2018

MIAMI-DADE COUNTY
FREIGHT PLAN UPDATE

PREPARED FOR
Miami-Dade Transportation
Planning Organization

Miami-Dade Transportation
Planning Organization

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2040 TPO LRTP	Year 2040 Transportation Planning Organization Long Range Transportation Plan
2045 TPO LRTP	Year 2045 Transportation Planning Organization Long Range Transportation Plan
AADT	Average Annual Daily Traffic
AADTT	Average Annual Daily Truck Traffic
AAGR	Average Annual Growth Rates
AIFSS	Automated International Flight Services Station
ASF	Alternative Site Frameworks
CBP	Customs and Border Protection
CFR	Code of Federal Regulations
CCTV	Closed-Circuit Television
CMAQ	Congestion Migration and Air Quality Improvement Program
CORE	Cargo Optimization, Redevelopment and Expansion Plan
CRFCs	Critical Rural Freight Corridors
CUFCs	Critical Urban Freight Corridors
DOTs	Departments of Transportation
DTPW	Department of Transportation and Public Works
EFTMS	Electronic Freight Theft Management System
ELD	Electronic Logging Device
FAST	Fixing Americas Surface Transportation Act
FASTLANE	Fostering Advancements in Shipping and Transportation for the Long-Term Achievement of National Efficiencies
FDOT	Florida Department of Transportation
FEC	Florida East Coast Railroad
FECI	Florida East Coast Industries
FHWA	Federal Highway Administration
FLZ	Freight Logistics Zone
FRA	Federal Railroad Administration
FRATIS	Freight Advanced Traveler Information System
FTAC	Freight Transportation Advisory Committee
FTE	Florida's Turnpike Enterprise
FTP	Florida Transportation Plan
FTZ	Foreign Trade Zones
GA	General Aviation
GOMs	Goals, Objectives and Measures
HEFT	Homestead Extension of Florida's Turnpike
HOS	Hours of Service
HSIP	Highway Safety Improvements Program
HST	Homestead Air Reserve Airport
ICTF	Intermodal Container Transfer Facility
ICWW	Intercostal Waterway

ILC	Intermodal Logistics Center
INFRA	Infrastructure for Rebuilding America
ITS	Intelligent Transportation System
MAP-21	Moving Ahead for Progress in the 21st Century Act
MIA	Miami International Airport
MPO	Metropolitan Planning Organization
MSF	Millions of Square Feet
NCTTF	National Commercial Vehicle and Cargo Theft Protection Task Force
NHFN	National Highway Freight Network
NHFP	National Highway Freight Program
NHPP	National Highway Performance Program
NPMRDS	National Performance Management Research Data Set
AOBRBs	Automatic Onboard Recorders
OPF	Opa-Locka Executive Airport
PACE	Planning and Conceptual Engineering
PHFS	Primary Highway Freight System
PSF	Price per Square Foot
PTI	Planning Time Index
ROW	Right Of Way
SAT	Study Advisory Team
SCIC	Supply Chain Intelligence Center
SFRC	South Florida Rail Corridor
SHS	State Highway System
SIB	State Infrastructure Banks
SIS	Strategic Intermodal System
SR	State Road
SU	Federal Surface Transportation Funds
STBG	Surface Transportation Block Grant Program
TDM	Transportation Demand Management
TEU	Twenty Equivalent Unit
TIGER	Transportation Investment Generation Economic Recovery
TMA	Transportation Management Area
TMB	Kendall Executive Airport
TPAS	Truck Parking Availability System
TPO	Transportation Planning Organization
TSA	Transportation Security Administration
TTTR	Truck Travel Time Reliability
TRIP	Transportation Regional Incentive Program
UCR	Uniform Crime reporting Program
US	United States
X51	Miami Homestead General Aviation Airport

1.0 BACKGROUND

1.0 Background

This Freight Plan update is sponsored by the Miami-Dade Transportation Planning Organization (TPO). The purpose of the report is to highlight the importance of freight mobility in Miami-Dade County, to update the County Freight Plan from 2014 to 2018, to develop an application for a Miami-Dade County designated Freight Logistics Zone (FLZ) and to coordinate with freight stakeholders to prepare an updated list of transportation needs. The list of projects developed in this update will be considered for funding in the development of the TPO's Year 2045 Long Range Transportation Plan (2045 TPO LRTP).

Miami-Dade County is the most populous county in the state with a 2017 population of 2,751,796 million people, per the United States Census. The County is home to a well-established and expanding freight transportation system that is the cornerstone of the regional and statewide economy, providing goods and services to Florida's largest consumer market and through major sea and air gateway connections to the global economy. Miami-Dade County is also home to a multi-cultural community with an economy dominated by international trade, tourism, agriculture, mining and natural resources.

PORTMiami is one of the largest container ports in Florida and is known as the cruise capital of the world. Miami International Airport (MIA) is dominant in terms of air cargo tonnage in Florida (81 percent in 2014) and is the world's largest gateway to Latin America and the Caribbean. The Miami River waterway, recently designated as an Emerging Strategic Intermodal System (SIS) Waterway by the Florida Department of Transportation (FDOT), provides key niche waterborne cargo services to smaller ports in the Caribbean Basin and supports an active industrial core along the river corridor. The Florida East Coast Railway (FEC), the South Florida Rail Corridor (SFRC) and CSX Transportation Railroad serve Miami-Dade County by providing intermodal, passenger and carload services connecting the County to the region, state and all of North America. The county has a robust network of roadways providing regional mobility as well as gateways to other Florida counties and more distant hinterland markets. These transportation facilities complement the largest warehouse/distribution center agglomeration in the State as well as the international banking and brokerage infrastructure that facilitates international trade activities for the region.

Today, the core freight activity in the county could be described as a freight beltway that extends from PORTMiami in the east to the rock quarries in the west. The beltway comprises PORTMiami, the Miami River Waterway, MIA, the FEC rail yard, the FEC and CSX railroads, the major warehouse districts in Doral and Medley, and major east/west roadways including State Road (SR) 836, United States (US) 27 and SR 112. This freight belt is further supported by major north-south roadways such as I-95, SR 821/Homestead Extension of Florida's Turnpike (HEFT), SR 826/Palmetto Expressway and SR 992/Krome Avenue that further distribute goods to adjacent counties and beyond.

Miami-Dade's freight infrastructure has undergone significant improvement and expansion to position the region for future growth opportunities. Much of that growth will be attributed to the recent deep dredging of the port channel to a 50 foot depth and the widening of the Panama Canal.

Source: Marketwire.com

The new Panama Canal locks opened on June 26, 2016 and just two weeks later, on July 9, 2016, PORTMiami officially joined the Neo-Panamax era when the Chinese ship MOL Majesty became the first ship to arrive at the port after transiting the newly expanded Panama Canal. The ship measured almost 1,000 feet long and 150 feet wide - larger than any cargo ship PORTMiami has ever seen. Like the MOL Majesty, shown above at PORTMiami, Neo-Panamax ships can carry three times the cargo of previous generations of vessels.

Miami-Dade County and stakeholders have prepared themselves to handle mobility to/from the Port and MIA and to compete for increases in trade by: constructing the PORTMiami Tunnel to connect PORTMiami directly to the Interstate System; connecting the MIA cargo operations area to the Doral warehousing areas on the NW 25th Street Viaduct; rehabilitating rail service to PORTMiami and connecting to the on-port Intermodal Container Transfer Facility (ICTF); developing an intermodal logistics center in Hialeah; replacing the SR 826/SR 836 interchange; and participating in a USDOT sponsored Freight Advanced Traveler Information System (FRATIS).

With these improvements complete, the underlying premise of this Update is to identify existing and future freight transportation needs in order to develop a list of freight-focused and freight-related projects for consideration in the development of the TPO 2045 LRTP. This list will identify projects for near-term (2020 to 2025), mid-term (2025 to 2030), and long-term (2031 to 2045). It is important to note that the 2045 LRTP is a cost constrained plan and that projects needs are expected to exceed available funding. However, inclusion in the plan supports opportunities for additional funding through state and federal grants.

This project was guided by a Study Advisory Team (SAT) including:

- CSX Transportation

- Florida Department of Transportation District 6
- Florida East Coast Railway
- Florida's Turnpike Enterprise
- Miami-Dade County Aviation Department
- Miami-Dade County Department of Transportation and Public Works
- Miami-Dade Expressway Authority
- PORTMiami

2.0 FREIGHT GOALS, OBJECTIVES AND MEASURES

2.0 Freight Goals, Objectives and Measures

Goals, Objectives and Measures (GOMs) for this update were developed utilizing the freight GOMs from the 2040 Miami-Dade County Long Range Transportation Plan (2040 TPO LRTP), the FDOT State Freight Plan as identified in the 2017 Motor Carrier System Plan, and Performance Measures required in Title 23 Code of Federal Regulations (CFR). Per Title 23 CFR 450.306(d)(4) it is required that the TPO integrate in the transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in the host state transportation plans, including the State Freight Plan.

2.1 Goals and Objectives

The TPO Goals from the 2040 LRTP and the State Freight Plan Goals are very similar. The FDOT State Freight Plan - Motor Carrier System Plan Goals are specific to freight and include:

- **Safety and Security:** Identify, support, and implement freight highway safety improvements and initiatives,
- **Agile, Resilient, and Quality Infrastructure:** Continue to invest in quality infrastructure that can be adapted to meet the needs of future freight vehicles and technology,
- **Efficient and Reliable Mobility:** Increase operational efficiency of goods movement and maintain reliable mobility for trucks,
- **Economic Competitiveness:** Support Florida's global competitiveness and increase the flow of domestic and international trade,
- **More Transportation Choices:** Increase the number of quality options for moving freight to, from, and within Florida,
- **Environment and Conserve Energy:** Balance the need for environmental protection and conservation with seeking motor carrier efficiencies,
- **Quality Places:** Coordinate early and often with local communities to ensure mobility for trucks that is consistent with local and regional priorities.

The 2040 TPO LRTP Goals cover all modes and freight-specific objectives are included in the plan as a subset of the Goals. The 2040 TPO Goals include:

- **Improve the Transportation System and Travel**
- **Increase the Safety of the Transportation System for All Users**
- **Support Economic Vitality**
- **Protect and Preserve the Environment and Quality of Life**
- **Promote Energy Conservation**
- **Enhance the Integration & Connectivity of the System for People and Freight Across and Between Modes of Transportation**
- **Optimize Sound Investment Strategies for System Improvement and Management/Operation**

- **Maximize and Preserve the Existing Transportation System**

For the purposes of developing freight specific Goals and Objectives for this Update, the Goals from the State Freight Plan were used as the framework and all the objectives from the State Freight Plan and the freight-specific objectives from the 2040 TPO were blended as shown in Table 2.1.

Table 2.1 Miami-Dade Freight Goals and Objectives

GOAL AREAS	OBJECTIVES
1. Safety and Security	• Improve safety on facilities and in multi-modal operations • Provide more safe and secure places for truck parking, both on and off the Interstate System • Prevent and mitigate cargo-related security risks. Ensure security at ports, airports and major intermodal centers/terminals
2. Agile, Resilient, Quality Infrastructure	• Preserve the existing State Highway System to maintain a state of good repair • Identify and implement the best available technologies and innovations to improve the reliability and efficiency of the transportation system • Collaborate with stakeholders to collect data relevant to motor carrier operations • Monitor truck weights and promote enforcement
3. Efficient and Reliable Mobility	• Ensure the efficiency and reliability of truck transportation connectivity • Continue to work with stakeholders to fund projects consistent with industry priorities and build relationships • Enhance mobility for freight by optimizing the functionality and efficiency of existing roadways
4. Economic Competitiveness	• Increase and improve freight access to airports and seaports • Enhance the efficient movement of freight and goods • Invest in PORTMiami infrastructure to further increase competitiveness for Port Panamax traffic • Expand and optimize cargo-handling and related intermodal facilities • Maximize use of State, Federal and Private Sector funding
5. More Transportation Choices	• Increase the convenience of connecting between multiple modes of freight transportation • Increase the mobility of the freight network through investment in transit, Transportation Demand Management (TDM) and managed lanes
6. Environment and Conserve Energy	• Plan and develop truck transportation infrastructure that protects the character of the natural environments and avoids or minimizes adverse environmental impacts • Increase energy efficiency and diversity of transportation-related energy sources
7. Quality Places	• Plan and develop freight transportation systems that reflect regional and community values, visions, and needs • Educate the public on how trucks impact their daily lives

2.2 Measures

Measures were developed by referencing and blending the 2040 LRTP Freight-specific Objectives and Measures and the FDOT State Freight Plan Objectives and Strategies. Measures were also modified based on the Federal Highway Administration (FHWA) performance rulemakings to implement the Transportation Performance Measurement framework established by Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation Act (FAST). There are many strategies and measures included in the GOMs, however the Federal requirements are very specific and require targets and performance reports. Collectively, the rules address challenges facing the US transportation system for freight and people, including:

- Improving safety,
- Maintaining infrastructure condition,
- Reducing traffic congestion,
- Improving efficiency of the system and freight movement,
- Protecting the environment, and
- Reducing delays in project delivery.

The rules establish national performance measures indicating that State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs) will establish targets for applicable measures. New and existing plans will document the strategies and investments used to achieve the targets. Progress toward the targets will be reported through new and existing mechanisms. Freight-specific measures include the Truck Travel Time Reliability (TTTR) Index for the Interstate System. The final rule is found in the *Federal Register* 82 FR 5970, January 18, 2017.

Through MAP-21, Congress required FHWA to establish measures to assess performance in 12 areas, including freight movement on the Interstate. The measures consider factors that are unique to this industry, such as the use of the system during all hours of the day, and the need to consider more extreme impacts to the system in planning for on-time arrivals [Title 23 CFR 490.607].

FDOT submitted the Florida Freight Plan in October of 2017 and recently issued their required 2 year and 4 year freight performance targets on May 18, 2018 along with all of the other required targets. The TPO must either support the state target or establish their own quantifiable 4 year target for freight within 180 days of the state target establishment (November 14, 2018). The State's target is based on the FHWA's National Performance Management Research Data Set (NPMRDS). This data set includes truck travel times for the full Interstate System and also includes the most significant roadways on the Miami-Dade County Freight Network. The NPMRDS will be used to measure and assess performance against the adopted FDOT freight targets.

2.3 Summary: Goals, Objectives, and Measures

Supporting each objective are corresponding strategies to guide commercial motor vehicles efforts. Chapter 5 of the FDOT Motor Carrier Plan includes a matrix with lead and supporting roles defined at the strategy level. Assigning responsibility is intended to encourage the most appropriate offices and agency partners to follow through on each objectives while maintaining a holistic approach in accomplishing the several goals in this plan.

GOAL 1

Safety and Security: Identify, support, and implement freight safety improvements and initiatives

- Objective 1.1: Improve safety on facilities and in multi-modal operations
    - Measure 1.1.1: Number of truck/rail/air cargo transportation-related incidents, injuries and fatalities
    - Measure 1.1.2: Level of investment in safety projects
- Objective 1.2: Provide more safe and secure places for truck parking, both on and off the Interstate System
    - Measure 1.2.1: Number of public truck parking spaces developed
- Objective 1.3: Prevent and mitigate cargo-related security risks. Ensure security at ports, airports and major intermodal centers/terminals
    - Measure 1.3.1: Airport, seaport and intermodal facilities have addressed security as part of their operations
    - Measure 1.3.2: Truck parking and staging area spaces built that have adequate lighting

GOAL 2

Agile, Resilient and Quality: Continue to invest in quality infrastructure that can be adapted to meet the needs of future freight vehicles and technology

- Objective 2.1: Preserve the existing State Highway System to maintain a state of good repair
    - Measure 2.1.1: Percent of highway lane miles on the freight network programmed for resurfacing on high truck corridors
- Objective 2.2: Identify and implement the best available technologies and innovations to improve the reliability and efficiency of the transportation system
    - Measure 2.2.1: 2045 LRTP identifies the latest technologies and innovations in freight transportation improvements
    - Measure 2.2.2: Number of intelligent transportation system partnerships, studies, and pilot programs implemented on the freight network
- Objective 2.3: Collaborate with stakeholders to collect data relevant to motor carrier operations
    - Measure 2.3.1: Amount of availability of data and associated training
    - Measure 2.3.2: Lessen proprietary concerns regarding Florida's public records requirements

    - Measure 2.3.3: Performance assessments prepared identifying freight impacts of new technologies or improvements
    - Measure 2.3.4: Increase standardization of freight data collection and reporting across the region
- Objective 2.4: Monitor truck weights and promote enforcement
    - Measure 4.5.1: Monitor and report level of overweight trucks at Weigh In Motion Stations

GOAL 3

Efficient and Reliable Mobility: Increase operational efficiency of goods movement and maintain reliable mobility for trucks

- Objective 3.1: Ensure the efficiency and reliability of truck transportation connectivity
    - Measure 3.1.1: Review annual reports for Miami-Dade County freight network roadways using the FHWA Truck Travel Time Reliability (TTTR) Index data system to assess progress towards freight targets
- Objective 3.2: Continue to work with stakeholders to fund projects consistent with industry priorities and build relationships
    - Measure 3.2.1: Percent of funding programmed on the Freight Network
    - Measure 3.2.2: Percentage of funding dedicated to intermodal access to PORTMiami and Miami International Airport
    - Measure 3.2.3: Percentage of funding dedicated to SIS hubs, corridors and connectors
    - Measure 3.2.4: Number of projects that include intermodal connections
- Objective 3.3: Optimize the functionality and efficiency of existing roadways
    - Measure 3.3.1: Coordinate with the freight community on accurate and real-time information to motor carriers
    - Measure 3.3.2: Prepare quarterly reports of TTRI results for freight corridors utilizing the RITIS and NPMRDS databases
    - Measure 3.3.3: Coordinate with the USDOT and FDOT on developing enhanced reporting functions for real time data

GOAL 4

Economic Competitiveness: Support Florida's global competitiveness and increase the flow of domestic and international trade

- Objective 4.1: Increase and improve freight access to airports and seaports
    - Measure 4.1.1 : Highway lane and centerline miles within 1 mile of MIA, Miami-Opa Locka Executive Airport, Miami-Kendall Executive Airport and PORTMiami
- Objective 4.2: Enhance the efficient movement of freight and goods
    - Measure 4.2.1: Level of intelligent transportation system investment within 1 mile of MIA, Opa Locka Airport, Miami-Kendall Executive Airport and PORTMiami

- Objective 4.3: Invest in PORTMiami infrastructure to further increase competitiveness for Port Panamax traffic
    - Measure 4.3.1: Percentage of funding dedicated to PORTMiami Infrastructure
- Objective 4.4: Expand and optimize cargo-handling and related intermodal facilities
    - Measure 4.4.1: Percentage of funding dedicated to intermodal access to PORTMiami and Miami International Airport
- Objective 4.5: Maximize use of State, Federal and Private Sector funding
    - Measure 4.5.1: Dollar amount of private sector funding as a proportion of total cost of plan
    - Measure 4.5.2: Dollar amount of State and Federal funding as a proportion of total cost of plan

GOAL 5

More Transportation Choices: Increase the number of quality options for moving freight to, from, and within Miami-Dade County

- Objective 5.1: Increase the convenience of connecting between multiple modes of freight transportation
    - Measure 5.1.1: Number of designated intermodal connectors and facilities
- Objective 5.2: Increase the mobility of the freight network through investment in transit and Managed Lanes
    - Measure 5.2.1: Level of investment in transit and managed lanes on the freight network and number of registered carpool/vanpool users on the freight network

GOAL 6

Environment and Conserve Energy: Balance the need for environmental protection and conservation with seeking motor carrier efficiencies

- Objective 6.1: Plan and develop truck transportation infrastructure that protects the character of the natural environment and avoids or minimizes adverse environmental impacts
    - Measure 6.1.1: Coordinate environmental initiatives with stakeholders and partners
    - Measure 6.1.2: Investigate opportunities to safely move more cargo with greater efficiency and reduced emissions
- Objective 6.2: Increase the energy efficiency and diversity of transportation-related energy sources
    - Measure 6.2.1: Apply for Federal funding for signage and/or other notifications from highways to available alternative energy source stations
    - Measure 6.2.2: Support investment in alternative energy sources for freight vehicles and stations

GOAL 7

Quality Places: Coordinate early and often with local communities to ensure mobility for trucks that is consistent with local and regional priorities

- Objective 7.1: Plan and develop freight transportation systems consistent with regional and community values, visions, and needs
    - Measure 7.1.1: Participate in statewide and regional planning initiatives
    - Measure 7.1.2: Research off-peak delivery strategies and support collaborative solutions that balance the needs of all stakeholders
- Objective 7.2: Educate the public on how trade and logistics impact their daily lives
    - Measure 7.2.1: Develop resources to explain the connection between freight mobility and access to goods
    - Measure 7.2.2: Number of TPO Freight Transportation Advisory Committee (FTAC) meetings

3.0 MIAMI-DADE FREIGHT TRANSPORTATION SYSTEM AND CARGO FLOWS

3.0 Miami-Dade Freight Transportation System and Cargo Flows

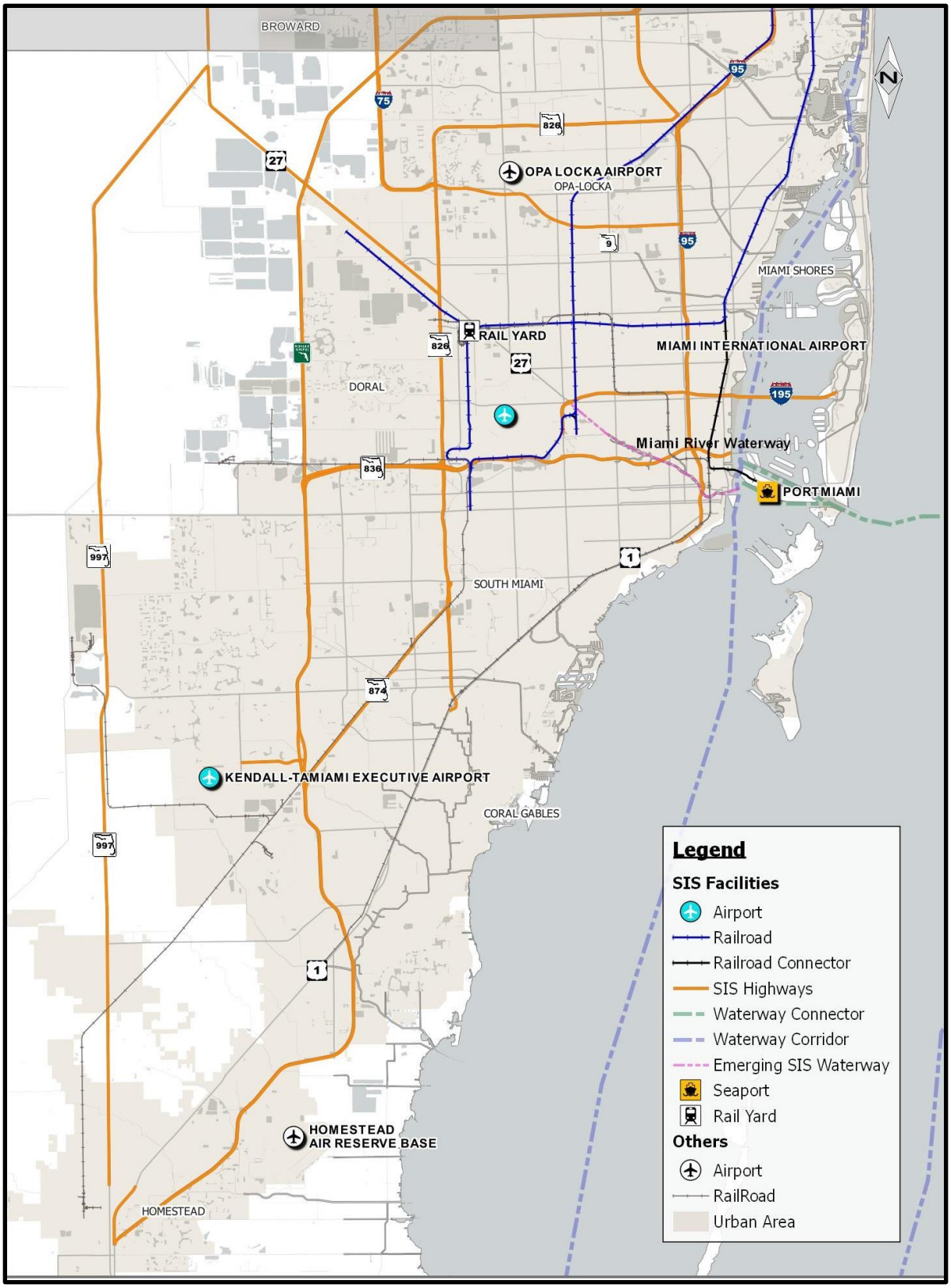
3.1 System Overview

Miami-Dade County has an extensive freight system encompassing all major modes of transportation. The modes complement one another to provide a smooth flow of goods throughout the County and connecting to the region and international destinations. The overall network includes a system of roadways, railways, waterways, connectors and freight hubs, many of which are designated as Florida SIS or Emerging SIS facilities. The SIS is Florida's highest priority network of transportation facilities important to the State's economy and mobility. It was adopted in 2003 to focus the State's limited transportation resources on the facilities most significant for interregional, interstate, and international transport of people and goods. The network was updated from the 2014 plan to include the Miami River designation as a SIS Emerging Waterway and the Miami-Kendall Airport as a SIS Airport. Figure 3.1 shows the extensive 2018 Miami-Dade County freight network. SIS designation is important because these facilities are the State's highest priority for transportation capacity investments and are the primary focus for implementing the Florida Transportation Plan (FTP), the State's long-range transportation vision and policy plan. The current SIS incorporates all aspects of freight needs: commercial airports, deep-water seaports, rail terminals and corridors, waterways, and highways. Within Miami-Dade County, the following facilities have been designated as part of the SIS:

- **Airport:** Miami International Airport and Miami-Kendall Executive Airport
- **Railyard:** FEC Hialeah Yard
- **Seaport:** PORTMiami
- **Waterway:** Miami River (Emerging SIS)
- **Roadways:** Designated highways consist of Interstates, toll roads/expressways, and other key State highways as illustrated in Figure 3.1
- **Connectors:** Each of the freight hubs have roadway, waterway and/or railway connectors designated to provide access to the SIS corridors.

The FAST Act requires the FHWA Administrator to establish a National Highway Freight Network (NHFN) to strategically direct Federal resources and policies toward improved performance of the NHFN. This network is the focus of funding under the National Highway Freight Program (NHFP) and a significant funding target under the Fostering Advancements in Shipping and Transportation for the Long- term Achievement of National Efficiencies (FASTLANE) Grants Program (Nationally Significant Freight and Highway Projects Program) (23 USC. 117). The NHFN consists of the following four subsystems: (1) the Primary Highway Freight System (PHFS); (2) those portions of the Interstate System not part of the PHFS;

Figure 3.1 - Miami-Dade County Freight System



Source: Marlin Engineering Inc.

(3) Critical Rural Freight Corridors (CRFCs); and (4) Critical Urban Freight Corridors (CUFCs). (23 USC. 167(c)). The network was recently approved and is shown in Figure 3.2. As Figure 3.2 shows there are no CUFCs or CRFCs in Miami-Dade County. Designation on the NHFN is important because it is a requirement for funding programs. The MAP-21 Section 1116 NHFP Formula program provides funding of $6.2 billion over five years (2016 - 2020) including $301 million for the State of Florida.

The CRFC and CUFC designated roadways support movement of freight at the local level and are important to overall connectivity between freight activity centers and the PHFS and overall Interstate system. The draft network for the State Florida included all of Krome Avenue and US 27 from SR 826 to I-75 in Broward County as Critical Freight Corridors (with designations of “Urban” or “Rural” depending on its location inside or outside of the Urban Development Boundary). The final Florida network did not include Krome Avenue or US 27 as statewide mileage caps limited the number of miles of freight corridors. Through the FHWA’s process of developing the NHFN, the mileage caps for Florida were identified as 160.07 miles of CUFC and 360.14 miles of CRFC. Local freight stakeholders strongly believe that these corridors belong on the network and are supporting revisions to the Florida network to add the segment of US 27 from SR 826 to the Broward County Line to the NHFN. On May 30, 2018 an official request from Miami-Dade County Office of the Mayor was submitted to FDOT requesting the US 27 be added to the Florida NHFN. The letter is provided in Appendix A.

3.2 Regional Context

It is important to understand how the county freight network connects to the rest of the South Florida and statewide freight systems. Freight operators do not recognize municipal jurisdictions on a daily basis and are focused on overall freight mobility and access to markets. Figure 3.3 shows how Miami-Dade County serves and connects to the South Florida region. Major connections such as I-75, I-95, and Florida’s Turnpike serve as high-volume roadways that provide access between counties and to the remainder of the country. The US 27 corridor provides access to the heart of industrial Miami-Dade County and connects to the western region of Palm Beach County as well as to Hendry and Glades Counties. Each of these counties are supportive of private development of new Intermodal Logistics Centers (ILCS) (e.g., Florida Crystals ILC, Airglades ILC, Gateway to the Americas ILC). In addition, US 27 connects South Florida to the rest of the State and represents one of FDOT’s “future corridors.” Therefore, this corridor, therefore represents a critical facility for the future. Other key regional components include the CSX Railroad and the FEC Railway, which provide connections throughout North America.

3.3 Highways

Miami-Dade County has a well-developed east/west and north/south highway network that provides access throughout the County and connects to the rest of the region and state. I-75, I-95, Florida’s Turnpike Enterprise (FTE) facilities and US 27 represent the primary interregional corridors. Other roadways,

Figure 3.2 – National Highway Freight Network Designation in Miami-Dade County

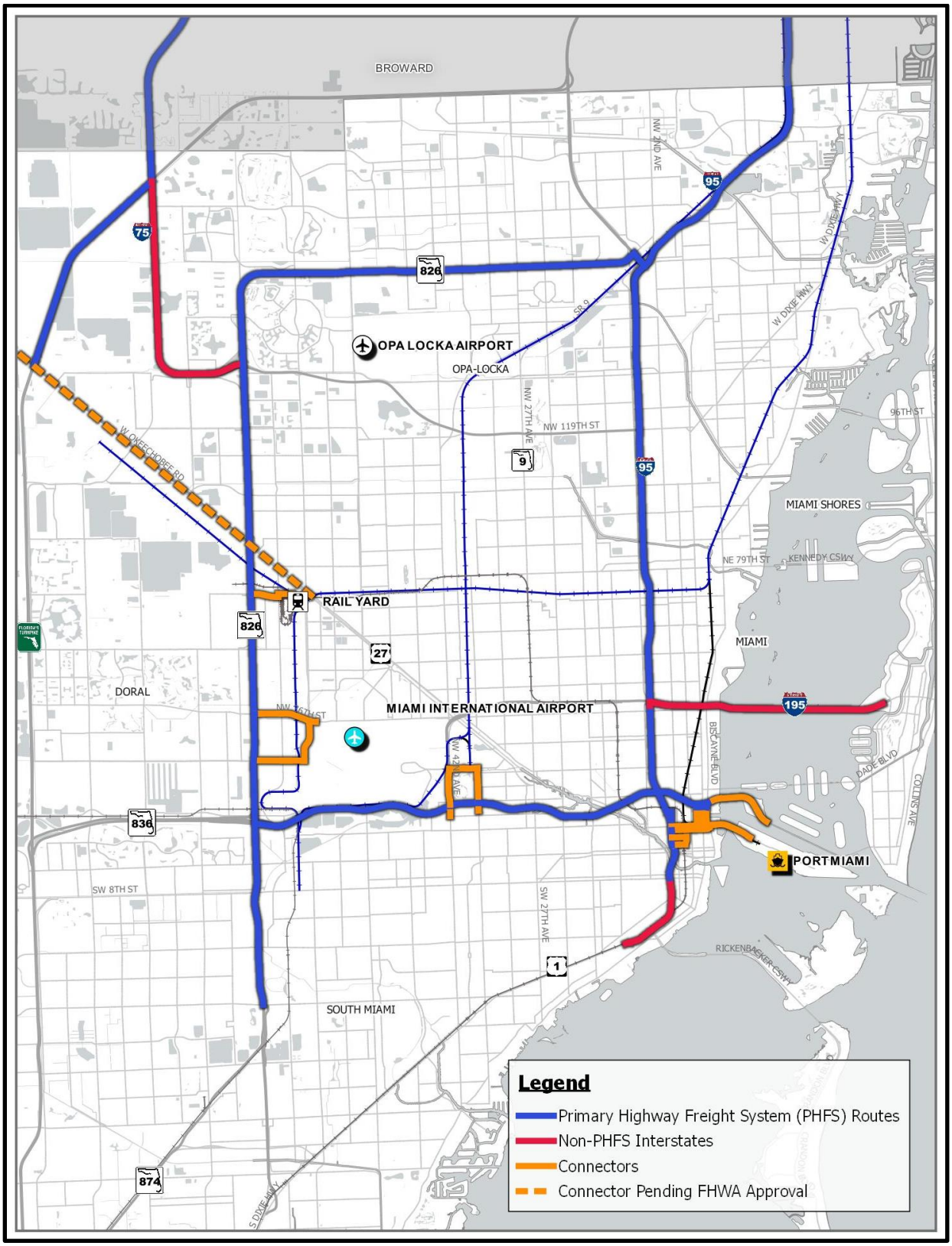
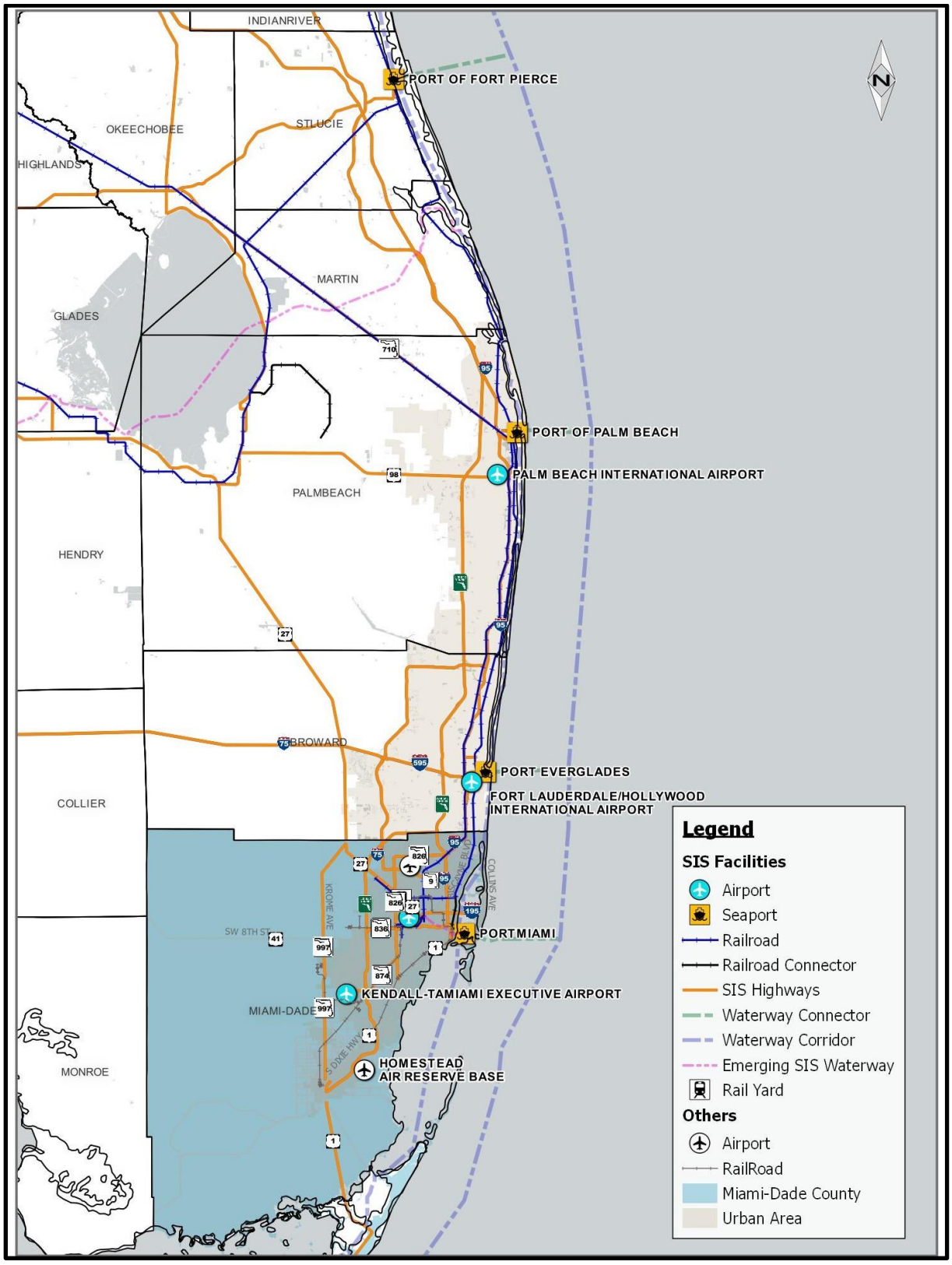


Figure 3.3 – Regional Context of Miami-Dade Freight Network



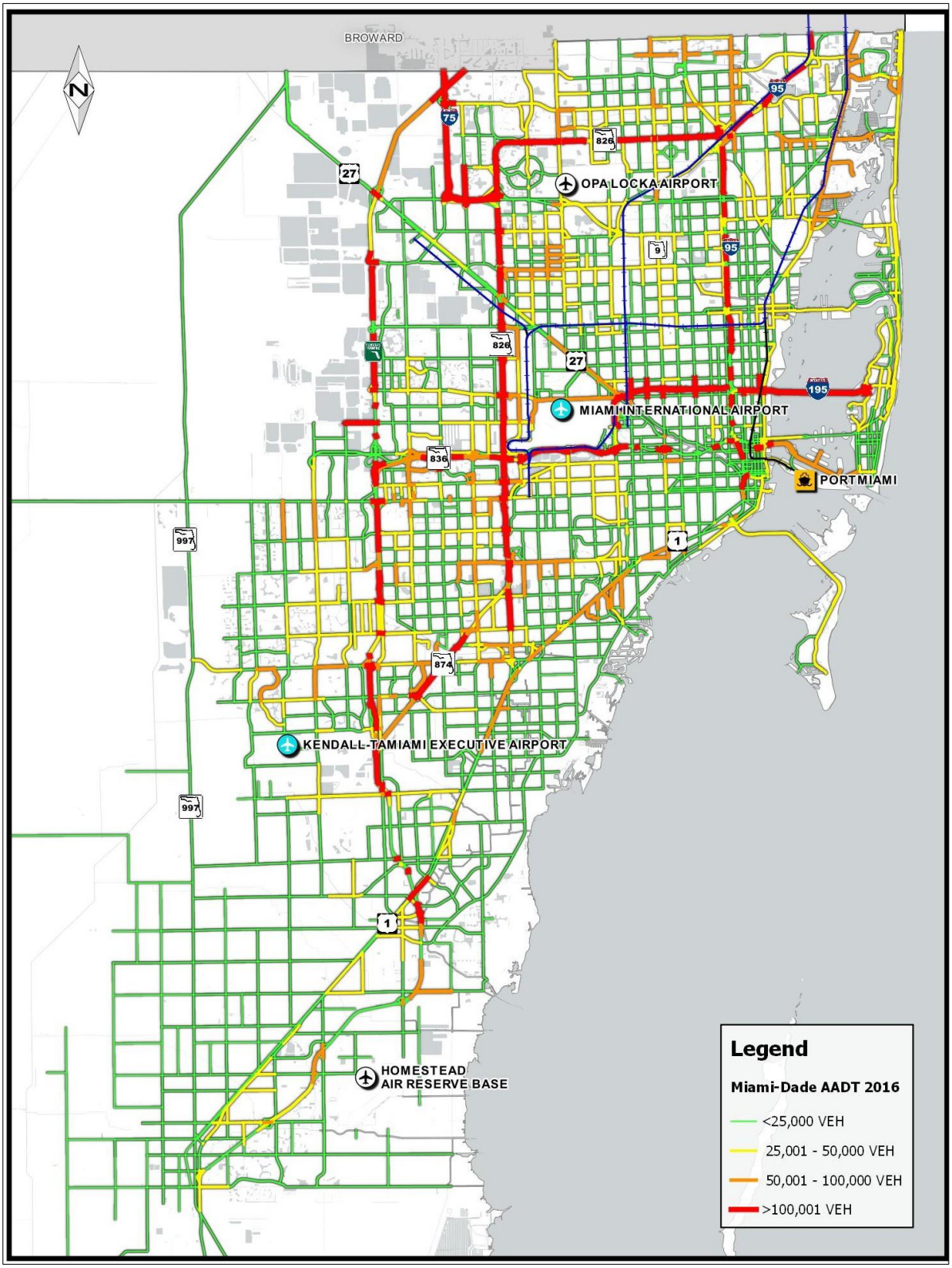
consisting of the expressways and state highways provide for internal movements and access to key freight hubs. All of these facilities are tolled except for the Hialeah and Palmetto Expressways including:

- Airport Expressway (SR 112)/I-195 – Toll
- Dolphin Expressway (SR 836)/I-395 – Toll
- Don Shula Expressway (SR 874) – Toll
- Gratigny Parkway (SR 924) – Toll
- Hialeah Expressway (SR 934)
- Palmetto Expressway (SR 826)
- Snapper Creek Expressway (SR 878) - Toll

Five of these major expressways are maintained by the Miami-Dade Expressway Authority: SR 112, SR 836, SR 874, SR 878, and SR 924. FDOT is responsible for other state roads and the FTE. For funding purposes, the Miami-Dade County freight highway network includes 198 miles of SIS roadways and 77.23 miles on the NHFN with overlapping designations for these 2 categories. The remaining 5,500 miles of roadways in the County are maintained by the Road, Bridge, and Canal Maintenance Division of the Miami-Dade County Department of Transportation and Public Works (DTPW) or a local jurisdiction.

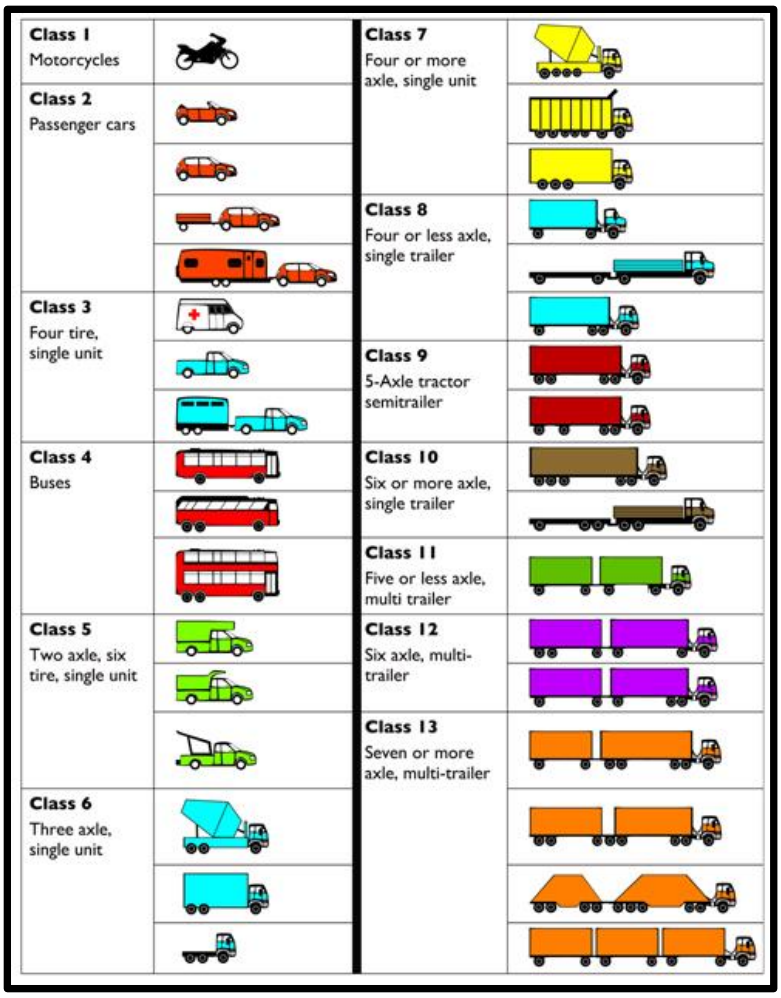
Figure 3.4 shows the 2016 Average Annual Daily Traffic (AADT) on the roadways in Miami-Dade County. The largest volumes, relative to the remainder of the County, are on the major expressways, including I-95, I-75, Homestead Extension of the Florida's Turnpike (HEFT), SR 836, SR 826, and the Airport Expressway. Other major traffic volumes are on NW 36th Street (extension of the Airport Expressway), US-1, and Okeechobee Road. The maps clearly reflect the NHFN and SIS roadways as they mostly register as high-volume roadways. These high volumes illustrate that these roadways are also significant for the movement of people within the County.

