TPO
Miami-Dade Transportation Planning Organization

SMART PLAN CORRIDOR INVENTORY
SOUTH DADE TRANSITWAY CORRIDOR

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FINAL REPORT - DECEMBER 2017

SMART PLAN CORRIDOR INVENTORY

SOUTH DADE TRANSITWAY CORRIDOR

CORRIDOR ASSESSMENT AND ANALYSIS TECHNICAL MEMORANDUM

Prepared for

Miami-Dade Transportation Planning Organization

Miami-Dade Transportation Planning Organization

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Prepared by: WSP

December 2017

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1. Introduction

On April 21, 2016, the Miami-Dade Transportation Planning Organization (TPO) Governing Board approved the Strategic Miami Area Rapid Transit (SMART) Plan to advance a program of rapid transit initiatives to address the mobility needs throughout Miami-Dade County. The SMART Plan includes six major rapid transit corridors and a Bus Express Rapid Transit (BERT) Network for Miami-Dade County. The South Dade Transitway Corridor is designated as a SMART Plan rapid transit corridor that is 20-miles in length and connects numerous municipalities which represent some of the fastest growing communities in Miami-Dade County. This corridor extends from the Dadeland South Metrorail Station to the SW 344th Street Park-and-Ride/Transit Terminal and provides a mobility connection between the Miami Central Business District and the Village of Pinecrest, the Village of Palmetto Bay, Town of Cutler Bay, City of Homestead, and Florida City.

1.1. Purpose

The purpose of this document is to create an inventory of existing socioeconomic, demographic, and land use conditions within the South Dade Transitway Corridor. This effort also includes a compilation of current state, county and local plans within a half-mile of the Transitway. This information will used to identify a complete picture of the existing conditions within the corridor area, and identify needs and deficiencies to further support transit and transit-oriented development.

2. Literature Review

2.1. FDOT - Multimodal Transportation Districts

The Florida Department of Transportation (FDOT) Multimodal Transportation Best Practices and Model Element Document was developed to help local governments prepare multimodal elements for local governmental comprehensive plans. Per Chapter 163, Part II, of the Florida Statutes (F.S.), all local governments in the State of Florida must prepare and adopt comprehensive plans that guide future development and growth. These comprehensive plans are required to include transportation elements that include a "special emphasis on public transportation systems, where feasible."

The document identifies best practices, offers general guidance for language (e.g. focus on objective language), and discusses key concepts (e.g. the integration of land use and transportation). The bulk of the document is organized into two main sections – model element guidance for Urbanized Areas, and a model element for Small Communities and Rural Areas.

2.1.1. Model Element for Urbanized Areas

Chapter 2 of the document provides a detailed overview of the main components of a comprehensive plan transportation element that are most applicable to urbanized areas. This section of the literature review will concentrate predominantly on this chapter.

Inventory and Analysis of Transportation and Land Use

This recommended section of a comprehensive plan encourages plan writers to conduct a thorough review of a community's existing conditions. These include an inventory of regional and modal plans, land use and multimodal environment conditions, public transportation routes and conditions, major roadways, evacuation routes, bicycle and pedestrian facilities, ports, aviation, rail and related facilities, and intermodal facilities and conditions. The identification of these facilities is described in the guiding statutory language which states "the comprehensive plan must be based on relevant and appropriate data collected from professionally accepted data sources."

From a best practice perspective, the document identifies a few examples of distinction. The City of El Paso, Texas discusses current conditions in the following categories: regional transportation planning, traffic congestion, air quality, walkability, parking, public transit, freight, regional rail, airports, and ports of entry (El Paso is located on the Mexican border, adjacent to Juarez, Mexico). The City of Fort Lauderdale identifies public transportation generators, including commercial, industrial and office land uses, recreation, education, an institutional and transportation land uses. These transportation generators are in turn mapped to identify convergences of land uses and attractors that could help develop transportation policies.

From a rapid transit corridor development perspective, the subset of inventorying related to Public Transportation Routes and Conditions is instructive. The section discusses different transit modes and how they interrelate with land use. A matrix outlines the characteristics of each of the discussed modes. This matrix is taken from FDOT's Transit Oriented Development (TOD) Workshop Sketchbook. The section includes Florida-specific examples of different technologies when available. For instance, this section provides a cursory overview of Sunrail and Tri-Rail services in its commuter rail description, and, Orlando's LYMMO service in discussing Bus Rapid Transit (BRT).

This section also calls for a synthesis between the information provided in the transit agency's Transit Development Plan (TDP) and the Comprehensive Plan. "Coordinating TDPs with the transportation element… provides an opportunity to guide transit-supportive land use along transit corridors and anticipate transit systems needs particularly beyond the planning horizon on of the TDP." TDPs are statutorily required to be developed for ten-year planning horizons. Thus, the transportation element of a comprehensive plan can take information developed for the TDP to develop a longer-reaching planning vision.

Additional best practices are scattered throughout this section of the document. A table identifies minimum dwelling densities for transit services. The source is *A Framework for TOD in Florida*, and suggests a minimum of 15 dwelling units per acre to support Premium Bus Services. In addition, a travel shed for TOD station diagram, (Best Practice 2-16) derived from the same document, provides a diagram identifying the cores surrounding TOD – a walkable Transit Core within one-quarter-mile of the station, a one-half-mile Transit Neighborhood, and a one-mile Transit Supportive Area beyond.

System Analysis and Future Needs

Chapter 163, Part II, F.S. requires local municipalities to do the following for system analysis and future needs of a transportation system: "1) Identify projected transportation system levels of service and system needs based upon the future land use map. 2) Identify how the local government will correct existing facility deficiencies and meet the identified needs of the projected transportation system." The Best Practices lists Information, tools and Resources for conducting this system analysis and future needs review of the transportation system in a bulleted list. Items of note on this list include Travel Demand Modeling using Florida standard Urban Transportation Model Structure (FSUTMS), TBEST – "a tool used to forecast transit ridership and accessibility at the individual route and stop level…," FDOT's *Quality/Level of Service Handbook*, Transportation Research Board Manuals, amongst other tools.

Under the System Analysis and Future needs segment of the transportation Component, the Best Practices manual identifies a series of analysis to be conducted. These are: Quality/Level of Service for all Modes, Sketch Planning Analysis for Network Planning, and Evaluating Bicycle and Pedestrian Needs. In order to develop Quality/Level of Service for all Modes, an Orange County prepares the *Annual Capacity and Availability Report*, which identifies roadways and segments

of roadways that do not meet the set Level of Service standards identified for the community. This is, in effect, a priority list that is used to develop subsequent updates to the County's Capital Improvements planning process.

The section also encourages urbanized areas to develop multimodal level of service measures, "local governments in urbanized areas may choose to engage in additional evaluation of quality of services across the various transportation modes to further identify system needs in relation to those modes." Figure 1, used in the best practices document, provides an example of LOS criteria for non-motorized transportation modes.

Pedestrian LOS	Bicycle LOS	Transit LOS
• Presence and width of sidewalks • Lateral separation of pedestrians and motorized vehicles • Presence of barriers and buffers, such as parked cars and trees • Volume and speed of motorized vehicles	• Proximity of bicyclists to motorized vehicles • Presence of a paved shoulder or marked bicycle lane • Volume and speed of motorized vehicles and percentage of trucks • Pavement condition • Availability of on-street parking	• Frequency – headways or transit vehicles per hour • Speed or travel time • Reliability or excess wait time • Stop amenities • Crowding or perceived travel time adjustments • Pedestrian LOS

Figure 1 – Statistically Significant LOS Criteria for Non-Automobile Modes in HCM 2010

Acknowledging the difficulties of planning for transit demand. For instance, Gainesville's TDP acknowledges the difficulty of planning for future transit service due to ridership fluctuation at different times of day and months of the year. In Gainesville, this is particularly acute due to the presence of the University of Florida, where the city deals with variable demand corresponding to school breaks. Gainesville addressed this with a series of market assessments – a traditional market assessment, a choice market assessment, and a regional market assessment. Table 1 identifies the markets identified by each of these assessments, as described on page 64 of the document:

Table 1 – Transit Market Assessments

Assessment Type	Types of Riders Identified
Traditional Market Assessment	Elderly, youth, low-income, no-vehicle populations
Choice Market Assessment	Residents of densely populated areas that could take transit for time savings, convenience or cost effectiveness
Regional Market Assessment	Regional residents who are interested in accessing destinations across a region

The Best Practices call for an evaluation of Bicycle and Pedestrian Needs, and a Sketch Planning Analysis for Network Planning. Combined, these two components of the transportation element help identify needs for locally identified thoroughfares and transportation routes, identify connectivity issues, and establish ratings for bicycle and pedestrian friendliness in the community. Amongst these tools include bike and pedestrian count tools, gap analyses, and sketch planning using GIS to determine route selections.

Future Multimodal Transportation System

In order to define a plan for the Future Multimodal Transportation System, there some key components to be addressed:

- Addressing Regional Coordination and Consistency
- Integration with Future Land Use
- Categorization and Managing Future Corridors
- Integrating with Port Facilities
- Integrating with Bike and Pedestrian Networks
- Identifying Desired Safety and Operational Projects
- Setting Future Quality/Level of Service Standards

Ensuring a strong nexus between land use and transportation is essential to the comprehensive plan. The statutory requirements of Chapter 163 requires local governments to ensure both elements are developed in coordination. Thus, the document encourages focus on achieving four goals – developing activity centers of varying sizes and intensified uses, with a strong core; diverse land uses that are complementary, promoting activities throughout the day in pedestrian-friendly environments; establish an interconnected, traffic-calmed street and pathway network that links neighborhoods to activity centers; and increase land use density and intensity within activity centers and transit stops.

Mobility Fees are discussed in this section, and how they may ensure that transit and pedestrian-oriented facilities grow in harmony with new development. The purpose of a mobility fee is to "recoup the proportionate cost of transportation demand generated by all new development." Fees can be applied to reflect regional and local impacts; a share of the fee could be allocated to local mobility – dedicated to collector roads, local transit circulators, and bicycle and pedestrian facility improvement. A mobility fee could be dedicated to regional or countywide projects.

The transportation element of a comprehensive plan should include a classification of different roadway types. These roadways should be classified with regards to their surrounding land uses, and the based upon the modes that they currently serve, and with regards to their surrounding environment. A best practice is described from Alameda, in California, where the roadway network is divided into a layered network. The transportation plan divides roads by their classification, function and by how much of a priority they place on non-automotive uses. The Alameda approach is depicted in Figure 2.

- Roadway Classification: island arterial, regional arterial, transitional arterial, collector, local
- Function: gateway, industrial/general commercial, residential, school and recreation zone;
- Transit: transit priority streets;
- Bicycle: bicycle priority streets; and
- Truck: truck routes

Source: *ITE Designing Walkable Urban Thoroughfares* (68)

Figure 2 – Alameda, CA roadway classification breakdown

In sum, the classification process component of the plans can be summarized as follows:

- Define the functional categories to be used to categorize road network
- Assign roadway categories to existing and planned network
- Identify generalized right-of-way needs for future thoroughfares and collector roadways

Goals, Objectives, and Policies

The last component of the transportation element for comprehensive plans discussed is the Goals, Objectives, and Policies section. Goals should be long-term, focused on ultimate direction; objectives should be specific and measurable; policies are the means by which a goal is achieved. Goals and objectives should be revisited for reevaluation to ensure harmonization with the community's needs and desires. They should also be harmonized with existing policies, and long-range and regional plans.

The document highlights key topics that should be addressed in developing the policy's goals, objectives and policies. These are:

- Regional and Internal Consistency
- Land Use and Multimodal Environment
- Multimodal Quality/Level of Service
- Major Roadway Network
- Access Management
- Minor Street Network
- Public Transportation Network
- Transportation Demand Management

- Bicycle and Pedestrian Network and Safety
- Ports, Aviation, Rail, and Intermodal Facilities.

2.1.2. Conclusion

The Miami-Dade County Comprehensive Development Master Plan's Transportation Component is structured differently than what is laid out in this best practices document. Adopted in October 2013, the document has undergone a series of amendment cycle, most recently in November 2015. There are five key elements to the element, which is divided into subelements: Traffic Circulation, Mass Transit, Aviation, Port of Miami River, and PortMiami (the seaport). The element begins with overarching goals, objectives, and policies, before splitting into the subelements, which have their own guiding goals, objectives, and policies, monitoring measures, and finally maps of existing and planned future facilities.

The Traffic Circulation element address automotive, pedestrian, and bicyclist needs, while the mass transit subelement "addresses the need to continue to promote and expand the public transportation system to increase its role as a major component in the County's overall transportation system.

2.2. National Governors' Association – Policy Academy on Integrating Transportation and Land Use

The National Governors Association (NGA) is a bipartisan organization of the nation's governors which helps them share best practices and collaborate on research among other things.

A Policy Academy is an intensive technical assistance effort on the part of the NGA that spans a year or more and involves meetings of the state team cohort as well as state specific site visits, webinars and other technical assistance.

2.2.1. Summary of Findings

The National Governors Association (NGA) Policy Academy on Shaping a New Approach to Transportation and Land Use Planning took place in 2010 between March 24th and November 19th. At the opening meeting, 21 senior-level policymakers and transportation and land use experts representing the participating five states – **Colorado, Maryland, Tennessee, Washington,** and **West Virginia** – met to advance their efforts to create a new planning framework for transportation and land use decisions.

During plenary sessions and in one-on-one consultations, the participants engaged with faculty members (national experts, successful state practitioners, and academics) on key design and implementation issues. The faculty provided guidance on:

- The link between transportation and economic development
- Reshaping governance models for transportation and land use planning
- Innovative financing mechanisms

- How to improve the planning process; developing performance metrics
- Federal-state partnerships around transportation.

No final report was issued, but slide shows were retained.

2.2.2. State Overview Presentations

Colorado

Vision: Identify & analyze the types of land use and transportation measures that would help the region meet air quality standards. Identify & assess obstacles preventing decisions that meet federal standards.

The goal set to attain this vision was to create an Environmental Protection Agency (EPA) approvable attainment plan with Vehicle Miles Travelled (VMT) reduction measures, with the initial vehicle being a Regional Air Quality Council (RAQC). The RAQC performed an extensive analysis of transportation and land use measures to determine the economic benefits and best fit for select Denver metro communities. Moving forward, the RAQC was expected to elevate understanding of air quality co-benefit of transportation/land use measures.

The Colorado team identified a number of challenges to meeting federal standards. With those standards tightening in 2010, there was the potential for non-attainment areas to grow, as well as the potential for ozone attainment to become too large to be overcome by a single region of the US. Another major challenge is that the EPA showed a questionable ability to accept transportation and land use measures as State Implementation Plan credits.

Tennessee

Vision: “Through shared understanding and partnership in land use and transportation choices, Tennessee will implement cost effective and fiscally realistic solutions using common sense approaches for the creation and maintenance of economically sound, environmentally sustainable and personally fulfilling communities”

The goals set to attain this vision include developing a Corridor Management Agreement (CMA) template, to propose corridor management incentives, and create training materials for stakeholders. To date in 2010, Tennessee had already selected two pilot corridors for CMAs, held a statewide symposium on corridors, developed CMA templates, and developed a process for new pilot CMA corridors. Moving forward, the most significant challenge identified by the Tennessee team is establishing partnerships and processes which are immune to local and state political changes.

Washington

Vision: “State, regional, and local policies support performance-driven and fiscally responsible transportation systems, land use plans, and actions for sustainable communities.”

To manifest this vision the goals were:

- Promote transportation and land use linkage
- Link state, regional, and local plans and actions
- Build livability and sustainability into plans
- Apply outcome-based performance measures

To help meet these goals, Washington began coordination across multiple agencies and jurisdictions. In collaboration with ULTRANS (the UC Davis Urban Land Use and Transportation Center) they developed a scenario tool to be applied to the various Metropolitan Transportation Plans (MTPs) developed in the state. Washington DOT also assisted the scenario planning efforts of the Regional Transportation Councils developing these MTPs. This tool can now be found at (http://ultrans.its.ucdavis.edu/projects/improved-data-and-tools-integrated-land-use-transportation-planning-california)

The remaining challenge identified by the Washington team is highly applicable to the Miami-Dade County SMART Plan corridors: How to overcome a planning culture which has been based entirely on growth projections – land use plans designed to accommodate rather than direct growth, and transportation plans which add capacity wherever growth is projected. While this has worked in the past, we now must question whether this pattern of land development is reproducible into the next 30 years? If not, can a scenario planning process that incorporates and informs the interaction between land use and transportation lead to decisions that will produce a desired set of outcomes.

2.2.3. Success Stories in Transportation and Land Use Planning

How Washington Makes it Work (Shaping a New Approach to Transportation and Land Use Planning) – Secretary Paula Hammond, Washington State Department of Transportation

The Strategy of the Washington Department of Transportation (WSDOT) to reduce congestion and improve mobility is called Moving Washington, and has three major pieces:

- Operating Roadways Efficiently – Generate revenue and improve performance through variable pricing and other traffic management tools
- Managing Demand – Provide more travel choices and options for people and freight
- Add Capacity Strategically

The Growth and Transportation Efficiency Center (GTEC) Program is a voluntary program that links land use and transportation in urban areas. It is a statewide framework with requirements and incentives customized by local jurisdictions for their transportation and land use context. This program is one part of the larger Commute Trip Reduction (CTR) law. While the CTR program focuses on commuters traveling to major employers, GTECs allow smaller employers to leverage state resources in order to achieve mobility goals as well. GTECs tie economic goals to land use decisions and transportation investments, and are required to be prioritized in funding.

GTECs increased the number of commuters eligible for commute trip reduction programs by 40 percent. In Miami, a system of GTEC's could be useful to highlight places/nodes which would benefit from increased transit service. By identifying areas which have high percentages of commuters, incentives could be offered to employees through their companies.

Charlotte LYNX Blue Line Economic Development Impacts and Land Use Patterns - Peter Zeiler, City of Charlotte, NC

The LYNX Blue Line is an excellent example of a successful core-to-edge rail line. It is 9.7 miles of light rail that connects the South Charlotte suburbs with the City Center. It was opened in 2007 with 15 stations (7 of which are park-and-ride) and in 2010 had 15,000-16,000 daily rides. It cost $465 Million to build, with a $50 Million companion infrastructure program.

The Blue Line had significant land value impacts:

- 65 land sales in six years (2003-2009)
- 11 paired land sales
    - Rezoned Transit Oriented Development (TOD): 36% - 143% annualized increase
    - Not rezoned: 5% - 16% annualized increase
- $1.88 Billion Total Projected Investment (2005 – 2013)
    - $20.4 M Annual Total Tax Revenue
    - $7.1 M City Tax Revenue
    - $13.1 M County Tax Revenue

Small Scale Infill has proven a significant contributor to the growth surrounding this project. 0.25 to one (1) acre sites are highly active in the market as owners realize assembly is unlikely in the near to mid horizon. Regional banks actively look for deals in the $1-5 million range, and smaller lots offer quicker and easier absorption. The boutique feel is also appealing to buyers and tenants.

Based upon the success of the LYNX Blue Line, it is recommended that the corridor infrastructure improvements related to the transit project be separated into their own project, to increase the likelihood of success obtaining capital funding. Enhancing connectivity through new and upgraded roads, bike/pedestrian improvements, aesthetics, major intersections, etc., can all fall under this umbrella.

Iowa Smart Planning - Aaron Todd, Rebuild Iowa Office, Iowa Department of Natural Resources

A catastrophic flood in 2008 (est. cost $8-10 Billion) provided a common focus to unite local and regional planning efforts across the state. This was seen as an opportunity to rebuild Iowa in a more coordinated way. Utilizing Smart Planning Principles made the state more attractive for federal government investment.

Iowa Smart Planning Principles:

- **Collaboration:** Stakeholder, community & regional collaboration in development decisions
- **Efficiency, Transparency and Consistency**: Predictable, fair & cost effective development decisions
- **Clean, Renewable and Efficient Energy**: Clean energy production & increased energy efficiency
- **Occupational Diversity:** Increase diversity of job & business opportunities
- **Revitalization:** Concentrate development & mix land uses
- **Housing Diversity**: Expand housing opportunities & choices
- **Community Character:** Foster distinctive, attractive communities with a strong sense of place
- **Natural Resources and Agricultural Protection**: Protect, preserve & wisely utilize natural resources & working lands
- **Sustainable Design:** Green building & infrastructure design
- **Transportation Diversity:** Variety of transportation choices

A Smart Planning Task Force was created with the charge of developing recommendations for effective implementation of the Smart Planning legislation. Membership was composed of:

- 14 State Agencies
- Three (3) Universities
- American Planning Association (APA) Iowa Chapter
- American Institute of Architects (AIA) Iowa Chapter
- Iowa Association of Regional Councils (IARC)
- Iowa League of Cities
- Iowa State Association of Counties
- School Administrators of Iowa
- Six (6) Governor's Appointees
- Four (4) non-voting Legislative members

These recommendations were largely targeted at state-scale actions, and were not found to be relevant to the Miami-Dade SMART plan. However, the structure of the task force is robust and a similar collection of subject matter experts and stakeholders may be successful in our context.

The Wasatch Choice for 2040: A New Paradigm for Transportation Planning in the Greater Salt Lake Region – Alan Matheson, Envision Utah

"The Wasatch Choice for 2040 Vision" is the name of the regional visioning plan for the Wasatch Front, the area around Salt Lake County in Utah. The impetus for this visioning process was the

desire to explore how land use and urban form can make the transportation system more efficient and less expensive.

Regional visioning is the natural evolution of Place Making at a larger scale (we can treat many of the SMART corridors as cohesive places, so they each obtain their own personality and reputation). A Vision is not a forecast, but a strategy to preserve best options and help the public understand long-term consequences of decisions made today. The "scenario approach" addresses each choice by presenting a number of potential outcomes which people choose from. Scenarios are presented in many ways – renderings, graphs, matrix-tables, etc.

At the conclusion of the visioning effort, a number of lessons were identified which answered the question of how land use can improve transportation.

- Designating mixed use centers makes it easier to remove regulations which interfere with market demand
- More compact growth must be allowed in areas of regional transportation significance
- Infill and redevelopment should be encouraged
- More diversity of housing products
- More interconnected streets
- High capacity transportation should connect mixed-use nodes

2.2.4. Consultant Presentations

Application of Sustainability Performance Measures – Josias Zietsman, Texas Transportation Institute

The goal of Mr. Zietsman's effort is to understand and apply concepts of sustainability through performance measurement. It is hard to quantify improvements to sustainability, but this can be done with extensive, detailed lists of goals and objectives. A recommended structure is to delineate functional goals from impact goals. Functional goals address how the system itself functions, while impact goals measure how that function impacts the environment.

Recommended Goals:

Functional Goals:

1. Provide a safe transportation system for users and the general public
2. Provide a transportation system that offers accessibility that allows people to fulfill at least their basic needs
3. Provide options that allow affordable and equitable transportation opportunities for all sections of society
4. Ensure the transportation system's functionality and efficiency is maintained and enhanced
5. Ensure the transportation system is secure from, ready for, and resilient to threats from all hazards

6. Ensure the transportation system's development and operation support economic development and prosperity
7. Ensure the economic feasibility of transportation investments over time

Impact Goals:

8. Protect and enhance environmental and ecological systems while developing and operating transportation systems
9. Reduce waste generated by transportation-related activities
10. Reduce the use of non-renewable resources and promote the use of renewable replacements
11. Reduce transportation-related emissions of air pollutants and greenhouse gases

The Challenge of Measuring Sustainable Communities – John Thomas, Sustainable Communities Office, US Environmental Protection Agency

This approach to sustainability is focused on the collaboration between the department of Housing and Urban Development (HUD), the Environmental Protection Agency (EPA) and United States Department of Transportation (USDOT) known as the Sustainable Communities Partnership. The six (6) major principles underlying this Partnership are each fulfilled by three (3) types of measures. These performance measures are meant as a compliment to existing measures, with varied applications for rural and urban regions.

Six (6) Principles:

- More Transportation Choices
- Promote Equitable Affordable Housing
- Increased Economic Competitiveness
- Support Existing Communities
- Leverage Federal Investment
- Value Communities and Neighborhoods

Three (3) Performance Measures:

- Broad Outcomes
- Indicators of Progress
- Key Strategies

The Broad Outcomes are relevant to long term planning at the regional scale. The Indicators of Progress are relevant to Capital Investments Programs as they are quantifiable measures. The Key Strategies are relevant at the level of individual projects, community interaction, and corridor scale initiatives. All of the measures should be understandable to the general public.

Economic Development through Coordinated Transportation and Land Use Planning - Chris Leinberger, Brookings Institution

The financial crisis that took place in 2008 was seen by many as the last gasp and bailout of suburban sprawl. In 2010 there was a pent-up market demand for walkable, urban areas. This is predicted to be the driver for 35% of the American economy for a generation, just like the 1950's-1990's but with urbanized real estate instead of suburban homesteads. Walkable urban infrastructure is vastly cheaper per unit and per square foot versus sprawl. Other potential benefits include major energy and emissions reductions, as well as reduced obesity and asthma in populations which reduces the load on the healthcare system.

Initiating the development of a walkable urban space is best done with coordination between the public and private sector. This coordination should result in a place management strategy which stabilizes the relationship between the two, to the benefit of all. The Business Improvement District (BID) is one such legal framework to achieve this level of public place management. Once elements of a walkable urban space begin to accumulate, they mutually increase in effectiveness. To make this happen, zoning laws often must change to make mixed use, party wall buildings with limited parking legal and practical to build. Governmental and smart growth groups must often get the ball rolling with catalytic development companies – sometimes loss leaders, whose purpose is not to make a large profit themselves but to signal other investors that the area is ripe for successful development.

In the effort to build a successful walkable urban space, many desired features are qualitative rather than quantitative, and therefore hard to organize and prioritize. By constructing a hierarchy of these qualities, we are able to see how they grow out of and support one another. Figure 3 represents one way to structure this hierarchy in the pursuit of a great city.

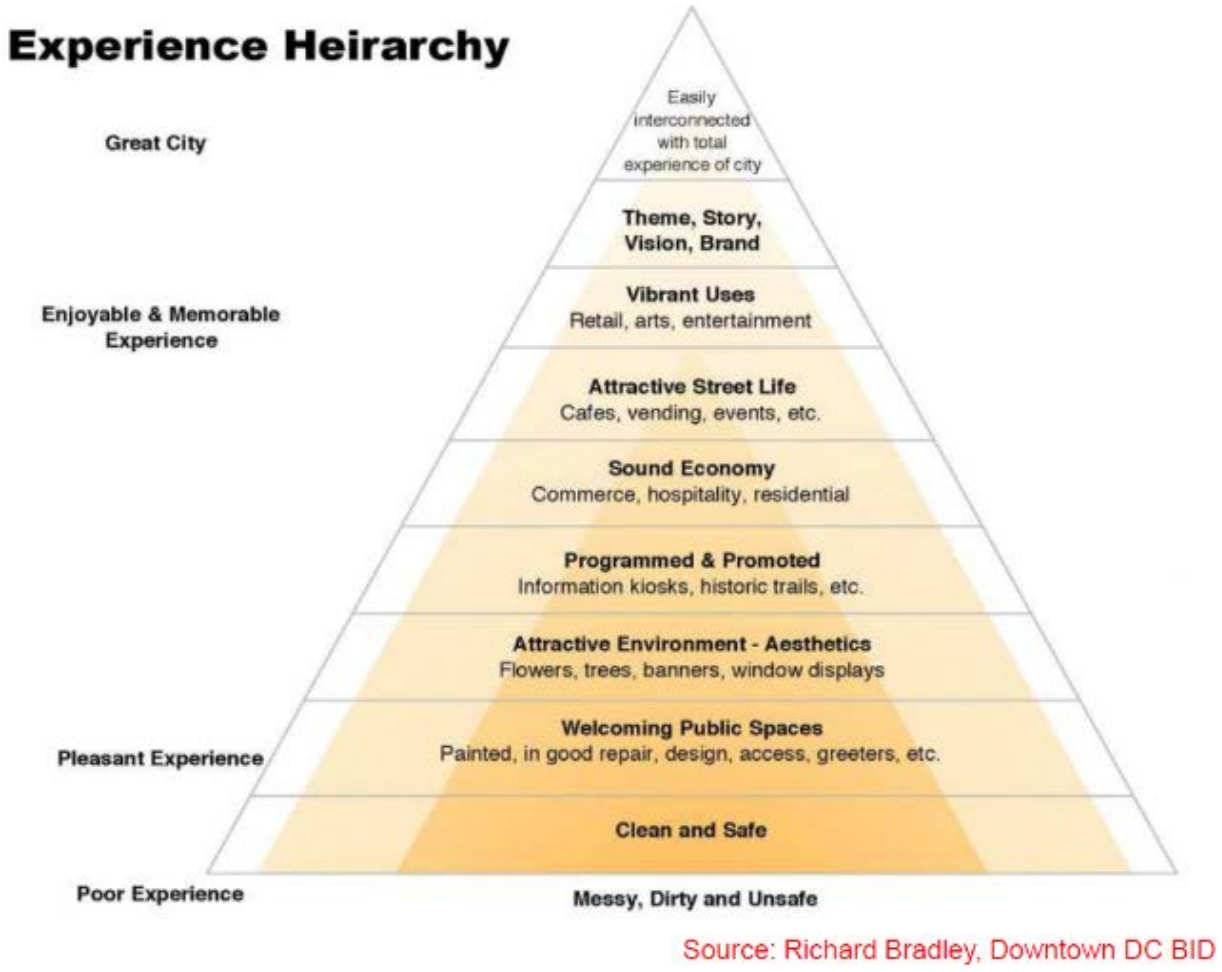

Figure 3 - Experience Heirarchy of a City

Climate and Health Impacts of Community Design - Dr. Lawrence Frank, Bombardier Chair in Sustainable Transportation, University of British Columbia

Investment in transit leads to improved health in large populations in two ways. First, it reduces total vehicle emissions which enhances respiratory health for those living in the area. Also, by encouraging walkable neighborhoods (as well as walking to/from transit) the overall body mass index of the population goes down, which in turn lowers the instance of chronic disease.

Walkability scores correspond to health indicators – a 5% increase in walkability is associated with a 32% increase in minutes walking/biking, 1.5-pound reduction in BMI (one-quarter point), 6.5% reduction in per capita vehicle distance traveled, 5.5% reduction in ozone precursors.

In Atlanta, a study showed that there was an average difference of 10 pounds between people in the most and least mixed use neighborhoods. This study used 5'10" white males to overcome demographic variations.

Connecting Health and Transportation Policies Through Land Use – Heidi Guenin, Upstream Public Health

The majority of this presentation is composed of photographs with simple titles, but a few diagrams communicate the ideas meat to be illustrated by these images.

The overarching theme is that, generally, an increase in physical activity and a decrease in driving will result in many positive health outcomes across the population for a number of different reasons.

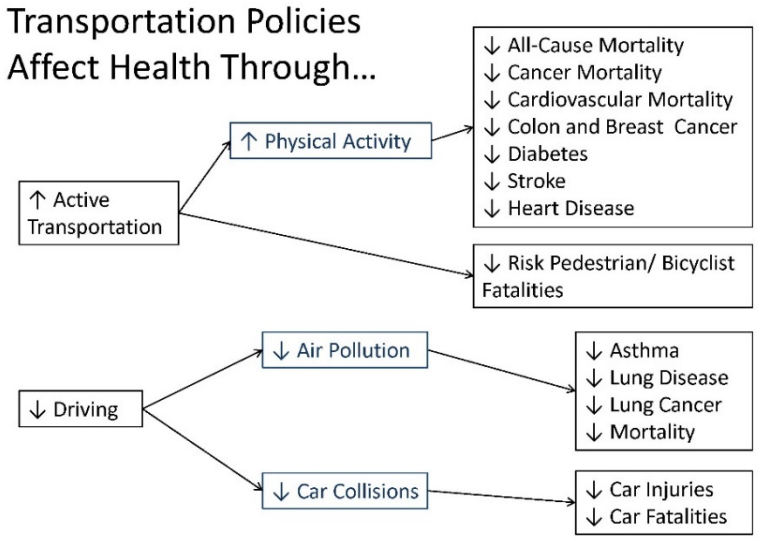

Figure 4 – The relationship between transportation policies and public health

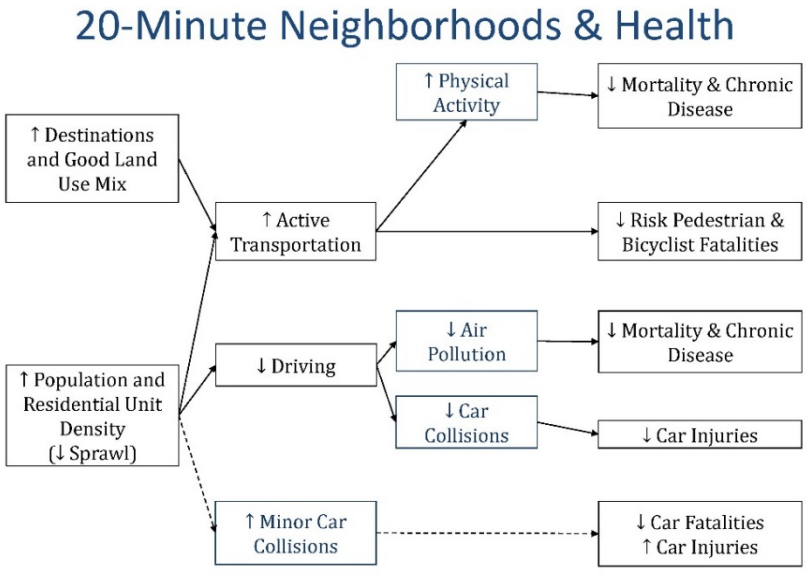

Figure 5 – The relationship between walkable neighborhoods and public health

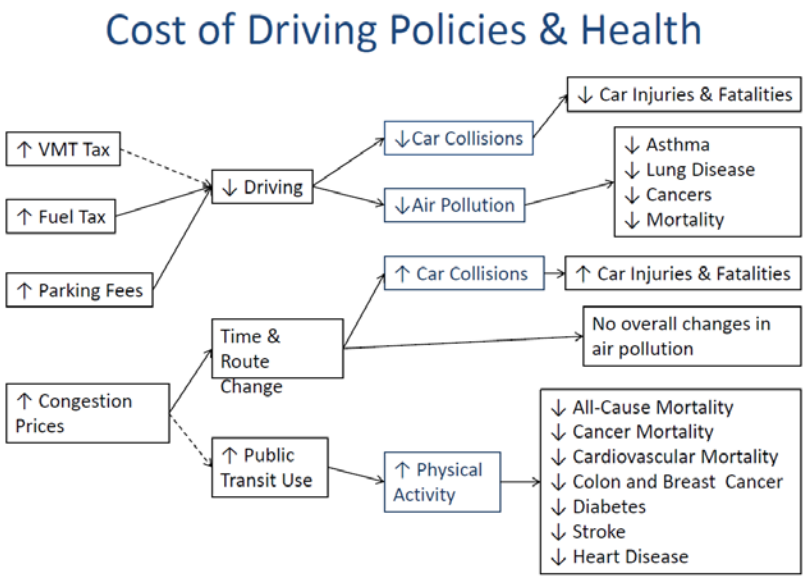

Figure 6 – The economics of transportation and how it relates to public health

3. Existing Conditions Assessment and Analysis

3.1. Inventory of Existing Conditions

The area surrounding the South Dade Transitway Corridor is governed by Unincorporated Miami Dade County and the five municipalities (Figure 7) it passes through or is abutted by:

- Pinecrest
- Cutler Bay
- Palmetto Bay
- Homestead
- Florida City

Neighborhoods adjacent to the corridor include:

- Kendall
- Continental Park
- The Falls
- Richmond Heights
- Palmetto Estates
- Perrine
- South Miami Heights
- Redlands
- Goulds
- Princeton
- Naranja
- Leisure City

The Corridor also includes landmarks which drive a large amount of traffic:

- Dadeland Mall
- The Falls Mall
- Jackson South Community Hospital
- Southland Mall
- Miami-Dade College Homestead Campus
- Florida Keys Outlet Center

Miami-Dade SMART Plan
South Dade Transitway Corridor
Municipalities and Landmarks

Date: 12/6/2017

TPO Miami-Dade Transportation Planning Organization

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Miles 0 0.45 0.9 1.8

Legend

- South Dade Corridor
- Half Mile Buffer
- Major Roads
- Metrorail
- Metrorail Stations
- Miami-Dade County
- Water
- Cutler Bay
- Florida City
- Homestead
- Palmetto Bay
- Pinecrest

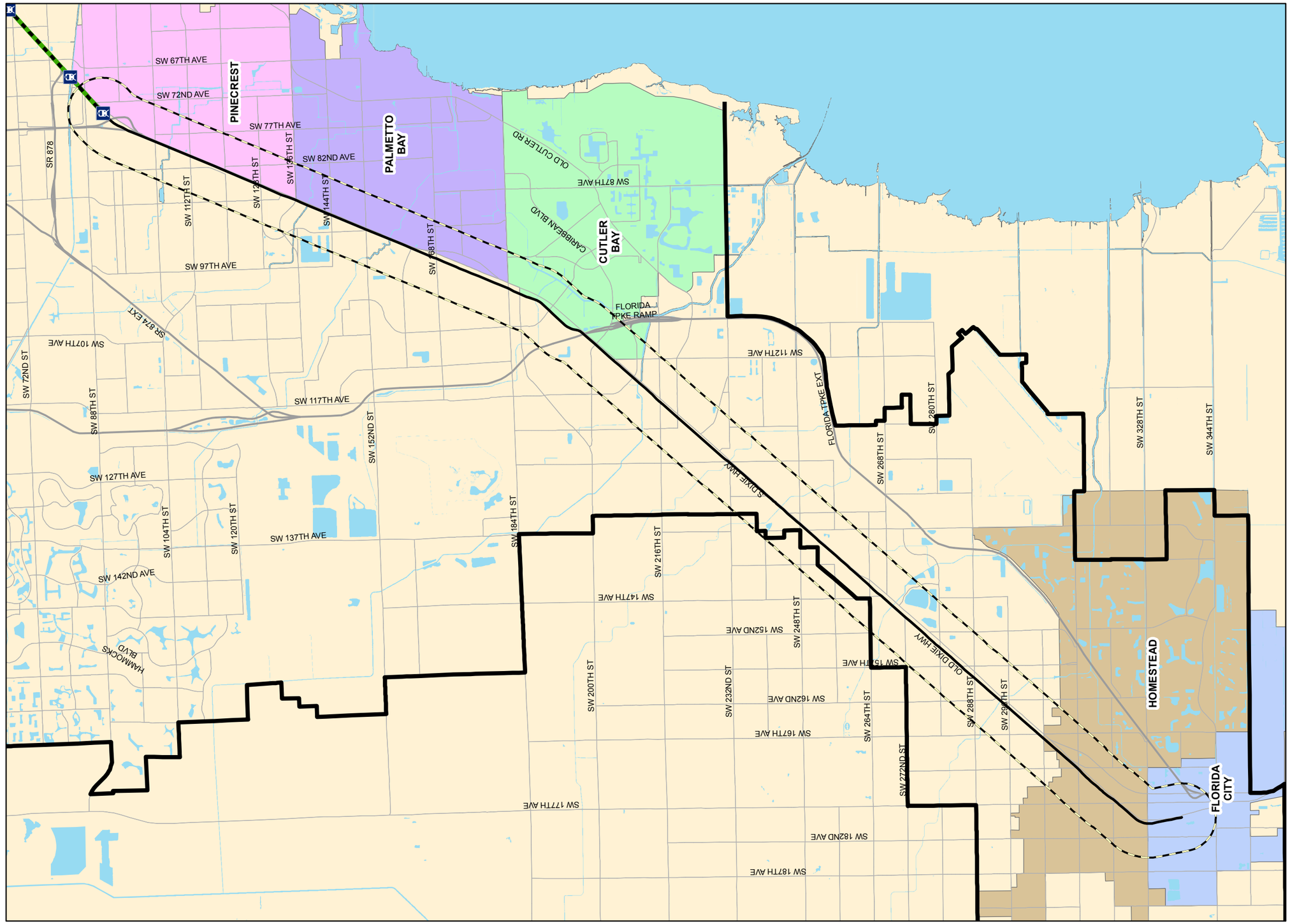

Figure 7 - Municipalities along South Dade Transitway Corridor

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3.1.1. Land Use and Zoning

Existing Land Use

Existing Land Use data was collected from the Miami-Dade County GIS Open Data service. The existing land use abutting the corridor is dominated by commercial functions, but the surrounding half-mile buffer area is primarily residential, as shown in Figures 8 and 9. Between SW 232nd Street and SW 264th Street the Urban Development Boundary encroaches into the buffer area, resulting in decreased density and a preponderance of agricultural and undeveloped land.

