









Technical Memorandum 2Systems and Assets















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Introduction

Florida's freight systems and assets are essential to the efficient movement of goods and commodities across all modes within the state. This technical memorandum provides a comprehensive inventory and description of Florida's freight systems assets. Florida's freight transportation system serves a diverse range of needs by providing for the movement of goods across local, regional, interstate, and international multimodal networks. As such it is imperative to understand the characteristics and locations of existing infrastructure throughout the state in order to assess freight system trends, needs, and issues.





National Freight and Freight Related System Designations

This section provides an overview of all freight and freight related systems that have been designated by national and federal organizations. These systems are listed below:

- National Highway System (NHS)
- National Highway Freight Network (NHFN)
- Interim Multimodal National Freight Network (IMNFN)
- Alternative Fuel Corridors (AFC)
- Foreign Trade Zones (FTZ)
- Pipelines Under the Jurisdiction of the Pipeline and Hazardous Materials Safety Administration (National Pipeline Mapping System (NPMS))

National Highway System

Definition: The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. It was developed by the U.S. Department of Transportation (USDOT) in cooperation with state DOT's, local officials, and metropolitan planning organizations (MPOs). Regulatory procedures for the system actions on NHS are explained in the Code of Federal Regulations (23 CFR 470). The NHS is inclusive of the following subsystems of roadways (note that a specific highway route may be on more than one subsystem):

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.
- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity and emergency capabilities for defense purposes.
- Major Strategic Highway Network Connectors: These are highways which provide access between major military installations and highways which are part of the STRAHNET.
- Intermodal Connectors: These highways provide access between major intermodal facilities and the other four subsystems making up the National Highway System.

Importance to Freight: The NHS consists of interconnected urban and rural principal arterials and highways (including toll facilities) which serve major population centers, international border crossings, ports, airports, public transportation facilities, other intermodal transportation facilities and other major travel destinations. This network also serves interstate and

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¹ NHS Procedures



interregional travel. States are encouraged to utilize federal funds on improving the efficiency and safety of this network. Ultimately, the NHS is one of the most important networks in stimulating and maintaining Florida's economy, as this network carries the most heavy truck traffic linking goods and commerce to and from major population centers and intermodal hubs.

Data Source: Roadway Characteristics Inventory, 2018

Summary Statistics: Figure 1 depicts the statewide coverage of the NHS. Table 1 lists the mileage of different subsystems of NHS roadways in Florida. Table 2 provides the center line mileage, lane mileage, and daily vehicle miles traveled on the Florida portion of the NHS for the year 2018.

Table 1 | National Highway System (NHS) Mileage

Subsystems of roadways	Mileage (as of April 1,2019)
Interstate	1,546
MAP-21 Principal/Minor Arterials	4,345
Other Principal Arterials	2,333
Intermodal Connectors	162
Strategic Highway Network (STRAHNET)	343
Major Strategic Highway Network Connectors	121
Total	8,850

Table 2 | National Highway System (NHS) Mileage (includes State Highway System only)

Roadway Classifications	Center Line Miles	Lane Miles	Daily Vehicle Miles Traveled ('000s)
Rural Interstate	717.3	3,512.2	30,137.3
Rural Toll	175.6	682.6	6,143.9
Rural Other	2,549.2	7,309.3	22,901.6
Urban Interstate	778.0	4,982.9	83,885.0
Urban Toll	473.4	2,399.4	34,287.1
Urban Other	3,514.6	15,587.0	115,221.8
Total	8,208.0	34,473.3	292,576.8



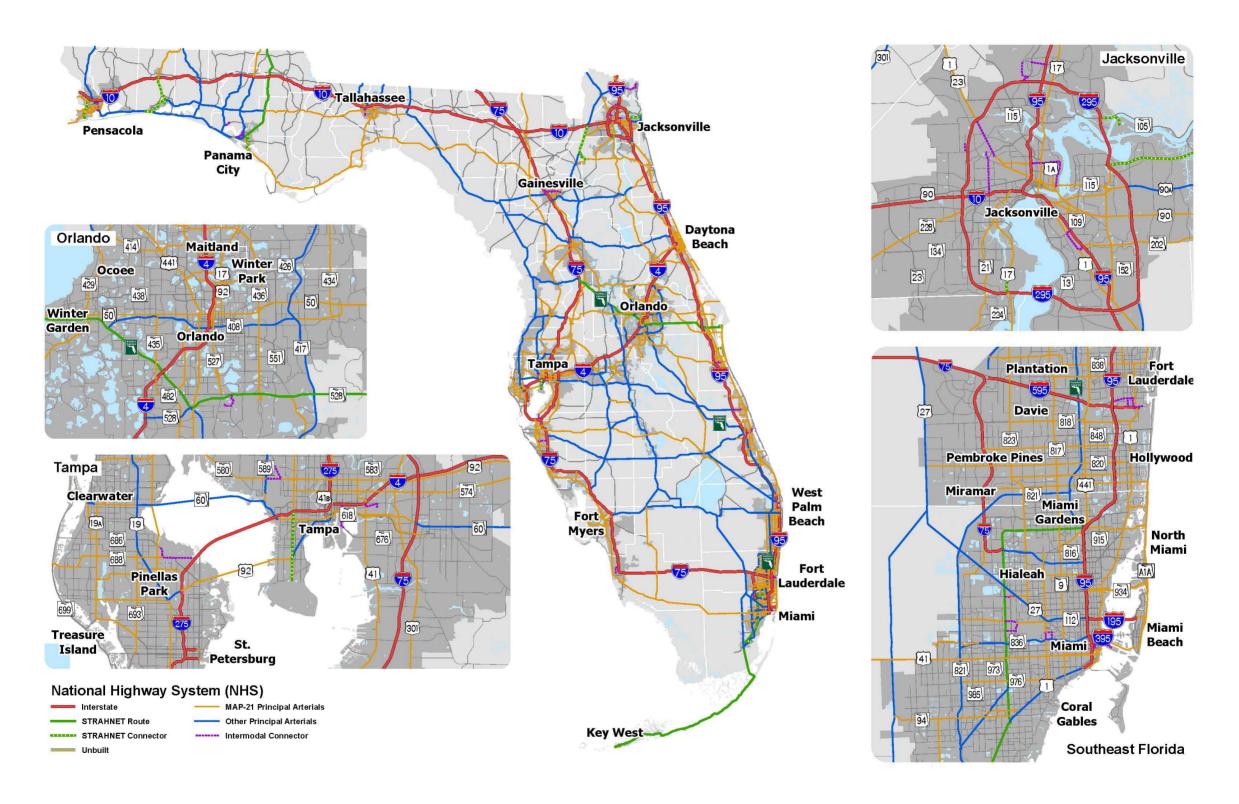


Figure 1 | National Highway System



National Highway Freight Network

Definition: The National Highway Freight Network (NHFN), established by the FAST Act, helps strategically direct resources toward improved system performance for efficient movement of freight on highways. The NHFN includes the following subsystems of roadways:

- Primary Highway Freight System (PHFS): This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system.
- Other Interstate portions not on the PHFS: These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities.
- Critical Rural Freight Corridors (CRFCs): These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities.
- Critical Urban Freight Corridors (CUFCs): These are public roads in urbanized areas which
 provide access and connection to the PHFS and the Interstate with other ports, public
 transportation facilities, or other intermodal transportation facilities.

Appendix A describes NHFN designation procedures and the list of all designated CRFCs and CUFCs in accordance with Section 1116 of the FAST Act.

Importance to Freight: This network is expected to assist different states in strategically directing resources toward improved system performance for efficient movement of freight on highways, including the NHS, freight intermodal connectors and aerotropolis transportation systems. The FAST Act established the National Highway Freight Program to improve the efficient movement of freight on the NHFN.

Data Source: Freight and Multimodal Operations Office, 2018

Summary Statistics: Figure 2 depicts the statewide coverage of the NHFN. Table 3 lists the mileage of different subsystems of NHFN roadways in Florida.

Table 3 | Statewide Mileages of National Highway Freight Network

Subsystem of roadways	Statewide Mileages		
Primary Highway Freight System (PHFS) Routes	1.538.92		
PHFS Intermodal Connectors	61.77		
Interstate Not on the PHFS	54.63		
Critical Urban Freight Corridors (CUFC)	159.86 (Maximum Allowable Limit = 160.07)		
Critical Rural Freight Corridors (CRFC)	309.89 (Maximum Allowable Limit = 320.14)		
Total	2,125.07		



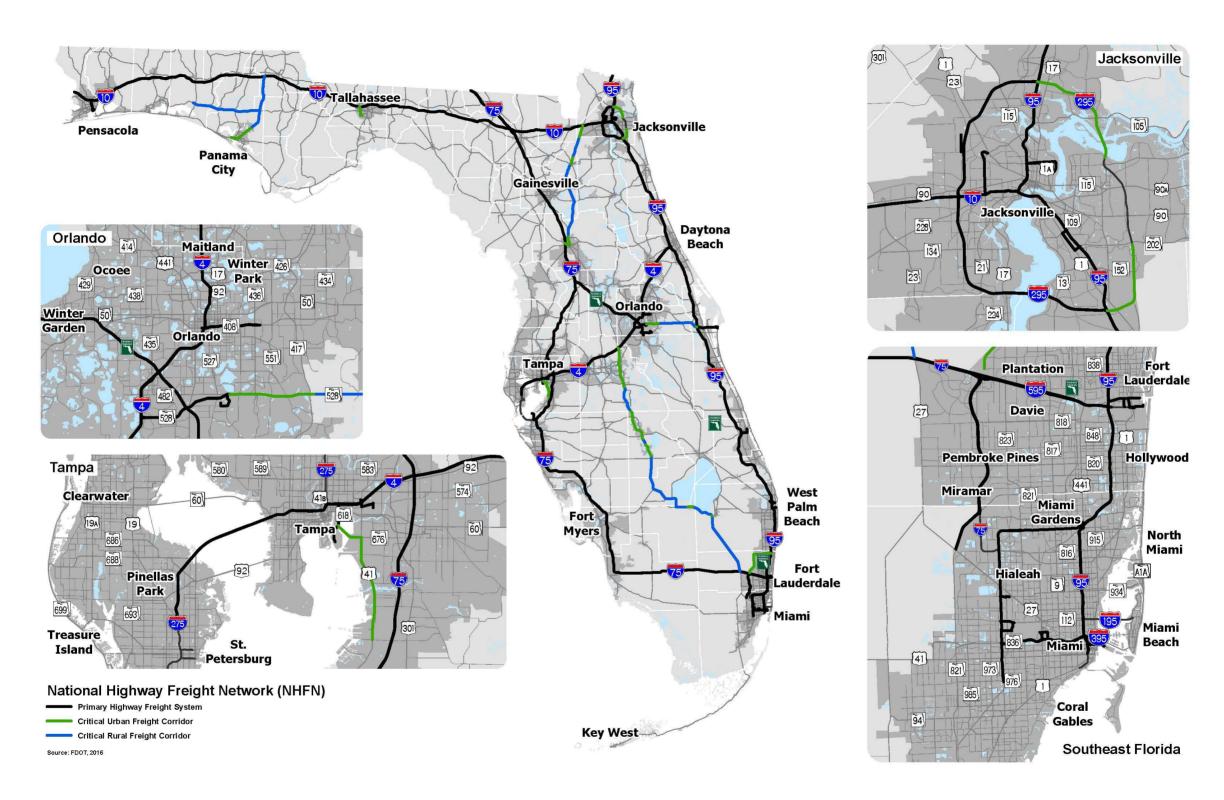


Figure 2 | National Highway Freight Network



Definition: The Interim Multimodal Freight Network (Interim NMFN) is based on the statutory requirements identified in 49 U.S.C. 70103(b)(2) ² and includes the National Highway Freight Network, the freight rail systems of Class I railroads, the public ports of the United States that have total annual foreign and domestic trade of at least 2,000,000 short tons, the inland and intracoastal waterways of the United States, the Great Lakes, the St. Lawrence Seaway, and coastal and ocean routes along which domestic freight is transported, the 50 airports located in the United States with the highest annual landed weight, and other strategic freight assets such as railroad connectors and border crossings.