Figure 3.4 – 2016 AADT on Miami-Dade Highway System



Source: FDOT Florida Traffic Online

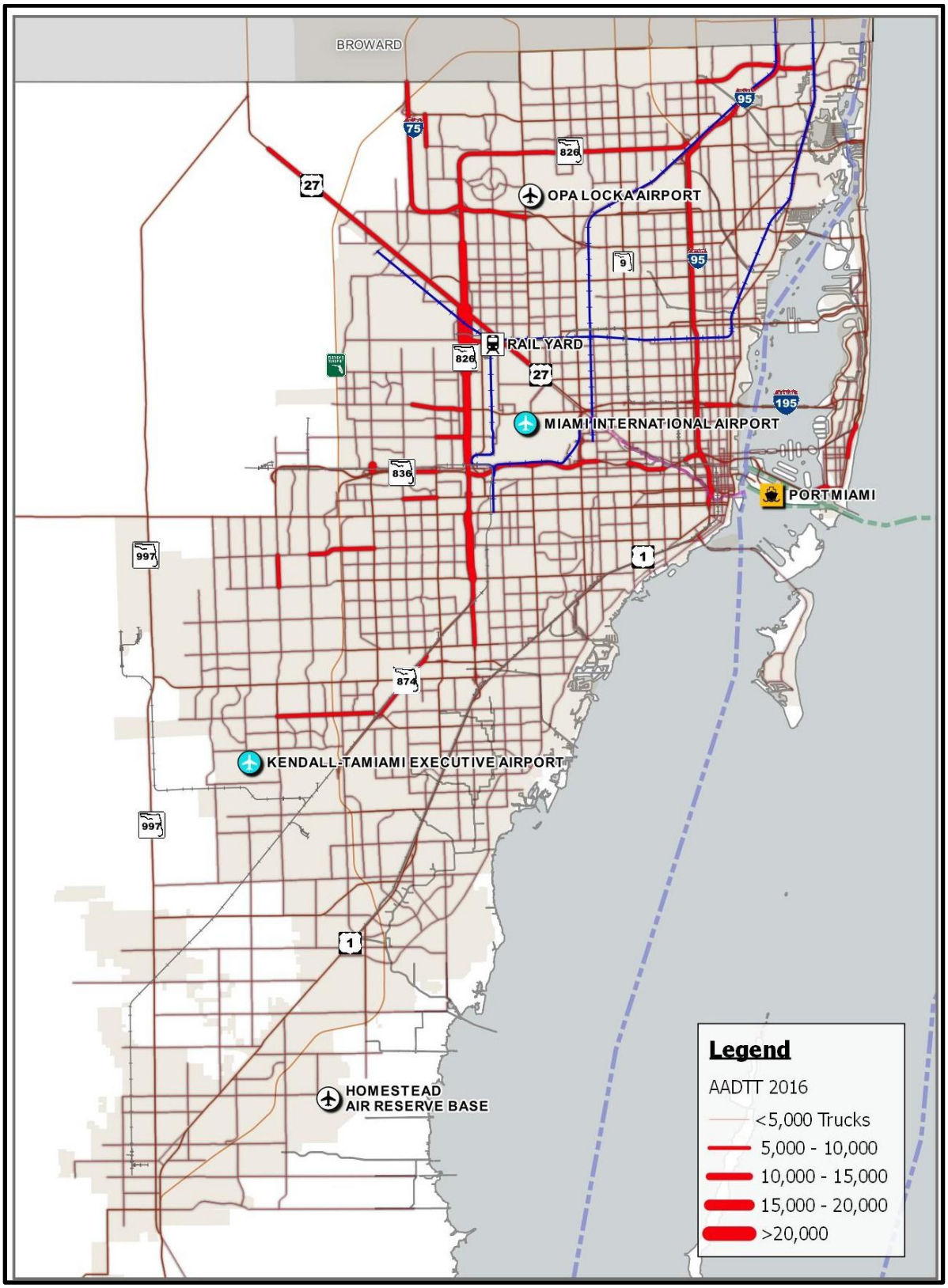
More significant for the movement of freight is the volume of trucks moving on these roadways. Figure 3.5 on the following page displays the 2016 Average Annual Daily Truck Traffic (AADTT) on the roadways of Miami-Dade County. The graphic to the right was prepared by FHWA to describe vehicle classifications. For traffic counting purposes all vehicles classes 4 through 13 are grouped into the "truck" category which generally includes any truck or bus with six or more tires. Figure 3.5 shows that SR 826 between NW 74th Street to US 27 carries the highest daily volume of trucks in the County with more than 20,000 trucks per day.



To put both AADT and AADTT in perspective, it is important to understand just how significant the volume of trucks is in comparison to the total traffic. Figure 3.6 shows the 2016 percentage of the total roadway volume attributed to trucks on the roadway network. While major volumes are concentrated on a few roadways, namely the Interstate System, high truck counts are present throughout the County. Typically, a 5 percent mode share of trucks is significant, yet a large proportion of roadways in the County have over a 15 percent share. The interstates and other major SIS facilities are for the most part not in this top tier. While these roads do carry a significant number of trucks, the trucks are counterbalanced by the sheer number of vehicles using these facilities and thus trucks account for a lower percentage of the total volume on interstates and other major SIS roadways.

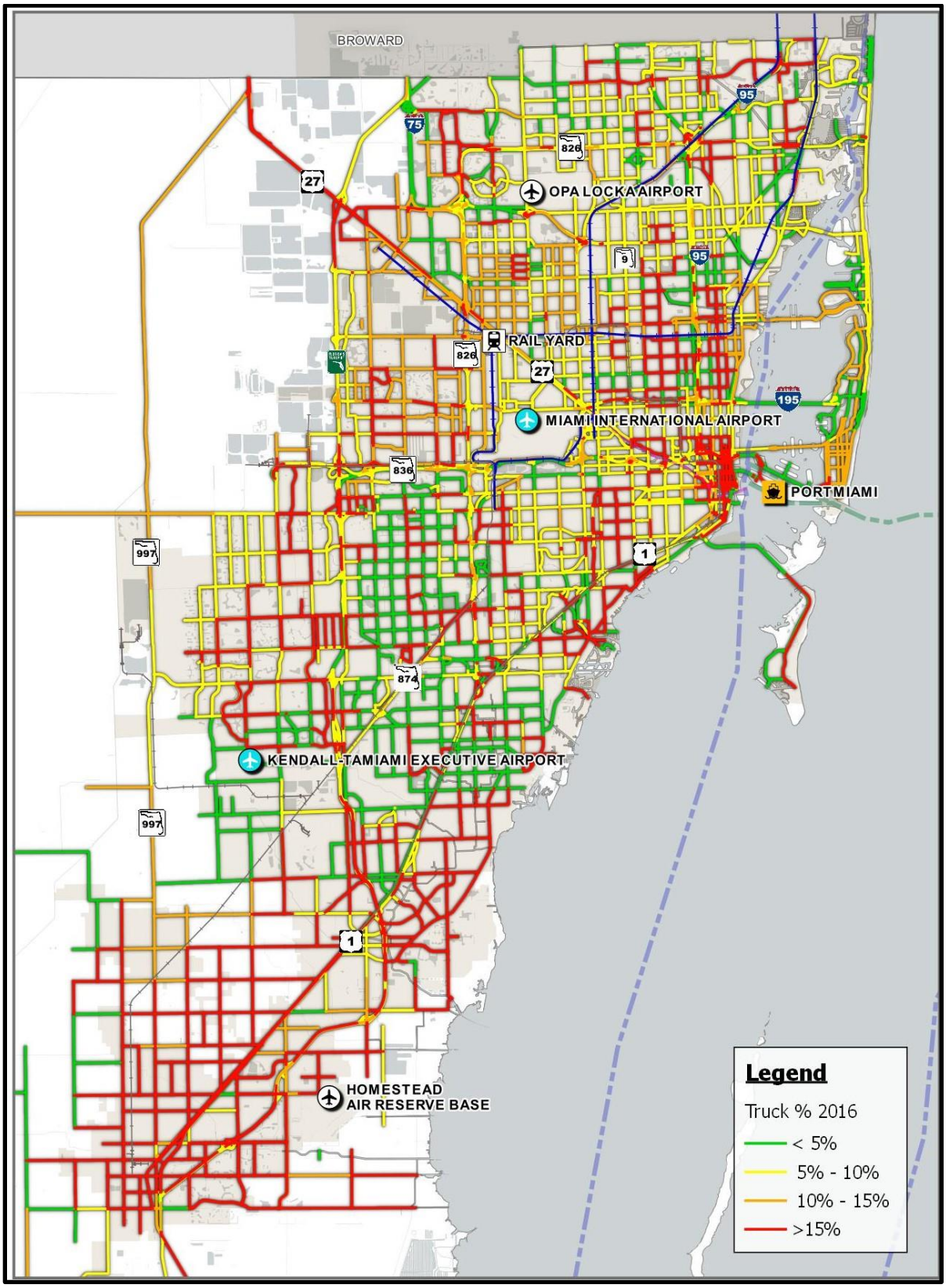
In addition to the truck volume and truck percent characteristics, roadways also provide access to the region's freight hubs and logistics infrastructure (e.g., PORTMiami, FEC rail yard, MIA, Miami River waterway, western Miami-Dade County warehouse districts). Critical investments, like the recently opened PORTMiami tunnel and the 25th Street Viaduct, allow trucks to quickly and directly access key freight hubs. FDOT currently also has a study underway to evaluate ways to improve the 74th Street connector to the FEC Hialeah Ramp.

Figure 3.5 - AADTT on Miami-Dade Highway System



Source: FDOT Florida Traffic Online

Figure 3.6 – 2016 Truck Percentage on Miami-Dade Highway System



Source: FDOT Florida Traffic Online

3.4 Railroads

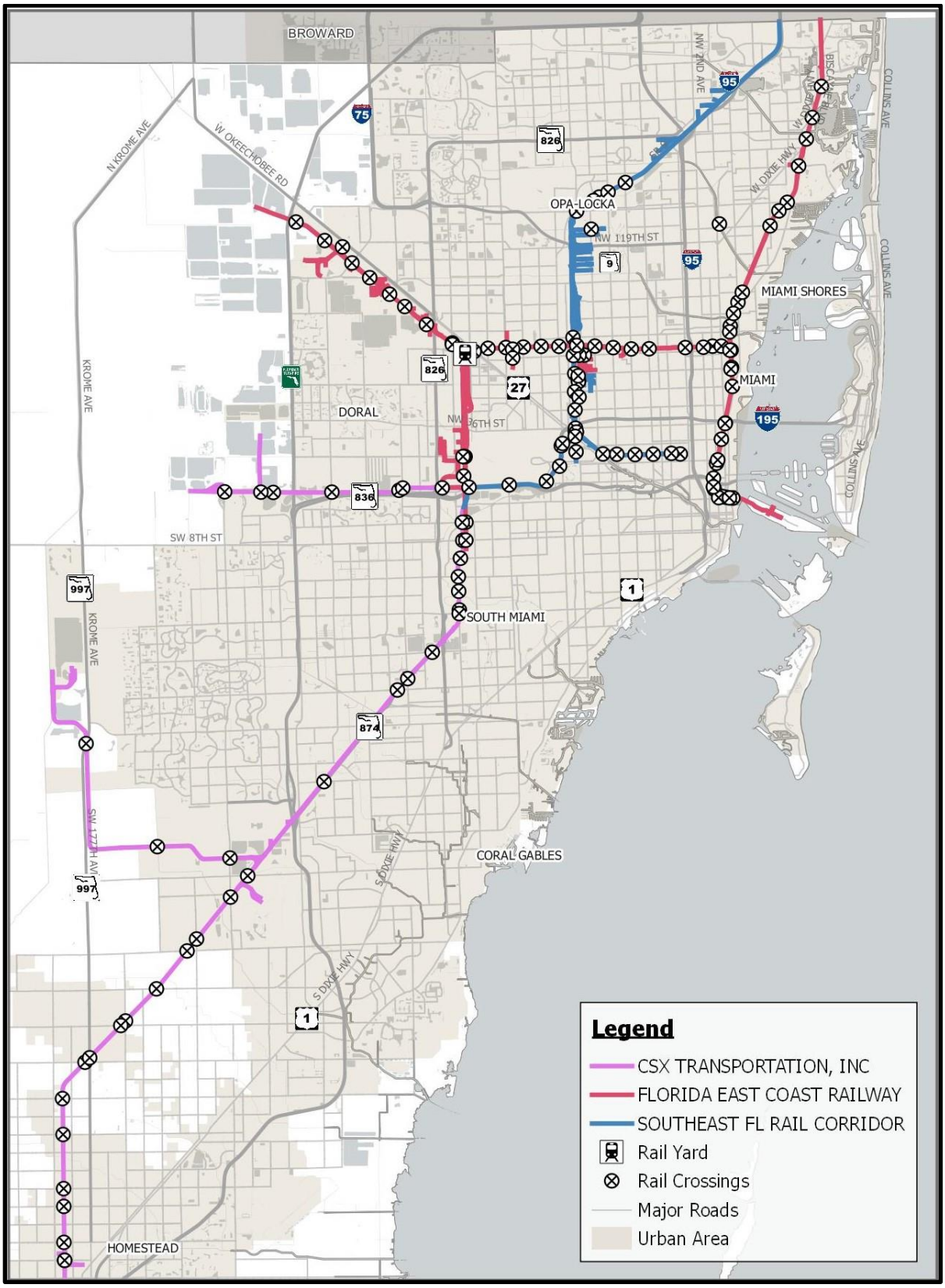
Florida's railroad history in dates back to the times of Henry Flagler and his dream to expand his rail corridor down the entire Florida peninsula. Miami-Dade County's freight rail network is operated by two entities including the FEC and CSX Transportation. The FEC, based in Jacksonville, Florida, is the only railroad that follows the state's eastern coastline operating 351 miles of mainline tracks. Connections and track rights with other railroads allow for goods brought in through Florida's East Coast ports to have ready access to the North American market. FEC interchanges in Jacksonville with two Class 1 railroads the CSX and Norfolk Southern. CSX, also based in Jacksonville, operates about 21,000 route miles in 23 states, the District of Columbia, Ontario, and Quebec and has its southern terminus in Miami-Dade County. This freight rail network allows ready access to nearly two-thirds of the American population and the ability to access additional markets through alliances with other railroads throughout the rest of North America. The existing rail network in Miami-Dade County is illustrated in Figure 3.7.

Table 3.1 and Figure 3.8 provide data and information related to existing and historic rail conditions. Information from the USDOT Federal Railroad Administration (FRA) was analyzed on Table 3.1 for the 22 strategic crossing locations shown on Figure 3.8. The results of the analysis show that the most railway/train related crashes from 2012 to 2016 occurred at the SFRC/NW 22nd Avenue crossing with two crashes followed by the FEC/NW 27th Avenue crossing. The FEC/Port Boulevard and the CSX/Flagler Street crossings with one train crash each. Table 3.1 also presents the FRA Web Accident Prediction System indices that show the percent chance that a rail crash would occur each year, based on 2016 data. The indices are calculated based on crash history and current year number of train trains per day multiplied by AADT and show that the SFRC/NW 22nd Street crossing has the highest probability of a crash in 2017 followed by the FEC crossings at NW 27th Avenue, NE 203rd Street, NE 163rd Street and at Port Boulevard.

FEC has recently completed several major expansion projects to improve its network in anticipation of increased cargo volumes at PORTMiami. The PORTMiami project is complete and included four phases: reconstruction of the FEC Port Lead, reconstruction of the bascule bridge connecting PORTMiami and the FEC, construction of an on-port rail facility, and modifications to FEC's Hialeah Rail Yard to accommodate an increase in traffic. Connected to these improvements is the South Florida Logistics Center, a 400-acre logistics complex adjacent to MIA, operated by FEC's sister company Florida East Coast Industries (FECI). This facility has been very successful and is near capacity.

FDOT District 6 is now undertaking a study of 7 railroad crossings in the Town of Medley. The study is being performed to analyze delay caused by crossing closures and to then prioritize potential grade separation studies. Figure 3.8 also shows the locations of these crossings.

Figure 3.7 - Miami-Dade County Freight Rail Network



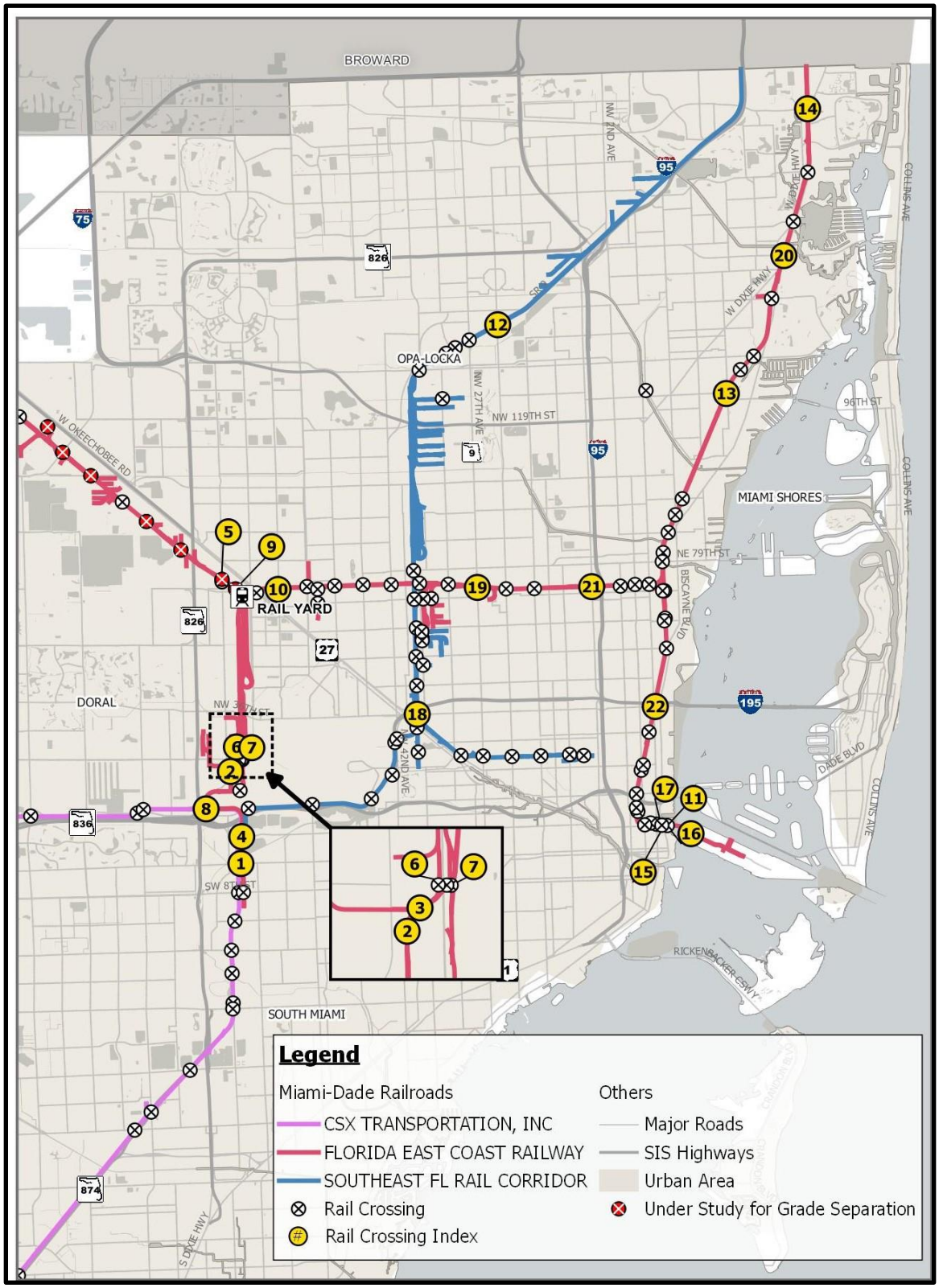
Source: Federal Railroad Administration

Table 3.1 – Strategic Rail Crossing Crash, Train and Traffic Data

Miami-Dade Strategic Rail Crossings													
Map Index #	RR Street Crossing	Primary Operating Railroad	Crossing number	Position	Type	Rail Crash History (2012-2016)	Roadway	Total Serious Injuries	FRA Rail Crossing Crash Prediction Index	# of trains	Max Speed	AADT	Conflicts (#Trains x AADT)
12	NW 22nd Ave	SFRC	628320N	At Grade	Public	2	4	0	18.0%	55	79	30,500	1,677,500
19	NW 27th Ave	FEC	272717K	At Grade	Public	1	0	0	6.8%	22	35	27,300	600,600
14	NE 203rd St	FEC	272596P	At Grade	Public	0	1	0	6.3%	34	50	49,600	1,686,400
16	Port Boulevard	FEC	272960A	At Grade	Public	1	0	0	5.7%	3	25	9,999	29,997
20	NE 163rd St	FEC	272604E	At Grade	Public	0	0	0	5.7%	18	45	44,500	801,000
18	NW 36th St	SFRC	628377P	At Grade	Public	0	0	0	4.6%	43	45	20,700	890,100
1	W Flagler St	CSX	631055E	At Grade	Public	1	0	1	4.3%	1	25	47,500	47,500
10	W 8th Ave	FEC	272748J	At Grade	Public	N/A	0	0	2.6%	21	35	17,500	367,500
7	NW 25th St	FEC	272776M	At Grade	Public	0	0	0	2.2%	6	20	21,512	129,072
9	NW 74th St	FEC	272755U	At Grade	Public	0	4	0	2.2%	18	20	2,485	44,730
5	Milam Dairy Road	FEC	272780C	At Grade	Public	0	0	0	1.6%	6	20	30,825	184,950
8	Milam Dairy Road	CSX	628536U	At Grade	Public	0	0	0	1.4%	1	10	23,500	23,500
2	NW 22nd St	FEC	272779H	At Grade	Public	0	0	0	1.4%	6	20	2,712	16,272
22	NE 36th St	FEC	272633P	At Grade	Public	0	0	0	1.1%	4	15	15,500	62,000
3	NW 70th Ave	FEC	272778B	At Grade	Public	0	0	0	0.9%	6	20	4,558	27,348
6	NW 26th St	FEC	272899Y	At Grade	Public	0	0	0	0.6%	6	15	101	606
13	NE 125th ST	FEC	272612W	At Grade	Public	1	0	0	0.1%	18	45	33,350	600,300
21	NW 7th AVE	FEC	272712B	At Grade	Public	0	0	0	0.0%	18	35	23,662	425,916
4	NW 68th Ave	FEC	272787A	At Grade	Private	N/A	0	0	N/A	2	10	N/A	
10	Yard Xings	FEC	273151T	At Grade	Private	1	0	0	N/A	N/A	N/A	N/A	
11	FEC TOFC D/W	FEC	272948T	At Grade	Private	N/A	0	0	N/A	12	20	9,999	119,988
15	Pedestrian	FEC	273139L	At Grade	NA	N/A	0	0	N/A	1	25	N/A	
17	Pedestrian Arena	FEC	273133V	At Grade	NA	N/A	0	0	N/A	1	25	N/A	

Source: USDOT Federal Rail Road Administration

Figure 3.8 - Miami-Dade County Rail Network Strategic Railroad Crossing Index Map



Source: Federal Railroad Administration

The crossings being analyzed are along the FEC Medley Lead track and include:

- NW 74th Street – 125 feet west of NW 69th Avenue
- NW 72nd Avenue – 125 feet south of NW 77th Street
- NW 79th Avenue – 1,780 feet south of NW South River Drive
- NW 93rd Street – 2,300 feet west of NW South River Drive
- NW 106th Street – 2,300 feet west of NW South River Drive
- NW 116th Way – 1,450 feet southwest of NW South River Drive
- NW 121st Way – 1,480 feet southwest of NW South River Drive

Other key rail developments underway in Miami-Dade County include the connection between CSX and the FEC via a new track at the Iris connection, which will be completed and operational by 2019. The construction includes a new single-track connection between the FEC Railway and the SFRC within FDOT right-of-way. The project will facilitate freight connectivity from the SFRC to the FEC Little River Connection and provide access to the Hialeah maintenance yard. This connection will allow the shifting/rationalization of freight traffic between the two lines, thus improving the region's ability to effectively manage the mix of passenger and freight movements. Rationalization, or the sharing of freight traffic between the 2 corridors, has become increasingly important with the expanded passenger service underway and planned on the FEC corridor (e.g., the FEC Brightline service began on May 19, 2018 and the TriRail Coastal Link expansion is planned for the future). Other connections, including the Pompano connection in Broward County and the Northwood connection in Palm Beach County, represent improved connectivity. Both the Iris and Northwood connections are funded by the South Florida Freight and Passenger Rail Enhancement Project between the SFRC and FEC Railway Transportation Investment Generating Economic Recovery (TIGER) grant while the Pompano connection remains unfunded at this time. From an industrial development perspective, the FEC and the CSX continue to work with rail-served property owners in Miami-Dade County. As sites redevelop and modernize, and new facilities are constructed, rail access remains a competitive advantage especially considering the limited number of properties served. Potential development areas, like the Miami River district, have rail access that could be used to promote industrial investments.

Figure 3.9 provides a map showing the regional context of the Iris and Northwood connections. The graphic is sourced from a presentation provided at the 2016 FDOT Design Expo by FDOT District 4.

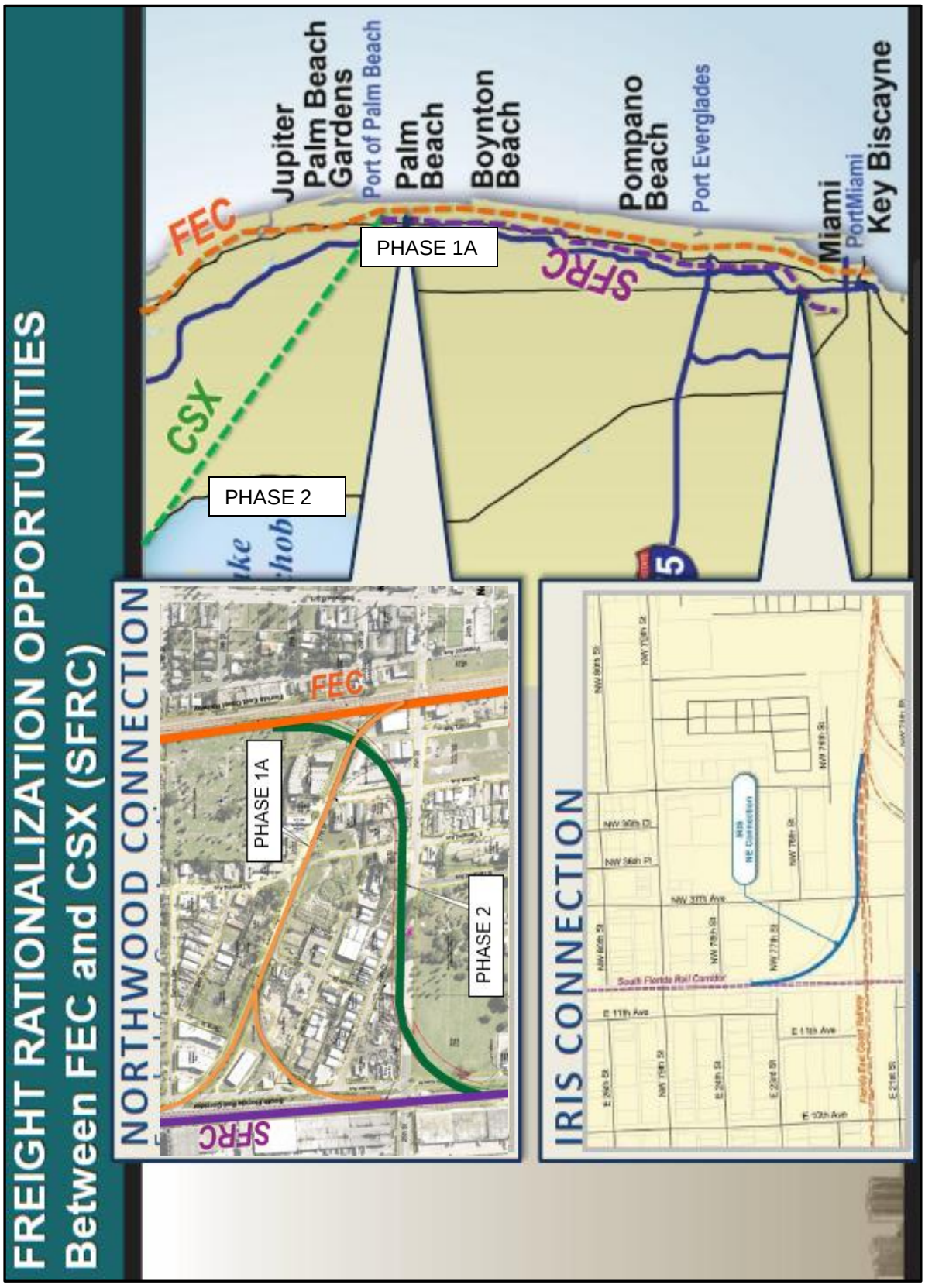
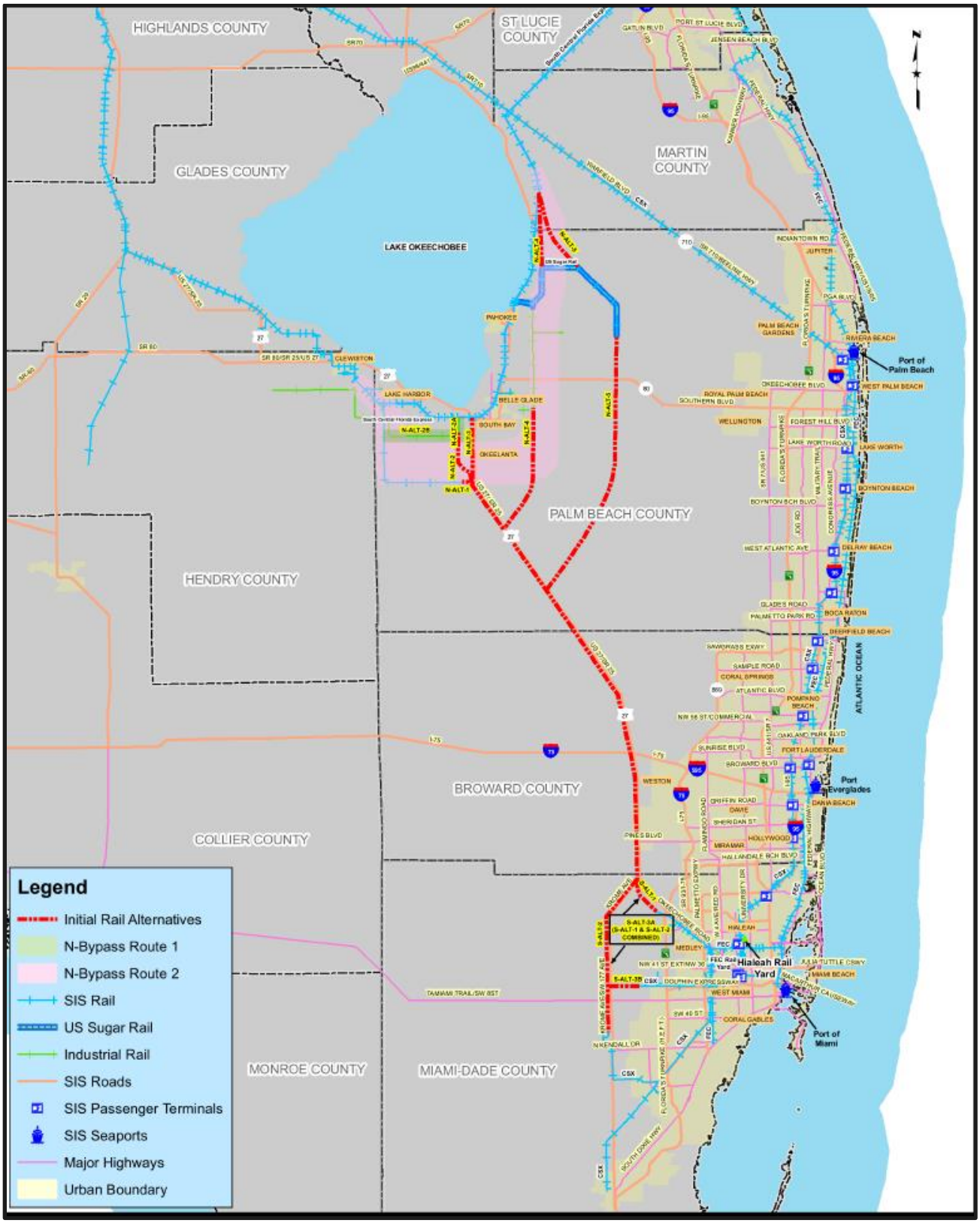


Figure 3.9 – Iris and Northwood Rail Connections

Source: FDOT District 4

The US 27 corridor represents another possible expansion of South Florida's rail network. A rail feasibility study, completed by FDOT, suggested a new rail link may be feasible. The feasibility study was followed by a Planning and Conceptual Engineering (PACE) Study in 2012. The potential corridor would connect three possible rail termini in western Miami-Dade County to railroad connections in Palm Beach County, as illustrated in Figure 3.10. The impetus for these efforts is the potential to effectively manage passenger and freight rail operations in South Florida. With efforts by PORTMiami and Port Everglades to double their containerized operations over the next twenty years, expansion of Tri-Rail service and development of the Brightline Florida service, and growth in development along the SFRC and FEC rail corridors, traffic along existing rail lines will increase significantly. While existing right-of-way can accommodate an expansion through double or triple tracking, the effects of the increased passenger and rail operations will have a significant impact on the region. In addition, there are ILCs proposed and under development in Palm Beach, Hendry, and Glades counties that will directly serve South Florida and rely on connections to South Florida's freight generators (e.g., PORTMiami, MIA). As such, a new rail corridor in the rural western part of South Florida remains an attractive option.

Figure 3.10 - Proposed US 27 Rail Corridor



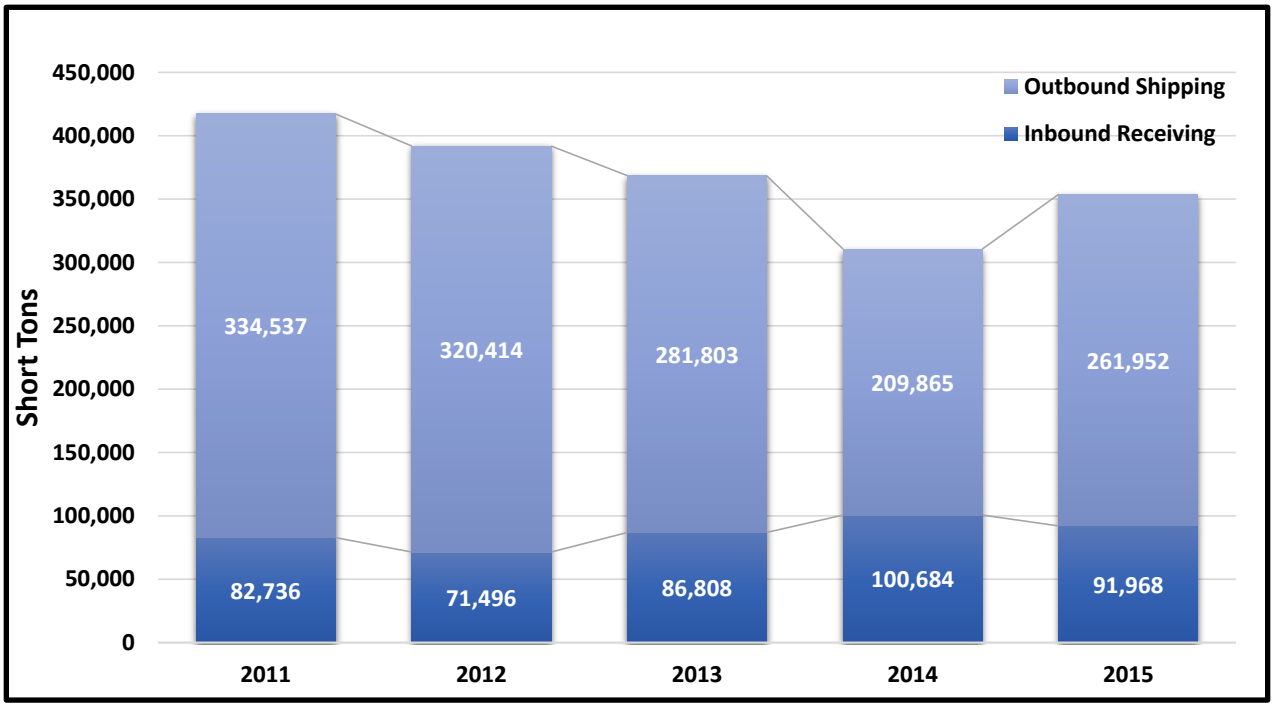
Source: FDOT 4 US 27 PACE Study

3.5 Waterways

Miami-Dade County has three main waterways that are linked to the successful freight industry: the Miami River, the Atlantic Intracoastal Waterway and the Atlantic Shipping Lane. All three of these waterways are designated on the SIS, as shown on Figure 3.1 (page 15).

The Miami River, overseen by the Miami River Commission, is a 5.5-mile long waterway running from Biscayne Bay to MIA where it turns into the Miami Canal. An estimated 2,000 vessels move through this waterway each year. Use of the waterway for freight has drastically reduced since the highs seen in the mid-1990s when nearly 900,000 short tons of cargo moved through the waterway. In 2014, the Miami River handled a little more than 300,000 short tons for the year with a strong emphasis on exports which make up roughly 73 percent of the total volume. With that said, Figure 3.11 illustrates that 2015 represented a significant growth year perhaps indicating change in the downward trend.

Figure 3.11 - Short Tons Moved Through the Miami River



Source: US Army Corps of Engineers Waterborne Commerce Statistics.

The Atlantic Intracoastal Waterway (ICWW) stretches from Norfolk, Virginia to Key West, Florida as a 1,200-mile portion of the 3,000-mile Intracoastal Waterway. This system was originally designed to reduce the amount of open-ocean travel required. Depths are maintained at 12 feet from Norfolk through Fort Pierce, Florida, but only 10 feet for the remainder through Miami where the use of the ICWW will likely remain recreational.

Cargo volumes from Jacksonville to Miami fluctuate annually and previously were driven largely by petroleum movements, however, that commodity no longer travels in the ICWW. There has been a significant volume reduction in recent years, likely due to conversion of FPL plants from petroleum to natural gas. Table 3.2 summarizes the last available five years of cargo traffic.

Table 3.2 - Atlantic Intracoastal Waterway Cargo Volumes Jacksonville, FL to Miami, FL

Short Tons Per Year						
CommodityName	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**
Gasoline	5,800					**5,800**
Marine Shells					5,200	**5,200**
Alcohols	4,531					**4,531**
Fab. Metal Products	661	1,188	472	2	800	**3,123**
Machinery (Not Elec)	277	103	854		540	**1,774**
Misc. Mineral Prod.				1,000		**1,000**
Unknown or NEC	289		260	54		**603**
Pigments & Paints	315					**315**
Ships & Boats	275					**275**
I&S Bars & Shapes				178		**178**
Lumber			60			**60**
Non-Ferrous Scrap	48					**48**
Rubber & Plastic Pr.			27			**27**
Primary Wood Prod.			26			**26**
Manufac. Wood Prod.	21					**21**
Plastics			16	1		**17**
I&S Pipe & Tube			14			**14**
I&S Plates & Sheets	12					**12**
Electrical Machinery	5		5			**10**
Manufac. Prod. NEC	4		3			**7**
I&S Primary Forms				6		**6**
Sand & Gravel	3					**3**
Paper Products NEC	1					**1**
Food Products NEC	1					**1**
Total	**12,243**	**1,291**	**1,737**	**1,241**	**6,540**	**23,052**

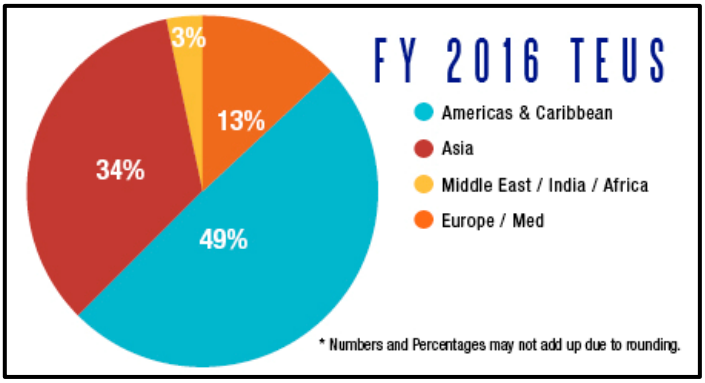
Source: USACE Waterborne Commerce Data.

Increased cargo moving on the ICWW would likely be associated with waterside operations requiring direct barge service for bulk, break bulk, or specialized project cargo. New facilities may need additional dredging to provide access from the Federal channel to the berth. Cargo movement is further complicated by bridges on the ICWW, which constrain the movement of larger vessels. In Miami-Dade County, the use of the ICWW will likely remain largely recreational, other than for access to PORTMiami and the Miami River.

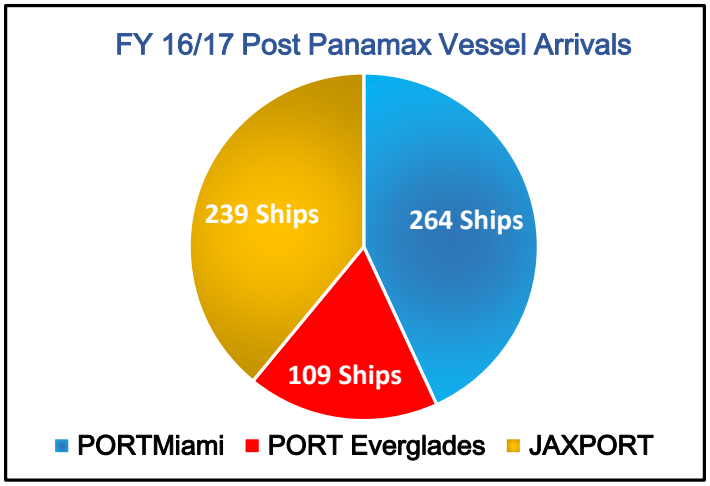
3.6 Seaport

PORTMiami is one of the world's leading hubs for global commerce and tourism. Its gateway location in the center of the Western Hemisphere makes the Port a significant conduit for international trade and commerce. PORTMiami stands as the U.S. container port closest to the Panama Canal, providing shippers fast access to Florida's booming local consumer base and the entire U.S. market. PORTMiami is managed by the Miami-Dade County Seaport Department and is located just outside of downtown Miami on a 520- acre island.

PORTMiami's main trade flows are in a north/south direction as just over 49 percent of total Twenty Foot Equivalent Unit (TEU) trade is with the Americas and the Caribbean. However, Asian trade is growing significantly as trade in TEUs grew by 11 percent in 2015 and 15 percent in 2016 and now totals about 34 percent of total TEUs in 2016. Of the 612 Post Panamax Cargo ships to visit the three largest Florida largest seaports, 264 arrived at PORTMiami from July 2016 to June 2017.