Future Land Use

Future Land Use data was collected from the Miami-Dade County GIS Open Data service as well as the Miami-Dade County Comprehensive Development Master Plan. The Future Land Use map has fewer, more general categories than existing land use. The breakdown of future land uses on the corridor is depicted in Table 2 and Figures 10 and 11 below.

Table 2 - Future Land Use

Land Use Category	Area (Acres)	Percent of Buffer Area
Residential	4,632	42.9%
Commercial & Service	1,467	13.6%
Undeveloped	1,143	10.6%
Agriculture	1,000	9.3%
Parks and Recreational Open Space (Including Preserves and Conservation Areas)	595	5.5%
Transportation, Communication, and Utilities	560	5.2%
Institutional	556	5.2%
Industrial	472	4.4%
Inland Water	330	3.1%
Transient-Residential (Hotel-Motel)	34	0.3%
Total	**10,789**	100.00%

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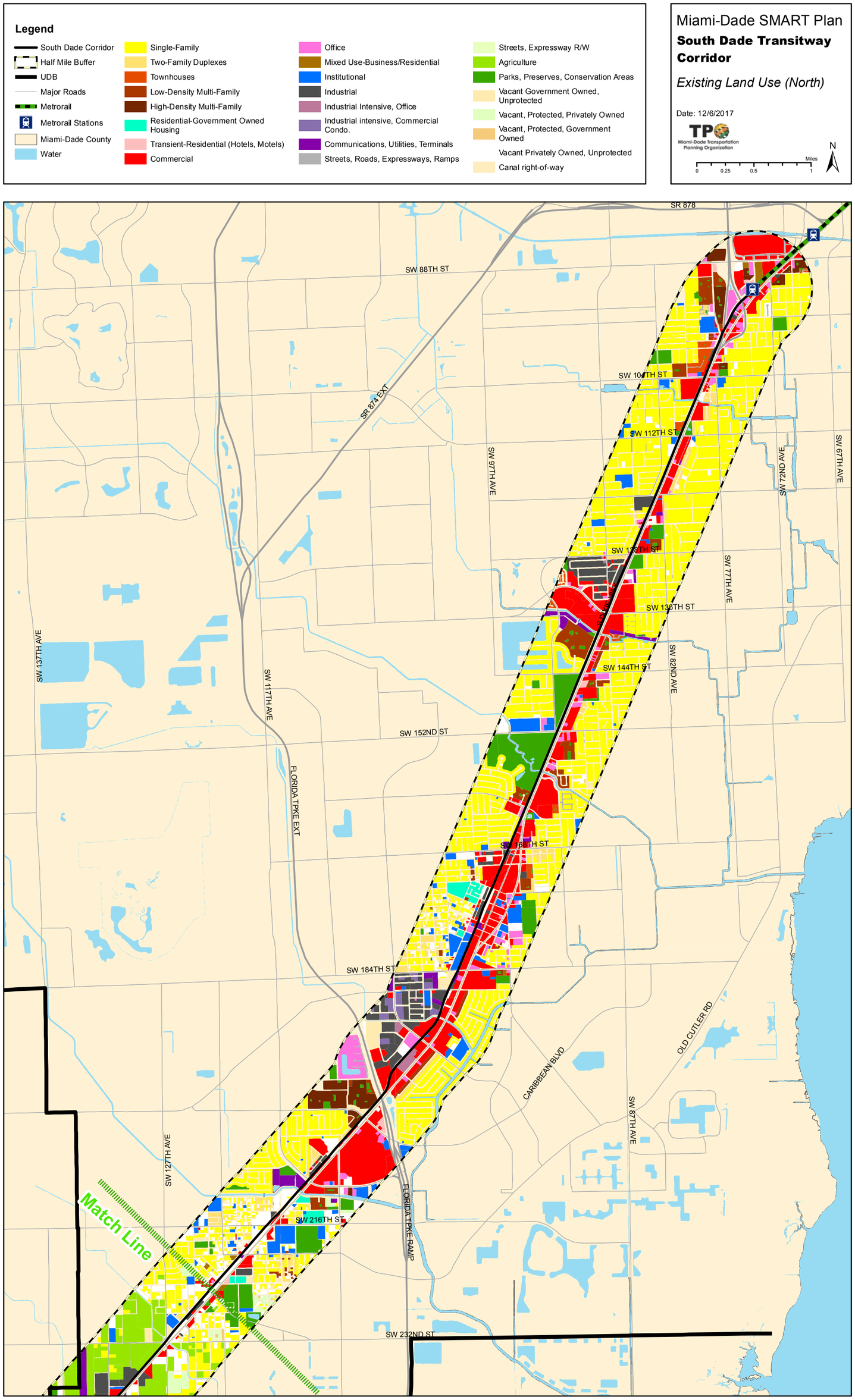


Figure 8 - Existing Land Use (North)

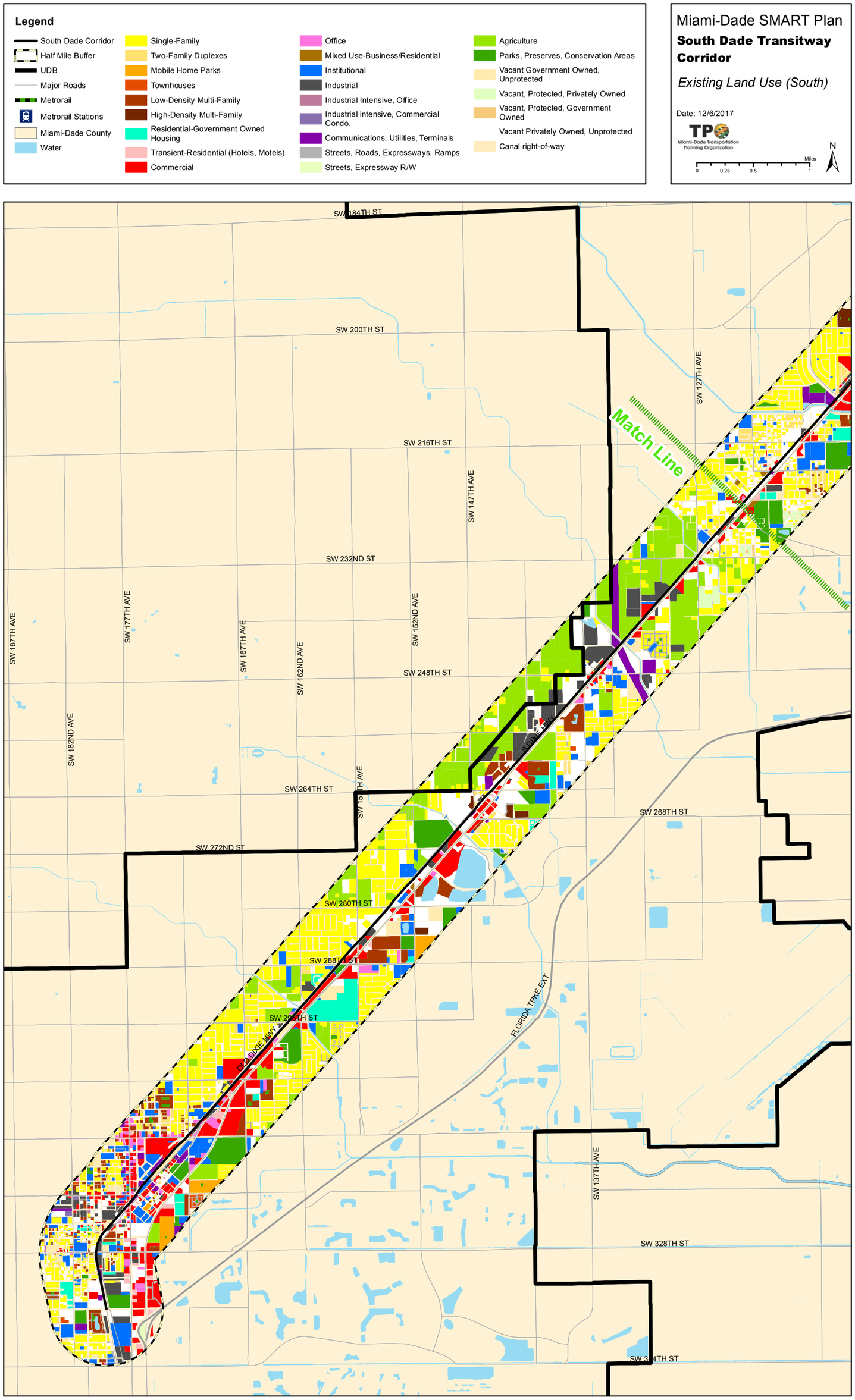


Figure 9 - Existing Land Use (South)

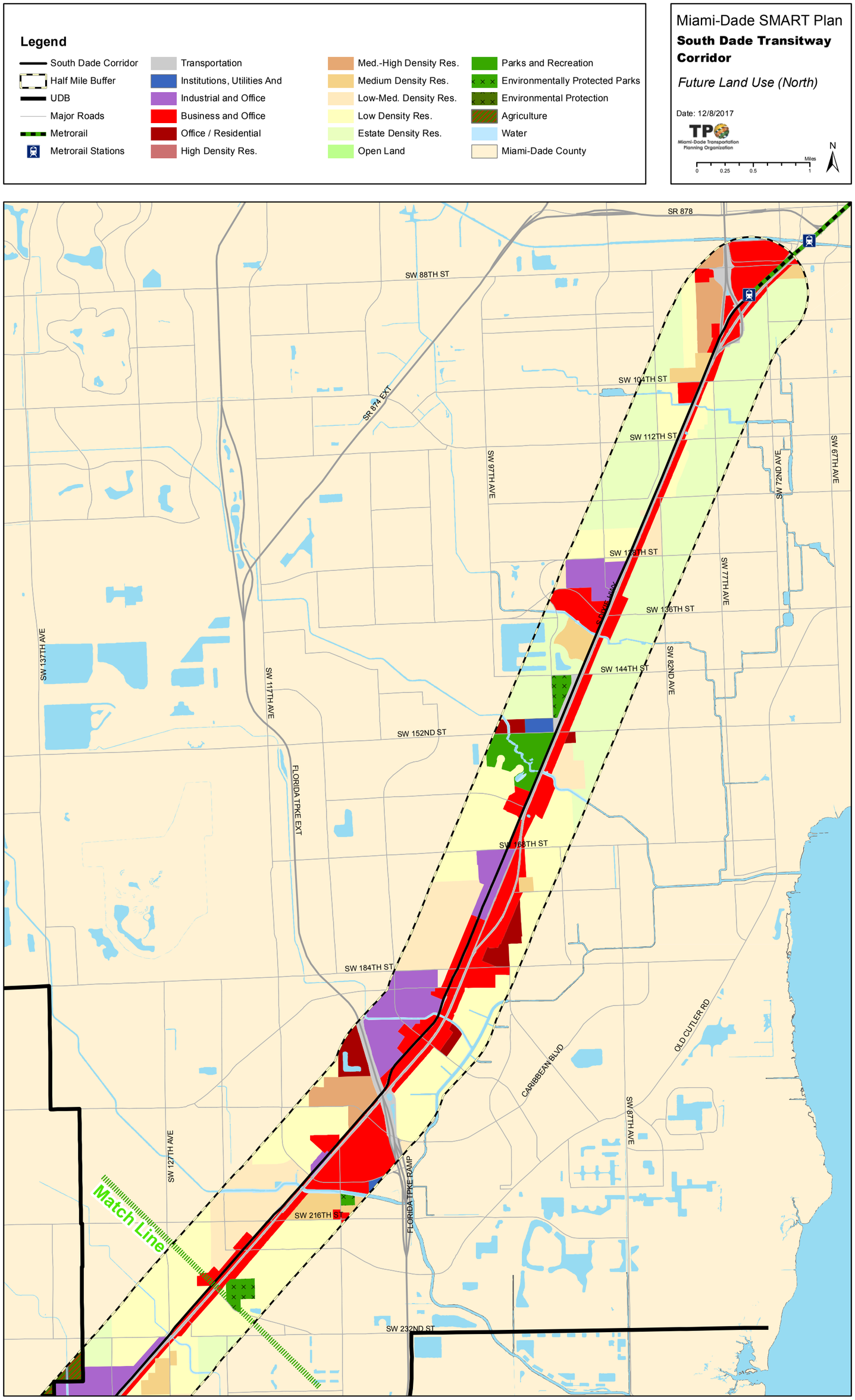


Figure 10 - Future Land Use (North)

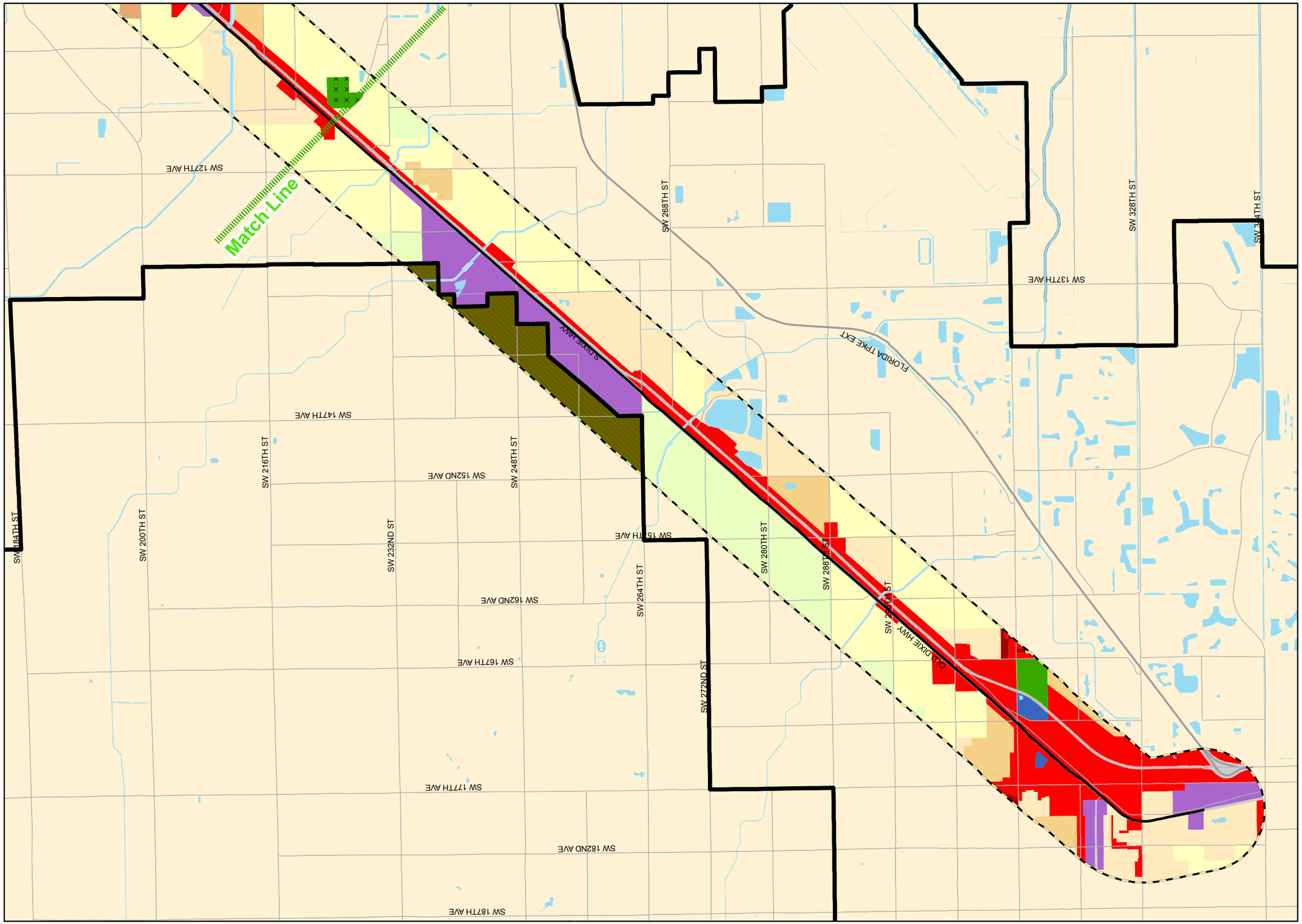
Miami-Dade SMART Plan
South Dade Transitway Corridor
Future Land Use (South)

Date: 12/8/2017

TPO Miami-Dade Transportation Planning Organization

N

0 0.25 0.5 1 Miles



Legend

- South Dade Corridor
- Half Mile Buffer
- UDB
- Major Roads
- Metrorail
- Metrorail Stations
- Transportation
- Institutions, Utilities And Comm.
- Industrial and Office
- Business and Office
- Office / Residential
- High Density Res.
- Med.-High Density Res.
- Medium Density Res.
- Low-Med. Density Res.
- Low Density Res.
- Estate Density Res.
- Open Land
- Parks and Recreation
- Environmentally Protected Parks
- Environmental Protection
- Agriculture
- Water
- Miami-Dade County

Figure 11 - Future Land Use (South)

Zoning

Zoning typically follows the same patterns as land use, but in the South Dade Transitway Corridor this is heavily affected by the presence of a unique zoning category, the Urban Center District. These districts use a system which blends traditional functional zoning and form-based zoning, with the goal of developing into dense, walkable mixed-use environments. They are well suited for future transit oriented development; 23% of the total corridor half-mile buffer area consists of urban center district zoning, the second largest land use after residential single family.

An additional land use, Residential/Commercial, can be supportive of transit-oriented development. This category includes Traditional Neighborhood Developments (TNDs), which is described as a neighborhood where "residences, shops, workplaces, and civic buildings are interwoven within the neighborhood, all in close proximity." This land use can include single-family housing, and thus would not be a true TOD, but it does lay the groundwork for mixed-uses.

Despite the character defining quality of Urban Center Districts, residential single family zoning still dominates the area quantitatively, covering 37% of the corridor. Some of this single-family zoning is located directly adjacent to the corridor, suggesting opportunities exist to redevelop the corridor's walkshed to ensure higher and better use.

Table 3 – Zoning in the South Dade Transitway Corridor

Generalized Zoning Category	Acres	Percent of Buffer Area
Residential Single Family	3,900	37%
Urban Center District	2,413	23%
Agriculture	1,107	10%
Commercial	844	8%
Residential/Commercial	634	6%
Residential Multi-Family	603	6%
General Use	437	4%
Industrial	379	4%
Institutional	239	2%
Office	76	1%
Parks	34	0%
Residential/Office	18	0%
Total	10,684	100%

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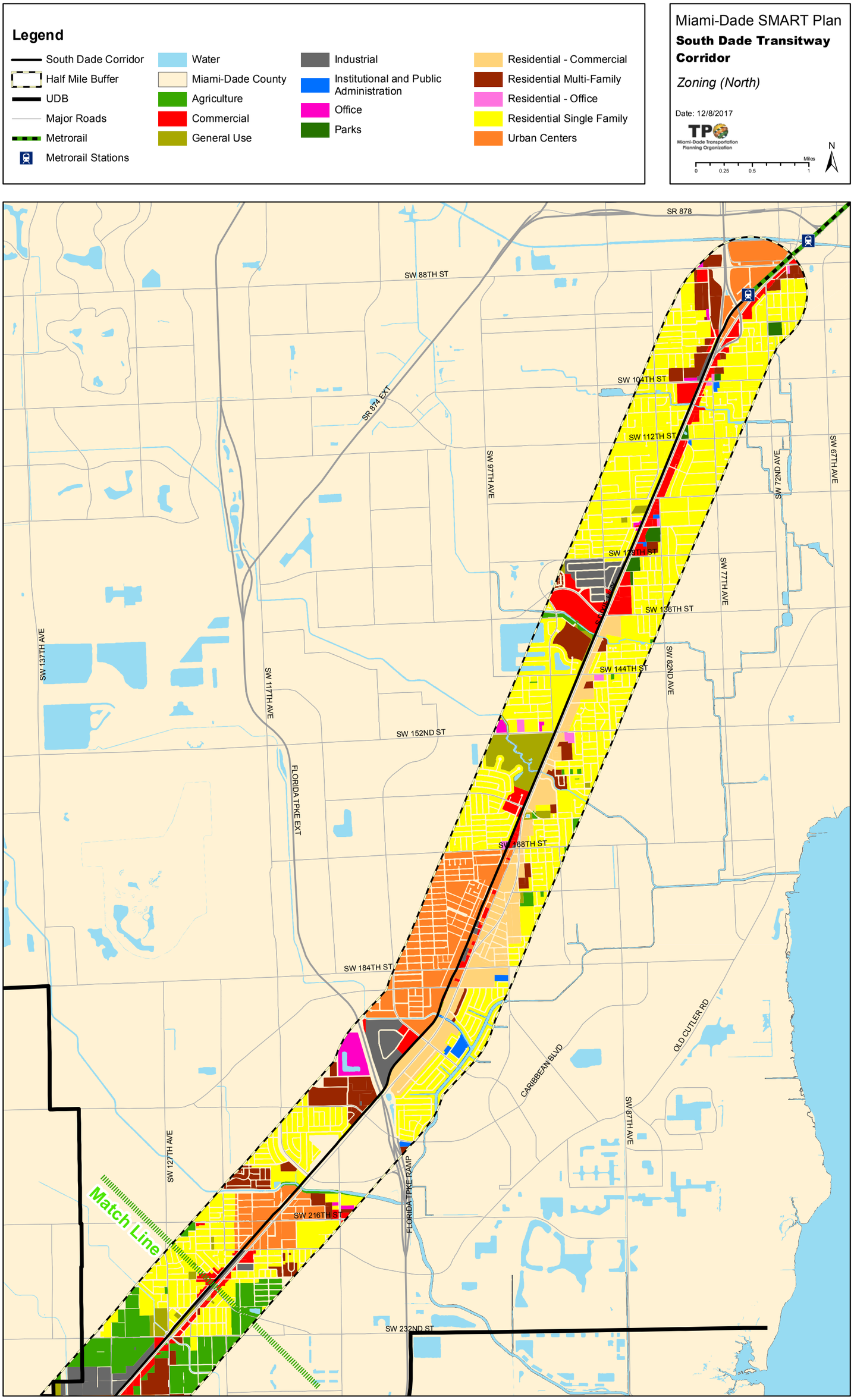

Figure 12 – Zoning (North)

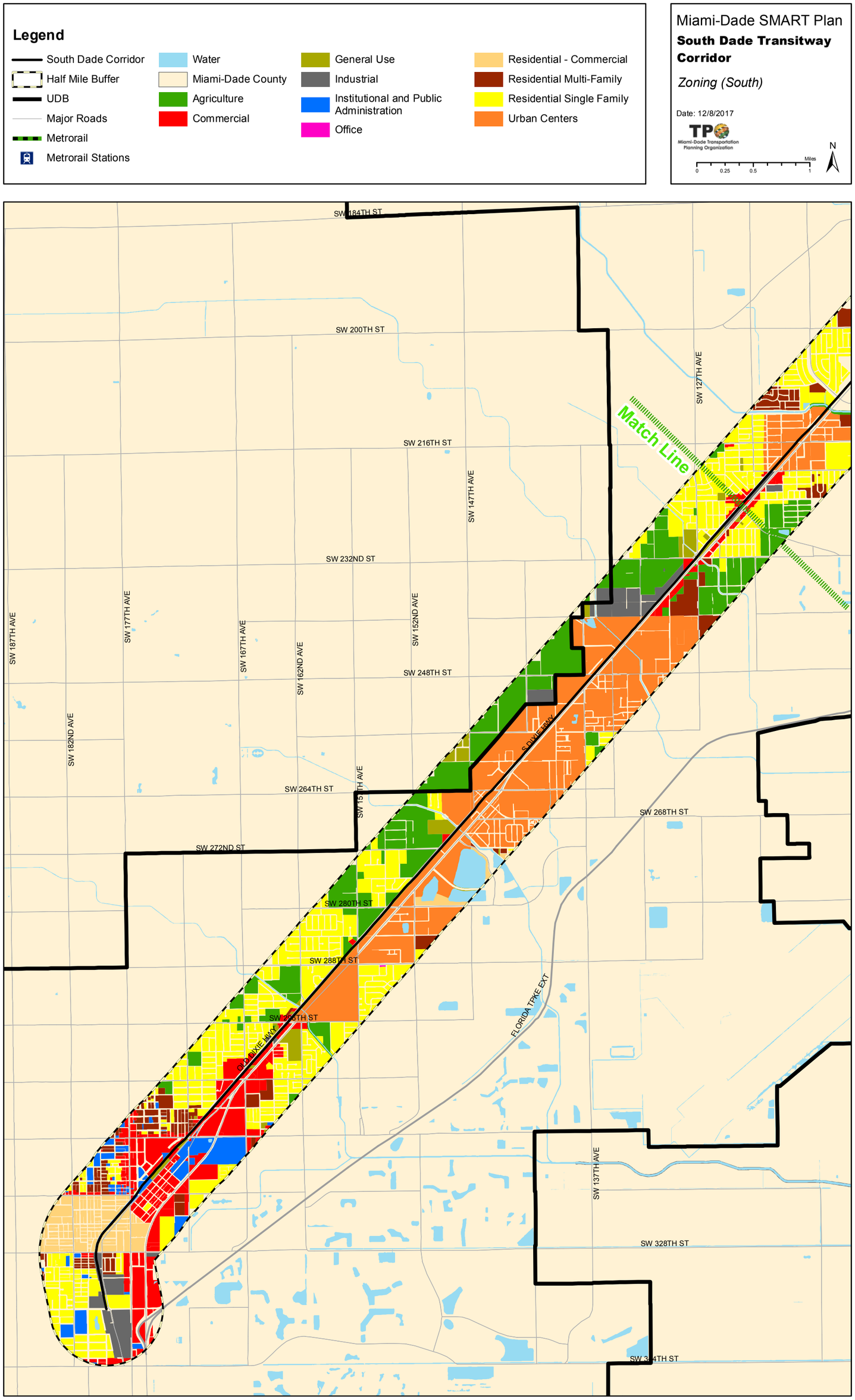

Figure 13 – Zoning (South)

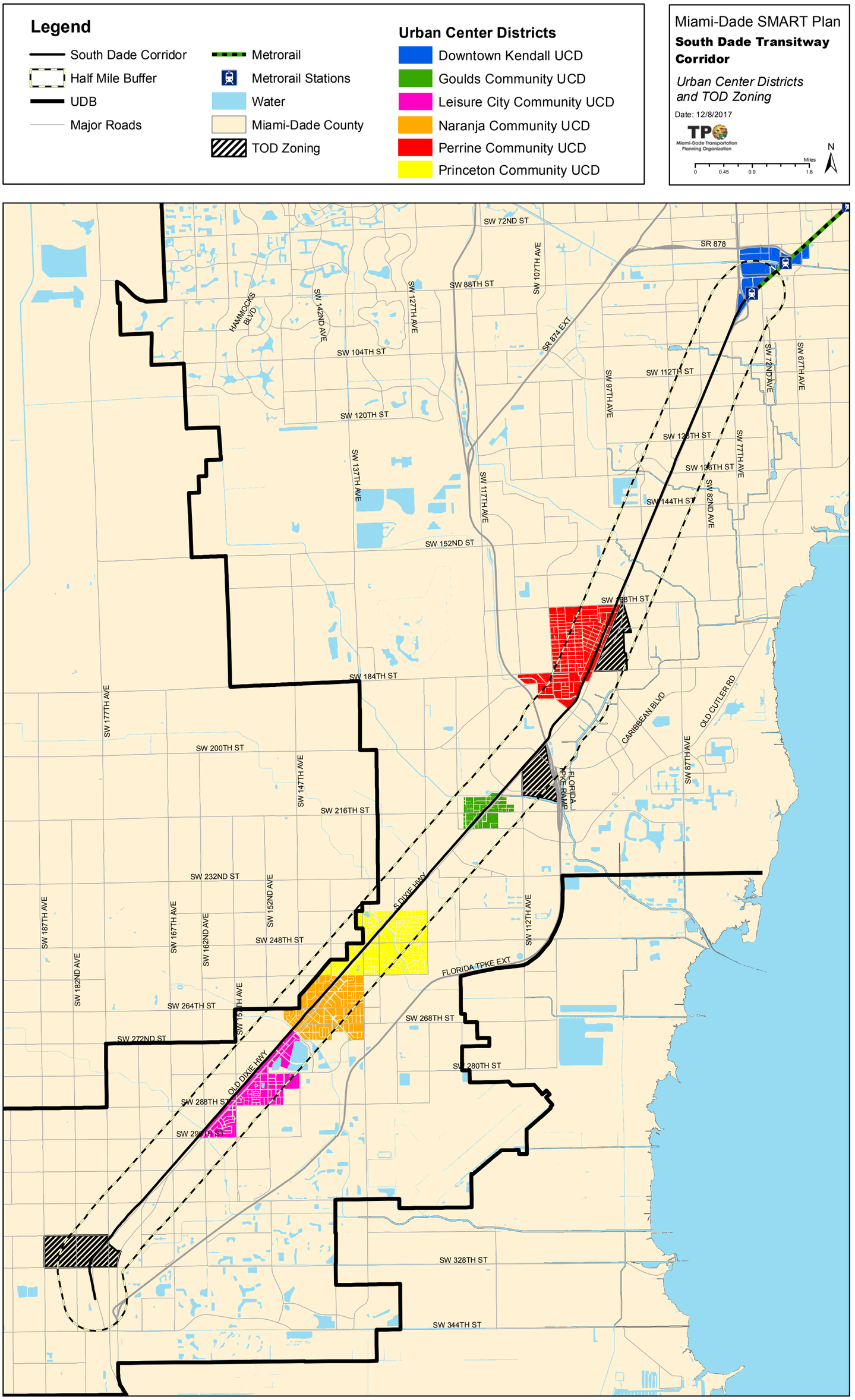

Figure 14 - Urban Center Districts and TOD Zoning

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3.1.2. Socioeconomic Conditions and Demographics

Population and Employment Density

The South Dade Transitway Corridor has a lower population density than that of the county overall. Despite pockets of multifamily housing along the corridor, the predominant typology is single family housing. The median population density for the corridor is 5,250 residents per square mile. This is 34% lower than the County's median population at 7,900 residents per square mile. These figures are displayed in Table 4 - Population Density.

Table 4 - Population Density

Tracts	Population	Population Density (sq/mi)
Within ½ mile of South Dade Transitway Corridor	264,800	5,250
Within Miami-Dade County	2,639,042	7,900

Source: US Census American Community Survey (ACS), 2015

The Northern third of the corridor is generally low density – the incorporated areas of Pinecrest and Palmetto Bay are predominantly zoned for single-family housing, and have a density of 2,800 and 3,000 residents per square mile, respectively. These municipalities have significant amounts of "Estate Density Residential" identified on the Future Land Use Map, with densities, of one (1) to 2.5 dwelling units per acre.

There is a rise in population density near the intersection of U.S. 1 and HEFT, including a pocket of apartments on SW 200th Street which produces the highest density Traffic Analysis Zone (TAZ) in the corridor.

South of SW 216th Street, the UDB narrows and the corridor's character changes. The Northwest side of U.S. 1 at this point is largely outside of the UDB, and consequently is relatively undeveloped. On the southeast side of the corridor, however, population density increases from SW 248th Street to the south. A number of factors contribute to this, including easy access to the Turnpike, the presence of multiple Urban Center Districts, and the Naranja Lakes Community Redevelopment Agency (CRA) which helped redevelop the area after Hurricane Andrew.

The Naranja Community Urban Center District (UCD) was initiated in 2004 and since that time has catalyzed the construction of numerous apartment complexes near the crossing of U.S. 1 and SW 260th and SW 264th Streets. Recent construction and site work indicates that this pattern is continuing. While this development does not currently appear on population density maps, further population densification should follow within this area.

