane
- Transit: Route 287
- Traffic Volumes
 - Average Daily Traffic 6,000





Walk Audit Results SW 168 Street

HIGHLIGHTS

DESIRED OR NEEDS UPGRADE ELEMENTS: Sidewalk, Bike Lane, Multi Use Trail, Shade Trees, Vehicle Lane, Trash Bins, Transit Stop, Lighting, Median, Buffer

SIDEWALK CONDITION: Very Poor – Many Cracks

BUS STOP CONDITION: Bare

PED SAFETY & COMFORT: A Little Safe & Secure

TREES PER BLOCK: 3 - 5

ROADWAY ACCESSIBILITY: Not at All



SW 184 Street Existing Conditions

• Street Character

 Residential and commercial. Commercial buildings are setback with parking in front. Few shade trees.

Right-of-Way & Travel Lanes

- ROW Varies 77' 90'
- 2 lanes to 5 lanes

Multimodal Access

- Sidewalks: 5 to 6-FT, Concrete, various missing gaps
- Bicycles: None
- Transit: Cutler Bay Local (Route 200)
- Traffic Volumes
 - Average Daily Traffic 5,900





Walk Audit Results SW 184 Street

HIGHLIGHTS

DESIRED OR NEEDS UPGRADE ELEMENTS: Sidewalk, Bike Lane, Multi Use Trail, Shade Trees, Lighting, Buffer, Seating

SIDEWALK CONDITION: Fair – Some Cracks

PED SAFETY & COMFORT: Somewhat Safe & Secure

TREES PER BLOCK: 3 - 5

ROADWAY ACCESSIBILITY: Not Really



03 Data Collection & Analysis



Traffic Data

Roadway Segment	AADT (2019)	Max ADT*	LOS	Posted Speed Limit (mph)	
SW 144 Street	6,200	13,320	С	30	
SW 152 Street	12,500	13,320	D	35	
SW 168 Street	6,000	13,320	С	35	
SW 184 Street	5,900	15,930	С	40	
*Max capacity based on LOS "D"		20 mph			
AADT = Annual Average Daily Traffic ADT = Annual Daily Traffic LOS = Level-of-Service MPH = Miles Per Hour		the severe in	Image: state or jury Image: state or jury	*********** 90% chance of death or severe injury 21	





Bicycle & Pedestrian Data



Strava – data is aggregated over 2 years by public activities, the map is updated monthly, some users have opted out. Heat map checked on March 20, 2021.

Survey

147 Responses

Key Takeaways:

86% walk or bike the study's roadways

People would walk/bike more if there was infrastructure available, less or slower traffic, and it was safer/more secure

 $\mathbf{78\%}$ want or have sidewalks in their neighborhoods

Pedestrian amenities and **high visibility crosswalks** are the most desired pedestrian improvements

82% of respondents want a separated bicycle facility

Street trees are the #1 desired community improvement, followed by bioswales and pocket parks

Street trees and **lighting** are the most desired intersection improvement



04 Corridor Selection





I-Use Trail & SMART Plan Connectivity Study: Appendix



Study Roadways Population

Serving Population (> 18 & < 65years & People with Disabilities)

- Area Population: 64%
- 5 17 Years: 13%
- Over 65 Years: 7%
- People with a Disability: 4%

(Numbers based upon 2010 Census adjusted to 2019 population growth estimates)



Employment

Heat Map

- Jobs primarily located along US
 1 South Dixie Hwy
- Hotspot near SW 184 and Old Cutler Road
- 30% of jobs are available within ¼-mile of study roads



Bicycle Facilities ంర **Pedestrian**



Located within 1/2-mile of the study corridors:

- Alexander Montessori
- Howard Drive Elementary
- Coral Reef Elementary
- Westminster Christian
- Palmetto Bay Senior High
- Village Pines
- Henry Perrine
- Southwood Middle
- Christ Fellowship Academy
- Palmetto Bay Academy
- Lincoln Marti
- Carrie Brazer Center
- Madeline Montessori
- Palmer Trinity
- Robert Russa Moton Elementary
- Our Lady of the Holy Trinity



Transit

Primary access along US 1 / South Dade Transitway

Routes 1, 31, 34, 38, 39, 52, 252, 287

SW 152 Street

iBus

Route 57

Stops are missing basic transit amenities

SW 168 Street

Routes 57, 287

SW 184 Street

Routes 1, 200, 287



Places

Key Destinations, Parks, Cultural Centers, Public Facilities, and Historic Sites within a $\frac{1}{2}$ -mile:

- Parks & Preserves
- Historic Sites
- Places of Worship
- Deering Estate
- Libraries
- Movie Theaters
- Shopping Centers
- Grocery Stores
- Senior Center
- Career Center



Survey Results: Roadway Ranking

- 1. SW 152 Street
- 2. SW 168 Street
- 3. SW 144 Street
- 4. SW 184 Street





ppendix 5C: MUTSPCS Stakeholder Meeting 6.23.2

Evaluation Criteria & Scoring

Factor	Total Possible Points	SW 144 Street	SW 152 Street	SW 168 Street	SW 184 Street
Safety	12	3	4	5	4
Density	16	12	11	12	14
Infrastructure	12	6	5	9	9
Connectivity	16	5	13	11	12
Survey	4	2	4	3	1
TOTAL	58	28	37	40	40

Next Steps



Conceptual Design

- Graphics / Renderings
 - 2 Selected Corridors
 - 2 Alternatives for each
- Prioritized Recommendations
 - General
 - Specific





Public Meeting 2

- September 22, 2021
- Proposal of design and improvements along the selected two corridors
- Public feedback and polling on proposals
- Public vote on preferred alternative
- 15% plan view sheet of preferred roadway
- Final product to be presented in November 2021 to Village Council




06 Questions & Comments



39

Project Contact

City Contact

Dionisio Torres, P.E.

Public Services Director

Dtorres@palmettobay-fl.gov

305.969.5086

Project Contact

Christina Fermin, AICP, LEED GA

Project Manager

Cfermin@marlinengineering.com

954.870.5064





Multi-Use Trail & SMART Plan Connectivity Study

Stakeholder Meeting

June 2021



April 6, 2021 Public Meeting #1 Comments

Eric T. – Submitted Comments: (See email for additional comments)

General Public Comments - "Requests, Petitions & Public Comments Submitted"	Reference is made to my email 5 Apr. to DT & CF, which contained detailed comments and many attachments. Particularly important is the Village bike map which can be downloaded from the Village website. Sidewalk improvements should include not only filling gaps but eliminating 90 deg. turns by using 5 ft. triangles at the 90 deg. turn.						
Agenda Item No.	SW 184 St.						
Comments (type your comments in the box below)	There should be a multi-user path on the north side from Old Cutler Path to SW 82 Av. There is a 6 ft. sidewalk in front of Palmer Trinity School. We need protected bike lanes from there to SW 97 Av. as the speed limit is 40 mph. There is 375 ft. of missing sidewalk on the north side, plus some triangles / ADA ramps needed. Little can be done west of SW 97 Av. without eliminating a travel lane.						
Agenda Item No.	SW 168 St.						
Comments (type your comments in the box below)	Perrine Elementary School is at 8851. There is an internal drop off area at SW 89 Pl. There is a traffic circle at SW 87 Av. and at SW 82 Av. The sidewalks on Br874292 over the C-100 Canal are only 42" wide due to the railings, as are those on Br874424 over the C-100A Canal. The sidewalk on the south side ends at SW 76 Av., by the old house at 7490. The gap is 1100 ft. to the driveway of the former BB&T bank location on Old Cutler Rd. About 220 ft. of the sidewalk will have to have a curb and drain into the coral rock wall. A 1.5" plastic pipe cast into the curb & sidewalk every 5 ft. should do the trick. Trees on the next 300 ft. may end up too close to the sidewalk, unless a similar treatment is used.						
Agenda Item No.	SW 152 St.						
Comments (type your comments in the box below)	There are historically protected coral rock walls along much of the street, mostly on the south side. In some cases, such as between SW 87 Ct. & SW 86 Av., the sidewalk goes behind the wall. Coral Reef Elementary School & Park are west of SW 77 Av. Because of the railings on Br874423 over the C-100A Canal, the sidewalk is only 42" wide. It is important that a sidewalk be installed in front of the new development east of SW 71 Ct. Many sidewalk ramps etc. were installed when the road was repaved.						
Agenda Item No.	SW 144 St.						

Comments (type your comments in the box below)

There is a gap on the south side in front of 8600. The property still extends to the center of the street. I note that the property owner did not object to paving the street in front of their house, only the sidewalk. There are many poor connections to the street with 90 deg. angles. The sidewalks on Br874418 over the C-100C Canal are only 46" wide, as are those of Br874421 over the C-100A Canal.

Eric T. –

Note that question #1 he submitted walking all roads and wants to correct it to walks and bikes all roads. Doesn't believe a bridge over US 1 is practical, better at SW 176 St over canal, this would better connect residents from the south to the north of the Village.

Jennifer –

Study looks great! Concerned with 87 Ave bridge which will end at 144 St. The traffic may make it dangerous, especially for pedestrians. Wants a traffic analysis done to see how future traffic will impact the community, not sure when the bridge is coming.

Eugene (former Mayor & Cyclist Activist) -

Florida Law allows bicyclists to use the road – concerned with shared use path/multi-use trail, they are problematic for heavy users, many of the cyclists that use Old Cutler Road do not use the trail because it is poorly maintained, tree roots uplifting in certain areas and pedestrians. Most accidents which have occurred along Old Culter Road involving bicyclists/pedestrians have occurred along the Trail. Golf Carts are also a concerned as they have begun using the Trail. Dedicated bicyclists need to have their own separate facility. Additionally, 87 Ave which ends at 144 St needs to be a complete street with the bridge coming online. Would like the project to consider involving Stakeholders and recommended Bicycle and Pedestrian Master Plan.

Marsha (District 3 Councilwoman) -

Would like us to focus on 184 St, Village Council has endorsed the Palmetto Path (10.5 miles) from 136 St to Old Cutler Road to 184 St to Franjo Rd. 184 St is the remaining missing portion of this pathway. The Village has received a grant (per Jenny) for Historic and Information Signage. 184 St needs a completed sidewalk network, wider sidewalks preferred as there is enough ROW. Can also incorporate protected bike lanes. Would like to be involved in this project.

Nancy –

Resident has asked for pedestrian signal beacons at 144 St and 82 Ave for over 10 years, if we can get this done would greatly appreciate it. Expressed concerns related to 136 St multi-use pathway as she heard they will be removing 50 trees between US 1 and SW 67 Ave. Does not believe this pathway will be used.

Noted that he shared a map of the Palmetto Path which Marsha spoke of, also highlighted need for a shared path east of 82 Ave and a protected bike lane west of 82 Ave.

Eugene –

Believes any improvements along 184 St need to be in partnership with Cutler Bay. Agrees with Eric and Marsha comments.

From: noreply@civicplus.com <<u>noreply@civicplus.com</u>> Sent: Tuesday, April 6, 2021 6:01 PM To: Melissa Dodge <<u>mdodge@palmettobay-fl.gov</u>>; Missy Arocha <<u>marocha@palmettobay-fl.gov</u>> Subject: [EXT] Online Form Submittal: Public Comments Form

CAUTION: EXTERNAL SENDER -- Please avoid opening any unexpected attachments or clicking any strange links.

Public Comments Form

Meeting Date	April 6, 2021						
Meeting Type Community Workshops							
The box below must be checked for Zoning Hearings ONLY	Field not completed.						
Name	Eric Tullberg						
Email Address	e341@bellsouth.net						
Address	7884 SW 179 Tr.						
City	Palmetto Bay						
State Florida							
Zip Code	33157						
	(Section Break)						
General PublicReference is made to my email 5 Apr. to DT & CF, which contained detailed comments and many attachments.Petitions & PublicParticularly important is the Village bike map which can be downloaded from the Village website. Sidewalk improveme							

should include not only filling gaps but eliminating 90 deg. turns by using 5 ft. triangles at the 90 deg. turn.

	(Section Break)				
Agenda Item No.	SW 184 St.				
Comments (type your comments in the box below)	There should be a multi-user path on the north side from Old Cutler Path to SW 82 Av. There is a 6 ft. sidewalk in front of Palmer Trinity School. We need protected bike lanes from there to SW 97 Av. as the speed limit is 40 mph. There is 375 ft. of missing sidewalk on the north side, plus some triangles / ADA ramps needed. Little can be done west of SW 97 Av. without eliminating a travel lane.				
Agenda Item No.	SW 168 St.				
Comments (type your comments in the box below)	Perrine Elementary School is at 8851. There is an internal drop off area at SW 89 Pl. There is a traffic circle at SW 87 Av. and at SW 82 Av. The sidewalks on Br874292 over the C-100 Canal are only 42" wide due to the railings, as are those on Br874424 over the C-100A Canal. The sidewalk on the south side ends at SW 76 Av., by the old house at 7490. The gap is 1100 ft. to the driveway of the former BB&T bank location on Old Cutler Rd. About 220 ft. of the sidewalk will have to have a curb and drain into the coral rock wall. A 1.5" plastic pipe cast into the curb & sidewalk every 5 ft. should do the trick. Trees on the next 300 ft. may end up too close to the sidewalk, unless a similar treatment is used.				
Agenda Item No.	SW 152 St.				
Comments (type your comments in the box below)	There are historically protected coral rock walls along much of the street, mostly on the south side. In some cases, such as between SW 87 Ct. & SW 86 Av., the sidewalk goes behind the wall. Coral Reef Elementary School & Park are west of SW 77 Av. Because of the railings on Br874423 over the C-100A Canal, the sidewalk is only 42" wide. It is important that a sidewalk be installed in front of the new development east of SW 71 Ct. Many sidewalk ramps etc. were installed when the road was repaved.				
Agenda Item No.	SW 144 St.				

Comments (type your comments in the box below)	There is a gap on the south side in front of 8600. The property still extends to the center of the street. I note that the property owner did not object to paving the street in front of their house, only the sidewalk. There are many poor connections to the street with 90 deg. angles. The sidewalks on Br874418 over the C-100C Canal are only 46" wide, as are those of Br874421 over the C-100A Canal.
Agenda Item No.	Field not completed.
Comments (type your comments in the box below)	Field not completed.
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Comments (type your comments in the box below)	Field not completed.
Agenda Item No.	Field not completed.
Comments (type your comments in the box below)	Field not completed.

Email not displaying correctly? View it in your browser.

Thank you for your comprehensive presentation tonight. I appreciate all the information you gave residents and am looking forward to being involved in the process.

As I mentioned in my comments, you have a head start on 184 th St., as Palmetto Bay Council has already approved the Palmetto Bay Path. The only road connectivity missing for the Path is 184 th St. From walking 184th St. so often, I believe that there is enough right-of-way to accommodate a shared pedestrian-"family" bike path, a protected "express" bike lane next to the road, and preservation of much of the landscaping and trees. Another advantage of 184 th St. is that, unlike the other streets in your study, there are relatively few homes close to the streets. Most of the street is lined with high brick walls closing off back yards from 184th, decorative fences protecting front yards, commercial building frontage, and a school with a brick fence.

I understand the dilemma of accommodating "family" bicyclists and "express" bicyclists in accommodating their uses. I support protected bike lanes next to the roads for the "express"

folks, and shared paths for the "family" bicyclists. Although they are riding the same equipment, bicycles, they are a world apart in their usage needs. They should not be using the same terrain. My analogy is people who use balls for tennis have very different usage needs than do soccer, football, and handball players.

As to working with Cutler Bay for 184 th St. as Mayor Flinn suggested, it is always possible. However, the town just completed its narrow pedestrian-only sidewalk on the south side of 184 th St.. This might be a disincentive for the town to spend more money on 184 th. I was surprised the town did not build a shared path.

I plan to submit for approval to Palmetto Bay Council in May the matching Florida grant for informational and historic signs on Palmetto Bay Path (136, Old Cutler Road, 184, Franjo road/US1/busway) on the 10 ½ mile bike/walking shared path. Now that our budget appears to be recovering from the loss of revenues from the pandemic, I am hopeful that the Council will approve it.

Palmetto Bay Path has been a work in progress for two years. I whole-heartedly support the northern leg of the Path, the 136th St. project. I attended every meeting about it and am satisfied that the project will remove as few trees as possible, provide enough room for Howard School drop-off, and become a needed safety and recreational enhancement for the village and any driver/pedestrian/bicyclist who uses it.

The Council has asked the county to look into golf cart use of our streets. I do not support golf carts on Old Cutler Road shared path. They are vehicles that belong on roads, not on shared paths.

Finally, I am a walking advocate. Since the pandemic forced me to quit my gym, I walk everywhere with my dog for exercise every day. I meet pedestrians all the time, especially dog walkers and early morning joggers. There are plenty of pedestrians, not well organized, who will be the main users of your connectivity proposal. Please keep pedestrians in the forefront of your consideration. Sidewalks need to be replaced and gaps filled. Walking in the street is not ideal, but since Palmetto Bay has few sidewalks, it becomes necessary, but dangerous. I don't walk at night since being hit by a car crossing an unlighted intersection near my home to attend an evening function at Village Hall, just four blocks from my house. I would appreciate lighting on the sidewalks and streets you select so that pedestrians are safe.

Shade trees by the paths are greatly appreciated by walkers.

I plan on joining your walking audit at both parks. I'm looking forward to working with you on this excellent TPO-Palmetto Bay initiative.

Marsha Matson, Ph.D. Palmetto Bay Council District #3

Questions Log K:\2020055.000 Village of Palmetto Bay SMART Moves Feasibility Study\Public & Stakeholder Outreach\Meeting 1\QuestionsLog 2021_04_06 20_15.rtf

Q: The problem with the current traffic study is that it does not take into account the just approved bridge which will connect 87th Ave. The new thoroughfare that it will create will end at 144th. I predict that 144th and a second extent 152nd will become incredibly dangerous for people to walk or bike on due to the

huge amount of future traffic the bridge will create.[Jennifer Santino] [jds3377777@aol.com] [Q: 7:19 PM]

	Webinar ID & Title			Attendes Co	ntact								Engagement Metrics	
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 Jackson

1/28/22, 11:48 AM

Marlin Engineering Mail - Walking Audit sign up



Christina Fermin <cfermin@marlinengineering.com>

Wed, Apr 7, 2021 at 2:05 AM

Thu, Apr 8, 2021 at 9:44 AM

Walking Audit sign up

2 messages

Eric Tullberg <e341@bellsouth.net> To: CFermin@marlinengineering.com Cc: dtorres@palmettobay-fl.gov

- A. I do not have a smart phone so I could not capture the QR code.
- B. The flyer indicated that the 15 Apr. WA was at 0800, but in the mtg. it was stated as 1800, 10 hrs. later. Which is correct? If it is the latter, it will be dark 2 hrs. later.
- C. Where exactly in CRP are we to meet Thur.?
- D. Is everyone going to visit both SW 144 St. & SW 152 St. or do we have to choose now?
- E. Where exactly in PBP are we to meet Sat.?
- F. Is everyone going to visit both SW 168 St. & SW 184 St. or do we have to choose now?
- G. Do I need to bring a measuring wheel? I always carry a tape.
- H. Sign me up for both, but please tell everyone when and where.

