

September 2017



TOWN OF CUTLER BAY

Complete Streets Corridor Analysis

THE CORRADINO GROUP



This page intentionally left blank.



This report was made possible in part through the Miami-Dade TPO Municipal Grant Program.

The Miami-Dade TPO complies with the provisions of Title VI of the Civil Rights Act of 1964, which states: No person in the United States shall, on grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance. It is also the policy of the Miami-Dade TPO to comply with all of the requirements of the Americans with Disabilities Act. For materials in accessible format please call (305) 375-4507.

The preparation of this report has been financed in part from 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.

This page intentionally left blank.

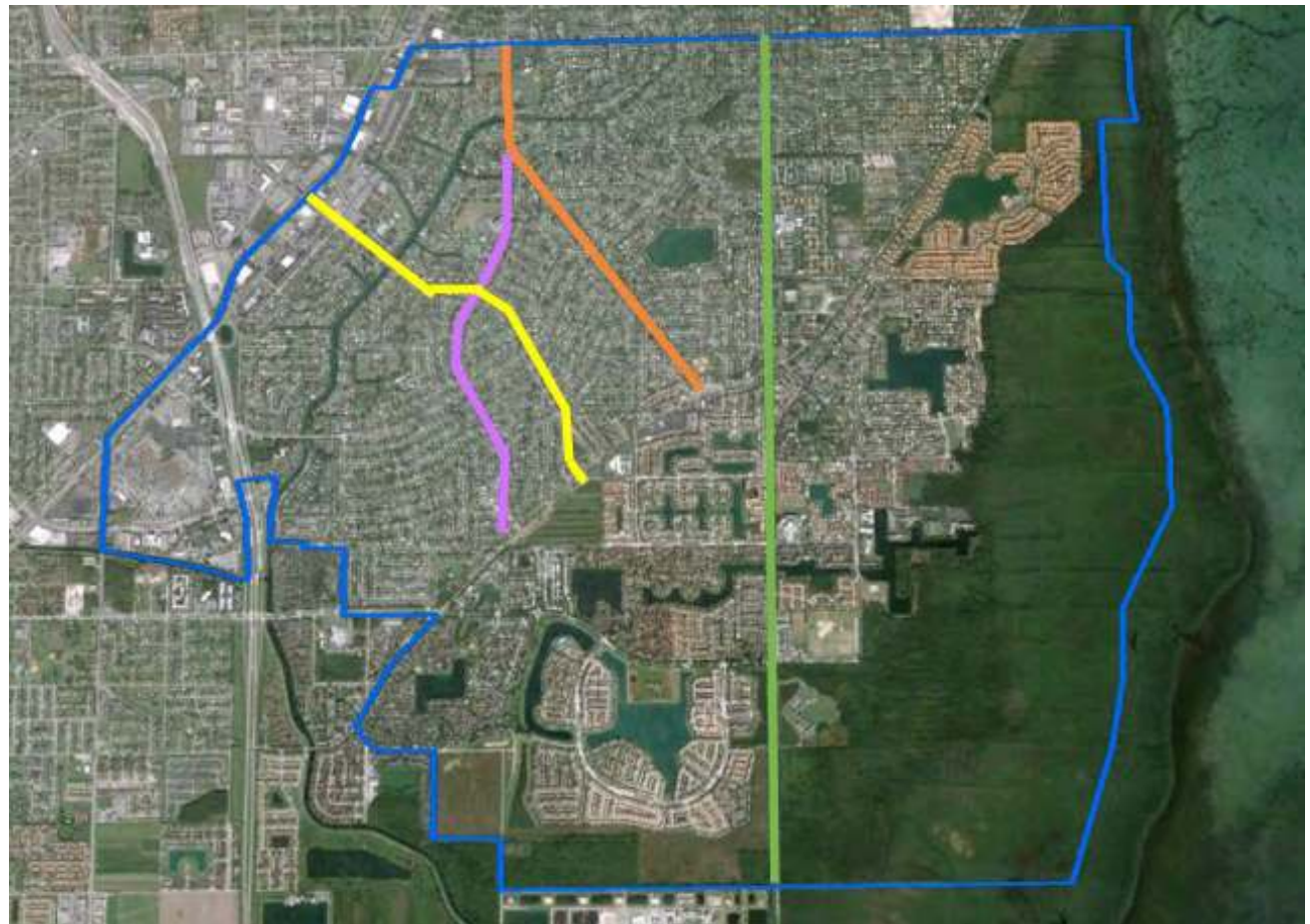
Cutler Bay is made up of a diverse array of parks, schools, residential and commercial areas that are well connected for cars, but not connected to one another from a bicycle and pedestrian standpoint. Yet, the section line and half section line grid that exists in the remainder of the county, spaced on ½ mile intervals, twists and converges in the center of Cutler Bay, creating almost a hub and spoke configuration. These corridors connect major generators, and travel through the community. Previous master plans have identified that these corridors are to contain integrated bicycle, pedestrian and transit facilities. While these are planned, they must also be similarly incorporated in implementation through design concepts. To develop a successful plan that has consensus from the community, it was crucial to clearly identify what specifically citizens are looking for in the future to service their non-motorized transportation needs on these corridors, and to integrate them into the rights-of-way in a manner that exceeds minimum standards.

The Town of Cutler Bay commissioned this study to advance its already well planned vision to provide a balanced multimodal transportation network within the Town; to further implement the vision through the consolidation of existing project policies on specific corridors; and to develop conceptual designs that will be used as a precursor to attaining funding and near-future construction. The corridors addressed here are prioritized and financially feasible and will become a component of the Town's 5-Year Capital Improvement Element of the Comprehensive Plan, a State requirement.

Study Corridors in this study include:

- SW 87th Avenue
- Franjo Road
- Marlin Road
- Gulfstream Road

To achieve these objectives, a detailed scope of services, including a robust public involvement plan, was developed. Cutler Bay's methodology is one that is based on solid planning and engineering analysis of each corridor, the impacts to all the levels of service for all modes, discussion of state of the art methods of providing mobility, and above all, frequent and consistent public involvement at various levels in the community and various times in the project to assure consensus. Through the Town's implementation of similar projects such as the redesign of Old Cutler Road and Caribbean Boulevard, the Town has won awards for its attention to detail. More important than the awards the Town has recently received, however, is the overwhelming satisfaction of the community on the entire process from planning to construction. This report will advance and supplement the Non-Motorized component of the Town's Transportation Element to the Growth Management Plan (Comprehensive Plan).



This page intentionally left blank.

This chapter focuses on examining existing conditions, policies, previous or ongoing studies, work programs and Capital Improvements containing projects within the area. The chapter is sub-divided as follows:

- I. *Background Information*
- II. *Cutler Bay Previous Planning Studies*
- III. *Existing Conditions*
- IV. *Potential Development and Planned Projects*

I. Background Information

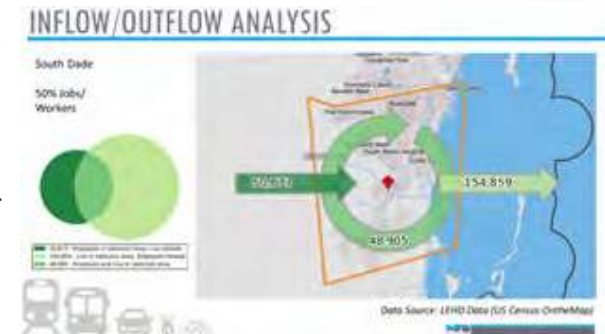
What Are Complete Streets?

A Complete Street, as defined by the National Complete Streets Coalition (NCSC), is a street where the entire right-of-way is planned, designed, and operated for all modes of transportation and all users regardless of age or ability. Pedestrians, bicyclists, transit riders, and motorists of all ages and abilities must be able to safely move along and across a Complete Street. Complete Streets make it easy to cross the street, walk to shops, catch the bus, bike to work, and enjoy many other healthy activities.

While this seems to be a fancy new name, this is not a new concept, particularly to the Town of Cutler Bay, who has been planning for its mobility for over a decade. South Florida has been growing up in an era where the predominant factor being planned for in our rights of way is the roadway network. Complete Streets or Mobility utilize the right of way for each mode (roadway, bicycle, pedestrians, and transit) where appropriate. Through its Transportation Master Plan, Bicycle and Pedestrian Master Plan, and Safe Routes to School analysis, Cutler Bay has positioned itself well ahead of the industry standard in this field. The issue is that the base the Town has had to work with, like most other places in Florida, is behind.

There is a tremendous amount of pressure on all of us relative to traffic and congestion. South Dade and Cutler Bay are faced with critical decisions. The fact is that South Dade has all of the remaining developable land in Miami-Dade County, and it has unbalanced demographics. South Dade has 50% of the land area in Miami-Dade County, only 25% of the population, and only 12% of the jobs. It will likely grow in the next twenty-five years, and how this growth takes place is critical. Today traffic is highly directional, as over 150,000 people heading

north out of the region each morning and returning south every afternoon. This directionality creates a counterintuitive situation, in which roadways in the morning will be Level of Service “F” heading north, but Level of Service “A” heading south.



Recent analysis completed by the Miami-Dade TPO for the sub region in their Long Range Transportation Plan showed that a critical aspect in achieving significant rail mass transit along the Transitway corridor is the presence of multi-modal capacity, in the form of the first mile/last mile infrastructure embodied by this Complete Streets analysis, particularly in and around the major nodes such as the Cutler Bay Urban Center District. There may be significant funding for these projects in the near future, and to be competitive, planning documents such as this will be indispensable.

As described by the National Complete Streets Coalition, there is no singular design prescription for complete streets - each one is unique and responds to its community context. Some features that a complete street may include are sidewalks, bike lanes (or other innovative bicycle facilities), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median refuges, accessible pedestrian signals, landscaped curb extensions, bioswales, roundabouts, onstreet parking, and secure bicycle parking, among others. A complete street in a suburban area may look different than a complete street in the urban core, but both are designed with the same principles in mind to balance safety and convenience for everyone using the road.

Why Complete Streets?

Incomplete streets - those designed with only cars in mind, which dominate South Florida - limit transportation choices by making walking, bicycling, and taking public transportation inconvenient and unattractive. How many times, when considering a sidewalk, do we hear it said that we don't need the sidewalk because nobody walks on the street? It is very likely that nobody walks on the street because there is no sidewalk and walking in a grass swale is uncomfortable and unsafe. The presences of a close knit system of sidewalks and bike lanes give people choices, and will lessen automobile congestion with increasing success as networks are built, used and accepted as a viable way to move.

Conventional streets designed solely to move motor vehicles must be modified to conform to Complete Streets goals. Incomplete streets either directly or indirectly cause a number of problems for communities, including the following:

- Lack of opportunity to be active as part of daily life; therefore increasing probability of chronic diseases and other negative health outcomes attributed to sedentary lifestyles;
- Lack of viable transportation choices;
- Senior citizens being geographically limited because they cannot cross streets;
- Children becoming overweight, unnecessary neighborhood congestion, and air pollution around schools, are all due to children being driven to school rather than walking;
- Unnecessary driving for short trips;
- Overconsumption of energy;
- Unnecessary emission of greenhouse gases;
- Economic hardship and recession when energy prices rise;
- Streets that do not support neighborhood retail;
- Neighborhoods that lack livability;
- Polluted waterways;
- Underground water aquifers drying up;
- Dehydrated streetscapes causing unnecessary importation of water for landscaping; and
- Uplifted sidewalks.

However, Complete Streets reverse this outcome by providing the following benefits:

Capacity. Complete Streets can improve the efficiency and capacity of existing roads by moving more people in the same amount of space. Complete Streets can maintain volume, reduce speeds, and conveniently accommodate bicyclists and pedestrians. Increasing productivity out of the existing road and public transportation system is vital to reducing congestion. Many times, the difference between tolerable congestion and frustration lies in a few percent of more or less cars. If a community could spread the mode share to transit, bicycling and walking in 3-5% for each mode, that could mean 15% less cars. That is the difference between acceptable and failing vehicular levels of service. To put it in financial terms, adding a travel lane for 15% more cars usually costs millions of dollars.

Equity. Complete Streets are for everyone. People of all ages, abilities, and income will have more options when making essential trips such as to work, school, the grocery store, or for healthy recreation. Walking, bicycling, and taking public transportation are less expensive forms of personal transportation than relying on automobiles.

Public Health. Complete Streets promote active transportation, which is human-powered transport (walking, bicycling, accessing public transit). Currently, one-third of our nation's children are overweight or obese according to the Centers for Disease Control and Prevention (CDC). The CDC identified a strong correlation between planning and investments in infrastructure and some of the most serious health concerns facing the United States, including heart disease, obesity, and diabetes.

Safety. Safety is critical. South Florida's roads are some of the most dangerous in the nation for cyclists and walkers. We all may know someone who has been injured while doing so. This must change if we are to have an impact. Making these travel choices more convenient and attractive means making them safer. Half of Haddon's ten strategies for road traffic injury prevention mirror Complete Streets. Roadway improvements that have been recommended to reduce the annual toll of injuries and fatalities to pedestrians and bicyclists are well documented. Adding complete streets elements to existing roadways improves safety for all users.

Guiding Principles of Complete Streets

Complete Streets promote a choice of transportation alternatives that improve health and allow neighborhoods to be more integrated into the larger region, maintain a healthy environment, promote economic transportation, and improve safety. The following are guiding principles:

Pedestrian. The goal of the pedestrian environment is accessibility for all users, including the handicapped, youth and elderly. Sidewalks should be of adequate width, generally at least two people standing side-by-side in one direction and with room to pass walkers in the opposite direction. Sidewalks and pathways should lack gaps, and should be continuous from block to block. Safety is the utmost importance, not only in the form of a perception of safety, but also shelter from



traffic, reduction of accidents, injuries and fatalities. Appropriate drainage to prevent standing water is also important.

Pedestrian Crosswalks. The principles above are even more critical for pedestrians crossing the street. Crosswalks should be clear of obstructions and located so that they are visible for both drivers and pedestrians to see each other. Ideally, there should be legible signs and signals that offer direction for the traveler. Midblock crosswalks should be located where needed and where traffic calming measure can also be used. A refuge in the center island median is critical, especially on wider, busy streets.



Bicycling. Bicycling is a great way to enjoy time outdoors, run quick errands, get exercise and enjoy social events. To be enjoyable it must be viewed as safe, convenient, and comfortable. The ideal bicycling network will consist of a grid of $\frac{1}{2}$ mile to be sufficient in completing a local network. This easily conforms to Miami-Dade County's, mile and half mile

grid network set up on the Section line and Half-Section line road. These roads, ending in "2" and "7" are spaced $\frac{1}{2}$ mile apart. Bicycling facilities should include lighting, signage, and barriers (where appropriate), which enhance safety. Bicyclists can benefit from a cohesive wayfinding system as well.

Transit. To make transit a more usable mode, facilities should include shelter from the elements in case of rain, places to sit and rest, trash cans to ensure cleanliness – an aspect of comfort; and at times, availability of transit information. Transit stops should be easily accessible, including ADA compliance, which include landing pads for wheelchairs, appropriate ramps, and safe access, including appropriate places to cross before and after bus travel. Benches should be emplaced at stops with longer than 5 minute headways and shelters should be emplaced at stops with 10 minutes or greater headways.

Roadways. Complete Streets isn't designed to eliminate the vehicle; just provide more options. Roadway design should ensure visibility for both driver and pedestrian or cyclist. They should ensure implementation of safe crossings and improved lighting in the community. Control of speed through the usage of traffic calming,



and reduction of conflict points are tools which can be utilized to promote safety on the road.

Local Standards and Design Guidelines

Local jurisdictions generally follow some established standards for designing streets. Much confusion exists as to what they must follow, what is merely guidance, when they can adopt their own standards, and when they can use designs that differ from existing standards. Because in Miami-Dade County, implementation of any operational or safety improvements on our right of ways is under the jurisdiction of Miami-Dade County, it is best to conform to their standards. It makes little sense to develop a master plan with recommendations that can't be implemented, but some local communities have, to their great frustration. Aspirational design goals should be planned and fought for. FDOT is in the process of better accommodating bicycles and walkers in their Complete Streets Handbook and Design Manual. See Section 3 for more details on these documents.

The most important of those standards and guides are the following:

- The American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets* (the "Green Book")
- *The Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways* (the "Florida Greenbook")
- The Florida Department of Transportation's (FDOT) *Plans Preparation Manual* (PPM)
- The Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD)
- Americans with Disabilities Act (ADA) regulations and standards
- Local manuals or street design standards
- Miami-Dade County Complete Streets Design Guidelines

AASHTO Green Book

A Policy on the Geometric Design of Highways and Streets (the AASHTO Green Book, 6th Edition, 2011) provides guidance for designing geometric alignment, street width, lane width, shoulder width, medians, and other street features. Design guidelines are given for intersections, freeways, arterials, collectors, and local roads. The intent of the Green Book is to provide guidance to designers by referencing a recommended range of values for dimensions; it is not intended to be a detailed design manual that could supersede the need

for the application of sound engineering principles by the designer. Although the Green Book's guidelines are generally organized by functional classification, some local jurisdictions apply its guidelines uniformly to all streets.

Furthermore, the Green Book provides guidance that local jurisdictions often unnecessarily treat as standards. The Green Book encourages flexibility in design within certain parameters to permit independent designs tailored to particular situations. In addition, AASHTO published *A Guide for Achieving Flexibility in Highway Design* to further this context-sensitive approach. For example, 10-foot lanes, which local jurisdictions often avoid out of concerns of deviating from standards, are well within AASHTO guidelines.

Florida Greenbook

The *Manual of Uniform Minimum Standards for Design, Construction, and Maintenance for Streets and Highways* (the Florida Greenbook) is intended to provide minimum standards for use on all public streets that are not part of the State Highway System. Florida Administrative Code Rule 14-15.002, which adopted the May 2011 Florida Greenbook, became effective June 4, 2012. Significant modifications are included in the May 2011 Florida Greenbook that expand Chapter 8 (Pedestrian Facilities) and Chapter 9 (Bicycle Facilities) to provide improved guidance.

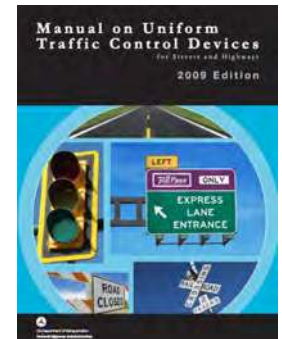
In addition, a new chapter on Traditional Neighborhood Development (TND) was added to the Florida Greenbook since the previous 2007 version. The Florida Greenbook is available on the FDOT website (<http://www.dot.state.fl.us/rddesign/FloridaGreenbook/FGB.shtm>).

FDOT Plans Preparation Manual

The *FDOT Plans Preparation Manual* (PPM) Volume I outlines the design criteria and procedures for use on the State Highway System (SHS) and on FDOT projects. The criteria in the PPM represent requirements for the State Highway System, which must be met for the design of FDOT projects unless approved exceptions or variations are obtained in accordance with procedures outlined in the PPM. The PPM Volume I contains several chapters of interest to implementing complete streets on the SHS including Chapter 2 (Design Geometrics and Criteria), Chapter 8 (Pedestrian, Bicycle, and Public Transit Facilities), Chapter 21 (Transportation Design for Livable Communities), and Chapter 25 (Design Criteria for Resurfacing, Restoration, and Rehabilitation [RRR] projects). The PPM Volume II sets forth requirements for the preparation and assembly of contract plans for FDOT projects. Of note is PPM Volume II Chapter 6, which includes typical cross sections.

Manual on Uniform Traffic Control Devices

The Federal Highway Administration's (FHWA) *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) provides standards and guidance for the application of all allowed traffic control devices including roadway markings, traffic signs, and signals. FHWA oversees application of the MUTCD. The State of Florida chooses to adopt the Federal MUTCD as its manual for signs, pavement markings, and traffic control devices.



The rules and requirements for the use of traffic control devices are different than for street design criteria. Local agencies have limited flexibility to deviate from the provisions of the MUTCD in the use of traffic control devices due to the relationship between the MUTCD, the Code of Federal Regulations (CFR), and state law. The MUTCD does provide flexibility and options within its general provisions for items such as application of standard traffic control devices, use of custom signs for unique situations, traffic sign sizes, and sign placement specifics. However, agencies do not generally have the flexibility to develop signs that are similar in purpose to signs within the MUTCD while using different colors, shapes, or legends. Agencies also are not authorized to establish traffic regulations that are not specifically allowed or are in conflict with state law. The provisions of the MUTCD and related state laws thus make it cumbersome to deploy new traffic control devices. This can result in complications, especially in the areas of speed management, pedestrian crossings, and bikeway treatments.

Miami-Dade County Complete Streets Design Guidelines

Miami-Dade County has developed the Complete Streets Design Guidelines to provide policy and guidance to all parties involved in street design projects: governmental agencies, consultants, private developers, and community groups. It is the goal of these guidelines to support the development of streets that are safe for all users, with consistency in policy and design across all street projects in Miami-Dade County. Users of this document will be able to identify context-sensitive street elements and design features that can be applied in a manner consistent with federal and state best practices. Engineers, planners, and policy makers will find guidance and criteria to help prepare design plans based on principles of safer, more comfortable, and accessible streets so that walking and bicycling are viable transportation choices. The document also addresses some common concerns and perceived barriers regarding designing pedestrian and bicycle facilities.

“Complete Streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities.”

– Smart Growth America

Miami-Dade’s Complete Streets initiative aims to devote the County’s most extensive resource, its publicly owned streets and sidewalks, toward affordable, equitable, and healthy mobility options for all users. This approach adopts and champions innovative designs which treat all people equally whether they are walking, bicycling, taking transit, or using an automobile. People are at the heart of the Complete Streets approach; this initiative embraces design as a tool to advance the health and safety of the community while promoting sustainable transportation options and vibrant public spaces.

II. Cutler Bay Previous Planning Studies

Since incorporation, the Town has engaged in many significant planning efforts and studies. These studies have resulted in numerous policies and recommendations. For this Complete Streets effort, it is important to review these policies and recommendations and utilized them in thinking about the implementation needs. How will the dots be connected?

- Town of Cutler Bay Transportation Master Plan
- Town of Cutler Bay 2014 - 2019 Strategic Master Plan
- Town of Cutler Bay Bicycle & Pedestrian Master Plan
- Town of Cutler Bay Growth Management Plan
- Town of Cutler Bay Street Tree Master Plan
- Town of Cutler Bay Land Development Regulations

A. Town of Cutler Bay Transportation Master Plan Recommendations

By 2014 the Town had completed its second Transportation Master Plan; the first was completed in 2008. Since that first plan, the Town has placed great effort into assuring that TPO grant funds have not simply gone to produce studies, but have been used to create capital programs that have been implemented. Primary recommendation of the original Transportation Master Plan were both a Transit Circulator and a Bicycle and Pedestrian Plan. The initial study took care in working with citizens, elected officials and local agencies to develop consensus on a vision to guide transportation projects and policy. As the South Dade economy has begun to rebound from the recent recession, the Town found it was important to have updated capital projects in the pipeline so that there

are projects to build when funding is available. The 2014 plan resulted in the recommendation of an entirely new project bank which prioritizes all of the pending projects and removed completed projects. The result was 63 multimodal projects at a potential value of approximately \$21 million. The following are related to Complete Streets within the four focus corridors of this study.

Citizen’s Comments Related to Complete Streets

Public input was solicited at workshops during the development of the Transportation Master Plan. Citizen’s voiced the following concerns and comments that are relevant to Complete Streets.

- Traffic calming
- Repave all roads
- Cutler Ridge Drive/Franjo Road - Dangerous Intersection
- Traffic Circles along Franjo Road
- Connect Gulfstream Road across Old Cutler Road
- Center turn lanes on Franjo Road
- Need crosswalks and pedestrian countdown signals
- Bike racks and bike trails are good
- Bike lanes on Franjo Road and Marlin Road
- Examine curb separating the new bike lanes
- Bike lanes with signage
- Create bicycle network
- Connect Town parks through pedestrian and bike paths
- Add bike lanes at specific locations: Marlin Road, Franjo Road, Coral Sea Road

The Transportation Master Plan included the four focus corridors of the Complete Streets study as described on the following pages.



SW 87th Avenue - Existing Conditions

SW 87th Avenue is the easternmost complete north/south regional corridor, connecting Cutler Bay with Palmetto Bay to the north and Black Point Marina to the south. Three schools are located along this road, Centennial Middle School (8601 SW 212th Street), Whigham Elementary School (21545 SW 87th Avenue) and Mater Academy Cutler Bay (22025 SW 87th Avenue). Along SW 87th Avenue south of Old Cutler Road is the only existing off-road multi-use path within the Town.

Currently a visual evaluation along this roadway reveals the following levels of deficiencies:

- ✓ Quality of sidewalk - Fair
- ✓ Sidewalk connectivity - Fair
- ✓ Pedestrian crosswalks - Fair
- ✓ Dedicated bike lanes - Fair (overall) - Good (south half)
- ✓ Updated street furniture - Poor
- ✓ Bus pull out bays - Poor
- ✓ Street lighting - Poor
- ✓ Drainage - Good
- ✓ Curb and gutter - Poor
- ✓ Presence of street ruts/pot holes - Fair



Projects Proposed in the Transportation Master Plan - SW 87 Avenue

- Street lighting improvements
- Traffic Calming between SW 184th Street to Old Cutler Road
- Traffic Circle at SW 216th Street/SW 87 Avenue
- School Loading Zone at Whigham Elementary School
- Town Circulator runs along SW 87th Avenue
- Shared-use path already implemented on south half, extend to north half



Franjo Road - Existing Conditions

Franjo Road is bordered mainly by single family homes with light commercial at Old Cutler Road. This roadway provides the main access to Franjo Park.