Source: PORTMiami



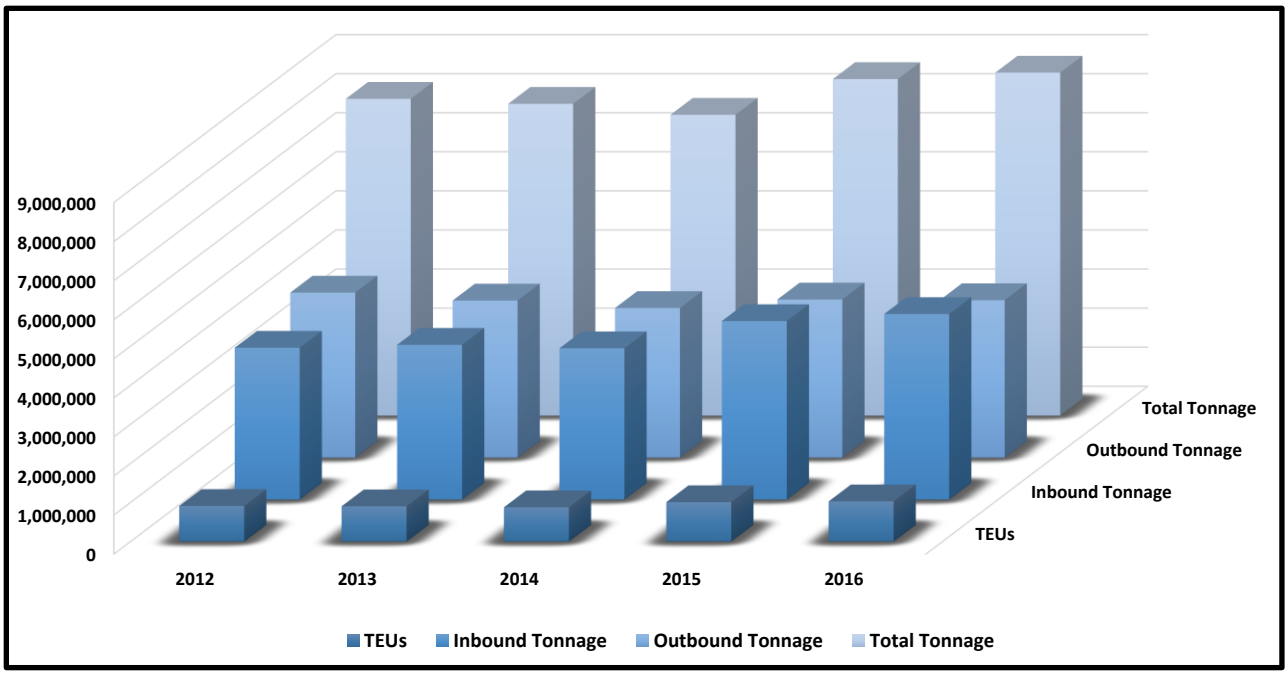
Source: FDOT Panama Canal Expansion and Florida Seaport Report

Figure 3.12 shows 2012 to 2016 cargo movements through PORTMiami by tonnage and TEU movements. Operations peaked in 2005 at nearly 9.5 million tons and over a million TEUs, but declined in the following years due to a combination of the damaged rail connections in 2005, the relocation of carriers such as MSC to other ports, and the economic downturn. However, the economy has rebounded since the recession and 2015 and 2016 show a significant turn around and a return to a growth trend getting closer to the numbers previously recorded in the mid-2000s.

As discussed earlier, PORTMiami has undergone a vast transformation in recent years. The PORTMiami Tunnel opened in August 2014, providing direct access to the Interstate System. As a result, traffic and trucks no longer have to travel through downtown Miami. The tunnel provides the port with the ability to accommodate its anticipated growth and reduce the impact of port traffic on downtown Miami, which is undergoing significant development. Figure 3.13 shows a dramatic drop in total and truck traffic in 2015 and

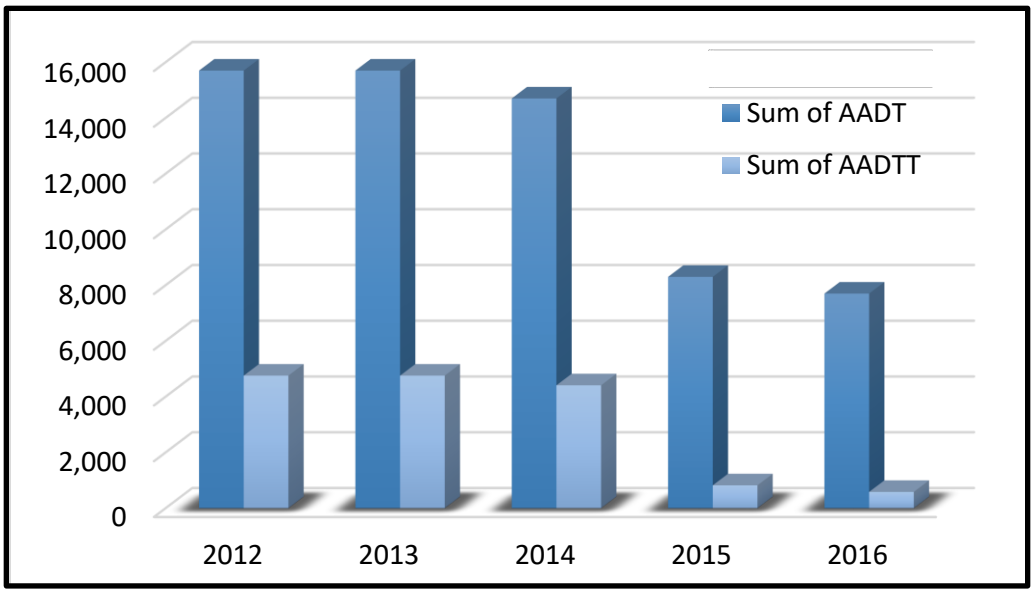
2016 and Figure 3.14 shows that the traffic and trucks shifted over to the new tunnel access. In addition to new highway/tunnel access, rail service was restored to the port in 2014 and an on-port Intermodal Container Transfer Facility (ICTF) was also constructed. As mentioned earlier, the rail improvements were completed in conjunction with FECI development of the South Florida Intermodal Logistics Center at the south end of the existing Hialeah Yard. Figure 3.15 provides information from PORTMiami showing rail moves from the Port are steadily averaging between 2,000 and 2,600 train cars per month.

Figure 3.12 - Historic Cargo Movements by Tonnage and TEU through PORTMiami



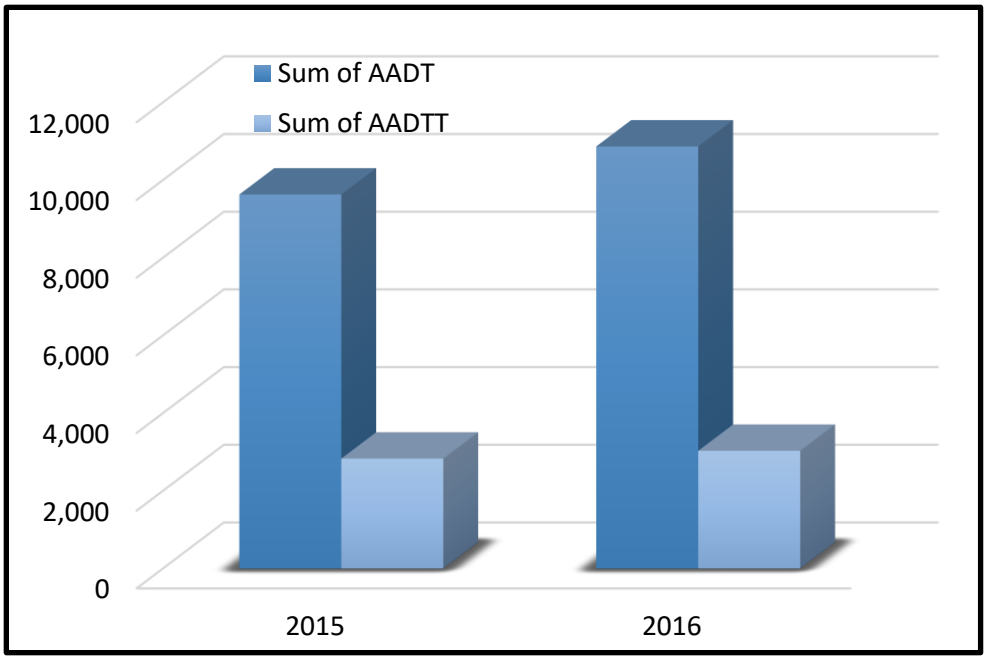
Source: http://www.miamidade.gov/portmiami/cargo.asp

Figure 3.13 – Traffic (AADT) and Truck (AADTT) Data for PORTMiami Bridge



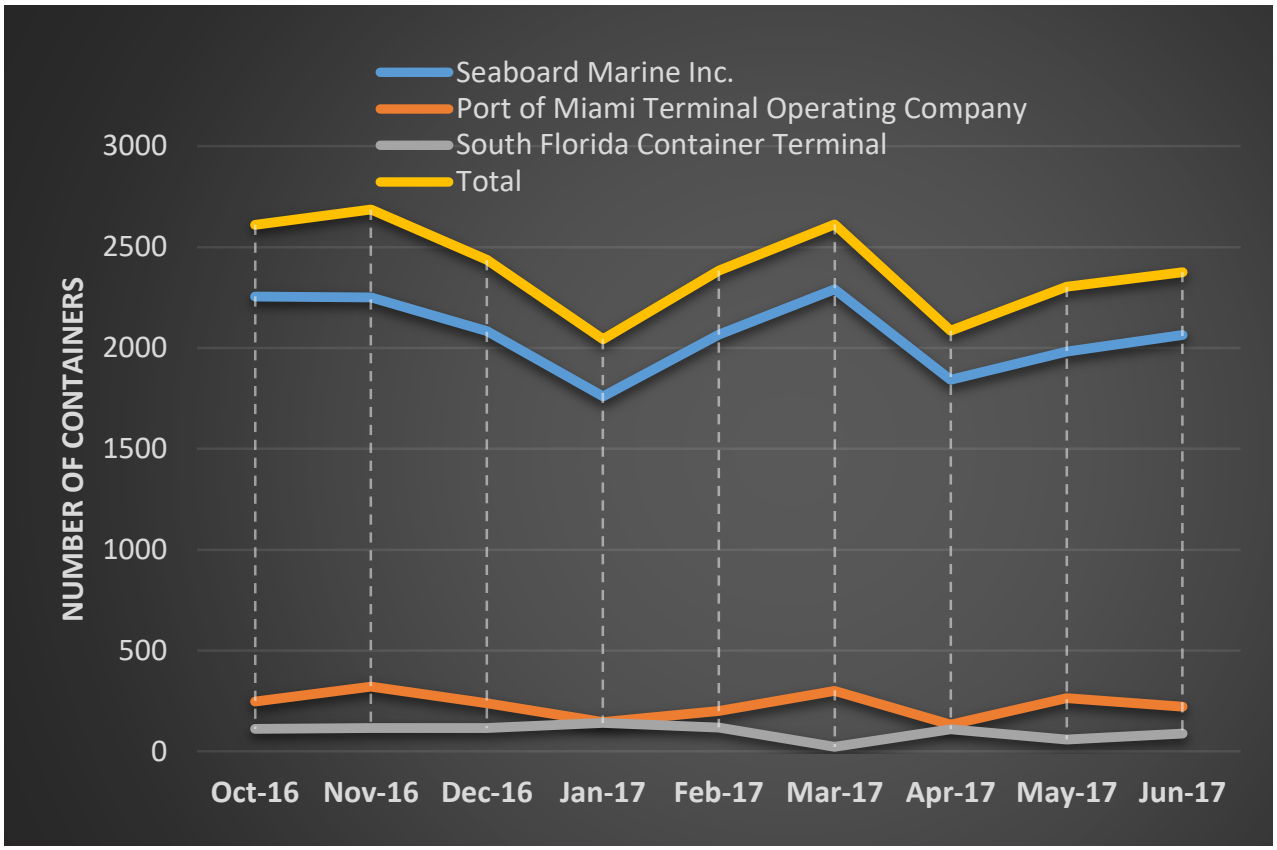
Source: FDOT Florida Traffic Online

Figure 3.14 – Traffic (AADT) and Truck (AADTT) Data for PORTMiami Tunnel



Source: FDOT Florida Traffic Online

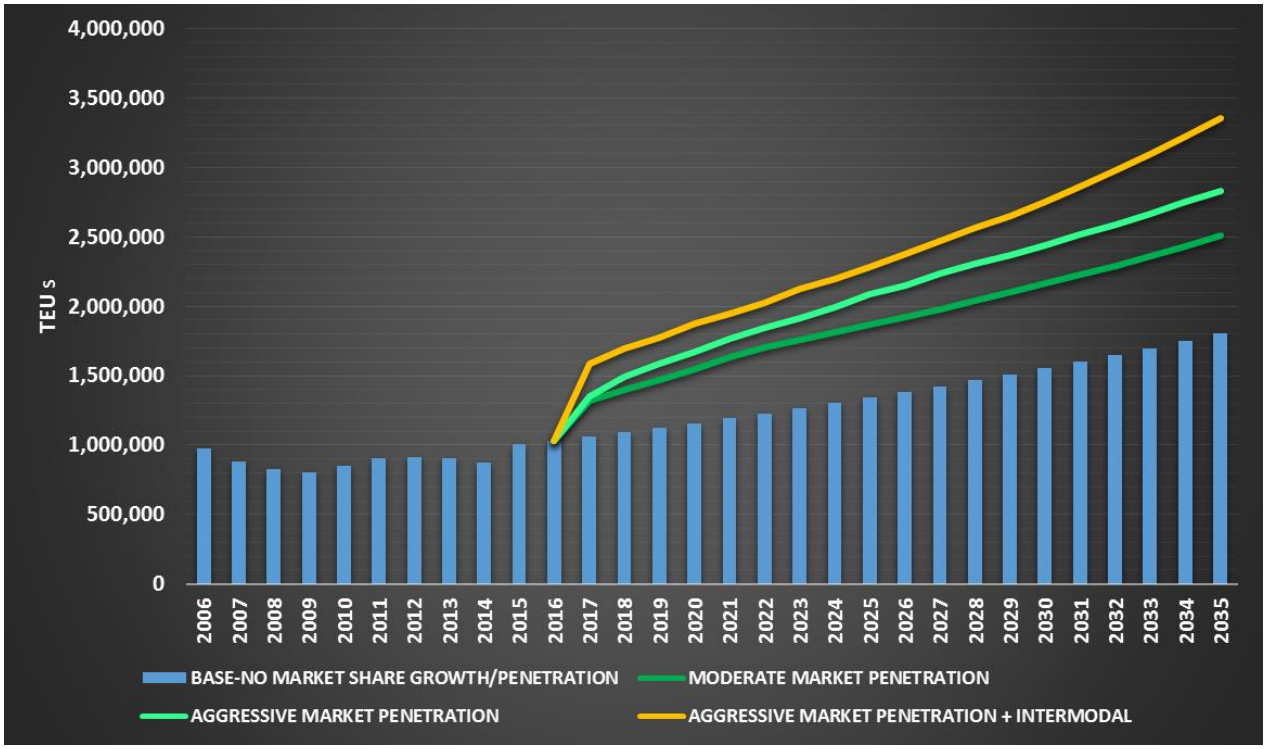
Figure 3.15 – PORTMiami Container Rail Moves Trends



Source: PORTMiami

Finally, waterbourne access to PORTMiami has also been improved since the last freight plan. The deep port channel dredge has concluded providing 50 to 5 foot' depth allowing for the main channel to accommodate Neo-Panamax ships. These projects are pivotal to the cargo forecasts developed as part of the 2035 Port Master Plan. Data from the PORTMiami 2035 plan was updated to reflect TEUs through 2016 and projections made using the scenarios in the master plan. Figure 3.16 shows the expected increase in TEUs at PORTMiami. By 2035, container throughput is projected to range between 1.8 million and 3.4 million TEUs, with annual growth rates ranging from 3 to 5.8 percent. The range represents a no-growth market share to aggressive market penetration by the port.

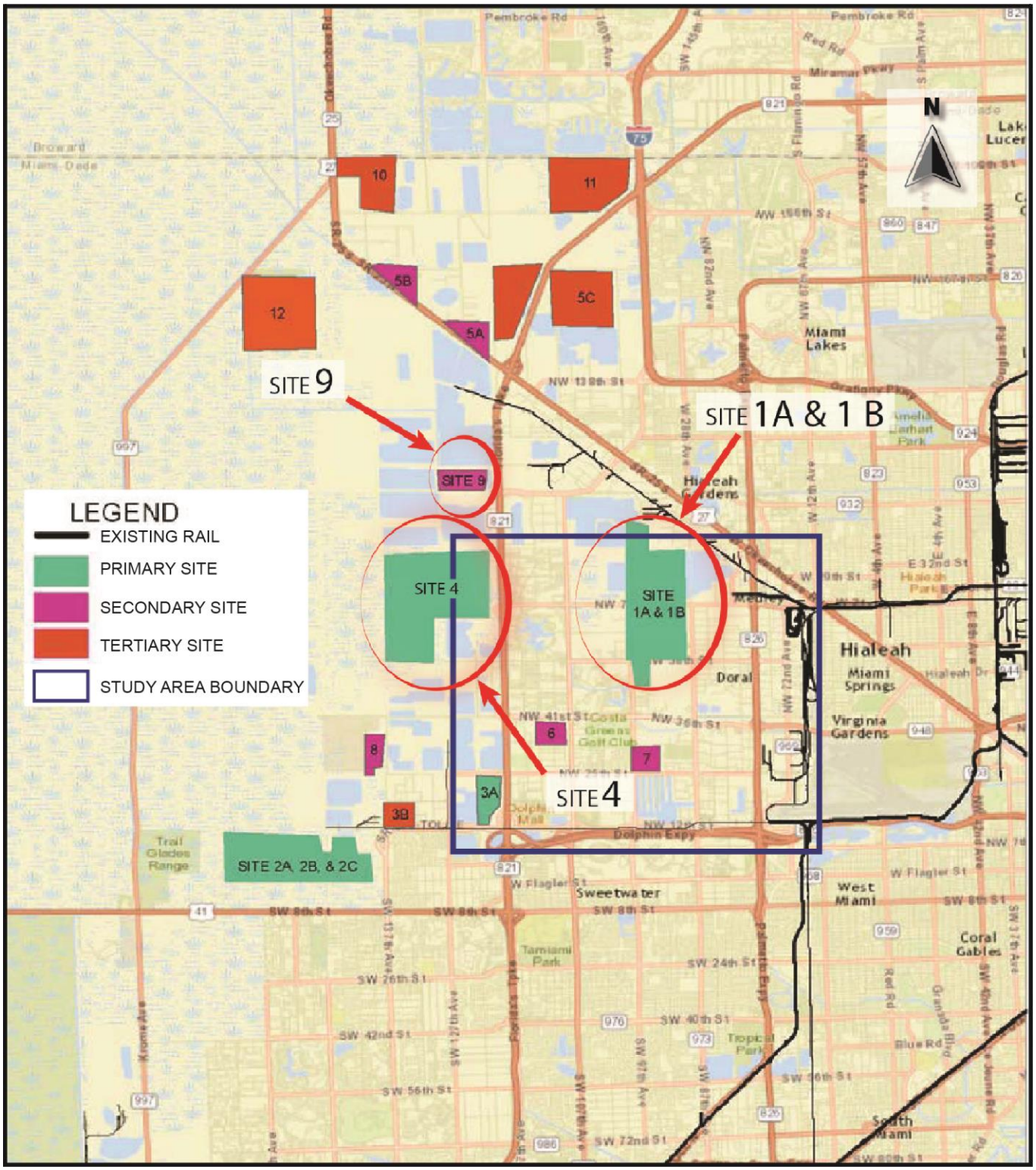
Figure 3.16 - PORTMiami Projected Growth by TEUs



Source: Marlin Engineering Inc. and PORTMiami 2035 Master Plan

In addition to growth in cargo, PORTMiami will experience significant growth in cruise traffic and rationalizing the physical space at the port is already an issue. One solution that is being studied is the development of an Inland Terminal away from the port that would be connected by roadway and rail. The site could be used for transload, intermodal and lay-down facilities, which would relieve the cargo space needs at the Port. In 2017, the county initiated a study to identify suitable locations. Figure 3.17 shows 16 locations that are currently under review. Most of the properties are privately owned and there is no commitment to purchase property at this time. The study is being performed to seek out partnerships and leverage assets. For example the FDOT District 6 Doral Subarea Freight Plan looked at potential alternatives for development of three sites in proximity to the Doral area. The concepts are found in Appendix B.

Figure 3.17 – PORTMiami Potential Inland Terminal Locations



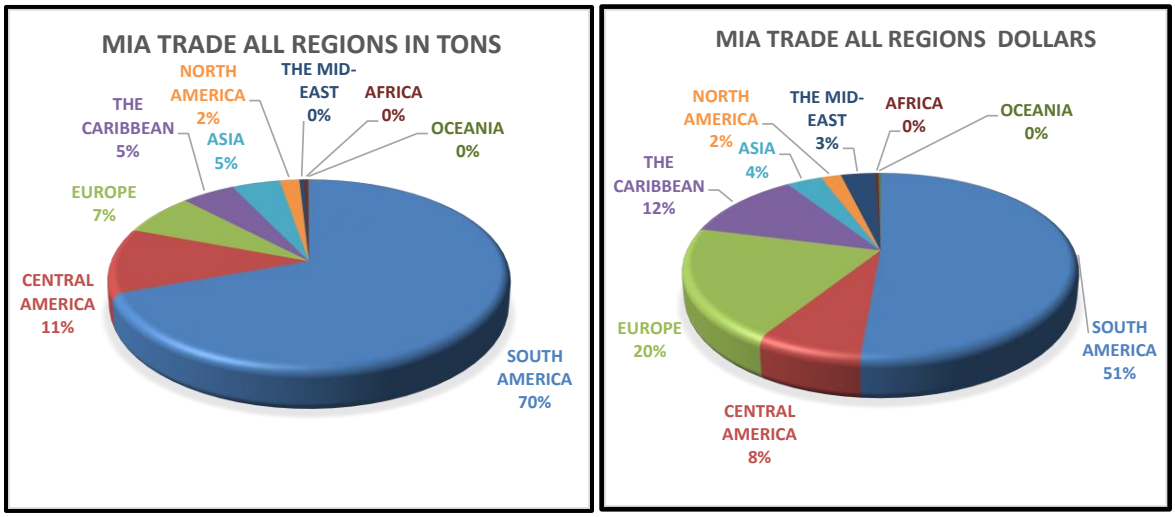
Source: PORTMiami

3.7 Airports

Miami International Airport (MIA) is situated on 3,300 acres, supporting four runways just eight miles west of Downtown Miami. In 2016, MIA was ranked the number one International Freight Airport in the United States and ranked number eleven overall in the world. MIA carries over 80% of all cargo in Florida and is considered the gateway to Latin America and the Caribbean. In addition to MIA the Miami-Dade Aviation Department manages Miami-Kendall Executive Airport (TMB), Miami-Opa Locka Executive Airport (OPF), Homestead Air Reserve Base (HST), and Homestead General (X51). These airports have great potential for the future, however, the bulk of air freight movements are handled through MIA.

As the leader in the Americas in international freight and the world's largest gateway to Latin America and the Caribbean, MIA controls the north-south cargo flows in the Western Hemisphere. Florida's airports directly serve 97 international destinations with either dedicated all-cargo or wide-body passenger aircraft. Seven of the top ten trade lanes are from MIA to markets located in Latin America and the Caribbean. Air cargo lift capacity to Bogotá, Colombia remains as the largest trade lane. Figure 3.18 shows that, in 2016, South America, Central America and the Caribbean made up 86 percent of the tonnage through MIA and 71 percent of dollar value.

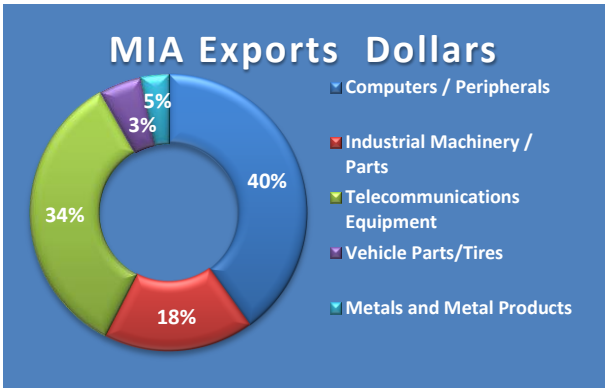
Figure 3.18 – 2016 Miami International Airport Trade with Partners



Source: Miami-Dade County Aviation Division

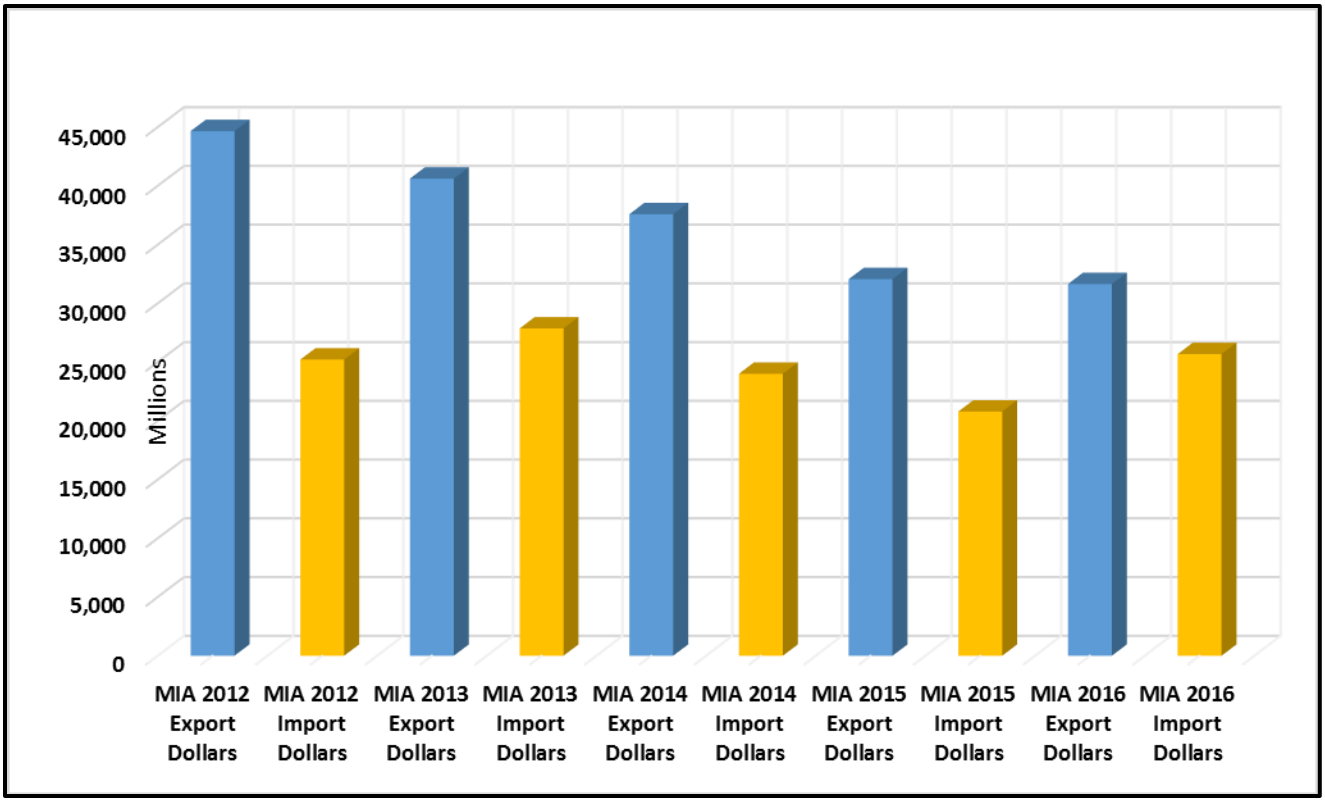
Figures 3.19 and 3.20 show recent trends at MIA. Figure 3.19 shows historical values at MIA, indicating that there has been a significant drop in the value of product since 2012 and that import values have pretty much held steady around $25 million per year, except in 2015 where there was a significant drop.

As a result of its extensive infrastructure and unique operating characteristics, MIA has become the dominant airport in a number of commodities. MIA accounts for approximately 72 percent of US fruit and vegetable imports, 90 percent of US flower imports, and 54 percent of US fish imports. While these markets account for the largest volume of goods by tonnage, the bulk of operations by value, as result of exports, focuses on different commodities. The top three export commodities for MIA by value in 2016 are Computers/Peripherals, Telecommunications Equipment, and Industrial Machinery/Parts, for a combined value of $9.5 billion in 2016, which is down significantly from nearly 12 billion in 2011.



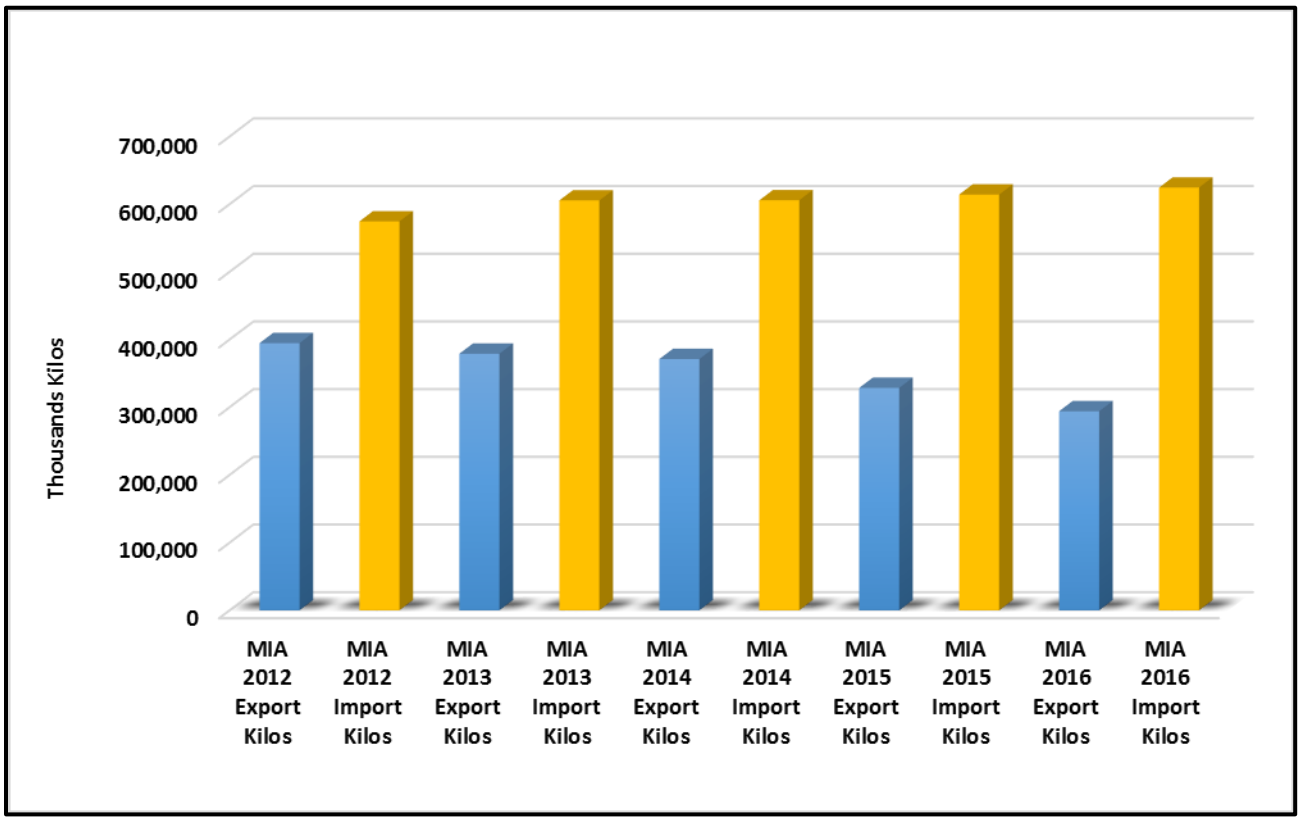
Source: Miami-Dade County Aviation Division

Figure 3.19 – 2016 Total Freight Value through Miami International Airport



Source: Miami-Dade County Aviation Division

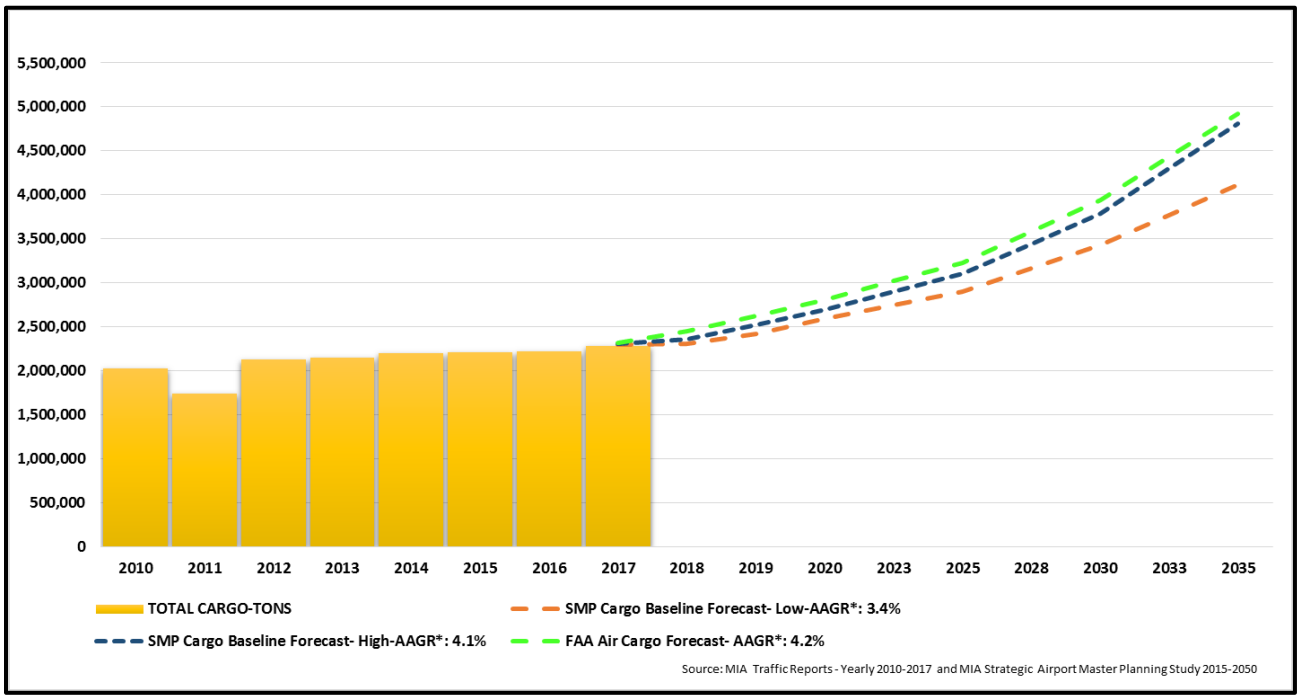
Figure 3.20 – Historic Total Freight Tonnage through Miami International Airport



Source: Miami-Dade County Aviation Division

Similar to PORTMiami, projections for growth at MIA are identified in their master plan under multiple growth scenarios. The Miami-Dade Aviation Department (MDAD) MIA Strategic Master Plan shows three forecasts including Average Annual Growth Rates (AAGR) ranging from 3.4 percent per year to 4.2 percent per year. Figure 3.21 shows anticipated tonnage ranging from four million tons to five million tons by 2035.

Figure 3.21 - Estimated Growth of Cargo Tonnage at Miami International Airport



Source: MIA Strategic Airport Master Planning Study 2015-2050

To support the expected growth, MDAD has prepared a phased Cargo Optimization, Redevelopment and Expansion (CORE) Plan. The plan includes projects to *optimize* use of existing cargo facilities to provide additional near-term capacity. This phase will demolish obsolete, costly to maintain, facilities and replace them with a new cargo clearance center. The next phase is to *redevelop* and construct new cargo facilities on existing MIA property and finally to *expand* facilities on acquired land. The planned program is to construct facilities based on growth, with the *optimize* phase based on cargo demand up to 2.5 million tons, the *redevelop* phase up to 2.8 million tons, and the *expand* phase up to 4.1 million tons, including a new vertical core cargo facility. Figure 3.22 depicts the completed CORE facilities at the southwest corner of the airport.

Figure 3.22 – Depiction of Ultimate Layout of MIA CORE Plan

Source: Miami-Dade County Aviation Department

As mentioned earlier. Miami-Dade County is also home to additional airports including Miami-Kendall Executive Airport, Miami-Opa Locka Executive Airport, Homestead Air Reserve Base and Homestead General. The Miami-Kendall Executive Airport, recently designated as a SIS facility, is located 15 minutes from the business centers in the southern part of the County. With its three runways ranging from 4,001 feet to 5,999 feet, the 1,380-acre airport acts as a general reliever for MIA. This airport provides US Customs services (Landing Rights Airport) and is home to the MIA Automated International Flight Service Station (AIFSS), the air traffic facility providing en-route communications. There are plans underway that could greatly expand the use of this airport, including the Miami-Dade Expressway Authority (MDX) proposal to extend SR 836 south and west in proximity to the airport and plans to widen access to the east on SW 128th Street connecting to SR 826.

Miami-Opa Locka Executive is situated on 1,810 acres of land, twelve miles northwest of the city center. At 8,002 feet, Runway 9L/27R at OPF is one of the longest general aviation runways in the country, enabling the airport to handle virtually any type of aircraft. Two additional runways at the airport measure 4,306 feet and 6,800 feet. OPF supports light cargo traffic to the Caribbean and large aircraft maintenance facilities as well as being home to the busiest US Coast Guard Air/Sea Rescue Station. OPF is the largest of the four

general aviation airports operated by Miami-Dade County, and is designated general aviation (GA) reliever airport for Miami International Airport (MIA) with an Airport Reference Code (ARC) of C-III, as defined by FAA Circular 150/5300-13A. Located approximately twelve miles northwest of downtown Miami, and seven miles north of MIA.

In 2017, OPF experienced 136,556 total annual operations, and had 326 based aircraft. The airport accommodates a diverse set of aviation needs, including corporate and business-use, and military traffic, various aeronautical functions, business parks, and other general aviation's activities traditionally offered to both private and public sector users. OPF's land area consists of 1,880 acres, and its airfield consists of three active runways including two east-west runways and one southeast-northwest runway.

In June of 2018, MDAD officially requested that FDOT designate OPF as a SIS designated hub and therefore eligible for SIS funding per Florida Statutes 339.63(4). A copy of the request is provided in Appendix C. Per the MDAD request OPF meets all of the SIS General Aviation Reliever Airport Criteria:

- Criteria: Identified by FAA as a General Aviation Reliever Airport, and the Airport it relieves is designated on the SIS**.** Eligible: Yes - OPF is Designated a GA Reliever Airport by FAA and MIA is designated on the SIS.
- Criteria: Handles at least 75,000 itinerant (nonlocal) operations per year. Eligible: Yes - 81,067 Itinerant Operations in 2017**.**
- Criteria: Has a runway length exceeding 5,500 linear feet**.** Eligible: Yes - 8,002 Linear foot runway**.**
- Criteria: Capable of handling aircraft at least 60,000 pounds with a dual wheel configuration which is served by at least one precision instrument approach. Eligible: Yes - 249,000 pounds with dual wheel configuration.
- Criteria: Service to clusters of industries dependent on air transportation. Eligible: Yes - Most recently, Amazon has constructed its first mega warehouse in South Florida at OPF.

4.0 MIAMI-DADE LOGISTICS INFRASTRUCTURE

4.0 Miami-Dade Logistics Infrastructure

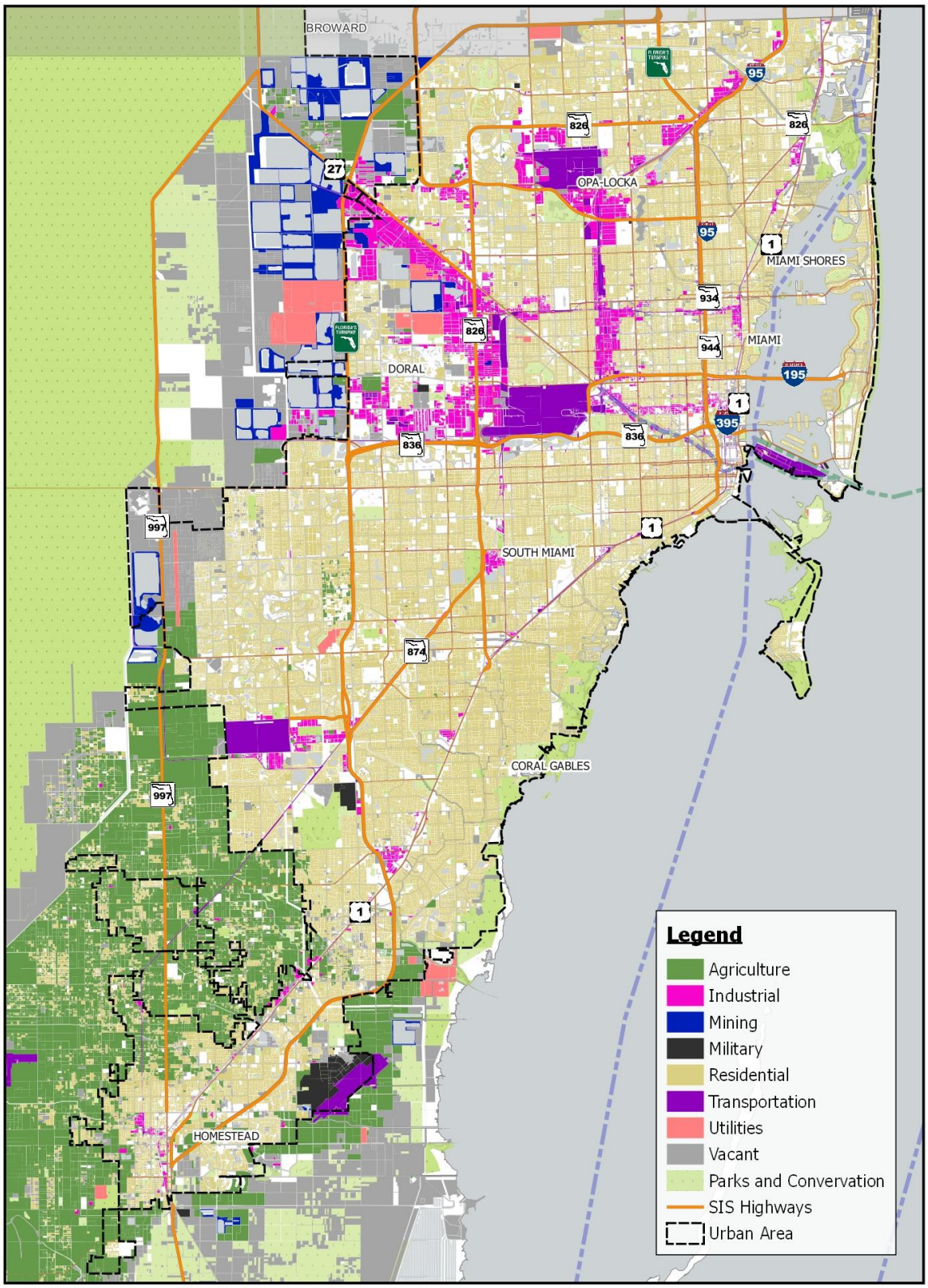
The county's freight transportation infrastructure provides the means by which the freight moves into, out of and within the county. However, there are many other factors that impact how freight moves. These factors combine with the transportation system to form a comprehensive logistics infrastructure that provides all the necessary services, warehouse capacity, and international trade expertise. For example, freight forwarders and brokers provide a wealth of knowledge on the laws and regulations imposed on different types of commodities being imported or exported; many shippers and receivers rely on third party warehouse operators; trucking companies need full service truck parking facilities to maintain their vehicles and adhere to hours of service regulations; and developers need access to land with appropriate zoning and land use designations to allow for industrial facilities. The conditions and amenities available at such facilities have a direct impact on the types of goods which can be handled or stored. Key logistics-related components and developments in Miami-Dade County are described below.