Eric Tullberg PE 305-255-2594 (H no text)

Christina Fermin <cfermin@marlinengineering.com> To: Eric Tullberg <e341@bellsouth.net> Cc: Dionisio Torres <dtorres@palmettobay-fl.gov>

Eric,

My answers are below in red.

On Wed, Apr 7, 2021 at 2:05 AM Eric Tullberg <e341@bellsouth.net> wrote:

- A. I do not have a smart phone so I could not capture the QR code. Here is the link to sign up.
- B. The flyer indicated that the 15 Apr. WA was at 0800, but in the mtg. it was stated as 1800, 10 hrs. later. Which is correct? If it is the latter, it will be dark 2 hrs. later. April 15 we are meeting at 6 pm, noted.
- C. Where exactly in CRP are we to meet Thur? The location has been changed to St. Richard's Church Park & Ride on April 15 and Village Hall on April 17 meeting link reflect these changes.
- D. Is everyone going to visit both SW 144 St. & SW 152 St. or do we have to choose now? There will be 2 groups, we'll be walking the groups at the same time.
- E. Where exactly in PBP are we to meet Sat.? See above comment to C.
- F. Is everyone going to visit both SW 168 St. & SW 184 St. or do we have to choose now? There will be 2 groups, we'll be walking the groups at the same time.
- G. Do I need to bring a measuring wheel? I always carry a tape. If you have one, yes, that would be great. We have 1 wheel and we'll also have some measuring tape.
- H. Sign me up for both, but please tell everyone when and where. Please use the link to sign up and feel free to share with friends and neighbors.

[Quoted text hidden]

Christina Fermin, AICP, LEED Green Associate | STRATEGIC PLANNER

P 305.477.7575 | D 954.870.5064 | cfermin@marlinengineering.com

1/28/22, 11:47 AM

Marlin Engineering Mail - Beth Adler re : input, unable to attend Sat audit mtg, exposed to virus



Christina Fermin <cfermin@marlinengineering.com>

Beth Adler re : input, unable to attend Sat audit mtg, exposed to virus

4 messages

Beth's E Mails <jordaly@aol.com>

Fri, Apr 16, 2021 at 11:12 AM

To: cfermin@marlinengineering.com, Missy Arocha <marocha@palmettobay-fl.gov> Cc: dhall@palmettobay-fl.gov, Fanny Carmona <fcarmona@palmettobay-fl.gov>, Melissa Dodge <mdodge@palmettobayfl.gov>, Karyn Cunningham <kcunningham@palmettobay-fl.gov>

Good morning,

I signed up for Saturday morning audit. Les was exposed yesterday, but fully vaccinated. I am fully vaccinated, but a week shy of complete quarantine period. So I will write my input, instead of being on site.

1. Surface composition-

First, I am totally opposed to use concrete surface (sidewalks) for multi purpose recreational areas, such as within parks & as connections between asphalt path networks. The recreational surface of choice, should be asphalt.

Some reasoning to consider.

-Asphalt causes less friction on body joints that have direct contact with surface.

-White/light, beach sand is known to reflect light. In fact, the underside of many hat visors are dark, so not to reflect light. Surface sun/light composition reflection, could most likely become a more recognized, climate-heat issue. -Asphalt is continuous, so easy on eyes to follow and blemishes less noteworthy. Because concrete is so symmetrical,

blemishes are much more noticeable.

2. Off road pathways-

I prefer that we start with combination, off road, bike & pedestrian connector systems. First, lets determine usage and than later, if the off street paths are too full of bikes & pedestrian usage, we then can create street bike lanes. Some reasoning to consider-

- the rising/ setting sun found in east/west travel, can blind vehicle drivers. So bike lanes might be safer for north/south travel.

- the look of the Old Cutler bike path should be compared to the look of our existing sidewalk systems. To me, the bike path looks way more professional- flowing , continuous, and recreational friendly/inviting.

- plan for tree canopy over path, which would benefit, both pedestrians and bikers.

3. Safety for both pedestrians and bikers-

Thinking in terms of the passing of bikers & walkers/ joggers, in the narrow-single file.

- no golf cars allowed on path system, which have too wide a wing span.

- of course, make path wide enough to comfortably accommodate both bike and pedestrian. Though in reality, we might not be able to have wide paths-Old Cutler path wide.

- like the surface markings appearing on Old Cutler bike path. I also think because of pandemic, we are more aware of surface markings, in addition to upright signage.

3. Our neighboring community- Cutler Bay.

The street upgrades look wonderful!

From a recreational/continuity/unfamiliar user, point of view, I have a major problem with the Old Cutler Road transition from asphalt (87 th Ave) to concrete (shopping center area) to asphalt (Lakes By the Bay). Though the shopping center area looks symmetric, I think the recreational continuity of surface, of the path network, is more important. Though I am not sure, this is a result of a code issue.

4. Accommodating Bicyclist, Pedestrian , or both?

I hope this is helpful and relevant input.

Beth Adler 8140 SW 151 Street Palmetto Bay, FI 33158

Sent from my iPad

1/28/22, 11:47 AM

Marlin Engineering Mail - Beth Adler re : input, unable to attend Sat audit mtg, exposed to virus

Djenepha Polynice Hall <dhall@palmettobay-fl.gov>

Fri, Apr 16, 2021 at 11:30 AM

To: Beth's E Mails <jordaly@aol.com>, "cfermin@marlinengineering.com" <cfermin@marlinengineering.com>, Missy Arocha <marocha@palmettobay-fl.gov>

Cc: Fanny Carmona <fcarmona@palmettobay-fl.gov>, Melissa Dodge <mdodge@palmettobay-fl.gov>, Karyn Cunningham <kcunningham@palmettobay-fl.gov>

Good morning Mrs. Adler,

Thank you for your comments and supporting details. Your observations and input will be considered when developing a final plan. There will be future meetings for public participation before a final product is created.

We look forward to your future participation.

Best Regards,

Jenny Polynice-Hall Grant Writer 9705 East Hibiscus Street Palmetto Bay, FL. 33157-5606 Office: (305) 259-1234 EXT: 1277 Fax: (305) 259-1293 dhall@palmettobay-fl.gov

-----Original Message-----From: Beth's E Mails <jordaly@aol.com> Sent: Friday, April 16, 2021 11:12 AM To: cfermin@marlinengineering.com; Missy Arocha <marocha@palmettobay-fl.gov> Cc: Djenepha Polynice Hall <dhall@palmettobay-fl.gov>; Fanny Carmona <fcarmona@palmettobay-fl.gov>; Melissa Dodge <mdodge@palmettobay-fl.gov>; Karyn Cunningham <kcunningham@palmettobay-fl.gov> Subject: [EXT] Beth Adler re : input, unable to attend Sat audit mtg, exposed to virus

CAUTION: EXTERNAL SENDER -- Please avoid opening any unexpected attachments or clicking any strange links. [Quoted text hidden]

 Karyn Cunningham <kcunningham@palmettobay-fl.gov>
 Fri, Apr 16, 2021 at 11:37 AM

 To: Beth's E Mails <jordaly@aol.com>, "cfermin@marlinengineering.com" <cfermin@marlinengineering.com>, Missy Arocha

 <marocha@palmettobay-fl.gov>

Cc: Djenepha Polynice Hall <dhall@palmettobay-fl.gov>, Fanny Carmona <fcarmona@palmettobay-fl.gov>, Melissa Dodge <mdodge@palmettobay-fl.gov>

Thank you.

Best regards, Mayor Karyn Cunningham Village of Palmetto Bay 305-904-1805

Please Note: Florida has very broad public records laws. Most written communications to or from local officials regarding official business are public records available to the public and media upon request. Your e-mail communications may therefore be subject to public disclosure.

From: Beth's E Mails <jordaly@aol.com>
Sent: Friday, April 16, 2021 11:12 AM
To: cfermin@marlinengineering.com <cfermin@marlinengineering.com>; Missy Arocha
<marocha@palmettobay-fl.gov>
Cc: Djenepha Polynice Hall <dhall@palmettobay-fl.gov>; Fanny Carmona <fcarmona@palmettobay-fl.gov>;

https://mail.google.com/mail/u/0/?ik=af8cd87100&view=pt&search=all&permthid=thread-f%3A1697210361165231379&simpl=msg-f%3A16972103611... 2/3

1/28/22, 11:47 AM

Marlin Engineering Mail - Beth Adler re : input, unable to attend Sat audit mtg, exposed to virus

Melissa Dodge <mdodge@palmettobay-fl.gov>; Karyn Cunningham <kcunningham@palmettobay-fl.gov> Subject: [EXT] Beth Adler re : input, unable to attend Sat audit mtg, exposed to virus

CAUTION: EXTERNAL SENDER -- Please avoid opening any unexpected attachments or clicking any strange links.

[Quoted text hidden]

Christina Fermin <cfermin@marlinengineering.com> To: Beth's E Mails <jordaly@aol.com> Cc: Jenny Polynice-Hall <dhall@palmettobay-fl.gov> Fri, Apr 16, 2021 at 2:05 PM

Beth,

Thank you for your input. If you have not already done so, please take the survey for the project available through the end of this month.

Also, we create a walking audit survey if you've already walked one of the study roadways or plan to walk them on your own time, please feel free to take the survey to provide insight on the roadways.

Stay safe and be well.

Sincerely, Christina Fermin



Virus-free. www.avast.com

[Quoted text hidden]

Christina Fermin, AICP, LEED Green Associate | STRATEGIC PLANNER

P 305.477.7575 | D 954.870.5064 | cfermin@marlinengineering.com

Marlin Engineering Mail - Beth Adler re: extremely concerned over recreational sidewalk trend



Christina Fermin <cfermin@marlinengineering.com>

Beth Adler re: extremely concerned over recreational sidewalk trend 3 messages

omeeeugee

Beth's E Mails <jordaly@aol.com> To: Christina Fermin <cfermin@marlinengineering.com>

Tue, May 18, 2021 at 8:07 AM

Hi-

By now you must realize how concerned I am about seeing cement sidewalk trend incorporated into recreational settings. I have included a wide asphalt path photo taken at Lake Nona , FI, Friday. Simply said, the modernization/upgrade of recreational path surface, is enlarging the asphalt path width and not replacing asphalt with museum grade, cement. I hope sharing my mindset, helps. Reth

Sent from my iPad



IMG_0704.jpg

Christina Fermin <cfermin@marlinengineering.com> To: Beth's E Mails <jordaly@aol.com> Tue, May 18, 2021 at 9:55 AM

Hi Beth,

Thanks for your input. Multi-Use Trails or Shared Use Pathways are typically constructed using asphalt since they are used by many types of users for recreational purposes, while they are more cost effective, they do require regular maintenance. Sidewalks are typically constructed out of concrete as they typically last longer and are more durable. They also require maintenance, they do not require as much maintenance as an asphalt pathway. Asphalt typically lasts about 10 years, while concrete lasts about 20 or more years.

Whatever multi-use pathway comes from this study will be recommended for asphalt or similar treatment, while sidewalks will be recommended for concrete, especially to fill in any missing sidewalk gaps to the existing concrete sidewalk network.

Let me know if you have any other questions.

Thanks, Christina



Virus-free. www.avast.com

Marlin Engineering Mail - Beth Adler re: extremely concerned over recreational sidewalk trend

[Quoted text hidden] [Quoted text hidden] Sent from my iPad

Christina Fermin, AICP, LEED Green Associate | STRATEGIC PLANNER

P 305.477.7575 | D 954.870.5064 | cfermin@marlinengineering.com

Beth's E Mails <jordaly@aol.com>

To: Christina Fermin <cfermin@marlinengineering.com>

Thanks! Beth

Sent from my iPad

On May 18, 2021, at 9:56 AM, Christina Fermin <cfermin@marlinengineering.com> wrote:

[Quoted text hidden]

1/28/22, 11:51 AM

Marlin Engineering Mail - Beth Adler re: totally impressed rec signage-Johnson Park/ Highland Park, NJ

Gmail

Christina Fermin <cfermin@marlinengineering.com>

Beth Adler re: totally impressed rec signage-Johnson Park/ Highland Park, NJ 3 messages

BETH ADLER <jordaly@aol.com> Fri, Jun 25, 2021 at 7:03 AM To: Dionisio Torres <dtorres@palmettobay-fl.gov>, Christina Fermin <cfermin@marlinengineering.com>, Nick Marano <nmarano@palmettobay-fl.gov> Cc: council@palmettobay-fl.gov, Fanny Carmona <fcarmona@palmettobay-fl.gov>

I sent this photo to Fanny yesterday, because park and rec committee has been struggling with how to handle inside park, multi use path safety/etiquette-courtesy. Obviously, I was totally impressed how this signage dealt with this issue and wanted to make sure it was strongly considered with all village multi use pathways, outside of parks(including SW 136 Street and Old Cutter/PB portion, multi use path). Thinking of you all in Miami, in this tragic time.

Beth

Sent from my iPad



IMG_0826.jpg 3357K

Tue, May 18, 2021 at 10:37 AM

Marlin Engineering Mail - ET Comments - Palmetto Bay SMART Plan Connectivity Study



Christina Fermin <cfermin@marlinengineering.com>

ET Comments - Palmetto Bay SMART Plan Connectivity Study

2 messages

Eric Tullberg <e341@bellsouth.net>

Fri, Jun 25, 2021 at 6:19 PM

- To: Christina Fermin <cfermin@marlinengineering.com> Cc: dtorres@palmettobay-fl.gov
 - A. Attached are some documents you may find useful:
 - 1. PB&CB-HD.pdf is a bike facilities map for Palmetto Bay, Cutler Bay and the surrounding area from SW 112 St. to SW 256 St. and from SW 137 Av. to SW 57 Av. Prior to the planned SW 136 St. path there is no E-W connection between Route 1 (the Old Cutler Path & Commodore Trail) and the M-Path from SW 40 St. to SW 216 St. (11 mi.). After that path is built it is 5 mi. from SW 136 St. to SW 216 St.
 - 2. The latest sidewalk map I have is from 2004. When a new map is produced it needs to show both sides as there are many places where there is a sidewalk on only one side of the street. There also needs to be a symbol showing the ADA ramp situation for each of the 4 corners. Many sidewalks do not joint the streets for a crosswalk but curve into the grass as in letters F & G in SWA-8511.pdf.
 - 3. DUV_BL20.pdf is a map of the bike lanes in the Downtown Urban Village. It shows that many of them are one-way. There are no eastbound bike lanes. The Busway and BRT stops are also shown.
 - 4. BPMP-STy.pdf is a tabulation of the Short Term Priority Projects from the last Bicycle Pedestrian Master Plan (Sep. 2009) Note that VPB has done 33 % of roads within its jurisdiction, but MDC has done only 4% of its share.
 - B. The pictures and drawings you sent showing Existing Conditions were very useful. These were my observations: 1. SW 144 St.
 - a. Sidewalk missing in front of 8600. The property has not been platted so theoretically they own to the center of the road. I have asked that they be contacted about filling in the sidewalk. Easement? Eminent Domain?
 - b. Big power poles in the sidewalk. Not much can be done other than extending the sidewalk.
 - c. Br874421 over the C-100A Canal & Br874418 over the C-100C Canal each have 46 " clear from the guardrail.
 - 2. SW 152 St.
 - a. Bike lanes were supposed to be installed as MDC part of the 2009 BPMP; but instead we got sharrows when the road was repaved. Most of the BPAC thinks sharrows are useless.
 b. Many ADA ramps were installed & crosswalks improved when the road was repaved.
 - b. Many ADA ramps were installed a crosswarks improved when the road was repayed.
 - c. There are historic rock walls along the south side from 86 Av. to 89 Av. Sometimes the sidewalk is behind them, other times the side walk is next to the street. Whatever is done should preserve these walls.
 - d. Br874423 over the C-100A canal has railings 42" from the side of the bridge. Heavy ped. use from Coral Reef Park & Elementary School.
 - e. The most developed corridor, little room for improved facilities.
 - 3. SW 168 St.
 - a. There is 1120 ft. of missing sidewalk on the south side from SW 76 St. to the old BB&T bank location on Old Cutler Rd. For the first 300 ft. from SW 76 St. to SW 74 Ct. a reinforced edge or root barrier will be required ue to trees close to the path. For the next 780 ft. a curb will be required against the road as there is not sufficient ROW to set the sidewalk back. CF measured 7 ft. from road to wall, but it may be 6 ft. in spaces. There is a place where the wall was removed and trees planted but there needs to be 4 ft. from the trees so the sidewalk will be next to the road. We talked about how to drain the road across the sidewalk. ET suggested placing a 1.5" nominal PVC pipe (1.875" O.D.) at the level of the road at 5 ft. intervals, sloped to the wall. DT said it would be better to use a low spot in the sidewalk at intervals, as the pipes would be likely to clog. Assuming a max. 5% slope and 5 ft. at the top and bottom of each slope, the minimum distance between low areas would be 30 ft. A type "D" curb would be used to minimize the encroachment of the travel lanes. When I get a chance I will provide a drawing of what is suggested.
 - b. I noted that Steve Cody had difficulty with a wheel chair getting over some of the sidewalk repairs. We must be cognizant that those using wheelchairs require a smoother surface than bicycles.
 - c. Br874292 crosses the C-100 Canal and Br874424 crosses the C-100A Canal. Both have only 42" between the railing and the side of the bridge.
 - d. There are traffic circles at SW 82 & 87 Av. The may be expanded to include right turn lanes, which may affect our plans. The ped. crossings at the circles are difficult to negotiate as there is not

Marlin Engineering Mail - ET Comments - Palmetto Bay SMART Plan Connectivity Study

sufficient room to turn from the sidewalk. There is not 6 ft. of space in the center of the crosswalk so someone with a bike can cross each lane separately.