Freight Mobility and Trade Plan

Importance to Freight: Section 70103 of Title 49, U.S.C., established in Section 8001 of the FAST Act, directs the Under Secretary of Transportation for Policy to establish a NMFN that will be used to:

- Assist states in strategically directing resources toward improved system performance for the efficient movement of freight on the NMFN;
- Inform freight transportation planning;
- Assist in the prioritization of federal investment; and
- Assess and support federal investments to achieve the national multimodal freight policy goals and the national highway freight program goals.

Data Source: U.S. Department of Transportation, 2018

Summary Statistics: Table 4 and Figure 3 provide the statewide information for the Interim NMFN.

Table 4 | Statewide Statistics of Interim National Multimodal Freight Network

Subsystem of Roadways	Statewide Statistics
National Highway Freight Network	2,125.07miles
Rail Freight Network Routes	2,142 miles
Ports	7
Domestic Waterway Routes	765 miles
Cargo Airports	4

² Establishment of Interim National Multimodal Freight Network, 2015



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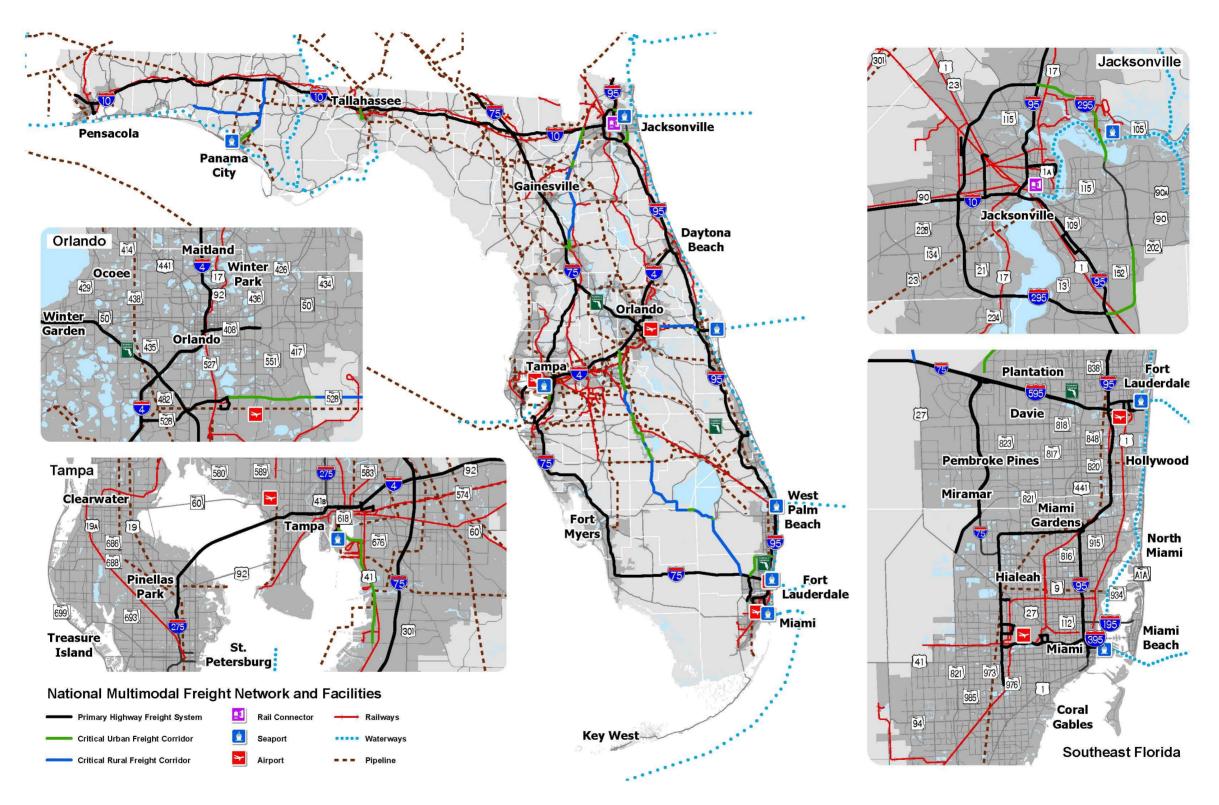


Figure 3 | National Multimodal Freight Network



Alternative Fuel Corridor Designations

Definition: The U.S. Department of Transportation (USDOT) has designated national plug-in electric vehicle charging and hydrogen, propane, and natural gas fueling corridors in strategic locations along major highways to improve the mobility of alternative fuel vehicles. To designate these corridors, USDOT solicits nominations from state and local officials with insight from industry stakeholders. Every five years after the establishment of the corridors, USDOT will update and redesignate the corridors.

Importance to Freight: With the designation of alternative fuel corridors, FHWA has sought to establish a national network of alternative fueling and charging infrastructure along NHS corridors. FHWA intends to support the expansion of this national network through the following process:

- Provide the opportunity for formal corridor designations on an annual basis;
- Ensure that corridor designations are selected based on criteria that promote the "build out" of a national network;
- Develop national signage and branding to help catalyze applicant and public interest;
- Encourage multi-state and regional cooperation and collaboration; and,
- Bring together a consortium of stakeholders including state agencies, utilities, alternative
 fuel providers, and car manufacturers to promote and advance alternative fuel corridor
 designations in conjunction with the Department of Energy.

Data Source: Federal Highway Administration, 2016

Summary Statistics: Designated corridors in Florida include I-10, I-295, SR-105 and SR A1A. Table 5 and Figure 4 provide the details of the alternative fuel corridor designations in the state of Florida. Figure 4 also includes the alternative fueling stations locations.

Alternative fuel stations as depicted in Figure 4 include 1,468 Electric (ELEC), 138 Liquefied Petroleum Gas (LPG), 87 E85 Ethanol (E85), 66 Compressed Natural Gas (CNG), 12 Biodiesel (BD) and 4 Liquefied Natural Gas (LNG) stations.















Table 5 | Corridor-Pending and Corridor-Ready Alternative Fuel Corridors (2016)

	Corridor Pending (2016)	Corridor Ready (2016)	
Lead Agency	N. Florida TPO	N. Florida TPO	
Fuel(s)	EV, CNG, LNG, LPG, H2	EV, CNG, LNG, LPG, H2	
EV ¹	I-10: From Jacksonville to Lake City, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-95 From FL/GA border to St. Augustine, I-295	
CNG ²	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to Jacksonville, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-95 From Jacksonville to St. Augustine, I-295 Entire length of highway	
LNG ³	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, I-295: Entire length of highway, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, I-295: Entire length of highway, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	
LPG ⁴	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-295	
Hydrogen Pending⁵	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, I-295: Entire length of highway, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A		

¹Includes only DCFC, 50 miles between stations, 5 miles from highway, public stations only, no Tesla facilities

²150 miles between stations, 5 miles from highway, public stations only, fast fill, 3,600 psi

³200 miles between stations, 5 miles from highway, public stations only

⁴150 miles between stations, 5 miles from highway, public stations only, primary stations only

⁵100 miles between stations, 5 miles from highway, public stations only (includes non-road facilities that are compliant with SAE J2601 standards)



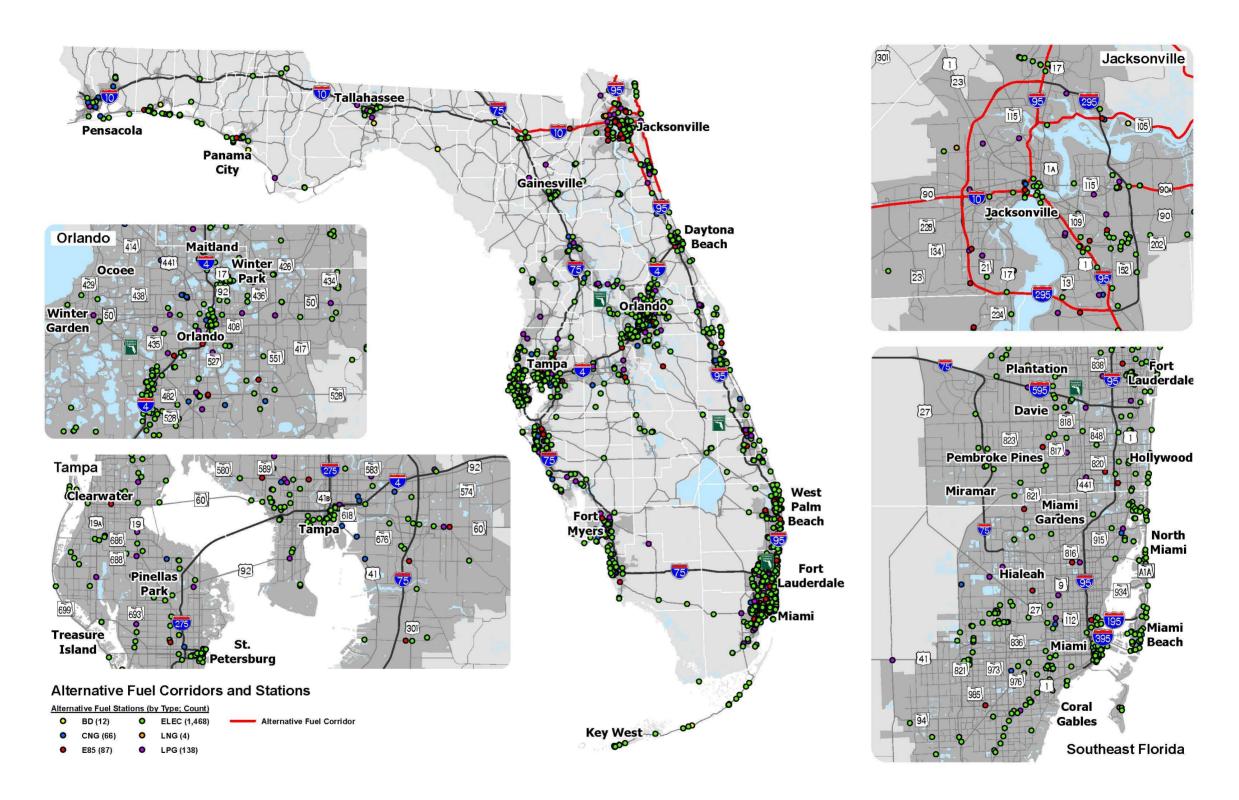


Figure 4 | Alternative Fuel Corridors and Alternative Fuel Station Locations



Definition: A Foreign Trade Zone (FTZ) is a secure area under the supervision of the Bureau of Customs and Border Protection (CBP). FTZs are considered outside the customs territory of the United States for the purposes of payment of duty. The authority for establishing zones is granted by the Foreign Trade Zone Board, under the Foreign-Trade Zones Act of 1934, as amended (19 U.S.C. 81a-81u), and the FTZ Board's regulations (15 C.F.R. 400).