Table 5 – Buffer Area Demographics

Geography	Households	Population	Employees
County Population	842,153	2,639,042	2,152,396
Half-Mile Area	25,838	85,726	65,374

Source: US Census American Community Survey (ACS), 2015

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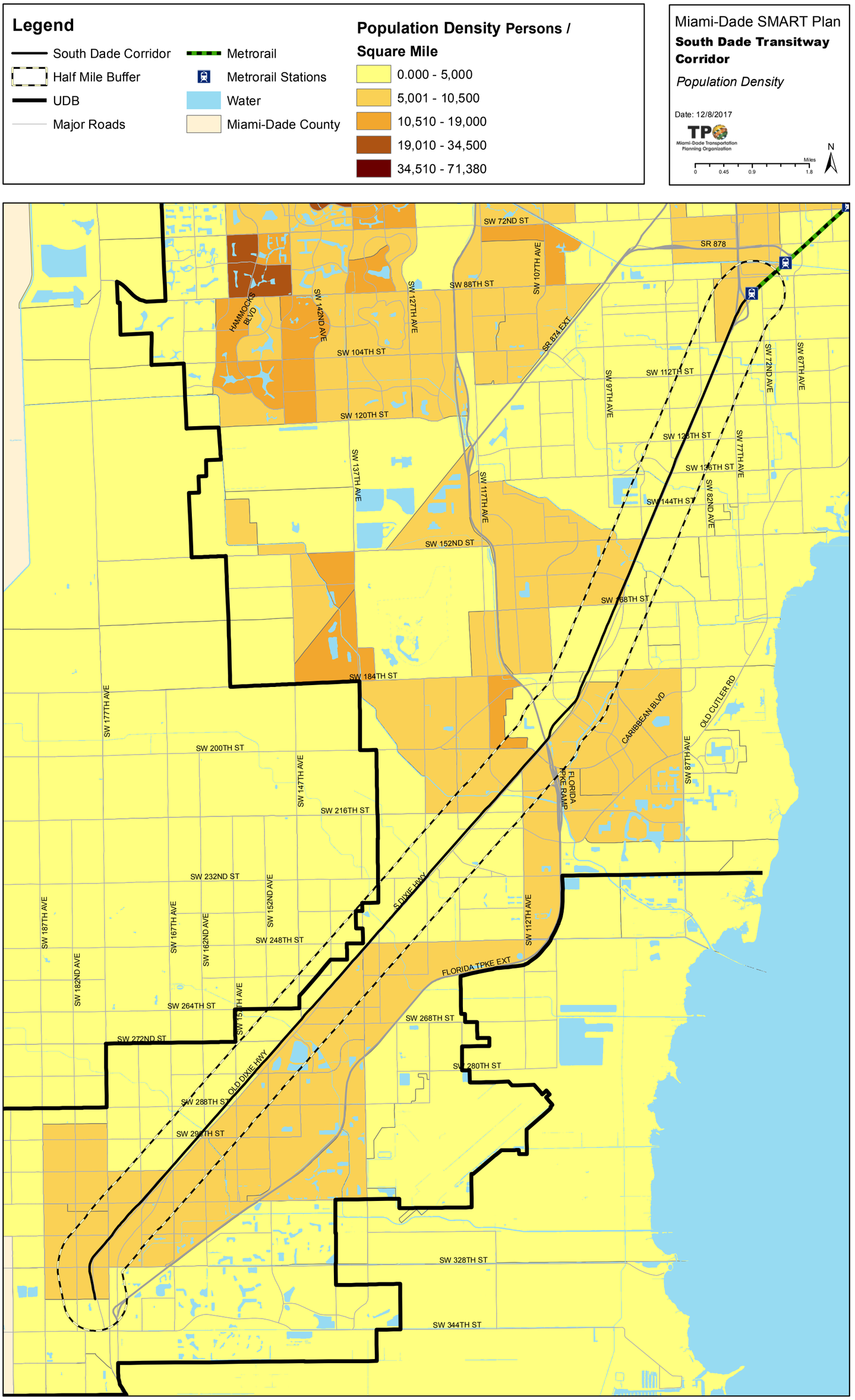

Figure 15 - Population Density

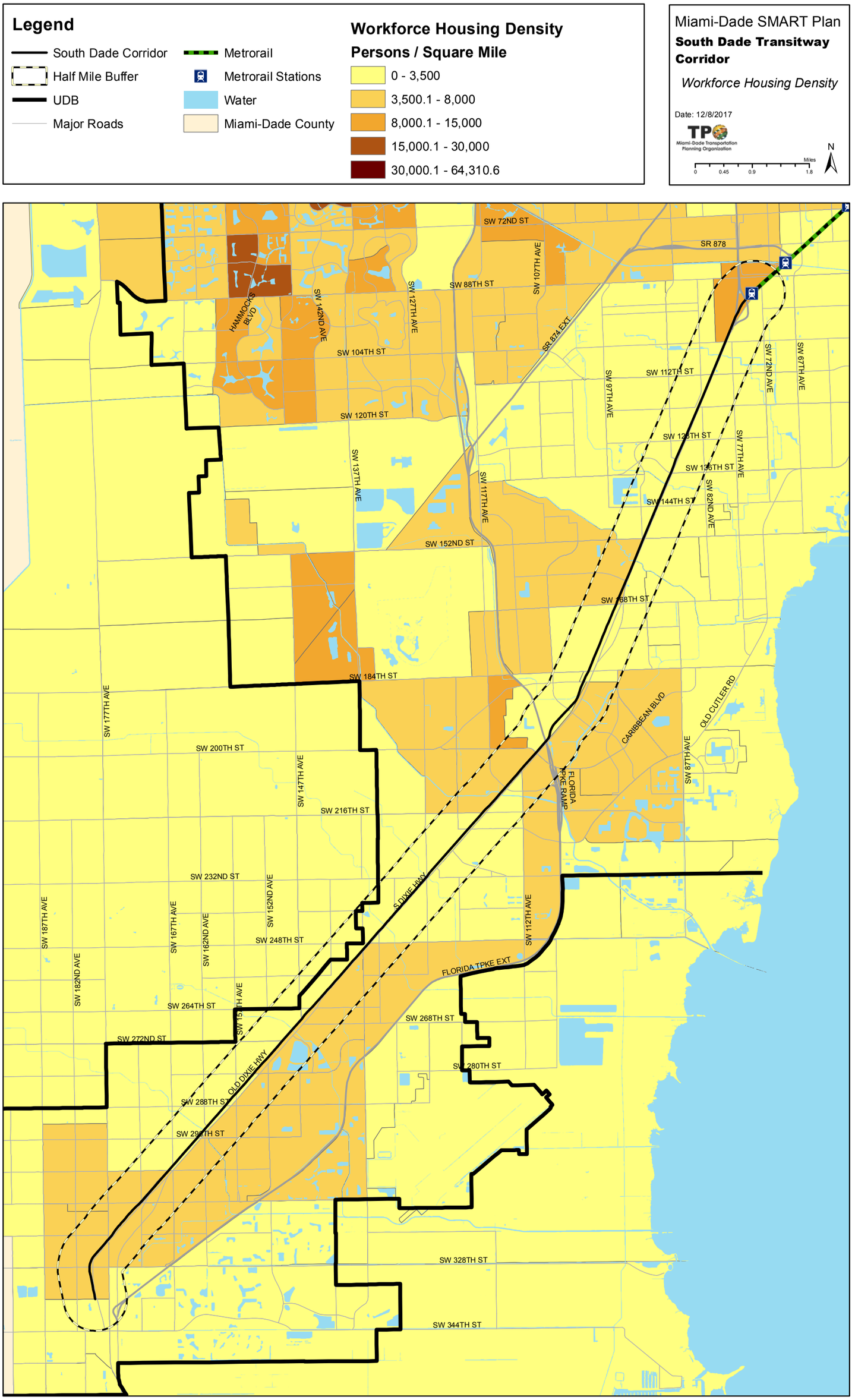

Figure 16 - Workforce Housing Density

Average Household Income

Economically, the South Dade Transitway Corridor is roughly divided into three parts. The northern one-third of the corridor is considerably wealthier than the southern two thirds, especially within the municipalities of Pinecrest, Palmetto Bay, and Cutler Bay. These populations offset one another and, as a result, the corridor's average income mirrors the County's – both are approximately $69,600 per year.

South of 168th Street, the economic character of the area begins to change as concentrations of low income households near the intersection of U.S. 1 and HEFT emerge. A pattern can then be seen in the southern one-third of the corridor, where the southeast side of U.S. 1 has a higher density of lower income residents while the northwest side of the corridor is low density but higher average income. The Corridor's southern terminus is located in the census tract with the lowest average income of the entire corridor – $29,507.

Low Income Housing

This section discusses public housing and Section 8 housing within the South Dade Corridor. Low income housing is predominantly concentrated on the central and southern portions of the corridor.

Low Income Public Housing is government owned, and is intended for the most disadvantaged members of the community, i.e. extremely low-income, elderly, or disabled residents. Due to the limited number of buildings and highly varied number of units within each building, public housing buildings are depicted in Figures 19 and 20 as single points whose size corresponds to the number of units in the building. The South Dade Transitway Corridor is home to 717 Public Housing units in 16 different locations.

Section 8 housing is meant for individuals or families with low to moderate income. The program provides qualifying individuals with vouchers to subsidize the housing costs. While some Section 8 recipients can use vouchers on any rental unit on the open market, most are required to choose from a limited number of buildings in which the owner has set aside some or all the units specifically for low-income Section 8 housing. Due to the large number and wide distribution of Section 8 housing units, these locations are depicted as a heat map (Figures 19 and 20), with darker red areas indicating higher density of Section 8 housing units. There are 1,308 Section 8 housing units located within the buffer area of the South Dade Transitway Corridor. As with public housing, Section 8 housing is concentrated along the central and southern portions of the corridor, with large concentrations in Cutler Bay, Naranja, and Homestead.

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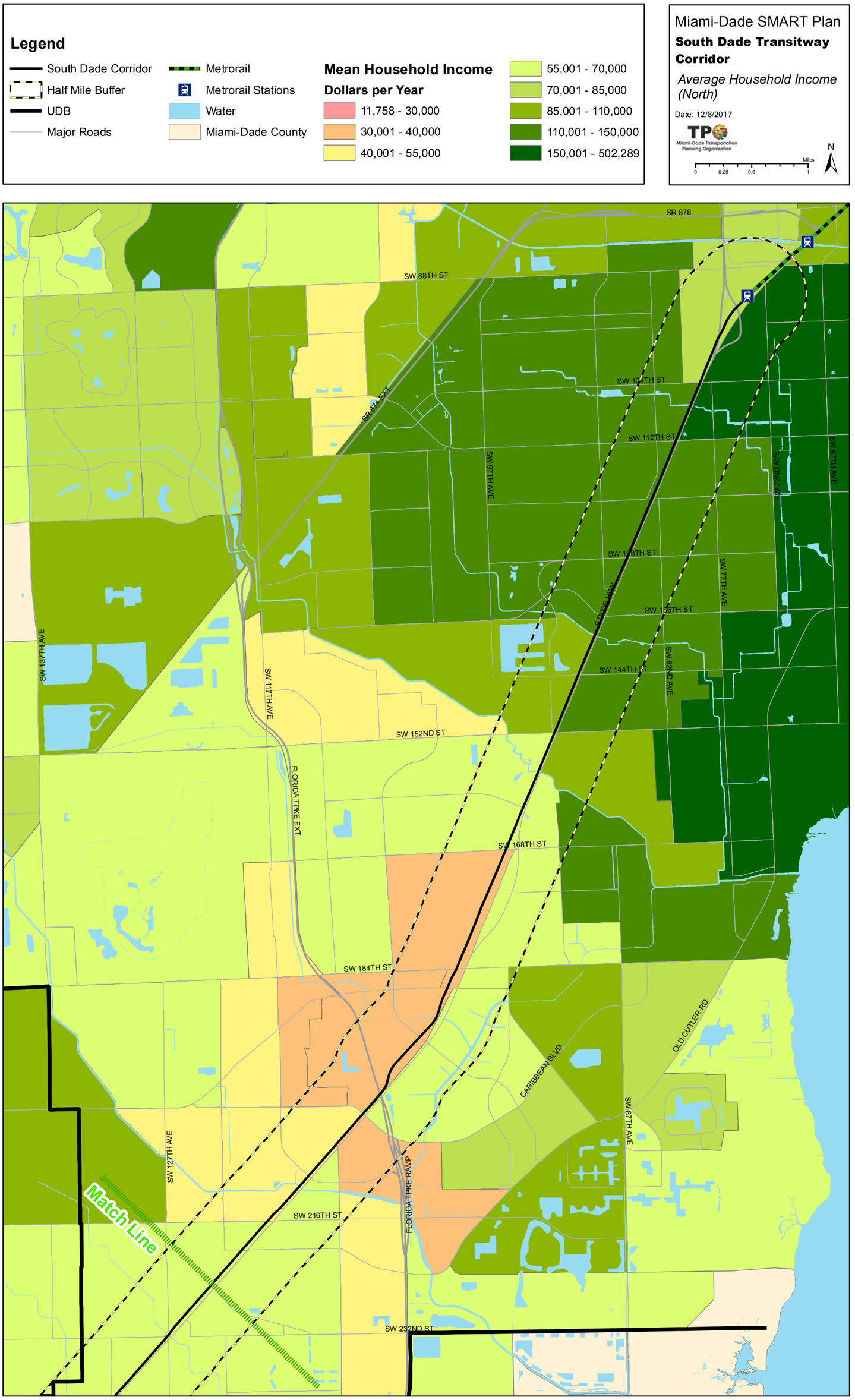

Figure 17 - Average Household Income (North)

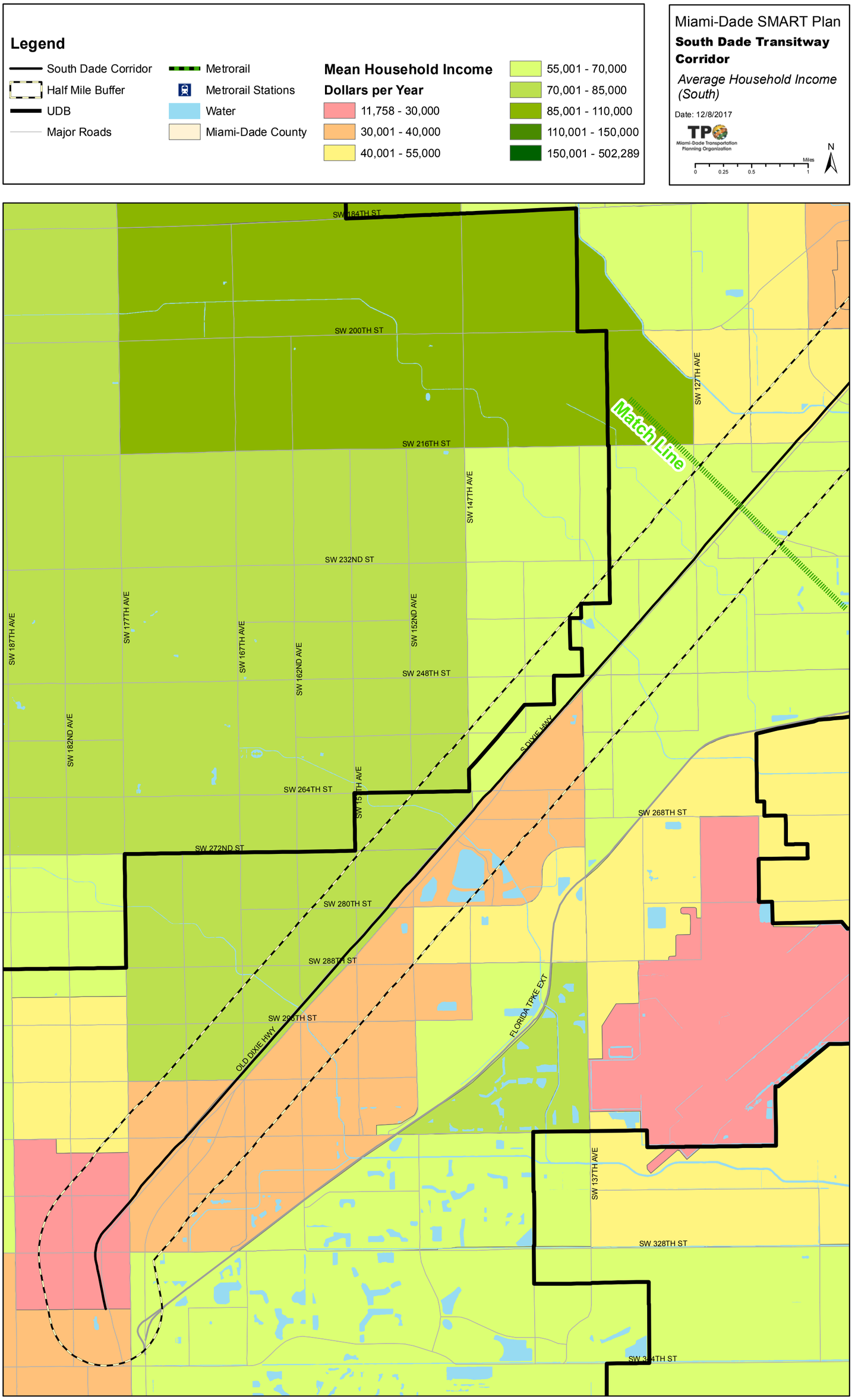

Figure 18 - Average Household Income (South)

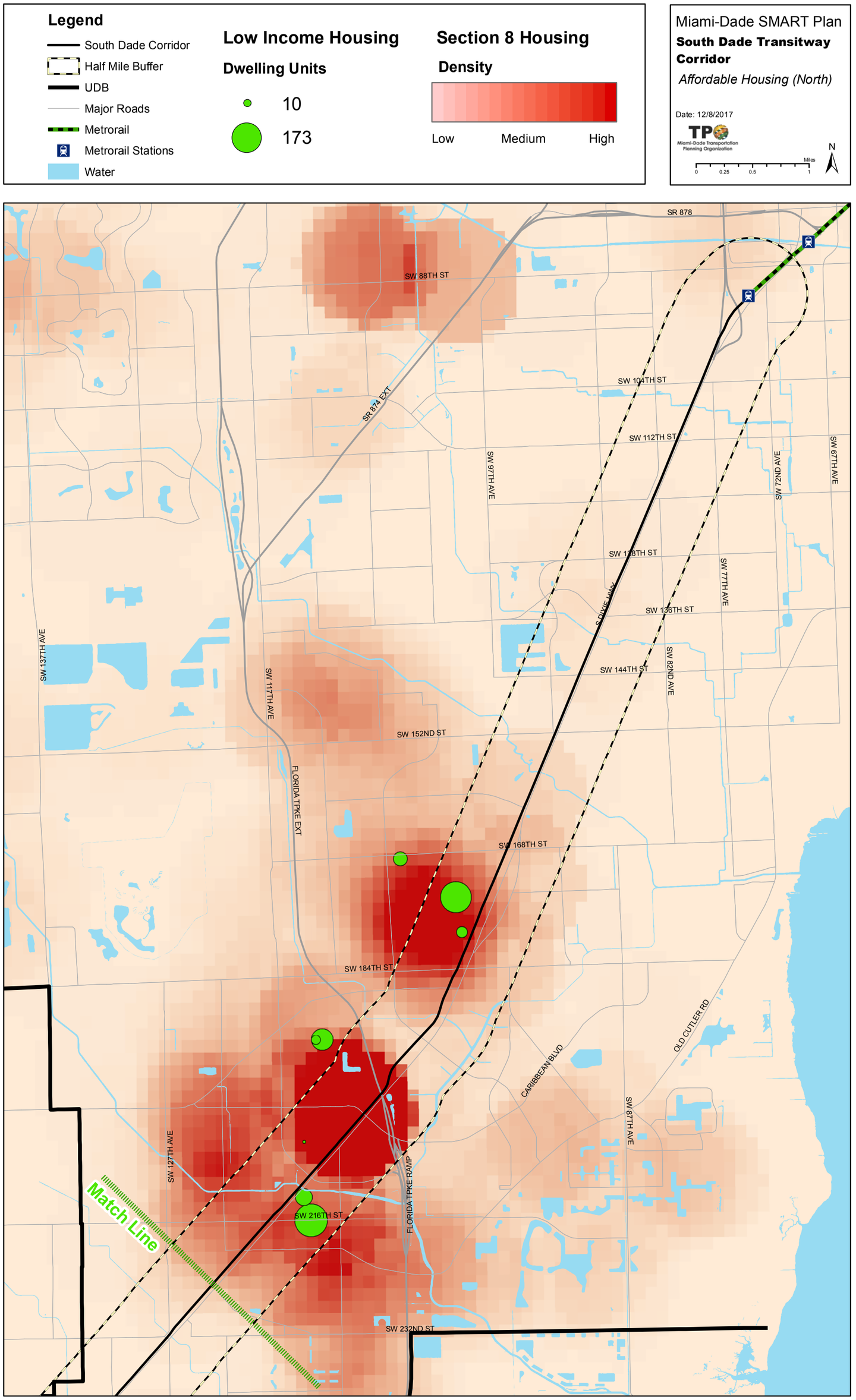

Figure 19 - Affordable Housing (North)

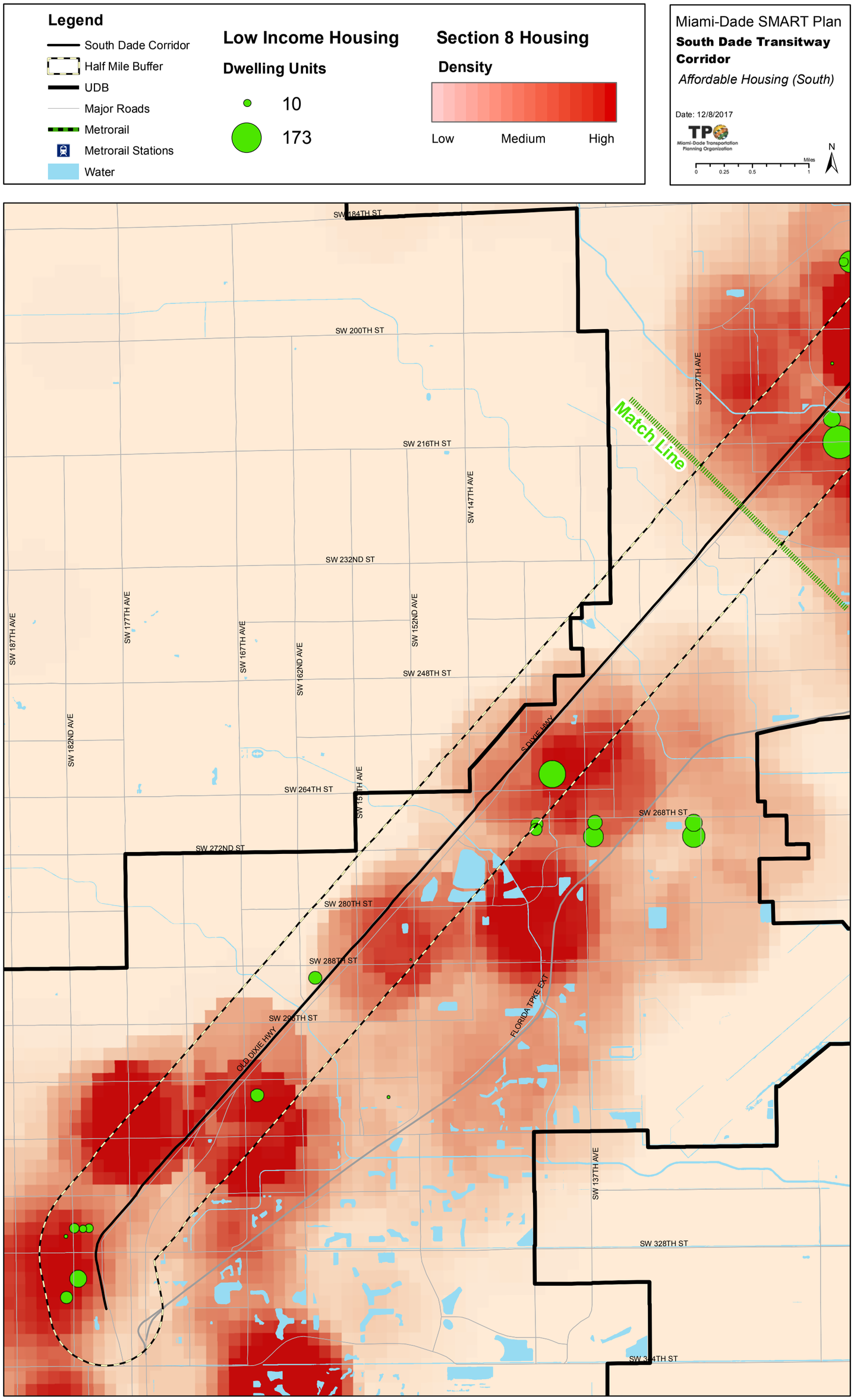

Figure 20 - Affordable Housing (South)

Transit Dependent Populations

Transit dependent populations can be measured in many ways, but for this study four (4) demographic classifications were combined to determine the transit dependent propensity for the area. Data was gathered from the 2015 American Community Survey (ACS) for all Census Tracts within Miami-Dade County. Statistics regarding the corridor buffer area were derived in two steps. First, data from every census tract within a half-mile buffer area was collected and organized. Then this data was adjusted according to the percentage of the tract which was within the half-mile buffer to reach a final estimation. In Tables 6 and 7, data from the complete census tract is depicted in blue while the orange fields have been normalized by the percentage of the tract which falls within the half-mile corridor buffer. Each demographic is displayed independently in figures 21 through 28, and then all four are combined to create a single map which depicts the Transit Dependent Propensity for the area (Figures 29 and 30).

The four (4) contributing classifications are:

- Low Income Households (under $25k / year)
  31.2% or 8,074 of the households within the South Dade Transitway Corridor buffer area qualify as low income, netting less than $25k per year. This indicates a slightly higher concentration than the rest of Miami-Dade County, which contains 30.6% low income households.

- Zero Car Households
  12.8% or 3,303 of the households within the South Dade Transitway Corridor buffer area do not have access to a car. This is 1.6% higher than the county average of 11.2%.

- Aged over 65 years
  10.8% or 9,290 of the residents of the South Dade Transitway Corridor are aged over 65. Compared to the County average of 14.9%, this indicates that the corridor has a relatively low concentration of senior citizens.

- Minority (any ethnicity that is not ‘white, non-hispanic’)
  83.3% of the residents of the South Dade Transitway Corridor identify as some category other than white, non-hispanic. This is slightly lower than the County-wide average of 84.9%. 3.2% of all minorities in Miami-Dade County live within the corridor buffer area.

Table 6 – Distribution of Low Income and of 0 Car Households

	Total Households	Low Income Households (<25k)	0 Car Households
County Total	842,153	258,000	94,281
% of County Total Households		30.6%	11.2%
Census Tract	76,177	21,162	7,621
% of Households in Census Tract		27.8%	10.0%
% of County Total for Category	9.0%	8.2%	8.1%
Half-Mile Buffer (Census Tract Clip)	25,838	8,074	3,303
% of Households in Buffer		31.2%	12.8%
% of County Total in Buffer	3.1%	3.1%	3.5%

Table 7 – Distribution of Persons Aged Over 65 and of Minority Persons

	Total Population	Aged Over 65	Minority
County Total	2,639,042	393,427	2,240,342
% of County Total Population		14.9%	84.9%
Census Tract	257,960	28,790	207,599
% of Population in Census Tract		11.2%	80.5%
% of County Total for Category	9.8%	7.3%	9.3%
Half-Mile Buffer (Census Tract Clip)	85,727	9,290	71,383
% of Population in Buffer		10.8%	83.3%
% of County Total in Buffer	3.2%	2.4%	3.2%

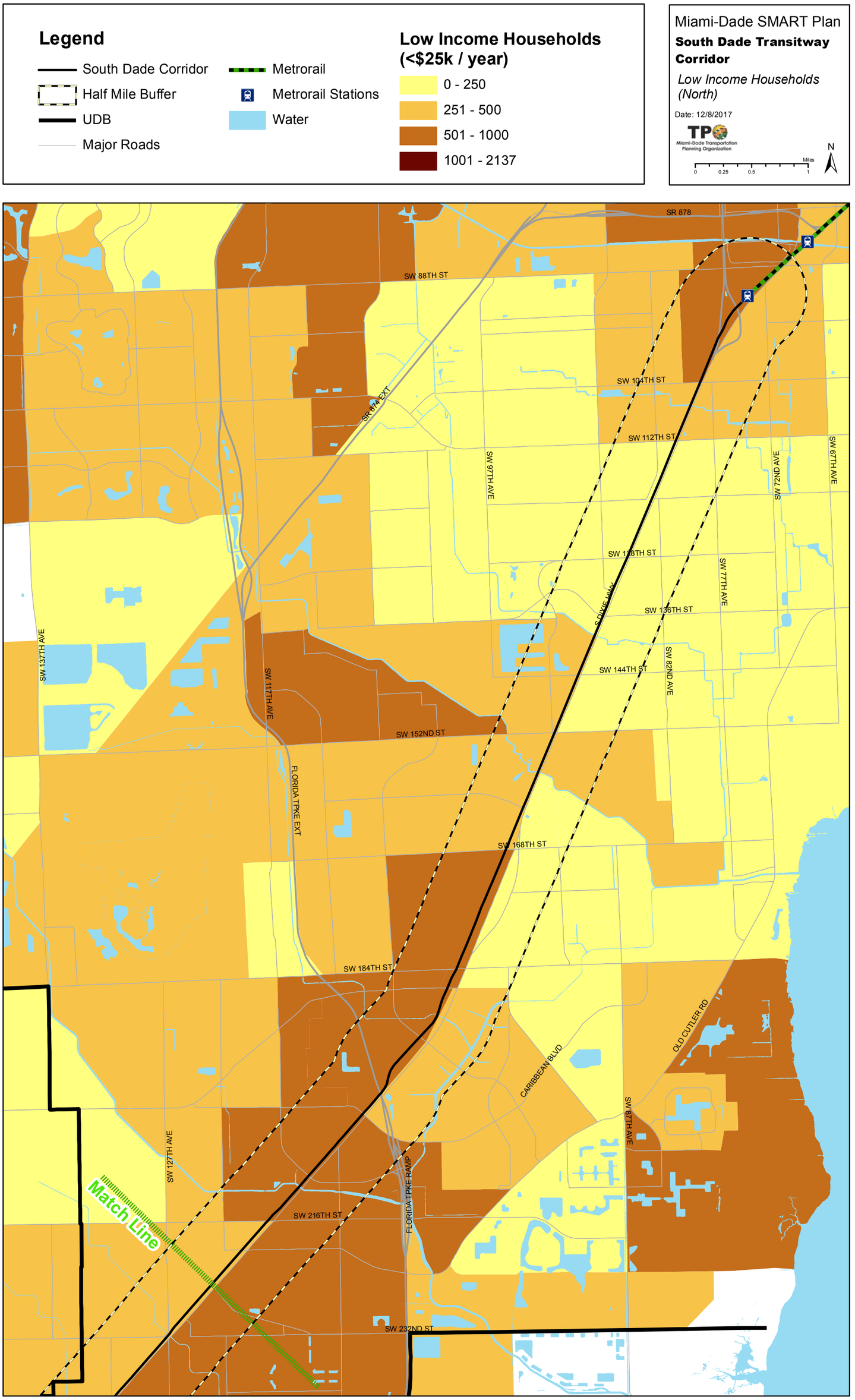

Figure 21 - Low Income Households (North)

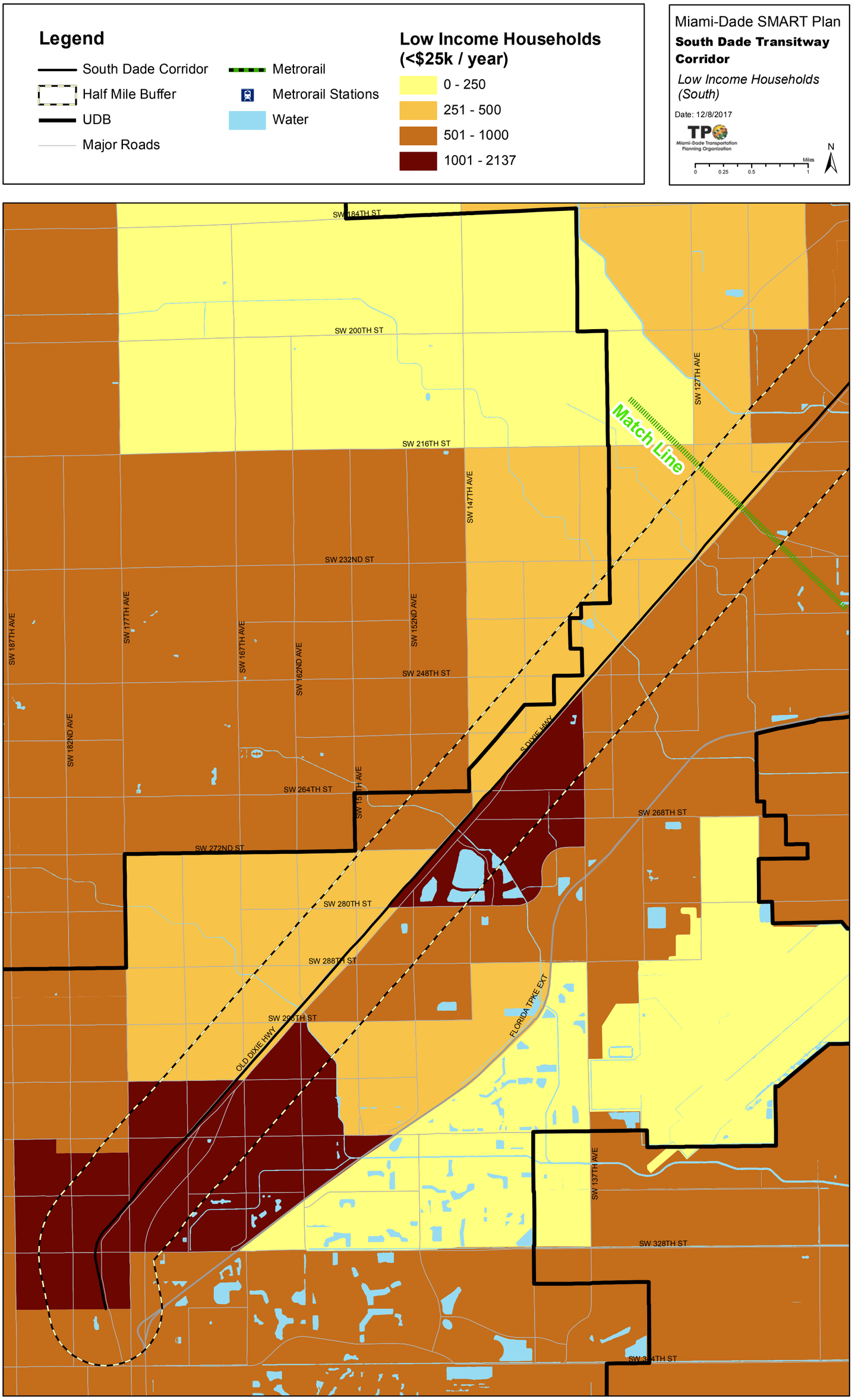

Figure 22 - Low Income Households (South)