4.1 Freight and Industrial Property Trends and Developments

An analysis of available land use data helps to illustrate the location of freight and industrial operations. Four categories of land use data are defined as freight intensive for this analysis, as follows:

- **Transportation land uses** (e.g., airports, seaports, railroads/rail terminals, roadways). Transportation land uses capture the major freight terminals as well as key roadway and rail corridors. Several of these terminals represent intermodal logistics centers. Figure 4.1 shows the terminals in dark purple and the major roadway corridors in orange (Strategic Intermodal System roads) and light pink (other State roads).
- **Industrial land uses** (e.g., warehousing/distribution centers). Industrial land uses represent warehouses, distribution centers, foreign trade zones, light manufacturing, and other light and heavy industrial uses. Based on the operation, several of these facilities also represent intermodal logistics centers. Figure 4.1 shows the location of these facilities in light purple.
- **Agricultural land uses** (e.g., farms, packing facilities). Miami-Dade County is home to an established and historic agricultural community, located largely to the south and west. These operations vary by season, but represent significant freight activity. Figure 4.1 shows the location of agricultural operations in dark green.
- **Mining land uses** (e.g., aggregate mining). Aggregate mining has long existed in Miami-Dade County, generating significant truck and rail traffic throughout the region. These operations are concentrated in the Lake Belt in northwestern Miami-Dade County. Figure 4.1 shows the location of mining activity in blue.

Figure 4.1 – Miami-Dade County Land Use



Source: Miami-Dade County GIS Hub

The majority of existing industrial property is concentrated in the north central and northwestern portions of Miami-Dade County (e.g., Doral, Medley, Hialeah, Opa-Locka). These properties consist of warehouses, distribution centers, fulfillment centers, and light and heavy manufacturing. All of these facilities are located adjacent to or in close proximity to key transportation hubs and corridors. The southern portion of the county is home to the majority of agricultural operations, with transportation facilities throughout the county connecting these operations to distribution centers. Mining operations, consisting of aggregate mining, are located in the northwest part of the county and have direct rail access to quarries. The remaining portions of the county are predominantly developed as residential or are preserved for environmental purposes, such as the Everglades National Park.

Based on the land use data, approximately 10 percent of the county is used for freight-related purposes as shown in Table 4.1. Agriculture and Transportation have the highest share at around 4 percent each, whereas Industrial and Mining activities each account for about one percent of the total land uses in Miami-Dade County. Conservation areas represent 68 percent of the county, consisting primarily of Everglades National Park (33 percent of Miami-Dade County) and Water Conservation Areas (13 percent of Miami-Dade County). With the exclusion of these two major conservation lands, 19 percent of lands are designated for industrial purposes.

Table 4.1 – Miami-Dade Freight-Related Land Use

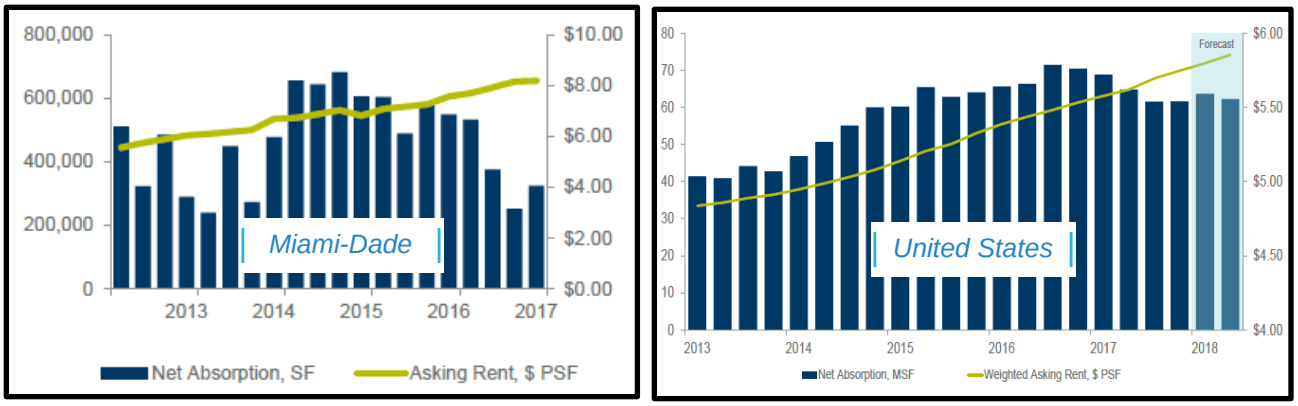
LAND USE TYPE	TOTAL BY PERCENT	TOTAL BY PERCENT EXCLUDING MAJOR CONSERVATION AREAS
Agriculture	3.9	7.3
Industrial	0.9	1.7
Mining	1.2	2.2
Transportation	4.4	8.2
Total Freight-Related	10.4	19.4

Source: Miami-Dade County

4.2 Trends in Warehouse Affordability and Pricing

Due to the existing developments, available land, and constraints associated with lands outside the Urban Development Boundary (UDB), warehousing space is limited and expensive. Based on quarterly analyses by commercial real estate brokers, it is possible to compare the Miami-Dade market to national averages and other freight-intensive regions. Figure 4.2 shows the net absorption and asking rent trends for both Miami-Dade and the United States for 2013 through Quarter 4 of 2017 in millions of square feet (MSF) and price per square foot (PSF). Similar trends exist for the overall net absorption, that is, it has remained positive over the past seven consecutive years. In addition, asking rents have been steadily increasing for both markets. The main difference for these trends is the asking rent per square foot. Miami-Dade's asking rent per square foot sits significantly higher at $8.67 per square foot whereas the US average is $5.84.

Figure 4.2 – Warehouse Net Absorption and Asking Rent

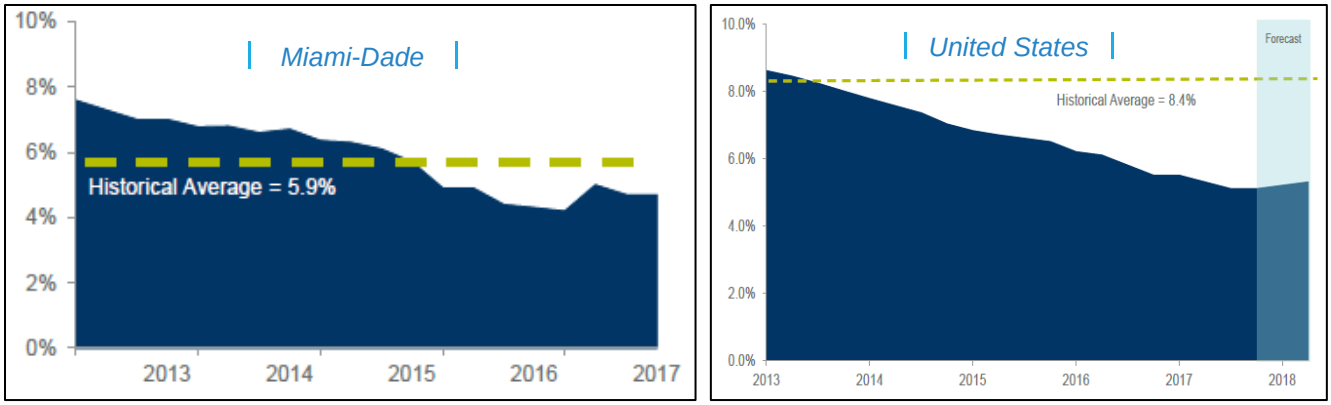


Source: Cushman & Wakefield, Industrial Quarter 4 2017 Market Reports.

In spite of higher average rent prices, Miami-Dade's warehousing inventory experiences an overall lower vacancy rate than the rest of the country, as shown in Figure 4.3. Historical averages for Miami-Dade suggest a vacancy rate of 5.9 percent, although vacancies have been below this average since roughly 2015. The Unites States as a whole fell below its historical average of 8.4 percent in mid-2013. These low vacancy rates encourage developers to construct additional capacity where possible to take advantage of increasing rental rates.

From a regional market perspective, shown in Table 4.2, vacancy rates of 4.7 percent in Miami were well below the average vacancy of 6.1 percent found in the South, which has the highest vacancy rate of the four regions representing the United States, as defined by Cushman & Wakefield. This illustrates a strong demand for property in South Florida, particularly given that the asking rents for spaces in Miami are nearly double that of the southern region as a whole ($8.44 vs. $4.66). A comparison of vacancy rates and asking rent by market can help characterize the county's market strength/demand. As described above, there is a significant demand for space in the Miami region as shown by low vacancy and high rent.

Figure 4.3 - Overall Warehouse Vacancy



Source: Cushman & Wakefield, Industrial Quarter 4 2017 Market Reports.

The Los Angeles market is similar with even lower vacancy and higher rent (1.3 percent and $8.83). Both of these markets reflect major gateways with significant local markets and limited developable land. Other locations, such as Jacksonville and Savannah, represent major international gateways with more available and affordable land, which results in lower rental rates despite vacancy rates being on par with Miami.

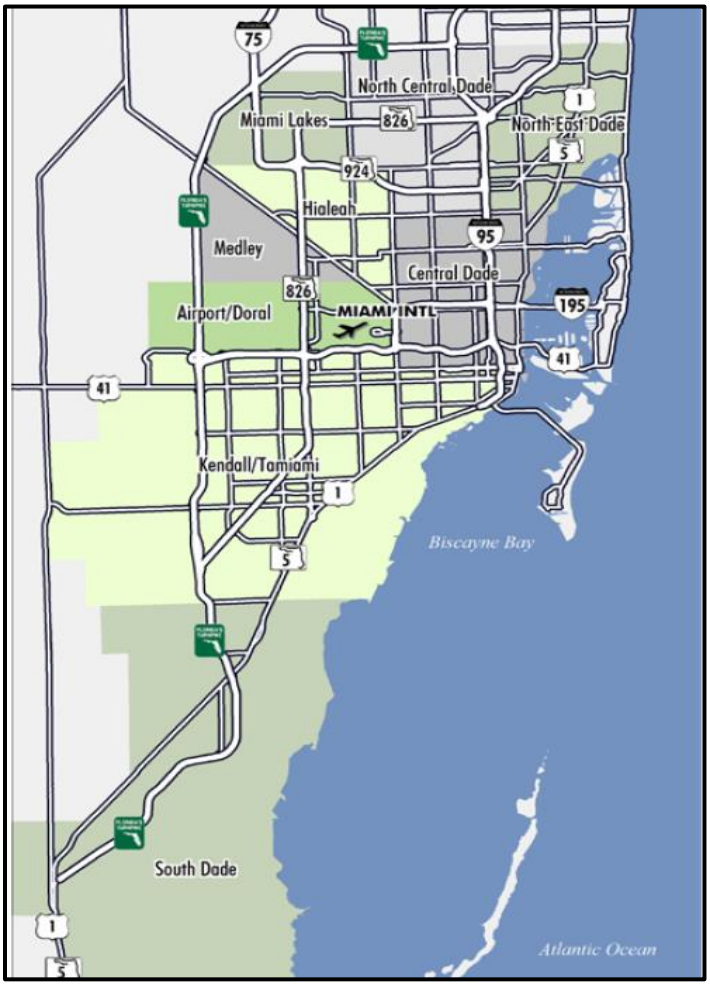
Table 4.2 - Comparison of Vacancy Rates and Asking Rents by Geography

		WEIGHTED AVERAGE ASKING RENT ($)	
REGION/CITY	VACANCY RATES (%)	WAREHOUSING/ DISTRIBUTION	MANUFACTURING
United States	5.1	5.18	5.62
Northeast	5.3	6.02	4.97
Midwest	5.3	4.31	4.46
South	6.1	4.66	4.73
West	3.7	7.00	8.60
Atlanta, GA	7.7	3.80	4.17
Jacksonville, FL	4.0	4.82	5.96
Los Angeles, CA	1.3	8.83	9.00
Savannah, GA	1.2	4.33	N/A
Miami, FL	4.7	8.44	6.43

Source: Cushman & Wakefield, Industrial Quarter 4 2017 Market Reports (Preliminary Q4 2017)

In determining these vacancy and rental rates, commercial real estate brokers typically divide the county into regions in order to conduct submarket analyses. Figure 4.4 displays the nine industrial submarkets in Miami-Dade determined by the CBRE Group's analysis. These nine areas are listed in Table 4.3.

Figure 4.4 - Industrial Submarkets of Miami-Dade County



Source: CBRE Marketview, Miami Industrial, Q4 2017.

The least vacant area of the county is North East Dade at 0.2 percent, which aligns with the highest asking lease rate of $12.89/Square Foot/Industrial Gross (SF/IG), and the lowest total inventory of space at just over 2.8 million square feet. The highest vacancy is found in Hialeah at 7.3 percent with an asking lease rate of $8.50 and an inventory exceeding 13 million square feet.

Overall, the Airport/Doral submarket has the largest total inventory of over 58 million square feet and roughly another one million square feet under construction. The proximity of this submarket to the airport, major roadways, and rail yards makes it an ideal location for logistics-based businesses to locate. This proximity continues to drive demand, as evidenced by this submarket having the third highest average asking lease rate of $9.94/SF. At the county level, the industrial market consists of over 215 million square feet of inventory, of which 178 million or 82 percent represents warehousing space.

Miami-Dade County is home to over 200 million square feet of warehouse space. This is the largest concentration of warehouse space in Florida. It is estimated that there are only 2,500 acres left to develop in Miami-Dade County, amounting to an additional 40.8 million square feet. Across the three counties in South Florida, at a maximum, industrial space can only increase by 15 percent.

4.3 Evolving Warehouse Needs

As experienced in the warehousing and distribution center industry throughout the US, new state-of-the-practice facilities continue to evolve and standardize, based on market demands. Newer warehouse and distribution space being built to handle additional business has been more standardized than older warehouse space, particularly when it comes to height and size characteristics, as well as access to and lay out of loading docks/bays. Looking specifically at the evolution of the Miami-Dade market, a comparison was conducted between buildings with at least 50,000 square feet of rental space built prior to 1980 and those built after 2007.

Table 4.3 - Miami-Dade Industrial Market Submarket Analysis

SUBMARKET	TOTAL INVENTORY (MSF)	TOTAL VACANCY	TOTAL AVAILABILITY	2017 NET ABSORPTION (SF)	UNDER CONSTRUCTION (SF)	AVG. ASKING LEASE RATE ($/SF/IG)
Airport/Doral	58.0	3.4%	8.3%	702,729	920,033	9.94
Central Dade	38.1	3.9%	6.7%	(114,180)	59,959	8.14
Hialeah	13.6	7.3%	9.0%	323,411	17,901	8.50
Kendall/ Tamiami	12.4	0.8%	2.6%	39,870	13,413	10.61
Medley	42.8	4.2%	8.0%	1,266,131	549,410	8.58
Miami-Lakes	6.7	2.7%	4.1%	398,557	1,917,107	8.81
North Central Dade	36.2	2.5%	6.2%	(64,418)	1,368,122	8.72
North East Dade	2.8	0.2%	5.2%	19,196	0	12.89
South Dade	4.8	3.5%	5.8%	271,748	40,375	9.18
Total	215.5	3.5%	7.1%	2,841,044	4,886,320	9.00
Manufacturing	19.2	2.4%	5.2%	(66,456)	0	8.32
Warehousing/ Distribution	177.8	3.8%	7.7%	2,473,465	4,868,419	8.91
R&D/Flex	10.6	2.3%	3.8%	37,768	0	13.66
Other Industrial	7.9	1.8%	2.4%	396,267	17,901	13.15

Source: CBRE Marketview, Miami Industrial, Q4 2017.

Height is an important attribute of warehousing space, reflecting the types of operations conducted there. Additional height allows for greater storage space within the same footprint; this is critical in urban locations where land availability is limited and expensive. For warehousing and distribution spaces built prior to 1980, there were at least 29 varying heights found in such buildings, excluding those which did not have a reported height in the CoStar database. These ranged from 11 feet to 40 feet. The most popular heights of this era were 20 feet (18 percent

of total rental space), 18 feet (13 percent), and 22 feet (10 percent). For those built since 2007, only 11 different heights are recorded, of which the minimum is 18 feet and the maximum is 42 feet. The most popular height is 32 feet (26 percent of the total rental space) and 30 feet (25 percent).

Truck access to warehouse and distribution center locations also has improved. Many of the older properties have a limited number of loading docks and those that do exist cannot always accommodate the larger trucking equipment in use today. This is due to key characteristics including dock height and driveway/bay length.

Even with the addition of new facilities, the local market continues to rely on the existing, dated, "obsolete" facilities; they are effectively used for smaller, niche operations and for operations with quick inventory turnover which negates the benefits of high ceilings.

In regard to rentable space, the average size has also increased over time, despite the limitations of developable land for this use. For buildings built prior to 1980 with other 50,000 square feet of rental building area, the average size was just over 100,000 square feet. The largest building built in this time period had approximately 766,000 square feet of space and is still in use today as part of Publix Supermarket's distribution network. Over time, the average size of new buildings has increased to approximately 160,000 square feet although the largest buildings built in the last 10 years have capped out at 500,000 square feet for both the Centurion Cargo Center at the Miami International Airport and the USPS facility at the Miami-Opa Locka Executive Airport.

4.4 New Developments and Future Growth

Looking forward, several large developments are underway or planned. The majority of these new buildings will be located in northwest Miami-Dade County adjacent to major transportation corridors. In addition, several of the largest developments represent mixed use facilities that will rely on trucks for retail and commercial deliveries, and generate significant auto traffic that will compete for roadway capacity. One of the most significant and well known mixed use developments is the American Dream mega-mall proposed in Miami-Dade County. While not freight-specific, the development is anticipated to exceed five million square feet of retail, entertainment, and dining space, surpassing the Mall of America. The location of this development at the intersection of I-75, Florida's Turnpike Extension, and Miami Gardens Drive would allow for ready access to these major roadways. With an estimated 14,000 workers and 30 million visitors per year, this development is expected to produce tens of thousands of additional trips each day, which can lead to even more congestion on already overcrowded roadways.

The $4 billion project has been in the planning stage for over two years, with a current estimated completion date of 2023. Most recently, in May of 2018, the Mall secured zoning approval from the Miami-Dade County Commission and is now in the process of securing environmental and water permits. As this project moves forward, efforts need to be undertaken to ensure that freight traffic is not negatively impacted moving through the region as well as for trucks which need to access the facility for delivery.

Adjacent to the American Dream Mall development is the proposed Graham Project, located to the south of the mall site. This project would include approximately 2,000 multi-family rental units, one million square feet of commercial space, and three million square feet of Business Park, the majority of which would be office

space, in addition to four hotels totaling 1,600 rooms. The development of the American Dream Mall and the Graham Project could impact freight-specific projects that are also advancing in the same subregion.

Flagler Global Logistics has begun development of their 500-acre site, known as the Countyline Corporate Park. The eventual buildout will encompass over eight million square feet of industrial space. This development is further surrounded by housing projects underway including Dacar Management's Atlas Hialeah Heights and Lennar's Two Lakes, Satori, and Bonterra sites. With such a significant mix of users, transportation improvements conducted in this area need to be mindful of these users' diverse needs.

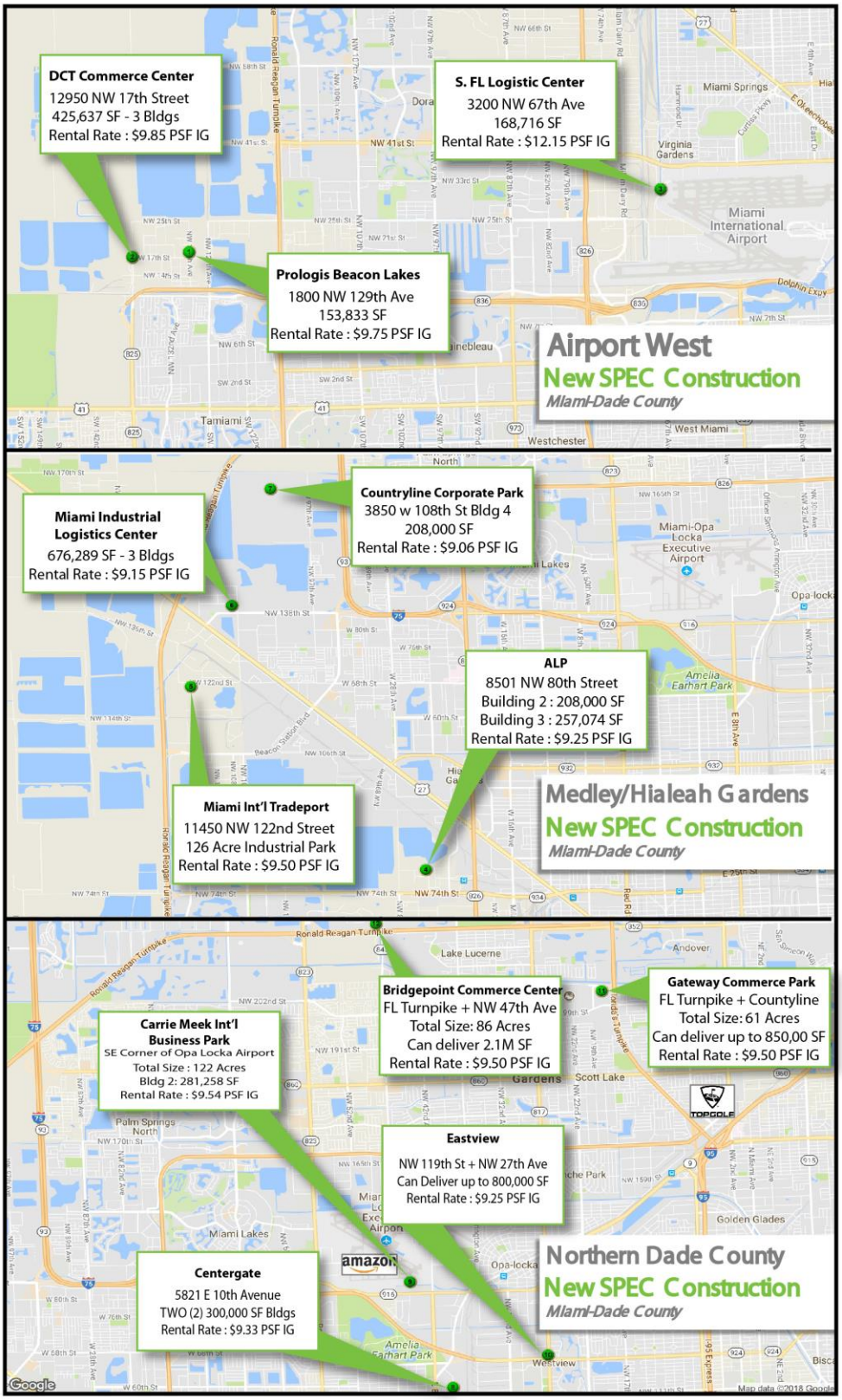
Other developments taking place within Miami-Dade County are on a smaller scale, but no less important. Many of these are located within existing industrial areas and thus would be less likely to cause conflicts with other land uses. Such developments include the cluster found to the east of NW 87th Avenue and north of NW 74th Street, which encompasses the two phases of the Airport North Logistics Center which are already completed and an additional proposed 2.6 million square foot development. The first building of the Miami International Tradeport, located off of NW 122nd Street, was completed in early 2014, with a final buildout plan of approximately 1.5 million square feet of industrial space. Opa-Locka is also looking to expand the industrial footprint of the city with the first Amazon mega-warehouse in South Florida. Built on Miami-Opa Locka Executive Airport property, this facility will encompass 850,000 square feet of warehousing space and will employ 1,000 workers. This will place Amazon as the primary tenant of the 97-acre planned development in this city.

While not an exhaustive inventory, the above developments represent examples of ongoing and planned projects occurring throughout the county. The clear message is that there is significant and conflicting demand for all developable property in the county. As these developments advance, transportation investments will be necessary to ensure regional mobility for all system users. Figure 4.5 provides a graphic of some of the major warehousing developments now underway.

4.5 Foreign Trade Zones

In the United States, foreign trade zones (FTZ) are areas located near ports of entry. The idea behind them is that goods receive the same U.S. Customs treatment as if they were still outside the United States, but may be reconfigured or manufactured on US soil. Duties are only paid when goods are transferred to the US consumer market. This lowers the amount of tariffs and taxes paid by companies engaging in international trade by eliminating and/or delaying payment. Effective use of FTZs creates economic opportunities and competitive advantages for a region. At present, there are four FTZs in Miami-Dade County, but the structure of such zones is evolving. The defined zones are as follows:

Figure 4.5 – New Industrial Warehousing Developments Underway



Source: Mike Silver, CBRE presentation to TPO FTAC April 2018

- FTZ No. 32: Miami Free Zone – 47-acre site with more than 850,000 sq. ft. of facilities
- FTZ No. 166: Homestead – 1,000-acre site roughly 30 miles from both the Airport and Seaport
- FTZ No. 180: Wynwood – Inactive zone that was never fully established
- FTZ No. 281: Miami-Dade County- The PORTMiami Free Zone, recently expanded to include Miami International Airport

FTZ 281 is the newest FTZ designated in Miami-Dade County. The limits of this zone extend from SW 8th Street in the south to the county border with Broward in the north. What is unique about this zone is that it will be among the first to be operated under the Alternative Site Framework's (ASF) streamlined process, adopted in January 2009 by the Foreign Trade Zones Board. Under ASF, two types of sites are designated: Magnet and Usage-Driven. Magnet sites are similar to the way FTZs work today, by designating an area in advance in order to attract multiple users to that area. These are not the main goal of the ASF, however, and six or fewer Magnet sites are to be created per grantee. One such designation is the South Florida Logistics Center. The newer designations, Usage-Driven sites, is for companies seeking to pursue FTZ activities. In this case, the FTZ designation is tied to a particular company and is limited to the space needed by that company. In the event of a company relocating, the facility will no longer be designated as a Usage-Driven site and a new occupant would need to reapply.

In switching from the traditional FTZ designations to the ASF, unused FTZs will be removed. Currently, FTZs are designated based on speculation about where industries will locate. However, there is little correlation between these sites and actual use, resulting in unused locations such as FTZ No. 180. ASF will allow for companies to designate their existing site provided that it is located within the boundaries of the FTZ. In addition, all sites (both Usage-Driven and Magnet) will be given "sunset" limits of three to five years in order to remove excess designations that no longer fit the needs of the FTZ.

While Miami-Dade has an extensive freight infrastructure, growth is limited given that much of the county has already been developed, particularly for residential use, and as the location of the Florida Everglades to the west and the environmental concerns associated with the conservation of this unique habitat preclude such growth. Nevertheless, acreage is still available. Parcels can be identified by selecting land which is presently "Vacant government owned or controlled" or "Vacant, non-protected, privately owned," but will have either an "Agriculture," "Industrial and Office," "Restricted Industrial and Office," "Terminals," or "Transportation Right of Way (ROW), Rail, Metrorail, Etc.)" land use category in the future.

5.0 FREIGHT SECURITY AND CARGO THEFT

5.0 Freight Security and Cargo Theft

Theft of goods in transport is a significant cost of business for the freight community. Thefts most commonly occur when products are stopped in transit, whether that be in a container sitting in a seaport , airport, or rail yard, or on a truck at a truck stop or truck terminal. Fortunately, over the last decade, most non-highway facilities have developed extensive security features that provide controlled access to shipments. In some instances, such as at airports and seaports, controlled access is mandated and provided by the federal government through agencies like Customs and Border Protection (CBP), and the Transportation Security Administration (TSA). Private facilities, like rail yards, are protected by perimeter fencing and private police forces.

Trucks operate in a different, higher risk environment. While drivers must have required credentials to access freight hubs (airports, seaports and rail yards), once the trucks are loaded, they depart the secure environment. This leaves trucks and drivers especially vulnerable to cargo theft, vehicle theft, and bodily harm. As mentioned, this is more likely to occur while trucks are stopped, meaning that the facilities truck drivers use for fuel, food, and parking need to provide a minimal level of safety to prevent theft. Cargo and driver security alone highlights the need for adequate truck parking capacity as part of our freight infrastructure. This section discusses the overall impacts of cargo theft and current efforts to minimize related costs, and Section 6.0 discusses the role of truck parking in the distribution network as it relates to safety and security.

5.1 Cargo Security and Theft Prevention

Cargo security is a part of supply chain security. While supply chain security covers topics such as how natural disasters and civil unrest could potentially affect the production or transit of a product, cargo security is more focused on the transportation of the product. In Florida, cargo security applies to products arriving by truck, railroad, water, or air; products leaving the area, or those just passing through. The theft of cargo is often described as a “gateway” crime that can lead to broader investigations in areas like organized crime, drug trafficking, health care fraud, and even terrorism.

The official definition of cargo theft, per the FBI’s Uniform Crime Reporting Program (UCR), “is the criminal taking of any cargo including, but not limited to, goods, chattels, money, or baggage that constitutes, in whole or in part, a commercial shipment of freight moving in commerce, from any pipeline system, railroad car, motor truck, or other vehicle, or from any tank or storage facility, station house, platform, or depot, or from any vessel or wharf, or from any aircraft, air terminal, airport, aircraft terminal or air navigation facility, or from any intermodal container, intermodal chassis, trailer, container freight station, warehouse, freight distribution facility, or freight consolidation facility. For purposes of this definition, cargo shall be deemed as moving in commerce at all points between the point of origin and the final destination, regardless of any temporary stop while awaiting transshipment or otherwise.”

5.2 Impacts of Cargo Theft

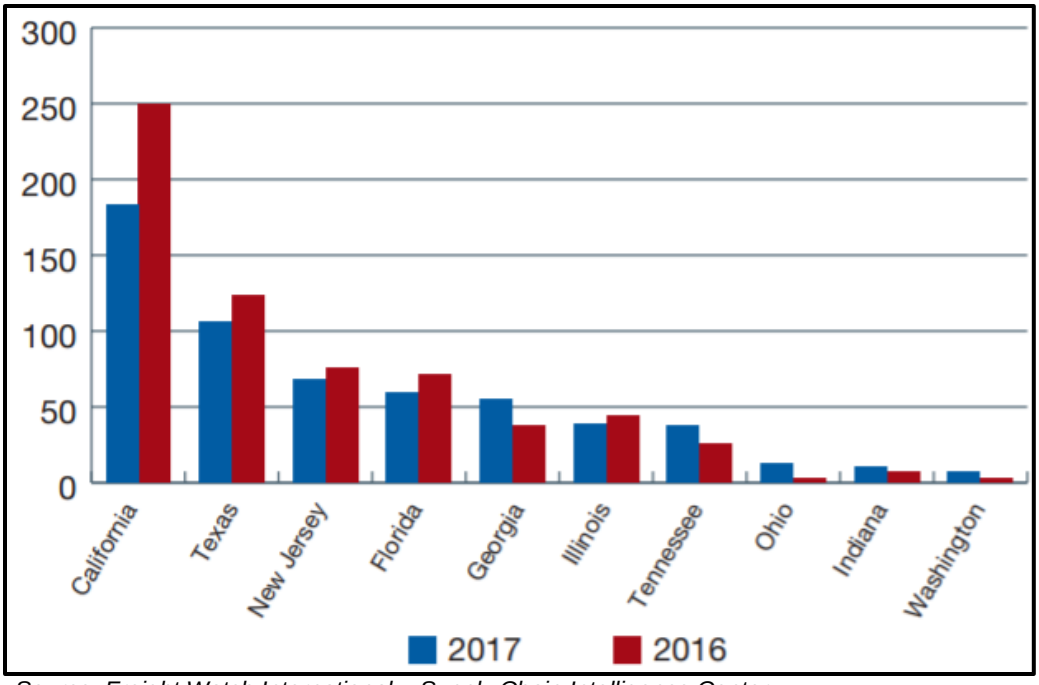
The impacts of cargo theft are wide-ranging, including increased costs for consumers, higher delivery costs, loss of employment for drivers, and potentially the loss of a driver's life. Data on cargo theft, has been reported to the FBI on a very limited basis for several years, and the 2013 report is the first public release of the data. Multiple agencies report their crime statistics to the UCR, and while this is a comprehensive database, other private databases, such as SensiGuard Security Services, *"records only those cargo thefts reported by reliable sources, such as transportation security councils, insurance companies, and law enforcement organizations. While this does not result in a 100% capture of incidents, it provides a sufficient cross-section of cargo thefts and allows the Freight Watch International Supply Chain Intelligence Center (SCIC) to identify trends and deliver in-depth, accurate analysis of the scope of cargo theft in the United States. Additionally, the SCIC only records incidents involving the theft of cargo, not standalone conveyances such as trailers, containers or bobtail tractors."*

A general understanding of cargo theft trends is available from the quarterly and annual reports generated by the SCIC. As shown in Figure 5.1, Florida has the fourth highest rate of cargo theft in the country, representing 9 percent of total cargo theft. Disproportionate to other states, Florida has a high percentage (29 percent) of thefts consisting of Food & Drinks. Compared to prior years, the highest theft rates nationwide were found in November (13 percent), October (11 percent), and July (10 percent). In states like Florida, Texas and Georgia, where cargo theft rates are already some of the highest in the country, major natural disasters, like Hurricanes Harvey and Irma, can further compromise supply chains. SensiGuard recorded 649 cargo thefts in the United States in 2017, with an average value of $146,063. While the volume of thefts has continued to drop, the United States is still ranked as a HIGH threat for cargo thefts, with thieves operating as organized units which hone in on shipments that can be easily fenced. As thieves refine their methods, shippers and enforcement activities need to likewise refine their supply chain security.

5.3 Existing Efforts

Due to the increased cost of business as a result of cargo theft and potential for harm, efforts have been undertaken at local, state, and national levels to combat cargo theft. Locally, the Miami-Dade Police Department has annual cargo theft seminars. The Transportation Security Council of the American Trucking Association keeps a current list of agencies, by state, that are involved with cargo security. In Florida, Regional Cargo Theft Task Forces and Related Cargo Theft Organizations that are listed include Miami-Dade Police, FBI – Miami, Palm Beach County Sheriff's Office, Miami International Airport--Cargo Theft Unit, Florida Statewide Cargo Theft Task Force: Florida Highway Patrol--Office of Investigations & Intelligence, Central Florida FBI Cargo Theft Task Force, Marion County Sheriff's Office, and Jacksonville Sheriff's Office.

Figure 5.1 - Top 10 US States for Cargo Theft, 2017



Source: Freight Watch International – Supply Chain Intelligence Center.

The Florida Department of Highway Safety and Motor Vehicles has a cargo theft database called the Electronic Freight Theft Management System (EFTMS). The Florida Trucking Association recommends that fleet managers report theft first to CargoNet and then to the Florida EFTMS. While CargoNet and EFTMS are related systems, the Florida Trucking Association recommends data be entered into both separately. CargoNet offers free accounts for submitting thefts; only members have access to the database. Accounts are also gratis for submitting thefts to the EFTMS; only law enforcement can access the EFTMS database. Meanwhile, a company like SensiGuard provides global and nationwide cargo theft data analysis and summary reports, and charges for their products and services such as advanced logistics monitoring technology and tracking technology and software. While the advice from the Florida Trucking Association applies to highway shipments, the EFTMS covers all modes of transportation.

The Florida Commercial Vehicle and Cargo Theft Task Force partners with multiple enforcement agencies and meets multiple times per year to coordinate statewide efforts to combat cargo theft and commercial vehicle crimes. There is also now a National Commercial Vehicle and Cargo Theft Prevention Task Force (NCTTF) that *"works in cooperation with private industry, insurance, and Federal, state and local governments in order to combat the continued threat posed by cargo theft perpetrators to the economy, the American citizens, and the national security of the United States of America. The Task Force members have identified a need for additional information sharing and national partnering. This web site is one step in strengthening this collaborative fight in combating cargo theft."*

6.0 TRUCK PARKING

6.0 Role of Truck Parking

Truck parking facilities fulfill an important role in the freight community by providing a space for drivers to stop for fuel, food, restroom breaks, sleeping, and more. These facilities can provide a range of services, based on how a particular location is used. For instance, some drivers work locally and only need a space to park overnight. Facilities serving these drivers will typically only offer the bare minimum of a space to park, along with a fence and security. On the other hand, drivers that are making long-haul movements and need a place to sleep overnight would be more apt to look for a facility offering more amenities such as showers, a restaurant, and restrooms, among others. Truck parking plays a pivotal role in keeping drivers safe both on and off the road.

6.1 Background

Truck parking has always been an important component of the freight network, but has often been overlooked when it came to freight investment and public knowledge. With the passage of the Moving Ahead for Progress In the 21st Century (MAP-21) Act in 2012, Section 1401 Jason's Law made the construction of safety rest areas, commercial motor vehicle parking facilities, and electric vehicle and natural gas vehicle infrastructure eligible for federal funding. In addition, the US DOT was required to survey states within 18 months of enactment regarding commercial vehicle traffic and the ability to provide parking for such vehicles. The passage of the Fixing America's Surface Transportation (FAST) Act in 2015, further allowed for truck parking to be eligible under formula funding, including the following: Surface Transportation Block Grant Program (STBG); National Highway Freight Program (NHFP); Highway Safety Improvement Program (HSIP); National Highway Performance Program (NHPP); and Congestion Mitigation and Air Quality Improvement Program (CMAQ).

Despite the availability of federal funding for truck parking, new regulations and availability of suitable land in urbanized areas have continued to exasperate the issue. The *Jason's Law Truck Parking Survey Results and Comparative Analysis* released by FHWA in August 2015 supports these observations. A total of 36 state DOTs (72 percent) responded that they have a problem with commercial truck parking within their state, with 31 percent observing shortages at private truck stops and 59 percent observing shortages at public rest areas. Florida, for its part, responded affirmatively to each of these inquiries. Challenges that limit new and expanded truck parking facilities include competition for available land, land purchase costs, and local opposition.

6.2 Hours of Service

Hours of Service (HOS) regulations impact how long a driver may drive in a given day or over a period of seven or eight days. The Hours of Service of Drivers Final Rule was published in the Federal Register in December 2011, with an effective date of February 2012 and a compliance date of July 2013 for remaining provisions. A summary of this Final Rule is contained in Table 6.1. This summary does not include the

additional mandates established under the Electronic Logging Device (ELD) Rule published in the Federal Register in December 2015. The ELD Rule states that a motor carrier operating commercial motor vehicles must install and require each of its drivers to use an ELD to record the driver's duty status no later than December 18, 2017. Drivers and motor carriers currently using Automatic Onboard Recorders (OABRDs) may, however, continue to use them for an additional two years beyond that date.

Table 6.1 - Summary of Hours of Service Regulations – Interstate

LIMIT	DESCRIPTION
11-Hour Driving Limit	May drive a maximum of 11 hours after 10 consecutive hours off duty
14-Hour Limit	May not drive beyond the 14th consecutive hour after coming on duty, following 10 consecutive hours off duty. Off-duty time does not extend the 14-hour period
Rest Break	May drive only if eight hours or less have passed since end of driver's last off-duty or sleeper berth period or at least 30 minutes. Does not apply to drivers using either of the short-haul exceptions in 395.1.
60/70-Hour Limit	May not drive after 60/70 hours on duty in 7/8 consecutive days. A driver may restart a 7/8 consecutive day period after taking 34 or more consecutive hours off duty.
Sleeper Berth Provision	Drivers using the sleeper berth provision must take at least eight consecutive hours in the sleeper berth, plus a separate two consecutive hours either in the sleeper berth, off duty, or any combination of the two.

Source: Federal Motor Carrier Safety Administration.

An understanding of these HOS and ELD mandates is an important component of understanding continued parking shortages, despite efforts to expand existing facilities or build new ones. To maximize their working hours, drivers would ideally stop just short of their maximum hours of service. However, a parking facility may not be located at that exact moment in time. Further, the closest available parking facility may already be full. As a result, drivers must risk exceeding hours of service, or saving valuable hours of service to use locating a place to park. Time wasted can be significant as some areas have very limited truck parking and many over the road/long-haul drivers may not be familiar with a local geography.

Hours of service regulations differ slightly for local, intrastate-only drivers. Table 6.2 shows these hours of service regulations for the state of Florida. For the most part, these regulations are slightly more relaxed than the regulations for interstate commerce. For example, truckers may drive for 12 hours after 10 hours off duty for intrastate commerce whereas they can only drive for 11 hours for interstate commerce. However, parking challenges exist for local drivers as well. Most residential communities have restrictions that require a driver to park his/her truck elsewhere. In Miami-Dade County this has created a significant demand for overnight truck parking lots.

Table 6.2 - Summary of Hours of Service Regulations – Intrastate

LIMIT	DESCRIPTION
12-Hour Driving Limit	May drive a maximum of 12 hours after 10 consecutive hours off duty
16-Hour Limit	May not drive beyond the 16th consecutive hour after coming on duty, following 10 consecutive hours off duty.
70/80-Hour Limit	May not drive after 70/80 hours on duty in 7/8 consecutive days. A driver may restart a 7/8 consecutive day period after taking 34 or more consecutive hours off duty.
150-Air Mile Radius	Record of duty status is not required providing the motor carrier maintains true time records showing the time the driver reports for duty, the number of hours on-duty each day, and the time the driver goes off duty.
Harvest Periods	Weekly limit does not apply to persons operating commercial motor vehicles solely within Florida during harvest periods while transporting any unprocessed agricultural products or unprocessed food or fiber that is subject to seasonal harvesting from place of harvest to the first place of processing or storage or from place of harvest directly to market, or while transporting livestock, livestock feed, or farm supplies directly related to growing or harvesting agricultural products.

Source: Florida Highway Patrol Office of Commercial Vehicle Enforcement.

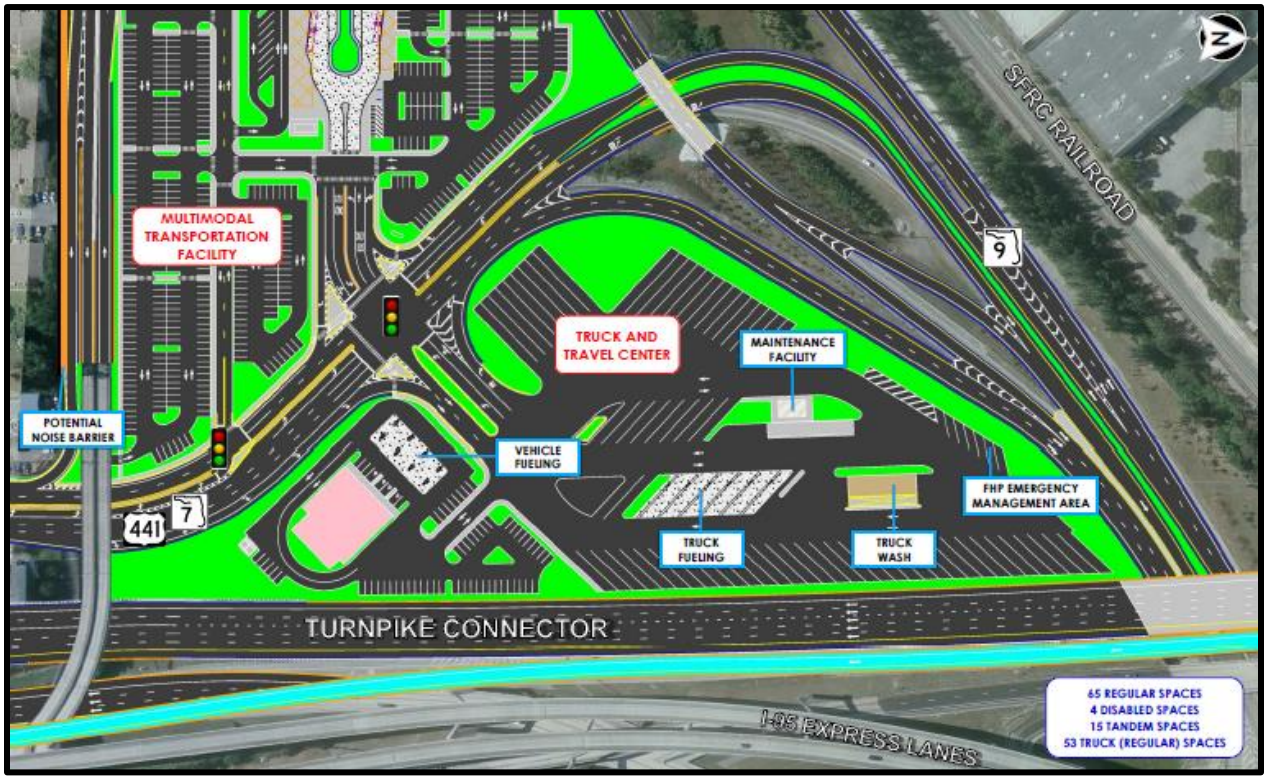
6.3 Miami-Dade Truck Parking Studies

Miami-Dade has realized parking shortages for truckers over the course of the last decade. The Miami-Dade TPO conducted two truck parking studies that were completed in September 2010 and November 2012. These studies sought to determine the availability of truck parking, the demand for truck parking, and potential locations for additional facilities to be developed. It was estimated that there were only 293 truck parking spots for both local drivers and long-haul drivers. However, the demand was determined to be in excess of 12,000 spots, which would require over 1,100 acres of land to develop. In a county with limited undeveloped land, a wide mix of land uses, and high land values, finding appropriate locations to build such facilities has proven to be a challenge despite efforts by the TPO, the Miami-Dade Freight Advisory Committee (FAC), and FDOT District 6 to encourage the development of new truck parking locations.