Currently a visual evaluation along this roadway reveals the following levels of deficiencies:

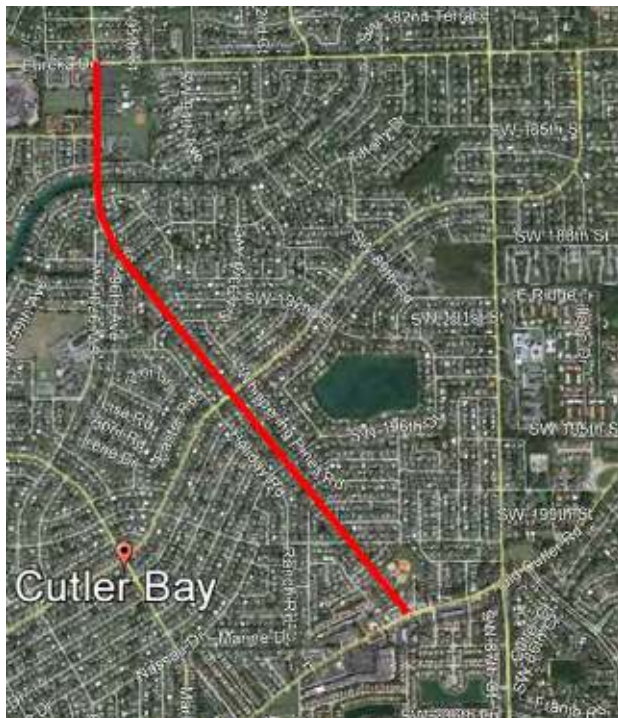
- ✓ Quality of sidewalk - Fair
- ✓ Sidewalk connectivity - Good
- ✓ Pedestrian crosswalks - Fair
- ✓ Dedicated bike lanes - Poor
- ✓ Updated street furniture - Poor
- ✓ Bus pull out bays - Poor
- ✓ Street lighting - Poor
- ✓ Drainage - Fair
- ✓ Curb and gutter - Poor
- ✓ Presence of street ruts/pot holes - Fair

Projects Proposed in the Transportation Master Plan - Franjo Road

- Remove parking on swale
- Town Circulator routes on Franjo Road
- Infill sidewalk gaps
- Possible Intersection improvements at Sterling Drive/Franjo Road (Signal Warrant Analysis needed)
- Operational Analysis and Intersection improvements - Franjo Road/Cutler Ridge Drive
- Install Left Turn Lane at Franjo Road/SW 186th Street

Also consider bicycle facilities, such as:

- Bike lanes
- Bike racks



Gulfstream Road - Existing Conditions

Gulfstream Road mainly serves single family homes, and does not currently intersect with Old Cutler Road where a traffic circle currently exists. This roadway crosses Marlin Road, another study corridor and serves two schools Cutler Ridge Middle and Gulfstream Elementary.

Currently a visual evaluation along this roadway reveals the following levels of deficiencies:

- ✓ Quality of sidewalk - Fair
- ✓ Sidewalk connectivity - Fair
- ✓ Pedestrian crosswalks - Fair
- ✓ Dedicated bike lanes - Poor
- ✓ Updated street furniture - Poor
- ✓ Street lighting - Poor
- ✓ Drainage - Good

- ✓ Curb and gutter - Poor
- ✓ Presence of street ruts/pot holes - Poor

Projects Proposed in the Transportation Master Plan - Gulfstream Road

- Bicycle Lanes/Facilities
- Safe Routes to Schools Recommendations
- School Loading Zones - Cutler Bay Middle School, Gulfstream Elementary
- Bike Racks
- Traffic Circle - Gulfstream Road and Marlin Road

Also consider:

- Crosswalk improvements



Marlin Road - Existing Conditions

Marlin Road diagonally bisects Cutler Bay from US-1 to Old Cutler Road, connecting the two main commercial corridors. Schools along this roadway include Methodist Kindergarten and Bel Aire Elementary School (one block off). Currently a visual evaluation along this roadway reveals the following levels of deficiencies:

- ✓ Quality of sidewalk - Fair
- ✓ Sidewalk connectivity - Good
- ✓ Pedestrian crosswalks - Good
- ✓ Dedicated bike lanes - Poor
- ✓ Updated street furniture - Poor
- ✓ Bus pull out bays - Poor
- ✓ Street lighting - Poor
- ✓ Drainage - Fair
- ✓ Curb and gutter - Poor
- ✓ Presence of street ruts/pot holes - Poor

Projects Proposed in the Transportation Master Plan - Marlin Road

- Operational Analysis and Signal Progression Improvements along Corridor
- Signage (Including Digital Monument Signage)
- Traffic Calming - Marlin Road/Belle Aire Drive
- Traffic Circle - Gulfstream Road/Marlin Road

Also consider bicycle facilities, such as:

- Bike lane
- Bike racks



B. Town of Cutler Bay 2014-2019 Strategic Master Plan Recommendations

A strategic plan is a written document that is used to communicate an organization's mission, vision and goals. When known, it may also include the actions needed to achieve those goals and other critical elements developed during the planning exercise. It is a living document that after sufficient time should be refreshed or revised as circumstances dictate. As such it is a "living work in progress" and a guideline for the organization's actions. The following Goals, Objectives and Activities pertain to Complete Streets principles:

Growth Management & Infrastructure Needs

Goal 3.1

The Town of Cutler Bay will provide the infrastructure needed to meet current and emerging needs of the community.

Objective: The Town will expand bike facilities to accommodate or promote non-motorized travel, as outline in the Bicycle & Pedestrian Master Plan.

Activities: Create dedicated bike lanes on SW 87th Avenue and other Miami-Dade arterial roadways, schools, shopping districts, and other popular destinations.

Install pedestrian lighting on Marlin Road and Old Cutler Road to accommodate cyclists/pedestrians.

Public Safety

Goal 6.2

Optimize the smooth flow of traffic through the Town of Cutler Bay by minimizing traffic congestion and maximizing the capacity of our local roadways.

Objective: Increase safety of motorists, cyclists and pedestrians.

Activities: Continue to work with the Miami-Dade County, the League of Cities, the Transportation Planning Organization (TPO) and the Legislative Delegation to expand the availability of County transportation services to the residents and businesses within the Town.

Town will monitor and seek ways to reduce traffic congestion along heavily traveled roadways (i.e. Old Cutler Road, Marlin Road, Caribbean Boulevard).

Parks and Recreation

Goal 7.1

The Town of Cutler Bay will develop parks, recreational facilities and recreational programs to meet the current and emerging needs of residents of all ages.

Public Works

Goal 9.1

Develop the Town of Cutler Bay into a model community for the condition of its roads, street lighting, storm drainage facilities, swale maintenance, sidewalks, etc.

Objective: The Town will continue to enhance roadways and pedestrian facilities.

Activities: The Town in conjunction with Miami-Dade County Public Works Department will seek to secure more Joint Participation Agreements (JPA's) for corridor improvements; such as Marlin Road, Franjo Road and Gulfstream Road.



C. Town of Cutler Bay Bicycle & Pedestrian Master Plan Recommendations

As Cutler Bay rises to regional prominence it is expected that the number of short trips will continue to increase, as destinations like work, restaurants, shopping and schools all come closer to people's homes. Short trips are defined as being less than a half mile. Today we live in an automobile dominated society, one of the main reasons for which is because options to utilize any other mode but the car do not exist. In the future, it is anticipated that a large portion of these short trips will often times be made by walking or bicycling rather than by driving. As traffic congestion increases, the construction of bicycle and pedestrian facilities as an alternative to automobile travel becomes more and more important and will help maintain mobility within the community. As a result of the existing conditions analysis and public meetings about seventy projects were developed in three project classifications:

- Basic Pedestrian Network
- Regional Access
- Policy/Non-Capital Efforts

Basic Pedestrian Network

While the examination of the existing conditions show that Cutler Bay is pedestrian friendly to some extent there is a need for the Town to infill gaps in the system, where they are important and where they are desired. The southwest area of the town is well populated with sidewalks. There are pockets of areas where these sidewalks do not connect the street and crosswalks with ADA accessible sidewalk connections or painted crosswalks. It is recommended that these be filled in as funds warrant. There are potentially several hundred short (+-10') sidewalk connections that need to connect to the edge of pavement. Similarly there are likely a couple of hundred crosswalks that need to be installed. This will make the community that much better to walk around in. Coupled with this there are various projects associated with local roadways that would better connect the origins and destinations that lie on either side. These mainly encompass filling in sidewalks, adding crosswalks, smoothing swales, adding pedestrian count down signals. It is acknowledged that while sidewalks typically increase the quality of life in communities, they are not always welcomed by neighbors on individual streets, particularly in more suburban areas. The goal here was to assure that the basic section line roads had sidewalks on both sides. Then the parks, schools and other generators of potential pedestrian and bicycle traffic were connected through neighborhoods. Because the basic system is extensive this effort was simplified.

| Pedestrian Network Opinion of Probable Costs | | | | | |
|--|------------------------------|----------------------------|--------------------------------------|-------|----------|
| Road | From | To | Improvement | Qty | Cost |
| Marlin Road | - | US-1 | Install 10' wide HV Crosswalk | 309' | \$10,850 |
| - | - | US-1 | Pedestrian Refuge in Median | 309' | \$95,650 |
| Franjo Road | SW 184th Street | SW 185th Terrace | Install 5' wide Sidewalk (East Side) | 1350' | \$27,000 |
| - | Franjo Road/ Gulfstream Road | Install Crosswalk | - | - | - |
| - | - | Gulfstream Road | Install 10' wide LV Crosswalk | 23' | \$100 |
| - | - | | Install Sidewalk Ramps | 40' | \$800 |
| Franjo Road | - | Flag Drive /SW 193rd Drive | Install Crosswalk | - | - |
| - | - | - | Install 10' wide LV Crosswalk | 27' | \$100 |
| - | - | - | Install Sidewalk Ramps | 40' | \$800 |
| - | - | - | Install 10' wide LV Crosswalk | 40' | \$100 |
| - | - | - | Install Sidewalk Ramps | 29' | \$600 |
| - | - | Old Cutler Road | Delineate Road Edge | - | - |

Regional Access

Projects providing regional access were focused on connecting to the existing system of trails and greenways that converge in and around Cutler Bay. These mainly consist of on road bicycle facilities on major through corridors, as well as connections (like wider sidewalks or a pedestrian bridge) to major generators like the Performing Arts Center, South Dade Government Center, and Busway. Connecting to these facilities would provide incentive for recreational movement or even potential commuting via bicycle on a sub-regional or regional basis.

| Regional Access Cutler Bay Bicycle and Pedestrian Master Plan Proposed Projects | | | | | |
|---|-----------------|----|--------------------|------|-------------|
| Road | From | To | Improvement | Qty | Cost |
| SW 87th Avenue | Entire Corridor | | Install Bike Lanes | 3 gm | \$1,130,100 |
| Franjo Road | Entire Corridor | | Install Bike Lanes | 3 gm | \$1,397,950 |

Policy/Non-Capital Projects

An important segment of the project has to do with policy efforts, which the Town would need to decide upon prior to undertaking. The highest priority would be to undertake a Safe Routes to School study. These are grant applications meant to identify safe routes to and from local schools in each direction. They result in enhanced sidewalks, crosswalks, signage, signals and even equipment and crossing guards. The study results in a grant, which is submitted to FDOT. Grant recipients can have all or a portion of the projects implemented. The Miami Dade TPO has recently been providing funding for such studies through its municipal grant program. The TPO grants are awarded early in the calendar year. An additional study can be to develop a “bike to work plan”. This would be an effort to develop incentives for people to use their bicycles to commute to work or for shopping or other non-recreational uses. It is also a candidate for an TPO grant.

| Policy/ Non-Capital Opinion of Probable Costs | | |
|---|--|-----------|
| Project Type | Recommendation | Cost |
| Study | Safe Routes to School | \$50,000 |
| Signage | For pathways, trails, bike lanes, Share the Road | \$7,500 |
| Study | Bike to Work Plan | \$50,000 |
| Facilities | More Bike Lockers & Racks | \$100,000 |

D. Town of Cutler Bay Growth Management Plan (Transportation, Future Land Use and Recreation, Climate Change & Open Space Elements)

The Cutler Bay Growth Management Plan is an official long-range policy statement adopted on April 28, 2008 by a formal resolution in the Town Council. The Growth Management Plan guides the long-range, comprehensive decision-making process generally concerning physical development. The plan also directs the Town’s actions intended to influence development over the long-term and contains goals, objectives, policies, and guidelines for growth and redevelopment for the Town. Cutler Bay’s Growth Management Plan contains 10 “elements” that address future land use, housing, infrastructure, coastal management, conservation, intergovernmental coordination, capital improvements, transportation, recreation and open space, and educational facilities. Elements primarily affecting transportation are the Land Use, Transportation, Recreation and Open Space and Climate Change.

Cutler Bay Transportation Element

Policy TI-1J: In lower density areas, outside of designated charrette areas the Town shall work with the County and the State to maximize, where appropriate, through traffic management and planned improvements, particularly on section line and half section line roads, which form the basic surface mobility network.

Policy TI-1T: The Town shall work with Miami-Dade County Transit to implement transit service improvements where warranted throughout the town and along the US-1 Busway, including but not limited to Signal Prioritization, Minimal Headways, Special Use Lanes, and other Transportation Demand Management, Transportation Systems Management, Tolling and High Occupancy Vehicle approaches that may be practical.

Objective TI-2 Alternative Modes of Transportation

The Town shall work to provide for alternative modes of transportation, in coordination with other units of Local, County and State government and the private sector.

Policy TI-2A: The Town shall work with The Florida Department of Transportation, Miami-Dade Transit, Miami-Dade County Public Works Department and the Metropolitan Planning Organization to identify strategies in which it can achieve a more balanced modal split.

Policy TI-2B: The Town shall work with The Florida Department of Transportation, Miami-Dade County Public Works Department and Miami-Dade Transit to implement parking strategies in the charrette areas and along the Busway to provide incentive for the further development of transit friendly urban design.

Policy TI-2C: The Town shall use appropriate Transportation Systems Management (TSM) and Transportation Demand Management (TDM) strategies to improve system efficiency and enhance safety. These include, but are not limited to:

- Coordination with South Florida Regional Commuter Services;
- Coordination with Miami-Dade Transit;
- Coordination with local municipal circulators;
- Congestion management;
- Access management;
- Installation of on-road bicycle lanes and bicycle parking and storage facilities;
- Parking policies which discourage driving alone;
- Employer-sponsored programs to encourage carpooling, vanpooling, bicycling, flexible work hours, telecommuting and transit usage;
- Site development;
- Designs which foster transit usage and pedestrian accessibility; and
- Bus pull-in/pull-out areas, where deemed safe and necessary to retain highway Level-of-Service.

Policy TI-2D: The Town shall, in conjunction with Miami-Dade County, support Miami-Dade Transit in continuing to provide bus service within the Town at defined Levels-of-Service as specified by Miami-Dade Transit in their Transit Development Program (TDP).

Policy TI-2E: The Town shall encourage Miami-Dade Transit to evaluate all aspects of the existing transit system, including regular Miami-Dade Transit routes, any existing paratransit, STS, demand response or other transportation demand strategy approaches being used.

Policy TI-2F: In the Old Cutler Road Charrette and UCD Charrette Areas, the Town shall develop Land Development Regulations that promote Transit Oriented Development and mixed-use development.

Policy TI-2G: In the Charrette Areas, the Town shall work with the development community to specify other commitments that serve to reduce single-occupant motor vehicle trips.

Policy TI-2H: Encourage Miami-Dade Transit to analyze the existing local Miami-Dade Transit route system for connection to the larger, regional system, like the Busway and Metrorail.

Policy TI-2I: As envisioned in the Future Land Use Element, the Town will work to develop land use strategies and densities along US-1 which will facilitate the justification and implementation of high capacity transit, such as Metrorail.

Policy TI-2J: The Town supports the implementation of an extension of the Metrorail System between Dadeland and Florida City on the US-1 Busway, and therefore supports a funding shift from primarily roadway projects to a more alternative mode/transit mobility programming.

Policy TI-2K: In cooperation with the Metropolitan Planning Organization and Miami-Dade Transit, the Town shall request that a survey be taken and analyzed to determine local employer/employee/resident travel characteristics, and to develop issues and needs for Transportation Demand Management techniques, including enhanced mass transit, carpooling, vanpooling, flexible work hours, guaranteed ride home, and employee bonuses to refrain from driving alone.

Policy TI-2L: Cutler Bay shall work with Miami-Dade Transit to construct bus shelters and enhanced stops at all transit stops within the Town.

Policy TI-2M: The Town will work with Miami-Dade Transit to decrease bus headways mid-day to 30 minutes or less.

Policy TI-2N: Cutler Bay shall support County plans for the higher level of transit service along on the Busway, including the examination of High Occupancy Toll lanes, or development of the Metrorail. The Town will advocate for a transit impact fee.

Policy TI-2O: Cutler Bay will explore implementing unique and innovative transportation options that can provide alternates to traditional modes of travel. One new mode is an aerial cable car system that could provide overhead views of environmentally sensitive areas and could link Cutler Bay to major public attractions such as the Metro Zoo as well as existing public transit systems such as the Metrorail.

Objective TI-3 Safe and Convenient Pedestrian and Bicycle Network

The Town shall provide a safe and convenient pedestrian and bicycle network including links to schools, recreational facilities, bus stops, and major trip generators.

Policy TI-3A: The Town shall work with The Florida Department of Transportation and Miami-Dade Transit to provide safe and convenient pedestrian connections to Busway Stations across US-1.

Policy TI-3B: The Town shall continue to identify sidewalk needs in the following areas:

- Existing roadways;
- Hazardous routes;
- Designated school walking routes;
- Connecting existing sidewalks to schools, parks, recreational facilities, and new developments;
- Repairing and replacing existing deteriorated sidewalks; in connection with new road construction; and
- Accessing Miami-Dade Transit bus stops.

Policy TI-3C: The Town shall promote pedestrian and bicycle linkages between residential and nonresidential land uses. The principles of Crime Prevention through Environmental Design shall be a consideration in site plan reviews.

Policy TI-3D: The Town shall continue to seek supplemental funding for local sidewalk construction programs. In particular, the Town shall seek to be included formally in the funding allocated by the Peoples Transportation Plan.

Policy TI-3E: As part of a Pedestrian Safety Plan, the Town shall continue to identify and install pedestrian safety improvements in conformance with the Manual of Uniform Traffic Control Devices. Streets through residential neighborhoods should be maintained and identified in a manner that promotes and protects the residential environment and enhances pedestrian safety.

Policy TI-3F: The Town shall coordinate with Miami-Dade Transit for improved pedestrian facilities within ¼ mile of all transit stations, and areas of transit oriented densities. The Town strongly supports a pedestrian overpass on US-1 to the busway and will work with the appropriate agencies to implement this project.

Policy TI-3G: The Town shall work to develop on and off-road bike lanes paths, greenways and trails.

Policy TI-3H: The Town shall identify and prioritize enhancement projects for pedestrian and Bicycle ways in conjunction with the Metropolitan Planning Organization.

Policy TI-3I: The Town shall work to assure that all sidewalks are ADA compliant.

Policy TI-3J: The Town shall coordinate with Miami-Dade County Schools, and the Metropolitan Planning Organization to develop safe routes to and from schools.

Policy TI-3K: The design and construction of thoroughfare roads shall provide for safe on-road bicycle lanes, wherever possible and practical as determined by the Town's Planning and Public Works departments.

Policy TI-3L: All requests for development shall be required to install safe and convenient pedestrian and bicycle access, as provided for in the Land Development Regulations.

Policy TI-3M: The Town shall implement a design strategy known as an "intersection sleeve" at certain intersections on high capacity thoroughfares particularly along US-1. These will make high-volume traffic roadways safe for pedestrians to cross. These locations shall be determined from a comprehensive pedestrian amenity study. The "sleeve" strategy involves clearly striping cross-walks and using different paving materials, crossing signage and lighting, and reducing the distance between curb corners where possible to reduce pedestrian crossing distance.

Policy TI-3N: The Town shall examine the connection of major traffic generators, transit stops and areas of density, with an interconnected system of sidewalks and or bicycle paths, this task should be coordinated with the Town's Recreational Master Plan system.

Policy TI-3O: The Town shall work to reduce conflicts among modes of transportation. This can be done through:

- a. Establishing enhanced intersections with more visible crosswalks and enhanced signage;
- b. Developing bike paths and lanes with bollards and raised islands to increase safety at intersections by preventing vehicles from entering the special lanes;
- c. Bus shelters;
- d. Traffic calming where appropriate; and
- e. Pedestrians islands.

Policy TI-4B: Transportation Demand Management techniques and Transportation System Management measures shall be examined by the Town through its Transportation Master Plan.

Transportation Demand Management (TDM) is defined as the use of incentives, disincentives, and market management to affect travel behavior to shift to non-motorized and/or higher-occupancy modes, reduce or eliminate the need to travel, and/or shift travel onto less congested routes. TDM is also used to mean the provision or expansion of alternatives to Single Occupancy Vehicle (SOV) travel, such as transit, bicycling, and walking. In recent years TDM has been targeted in federal legislation as potentially important pieces of the overall strategy to address congestion and air quality issues. Transportation System Management (TSM) shall mean a program to reduce demand on, and increase capacity of the existing transportation system through better and more efficient use and applications. This may be achieved through traffic signal progression along major roadways, expanded intersections, providing peak-hour reversible lane operations, etc.

Objective TI-6 A Transportation System to Enhance and Preserve Neighborhoods

The Town shall develop a transportation system that helps preserve and enhance the Town's neighborhoods.

Policy TI-6A: The Town shall develop standards and a palette of acceptable improvements for protecting Neighborhoods to minimize impacts from traffic intrusion.

Policy TI-6F: The Town shall implement the aesthetics of road corridors during the design process. Where adequate Right-of-Way exists or can be reasonably acquired, landscaped medians shall be the preferred center component of road cross sections. When major new public facilities are planned, their design should be aesthetically compatible with the surrounding area, whenever practical.

Policy TI-6G: The Town will work with Miami-Dade Transit, Miami-Dade Public Works Department, The Florida Department of Transportation and the Department of Community Affairs to develop appropriate methods by which to utilize transit as alternative capacity when existing traditional roadway capacity is expended.

Policy TI-6I: Any missing links in the sidewalk system shall be eliminated, provided that financial resources are available.

Policy TI-6J: The Town shall improve its ROW's in order to encourage pedestrian activity. Where pedestrian activity would be encouraged without significant adverse effect on public safety, such improvements may include, but would not necessarily be limited to, development of "sleeves", straightening of medians, realignment of streets, realignment of street curbs at intersections, establishing parallel or angled parking, extending sidewalks to accommodate trees or tree planters, improving crosswalks, reducing the number or width of automobile travel lanes, or improving pedestrian ramps.

Policy TI-7D: The Town shall explore measuring Level-of-Service in terms of person trips, allowing transit to provide trip capacity within the area.

Objective TI-8 Transportation that Serves Regional and Local Interests

The Town shall work with other Local, County and State bodies to assure that the transportation system is regionally connected and context sensitive as it traverses Cutler Bay.

Policy TI-8D: Retrofitted or reconstructed streets, wherever practical as determined by the Town, shall include amenities such as shade trees and benches, curb, gutter and adequate drainage infrastructure, as well as pedestrian safe designs; such as, refuge medians where more than two-lane roadways exist, raised pavements to alert motorists to pedestrian crossings, and sidewalk bulb-outs where there is on-street parking.

Objective TI-10 Elderly and Transit Dependent Transportation Services

The Town shall focus on the provision of transit services to the elderly and transportation disadvantaged population.

Cutler Bay Future Land Use Element

Policy FLU-2A: Development and redevelopment in the Town Center shall provide for the development of a well-designed and compatible area that provides attractive places to live, work and shop and that is accessible via the full range of transportation options, including transit, automobiles, bicycles, and pedestrians.

Policy FLU-4B: The Town shall ensure the provision of multi-modal transportation access between its residential neighborhoods, the Town Center, and mixed-use districts along US-1 and Old Cutler Road.

Section I: Background Information and Existing Conditions

Policy FLU-5B: Development and redevelopment in the Town shall provide for pedestrian friendly street design, an interconnected street network and hierarchy to reduce congestion and improve traffic flow, design that promotes the use of non-motorized transportation modes, connectivity to transit, and a range of uses in a compact area to reduce the need for external trips.

Cutler Bay Recreation and Open Space Element

Policy ROS-3D: The Town will seek private and public funding sources as may be available through various sources to fund the acquisition and development of land for future parks, recreational facilities and programs.

Objective ROS-4

The Town will provide improved access to parks and recreational facilities within Cutler Bay.