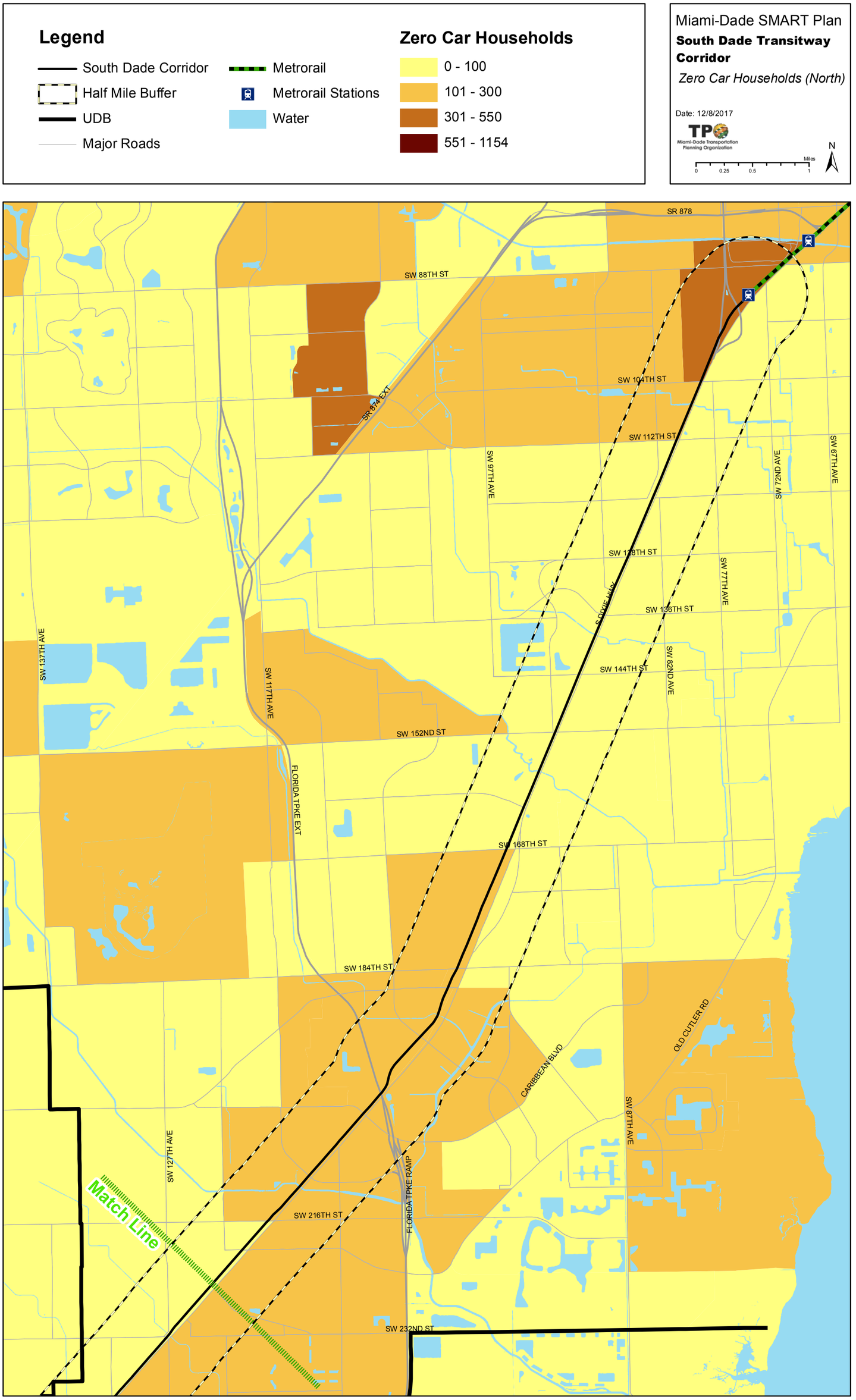

Figure 23 - Zero Car Households (North)

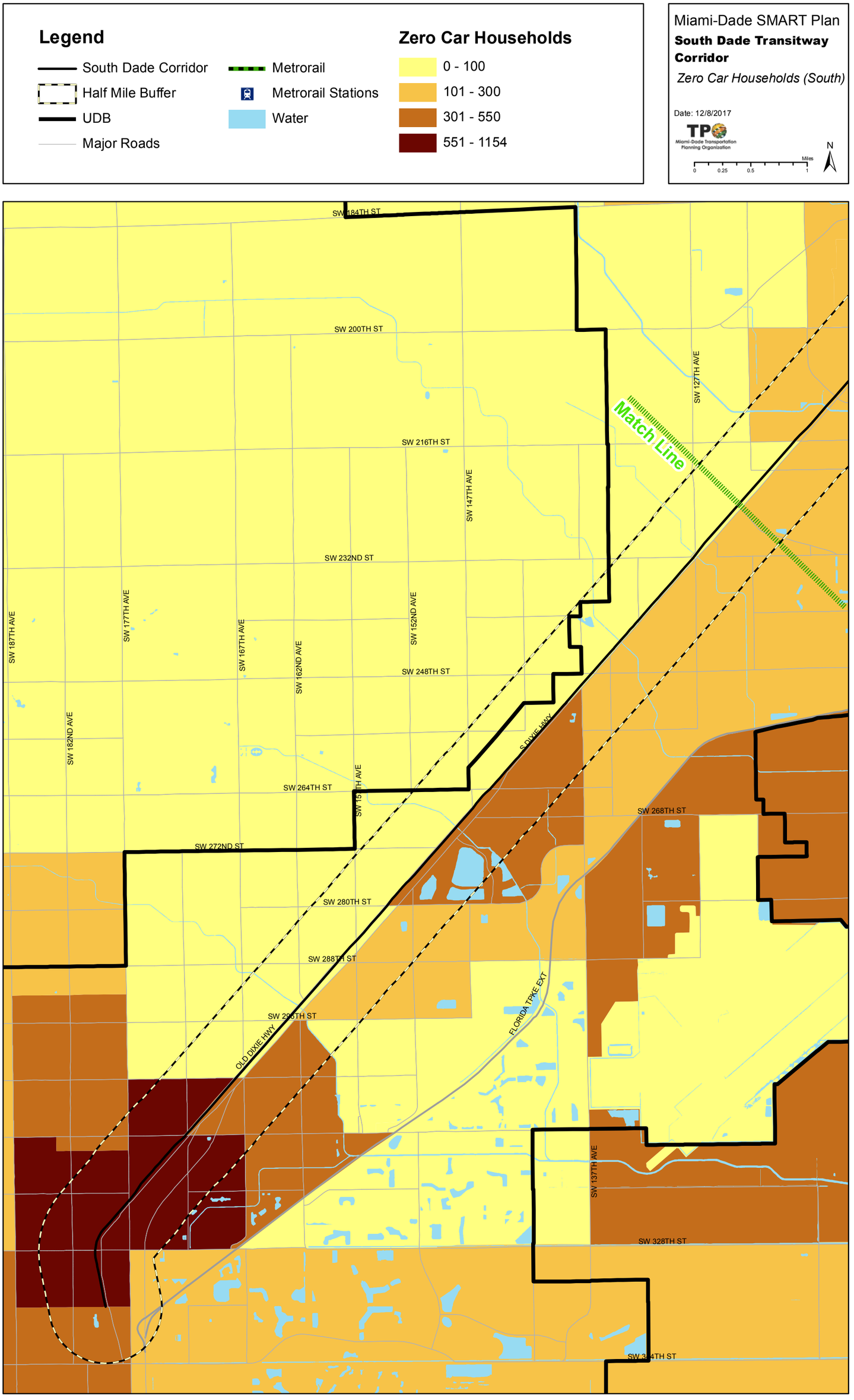

Figure 24 - Zero Car Households (South)

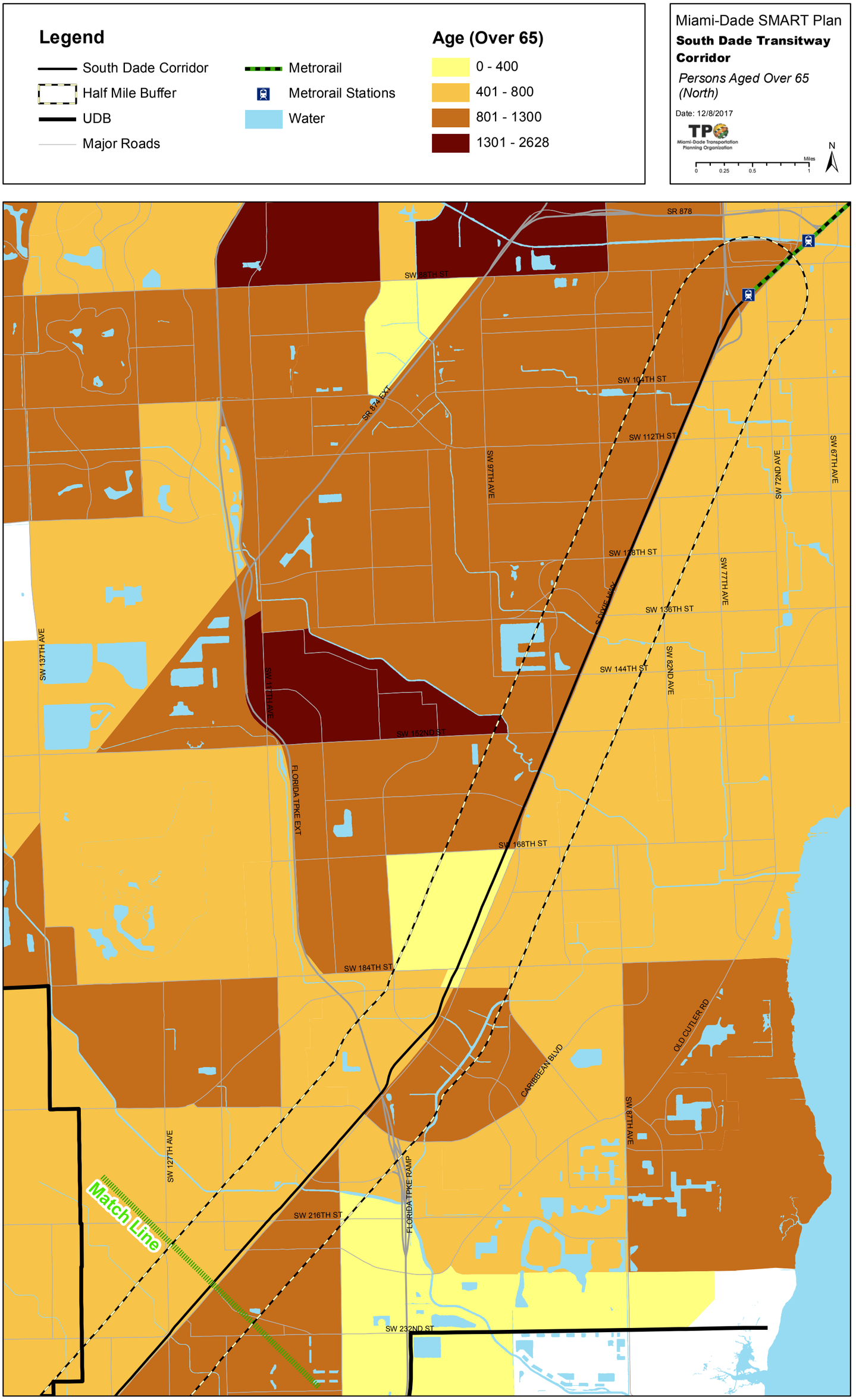

Figure 25 - Persons Aged Over 65 (North)

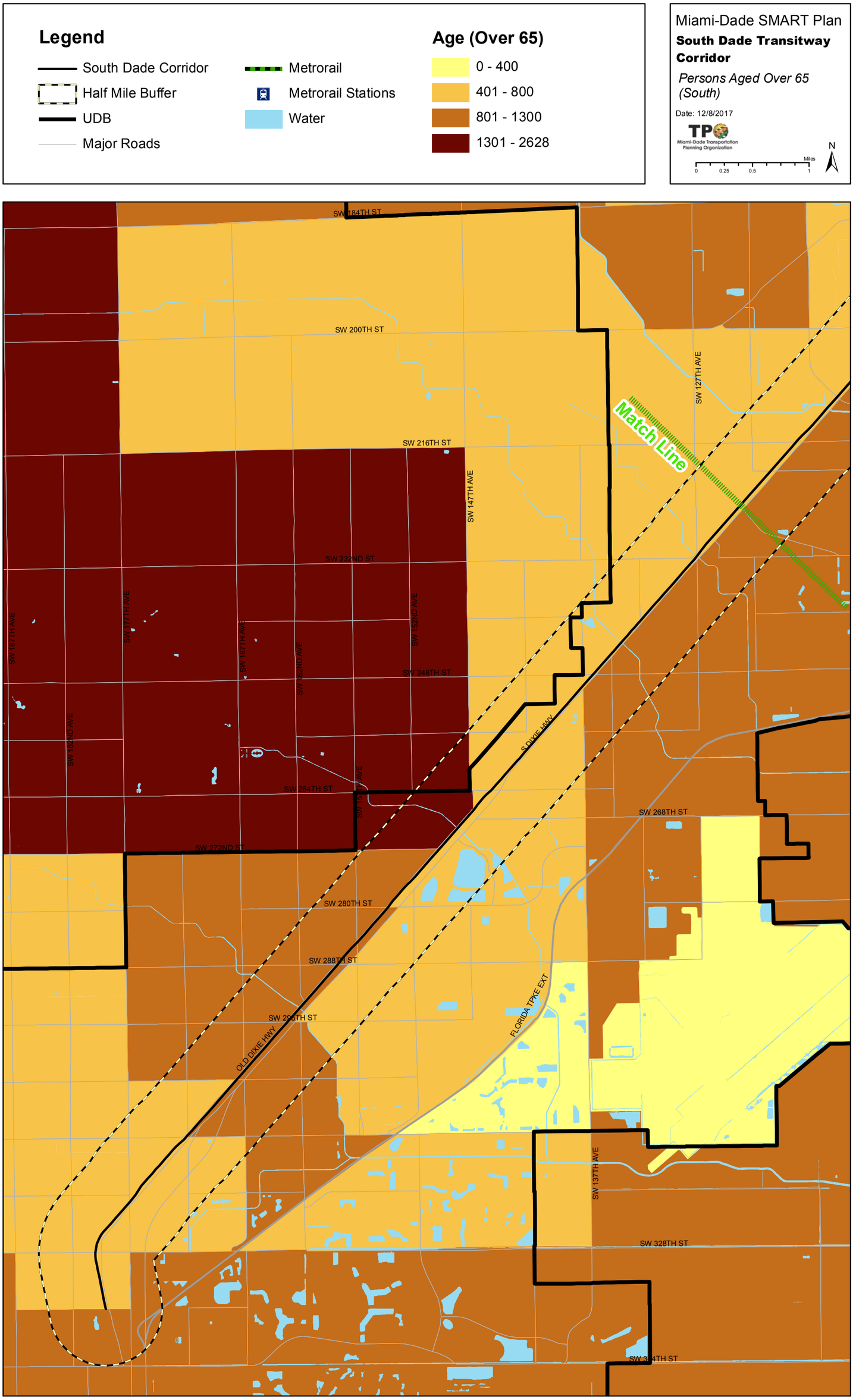

Figure 26 - Persons Aged Over 65 (South)

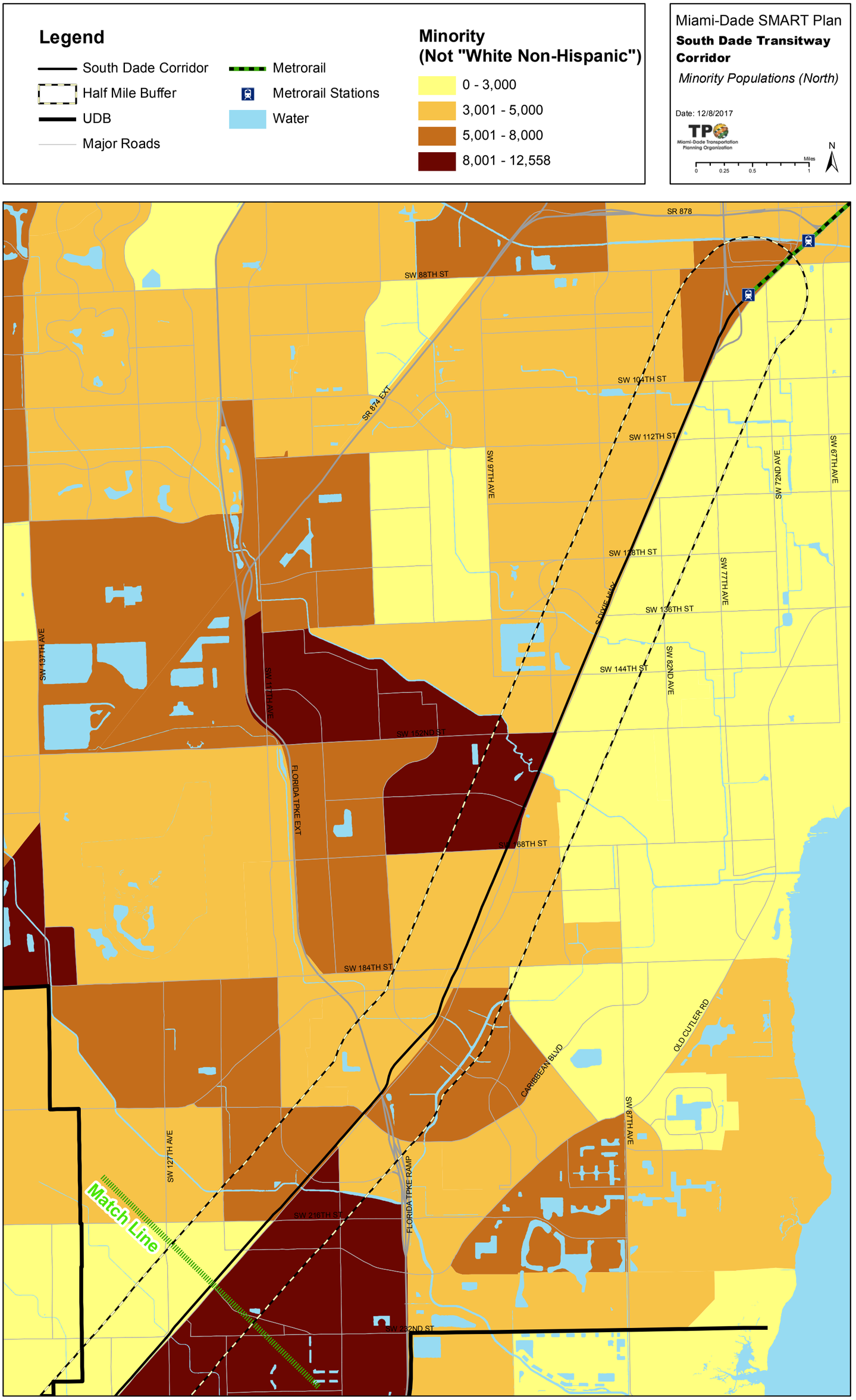

Figure 27 – Minority Populations (North)

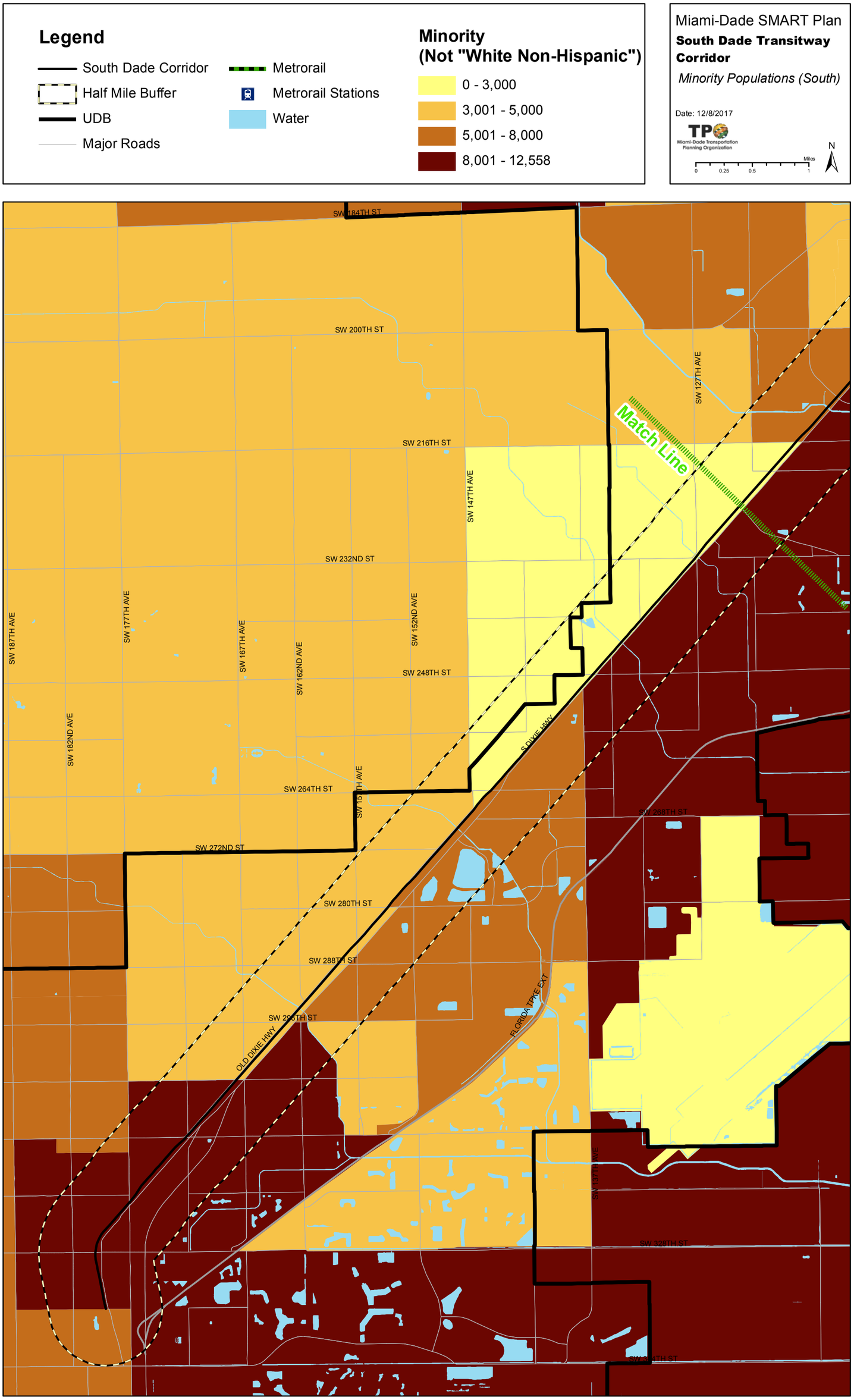

Figure 28 – Minority Populations (South)

Miami-Dade SMART Plan
South Dade Transitway Corridor
Transit Dependence (North)

Date: 12/8/2017

TPO Miami-Dade Transportation Planning Organization

N

Miles
0 0.25 0.5 1

Transit Dependence Propensity
High
Medium
Low

Legend
- UDB
- Half Mile Buffer
- Metrorail Stations
- Metrorail
- South Dade Corridor
- Major Roads
- Water

SW 67TH AVE
SW 72ND AVE
SW 77TH AVE
SR 878
SW 82ND AVE
SW 104TH ST
SW 112TH ST
SW 120TH ST
SW 136TH ST
SW 144TH ST
S DIXIE HWY
OLD CUTLER RD
SW 87TH AVE
CARIBBEAN BLVD
SW 168TH ST
SW 97TH AVE
SW 88TH ST
SW 152ND ST
SR 874 EXT
SW 184TH ST
FLORIDA TPKE RAMP
SW 232ND ST
SW 216TH ST
FLORIDA TPKE EXT
SW 117TH AVE
SW 127TH AVE
SW 137TH AVE
Match Line

Figure 29 - Transit Dependence Propensity (North)

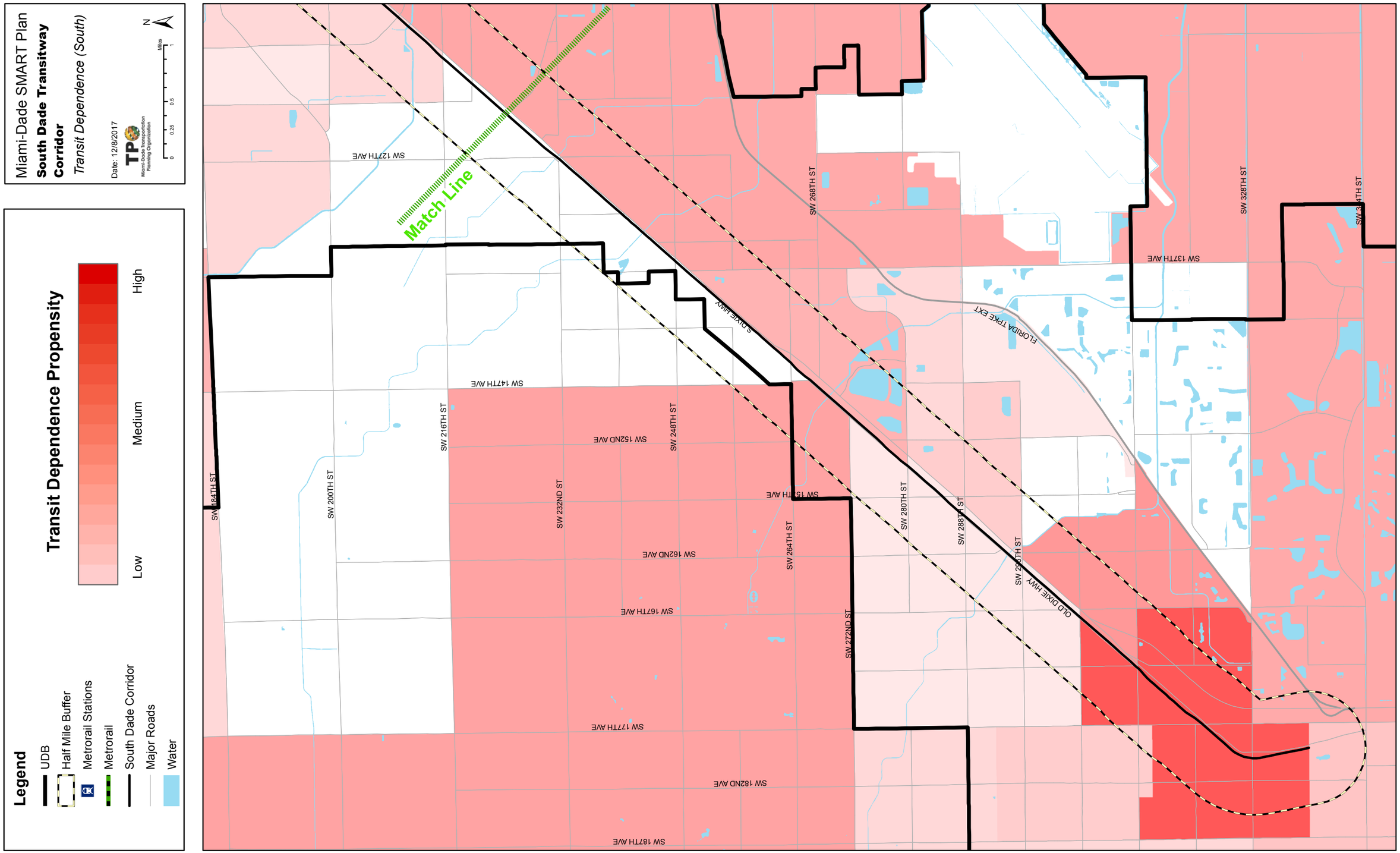

Figure 30 - Transit Dependence Propensity (South)

3.1.3. Property Values

Redevelopment Potential

To assess the Corridor's potential for being redeveloped with a TOD focus, a redevelopment potential analysis was conducted. Parcel property value data was collected from the Miami-Dade County Property Appraiser. Property appraiser data used in this analysis is from 2016. This data contains separate valuations for the building value and underlying land value for every parcel within the corridor's half-mile buffer area. Using this data, each parcel's redevelopment potential was calculated as the ratio of the building value to land value. When the building value is zero to one and a half times the value of the land, the parcel is considered to have high redevelopment potential. When the building value is between 1.5 and 3 times the land value, the parcel is considered to have moderate redevelopment potential. Vacant parcels are depicted in purple; public park space is depicted in green. Buildings built within the last 20 years (since 1996) are excluded from this analysis. The results of this analysis can be seen in Figures 31 and 32, which depict the redevelopment potential for the north and south half of the corridor, respectively.

Table 8 – Redevelopment Potential Profile

	Vacant	High Potential	Medium Potential
Number of Parcels	2,945	1,639	2,165
Total Acres	1,861	1,937	1,178

While Goulds and West Perrine, the neighborhoods to the south of the City of Cutler Bay, have large numbers of vacant lots, they are mostly zoned as small single family residential parcels. The area south of Goulds, between SW 232th Street and SW 280th Street, high rates of vacancy and redevelopment potential exist in large multi-acre lots.

This analysis suggests that both sides of the corridor north of 136th street contain a high concentration of redevelopable land. This is some of the most valuable land along the corridor, which, combined with sharp increases in land values in recent years in South Florida, explain this land's potential.

The south side of the corridor has greater concentrations of vacant land. These are closely correlated with proximity to the Urban Development Boundary, thus much of this land is currently used for agricultural purposes, including orchards and nurseries.

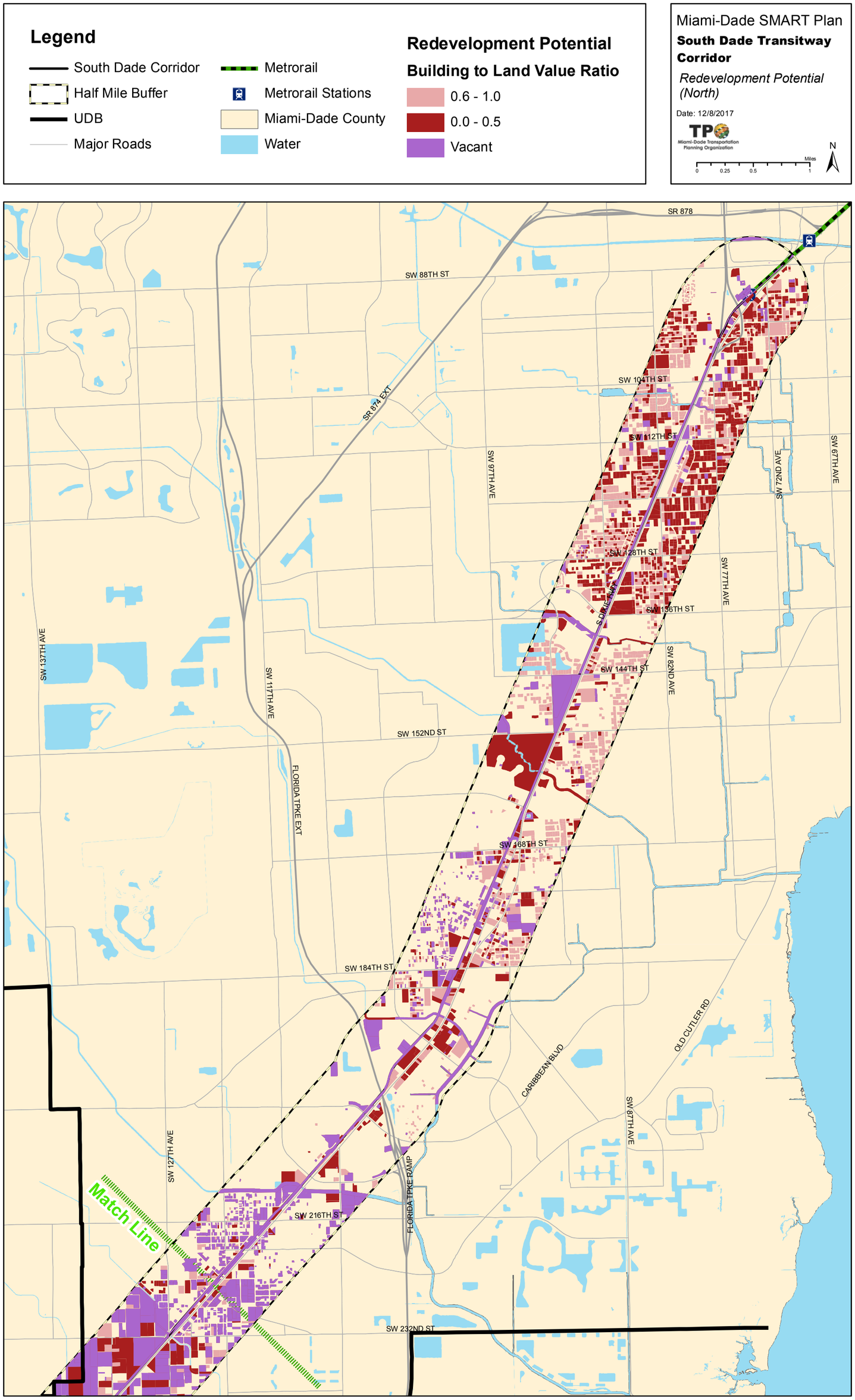

Figure 31 - Redevelopment Potential (North)

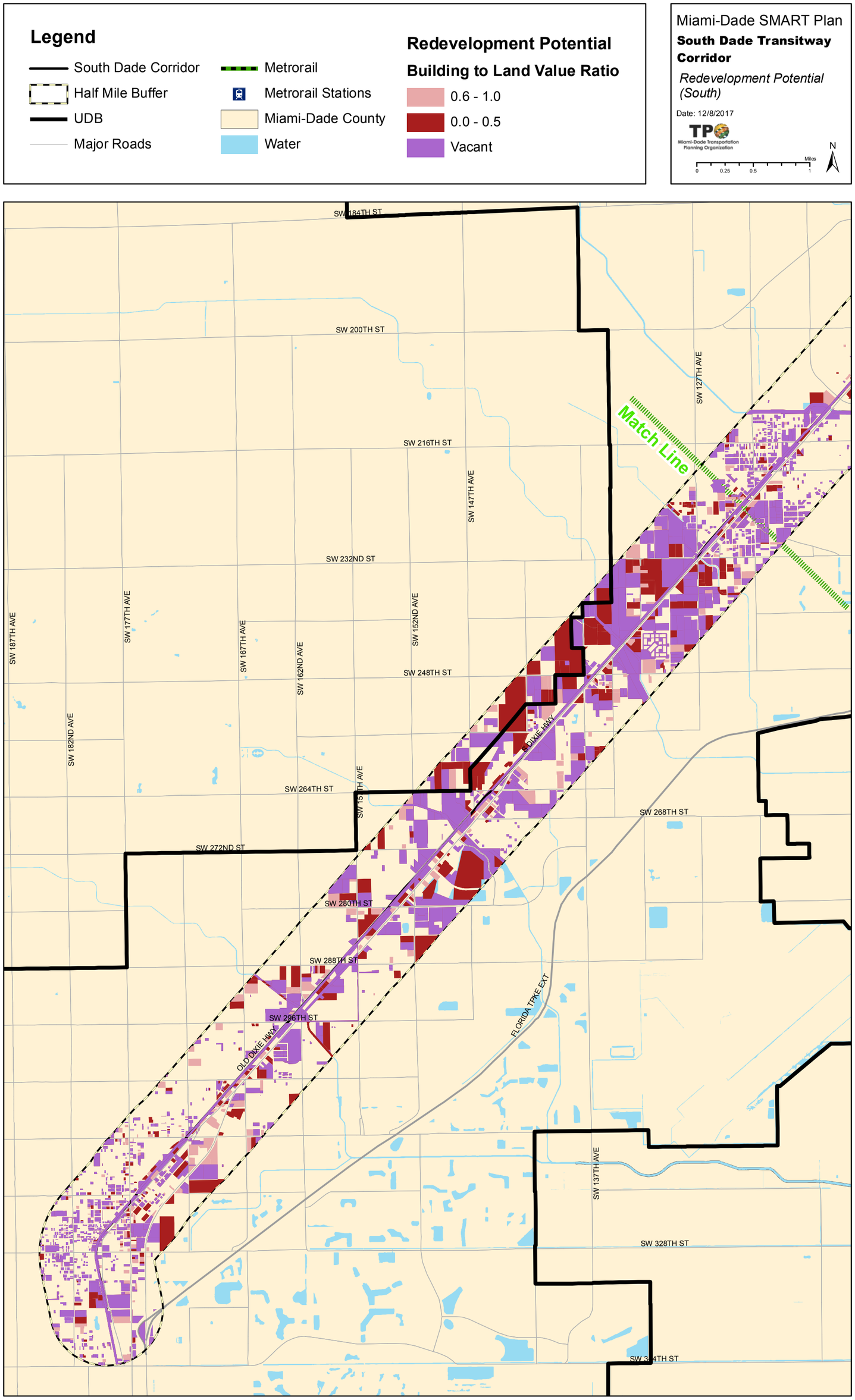

Figure 32 - Redevelopment Potential (South)

3.1.4. Existing Transportation System

Existing Roadways

The main thoroughfare along the South Dade Transitway Corridor for passenger vehicles is U.S. 1/SR 5, a state maintained road. The South Miami-Dade Transitway lies adjacent and parallel to U.S. 1 from the Dadeland South Metrorail station to its intersection with SW 344th Street/W Palm Drive in Florida City. The total length of the corridor is approximately 20 miles.

The five municipalities within the corridor are responsible for maintenance of most of their own roads, while the county is responsible for the arterials that pass through them as well as all roads on unincorporated land. Table 9 summarizes the roadway maintenance miles by jurisdiction. Figures 34 and 35 depict the maintenance obligations for roadways in Miami-Dade County.

Table 9 - Roadway Maintenance by Jurisdiction

Road Maintenance (miles)						
State	**County**	**City**	**City/County Shared**	**Private/Port Roads**	**Unknown**	**Undeveloped**
37.6	197.0	105.0	1.4	28.6	0.8	5.9

U.S. 1 is a six-lane divided urban principal arterial with a posted speed limit of 45 miles per hour. South of SW 112th Avenue (South Allapattah Road), U.S. 1 narrows to a four-lane divided roadway. For most of its length, the median width along U.S. 1 ranges between 24 and 26 feet. North of SW 104th Street, the median width reduces to seven feet until the intersection with the SR 826 (Palmetto Expressway) northbound on-ramp where the median width increases to 20 feet until the northern limit of the corridor.