Freight Mobility and Trade Plan

Importance to Freight: The purpose of establishing FTZs is to "expedite and encourage foreign commerce and other purposes." The FTZ Act is administered in the context of evolving U.S. economic and trade policy and economic factors relating to international competition.

Data Source: Foreign Trade Zone Board, 2017

Summary Statistics:³

• Florida has the 2nd largest FTZ Network in the United States.

- Florida is ranked 8th in the US for exports (\$) and 20th for merchandise received (\$).
- For warehouse and distribution activity Florida is ranked 3rd in the US for exports (\$) and 11th for merchandise received (\$).
- For production activity, Florida is ranked 18th in the US for exports (\$) and 19th for merchandise received (\$).
- For warehouse and distribution activity (\$) Broward County (Zone 25) is ranked 4th, Miami-Dade County (Zone 281), is ranked 7th, Miami (Zone 32) is ranked 19th, and Orlando (Zone 42) is ranked 21st out of all zones in the US for exports. Broward County (Zone 25) is ranked 22nd out of all zones in the US for merchandise received.
- The major products by value include oil/petroleum (39%), vehicles (14%), machinery/equipment (10%), beverage/spirits (10%) and consumer products (8%).

³ 79th Annual Report of the Foreign-Trade Zones Board to the Congress of the United States





Table 6 provides the list of Foreign Trade Zones in the state. Figure 5 provides the locations.

Table 6 | Florida Foreign Trade Zones

Foreign Trade Zones (FTZ) Number	Merchandise Received	Exports	Employees
FTZ No. 25 Broward County	\$1,000-5,000 Mil	\$1,000-5,000 Mil	501-750
FTZ No. 32 Miami	\$500-750 Mil	\$250-500 Mil	1,501-2,000
FTZ No. 42 Orlando	\$500-750 Mil	\$250-500 Mil	151-250
FTZ No. 64 Jacksonville	\$1,000-5,000 Mil	\$100-250 Mil	1,001-1,250
FTZ No. 65 Panama City	\$100-250 Mil	\$0	501-750
FTZ No. 79 Tampa	\$750-1,000 Mil	\$25-50 Mil	251-500
FTZ No. 135 Palm Beach County	\$1-5 Mil	\$1-5 Mil	51-75
FTZ No. 136 Brevard County	\$250-500 Mil	\$1-5 Mil	26-50
FTZ No. 166 Homestead	\$0	\$0	0
FTZ No. 169 Manatee County	\$0	\$0	0
FTZ No. 180 Miami (Wynwood)	NA	NA	NA
FTZ No. 193 Pinellas County	\$50-75 Mil	\$50-75 Mil	501-750
FTZ No. 198 Volusia County	\$0	\$0	0
FTZ No. 213 Fort Myers	\$75-100 Mil	\$5-10 Mil	26-50
FTZ No. 215 Sebring	\$05 Mil	\$0	1-25
FTZ No. 218 St. Lucie County	\$.5 Mil-1 Mil	\$.5 Mil-1 Mil	1-25
FTZ No. 241 Fort Lauderdale	\$100-250 Mil	\$100-250 Mil	51-75
FTZ No. 249 Pensacola	\$1000-5,000 Mil	\$0	251-500
FTZ No. 250 Seminole County	\$25-50 Mil	\$5-10 Mil	1-25
FTZ No. 281 Miami-Dade County	\$1,000-5,000 Mil	\$500-750 Mil	1,251-1,500
FTZ No. 292 Lake County	\$0	\$0	0





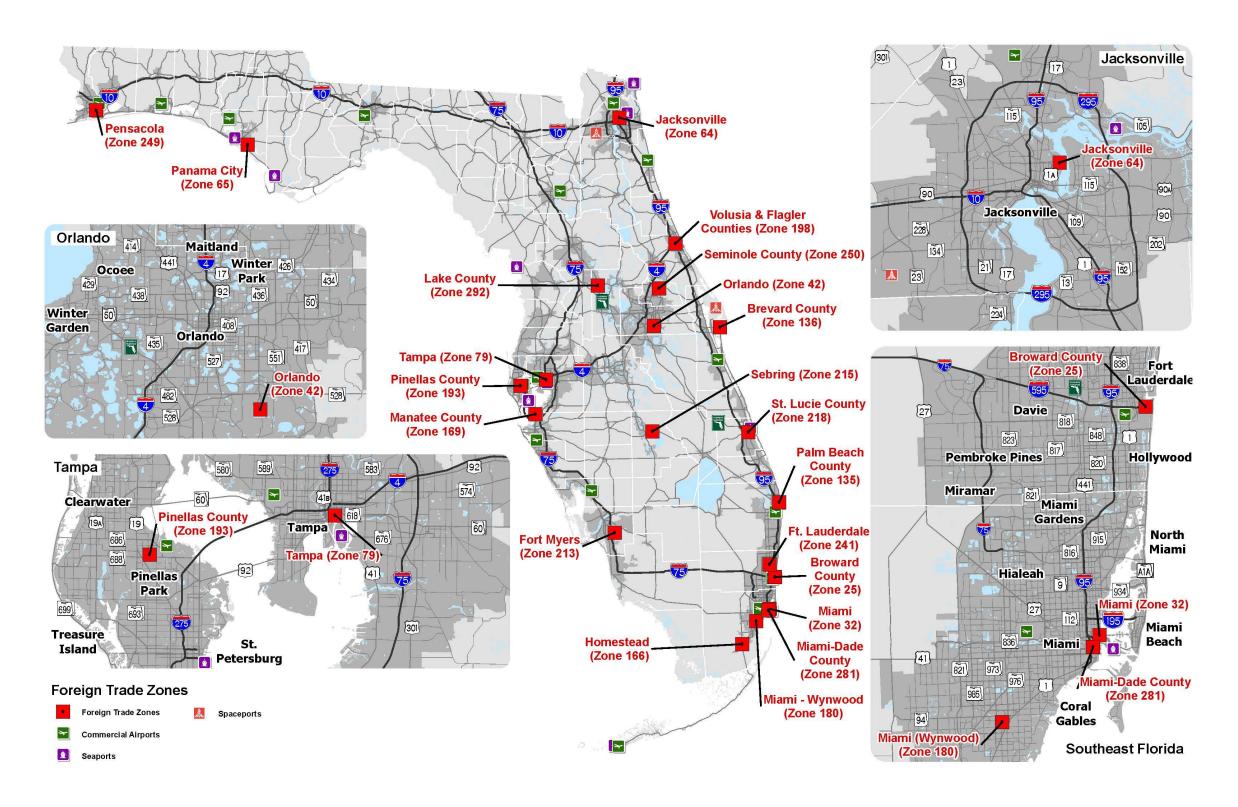


Figure 5 | Foreign Trade Zones in Florida



Pipelines

The National Pipeline Mapping System (NPMS) contains hazardous liquid and gas transmission pipelines. The gas transmission and hazardous liquid mileage is provided in Table 7 below. This summary of mileage by county includes all pipelines in the NPMS categorized as active (pipelines categorized as 'permanently abandoned' are not included in the mileage).

Data Source: National Pipeline Mapping System (NPMS), 2019

Table 7 | Top 10 Counties by Pipeline Mileage (Gas Transmission or Hazardous Liquid)

County Name	Gas Transmission Mileage	County Name	Hazardous Liquid Mileage
Polk	405.5	Hillsborough	139.79
Hillsborough	273.28	Polk	125.5
Palm Beach	247.22	Osceola	29
Santa Rosa	193.18	Escambia	26.38
Brevard	173.93	Palm Beach	24.37
Marion	173.42	Broward	22.92
Osceola	163.2	Orange	18.71
Suwannee	155.98	Santa Rosa	16.32
Levy	152.7	Miami-Dade	16
Martin	151.06	Martin	13.71
Florida	5447.95	Florida	450.09

Source: National Pipeline Mapping System (NPMS) as of 6/25/2019

Transmission of all anhydrous ammonia is operated by Tampa Bay Pipeline Co. Additionally, Tampa Bay Pipeline Co. transports anhydrous ammonia to three major plants serving an integral part of Florida's fertilizer industry. Transmission of all crude oil is operated by Genesis Pipeline USA, L.P. The fuel grade ethanol is transmitted by Central Florida Pipeline Corp. Nearly 26 different operators play a role in natural gas transmission in Florida. Florida Gas Transmission Co., operates the majority, with 70.9% of all the natural gas pipelines. Six operators handle non-Highly-Volatile Liquids (HVL) products. Central Florida Pipeline Corp. (47.51%), Florida Power and Light Co. (25.77%) and Buckeye Partners, L.P. (18.79%) manage the majority of pipelines transmitting non-HVL products. Approximately 97% of Florida's population is located in counties served by natural gas.

Florida ranks 3rd nationally for total energy consumption and uses 894 billion cubic feet of natural gas annually, with roughly 85% attributed to the generation of electricity. Natural gas has a wide range of applications. Homes and businesses use natural gas for heat-intensive

applications, such as water heating, cooking, clothes drying, grilling, pool/spa heating, etc. Common industrial uses include manufacturing, agriculture, and standby power generation. A large percentage of Florida's natural gas consumption is used for electric power generation. In 2008, natural gas provided 47% of the state's electric utility generation and by 2018 this had grown to 72%. This growth has also been supported by natural gas pipeline expansion. According to the Energy Information Administration's (EIA) Natural Gas Pipeline State-to-State Capacity database, natural gas pipeline delivery capacity to Florida increased from 4.1 billion cubic feet per day (bcf/d) in 2008 to 6.2 bcf/d in 2018, up 50%. Natural gas is also rapidly gaining momentum as an alternative transportation fuel. Figure 6 provides pipeline mileage by commodity type.