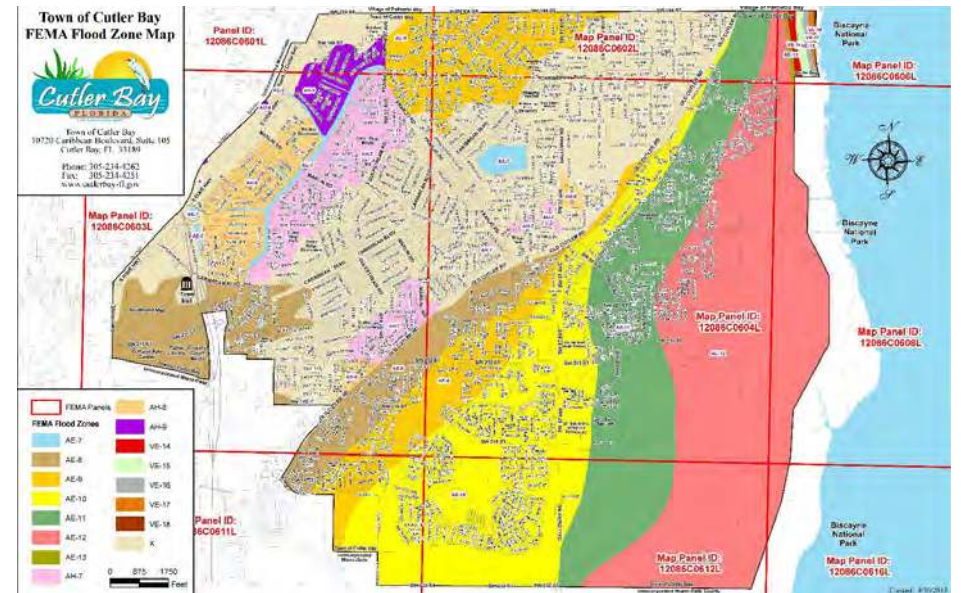
Policy ROS-4C: The Town will promote non-motorized access to all existing and future parks and recreation open spaces within Cutler Bay by creating and improving greenways, trails, bike lanes, sidewalks and improved connectivity between parks and residences, schools, community centers, activity centers and transportation hubs.

Policy ROS-4E: The Town shall continue to provide improved access for persons with disabilities by removing architectural, communication and program barriers to participation in compliance with the Americans with Disabilities Act.

Cutler Bay Climate Change Element

There are a number of actions that local governments can take to reduce greenhouse gas emissions. These actions include: reducing vehicle miles traveled through the provision of alternative transportation mechanisms; promoting land use patterns that reduce automobile dependence (i.e. compact mixed use development vs. urban sprawl), and; reducing energy consumption in all sectors (i.e. green building techniques, efficiency standards...).

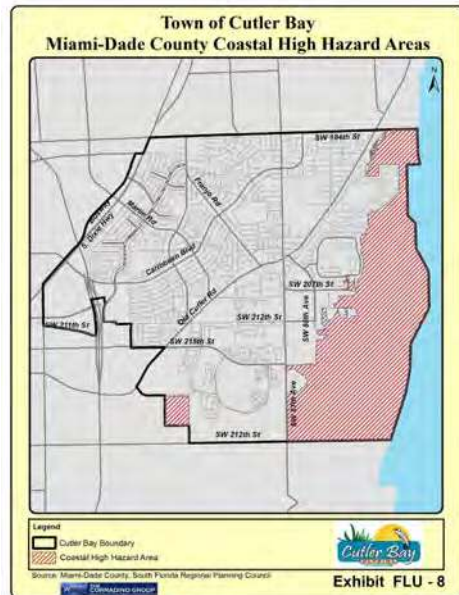
Goal 1: Achieve a sustainable, climate resilient community by: promoting energy efficiency and greenhouse gas reduction strategies; protecting and adapting public infrastructure, services, natural systems and resources from climate change impacts, and; continuing to coordinate with other agencies to address climate change at the local, County, regional, State, federal, and global levels.



Objective CC-1: Mitigate the causes of climate change while providing for cleaner energy solutions and a more energy efficient way of life for residents, visitors and businesses.

Objective CC-3: The Town of Cutler Bay shall advance transportation and land use alternatives that: reduce fossil fuel use; improve the mobility of people, goods and services; provide a diverse, efficient, and equitable range of transportation options, and; increase the Town's resiliency to the impacts of climate change. **Policy CC-3D:** The Town of Cutler Bay and its transportation partners shall continue to implement strategies to improve bicycle and pedestrian ways which safely and conveniently connect residential areas to recreational areas and major activity centers, and which safely connect bicycle and pedestrian ways along major thoroughfares throughout the Town.

Policy CC-3E: Development and redevelopment in the Town of Cutler Bay shall provide for pedestrian friendly street design, an interconnected street network and hierarchy to reduce congestion and improve traffic flow, design that promotes the use of non-motorized transportation modes, connectivity to transit, and a range of uses in a compact area to reduce the need for external trips.



Policy CC-5E: The Town of Cutler Bay shall continue to maintain and enhance its tree canopy through such efforts as implementation and periodic update of its Street Tree Master Plan, urban forestry grants, and other actions.

E. Town of Cutler Bay Street Tree Master Plan Recommendations

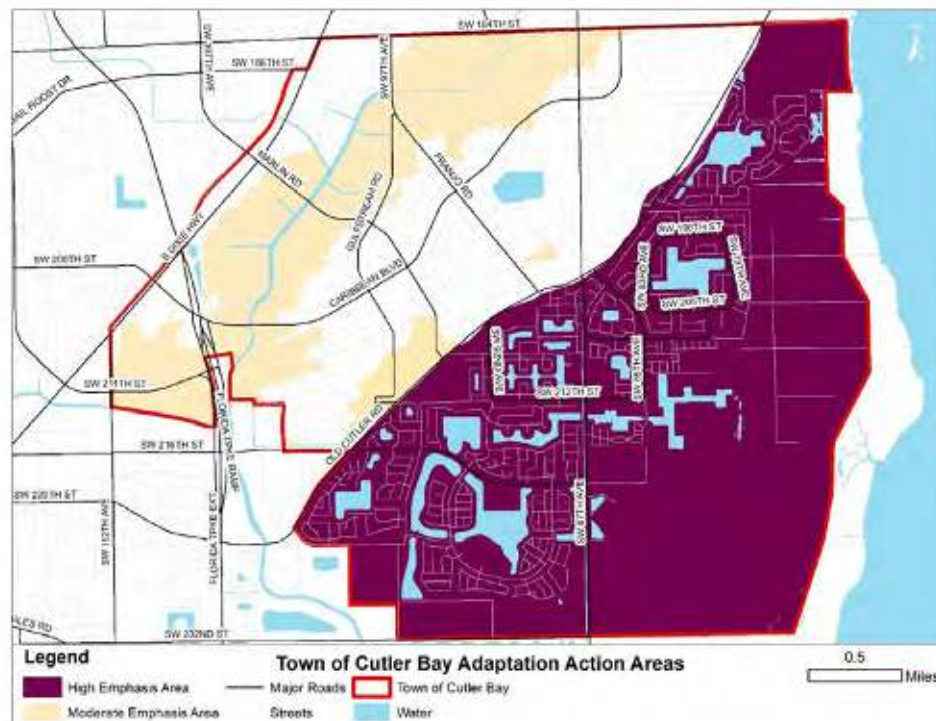
Since incorporation, the Town leasers have sought to enhance the quality of life for its citizens. The Street Tree Master Plan has been developed as a guide to proper addition of trees along the rights-of-way. The plan address the following:

- Community Dialogue
- Benefits of Tree Plantings
- Inventory and Assessment of Existing Street Trees
- The Projected Planting Requirements
- Budgeting and Phasing for Planting and Maintenance
- Guidelines for Placement of Street Trees
- Protection and Maintenance of Street Trees
- Approaches to Design of Street Tree Plantings

Page 2 of the Master Plan states “Trees that shade sidewalks and roadways are most valuable in developing a walk-able community.” Complete Street recommendations will conform to the Master Plan in regards to the guidelines on placement, size and spacing of trees. Some considerations include safe sight distance at street corners and driveways; maintaining a proper distance from light poles, water meters, sidewalks and utility boxes and avoidance of conflicts with overhead electric lines. The Master Plan also provides three approaches to design and a list of suitable trees.

F. Town of Cutler Bay Land Development Regulations (LDR's)

The Town of Cutler Bay LDR's address streets and roadways in Article IX Transportation Requirements. The purpose of the article is to encourages the development of a network of interconnecting streets that work to disperse traffic while connecting and integrating neighborhoods with the existing urban fabric of the town. Equally important, the article encourages the development of a network of sidewalks and bicycle lanes that provide an attractive and safe mode of travel for cyclists and pedestrians. Interconnecting street networks encourage alternate modes of transportation to the automobile, enhance transit service opportunities, improve traffic safety through promoting slower speeds, and potentially reduce vehicle miles traveled within the street network. The article includes sections on general principles, design specifications and contains specific street cross-sections. A review of the cross-sections reveals that they do not fully implement complete street concepts and it is recommended that they be revised as part of this effort.



III. Existing Conditions

Land Use

Transportation is a symptom of activity and without destinations to go to, there is no need to travel. Understanding land use and the placement of housing, commerce, entertainment, civic facilities (such as schools, parks, community centers, and Town Hall), are important as these transit generators will provide insight into local needs and patterns for transportation. Exact locations of commerce and community centers versus housing allows for a better understanding of what routes people may take or need to get from point A to point B. How much transportation, and thus modal type, also results from land use, as density of development lets us know whether we need a less expensive, smaller community bus, or something more.

Commercial Connections

The four corridors for this study were chosen because they are important collectors within the Town. Each one serves as a linkage between and among the neighborhoods and the commercial centers within the area. **Franjo Road** connects the commercial center of Old Cutler Road to the commercial on SW 184th Street and ultimately to the commercial center of Palmetto Bay (0.5 miles to the north of Cutler Bay). **Marlin Road** is another regional connector, uniting the commercial corridor of US-1 to the future commercial area at the Potato Field on Old Cutler Road. **SW 87th Avenue** provides a regional connection for all of the eastern side of Cutler Bay, linking the parks, schools and recreational opportunities along this road to Old Cutler Road, south to Black Point Marina and north through Palmetto Bay. SW 87th Avenue is the first north/south corridor for all the residential communities on the east side of Cutler Bay. **Gulfstream Road** will provide a fourth connection for the residential areas to Old Cutler Road when the final link is completed. Gulfstream Road intersects both Marlin Road and Franjo Road. It's important to understand that these north/south connections between the neighborhoods and the commercial areas exist. When complete street techniques are implemented these corridors could consist of safe and secure pedestrian gateways or pathways from residential neighborhoods to commercial centers. Primary use would come from residents within ¼ mile who choose to walk or bike for short shopping trips instead of drive.

Parks and Schools

These four corridors are also connections to and from fourteen of the parks and schools within the Town. **Franjo Road** serves Franjo Park, Holy Rosary Academy, Tiffany Drive Park, and Bel Aire Park; **Marlin Road** serves Bel Air Elementary (one block off Marlin Road); **SW 87th Avenue** serves Centennial Middle, Whigham Elementary, Lakes by the Bay Park, Ned Glen Nature Preserve, Whispering Pines Hammock Park, Whispering Pines Elementary, and Whispering Pines Park; **Gulfstream Road** serves Cutler Ridge Middle and Gulfstream Elementary schools. Complete streets concepts are important when looking at providing safe and multi-modal access to the places our children learn and play. Additionally, providing safe ways for children to walk or bike to school will reduce vehicular trips throughout the Town by eliminating the pick-up and drop-off traffic. If you have ever wondered why traffic seems so much less congested in the morning when school is out for the summer, it is not your imagination. There are significantly more cars on the road shuttling students to and from school at the same time commuters are on their way to work. Many of these trips could be eliminated by providing safe ways for students to walk and bike to school.



Character of the Corridors

When each of the corridors are looked at individually, there are many similarities. With the exception of a short segment of Marlin Road, all are two lane roadways primarily providing direct access to single family residential uses. Flashing signs "School Zone 15 MPH" are the only traffic calming infrastructure that exists. Most of the study corridors are bounded on both sides of the paved streets by wide swales (of varying widths) and narrow sidewalks. With the exception of SW 87th Avenue south of Old Cutler Road, very few of the streets have curb or gutters or bike facilities. Street lighting is provided by tall mast-arm style overhead poles, which are sparsely located at best, and non-existent on SW 87th Avenue. The street pavement condition is poor in most areas, containing pot holes, patches and deteriorating edges. Drive aprons are of varying quality, some are in poor condition and lack uniformity.

The following provides more details describing the individual corridors existing conditions:

Gulfstream Road at a Glance

SIDEWALKS

Widths: 5' on both sides of the street

Landscaping: Spotty tree canopy, various plants and trees, not uniform

Bus Stops/Shelters: None (not a bus route)

Bike Parking: None

Street Furniture: None

ROADWAYS

R.O.W. Width: Varies (70'-80')

Lane Widths: Varies (10'-13')

Median Design: None

Target Speeds: 30 MPH

Bicycle Facilities: None

Bus Lanes: None (not a bus route)

Traffic Calming: School Zone flashers

Drainage: Grass swale

Lighting: Tall mast arm light poles

Parking: Swale parking is common, no on-street parking available, swale parking excessive at Gulfstream Elementary

INTERSECTIONS

Crosswalk Design: Lacking at most intersections, standard design if present, ladder design at schools

Crossing Islands: None

Signals: None

Circle: Old Cutler Road

Multimodal Facilities: None

Intersections of Concern: Franjo Road & Gulfstream Road intersection is non-standard (two stops approaching Franjo Road is unnatural and awkward); Gulfstream Road doesn't presently intersect with Old Cutler Road



Franjo Road at a Glance

SIDEWALKS

Widths: 5' on both sides of the street

Landscaping: Some stretches are palmed lined, while other areas consist of various plants and trees, not uniform

Bus Stops/Shelters: Shelters at most stops

Bike Parking: None

Street Furniture: None

ROADWAYS

R.O.W. Width: Varies (65'-70')

Lane Widths: 12'

Median Design: None

Target Speeds: 30 MPH

Bicycle Facilities: None

Bus Lanes: None (is a bus route)

Traffic Calming: School Zone flashers

Drainage: Grass swale

Lighting: Tall mast arm light poles

Parking: Swale parking is common, no on-street parking available

INTERSECTIONS

Crosswalk Design: Standard design were present, mostly to cross side street (N/S), ladder design at schools

Crossing Islands: None

Signals: Caribbean Boulevard, SW 184th Street, Old Cutler Road,

Multimodal Facilities: None

Intersections of Concern: Franjo Road & Gulfstream Road intersection is non-standard (two stops approaching Franjo Road is unnatural and awkward)



Marlin Road (US-1 to Sterling Drive) at a Glance

SIDEWALKS

Widths: 5.5' on both sides of the street

Landscaping: Some stretches are palmed lined, while other areas consist of various plants and trees, not uniform

Bus Stops/Shelters: None

Bike Parking: None

Street Furniture: None

ROADWAYS

R.O.W. Width: Varies (100'-90')

Lane Widths: Varies (10'-12')

Median Design: Landscaped

Target Speeds: 30 MPH

Bicycle Facilities: None

Bus Lanes: None (not a bus route)

Traffic Calming: School Zone flashers

Drainage: Curb & Gutter

Lighting: Tall mast arm light poles

Parking: Swale parking is common, no on-street parking available

INTERSECTIONS

Crosswalk Design: Standard design were present, mostly to cross side street (N/S), ladder design at schools

Crossing Islands: Landscaped medians

Signals: Belview Drive

Multimodal Facilities: None

Intersections of Concern: Approaching Sterling Drive (southbound) roadway merges from two lanes to one lane, creating a conflict point and speeding



Marlin Road (Sterling Drive to Old Cutler Road) at a Glance

SIDEWALKS

Widths: 5' on both sides of the street
Landscaping: various plants and trees, not uniform
Bus Stops/Shelters: None (not a bus route)
Bike Parking: None
Street Furniture: None

ROADWAYS

R.O.W. Width: Varies (60'-70')
Lane Widths: 10'
Median Design: None
Target Speeds: 30 MPH
Bicycle Facilities: None
Bus Lanes: None (not a bus route)
Traffic Calming: None
Drainage: Swale
Lighting: Tall mast arm light poles
Parking: Swale parking is common, no on-street parking available

INTERSECTIONS

Crosswalk Design: Standard design were present, mostly to cross side street (N/S)
Crossing Islands: None
Signals: Caribbean Boulevard, Old Cutler Road
Multimodal Facilities: None
Intersections of Concern: None



SW 87th Avenue at a Glance

SIDEWALKS

Widths: 5' on both sides of the street

Landscaping: Most of the length of road are palmed lined, while other areas contain same species of smaller trees, some uniformity exists. Some issues with trees located directly under electric utility lines

Bus Stops/Shelters: Shelters at most stops

Bike Parking: None

Street Furniture: One pedestrian refuge/median pavilion on the multi-use path, presence of utility boxes

ROADWAYS

R.O.W. Width: Varies (120'-70')

Lane Widths: 10'

Median Design: None

Target Speeds: 30 MPH

Bicycle Facilities: 10' wide Multi-Use path south of Old Cutler Road

Bus Lanes: None (is a bus route)

Traffic Calming: School Zone flashers

Drainage: Grass swale and curb/gutter south of Old Cutler Road

Lighting: None

Parking: Swale parking is present north of Old Cutler Road

INTERSECTIONS

Crosswalk Design: Ladder design at parks and schools

Crossing Islands: None

Signals: Caribbean Boulevard, SW 212th Street, SW 184th Street, SW 216th Street

Circle: Old Cutler Road

Multimodal Facilities: None

Intersections of Concern: None



IV. Potential Development and Planned Projects

The following is a description of regionally planned multimodal projects in and around the Town.

Old Cutler Road

In June 2002, prior to the Town's incorporation, area residents participated in a charrette conducted by the Miami-Dade County Department of Planning & Zoning to address the Old Cutler Road corridor, a designated historic roadway. The goal of the Old Cutler Road Charrette Area Plan was to create a framework that preserved the heritage of this historic roadway, facilitated improvement in public infrastructure and the investment in private land, enhanced the livability and encouraged design quality, both architectural and urban. In January 2007, the Town adopted the Old Cutler Road zoning overlay district. The intent of this overlay is to facilitate redevelopment of the corridor in accordance with the 2003 charrette recommendations. In 2008 the Growth Management Plan created a new mixed-use district on the Future Land Use Map to implement the development anticipated by the original charrette and the overlay district.

The Old Cutler Road area has been given a recent retrofit relative to the roadway. This beautification project worked within the parameters of the 1974 historic designation to provide multimodal supporting infrastructure for potential land development in the area. Today, the road accommodates cars, bicycles, pedestrians and transit.

Town Center Redevelopment

Southland Mall is an enclosed shopping mall surrounded by parcels used as parking lots. As seen in the Future Land Use Map most of the land use surrounding the shopping mall is business and office. Southland Mall, which is now known as the Town Center on the Future Land Use Map, is intended for redevelopment as a high-quality, design-unified, mixed use downtown for Cutler Bay. In 2002, prior to the Town's incorporation, this area was the subject of an intensive seven day charrette conducted by the Miami-Dade County Department of Planning & Zoning. The key recommendations of this charrette provided the basis for the Town's creation and adoption of the Urban Center Zoning District in March 2006, as well as the interpretive text and regulating policies for the Town Center District in the Growth Management Plan. The Town Center is envisioned as a Dadeland-sized regional activity center. It provides Cutler Bay with the potential to be a major economic factor in South

Dade. Surrounding the area now are the South Dade Government Center, the South Dade Performing Arts Center and Cutler Bay's Town Hall. The District sits at the confluence of the Busway, Turnpike and US-1.

US-1 Busway (Future Transit and Park and Ride)

Work analyzing the South Dade Corridor in 2006 has suggested that not enough density exists to make a Metrorail system competitive or cost effective. The County had approved the plan to enhance the Bus Rapid Transit capacities of the corridor, with park and ride lots, and bus priority, either by signaling or grade separated intersections, until ridership warrants a rail system. The Strategic Miami Area Rapid Transit Plan (SMART Plan) has reinitiated the analysis of all corridors, in particular the Busway Corridor as the community desires some form of rail. It is highly likely that to attain these higher forms of mass transit, that land use alternatives or corridor plans will need to be put in place.

Miami-Dade Transportation Planning Organization Mobility Hubs

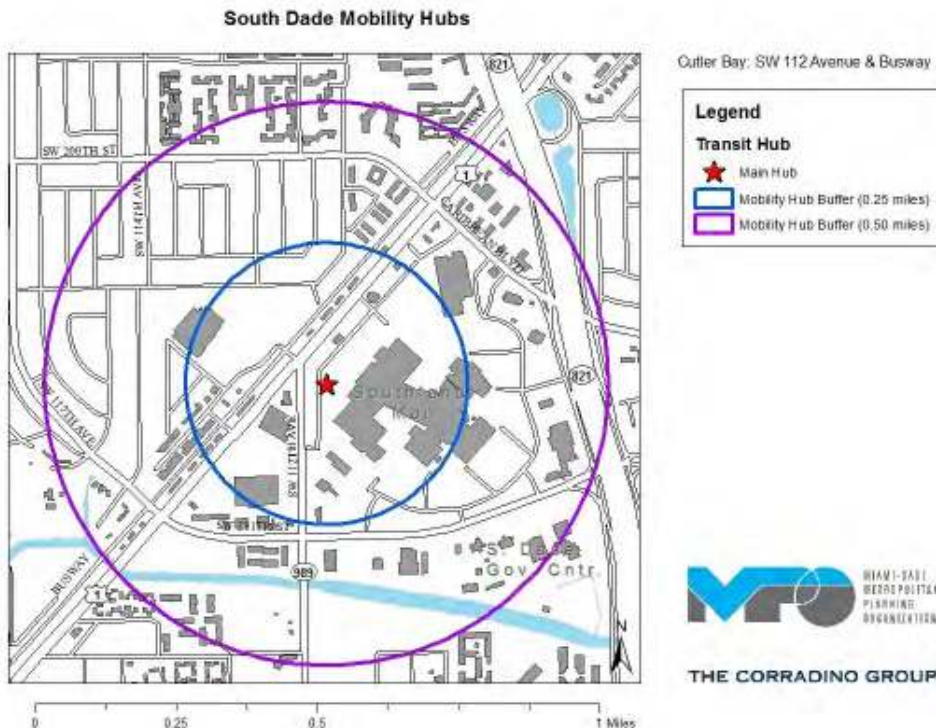
The automobile is the main way of transport in South Florida due to the ease of access, reliability and comfort. As a result, most roadways in the area are constrained by the amount of volume on the roadways. In order to motivate commuters to change their primary mode of travel an environment catering to all alternative transportation modes need to be adopted.

By the creation of multimodal hubs throughout the South-Dade Study area the county can start organizing itself to provide the resources and projects needed to make alternative transportation modes a reality. Mobility hubs are more than just transit stations but is a location where more than one transit route converge, an area where bicyclists and pedestrians have access to local land uses, major generators and have a land uses that cater the mass movement of commuters. Mobility hubs represent a long-term transit oriented development (TOD) plan that represents sustainable investment for the development of healthy functioning transportation models. Transit oriented development create a mixed use of high intensity and density assets. This spurs economic development around transit hubs and in turn help on a sustainable growth of the town.

Each of the transportation hubs are unique in their own way, but the Cutler Bay Hub stands out since its located at a major strategic location within the South Dade region. Located at the intersection of two major regional thoroughfares US-1 (South Dixie Highway) and SR-821 (Homestead Extension of the Florida Turnpike). Located in such a crucial location for the region, this hub is to

be classified as a main hub or regional hub based on its location alone and accessibility to regional areas of interest across the county. This regional hub would provide access for travelers in the region and sub area to have direct and seamless connection to other main regional hubs; such as the Dadeland main hub; and local sub hubs; such as Naranja, Palmetto Bay and Kendall HEFT (secondary and tertiary hubs).

This main distribution point for the South Dade area currently contains development such as Southland Mall, South Dade Government Center, Cutler Bay Town Hall, South Miami-Dade Cultural Arts Center and other office/commercial areas that further justifies the role the area plays in the region. The proposed location for the transportation hub is SW 112 Avenue (SR-989 Allapattah Road) and US-1 in the southeast quadrant of the intersection, currently a parking lot for the Southland Mall; as seen in figure below. This location was selected due to its proximity to the main trip generator Southland Mall and its accessibility to the South Dade Busway, US-1 and SR-821. The transit hubs geographical location where multiple regional routes converge. This junction allows just then a natural point to switch modes within a trip, or to begin a trip making it a natural destination.



Miami-Dade County Long-Range Transportation Plan (LRTP) 2040

The Long Range Transportation Plan (LRTP) was developed to guide transportation improvements in Miami-Dade County for the next 25 years. The 2040 Plan includes enhancements to roadways, transit, bicycle and pedestrian facilities, and greenways/trails. The LRTP intends to improve transportation systems and travel, promote economic vitality, enhance social benefits, encompass environmental affairs, integrate land use, transportation, growth, and development, while optimizing sound investment strategies. Some of the objectives and goals of the LRTP include improving countywide accessibility, reducing congestion, and enhancing the mobility of all county residents.