The Transitway is a two-lane undivided roadway that is used exclusively by the Department of Transportation and Public Works (DTPW) buses and emergency response vehicles. In general, the Transitway is located within 100 feet of the west side of U.S. 1. At the approach to Dadeland South and South of SW 160th Street, the Busway is located west of U.S. 1 behind commercial establishments, and at the southern end it is as far as a quarter mile away from U.S. 1. The typical Transitway road section consists of two 12-foot lanes separated by a four-foot painted median, eight-foot shoulders (six feet paved and two feet unpaved), varying width roadside swales, and a ten-foot paved bicycle path. The Transitway crosses under the SR-826 on and off ramps near the north terminus of the corridor (north of SW 98th Street) and under the SR 821/ HEFT near

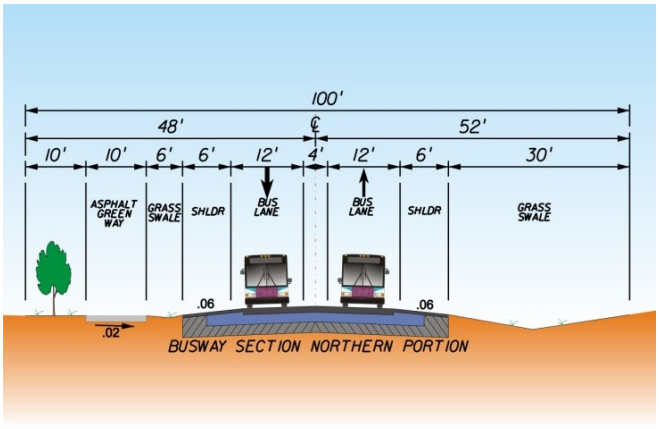

Figure 33 - Typical Section of the Transitway

SW 200th Street. North of SW 98th Street, the Busway shares right-of-way with the Metrorail tracks and has a constrained urban two-lane section. The Transitway has a posted speed limit of 45 miles per hour, and buses are required to cross all intersections at 15 miles per hour or less.

Currently, there are 55 signalized intersections and 108 unsignalized intersections along U.S. 1. There are 49 signalized intersections and a total of 30 bus stations along the Transitway. Tables 10, 11, and 12 provide an intersection inventory of the corridor.

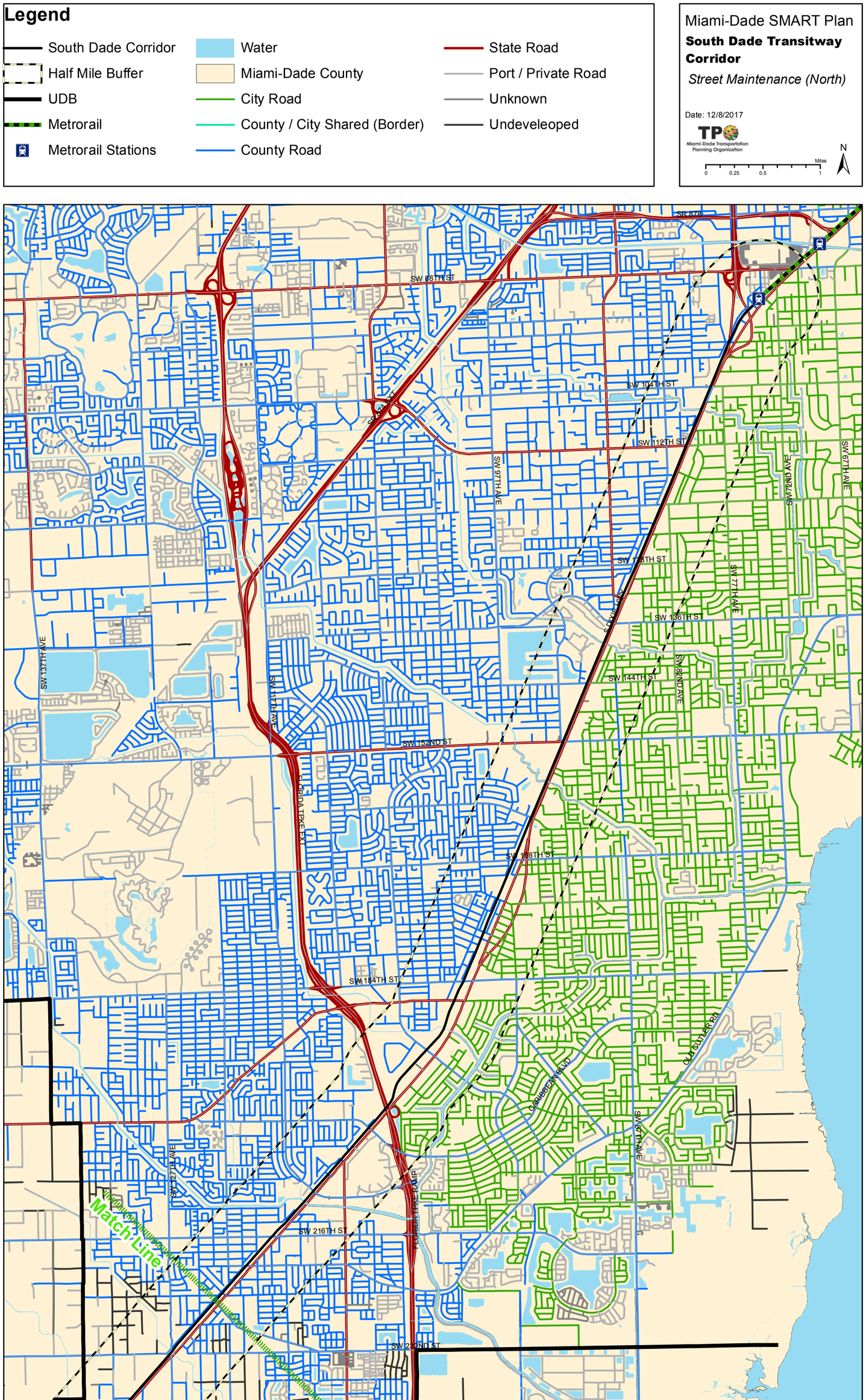

Figure 34 - Street Maintenance (North)

Miami-Dade SMART Plan
South Dade Transitway Corridor
Street Maintenance (South)

Date: 12/8/2017

TPO Miami-Dade Transportation Planning Organization

N

Miles
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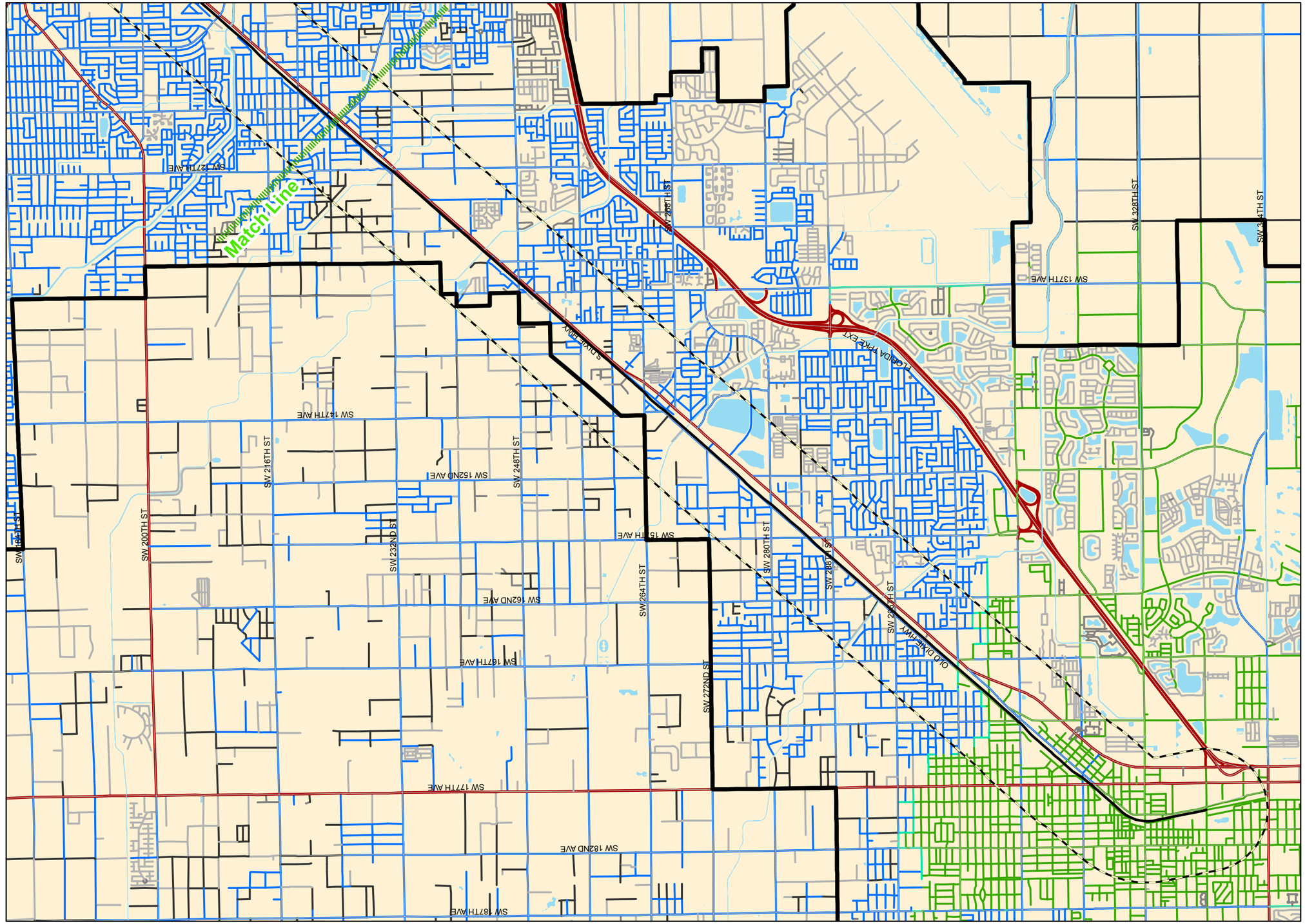


Legend

- South Dade Corridor
- Half Mile Buffer
- UDB
- Metrorail
- Metrorail Stations
- Water
- Miami-Dade County
- City Road
- County / City Shared (Border)
- County Road
- State Road
- Port / Private Road
- Unknown
- Undeveloped

Figure 35 - Street Maintenance (South)

Table 10 - U.S. 1 Signalized Intersections

ID	Cross Street	Signal ID	Mile Post
1[(1)]	SW 72 Ct/Dadeland Blvd	4341	0.451
2[(1)]	Datran Dr	4681	0.344
3	SW 98 Street/Johnson Dr	4195	20.042
4	SW 104 Street	3147	19.613
5	SR 990 / SW 112 Street	2954	19.057
6	SW 120 Street	6894	18.514
7	SW 124 Street	3090	18.216
8	SW 128 Street	4278	17.934
9	SR 973 / SW 132 Street	3651	17.597
10	SW 136 Street	3531	17.373
11	SW 144 Street	3656	16.82
12	SW 14600 Block	4530	16.646
13	SR 992 / SW 152 Street	2955	16.266
14	SW 15900 Block	3891	15.673
15	SW 160 Street	3236	15.532
16	SW 168 Street	2956	15.171
17	SW 174 Street	3556	14.775
18	Evergreen / Franjo	3224	14.607
19	Hibiscus Street	3558	14.426
20[(2)]	Hibiscus Street	3557	0.822
21[(2)]	Banyan Street	3566	0.51
22[(2)]	SW 168 Street	3916	0.11
23	SW 184 Street	4712	13.982
24	SR 994 / SW 186 Street	2994	13.796
25	Marlin Rd	3872	13.234
26	SW 19500 Block	5462	13.074
27	SW 200 Street	2993	12.383
28	SW 20400 Block	3652	12.175
29	SR 989 / SW 112 Avenue	3649	12.014
30	SW 117 Avenue/SW 211 Street	4252	11.647
31	SW 216 Street	3502	11.15
32	SW 220 Street	3627	10.809
33	SW 224 Street/Miami Avenue	6042	10.465
34	SW 232 Street	5049	9.74
35	SW 132 Avenue	6045	9.018
36	SW 244 Street	6053	8.677
37	SW 248 Street	3465	8.4
38	SW 137 Avenue	6052	8.218
39	SW 252 Street	6634	8.058
40	SW 260 Street	6636	7.392
41	SW 264 Street	6093	7.077
42	SW 268 Street	3741	6.747
43	SW 272 Street	5106	6.318

ID	Cross Street	Signal ID	Mile Post
44	SW 280 Street	5262	5.696
45	SW 157 Avenue	5261	5.141
46	SW 288 Street	3046	5.027
47	SW 296 Street	3610	4.339
48	SW 304 Street	3533	3.662
49	SW 308 Street	3024	3.363
50	SW 312 Street	3025	3.093
51	NE 2 Dr/SW 320 Street	3570	2.443
52	SE 8 Street / SW 328 Street	3026	1.871
53	SW 33300 Block	5985	1.555
54	SW 336 Street	6475	1.369
55	SR 9336/ SW 344 Street	4339	0.862

Table 10 - U.S. 1 Signalized Intersections (Continued)

Note: U.S. 1 within the Study area is Roadway ID 87020000 with the exception of:

(1) Roadway ID 87030000
(2) Roadway ID 87020001

Table 11 – Transitway Signalized Intersections

ID	Cross Street	Mile Post
1	Dadeland	8.354
2	SW 98 Street	7.956
3	SW 104 Street	7.537
4	Killian Drive/SW 112 Street	6.982
5	SW 124 Street	6.139
6	SW 128 Street	5.866
7	SW 132 Street	5.532
8	SW 136 Street/Howard Drive	5.311
9	Mitchell Drive/ SW 144	4.745
10	SW 152 Street/Coral Reef	4.193
11	SW 160 Street/Colonial Drive	3.473
12	SW 168 Street/Richmond	3.073
13	Banyan Street	2.706
14	Hibiscus Street	2.394
15	SW 184 Street/Eureka Drive	1.929
16	SR 994/SW 186 Street	1.744
17	Marlin Road	1.234
18	SW 200 Street/Caribbean	0.371
19	SW 112 Avenue/SW 208 Drive	11.427
20	SW 117 Avenue/SW 211 Street	11.059
21	SW 216 Street	10.526
22	SW 220 Street	10.186
23	SW 224 Avenue	9.869
24	SW 127 Avenue / SW 232 Street	9.15
25	SW 238 Street	8.631
26	SW 132 Avenue	8.426
27	SW 244 Street	8.09
28	SW 248 Street	7.793
29	SW 137 Avenue	7.655
30	SW 252 Street	7.45
31	SW 260 Street	6.774
32	SW 264 Street	6.427
33	Old Dixie Highway / SW 146 Court	6.192
34	SW 272 Street	5.725
35	SW 280 Street	5.045
36	SW 157 Avenue/Newton Road	4.623
37	SW 288 Street/Biscayne Drive	4.372
38	SW 296 Street/Avocado Drive	3.692

ID	Cross Street	Mile Post
39	SW 304 Street/NE 15 Street	3.016
40	SW 308 Street/NE 11 Street	2.678
41	SW 312 Street/NE 8 Street	2.339
42	NE 2 Drive	1.837
43	SW 320 Street	1.657
44	Krome Avenue/SW 177 Avenue	1.566
45	SW 324 Street	1.322
46	SW 328 Street	1.02
47	SW 336 Street	0.513
48	Park & Ride	0.112
49	SW 344 Street	0

Table 11 - Transitway Signalized Intersections (Continued)

Note: U.S. 1 within the Study area is Roadway ID 87020000

Table 12 - U.S. 1 Un-signalized Intersections

ID	Cross Streetreet	Mile Post
1	SW 90 Street	0.652
2	SW 72 Avenue	0.593
3	Denicke Avenue/SW 95 Street	0.181
4	SR 826 NB mainline	19.938
5	SW 100 Street	19.909
6	SR 826 SB mainline	19.9
7	SW 102 Street/Flagler Boulevard	19.763
8	SW 106 Street	19.481
9	SW 110 Street	19.213
10	SR 990/Killian Drive	19.071
11	SW 117 Street	18.818
12	SW 130 Street	17.808
13	SW 132 Street	17.67
14	Home Depot Entrance	17.387
15	Colonial Palms Mall	17.339
16	SW 141 Street	17.031
17	SW 148 Street	16.544
18	Mall Entrance	16.38
19	SW 156 Street	16.016
20	SW 157 Street	15.969
21	SW 158 Lane	15.829
22	Begin section 87020001	15.265
23	SW 169 Street	15.123
24	SW 170 Street	15.042
25	SW 95 Ave	14.939
26	SW 175 Terrace	14.68
27	E fern Street	14.553
28	Guava Street	14.492
29	Indigo Street	14.36
30	Wayne Avenue	14.261
31	Wayne Avenue	0.976
32	Indigo Street	0.886
33	Guava Street	0.76
34	E fern Street	0.696
35	Evergreen Street	0.635
36	E datura Street	0.572
37	SW 170 Street	0.251
38	SW 169 Street	0.159
39	SW 183 Streetr / end section 87020001	14.139

ID	Cross Streetreet	Mile Post
40	South Dade Shopping	13.915
41	Mall entrance	13.689
42	Broad Channel Drive	13.575
43	Mall entrance	13.374
44	Belview ln	12.906
45	SW 107 Avenue Road	12.702
46	Ramp to SR 821 NB	12.662
47	Publix	11.781
48	SW 117 Avenue	11.66
49	SW 213 Street	11.413
50	SW 214 Street	11.335
51	SW 215 Street	11.249
52	SW 216 Street	11.164
53	SW 117 Court	11.164
54	SW 118 Avenue	11.05
55	SW 118 Court	10.956
56	Old Cutler Road/220 Street	10.822
57	SW 222 Street	10.659
58	SW 120 Avenue	10.652
59	Miami Avenue	10.476
60	Bailes Road	10.363
61	SW 228 Street	10.143
62	SW 124 Avenue	10.11
63	SW 230 Street	9.993
64	SW 231 Street	9.894
65	SW 129 Avenue	9.362
66	SW 242 Street	8.935
67	SW 134 Avenue	8.609
68	Coconut Palm Drive	8.416
69	Murray Street/SW 135 Road	8.331
70	SW 250 Street	8.247
71	SW 137 Avenue	8.232
72	SW 252 Street	8.076
73	SW 139 Avenue	7.852
74	Old Dixie Highway	7.308
75	Henderson Street	7.259
76	SW 266 Street	6.916
77	SW 146 Court	6.791
78	Epmore Drive/SW 272 Street	6.586
79	SW 145 Avenue	6.498
80	Naranja Lakes Boulevard	6.152

ID	Cross Streetreet	Mile Post
81	Kingman Road/SW 152 Avenue	5.889
82	Waldin Drive/SW 280 Street	5.709
83	SW 282 Street	5.543
84	SW 284 Street	5.374
85	SW 293 Terrace	4.557
86	SW 164 Avenue	4.035
87	Ne 12 Avenue	3.647
88	N Flagler Avenue	3.534
89	Homestead Town Square	3.27
90	Homestead Town Square	3.188
91	Harris Field	2.877
92	SE 6 Avenue	2.666
93	NE 6 Avenue	2.666
94	NE 3 Drive	2.494
95	NE 1 Drive	2.333
96	E Mowry Drive/SW 320 Street	2.252
97	SE 4 Street	2.125
98	SE 6 Street	1.999
99	NE 14 Street	1.739
100	Home Depot entrance	1.713
101	Ramp 87471102	1.236
102	SR 821/HEFT NB	1.15
103	SR 821/HEFT SB	1.036
104	Service Road	0.612
105	Best Western entrance	0.491
106	SW 352 Street	0.356
107	SR 997/Krome Avenue	0.122
108	Card Sound Road	0

Table 12 - U.S. 1 Un-signalized Intersections (Continued)

Note: U.S. 1 within the Study area is Roadway ID 87020000 with the exception of:

(1) Roadway ID 87030000
(2) Roadway ID 87020001

The current signal system along U.S. 1 is interconnected and there is a limited amount of signal progression present along the Transitway. Typically, U.S. 1 traffic signals have four phases and cycle lengths of approximately 180 seconds. For safety, only the U.S. 1 northbound left turns are protected; most of the east and westbound movements on the cross streets operate on a split phase.

The Transitway traffic signals operate as fully actuated and are interconnected to the adjacent U.S. 1 signal. There is no progression provided, but a “conditional” signal priority at the individual

intersection is provided. If there is no bus on the Transitway during the north/south green on U.S. 1, the green is allocated to the U.S. 1 southbound right turns and the signal for the Transitway will remain red. If a bus is detected within a predetermined time of the north/south green on U.S. 1, the Transitway will get the green. If the bus activates the signal within the last seconds of the U.S. 1 southbound green time (typically the last 39 seconds of the phase), or when the green is assigned to any of the other movements, the bus will need to wait at the red light until the next cycle. The last seconds of the U.S. 1 southbound phase are assigned for the southbound right regardless of whether there is a bus at the Transitway.

Traffic Volumes

The corridor development pattern has created a north-south commuting patterns, traffic volumes increase steadily from south to north along the corridor. The northern portion of the corridor is currently experiencing some of the region's worst traffic congestion. Table 13 summarizes 2016 Annual Average Daily Traffic (AADT) Volumes as recorded on FDOT's database. As shown, these volumes far exceed the capacity guidelines for a six-lane urban arterial (59,900 vehicles). The project corridor south of SW 152nd Street is within a Miami-Dade County hurricane evacuation zone. South of SW 200th Street, the project corridor is also within the Turkey Point Nuclear Power Plant's ten-mile Emergency Planning Zone. This congestion affects hurricane or other disaster evacuation procedures.

Congested traffic conditions on U.S. 1 result in delays not only to traffic traveling north and south along U.S. 1 but also to traffic approaching US- 1 on the intersecting cross streets.

A contributing factor for this heavy traffic pattern is the limited number of north-south facilities connecting the southern portion of Miami-Dade County. Besides U.S. 1, there are only three other north-south facilities, Krome Avenue (SR 997), the Homestead Extension of the Florida's Turnpike (HEFT) and Old Cutler Road. Krome Avenue is heavily used by trucks, and is a two-lane rural facility south of SW 136th Street, but north of SW 136th Street it has been widened to a four-lane road with a median. The HEFT is a four to six-lane limited access tolled expressway and Old Cutler Road is a two-lane road through residential areas between SW 242nd Street and Coconut Grove, both of which are heavily used by commuters and are operating over capacity.

Table 13 – AADT and LOS Summary

Cosite	Location	AADT	Number of Lanes	LOS
U.S. 1				
872532	SR 5/U.S. 1, 200' S SR 94/Kendall Drive/SW 88 Street	48,500	3	C
870110	SR 5/U.S. 1, 100' S SR 826/Palmetto Expressway	95,000	3	F
870014	SR 5/U.S. 1, 100' S Killian Drive/SW 112 Street	72,000	3	F
870332	SR 5/U.S. 1, 200' S Coral Reef Drive/SW 152 Street	68,500	3	F
872562	SR5/U.S. 1 S Dixie Highway One Way SB 300' S of SW 174 Street	29,000	3	C
872563	SR5/U.S. 1 S. Dixie Highway One Way NB 300' S of SW 174 Street	29,500	3	C
870346	SR 5/U.S. 1, 100' N Allapattah RD/SW 112 AV	52,500	3	C
870008	SR 5/U.S. 1, 100' S Silver Palm Drive/SW 232 Street	34,500	2	C
872521	SR 5/U.S. 1, 380' N SW 272 Street	45,500	2	F
870545	SR 5/U.S. 1, 100' N SW 308 Street	28,000	2	C
870544	SR 5/U.S. 1, 100' N Lucy Street/SW 328 Street (Homestead)	33,000	2	C
Transitway				
872572	Transitway 500' N of SW 128TH Street	600	1	C
872571	Transitway 1000' S of Coral Reef Drive./ SW 152 Street	550	1	C
872570	Transitway 500' S of Marlin RD.	550	1	C
Cross-Streets				
878631	Flagler Avenue, 200' S of SR 5/U.S. 1 (2011 off system cycle)	4,300	1	C
871093	SR 990/Killian Drive, 200' W SR 5/U.S. 1	10,200	2	C
871106	SR 992/Coral Reef Drive, 400' W SR 5/U.S. 1	37,500	2	C
871114	SR 994/Quail Roost Drive, 200' W U.S. 1 on SW 186 Street	18,900	2	C
878285	SW 112TH Street, 200' E of U.S. 1	6,700	2	C
878129	SW 136TH Street/ Howard Drive, 200' W of U.S. 1	17,000	2	D
878274	Coral Reef Drive, 200' E of U.S. 1	11,400	1	D
878277	SW 168TH Street, 200' W of U.S. 1	10,300	2	C
970501	HEFT/SR-821 M/L, S of Quail Roost Drive, MM 13.234	137,000	4	D
	Marlin Road, N of U.S. 1	23,200	2	D
878276	SW 184TH Street, 200' W of U.S. 1	17,700	2	D
972263	HEFT/SR-821 M/L, NB one-way, N of ramp 102	39,800	2	
878319	SW 220TH Street, 200' E of U.S. 1	3,800	2	C
878325	Coconut Palm Drive, 200' W of U.S. 1	5,200	2	C
878224	SW 264TH Street, 200' W of BUSWAY	4,700	2	C
878179	SW 280TH Street/Waldin Drive, 200' EA of U.S. 1	6,500	1	C
878226	SW 296TH Street/Avocado Drive, 200' W of U.S. 1	10,500	1	D
878275	SW 320TH Street, 200' E of U.S. 1	5,900	2	C
878189	SW 328TH Street, 200' E of U.S. 1	9,800	2	C
970013	HEFT SB off ramp to NB U.S. 1/South Dixie HWY, M1C	5,600		
970127	HEFT NB on ramp from U.S. 1, M12G	9,100		
970014	HEFT SB off ramp to SB U.S. 1/South Dixie HWY, M1D	14,000		
970012	HEFT NB on ramp from SB U.S. 1/South Dixie HWY, M1B	4,000		
970011	HEFT NB one way from NB U.S. 1/South Dixie HWY, M1A	15,840		

Safety

Safety along U.S. 1 and the Transitway is an important issue for automobiles, buses, bicyclists, and pedestrians alike, primarily at cross street intersections. Along the U.S. 1 roadway corridor most crashes occur at major intersections, which is typical for arterial roadway. The FDOT high crash database was researched to identify the segments and intersections within the corridor that present a higher than normal crash rate. Table 14 and Table 15 summarize the results. Figures 36 and 37 depict the locations of these segments along U.S. 1.

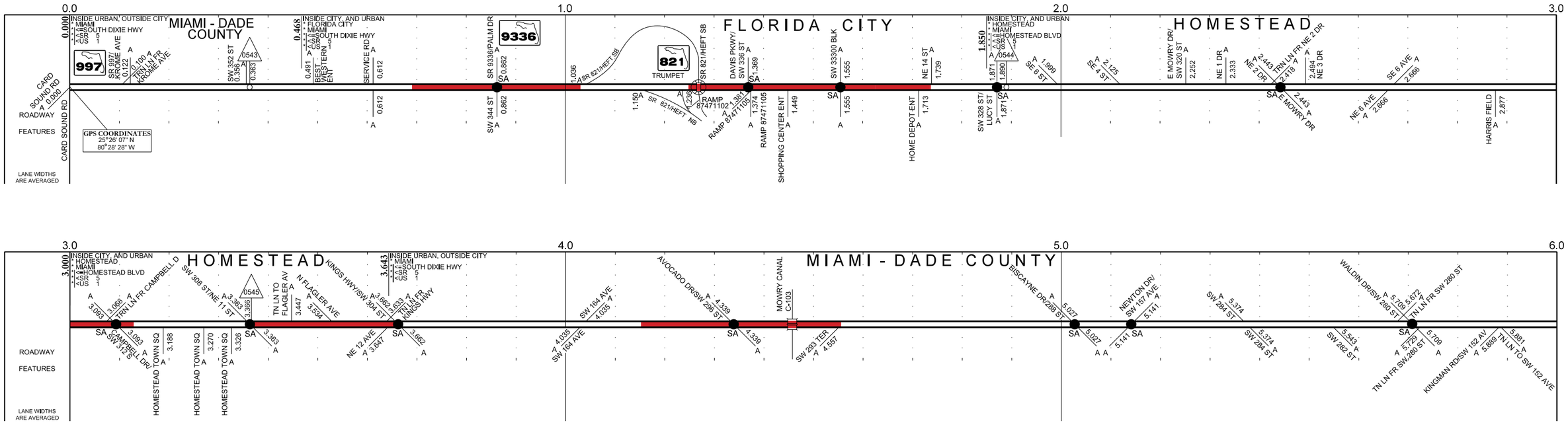
Table 14 - High Crash Segment Locations

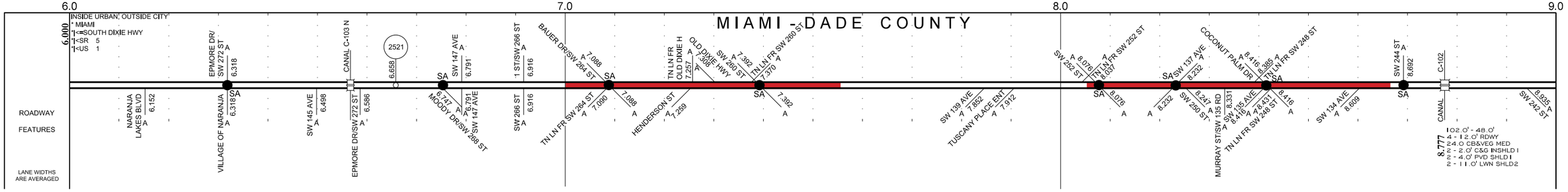
Begin Mile Point	End Mile Point	Segment Length	Total Crashes	Average Daily Traffic	Crash Rate	Total Fatalities	Total Injuries	Total Property Damage Only Crashes
0.7	0.862	0.162	23	27,166	17.85	0	14	14
0.862	1.036	0.174	81	28,999	14.84	0	31	61
1.236	1.636	0.4	94	29,000	7.40	1	58	59
1.636	1.739	0.103	20	28,999	6.11	0	6	17
3.03	3.13	0.1	61	28,506	19.54	0	31	41
3.363	3.662	0.299	105	27,663	11.59	0	63	68
4.162	4.562	0.4	114	27,666	9.41	1	76	73
4.962	5.262	0.3	142	36,151	11.96	2	147	73
6.967	7.567	0.6	143	38,496	5.65	0	144	67
8.067	8.659	0.592	187	38,220	7.55	2	132	111
9.577	9.977	0.4	108	37,833	6.52	0	111	55
10.377	11.377	1	278	37,833	6.71	0	240	153
11.552	12.014	0.462	220	37,829	11.50	2	151	142
12.214	12.614	0.4	258	49,166	11.98	0	98	190
13.114	13.514	0.4	315	49,166	14.63	0	88	263
13.914	14.139	0.225	193	49,163	17.58	1	104	138
16.165	16.565	0.4	298	69,333	9.81	0	121	227
17.365	17.465	0.1	154	72,323	19.45	1	56	121
19.628	19.9	0.272	171	94,327	6.09	0	54	129
0.8(1)	1.1	0.3	207	51,351	12.27	1	70	153
1.3(1)	1.5	0.2	186	81,500	10.42	1	123	119

Note: U.S. 1 within the Study area is Roadway ID 87020000 with the exception of:

(1) Roadway ID 87030000

(2) Roadway ID 87020001





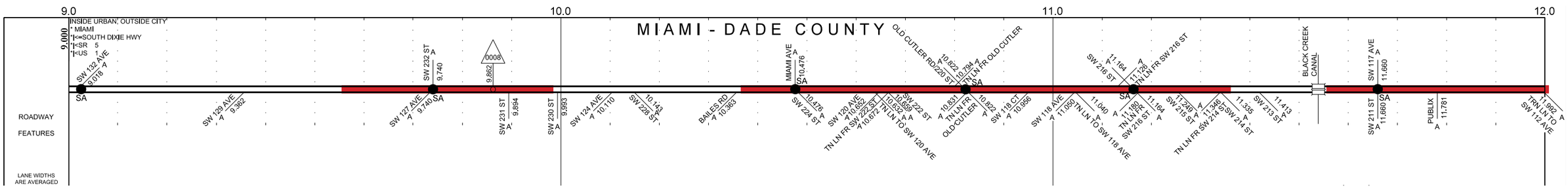


Figure 36 - High Crash Segment Locations (South)

Figure 37 - High Crash Segment Locations (North)

Table 15 - High Crash Intersection Locations

Mile Point	Intersecting Roadway	Actual Crash Rate	Intersection Crash Rate Count	Total Fatalities	Total Injuries	Total Property Damage Only
0.862	SR 9336/Palm Drive	2.941	95	0	40	68
1.369	Davis Parkway/SW 336 Street	1.669	53	0	23	36
1.374	Ramp 87471105	1.638	52	0	23	35
1.555	SW 33300 Block	1.134	36	0	27	21
1.713	Home Depot Entrance	0.661	21	0	6	18
2.418	Turning lane from NE 2 Drive	1.48	47	0	22	32
3.068	Turning lane from Campbell Drive	1.889	60	0	30	41
3.093	Campbell Drive/SW 312 Street	2.067	66	0	32	46
3.135		2.278	69	0	30	50
3.633	Turning lane from Kings Highway	3.004	91	0	53	59
3.647	NE 12 Avenue	3.103	94	0	55	60
3.662	Kings Highway/SW 304 Street	3.334	101	0	68	61
4.339	Avocado Drive/SW 296 Street	3.136	95	1	65	60
4.979		2.476	75	0	74	40
5.027	Biscayne Drive/288 Street	1.945	82	1	81	42
7.088	Bauer Drive/SW 264 Street	1.376	58	0	64	26
7.09	Turning lane from SW 264 Street	1.376	58	0	64	26
7.37	Turning lane from SW 260 Street	1.328	56	0	54	24
7.392	SW 260 Street	1.328	56	0	62	24
8.037	Turning lane from SW 252 Street	0.617	26	0	14	17
8.232	SW 137 Avenue	1.281	54	0	30	36
8.247	SW 250 Street	1.305	55	0	31	36
8.256		1.328	56	0	32	36
8.385	Turning lane from SW 248 Street	1.305	55	0	50	31
8.431	Turning lane from SW 248 Street	1.472	61	0	55	35
9.018	SW 132 Avenue	0.652	27	0	14	18
9.74	SW 232 Street	1.907	79	0	80	40
10.445		0.99	41	0	37	19
10.476	SW 224 Street	1.014	42	0	38	19
10.794	Turning lane from Old Cutler	1.376	57	0	61	30
10.822	Old Cutler Road/220 Street	1.497	62	0	64	34
10.831	Turning lane from Old Cutler	1.497	62	0	64	34
11.126	Turning lane from SW 216 Street	2.1	87	0	61	51
11.164	SW 216 Street	2.414	100	0	71	58
11.18	Turning lane from SW 216 Street	2.293	95	0	64	57
11.66	SW 117 Avenue	3.017	125	1	86	80
11.992	Turning lane to SW 112 Avenue	2.897	120	0	62	85

Mile Point	Intersecting Roadway	Actual Crash Rate	Intersection Crash Rate Count	Total Fatalities	Total Injuries	Total Property Damage Only
12.009		3.041	126	0	63	90
12.045		2.359	127	0	62	92
12.064		2.21	119	0	56	88
12.393	Caribbean Boulevard	3.511	189	0	58	146
13.245	Marlin Road	4.848	261	0	66	221
13.796	SR 994/SW 186 Street	2.452	132	0	36	107
13.982	Eureka Drive/SW 184 Street	2.953	159	1	88	114
16.248	Turning lane from Coral Reef	2.937	223	0	69	180
16.266	SW 152 Street	3.069	233	0	76	186
16.82	SW 144 Street	1.805	137	0	57	107
17.339		1.791	136	1	39	109
17.365	Turning lane from SW 136 Street	2.055	156	1	50	124
17.387	SW 136 Street	1.892	155	1	57	121
19.023		1.223	98	0	31	77
19.658		1.442	149	0	36	122
0.864(1)	Turning lane from Kendall Drive	2.28	129	0	43	95
0.792(1)	Turning lane from Kendall Drive	1.87	101	0	40	70

Table 15 - High Crash Intersection Locations (Continued)

Bicycle and Pedestrian Connectivity

GIS layers of existing bike paths and sidewalks were reviewed to determine bicycle and pedestrian connectivity within the study area.