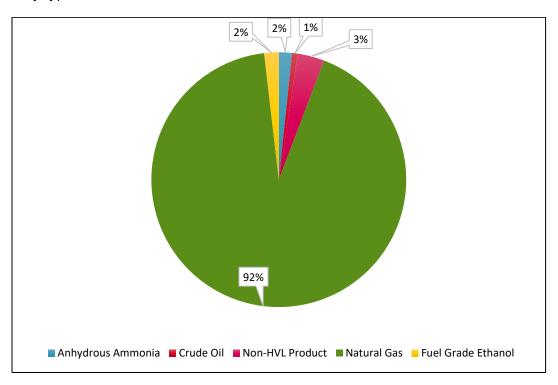


Figure 6 | Percent of Pipeline Mileage by Commodity Type



Statewide Freight and Freight Related System Designations

This section provides an overview of all freight and freight related systems that have been designated by the state of Florida. These systems are listed below:

- Strategic Intermodal System (SIS)
- Functional Classification
- State Highway System (SHS)
- Rail Network
- Intermodal Logistics Centers (ILCs)

Strategic Intermodal System

Definition: The Strategic Intermodal System (SIS) is Florida's high priority network of transportation facilities most important to the state's economy and mobility. The Governor and Legislature established the SIS in 2003 to focus the state's transportation resources on the facilities most significant for interregional, interstate and international travel. The SIS is the state's highest priority for transportation capacity investments and a primary focus for implementing the Florida Transportation Plan (FTP), the state's long-range transportation vision and policy plan.

Importance to Freight: The SIS includes the state's largest and most significant commercial service and general aviation airports, spaceports, public seaports, intermodal freight terminals, rail corridors, waterways, and highways. SIS facilities are the workhorses of Florida's transportation system and account for a dominant share of the people and freight movement to, from, and within Florida. The SIS also includes facilities that have strategic growth importance. All facilities designated on the SIS are eligible for state transportation investments consistent with the policy framework defined in the SIS Policy Plan.

Data Source: Systems Implementation Office, 2019

Summary Statistics: Figure 7 depicts the statewide coverage of new SIS network designations which include the SIS and strategic growth SIS network. As of September 2019, the documentation for new SIS designations are in the draft phase.





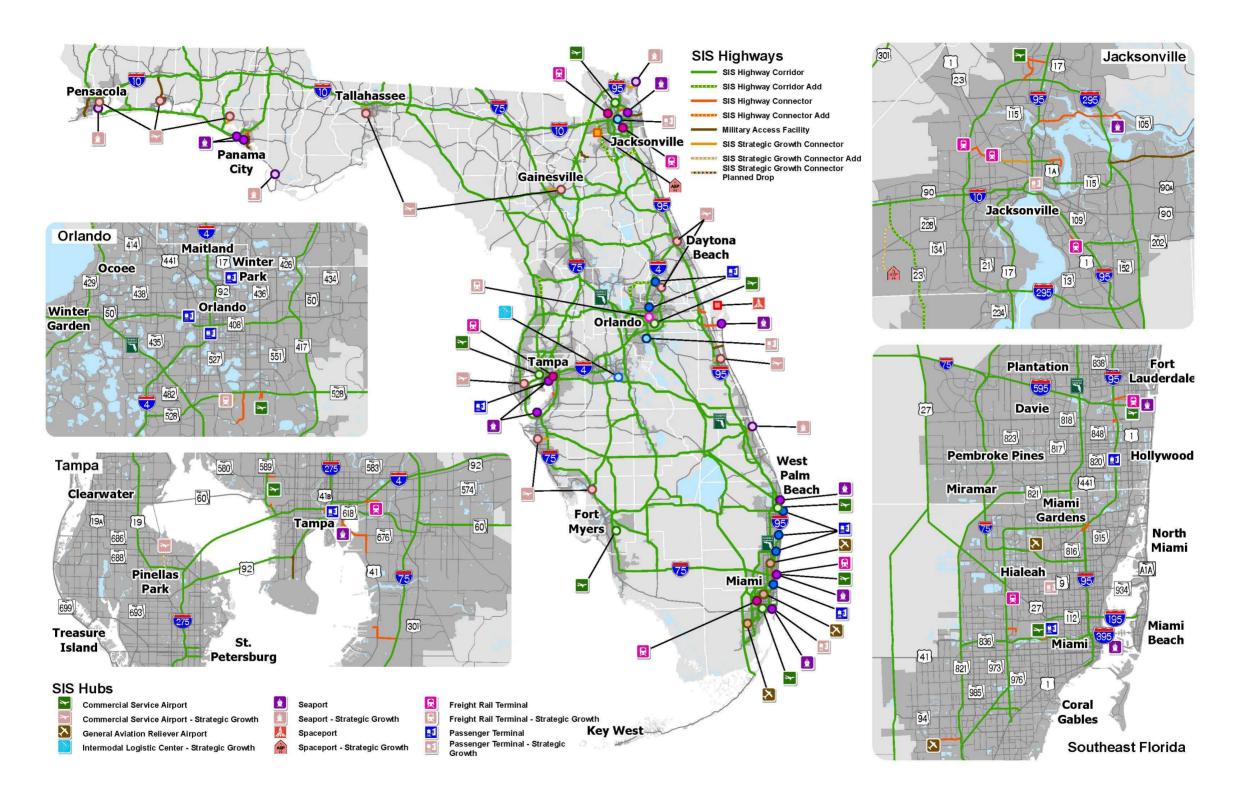


Figure 7 | Strategic Intermodal System



Definition: Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the service they are intended to provide. Five functional classification categories are common to rural and urban roads. The rural or urban designation is part of the complete functional classification designation. The procedure is developed by the FDOT.⁴ They are classified in the following categories:

Freight Mobility and Trade Plan

- Principal Arterial (Urban and Rural)
- Minor Arterial (Urban and Rural)
- Major Collector (Urban and Rural)
- Major Collector (Urban and Rural)
- Minor Collector (Urban and Rural)
- Local (Urban and Rural)

Importance to Freight: These functional classifications are important as many of the principal categories of the functional classification system roads become a part of NHS, SIS and other major designations.

Data Source: Transportation Data and Analytics, Annual SHS Mileage Reports, 2018 https://www.fdot.gov/statistics/mileage-rpts/default.shtm#SHS

Summary Statistics: Table 8 and Figure 8 depict the coverage of the functional classification system for the state.

Table 8 | Functional Classification Mileages (2018)

Roadway Classifications	Center Line Mileage	Lane Miles	Daily VMT (1000s)
Rural Principal Arterial	3,479.60	11,579.00	59,569.70
Rural Minor Arterial	1,762.10	3,632.50	8,080.60
Rural Major Collector	404.9	813.5	1,062.80
Rural Minor Collector	0	0	0.00
Urban Principal Arterial	4,783.40	23,070.50	234,284.30
Urban Minor Arterial	1,504.80	4,938.20	29,567.90
Urban Total Collector	165	381.4	1,624.30
Total	12,099.80	44,415.10	334,189.60

⁴ <u>Urban Boundary and Functional Classification of Roadways (Topic Number: 525-020-311-b), 2018</u>



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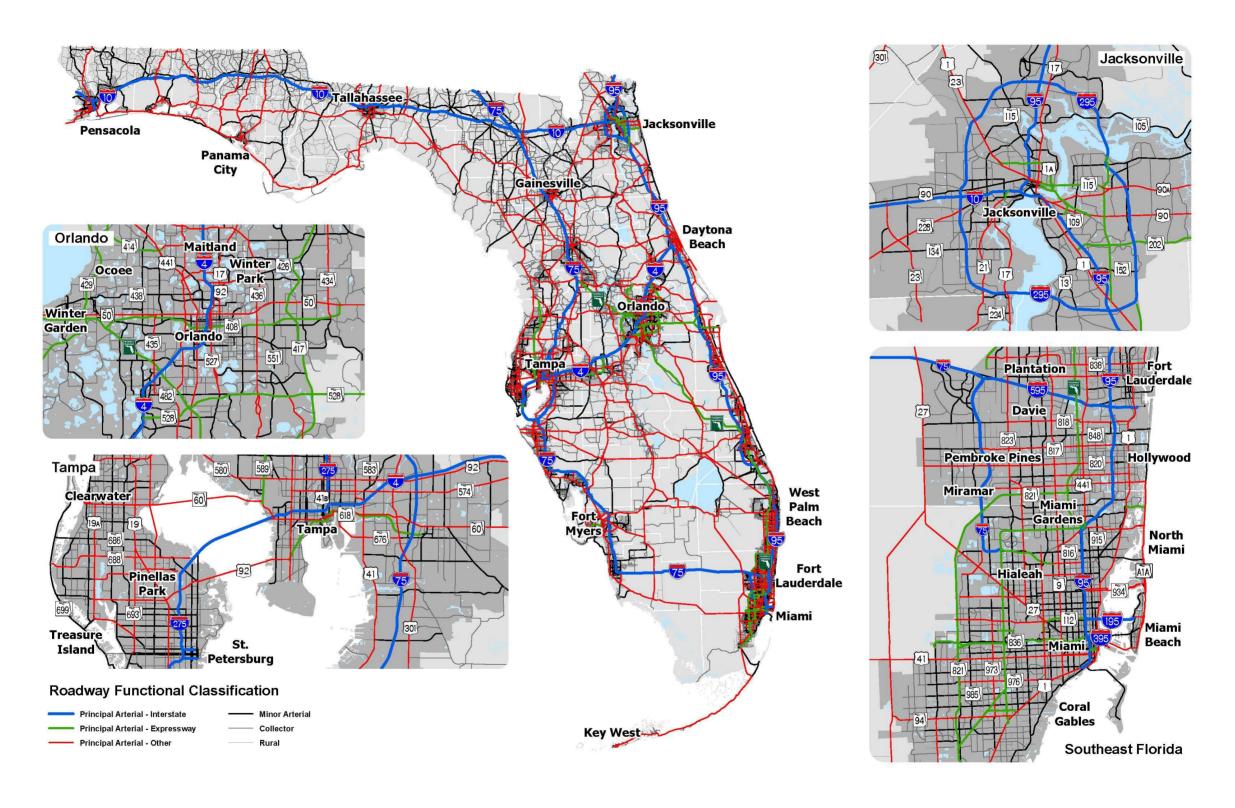


Figure 8 | Roadway Functional Classification



State Highway System

Definition: The State Highway System (SHS) includes roadways under the jurisdiction of the FDOT, state-chartered expressway authorities, and other state agencies. Per FS. 335.02, FDOT, state-chartered expressway authorities, and other state agencies have the authority to designate roads as part of the SHS. The procedure and handbooks are developed by the FDOT.⁵

Importance to Freight: By designating through the SHS, Florida is able to maintain and monitor its roadways for an efficient, reliable, and safe system that ensures mobility of people and goods.