In 2016, FDOT District 6 performed market and economic analyses regarding the feasibility of building and operating truck stop facilities at two sites owned by the State of Florida within the Greater Miami area. The proposed site at the Golden Glades Interchange had some positive attributes, including being surrounded by several major highways including I-95 and the Florida's Turnpike. The site was found to have some difficulties with traffic and access for trucks, but a gas station and convenience store could be successful as the current and projected number of cars parked each day in the lot across from SR 7 is very significant. This $55 million

project is anticipated to begin in August 2018 and be completed in January 2020. Figure 6.1 below shows the site concept. The project is currently in a Project Development and Environment re-evaluation phase.

Figure 6.1 – Golden Glades Interchange Truck Travel Center Concept



Source: Federal Motor Carrier Safety Administration.

6.4 FDOT's Truck Parking Availability System (TPAS)

Truck parking is also an issue at the state level in Florida. In an effort to help advance the topic of truck parking, FDOT has developed a real time Truck Parking Availability System (TPAS). The goal of TPAS is to install an Intelligent Transportation System (ITS) to detect available truck parking at approximately 74 public facilities across Florida's Interstate System. Additionally, the system will collect information at some private locations. These locations will include I-4, I-10, I-75, and I-95, welcome centers, weigh stations, and rest areas. This technology will utilize in-pavement sensors to detect vehicle presence in a parking space at rest areas and welcome centers which can be manually verified with closed-circuit televisions (CCTV) cameras. Weigh stations, for their part, will have sensors to monitor when trucks enter or exit a weigh station as well as the CCTV cameras. The information collected by these sensors will then be shared via smartphone applications so that truckers and dispatchers can search for available parking.

This type of technology is important as it gives truckers knowledge of the road ahead of them. By knowing whether or not there is parking available at the next facility, truckers can make an informed decision to either

keep driving or modify their route or anticipated driving hours to park at a different facility. FDOT was successful in competing for a $10.8 million Infrastructure for Rebuilding America (INFRA) Grant for the initial implementation of the TPAS. This project has been implemented in various phases with some of the most recent installations occurring in February 2018 along I-10 at rest areas and weigh stations in Escambia, Santa Rosa, Okaloosa, Holmes, Jackson, Gadsden, Leon, and Jefferson Counties as well as the Florida Welcome Center in Escambia.

6.5 Current Parking Availability

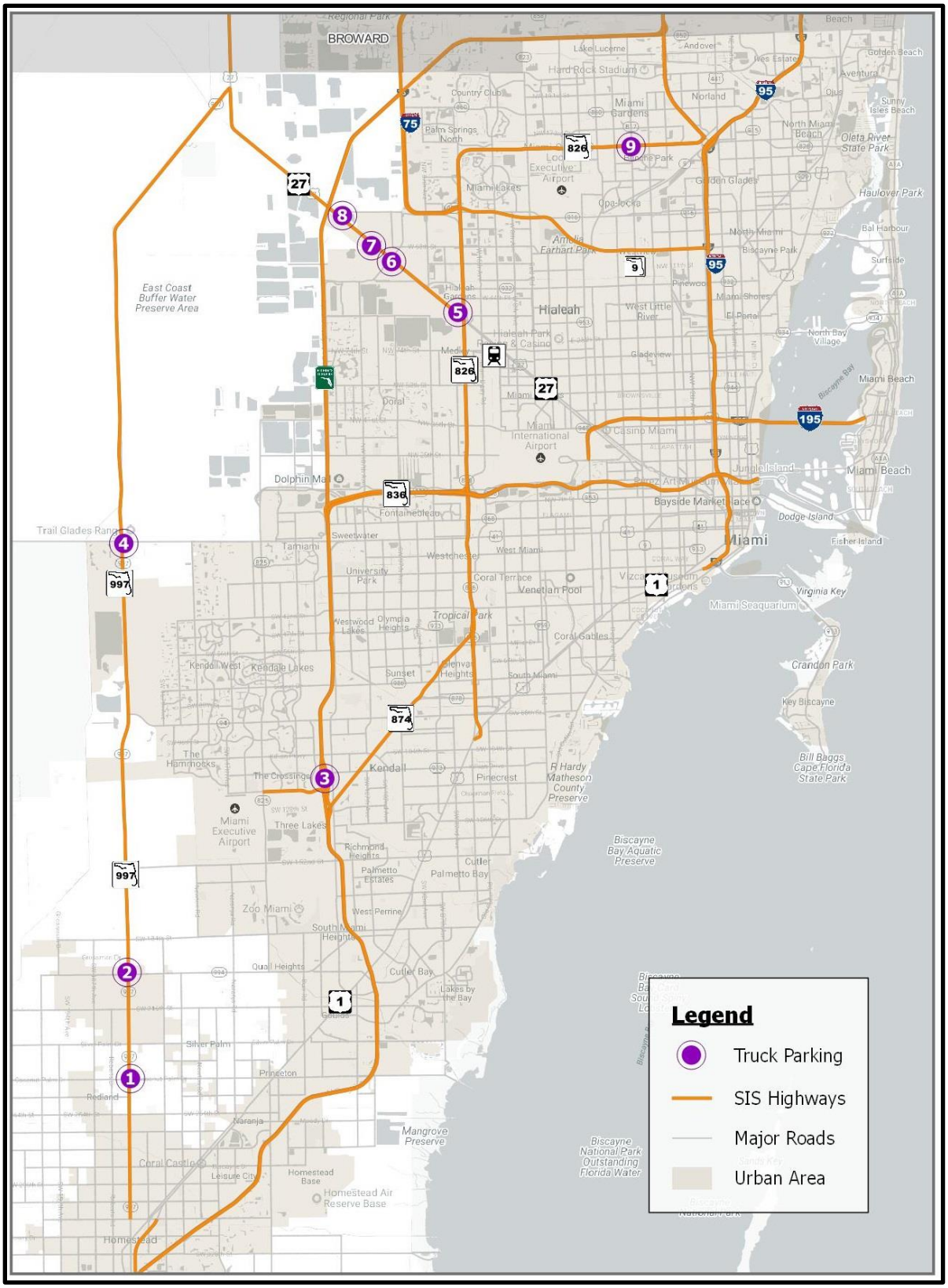
With a demand of 12,000 truck parking spaces, as documented by the Miami-Dade TPO studies, the supply of parking spaces is critical. As part of the Jason's Law Truck Parking Survey conducted in 2015, FHWA collected information on existing truck parking locations, both private and public, across the nation. Public facility data for this survey was sourced from FHWA while private facility data was sourced from Trucker's Friend. Table 6.3 provides a map index and additional details on each of the locations and Figure 6.2 provides a map of truck parking facilities in Miami-Dade County. This Federal Dataset was compiled several years ago and does not reflect recent truck parking developments within the county. For instance, World Property Service Inc. Truck Parking located at NW 142nd Street off of NW 102nd Avenue, and F and M Parking at NW 122nd Avenue are both capable of serving several hundred trucks, but are not included in the Federal inventory. These locations are outside of the UDB, which limit the types of services they may offer drivers. However, given the limited supply, many drivers may prefer no amenities for a night as opposed to an unsafe parking location. FDOT District 6, building on work initiated by the Miami-Dade TPO, continues to explore and pursue opportunities to advance new truck parking projects.

Table 6.3 - Truck Parking Locations in Miami-Dade County

MAP INDEX	BUSINESS	INTERSECTION	TOTAL SPACES
1	Mobil	Coconut Palm Drive & Krome Avenue	12
2	Exxon	SW 200th Street & Krome Avenue	15
3	Snapper Creek	HEFT North of Don Shula Expressway	24
4	Shell	US 41 & Krome Avenue	30
5	USA Truck Service Plaza	Okeechobee Rd/Frontage Rd & NW 77th Avenue	90
6	FX	NW South River Drive & Beacon Station Road	2
7	Pilot Travel Center	NW South River Drive & NW 122nd Street	65
8	Citgo	Okeechobee Road & NW 138th Street	10
9	Mobil	NW 167th Street & NW 27th Avenue	8

Source: Federal Highway Administration.

Figure 6.2 - Truck Parking Locations in Miami-Dade County



Source: Federal Highway Administration.

6.6 Future Developments

The future development of truck parking locations will continue to be a local challenge. While additional truck parking locations are available in other counties, such as Broward and Palm Beach and points further north, which can serve some of the Miami-Dade market, those counties also face shortages. For most developers, the construction of a truck parking facility will not yield the highest profits, as evidenced by the lack of availability. As an example, recent land and property sales have included the sale of 181 acres for $40 million, 70 acres for $42 million, and 59 acres of developed distribution space for $59 million. Considering even the cheapest of these at approximately $220,000 per acre, the development of truck parking as determined by the Miami-Dade TPO's studies would require an investment of several billion dollars for the land alone. Companies operating within Miami-Dade County need to work with the local truck driving community in order to ensure that facilities are built into future development plans.

FDOT District 6 has tentatively funded a Commercial Motor Vehicle Facility component at a proposed PORTMiami Inland Terminal (Inland Cargo and Container Distribution Center) through the National Highway Freight Program (NHFP) - $14,768,000, FY21 (440617-2-94-01). The funds could be available for use at a location that is selected by the county. The TPO will continue to coordinate and monitor the port's progress and selection of a site.

7.0 FREIGHT SYSTEM PERFORMANCE

7.0 Freight System Performance

7.1 Background

On December 4, 2015, President Obama signed the Fixing America's Surface Transportation (FAST) Act (Pub. L. No. 114-94) into law—the first federal law in over a decade to provide long-term funding certainty for surface transportation infrastructure planning and investment. The FAST Act authorizes $305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs. The FAST Act maintains focus on safety, keeps intact the established structure of the various highway-related programs we manage, continues efforts to streamline project delivery and, for the first time, provides a dedicated source of federal dollars for freight projects. With the enactment of the FAST Act, states and local governments are now moving forward with critical transportation projects with the confidence that they will have a federal partner over the long term.

One of the key provisions of the FAST Act predecessor, Moving Ahead for Progress in the 21st Century (MAP-21), was the establishment of a performance and outcome based program. The objective was for states to invest resources in projects that would support progress towards the achievement of national goals. Performance goals were established in seven areas: Safety, Infrastructure Condition, Congestion Reduction, System Reliability, Freight Movement and Economic Vitality, Environmental Sustainability, and Reduced Project Delivery Delays.

When the new transportation bill, the FAST Act, was passed, these provisions remained unchanged, with three exceptions, including one for freight which reads as follows:

> *MAP-21 required DOT to establish performance measures in a number of areas, including the assessment of freight movement on the Interstate System. MAP-21 also required each State to set performance targets for these measures. The FAST Act now requires that if the Administrator determines that a State has failed to meet (or to make significant progress toward meeting) its freight performance targets within two years after the establishment of the targets, the State must describe in its next performance report to DOT the actions it will take to achieve these targets.*
>
> *https://www.fhwa.dot.gov/fastact/factsheets/performancemgmtfs.cfm*

While MAP-21 was first signed into law in 2012, the final rule that established a set of performance measures for state DOTs and MPOs to use was not published until January 2017. In relation to freight performance, this final rule includes two provisions for state DOTs to follow:

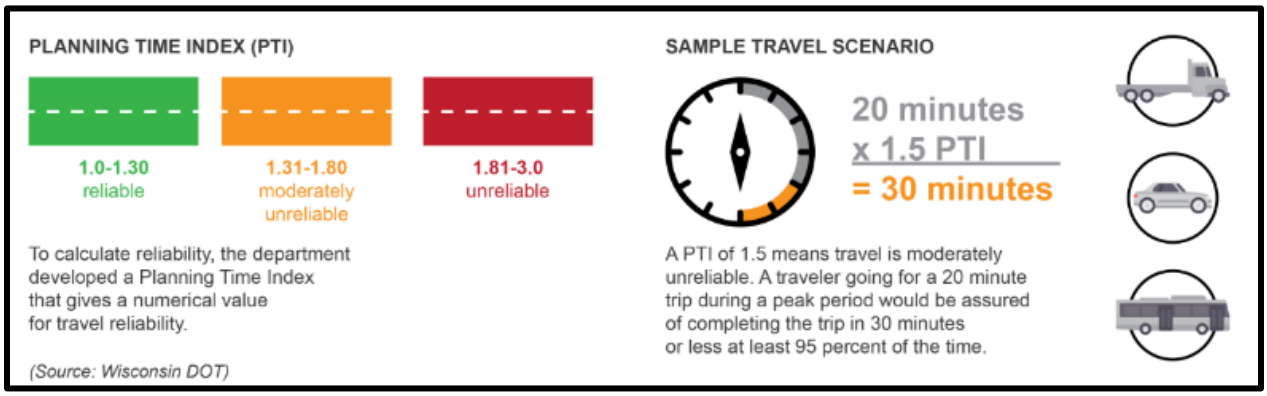
- **Truck Travel Time Reliability (TTTR).** This freight performance measure solely applies to the Interstate System and is calculated using the National Performance Management Research Data Set (NPMRDS). Data is first divided into five time periods: AM Peak (6 AM – 10 AM, weekdays); Mid-Day

(10 AM – 4 PM, weekdays); PM Peak (4 P. – 8 PM, weekdays); Overnight (8 PM. – 6 AM., all week); and Weekend (6 A.M. – 8 P.M., weekends). TTTR is then determined by dividing the 95th percentile truck travel time by the normal (or 50th percentile) truck travel time.

- **Congestion at truck freight bottlenecks.** The State DOT shall document the location of truck freight bottlenecks within the State including those identified in the National Freight Strategic Plan. If a State has prepared a State Freight Plan under 49 USC. 70202, within the last two years, then the State Freight Plan may serve as the basis for identifying truck freight bottlenecks. If the State Freight Plan has not been updated since the previous State Biennial Performance Report, then an updated analysis of congestion at truck freight bottlenecks must be completed. The inventory of bottlenecks shall include information such as location, average annual daily truck traffic, travel-time data, and capacity features causing the bottlenecks, among others.

In lay-terms a good way to describe the TTTR was found on the Wisconsin DOT website. The TTTR was related to a "Planning Time Index" (PTI) which incorporates your *expected travel time* plus the time you need to "pad" your trip because the roadway and travel time can be unpredictable. The PTI referenced in Figure 7.1 is the same as the TTTR Index.

Figure 7.1 – Info Graphic for PTI/TTTR Index

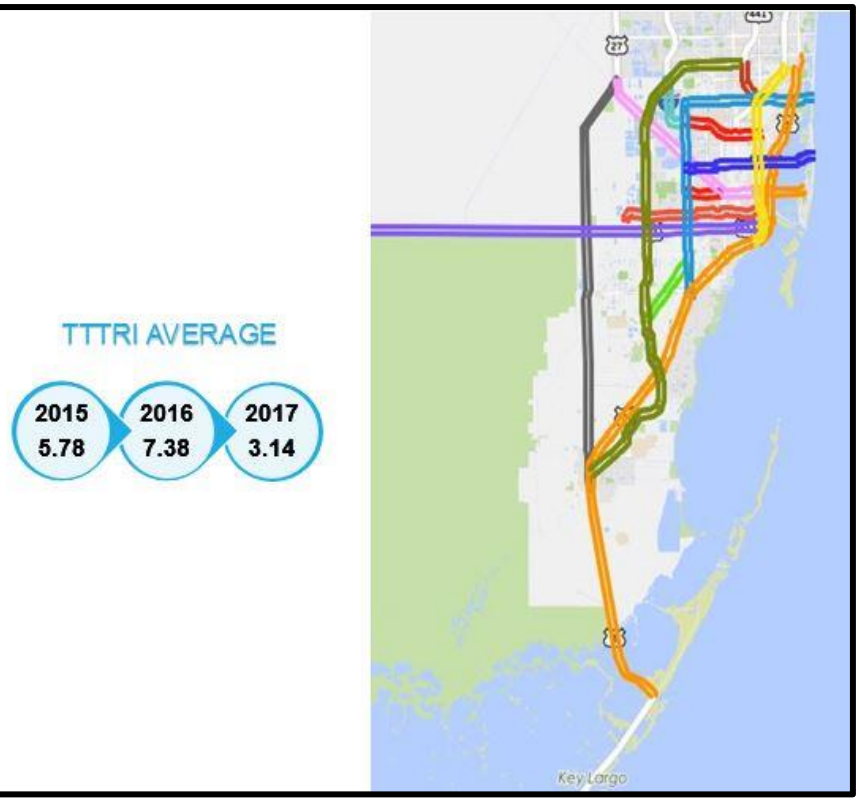


To comply with the TTTR performance requirements, state DOTs were required to establish 2- and 4-year targets by May 20, 2018 and the targets are to be reported in the state's baseline performance period report due by October 1, 2018. State DOTs have the option to adjust 4-year targets in their mid-performance period progress report, due October 1, 2020. MPOs must then either support the state target or establish their own quantifiable 4-year targets within 180 days of the state target establishment. FDOT officially announced their freight targets on May 18, 2018 and the TPO has until November 14, 2018 to establish their 4 year TTTR Index target.

This Plan Update performed an analysis of historic and current TTTR Index conditions in Miami-Dade County. Figure 7.2 shows the results of data made available by FHWA through the NPMRDS. The results show that many of the high-level roadways in the Miami-Dade Freight Network are included in the NPMRDS and that the average TTTR Indices for 2015 and 2016 are very high. FHWA was contacted to better understand these results and it was indicated that the deployment of the NPMRDS detector system had not been completed in Miami-Dade County until February of 2017 and data after that time is much more accurate.

Figure 7.2 – Miami-Dade County Historical NPMRDS Data

Truck Travel Time Reliability Index Miami-Dade	TTTR Index 2015	TTTR Index 2016	TTTR Index 2017
January	4.19	10.07	4.60
February	5.27	6.91	2.86
March	5.03	5.20	3.02
April	5.07	8.10	2.92
May	4.71	7.94	3.33
June	5.34	9.34	2.84
July	3.74	10.17	2.65
August	5.95	7.16	2.94
September	6.67	8.38	3.39
October	7.34	4.68	3.10
November	9.07	5.81	2.93
December	6.95	4.81	N/A
Year Average	5.78	7.38	3.14

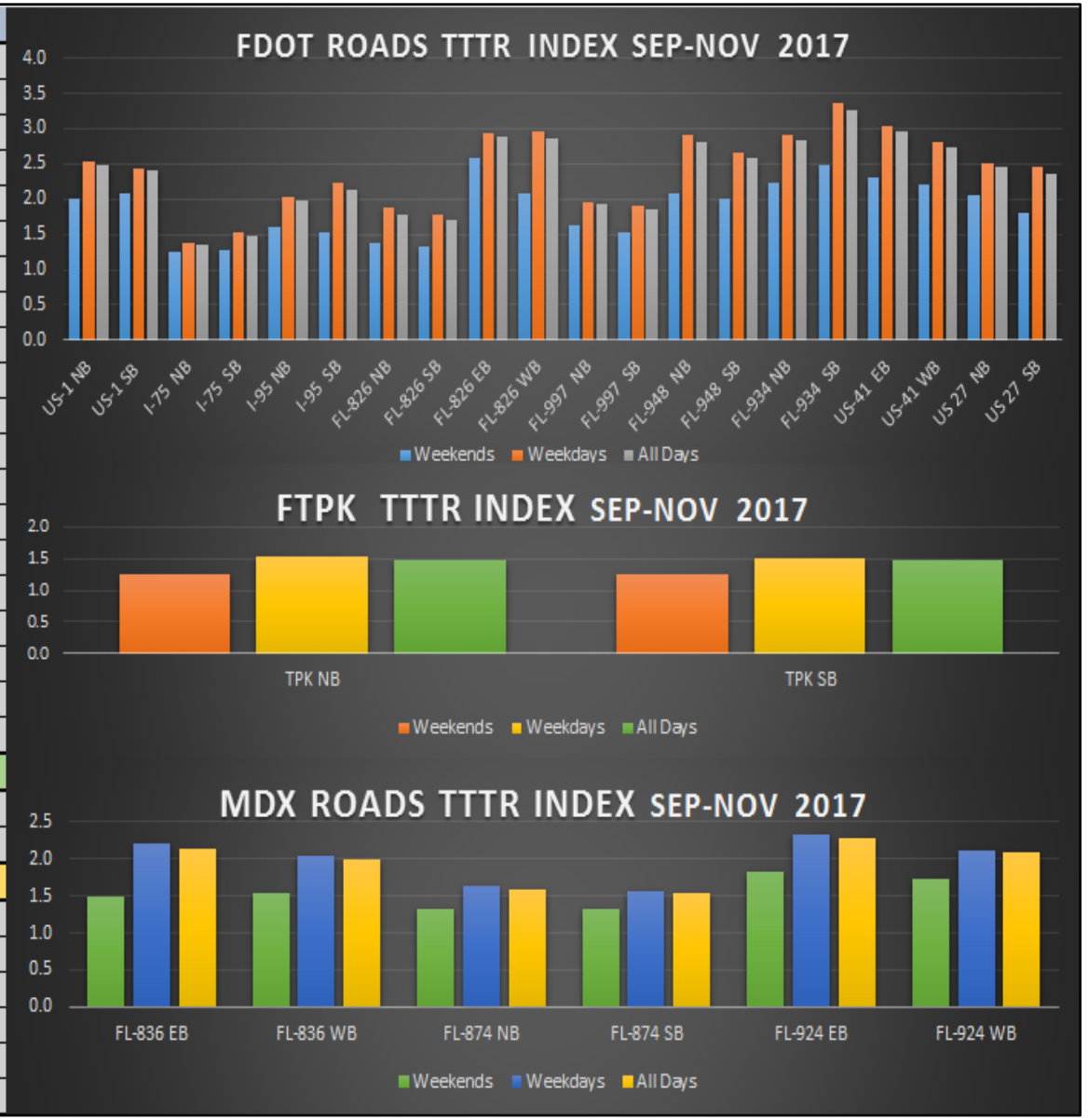


Source: NPMRDS

Figure 7.3 provides a dashboard for Miami-Dade Highway stakeholders during 2017 peak cargo months, September, October and November, and Appendix D provides Speed Scans for each roadway.

Figure 7.3 – Miami-Dade County Highway Stakeholder TTTR Index Dashboard

FDOT Roads	Weekends	Weekdays	All Days
US-1 NB	2.01	2.54	2.48
US-1 SB	2.07	2.44	2.41
I-75 NB	1.25	1.38	1.36
I-75 SB	1.27	1.53	1.49
I-95 NB	1.61	2.04	1.98
I-95 SB	1.54	2.24	2.14
FL-826 NB	1.38	1.87	1.79
FL-826 SB	1.34	1.79	1.71
FL-826 EB	2.59	2.93	2.88
FL-826 WB	2.07	2.95	2.86
FL-997 NB	1.63	1.96	1.92
FL-997 SB	1.54	1.91	1.85
FL-948 NB	2.08	2.91	2.82
FL-948 SB	2.00	2.67	2.59
FL-934 NB	2.24	2.91	2.83
FL-934 SB	2.48	3.36	3.26
US-41 EB	2.32	3.03	2.95
US-41 WB	2.20	2.80	2.74
US 27 NB	2.06	2.52	2.47
US 27 SB	1.81	2.45	2.37
FTPK	**Weekends**	**Weekdays**	**All Days**
TPK NB	1.26	1.53	1.48
TPK SB	1.26	1.51	1.47
MDX	**Weekends**	**Weekdays**	**All Days**
FL-836 EB	1.48	2.21	2.13
FL-836 WB	1.54	2.04	1.98
FL-874 NB	1.32	1.64	1.59
FL-874 SB	1.33	1.57	1.54
FL-924 EB	1.83	2.33	2.28
FL-924 WB	1.72	2.11	2.08



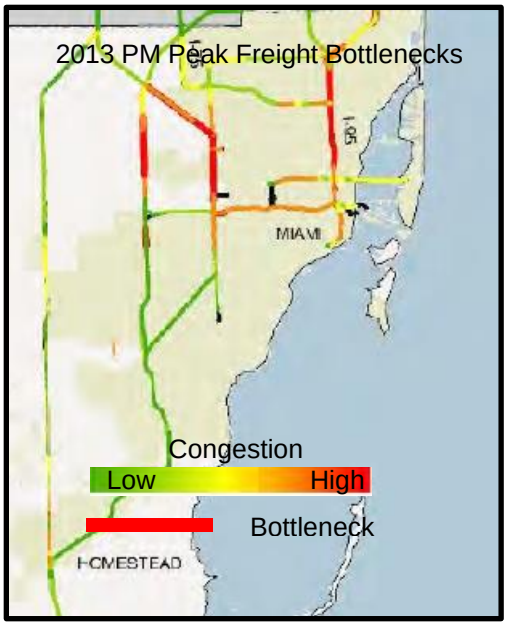
Source: NPMRDS

As previously noted the state DOT is required to identify truck freight bottlenecks within the State including those identified in the National Freight Strategic Plan. FDOT has prepared 2 statewide bottleneck analyses in the last decade. The top bottlenecks for all traffic at the statewide and districtwide level were identified as part of the 2011 Bottlenecks on Florida SIS study. The results of that study indicated there are hundreds of bottlenecks identified across the state and summarized the Top Twenty Statewide SIS Highway Bottlenecks. The study showed a majority of the top twenty bottlenecks were located in the heavily urbanized areas especially in the Miami-Dade area where fifteen of the top twenty were located, all of which fell on the following facilities:

- Florida's Turnpike
- SR 826 – Palmetto Expressway
- SR 836 – Dolphin Expressway
- I-95
- I-75
- SR 112 - Airport Expressway

Note that in 2011 data tools did not differentiate between freight and passenger bottlenecks. In 2015, FDOT conducted a bottleneck study using vehicle probe data from FHWA's National Performance Measure Research Data Set (NPMRDS) that provided freight truck flows along SIS highway corridors and identified freight specific areas of congestion and bottlenecks

The 2015 study showed a significant amount of the freight bottlenecks along the highway corridors were found in areas within and surrounding the urban areas of Jacksonville, Tampa Bay, Orlando, Ft. Lauderdale and Miami. Each of the corridors identified having at least one area suffering from a freight bottleneck. The results for Miami-Dade County are shown to the right. The graphic shows that for the 2013 PM Peak Period (4:00 PM to 7:00 PM) I-95 from SR 112 to the Golden Glades Interchange, US 27 from the HEFT to SR 826, the HEFT from NW 41st Street to NW 106th Street and SR B26 from NW 25th Street to US 27 as freight bottlenecks.



Source: FDOT Bottlenecks on Florida SIS Year 2015

7.2 Miami-Dade Freight Performance Targets

As mentioned earlier the FDOT established their 2 and 4-year freight targets for Interstate Highways on May 18, 2018 along with other system performance measures. For informational purposes, Table 7.1 shows historic performance for the TTTR for Miami-Dade County Interstate Highways and the statewide Interstate System in comparison the 2 and 4–year freight targets identified by FDOT. The Table shows that the Miami-Dade TTTR Index is much higher than the Statewide Indices which is expected as the Florida Interstate System has long stretches of Interstate where there very little local traffic congestion occurs. If the TPO chooses to adopt the state target, the TPO is effectively stating that its highway investments will contribute to the state's overall TTTR target. Note that the TPO only need declare a 4-year target.

Table 7.1 - TTTR Target for Miami-Dade County Interstates

Study Area	Annual TTTR Index by Year				2-Year Target	4-Year Target
	2014	2015	2016	2017		
Miami-Dade County Interstates	4.14	4.56	3.84	2.98	N/A	TBD
Statewide Interstates	1.42	1.45	1.44	1.43	1.75	2.00

Source: FDOT MAP-21 Mobility Performance Measures Development, Final Report, August 24, 2017; and 2017 PM3 Performance Measures Results, Memorandum, dated February 8, 2018, from Cambridge Systematics, Inc. to FDOT.

7.3 FDOT Statewide Initiatives

Beyond the Federal requirements, the Miami-Dade TPO may seek to monitor additional performance measures. At the state level, some of this work has already been completed. On an annual basis, the FDOT publishes a Source Book, which contains current and historical data and analysis describing the performance of Florida's transportation system. Figure 7.4 lists the measures in the Source Book, including multiple provisions for freight trucks, airports, rail, and seaports. While many of these statistics are reported within the Source Book at a composite level (State, District, etc.), they could also be determined for an individual MPO/TPO/TPA by FDOT.

7.4 FDOT District 6 Initiatives

FDOT District 6 has identified a proactive strategy to help advance its freight and logistics system, focused on partnering with local communities to develop subarea freight plans; freight-focused plans will help identify freight mobility strategies at the project level. The Town of Medley, one of the leading freight hubs in Miami-Dade County and South Florida, was selected to be the first community to go through this process. Medley has long been a leader as an industrial center providing service to PORTMiami, Port Everglades, MIA, Florida East Coast (FEC) Railway, and the South Florida business community. With access to SR 826, I-75, Florida's Turnpike, and U.S. 27, and connections with the region's major freight activity centers, Medley is accessible

Figure 7.4 - Multimodal Mobility Performance Measures Matrix

	MODE	QUANTITY	QUALITY	ACCESSIBILITY	UTILIZATION
PEOPLE	Auto/ Truck	• Vehicle Miles Traveled • Person Miles Traveled • % of non-Single Occupancy Vehicle Travel	• % Travel Meeting LOS Criteria • % Miles Meeting LOS Criteria • Travel Time Reliability » On-Time Arrival » Travel Time Variability • Vehicle Hours of Delay • Person Hours of Delay • Average Travel Speed • Number of Fatalities • Number of Serious Injuries • Rate of Fatalities • Serious Injuries Rate	• Time Spent Commuting • Job Accessibility – Auto	• % Travel Heavily Congested • % Miles Heavily Congested • Vehicles per Lane Mile • Hours Heavily Congested
	Transit	• Revenue Miles • Passenger Trips	• Revenue Miles between Failures	• Weekday Span of Service • Resident Access to Transit • Job Accessibility – Transit	• Passenger Trips per Revenue Mile
	Pedestrian and Bicycle		• Pedestrian Level of Service • Pedestrian and Bicycle – Fatalities and Serious Injuries • Bicycle Level of Service	• % Pedestrian Facility Coverage • % Bicycle Facility Coverage • % Population within 1 mile of Bike Lane and Shared-Use Paths	
	Aviation	• Passenger Boardings	• Departure Reliability		• Demand to Capacity Ratios
	Rail	• Passengers	• Departure Reliability		
	Seaport	• Passengers			
FREIGHT	Truck	• Combination Truck Miles Traveled • Truck Miles Traveled • Truck Tonnage • Combination Truck Ton Miles Traveled • Truck Value of Freight	• Travel Time Reliability » On-Time Arrival » Travel Time Variability • Combination Truck Hours of Delay • Combination Truck Average Travel Speed • Combination Truck Cost of Delay		• Truck Empty Backhaul Tonnage • % Miles Heavily Congested • Vehicles per Lane Mile
	Aviation	• Tonnage • Value of Freight			
	Rail	• Tonnage		• Active Rail Access	
	Seaport	• Tonnage • Twenty-Foot Equivalent Units • Value of Freight		• Seaport Rail Access	

Source: Florida Department of Transportation.

to local, regional, and state markets. The Medley study was followed by the Op-Locka, Miami River and Doral studies which have all been completed. These four served as a foundation in developing freight-focused projects for this Plan Update.

These planning level studies assess freight accessibility to/from and within each sub-area to develop strategies to enhance access and improve freight mobility. Figure 7.5 lists all the sub-area freight planning efforts currently programmed by District 6. The Miami River Freight Improvement Plan is unique among the sub-area freight planning efforts as it does not focus on a specific town or city. Instead, this study has developed viable options to improve intermodal freight movement and assess the potential of short sea shipping along the Miami River. These studies are being utilized by this Update to identify projects that will directly enhance freight mobility in Miami-Dade County.

Figure 7.5 – FDOT District 6 Subarea Freight Planning Studies

Sub-Area Freight Planning Efforts					
Name	**Financial Management Number**	**FDOT FY Contract Execution**	**Contract No.**	**Consulting Firm**	**Status**
Town of Medley Freight Improvement Plan	435754-2-22-01	2015-2016	C-9076	CTS Engineering, Inc.	Completed
Opa-Locka Freight Improvement Plan	435754-3-22-01	2015-2016	C-9P92	Cambridge Systematics, Inc.	Completed
Miami River Freight Improvement Plan	437946-1-22-01	2016-2017	C-9R48	Atkins North America, Inc.	Completed
Doral Freight Improvement Plan	437945-1-22-01	2016-2017	C-9S79	Marlin Engineering, Inc.	Completed
Miami Gardens Freight Improvement Plan	439483-1-12-01	2017-2018	C-9X11 (BDI)	PE Consulting Engineering, Inc.	In Progress
Hialeah Freight Improvement Plan	437989-1-22-01	2018-2019			Planned Ad.
Homestead Freight Improvement Plan	437999-1-22-01	2019-2020			TBD
Freight Village Analysis Study (Countywide)	437947-1-22-01	2020-2021			TBD

Source: Florida Department of Transportation District 6

8.0 FREIGHT SYSTEM NEEDS AND PRIORITIES

8.0 Freight System Needs and Priorities

Recently Miami-Dade County has invested heavily in key infrastructure projects that will transform how freight moves throughout the region. These major projects, including the PORTMiami Tunnel, NW 25th St Viaduct and on-port rail at PORTMiami, have long been in the planning stages. For these facilities to finally be constructed recognizes how important freight is to the local economy and the livability of County residents. Even with all these investments completed and underway, significant need remains.

Short-, mid- and long-term lists of highway freight needs for Miami-Dade County were developed using stakeholder interviews, review of past plans, the TPO Transportation Improvement Plan (TIP), and 2040 LRTP, the FDOT, Miami-Dade Expressway Authority and Florida's Turnpike Enterprise work programs and master plans, the FDOT District 6 Subarea Plans, FDOT SIS plans and in consultation with our modal partners. Projects were allocated to Short-, mid- and long term programs based on priorities provided by stakeholders and project readiness for implementation. For the purposes of future programming Short Range projects were identified for construction from Fiscal Years (FY) 2019 to 2025. This time frame was selected for several reasons as it is inclusive of the current TPO TIP, the FDOT, Turnpike and MDX Work Programs and for consistency with the First 5 Years of the upcoming TPO 2045 Long Range Transportation Plan (2045 LRTP) when it is adopted in Fiscal Year 2019. Following this reasoning the 2nd Five Year time frame is from FY 2026 to FY 2030 and the Long Range time frame is proposed for consistency with the outer years of the 2045 LRTP from FY 2031 to FY 2045.

Twenty different resources and documents were utilized to develop the lists and they are sourced in a footnote to each modal list of projects proposals. The lists also include the identification of localized hot spots which were identified from projects not implemented from the 2014 Freight Plan Update and by utilizing projects shown in the first four completed FDOT subarea freight planning studies. Individual lists were developed for the seaports, airports, rail, and highways. Highway lists were developed for "Freight-Related" and "Freight-Direct" projects. Freight-related projects are projects that are needed for all traffic and will also benefit freight. Freight-direct projects are projects that will have an immediate and significant impact on freight mobility. The following sections present the lists for each mode.

8.1 Seaport Projects

PORTMiami has experienced significant investment since the 2014 Freight Plan Update and many of their capital projects shown in the 2014 Update have been completed. The Port is currently developing a new master plan that will not be completed before the adoption of this Update. The list of needs for the Port is provided in Table 8.1 which was developed in close coordination with PORTMiami staff.

8.2 Airport Projects

MIA has recently made extensive investments in its cargo infrastructure. The $500 million Cargo Development Program included 17 new cargo buildings with over 3.5 million square feet that were completed prior to the 2014 Freight Plan Update. MDAD staff is now working on the development of an Amendment to their Strategic Master Plan called the Cargo Optimization, Redevelopment and Expansion Plan (CORE) which was explained in detail in Section 3 of this update. Table 8.2 provides the list of Airport needs developed in close coordination with MDAD.

8.3 Railroad Projects

Extensive infrastructure improvements are not planned for the railroads in Miami-Dade County. For the most part, planned improvements focus on key track upgrades, connection improvements, yard expansion and safety improvements. Table 8.3 details the projects identified in coordination with the FEC and CSX railroads. The US 27 Ramp to the Hialeah Yard is included here as a rail project because it has significant impact to the FEC Hialeah Intermodal Terminal.

8.4 Highway Projects

Highway needs include corridors and connectors and major and minor facilities. As discussed earlier, projects were identified that are Freight “Related” where they will have impact on a broader transportation purpose and Freight “Direct” where they will have an immediate and direct impact on freight mobility. Given the role trucks play in the County’s freight system, the extent of the list is much greater than those of the other modes. The list of needs was prioritized by identifying short-, mid- and long-term proposals for construction. Figures 8.1, 8.2 and 8.3 show the locations of the short-, mid- and long-term Freight Direct proposals, Table 8.4 provides the Freight-Direct and Table 8.5 provides the Freight-Related projects.