Cutler Bay Mobility Hub
Miami Dade 2040 Long Range Transportation Plan

| Priority | Project # | MPO # | Project Roadway | Limits | Project Description | Cost | Notes | Project Type |
|-------------------|-----------|---------|----------------------------|---|---|------------|---|--------------|
| 1 (2015-2020) | 1 | PW142 | SW 200 St | US-1 to Quail Roost Dr | Add 2 lanes and reconstruct | \$17.4 M | Preliminary Engineering, Construction, Capital | Hub |
| | 2 | NM58 | SW side of SW 117th Avenue | Roberta Hunter Park to South Dade Trail & Black Creek Trail junction | Bicycle/Pedestrian Improvements (Trail Improvements) | \$0.228 M | Preliminary Engineering | Corridor |
| | 3 | CMP7 | US-1 | SW 344 St to I-95 | Congestion Management (Signal Timing Optimization) | \$ 0.276 M | Preliminary Engineering | Corridor |
| | 4 | MDX119 | US-1 - Managed Lanes | SW 344 St (Palm) to Dadeland South Metrorail Station | Add 2 plus 1 reversible new managed lanes within the right-of-way of the US-1 Busway | \$970.0 M | Preliminary Engineering, Right of Way, Construction | Corridor |
| 2 (2021-2025) | 1 | PW142 | SW 200 St | US-1 to Quail Roost Dr | Add 2 lanes and reconstruct | \$12.8 M | Capital | Hub |
| | 2 | NM58 | SW side of SW 117th Avenue | Roberta Hunter Park to South Dade Trail & Black Creek Trail junction | Bicycle/Pedestrian Improvements (Trail Improvements) | \$227.8 M | Construction, Operations & Maintenance | Corridor |
| | 3 | CMP7 | US-1 | SW 344 St to I-95 | Congestion Management (Signal Timing Optimization) | \$ 0.276 M | Right of Way | Corridor |
| 3 (2026-2030) | 4 | MDX119 | US-1 - Managed Lanes | SW 344 St (Palm) to Dadeland South Metrorail Station | Add 2 plus 1 reversible new managed lanes within the right-of-way of the US-1 Busway | \$33.4 M | Construction, Operations & Maintenance | Corridor |
| 4 (2031-2040) | 1 | PW142 | SW 200 St | US-1 to Quail Roost Dr | Add 2 lanes and reconstruct | \$0.1 M | Preliminary Engineering | Hub |
| | 4 | MDX119 | US-1 - Managed Lanes | SW 344 St (Palm) to Dadeland South Metrorail Station | Add 2 plus 1 reversible new managed lanes within the right-of-way of the US-1 Busway | \$106.3 M | Capital | Corridor |
| Unfunded Projects | 5 | MDT161 | US-1 (Busway) | SW 88 St (Kendall) to SW 344 St (Palm) | Improve service on busway to BRT levels | \$19.0 M | Capital | Corridor |
| | 6 | MDT161U | US-1 (Busway) | SW 104 St to SW 344 St | Metrorail Extension | \$2660.0 M | Capital | Corridor |
| | 7 | MDT163 | US-1 (Busway) | SW 88 St (Kendall) to SW 344 St (Palm) | Bus signal priority along US-1 Busway | \$8.8 M | Capital | Corridor |
| | 8 | MDT164 | US-1 (Busway) | SW 88 St (Kendall) to SW 344 St (Palm); SW 117 Ave Intersection | Bus only grade separations at all intersections including and south of 98 St with at-grade stations | \$307.8 M | Capital | Corridor |
| | 9 | MDT226 | US-1 (Busway) | SW 344 St (Palm)/ US-1 Busway to Dadeland South Metrorail Station (Allapattah Rd)/SW 112 Ave Station & Caribbean Blvd (SW 200 St) Station | Kiss-and-ride at all stations along US-1 Busway | \$1.3 M | Capital | Corridor |
| | 10 | CMP32 | US-1 | SW 344 St to I-95 | Congestion Management (Enforce "don't block box" initiatives) | \$0.0 M | Capital | Corridor |

Most of the projects funded within the four priority years pertain to the connectivity of the hub locally to its neighborhoods, such as Projects 1 and 2. It's important that the pedestrian corridor is improved on SW 200th Street in order to provide access from the most populous part of the hub area to the actual hub location. Project #1 does address the need for the connection of two major regional bike routes that will provide connectivity to the mobility hub location through the South Dade Trail towards the Black Creek Trail.

The rest of the projects proposed are improvement to the US-1 corridor and the South Dade Busway. The signal timing optimization for the US-1 corridor will provide more flow through the corridor more efficiently. Additionally, the busway manage lanes would result in a great impact to the area. The manage lanes would provide seamless connectivity without the need to stop at traffic lights on the busway by providing an above grade overpass at every intersection throughout the South Dade Busway. Additional lanes will need to be constructed to provide paying motorist access to the facility which will be adjusted regularly depending on the demand of the facility to keep a continuous flow of traffic and level of service. Such an addition will provide quicker access for bus riders and more reliable service, which aren't affected by traffic lights.

Cutler Bay 5-Year Capital Improvements Schedule - Capital Improvements Element (CIE)

The Capital Improvements Element of the Town's Growth Management Plan provide for the establishment and annual update of the 5-Year Capital Improvements Schedule. This schedule notes all capital improvements projects in Cutler Bay, including transportation, as well as their financial sources and outlay for the next 5 years. The latest version of the CIE 5-year Schedule was adopted in 2015.

Miami-Dade County Transportation Improvement Program

The Transportation Improvement Program (TIP) serves as the five-year capital improvement program for transportation. It specifies proposed transportation improvements to be implemented in Miami-Dade County over the coming five years. The TIP is prepared every year to fulfill Federal statutory requirements, a condition to receive Federal funding for qualifying transportation projects. The TIP is a continuing planning process that results in plans and programs consistent with the comprehensive plan and development of the urbanized area. The priorities established by the TIP illustrate the policy decisions of the Transportation Planning Organization (TPO) as to the order in which transportation improvements will be advanced throughout the program period. Projects featured in the Miami-Dade Transportation Improvement Program that are situated within, or in the vicinity of the Town of Cutler Bay, are detailed below.

Cutler Bay Mobility Hub Existing Future Projects Miami-Dade MPO 2017 TIP Projects

| Project # | MPO # | FACILITY | LIMITS | TYPE OF WORK | Cost | Year | Notes | PROJECT TYPE |
|--|-----------|-------------------------------|--|---|-----------|-----------|----------------------|--------------|
| MIAMI-DADE COUNTY DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS | | | | | | | | |
| 1 | TA4389501 | MDT South Miami-Dade | Busway Routes | Urban Corridor Improvements | \$0.467 M | 2020-2021 | Operations | Corridor |
| 2 | TA4388371 | MDT Park & Ride Lot | S. Miami Dade Busway (SW 112 Avenue & SW 216 Street) | Development of a park and ride and TOD along South Miami Dade Busway (SW 112 Ave and SW 216 St) | \$5.2 M | 2016-2017 | Capital | Hub/Corridor |
| 3 | PW000005 | SW 200 St/Caribbean Boulevard | SW 127 Avenue to Coral Sea Road | Congestion Management | - | - | - | Hub |
| FLORIDA DEPARTMENT OF TRANSPORTATION | | | | | | | | |
| 4 | DT4378731 | US-1/South Dixie Hwy | At SW 200 Street | Pedestrian Improvements | \$0.508 M | 2017-2018 | Construction | HUB |
| 5 | DT4386111 | US-1/South Dixie Hwy | SW 344 Street to SW 152 Street | Transportation Planning: PD&E | \$1.5 M | 2017-2018 | PD&E | Corridor |
| FLORIDA TURNPIKE ENTERPRISE | | | | | | | | |
| 6 | TP4154881 | SR-821/HEFT | SW 216 Street to N. Eureka Drive | Express lanes: Add lanes & reconstruct | \$55.0 M | <2017 | Const. plan & Design | Corridor |
| 7 | TP4154882 | SR-821/HEFT | SW 216 Street to N. Eureka Drive | Landscaping | \$1.1 M | >2021 | Construction | Corridor |
| 8 | TP4154883 | SR-821/HEFT | SW 216 Street to N. Eureka Drive | Signing/Pavement Markings | \$0.3 M | 2016-2017 | Construction | Corridor |
| 9 | TP4233722 | SR-821/HEFT | SW 288 Street to SW 216 Street | Express lanes: Add lanes & reconstruct | \$0.2 M | 2016-2017 | Planning & Design | Corridor |
| 10 | TP4233723 | SR-821/HEFT | SW 288 Street to SW 216 Street | Signing/Pavement Markings | \$0.7 M | 2016-2018 | Construction | Corridor |
| 11 | TP4233724 | SR-821/HEFT | SW 288 Street to SW 216 Street | Landscaping | \$1.3 M | >2021 | Construction | Corridor |
| MIAMI-DADE EXPRESSWAY AUTHORITY | | | | | | | | |
| 12 | XA20003 | US-1 Managed Lanes | SW 344 Street to Dadeland South Metrorail Station | PD&E Study | - | - | - | - |

| Dept. | Table CI-3 (Cont.) Cutler Bay Departments Capital Improvement Plan (Committed and Planned Sources) FY 13/14 through 17/18 (Thousands) | | | | | | | | |
|--------------|---|---|---|--------------|---------|---------|-------|-------|----------|
| | Project Name | Description | Funding Source | Fiscal Years | | | | | |
| | | | | 13/14 | 14/15 | 15/16 | 16/17 | 17/18 | Total |
| Public Works | Old Cutler Roadway Improvement Project (JPA) 111 (Project Complete) | Traffic Circles (SW 87 Ave & SW 97 Ave), drainage improvements, bike lanes, lighting installation, sidewalk installation, and roadway reconstruction. | Miami-Dade County PTP funds, Joint Participation Agreement (JPA) (20090089) | \$1,133 | \$0 | \$0 | \$0 | \$0 | \$1,133 |
| | Caribbean Blvd Roadway Improvement Project (JPA) 11(D) (Coral Sea to SW 87th Avenue and C1N Canal to Coral Sea) | Drainage improvements, bike lanes, lighting installation, sidewalk installation, and roadway reconstruction. | Miami-Dade County PTP funds, JPA (20090029) | \$3,667 | \$3,350 | \$3,000 | \$0 | \$0 | \$10,217 |
| | Town-wide Sidewalk Improvements ² | Sidewalk Replacement and install ADA Ramps | Second local option gas tax | \$300 | \$500 | \$0 | \$0 | \$0 | \$800 |
| | Total | | | \$5,300 | \$3,850 | \$3,000 | \$0 | \$0 | \$12,150 |
| | | | | | | | | | |

Note: Amount in Thousands

FEED: Florida Department of Environmental Protection

SPWMD: South Florida Water Management District

111: Project will contribute to achieving the LOS standard for Stormwater Drainage.

11(D): Project will contribute to achieving the LOS standard for Transportation. Funds transfer to Miami-Dade County to purchase the bus.

2: Project will otherwise further the achievement of the Growth Management Plan and its goals, objectives and policies



The public was engaged in planning for Complete Streets implementation in Cutler Bay, that included discussing and receiving input on key, local planning issues. The input, when combined with the needs of the area, allowed a vision of the path forward. Three workshops were held to engage residents, business owners, and other community stakeholders.

The first workshop was held in the Cutler Bay Town Center, on October 25, 2016. Outreach for the workshops was effected through email blasts from the Town. During this workshop, the audience was presented with the goals and tasks of the study, and initial findings based on background review. A review of the Town's implementation of Complete Streets to date, including work on Old Cutler Road and Caribbean Boulevard, were provided to give the audience background information on what to expect from Complete Streets efforts. Those in attendance were invited to provide feedback on the Town's transportation issues. Feedback from the attendees included speeding, traffic circles, and with curbing and parking resulting from prior Complete Streets plans which should be taken into consideration as the Town moves forward.

The second workshop was held on February 7, 2017 with the Cutler Bay Concerned Citizens Group. After a brief presentation summarizing the past and present efforts, including an update on the Plan's progress from Workshop #1, the audience was invited to provide feedback. This feedback included the provision of bicycling facilities, concerns about future parking, and questions about whether roadways will be expanded in the future, among other questions. A third workshop was held on (March 2, 2017), to the Cutler Bay Business Association. This workshop was geared towards engaging local employers and businesses because of their location to the Complete Streets roadway improvements.

The plan was reviewed and presented in a public hearing on September 27, 2017, where it was formally accepted by the Town. It is anticipated that this plan will be used to populate the Town's Capital Improvement Element with bicycle, pedestrian, roadway, policy, and transportation projects.

The following provides comments from workshops #1 and #2. No comments or questions resulted from Workshop #3.

Cutler Bay Complete Streets Workshop #1 Notes October 25, 2016

1. There are some problems with the project on Caribbean Boulevard especially with the non-mountable curbs. The postman and FedEx and others are forced to park in the bike lane, which is dangerous. Very limited parking for friends and family (no swale).
2. Problems with the new traffic circles:
 - Cars go too fast around the circles and tend to quickly speed up as soon as out of the circles (27 speeding tickets were issued in one hour)
 - There is the potential to crash into the landscaping (happened in Palmetto Bay)
 - Buses, fire trucks and large vehicles can barely get around, the radius should be 30' at a minimum
 - Drivers don't comply with the Yield signs
 - 87th and OCR circle specifically dangerous for mopeds/motorcycles, especially because of bad driver etiquette and not observing the rules of the circle
 - An operational analysis should be done for all circles
 - Crosswalks in circles are difficult for drivers to see because of the landscaping – could consider enhanced crosswalks, maybe flashing beacons
 - Distracted driving is an issue
 - How will the future Gulfstream Road and OCR circle function?
3. Consider reducing speed limit on OCR (maybe 30 MPH?) between traffic circles. Some benefits would be that it would be possible to use golf carts on this road and discourage cut-through traffic from other areas.
4. Look at intersection of Cutler Ridge and Franjo Road, visibility is an issue because the intersection is misaligned and some trees are also blocking visibility.
5. Malta (traffic circles everywhere) and San Diego (speed humps to slow traffic) are good examples.
6. Heading eastbound on Marlin Road from US-1 the road merges from two lanes to one, this is an issue (bad driver behavior).
7. Any projects on Franjo Road near OCR should consider that there is an increase in traffic during baseball games.

Cutler Bay Complete Streets Workshop #2 Notes February 7, 2017

1. People are biking on SW 87th Avenue, but nowhere else.
2. Kids used to bike, but don't anymore.
3. Bike share failed in New York City.
4. On Caribbean Boulevard and Old Cutler Road there are now issues with landscapers parking in the drive lane, blocking traffic. They used to be able to park off the street in the swale.
5. These ideas (Complete Streets) could work (voiced by a Palmetto Bay resident).
6. How do we get bicycles in the bike path and off of Old Cutler Road, you built it but it is not being used.
7. There are different types of bike riders on Old Cutler Road, children and less experienced riders use the bike path, while serious bikers in groups use the road. It can be annoying, but bikes do deserve a place to ride. Not all riders are the same.
8. There are complaints about the maintenance of the bike path.
9. A question was asked to the police Major in attendance about the rules of the road related to bikes, do they have the same rights to use the roadway as cars. The Major answered that bikes also have to abide by the rules of the road, just like cars. That means staying to the right (even if not in a designated lane). The police are trying to get education out there, but citizens can also help by reporting illegal bike riders to the police.
10. If you make these improvements to SW 87th Avenue, where will people park. It will be a nightmare.
11. Police should go observe bikers on Caribbean Boulevard and SW 184th Street, it is common to see bikers not stopping at the light at this location.
12. Is there really a problem with traffic and lack of places to bike? What are we trying to solve here?
13. Kids don't cycle anymore.
14. Roundabouts are dangerous.
15. Problem on Caribbean Boulevard is the non-mountable curbs. No way for visitors, delivery trucks, mailman, etc to park off the road. UPS trucks and mail trucks are parking in the street. I am against any additional non-mountable curbs installed in the Town.
16. Non-mountable curbs are county standards and if county grant money is used, we have to follow their standards.
17. (Alfredo) Shared use on SW 87th Avenue on the north side of Old Cutler Road and a bike lane could be an option. The Town can explore mountable curbs, it can be discussed with the County. We will develop projects that meet your concerns.
18. Franjo Road is being redeveloped to the north in Palmetto Bay and it will create gridlock in Cutler Bay. What is this plan doing to interface with Palmetto Bay?
19. SW 184th Street may be looked at for complete streets in the future, but need to work with Palmetto Bay and the County, it is a more complicated street because of the multiple jurisdictions involved.
20. Planning doesn't work, we are left with fixing mistakes.
21. Do any of the plans add more drive lanes?
22. (Alfredo) No, just bike lanes, we are not adding more drive lanes. In some cases it may be a good idea to add additional dedicated turn lanes to improve flow, where needed.
23. (Police Major) I have observed that people tend to change their behavior when offered an option. These are good ideas and if given a chance people will start to use other options and other routes to get around. Another way to think about it is If you only had one park to go to, everyone would go to the same one, but if you have two or three parks, each one would be less crowded.
24. All new roadway projects that have been completed recently are good. These are county roadways, who maintains the landscape?
25. Sidebar on explanation of landscape maintenance being a shared responsibility. Alfredo explained that the County will maintain up to an amount per their standards. However, the Town had requested extra landscaping. Anything above the standard for the County is considered extra with costs borne by the Town.
26. Old Cutler Road is fantastic but some chicanes are needed.
27. There are concerns about roundabout design at Gulfstream Drive and Caribbean Boulevard, cars are going through the circle too fast
28. When headed north on Gulfstream Drive you have a white fence blocking view of any cars going east on Caribbean Boulevard.
29. The mountable curbs in the circles are causing cars to go faster
30. More enforcement of speeding is needed.
31. Don't add additional drive lanes.
32. Old Cutler Road is difficult for emergency vehicles because of the curbs
33. Gulfstream Drive northbound at SW 186th Street needs a dedicated left turn lane to relieve traffic backup.
34. These projects will add more bikeways and sidewalks that no one will use.
35. British buses could be taken to the people instead of people walking to the bus stops.
36. Protect the quality of Old Cutler Road from the neighbors.



Florida Department of Transportation Complete Streets Handbook

In addition to the local standards and design guidelines that were presented in the previous chapter, FDOT has begun revising its standards, policies, and guidance documents to align with this Complete Streets approach. The State has recently drafted standards specific to Complete Streets, the “Complete Streets Handbook” and the “FDOT Design Manual” (which will replace the Plans Preparation Manual in January 2018). While these documents are not finalized, it is a useful exercise for future funding and implementation purposes to review and compare the Town’s conceptual design projects with the new State guidelines.

The State adopted the following Complete Streets Policy on September 17, 2014:

It is the goal of the Department of Transportation to implement a policy that promotes safety, quality of life, and economic development in Florida. To implement this policy, the Department will routinely plan, design, construct, reconstruct and operate a context-sensitive system of “Complete Streets.” While maintaining safety and mobility, Complete Streets shall serve the transportation needs of transportation system users of all ages and abilities, including but not limited to:

- Cyclists
- Freight handlers
- Motorists
- Pedestrians
- Transit riders

The Department specifically recognizes Complete Streets are context-sensitive and require transportation system design that considers local land development patterns and built form. The Department will coordinate with local governments, Metropolitan Planning Organizations, transportation agencies and the public, as needed to provide Complete Streets on the State Highway System, including the Strategic Intermodal System.

This **Complete Streets Policy** will be integrated into the Department’s internal manuals, guidelines and related documents governing the planning, design, construction and operation of transportation facilities.



The FDOT Complete Streets policy captures three core concepts in its approach to Complete Streets:

FDOT Policy Concept #1: Complete Streets serve the transportation needs of transportation system users of all ages and abilities, including pedestrians, bicyclists, transit riders, motorists, and freight handlers.

Town Complete Street Conceptual Design: All four conceptual design projects in this plan propose new facilities within the existing right-of-way to improve the experience for multiple mobility modes.

FDOT Policy Concept #2: Complete Streets are context sensitive, and the approach provides transportation system design that considers local land development patterns.

Town Complete Street Conceptual Design: Each road concept slightly different based on the uses served and users needs. Streets that connect the commercial areas are treated different than those with the transit routes. Some roads include a multi-use path where it makes sense to connect to existing and planned regional facilities.

FDOT Policy Concept #3: A transportation system based on Complete Streets principles can help to promote safety, quality of life, and economic development.

Town Complete Street Conceptual Design: A robust, connected network provides options for the movement of people and goods and also is the foundation for safe and comfortable multimodal travel.

A number of important changes are emphasized:

- The plan strongly recommends the use of “target speed” as the basis for street design, which is a less “forgiving” approach for motor vehicles. Typically, streets were designed for higher speeds than the speed limit, encouraging people to speed.
- “Context-sensitive” design is promoted. This would be a very good change if “future context” is recognized, based on a municipal comprehensive plan. Many municipalities have plans for making specific places more walkable. The streets can either prevent or promote that change.
- Use of the urban-rural Transect is recommended, which creates a basis for connecting the plan to new urban principles.
- The document recommends looking at “return on investment” of Complete Street projects, which brings economics into the thinking of FDOT. Streets are not just for transportation, they are vital economically and socially. They set the foundation for diverse places, or monocultures.

The FDOT complete street guidelines propose to implement projects based on a system where context classification and transportation characteristics of a roadway will determine key design criteria for all non-limited-access state roadways (Chapter 2). The corridors in this plan fall within C-3R Suburban Residential and C-3C Suburban Commercial. Many roadways in Florida are built in C3C and C3R Suburban Context Classifications, with limited roadway connectivity and land uses dispersed along large areas of land. In these suburban contexts, the arterial roadway network typically supports both local access and regional mobility, concentrating most vehicular trips onto the state arterial roadways. Critical transit service, major employers, and retail services are also often located on these roadways. As investments are made along major arterial roadways, roadway design elements that support walking, bicycling, and transit use should be integrated. New local roadway connections and shared use paths should also be considered to complement and provide a network alternative to the arterial roadway system.

The conceptual designs as proposed in this plan create four separate design concepts based on the unique character of each corridor. SW 87th Avenue is the transit corridor and greenway where a multi-use path can be separated from travel lanes with a wide and lushly landscaped planting strip or bio swales. Franjo Road is the urban connector corridor. The concept is to separate various modes of transportation for more comfortable spaces by creating exclusive travel zones for pedestrians, bicycles and cars. Marlin Road is the bikeway corridor where on street parking buffers the bike lane from the travel lane. And Gulfstream Road is considered the greenway/boulevard and will be planted with large shade trees.



The guidelines state that anticipated users of a roadway and the travel patterns of those users should be determined well before the design phase of a project, and are best explored during the planning and design scoping phase. The following were considered to determine needs by mode in the development of the four corridor conceptual designs: land use, safety, vehicular trip types, travel patterns, types of pedestrians, types of bicyclists, transit and freight.

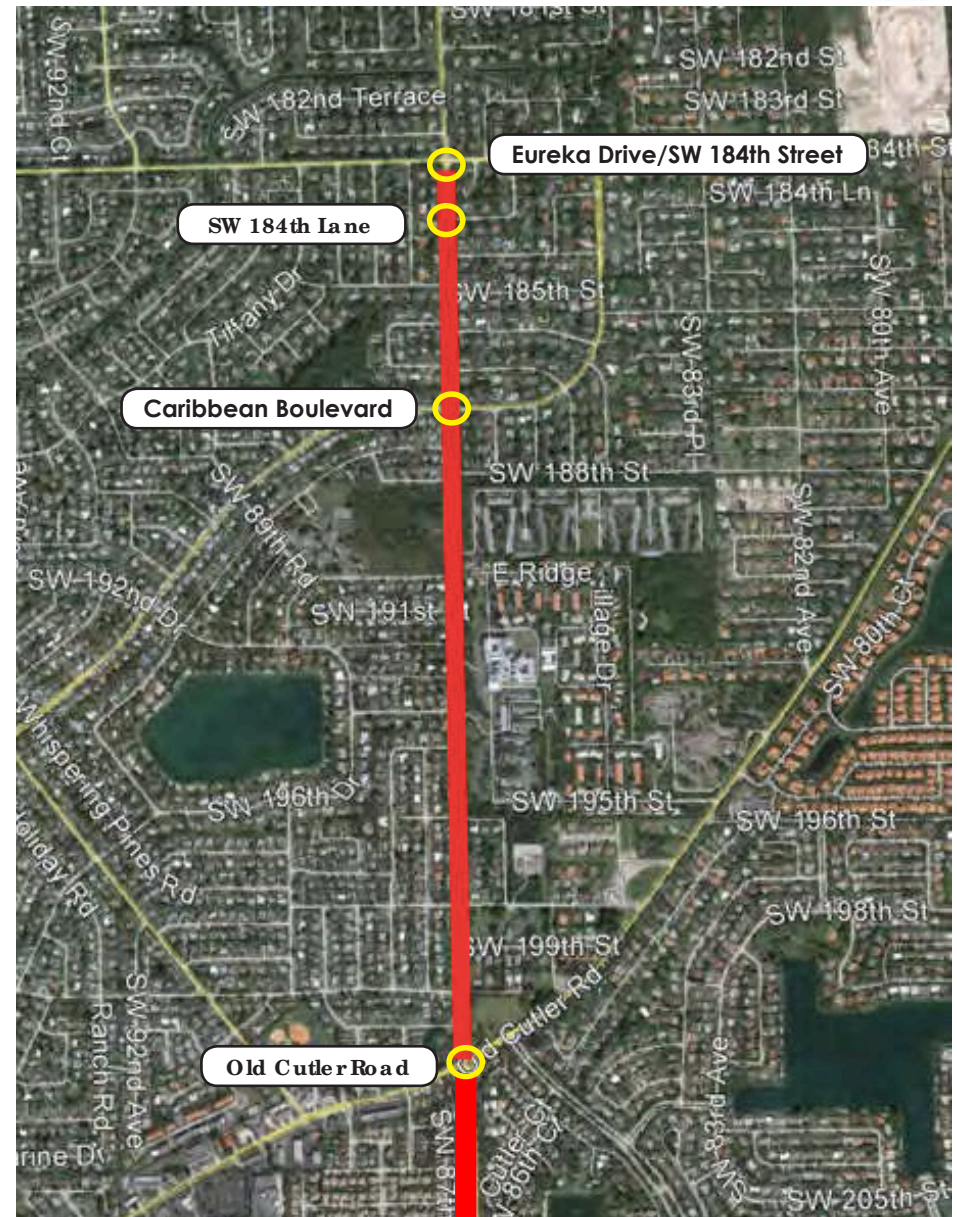
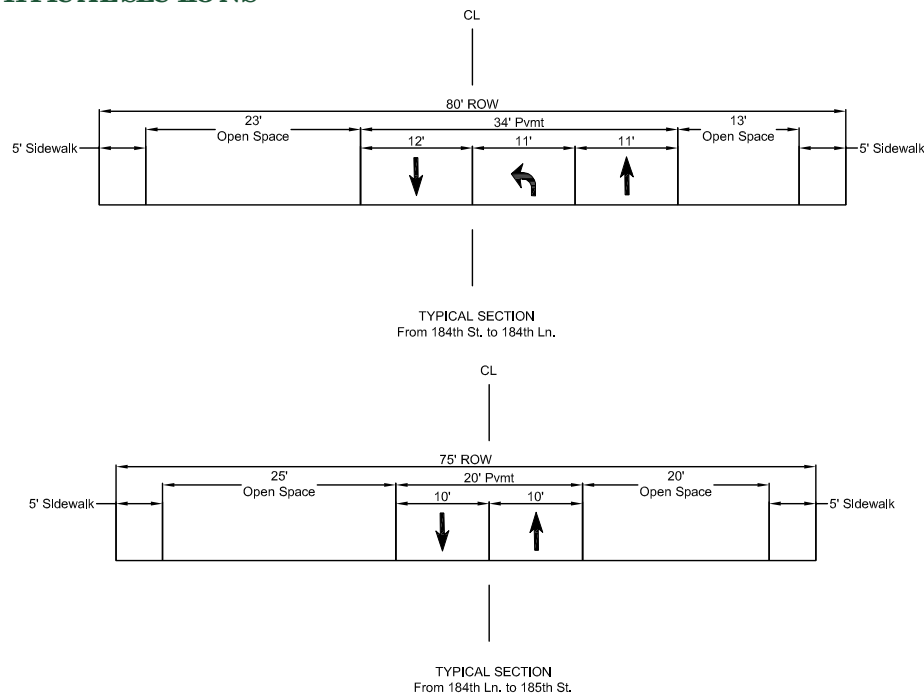
Finally, the guidelines address safety and roadway speed in designing and implementation of complete streets. Some examples which are mentioned and also are included in the conceptual designs in this plan include: on street parking, traffic circles, street trees and narrower travel lanes.