The South Dade Rail Trail is a 20.5-mile paved pathway that runs adjacent and parallel to the South Dade Transitway for its entire length from SW 344th Street in Florida City to Dadeland South Station. North of Dadeland South Station, the path continues as the M-Path and will eventually become the planned Underline, connecting a single continuous path all the way to Downtown Miami. There is limited connectivity with crossing bicycle infrastructure, but one notable instance is the Black Creek Trail, which crosses at SW 117th Ave/SW 211th Street and connects to Zoo Miami in the North and Black Point Marina in the South.

Bicycle facilitates that connect/cross the South Dade Greenway are summarized in Table 16.

Table 16 - Bicycle Facilities Connectivity

Facility	Intersects South Dade Greenway at:	Length	Trail End Points	Type
Paved Path				
M-path	Connects at Kendall Drive	9.4	Kendall Drive to Miami River (Downtown Miami)	Paved path beneath elevated rail
Coral Reef Dr. Sidewalk	SW 152 Street	3.3	SW 124 Avenue to U.S. 1	Wide Green & White Sidewalk
Black Creek Trail	SW 211 Street	8.3	Larry and Penny Thompson Park to Black Point Marina	Paved Path along the Black Creek Canal
SW 288 Street Sidewalk	SW 288 Street	2.7	U.S. 1 to SW 132 Ave	Wide Green & White Sidewalk
SW 264 Street Sidewalk		0.8	U.S. 1 to SW 137 Ave	Wide Green & White Sidewalk
Designated Bike lanes				
SW 344 Street	SW 344 Street	0.6	U.S. 1 to NW 6th Avenue	
Krome Avenue	Krome Avenue	3.8	U.S. 1 t SW 296th Street	
SW 211 Street	SW 211 Street	0.8	U.S. 1 To HEFT Ramp	
SW 176 Street	SW 176 Street	0.8	SW 107 Avenue to U.S. 1	
SW 92 Avenue	SW 92 Avenue	0.5	SW 164 Street to U.S. 1	
Wide Curb Lane				
U.S. 1		7.8	SW 112 Avenue to SW 102th Street	

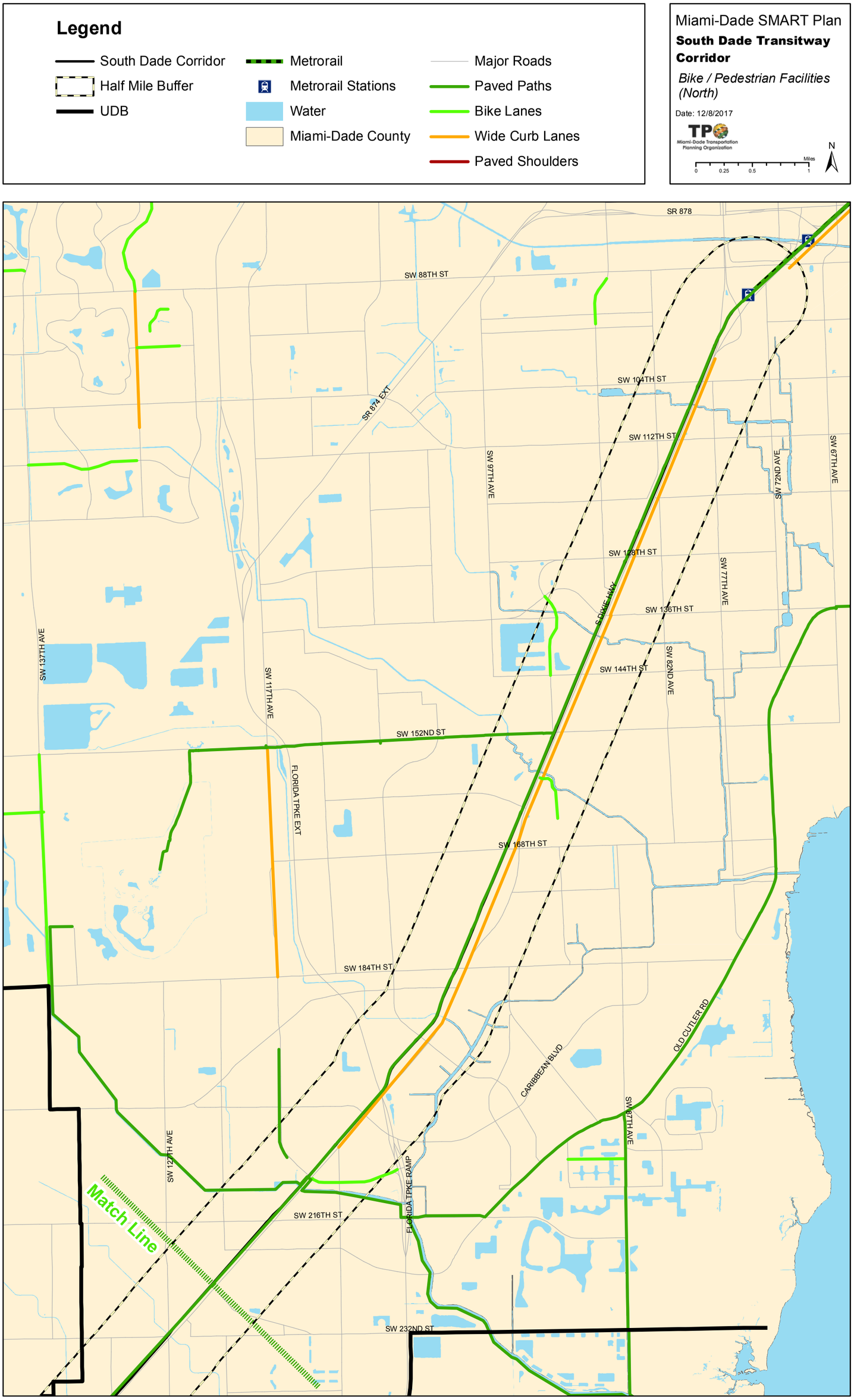


Figure 38 - Bicycle and Pedestrian Mobility Map (North)

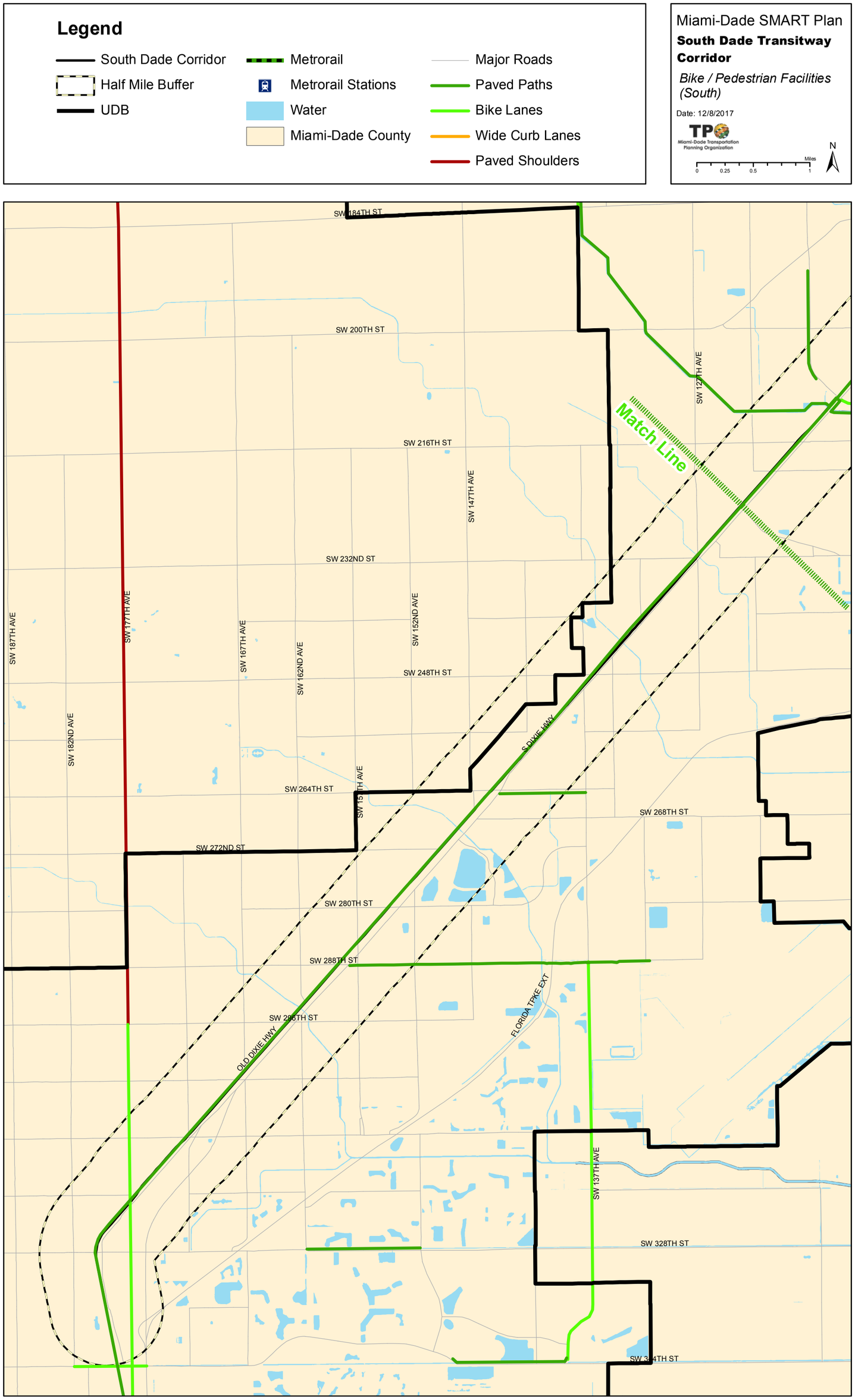


Figure 39 - Bicycle and Pedestrian Mobility Map (South)

In addition, the Miami-Dade 2040 Bicycle/Pedestrian Plan was reviewed. Table 17 lists the planned projects within the study area.

Table 17 - Miami-Dade 2040 Bicycle Pedestrian Improvement Plan

Facility	From/ to	Type	Length	Priority
SW 328 St	SW 187 Av to SW 162 Av	Bicycle Facility Improvements	2.59	Priority 1
SW 268 St	S Dixie Hwy to SW 112 Av	Bicycle Facility Improvements	3.484	Priority 1
SW 77 Av	SW 104 Street to SW 136 St	Bicycle Facility Improvements	2.079	Priority 1
SW 124 St	SW 77 Av to S Dixie Hwy	Bicycle Facility Improvements	0.649	Priority 1
SW 128 St	SW 77 Av to S Dixie Hwy	Bicycle Facility Improvements	0.688	Priority 1
SW 104 St	SW 77 Av to SW 57 Av	Bicycle Facility Improvements	2.134	Priority 1
SW 216 St	S Dixie Highway to HEFT	Bicycle Facility Improvements	1.12	Priority 1
SW 264 St	SW 137 Av to U.S. 1	Bicycle Facility Improvements	1.763	Priority 1
SW 176 St/Hibiscus St	SW 107 Av to U.S. 1	Bicycle Facility Improvements	0.79	Priority 1
SW 137 Av	HEFT to U.S. 1	Bicycle Facility Improvements	1.662	Priority 1
SW 137 Av	U.S. 1 to SW 184 St	Bicycle Facility Improvements	4.153	Priority 4

All buses running on the Transitway are fitted with exterior bicycle racks with a capacity for two bicycles. Bicycle racks are available at the Transitway stations. Pedestrian and bicycle crossings occur at most intersections both east-west for the cross streets and north-south along the Transitway (for the greenway). The greenway crossings are provided with pedestrian push button or phases. In addition, there are marked midblock pedestrian and greenway crossings along the Transitway.

In general, sidewalks are provided along U.S. 1 with widths ranging between five and six feet. No buffer or barrier protecting the pedestrians is provided. Most of the major roads crossing the corridor provide sidewalks on their approaches to U.S. 1. However, many side streets have incomplete sidewalks. Often they abruptly end, forcing pedestrians to choose between walking on vegetated public swales, or walking in the street.

Existing Transitway Bus Routes

The Transitway has an intergraded network of bus routes. Currently there are six bus routes operating along the Transitway: The Busway Local (31), 34 Express, Busway Max (38), Route 52, Coral Reef Max (252), and Saga Bay Max (287). These routes provide four types of services along the corridor, as shown in Table 18.

The Busway Max (38), Busway Local (31), 34 Express, Saga Bay Max (287), and Coral Reef Max (252) routes all terminate at the Dadeland South Metrorail station to the north while Route 52 terminates at the Dadeland North Metrorail Station. The Busway Max (38) and the 34 Express run the entire length of the Transitway. Busway Local (31) runs along the Transitway up to SW 211th Street, while Coral Reef Max (252), Route 52 and Saga Bay Max (287) only run along the northern portion of the Transitway.

Table 18 – Types of Existing Transitway Bus Routes

Route	Number of Transitway Stops	Service type	Service area
34 Express	13	Express	Full corridor length
38 Busway Max	30	All stops	Full corridor length
31 Busway Local	16	All Stops	Northern eight (8) miles of corridor
287 Saga Bay Max	11	All Stops	These three feeder buses collect passengers from adjacent neighborhoods then run along the Transitway to Dadeland South Metrorail Station.
252 Coral Reef Max	8		
52	8		

Routes running through adjacent neighborhoods, providing connectivity and feeding the Transitway are Routes 1, 57, 70, 136, 137 (West Dade Connection), route 200 (Cutler Bay Local), and Route 344. There are also neighborhood routes such as the City of Homestead East/West Trolley Route and the IBUS Routes from the Village of Palmetto Bay that connect to the Transitway.

The Transitway also provides connections via Metrorail to major destinations beyond the South Dade Transitway Corridor, including South Miami Hospital, The Shops at Sunset Place, the University of Miami, Coral Gables, Brickell, Downtown Miami, and the Health District. With the recent completion of the Airport Link portion of Metrorail, the Transitway now provides a one-transfer transit service to the Miami Intermodal Center (MIC) across from Miami International Airport.

Likewise, routes 73, 87, 88, 500 (Midnight Owl) run from Dadeland South Metrorail Station to the west and north parts of the County as well as Route 301 (Dade-Monroe Express) which runs from the Transitway Terminus at Florida City to Marathon providing a southern extension of the Transitway.

Service Headways

The headways of the Transitway routes vary between seven (7) and 30 minutes in the peak periods and between 15 minutes and 60 minutes in the off-peak periods. The 34 Express runs during the rush hour service only (from 5:00 AM to 9:00 AM and again from 4:00 PM to 8:00 PM), while Busway Max (38) runs 24 hours per day. Busway Local (31), Route 52 and Coral Reef Max (252) run for most of the day. Table 19 summarizes DTPW Routes headways.

Table 19 - Metrobus Route Headways

ROUTE BRANCHES		PEAK (AM/PM)	OFF-PEAK (Midday)	EVENING (at 8 pm)	OVERNIGHT	SATURDAY	SUNDAY
Primary Routes	31 (Busway Local)	15	30	40	n/a	30	30
	34 Express	7	n/a	n/a	n/a	n/a	n/a
	38 (Busway MAX)	10	15	15	60	15	20
	52	30	45	60	n/a	45	60
	252 (Coral Reef MAX)	30	60	60	n/a	60	60
	287 (Saga Bay MAX)	30	n/a	n/a	n/a	n/a	n/a
Connecting Routes	1	40	40	n/a	n/a	40	40
	35	30	30	30	n/a	60	60
	57	50	60	n/a	n/a	n/a	n/a
	70	30	60	60	n/a	60	60
	IBUS (Village of Palmetto Bay)	60	60	n/a	n/a	n/a	n/a
	136	50	n/a	n/a	n/a	n/a	n/a
	137 (West Dade Connection)	30	45	60	n/a	40	45
	200 (Cutler Bay Local)	50	50	n/a	n/a	50	n/a
	344	60	60	n/a	n/a	n/a	n/a
Route Extenders	73	30	40	60	n/a	60	60
	87	30	45	60	n/a	45	60
	88	20	30	30	n/a	30	30
	104	24	45	60	n/a	60	60
	500 (Midnight Owl)	n/a	n/a	n/a	60	60	60
	301 (Dade-Monroe Express)	30	60	60	n/a	60	60

Notes:

1) n/a = no service available or not applicable

Route Ridership

The Ridership Technical Reports published by DTPW for the last year were reviewed. Table 20 summarizes the ridership for the bus routes running along the Transitway. The data indicated that Route 38 (Busway Max) had the highest number of average boarding's per day, followed by Route 31 (the Busway Local).

Table 20 - Average DTPW Route Ridership

Route	2016 DTPW Route Ridership – Yearly Average				
	Weekday	Saturday	Sunday	Monthly	Total Yearly
31 Busway Local	1,520	777	695	39,241	510,134
34 Express	2,229	n/a	n/a	47,752	620,773
38 (Busway Max)	6,535	5,389	4,016	181,931	2,365,098
52	1,342	696	488	34,014	442,188
252 (Coral Reef Max)	924	353	262	22,531	292,900
287 (Saga Bay Max)	338	n/a	n/a	7,255	94,321

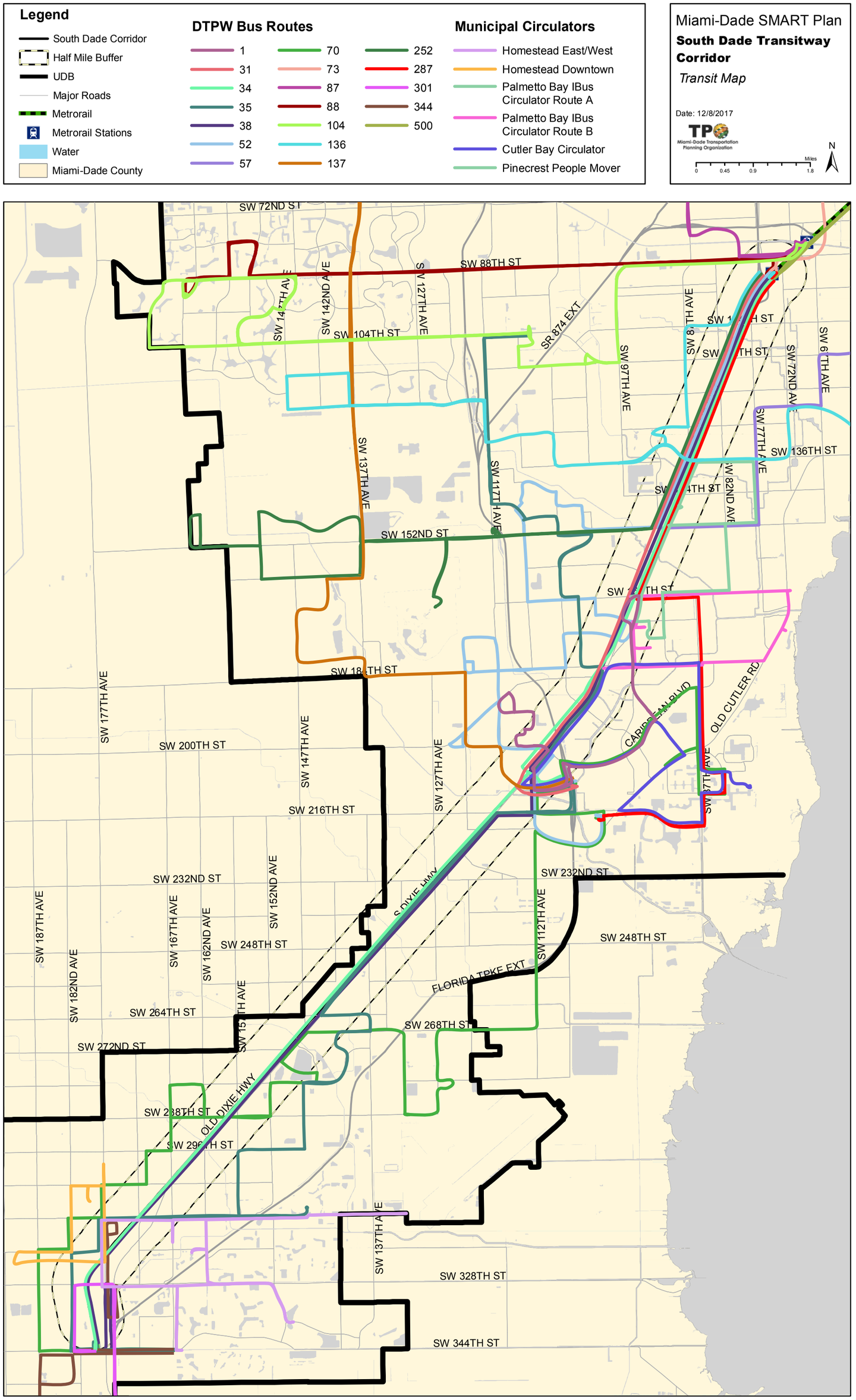


Figure 40 - Transit Route Map

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3.1.5. Future Transportation Improvements

Transportation Improvements throughout Miami-Dade County are catalogued in two major documents regardless of which governmental entity is responsible for maintenance: The 2040 Long Range Transportation Plan (LRTP) and the 2017 Transportation Improvement Program (TIP). The LRTP takes a long view of Miami's future, planning for the next 20 years and dividing projects by their timeframe and level of funding. The TIP addresses projects in more detail, with a five-year horizon. Projects that fall within the corridor study area are presented in Tables 21 and 22.

Table 21 - South Dade Transitway Corridor LRTP Projects

Long Range Transportation Plan			
Project ID	**Location**	**Description**	**Funding Priority**
CMP29	SR 997 (Krome Ave) at SW 312th Street (Campbell Dr)	Intersection Improvements - redesign to meet minimum turn radius requirements	1 (2020)
CMP7	U.S. 1 - SW 344 Street and I-95	Signal timing optimization	1 (2020)
NM12	SW 176th Street/Hibiscus Street from SW 107th Avenue To U.S. 1	Bicycle Facility Improvements	1 (2020)
NM13	SW 137th Avenue from HEFT To U.S. 1	Bicycle Facility Improvements	1 (2020)
NM7	SW 216th Avenue from SW 127th Avenue to HEFT	Bicycle Facility Improvements	1 (2020)
NM8	SW 264th Street From U.S. 1 to SW 137th Ave	Bicycle Facility Improvements	1 (2020)
HS101	SW 320 Street (Mowry) From SW 197 Avenue U.S. 1 to SW 187 Avenue SW 142 Ave	Add two (2) lanes with left turn lanes and reconstruct	2 (2025)
MDT114	Transitway and SW 104 St	Park-and-ride facility with 250-300 surface parking spaces	2 (2025)
MDT133	Kendall Corridor (Kendall Enhanced Bus)	Incremental improvement on PTP corridor	2 (2025)
MDT186	Park-and-Ride lot at SW 152 Street (Coral Reef)	New parking garage with 500 parking spaces and ground floor retail and office space	2 (2025)
MDT189	Dadeland South Station	Park-and-ride facility with 1000 parking space garage and ground floor retail and office space	2 (2025)
NM58	SW side of SW 117th Avenue from Roberta Hunter Park to South Dade Trail & Black Creek Trail junction	Trail Improvements	2 (2025)
PW142	SW 200 Street from U.S. 1 to Quail Roost Dr	Add two (2) lanes and reconstruct	2 (2025)
MDT252	Ramps From U.S. 1 Transitway to SR-826 (Palmetto)	Construct ramps connecting the U.S. 1 Transitway to SR-826 (Palmetto)	3 (2030)
NM90	Snapper Creek Trail "B" From SW 94th Avenue / K-Land Park to SW 57th Ave	Trail Improvements	3 (2030)
PW130	SW 107 Avenue from Quail Roost Dr to SW 160 St	Add two (2) lanes and reconstruct	3 (2030)
PW136	SW 152 Avenue from U.S. 1 to SW 312 Street (Campbell)	Add two (2) lanes and reconstruct	3 (2030)
CMP32	U.S. 1 - SW 344 Street and I-95	Enforce "don't block box" initiatives	4 (2035)
FDOT129	SW 152 Street (Coral Reef) from SR-821 (HEFT) to U.S. 1	Add two (2) lanes and reconstruct	4 (2035)
NM135	NE 12th Avenue from NE 8th Street to NE 15th St	Pedestrian Facility Improvements	4 (2035)
NM138	SW 137th Avenue from U.S. 1 to SW 184th St	Bicycle Facility Improvements	4 (2035)
PW156	SW 312 Street (Campbell) from NW 14 Ave/SW 176 Avenue to SW 197 Ave	Add two (2) lanes and reconstruct	4 (2035)
PW168	SW 137 Avenue from U.S. 1 to SW 184 St	Add two (2) lanes and reconstruct	4 (2035)
DT4326391	SR-826 (Palmetto) from U.S. 1/S Dixie Highway to SR-836 (Dolphin)	Managed Lanes	Partially Funded
MDX119	U.S. 1 - Managed Lanes from SW 344 Street (Palm) to Dadeland South Metrorail Station	Add two (2) plU.S. 1 reversible new managed lanes within the right-of-way of the U.S. 1 Transitway	Partially Funded
MDT110	Transitway Lot - SW 200th St	Park-and-ride facility with 140 surface spaces	Privately Funded
MDT109	Transitway and SW 312 Street (Campbell)	Park-and-ride facility with 90 surface spaces	Unfunded
MDT112	Transitway and SW 136 St	Park-and-ride facility with 50-75 surface spaces	Unfunded
MDT133U	Kendall Corridor (Kendall BRT) from West Kendall Transit Terminal to Dadeland North Metrorail Station	Full bus rapid transit	Unfunded
MDT155	SR-821 (HEFT-South) from SW 344 Street (Palm)/Transitway to Dolphin Station Intermodal Terminal	Express bus service on managed lanes between terminals	Unfunded
MDT158	SW 137 Avenue from U.S. 1 to SW 8th St/SW 147th Ave	Enhanced bus service	Unfunded
MDT161	U.S. 1 (Transitway) from SW 88 Street (Kendall) to SW 344 Street (Palm)	Improve service on Transitway to BRT levels.	Unfunded
MDT161U	U.S. 1 Corridor from SW 104 Street to SW 344 Street (Palm)	Metrorail Extension	Unfunded
MDT163	U.S. 1 (Transitway) from SW 88 Street (Kendall) to SW 344 Street (Palm)	Bus signal priority along U.S. 1 Transitway	Unfunded
MDT164	U.S. 1 (Transitway) from SW 88th Street (Kendall) to SW 344 Street (Palm)	Bus only grade separations at all intersections including and south of 98 Street with at-grade stations.	Unfunded

Long Range Transportation Plan			
Project ID	**Location**	**Description**	**Funding Priority**
MDT165	U.S. 1 (South Dixie Highway) from SW 88 Street (Kendall) to SW 104 St	Metrorail Extension	Unfunded
MDT170	Coral Reef Enhanced Bus from Dadeland North Metrorail Station to SW 152 Avenue / SW 152 Street (Coral Reef)	Enhanced Bus Service	Unfunded
MDT178	Transitway and SW 112 St	Park-and-ride facility with minimum of 200 spaces	Unfunded
MDT184	Palmetto Express Bus (South) from Dadeland North Metrorail Station to Dolphin Station Intermodal Terminal	Implement express bus service on managed lanes between terminals	Unfunded
MDT187	Expand overcapacity Park-and-Ride lot at SW 168th St	Add 300 parking spaces	Unfunded
MDT190	Transitway Extension to Dadeland North from Dadeland South Station to Dadeland North Station	Extend U.S. 1 Transitway to Dadeland North (approximately one-half-mile)	Unfunded
MDT205	87 Avenue Enhanced Bus from Palmetto Intermodal Terminal to U.S. 1 Transitway at SW 136 Street Park-and-Ride	Implement limited stop bus service	Unfunded
MDT206	72/67 Avenue Enhanced Bus from Dadeland North Metrorail Station to Miami Lakes Terminal	Implement limited stop bus service	Unfunded
MDT226	All U.S. 1 Transitway Stations from SW 344 Street (Palm)/ U.S. 1 Transitway to Dadeland South Metrorail Station	Kiss-and-ride at all stations along U.S. 1 Transitway. 31 total.	Unfunded
SFRTA108	Kendall Area LRT from Metrozoo Area to Dadeland	New premium transit service	Unfunded

Table 21 - South Dade Transitway Corridor LRTP Projects (Continued)

Table 22 - South Dade Transitway Corridor TIP Projects

Transportation Improvement Program			
Project ID	**Location**	**Description**	**Project Type**
DT4055756	SW 312 St/Campbell Dr from SR 997/Krome Avenue to SR 5/U.S. 1 (Truck bypass)	Flexible Pavement Reconstruction	Arterial/Collector Road
DT4055757	SW 336 St/Davis Pkwy from SR 997/Krome Avenue to U.S. 1 (Truck bypass)	Widen/Resurface Exist Lanes	Arterial/Collector Road
DT4055759	SR 997/Krome Avenue from SW 312St/Campbell Dr to SW 296 Street (Truck bypass)	Add Lanes & Rehabilitate Pavement	Arterial/Collector Road
DT4166602	Miami Dade County - Ludlam Trail Corridor	Bike Path / Trail	Pedestrian/Bicycle
DT4213571	SW 320 Street from S.W. 187 Avenue to Flagler Avenue	Add Turn Lane(s)	Arterial/Collector Road
DT4284872	SR 5/U.S. 1/S. Dixie from N Of SW 184 Street to S Of SW 168 Street	Resurfacing	Arterial/Collector Road
DT4311703	SR 94/Kendall Drive from SW 7500 Block/SW 73 Place to U.S. 1/S.Dixie Hwy	Resurfacing	Arterial/Collector Road
DT4311704	SR 94/Kendall Drive from SW 77 Avenue to U.S. 1	Intersection Improvement	Arterial/Collector Road
DT4315031	Safe Routes to School Infrastructure Project Perrine Elementary School	Safe Routes to School	Pedestrian/Bicycle
DT4326391	SR 826/Palmetto Expy from U.S. 1/S. Dixie Hwy to SR 836/Dolphin Xway	Planning	Expressway
DT4327431	SR 826/Palmetto Expy from SR 5/U.S. 1 to N. Of SR 878/Snapper Creek Expy	Resurfacing	Expressway
DT4332861	SR 992/SW 152 Street from SW 93 Avenue to SR 5/U.S. 1	Intersection Improvement	Arterial/Collector Road
DT4332862	SR 992/SW 152 Street from SR 821 Heft Nb Ramp to SR 5/U.S. 1	Resurfacing	Arterial/Collector Road
DT4334891	SR 5/U.S. 1 At SW 104 St	Intersection Improvement	Arterial/Collector Road
DT4348451	SR 5/U.S. 1/S. Dixie Highway from SW 152 Street to SR 9/I-95	Planning	Arterial/Collector Road
DT4348453	SR 94/Kendall Drive from SR 997/Krome Avenue to SR 5/South Dixie Hwy	Planning	Arterial/Collector Road
DT4363421	SR 990/SW 112 Street from SW 97 Avenue to U.S. 1/S Dixie Highway	Resurfacing	Arterial/Collector Road
DT4368771	SR 997/Krome Avenue from SR 5/U.S. 1 to SR 25/Okeechobee Road (Fhp)	Traffic Ops Improvement	Arterial/Collector Road
PW0000149	SW 268 Street from U.S. 1 to SW 112 Avenue	Continuous left turn lane along SW 268 Street	Arterial/Collector Road
PW0000215	SW 264 Street from SW 147 Avenue to U.S. 1	New two (2) lane road with center turn lane	Arterial/Collector Road
PW000723	SW 328 Street from SW 187 Avenue to U.S. 1	Roadway Improvements	Arterial/Collector Road
PW000771	SW 152 Street from SW 89 Court to SW 67 Avenue	Resurfacing	Arterial/Collector Road
PW20040342	SW 312 Street from SW 187 Avenue to SW 177 Avenue	Widen to five (5) lanes	Arterial/Collector Road
PW20040343	SW 137 Avenue from US - 1 to SW 200 Street	Completion as two (2) continuous lanes	Arterial/Collector Road
PW20040344	SW 137 Avenue from HEFT to US - 1	Widen from two (2) to four (4) lanes	Arterial/Collector Road
PW20040348	SW 216 Street from HEFT to SW 127 Avenue	Curb & Gutter, Traffic Operational Improvement	Arterial/Collector Road
PW20040349	SW 176 Street from US - 1 to SW 107 Avenue	Curb & Gutter, Traffic Operational Improv.	Arterial/Collector Road
PW20040350	SW 264 Street from US - 1 to SW 137 Avenue	Curb & Gutter, Traffic Operational Improv.	Arterial/Collector Road
PW671605	SW 328 Street from U.S. 1 to SW 162 Avenue	Widen from two (2) to four (4) lanes	Arterial/Collector Road
TA12	Kendall Cruiser (Route 288) from Dadeland North Station to West Kendall Transit Terminal	Urban Corridor Improvements	Transit
TA3	Park and Ride Facility at Quail Roost Drive	Park and Ride Lot	Transit
TA4	Park and Ride Facility at SW 168th Street and Transitway	Park and Ride Lot	Transit
TA4179171	MDTA/S Miami Dade Transitway Routes Operating Assistance from Dadeland to Florida City	Urban Corridor Improvements	Transit
TA4179172	MDTA/S Miami Dade Transitway Routes Operating Assistance from Dadeland to Florida City	Urban Corridor Improvements	Transit

Transportation Improvement Program			
Project ID	**Location**	**Description**	**Project Type**
TA4179173	MDTA/S Miami Dade Transitway Routes Operating Assistance from Dadeland to Florida City	Urban Corridor Improvements	Transit
TA4225291	MDT-Kendall Drive Enhanced Bus Service from Dadeland N. to SW 167 Ave	Transit Service Demonstration	Transit
TA4226756	MDT-SR 94 BRT from Dadeland N Metrorail Station to SW 167 Ave	New BRT Service	Transit
TA6	Capitalization of Preventive Maintenance	Capital Maintenance	Transit
TA7	Park and Ride at SW 344th Street and Busway	Park and Ride Lot	Transit
TA94	Kendall Enhanced Bus Service Phase 3, from Dadeland North Station to SW 167th Ave	New Enhanced Bus Service	Transit

Table 22 - South Dade Transitway Corridor TIP Projects (Continued)

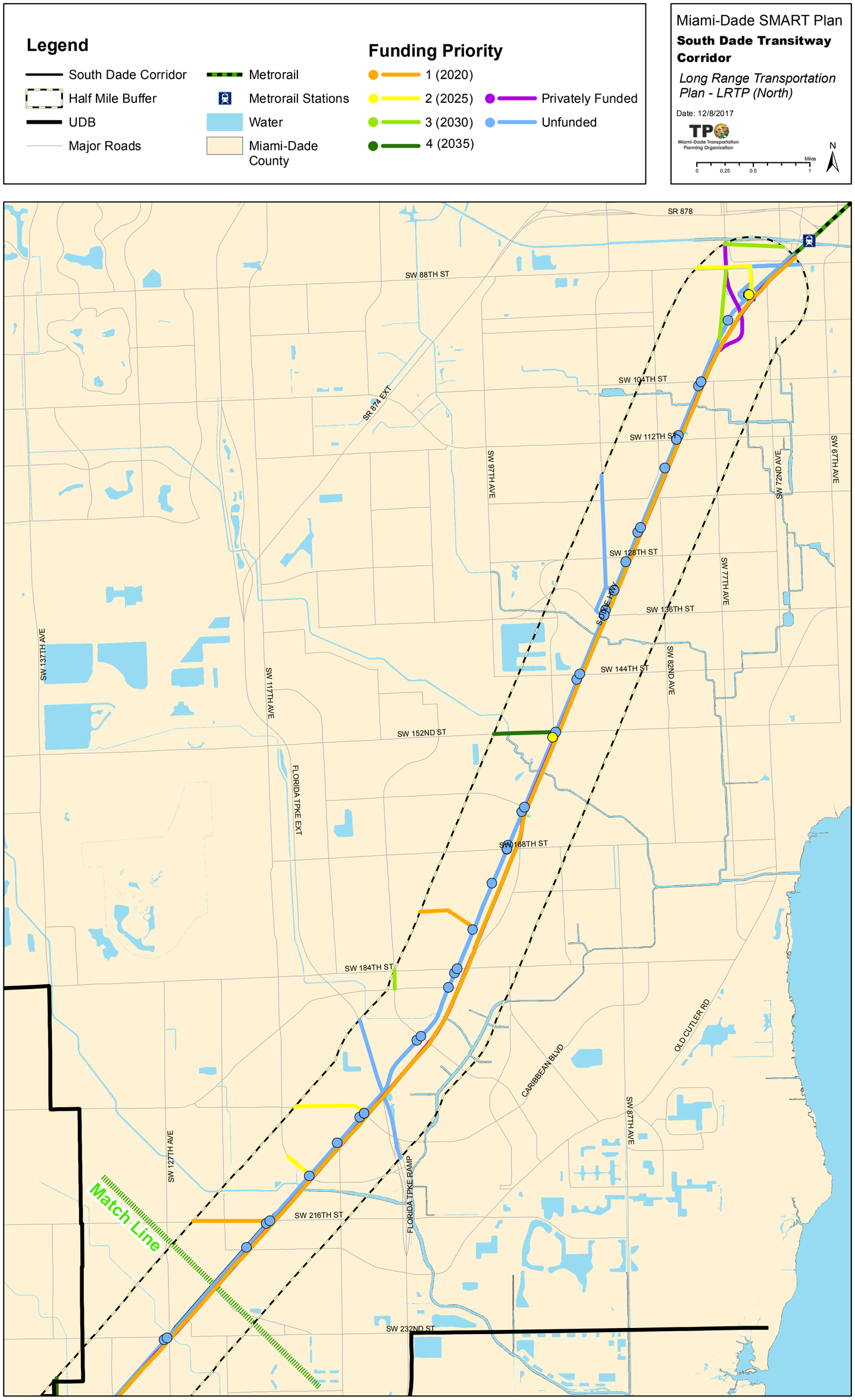

Figure 41 – Relevant Long Range Transportation Plan (LRTP) Projects (North)