Table 8.1 - Seaport Project Needs

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE			
Project Type	**Project**	**Description**	**Source**
Seaport	POM Gantry Crane Rail Repair and Replacement	Maintenance/Other	(13)
	POM Bays 148-195 Seawall Upgrades	Maintenance/Other	(13)
	POM North Bulkhead Repairs	Maintenance/Other	(13)
	POM Bays 0-65 Seawall Rehabilitation	Maintenance/Other	(13)
	POM SFCT Cargo Yard Densification (eRTG)	Capacity	(13)
	POM Cargo Gates	Capacity	(13)
	POM Procurement Super Post-Panamax Gantry Cranes	Capacity	(13)
	POM Seaboard Redevelopment Phase V	Capacity	(13)
	POM Shed E Demolition and Paving	Capacity	(13)
	POM Shed G Demolition and Paving	Capacity	(13)
	POM Seaboard Building 1306 Demolition and Paving	Capacity	(13)
	POM Seaboard Building 1630 Demolition and Paving	Capacity	(13)
	POM Federal Inspection Facility	Capacity	(13)
	POM Inland Terminal	Capacity	(13)
	POM Port Crane Management Facility	Maintenance/Other	(13)
	POM Facilities Move	Maintenance/Other	(13)
	POM Improvements to Gate Complex	Seaport	(18)
	POM Bays 177-183 Sea Wall Construction	Berth	(18)
	POM Repair to Vehicular Bascule Bridge	Seaport	(18)
	POM Redevelopment of Port Blvd.	INROAD	(18)
	POM Gantry Cranes Acquisition Program	BERTH	(18)
	POM Expand and Modernize Port Utilities	Seaport	(18)
	POM Cargo Terminals	Seaport	(18)
	POM Extend Railroad Tracks	Seaport	(18)
	POM Roadway Realignments	Seaport	(18)
	POM Channel Modifications	Seaport	(18)
	POM Berth O - West New Apron	Berth	(18)
	POM Channel Modifications	Seaport	(18)
	POM Crane Maintenance Facility	Seaport	(18)
	POM Cargo Yard Stacker Cranes Program	Seaport	(18)
	POM Cargo Yard Improvements	Yard	(18)
	POM Fill SW Corner (Transhipment Yard)	Transhipment yard	(18)
	POM New Berth SW Corner 1	Berth	(18)
	POM New Berth SW Corner 2	Berth	(18)
	POM Cargo Berth 5	Berth	(18)
	POM Cargo Berth 6	Berth	(18)
	POM Cargo Berth 7	Berth	(18)
	POM Multimodal Terminal	Intermodal Container Transfer Facility	(18)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.2 - Airport Project Needs

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE			
Project Type	**Project**	**Description**	**Source**
Airports	MIA Fuel Tanker Parking Facility	Ops Improvement at West Cargo Base	(1)
	MIA Perimeter Road Widening and Realignment	Access	(1)
	MIA North East Apron and Drainage Improvements	Cargo Ramp	(1)
	MIA Building 702 Conversion and Hardstand Project	Airport Ops	(2)
	MIA New Cargo Clearance Center	Airport Ops	(4)
	MIA Building 702 Extension (Optional)	Airport Ops	(4)
	MIA Building 702 Freighter Conversion and Airside Improvements	Airport Ops	(4)
	MIA Demo Building 703/703A	Airport Ops	(4)
	MIA Fuel Tender Relocation	Airport Ops	(4)
	MIA Taxiway R Realignment	Airport Ops	(4)
	MIA Construct Cargo Truck Staging Area	Airport Ops	(4)
	MIA Building 716 Apron Extension	Airport Ops	(4)
	MIA Partial Demolition Building 704 - North 1/3	Airport Ops	(4)
	MIA Taxiway R Realignment and Extension	Airport Ops	(4)
	MIA New Cargo Clearance Center	Airport Ops	(4)
	MIA Relocate Fuel Tender Staging Area	Airport Ops	(4)
	MIA Demolition Building 704	Airport Ops	(4)
	MIA Airside Expansion (Hardstands/GSE)	Airport Ops	(4)
	MIA Cargo Building Expansion 714 (Hardstands/GSE)	Airport Ops	(4)
	MIA Redeveloped Cargo Building 716 and Hardstands	Airport Ops	(4)
	MIA New Vertical Core Facility Concept	Airport Ops	(4)
	MIA Taxi Lot Relocation	Airport Ops	(8)
	MIA Consolidated Maintenance Facility	Airport Ops	(8)
	MIA Relocation of NW 15th Street Perimeter Road Bridge	Access	(8)
	Opa-Locka Rehab Aprons	Airport Ops	(1)
	Opa-Locka OPF Taxiway Repair	Underway - Airport Ops	(1)
	Miami Exec RIM Program	Airport Ops	(3)
	Miami Exec 128th Street Connector Improvements	Access	(3)
	Miami Exec SR 874 Connector	Access	(3)
	Miami Exec SW 157th Avenue Access Improvements	Access	(3)
	MIA Homestead General X51 Widen Building Six Parking Lots	Roadway Access	(1)
	MIA South Terminal Apron Expansion	Airport Ops	(4)
	MIA Central Base Apron Expansion	Airport Ops	(4)
	TMB Taxway H Eastward Extension	Ongoing	(20)
	TMB RIM HS1	Runway Incursion Mitigation	(20)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.3 - Railroad Project Needs

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE			
Project Type	**Project**	**Description**	**Source**
Rail	FEC Miami Freight Forwarding Yard	Freight Capacity-Access	(1)
	FEC N. Miami to Ojus Double Track	Freight Capacity-Line Expansion	(1)
	FEC NE 203RoadStreet & NE 215th Street Intersection Improvements between US-1 & W Dixie Hwy	Safety-Grade Crossing	(1)
	SFRC MR MIC Double Track Last Mile of SFRC	System Capacity	(1)
	FEC N. Miami to Little River Track Upgrade	Freight Capacity-Rehabilitation	(1)
	SFRC/SFRTA Positive Train Control	Safety-Grade Crossing	(1)
	US 27 Ramp Connection to Miami Hialeah FEC Intermodal Terminal	Freight Capacity-Access	(6)
	US 27 Southeast Florida Rail Bypass	Freight Capacity-Line Expansion	(6)
	FEC Hialeah from Expand Hialeah Yard to Capacity	Rail Yard	(18)
	FEC at Auto Handling Facility	Terminal	(18)
	Railroad crossing closures and repairs on Downtown Lead rail spur		(19)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

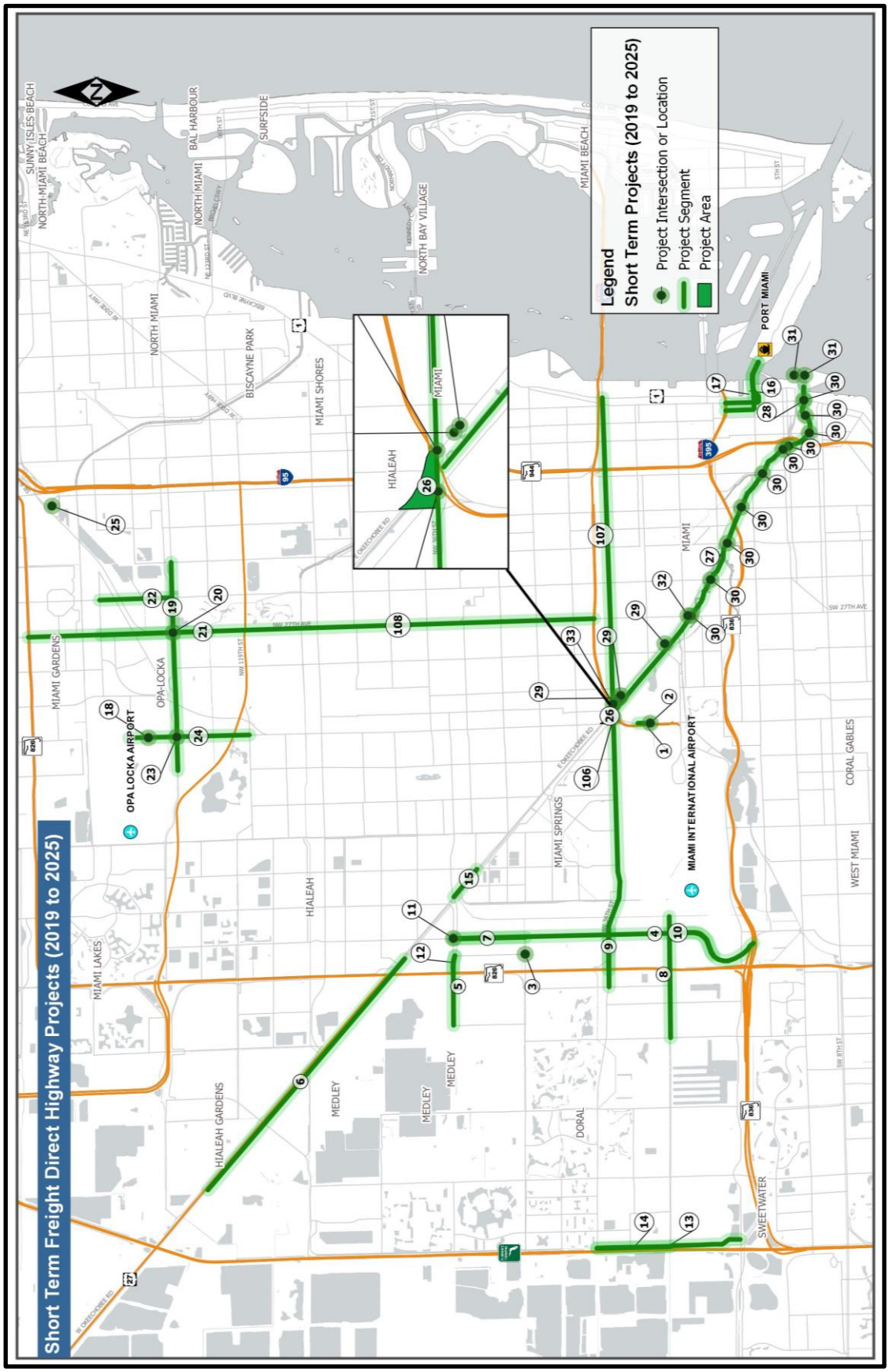


Figure 8.1 - Short Term Freight Direct Highway Projects (2019-2025)

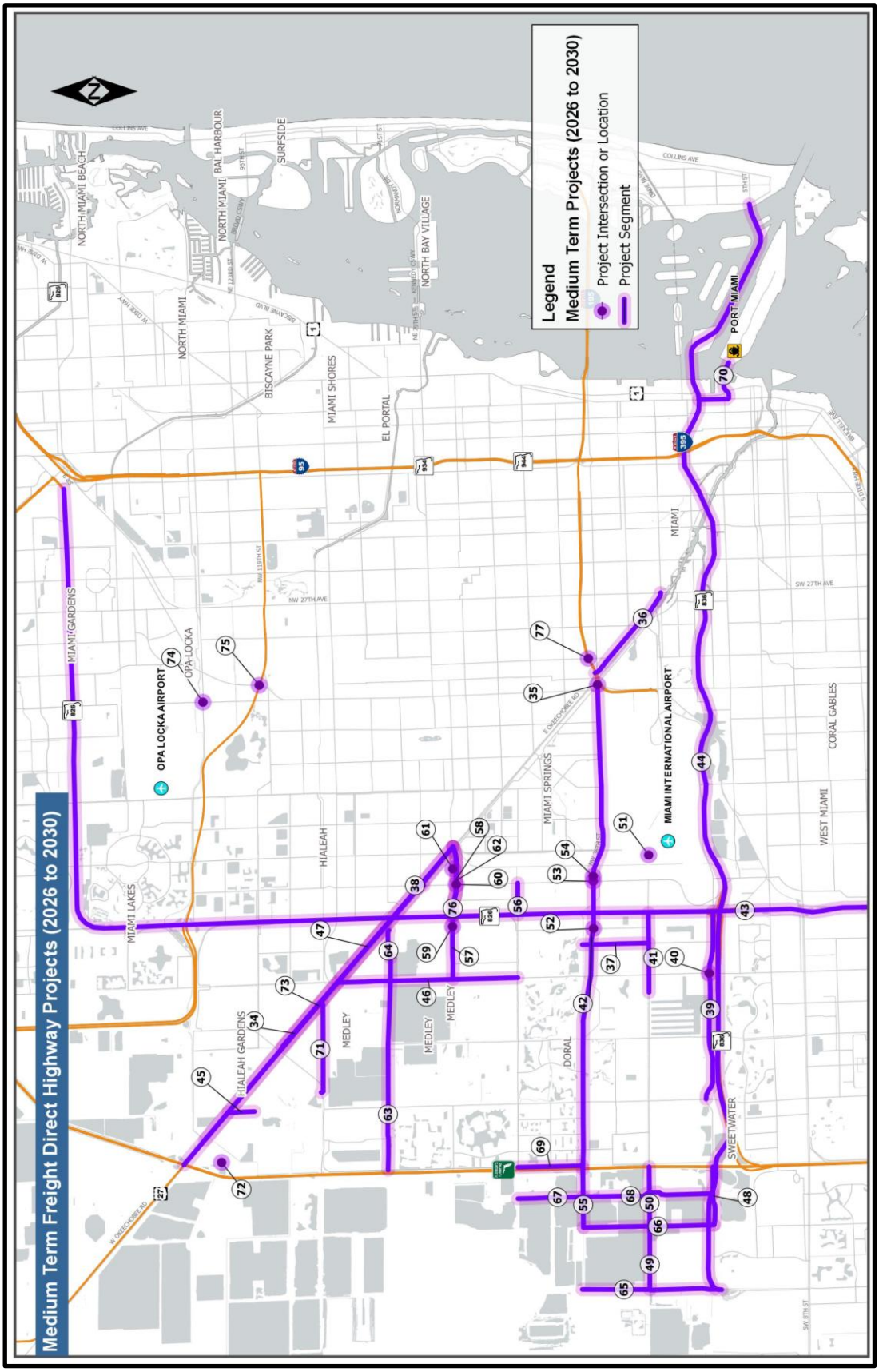


Figure 8.2 - Medium Term Freight Direct Highway Projects (2026-2030)

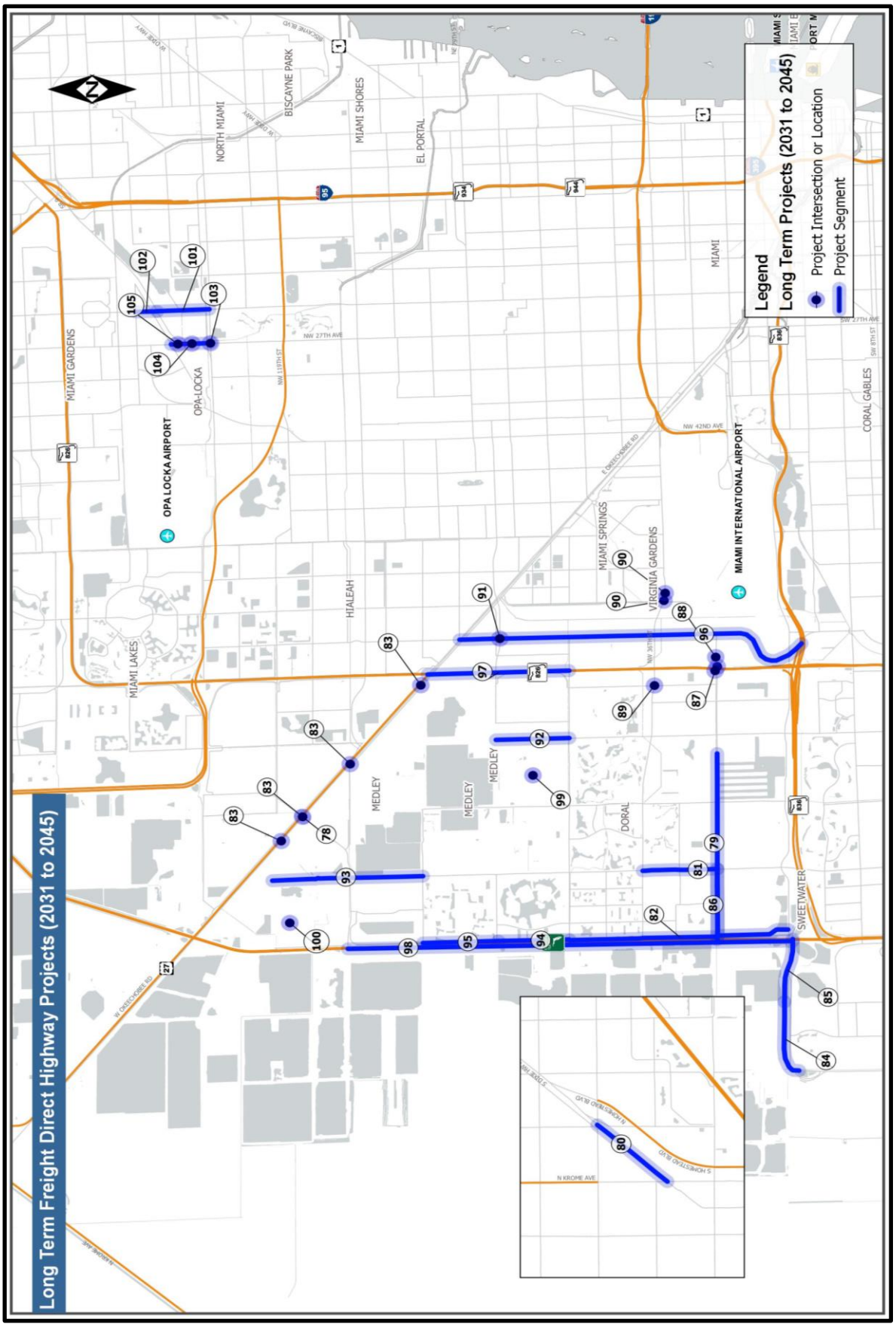


Figure 8.3 - Long Term Freight Direct Highway Projects (2031-2045)

Table 8.4 - Freight Direct Highway Projects

2018

MIAMI-DADE COUNTY

FREIGHT PLAN UPDATE

Project Type	Map Index #	Project	From	To	Description	Source
Freight Direct Highway Projects 2019 to 2025 (Short)	1	Le Jeune Road	NW 28th St	North of NW 31st St	Corridor Traffic Ops. Improvements	(1/15)
	2	Le Jeune Road	NW 28th St		Intersection Traffic Ops. Improvements	(1/15)
	3	NW 58th St	NW 74th Avenue		Intersection Traffic Ops. Improvements	(1/15)
	4	NW 72nd Avenue	NW 74th Avenue	SR 836	Corridor Traffic Ops. Improvements	(1/15)
	5	NW 74th St	NW 84th Avenue	NW 74th Avenue	Corridor Traffic Ops. Improvements	(1/15)
	6	NW South River Drive	NW 107th Avenue	NW 74th Avenue	Arterial Capacity Improvements	(1)
	7	Milam Dairy Road	NW 58th St	NW 74th St	Corridor Traffic Ops. Improvements	(1)
	N/A	Medley freight hub Street light improvements			Corridor Traffic Ops. Improvements	(1)
	8	NW 25th St	NW 87th Avenue	MIA Cargo Area	Signal Timing Improvement	(9)
	9	NW 36th St	NW 7100 Block	NW 79th Avenue	Signal Timing Improvement	(9)
	10	NW 72nd Ave	Corporate Way	NW 25th St	Signal Timing Improvement	(9)
	11	NW 72nd Ave	NW 74th St	NW 74th St Connector	Signal Timing Improvement	(9)
	12	NW 74th St	NW 74th Avenue	SR 826	Signal Timing Improvement	(9)
	13	NW 117th Avenue	NW 12th St	NW 41st St	add two Lanes to four Lanes Divided Arterial	(9)
	14	NW 117th Avenue	NW 25th St	NW 41st St	add two Lanes to four Lanes Divided Arterial	(9)
	15	US 27/Okeechobee Road	W 8th Avenue	NW 74th St	Signal Timing Improvement	(9)
	16	PORTMiami Access	I-395	PORTMiami Via 2nd Avenue and 5th St	Signal Timing Improvement	(9)
	17	PORTMiami Access	I-395	PORTMiami Via 1st Avenue and 6th St	Signal Timing Improvement	(9)
	N/A	At-Grade Railroad Crossings			Evaluate the need for rail grade separations at affected locations	(10)
	N/A	At-Grade Railroad Crossings	Countywide		Monitor rail movements for future grade spearations	(10)
	18	Curtiss St	at NW 42nd Avenue		Extend left turn lane storage to 1,000 feet on Curtiss St at WB approach to NW 42nd Ave; close median at Musick St	(11)
	19	NW 135th St	Opa-locka City Limits		Improve signal coordination along NW 135th St	(11)
	20	NW 135th St	NW 27th Avenue		Change EB approach to one shared through right plus two through plus two left; sign to indicate EB trucks making LT to NW 27th Avenue use outer lane only; pull back SBLT stop line, add pavement marking to align new EB through and left turn traffic pattern	(11)
	21	NW 27th Avenue	Opa-locka City Limits		Improve signal coordination along NW 27th Ave	(11)
	22	NW 22nd Avenue	Opa-locka City Limits		Improve signal coordination along NW 22nd Ave	(11)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.4 - Freight Direct Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE						
Project Type	**Map Index #**	**Project**	**From**	**To**	**Description**	**Source**
Freight Direct Highway 2019 to 2025 cont'd (Short)	23	NW 42nd Avenue	at NW 135th St		Add additional SB through lane and exclusive SB right turn lane at NW 42nd Avenue and NW135th St	(11)
	24	NW 42nd Avenue	Opa-locka City Limits		Improve signal coordination along NW 42nd Avenue/Le Jeune Road	(11)
	25	Truck Parking Faciltiy at Golden Glades Interchange				(12)
	26	Monitor implementation of ongoing "Iron Triangle Study" recommendations by FDOT				(19)
	27	Improve Miami River navigation channel signing and aids				(19)
	28	Tunnel PD&E Study for Brickell Avenue Bridge				(19)
	29	NW North River Drive railroad crossings				(19)
	29	Upgrade private driveway rail crossings on NW North River Drive				(19)
	107	Monitor NW 36th St Corridor Planning Study	SR 826	US 1	Multimodal planning study to consider street cross-section traffic operations, bicycle/pedestrian/transit and freight elements.	(19)
	108	Improve signal coordination along NW 27th Avenue	SR 826	SR 112		(19)
	30	Monitor and manage traffic signal time and coordination with bascule bridge operations along Miami River				(19)
	31	Install a Port of Miami River wayfinding sign system for NW North River Drive and NW South River Drive				(19)
	32	NW 27th Avenue/NW North River Drive intersection				(19)
	106	NW South River Drive at NW 36th St intersection				(19)
	33	NW North River Drive at NW 36th St intersection				(19)
	N/A	Investigate potential FTZ warehouse sites or development as private sector lead				(19)
Freight Direct Highway Projects 2026 to 2030 (Medium)	34	SR 25/Okeechobee Road/US 27	NW 138th St	NW 79th Avenue	Corridor Traffic Ops. Improvements	(1/15)
	35	NW South River Drive	NW 36th St		Intersection Traffic Ops. Improvements	(1/15)
	36	NW North River Drive	SR 112	NW 27th Avenue	Corridor Traffic Ops. Improvements	(1/15)
	37	NW 82nd Avenue	NW 41st St	NW 25th St	Arterial Capacity Improvements	(1/15)
	38	W 16th Avenue	S Okeechobee Rd	NW South River Dr	Corridor Traffic Ops. Improvements	(1/15)
	39	NW 12th St	NW 107th Avenue	SR 826	Arterial Capacity Improvements	(1)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.4 - Freight Direct Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE						
Project Type	Map Index #	Project	From	To	Description	Source
Freight Direct Highway Projects 2026 to 2030 (Medium)	40	NW 12th St	NW 87th Avenue		Intersection Traffic Ops. Improvements	(1)
	41	NW 25th St	NW 89th Court	SR 826	Arterial Capacity Improvements	(1)
	42	NW 36th St/ NW 41th St	HEFT	Le Jeune Road	Corridor Traffic Ops. Improvements	(1)
	43	SR 826/Palmetto Expressway	Golden Glades	Dadeland	Freeway Capacity Improvements (Unfunded)	(1)
	44	SR 836/I-395/MacArthur Causeway	NW 137th Avenue	Miami Beach	Freeway Capacity Improvements (Unfunded)	(1)
	45	NW 107th Avenue	Okeechobee Road	1000 ft north of NW 122nd St	Arterial Capacity Improvements	(1)
	46	NW 87th Avenue Extension	Okeechobee Road	NW 58th St	Arterial Capacity Improvements	(1)
	48	NW 12th St	NW 127th Avenue	TURNPIKE	add two Lanes to six Lane Divided Arterial with TSM&O	(9)
	49	NW 25th St	FI-825/SW 137th Avenue	NW 127th Avenue	New Road	(9)
	50	NW 25th St	NW 127th Avenue	TURNPIKE	add two Lanes to six Lane Divided Arterial with TSM&O	(9)
	51	NW 25th St	and NW 67th Avenue		Intersection Modification	(9)
	52	NW 36th St	and NW 79th Avenue		Intersection Modification	(9)
	53	NW 36th St	and NW 72nd Avenue		Intersection Modification	(9)
	54	NW 36th St	and NW 7100 Block		Intersection Modification	(9)
	55	NW 41st St	NW 127th Avenue	TURNPIKE	add two Lanes to a four Lane Divided Arterial	(9)
	56	NW 58th St	SR 826	Milam Dairy Road	add two Lanes to a four Lane Divided Arterial	(9)
	57	NW 74th St	NW 87th Avenue	SR 826	TSM&O	(9)
	58	NW 74th St	SR 826	Okeechobee Road	add two Lanes to a eight Lane Divided Arterial	(9)
	59	NW 74th St	and NW 77th Ct		Intersection Modification	(9)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.4 - Freight Direct Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE						
Project Type	**Map Index #**	**Project**	**From**	**To**	**Description**	**Source**
Freight Direct Highway Projects 2026 to 2030 (Medium)	60	NW 74th St	and NW 72nd Avenue		Intersection Modification	(9)
	61	NW 74th St	and NW 69th Avenue		Intersection Modification	(9)
	62	NW 74th St	FL-826	Okeechobee Road	add two Lanes to a eight Lane Divided Arterial	(9)
	63	NW 90th St	NW 117th Avenue	NW 84 Avenue	New Road and Add Lanes to four Lanes Divided Arterial	(9)
	64	NW 90th St	NW 84th Avenue	NW 79th Avenue	New Construction two Lane Divided Roadway	(9)
	65	SW 137th Avenue	NW 12th St	NW 41st St	New two Lane Divided Roadway	(9)
	66	NW 127th Avenue	NW 12th St	NW 41st St	New four Lane Divided Arterial	(9)
	68	NW 122nd Avenue	NW 12th St	NW 41st St	New four Lane Divided Arterial	(9)
	67	NW 122nd Avenue	NW 41st St	NW 58th St	New four Lane Divided Arterial	(9)
	69	NW 117th Avenue	NW 41st St	NW 58th St	add two Lanes to a four Lane Divided Arterial	(9)
	70	PORTMiami Access	I-395	PORT Miami Via 2nd Avenue and 5th St	Geometric Modifications	(9)
	71	NW 106th St	South River Drive to NW 116th Way		add two Lanes to a four Lane Divided Arterial	(10)
	72	NW 138th St	At NW 115th Avenue		Resurfacing to fix flood retention issues during raining conditions	(10)
	73	SR 25 / Okeechobee Road	HEFT to NW 74th St		Use of Traffic Adaptive Signal System throughout the corridor	(10)
	47	SR 25 / Okeechobee Road	Town of Medley		Implement Active Arterial Management Techniques, including dynamic message sign system, CCTV coverage and detection systems that can collect traffic data	(10)
	N/A	Medley Townwide			Implementation of a Virtual Freight Network (VFN) that identifies operational strategies using intelligent transportation technology to improve freight mobility within	(10)
	74	NW 42nd Ave/NW 135th St Access	NW 42nd Avenue and NW 135th St within 1000 feet of intersection		Reduce access/close driveways along intersection legs of NW 42nd Ave/NW 135th St	(11)
	75	Douglas Rd/Gratigny Parkway	Douglas Rd/Gratigny Access		Improve Le Jeune Rd/Douglas Roadaccess to/from Gratigny interchange	(11)
	76	NW 74th St	Palmetto Expy	FEC Intermodal Yard	Modify Connector	(17)
	N/A	Develop truck staging area near NW 37th Avenue				(19)
	77	Proposed ramps to and from the east on SR 112/Airport Expressway at NW 37th Avenue				(19)
	N/A	Reconstruct NW South River Drive				(19)
	N/A	NW South River Drive improvement				(19)
	N/A	Access management along south frontage of NW North River Drive				(19)
	N/A	Local street improvements in industrial district north of NW North River Drive				(19)
	N/A	Develop railroad intermodal ramp				(19)
	N/A	Explore development of a short sea shipping concept	Miami River			(19)
	N/A	Investigate bulkhead repair program utilizing SIS and other funds	Miami River			(19)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.4 - Freight Direct Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE						
Project Type	**Map Index #**	**Project**	**From**	**To**	**Description**	**Source**
Highway Freight Direct Projects 2031 to 2045 (Long)	78	NW 116th Way	Okeechobee Road	South River Drive	Corridor Traffic Ops. Improvements	(1/15)
		Way-Finding Sign Improvement Program			Corridor Traffic Ops. Improvements	(1/15)
	79	NW 25th St	HEFT	NW 89th Court	Corridor Traffic Ops. Improvements	(1)
	80	SR 997/Krome Truck By-Pass	Along Flagler Ave/Civic Court	NE 6th Ave	Arterial Capacity Improvements	(1)
	81	NW 107th Avenue	NW 25th St	NW 41st St / Campbell Dr	Arterial Capacity Improvements	(1)
	82	NW 117th Avenue	NW 12th St	NW 58th St	Corridor Traffic Ops. Improvements	(1)
	83	Medley Bridge/Canal Improvement Program	NW 121st Way, NW 116th Way, NW 105th Way, NW 79th Ave		Corridor Traffic Ops. Improvements	(1)
		Integration of Truck Route System & Regional ITS Network improvements			ITS Improvements	(1)
	84	SR 836	SR 825/SW 137th Avenue	NW 127th Avenue	add two Managed Lanes	(9)
	85	SR 836	NW 127th Avenue	HEFT	add two Expressway Lanes	(9)
	86	NW 25th St Viaduct	NW 117th Avenue	NW 107th Avenue	Transition to At Grade	(9)
		NW 25th St Viaduct	MIA Cargo Area	New Intermodal Center	+ Viaduct Ext	(9)
	87	NW 25th St Viaduct	WB to SB at SR 826		Intersection Improvement	(9)
	88	NW 25th St	and NW 75th Avenue		Intersection Modification	(9)
	89	NW 36th St	and NW 79th Avenue		Lane Reconfiguration	(9)
	90	NW 36th St	at NW 67th & 66th Avenue & Perimeter Road		Intersection Modifications	(9)
	91	NW 74th St	and NW 72nd Ave		Access Management	(9)
	92	NW 87th Avenue	NW 58th St	NW 74th St	add two Lanes to a six Lane Divided Arterial	(9)
	93	NW 107th Avenue	NW 90th St	NW 122th St	add two Lanes to a four Lane Divided Arterial	(9)
	94	NW 117th Avenue	NW 58th St	NW 74th St	add two Lanes to four Lane Divided Arterial	(9)
	95	NW 117th Avenue	NW 74th St	NW 90th St	New four Lane Divided Arterial	(9)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.4 - Freight Direct Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE						
Project Type	**Map Index #**	**Project**	**From**	**To**	**Description**	**Source**
Highway Freight Direct Projects 2031 to 2045 (Long)	96	Milam Dairy Road	SR 836	Okeechobee Road	add two Lanes to eight Lane Divided Arterial	(9)
	97	SR 826/Palmetto Expressway	NW 58th St	Okeechobee Road	Autonomous Vehicle/Connected Vehicle Technology	(9)
	98	HEFT	SR 836	NW 106th St	Autonomous Vehicle/Connected Vehicle Technology	(9)
		PORTMiami Access	I-395	PORT Miami	Reevaluate after I-395 Evaluation	(9)
	99	FEC Intermodal Facility Access N. of NW 58th St and W. of NW 87th Avenue			Capacity improvements	(9)
	100	FEC Transloading Facility Access at NW 114th S. of Homestead Extension			Capacity improvements	(9)
	101	NW 22nd Avenue	NW 22nd Avenue from Opa-locka Blvd to SR-9		Add two additional through lanes on NW 22nd Avenue from Opa-locka Blvd to SR-9	(11)
	102	NW 22nd Avenue	NW 22nd Avenue from SR-9 to NW 151st St		Add four additional through lanes on NW 22nd Avenue from SR-9 to NW 151st St	(11)
	103	NW 27th Avenue	North Corridor		Incorporate truck considerations input to SMART NW 27th Avenue project	(11)
	104	NW 27th Avenue	NW 27th Avenue from Opa-locka Blvd to SR-9		Add two additional through lanes on NW 27th Avenue from Opa-locka Blvd to SR-9	(11)
	105	SR-9/NW 27th Avenue Interchange			Reconstruct SR-9/NW 27th Avenue interchange (coordinate with SMART corridor project)	(11)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.5 - Freight Related Highway Projects

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE					
Project Type	**Project**	**From**	**To**	**Description**	**Source**
Freight Related Highway Projects Current to 2025 (Short)	SR 821/HEFT	SR 874	I-75	**Underway -** Widen, Add Managed Lanes	(1)
	NW 12th Street	NW 107th Avenue	SR 826	**Underway**- Widen from 4 lanes to 6 lanes, improve signal coordination	(1)
	SR 997/Krome Avenue	South of Flagler Avenue	SW 296th Street (Truck Route)	**Underway** - Widen	(12)
	I-75	at Miami Gardens Drive		**Underway -** Modify Interchange	(17)
	SR 836 Operational, Capacity and Interchange Improvements	NW 57th Avenue	NW 17th Avenue	**Underway** - New SR 836 Eastbound Auxiliary Lane from NW 57th Avenue to Le Jeune Road; SR 836 Eastbound additional lane from Le Jeune Road to NW 27th Avenue; SR 836 Westbound additional lane from 17th Avenue to 57th Avenue and improvements to the interchanges at NW 57th Avenue, Le Jeune Road, NW 27th Avenue and NW 17th Avenue.	(14)
	SR 836 Interchange Modifications at 87th Avenue	SR 836 West of 82nd Avenue	NW 97th Avenue	**Underway -** Reconstruction of the NW 87th Avenue Interchange and SR 836 Mainline to 500 feet West of NW 82nd Avenue.	(14)
	SR 826/Palmetto Expressway	I-75	SR 836	**Underway** - Add managed lanes Interchange Improvements	(1)
	SR 826/Palmetto Expressway (NB)	Okeechobee Road	NW 103rd St	**Underway**- Add 1 NB auxiliary lane	(1)
	SR 836/I-95 Interchange Ramps	NW 17th Avenue	I-95	Modify Interchange	(12)
	SR 826/Palmetto Expressway	SR 826 Eastbound Ramp	SR 9A/I-95 Northbound	Modify Interchange	(12)
	SR 826/Palmetto Expressway	I-75	I-95	Managed Lanes	(12)
	I-75	S. of NW 170th St	Miaml-Dade County Line	Managed Lanes	(12)
	SR 821/HEFT	SW 216th St	Eureka Dr	Widen from 6 to 10 lanes	(1)
	SR 821/HEFT	Eureka Dr	Kendall Dr	Widen to 8-, 10-, 12-lanes plus auxiliary lanes	(1)
	SR 821/HEFT	Kendall Dr	I-75	Widen from 6/8 lanes to 10 lanes	(1)
	NW 20th St	NW 27th Avenue	I-95	Roadway infrastructure improvements	(1)
	NW 25th St	NW 117th Avenue		Widen 25th St to include reversible lanes. Provide adequate left-turn bay lengths, incldue access management median opening closures within 1,000 feet of the intersection and provide adequate turning ratio	(1)
	SR 821/HEFT Interchange Improvements	Hainlin Mill Drive		Increase operational capacity, improve safety, address roadway and structural deficiencies, and enhance overall traffic operations on the Turnpike / SR 821 at Hainlin Mill Drive Interchange. Also includes improvements along the Turnpike / SR 821 and surface streets.	(7)
	HEFT	From MP 0 to MP 5.1, and ramps from MP 5.1	MP 9.2	Work includes milling and resurfacing, guardrail installation, and signing and pavement marking improvements.	(7)
	SR 25/Okeechobee Rd/US 27	E. of NW 117th Avenue	E. of NW 107 Avenue	Modify Interchange	(12)
	SR 112/I-195 Frontage Road & Ramp Realignment	Miami Design District		New Road	(12)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.5 - Freight Related Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE					
Project Type	**Project**	**From**	**To**	**Description**	**Source**
Freight Related Highway Projects Current to 2025 (Short) cont'd	SR 9A/I-95 Southbound Ramp to Westbound SR 836	SR 9a/I-95 Southbound Ramp	Westbound SR 836	Modify Interchange	(12)
	Golden Glades Interchange Improvements (Mainline Spur MP 0x)		SR 91/Turnpike Southbound	Modify Interchange	(12)
	Golden Glades Interchange Improvements N/B Direct Connect Bridge		SR 91/Turnpike Southbound	Bridge	(12)
	Golden Glades Interchange	SB Turnpike	SB I-95 at NW 135th St	Modify Interchange	(17)
	Golden Glades Interchange: SR-826/Palmetto Expy	NW 17th Avenue at SR 826	NB I-95 at NW 183rd St	Modify Interchange	(17)
	SR 91/Florida's Turnpike	I-95 / Golden Glades		Operational improvements from Golden Glades interchange to Turnpike / SR 91 SB to I-95 SB.	(7)
	SR 836/I-395	West of I-95	MacArthur Cswy Bridge	Bridge	(12)
	SR 25/Okeechobee Rd/US 27	E. of NW 107 Avenue	E. of NW 116th Way	Grade Separation	(12)
	Golden Glades Interchange	@ I-95, SR 826 and Florida's Turnpike		Modify Interchange	(12)
	I-95 NB	Biscayne River Canal	SR 860/Miami Gardens Drive	Add two Auxiliary Lanes	(12)
	SR 836 New HEFT Ramp Connections	SR 836	Homestead Extension of Florida's Turnpike	New connections from SR 836 to the Homestead Extension of the Florida's Turnpike (HEFT) including eastbound SR 836 to northbound HEFT general purpose lanes, and southbound HEFT general purpose lanes to westbound SR 836.	(14)
	SR 924/Gratigny Parkway Partial Interchange at NW 67th Avenue	SR 924	NW 67th Avenue	New westbound on and off ramp from NW 67th Avenue and new eastbound on-ramp from NW 67th Avenue.	(14)
	SR 112 Ramp Improvements at NW 37th Avenue	SR 112	NW 37th Avenue	New partial interchange at SR 112 and NW 37th Avenue. New movements SR 112 include eastbound on-ramp at NW 37th Avenue as well as a westbound off-ramp at NW 37th Avenue.	(14)
	SR 874/Don Shula Expressway	SW 72nd St	SR 874	New southbound exit ramp to SW 72nd St and new northbound entrance ramp to SR 874 from SW 72nd St.	(14)
	SR 836 Extension - Westbound Access Ramp	SR 836 Extension Westbound	NW 107th Avenue	New public-use access ramp from West of NW 107th Avenue to SR 836 westbound extension.	(14)
	SR 836 Infrastructure Modifications for Open Road Tolling (West SECTION)	NW 137th Avenue	NW 62nd Avenue	Modification of toll plaza, installation of gantries and system signage, and modification to SR 836 and ramps near existing toll plaza.	(14)
	SR 997/Krome Avenue	SW 312th St/Campbell Drive	SW 136 St	Add two Lanes to four Lanes Divided	(12)
	SR 826/Palmetto Expressway Connector	At Golden Glades		Modify Interchange	(12)
	SR 25/Okeechobee Rd/US 27	Broward County Line	West of HEFT	Add two Auxiliary Lanes	(12)
	SR 836 / I-95 Interchange Improvements	NW 17th Avenue	I-95	Widening and operational improvements to SR 836 EB from NW 17th Ave to I-95, widening of the SR 836 bridges over the Miami River and improvements to the SR 836 WB mainline and new connector serving SB I-95 traffic destined WB on SR 836 and to the Civic Center.	(14)
	Conduct transit circulator feasibility study to serve Palmer Lake and western Miami River corridor				(19)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.5 - Freight Related Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE					
Project Type	**Project**	**From**	**To**	**Description**	**Source**
Freight Related Highway Projects 2026 to 2030 (Medium)	SR 821/HEFT	US 1	Campbell Drive	Add two Lanes to six Lanes Expressway	(7)
	SR 826/Palmetto Expressway	I-75	NW 17th Avenue	Managed Lanes	(16)
	SR 25/Okeechobee Road/US 27	East of NW 87th Avenue	NW 79th Ave	Add two to Build eight Lanes	(12)
	SR 25/Okeechobee Road/US 27	East of NW 116th way	East of NW 87th Ave	Grade Separation	(12)
	SR 25/Okeechobee Road/US 27	at SR 826/Palmetto Expressway		Various Ramps	(12)
	SR 924/Gratigny Parkway Extension West to the HEFT	HEFT	Existing SR 924	Expressway extension from SR 924 West to the Homestead Extension of the Florida's Turnpike (HEFT). Segment 1 - 107th Avenue to HEFT including feasibility analysis for a potential ramp at 87th Avenue, Segment 2 - 97th Avenue to 107th Avenue, and Segment 3 - 97th Avenue to SR 826. This work program includes funding for Design-Build of Segment 1 WB and Segment 2, and Final Design for Segments 1 EB and 3 EB.	(14)
	SR 924/Gratigny Parkway Extension East to I-95	Existing SR 924 at NW 32nd Avenue	I-95	Expressway Extension	(14)
Highway Freight Related Projects 2031 to 2045 (Long)	SR 826/Palmetto Expressway	NW 103rd St	NW 154th St	Ultimate Improvement, Modify Interchange	(17)
	NW 21st Street/NW 32nd Avenue	NW 37th Avenue	NW 28th St	Construct high level bridge	(1)
	SR 25/Okeechobee Rd/US 27	Krome Avenue	NW 79th Avenue	Expressway Conversion-Construct Grade Separated Overpasses at Major Intersections. New Interchange at NW 79th Avenue, Krome Ave/SR 997, NW 103 St/NW 87th Avenue	(1)
	SR 25/Okeechobee Rd/US 27	Krome Avenue	SR 826	Conversion to limited access toll facility	(1)
	NW North River Dr	NW 107th Avenue	NW 74th Avenue	Widen North River Drive to include shoulders and improved access management	(1)
	NW South River Dr & Medley Bridges connecting to Okeechobee Rd/US 27	Medley's NW South River Drive Bridges	US 27/Okeechobee Road	Widen bridges and intersections between Okeechobee Roadand NW South River Dr. Address inadequate geometry and improve freight and truck movements	(10)
	NW North River Dr	NW 107th Avenue	NW 74th Avenue	Widen North River Drive to include shoulders and improved access management	(1)
	Medley Bridge/Canal Improvement Program	NW 121st St Way, NW 116th Way,NW 105th Way, NW 79th Avenue		Improve the connections between Okeechobee Roadand Medley through a combination of bridge widening and canal improvements	(1)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

Table 8.5 - Freight Related Highway Projects (continued)

2018 MIAMI-DADE COUNTY FREIGHT PLAN UPDATE					
Project Type	**Project**	**From**	**To**	**Description**	**Source**
Highway Freight Related Projects 2031 to 2045 (Long)	Connect 4 Express	SR 836	SR 924	New expressway connecting SR 836, SR 112 and SR 924. Includes system interchanges with SR 112 and SR 924 and potential service interchanges with NW 54th St, NW 79th St and NW 103 Road with connectors to NW 37th Avenue	(18)
	I-95 at NW 20th St	NW 20th St		New Interchange	(18)
	SR 836 SW Extension (MDX)	NW 137th Avenue	SW Kendall	New expressway connecting SR 836, SR 112 and SR 924. Includes system interchanges with SR 112 and SR 924 and potential service interchanges with NW 54th St, NW 79th St and NW 103 Road with connectors to NW 37th Avenue.	(18)
	SR 836 Managed Lanes	NW 87th Avenue	HEFT	Managed Lanes	(18)
	SR 836 Managed Lanes	East of SR 826	West of SW 27 Avenue	Managed Lanes	(18)
	NW 25th St Viaduct	NW 82nd Avenue	NW 107th Avenue	Grade Seaparated Viaduct	(18)
	SR 826/Palmetto Expressway	SR 836	US 1	Managed Lanes	(18)
	SR 826/Palmetto Expressway/ Okeechobee Road	SR 826	US 27/Okeechobee Road	Modify Interchange	(18)
	SR 25/Okeechobee Road	SR 826	Krome Avenue	Ultimate Improvement	(17)
	I-75	SR-826	NW 170th St	Ultimate Improvement	(17)
	I-75 at NW 138th St			Modify Interchange	(18)
	I-75 / SR 826 Int.	I-75	SR 826	Modify Interchange	(18)
	I-75 Corridor Improvements	NW 138th St	SR 826	Ultimate Improvement	(18)
	I-75 / Miami Gardens Dr. Interchange	HEFT	NW 170th St.	Ultimate Improvement	(18)
	I-75 / HEFT Interchange	Collector Distributor Road	Miami Gardens Dr	Modify Interchange	(18)
	SR 90 at I-95			Modify Interchange	(18)
	I-95	US 1	Broward County line	Managed Lanes and Transitway Ultimate Improvement	(18)
	I-195	Terminus of I-195	I-95	Ultimate Improvement	(18)

Sources: (1) 2014 Miami-Dade County Freight Plan Update (2) FDOT JACIP application 2/2018 (3) MDAD meeting 10/4/2017 (4) MIA CORE Program Presentation 11/2/2017 (5) PORTMiami Powerpoint at FTAC 1/10/2018 (6) Bob LeDoux, FEC 1/11/2018 MD Freight Plan Update Study Advisory Committee meeting (7) FTE Tentative 5-year Work Program FY19-23 Summary of Projects as of 9/29/2017 (8) Freight Plan Update SAC mtg 3/8/2018 (9) Draft Doral Area Freight Plan FDOT D6 (10) The Town of Medley Freight Mobility Improvement Plan FDOT 6: Final Report (11) City of Opa Locka Freight Implementation Plan FDOT 6: Final Report (12) FDOT SIS First 5-year Plan Fy 18-22 (13) Alissa Penaloza, PORTMiami, email 8/31/2017 (14) MDX FY 18-22 Work Program Board Approved 1/31/2017 (15) Miami-Dade 2040 LRTP 10/23/2014 (16) FDOT SIS Second 5 - year plan FY 23-27 (17) FDOT Strategic Intermodal System Cost Feasible Plan 2024-2040 (18) FDOT Strategic Intermodal System: 2045 Multi-Modal Unfunded Needs Plan (19) Miami River Freight Improvement Plan (20) FDOT Final Draft Review and comment 05/14/2018

9.0 FINDINGS AND STRATEGIES

9.0 Findings and Strategies

With an established and mature logistics infrastructure, and critical investments in place or under construction to modernize and advance the region, Miami-Dade County is well positioned for continued growth in freight-related industries. With the next wave of project needs identified, an effective investment strategy is critical to Miami-Dade's future. The list of projects developed in this update will be considered for funding in the development of the TPO's Year 2045 Long Range Transportation Plan (2045 TPO LRTP). However it must be noted that the LRTP is cost constrained and that needs will far exceed traditional funding sources. The TPO and its partners should collaborate to leverage as additional public funding resources for freight projects and to coordinate with the private sector on leveraging opportunities, including, the proposed PORTMIami Intermodal Terminal, truck parking and development of the CORE program at MIA.

As global shifts continue, and Florida advances its global logistics competitiveness, Miami-Dade County needs to continue to develop and implement strategies that ensure it remains competitive and positioned for growth. Maximizing freight and logistics opportunities will complement other investments designed to transition Miami into a world class city. The following highlights key short-term and ongoing strategies to advance Miami-Dade County's freight program:

- **Maximize use of available funding programs.** Maximize the use of Federal, State, County and City traditional funds to implement project needs. In addition, there are a significant number of programs available to help advance freight projects. Programs like the Infrastructure For Rebuilding America (INFRA), State Infrastructure Banks (SIB), FDOT SIS, and FDOT Intermodal Funds have been used to advance critical projects in Miami-Dade County. Applications, as appropriate, should be routinely submitted to these and other programs to ensure Miami-Dade County and its partners are competing for all available funding.
- **Leverage investments through public/private partnerships.** Miami-Dade County is home to one of the largest public/private partnerships (P3); this partnership helped successfully deliver the PORTMiami Tunnel. Regardless of the scale of the project, P3s can help accelerate critical investments through shared risk. Opportunities for additional P3s should be identified and pursued, as appropriate to help advance remaining freight system needs. In addition, these types of partnerships can help put together local funding matches when pursuing available funding grants from State and Federal partners.
- **Continue to monitor and support the pending requests for the designation of US 27 as a Critical Urban Freight Corridor and Critical Rural Freight Corridor, as applicable, of the National Highway Freight Network and FDOT Strategic Intermodal System designation for the Miami-Opa Locka Executive Airport.** Both of these strategies are key to unlocking additional funding sources for 2 significant components of the Miami-Dade County Freight Network. Official request documents are provided in Appendices A and C.
- **Coordinate and monitor PORTMiami's progress on the identification of an Inland Terminal –** PORTMiami is in the process of evaluating locations for the development of an off-site location for

potential intermodal, transload, laydown and other potential uses. Growth at the port for both cruise and cargo operations must be rationalized and some cargo operations could be located away from the port with good highway and rail connections. At the time of this Update, the port had identified 16 potential locations. Three locations were reviewed for use and conceptual design. The concepts are provided in Appendix B.