- e. SW 89 Pl. is a drop-off for the Perrine Elementary School.
- f. The missing sidewalk in front of 16810 is going to be difficult to address because:
 - A. They own up to the street.
 - B. The hedge has power poles in it.
 - C. They may be unwilling to give up 5 ft. of their parking area.
- 4. SW 184 St.
 - a. Because of the C-100B / C-1N Canal and the HEFT SW 184 St. is the last E-W rote until SW 216 St. It is also the only way for those of us who live south of the C-100 Canal and east of the C-100B Canal to go west. I feel that the greatest need is on SW 184 St. but apparently the other members of the team do not agree with me.
 - b. The north half of the road is Palmetto Bay, the south half is Cutler Bay.
 - c. Cutler Bay has installed a 5 ft. sidewalk along the entire south side from US-1 to Old Cutler Rd. There is one spot, just east of SW 97 Av. where a 72"x93"9.5" drain opening is a hazard for those walking to the bus stop. See ED097JB.jpg.
 - d. Bike lanes were planned for SW 184 St. since 2004. Since the speed limit is 40 mph, protected or at least buffered bike lanes are needed.
 - e. The section from SW 97 Av. west is a commercial area with 4 travel & 1 turn lane. There is little that can be done here. Although I usually ride on the road, I often use the sidewalks in that area, depending on the number of cars / pedestrians.
 - f. There is a culvert under SW 184 St. that carries the C-100B canal under the road, just east of SW 92 Av. There is a chain link fence next to the sidewalk. It looks as though the fence could be removed and the sidewalk widened up to the end of the culvert.
 - g. Sidewalk requirements on the north side:
 - A. No sidewalk 1180 ft. from Old Cutler Rd. past 78 Ct. (my exit) to Palmer Trinity School (PTS). B. PTS has 1010 ft. of mostly 6 ft. sidewalk. It does not transition smoothly to either side. It is
 - 10 ft. wide at the entrance. There is room to expand to the north west of the entrance, but there is a wall on the east side. There are trees south of the sidewalk.
 - C. No sidewalk 320 ft. from PTS to SW 82 Av.
 - D. The NW corner of SW 82 Av. needs a short ADA ramp
 - E. There is no sidewalk 210 ft. from SW 84 Ct. to 8501 SW 184 St. in front of 18390 SW 84 Ct. F. ADA ramps have been added to both sides of SW 86 Av.
- C. The following is my suggestion for SW 184 St. All modifications except the first are on the north (Palmetto Bay) side.
 - 1. Provide a level non-skid surface above the drainage grate just east of SW 97 Av., level with the sidewalk.
 - 2. Construct a sidewalk on the ROW line from SW 84 Ct. to 8501 SW 184 St.
 - 3. Build a 10 ft. multi-user path from Old Cutler Rd. across SW 78 Ct. 1180 ft. to PTS.
 - 4. Expand the sidewalk on the west side of the PTS entrance by 4 ft. Connect both ends with sections 10 ft. wide with no sharp bends.
 - 5. Build a 10 ft. multi-user path to SW 82 Av.
 - 6. ADA ramp for the NW side of SW 82 Av.
 - 7. Depending on available width build either an 8 ft. cycle-track or 5 ft. additional sidewalk on the outside of the trees, next to the road. The cycle-track would be for bikes only; the sidewalk would be part of a multiuse path pair. The cycle-track should have the westbound side closest to the road.
 - a. From SW 82 Av. 0.85 mi. to the C-100B Culvert.
 - b. As mentioned above, the sidewalk over the culvert would have to be widened to 10 ft.
 - c. From the Culvert 0.5 mi. west to SW 94 Ct. From that point cyclists would have to use the sidewalk or the road. Those going to the DUV / SW 97 Av. could take SW 94 Ct. to SW 181 Ter.
- D. Many existing sidewalks can be made easier to navigate by bicycle by eliminating the 90 deg. turns often required by poor sidewalk alignment. See SWA-CT.pdf. The ideal alignment is shown on the top half of the page. A & B represent the situation where there is a sidewalk going only in one direction; D & E show sidewalks in both directions. The alignment shown in D has recently been installed at SW 87 Av. & SW 184, where the intersection was improved. Alignment E is similar to the standard FDOT ramp that is 10 ft, wide at the sidewalk. The critical characteristic is that the ramp meets the sidewalk at an angle of 135 deg. or greater. Of course all ramps need detectable pads oriented in the direction of travel. The bottom of the drawing shows how a 5 ft. x 5 ft. isosceles concrete triangle can ease the transition from the sidewalk to the ramp. F shows the "Sidewalk to Nowhere" that has often been installed throughout the County. Instead of connecting directly with the road, it follows the property line around the corner and ends in the grass. I believe it was created by requiring the sidewalk to be on the ROW line, but not specifying it must connect directly to the road with a detectable pad. If an engineer built a road like that, he would be fired. G is the situation where the ramp is short. Note that only the side adjacent to the long sidewalk requires a triangle (or widened ramp). As people will not be traveling on the short leg, there is no need for a transition on that side. H shows the situation where there is a 90 deg. jog in the sidewalk mid-block. The triangle is situated so a cyclist can easily make the turn. If there are sidewalks in both directions, such as I, there should be a triangle on each side of the ramp. J shows how difficult a 90 deg. turn can be if there is no triangles to

Marlin Engineering Mail - ET Comments - Palmetto Bay SMART Plan Connectivity Study

ease the turn. Not only cyclists but wheelchairs, those pushing strollers and roller-bladers would find the turn from one 5 ft. sidewalk to another difficult. ConcTri.pdf shows the construction details for the triangles. If there is an obstruction in one of the legs the forms can be adjusted to accommodate. A 5 ft. triangle would require 4.2 cu.ft. of concrete – 30 per 5 cu. yd. load; so it makes sense to pour many at the same time. That will require a lot of coordination and several crews to get the pours completed before the concrete sets. At a roundabout, up to 16 triangles would be needed. Note the #5 bar is short enough to allow 2" space to the outside of the slab.

Eric Tullberg PE 305-255-2594 (H no text)

From: Christina Fermin <cfermin@marlinengineering.com>
Sent: Wednesday, 23 June, 2021 17:31
To: Eric Tullberg <e341@bellsouth.net>
Cc: Dionisio Torres <dtorres@palmettobay-fl.gov>; Djenepha Polynice Hall <dhall@palmettobay-fl.gov>
Subject: Re: Stakeholder Meeting Invite - Palmetto Bay SMART Plan Connectivity Study

Hi Eric,

Thanks for your phone call and email. I have attached the PPT presentation. Once I update the evaluation criteria I will send an email update to stakeholders. As I mentioned, stakeholders believe that we should move forward with SW 152 Street and SW 168 Street, once I incorporate a few more data points into the evaluation criteria, we will see how the ranking comes out based on recommendations.

As discussed, please send me whatever notes and recommendations you have, I would be happy to review and potentially include them into the report.

If you have any questions on the presentation slides, please let me know.

Have a great week.

Sincerely,

Christina

On Wed, Jun 23, 2021 at 3:56 PM Eric Tullberg <e341@bellsouth.net> wrote:

Sorry I missed the Zoom mtg. I checked my e-mails @14:58 so you had already shut down by the time I signed on. Is the presentation available online?

Eric Tullberg PE 305-255-2594 (H no text)

Marlin Engineering Mail - ET Comments - Palmetto Bay SMART Plan Connectivity Study

From: Christina Fermin <cfermin@marlinengineering.com> Sent: Tuesday, 8 June, 2021 13:52 To: Dionisio Torres <dtorres@palmettobay-fl.gov>; Jenny Polynice-Hall <dhall@palmettobay-fl.gov> Cc: Lisa Maack <lmaack@marlinengineering.com> Subject: Stakeholder Meeting Invite - Palmetto Bay SMART Plan Connectivity Study</lmaack@marlinengineering.com></dhall@palmettobay-fl.gov></dtorres@palmettobay-fl.gov></cfermin@marlinengineering.com>
Dear Stakeholder,
You are cordially invited to the Palmetto Bay Multi-Use Trail & SMART Plan Connectivity Study stakeholder advisory virtual meeting scheduled for Wednesday, June 23, 2021 at 2 pm. You will be receiving a calendar invite shortly.
We will be discussing the scope, existing conditions, data collection, corridor selection and next steps.
As members of the stakeholder advisory committee, expectations will include a review of materials, approval of the corridor selection, and input for the study.
We hope you can join us for this virtual meeting via Zoom. The meeting will be approximately 1-hour and include a 20- 30 minute presentation with +/-30 minutes for discussion and questions.
I have attached some materials for review which include photos of some of the deficiencies found along our site visit of the four study roadways, the results of the walk audit survey conducted in April, the public meeting presentation slides, and the flyer sent by the Village a few weeks ago. If you have not filled out the public survey, link here, please do so before it is closed this Friday at 5 pm. The flyer also includes a link to the 1st public meeting we hosted in April.
Should you have any questions please do not hesitate to contact me. We look forward to seeing you on June 23!
Sincerely,
Christina Fermin, AICP, LEED Green Associate PROJECT MANAGER
P 305.477.7575 D 954.870.5064 cfermin@marlinengineering.com

CHRISTINA FERMIN, AICP, LEED GREEN ASSOCIATE | Strategic Planner

O 954.870.5070 | **D** 954.870.5064

cfermin@marlinengineering.com

9 attachments

Marlin Engineering Mail - ET Comments - Palmetto Bay SMART Plan Connectivity Study

VPB_SW04.jpg 1506K



DUV_BL20.pdf 378K

BPMP-STy.pdf

SWA-8511.pdf

PBCRED-B.pdf

SWA-CT.pdf

ConcTri.pdf 45K

7-

27K

28K

🔁 РВСБ 310К

12 SWA 30K

7-

EDS097JB.JPG 741K

Christina Fermin <cfermin@marlinengineering.com> To: Eric Tullberg <e341@bellsouth.net> Cc: Dionisio Torres <dtorres@palmettobay-fl.gov>

Eric,

Your input is much appreciated.

Thank you for this information, I will be referencing some of this for the report.

Cheers, Christina [Quoted text hidden]

3 attachments

https://mail.google.com/mail/u/0/?ik=af8cd87100&view=pt&search=all&permthid=thread-f%3A1703579039051866108&simpl=msg-f%3A17035790390... 5/6

Mon, Jun 28, 2021 at 10:59 AM



Sidewalk, Path & other Bicycle Facility Dimensions

This document is intended to provide a short compendium of applicable standards. Minimum width of passage – ADA standards – 32" for less than 2 ft. long; otherwise 36" clear. There must be a 60" x 60" passing space every 200 ft. if the width is less than 60". Minimum sidewalk clear width 48" by FDOT standards. All bikelanes must go in the same direction as the adjacent motor vehicle traffic. Minimum width of a bike lane adjacent to a grass edge -4 ft. clear surface. No rumble strips or drainage grates can project into clear area. Minimum width of a bike lane adjacent to a curb or other vertical edge -5 ft. Buffered Bike Lanes have a striped area at least 2 ft. wide separating them from the travel lanes. Minimum width of a buffered bike lane adjacent to parked cars – (3') buffer + 4' BL = 7 ft.) per FDOT 2019 Design Manual Section 223 – Bicycle Facilities. Four door car doors open 3 ft.; two door even wider. A Protected Bike Lane is separated from the road by a physical barrier – grass, curb, bumps, cars, etc. Standard sidewalk width 5ft., unless adjacent to curb, then 6 ft. is required. Minimum width of one-way path - 6 ft. This is also the minimum for small power sweepers. Miami Dade Co., AASHTO standard for paths – 10 ft. wide. (old Urban exception was 8 ft.). A dashed center line is recommended for all 2 way paths to encourage people to keep right. Minimum width of two way path per FDOT Plans Prep. Manual-10 ft. Recommended width for paths – 12 ft. (Allows couples to ride, run or walk side by side) Width of MDC "Green & White" sidewalk paths 13 ft. - an 8 ft. slab next to a 5 ft. sidewalk. Where pedestrian & bicycle traffic is heavy and stopping is anticipated 14 - 24 ft. is suggested. On wide paths consideration should be given to separating cyclists from pedestrians. Minimum lane widths per FDOT Green Book 2005 Table 3-7: Freeways – 12 ft. Arterials & Collectors - 11 ft. Local Roads & Auxiliary Lanes (such as 2 way turn lanes) - 10 ft. Recommended width of wide curb lanes – 14 ft. A clear area of 2 ft. (3 ft. preferred) is required next to a path (maximum slope 1:6). Signs and other vertical obstructions should be at least 3 ft. from path. (It is not always feasible if push buttons are to be easily accessed.) Small trees should be planted at least 3 ft. and large trees at least 4 ft. from the path to minimize root damage. A 12-16" root barrier is the best way to prevent damage. Thick edges (8") on the concrete slabs also work. There should be a clear area at least 5 ft. wide next to any unfenced drop like a canal bank. Required turn radii at various lean angles and speeds (no superelevation): 5 mph, 15° (comfortable) lean angle – 6 ft. radius. (90° bend on 5 ft. sidewalk) 10 mph, 15° (comfortable) lean angle – 25 ft. radius. (right turn on suburban street) 12 mph, 15° (comfortable) lean angle – 36 ft. radius. 20 mph, 15° (comfortable) lean angle – 100 ft. radius. 20 mph, 20° (sporty) lean angle – 74 ft. radius. (left turn on suburban street) Maximum cross slope 1:50 or 2% per ADA standards. Maximum continuous slope 1:20 or 5% Maximum slope for ramps 1:12, 1"per ft. or 8% for no more than 30 ft. A 5 ft. wide landing must be installed every 30 ft. – rise 30", run (30+5) = 35 ft. Minimum overhead clearance for pedestrian paths is 8 ft. On long tunnels and places used by maintenance vehicles 10 ft. clearance is recommended. The minimum clearance for travel lanes on highways is 16 ft.

Railings on pedestrian bridges should be 42" high.

If there is a lot of bicycle traffic a 56" top rail is recommended.

VPB 2009 Bicycle Pedestrian Master Plan - Bridge Removed per 14 Sep.`09 Council Meeting

Road / Site	Segment / Ir From	ntersection To	Recomm	ended Impro	vements	Quantity	uantity Unit Total Cost			MDC	% Done	% Dev.
			Enhance	Pedestrian Co	onnections							
Commercial			High	Visibility Cros	swalk	300	feet	10,500		10,500	50%	0%
Intersection	Old Cutler Rd.	SW 168 St.	Install Ped	. Countdown	Type Heads	4	No.	3,500		3,500	100%	0%
			Install Rais	sed Sidewalk	(now HVC)	60	feet	2,200		2,200	100%	0%
			CI	hevron Markir	igs	80	feet	2,800		2,800	100%	0%
Publix	SW 148 St.	SW 87 PI.	Passag	e to Shopping	g Center							
			Two Direct	ional 8' Share	ed Use Path	300	feet	10,000	10,000		0%	0%
			N/E Side ft.	S/W Side ft.	ADA Ramps	Total - ft.	Δ					
SW 144 St.	SW 87 Av.	SW 82 Av.		140	0	140	8	13,000	13,000		0%	0%
	SW 90 Av.	SW 87 Av.	250		5	250	0	15,000	15,000		44%	0%
SW 160 St.	SW 87 Av.	SW 82 Av.	266		17	266	4	31,000	31,000		97%	0%
	SW 82 Av.	SW 77 Ct.	875		4	875	0	58,000	58,000		0%	0%
SW 164 St.	South Motors	SW 92 Ct.	0		4	0	0	19,000	19,000		100%	100%
SW 168 St.	SW 76 Av.	Old Cutler Rd.		1140	0	1,140	0	79,000		79,000	4%	0%
SW 174 St.	US-1	SW 89 Av.	393	315	4	708	7	60,000	60,000		99%	29%
SW 176 St.	SW 94 Av.	SW 87 Av.	730	750	7	1,480	2	79,000	79,000		35%	0%
	SW 82 Av.	Old Cutler Rd.	624		12	624	12	32,000	32,000		95%	0%
SW 184 St.	SW 95 Ct.	SW 82 Av.	565			565		23,000		23,000	34%	34%
SW 184 St.	SW 82 Av.	Old Cutler Rd.	2450		4	2,450		98,000		98,000	39%	39%
SW 82 Av.	SW 168 St.	SW 170 St.			2	0		3,000	3,000		0%	0%
SW 89 Av.	SW 174 St.	SW 176 St.			5	0	0	5,000	5,000		80%	0%
	SW 157 Tr.	SW 162 St.		1500		1,500		60,000		60,000	0%	0%
Old Cutler Rd.	SW 162 St.	SW 166 St.		1400		1,400		56,000		56,000	0%	0%
	SW 168 St.	SW 174 St.		1930		1,930		78,000		78,000	0%	0%
			Subtot	al Sidewalks	64	13,328	33	709,000	315,000	394,000		
SW 152 St.	US-1	SW 67 Av.	Ins	stall 4' bike lar	nes	2.5	mile	1,080,000		1,080,000	<mark>0%</mark>	<mark>0%</mark>
SW 82 Av.	SW 136 St.	SW 168 St.	Ins	stall 4' bike lar	nes	2	mile	860,000	860,000		25%	0%
						s Riko Lano	SRTS \$ Dev. %Done \$Rem.	58,000 82,300 17% 2,237,000 454,000	58,000 36,200 33% 805,000 102,000	46,100 4% 1,432,000 352,000		
COMMERCIAL	LOCAL CONN.	SIDEWALKS	CC	MMUTER ACCE	SS	GREENWAYS	TOTAL	2,678,000	1,185,000	1,493,000		



South Dade Trail South Dade Transitway



Map of Old Cutler Path through the muni. of Coral Gables, Pinecrest, Palmetto Bay, & Cutler Bay

Honorable Chairman Esteban L. Bovo, Jr and Members, Board of County Commissioners Page 2

The local governmental entity consults with the Department of Transportation before adopting the ordinance

The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide

The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by Sec. 316.271

The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalk.

Florida State Statute No 316, 2126, Authorized use of golf carts, low-speed vehicles, and utility vehicles

Florida State Statute No. 320.01, Definitions, general.

As referenced above, a municipality has the ability to designate two-lane county roads, located within the jurisdiction of a municipality, for the use of golf carts without requiring County approval. The County considers the following conditions in order to authorize the use of Golf Carts to travel on County maintained roadways:

- 1. Local residential roadways, specifically excluding:
 - Roads within commercial and industrial zoning areas
 - Section and half-section roads
 - Arterials and Collectors
- 2. Low-volume roads with fewer than 3,000 vehicle per day
- 3. Roads that are two-lane
- 4. Roads with posted speed limit of 30 mile per hour or less
- 5. Roads with minimal truck usage (less than 1 percent)
- 6. Roads within public right-of-way, specifically excluding:
 - Unpaved roadways
 - Undeveloped roadways
- 7. Golf carts may cross a portion of a County-maintained road or within State Highway System that has a posted speed limit of 45 miles per hour or less only at a marked pedestrian crossing







Transportation and Public Works Traffic Engineering Division 111 NW 1st Street • Suite # 1510 Miami, Florida 33128 T 305-375-2030 F 305-372-6064

July 08, 2021

Mr. Nick Marano Village Manager Village of Palmetto Bay 9705 E Hibiscus Street Palmetto Bay, FL 33157

Re: Village of Palmetto Bay Resolution 2021-26 relating to the feasibility of golf cart usage on County roads and the Old Cutler shared use path

Dear Mr. Marano,

The Department of Transportation and Public Works (DTPW) received the Village of Palmetto Bay Resolution No. 2021-26 related to the feasibility of golf cart usage on County roads and the Old Cutler Road (OCR) shared use path (please refer to Appendix A).

The County responded to a similar request in 2018 for the review of the use of golf carts along County road within County Commissioner District 8, which encompasses Palmetto Bay (please refer to Appendix B). As part of that evaluation the only County roads that are qualified for the operation of golf carts are:

- Gulfstream Road/SW 97 Avenue from Franjo Road to Montego Bay Road
- SW 97 Avenue from SW 216 Street to SW 223 Terrace
- SW 216 Street from SW 87 Avenue to SW 85 Avenue

Specifically, OCR does not qualify for the use of golf carts given that:

- 1. OCR is an arterial
- 2. Vehicular volumes are greater than 3,000 vehicle per day (vpd).
 - OCR volumes ranges from 23,500 vpd to 16,800 vpd (as per the available Florida Department
 - of Transportation count stations data, year 2019)
- 3. Posted speed is 40MPH
- 4. Truck percentage is greater than 1
 - OCR has a truck percentage of 3.5 (as per the available Florida Department of Transportation count stations data, year 2019)

When evaluating the potential of allowing golf carts on OCR shared use path we must consider safety as our primary concern. There is consideration made to the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk.