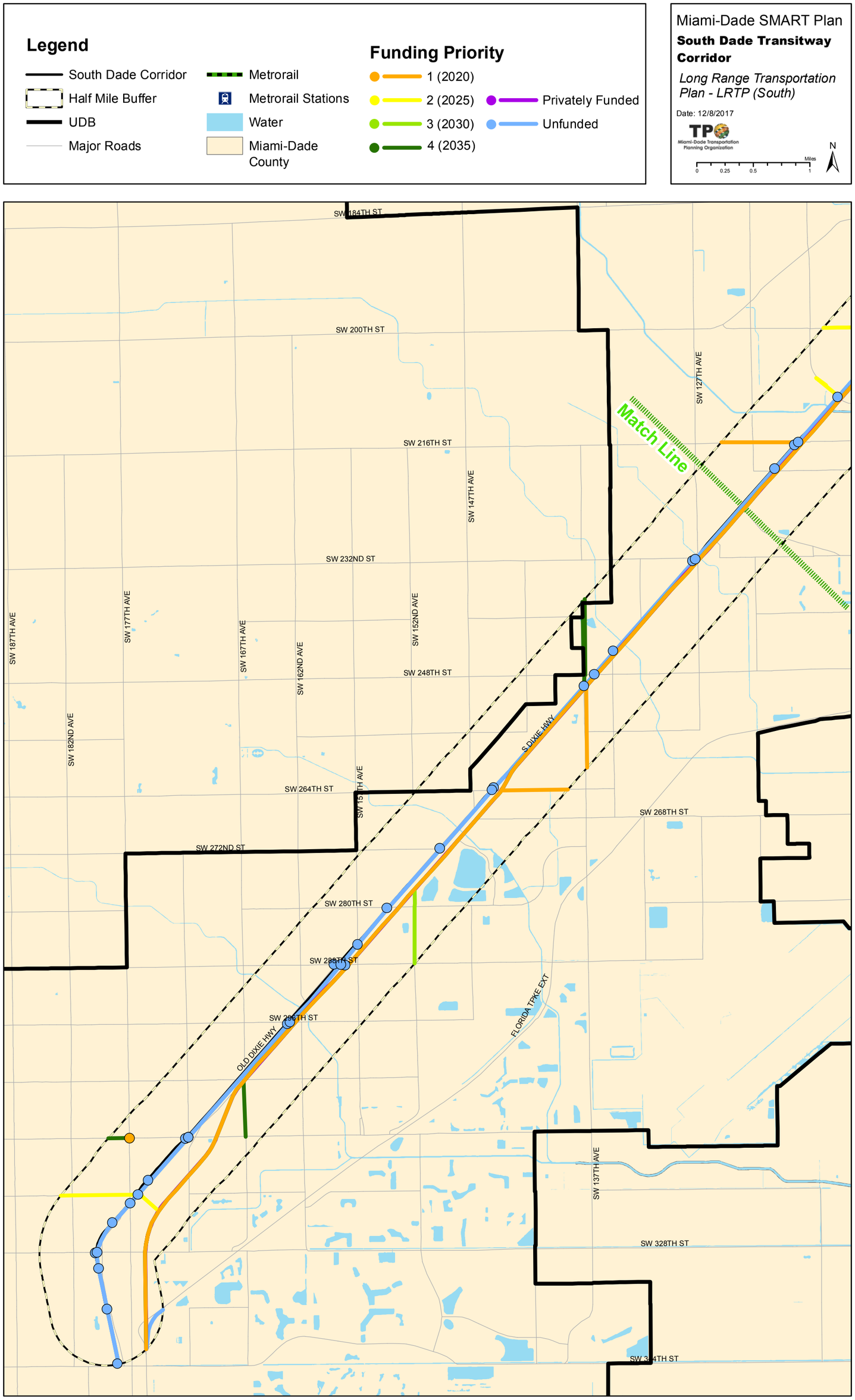

Figure 42 – Relevant Long Range Transportation Plan (LRTP) Projects (South)

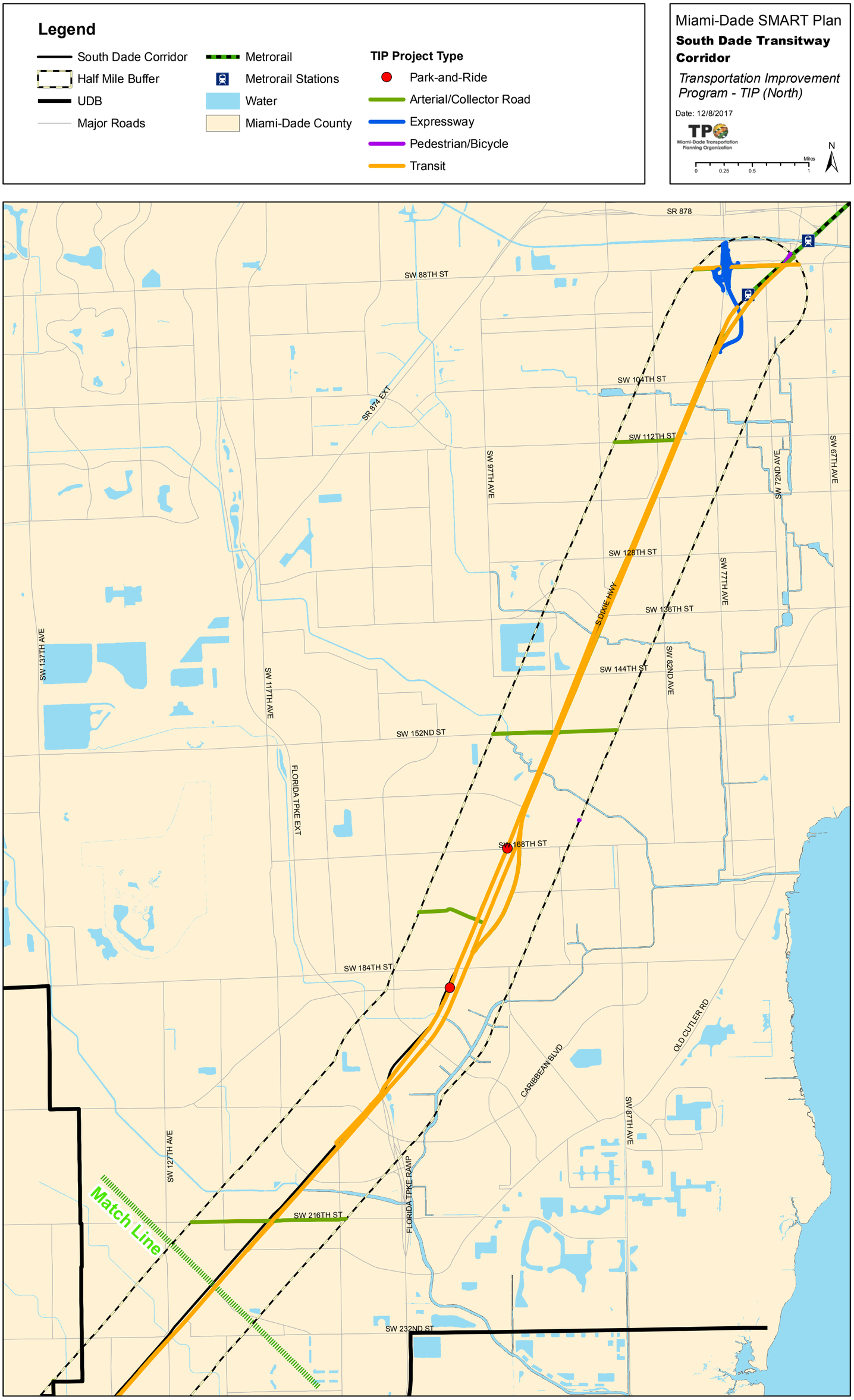

Figure 43 - Relevant Transportation Improvement Plan (TIP) Projects (North)

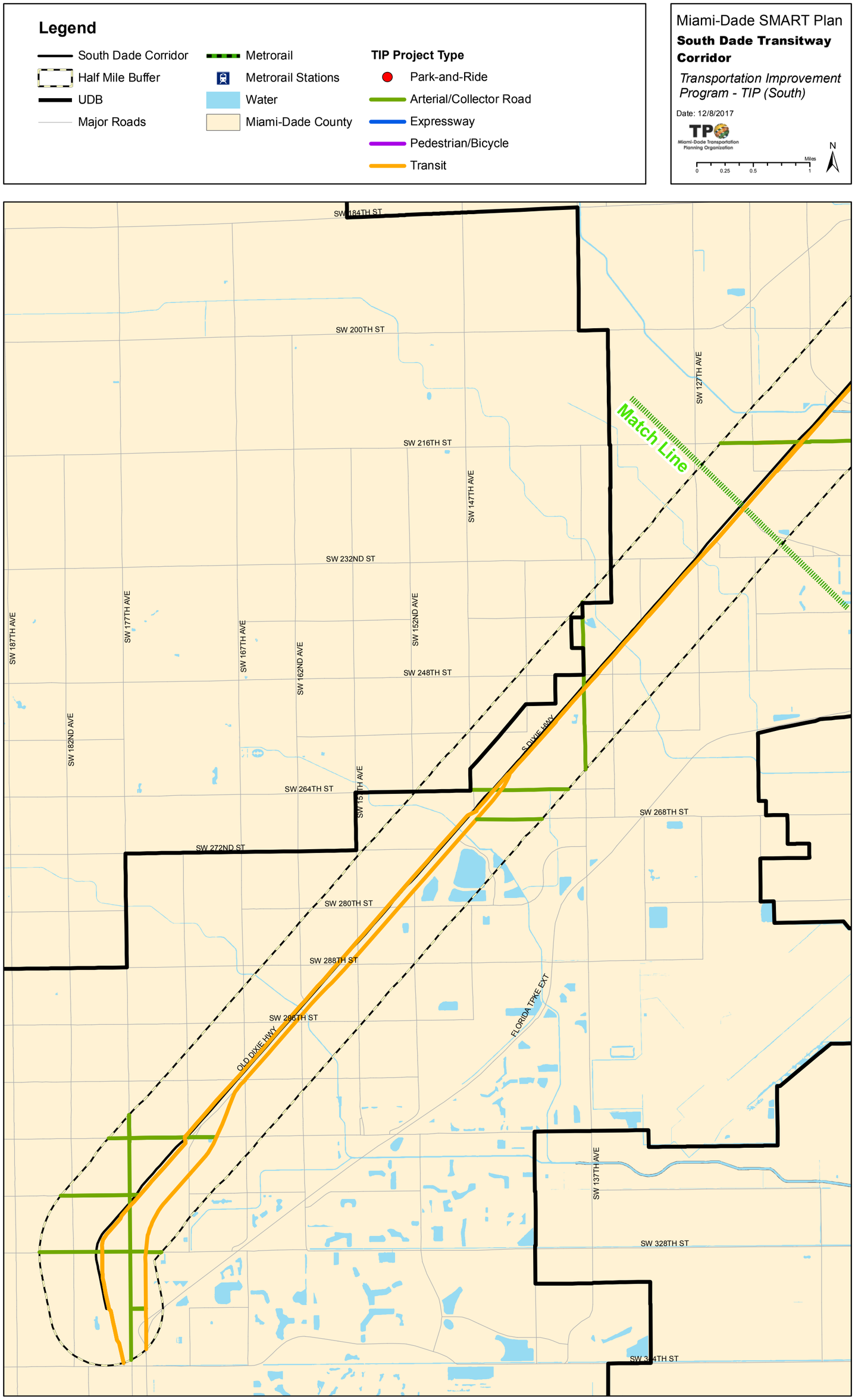

Figure 44 - Relevant Transportation Improvement Plan (TIP) Projects (South)

3.2. Corridor Profile

3.2.1. Government

The South Dade Transitway Corridor primarily consists of five municipalities on the north and south of the corridor with unincorporated Miami-Dade County in the center (SW 296th Street to SW 216th Street). Elements along the corridor that would provide a positive influence on transit within the corridor include:

- The recently expanded Naranja Lakes Community Redevelopment Agency
- Homestead's recently updated form based code that encourages mixed-use development and sustainability along U.S. 1
- Recent development trends in Naranja Lakes such as the Larkin Health Science Center, Alcazar Village, and the Coral Town Park Development
- In February of 2017, Cutler Bay was named one of the hottest suburban neighborhoods in the United States by Realtor.com
- The development of a Downtown Urban Village zoning district in Palmetto Bay in 2015, which is meant to attract mixed-use development and small business
- The announcement of the Regency Center, a 70,000-square foot retail development (including a 46,000 square foot Whole Foods) adjacent to the existing 173,000 square foot Target at SW 104th Street

With five Municipalities in addition to the unincorporated portions of Miami-Dade County, zoning along the South Dade Transitway Corridor is quite complex. Beyond the typical zoning categories, there are several specialized zoning types located along this corridor which are intended to encourage walkable mixed use or transit oriented development. These include:

- Miami-Dade County Urban Center Districts
    - Downtown Kendall Urban Center
    - Perrine Community Urban Center
    - Cutler Ridge Metropolitan Urban Center District
    - Goulds Community Urban Center
    - Princeton Community Urban Center
    - Naranja Community Urban Center
    - Leisure City Community Urban Center
- The North Pinecrest Business Alternative District (NPBAD)
- The Palmetto Bay Downtown Urban Village (Franjo Activity Center)
- Cutler Bay Town Center, The Cutler Bay Transit Corridor District
- Homestead's Northwest Neighborhood Overlay District (NWNOD)
- Homestead's Southwest Planned Urban Neighborhood (SWPUN).

Each of these is unique to its setting and is further explored later in this document.

It can be seen in Table 23 that the Urban Center Districts, Residential/Commercial, Residential Multi-Family make up 34% of the total acreage. These zonings are prime for TOD within the corridor; although, Miami-Dade County and the local municipalities should focus on converting much of the Residential Single Family use within the corridor to mixed use more suitable for TOD development. A breakdown of zoning categories on the corridor are depicted in

Table 23 - South Dade Transitway Corridor Zoning

Generalized Zoning Category	Acres
Residential Single Family	3,900
Urban Center	2,413
Agriculture	1,107
Commercial	844
Residential/Commercial	634
Residential Multi-Family	603
General Use	437
Industrial	379
Institutional	239
Office	76
Parks	34
Residential/Office	18

Historically, most of the traffic flow along the South Dade Transitway Corridor has been northbound during morning peak hours and southbound during evening peak hours as most employment centers are located in the center of the County. Further development of TOD and economic centers in the Homestead area of the South Miami-Dade would encourage a more balanced use of the corridor.

3.2.2. Freight

2014 Miami-Dade County Freight Plan Update

The 2014 Miami-Dade County Freight Plan Update provides an overview of freight-related infrastructure efforts for the County. The document provides a comprehensive review of Miami's system and cargo flows via road, rail, waterways, sea and airports. It catalogs the County's logistics infrastructure, including foreign trade zones, freight forwarding, and the land use implications for logistics and distribution centers. Synthesizing this information, the Plan lays out a vision for freight need and priorities.

In cataloging infrastructure, the plan evaluates the truck average annual daily traffic (AADT) for major facilities in the County. The U.S. 1 Corridor's truck traffic is not high, relative to other facilities in the County. For example, the Palmetto Expressway, I-95, and a portion of the Florida Turnpike Homestead Extension (HEFT) carry more than 10,000 trucks per day. By comparison, the U.S. 1 Corridor generally ranges from fewer than 2,500 trucks to 5,000 per day. One exceptions exists near the southern terminus of SR 826.

(Palmetto Expressway), which sees between 5,000 and 10,000 trucks per day. See Figure 45 for more details.

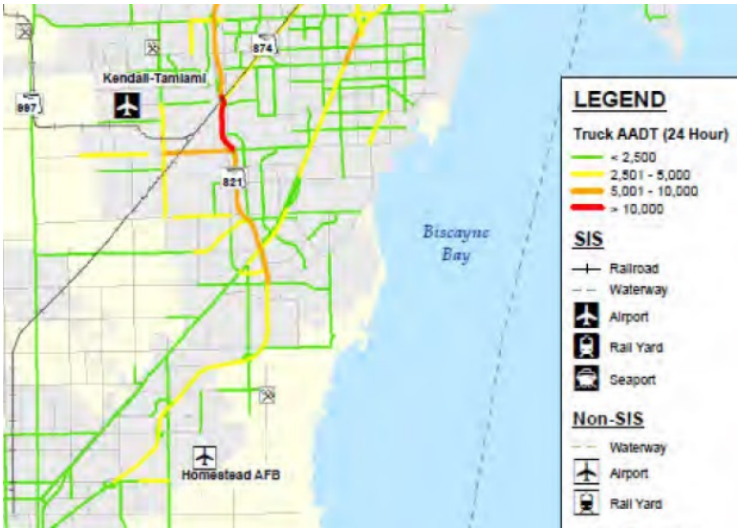

Figure 45 - Detail from Figure 2.4 AADT on Miami-Dade Highway System

Freight movement in Southwest Miami-Dade appears to be concentrated on the limited-access facilities; SR 874 (Don Shula Expressway), and the HEFT display higher levels of truck traffic than U.S. 1. These facilities provide links to the air and seaport facilities in the central part of the County that facilitate rapid transportation of goods throughout the County and to the Florida Keys. By contrast, trucks accessing U.S. 1 must confront lower speeds, more signalized intersections, and fewer freight-related land uses along this corridor.

A Foreign Trade Zone exists in Homestead at the intersection of SW 152nd Avenue and SW 312th Street (Campbell Drive). Foreign Trade Zones allow businesses located inside to warehouse and re-export products duty-free, reducing costs and improving the competitiveness of businesses in the region. This foreign trade zone is located immediately east of the HEFT. The U.S. 1 Corridor is located nearly two miles east of the zone, suggesting that it would not be the primary route for access to this zone.

Within the framework of the County's freight network, the U.S. 1 Corridor is not a central cog. The road and rail network in the central part of Miami-Dade County – the facilities surrounding the airport and adjacent freight-supportive land uses, and PortMiami – are more important. Moreover, within the framework of Southwest Miami-Dade County, U.S. 1 does not appear to be a primary route – the limited-access SR 874 and HEFT facilities play a more central role.

3.2.3. Municipal Capital Improvements

The Capital improvement plans for the five municipalities that are traversed by the Corridor were reviewed to determine any planned projects within a ½ a mile of the Corridor. The programed projects are summarized below:

Village of Pinecrest:

- Kendall Drive Beautification Project - improvements to the median and swales along Kendall Drive from U.S. 1 to SW 65 Court – landscape improvements.
- U.S. 1 Beautification Project - improvements to the median and eastern swale along U.S. 1 from SW 136 Street north to Snapper Creek Canal. This project will consist of development of conceptual design plans for landscape improvements to the median along the roadway including plantings and entry features as well as potential lighting improvements.

Village of Palmetto Bay:

- SW 97th Avenue – Roadway reconstruction from U.S. 1 to SW 184th Street. The improvements include; new traffic circle or roundabout, new bike lanes, new turn lanes, paver on street parallel parking, and pedestrian circle, ADA-compliant curb ramps, decorative paver patterns, repairs to damaged driveway aprons, new striping and paver, new LED street lights, and, landscaped medians.
- U.S. 1 Beautification & Maintenance – landscaping improvements from SW 164th Street to SW 152nd Street
- Localized drainage improvements
- Downtown Redevelopment. Street Improvement Project (Complete Streets)
- Safe Routes to School Improvements - Perrine Elementary & Coral Reef Elementary
- Bike Trail through FPL Easement

Town of Cutler Bay: – No improvements within a half-mile of the Corridor were identified.

City of Homestead:

- SW 328th Street (Lucy Street) -Relocation of electric utility poles along the north side street between U.S. 1 and SW 172nd Avenue to accommodate the future expansion from U.S. 1 to SW 162 Avenue
- SW 328th Street – Roadway widening to four lanes from U.S. 1 to SW 162 Ave. The expansion will include a raised median, sidewalks and bicycle facilities.

Florida City:

SW 344th Street (east of U.S. 1) – Roadway widening and resurfacing.

3.3. Needs Analysis

Based upon the previous analyses of existing conditions throughout the South Dade Transitway Corridor, several needs and deficiencies have been identified throughout the corridor limits. Due to its extensive length (20 miles) these recommendations have been divided according to three segments. The north segment of the corridor is defined as the area between Dadeland South Metrorail Station and SW 216th Street. The central portion of the corridor is defined as the area between SW 216th Street and SW 264th Street, and the south portion of the corridor runs between SW 264th Street and SW 344th Street, at the Transitway's terminus. To facilitate this needs analysis a corridor needs matrix (Table 24) has been developed and is divided by land use specific topics to include land use type, zoning and planned development, socioeconomics and multimodal connectivity.

Existing Land Use: Transitioning from the northern side of the corridor to the central and southern segments, land use density decreases. Low and mid-density residential developments on the north yield to vacant and agricultural land uses on the central and southern portions of the corridor. Near the southern terminus of the corridor, the land uses shift back to a diverse mix of residential and commercial uses in the commercial cores of Florida City and Homestead.

Zoning and Planned Development: The communities on the north side of the corridor have mixed zoning policies that can discourage TOD, mixed-use zoning, or high density development. Specifically, Pinecrest has development standards for the eastern side of the corridor which do not incentivize TOD development. Implementing a consistent set of land use policies can serve a catalyst for transit supportive development.

Population and Employment Density: Unlike existing land use, population density increases as you transition from the northern segment of the corridor to the central and south segments. Although the land is less intensively developed, the residential developments are concentrated in multifamily units and smaller single family housing parcels. Moreover, the census places of Naranja, Princeton, and Leisure City contain some of the fastest growing census tracts in Miami-Dade County, having experienced significant growth in the past decade. These fast-growing communities are expected to place higher demands on transit services in the coming years.

Multimodal Connectivity: Outside of the South Dade Transitway Corridor, there is minimal transit service coverage providing last-mile connections, as well as access to neighboring communities. This also limits providing direct connections to the County's urban core. The UDB's proximity to the south and central portions of the corridor places adds constraints to transit service coverage, as per County policy, DTPW is restricted from providing transit service outside of the UDB.

Although non-motorized connections are strong along the corridor thanks to the South Dade Trail, sidewalks and cycling infrastructure are lacking to complete last-mile connectivity. This places additional demands on the e isting limited park-and-ride facilities.

Table 24 Corridor Needs Matrix

Topic	Current Conditions/Policies	Transit Ready?	Action Items / Next Steps
Existing Land Use (North)	• Multiple landmarks / destinations act as anchors (Dadeland, The Falls, Southland Mall, Jackson South Hospital, Park-and-Ride lots at SW 152nd St, SW 168th St, and SW 112th Ave) • Abundance of single-family residential land use, including abutting the corridor on NW side • Mostly Commercial land use along SE side of corridor, with single-family residential beyond • Contains the only two large concentrations of high-density residential land use in the corridor (north of Southland Mall, southwest of Dadeland Mall)	Yes	• Construction of Palmetto Bay Downtown Urban Village • Construction of Cutler Bay Town Center
Existing Land Use (Central)	• Underutilized • Very low density with agricultural land use dominating • Many vacant lots / lots with high redevelopment potential	No	Further development of: • Naranja Lakes CRA • Naranja Community Urban Center District • Princeton Community Urban Center District
Existing Land Use (South)	• Underutilized • Low density development • Many large vacant lots / lots with high redevelopment potential	No	Further Development of: • Naranja Lakes CRA • Leisure City Community Urban Center • Homestead SWPUN District
Zoning and Planned Development (North)	• **Pinecrest** - Pinecrest Parkway Corridor Alternative Development Standards improve aesthetics along the corridor but offer no incentives for TOD, mixed-use zoning, or high density development • **Palmetto Bay** - Downtown Urban Village District provides development standards which promote ground level commercial uses, complete streets, and medium density (up to 24 du/acre) • **Cutler Bay** - Transit Corridor Zone encourages but does not incentivize vertically mixed uses. Southland Mall area is zoned for redevelopment: Town Center sub-districts allow high density, up to 250 du/acre at 18 stories with an FAR of 3.0 • **Miami-Dade County** - Northern Half of Goulds Community Urban Center District (CUCD) and the West Perrine CRA, which contains the Perrine CUCD	Yes	Configure new districts around proposed stations
Zoning and Planned Development (Central)	• Large majority of this section falls within the northern half of the Naranja Lakes CRA, which overlaps with the Princeton Community Urban Center District (CUCD) as well as the northern half of the Naranja CUCD. • Southern Half of Goulds CUCD • Land West of Naranja CRA is largely agricultural.	Yes	Utilize CUCD Zoning
Zoning and Planned Development (South)	• Southern portion of Naranja Lakes CRA • Homestead CRA • Florida City CRA • Leisure City CUCD • Southern half of Naranja CUCD • Homestead South-West Planned Urban Neighborhood (SWPUN)	Yes	Utilize CUCD Zoning
Population/Employment Density (North)	Low density, predominantly comprised of single-family housing; strong mix of retail and dinning means there are lots of attractions along this portion of the corridor.	Yes	Allow for higher density development

Topic	Current Conditions/Policies	Transit Ready?	Action Items / Next Steps
Population/Employment Density (Central)	Generally low density with concentrations of medium density. proximity of the UDB limits opportunities within the half-mile buffer of the corridor	No	Attract development to vacant/underutilized properties
Population/Employment Density (South)	Higher density than central portion of corridor; ample opportunity for further growth	No	Attract development to vacant/underutilized properties
Transit Connectivity (North)	Pinecrest - two (2) Circulators Palmetto Bay - two (2) Circulators Cutler Bay - one (1) Circulator DTPW - 17 additional routes	No	Increase availability of transit services to bridge last mile to South Dade Transitway Corridor
Transit Connectivity(Central)	No DTPW routes leave the South Dade Transitway Corridor within this section; service cannot be provided beyond UDB	No	Consider implementation of circulator
Transit Connectivity (South)	Homestead - two (2) Circulators 344 circulates between Homestead and Florida City 301 connects to the Keys DTPW - two (2) routes which follow transitway to Dadeland South DTPW - two (2) additional routes	Yes	Improve transit stops within adjoining communities to improve last-mile access to Transitway
Bike/Ped Connectivity (North)	Limited east-west bike connections from U.S. 1 to adjoining neighborhoods	No	Extend bicycle network and sidewalks
Bike/Ped Connectivity (Central)	Limited east-west bike connections from U.S. 1 to adjoining neighborhoods	No	Extend bicycle network and sidewalks
Bike/Ped Connectivity (South)	Limited east-west bike connections from U.S. 1 to adjoining neighborhoods	No	Extend bicycle network and sidewalks

Table 24 Corridor Needs Matrix (Continued)

3.4. Transit Oriented Development Guidelines

The South Dade Transitway Corridor passes through Unincorporated Miami-Dade County and five (5) other municipalities. Most have their own strategy aimed at promoting Transit Oriented Development (TOD) through zoning and land use, but the common element between all strategies is the inclusion of mixed-use zoning. This is because residents of mixed-use districts can enjoy a car-free lifestyle when provided with a robust transit system which provides access to major employment and entertainment areas. An overview of how each municipality regulates and incentivizes TOD through zoning follows below.

3.4.1. Miami-Dade County

Miami Dade County uses traditional functional zoning with several additional special zoning districts, some of which are designed to enhance mixed-use and transit-oriented development. The districts which are found within a half-mile of the corridor are reviewed below.

The Planned Area Development (PAD): Intended to provide flexibility in planning, design and development, similar Planned Unit Development (PUD), but there are none located within a half-mile of the South Dade Transitway Corridor. Future TOD near station areas may pursue this zoning designation.

Urban Center (UC) / Urban Area (UA) District: Created in 2005, the UC/UAD's are intended to develop over time into multi-use districts characterized by high quality urban design. The zoning system is a hybrid of traditional function-based zoning and a more mixed-use oriented form-based zoning code; the zones are defined according to function, but the standards and requirements buildings must meet are form based. Where conflicts exist with overlapping zoning and land use regulations, the regulations of the Urban Centers take precedence. There are seven (7) Urban Center Districts (UCDs) within the South Dade Transitway Corridor: Cutler Ridge Metropolitan UCD, Downtown Kendall UCD, Goulds Community UCD, Leisure City Community UCD, Naranja Community UCD, Perrine Community UCD, and the Princeton Community Urban Center.

Each District has their own Regulating Plan, composed of seven (7) Plans:

- Street Types
- Sub-districts
- Land Use
- Building Heights
- Designated Open Spaces
- New Streets
- Bike Routes

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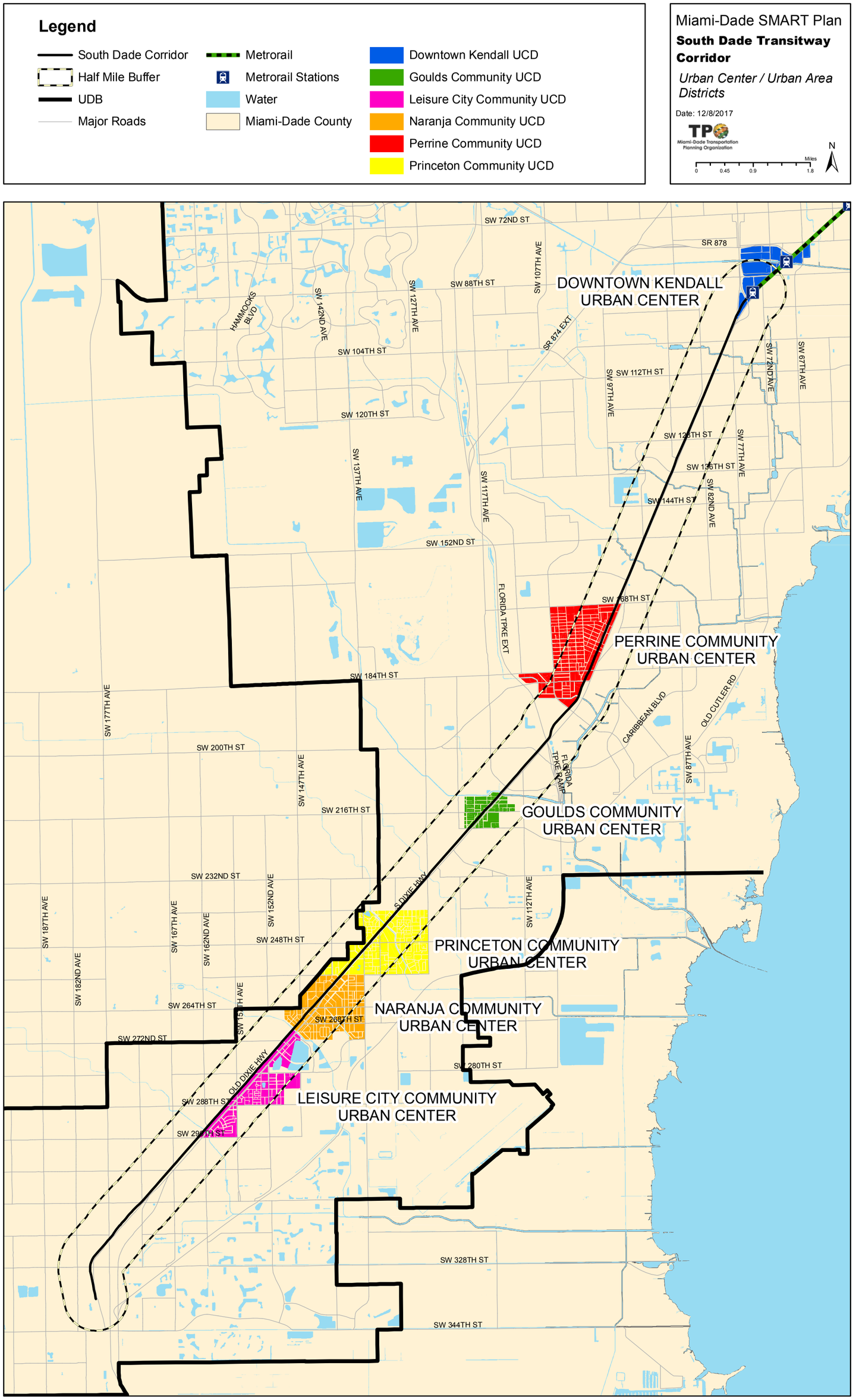

Figure 46 - Urban Center / Urban Area Districts

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Traditional Neighborhood Development (TND) District: The TND is intended to allow developers the freedom to build according to the urban conventions which were normal in the United States from colonial times until the 1940's, when mixed-use buildings were encouraged. Traditional Zoning categories are eschewed in favor of simplified land use categories (Public/semi-public, Civic, Shopfront, Rowhouse, House, Workshop).

There is one TND within the study area – Naranja Lakes, which straddles the east and west sides of the corridor between SW 256th and SW 272nd Streets. This area was destroyed by Hurricane Andrew in 1992, and residents chose not to rebuild. In 1996, a Charrette was held to design a new mixed-use community on the abandoned site. The project was designed to be fully walkable, with a downtown area, workplace, a variety of residential types, and civic buildings.

In 2002 with the help of the County, the Naranja Lakes CRA was established to fund the construction of the project. Construction began in 2006 on the eastern portion named Mandarin Lakes, and is now mostly completed with over 1,500 residential units. The western portion has changed ownership and new plans for development have been proposed, but its future is uncertain as this proposal requires a change in density allowed by the existing TND plan. If allowed to proceed, the development would be named Mandarin Park and would include 520 residential units, 87,600 sf of commercial space, and three acres of public space.

In 2017, the CRA was significantly expanded, now reaching as far north as SW 232nd Street. The CRA now overlaps with three Urban Center Districts – the Leisure City Community UCD, the Naranja Community UCD, and the Princeton Community Urban Center. In the February 2017 amendment to the Naranja Lakes Community Redevelopment Plan, a strong emphasis is placed on incentivizing transit oriented development and on rebranding the area. On Page 5, it states "the CRA should prioritize Transit Oriented Development (TOD) in the corridor, especially at the locations along U.S. 1 that have opportunity for development and which connect to the Florida Turnpike, such as the area near SW 248th Street and SW 296th Street." With this focus in mind, it is anticipated that additional TOD will take place along the corridor within the bounds of the CRA.