- **Continue to coordinate with FDOT District 6 on the development of subarea freight studies.** FDOT District 6 has funded a series of subarea freight studies that were critical in the development of freight infrastructure and operations projects that directly enhance freight mobility for this update.
- **Continue to coordinate with local stakeholders on the development of truck parking facilities.** This update has documented the lack of private incentive to develop a major due to land costs. The TPO should continue to collaborate with Miami-Dade County and the FDOT on identifying public property and/or funding to support the development of a major full service trucking facility.
- **The TPO should monitor progress of funding for the FDOT 6 NHS Intermodal Connector projects** including opportunities to be funded through Federal grants, the FDOT SIS program, County funds.
- **Monitor the progress of advocacy groups for the prevention of cargo theft**. The Florida Commercial Vehicle and Cargo Theft Task Force partners with multiple enforcement agencies and meets multiple times per year to coordinate statewide efforts to combat cargo theft and commercial vehicle crimes. There is also now a National Commercial Vehicle and Cargo Theft Prevention Task Force (NCTTF) that works in cooperation with private industry, insurance, and Federal, State and local governments in order to combat the continued threat posed by cargo theft perpetrators to the economy. The Task Force members have identified a need for additional information sharing and national partnering and developed a website as a step in strengthening this collaborative fight in combating cargo theft. *https://www.nationalcargothefttaskforce.org/ncttf/start.action.*
- **Promote economic contributions of freight and logistics industry.** Transportation and economic development investments take place within a competitive environment. The funding PORTMiami has received to prepare it for the next generation of cargo vessels was hard fought for through demonstration of overall benefits. The ability to quantify the economic impacts associated with freight project investments will be critical in the successful solicitation of local, State, and Federal funds. Impact tools and marketing materials should be developed and used to educate key decision-makers.
- **Maximize use of available funding programs.** There are a significant number of programs available to help advance freight projects. Programs like the Infrastructure For Rebuilding America (INFRA), State Infrastructure Banks (SIB), FDOT Strategic Intermodal System (SIS), and FDOT District 6 Intermodal Funds have been used to advance critical projects in Miami-Dade County. Applications, as appropriate, should be routinely submitted to these and other programs to ensure Miami-Dade County and its partners are competing for all available funding.
- **Leverage investments through public/private partnerships.** Miami-Dade County is home to one of the largest public/private partnerships; this partnership helped successfully deliver the PORTMiami

Tunnel. Regardless of the scale of the project, P3s can help accelerate critical investments through shared risk. Opportunities for additional P3s should be identified and pursued, as appropriate to help advance remaining freight system needs. In addition, these types of partnerships can help put together local funding matches when pursuing available funding grants from State and Federal partners.

- **Continue to coordinate with local stakeholders on the development of truck parking facilities.** The future development of truck parking locations will continue to be a local challenge and will require support from stakeholders.
- **Evaluate the effectiveness of the freight system.** The FAST ACT requires implementation of a monitoring program to help track the performance of the freight system as well as the effectiveness of the freight program. The TPO must identify a four year target for performance passed on Truck Travel Time Reliability information from the National Performance Measure Research Data Set (NPMRDS).
- **Engage the freight community in the identification of freight bottlenecks.** In anticipation of the FDOT-identified list of freight bottlenecks it is recommended the TPO and stakeholders utilize the NPMRDS to identify bottlenecks. Appendix D provides documentation of the speed scans for the Fall of 2017 Truck traffic in Miami-Dade County. In addition, the Miami-Dade TPO Freight Transportation Advisory Committee should also be engaged with freight industry input on bottlenecks.
- **Ensure trade and logistics remain a targeted industry.** Significant work has been undertaken over the last several years by the Florida Chamber Foundation and the Beacon Council, along with many others, to elevate trade and logistics to the list of targeted industries. As a result, different types of economic incentives are available to the industry to drive growth. It is critical that the industry remain designated and that economic development professionals use available incentive to attract and grow businesses in Miami-Dade County.
- **Support work force development programs.** The trade and logistics industries are aging and the availability of a trained workforce has become one of the most critical concerns to many companies. Workforce Florida, FDOT, and the Florida Chamber have all expressed the need for more training programs; in fact, FDOT recently conducted a study designed to explore the development of an Intermodal and Logistics Academy. Miami-Dade County should take an active role in workforce development.
- **Continue to develop, test and expand pilot programs.** Miami-Dade County is home to several innovative pilot programs developed to address critical bottlenecks in our international trade regulations and operations. The Perishables Coalition, the Transshipment Committee, and Customs and Border Patrol's Reimbursable Services Authority all represent exceptions to Federal trade regulations or new ways to manage the programs. More recently the International Air Transport Association (IATA) recognized MIA as the first IATA Designated Pharma Hub Airport in the U.S. and only the second in the world. Local leaders should continue to expand these pilots and identify new innovations.
- **Monitor ILC developments and partner as appropriate.** The larger master planned ILC proposals in the heartland of South Florida have the potential to significantly expand the logistics capacity of the

region and the State as they come online. These developments are taking longer than expected to break ground, but when they do it will be important for Miami-Dade County businesses and government leadership to engage with these developers to establish business relationships. In the longer term, this connection will be even more critical as the County's ability to expand warehouse capacity diminishes.

- **Promote regional freight mobility.** Finally, it is important to recognize that the Miami Urbanized Area covers three counties in South Florida. This integrated region is home to over six million residents and millions of annual tourists. The freight companies serving this market do not recognize County lines; they only care about overall access and mobility. The Miami-Dade TPO has partnered with its counterparts in Broward and Palm Beach counties to ensure there is a regional plan. It will be important to ensure consistency, as appropriate, between the County and regional plans.

Appendix A – Miami-Dade Transportation Planning Council Resolution #11-18 Supporting US 27 as Part of NHFN

Agenda Item III.D
Substitute

TPC RESOLUTION #11-18

RESOLUTION RECOMMENDING SUPPORT OF THE FLORIDA DEPARTMENT OF TRANSPORTATION'S (FDOT) DESIGNATION OF THE US 27 (STATE ROAD 25) CORRIDOR BETWEEN INTERSTATE 75 AND THE HIALEAH RAIL YARD AS BOTH A CRITICAL URBAN FREIGHT CORRIDOR (CUFC) AND CRITICAL RURAL FREIGHT CORRIDOR (CRFC), AS APPLICABLE, OF THE NATIONAL HIGHWAY FREIGHT NETWORK (NHFN)

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

WHEREAS, the Transportation Planning Council (TPC) has been established and charged with the responsibility and duty of fulfilling the aforementioned functions; and

WHEREAS, the Fixing America's Surface Transportation (FAST) Act directed the Federal Highway Administration (FHWA) to establish a National Highway Freight Network (NHFN) to strategically direct Federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system. The NHFN includes 160.07 miles in Florida as Critical Urban Freight Corridor (CUFC) and 320.14 miles as Critical Rural Freight Corridors (CRFC); and

WHEREAS, State Road (SR) 25 serves as a critical link for the movement of freight between Miami-Dade County and Central Florida, and serves as an alternative for freight traffic on Interstate 95 and the Florida's Turnpike. It is designated as a CRFC north of Interstate 75 in Broward County, however, the segment of SR 25 south of Interstate 75 into Miami-Dade County does not currently have a NHFN designation; and

WHEREAS, the Miami-Dade TPO coordinated with Florida Department of Transportation (FDOT) Districts 4 and 6, the Broward MPO, and Florida's Turnpike Enterprise to include SR 25 in the NHFN as a CUFC and CRFC and to transfer mileage from the Sawgrass Expressway (SR 869); and

WHEREAS, transferring mileage from SR 869 is necessary to maintain the total NHFN mileage; and

WHEREAS, the TPC has reviewed the proposed designation of US 27 as a CUFC and CRFC, and finds it consistent with the goals and objectives of the Transportation Plan for the Miami Urbanized Area,

NOW, THEREFORE, BE IT RESOLVED BY THE TRANSPORTATION PLANNING COUNCIL FOR THE TRANSPORTATION PLANNING ORGANIZATION, IN ITS ROLE AS THE MPO FOR THE MIAMI URBANIZED AREA, that support for the Florida Department of Transportation's (FDOT) designation of the US 27 (State Road 25) corridor between Interstate 75 and the Hialeah Rail Yard as a Critical Urban Freight Corridor (CUFC) and Critical Rural Freight Corridor (CRFC), as applicable, of the National Highway Freight Network (NHFN), is hereby recommended to the TPO Governing Board.

The adoption of the foregoing resolution was moved by Mr. Eduardo "Ed" Santamaria. The motion was seconded by Mr. Tom Ruiz, and upon being put to a vote, the vote was as follows:

Jesus Guerra, Chairperson	-Aye	Michelle Lopez	-Aye (S. Hammons)
Alice N. Bravo	-Aye (A. Hernandez)	Kevin Lynskey	-Aye (D. Yoder)
Alice N. Bravo	-Aye (G. Miranda)	Jack Osterholt	-Aye (J. Gonzalez)
Julio Brea	-Aye	Jack Osterholt	-Absent
Anthony J. Catalina	-Absent	Javier Rodriguez	-Absent
Harold Desdunes	-Absent	Tom Ruiz	-Aye
Rudy Garcia	-Absent	Jose Sanchez	-Aye
Jorge Gomez	-Aye	Eduardo "Ed" Santamaria	-Aye
Jose R. Gonzalez	-Absent	Lester Sola	-Absent
Sandra Harris	-Aye	Larry M. Spring, Jr.	-Aye (D. Yoder)
Juan Kuryla	-Absent		

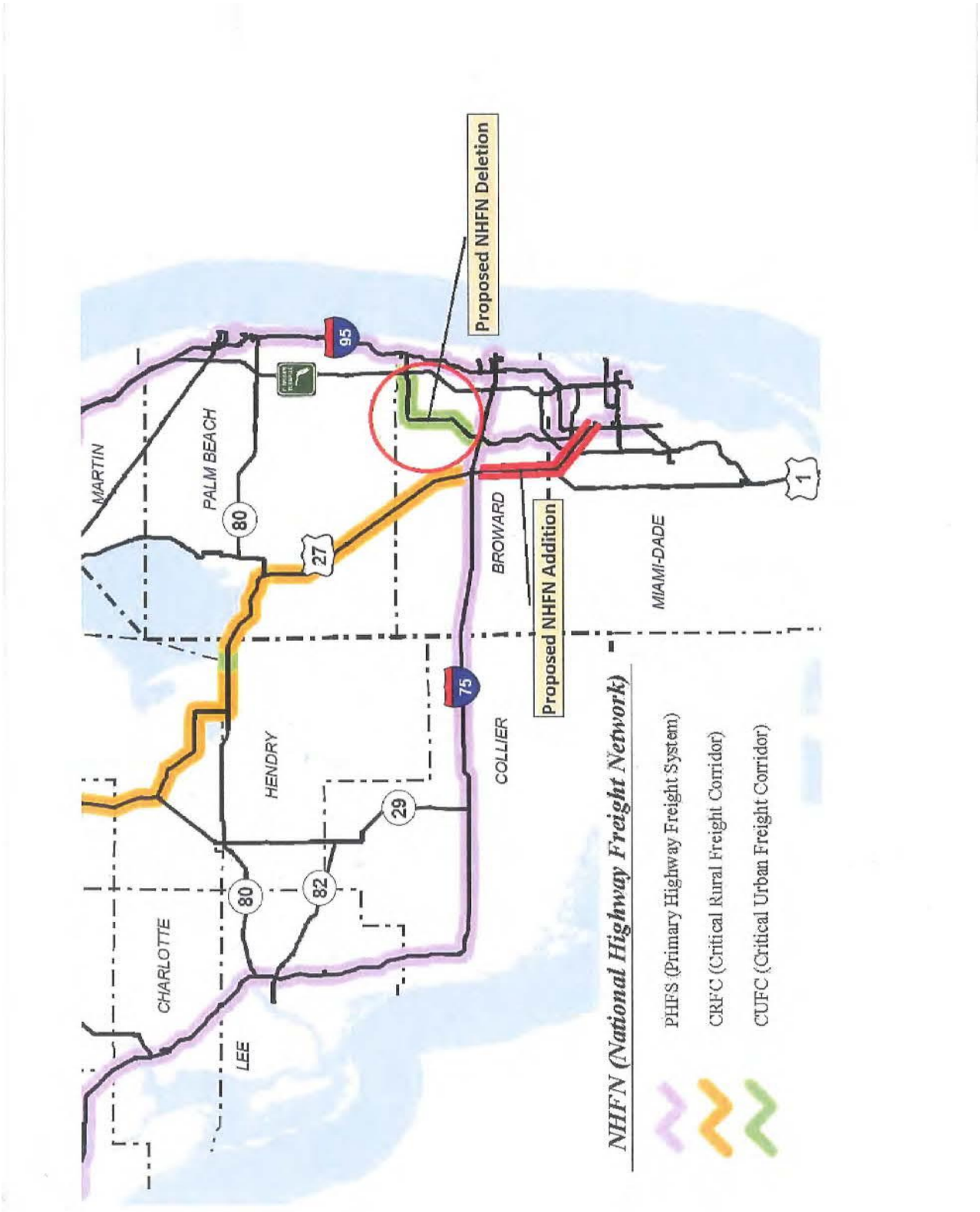
The Chairperson thereupon declared the resolution duly passed and approved this 9th day of April, 2018.

MIAMI-DADE TRANSPORTATION PLANNING ORGANIZATION

By Zainab Salim

Zainab Salim, Clerk
Miami-Dade TPO

TRANSPORTATION PLANNING ORGANIZATION
IN ITS ROLE AS MIAMI-DADE MPO
FLORIDA TPO


Proposed NHFN Deletion
Proposed NHFN Addition
MARTIN
PALM BEACH
HENDRY
COLLIER
BROWARD
MIAMI-DADE
CHARLOTTE
LEE
95
80
27
75
29
82
1
NHFN (National Highway Freight Network)
PHFS (Primary Highway Freight System)
CRFC (Critical Rural Freight Corridor)
CUFC (Critical Urban Freight Corridor)

Appendix B – Inland Terminal Concepts (From Doral Subarea Freight Plan)

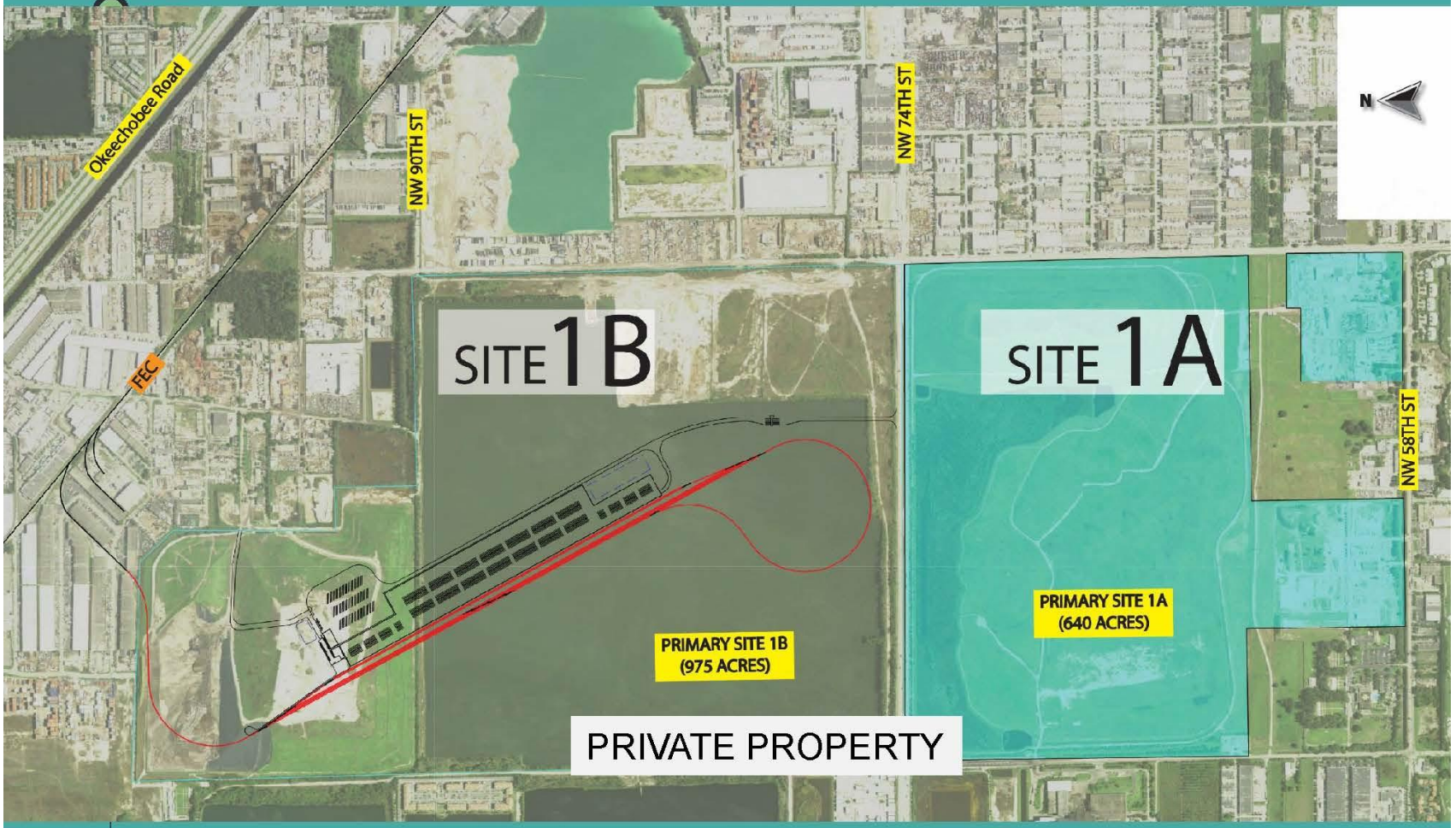
DISCLOSURE on PRIVATELY OWNED PARCELS

The Florida Department of Transportation (the Department) wishes to emphasize that this study (FM No. 437645-1-22-01) is a planning level assessment designed to provide information on potential transportation projects to support freight related infrastructure. The following section includes a review of properties that have been under review by Miami-Dade County that may have the potential for development as an Inland Terminal. Note that some of these properties are privately owned and all the proposals include extensions of privately operated Railroads connecting to those properties.

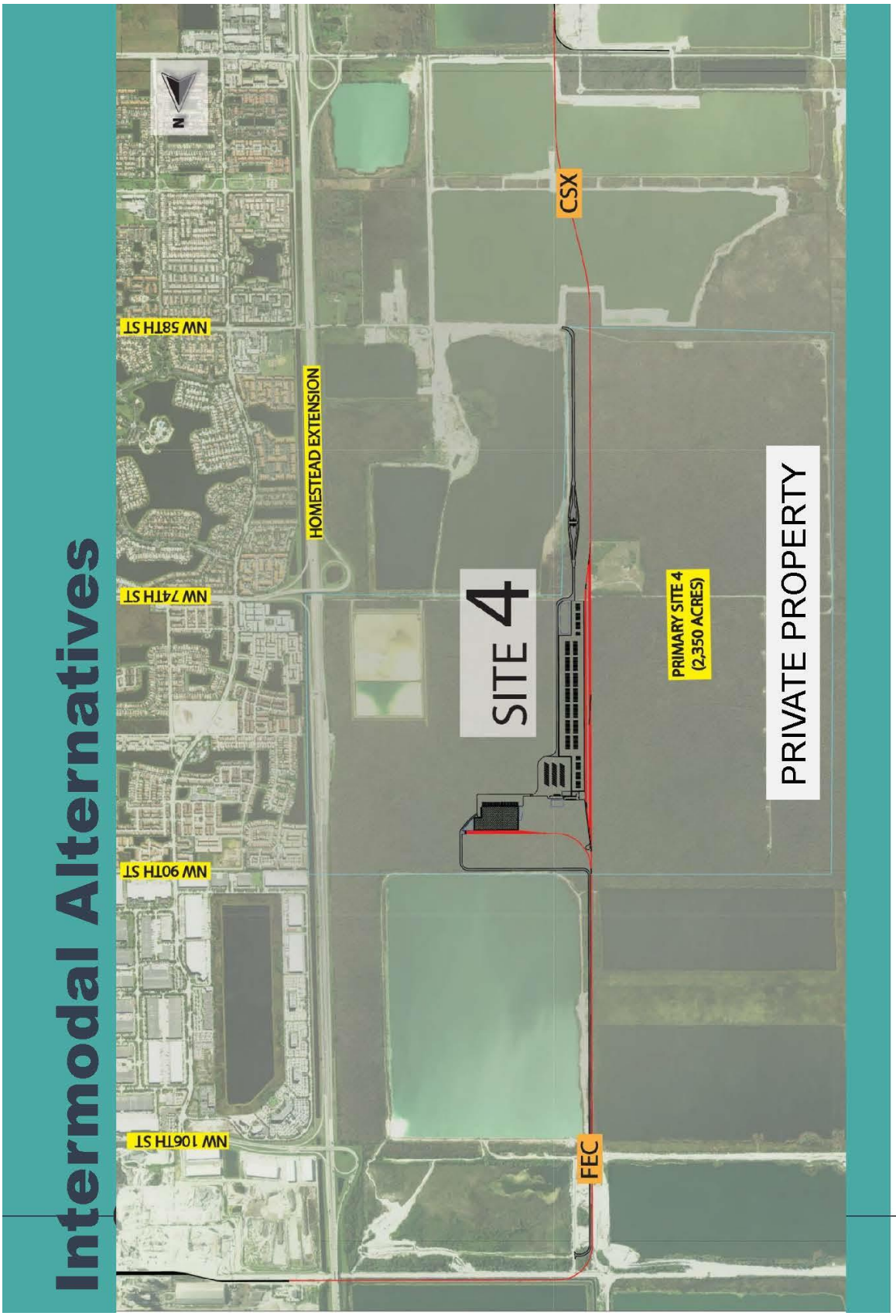
The proposals provided in this study are for informational purposes for the private sector, specifically land owners, railroad operators and potential developers of such facilities and to facilitate partnerships to advance the development of such facilities and services.

1

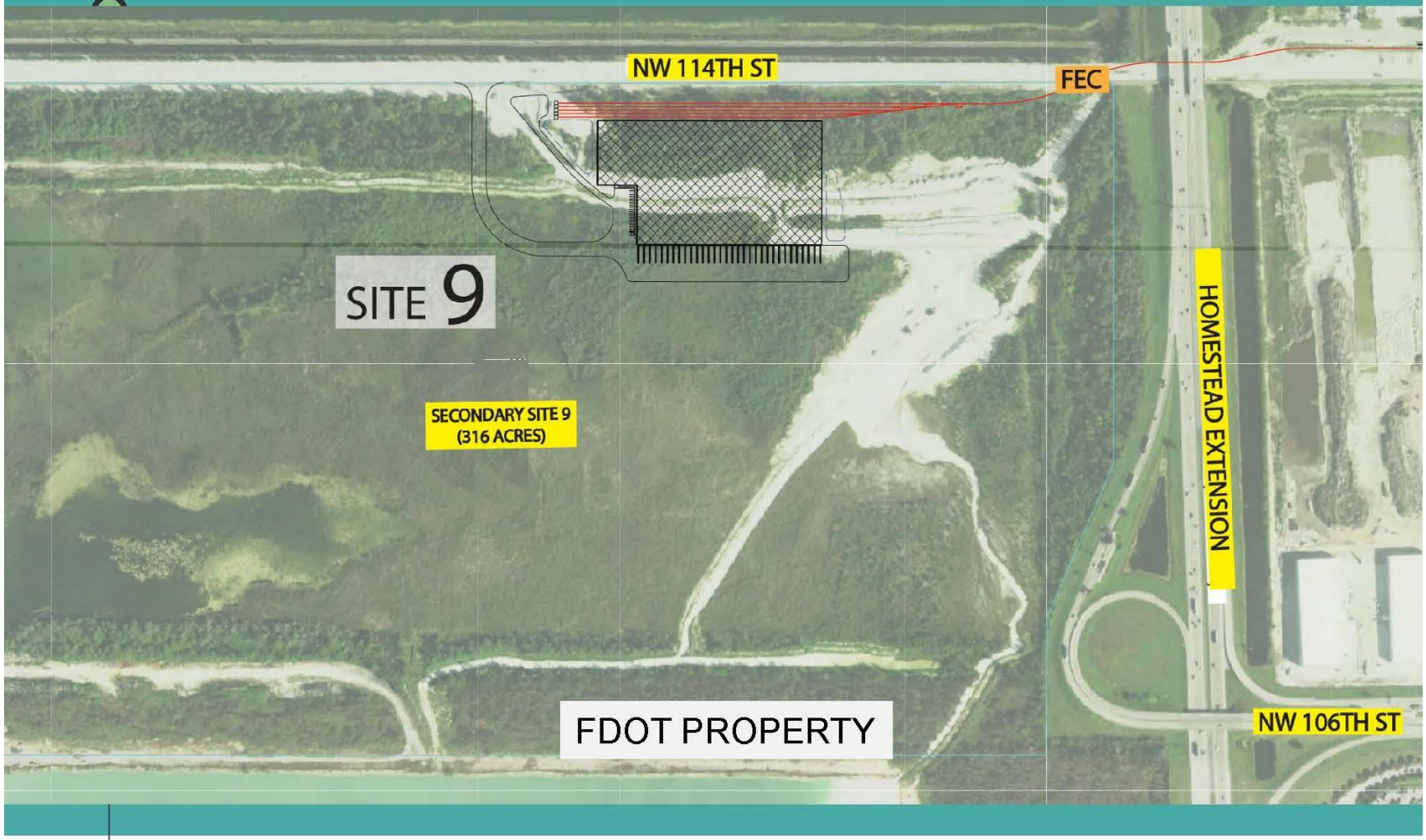
Intermodal Alternatives



DISTRICT 6 FDOT FLP


Intermodal Alternatives
N
NW 58TH ST
NW 74TH ST
NW 90TH ST
NW 106TH ST
HOMESTEAD EXTENSION
CSX
FEC
SITE 4
PRIMARY SITE 4
(2,350 ACRES)
PRIVATE PROPERTY
FDOT
DISTRICT 6

Intermodal Alternatives



Appendix C – Request for SIS Designation for Miami-Opa Locka Executive Airport

MIAMI INTERNATIONAL AIRPORT

Commercial Airport:
Miami International Airport

General Aviation Airports:
Dade-Collier Training & Transition
Homestead General
Kendall-Tamiami Executive
Opa-locka Executive

Miami-Dade Aviation Department
P.O. Box 025504
Miami, Florida 33102-5504
T 305-876-7000 F 305-876-0948
www.miami-airport.com

miamidade.gov

June 5, 2018

Mr. James Wolfe, P.E.
District Secretary
Florida Department of Transportation (FDOT), District 6
1000 N.W. 111th Ave.
Miami, FL 33172

Re: Request for Strategic Intermodal System (SIS) Designation for Miami-Opa Locka Executive Airport

Dear Mr. Wolfe:

Pursuant to Florida Statutes 339.63(4), this letter is in support of the Florida Department of Transportation consideration of Miami-Opa Locka Executive Airport (OPF) as a candidate for Strategic Intermodal System (SIS) designation, and funding eligibility.

The Miami-Opa Locka Executive Airport (OPF), formerly Opa-locka Executive Airport, was transferred to Miami-Dade County by the U.S. federal government in 1962, along with a portion of the former Naval Air Station Miami property. Since then OPF has grown into one of the busiest general aviation airports in Florida. Today OPF is the largest of the four general aviation airports operated by the Miami-Dade County, and is designated general aviation reliever airport for Miami International Airport (MIA) with an Airport Reference Code (ARC) of C-III, as defined by FAA Circular 150/5300-13A. Located approximately twelve miles northwest of downtown Miami, and seven miles north of MIA, the airport is utilized by corporate jets on a regular basis. Access to the airport is provided via N.W. 135th Street and LeJeune Road or from the City of Opa Locka, via Curtiss Road (NW 142nd St) from NW 37th Avenue.

In 2017, OPF experienced 136,556 total annual operations, and had 326 based aircraft. The airport accommodates a diverse set of aviation needs, including corporate and business-use, and military traffic, various aeronautical functions, business parks, and other general aviation activities traditionally offered to both private and public sector users.
OPF's land area consists of 1,880 acres, and its airfield consists of three active runways including two east-west runways and one southeast-northwest runway:

- Runway 9L-27R: 8,002 feet long by 150 feet wide, east-west oriented, lighted;
- Runway 12-30: 6,800 feet long by 150 feet wide, southeast-northwest crosswind oriented, lighted with displaced threshold; and
- Runway 9R-27L - 4,309 feet long by 100 feet wide, east-west oriented, lighted.

Runway 9L-27R and Runway 12-30 are capable of handling any commercial/cargo type aircraft that can depart on available runways of their length while the remaining runways are of sufficient strength for operations by light general aviation aircraft only. ILS and associated approach lighting systems are installed on Runway 9L, on Runway 27R, and on Runway 12. Visual Approach Slope Indicators, VASIs, are installed on Runways 9L, 9R, and 27R. Precision Approach Path Indicators, PAPIs, are installed on Runways 12, 30, and 27L. Medium-Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) are installed on Runways 9L and 12. An ASOS Surface Weather Observation Station is in place and is operational. Former Runway 18-36 has been renamed Taxiway H. A rotating beacon is located on the Air Traffic Control Tower, and an engine run-up pad is being currently designed.

The airport's other facilities include T-hangars, conventional corporate hangars, aprons, ramps, storage facilities, and automobile parking. More recently, the Miami-Dade Aviation Department (MDAD) has built a new Air Traffic Control Tower operated by FAA, new Fixed Based Operator building, offices, a business park, and retail/industrial facilities.

Three full-service Fixed Base Operators (FBO's) provide private jet services at OPF. Additionally, the U.S. Coast Guard Air Station Miami, Miami-Dade County Police Department, Aviation Division, and Miami-Dade County Fire Department (Air Rescue) have their helicopter operations at OPF, and the Customs Border Protection (CBP) has a private aircraft clearance facility that service international traffic at the airport. With over 500 acres leased for development, including for large distribution facilities used by USPS and Amazon, OPF has received more than $225 million in private real estate investment since 2017.

OPF passed inspection in April 2017, and meets FOOT's SIS eligibility criteria, as outlined in the table below:

SIS Criteria	Miami-Opa Locka Airport	SIS Criteria Met
Identified by FAA as a General Aviation Reliever Airport, and the Airport it relieves is designated on the SIS	Designated GA Reliever Airport by FAA	Yes
Handles at least 75,000 itinerant (nonlocal) operations per year	81,067 Itinerant Operations in 2017	Yes
Has a runway length exceeding 5,500 linear feet	8,002 Linear foot runway	Yes
Capable of handling aircraft at least 60,000 pounds with a dual wheel configuration which is served by at least one precision instrument approach	249,000 Pounds with dual wheel configuration	Yes
Service to clusters of industries dependent on air transportation	Yes	Yes

Mr. James Wolfe
June 5, 2018
Page 3

Based on the foregoing information, and the very significant role that OPF serves for MIA and the County's airport system in general, the Miami Dade County Aviation Department herewith respectfully requests that the Florida Department of Transportation gives full consideration to designating OPF as an eligible airport for SIS funding as a General Aviation Reliever.

If you require any additional information please do not hesitate to reach me at 305-876-8080.

Sincerely,

José A. Ramos, R.A.
Division Director Aviation Planning, Land-Use & Grants

JAR/er

Attachments

C: Lester Sola
Arlyn Rull
Ken Pyatt
Pedro F. Hernández
Ammad Riaz
Norma Mata
Harold Desdunes, FDOT
Sunshine Cayubit, FDOT
Dionne Richardson, FDOT
Dat Huynh, FDOT
Ken Jeffries, FDOT
Shereen Yee Fong, FDOT

OFFICE OF THE MAYOR
MIAMI-DADE COUNTY, FLORIDA

CARLOS A. GIMENEZ
MAYOR

May 30, 2018

Mr. James Wolfe, P.E.
District Secretary
Florida Department of Transportation (FDOT), District 6
1000 N.W. 111th Ave.
Miami, F133172

Re: Request for Strategic Intermodal System (SIS) Designation for Miami-Opa Locka Executive Airport

Dear Mr. Wolfe,

On behalf of Carlos A. Gimenez, Mayor, Miami-Dade County, I am writing this letter in support of the addition of a Strategic Intermodal System (SIS) Designation for Miami-Opa Locka Executive Airport (OPF). OPF is the largest general aviation airport operated by the County, and its SIS designation and eligibility for SIS funding are of strategic importance to Miami-Dade residents and businesses. It is the County's understanding that including OPF on the SIS would provide additional economic opportunities for our area, and the SIS designation of the airport would be critical to the transportation needs of our region.

Thank you for the opportunity to endorse this very worthwhile SIS designation. Your consideration and support of the airport and connector is appreciated.

Sincerely,

Jack Osterholt
Deputy Mayor

c: Honorable Carlos A. Gimenez, Mayor, Miami-Dade County
Lester Sola, Director, Miami-Dade Aviation Department
Jose Ramos, Division Director, Miami-Dade Aviation Planning, Land-Use & Grants
Harold Desdunes P.E., Director of Transportation Operations, FDOT District 6
Huynh P.E., Planning and Environmental Administrator, FDOT District 6
Ken Jeffries, Planning Manager, FDOT District 6Shereen
Yee Fong, Transportation Planner IV/SIS Coordinator, FDOT District 6

STEPHEN P. CLARK • 111 N.W. FIRST STREET • 29TH FLOOR • MIAMI, FLORIDA 33128-1930 • (305) 375-5071

Miami-Dade
Transportation Planning Organization
111 NW 1st Street, Suite 920
Miami, Florida 33128

May 11, 2018

Mr. James Wolfe, P.E., Secretary
Florida Department of Transportation (FDOT), District 6
1000 N.W. 111th Ave.
Miami, F133172

Re: Letter of Support for Strategic Intermodal System (SIS) Designation of Miami-Opa-Locka Executive Airport

Dear Mr. Wolfe:

Pursuant to Florida Statute 339.63(4), this letter is in support of the Miami-Dade Aviation Department (MDAD) request for your consideration of Miami-Opa Locka Executive Airport (OPF) as a candidate for Strategic Intermodal System (SIS) designation, and funding eligibility.

The Miami-Opa-Locka Executive Airport (OPF), formerly Opa-Locka Executive Airport, was transferred to Miami-Dade County by the U.S. federal government in 1962, along with a portion of the former Naval Air Station Miami property. Since then OPF has grown into one of the busiest general aviation airports in Florida. Today OPF is the largest of the four general aviation airports operated by the Miami-Dade County, and is designated general aviation reliever airport for Miami International Airport (MIA) with an Airport Reference Code (ARC) of C-III, as defined by FAA Circular 150/5300-13A. Located approximately twelve miles northwest of downtown Miami, and seven miles north of MIA, the airport is utilized by corporate jets on a regular basis. Access to the airport is provided via N.W. 135th Street and LeJeune Road or from the City of Opa-Locka, via Curtiss Road (NW 142nd St) from NW 37th Avenue.

In 2017, OPF experienced 136,556 total annual operations, and had 326 based aircraft. The airport accommodates a diverse set of aviation needs, including corporate and business-use, and military traffic, various aeronautical functions, business parks, and other general aviation activities traditionally offered to both private and public sector users.

OPF's land area consists of 1,880 acres, and its airfield consists of three active runways including two east-west runways and one southeast-northwest runway:

- Runway 9L-27R: 8,002 feet long by 150 feet wide, east-west oriented, lighted;
- Runway 12-30: 6,800 feet long by 150 feet wide, southeast-northwest crosswind oriented, lighted with displaced threshold; and
- Runway 9R-27L - 4,309 feet long by 100 feet wide, east-west oriented, lighted.

Runway 9L-27R and Runway 12-30 are capable of handling any commercial/cargo type aircraft that can depart on available runways of their length while the remaining runways are of sufficient strength for operations by light general aviation aircraft only. ILS and associated approach lighting systems are installed on Runway 9L, on Runway 27R, and on Runway 12. Visual Approach Slope Indicators, VASIs, are installed on Runways 9L, 9R, and 27R. Precision Approach Path Indicators, PAPIs, are installed on Runways 12, 30, and 27L. Medium-Intensity

Approach Lighting System with Runway Alignment Indicator Lights (MALSR) are installed on Runways 9L and 12. An ASOS Surface Weather Observation Station is in place and is operational. Former Runway 18-36 has been renamed Taxiway H. A rotating beacon is located on the Air Traffic Control Tower, and an engine run-up pad is being currently designed.

The airport's other facilities include T-hangars, conventional corporate hangars, aprons, ramps, storage facilities, and automobile parking. More recently, the MDAD has built a new Air Traffic Control Tower operated by FAA, new Fixed Based Operator building, offices, a business park, and retail/industrial facilities.

Three full-service Fixed Base Operators (FBO's) provide private jet services at OPF. Additionally, the U.S. Coast Guard Air Station Miami, Miami-Dade County Police Department, Aviation Division, and Miami-Dade Fire Department (Air Rescue) have their helicopter operations at OPF, and the Customs Border Protection (CBP) has a private aircraft clearance facility that service international traffic at the airport. With over 500 acres leased for development, including for large distribution facilities used by USPS and Amazon, OPF has received more than $225 million in private real estate investment since 2017.

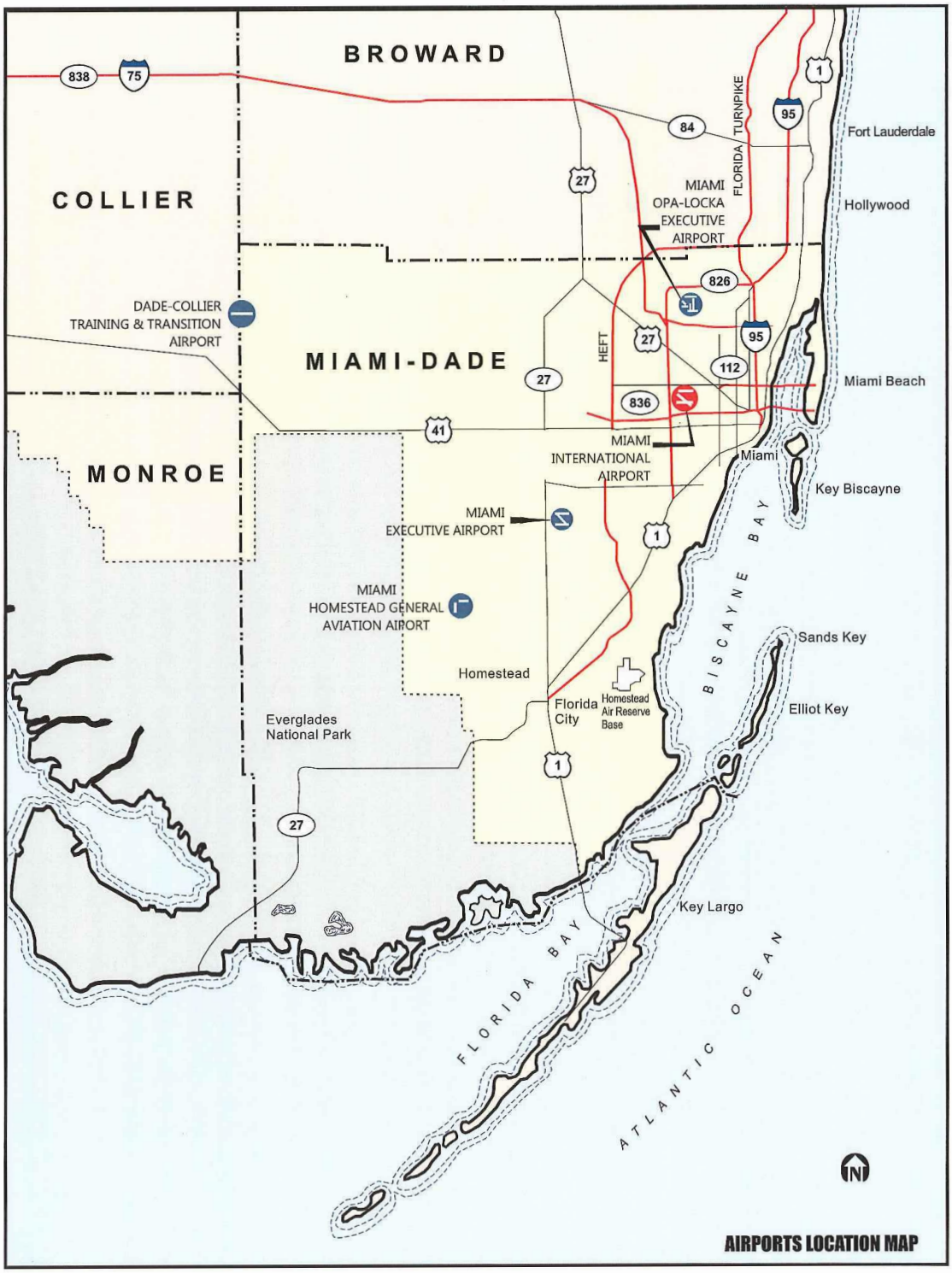
OPF meets FDOT's SIS designation criteria. Based on the foregoing information, and the very significant role of OPF for MIA and the County's airport system in general, the Miami Dade Transportation Planning Organization (TPO) respectfully requests that the Florida Department of Transportation gives full consideration to the request for SIS designation of OPF as an airport eligible for SIS funding as a General Aviation Reliever.

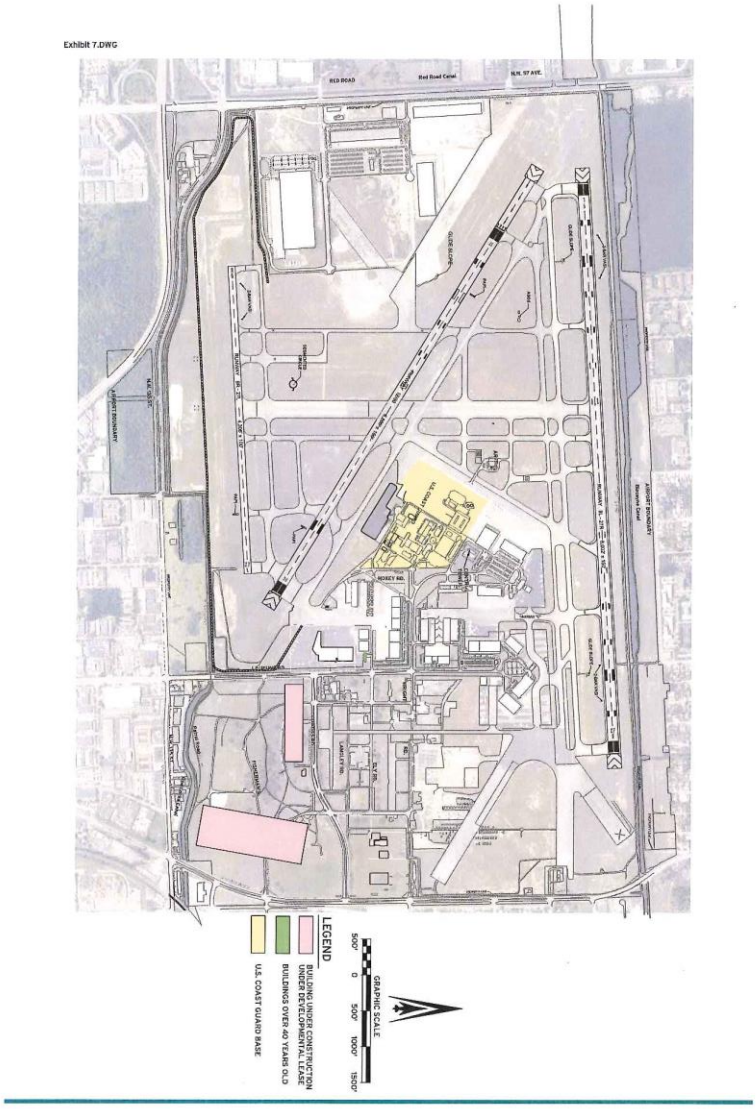
If you require any additional information, please do not hesitate to reach me at 305-375-4507.