Understanding that a shared used path is not a sidewalk, Florida Departments of transportation (FDOT) Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Street and Highways (commonly known as the "Florida Green Book") defines the shared use path as follows:

 Paved facilities physically separated from motorized vehicular traffic by an open space or barrier. May be within the highway right of way or an independent right of way with minimal cross flow by motor vehicles. Users are **non-motorized** and may include: pedestrians, bicyclists, skaters, people with disabilities, and others

Florida State Statute No 316.003 defines Bicycle, Golf cart and pedestrian as follows:

- (4) Bicycle Every vehicle propelled solely by human power, having two tandem wheels, and including any device generally recognized as a bicycle though equipped with two front or two rear wheels. The term does not include a scooter or similar device.
- (28) Golf cart **A motor vehicle** designed and manufactured for operation on a golf course for sporting or recreational purposes.
- (54) Pedestrian Any person afoot.

After evaluating the OCR shared use path, the use of golf carts along shared use paths is not compliant with the Green Book. Also, the conflicts between the golf carts and the shared use path users (pedestrian and bikers) would create significant safety and operational problems:

- The OCR shared used path geometry is limited in nature, given the exiting right-of-way, in some locations the width of the path is even less than the minimum typical width of 10 ft.
- Some Golf Carts can exceed speeds of 20 mph at which point they are considered low-speed vehicle.

• Florida State Statute No 316.212 Clause (8) (b) the maximum golf cart operating speed can be 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide.

The path is not designed or warranted for the use of golf carts. After reviewing the request DTPW **does not recommend** the use of golf carts along the OCR shared use path.

Should you have any questions or require additional information, please do not hesitate to contact our office at (305) 375-2030.

Sincerely,

Darlene M. Fernandez, P.E.

Attachments:

Appendix (A) Village of Palmetto Bay Resolution No. 2021-26 Appendix (B)* County Golf Cart Directive No. 151168 *complete Florida State Statute No 316.212 is part of the directive in Appendix B.

CC:

Jimmy Morales, DTPW, Interim Director Frank P. Guyamier, P.E., DTPW, Deputy Director and Design & Engineering / County Engineer

Appendix A Village of Palmetto Bay Resolution No. 2021-26

DocuSign Envelope ID: E2291E04-FABB-4288-AA85-10C8331E0FC3

RESOLUTION NO. 2021-26

A RESOLUTION OF THE MAYOR AND VILLAGE COUNCIL OF 3 THE VILLAGE OF PALMETTO BAY, FLORIDA, RELATING TO THE 4 FEASIBILITY OF GOLF CART USAGE ON COUNTY ROADS AND 5 THE OLD CUTLER SHARED USE PATH; REQUESTING THAT 6 MIAMI-DADE COUNTY CONDUCT AN ASSESSMENT OF COUNTY 7 ROADS AND THE OLD CUTLER SHARED-USE PATH FOR GOLF 8 CART USE: AND PROVIDING FOR AN EFFECTIVE DATE. 9 (Sponsored by Administration) 10

WHEREAS, the Village recognizes the needs of many citizens
 who enjoy the recreational advantages of golf cart use; and

15 **WHEREAS,** the Village also recognizes the environmental 16 benefits associated with its citizens utilizing golf carts for trips within 17 the Village rather than automobile; and

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WHEREAS, County ordinance states "a golf cart may be 19 operated only upon a County road that has been designated by a 20 County, a municipal street that has been designated by a municipality, 21 or a two-lane County road located within the jurisdiction of a 22 municipality designated by that municipality, for use by golf carts. Prior 23 to making such a designation, the responsible local governmental 24 entity must first determine that golf carts may safely travel on or cross 25 the public road or street, considering factors including the speed, 26 volume, and character of motor vehicle traffic using the road or street. 27 Upon a determination that golf carts may be safely operated on a 28 designated road or street, the responsible governmental entity shall 29 post appropriate signs to indicate that such operation is allowed"; and 30 31

WHEREAS, The Village of Palmetto Bay request that Miami-Dade County conduct an assessment of County roads and the Old Cutler shared-use path for golf cart use.

35

NOW, THEREFORE, BE IT RESOLVED BY THE VILLAGE
 OF PALMETTO BAY, FLORIDA, THAT:

38

39 <u>Section 1.</u> The Village Council approves the Village Manager to 40 move forward to request that Miami-Dade County conduct an DocuSign Envelope ID: E2291E04-FABB-4288-AA85-10C8331E0FC3

)

1 2	assessment of County roads and the determine if eligible for designated golf	Old Cutler shared-use path to cart usage.
3 4 5	Section 2. This resolution shall its adoption.	I take effect immediately upon
6 7	PASSED AND ADOPTED this 1	^t day of March 2021.
9 10 11	ATTEST: Missy Arocha Missy Arocha Missy Arocha Village Clerk	Locusigned by: Karyn Cunningham Karyn Cunningham Karyn Cunningham Mayor
13 14 15	APPROVED AS TO FORM AND LEGA	L SUFFICIENCY FOR THE
16 17 18	USE AND RELIANCE OF THE VILLAG	E OF PALMETTO BAY ONLY:
19 20 21 22	John C. Dellagloria, Esq. Village Attorney	
23 24 25	FINAL VOTE AT ADOPTION:	
25 26 27	Council Member Patrick Fiore	YES
28 29	Council Member Steven Cody	YES
30 31	Council Member Marsha Matson	YES
32 33	Vice-Mayor Leanne Tellam	YES
34	Mayor Karyn Cunningham	YES

Appendix B County Golf Cart Directive No. 151168

Date:	March 22, 2018
То:	Honorable Chairman Esteban L. Bovo, Jr. and Members, Board of County Commissioners
From:	Carlos A. Gimenez
Subject:	Resolution Directing the County Mayor to Prepare a Plan for the Use of Golf Carts on Miami-Dade County Roads Within Municipalities Which Have Allowed Golf Cart Use on Municipal Roads – Directive No. 151168

Momorandum

MIAMIDADE

At the October 6, 2015 Board of County Commissioners (Board) meeting, the Board approved Resolution No. R-501-15, sponsored by Commissioner Daniella Levine Cava, requesting a plan for the use of golf carts on Miami-Dade County (County) roads within municipalities which have allowed golf cart use on municipal roads.

Florida State Statute No 316.212, Operation of golf carts on certain roadways, states:

(1) A golf cart may be operated only upon a county road that has been designated by a County, a municipal street that has been designated by a municipality, or a two-lane county road located within the jurisdiction of a municipality designated by that municipality, for use by golf carts. Prior to making such a designation, the responsible local governmental entity must first determine that golf carts may safely travel on or cross the public road or street, considering factors including the speed, volume, and character of motor vehicle traffic using the road or street. Upon a determination that golf carts may be safely operated on a designated road or street, the responsible governmental entity shall post appropriate signs to indicate that such operation is allowed.

The following other sections of the Florida Statutes are also related to the use of golf carts (see attached).

Clauses (6) and (8) (b) within Florida State Statute No 316.212 which read:

- (6) A golf cart must be equipped with efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear
- (8) A local governmental entity may enact an ordinance relating to:
 - (b) Golf cart operation on sidewalks adjacent to specific segments of municipal streets, county roads, or state highways within the jurisdictional territory of the local governmental entity if:

The local governmental entity determines, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk
Honorable Chairman Esteban L. Bovo, Jr and Members, Board of County Commissioners Page 2

The local governmental entity consults with the Department of Transportation before adopting the ordinance

The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide

The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by Sec. 316.271

The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalk.

Florida State Statute No 316, 2126, Authorized use of golf carts, low-speed vehicles, and utility vehicles

Florida State Statute No. 320.01, Definitions, general.

As referenced above, a municipality has the ability to designate two-lane county roads, located within the jurisdiction of a municipality, for the use of golf carts without requiring County approval. The County considers the following conditions in order to authorize the use of Golf Carts to travel on County maintained roadways:

- 1. Local residential roadways, specifically excluding:
 - Roads within commercial and industrial zoning areas
 - Section and half-section roads
 - Arterials and Collectors
- 2. Low-volume roads with fewer than 3,000 vehicle per day
- 3. Roads that are two-lane
- 4. Roads with posted speed limit of 30 mile per hour or less
- 5. Roads with minimal truck usage (less than 1 percent)
- 6. Roads within public right-of-way, specifically excluding:
 - Unpaved roadways
 - Undeveloped roadways
- Golf carts may cross a portion of a County-maintained road or within State Highway System that has a posted speed limit of 45 miles per hour or less only at a marked pedestrian crossing

Honorable Chairman Esteban L. Bovo, Jr and Members, Board of County Commissioners Page 3

After reviewing roadways within municipalities in Commission District 8, based on the roadways characteristics listed above, the following roadway segments within the Town of Cutler Bay are qualified for the operation of golf carts.

- Gulfstream Road/SW 97 Avenue from Franjo Road to Montego Bay Road
- SW 97 Avenue from SW 216 Street to SW 223 Terrace
- SW 216 Street from SW 87 Avenue to SW 85 Avenue

Pursuant to Ordinance No. 14-65, this memorandum will be placed on the next available Board meeting agenda.

If additional information is required, please contact Alice N. Bravo, P.E., Director, DTPW, at (786) 469-5406.

Attachments:

Appendix (A) Florida State Statute No 316.212, 316.2126, and 320.01

 c: Abigail Price-Williams, County Attorney Geri Bonzon-Keenan, First Assistant County Attorney Alina T. Hudak, Deputy Mayor, Office of the Mayor Alice N. Bravo, P.E., Director, Department of Transportation and Public Works Cathy Jackson, Interim Commission Auditor Christopher Agrippa, Clerk of the Board Eugene Love, Agenda Coordinator

APPENDIX A

*

The Florida Senate 2017 Florida Statutes

<u>Title XXIII</u> MOTOR VEHICLES	<u>Chapter 316</u> STATE UNIFORM TRAFFIC CONTROL	SECTION 212 Operation of golf carts on certain roadways.
7	Entire Chapter	

316.212 Operation of golf carts on certain roadways.— The operation of a golf cart upon the public roads or streets of this state is prohibited except as provided herein:

(1) A golf cart may be operated only upon a county road that has been designated by a county, a municipal street that has been designated by a municipality, or a two-lane county road located within the jurisdiction of a municipality designated by that municipality, for use by golf carts. Prior to making such a designation, the responsible local governmental entity must first determine that golf carts may safely travel on or cross the public road or street, considering factors including the speed, volume, and character of motor vehicle traffic using the road or street. Upon a determination that golf carts may be safely operated on a designated road or street, the responsible governmental entity shall post appropriate signs to indicate that such operation is allowed.

(2) A golf cart may be operated on a part of the State Highway System only under the following conditions:

(a) To cross a portion of the State Highway System which intersects a county road or municipal street that has been designated for use by golf carts if the Department of Transportation has reviewed and approved the location and design of the crossing and any traffic control devices needed for safety purposes.

(b) To cross, at midblock, a part of the State Highway System where a golf course is constructed on both sides of the highway if the Department of Transportation has reviewed and approved the location and design of the crossing and any traffic control devices needed for safety purposes.

(c) A golf cart may be operated on a state road that has been designated for transfer to a local government unit pursuant to s. <u>335.0415</u> if the Department of Transportation determines that the operation of a golf cart within the right-of-way of the road will not impede the safe and efficient flow of motor vehicular traffic. The department may authorize the operation of golf carts on such a road if:

1. The road is the only available public road along which golf carts may travel or cross or the road provides the safest travel route among alternative routes available; and

2. The speed, volume, and character of motor vehicular traffic using the road is considered in making such a determination.

Upon its determination that golf carts may be operated on a given road, the department shall post appropriate signs on the road to indicate that such operation is allowed.

(3) Notwithstanding any other provision of this section, a golf cart may be operated for the purpose of crossing a street or highway where a single mobile home park is located on both sides of the street or highway and is divided by that street or highway, provided that the governmental entity having original jurisdiction over such street or highway shall review and approve the location of the crossing and require implementation of any traffic controls needed for safety purposes. This subsection shall apply only to residents or guests of the mobile home park. If notice is posted at the entrance and exit of any mobile home park where residents of the park operate golf carts or electric vehicles within the confines of the park, it is not necessary for the park to have a gate or other device at the entrance and exit in order for such golf carts or electric vehicles to be lawfully operated in the park.

(4) Notwithstanding any other provision of this section, if authorized by the Division of Recreation and Parks of the Department of Environmental Protection, a golf cart may be operated on a road that is part of the State Park Road System if the posted speed limit is 35 miles per hour or less.

(5) A golf cart may be operated only during the hours between sunrise and sunset, unless the responsible governmental entity has determined that a golf cart may be operated during the hours between sunset and sunrise and the golf cart is equipped with headlights, brake lights, turn signals, and a windshield.

(6) A golf cart must be equipped with efficient brakes, reliable steering apparatus, safe tires, a rearview mirror, and red reflectorized warning devices in both the front and rear.

(7) A golf cart may not be operated on public roads or streets by any person under the age of 14.

(8) A local governmental entity may enact an ordinance relating to:

(a) Golf cart operation and equipment which is more restrictive than those enumerated in this section. Upon enactment of such ordinance, the local governmental entity shall post appropriate signs or otherwise inform the residents that such an ordinance exists and that it will be enforced within the local government's jurisdictional territory. An ordinance referred to in this section must apply only to an unlicensed driver.

(b) Golf cart operation on sidewalks adjacent to specific segments of municipal streets, county roads, or state highways within the jurisdictional territory of the local governmental entity if:

1. The local governmental entity determines, after considering the condition and current use of the sidewalks, the character of the surrounding community, and the locations of authorized golf cart crossings, that golf carts, bicycles, and pedestrians may safely share the sidewalk;

2. The local governmental entity consults with the Department of Transportation before adopting the ordinance;

3. The ordinance restricts golf carts to a maximum speed of 15 miles per hour and permits such use on sidewalks adjacent to state highways only if the sidewalks are at least 8 feet wide;

4. The ordinance requires the golf carts to meet the equipment requirements in subsection (6). However, the ordinance may require additional equipment, including horns or other warning devices required by s. <u>316.271</u>; and

5. The local governmental entity posts appropriate signs or otherwise informs residents that the ordinance exists and applies to such sidewalks.

(9) A violation of this section is a noncriminal traffic infraction, punishable pursuant to chapter 318 as a moving violation for infractions of subsections (1)-(5) or a local ordinance corresponding thereto and enacted pursuant to subsection (8), or punishable pursuant to chapter 318 as a nonmoving violation for infractions of subsection (6), subsection (7), or a local ordinance corresponding thereto and enacted pursuant to subsection (8).

History.—s. 2, ch. 83-188; s. 1, ch. 84-111; s. 2, ch. 88-253; s. 322, ch. 95-148; s. 4, ch. 96-413; s. 168, ch. 99-248; s. 7, ch. 2000-313; s. 6, ch. 2005-164; s. 3, ch. 2008-98; s. 46, ch. 2010-223; s. 2, ch. 2015-163.

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<u>Title XXIII</u> MOTOR VEHICLES	<u>Chapter 316</u> STATE UNIFORM TRAFFIC CONTROL	SECTION 2126 Authorized use of golf carts, low- speed vehicles, and utility vehicles.
	Entire Chapter	

316.2126 Authorized use of golf carts, low-speed vehicles, and utility vehicles.--

(1) In addition to the powers granted by ss. <u>316.212</u> and <u>316.2125</u>, municipalities are authorized to use golf carts and utility vehicles, as defined in s. <u>320.01</u>, upon any state, county, or municipal roads located within the corporate limits of such municipalities, subject to the following conditions:

(a) Golf carts and utility vehicles must comply with the operational and safety requirements in ss. <u>316.212</u> and <u>316.2125</u>, and with any more restrictive ordinances enacted by the local governmental entity pursuant to s. <u>316.212(8)</u>, and shall be operated only by municipal employees for municipal purposes, including, but not limited to, police patrol, traffic enforcement, and inspection of public facilities.

(b) In addition to the safety equipment required in s. <u>316.212(6)</u> and any more restrictive safety equipment required by the local governmental entity pursuant to s. <u>316.212(8)</u>, such golf carts and utility vehicles must be equipped with sufficient lighting and turn signal equipment.

(c) Golf carts and utility vehicles may be operated only on state roads that have a posted speed limit of 30 miles per hour or less.

(d) Golf carts and utility vehicles may cross a portion of the State Highway System which has a posted speed limit of 45 miles per hour or less only at an intersection with an official traffic control device.

(e) Golf carts and utility vehicles may operate on sidewalks adjacent to state highways only if such golf carts and utility vehicles yield to pedestrians and if the sidewalks are at least 5 feet wide.

(2) State employees, state park volunteers, and state park visitors are authorized to use golf carts and utility vehicles, as defined in s. <u>320.01</u>, upon any public roads within the boundaries of state parks managed by the Division of Recreation and Parks of the Department of Environmental Protection, subject to the following conditions:

(a) Golf carts and utility vehicles must comply with the operational and safety requirements in s. <u>316.212</u>.

(b) Golf carts and utility vehicles shall be operated only by state employees and state park volunteers for state purposes and by state park visitors for uses authorized by the Division of Recreation and Parks of the Department of Environmental Protection.

(3)(a) As used in this subsection, the term:

1. "Golf cart" means a motor vehicle as defined in s. <u>320.01(22)</u>, including vehicles modified to have a cargo platform or bin to transport parcels or a hitch to tow a trailer.

2. "Residential area" means areas zoned primarily or exclusively for single-family or multifamily residential use.

3. "Seasonal delivery personnel" means employees of a licensed commercial delivery service that has at least 10,000 persons employed in this state.

(b) Seasonal delivery personnel may use the following vehicles solely for the purpose of delivering express envelopes and packages having a maximum size of 130 inches for the combined length and girth and weighing not more than 150 pounds from midnight October 15 until midnight January 31 of each year:

1. Low-speed vehicles and utility vehicles as defined in s. <u>320.01</u> upon any public road within a residential area that has a posted speed limit of 35 miles per hour or less.

2. Golf carts upon a public road within a residential area that has a posted speed limit of 30 miles per hour or less.

3. Golf carts upon a public road within a residential area that has a posted speed limit of 30 to 35 miles per hour, unless a municipality having jurisdiction over the public road has enacted an ordinance restricting personnel from driving on such roads.

Seasonal delivery personnel may pull a trailer from any of these vehicles.

(c) All vehicles specified in this subsection must be:

- 1. Marked in a conspicuous manner with the name of the delivery service.
- 2. Equipped with, at a minimum, the equipment required under s. <u>316.212(6)</u>.

3. Equipped with head lamps and tail lamps, in addition to the safety requirements in s. <u>316.212(6)</u>, if operated after sunset.

(4) Anyone operating a golf cart, low-speed vehicle, or utility vehicle pursuant to this section must possess a valid driver license as required by s. <u>322.03</u>.