Data Source: Roadway Characteristics Inventory, 2018

Summary Statistics: Table 9 provides the center line mileage, lane mileage and daily vehicle miles traveled on SHS for 2018.

Table 9 | State Highway System Mileages (2018)

Subsystems	Center Line Mileage	Lane Miles	Daily VMT (1000s)
Interstate - Rural	717.3	3,512.20	30,137.30
Toll - Rural	188.3	710.8	6,254.90
Other - Rural	4,741.30	11,802.50	32,321.60
Interstate - Urban	778	4,982.90	83,885.00
Toll - Urban	490	2,451.80	34,613.70
Other - Urban	5,188.50	20,964.00	147,003.70
Total	12,103.40	44,424.20	334,216.20

Rail Network

As per the Association of American Railroads (AAR), in 2017, Florida ranked 23rd in the country for total number of railroads (15 freight railroads) and ranked 24th in the country for railroad mileage (with 2,700+ miles of mainline railroads). Railroads are classified based on their annual operating revenues. The class to which a carrier belongs is determined in accordance with the following revenue thresholds:

- Class I railroads have annual carrier operating revenues of greater than \$250 million.
- Class II railroads have annual carrier operating revenues less than \$250 million but more than \$20 million.
- Class III railroads have annual carrier operating revenues of less than \$20 million.

Florida's freight rail system is operated by two Class I railroads (CSX Transportation and Norfolk Southern Corp.), one Class II railroad, and multiple Class III railroads that are further categorized

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⁵ <u>Transportation System Jurisdiction and Numbering (525-020-010-h), 2016</u>



as switching and terminal railroads or short lines. Florida has 3,843 miles of railroads, including 2,742 miles of mainline. CSX is the largest railroad in the state, owning over 50% of total rail mileage. The Florida East Coast (FEC) is the second largest railroad owner at 15%, although some mileage is operated by a short line. FDOT is the third largest owner, though all its mileage is operated by others. Table 10 and Figure 9 provide the statewide mileages and statewide coverage of the rail network.

Data Source: Florida Department of Transportation, 2018

Table 10 | Statewide Mileages of the Rail Network

Subsystem of Railroads	Statewide Mileages
CSX Transportation	2,057
Norfolk Southern Railway	126
Florida East Coastal Railway	561
Short Lines	819
Florida DOT	137
Other	142
Total Mileage	3,843

As of September 2018, there are a total of 5,324 open highway-rail crossings in the state. 92% of those are at-grade crossings, while the other 8% are instances where tracks go under or over a road. Out of all the crossings in the state, 75% are public.

The Strategic Rail Corridor Network (STRACNET) is another designated rail network which is important to the United States' strategic defense policy and which provides defense access, continuity, and emergency capabilities for defense purposes.



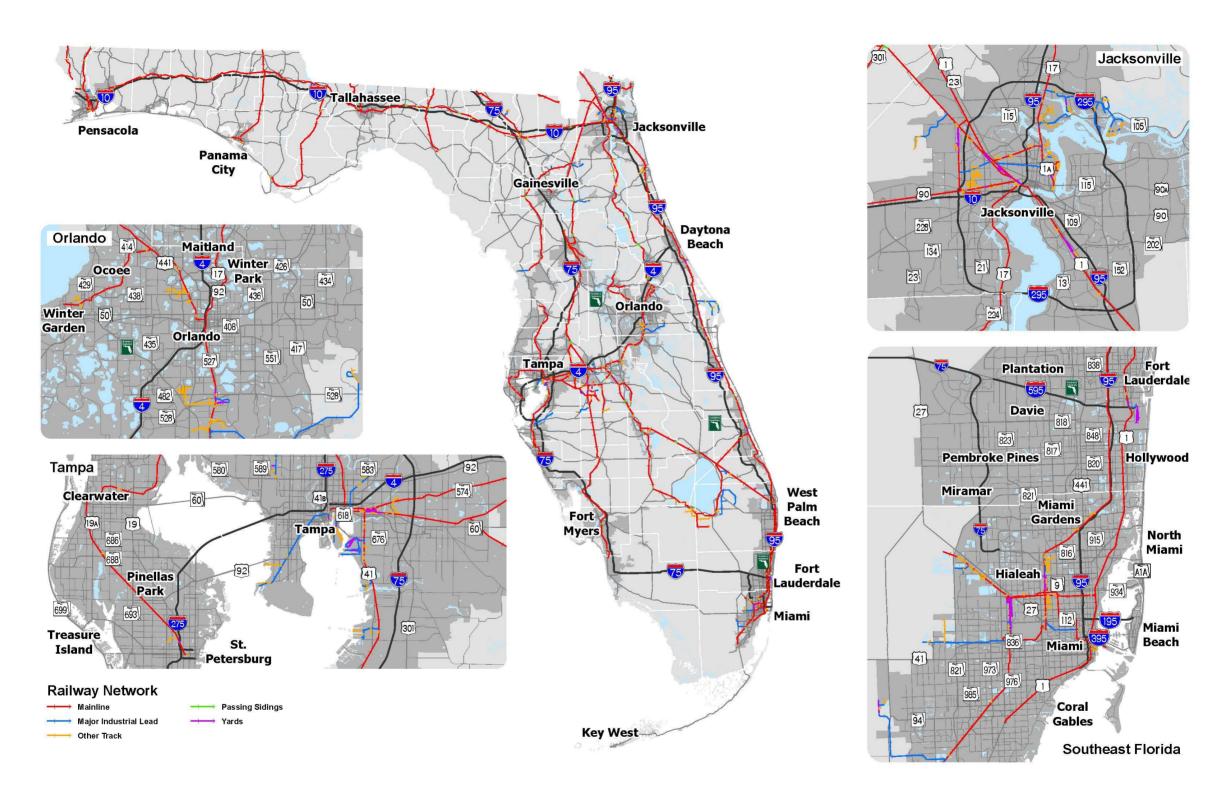


Figure 9 | Statewide Rail Network



Intermodal Logistics Centers

Definition: According to Section 311.101(2), F.S.: the term "intermodal logistics center (ILC)" means a facility or group of facilities serving as a point of intermodal transfer of freight in a specific area physically separated from a seaport where activities relating to transport, logistics, goods distribution, consolidation, or value-added activities are carried out and whose activities and services are designed to support or be supported by conveyance or shipping through one or more seaports listed in S. 311.09, F.S.

Importance to Freight: The purpose of the ILC Infrastructure Support Program is to provide funds for roads, rail facilities, or other means for the conveyance or shipment of goods through a seaport to or from an ILC. To be considered eligible for funding under the ILC Infrastructure Support Program, a project must meet the criteria established in Section 311.101(3), F.S., and in 14-118 FAC. Past projects have included infrastructure enhancements such as road construction, rail expansion, and dock improvements. ILCs are a SIS hub designation and the criteria are part of overall SIS designations.

Currently the Central Florida Intermodal Logistics Center is designated as SIS ILC-Strategic growth.

Multimodal Critical Rural Freight Corridors and Facilities

The multimodal critical rural freight corridors and facilities are identified in multiple national and statewide designations as identified below:

- Interim National Multimodal Freight System (Figure 3)
- Strategic Intermodal System (SIS) (Figure 7)
- Multi-use Corridors of Regional Economic Significance (M-CORES)

Figure 3 and Figure 7 highlight the multimodal critical urban and critical rural freight corridors and facilities.

The Multi-use Corridors of Regional Economic Significance (M-CORES) program is intended to revitalize rural communities, encourage job creation and provide regional connectivity while leveraging technology, enhancing the quality of life and public safety, and protecting the environment and natural resources. The program was signed into law by Governor Ron DeSantis on May 17, 2019. The intended benefits include, but are not limited to, addressing issues such as:

- Hurricane evacuation
- Congestion mitigation
- Trade and logistics
- Broadband, water and sewer connectivity





- Energy distribution
- Autonomous, connected, shared and electric vehicle technology
- Other transportation modes, such as shared-use non-motorized trails, freight and passenger rail, and public transit
- Mobility as a service
- Availability of a trained workforce skilled in traditional and emerging technologies
- Protection or enhancement of wildlife corridors or environmentally sensitive areas
- Protection or enhancement of primary springs protection zones and farmland preservation areas

The three corridors as part of M-CORES (Figure 10) are as follows:

- The Suncoast Connector, extending from Citrus County to Jefferson County
- The Northern Turnpike Connector, extending from the northern terminus of Florida's Turnpike northwest to the Suncoast Parkway
- The Southwest-Central Florida Connector, extending from Collier County to Polk County



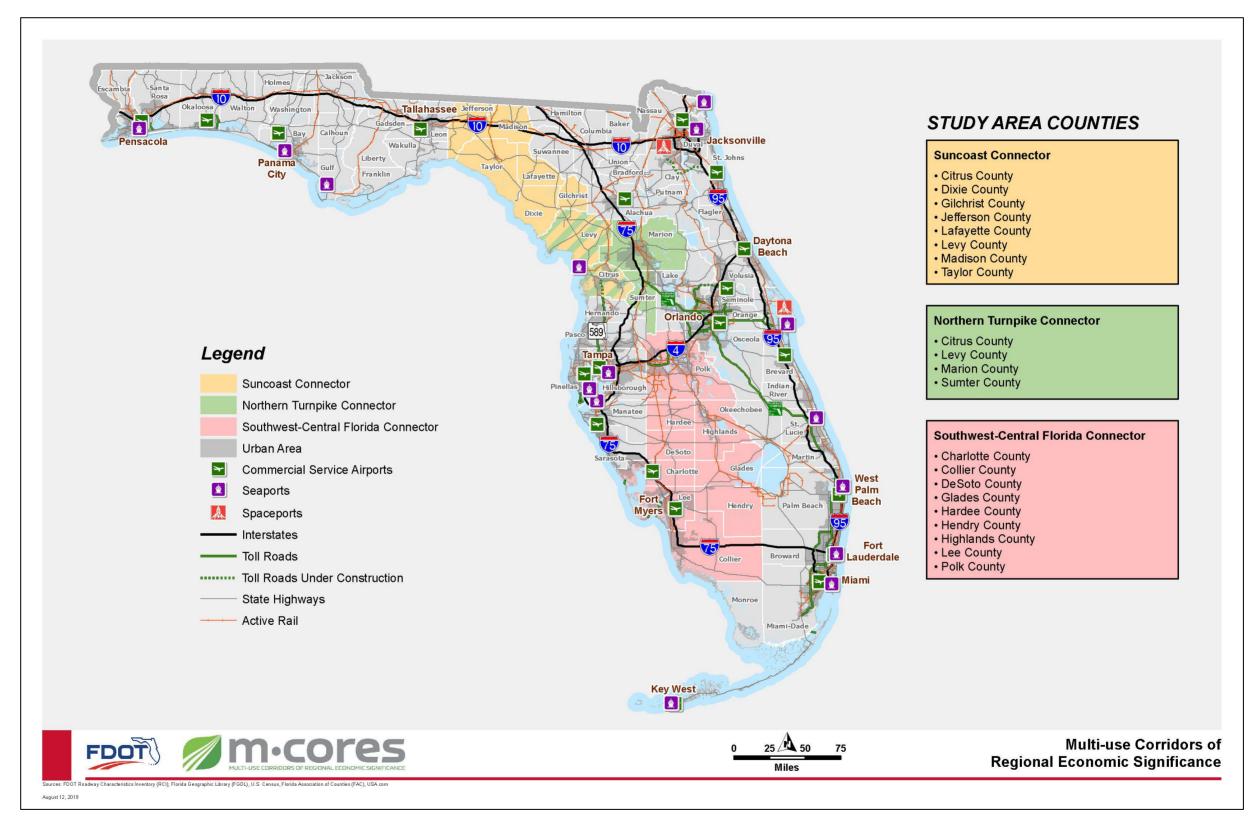


Figure 10 | Multi-Use Corridors of Regional Economic Significance













Transportation Assets

In addition to national and state designated systems, Florida has a wide array of transportation assets that enable the movement of goods and services to help stimulate and support Florida's freight economy. Investment in transportation assets is essential to building and maintaining these critical resources. The transportation assets listed below are detailed in this document:

- All public roadways
- Bridges
- Weigh In Motion (WIM) and Telemetered Traffic Monitoring Sites (TTMS) maintained by FDOT's Traffic Data and Analytics (TDA) Office, Agricultural Inspection Stations, and Motor Carrier Size and Weight Inspection Stations (MCSAW)
- Truck Parking Supply
- Transportation Hubs
- Freight Intensive Areas

All Public Roadways

The following is a summary of the existing public road mileage in Florida as required by Section 402 c of Title 23, United States Code. From 2017 to 2018 there has been an increase of 250.5 miles of public roadways across Florida. Table 11 provides a breakdown of mileages for different roadway system ownership. To date, most population centers are linked by paved roadways and virtually all economic hubs are connected by major highways. Figure 11 provides annual trends for centerline mileage, lane miles, and daily vehicle miles traveled from 1991 to 2018. Trends indicate that VMT has grown at a higher rate than the increased capacity provided by FDOT investments.

Data Source: Roadway Characteristics Inventory, 2018

Table 11 | Certified Public Roadway Mileage (2018)

Roadway System Ownership	Miles
State Highway System	12,103.4
County Road System	70,372.1
City Street System	38,339.3
Bureau of Indian Affair Roads	183.6
Indian Nation Roads	28.9
USDA Forest Service Roads	1,244.4
National Park Service Roads	189.0
US Army Corps of Engineers Roads	32.2
US Army Roads (other)	6.5
US Department of Defense Roads (Excluding Army)	415.0
US Fish and Wildlife Service Roads	124.5
National Aeronautics and Space Administration Roads	60.0
Total Mileage	123,098.9



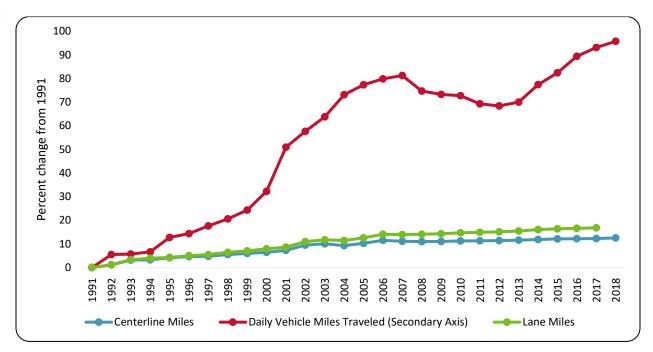


Figure 11 | Percent Change in Center Line Miles, Lane Miles and Daily Vehicle Miles Traveled (Base Year: 1991)

Bridges

Bridges are a key component of Florida's transportation assets. Maintaining their integrity is critical for the safe and efficient travel of freight across transportation networks. As per the 2019 Florida Bridge Information report⁶, there are more than 12,000 bridges in the state of Florida. Table 12 provides the number of bridges owned by different entities/agencies.

⁶ Florida Bridge Information, 2019 3rd Quarter













Table 12 | Number of Bridges by Ownership

Owner	Number of Bridges
State Highway Agency	5659
County Highway Agency	3904
City or Municipal Highway Agency	1219
Turnpike	758
State Toll Authority	560
State Park, Forest or Reservation	123
Other Local Agency	81
Other State Agency	43
Private	38
Town/Township	33
Local Toll Authority	18
Indian Tribal	4
Local Park	1
Total	12,441

Weigh in Motion, Telemetered Traffic Monitoring Sites, Agricultural Inspection Sites, and Motor Carrier Size and Weigh Stations

Information on the truck traffic volume, truck weight, and truck cargo that traverses Florida's transportation system is essential to understanding existing travel conditions and maintaining the safe passage of trucks and cargo across Florida's roadways. Florida coordinates truck volume data collection via a number of state and local entities tasked with monitoring the flow of traffic along essential public roadways. The state oversees the protection of Florida's agricultural commerce by inspecting trucks carrying agricultural products. Additionally, the state maintains the safe condition of highways and bridges by ensuring truck weight and dimension compliance.

The Transportation Data and Analytics (TDA) office coordinates the collection of traffic data on all state highways and many highways not on the State Highway System. Depending on location, traffic data may include daily counts, vehicle classification, speeds, weight, and direction. The TDA office operates a network of around 300 continuous traffic monitoring sites for daily transmittal of data. The TDA office also coordinates the collection of short-duration traffic studies at thousands of sites by FDOT District personnel. Figure 12 depicts the coverage of TDA continuous traffic monitoring sites (WIM and TTMS) across the state of Florida.

⁷ Traffic Monitoring Procedure(525-030-150-d), 2013





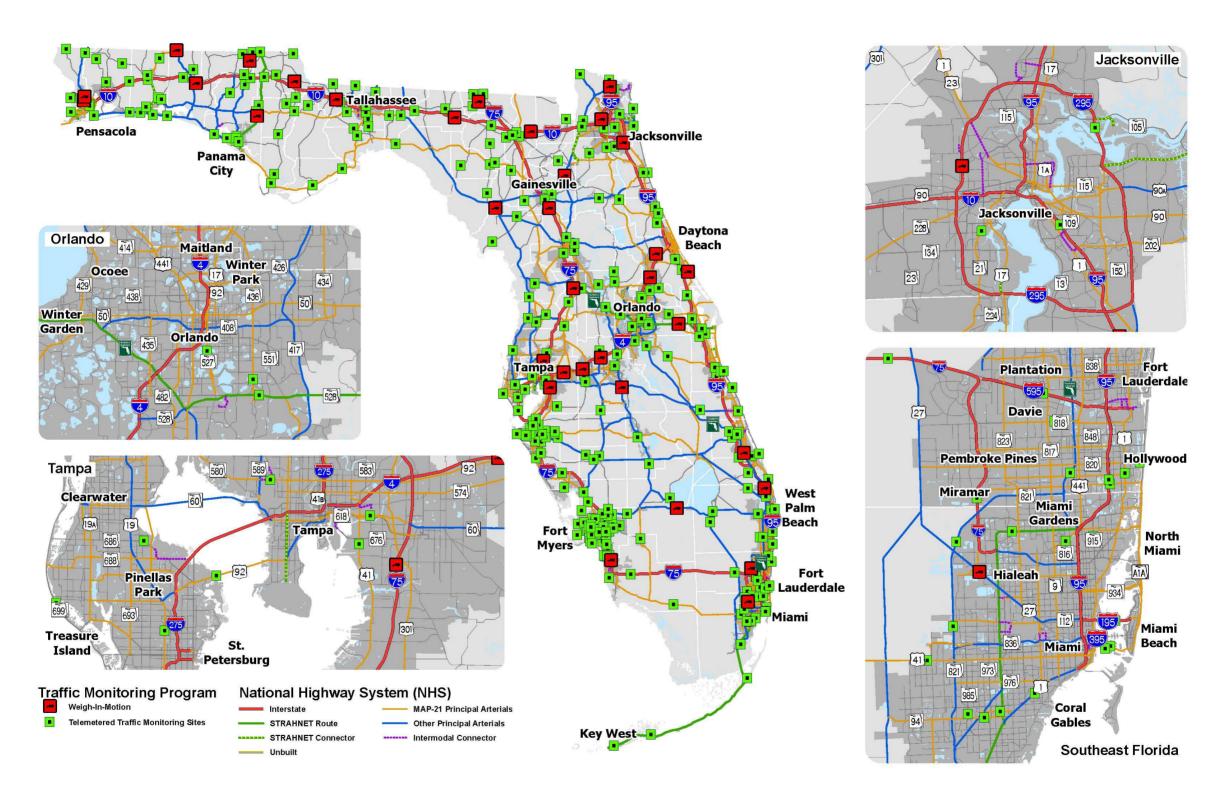


Figure 12 | TDA WIM and TTMS Sites















The Florida Department of Agriculture and Consumer Services' Office of Agricultural Law Enforcement operates 23 agricultural inspection stations⁸ to protect Florida's agriculture and ensure a safe food supply. An agricultural inspection station is located on every paved highway going in and out of the state. These stations are operated 24 hours a day, 365 days a year and are expected to monitor all agricultural commerce traversing via truck in and out of Florida. They are staffed by law enforcement officers whose main duty is to prevent plant and animal pests, diseases, and unsafe food from entering Florida. Trucks, rental trucks, vans, trailers, and any vehicles carrying agricultural, horticultural, or livestock products must stop at an inspection station. FDOT's Motor Carrier Size and Weight (MCSAW) stations fulfill their mission of providing a safe transportation system by performing commercial vehicle size and weight enforcement. The primary purpose of the MCSAW weight enforcement program is to protect Florida's highway system and bridges from being damaged by overweight vehicles. Vehicles are weighed at the 20 fixed weigh station⁹ locations, and targeted enforcement is possible with portable scales statewide.

Truck Parking Supply

According to a study conducted by the TDA office, ¹⁰ a total of 298 truck parking locations exist across the state – a third of these locations are publicly-owned facilities (98) and the remaining facilities are privately-owned (200). Out of a total of 10,093 truck parking spaces estimated in the state, around 30% of these spaces are located at publicly-owned facilities (3,028) and the remaining 70% are privately-owned facilities (7,065). These truck parking supply statistics indicate that privately-owned facilities are responsible for the majority of the truck parking supply in Florida. It is important to note that the ratio of public to private parking spaces in Florida is higher than the majority of states (Vermont, New Hampshire, and Connecticut are the only exceptions) as per the Jason's law Survey (2015).¹¹ Table 13 shows the supply information for every District. Figure 13 provides a statewide coverage of all truck parking locations identified in the study.