It can be determined that the complete streets projects in this plan are consistent with the FDOT policies and guidelines.

SW 87th AVENUE *Existing Characteristics*

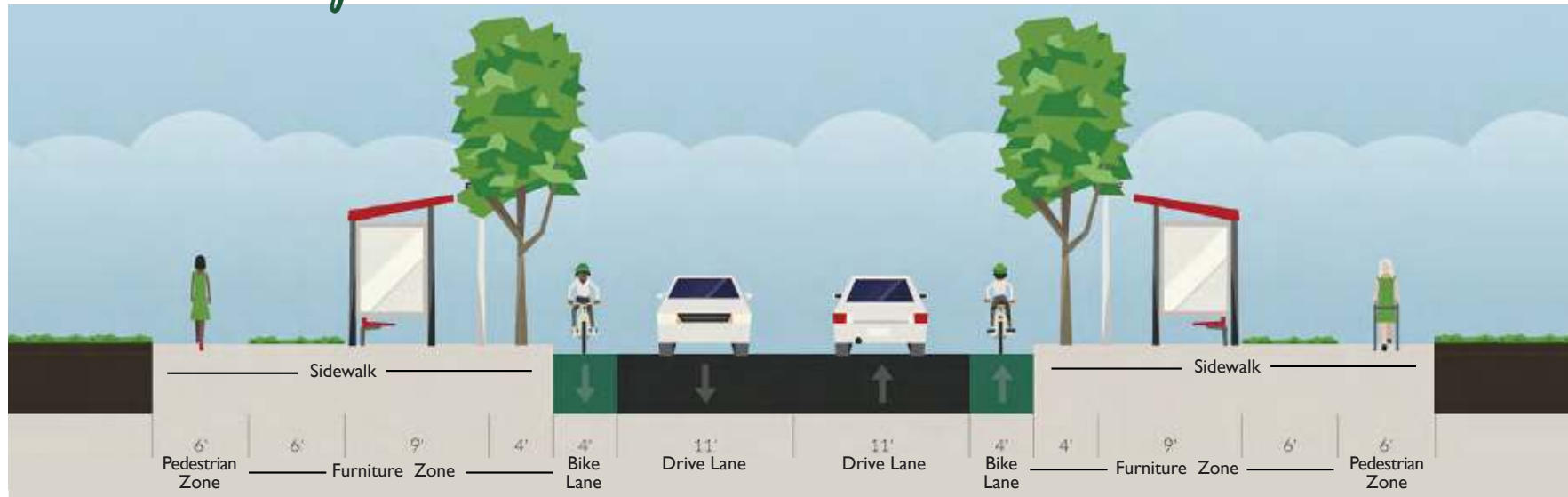
- ROW width: 70'-120'
- Speed limit: 30mph
- 2 lanes (turn lane varies)
- Lane width: 10'
- 5' sidewalks
- Have some standard crosswalks at schools
- Traffic signals exist at key intersections
- Regional connector: Green
 - Connects to key destinations including parks and schools
 - Lined with palms
 - Bus shelters
 - On street parking
 - Existing multi-use path
- Transit
 - Includes circulator and MDT Bus
 - Average width 80' ROW

TYPICAL SECTIONS



SW 87th AVENUE 2-Lane Option with No Turn Lane

Transit Corridor and Greenway



ROW Varies, 80' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|---|
| ROW width | 70'-120' |
| 2 travel lanes | 11' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone (optional) Planting zone with shade trees Bike Lane Planting strip with shade trees and optional bus pull out | 5.5' minimum, 8' desired (9' min. for bus shelter, 4' min. for bench) 3' minimum, 7' desired 4' minimum 10' desired |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Transit Corridor:

SW 87th Avenue is the primary transit corridor with an improved bike lane on both sides of the roadway.

Greenway:

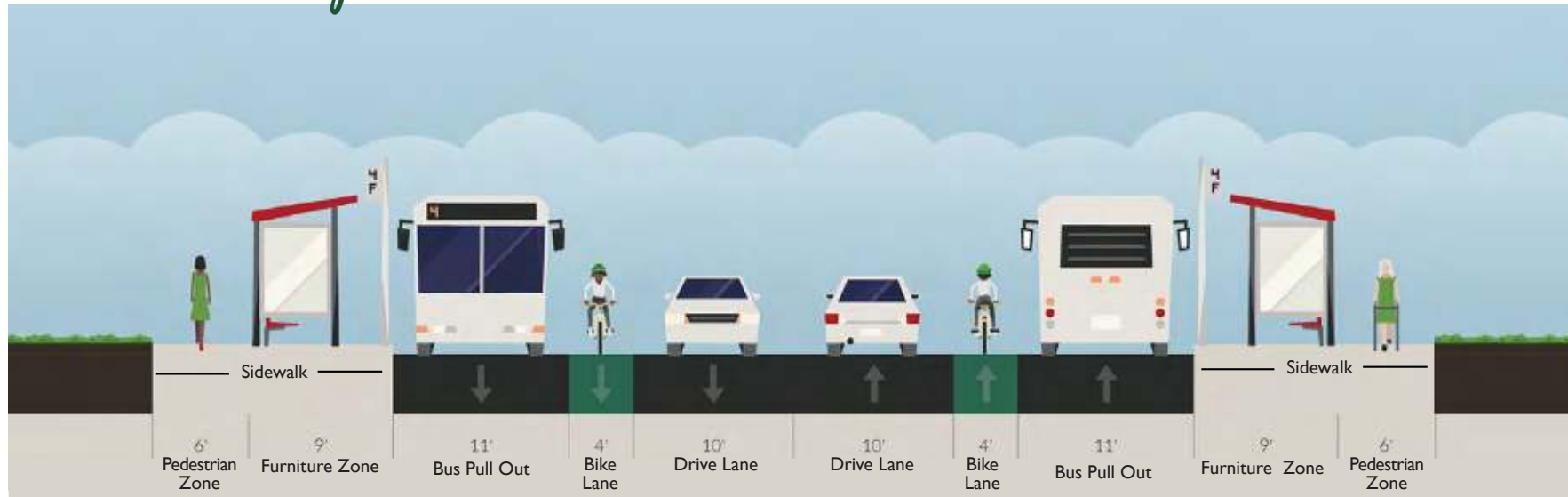
Landscaped buffers separate the various modal paths including sidewalk, multi-use path, travel lanes and bike lane. Shade trees are preferred when space allows. Small shrubs or palms are a good alternative for narrower landscaped buffers and planting strips. Bus pull outs can share the furniture zone.

Furniture Zone:

When possible, street furniture should be placed in front of the pedestrian sidewalk to create a furniture zone. Street furniture on SW 87th Avenue shall include bus shelters, benches, lighting, pedestrian signals, kiosks and bike racks.

SW 87th AVENUE 2-Lane Option with No Turn Lane

Transit Corridor and Greenway



ROW Varies, 80' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|---|
| ROW width | 70'-120' |
| 2 travel lanes | 11' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone (optional) Planting zone with shade trees Bike Lane Planting strip with shade trees and optional bus pull out | 5.5' minimum, 8' desired (9' min. for bus shelter, 4' min. for bench) 3' minimum, 7' desired 4' minimum 10' desired |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Transit Corridor:

SW 87th Avenue is the primary transit corridor with an improved bike lane on both sides of the roadway.

Greenway:

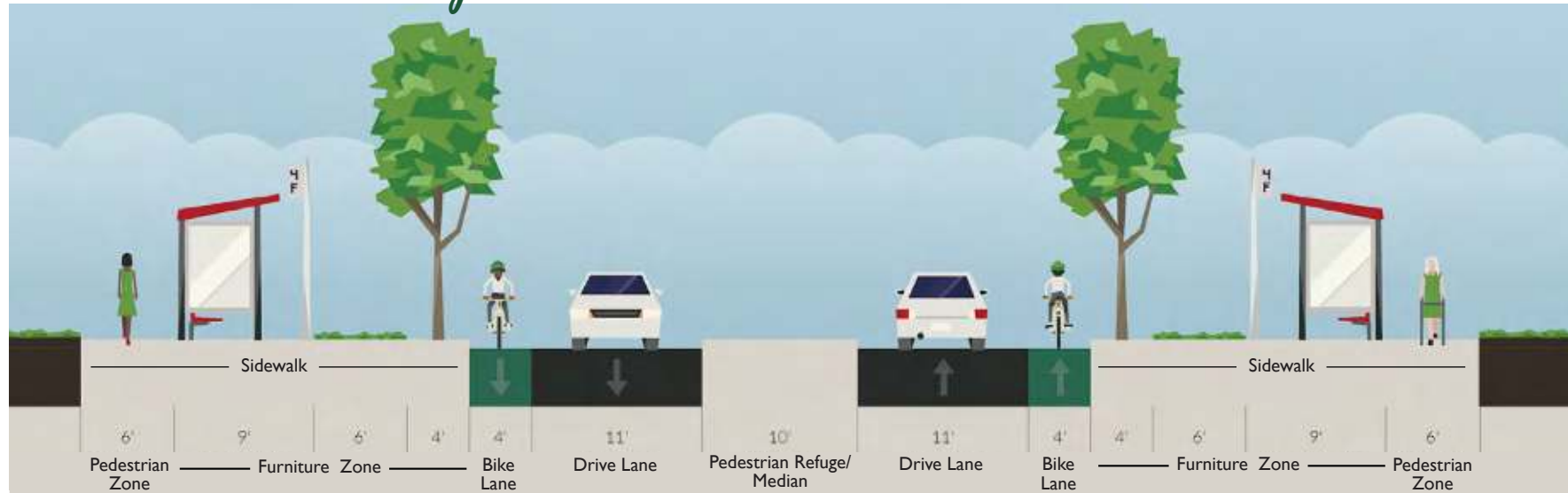
Landscaped buffers separate the various modal paths including sidewalk, multi-use path, travel lanes and bike lane. Shade trees are preferred when space allows. Small shrubs or palms are a good alternative for narrower landscaped buffers and planting strips. Bus pull outs can share the furniture zone.

Furniture Zone:

When possible, street furniture should be placed in front of the pedestrian sidewalk to create a furniture zone. Street furniture on SW 87th Avenue shall include bus shelters, benches, lighting, pedestrian signals, kiosks and bike racks.

SW 87th AVENUE *Midblock Crossing with No Turn Lane*

Transit Corridor and Greenway



ROW Varies, 80' ROW Shown Above.



DESCRIPTION

Midblock Crossings:

Barriers and pedestrian refuge/median islands are added to this section to enhance pedestrian crossings in the middle of the block. The landscaped buffer on the west side of the roadway is eliminated and a pedestrian refuge/median is added to the center of the roadway. Bike lanes can be adjacent to the road. Barriers are placed on either side of the road for additional safety.

Pedestrian refuges/medians align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

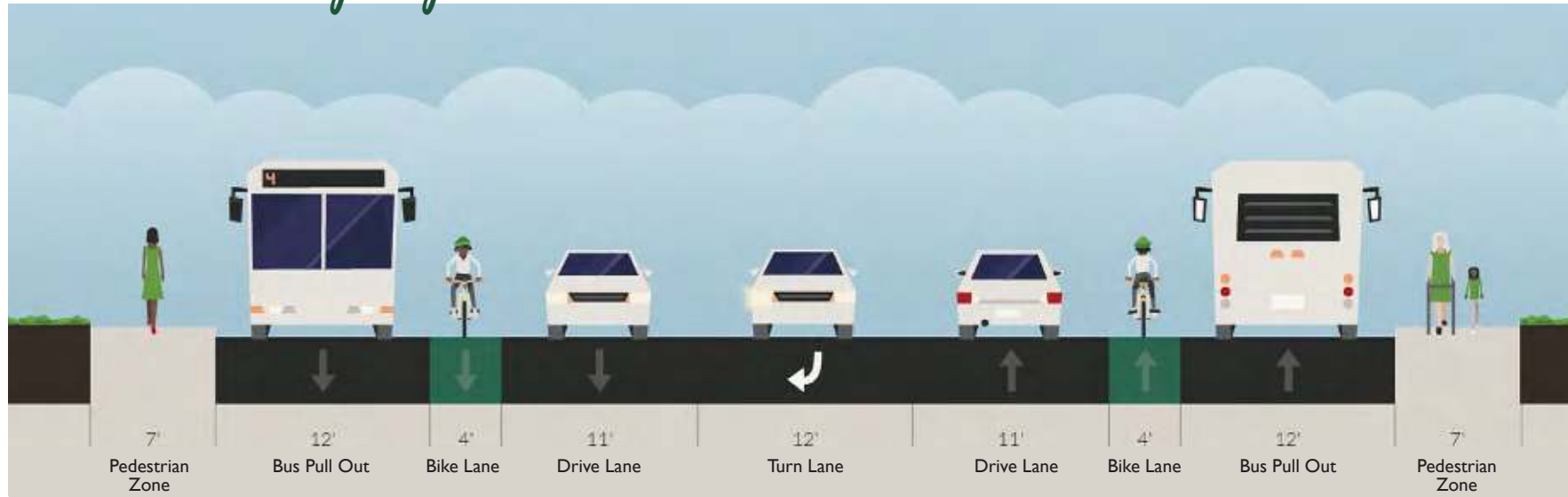
Barriers can be decorative and distinct to Cutler Bay.

Intersection Crossings:

Crossings at intersections should have curb extensions to reduce crossing distances.

SW 87th AVENUE 2-Lane Option plus Turn Lane

Transit Corridor and Greenway



ROW Varies, 80' ROW Shown Above.

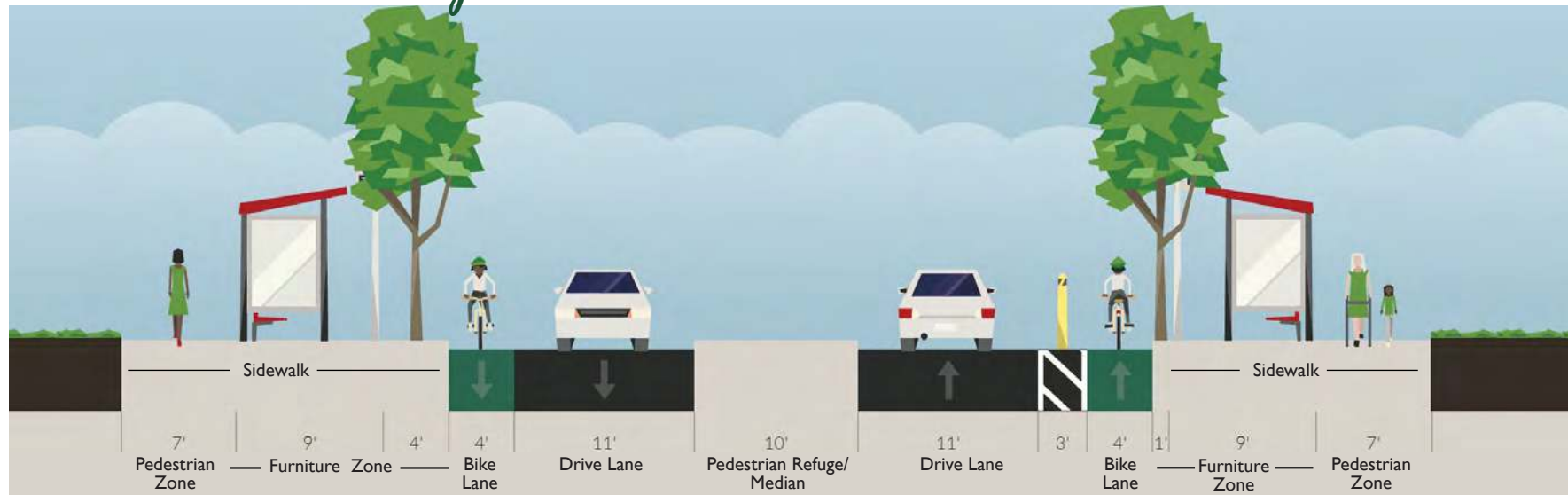
| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 70'-120' |
| 2 travel lanes and 1 turn lane | 11'-12' |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone (optional) Planting zone with shade trees Bike Lane Planting strip with shade trees and optional bus pull out | 5' minimum and 8' desired (9' min. for bus shelter; 4' min. for bench) 3' minimum, 7' desired 4' minimum, 9' desired 4' minimum, 10' desired |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Landscaped buffers and sidewalk widths decrease to accommodate an additional turn lane for narrow ROWs. All other dimensions and elements should match the 2-lane roadway design. Bus pull out lane shares the furniture zone.

SW 87th AVENUE *Midblock Crossing with Turn Lane*

Transit Corridor and Greenway



ROW Varies, 80' ROW Shown Above.

DESCRIPTION

Midblock Crossings:

Barriers and pedestrian refuge/median islands are added to this section to enhance pedestrian crossings in the middle of the block. Landscaped buffers which are interior to the roadway are swapped for barriers to provide safer pedestrian crossings.

The center turn lane is swapped for an ten foot pedestrian refuge/median. This narrows the crossing distance to a eighteen foot segment and a fifteen foot segment.

Barriers are placed between the travel lane and the bike lane for additional safety.

Pedestrian refuges/medians align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

Intersection Crossings:

Crossings at intersections should have curb extensions to reduce crossing distances.

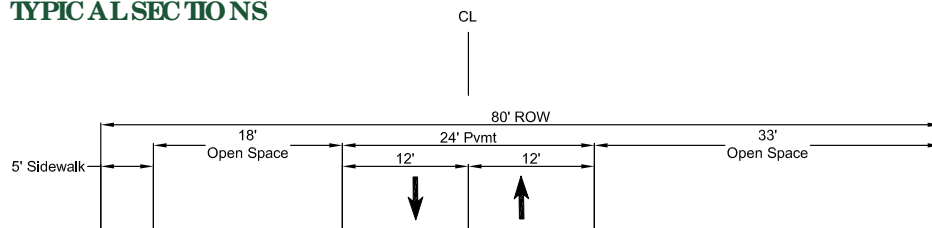


Barriers can help to separate zones along with curbs and changes in grade especially at mid block crossings. Barriers can be decorative and distinct to Cutler Bay.

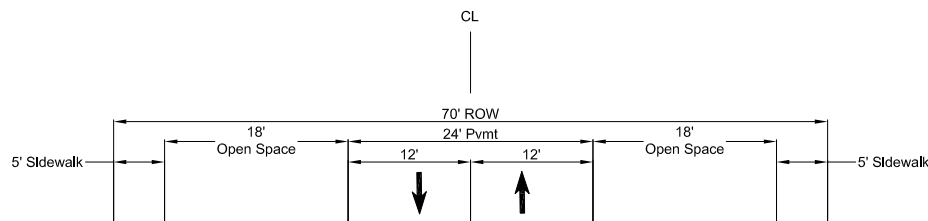
FRANJO ROAD *Existing Characteristics*

- ROW width: 65'-80'
- Speed limit: 30mph
- 2 lanes
- Lane width: 12'
- 5' sidewalks
- Have some standard crosswalks
- Traffic signals exist at key intersections
- Commercial connector: More hardscape
 - Connects to commercial section of Old Cutler Road and SW 184th Street
 - On street parking
 - No bike facilities
 - Bus shelters
- Transit
 - Includes circulator on Franjo Road and MDT Bus

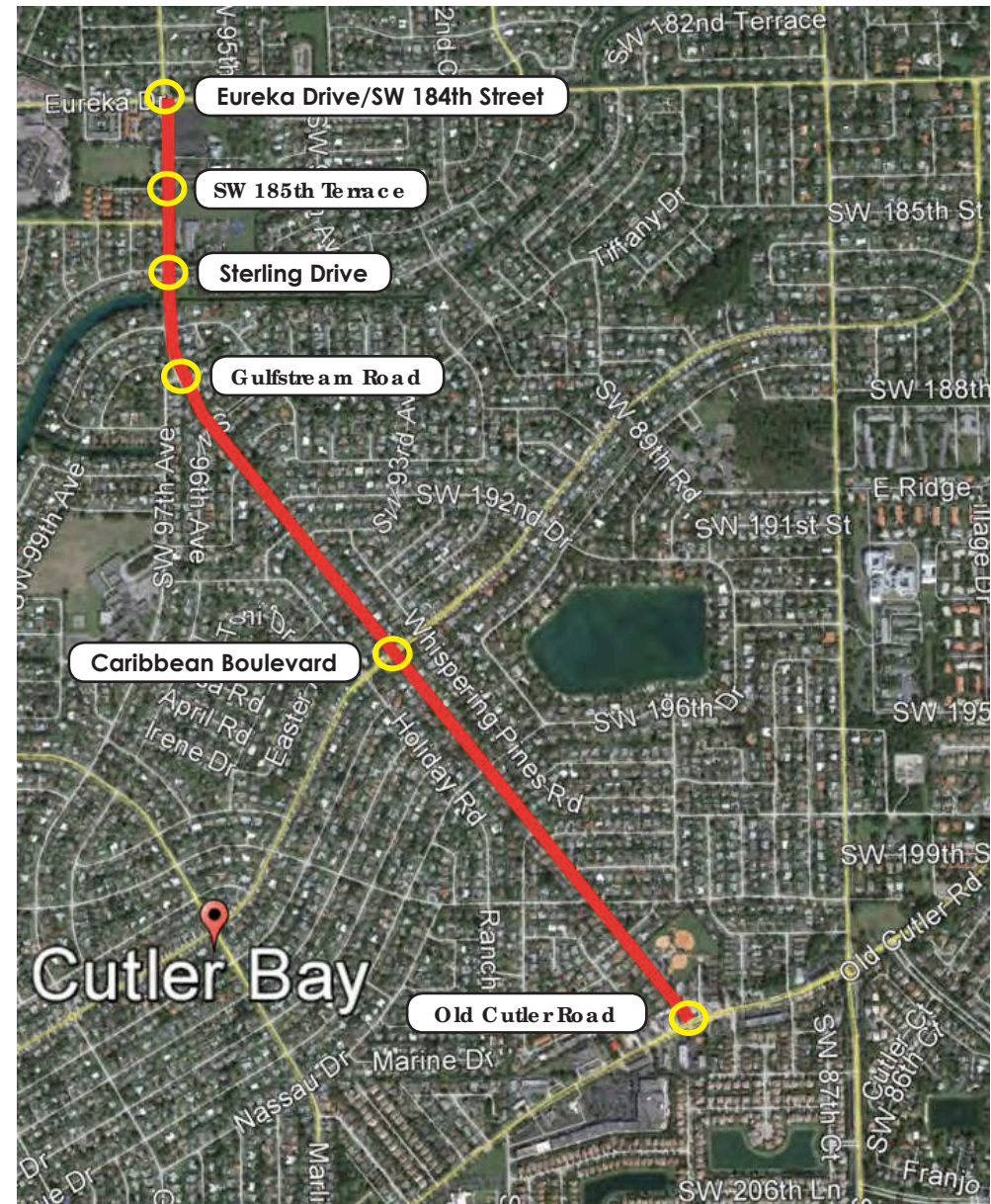
TYPICAL SECTIONS



TYPICAL SECTION
From 230' South of 184th St. to SW 185th Terrace

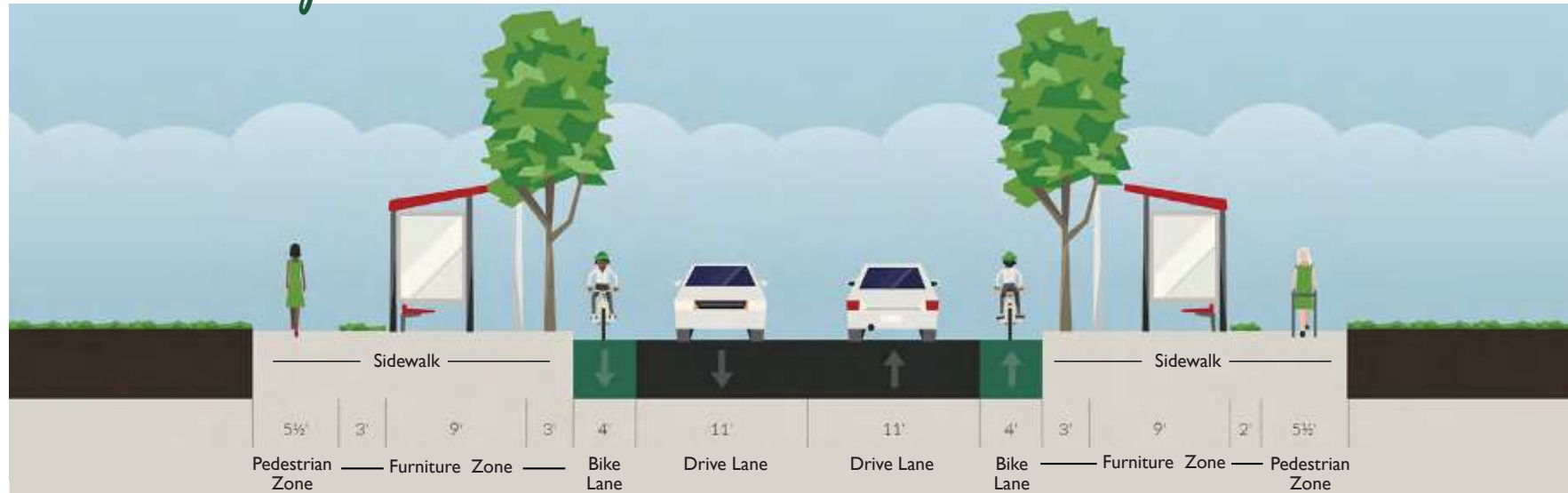


TYPICAL SECTION
From 200' South of Gulfstream Rd. to Caribbean Blvd.