History.—s. 5, ch. 96-413; s. 90, ch. 99-13; s. 4, ch. 99-163; s. 169, ch. 99-248; s. 7, ch. 2005-164; s. 5, ch. 2008-98; s. 1, ch. 2009-208; s. 8, ch. 2012-181; s. 12, ch. 2014-216.

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<u>Title XXIII</u>	<u>Chapter 320</u>	SECTION 01
MOTOR VEHICLES	MOTOR VEHICLE LICENSES	Definitions, general.
	Entire Chapter	

320.01 Definitions, general. — As used in the Florida Statutes, except as otherwise provided, the term:

(1) "Motor vehicle" means:

(a) An automobile, motorcycle, truck, trailer, semitrailer, truck tractor and semitrailer combination, or any other vehicle operated on the roads of this state, used to transport persons or property, and propelled by power other than muscular power, but the term does not include traction engines, road rollers, personal delivery devices as defined in s. <u>316.003</u>, special mobile equipment as defined in s. <u>316.003</u>, vehicles that run only upon a track, bicycles, swamp buggies, or mopeds.

(b) A recreational vehicle-type unit primarily designed as temporary living quarters for recreational, camping, or travel use, which either has its own motive power or is mounted on or drawn by another vehicle. Recreational vehicle-type units, when traveling on the public roadways of this state, must comply with the length and width provisions of s. <u>316.515</u>, as that section may hereafter be amended. As defined below, the basic entities are:

1. The "travel trailer," which is a vehicular portable unit, mounted on wheels, of such a size or weight as not to require special highway movement permits when drawn by a motorized vehicle. It is primarily designed and constructed to provide temporary living quarters for recreational, camping, or travel use. It has a body width of no more than 8½ feet and an overall body length of no more than 40 feet when factory-equipped for the road.

2. The "camping trailer," which is a vehicular portable unit mounted on wheels and constructed with collapsible partial sidewalls which fold for towing by another vehicle and unfold at the campsite to provide temporary living quarters for recreational, camping, or travel use.

3. The "truck camper," which is a truck equipped with a portable unit designed to be loaded onto, or affixed to, the bed or chassis of the truck and constructed to provide temporary living quarters for recreational, camping, or travel use.

4. The "motor home," which is a vehicular unit which does not exceed the length, height, and width limitations provided in s. <u>316.515</u>, is a self-propelled motor vehicle, and is primarily designed to provide temporary living quarters for recreational, camping, or travel use.

5. The "private motor coach," which is a vehicular unit which does not exceed the length, width, and height limitations provided in s. <u>316.515(9)</u>, is built on a self-propelled bus type chassis having no fewer than three load-bearing axles, and is primarily designed to provide temporary living quarters for recreational, camping, or travel use.

6. The "van conversion," which is a vehicular unit which does not exceed the length and width limitations provided in s. <u>316.515</u>, is built on a self-propelled motor vehicle chassis, and is designed for recreation, camping, and travel use.

7. The "park trailer," which is a transportable unit which has a body width not exceeding 14 feet and which is built on a single chassis and is designed to provide seasonal or temporary living quarters when connected to utilities necessary for operation of installed fixtures and appliances. The total area of the unit in a setup mode, when measured from the exterior surface of the exterior stud walls at the level of maximum dimensions, not including any bay window, does not exceed 400 square feet when constructed to ANSI A-119.5 standards, and 500 square feet when constructed to United States Department of Housing and Urban Development Standards. The length of a park trailer means the distance from the exterior of the front of the body (nearest to the drawbar and coupling mechanism) to the exterior of the rear of the body (at the opposite end of the body), including any protrusions.

8. The "fifth-wheel trailer," which is a vehicular unit mounted on wheels, designed to provide temporary living quarters for recreational, camping, or travel use, of such size or weight as not to require a special highway movement permit, of gross trailer area not to exceed 400 square feet in the setup mode, and designed to be towed by a motorized vehicle that contains a towing mechanism that is mounted above or forward of the tow vehicle's rear axle.

(2)(a) "Mobile home" means a structure, transportable in one or more sections, which is 8 body feet or more in width and which is built on an integral chassis and designed to be used as a dwelling when connected to the required utilities and includes the plumbing, heating, air-conditioning, and electrical systems contained therein. For tax purposes, the length of a mobile home is the distance from the exterior of the wall nearest to the drawbar and coupling mechanism to the exterior of the wall at the opposite end of the home where such walls enclose living or other interior space. Such distance includes expandable rooms, but excludes bay windows, porches, drawbars, couplings, hitches, wall and roof extensions, or other attachments that do not enclose interior space. In the event that the mobile home owner has no proof of the length of the drawbar, coupling, or hitch, then the tax collector may in his or her discretion either inspect the home to determine the actual length or may assume 4 feet to be the length of the drawbar, coupling, or hitch.

(b) "Manufactured home" means a mobile home fabricated on or after June 15, 1976, in an offsite manufacturing facility for installation or assembly at the building site, with each section bearing a seal certifying that it is built in compliance with the federal Manufactured Home Construction and Safety Standard Act.

(3) "Owner" means any person, firm, corporation, or association controlling any motor vehicle or mobile home by right of purchase, gift, lease, or otherwise.

(4) "Trailer" means any vehicle without motive power designed to be coupled to or drawn by a motor vehicle and constructed so that no part of its weight or that of its load rests upon the towing vehicle.

(5) "Semitrailer" means any vehicle without motive power designed to be coupled to or drawn by a motor vehicle and constructed so that some part of its weight and that of its load rests upon or is carried by another vehicle.

(6) "Net weight" means the actual scale weight in pounds with complete catalog equipment.

(7) "Gross weight" means the net weight of a motor vehicle in pounds plus the weight of the load carried by it.

(8) "Cwt" means the weight per hundred pounds, or major fraction thereof, of a motor vehicle.

(9) "Truck" means any motor vehicle with a net vehicle weight of 5,000 pounds or less and which is designed or used principally for the carriage of goods and includes a motor vehicle to which has been added a cabinet box, a platform, a rack, or other equipment for the purpose of carrying goods other than the personal effects of the passengers.

(10) "Heavy truck" means any motor vehicle with a net vehicle weight of more than 5,000 pounds, which is registered on the basis of gross vehicle weight in accordance with s. <u>320.08</u>(4), and which is designed or used for the carriage of goods or designed or equipped with a connecting device for the purpose of drawing a trailer that is attached or coupled thereto by means of such connecting device and includes any such motor vehicle to which has been added a cabinet box, a platform, a rack, or other equipment for the purpose of carrying goods other than the personal effects of the passengers.

(11) "Truck tractor" means a motor vehicle which has four or more wheels and is designed and equipped with a fifth wheel for the primary purpose of drawing a semitrailer that is attached or coupled thereto by means of such fifth wheel and which has no provision for carrying loads independently.

(12) "Gross vehicle weight" means:

(a) For heavy trucks with a net weight of more than 5,000 pounds, but less than 8,000 pounds, the gross weight of the heavy truck. The gross vehicle weight is calculated by adding to the net weight of the heavy truck the weight of the load carried by it, which is the maximum gross weight as declared by the owner or person applying for registration.

(b) For heavy trucks with a net weight of 8,000 pounds or more, the gross weight of the heavy truck, including the gross weight of any trailer coupled thereto. The gross vehicle weight is calculated by adding to the gross weight of the

heavy truck the gross weight of the trailer, which is the maximum gross weight as declared by the owner or person applying for registration.

(c) The gross weight of a truck tractor and semitrailer combination is calculated by adding to the net weight of the truck tractor the gross weight of the semitrailer, which is the maximum gross weight as declared by the owner or person applying for registration; such vehicles are together by means of a fifth-wheel arrangement whereby part of the weight of the semitrailer and load rests upon the truck tractor.

(13) "Passenger," or any abbreviation thereof, does not include a driver.

(14) "Private use" means the use of any vehicle which is not properly classified as a for-hire vehicle.

(15)(a) "For-hire vehicle" means any motor vehicle, when used for transporting persons or goods for compensation; let or rented to another for consideration; offered for rent or hire as a means of transportation for compensation; advertised in a newspaper or generally held out as being for rent or hire; used in connection with a travel bureau; or offered or used to provide transportation for persons solicited through personal contact or advertised on a "share-expense" basis. When goods or passengers are transported for compensation in a motor vehicle outside a municipal corporation of this state, or when goods are transported in a motor vehicle not owned by the person owning the goods, such transportation is "for hire." The carriage of goods and other personal property in a motor vehicle by a corporation or association for its stockholders, shareholders, and members, cooperative or otherwise, is transportation "for hire."

(b) The following are not included in the term "for-hire vehicle": a motor vehicle used for transporting school children to and from school under contract with school officials; a hearse or ambulance when operated by a licensed embalmer or mortician or his or her agent or employee in this state; a motor vehicle used in the transportation of agricultural or horticultural products or in transporting agricultural or horticultural supplies direct to growers or the consumers of such supplies or to associations of such growers or consumers; a motor vehicle temporarily used by a farmer for the transportation of agricultural or horticultural products from any farm or grove to a packinghouse or to a point of shipment by a transportation company; or a motor vehicle not exceeding 1½ tons under contract with the Government of the United States to carry United States mail, provided such vehicle is not used for commercial purposes.

(16) "Road" means the entire width between the boundary lines of every way or place of whatever nature when any part thereof is open to the use of the public for purposes of vehicular traffic.

(17) "Brake horsepower" means the actual unit of torque developed per unit of time at the output shaft of an engine, as measured by a dynamometer.

(18) "Department" means the Department of Highway Safety and Motor Vehicles.

(19)(a) "Registration period" means a period of 12 months or 24 months during which a motor vehicle or mobile home registration is valid.

(b) "Extended registration period" means a period of 24 months during which a motor vehicle or mobile home registration is valid.

(20) "Marine boat trailer dealer" means any person engaged in:

(a) The business of buying, selling, manufacturing, or dealing in trailers specifically designed to be drawn by another vehicle and used for the transportation on land of vessels, as defined in s. <u>327.02</u>; or

(b) The offering or displaying of such trailers for sale.

(21) "Renewal period" means the period during which renewal of a motor vehicle registration or mobile home registration is required, as provided in s. <u>320.055</u>.

(22) "Golf cart" means a motor vehicle that is designed and manufactured for operation on a golf course for sporting or recreational purposes and that is not capable of exceeding speeds of 20 miles per hour.

(23) "International Registration Plan" means a registration reciprocity agreement among states of the United States and provinces of Canada providing for payment of license fees on the basis of fleet miles operated in various jurisdictions. (24) "Apportionable vehicle" means any vehicle, except recreational vehicles, vehicles displaying restricted plates, city pickup and delivery vehicles, buses used in transportation of chartered parties, and government-owned vehicles, which is used or intended for use in two or more member jurisdictions that allocate or proportionally register vehicles and which is used for the transportation of persons for hire or is designed, used, or maintained primarily for the transportation of property and:

- (a) Is a power unit having a gross vehicle weight in excess of 26,000 pounds;
- (b) Is a power unit having three or more axles, regardless of weight; or
- (c) Is used in combination, when the weight of such combination exceeds 26,000 pounds gross vehicle weight.

Vehicles, or combinations thereof, having a gross vehicle weight of 26,000 pounds or less and two-axle vehicles may be proportionally registered.

(25) "Commercial motor vehicle" means any vehicle which is not owned or operated by a governmental entity, which uses special fuel or motor fuel on the public highways, and which has a gross vehicle weight of 26,001 pounds or more, or has three or more axles regardless of weight, or is used in combination when the weight of such combination exceeds 26,001 pounds gross vehicle weight. A vehicle that occasionally transports personal property to and from a closed-course motorsport facility, as defined in s. 549.09(1)(a), is not a commercial motor vehicle if the use is not for profit and corporate sponsorship is not involved. As used in this subsection, the term "corporate sponsorship" means a payment, donation, gratuity, in-kind service, or other benefit provided to or derived by a person in relation to the underlying activity, other than the display of product or corporate names, logos, or other graphic information on the property being transported.

(26) "Motorcycle" means any motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground, excluding a vehicle in which the operator is enclosed by a cabin unless it meets the requirements set forth by the National Highway Traffic Safety Administration for a motorcycle. The term "motorcycle" does not include a tractor or a moped.

(27) "Moped" means any vehicle with pedals to permit propulsion by human power, having a seat or saddle for the use of the rider and designed to travel on not more than three wheels, with a motor rated not in excess of 2 brake horsepower and not capable of propelling the vehicle at a speed greater than 30 miles per hour on level ground, and with a power-drive system that functions directly or automatically without clutching or shifting gears by the operator after the drive system is engaged. If an internal combustion engine is used, the displacement may not exceed 50 cubic centimeters.

(28) "Interstate" means vehicle movement between or through two or more states.

(29) "Intrastate" means vehicle movement from one point within a state to another point within the same state.

(30) "Person" means and includes natural persons, corporations, copartnerships, firms, companies, agencies, or associations, singular or plural.

(31) "Registrant" means a person in whose name or names a vehicle is properly registered.

(32) "Motor carrier" means any person owning, controlling, operating, or managing any motor vehicle used to transport persons or property over any public highway.

(33) "Motorized disability access vehicle" means a vehicle designed primarily for handicapped individuals with normal upper body abilities and designed to be fueled by gasoline, travel on not more than three wheels, with a motor rated not in excess of 2 brake horsepower and not capable of propelling the vehicle at a speed greater than 30 miles per hour on level ground, and with a power-drive system that functions directly or automatically without clutching or shifting gears by the operator after the drive system is engaged. If an internal combustion engine is used, the displacement may not exceed 50 cubic centimeters.

(34) "Resident" means a person who has his or her principal place of domicile in this state for a period of more than 6 consecutive months, who has registered to vote in this state, who has made a statement of domicile pursuant to s. <u>222.17</u>, or who has filed for homestead tax exemption on property in this state.

(35) "Nonresident" means a person who is not a resident.

(36) "Electric vehicle" means a motor vehicle that is powered by an electric motor that draws current from rechargeable storage batteries, fuel cells, or other sources of electrical current.

(37) "Disabled motor vehicle" means any motor vehicle as defined in subsection (1) which is not operable under its own motive power, excluding a nondisabled trailer or semitrailer, or any motor vehicle that is unsafe for operation upon the highways of this state.

(38) "Replacement motor vehicle" means any motor vehicle as defined in subsection (1) under tow by a wrecker to the location of a disabled motor vehicle for the purpose of replacing the disabled motor vehicle, thereby permitting the transfer of the disabled motor vehicle's operator, passengers, and load to an operable motor vehicle.

(39) "Wrecker" means any motor vehicle that is used to tow, carry, or otherwise transport motor vehicles and that is equipped for that purpose with a boom, winch, car carrier, or other similar equipment.

(40) "Tow" means to pull or draw any motor vehicle with a power unit by means of a direct attachment, drawbar, or other connection or to carry a motor vehicle on a power unit designed to transport such vehicle from one location to another.

(41) "Low-speed vehicle" means any four-wheeled vehicle whose top speed is greater than 20 miles per hour but not greater than 25 miles per hour, including, but not limited to, neighborhood electric vehicles. Low-speed vehicles must comply with the safety standards in 49 C.F.R. s. 571.500 and s. <u>316.2122</u>.

(42) "Utility vehicle" means a motor vehicle designed and manufactured for general maintenance, security, and landscaping purposes, but the term does not include any vehicle designed or used primarily for the transportation of persons or property on a street or highway, or a golf cart, or an all-terrain vehicle as defined in s. <u>316.2074</u>.

(43) For purposes of this chapter, the term "agricultural products" means any food product; any agricultural, horticultural, or livestock product; any raw material used in plant food formulation; and any plant food used to produce food and fiber.

(44) "Mini truck" means any four-wheeled, reduced-dimension truck that does not have a National Highway Traffic Safety Administration truck classification, with a top speed of 55 miles per hour, and which is equipped with headlamps, stop lamps, turn signal lamps, taillamps, reflex reflectors, parking brakes, rearview mirrors, windshields, and seat belts.

(45) "Swamp buggy" means a motorized off-road vehicle that is designed or modified to travel over swampy or varied terrain and that may use large tires or tracks operated from an elevated platform. The term does not include any vehicle defined in chapter 261 or otherwise defined or classified in this chapter.

History.—ss. 1, 6, ch. 7275, 1917; s. 1, ch. 7737, 1918; RGS 1006, 1011; ss. 2, 5, ch. 8410, 1921; s. 2, ch. 9156, 1923; s. 1, ch. 9157, 1923; ss. 1, 3, ch. 10182, 1925; CGL 1280, 1285, 1677; s. 3, ch. 15625, 1931; s. 3, ch. 16085, 1933; s. 1, ch. 20743, 1941; s. 1, ch. 20911, 1941; s. 1, ch. 26923, 1951; s. 1, ch. 59-351; s. 1, ch. 65-61; s. 1, ch. 65-446; ss. 23, 24, 35, ch. 69-106; s. 1, ch. 70-215; s. 1, ch. 70-391; s. 93, ch. 71-377; s. 1, ch. 72-339; s. 1, ch. 73-284; s. 2, ch. 74-243; s. 3, ch. 75-66; s. 2, ch. 76-135; s. 4, ch. 76-286; s. 1, ch. 77-180; s. 1, ch. 77-357; s. 1, ch. 78-221; s. 125, ch. 79-400; s. 12, ch. 81-151; s. 22, ch. 82-134; s. 3, ch. 83-188; s. 23, ch. 83-215; s. 1, ch. 83-318; s. 1, ch. 84-182; s. 7, ch. 84-260; s. 5, ch. 85-155; s. 43, ch. 85-180; s. 10, ch. 85-309; s. 4, ch. 85-343; s. 11, ch. 86-243; s. 11, ch. 87-161; s. 20, ch. 87-198; s. 5, ch. 87-225; s. 1, ch. 88-147; s. 66, ch. 89-282; s. 2, ch. 89-320; s. 1, ch. 90-163; s. 4, ch. 90-270; s. 5, ch. 92-148; s. 39, ch. 94-306; s. 910, ch. 95-148; s. 10, ch. 95-233; s. 29, ch. 96-413; s. 3, ch. 97-58; s. 2, ch. 99-163; s. 15, ch. 99-248; s. 39, ch. 2001-196; s. 1, ch. 2007-242; s. 16, ch. 2008-176; s. 2, ch. 2009-183; s. 20, ch. 2012-174; s. 27, ch. 2012-181; s. 27, ch. 2013-160; s. 72, ch. 2016-239; s. 4, ch. 2017-150.

Disclaimer: The information on this system is unverified. The journals or printed bills of the respective chambers should be consulted for official purposes.

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No

We need less traffic around Palmetto Bay. The neighborhood is becoming alternative road of US 1.

I believe one of the biggest drawbacks connecting to the Old Cutler Network system, is on the 4 major east- west streets there is no surface continuity, there is a disconnect. Instead of having an asphalt-to-asphalt fluid path connection- transitions, there are cement sidewalk to asphalt path connections. I believe asphalt/multi-use pathways speak, recreation, and cement sidewalks, either belong within neighborhoods and/or unfortunately appear as, museum grade surfaces- within parks. I believe the asphalt path connection on SW 136 St. is the correct way to proceed. I would recommend on all major east west streets, there is one continuous asphalt multi use path on one side of street with tree canopy. Thanks.