Sincerely,

Aileen Bouclé, AICP
Executive Director

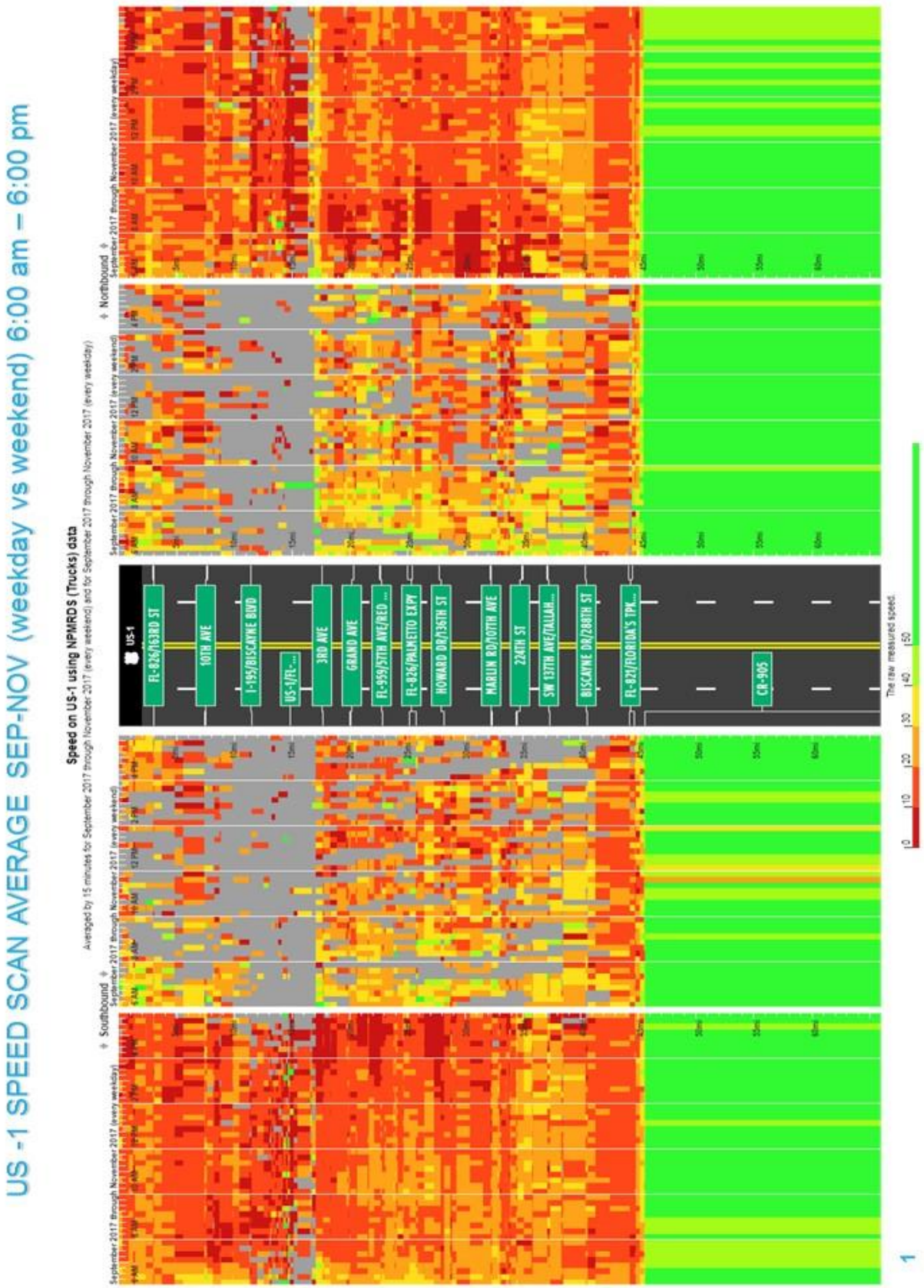
c: Esteban L. Bovo, Jr., Chairman and Members of TPO Governing Board
Lester Sola, Director, Miami-Dade Aviation Department
Jose Ramos, Division Director, Miami-Dade Aviation Planning, Land-Use & Grants
Carlos Roa, Assistant Director, Transportation and Land Use, Miami-Dade TPO
Harold Desdunes, Director of Transportation Operations, FDOT District 6
Dionne Richardson, Modal Development Manager, FDOT District 6
Huynh P.E., Planning and Environmental Administrator, FDOT District 6
Ken Jeffries, Planning Manager, FDOT District 6
Shereen Yee Fong, Transportation Planner IV/SIS Coordinator, FDOT District 6

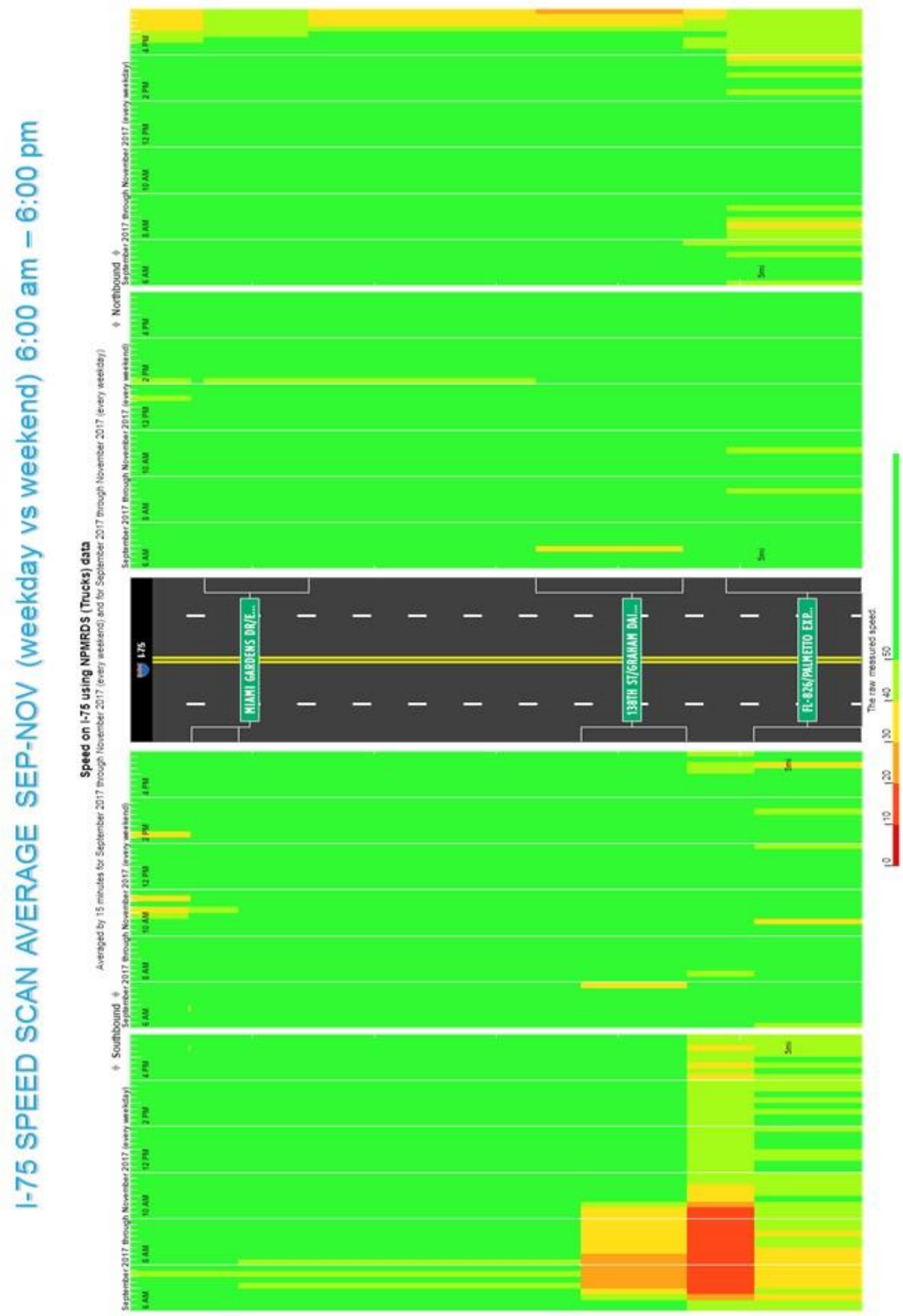

BROWARD
COLLIER
MIAMI-DADE
MONROE
838
75
84
27
95
1
826
836
112
41
FLORIDA TURNPIKE
HEFT
Fort Lauderdale
Hollywood
Miami Beach
Miami
Key Biscayne
Sands Key
Elliot Key
Key Largo
Homestead
Florida City
Everglades National Park
MIAMI OPA-LOCKA EXECUTIVE AIRPORT
DADE-COLLIER TRAINING & TRANSITION AIRPORT
MIAMI INTERNATIONAL AIRPORT
MIAMI EXECUTIVE AIRPORT
MIAMI HOMESTEAD GENERAL AVIATION AIRPORT
Homestead Air Reserve Base
BISCAYNE BAY
FLORIDA BAY
ATLANTIC OCEAN
N
AIRPORTS LOCATION MAP

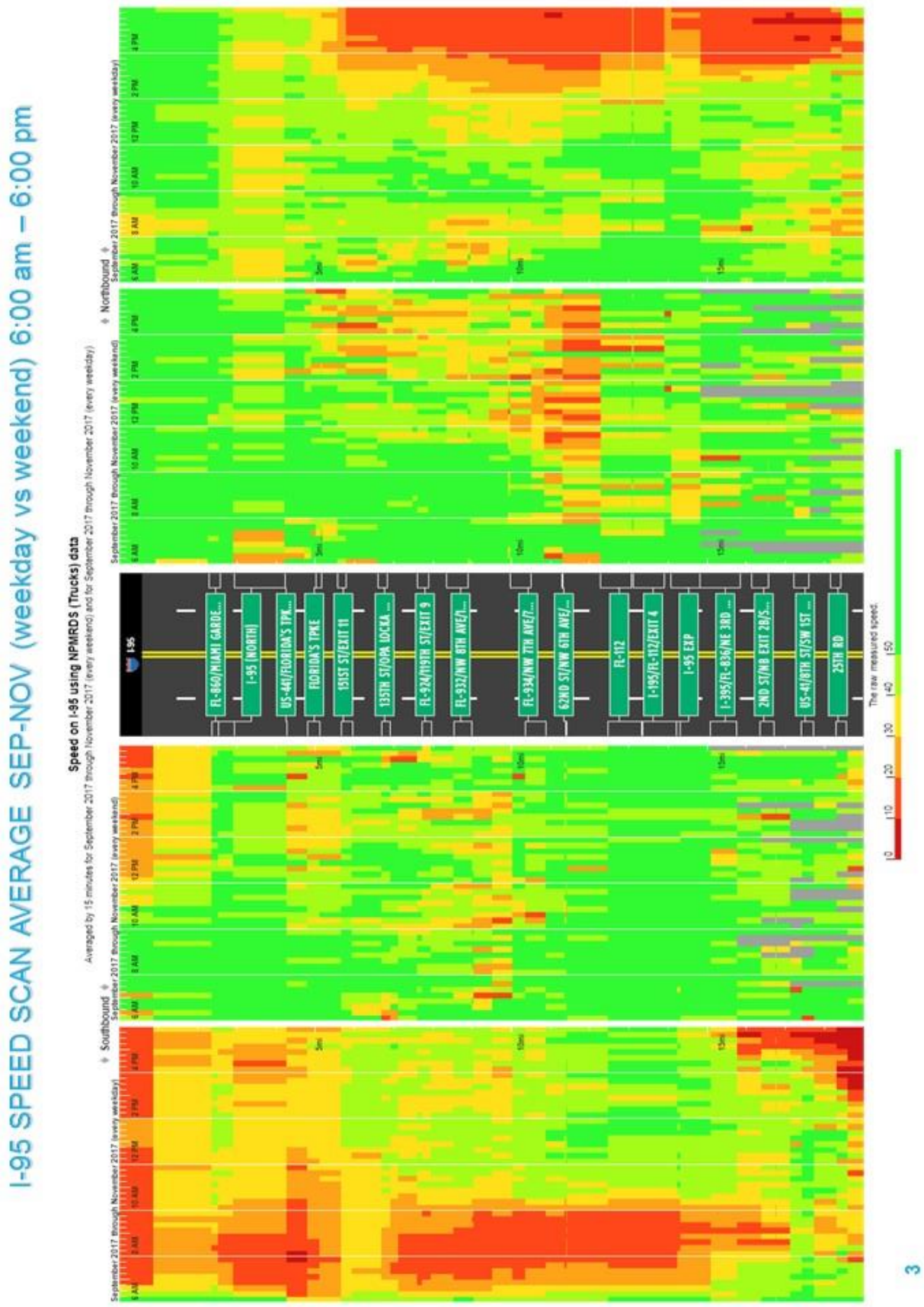


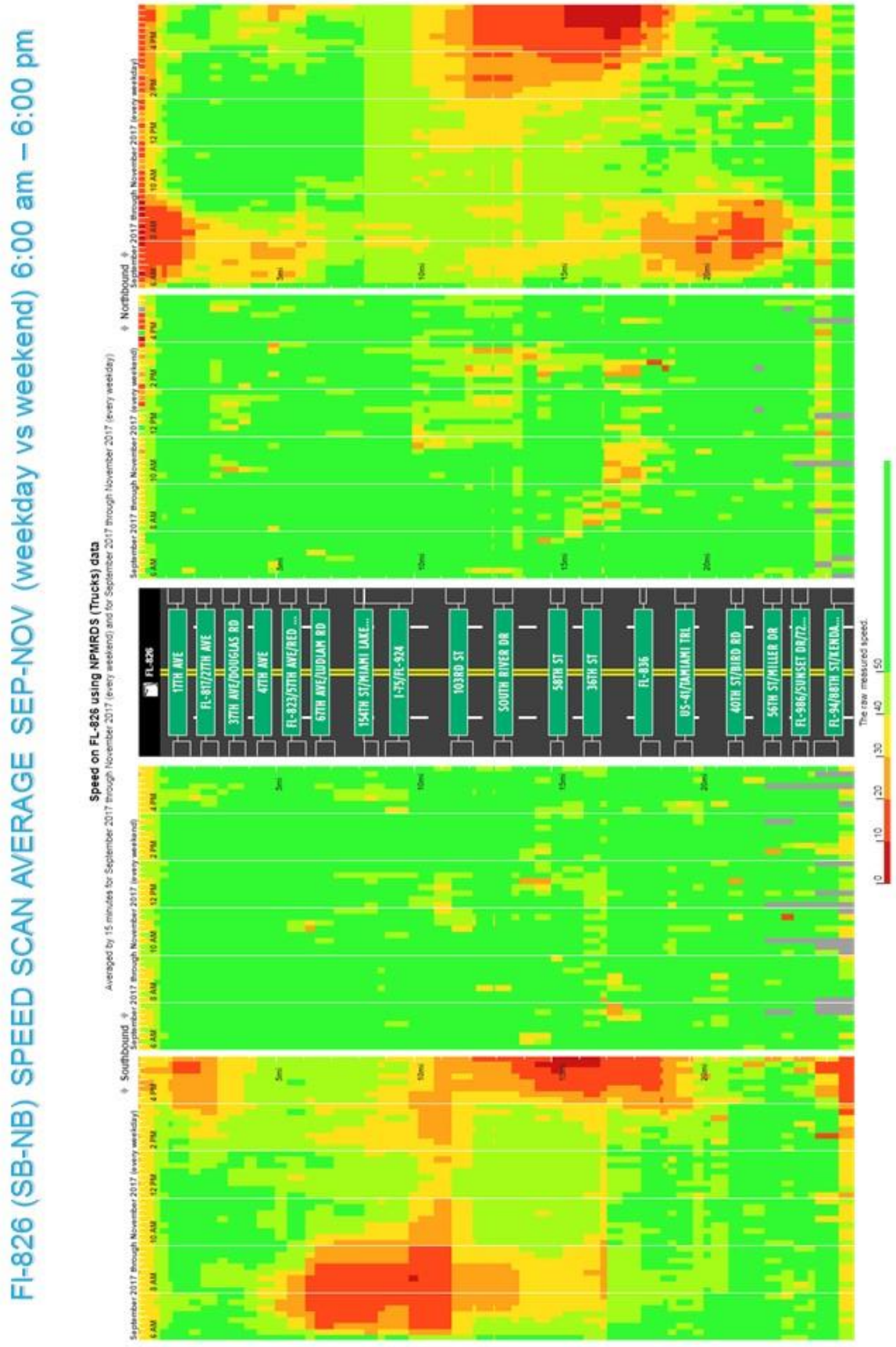
MIAMI-OPA LOCKA EXECUTIVE AIRPORT
EXHIBIT No. 7

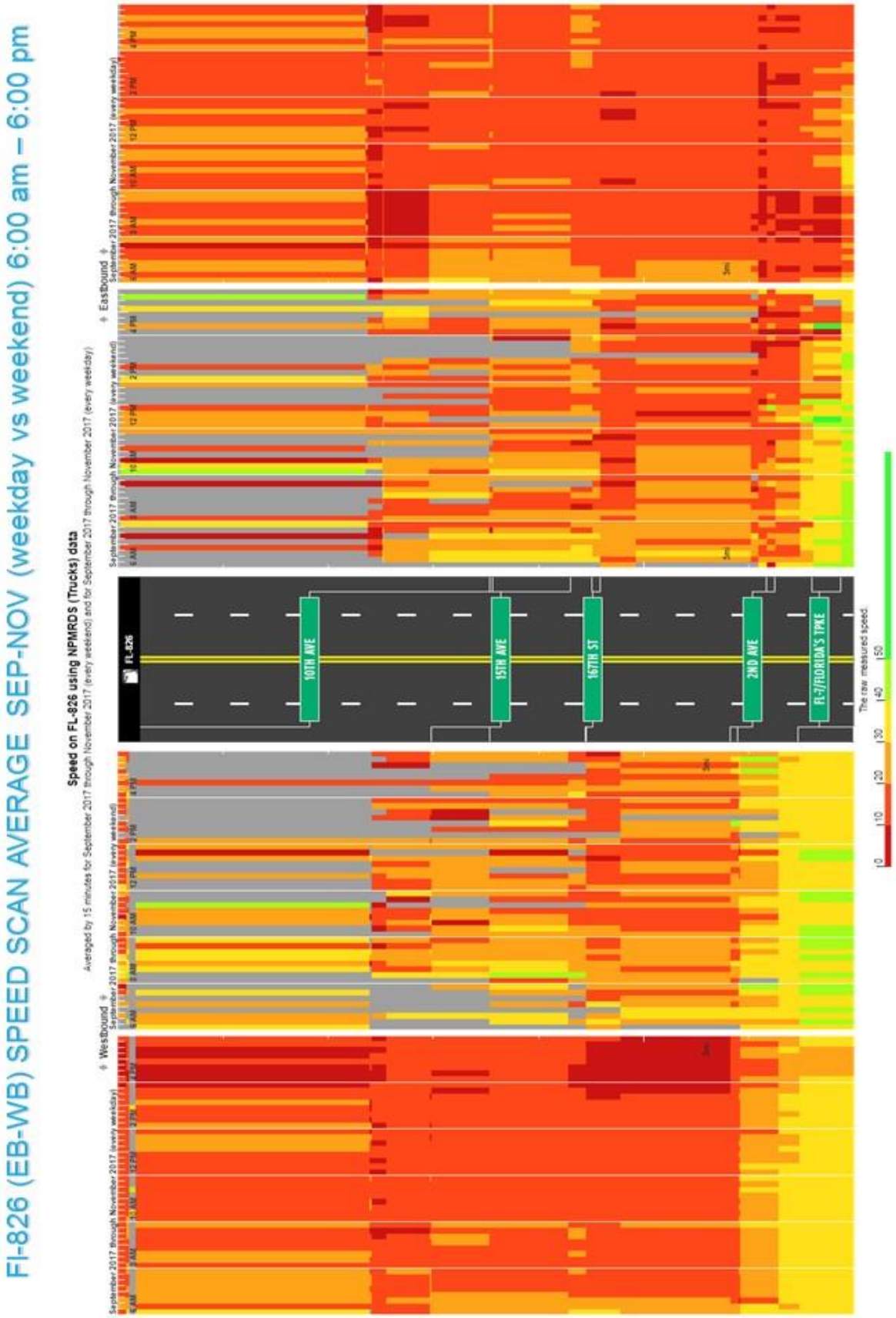
Appendix D – Miami-Dade County Speed Scans NPMRDS

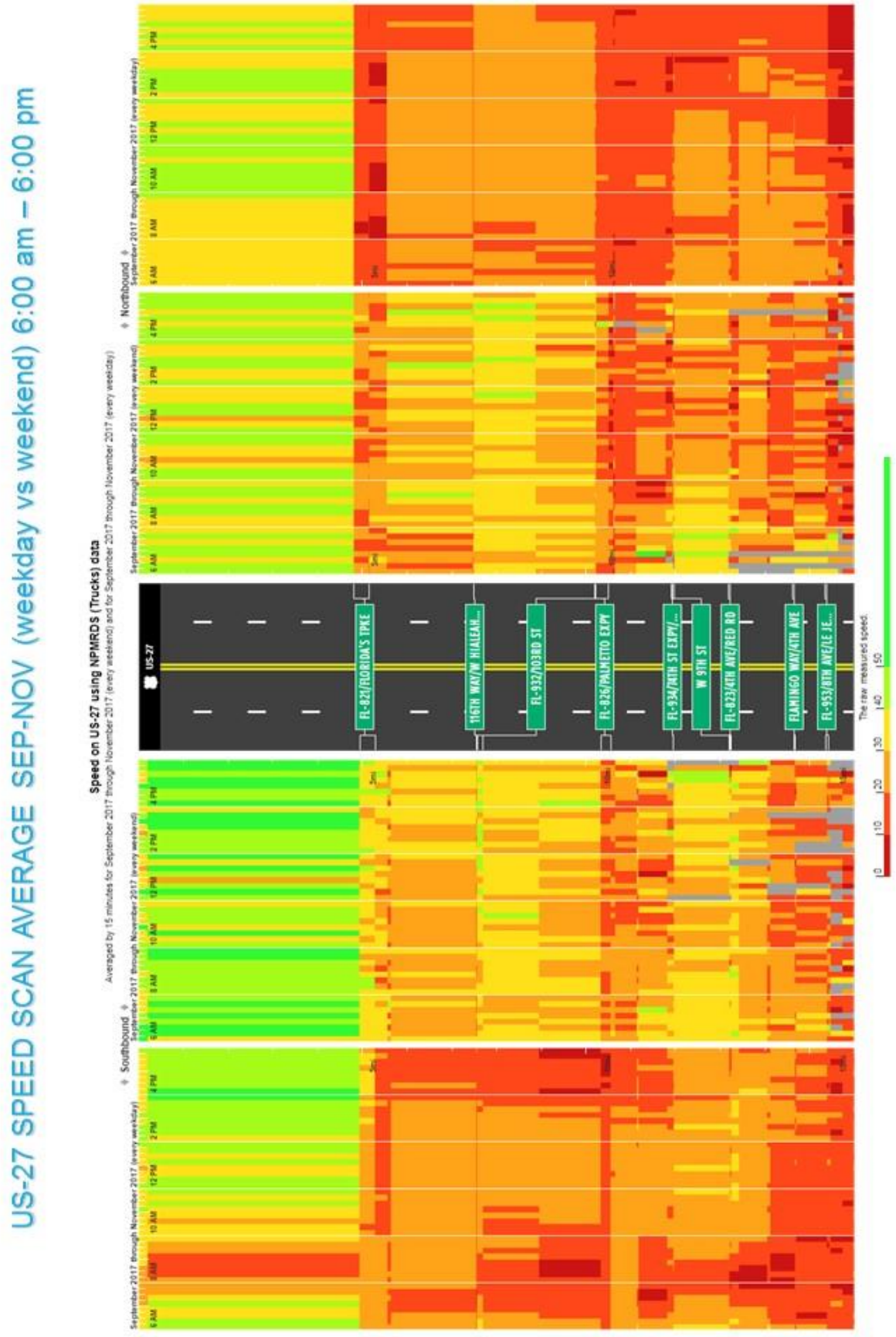

US -1 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on US-1 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
US-1
FL-826/NW 163RD ST
10TH AVE
I-195/BISCAYNE BLVD
US-1/FL-...
3RD AVE
GRAND AVE
FL-959/57TH AVE/RED ...
FL-826/PALMETTO EXPY
HOWARD DR/136TH ST
MARLIN RD/107TH AVE
224TH ST
SW 137TH AVE/TALLAH...
BISCAYNE DR/288TH ST
FL-821/FLORIDA'S TPK...
CR-905
The raw measured speed.
0
10
20
30
40
50
1

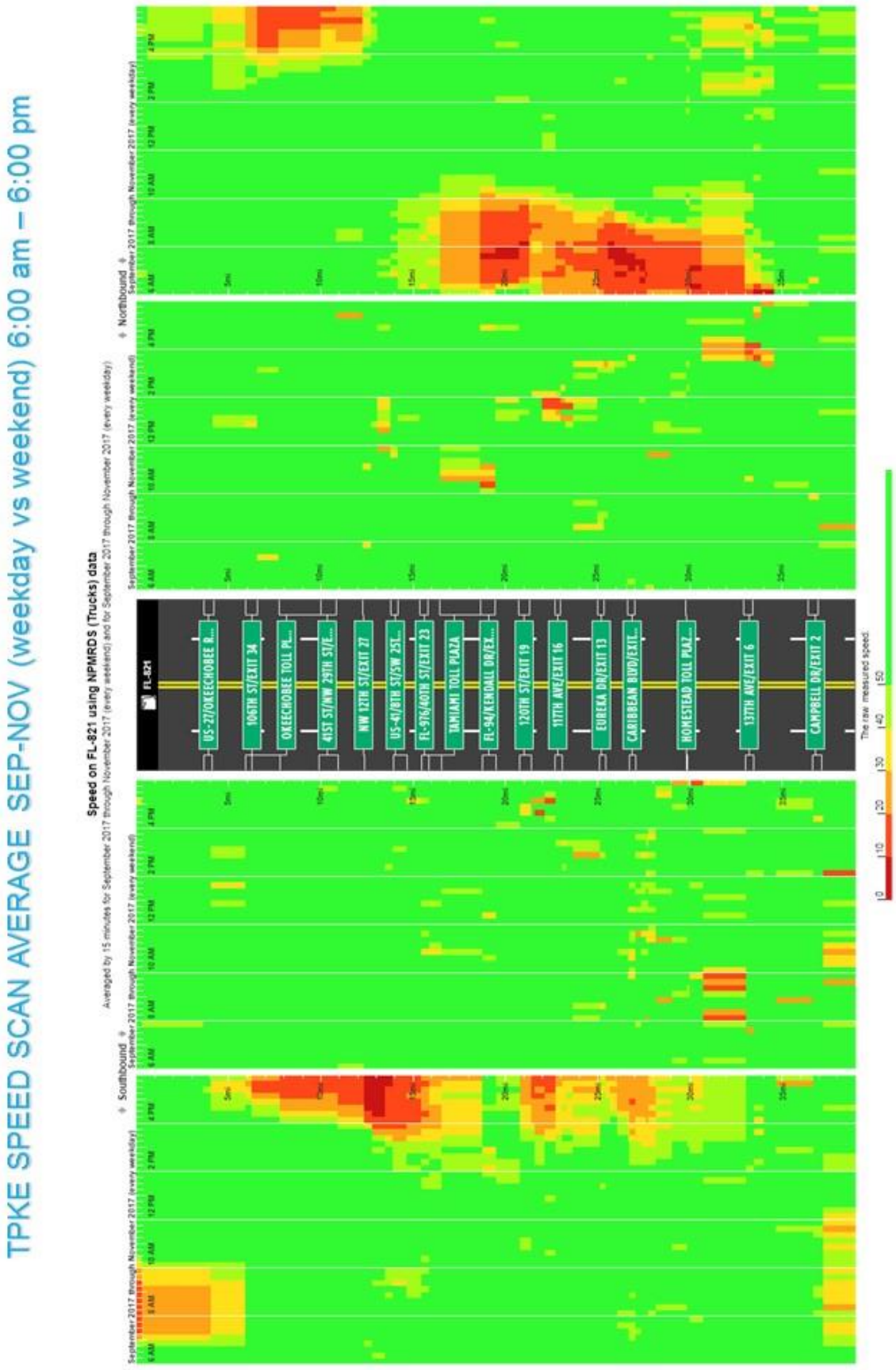

I-75 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on I-75 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
September 2017 through November 2017 (every weekday)
September 2017 through November 2017 (every weekend)
6 AM
10 AM
12 PM
2 PM
4 PM
I-75
MIAMI GARDENS DR/E...
138TH ST/GRAHAM DAI...
FL-826/PALMETTO EXP...
The raw measured speed:
10
110
120
130
140
150


I-95 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on I-95 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
September 2017 through November 2017 (every weekday)
September 2017 through November 2017 (every weekend)
I-95
FL-860/MIAMI GARDE...
I-95 (NORTH)
US-441/FLORIDA'S TPK...
FLORIDA'S TPKE
151ST ST/EXIT 11
135TH ST/OPA LOCKA ...
FL-924/119TH ST/EXIT 9
FL-932/NW 6TH AVE/I...
FL-934/NW 7TH AVE/I...
62ND ST/NW 6TH AVE/...
FL-112
I-195/FL-112/EXIT 4
I-95 EXP
I-395/FL-836/NE 3RD ...
2ND ST/NB EXIT 2B/S...
US-41/8TH ST/SW 1ST ...
25TH RD
The raw measured speed:
0
10
20
30
40
50
3

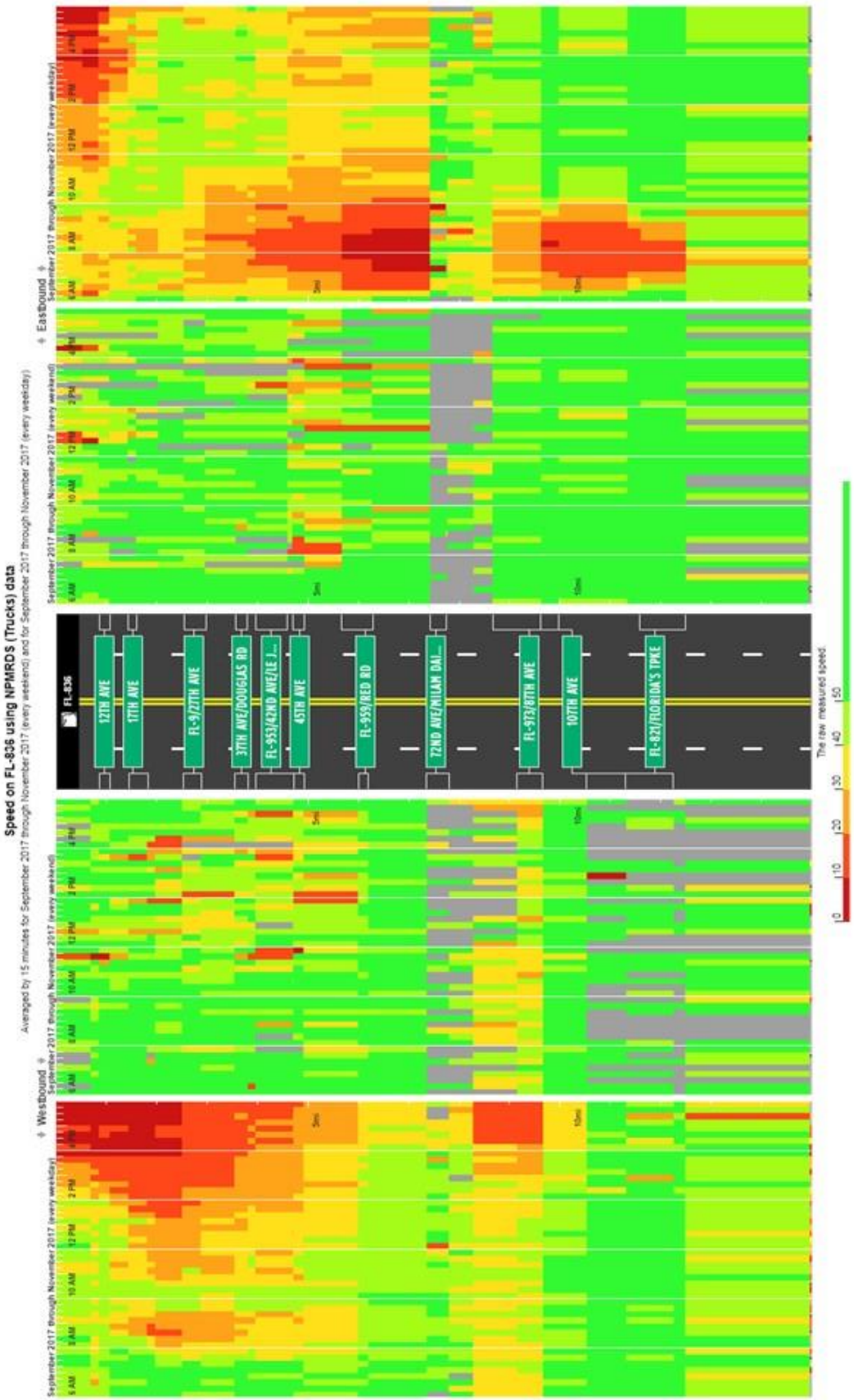

FI-826 (SB-NB) SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on FL-826 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
September 2017 through November 2017 (every weekday)
September 2017 through November 2017 (every weekend)
6 AM
8 AM
10 AM
12 PM
2 PM
4 PM
FL-826
11TH AVE
FL-817/27TH AVE
37TH AVE/DOUGLAS RD
47TH AVE
FL-823/57TH AVE/RED ...
67TH AVE/LUDLAM RD
154TH ST/MIAMI LAKE...
I-75/FL-924
103RD ST
SOUTH RIVER DR
58TH ST
36TH ST
FL-836
US-41/TAMIAMI TRL
40TH ST/BIRD RD
56TH ST/MILLER DR
FL-986/SUNSET DR/72...
FL-94/88TH ST/KENDA...
3mi
10mi
15mi
20mi
The raw measured speed:
0
10
20
30
40
50

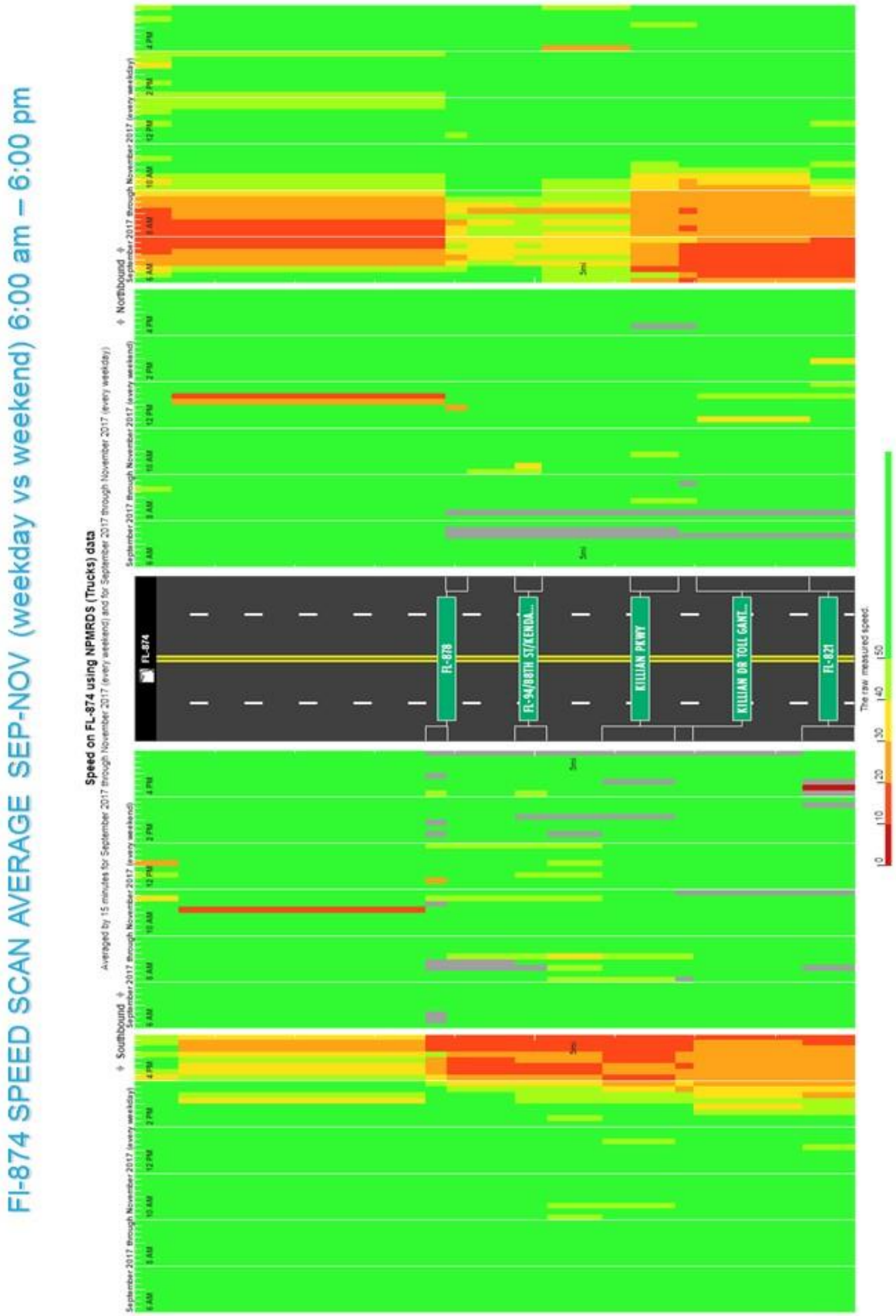

FI-826 (EB-WB) SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on FL-826 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Westbound
Eastbound
FL-826
10TH AVE
15TH AVE
167TH ST
2ND AVE
FL-7/FLORIDA'S TPKE
The raw measured speed
0
10
20
30
40
50
5

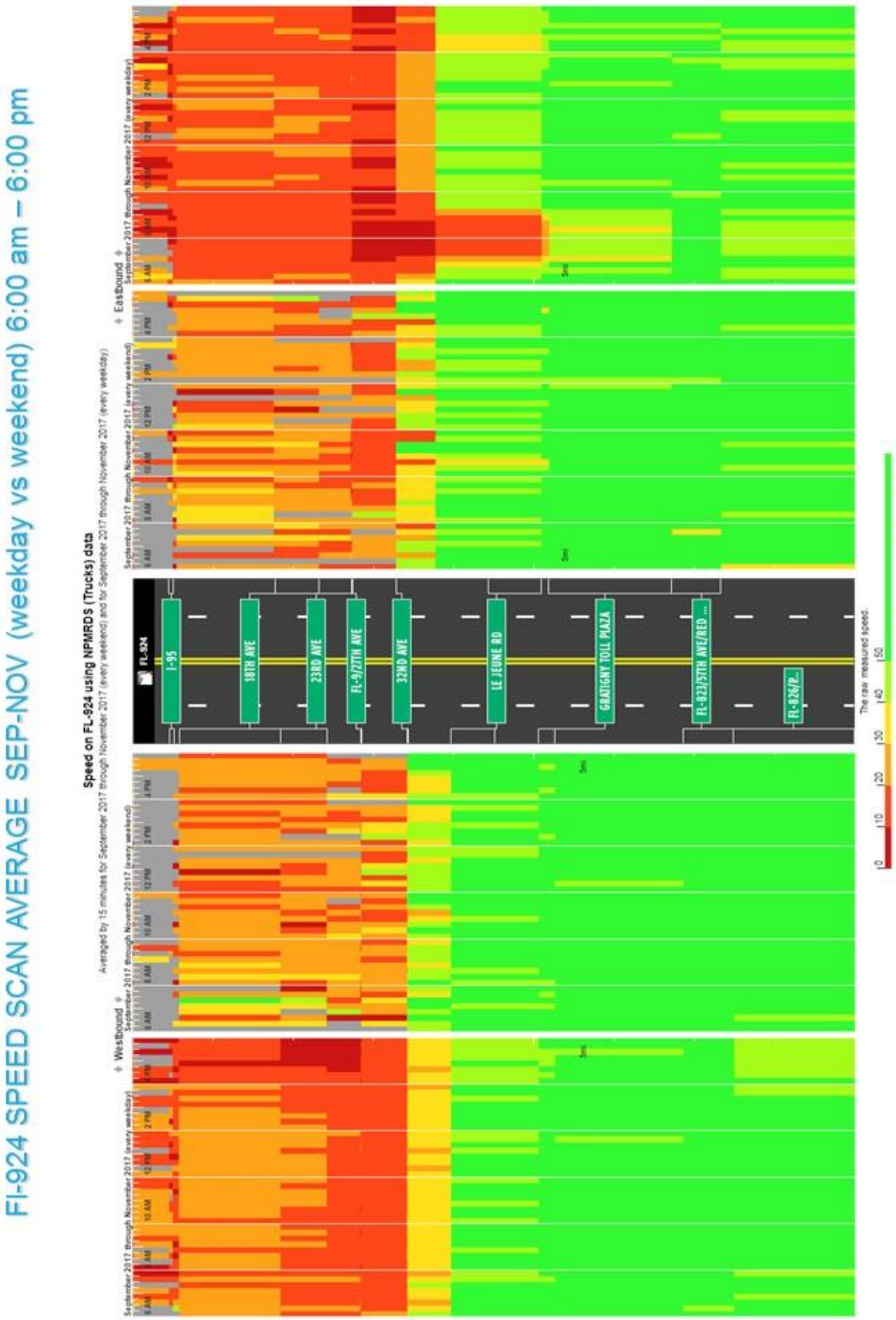

US-27 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on US-27 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
US-27
FL-822/FLORIDA'S TPKE
116TH WAY/W HIALEAH...
FL-932/103RD ST
FL-826/PALMETTO EXPY
FL-934/74TH ST EXPY/...
W 97TH ST
FL-823/67TH AVE/RED RD
FLAMINGO WAY/67TH AVE
FL-953/57TH AVE/LE JE...
The raw measured speed.
0
10
20
30
40
50
6 AM
8 AM
10 AM
12 PM
2 PM
4 PM


TPKE SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on FL-821 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
FL-821
US-27/OKEECHOBEE R...
106TH ST/EXIT 34
OKEECHOBEE TOLL PL...
41ST ST/NW 29TH ST/E...
NW 12TH ST/EXIT 27
US-41/8TH ST/SW 25T...
FL-976/40TH ST/EXIT 23
TAMIAMI TOLL PLAZA
FL-94/KENDALL DR/EX...
120TH ST/EXIT 19
117TH AVE/EXIT 16
EUREKA DR/EXIT 13
CARIBBEAN BLVD/EXIT...
HOMESTEAD TOLL PLAZ...
137TH AVE/EXIT 6
CAMPBELL DR/EXIT 2
The raw measured speed:
10
110
120
130
140
150

FI-836 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm




FI-874 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on FL-874 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Southbound
Northbound
FL-874
FL-878
FI-94/88TH ST/KENDA...
KILLIAN PKWY
KILLIAN DR TOLL GANT...
FL-821
The raw measured speed:
10
110
120
130
140
150
9


FI-924 SPEED SCAN AVERAGE SEP-NOV (weekday vs weekend) 6:00 am – 6:00 pm
Speed on FL-924 using NPMRDS (Trucks) data
Averaged by 15 minutes for September 2017 through November 2017 (every weekend) and for September 2017 through November 2017 (every weekday)
Westbound
Eastbound
September 2017 through November 2017 (every weekday)
September 2017 through November 2017 (every weekend)
6 AM
10 AM
12 PM
2 PM
4 PM
FL-924
I-95
18TH AVE
23RD AVE
FL-9/27TH AVE
32ND AVE
LE JEUNE RD
GRATIGNY TOLL PLAZA
FL-823/57TH AVE/RED ...
FL-826/P...
The raw measured speed:
0
10
20
30
40
50