FRANJO ROAD 2-Lane Option

Urban Connector



ROW Varies, 70' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 65'-80' |
| 2 travel lanes | 11' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone Planting zone with shade trees and bio swale Bike lane | 5' minimum, 9' desired and 9' min. for bus shelter, 5' min. for bench 3' minimum 4' minimum |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Transit Corridor

Franjo Road is a secondary transit corridor with a bike lane on the roadway.

Urban Connector

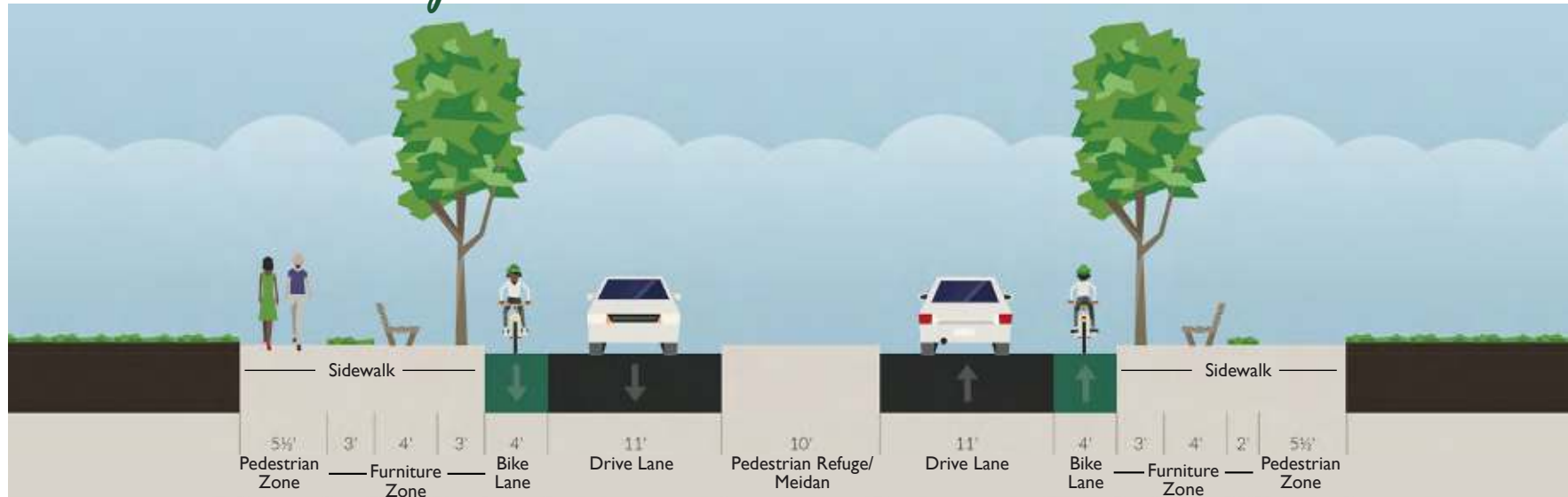
Franjo Road connect to the main commercial centers on Old Cutler Road and SW 184th Street. Therefore, this street has an urban character. Shade trees cover the furniture zone and bicycle zones and include bio swales instead of traditional landscaped buffers.

Pedestrian and Furniture Zones:

A shared pedestrian and furniture zone is primarily open for walking with periodic furniture including bus shelters, benches, lighting, pedestrian signals, kiosks and bike racks.

FRANJO ROAD *Midblock Crossing*

Urban Connector



ROW Varies, 70' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 65'-80' |
| 2 travel lanes | 11' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone Planting zone with shade trees and bio swale Bike lane | 5' minimum, 9' desired and 9' min. for bus shelter, 5' min. for bench 3' minimum 4' minimum |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Midblock Crossings:

At midblock crossings, the roadway is modified to accommodate a ten foot pedestrian midblock refuge. This narrows the crossing distance to thirty feet.

Crosswalks are striped and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

Pavement can be marked before and after the crosswalk with yellow stripes across the entire roadway or white wavy lines along the pavement edge.

Intersection Crossings:

Crossings at intersections should have curb extensions on Franjo Road to reduce crossing distances.

MARLIN ROAD *Existing Characteristics*

US-1 to Sterling

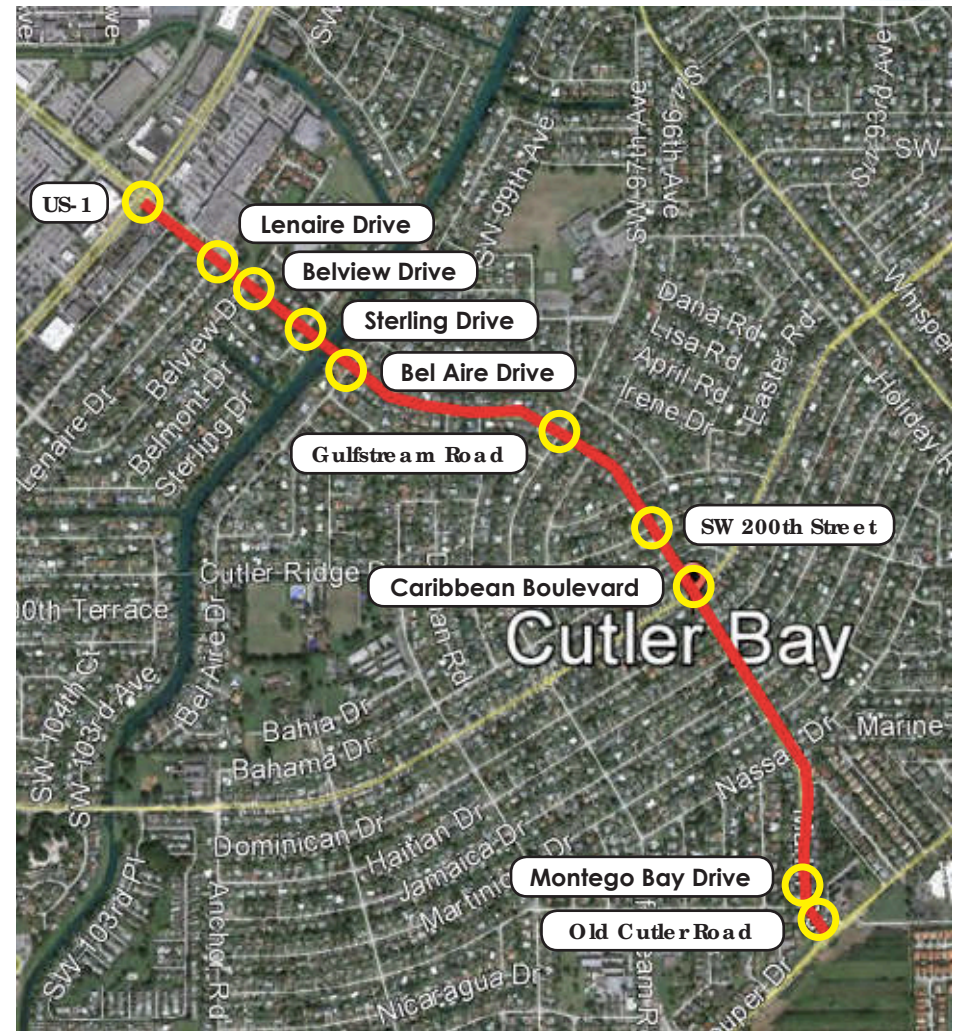
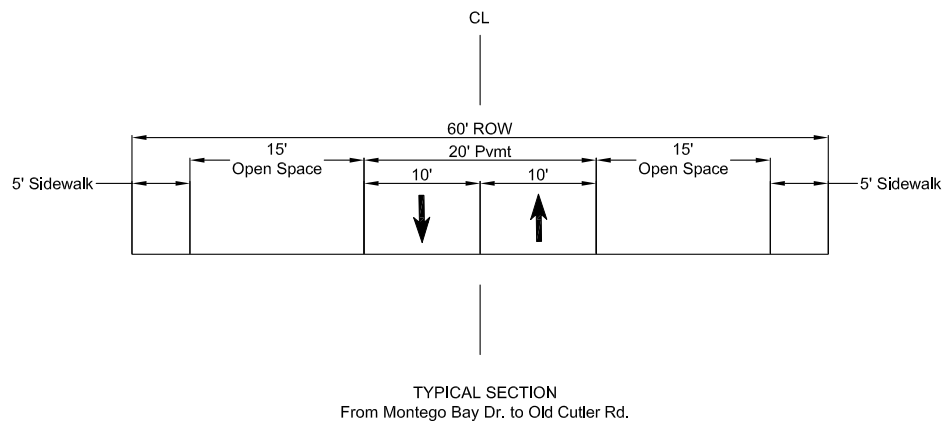
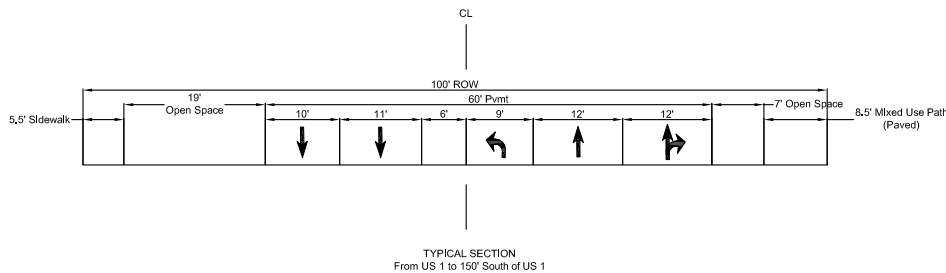
- ROW width: 100'-90'
- Speed limit: 30mph
- 4 lanes plus turn lane
- Lane width: 10'-12'
- 5.5' sidewalks
- Landscaped medians
- Some crosswalks

- Crosses wide canal
- Regional connector
- On street parking
- Commercial at Old Cutler and US-1

Sterling to Old Cutler

- ROW width: 60'-70'
- Speed limit: 30mph
- 2 lanes
- Lane width: 10'
- 5.5' sidewalks
- No medians
- No bike facilities
- Some crosswalks
- Traffic signals at key intersections

TYPICAL SECTIONS



MARLIN ROAD NORTH OF CANAL 4-Lane Option with Turn Lane

Bike way



ROW Varies, 100' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|---|--|
| ROW width | 90'-100' |
| 4 travel lanes and 1 turn lane | 10' x 4, 11' turn lane |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 9' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone Planting zone with shade trees Bike lane Landscaped buffer Landscaped median with shade trees | 6' minimum, 7' desired 6' minimum 3' minimum 4' minimum, 8' desired 3' minimum 6' minimum, 8' desired |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Bike way:

Between US-1 and Sterling Drive, Marlin Road has two bike lanes. Since there are no buses on this roadway, more space is dedicated to green plantings and shade trees. Both sidewalks and bike lanes are shaded with trees for comfort and protection from the elements and each are wide.

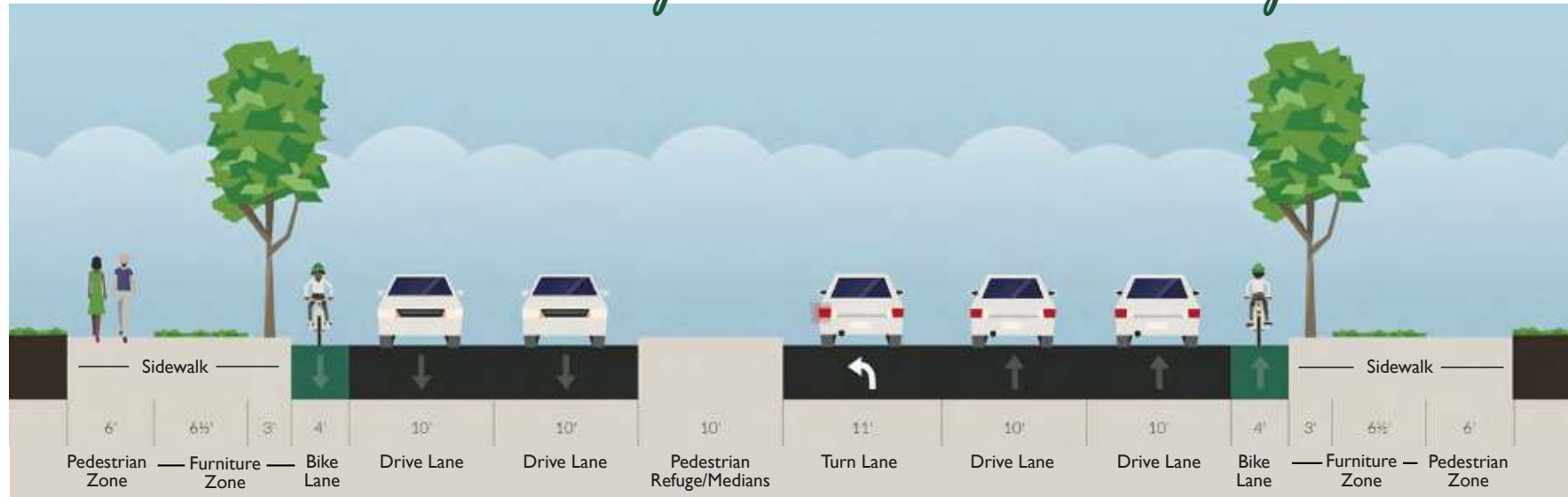
In the section above, a wide expanse of pavement is interrupted with a six foot wide planted median.

Pedestrian and Furniture Zones:

A shared pedestrian and furniture zone is primarily open for walking with periodic furniture including benches, lighting, pedestrian signals, kiosks and bike racks.

MARLIN ROAD NORTH OF CANAL *Midblock Crossing at Schools Between Us-1 and Sterling Drive*

Bike way



ROW Varies, 100' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|---|
| ROW width | 90'-100' |
| travel lanes and 1 turn lane | 10' x 4, 11' x 1 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 9' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone Planting zone with shade trees Bike lane Pedestrian refuge/median | 6' minimum, 7' desired 6' minimum 3' minimum 4' minimum, 8' desired 10' minimum |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Midblock crossings:

At midblock crossings, landscaped medians are replaced with hardscaped pedestrian refuges/medians. Barriers on either side of the median provide additional protection from car traffic. Barriers can be decorative and distinct to Cutler Bay.

Pedestrian refuges/medians align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

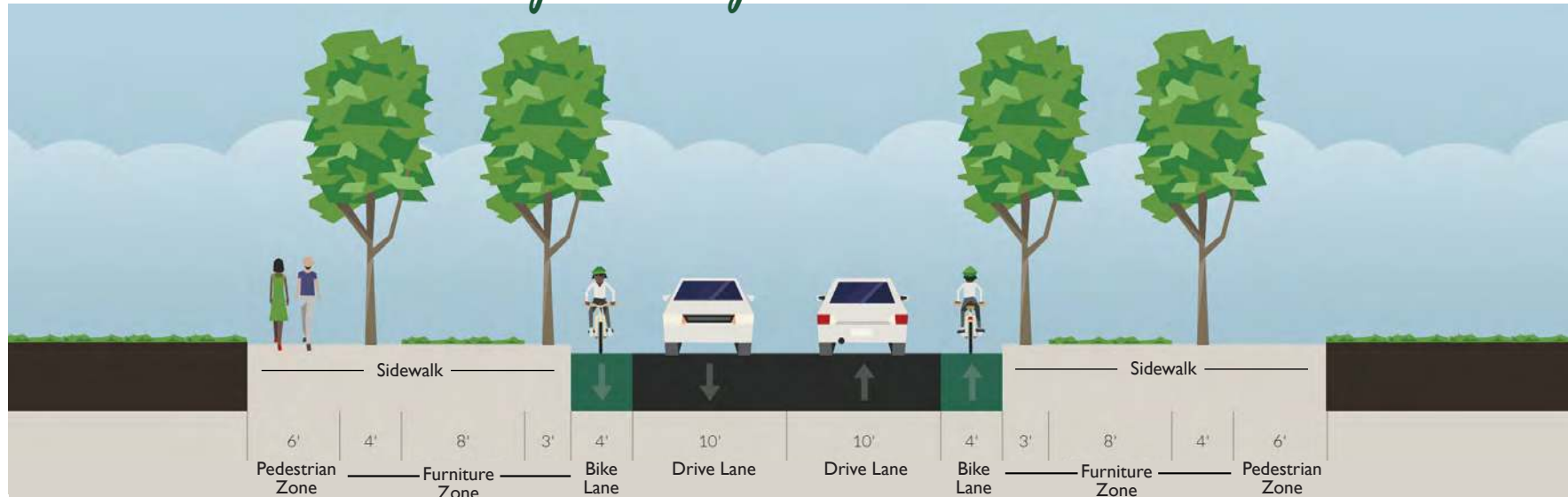
Pavement can be marked before and after the crosswalk with yellow stripes across the entire roadway or white wavy lines along the pavement edge.

Intersection Crossings:

Crossings at intersections should have curb extensions to reduce crossing distances.

MARLIN ROAD SOUTH OF CANAL 2-Lane Option, Sterling Drive to Old Cutler Road

Bike way



ROW Varies, 70' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 60'-70' |
| 2 travel lanes | 10' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone Planting zone with shade trees and bio swale Bike lane Landscaped buffer with shade trees | 6' minimum 8' minimum 3' minimum 4' minimum, 9' desired 3' minimum |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

From Sterling Drive to Old Cutler Road, Marlin Road narrows to 60 and 70 feet and is a two-lane road. The greenway is modified and a bio swale is added.

Bike way:

Both sidewalks and bike lanes are shaded with trees for comfort and protection from the elements and each are wide.

Parklet and Parking Zone:

Marlin Road has on-street parking with parklets in some locations. A parklet is a mini park that sits within a parking lane. On Marlin Road, parklets provide a safe space for sitting along the greenway and can serve as a good rest area for bicyclists,

Pedestrian and Furniture Zones:

A shared pedestrian and furniture zone is primarily open for walking with periodic furniture including benches, lighting, pedestrian signals, kiosks and bike racks.

MARLIN ROAD SOUTH OF CANAL *Midblock Crossing Sterling Drive to Old Cutler Road*

Bike way



ROW Varies, 70' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|---|---|
| ROW width | 60'-70' |
| 2 travel lanes | 10' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 8' must be reserved for sidewalk and planting strip, curb and gutter) Pedestrian zone Furniture zone Planting zone with shade trees and bio swale Bike lane Pedestrian refuge | 6' minimum 5' minimum 3' minimum 4' minimum, 9' desired 6' minimum, |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Midblock crossings:

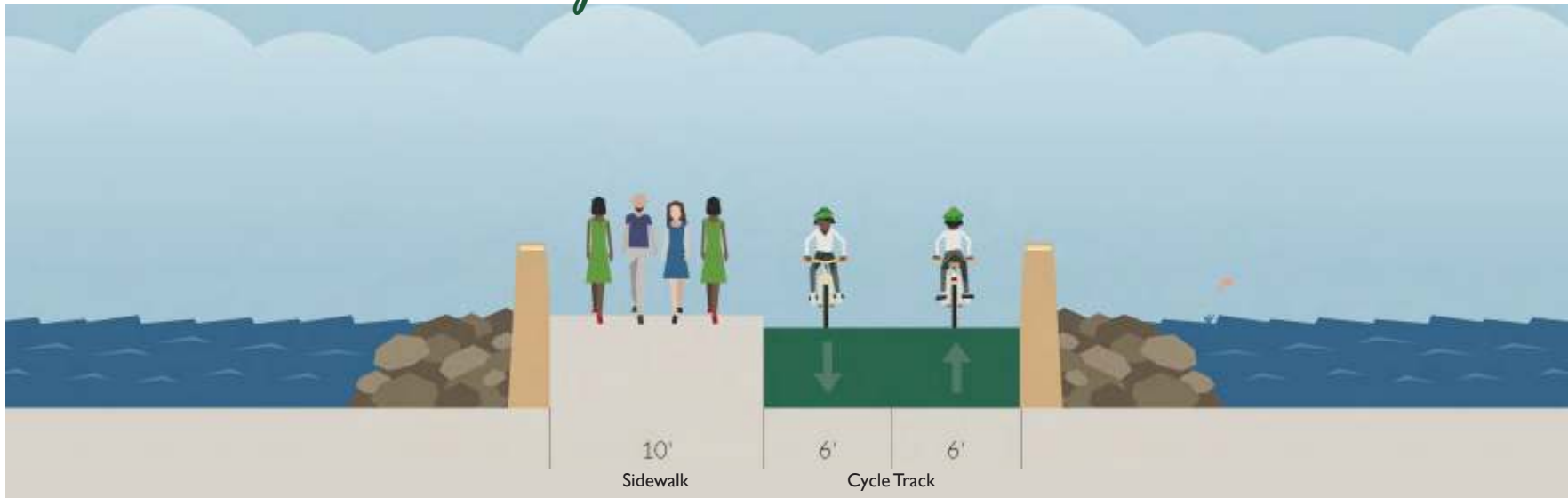
At midblock crossings, the east side of the roadway is modified to extend the sidewalk and narrow the crossing distance. The parklet and parking lane is removed to accommodate a six foot pedestrian refuge adjacent to the bike lane. This narrows the crossing distance to twenty four feet.

Pedestrian refuges align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

Pavement can be marked before and after the crosswalk with yellow stripes across the entire roadway or white wavy lines along the pavement edge.