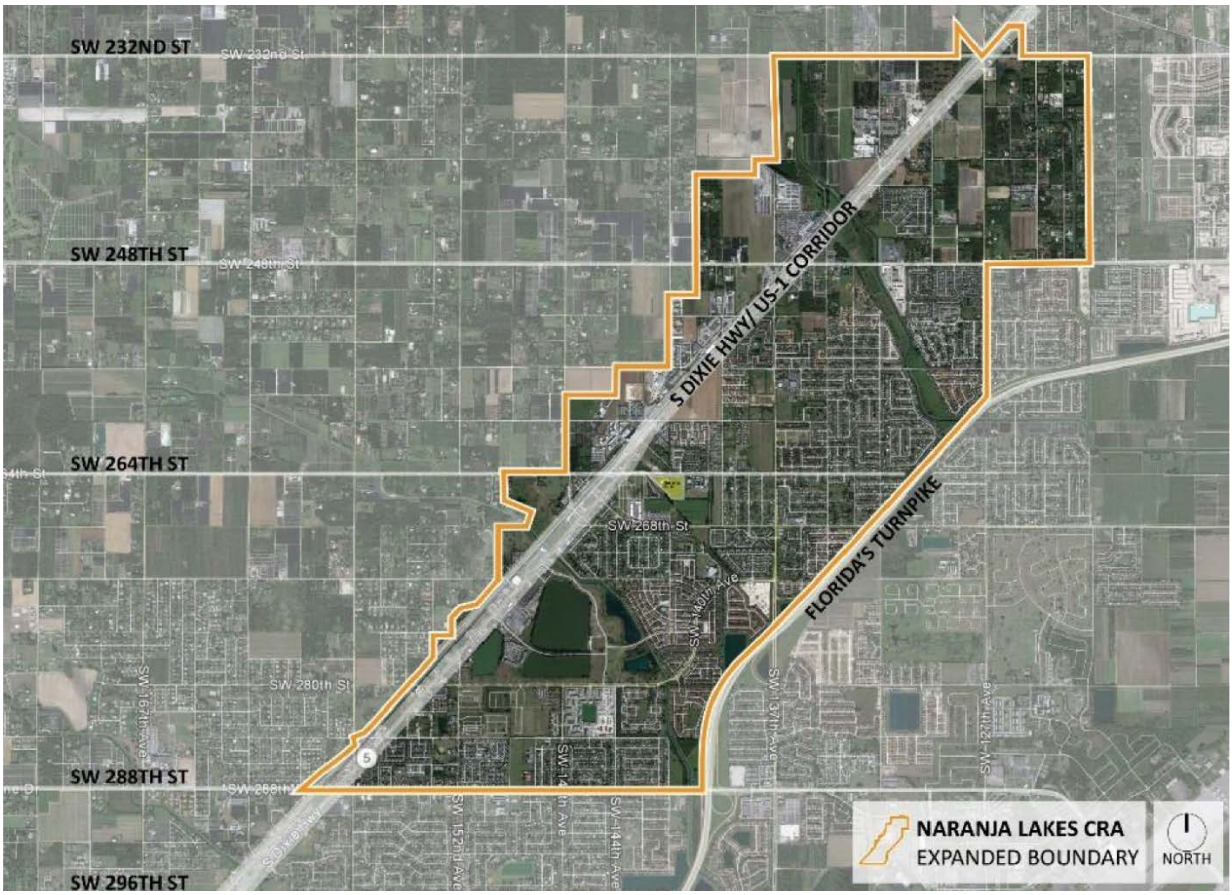

Figure 47 - Naranja Lakes CRA

3.4.2. Pinecrest

Pinecrest has two areas which have an alternate regulatory framework for implementing the CDMP FLU: The North Pinecrest Business Alternative District (NPBAD) and the Pinecrest Parkway Corridor Alternative Development Standards. These Development Standards are not required, but are offered on a voluntary basis to developers who are willing to conform to the design requirements in exchange for incentives including reductions in the amount of required impervious coverage and green space.

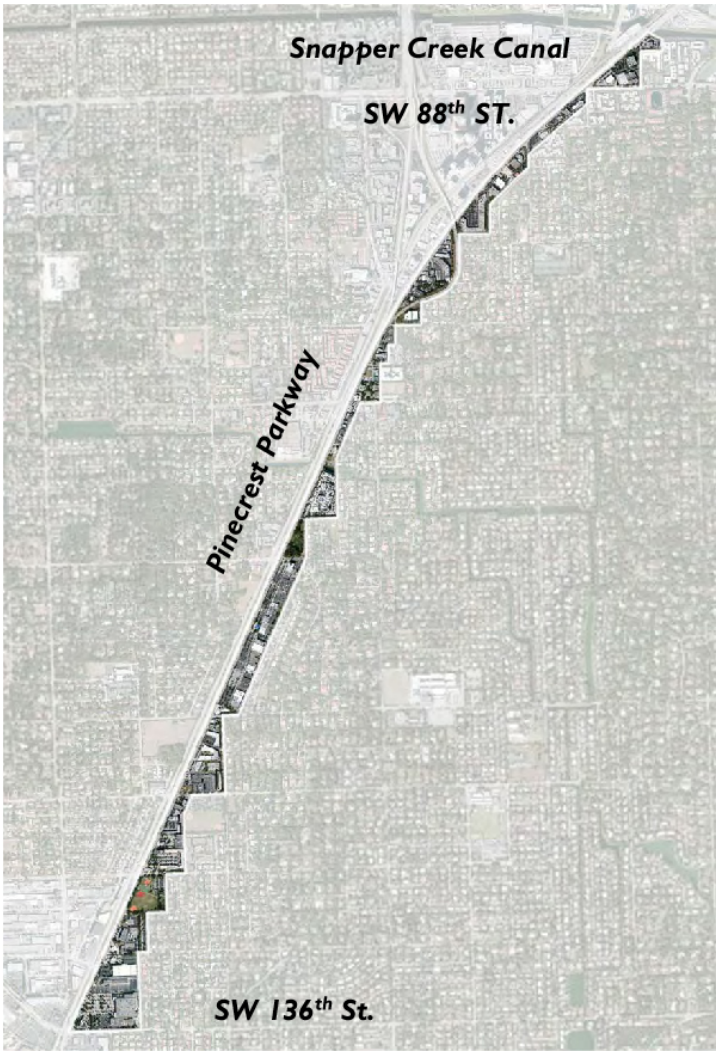

Figure 48 - Pinecrest Parkway

Within Pinecrest, U.S. 1 is known as the Pinecrest Parkway. The Pinecrest Parkway Corridor Alternative Development Standards are intended to encourage the implementation of the Pinecrest Parkway (U.S. 1) Vision Plan, adopted in 2012. It applies to "the area from the median on Pinecrest Parkway, the Parkway itself, those properties fronting Pinecrest Parkway, and those properties immediately to the rear of those properties" from the Snapper Creek Canal to SW 136th street.

The most relevant aspect of these standards to the South Dade Transitway Corridor is the requirement for pedestrian and bicycle connectivity with the neighborhoods to the east. Combined with the aesthetic standards, this helps make the Transitway Corridor significantly more pleasant to access for Pinecrest residents. Most of the alternative standards are aesthetically oriented, with a few exceptions:

- **+5%** Maximum impervious surface ratio
- **-5%** Minimum green space
- **8'** Landscape buffer to U.S. 1

The North Pinecrest Business Alternative District (NPBAD) applies to two areas, each located across U.S. 1 from Metrorail stations. It currently contains strip malls, small to medium office buildings, and standalone retail chains such as CVS and DSW. This district functions as an optional alternative zoning designation. A developer may choose to develop the property based on either the underlying zoning category, or based on the provisions of the NPBAD.

Basics of NPBAD zoning:

- Maximum building coverage of lot: 40%
- Maximum FAR: 0.4 by right, up to 0.73 if design criteria is met
- Max residential density: 12 units/acre (average unit size minimum 600 square feet.)

Figure 49 - North Pinecrest Business Alternative Distrcits

3.4.3. Palmetto Bay

Palmetto Bay has three different zoning types which could potentially be significant to TOD; the Downtown Urban Village (DUV), the Village Mixed-Use (VMU) District, and the Planned Area Development (PAD) which was described earlier in the section on Miami-Dade County. The PAD and VMU Districts within Palmetto Bay are both located on Biscayne Bay, and therefore are beyond the bounds of this study.

The Downtown Urban Village is intended to facilitate a community village center by providing development standards that guide building style, form, and scale, and by promoting ground level commercial uses as well as complete streets.

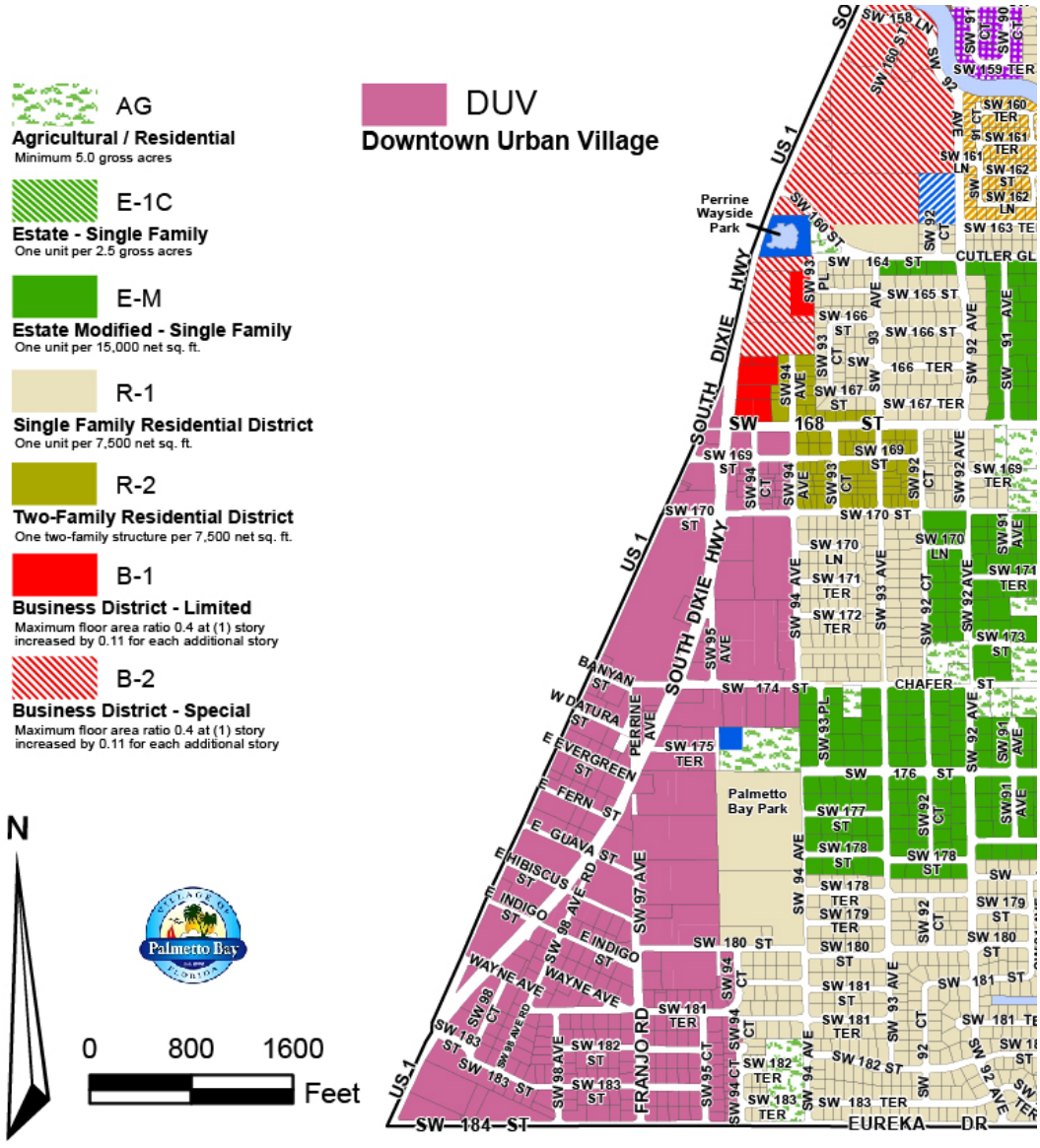

Figure 50 - Palmetto Bay Downtown Urban Village Zoning

The DUV is further subdivided into four sectors of increasing development intensity, as depicted in the map below. Development intensity is primarily regulated through building type, placement standards, and minimum/maximum number of floors. In this system, the maximum number of dwelling units has a greater effect on the size of the units than on the size of the building.

The DV and DG sectors allow for 24 dwelling units per acre and allow a maximum of five stories (up to eight stories with bonus). The UV and NV sectors both provide variable maximum residential densities and heights based on building type.

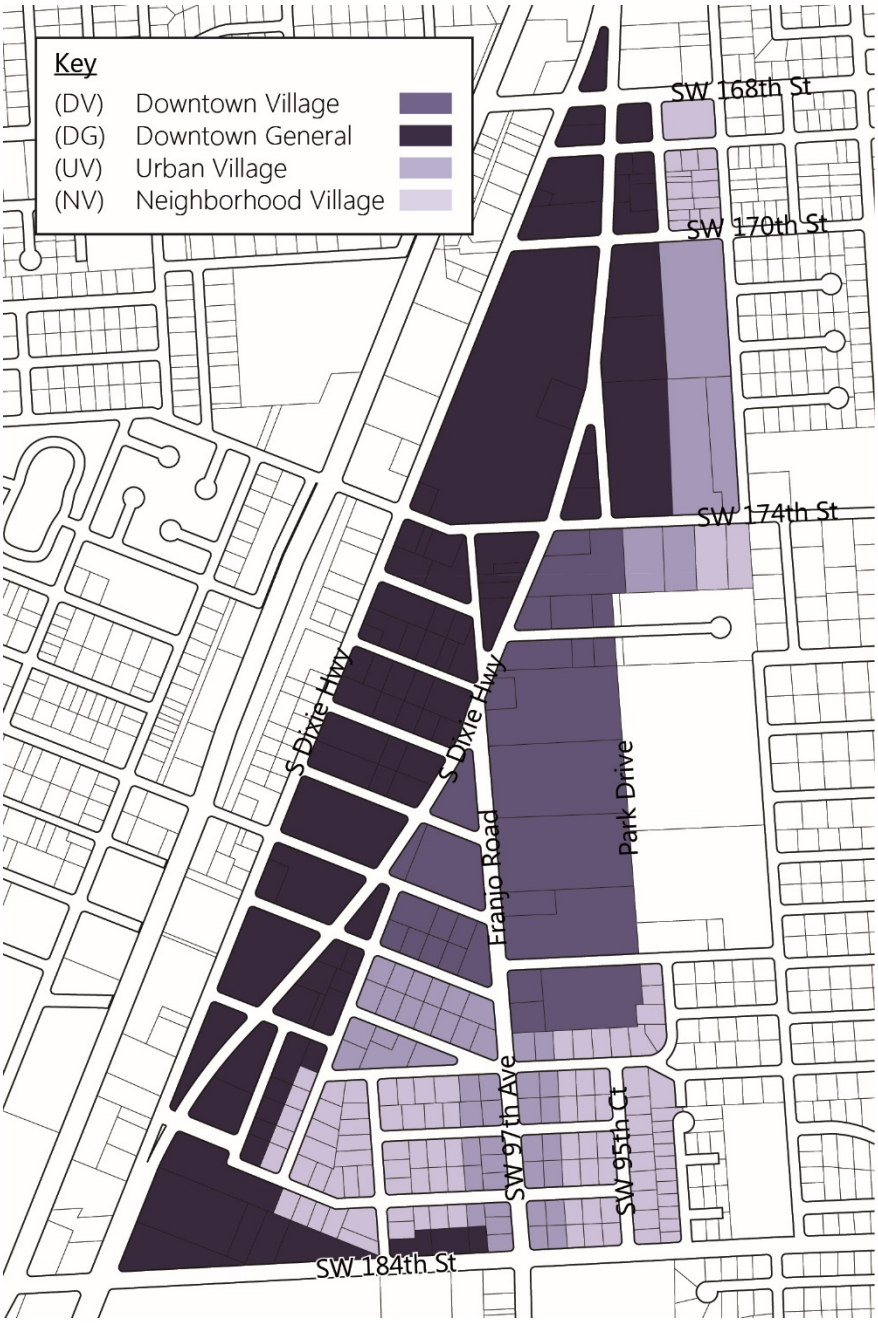

Figure 51 - Palmetto Bay Downtown Urban Village Sub-districts

3.4.4. Cutler Bay

The Town of Cutler Bay fronts two miles of the corridor. The northern portion from SW 184th Street to the Turnpike is exclusively zoned as a Transit Corridor (TRC) for all lots abutting U.S. 1. The Southern Portion from the Turnpike to SW 112th Avenue (S. Allapattah Rd) is zoned as a Town Center (TC). This area is subdivided into sub-districts, and is dominated by the Southland Mall.

The TRC zone is intended to primarily be a commercial zone, with vertically mixed uses encouraged, but not incentivized. Buildings must be between two and five stories, with a maximum floor to area of 2.0 and maximum density of 75 units per acre.

The TC zone is divided into sub-districts with density progressing from Core (most dense) to Center to Edge (least dense). Table 25 illustrates how the density is regulated in the three sub-districts.

Table 25 - Cutler Bay Town Center Zone Subdistricts

Measurement	Edge	Center	Core
Maximum floor area ratio	0.5	2.0	3.0
Maximum density (units per acre)	50	150	250
Maximum number of stories	8	15	18

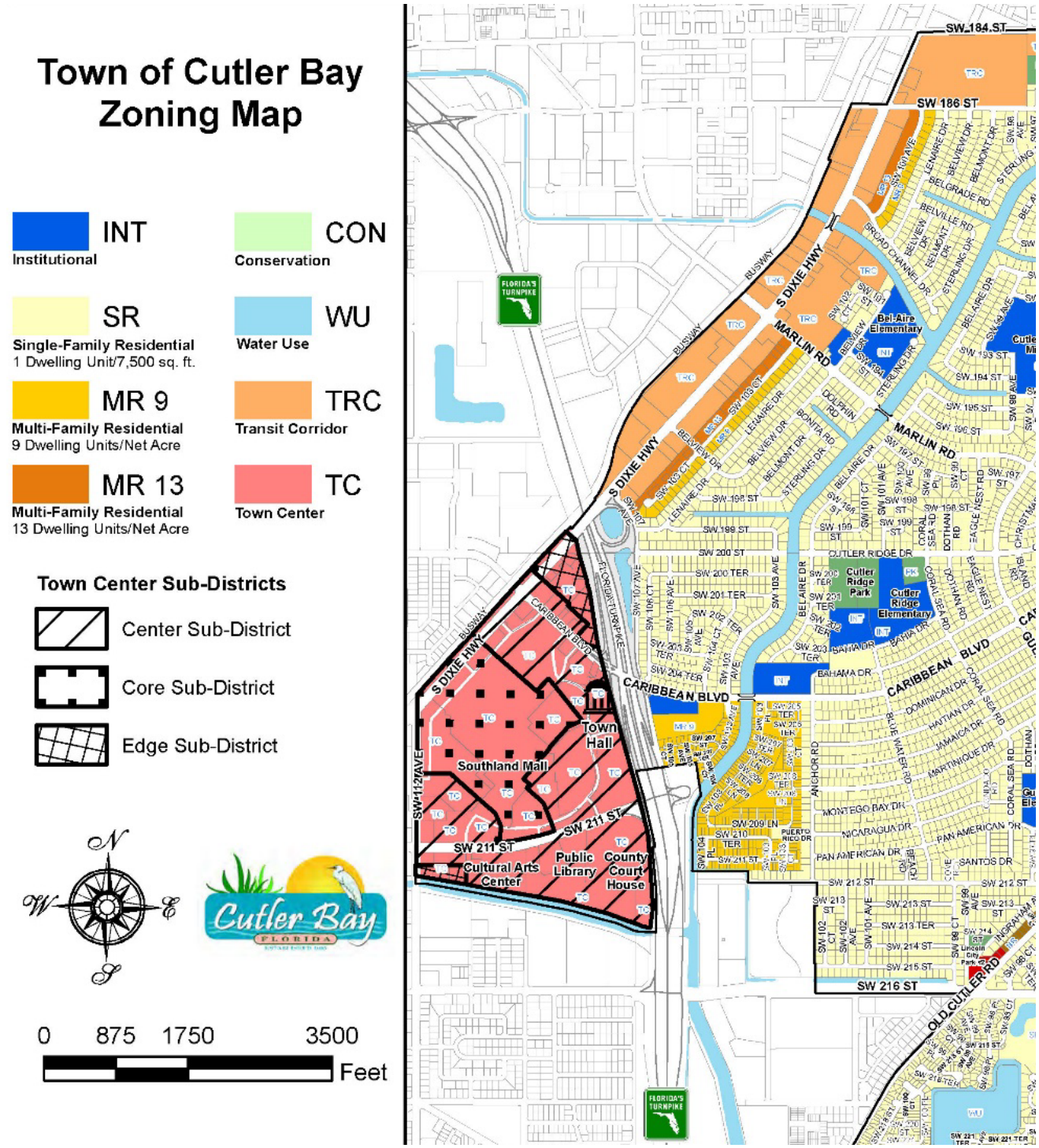

Figure 52 - Cutler Bay Transit Supportive Zoning

3.4.5. Florida City

The final mile of the South Dade Transitway travels through Florida City. Due to the low density and low total population of Florida City, no Transit Oriented Development is expected in reaction to actions taken regarding the South Dade Transitway.

3.4.6. Homestead

The South Dade Transitway encounters two unique zoning conditions as it passes through Homestead, the Northwest Neighborhood Overlay District (NWNOD) and the Southwest Planned Urban Neighborhood (SWPUN).

The NWNOD is envisioned as a traditional single-family household neighborhood. It has not yet had regulations entered into the Municipal Code, but sections have been reserved with the declared intent of implementing the Northwest Neighborhood Plan of 2007. This Plan indicates a neighborhood center one (1) mile west of the Transitway, and emphasized connectivity along NW 11th Street.

In Homestead, Planned Urban Neighborhood (PUN) districts have a stated intention of encouraging compact mixed-use development. There is currently only one PUN in Homestead, the SWPUN, which is regulated by the Southwest Neighborhood Master Plan.

The SWPUN is further divided into sub-districts, the most relevant to this study being the Neighborhood Mixed-Use district, the Downtown Mixed-Use district, and the Multimodal Transportation Overlay Sub-District (MMTOD). The maximum average gross residential density allowed in any sub-district is 15 units per acre, with individual parcels allowed a maximum of 20 dwelling units per acre.

The Downtown Mixed-Use Sub-District is approximately 12 acres, half of which contains the MMTOD. The MMTOD is intended to promote transit-oriented development and provide essential transportation linkage and services between Homestead and the rest of the County. In pursuit of this goal, the MMTOD is exempted from most of the requirements within the Master Plan, allowing for maximum freedom of design.

The Neighborhood Mixed-Use Sub-District is the only one in which apartment/condominium buildings and mixed-use buildings are both permitted by right. The contiguous area west of the transitway totals approximately 41 acres, but is separated from the MMTOD and Downtown Mixed-Use Sub-District by a swath of industrial zoned land.

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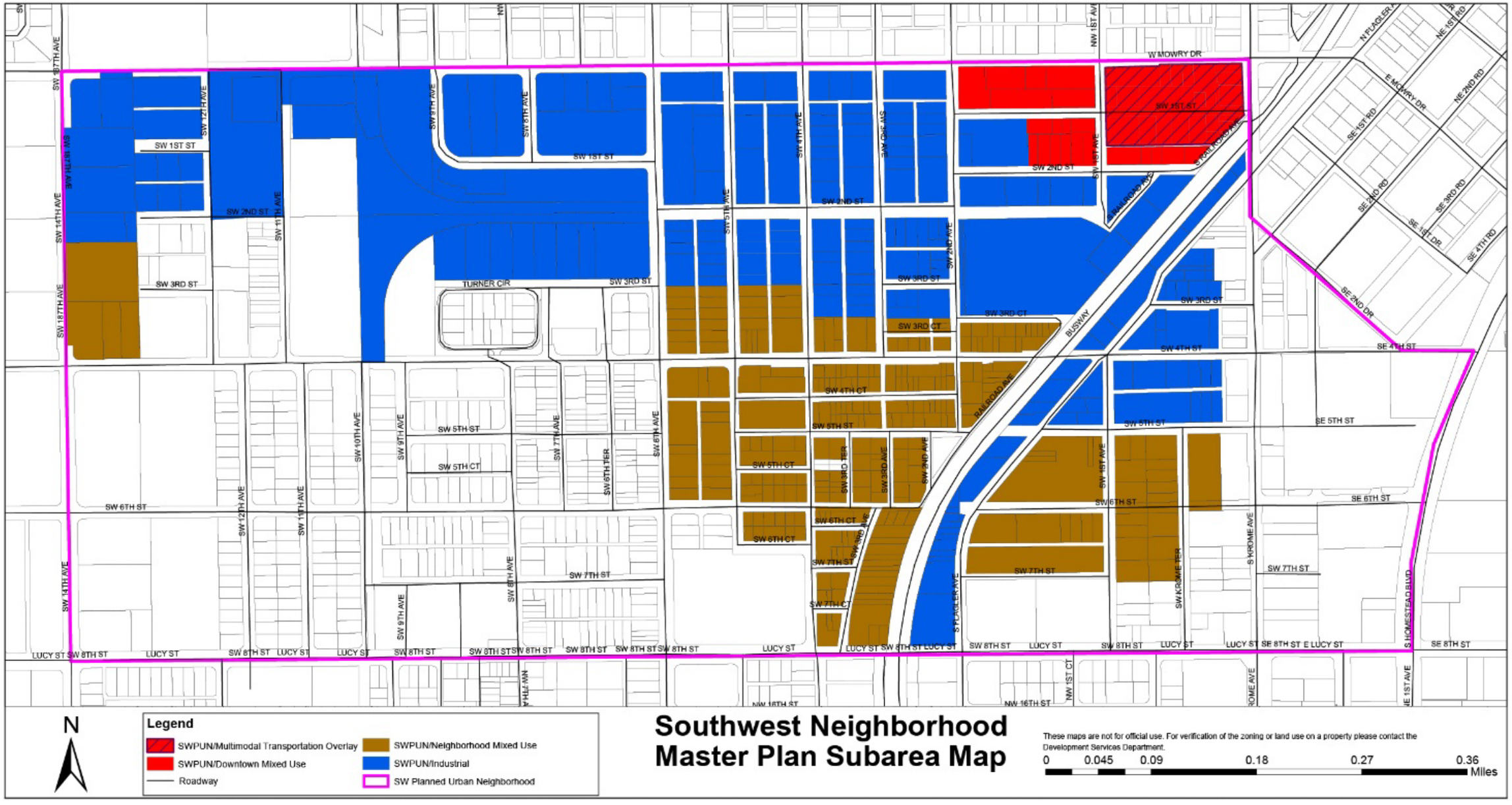

Figure 53 – Homestead Southwest Planned Urban Neighborhood (SWPUN)

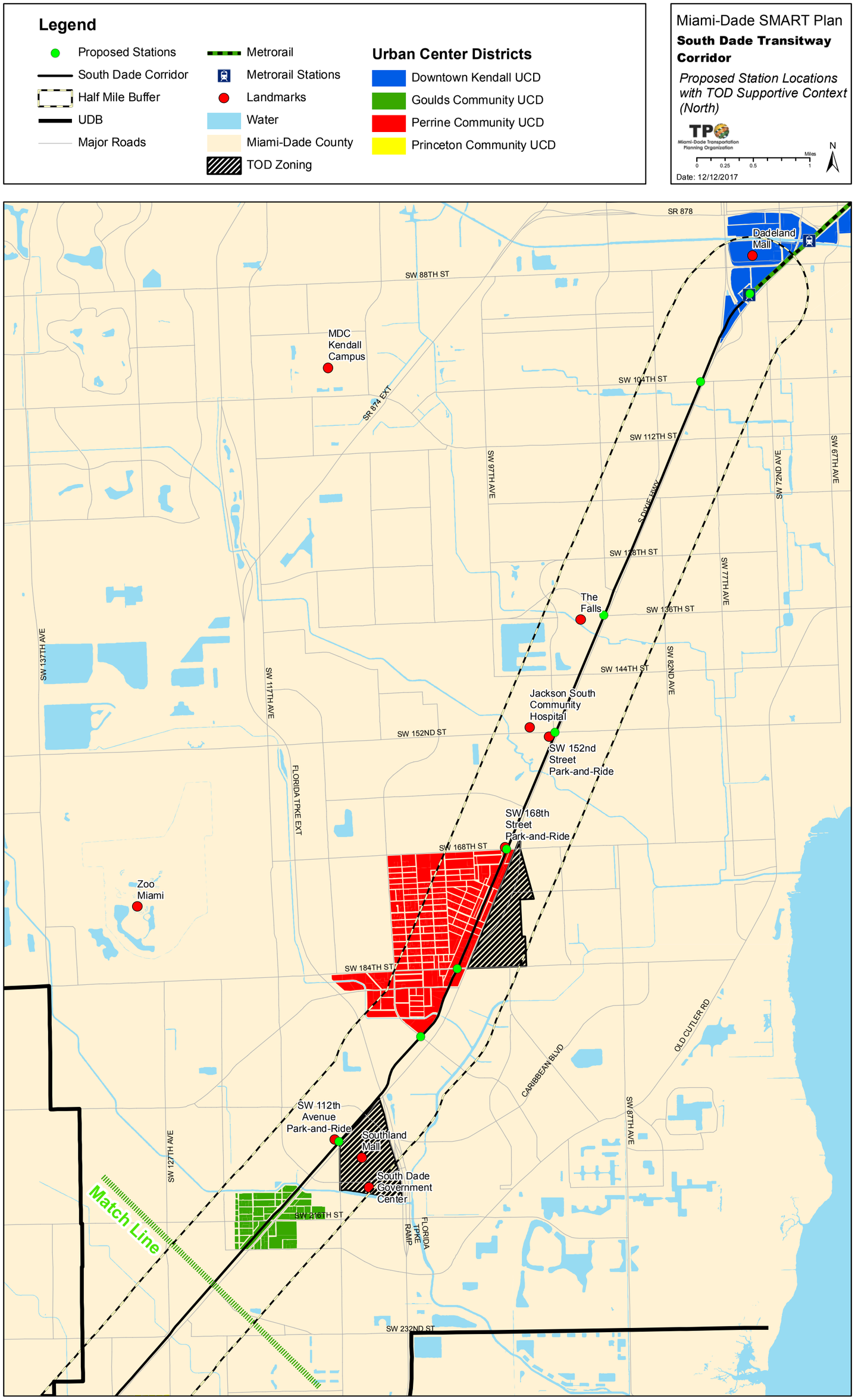

Figure 54 - Proposed Station Locations with TOD Supportive Context (North)

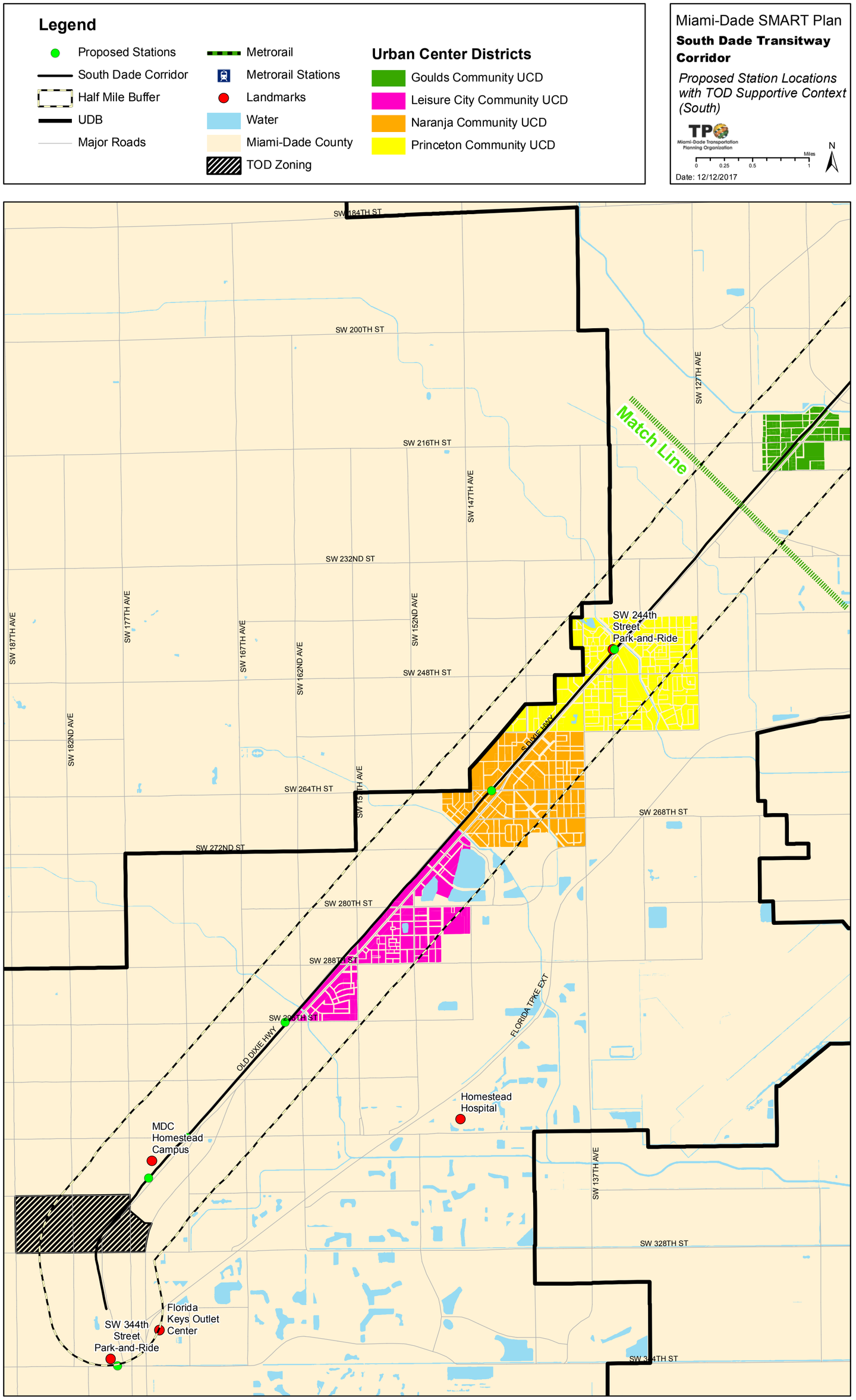

Figure 55 - Proposed Station Locations with TOD Supportive Context (South)

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Planned Station Area Locations

Preliminary station locations for rapid transit on the corridor have been identified. The tentative sites are associated with existing transit-oriented zoning and land use patterns along the corridor. These station sites are described in Table 26.

Table 26 - South Dade Transitway Corridor Rapid Transit Station Locations

Preliminary Station Locations	Transit Destination Served
Dadeland South Metrorail Station	Downtown Kendall Urban Center
104th Street	North Pinecrest Business Alternative District
136th Street	The Falls (Mall)
152nd Street	Jackson South Community Hospital
168th Street	Perrine Community Urban Center (North Border)
184th Street	Perrine Community Urban Center (Central)
Marlin Road	Perrine Community Urban Center (South Border)
112th Avenue	Cutler Bay Town Center District
244th Street	Princeton Community Urban Center
264th Street	Naranja Community Urban Center
296th Street	Leisure City Community Urban Center (South Border)
312th Street	MDC Homestead Campus
NE 2nd Drive/Homestead Multimodal Transit Center	Homestead Southwest Planned Urban Neighborhood
344th Street	Florida City

4. Conclusion

This report provides a comprehensive inventory of existing conditions on the South Dade Transitway Corridor. It begins with a literature review of two guiding documents on integrating land use and transportation. Then, the document provides an exhaustive inventory of land use, demographic, economic, transportation, and transit characteristics of the area around the corridor.

The data collected from these myriad sources all point toward a common conclusion – the South Dade Transitway Corridor can sustain high capacity, rapid transit and can support higher-density TOD. The corridor is home to high concentrations of transit-dependent populations, including individuals 65 and older and 18 and younger, and low income and zero car households. Moreover, large stretches of the corridor already have policy frameworks established that can help foster transit-oriented development. Finally, the land adjacent to the corridor contains significant stretches of vacant and redevelopable parcels that are ripe for transformation to TOD.

More work remains to be done to fully realize the corridor's potential. Stretches of the corridor do not have adequate land use regulations in place to help foster TOD – notably the eastern side of U.S. 1 in Pinecrest has no such framework in place. Additionally, the county should consider modifications to the UDB to maximize the land use potential of parcels that are walking distance of the corridor on the southern end of the corridor.

The data from this inventory will be used to further advance studies to improve transit on the South Dade Transitway. Two studies of particular note are currently underway: The TPO is currently organizing Land Use and Visioning Studies for all the SMART Plan Corridors, including the South Corridor, and Miaim-Dade's DTPW is simultaneously advancing a Project Development and Environmental Study.

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