82 Ave southbound and 152 street, needs to be address as cars speed a lot on 82 Ave

I would love to walk my dogs in Coral Reef Park. That restriction makes the park useless to me.

Native tree canopy. Pocket parks with native plantings.

Improve what we have.

No more concrete.

No additional lighting.

Encourage GREEN.

Allow dogs to be walked in our parks, including Cora Reef Park.

Questions should include a "no opinion" option.

Calming circles are a waste - dangerous as well since nobody "yields."

I live east of Old Cutler. It is so difficult to safely cross Old Cutler that it prevents my family from going to Coral Reef Park by bike or walking. Pedestrians and bicyclists need a safer way to get across Old Cutler. Especially during commuting time, the drivers are so intent on getting home or to work that they don't pay attention to foot or bicycle traffic.

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I commute to work almost every day via bike. I only use the sidewalks because the driving culture in Miami is pure chaos. If we had protected bike lanes, more folks would use them and not be risking their life trying to earn a paycheck.

Many of the existing sidewalks in our area are very difficult for bicycles. They are damaged or end only so that riding a bike is very dangerous. The designated bike paths are not used very much and cyclists tend to use the street which is a big burden for motorists. If the existing sidewalks could be modified to better accommodate cyclists, the neighborhood would be a much safer place.

STOP the bridge!!!! Palmetto Bay will be ruined with this bridge.

You have completely forgotten golf cart paths, and golf carts as transportation.

Pedestrian bridges over the canals.

176th pedestrian/bike/golf cart bridge street bridge would connect east and west PB not forcing walkers/bikers to go up to 168th just to go to any of the parks.

Must install a traffic light at the crossing between SW 173 St and Old Cutler.

Love the town - let's keep the trees, and not build bridges to allow cut-thru traffic.

STOP approving more development in PB, improve traffic flow, BUILD the 87th Ave bridge.

No bridges, need more access to TPK.

Better trash control of garbage along street sides. Beautification of intersections and swells with foliage including flowers.

The way some answers are structure do not reflect my needs nor my neighbors. I am interested is slowing down the traffic on 136 street. Council persons need to negotiate with Pinecrest councilpersons to slow down the traffic in this street. Students from Pinecrest also attend Howard Drive elementary. As a palmetto Bay resident, there is a need to slow down the traffic on Howard drive (136 street). The need is going to be greater when the bridge is built and all the traffic coming from the bridge will end up moving east through 136 street. No vehicle will want to go back to US1 so the only alternative will be 136 street.

We need to provide facilities so people can safely and conveniently walk or bike all over our Village.

all these improvements the elected officials want to make are not necessary, people do not walk and rarely bike perhaps on weekends, in Palmetto Bay. We do not have the money to do it, we are almost on the red and just because one elected official brought this when elected now it seems that is going to happen, shame on her. What are your solutions to the neighborhoods that are going to be destroyed by 1000% more cars per day by the 87th Ave bridge?

What is your property acquisition plan for pocket parks?

How are you coordinating with county assets for grants and shared spaces with utilities?

Less studies more action! We have been incorporated for 20 years!

I live and work in Palmetto Bay should be part of the choices

The question that asks us to select communities, businesses or the Falls makes no sense. Otherwise, a great short survey. Leanne Tellam ;-)

Complete the Grid with Bridges on 87 & 77 Avenues with complete streets. This will be the single biggest safety enhancement and traffic solution for the entire South Dade area.

Please add sidewalk on 83 Ave south of 152 St.

Both my son and I have been hit by cars while on bicycle riding in the area.

SW 152 and SW 168 have the most schools and park facilities therefore should be a priority.

We are disappointed in the lack of responsiveness to monitor the cut-through traffic that speeds recklessly through our neighborhood streets, especially those intersecting 152nd. Not only does the high volume of unchecked careless vehicle travel impede safe passage on foot or bike, but it also reduces our overall enjoyment of our neighborhood and increase the amount of litter and trash on the road. 152nd and 89th look and feel not like a nice place to live but a dirty, unsafe and unprioritized area.

Make the sidewalk on the 184 Palmetto Bay side go all the way to old cutler like cutler bay did on their side. Same with 168th street- both sides.

Thank you for creating this survey and for hopefully bringing more pedestrian and bicycle paths and shortened crosswalks. There are a lot of bicyclists every weekend that go South on Old Cutler, cut down 176, left on 82nd and turn right on 184th street. Increasing pedestrian/bike/runner safety and putting less reliance on the car helps everybody. Also not discussed in this survey is creating running paths through pocket parks. Please consider more cushioned soft running/walk paths like the ones installed at Coral Reef Park. Could that path be extended throughout the park; it is only in a small section and the creation of the new bridge removed some of it. My two cents. Thank you for all you do in making this city a great place to live.

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Communicate with the neighboring villages for planning.

It would be great to start planting trees that actually serve a purpose in palmetto bay. No more palm trees! They don't provide enough shade and they don't absorb water. We need trees that will absorb water and serve a purpose during our storms. Also, I live on 168th and TPO needs to do a traffic study, the roundabout does absolutely nothing except prevent people from leaving their streets in the morning/afternoon. We need improved bikeways, there are so many bikers on the weekends that travel down through PB and we need to ensure their safety and the safety of our drivers!

Please keep safety in mind for all and any upgrades. I walk and bicycle at least once a day in Palmetto Bay and constantly see both stop sign and redlight runners, speeding and reckless driving, teenagers crossing dangerously, to name a few. Anything you can do to make this community safer is appreciated.

If you put roundabouts at these intersections, you will create even more gridlock than we already have. Traffic will stall creating more headaches and more congestion. Stop allowing developers to overrun our village and Crete thus mess that you are only going to make worse.

Thank you for providing the survey. Our biggest problem is people not obeying traffic laws - rolling through stop signs, driving through red lights, driving around stopped drivers at red lights to make turns, speeding, etc. I propose an enforcement program that records drivers (cameras) at intersections and allows citizens to report violations when observed. For example, all major intersections are video recorded but don't have to be actively monitored by a central location. If a citizen observes a violation, they can text the location and time, the video can be reviewed for violation, and citation issued for violations. There are just too many drivers around here who think they are above the law or that their time- and safety- is more important than the rest of ours that they just act as they will. would enjoy the opportunity to join the discussion- markclose@yahoo.com?

More needed for elderly and disabled.

We need police out and about like the Village of Pinecrest, Coral Gables, Key Biscayne, Sweetwater, Doral, Miami Beach, North Miami Beach ... I can go on and on! This deal with Miami Dade County rent-a-cop has NOT worked at all. We need privatization of our police force like ALL the other municipality's. Stop thinking about sidewalks and let's do what other municipalities are doing NOW to protect the residents on bikes from getting run over...a strict and VISIBLE police force.

No

Thank you for all that you do!

I am an avid walker doing about 6-7 miles a day. I walk through the neighborhoods of Palmetto Bay and its wonderful except for when I need to cross 144, 152 or 168 streets. I usually start at 6am but can be crossing over those streets when traffic starts to get heavy. It would be nice to have designated walk crossings at certain intersections. And public restrooms would be nice perhaps at those same locations. Reduction of traffic into quiet neighborhoods is a priority. Thanks for the outreach to residents for our opinions.

No bridge over US1!

Additional sidewalks, sidewalk benches.

Drivers should slow down when driving. Many adults and children are on the road often.

Do not bridge SW 87th Avenue or SW 77th Avenue.

Don't build the bridge. We don't need more vehicle traffic in Palmetto Bay.

No.

I walk 5 to 6 miles a day around my neighborhood. When thinking of a park, think of NY's Central Park and what it offers.

The principal concern of bikers is getting across Old Cutler without being hit by a turning vehicle. Eastbound on 152 St at Old Cutler is the worst. The cut on the sidewalk actually feeds a biker into the intersection. The least bad alternative at all these intersections is to get out into the traffic and cross in the midst of the motor vehicles.











It seems that the major concern with bicycles should be refocused on Old Cutler Road, as they create delays and safety concerns while riding during high traffic periods.

If I believed the pelotons would stay in the protected lanes, I might support Alternative 2. But I dont, so I chose Alt1 to provide room for families

Get rid of the Art in the community & use those collected revenues for building circles & traffic issues instead. Since developers are adding to the traffic problems that money should be going there! Common sense???

Widen the road for bicycle traffic to share the road. A separation in a bike line does slow down traffic but it is also not preferred by road cyclists because it traps them in a lane, and its also not preferred by family or path riders as it puts those riders closer to vehicular traffic. Parents dont like children riding next to vehicles.

So, the intent seems good but its a waste of \$\$ if neither use it.

The police need to take action to take the bicycle off the road when there is a pathway, such as Old Cutler. They block traffic, never over 25 miles per hour and back up the traffic. They ignore the path and then move into the street causing traffic backups. If they are still allowed in the streets then forget all of this and build a pathway.

Get the bikes off the roads, they are nothing but obstructions on Old Cutler even when they have a path they are out blocking traffic.

Its sad to see all the trees that have been destroyed to put the cement sidewalks

I ride my bike on 3 to 4 times a week. I ride on the road on 144th from 80th Ave until I reach Old Cutler. I do not see a need to expand the sidewalk. I have seen the expansion on 136th and do not feel that this was required either.

No bridge please

Bike lanes serve both drivers and the cyclists. It also preserves the tree canopy.

Bike lanes add the the usefulness of the road.

You don't have it as an option, but my preference would be regular (non-protected) bike lanes similar to the one in Cutler Bay, on Caribbean Blvd and the one started on 82nd Avenue. I can't even think of anyplace around here that has a protected bike lane. The lanes on Caribbean are the typical bike lane and would be less expensive than constructing a wall and also require less space, so fewer trees could be knocked down. I can only assume you're not including that as an option because you want to construct a ridiculous "multi path" that no one needs. My second choice is the protected lanes. My third is leave it as-is. Your "multi path" is dangerous. It is one sidewalk square wide in some places, two in others, so it's unpredictable. People are going to get killed. Please, please stop ripping out trees for an ugly path no one will use! There is already a sidewalk on all these streets, which is adequate for pedestrians and children on bicycles.

Dont screw it up like 136 street.

this village needs new direction. all these apartments that are being approved by the mayor and council are unacceptable/.

Please do not remove any more trees for any of these projects. What happened on SW 136th is a terribe. All those beautiful old trees cut down for an increased sidewalk!!! Terrible. If it was done for bikers, they don't use it, they would rather be in the streets creating traffic nightmares.

Bike lanes and Shared paths are not the same, you need to factor for both not just one or the other. Shared paths are for children, runners, joggers, walkers and casual cyclists. We also need to protect advanced cyclists who are out for fitness not casual riding, we are not taken into consideration in any of these proposals. Riding the shared path actually puts us at greater risk with children, dogs, families and with vehicles too then being on the road.

Major corridors like these need protected bike lanes

Where roundabouts are proposed at Old Cutler and 136 St and Old Cutler and 67 Ave please include on street separated areas for bikc commuters. Quit killing the trees.

The transit we were promised was a train! Building big bus stops is not what we paid half cent sales tax for. I dont recall Palmetto Bay residents getting a say in whats happening on sw 136 st. Lets see what happens to that street before we go forward with ANYTHING else.

Palmetto Bay has been destroyed enough. Leave it alone. Southwest 136 street is a disgrace. Lets stop the spending and protect the residents.

Palmetto Bay needs to Stop fighting Miami Dade and the Citizens wasting time, money and Connectivity that is essential for Quality of life

Dont understand why a regular bike lane like the one on 82nd Avenue isnt an option. That would be my first choice. Cant think of anyplace with a protected bike lane.

A shared path gives no protection from drivers with eyes down, on phones unfortunately.

We ride in Palmetto Bay 4 days a week. It would be nice to have bike lanes all the way to black point starting at South Miami

It would be great if the busway had a bike lane that had bridges for the major intersections so bike groups could use without stopping- very few bikers use the busway because of all the stops. Though not part of Palmetto Bay, the busway connects to the black point marina trail around 216thst. This can then take you towards black point or west towards 137th ave. If the busway could take you all the way down to krome and north to downtown, it would make for one of the best bike paths in a major city. More bikers would use this route and would feel less need to ride in busy neighborhood streets. We need at least a 25 mile bike route that is big enough to share with pedestrians so we can ride on it at 20-25mph and not have to stop or slow down.

I am concerned that golf carts will take over the dedicated bike lanes, since they are not allowed to drive on those streets

Please fix the stree for safe bike rides.

I have lived in the Palmetto Bay area for a long time and where there was not so much traffic is really bad Today. This is a beautiful area and I am proud to live here. We are truly blessed. Please, Please there should be a stop in construction in the area. Simplify in all. Thank you

The County's wishes and suggestions should prevail > 144th, 152nd, 168th, & 184th should ALL be four-laned east of U.S.-1 to Old Cutler

We need to make it safer for bikers who use roads.

Lighting on the trails on old Cutler and along of 152 are important

Interested in being more involved - mashruk_zahid@hotmail.com

Keep up the good work!



SIGN-IN SHEET

SW 144 Street & SW 152 Street Walk Audit Thursday, April 15, 2021

	NAME (PRINT)	ORGANIZATION	ADDRESS	PHONE #	E-MAIL
	Marsha Matson	PB	93005W180 St.		monatson get mello has
	Jenny Polynice-Hall	VPD	GAONE HIDISCOSSE.		1 300
	Dionisis Toma	PB	9495 6W 180 5MM		
×	Delc Fell	7B	7201 SW 14456.		Tropicrover maticon
	Diane Quick	EACPB	+229 SW 145 St		
	Ed PALACIO	Vesident	(S321 Su 74 pl		edpalae sellsonthinget
×	Paphael lagos	Marin	3363 W Commercial		
	Usa Maadic	Martin			
	Climstina Fermin	Marlin			



SIGN-IN SHEET

SW 168 Street & SW 184 Street Walk Audit Saturday, April 17, 2021

NAME (PRI	NT)	ORGANIZATION		ADDRESS		PHONE #	E-MAIL	
Leopoldo L'	linas	Palmer Trinity Resident	8220 SW	148 Dr		305 431 2347	Illinos Opalmentrinity	,org
MaishaMa	atson	Palmetto Bac				~	mm at sone palmetto	bas-fl.
Eric Tull	berg	BPACGMI	7884	SW 179	Tr	305-255-251	4 @341@bellsouth	ret
Karen Luna	incham	PB						
Dionisio-To	Res	88						
Tenny Par	ince +	all PB						
Lisama	dik	Marin						
Rapharel	10,005	Marin						
Clinsting	Termin	Martin						
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SMART PLAN CONNECTIVITY STUDY

Walking Audit Survey – Palmetto Bay

1. Whi	ch roadway did you wa	alk? (select o	ne)		2. Who	o a	are the users	for this facility? (select all that	
a)	SW 144 Street				apply))			
b)	SW 152 Street				a)	E	Bicyclists		
c)	SW 168 Street				b)	F	Pedestrians		
d)	SW 184 Street				c)	S	Students		
					d)	Т	Transit Users		
					e)	E	Employers		
					f)	D	Disabled		
					g)	١	Vehicles		
3. Whi	ch cross-section eleme	nts are prese	ent? (sele	ect all	4. Whi	ich	cross-sectio	n elements that are present need	to
that ap	oply)				be upg	gra	ided (i.e. enla	arged or enhanced)? (select all that	t
a)	Bike Lane				apply)				
b)	Sidewalk				a)	E	Bike Lane		
c)	Seating				b)	S	Sidewalk		
d)	Buffer between the s	idewalk and	the road		c)	S	Seating		
e)	Shade Trees				d)	E	Buffer betwee	en the sidewalk and the road	
f)	Transit Stop(s)				e)	S	Shade Trees		
g)	Vehicle Lane				f)	Т	Transit Stop(s	5)	
h)	Bus Lane				g)	١	Vehicle Lane		
i)	Trash / Recycle Bins				h)	E	Bus Lane		
j)	Lighting				i)	Т	Trash / Recyc	le Bins	
					j)	L	lighting		
5. Whi	ch cross-section eleme	nts would yo	ou like to	see in th	nis roadw	way	y?		
a)	Bike Lane								
b)	Sidewalk								
c)	Seating								
d)	Buffer between the s	idewalk and	the road						
e)	Shade Trees								
f)	Transit Stop(s)								
g)	Vehicle Lane								
h)	Bus Lane								
i)	Trash / Recycle Bins								
j)	Lighting								
k)	Median								
6. In g	eneral, do cars seem to	be traveling	g at a safe	e and cor	nfortable	le s	speed? (selec	t one)	
	То	o Slow	1	2	3	4	5	Too Fast	

7. On average, how is the sidewalk pavement condition per block? (select one)										
Mar	ny cracks, tripping ha	azards	1	2	3	Z	1	5 Good as new		
8. Do the pedestrian areas feel safe and secure? (select one)										
Not	safe or secure	1	2	3	4	Ę	5	Very safe and secure		
9. Are public plazas and parks available and inviting?										
Non	e available	1	2	3	4	5	5	Available and inviting		
10. Do the buildings	enhance the pedest	rian er	nvironr	nent o	r detrac	t?				
Detrac oriented away from	t (barren, 1 pedestrians)	2	2	3	4	5		Inviting (cater to sidewall	<)	
11. On average, how	many shade trees of	lo you	see on	1	12. On	avera	ge, ł	now many crosswalks are v	isibly marked	
both sides of the structure a) 0-1	eet, per block? (sele	ct One)		per blo	ck? (se	elec	t one)		
b) 2-4					b)	1				
c) 3-5					c)	2				
d) 6-10					d)	3				
e) >10 13 I felt safe while y	valking along this ro	adwav	(sele	oct one	e)	4				
13. There sure write v		uuwuy	(Sere		•)					
	Not safe at all	1	2	3	. 4	ļ	5	Very safe		
14. I would choose t	o walk along this roa	adway	in the	future	(selec	t one)				
	Never	1	2	3	4	Ļ	5	Definitely		
15. This roadway ap	pears accessible to a	ll type	s of us	ers(select or	ne)				
	Not at all	1	2	3	4		5	Completely		
Additional Feedback	«:									



DID YOU PARTICIPATE IN OUR WALKING AUDIT?

Please scan the below QR code to take our walking audit survey once you have completed the walk.



You may also use this link:

https://forms.gle/YyYrRTL9ojX5uyLp7

Ask for a paper copy of the survey if you do not want to take our digital survey.