MARLIN ROAD *New Bike/Pedestrian Bridge over Canal*

Pedestrian/ Bike way Bridge

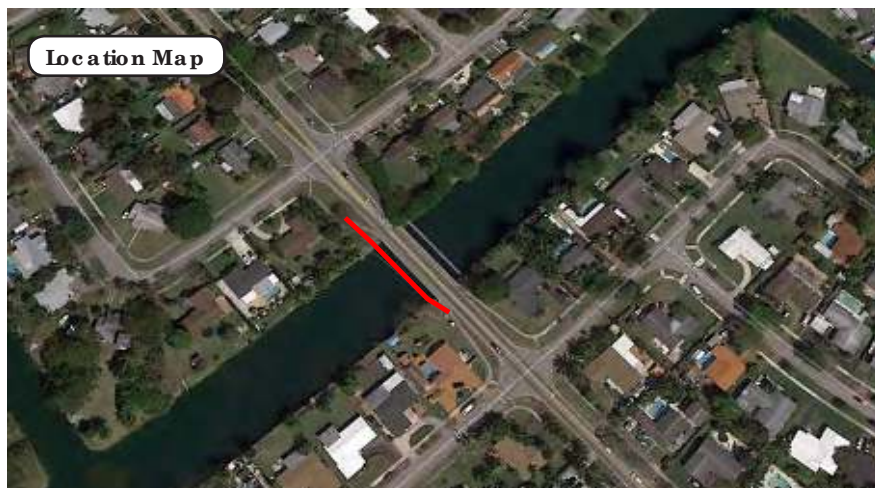


22' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|---|--------------------|
| Bridge width | 22' |
| <ul style="list-style-type: none"> Sidewalk (curb and gutter) Cycle Track | 10' 12' |

DESCRIPTION

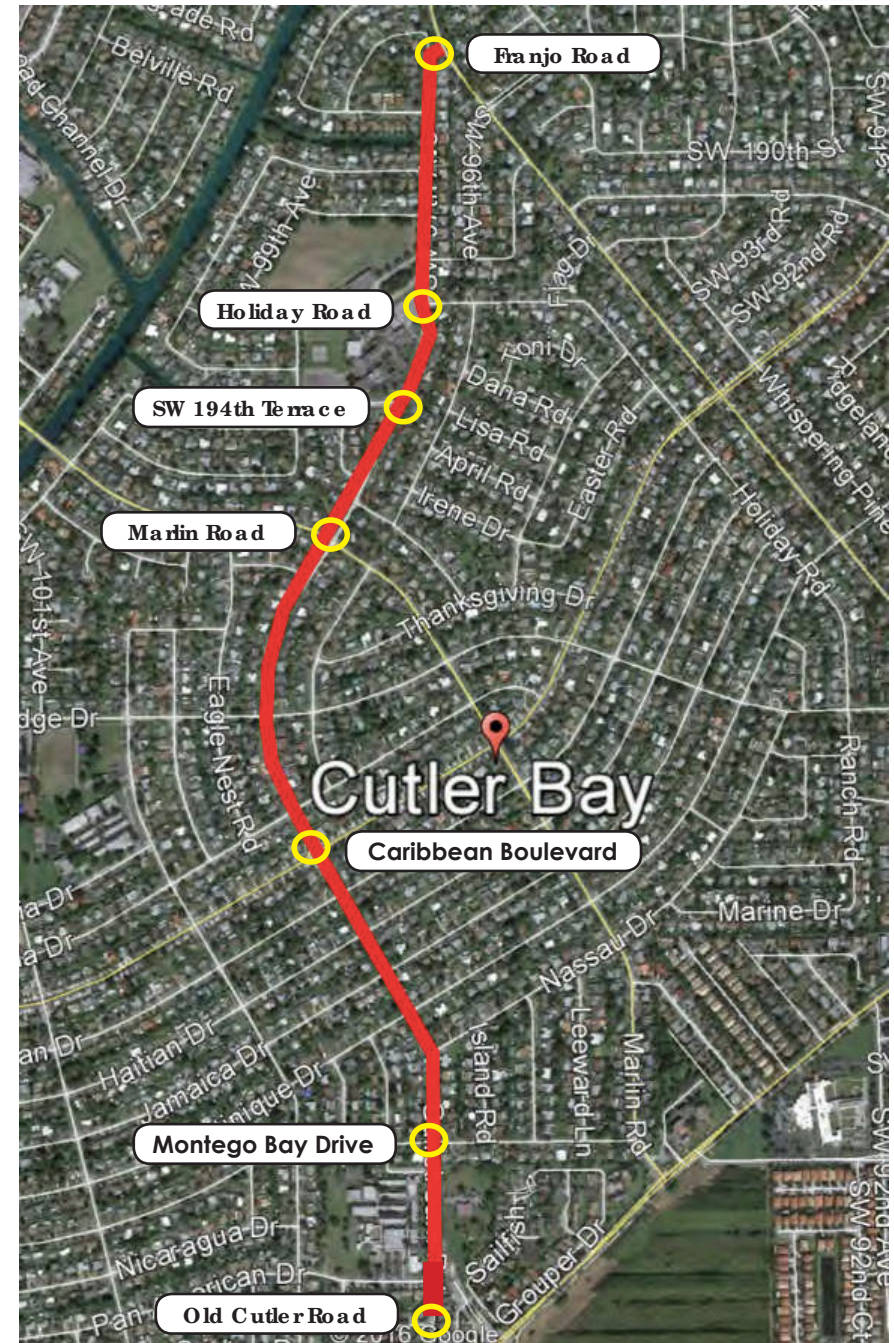
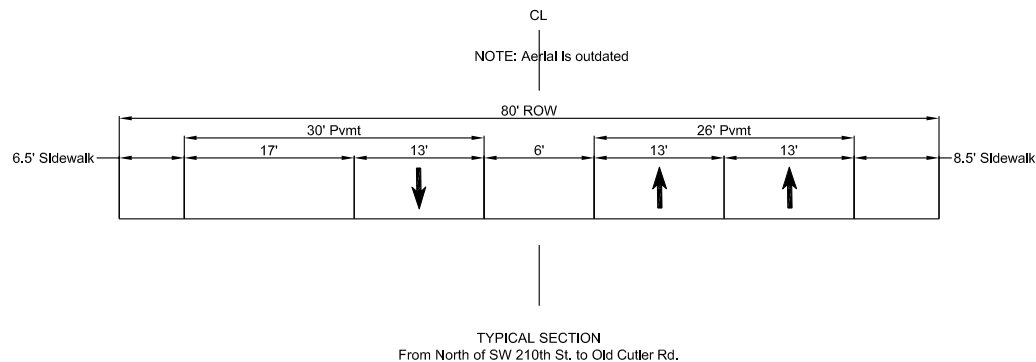
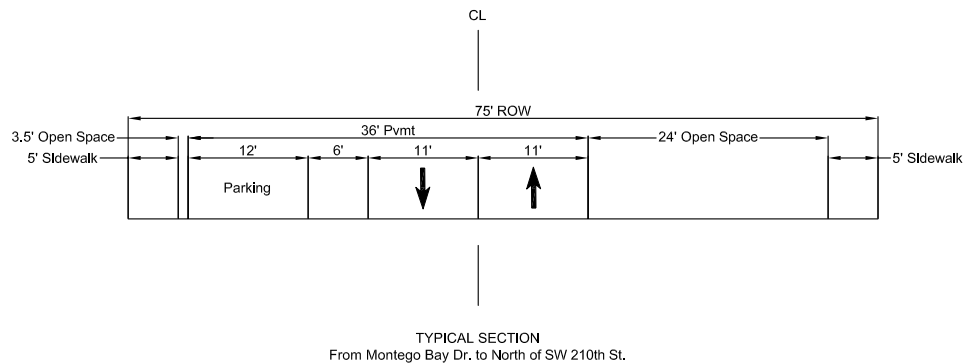
A bike and pedestrian only bridge is recommended for the canal crossing on Marlin Road if the current bridge cannot be widened. Sharrows are not recommended due to potential speeding issues at this location. A twenty two foot wide bridge is shown here with a cycle track and one ten foot wide sidewalk.



GULFSTREAM ROAD *Existing Characteristics*

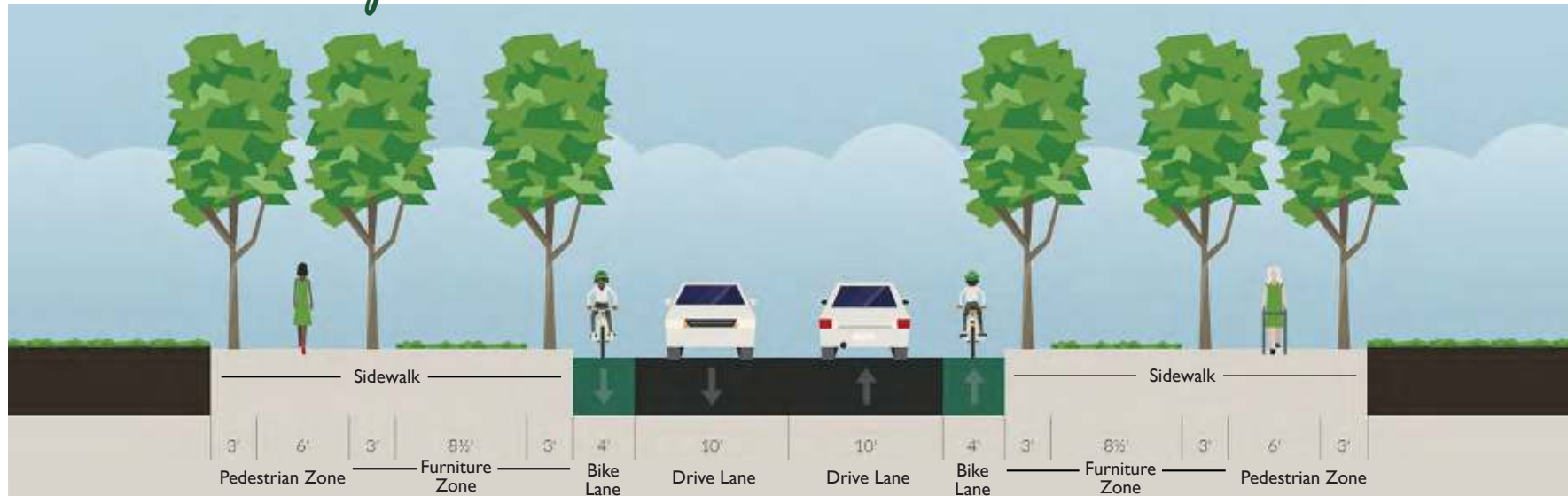
- ROW: 70'-80'
- Speed limit: 30mph
- 2 lanes (third lane varies)
- Lane width: 10'-13'
- 5' sidewalks
- No median
- Mostly residential
 - No transit
 - No bike facilities

TYPICAL SECTIONS



GULFSTREAM ROAD 2-Lane Option

Greenway/Boulevard



ROW Varies, 75' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 70'-75' |
| 2 travel lanes | 10' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 11' must be reserved for sidewalk and planting strips, curb and gutter) Pedestrian zone Furniture zone Bike lane Landscaped buffer with shade trees | 6' minimum 8' minimum 4' minimum, 8' desired 3' minimum |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Between Franjo Road and SW 210th Street, Gulfstream Road is a two lane boulevard with bike paths and walking paths.

Walking path (sidewalk):

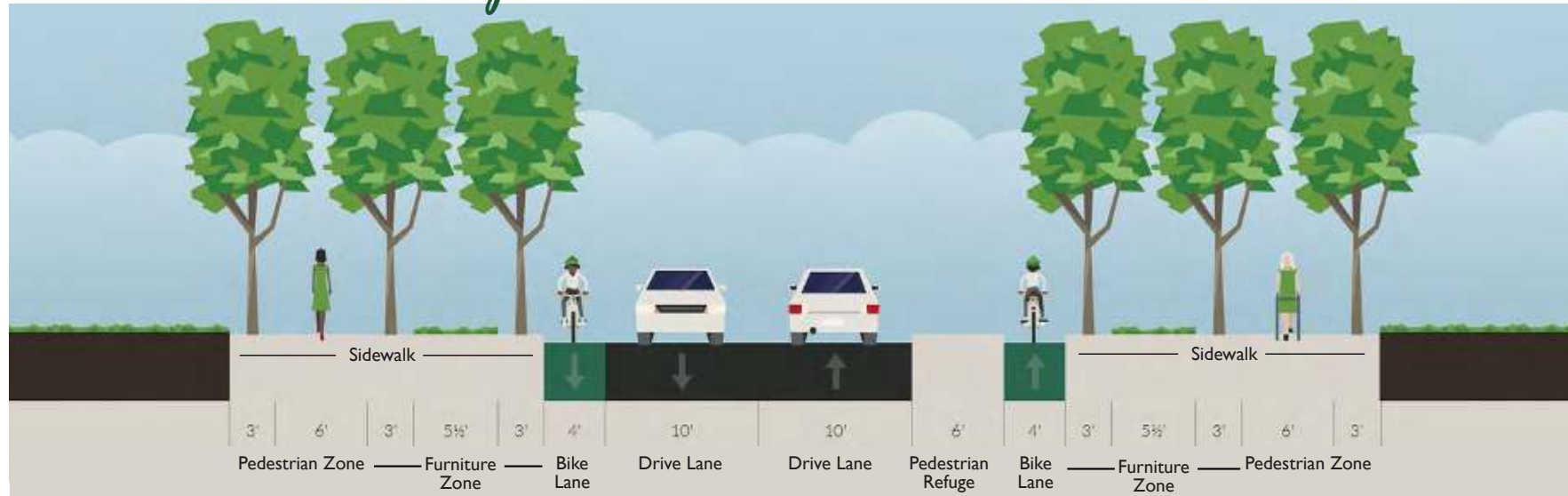
An enhanced sidewalk is lined with shade trees, making Gulfstream the preferred corridor for walking. The walking path includes benches, street lamps and bike racks between the landscaped planting strip.

Bike path:

The bike paths are also generously lined with shade trees for an easy and comfortable route to Old Cutler Road, Caribbean Boulevard and Franjo Road.

GULFSTREAM ROAD *Midblock Crossing*

Greenway/Boulevard



ROW Varies, 75' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 70'-75' |
| 2 travel lanes | 10' x 2 |
| Street <ul style="list-style-type: none"> Sidewalk (<i>minimum 11' must be reserved for sidewalk and planting strips, curb and gutter</i>) Pedestrian zone Furniture zone Bike lane Landscaped buffer with shade trees Pedestrian refuge | 6' minimum 5' minimum 4' minimum, 8' desired 3' minimum 6' minimum |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Midblock Crossings:

At midblock crossings, the east side of the roadway is modified to extend the sidewalk and narrow the crossing distance. The swale is narrowed to accommodate a six foot pedestrian refuge adjacent to the bike lane. A smaller, three foot wide pedestrian refuge is between the two travel lanes.

Pedestrian refuges align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

Pavement can be marked before and after the crosswalk with yellow stripes across the entire roadway or white wavy lines along the pavement edge.

GULFSTREAM ROAD 2-Lane Option with Turn Lane

Greenway/Boulevard



80' ROW Shown Above.

| ELEMENTS | MINIMUM DIMENSIONS |
|--|--|
| ROW width | 80' |
| 2 travel lanes and 1 turn lane as needed | 10' x 2, 11' turn lane |
| Street <ul style="list-style-type: none"> Sidewalk (minimum 11' must be reserved for sidewalk and planting strips, curb and gutter) Pedestrian zone Furniture zone Bike lane Landscaped buffer with shade trees | 6' minimum 6' minimum 4' minimum, 8' desired 3' |
| Crosswalks at intersections | 12' wide minimum |

DESCRIPTION

Between SW 210th Street and Old Cutler Road, Gulfstream Road increases from two lanes to three lanes with one center turn lane. Therefore, the additional turn lane replaces the pedestrian refuge/median. All other dimensions and elements should match the 2-lane roadway design. The need for a turn lane at this location will be analyzed through future traffic studies.

Character Reference Sheet

SW 87th AVENUE: Transit Corridor and Greenway



Bike lanes with a wide and lushly landscaped planting strip or bio swales as shown in the image above.

FRANJO ROAD: Urban Connector



Separate various modes of transportation for more comfortable spaces by creating exclusive travel zones for pedestrians, bicycles and cars as shown above.

MARIN ROAD: Bikeway



On street parking buffers the bike lane from the travel lane in this image above.



Example of how bike path and transit stop might look with changes in grade, pavement markings and special barriers.



Barriers can help to separate zones along with curbs, bio swales and changes in grade especially at mid block crossings. Barriers can be decorative and distinct to Cutler Bay.

GULFSTREAM ROAD: Greenway/Boulevard



Gulfstream Road will be planted with large shade trees to create a boulevard/greenway.

Character Reference Sheet

Mid Block Crossings



Pavement markings can be added to alert drivers that they are approaching a crosswalk.



Midblock crossings use pedestrian refuges/ medians and barriers to create a safe way for pedestrians and bicyclists to cross the street.



Curb extensions narrow crossing distances for safer crossings.

Intersection Crossings



Barriers and changes in pavement texture create safer crossings.



Be creative. Crosswalks can be eye catching and thought provoking while still providing safety.

Evaluation and Prioritization

The four conceptual projects are described below. Each one is designed to have a distinct character; two corridors are transit routes which have accommodated bus facilities into the project design. All corridors include a shared pedestrian and furniture zone that is primarily open for walking with periodic furniture including benches, lighting, pedestrian signals, kiosks and bike racks.

Midblock crossings were addressed for all corridors. Barriers and pedestrian refuge/median islands are added to the section to enhance pedestrian crossings in the middle of the block. The landscaped buffer on the west side of the roadway is changed to a seven foot hardscaped median adjacent to the multi-use path to create a pedestrian refuge/median. Bus pull outs can be adjacent to the west pedestrian refuge/median. Barriers are placed on either side of the pedestrian refuge/median for additional safety as well as between the travel lane and the shared bus/bike lane for safer crossing. Pedestrian refuges/medians align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park or as identified within a Safe Routes to School Plan should be high emphasis.

Evaluation Criteria

The four projects were prioritized using three evaluation factors 1) Ease of Implementation; 2) Efficiency; 3) Maintains/Enhances Town Character. The Table below presents the prioritized projects. The project priorities are subject to change if additional funding comes available. This could be in the form of grants, private funding or impact fees.

1. SW 87th Avenue: Transit Corridor and Greenway

Transit Corridor

SW 87th Avenue is the primary transit corridor with an improved bike lane on both sides of the roadway.

Greenway

Landscaped buffers separate the various modal paths including sidewalk, multi-use path, travel lanes and bike lane. Shade trees are preferred when space allows. Small shrubs or palms are a good alternative for narrower landscaped buffers and planting strips. Bus pull outs can share the furniture zone.

Furniture Zone

When possible, street furniture should be placed in front of the pedestrian

sidewalk to create a furniture zone. Street furniture on SW 87th Avenue shall include bus shelters, benches, lighting, pedestrian signals, kiosks and bike racks.

Project Evaluation

Ease of Implementation: SW 87th Avenue ranks high for ease of implementation. The right-of-way exists for the project as described above.

Efficiency: The SW 87th Avenue ranks high for efficiency. The project will complete and existing regional bicycle network and also provide increase safety to several schools. This project also connects the two existing complete streets in the Town, Old Cutler Road and Caribbean Boulevard.

Maintain/Enhance Town Character: The significant increase to the tree canopy that would result from this greenway corridor ranks this project high for maintain/enhance Town character

2. Franjo Road: Urban Connector

Transit Corridor

Franjo Road is a secondary transit corridor with a bike lane on the roadway.

Urban Connector

Franjo Road connect to the main commercial centers on Old Cutler Road and SW 184th Street. Therefore, this street has an urban character. Shade trees cover the furniture zone and bicycle zones and include bio swales instead of traditional landscaped buffers.

Pedestrian and Furniture Zones

A shared pedestrian and furniture zone is primarily open for walking with periodic furniture including bus shelters, benches, lighting, pedestrian signals, kiosks and bike racks.

Project Evaluation

Ease of Implementation: Franjo Road ranks high for ease of implementation. The right-of-way exists for the project as described above.

Efficiency: Franjo Road corridor ranks medium for efficiency. The roadway links commercial centers as well as parks and schools, but does not connect to a regional bikeway.

Maintain/Enhance Town Character: This corridor ranks medium to maintain/enhance town character; the theme for this corridor is urban connector.

3. Marlin Road: Bike way and Canal Bridge

Bike way

Between US-1 and Sterling Drive, Marlin Road has two bike lanes. Since there are no buses on this roadway, more space is dedicated to green plantings and shade trees. Both sidewalks and bike lanes are shaded with trees for comfort and protection from the elements and each are wide.

From Sterling Drive to Old Cutler Road, Two bike lanes are protected from on street traffic by tree lined landscaped buffers. Both sidewalks and bike lanes are shaded with trees for comfort and protection from the elements and each are wide.

Canal Bridge

A bike and pedestrian only bridge is recommended for the canal crossing on Marlin Road. A twenty two foot wide bridge is shown here with two bike lanes buffered by two foot wide pavement markings.

Project Evaluation

Ease of Implementation: Marlin Road ranks medium for ease of implementation. The right-of-way exists for the project as described above, except for the canal bridge. The canal crossing will require additional permits as well as intergovernmental coordination with the South Florida Water Management District. Marlin Road is the longest corridor of the four in this study.

Efficiency: The Marlin Road corridor ranks medium for efficiency. The roadway links commercial centers, but does not connect to regional facilities.

Maintain/Enhance Town Character: This corridor ranks medium/high to maintain/enhance town character; the theme for this corridor is bikeway.

4. Gulfstream Road: Greenway/Boulevard

Greenway/Boulevard

Between Franjo Road and SW 210th Street, Gulfstream Road is a two lane boulevard with bike paths and walking paths. An enhanced sidewalk is lined with shade trees, making Gulfstream Road the preferred corridor for walking.

The walking path includes benches, street lamps and bike racks between the landscaped planting strip. The bike paths are also generously lined with shade trees for an easy and comfortable route to Old Cutler Road, Caribbean Boulevard and Franjo Road.

Project Evaluation

Ease of Implementation: Gulfstream Road ranks high for ease of implementation. The right-of-way exists for the project as described above.

Efficiency: The Gulfstream Road corridor ranks medium/low for efficiency. The roadway lacks connections to commercial centers and to regional facilities.

Maintain/Enhance Town Character: This corridor ranks medium to maintain/enhance town character; the theme for this corridor is greenway boulevard.

5. Traffic Circles at Intersections

As the County moves forward to address regional traffic issues, the Town should proceed with the assumption that the County's Road Impact Fee will be reallocated more towards the SMART Plan and roadway capacity purposes. To address this, future improvements at intersections along the complete streets corridors should avoid adding turn lanes and should favor additional traffic circles, where feasible. Turn lanes should only be added based on recommendations from an operational analysis and when a traffic circle can't be accommodated. Intersections along these complete street corridors should include traffic circles.

The Town has recent experience with new traffic circles at key intersections along two major east/west corridors, Old Cutler Road and Caribbean Boulevard. These successful public works projects can be measured by the improvement of traffic flow and ease of congestion which has had the positive result of creating roadway capacity in the overall network. Additionally, the Town has received multiple accolades and awards for the implementation of these retrofit projects within the existing neighborhoods. Not only have they improved traffic in the area, they have had a significant improvement to the aesthetics of the community. Below is a aerial view (google earth) of the traffic circle at Caribbean Boulevard and Gulfstream Road.



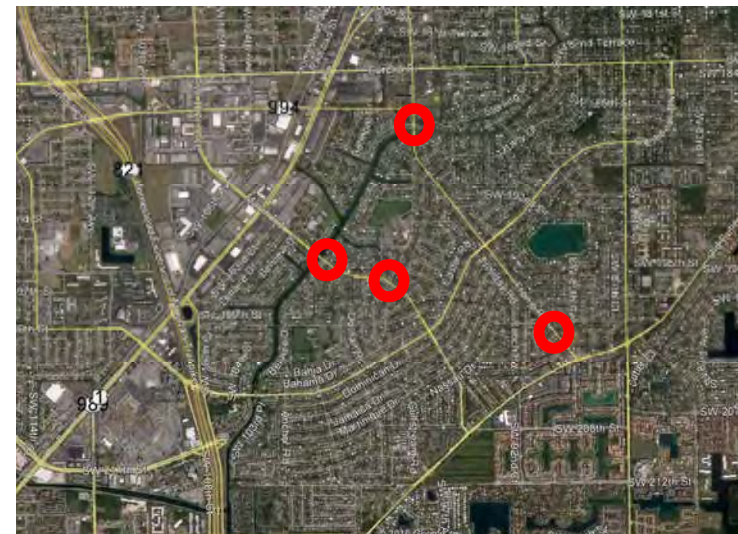
In addition to adding aesthetic improvements to a community, when designed properly, there are also traffic calming benefits. Slowing cars and controlling speeding was an important issue for the community which was brought up multiple times at the public workshops. Traffic calming aspects of the circle shown above include splinter islands on all approaches and a tight circle radii with mountable curbs on the center island to allow for larger vehicles.

Additional traffic capacity studies will be needed to move traffic capacity projects forward. These studies must show that additional improvements add roadway capacity. The primary locations to consider for additional traffic circles are found in the recommendations from the Town's Transportation Master Plan, these include:

1. SW 216th Street and SW 87th Avenue (See location map below)



- 2. Franjo Road and Cutler Ridge Drive
 - 3. Franjo Road and Sterling Drive
 - 4. Gulfstream Road and Marlin Road
 - 5. Marlin Road and Bell Aire Drive
- (See location map below)



6. Midblock Crossings and Pedestrian Refuges/ Medians

Midblock crossings use pedestrian refuges/medians crosswalks and barriers to create a safe way for pedestrians and bicyclists to cross the street. The following are proposed locations for midblock crossings and pedestrian refuges/medians on these four corridors.