⁸ Florida Department of Agriculture and Consumer Services, September 6-2019

⁹ Florida Department of Transportation, MCSAW, September 6-2019

¹⁰ Statewide Truck GPS Data Analysis, 2019

¹¹ Jason's Law Truck Parking Survey Results and Comparative Analysis, 2015











Table 13 | Truck Parking Supply by District

	DOT strict	Facility Type	Number of Locations	Number of Spaces	FDOT District	Facility Type	Number of Locations	Number of Spaces
	1	Private	47	1,104	5	Private	26	1,288
	1	Public	8	225	Э	Public	14	531
		Private	52	1,665		Private	10	240
	2	Public	31	655	6	Public	2	38
	•	Private	24	864	7	Private	19	431
	3	Public	19	635	,	Public	8	200
	4	Private	22	1,473	Turnpike	Public	8	344
		Public	8	400	Statewide	Total	298	10,093



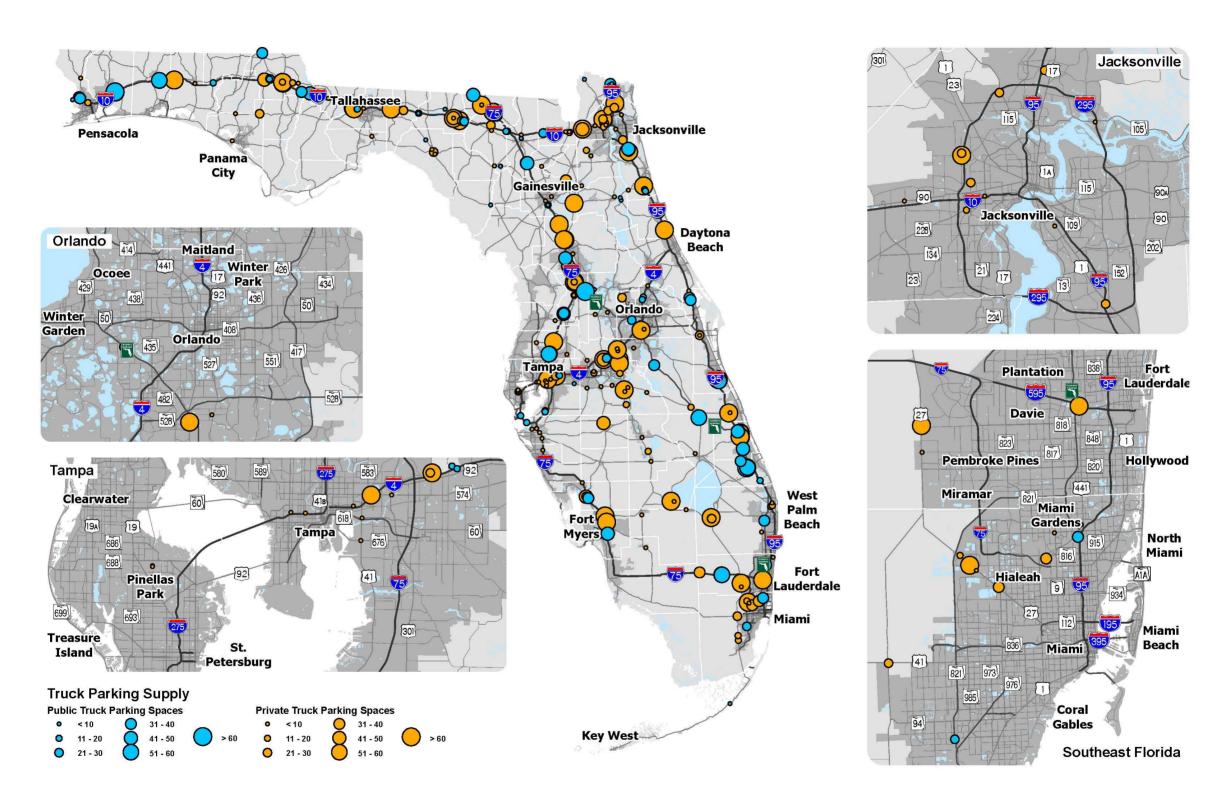


Figure 13 | Statewide Truck Parking Supply Locations













Transportation Hubs

According to the American Society of Civil Engineers (ASCE), Florida's infrastructure is ranked #1 in the U.S. with an expansive roadway and rail system as well as 15 major seaports, 20 commercial service airports and 2 spaceports. This section focuses on seaports, airports and spaceports.

Transportation Hubs - Seaports

Florida's proximity to east-west trade lanes that enter and leave the western hemisphere and the north-south shipping corridor supplying the Americas places it squarely in the center of international commerce. 15 deep-water seaports (Figure 14) are strategically positioned along the state's coastlines, Table 14 provides a list of major seaports in the state of Florida as per SIS and Florida Ports Council.

Table 14 | Major Seaports

Name of Port	Major Cargo Gateway	Major Cruise Port	SIS Designated Port	SIS Strategic Growth Component	Interim NMFN Designated Port
Port Canaveral	Y	Y	Y		Y
Port Citrus					
Port Everglades	Y	Y	Y		Y
Port of Fernandina	Y			Y	
Port of Fort Pierce	Y			Y	
Port of Jacksonville	Y	Y	Y		Y
Port of Key West		Y			
Port Manatee	Y		Y		
Port Miami	Y	Y	Y		Υ
Port of Palm Beach	Y	Y	Y		Y
Port Panama City	Y	Y	Y		Y
Port of Pensacola	Y			Y	
Port of Port St. Joe				Y	
Port of St. Petersburg					
Port Tampa Bay	Y	Y	Y		Y

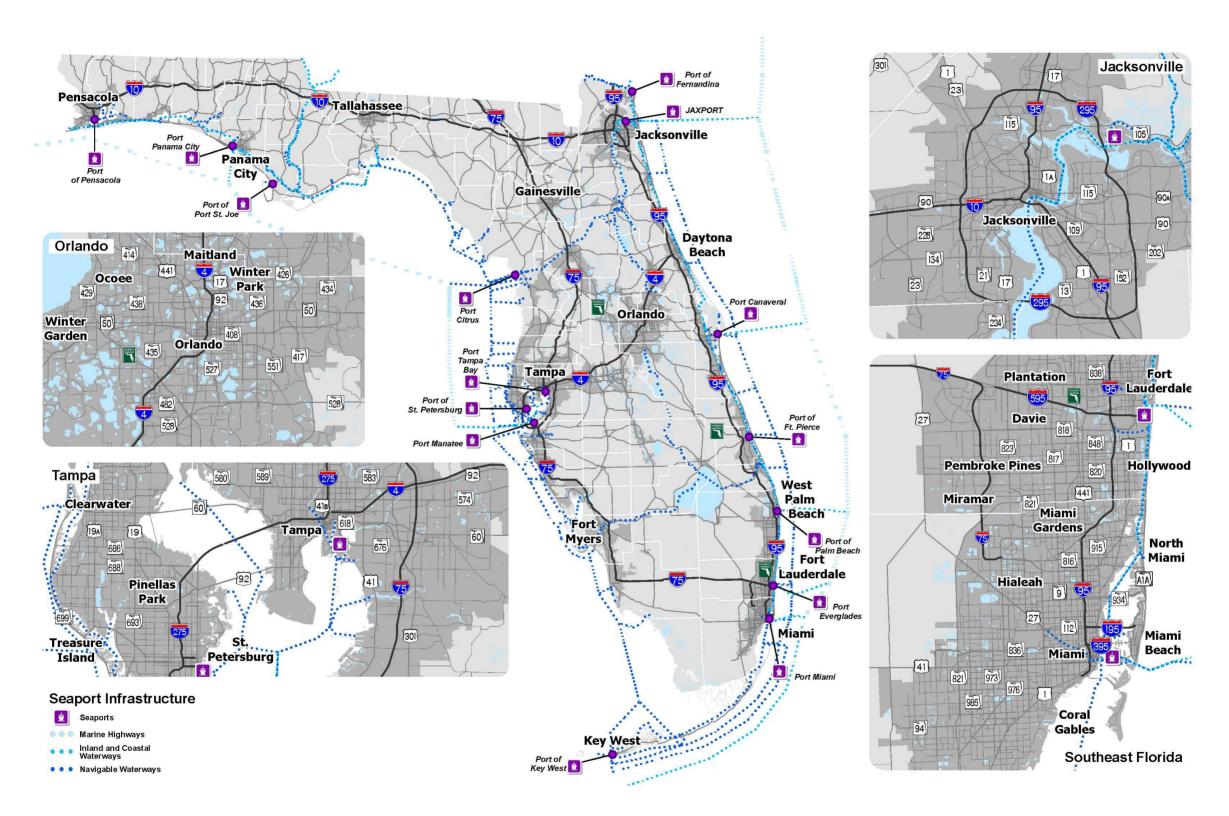


Figure 14 | Seaport Infrastructure



Transportation Hubs - Airports

Florida's 129 public-use commercial service (shown in Figure 16) and general aviation airports are a cornerstone of the state's economy. Figure 15 provides the number of aviation facilities in Florida. While many airports are capable of accommodating air cargo activity, 14 of the 20 commercial service airports in Florida had scheduled air cargo activity on dedicated freighter or widebody passenger aircraft in 2016.

Data Source: Florida Aviation System Plan, 2035

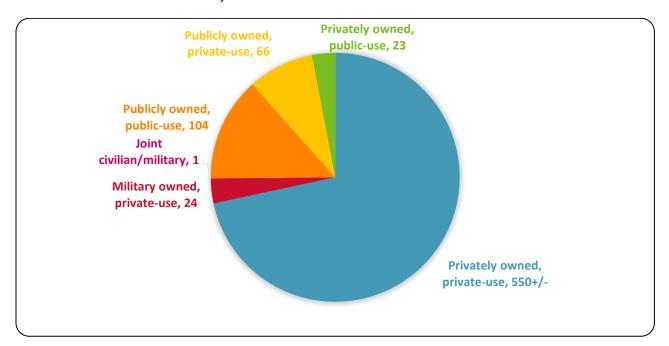


Figure 15 | Florida Aviation Facilities

As per F.S. Chapter 332, the "Florida Airport System" includes all existing public-use airports that are owned and operated within the state and those public-use airports which will be developed and made operational in the future. The public-use airports, account for approximately 15% of all aviation facilities in the state. Primary airports are defined as public airports with scheduled air carrier service that generate 10,000 enplanements or more per year. Primary airports (Table 15) are further classified (National Plan of Integrated Airport Systems (NPIAS) standards) by their share of U.S. enplanements as follows:

- Large Hub Airport: Account for one percent or more of all passenger enplanements within the U.S.
- **Medium Hub Airport:** Account for between .25 percent and one percent of all passenger enplanements within the U.S.