14. I would choose to walk along this roadway in the future...





SW 152 St

SW 144 St

I felt safe (4)

13. I felt safe while walking along this roadway...

SW 184 St

16. Additional feedback:

- Gaps on south side. Transit stops east of 87 Ave. Enough room for bike lanes? Fix south side sidewalk gaps. Add bike lane, if possible.
- South side sidewalk complete, north side has 1/2 mile in gaps. Fill sidewalk gaps. Add protected bike lane between SW 82 Ave and SW 97 Ave, shared use path from Old Cutler Road to SW 82 Ave.
- 184th needs sidewalk to fill in large gaps and a separate two-way protected bike lane with curb next to 184th on Palmetto Bay's side of the street (north side). 184th has a wide right-of-way on the north side, which can probably accommodate both a separated pedestrian sidewalk next to fences, the current landscape/tree strip next to the sidewalk, and a 2-way bike lane with curb next to the street. So, looking at the 184th north side right-of way, the ideal placement from north to south is private property fences, completed sidewalk, landscaping/trees, protected 2-way bike lane with curb, and street.
- 144st sidewalks could be made bike friendly by eliminating curves at intersections with streets and by eliminating blockage such as telephone poles. Also required are crosswalk signal buttons with signage. 144st has low car traffic and shaded sidewalks compared to 152 St. If I had these Qs with me at the time of walk, I could have accurately counted trees. I guessed at the answer; however, the street is tree lined. A large portion of the pavement on 144 St has been repaired in the past month.

152st, in its present condition, is not inviting for biking. Heavy and fast traffic, sidewalk condition is poor. In some areas, a walker or biker could fall off the sidewalk due to a drop off at the edge of the street. The sidewalk at the bridge is a problem for bikers, who would have to suddenly merge into traffic on the road. The light signals at Old Cutler Road need attention. Only available to cross Old Cutler and not 152ST and the walk light does not work to cross 152 St. Bus stop signage is absent at some of the stops. My crosswalk and tree Q answers are inaccurate, as I did not count. Of the 2 streets that I walked (152 and 144), 144st seemed a better fit for bikers and walkers.

			E۱	valuation Crite	ria and Scorin	g		
Factors	Items Description	Metric	Scores/Points	SW 144 th St.	SW 152 nd St.	SW 168 th St.	SW 184 th St.	Explaination of Metric
		Is the pedestrian crash rate above the average of the four segments AND have a fatal crash? OR Greater than the average?	Y = 3	0	3	0	0	
	Pedestrian crash severity	Is the pedestrian crash rate equal to or above the average OR have a fatal crash	? Y = 2	2	2	2	0	Average pedestrian crash for all four corridors is 3
		Is the pedestrian crash rate at the location above zero and below the average, but does NOT have any fatal crashes?	Y = 1	0	0	0	1	
		Is the bike crash rate above the average of the four segments AND have a fatal crash? OR Greater than the average?	Y = 3	0	0	3	3	
	Bike crash severity	Is the bike crash rate equal to or above the average OR have a fatal crash?	Y = 2	0	0	2	2	Average bicycle crash for all four corridors is 3.5
Safety		Is the bike crash rate at the location above zero and below the average, but does NOT have any fatal crashes?	Y = 1	1	1	0	0	
	Speed	Posted speed limit:	40 mph = 3 35 mph = 2 30 mph = 1	1	2	2	3	Points awarded to roadways with higher speeds; lower speeds are associated with ped/bike safety.
		Number of traffic calming treatments along the corridor:	4 - 5 Treatments = 1 2 - 3 Treatments = 2 0 - 1 Treatments = 3	3	3	2	3	Number of traffic calming treatments/devices along the corridor. Traffic calming devices include roundabouts, textured crossings at intersections, speed tables, rapid flashing beacon, etc.
	Traffic Calming	Number of future traffic calming treatments along the corridor:	4 - 5 Future Locations = 3 2 - 3 Future Locations = 2 1 - 2 Future Locations = 1	1	3	1	1	Future plans for traffic calming treatments as identified by Traffic Calming Plan and Old Cutler Road improvements.
	•	Safety Score	21	8	14	12	13	Higher scores indicate the more dangerous the corridor may be for bicycles and pedestrians
	Population	Percentage of total population living within 1/4 mile of the segment	1 - 10% = 1 10 - 12% = 2 13 - 15% = 3 16% + = 4	3	2	4	4	
		Percentage of 65+ population living within 1/4 mile of the segment	1 - 10% = 1 10 - 12% = 2 13 - 15% = 3 16% + = 4	2	3	1	1	2010 Census population adjusted using 2019 population estimate per Census Quickfacts
vinage Density		Percentage of 5-17 years aged population living within 1/4 mile of the segment	1 - 10% = 1 11 - 15% = 2 16 - 19% = 3 20% + = 4	4	4	4	3	
	Employment	Percentage of total employment within 1/4 mile of the segment	1 - 3% = 1 4 - 6% = 2 7 - 9% = 3 10% + = 4	3	2	2	4	Data points downloaded using 2018 LEHD 'on the map' data
		Village Density Score	16	12	11	11	12	Higher scores indicate density in people and jobs
		What percentage of sidewalk is missing?	> 10 % = 3 5% - 10% = 2 1% - 5% = 1	1	0	2	3	Corridor measured from Transitway to Old Cutler Road using GIS. Measurements of total linear feet missing from corridor between Old Cutler Road and Transitway. More points allocated to corridor with more sidewalk gaps.
		How many traffic signals are along the segment?	0 - 3 Signals= 3 3 - 6 signals = 2 6 - 9 Signals = 1	2	1	2	2	Total number of regular traffic signals between Transitway and Old Cutler Road. More points allocated to corridors with less traffic signals as there are less opportunities for safe crossing.
	Pedestrian Facilities	How many midblock crossings are there along the segment?	0 Crossings = 3 1 Crossing = 2 2 Crossings = 1	3	1	1	2	Total number of midblock crossings along corridor between Transitway and Old Cutler Road, more points allocated to corridors with few to no crossing facilities.
		What is the condition of the sidewalk?	Good = 0 Fair = 1 Poor = 2	0	1	2	2	Rating based on walking audit scores. Good = no/minor gaps, few cracks. Fair = some gaps and cracks. Poor = many gaps and many cracks.
		Are there alternative paths available within 1/2 of the segment?	N = 1	0	1	1	1	Points allocated to corrdors without an alternative pathway available within 1/2-mile.
		Are there bicycle lanes connecting to the segment?	Y = 1	0	0	1	1	Points provided to corridors with bicycle lanes connecting to/from corridor.

			32	Notes: Y = '	/es; N = No	32	35	
		TOTAL SCORE	82	36	58	52	55	Higher the score the higher the need for improvements
	stationaler reference	Resident Input Score	6	2	6	5	1	Higher scores indicate resident and stakeholder preference
	Stakeholder Preference	Stakeholder preference	Last = 1 Preferred Roadways = 2	0	2	2	0	Stakeholder preference provided at the 6/23/21 stakeholder meeting
Resident Input	Resident Survey Rank	Survey response ranking	First = 4 Second = 3 Third = 2	2	4	3	1	1 to 4 ranking based on results of the public survey closed in June 2021.
Connectivity Score		16	5	13	11	12	Higher scores indicate connectivity to nearby destinations within and surrounding Village	
	Parks & Cultural Centers	Is the location within a ½ mile of a park, public facility, cultural or historic designated site? (i.e. Churches, Libraries, Senior Center, etc)	>16 destinations = 4 11 - 15 destinations = 3 6 - 10 destinations = 2 1 - 5 destinations = 1	1	2	3	4	Total number of public facilities within a 1/2-mile, destinations include parks, cultural centers, museums, city hall, historic sites, community centers and movie theaters.
Score	Places	Is the location within a ½ mile of a Key destination (i.e. Grocery Store, Shopping Center or Plaza, Superstores, Mall, Hospital or Office Park)	>16 destinations = 4 11 - 15 destinations = 3 6 - 10 destinations = 2 1 - 5 destinations = 1	2	3	2	3	Total number of key destinations within a 1/2-mile radius of the corridor, key destinations include grocery stores, shopping centers, hospitals, superstores, medical offices.
Connectivity	Transit	Is the location within a ½ mile of a premium transit station? Or a ¼ mile of a bus stop?	Number of Transit Stop 1 - 5 = 1 5 - 10 = 2 10 - 15 = 3 > 15 = 4	0	4	2	1	Total number of transit stops within a 1/4-mile, total number of premium transit stops within a 1/2 mile of the corridor. Premium transit includes Transitway stops.
	Schools	Is the location within ½ mile of a school?	Number of Schools 0 - 1 = 1 2 - 3 = 2 4 - 5 = 3 > 5 = 4	2	4	4	4	Total number of public and private schools within a half mile of the corridor.
Infrastructure Score		23	9	14	13	17	Higher scores indicate the greater the need for ped/bike facilities and initial right-of-way availability.	
	Right-of-way	Right-of-way Are there ROW restrictions?		0	1	0	1	Restrictions within the right-of-way that may hinder construction of multimodal pathways; restrictions include required easements, eminent domain, unplatted properties, etc. Per MDCPA website.
	Canal Bridges	Is there available ROW on existing bridge canals for bike lanes or wide pathways? OR are there alternate pathways nearby?	Y = 1	0	1	0	1	Bridges crossing canals provide enough room for non-motorized facility expansion. OR there is a pedestrian bridge nearby.
	Shade	Are sidewalks consistently shaded throughout the segment?	Y = 1	1	1	0	0	Shade/Canopy trees consistently adjacent to sidewalks for more than 50% of the length of the corridor (exludes Palm Trees).
	use Trail	Has the corridor been identified for a potential shared use pathway or multi-use trail?	Y = 1	0	1	0	1	Per Village of Palmetto Bay Plans/Studies (i.e. Mobility Hub Plans)
	Shared Use Path / Multi-	Does the corridor connect to at least one shared use pathway or multi- use trail?	Y = 1	1	1	1	1	Shared use or Multi-use pathways connected to the corridor (i.e. South Dade Trail / Old Cutler Trai
Score		Priority year the roadway is planned for bike lanes (LRTP):	2020 - 2025 = 1 2026 2030 = 2 2031 - 2035 = 3	0	3	2	2	LRTP (2045) has identified onroad bicycle facilities along many roadways, projects have been identified in the LRTP and ranked as Priority 1, 2 or 3. Greater points allocated to later years as the opportunity to incorporate recommendations are greater for projects planned in later years.
Infrastructure	Bike Facilities	Number of future connections?	2 - 3 Connections = 2 1 - 2 Connections = 1 0 Connections = 0	1	2	1	0	Total number of future bike lanes connecting into the corridor per Village Plans/Studies.















LEGEND		
Residential Zoning	g	Sidewalk
🛑 Bike Lane		🚯 Shared Use Path
Landscaped Buffe	er	Curb/Concrete Buffer
Park		Pavement
School		🔵 Canal
Commercial zonir	ng	💮 Right of Way
_	PAGE: 4/6	SW 152ND STREET FROM S DIXIE HWY TO OLD CUTLER RD









SW 184 STREET CONCEPTUAL PLAN SHEET 1 OF 8

































RECOMMENDATIONS	TYPE	IMPACT	NOTE	FEASIBILITY	NOTE	PRIORITIZATION		
GENERAL								
Complete Streets Policy	Policy	High	Such a policy will direct planners, engineers and public work employees to routinely design and operate the ROW to prioritize safer slower speeds for all people who use the road, over high speeds for motor vehicles.	High	The policy would need to be adopted by the Commission - Miami Beach and South Miami are two cities in the county who have adopted such a policy.	High		
Budget for Ped/Bike Improvements	Policy	High	Creating a budget for non-motorized improvements can ensure the Village has set aside funds annually for planning, design and construction of these project.	High	The Village would be required to fund such a budget through allocating existing resources or creating a policy to furnish this budget line item. This can also be achieved through an multimodal impact fee ordinance.	High		
Maintenance Plan for Bike/Ped Infrastructure	Policy	High	Creating a maintenance plan for bike/ped infrastructure ensures these facilities are in good working condition for use.	High	This could be incorporated into the Village's maintenance plan.	High		
Coordination with DTPW	Multi-Agency Coordination	High	SW 152 St, SW 168 St and SW 184 St are county operated roadways, coordination for improvements and maintenance can be achieved through greater cooperation and outreach.	High	While the Village already coordinates with DTPW on projects, greater coordination and cooperation between the entities could achieve additional projects and funding.	High		
Coordination with Cutler Bay	Multi-Agency Coordination	High	Improvements along SW 184 St should be coordinated with Cutler Bay to ensure a cohesive connected system of bicycle and pedestrian facilities.	High	Partnerships amongst cities and agencies could provide for funding, priorty projects and planning for improvements.	High		
Coordination with FDOT	Multi-Agency Coordination	High	Dixie Highway is a state operated roadway and improvements related to Dixie Highway need to be coordinated with FDOT, District 6.	High	Coordination and communication with FDOT could provide enhanced pedestrian and bicycle facilities along Dixie Highway to ensure bike/ped users have a safe way to traverse Dixie Highway to utilize future BRT services.	High		

RECOMMENDATIONS	TYPE	IMPACT	NOTE	FEASIBILITY	NOTE	PRIORITIZATION
Slow Streets Pilot Program	Policy	Medium	Miami Beach has been very successful with the pilot program.	High	Community involvement is key and with neighborhood buy-in, this is feasibile.	Medium to High
Pedestrian Bridge Study	Study	Medium	Identifying key locations for pedestrian bridges throughout the Village to create a holistic network of bike and ped facilities.	Medium	Funding for such a study could be explored through a number of existing funding sources such as the TPO or Infrastructure Act.	Medium
Branding Plan	Plan	Low	The creation of a branding plan can help create a sense of place, identity and brand for the Village. Branding plans typically incorporate community signage standards, allowing the installation of uniform community and neighborhood signs.	Medium	Miami Beach, Hallandale, Pembroke Pines and Coral Springs are some examples of communities who have adopted branding plans and guidelines and have distinct brands that have assisted in attracting tourists and created a sense of place for the community.	Low to Medium
	-		PEDESTRIAN & BICY	CLE		
Bicycle Facilities & Improvements are Incorporated into Roundabouts at SW 152 Street & SW 184 Street	Multi-Agency Coordination	High	Both SW 152 Street and SW 184 Street are under design for roundabouts at Old Cutler Road, incorporating recommended improvements is an important cost saving measure.	High	Roundabouts are under county review. Ensuring proposed facilities can be integrated with the design will save money.	High
Consider Protected or Separated Bicycle Facilities for Future Improvements along main thoroughfares	Policy	High	Approximately 80% of survey participants prefer a separated facility.	High	Consider adopting a policy to install protected or separated bicycle facilities for all primary roadway improvements.	High
Midblock Crossing Traffic Study at SW 78 Pl & SW 152 Street	Study	High	Proposed conceptual plans include a mid-block crossing at this location to allow safe crossing of bicyclists and pedestrians.	High	Midblock crossings require a traffic study for implementation.	High

RECOMMENDATIONS	TYPE	IMPACT	NOTE	FEASIBILITY	NOTE	PRIORITIZATION
Midblock Crossing Traffic Study on SW 184 Street near Palmer Trinity School	Study	High	Midblock crossings are typical provided near schools, providing a crossing near the school could improve safety for pedestrians and students going to/from the school.	High	Midblock crossings require a traffic study for implementation.	High
Multimodal Feasibility Study for SW 144 Street and SW 168 Street	Study	High	Feasibility studies for both SW 144 St and SW 168 St are recommended for improving multimodal facilities along both corridors.	es for both SW 144 St ire recommended for modal facilities along High High SW 168 St is a County roadway, therefore coordination with the County is very important. The completion of such a study could make improvements eligible for federal and state grant funding.		High
Multimodal Feasibility Study for SW 77 Avenue, SW 82 Avenue, SW 87 Avenue and SW 92 Ave	Study	High	There are currently few facilities for bicyclists along these roadways, feasibility studies are recommended for improving multimodal transportation along all four corridors.	High	SW 87 Ave and SW 77 Ave are County operated roadways, therefore coordination with the county is very important. The completion of such a study could make improvements eligible for federal and state grant funding.	High
Install Protected Bicycle Lanes along SW 152 St	Design	High	Approximately 80% of survey participants prefer a separated facility - the protected bike lane was the preferred alternative.	High	Coordination with DTPW is a vital component to ensuring the proposed improvements are advanced to the design phase.	High
Install Protected Bicycle Lanes along SW 184 St	Design	High	Approximately 80% of survey participants prefer a separated facility, the protected bike lane was the preferred alternative.	High	Coordination with DTPW is a vital component to ensuring the proposed improvements are advanced to the design phase.	High
Pedestrian Amenities	Infrastructure	High	Signage, benches, lighting and trash receptacles are an important component to the walking environment as they provide guideance, rest areas, improved safety and prevent litter.	High	Survey #1 identified pedestrian amenities as the number one desired pedestrian improvement for the community by 63% of respondants.	High

RECOMMENDATIONS	TYPE	IMPACT	NOTE	FEASIBILITY	NOTE	PRIORITIZATION
Bicycle Facilities & Improvements are Incorporated into Roundabouts at SW 152 Street & SW 184 Street	Multi-Agency Coordination	High	Both SW 152 Street and SW 184 Street are under design for roundabouts at Old Cutler Road, incorporating recommended improvements is an important cost saving measure.	High	Roundabouts are under county review. Ensuring proposed facilities can be integrated with the design will save money.	High
Plant Shade Trees along pathways	Policy	High	Shade is an important component of the walking environment and could provide a number of community benefits.	Medium	Tree giveaways, community planting events and street tree policies are an effective way to ensure trees get planted and maintained by the community.	Medium to High
Midblock Crossing Traffic Studies for SW 144 Street	Study	High	Both SW 144 St and SW 184 St have few areas where pedestrians and bicylists can safety cross, additional crossings can create a safer environment for both bicyclists and pedestrians.	Medium	SW 144 St is a Village roadway, while SW 184 St is a County roadway. The Village would need to coordiate with DTPW for additional crossings along SW 184 St. The completion of such a study could make improvements eligible for federal and state grant funding.	Medium to High
Widen Existing Sidewalk between US-1 & Franjo Rd along SW 184 St	Infrastructure	High	ROW is maxed out and widening the existing sidewalk would encourage walking/biking.	Medium	Coordination with the County for programming these improvements as the County sets aside funds for these improvements annually.	Medium to High
Fill-in Sidewalk Gaps along SW 144 Street, SW 168 Street and SW 184 Street	Infrastructure	High	Filling in sidewalk gaps is important for connectivity and accessibility. All three roadways identified have missing segments of sidewalks.	Medium	Sidewalk improvements along SW 168 St and SW 184 St would need coordination with the County.	Medium to High
Pedestrian Pathway Ordinance	Policy	Medium	Such a policy would ensure that future sidewalk improvements would guarantee a clear zone for pedestrian accessibility and ensure signage and utilities remain out of the walking path.	Medium	This policy would require approval from the Commission, Planning and Public Works could ensure the policy is enacted.	Medium
			INTERSECTION IMPROVI	EMENTS		