SW 87th Avenue



Between SW 196th Street and SW 198th Street



Between SW 194th Terrace and SW 196th Street



At SW 192nd Street



At SW 189th Street



At 184th Terrace

Franjo Road



Between SW 193rd Drive and Caribbean Boulevard



Between Caribbean Boulevard and SW 196th Drive

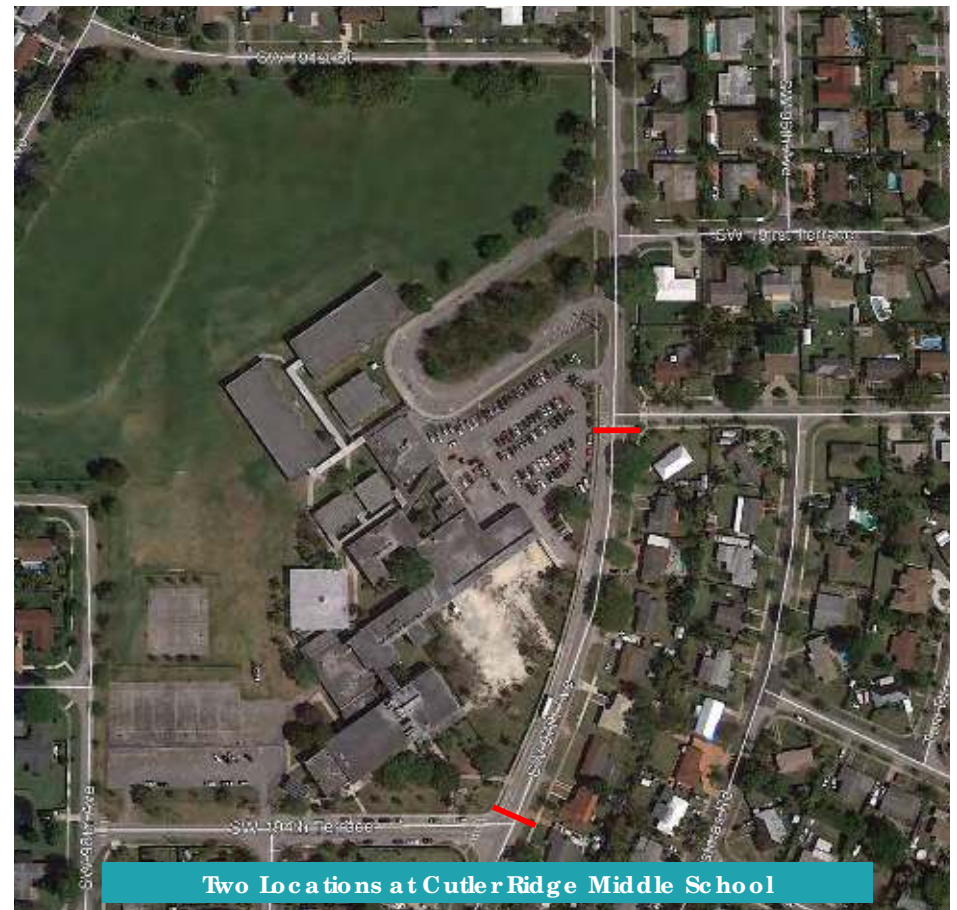


Between SW 89th Street and Old Cutler Road

Gulfstream Road



Between Marlin Road and Cutler Ridge Drive



Two Locations at Cutler Ridge Middle School

Marlin Road



7. New “Smart” or “Adaptive” Traffic Signals

An adaptive traffic signal is an intersection signal that can adjust in real-time to traffic conditions. A technology for smart traffic signals has been developed in an effort to reduce vehicle emissions and improve commute times in cities. Unlike other dynamic control signals that adjust the timing and phasing of lights according to limits that are set in controller programming, this system combines existing technology with artificial intelligence.

The traffic signals communicate with each other and adapt to changing traffic conditions to reduce the amount of time that cars spend idling. Using fiber optic video receivers similar to those already employed in dynamic control systems, the new technology monitors vehicle numbers and makes changes in real-time to avoid congestion wherever possible. Initial results from the pilot study are encouraging: the amount of time that motorists spent idling at lights was reduced by 40% and travel times across the city were reduced by 26%.

The use of smart traffic signals should be incorporated in future complete street projects. Preliminary locations could include the main intersections along the two transit corridors of this study, Franjo Road and SW 87th Avenue. The exact intersection locations should be further refined through traffic warrant studies.

Conceptual Cost Estimates

| Project Cost Estimates - Quantities | | | | | | | | | | | | | |
|-------------------------------------|-----------------|-----------------|-----------------------|--------------|------------|------------------------|------------------|-------------------|-----------|--------------------------|----------|--------------|-----------|
| No. | Project | From | To | Bus Shelters | Cost (MDT) | Multi-use Path (Miles) | Cost (Sq. Yards) | Bike Lane (Miles) | Cost | Shared Bike Lane (Miles) | Cost | Street Trees | Cost |
| 1 | SW 87th Avenue | Old Cutler Road | SW 184th Street | 10 | \$250,000 | 1.35 | \$380,000 | 0 | 0 | 1.35 | \$10,000 | 1,400 | \$700,000 |
| 2 | Marlin Road | US-1 | Sterling Road | 0 | 0 | 0 | 0 | 0.65 | \$89,000 | 0 | 0 | 400 | \$200,000 |
| 3 | Marlin Road | Sterling Drive | Old Cutler Road | 0 | 0 | 0 | 0 | 2.4 | \$367,000 | 0 | 0 | 1,500 | \$750,000 |
| 4 | Franjo Road | Old Cutler Road | SW 184th Street | 12 | \$300,000 | 0 | 0 | 1.65 | \$168,000 | 1.65 | \$12,000 | 550 | \$275,000 |
| 5 | Gulfstream Road | Franjo Road | N. of Old Cutler Road | 0 | 0 | 0 | 0 | 3 | \$408,320 | 0 | 0 | 1,700 | \$850,000 |

| Project Cost Estimates - Quantities (CONTINUED) | | | | | | | | | | | | | | | |
|---|-----------------|-----------------|-----------------------|------------|----------|-------------------|---------|--------------------------|----------|----------------|------|---------|----------|--------|-----------|
| No. | Project | From | To | Crosswalks | Cost | Midblock Crossing | Cost | Pedestrian refuge/Median | Cost | Traffic Circle | Cost | Parklet | Cost | Bridge | Cost |
| 1 | SW 87th Avenue | Old Cutler Road | SW 184th Street | 50 | \$10,000 | 5 | \$2,500 | 5 | \$32,000 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Marlin Road | US-1 | Sterling Road | 12 | \$2,400 | 2 | \$1,000 | 2 | \$13,000 | 0 | 0 | 0 | 0 | 1 | \$720,000 |
| 3 | Marlin Road | Sterling Drive | Old Cutler Road | 50 | \$10,000 | 2 | \$1,000 | 2 | \$13,000 | 2 | TBD | 4 | \$20,000 | 0 | 0 |
| 4 | Franjo Road | Old Cutler Road | SW 184th Street | 40 | \$8,000 | 3 | \$1,500 | 3 | \$19,500 | 2 | TBD | 4 | \$20,000 | 0 | 0 |
| 5 | Gulfstream Road | Franjo Road | N. of Old Cutler Road | 40 | \$8,000 | 3 | \$1,500 | 3 | \$19,500 | 0 | 0 | 6 | \$30,000 | 0 | 0 |

Prioritization Summary Table

| No. | Project Prioritization | From | To | Description |
|-----|------------------------|-----------------|-----------------------|---|
| 1 | SW 87th Avenue | Old Cutler Road | SW 184th Street | SW 87th Avenue is the primary transit corridor with an improved bike lane on the roadway. |
| 2 | Marlin Road | US-1 | Sterling Drive | Since there are no buses on this roadway, more space is dedicated to green plantings and shade trees. Both sidewalks and bike lanes are shaded with trees for comfort and protection from the elements and each are wide. A wide expanse of pavement is interrupted with a six foot wide planted median. |
| 3 | Marlin Road | Sterling Drive | Old Cutler Road | From Sterling Drive to Old Cutler Road, Marlin Road narrows to sixty and seventy feet and is a two-lane road. |
| 4 | Franjo Road | Old Cutler Road | SW 184th Street | Franjo Road is a secondary transit corridor with bike lanes on each side of the roadway. |
| 5 | Gulfstream Road | Franjo Road | N. of Old Cutler Road | Between Franjo Road and SW 210th Street, Gulfstream Road is a two-lane boulevard with bike paths and walking paths. An enhanced sidewalk is lined with shade trees, making Gulfstream the preferred corridor for walking. The walking path includes benches, street lamps and bike racks between the landscaped planting strip. |

Funding Sources

Funding for transportation projects comes from three primary sources: Local, State and Federal. Each year funding is more difficult to come by. Cities and counties, face the dilemma of rising costs of transportation projects, increasing traffic volumes and limitations on the ability to generate revenue. Fast changing economic environments put pressure on local governments to keep up with growth and congestion. At the same time, most states limit counties' ability to raise revenue.

Faced with rapidly increasing construction costs and traffic volumes local governments are finding new funding and financing solutions for transportation. Often, these solutions involve partnerships with other jurisdictions, the private sector and, most of all, county residents. Unfortunately, Florida is a donor state, giving more into the federal system than it gets back. Most monies for large projects are collected locally, provided to the Federal Government, and then reallocated to the states to be administered to agencies, like FDOT.

Local Funding

Local funding is generated from within a city or county, generally relying on property taxes or other funds. Many communities have concurrency fees or impact fees, which can be applied to local infrastructure projects. In high-growth communities, it is advised that they consider these in the form of mobility fees, which require that developments fund their fair share of the infrastructure needed to support their development.

Miami-Dade County's People's Transportation Plan, 1/2 Penny Sales Tax

Miami Dade County's People Transportation Plan (PTP), half-penny transportation surtax was approved by Miami-Dade County voters in November 2002 and included \$476 million for public works projects. The PTP funds to be provided were for major highway and road improvements totaling \$309 million, and for neighborhood improvements totaling \$167 million. Twenty percent of the total funding is provided to municipalities, based on their population. Each city must spend at least 20% of their funds on transit projects. Importantly, this source of funds can be used for a local match to federal funding. An advantage many local areas do not have.

Neat Streets Miami Local Matching Tree Grant

In an attempt to reach the Million Trees Miami goal of 1 million trees planted by

2020 and a 30 percent tree canopy, we're pleased to announce the second year of the Street Trees Matching Grant program. Funded by Miami-Dade County, this grant engages municipalities, non-profits and **community organizations** in planting native or Florida-friendly trees on county or local corridors and gateways. Neat Streets Miami Street Tree **Matching Grants of \$5,000 to \$25,000** will be awarded to those communities who can demonstrate the greatest benefits for residents, employers and visitors and are able to provide a stewardship plan for our joint investment.

Local Option Fuel Taxes

County governments are authorized to levy up to 12 cents of local option fuel taxes in three separate levies on fuel sold within the county. The funds are used for transportation expenditures.

- The ninth-cent fuel tax is a tax of 1 cent on every net gallon of motor and diesel fuel sold within a county.
- A tax of 1 to 6 cents on every net gallon of motor and diesel fuel sold within a county.
- A tax of 1 to 5 cents on every net gallon of motor fuel sold within a county. Diesel fuel is not subject to this tax. The funds may also be used to meet the requirements of the capital improvements element of an adopted local government comprehensive plan.

State Funding

The State of Florida has several funding sources that primarily come from FDOT. The Governor's FY 2016/2017 transportation budget makes the following investments:

- \$3.3 billion for construction of highway projects to keep Florida's transportation infrastructure among the best in the country.
- \$153.9 million in seaport infrastructure improvements to keep Florida first in the world for ocean cruise passengers and a major U.S. cargo gateway.
- \$237.6 million for aviation improvements to keep Florida first in airport infrastructure investments.
- \$731.9 million for scheduled repair of 48 bridges and replacement of 21 bridges to keep Florida's bridges among the best structures in the country.
- \$963.4 million for maintenance and operation to keep Florida's infrastructure among the best maintained in the country.
- \$574 million for public transit development grants to keep Florida's growth in transit ridership over the last five years among the best in the country.

- \$159 million for safety initiatives to continue to improve the safety of families and visitors on our roads.
- \$46.6 million for bike and pedestrian trails to keep Florida's trail development among the best in the country.

FDOT Safety Office Programs

The Florida Department of Transportation Safety Office (FDOT) funds subgrants that address traffic safety priority areas including:

- | | |
|----------------------------|--|
| • Aging Road Users | • Occupant Protection and Child Passenger Safety |
| • Community Traffic Safety | • Pedestrian and Bicycle Safety |
| • Impaired Driving | • Police Traffic Services |
| • Motorcycle Safety | • Speed and Aggressive Driving |
| • Teen Driver Safety | • Traffic Record Coordinating Committee (TRCC) |
| • Traffic Records | |

Awards to state and local safety-related agencies are used as “seed” money to assist in developing and implementing programs that address traffic safety deficiencies or expand ongoing safety programs activities. Funding for these grants are apportioned to states annually from the National Highway Traffic Safety Administration (NHTSA) according to a formula based on population and road mileage. Funding may be available for projects in other program areas if there is documented evidence of need.

To promote self-sufficiency, agencies are expected to provide a local funding match when personnel costs are included in second and third year projects. The local match is normally 25% of eligible costs for second year projects and 50% for third year projects.

These grants are awarded on a Federal fiscal year basis, and can be funded for a maximum of three consecutive years in each priority area.

Economic Development Transportation Fund

The Economic Development Transportation Fund, commonly referred to as the “Road Fund,” is an incentive tool designed to alleviate transportation problems that adversely impact a specific company's location or expansion decision. The award amount is based on the number of new and retained jobs and the eligible transportation project costs, up to \$3 million. The award is made to the local government on behalf of a specific business for transportation improvements.

Recommendations

In addition to the project development, the Town can encourage complete streets through the adoption of new policies, regulations and funding strategies. Education, encouragement and enforcement are also recommended to fully integrate complete streets as the Town continues to grow and develop.

Complete Streets Impact Fees and Concurrency

The Town is poised to be one of the County's premiere business and residential centers in the South. The issue relative to transportation continue to be the lack of roadway capacity to maintain an adequate level of service at peak periods. One way to solve this problem is by using alternative modes of transportation to add capacity to the system. The consequences of continued growth without supporting multimodal mobility are significant. As the economy rebounds and businesses are seeking greater efficiencies, having employees spend hours of their day in a commute is wasteful and is an economic drain to the region as a whole.

To ensure new development pays its fair share to mitigate for impacts to the system, the Town has established a Concurrency Management System (CMS) that ensures the availability and sufficiency of public facilities and services at the time the impacts of development occur. The CMS ensures that development approval is contingent on the Town's ability to provided facilities and services or requires the developer provide those facilities in order to maintain adopted roadway LOS standards. While it is important for the Town to continue to collect fees for vehicle trips, the CMS could be revised to encompass all forms of mobility.

Recent legislation allows for flexibility for how impact fees are collected. It allows the pooling of multiple fees to fund a single, regionally significant system. However, fees cannot be utilized to fund operations and maintenance. State statutes also require that the collection of fees must be based on the most recent local data. The levels of service that communities desire to live up to must be reasonable.

Under these current rules, local governments are allowed to repeal transportation concurrency. In doing so, these governments may elect to have an alternative mobility funding system. The benefit of this is to allow for alternative methodologies that rely solely on vehicle trips in a specific area, and limitations resulting from assessing fees based on concurrency.

However, this funding system “may not be used to deny, time, or phase an application for site plan approval, plat approval, final subdivision approval,

building permits or the functional equivalent of such approvals provided that the developer agrees to pay for the development's identified transportation impacts via the funding mechanism implemented by the local government." In addition, a "mobility fee-based funding system must comply with the dual rational nexus test applicable to impact fees." (Florida State Statutes – 163.3180).

Under alternative systems, a bank of multimodal projects and the cost of their implementation will be arrived at by projecting needs across all modes into the future, based on anticipated development as defined on the Town's Future Land Use Map. Facilities whose level of service fall below those thresholds placed in the Comprehensive Plan can then be brought into compliance. The cost of those projects will be divided by the number of trips anticipated to result from the development over the planning horizon, as specified in the Comprehensive Plan, Land Development Code and Future Land Use Map, and a cost per trip will be arrived at.

As part of a proportionate fair-share system, developers will be required to contribute a certain dollar amount based on the number of trips they ultimately generate. The Town will implement the complete street projects with these funds. Developers will have the opportunity to gain credits which will enable them to lessen the amount paid, by implement one or more multimodal oriented urban design aspects, or policy initiatives at their development site.

Money generated by an impact fee program are required to go into a dedicated fund, which will be used to implement the projects. How a "mobility fee" takes shape, however, can be in one of many ways. Some examples are below:

1. "Conditional" Concurrency:

An attempt to achieve mode split standards. Under this option, concurrency would be under a roadway and multimodal system, resulting in a somewhat indirect approach to funding multimodal projects. Difficult to execute.

2. Mobility Impact Fee (Standards - Consumption Based):

Based on "person trips". Each development charged the incremental value of the facilities needed to service it. Difficult to estimate.

3. Mobility Impact Fee (Plans - Based):

Based on adopted plans allowing for specific projects derived from local need, analysis and professional standards. Each infrastructure has its own capacity, and level of service standard to be achieved. Fee based on cost of implementing plans in order to accommodate future growth. Meets the Dual Rational Nexus test.

4. Multimodal Concurrency Fee:

Concurrency expanded for multimodal LOS, based on a weighted average of each mode, adding up to 100%. Allows more freedom in the funding scheme. Perpetuates predominant mode of travel. Costly to implement.

5. Multimodal Impact Fee and Roadway Impact Fee Hybrid:

Combings two methodologies. Total trips estimated for a development, impact then projected and fees assessed per mode. Each fee can be different. Trip transfer credits can be purchased by developer based on policies. Potential for underfunding. Easy to implement.

Complete Streets Revisions to Cutler Bay Growth Management Plan

The Town may include this entire complete streets policy in the comprehensive plan as a complete policy package, or may selectively adopt specific objectives or policies. This section fits in the comprehensive plan's Transportation Element.

Adopt new Complete Streets Goal: Provide safe and comfortable routes for walking, bicycling, and public transportation to increase use of these modes of transportation, enable convenient and active travel as part of daily activities, reduce pollution, and meet the needs of all users of the streets, including children, families, older adults, and people with disabilities.

Adopt new complete streets Objectives and Policies: Integrate Complete Streets infrastructure and design features into street design and construction to create safe and inviting environments for all users to walk, bicycle, and use public transportation.

TI.1.1. In planning, designing, and constructing Complete Streets:

- Include infrastructure that promotes a safe means of travel for all users along the right of way, such as sidewalks, shared use paths, bicycle lanes, and paved shoulders.
- Include infrastructure that facilitates safe crossing of the right of way, such as accessible curb ramps, crosswalks, refuge islands, and pedestrian signals; such infrastructure must meet the needs of people with different types of disabilities and people of different ages.
- Ensure that sidewalks, crosswalks, public transportation stops and facilities, and other aspects of the transportation right of way are compliant with the Americans with Disabilities Act and meet the needs of people with different types of disabilities, including mobility impairments, vision impairments, hearing impairments, and others. Ensure that the ADA

Transition Plan includes a prioritization method for enhancements and revise if necessary.

- Prioritize incorporation of street design features and techniques that promote safe and comfortable travel by pedestrians, bicyclists, and public transportation riders, such as traffic calming circles, additional traffic calming mechanisms, narrow vehicle lanes, raised medians, dedicated transit lanes, transit priority signalization, transit bulb outs, road diets, high street connectivity, and physical buffers and separations between vehicular traffic and other users.
- Ensure use of additional features that improve the comfort and safety of users:
 - Provide pedestrian-oriented signs, pedestrian-scale lighting, benches and other street furniture, bicycle parking facilities, and comfortable and attractive public transportation stops and facilities.
 - Encourage street trees, landscaping, and planting strips, including native plants where possible, in order to buffer traffic noise and protect and shade pedestrians and bicyclists.
 - Reduce surface water runoff by reducing the amount of impervious surfaces on the streets.

Add new performance measure Objective and Policies: Establish performance standards with measurable outcomes to assess safety, functionality, and actual use by each category of users; include policies such as:

- By [2025], facilitate a transportation mode shift so that [20] % of trips occur by bicycling or walking.
- By [2025], reduce the number of injuries and fatalities to bicyclists and pedestrians by []%*.
- Reduce per capita vehicle miles traveled by []%* by [insert year].
- Provide a high proportion of streets ([]%*) with sidewalks, low design speeds, tree canopy, and street furnishings.
- Increase the miles of bicycle lanes and other bikeways by []%* by [insert year].
- Increase the miles of sidewalks by []%* by [insert year]

** Exact percentages will be determined at the time the comprehensive plan amendment is adopted.*

Complete Streets Revisions to Cutler Bay Land Development Regulations, Article IX

Revise street standards in the Land Development Regulations, Article IX, to ensure that standards support and do not impede Complete Streets.

Sec. 3-132. General principles.

The town views streets as the most important public spaces and therefore has developed the following set of principles which permit this space to be used by both vehicles and people:

(1) Streets are designed to be only as wide as necessary to accommodate the all users and modes of transportation ~~vehicular mix serving adjacent land uses~~, while providing adequate access.

...

(9) The Cutler Bay Public Works Department shall make complete streets practices a routine part of everyday operations, shall approach every transportation project and program as an opportunity to improve public streets and the transportation network for all users, and shall work in coordination with other departments, agencies, and jurisdictions to achieve complete streets.

(10) Every street project on public streets shall incorporate complete streets infrastructure sufficient to enable reasonably safe travel along and across the right of way for each category of users; provided, however, that such infrastructure may be excluded, upon written approval by the Town Manager.

(11) As feasible, Cutler Bay shall incorporate complete streets infrastructure into existing public streets to improve the safety and convenience of users, construct and enhance the transportation network for each category of users, and create employment.

(12) If the safety and convenience of users can be improved within the scope of pavement resurfacing, restriping, or signalization operations on public streets, such projects shall implement complete streets infrastructure to increase safety for users.

...

Sec. 3-133. Design specifications.

Streets shall be designed to permit comfortable use by motorists, pedestrians, and bicyclists, transit users and motorists. Street widths, design speeds, and the number of motor travel lanes shall be minimized to enhance safety for motorists and non-motorists alike. The specific design of any given street must consider the building types which have frontage and the relationship of the street to the overall town street network. New development with frontage on existing

publicly maintained streets shall be required to build to the standards of this article.

...

(3) *Traffic control plans.* Traffic control plans showing signage and pavement markings shall be prepared in accordance with the guidance of the manual on uniform traffic control devices, shall address all modes of transportation and shall be prepared by the public works department.

...

(11) *On-street parking.* On-street parking is recommended where building type and use will generate regular parking use. For streets which serve commercial and mixed use buildings, and where possible, on-street parking is required and should be marked as such. Where possible, on-street parking on at least one side of the street is recommended on streets serving single-family, two-family, townhouse, and multifamily structures with lots 60 feet or less in width. Where possible, on-street parking must also be provided on one side of any street adjacent to a square, park or other open space. On-street parking can include parklets. A parklet is a mini park that sits within a parking lane and provide a safe space for sitting along the greenway.

...

(13) *Pedestrian street crossings.* Midblock crossings, bulb outs, raised crosswalks and similar techniques may be used to accommodate pedestrians. when traffic and site conditions exist to provide circulation or access to schools, playgrounds, parks, shopping centers, transportation and other facilities. Pedestrian refuges/medians shall align with striped crosswalks and include crossing signals whenever possible. They should be located within 0.25 miles of a school or park.

(14) *Bike lanes.* Designated bike lanes shall be eight feet where feasible and a minimum of four five feet in width shall be installed by all development with frontage along arterial and collector roadways; four feet along residential streets.

...

~~(16) *Planting strips.* Planting strips should be located between the edge of pavement/curb and sidewalk and parallel to the street. Within commercial areas and other sidewalks with high pedestrian volumes, grated tree wells may be used in lieu of planting strips. The minimum width of all planting strips shall be five feet.~~

(16) *Shared pedestrian and furniture zone.* A shared pedestrian and furniture zone is primarily open for walking with periodic furniture including bus shelters, benches, lighting, pedestrian signals, kiosks and bike racks. This zone shall be a minimum of five feet in width, and nine feet where feasible.

(17) *Shared Multi-use paths.* A path that is jointly used for both bicycles and pedestrians shall be ~~ten~~ eight feet in width. Wherever they are present they should be easily accessible and where possible should be on both sides of the street and meet all ADA requirements. Multi-use paths should be separate from travel lanes with a physical buffer that could include a planting strip or barriers.

Complete Streets Public Education

The objective of education is to promote the concept of mobility to the general public in order to get people walking and biking safely. The Town can provide educational pamphlets and workshops about the use of new facilities such as sharrows. The Town can work with the school board to include safe bicycling and walking classes in school curricula. There are also advertisement opportunities on the Town shuttle bus to promote safety. Some other educational opportunities are to work with Florida Bicycle Association to implement initiatives such as Cycle Savvy and Alternative Transportation Education.

Complete Streets Public Enforcement

Enforcement can be used as a complimentary tool to education, not as a punishment. Enforcement can be targeted to both motorist and non-motorists to ensure the rights of both groups are respected. The Town police can have a greater presence by patrolling on bikes. Promote Ride Right, Drive Right campaign to enforce the 3-foot separation law between motorists and bicyclists.

- i. Note that many types of accommodations for people with disabilities are mandated by federal law under the Americans with Disabilities Act.
- ii. A road diet is a transportation technique in which the number or width of lanes dedicated to motor vehicle traffic is decreased, often by combining the two central lanes into a single two-way turn lane, in order to create additional space within the right of way for features such as bicycle lanes, sidewalks, or buffer zones.
- iii. Connectivity describes the directness of routes and density of connections in a street network. A street network with high connectivity has many short links, numerous intersections, and few dead-end streets. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations.

This page intentionally left blank.



THE CORRADINO GROUP



Miami-Dade Transportation
Planning Organization