RECOMMENDATIONS	ТҮРЕ	IMPACT	NOTE	FEASIBILITY	NOTE	PRIORITIZATION
Lead Pedestrian Interval (LPI) Traffic Study at Signalized Intersections	Study	High	Provides a head start for pedestrians and bicylists at an intersection, benefits include increased visibility, reduced conflicts, increased yielding and safety.	High	County coordination is required to modify signal phasing and timing.	High
Restripe faded standard crosswalks at all T-intersections along SW 152 Street	Pavement Markings	High	Many of the existing pavement markings are faded.	High	Coordination with the County to ensure funding is allocated for this improvement.	High
Upgrade pedestrian push-buttons for ADA compliance at all signalized intersections along SW 152 Street	Infrastructure	High	Most existing push buttons are not ADA compliant along SW 152 St and SW 184 St.	High	Coordination with the County for programming these improvements as the County sets aside funds for these improvements annually.	High
Install pedestrian signal heads per ADA criteria and include audible signals.	Infrastructure	High	Signal heads should be install adjacent to crosswalk at a height of 7' to 10', signals should have a countdown timer.	High	Coorindation with the County for programming these improvements is important to ensure funds get set aside.	High
Lighting	Infrastructure	High	Lighting at intersection can make drivers aware of the presence of the intersection and reduce nighttime crashes.	High	Build intersection lighting into traffic improvement projects and roadway resurfacing projects. Coordination with the County is key to incorporating recommendations.	High
Bicycle Signals at Signalized Intersections along SW 152 Street and SW 184 Street	Multi-Agency Coordination	High	Bicycle signals would improve safety for bicyclists crossing intersections and restricts vehicle movements for bicyclists to advance.	Low	Approval and coordination with the County & FDOT, District 6 would be required to explore this further.	Medium to Low

RECOMMENDATIONS	TYPE	IMPACT	NOTE	FEASIBILITY	NOTE	PRIORITIZATION
Install Bicycle Box at all major signalized intersections along US- 1, SW 87 Ave and Old Cutler Road	Multi-Agency Coordination	High	Bike boxes has interim approval from FHWA - potential 35% reduction in through bicyce/right-turn vehicle conflcits.	Medium	Coordination with FDOT District 6 for US-1 and DTPW for Old Cutler Road and SW 152 St, SW 184 St and SW 87 Ave.	Medium to High
High-emphasis or textured pavement for all crosswalks at signalized intersections	Pavement Markings	High	xtured pavement is also utilized as a affic calming technique and signates a space for bicyclists and edestrians crossing.		Coordination with the County to ensure funding is allocated for this improvement.	Medium to High
Install pedestrian crossing signage at all signalized intersections.	Signage	Medium	Signage can alert vehicles about upcoming pedestrian crossings.	High	Coorindation with the County for programming these improvements is important to ensure funds get set aside.	Medium to High
Raised intersection at SW 80 Ave & SW 152 Street	Study	Medium	Raised intersections are a traffic calming technique which can slow down traffic as there is a lot of pedestrian and bicyce activity nearby.	Medium	Public Works can incorporate this recommendation to be explored further in the Village's next Traffic Calming Study. Coordination would need to be made with the county.	Medium
Raised intersection at SW 77 Ave & SW 152 Street	Study	Medium	Raised intersections are a traffic calming technique which can slow down traffic as there is a lot of pedestrian and bicyce activity nearby.	ed intersections are a traffic hing technique which can slow on traffic as there is a lot of estrian and bicyce activity nearby.		Medium
Reduce Turn Radius (where feasible)	Study	Medium	Reducing the turning radii forces vehicles to slow down for turning.	Low	Coordination with the County is important to identify which intersections would be eligible for this type of improvement.	Low to Medium

Sponsor	Program Name	Funding Type	Description of Funding Program	Further Information
			FEDERAL FUNDING SOURCES	
USDOT	Infrastructure For Rebuilding America (INFRA)		U.S Department of Transportation (USDOT) Secretary Pete Buttigieg announced that the Biden-Harris Administration intends to award \$905.25 million to 24 projects in 18 states under the Infrastructure for Rebuilding America (INFRA) discretionary grant program. These grants advance the Administration's priorities of rebuilding America's infrastructure and creating jobs by funding highway and rail projects of regional and national economic significance that position America to win the 21st century.	https://www.transportation.gov/buildamerica/financing /infra-grants/infrastructure-rebuilding-america
USDOT	BUILD	Capital / Operations & Maintenance	The Better Utilizing Investments to Leverage Development, or BUILD Transportation Discretionary Grant program, provides a unique opportunity for the DOT to invest in road, rail, transit and port projects that promise to achieve national objectives. Previously known as Transportation Investment Generating Economic Recovery, or TIGER Discretionary Grants, Congress has dedicated nearly \$8.9 billion for twelve rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact. The eligibility requirements of BUILD allow project sponsors at the State and local levels to obtain funding for multi-modal, multi-jurisdictional projects that are more difficult to support through traditional DOT programs. BUILD can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional Federal programs which provide funding to very specific groups of applicants (mostly State DOTs and transit agencies).	https://www.transportation.gov/BUILDgrants
USDOT	RAISE (Rebuilding American Infrastructure with Sustainability and Equity)	Capital / Planning	The Rebuilding American Infrastructure with Sustainability and Equity, or RAISE Discretionary Grant program, provides a unique opportunity for the DOT to invest in road, rail, transit, and port projects that promise to achieve national objectives. Previously known as the Better Utilizing Investments to Leverage Development (BUILD) and Transportation Investment Generating Economic Recovery (TIGER) Discretionary Grants, Congress has dedicated nearly \$8.9 billion for twelve rounds of National Infrastructure Investments to fund projects that have a significant local or regional impact. The eligibility requirements of RAISE allow project sponsors at the State and local levels to obtain funding for multi- modal, multi-jurisdictional projects that are more difficult to support through traditional DOT programs. RAISE can provide capital funding directly to any public entity, including municipalities, counties, port authorities, tribal governments, MPOs, or others in contrast to traditional Federal programs which provide funding to very specific groups of applicants (mostly State DOTs and transit agencies). This flexibility allows RAISE and our traditional partners at the State and local levels to work directly with a host of entities that own, operate, and maintain much of our transportation infrastructure, but otherwise cannot turn to the Federal government for support.	https://www.transportation.gov/RAISEgrants
USDOT	Congestion Mitigation and Air Quality (CMAQ) Improvement Program		The Congestion Mitigation and Air Quality Improvement (CMAQ) Program provides funds to States for transportation projects designed to reduce traffic congestion and improve air quality, particularly in areas of the country that do not attain national air quality standards. The Secretary of Transportation is required to establish and implement the Congestion Mitigation and Air Quality (CMAQ) Improvement Program. The authority to administration (FHWA) and the Federal Transit Administration (FTA).	https://www.transportation.gov/sustainability/climate/f ederal-programs-directory-congestion-mitigation-and- air-guality-cmag

Sponsor	Program Name	Funding Type	Description of Funding Program	Further Information
FHWA	Transportation Alternatives	Capital	Eligible activities include construction, planning, and design of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity. For example, new sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic calming techniques, lighting, ADA compliance projects, and other safety-related infrastructure.	https://www.fnwa.dot.gov/fastact/factsheets/transportationaltern ativesfs.cfm
FHWA	Surface Transportation Block Grant Program (STBG)	Capital / Operations & Maintenance / Planning & Research (SU Flexed to FTA)	The STBG program provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.	https://cms7.fta.dot.gov/funding/grants/flexible-funding- programs-surface-transportation-block-grant-program-23-usc- 133
FHWA	Recreational Trails Program (23 USC 206)	Capital / Operations & Maintenance / Programming	Develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. States are encouraged to enter into contracts and cooperative agreements with qualified youth conservation or service corps. Eligible projects include: Maintenance and restoration of existing trails; Development and rehabilitation of trailside and trailhead facilities and trail linkages; Purchase and lease of trail construction and maintenance equipment; Construction of new trails (with restrictions for new trails on Federal lands); Acquisition of easements or property for trails; Assessment of trail conditions for accessibility and maintenance; Development and dissemination of publications and operation of educational programs to promote safety and environmental protection related to trails (including supporting non-law enforcement trail safety and trail use monitoring patrol programs, and providing trail-related training) (limited to 5 percent of a State's funds); State administrative costs related to this program (limited to 7 percent of a State's funds).	https://floridadep.gov/lands/land-and-recreation- grants/content/rtp-assistance
FHWA	Highway Safety Improvement Program (HSIP)	Capital	The overall purpose of this program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads through the implementation of infrastructure-related highway safety improvements.	http://safety.fnwa.dot.gov/hsip/
FDOT	Bicycle and Pedestrian Grant		FDOTs Highway Safety Grant Program awards subgrants to traffic safety partners that undertake programs and activities to improve pedestrian and bicycle safety through the reduction of serious injuries and fatalities resulting from traffic crashes. Subgrants may be awarded for assisting in addressing pedestrian and bicycle safety deficiencies, expansion of an ongoing activity, or development of a new pedestrian and bicycle safety program.	https://www.fhwa.dot.gov/environment/bicycle_pedestrian/fundi ng/funding_opportunities.cfm https://www.fdot.gov/Safety/grants/grants-home.shtm
FTA	5305d	Planning	The program provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states. Planning needs to be cooperative, continuous, and comprehensive, resulting in long-range plans and short- range programs reflecting transportation investment priorities. Funds shall only be used on approved work tasks within an adopted Unified Planning Work Program (UPWP).	https://www.transit.dot.gov/funding/grants/metropolitan- statewide-planning-and-nonmetropolitan-transportation- planning-5303-5304
Office of Policy and Management	Small Town Economic Assistance Program (STEAP)		Under this program, OPM provides grants to small municipalities for developing or improving infrastructure, including roads, accessways, and other site improvements (CGS § 4-66g)	https://portal.ct.gov/OPM/Bud-Other- Projects/STEAP/STEAP_Home#Communities

Sponsor	Program Name	Funding Type	Description of Funding Program	Further Information
Office of Policy and Management	Local Capital Improvement Program (LoCIP)		The LoCIP program provides formula grants to municipalities for capital improvements, including sidewalk and pavement improvement projects (CGS § 7-536 (a) (4)). A municipality may apply to the Office of Policy and Management (OPM) for reimbursement after it spends money on an authorized LoCIP project. The amount reimbursed cannot exceed the municipality's available LoCIP balance.	http://www.ct.gov/opm/lib/opm/igp/grants/locip/locip _guidelines.pdf
HUD	CBDG Section 108	Capital / Programming	Section 108 is the loan guarantee provision of the Community Development Block Grant (CDBG) program. Section 108 provides communities with a source of financing for economic development, housing rehabilitation, public facilities, and large-scale physical development projects. This makes it one of the most potent and important public investment tools that HUD offers to local governments. It allows them to transform a small portion of their CDBG funds into federally guaranteed loans large enough to pursue physical and economic revitalization projects.	https://www.hudexchange.info/programs/section-108/
National Endowment for the Arts (NEA)	Access to Artistic Excellence, "Our Town" Program	Programming	Based on the availability of funding, the National Endowment for the Arts will provide a limited number of grants, ranging from \$25,000 to \$150,000, for creative placemaking projects that contribute toward the livability of communities and help transform them into lively, beautiful, and sustainable places with the arts at their core. Creative placemaking is when artists, arts organizations, and community development practitioners deliberately integrate arts and culture into community revitalization work - placing arts at the table with land-use, transportation, economic development, education, housing, infrastructure, and public safety strategies. The Arts Endowment plans to support a variety of diverse projects, across the country in urban and rural communities of all sizes. Projects may include planning, design, and arts engagement activities.	https://www.arts.gov/grants-organizations/our-town/introduction
			STATE / FLORIDA FUNDING SOURCES	
DEP	Florida Recreation Development Assistance Program (FRDAP)	Acquisition / Development	The Land and Recreation Grants staff administers grants to local governments through the Florida Recreation Development Assistance Program (FRDAP). This competitive, reimbursement grant program provides financial assistance for the acquisition or development of land for public outdoor recreation. Eligible participants include all county governments, municipalities in Florida, and other legally constituted local governmental entities with the responsibility for providing outdoor recreational sites and facilities for the general public.	https://floridadep.gov/lands/land-and-recreation- grants/content/frdap-assistance
FDOT	Intermodal Development Program	Capital	The Intermodal Program provided for under Florida Statute 341.053 supports projects which provide improved access to intermodal or multimodal transportation facilities and terminals. Projects funded under this program include rail access to airports and seaports, interchanges, and highways which provide access to airports, seaports, and other multimodal facilities. Potential opportunities to apply for this type of funding consist of projects to provide linkages between modes.	https://apps.fldfs.com/fsaa/searchCatalogResultsDetail.aspx?id =64126
FDOT	Park & Ride Lot Program	Capital / Programming	The Park & Ride Program provides funds for the planning, design, ROW acquisition, engineering, construction, inspection, and marketing of Park-and-Ride lots that are part of an approved Park-and-Ride project list or other locally adopted plan and is outlined in FDOT Procedure Topic 725-030-002-f.	https://www.fdot.gov/docs/default- source/transit/pages/finalparkandrideguide20120601.pdf
FDOT	Transit Corridor Program	Capital / Operations	The Transit Corridor Program provides funding 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 and is outlined in FDOT Procedure Topic 725-030-003.	https://apps.fldfs.com/fsaa/searchCatalogResultsDetail.aspx?id =64167
			PRIVATE FUNDING SOURCES	

Sponsor	Program Name	Funding Type	Description of Funding Program	Further Information	
	Doppelt Family Trail Development Fund	Capital	RTC launched a new grant program in 2015 to support organizations and local governments that are implementing projects to build and improve multi-use trails. Under the Doppelt Family Trail Development Fund, RTC will award approximately \$85,000 per year, distributed among several qualifying projects, through a competitive process.	https://www.railstotrails.org/our-work/grants/doppelt/	

OPINION OF PROBABLE COST											
Protected Bike Lane on SW 152 Street											
Village of Palmetto Bay											
Pay Item	Description	Unit	Qty	Unit Cost	Cost						
ROADWAY											
101-1	MOBILIZATION (6%)	LS	0		\$135,273.57						
102-1	MOT (6%)	LS/DA	0		\$135,273.57						
104-10-3	SEDIMENT BARRIER	LF	14,500	\$2.07	\$30,015.00						
110-1-1	CLEARING AND GRUBBING	AC	3.76	\$15,000.00	\$56,400.00						
	TREE IMPACTS	EA	200	\$2,000.00	\$400,000.00						
110-4-10	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	1,200	\$17.06	\$20,472.00						
120-1	EXCAVATION	CY	4,800	\$6.00	\$28,800.00						
160-4	TYPE B STABILIZATION	SY	7,800	\$4.40	\$34,320.00						
285-7-06	OPTIONAL BASE, BASE GROUP 06 (8")	SY	7,800	\$49.69	\$387,582.00						
	TYPE SP ASPHALT (WIDENING)	TN	430	\$112.69	\$48,456.70						
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	23,750	\$4.00	\$95,000.00						
337-7-82	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-9.5	TN	1,310	\$146.29	\$191,639.90						
			·	r	-						
	DRAINAGE (15%)	EA			\$204,959.96						
520-2-4	CONCRETE CURB, TYPE D	LF	16,000	\$34.49	\$551,840.00						
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	1,200	\$51.00	\$61,200.00						
570-1-2	PREFORMANCE TURF, SOD	SY	7,800	\$3.83	\$29,874.00						
	SIGNALIZATION		3	\$10,000.00	\$30,000.00						
	LIGHT POLES	EA	12	\$7,000.00	\$84,000.00						
		TOTAL ROADWAY			\$2,525,106.71						
SIGNING & P	AVEMENT MARKING										
	SIGNING & PAVEMENT MARKINGS	MI	2.000	\$30,000.00	\$60,000.00						
Notes:		TOTAL SI	GNING	· · · · · · · · · · · · · · · · · · ·	\$60,000.00						
1. MEI has no co	ontrol over competitive bidding or market conditions or the cost of										
labor, materials,	equipment, or over the contractor's methods of determining	SUB TOTA	L		\$2.585.106.71						
prices.The quanti	tes and pricing used in the Opinion of Probable Cost were composed				<i>\</i>						
based on FDOT	historical cost and our engineering opinion and judgement.	CONTRANCE	NOV	10%	\$2E9 E10 67						
Opinions of Prob	able Cost represent only the Engineers judgement as a design	CONTINGE	NCI	10-2	\$258,510.07						
professional fami	liar with the construction industry. MEI nor the signing Engineer										
cannot and does i	not guarantee that proposals, bids, or actual construction cost will	GRAND TO	TAL		\$2,843,617.38						
not vary from the	values stated in this document.										

OPINION OF PROBABLE COST											
Protected Bike Lane on SW 184 Street											
Village of Palmetto Bay											
Pay Item	Description	Unit	Qty	Unit Cost	Cost						
ROADWAY											
101-1	MOBILIZATION (6%)	LS	0		\$136,626.57						
102-1	MOT (6%)	LS/DA	0		\$136,626.57						
104-10-3	SEDIMENT BARRIER	LF	17,400	\$2.07	\$36,018.00						
110-1-1	CLEARING AND GRUBBING	AC	4.50	\$15,000.00	\$67,500.00						
	TREE IMPACTS	EA	50	\$2,000.00	\$100,000.00						
110-4-10	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	1,440	\$17.06	\$24,566.40						
120-1	EXCAVATION	CV	5 760	\$6.00	\$34 560 00						
160-4		SY	9 360	\$0.00	\$41 184 00						
285-7-06		sv	9,360	\$49.69	\$465,098,40						
203 7 00	TYPE SP ASPHALT (WIDENING)	TN	5,500	\$112.69	\$58.148.04						
			010	<i> </i>	<i>+•••)=</i>						
327-70-1	MILLING EXIST ASPH PAVT. 1" AVG DEPTH	SY	28,500	\$4.00	\$114.000.00						
337-7-82	ASPHALT CONCRETE FRICTION COURSE. TRAFFIC C. FC-9.5	TN	1.572	\$146.29	\$229.967.88						
	DRAINAGE (15%)	EA			\$207,009.95						
			л — — — — — — — — — — — — — — — — — — —								
520-2-4	CONCRETE CURB, TYPE D	LF	19,200	\$34.49	\$662,208.00						
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	3,000	\$51.00	\$153,000.00						
570-1-2	PREFORMANCE TURF, SOD	SY	9,360	\$3.83	\$35,848.80						
	SIGNALIZATION		2	\$10,000.00	\$20,000.00						
	LIGHT POLES	EA	4	\$7,000.00	\$28,000.00						
	-	TOTAL ROADWAY			\$2,550,362.61						
SIGNING &	PAVEMENT MARKING										
	SIGNING & PAVEMENT MARKINGS	MI	2.000	\$30,000.00	\$60,000.00						
Notes:		TOTAL SI	GNING		\$60,000.00						
1. MEI has no c	ontrol over competitive bidding or market conditions or the cost of	<u>.</u>									
labor, materials,	equipment, or over the contractor's methods of determining	SUB TOTA	L		\$2,610,362.61						
prices.The quant	tites and pricing used in the Opinion of Probable Cost were composed	d									
based on FDOT	historical cost and our engineering opinion and judgement.	CONTINGE	NCY	10%	\$261 036 26						
Opinions of Prot	bable Cost represent only the Engineers judgement as a design	CONTINGE		±00							
professional fam	iliar with the construction industry. MEI nor the signing Engineer	CDAND DC	איז א		62 071 200 07						
cannot and does not guarantee that proposals, bids, or actual construction cost will			1AL		\$2,871,398.8 /						
not vary from the	e values stated in this document.										