- **Small Hub Airport:** Account for .05 percent to .25 percent of all passenger enplanements within the U.S.
- **Non-Hub Airports:** Enplane less than .05 percent of all commercial passenger enplanements but have at least 10,000 annual enplanements.

Data Source: National Plan of Integrated Airport Systems (NPIAS) 2019 – 2023

Table 15 | Primary Airports

Name of Port	FAA ID	NPIAS Classification	Scheduled Cargo Activity	SIS	SIS Strategic Growth	Interim MNFN
Daytona Beach International	DAB	Non-hub			Y	
Destin-Fort Walton Beach	VPS	Small-hub			Υ	
Fort Lauderdale/ Hollywood International	FLL	Large-hub	Y	Y		Y
Gainesville International	GNV	Non-hub	Υ		Υ	
Jacksonville International	JAX	Medium-hub	Υ	Υ		
Key West International	EYW	Non-hub	Y			
Melbourne International	MLB	Non-hub			Y	
Miami International	MIA	Large-hub	Y	Υ		Y
Northeast Florida Regional	SGJ	Non-hub				
Northwest Florida Beaches International	ECP	Small-hub	Υ		Υ	
Orlando International	MCO	Large-hub	Υ	Υ		Υ
Orlando Sanford International	SFB	Small-hub	Υ		Υ	
Palm Beach International	PBI	Medium-hub	Υ	Υ		
Pensacola International	PNS	Small-hub	Υ		Υ	
Punta Gorda	PGD	Small-hub			Υ	
Sarasota/Bradenton International	SRQ	Small-hub			Υ	
Southwest Florida International	RSW	Medium-hub	Y	Υ		
St. Pete-Clearwater International	PIE	Small-hub	Υ		Y	
Tallahassee International	TLH	Non-hub	Y		Y	
Tampa International	TPA	Large-hub	Υ	Υ		Y

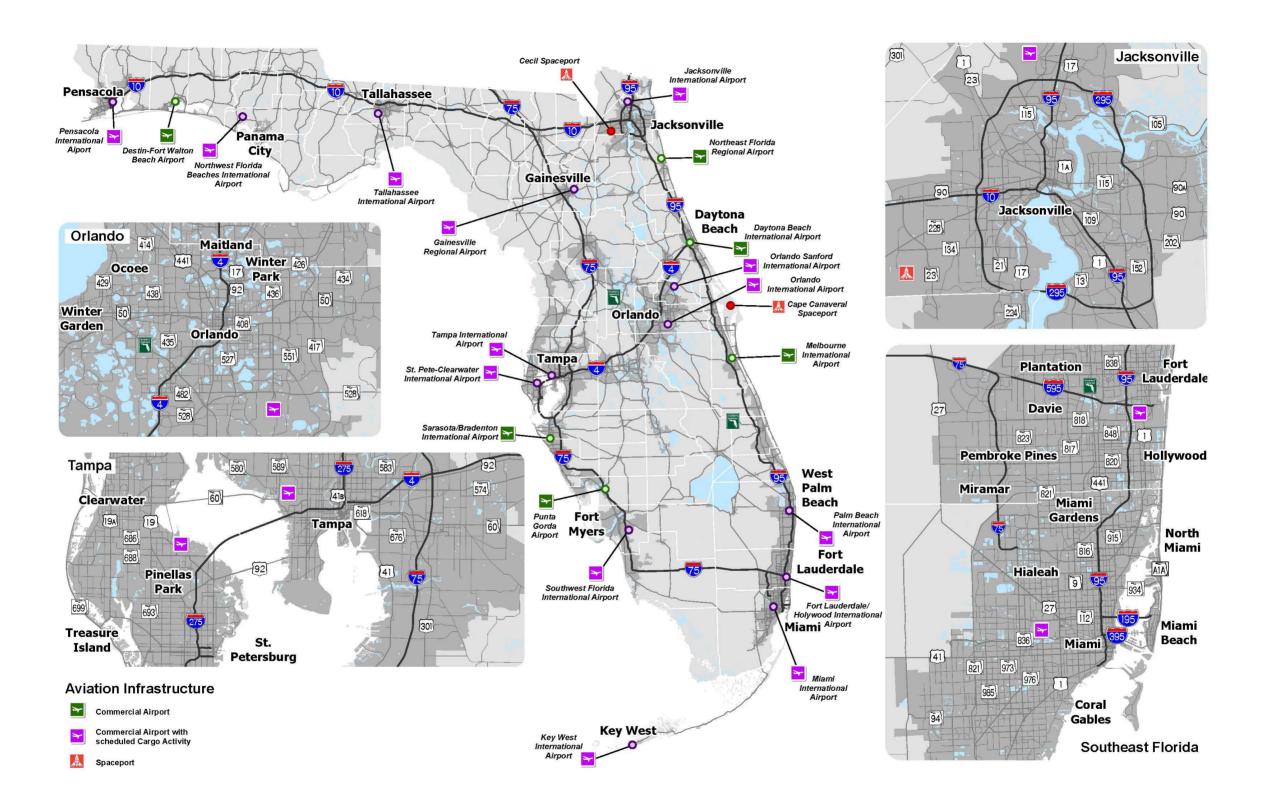


Figure 16 | Aviation Infrastructure

Air Cargo Operations

Air cargo operations can be categorized into two types: air cargo lift (air cargo carried on aircrafts) and road feeder service (air cargo carried between airports via truck). Figure 17 provides air cargo lift capacity for major airports in the state. Statewide, average daily air cargo lift capacity increased from nearly 13.59 million pounds in 2012 to over 13.67 million pounds in 2016, 12 representing an increase of 0.6 percent. In terms of total capacity, Miami International Airport (MIA) remains the state's capacity leader. MIA's over 9.6 million pounds of daily lift capacity accounts for 70% of the statewide total; Orlando International (MCO) has the second largest share of available air cargo capacity in Florida with 12%; Tampa International (TPA) and Ft. Lauderdale/Hollywood International (FLL) rank third and fourth, with 6% and 5%, respectively.

Freight Mobility and Trade Plan

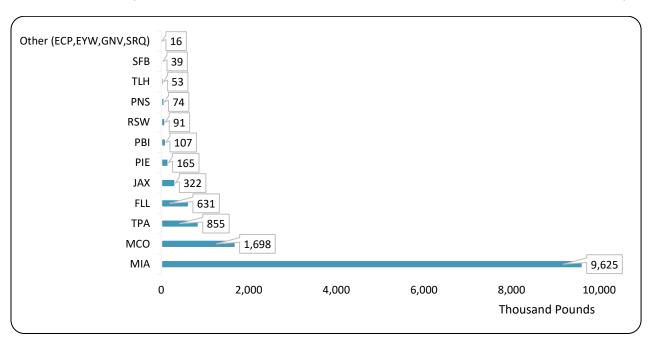


Figure 17 | Average Daily Air Cargo Lift Capacity at Florida Airports 2016 ('000 Pounds)

Scheduled road feeder service is typically offered by a trucking operator on behalf of an airline, to move air cargo between airports via truck. Road feeder services link major air cargo import or export hubs with smaller airports and allow shippers and receivers near the smaller airports access to major airline networks. Many road feeder services are allocated an airline flight number for a truck route connecting two airports. According to Official Airline Guide (OAG) road feeder service schedules, seven of Florida's commercial service airports currently have scheduled road feeder service. On average, Florida airports offer more than 24.36 million pounds of scheduled road feeder service cargo capacity each week. This represents a 36% increase over Florida's 2012 weekly road feeder service capacity. Strong growth in road feeder service is

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¹² 2016 Florida Air Cargo Study

directly tied to a combination of factors including increases in air carrier fuel costs experienced earlier in this decade; increased security costs and processing for cargo carried on passenger aircraft; and, smaller aircraft, with limited or no cargo carrying capacity, being used on domestic routes. Figure 18 represents the weekly road feeder service capacity at Florida airports during 2016. As shown in the tables, MIA averages over 11 million pounds of available weekly road feeder service capacity, comprising 45% of the statewide total. This represents an increase of 3.6 million pounds or 48% over 2012. MCO ranks second in weekly road feeder service capacity with over 6.1 million pounds, or 25% of the statewide total. TPA, Jacksonville International (JAX), and Pensacola International (PNS) follow with 14%, 9%, and 5% of the statewide total, respectively. PNS has experienced the largest percentage change, growing by 159% since 2012.

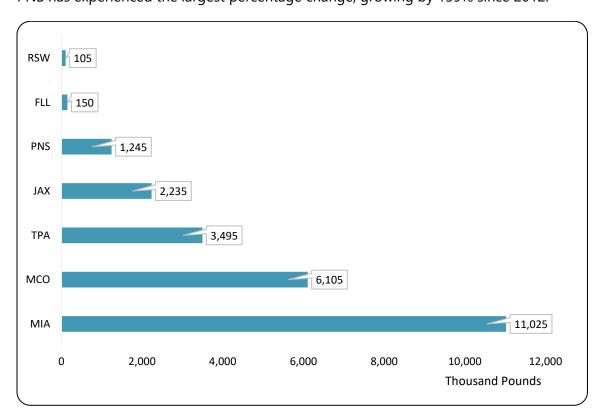


Figure 18 | Weekly Road Feeder Service Cargo Capacity at Florida Airports 2016 ('000 Pounds)

Transportation Hubs – Spaceports

There are two major spaceports in Florida – Cape Canaveral and Cecil. Figure 7 illustrates these locations. Cape Canaveral is the primary launch head of the US Eastern Range with three launch pads currently active. Cecil is a public joint civil-military airport and spaceport. Recently, the Jacksonville Aviation Authority received a \$1.8 million matching grant from Space Florida to fund the design and construction of a space operations center payload preparation facility and rocket motor test facility at Cecil Spaceport.



Consistent with the Florida Transportation Plan (FTP), the Florida Department of Transportation (FDOT) explored ways to identify major freight intensive areas. This statewide project was conducted by the FDOT Systems Implementation Office in coordination with the FDOT Transportation Data and Analytics Office. A freight intensive area is a cluster or group of freight facilities that generates, distributes, or attracts large amounts of freight activities and has a significant impact on Florida's transportation system and economy. The analysis used Florida Department of Revenue (DOR) parcel data and Florida Department of Economic Opportunity (DEO) employment data to locate freight activity areas.¹³ Table 16 provides summary statistics for the freight parcel floor area in the state. Figure 19 depicts a freight activity hot spot map.

Freight Mobility and Trade Plan

Table 16 | Statewide Summary Statistics for Freight Parcel Floor Area

DOR Land Use Code	Total Living Area (Square Feet)	Number of Parcels
029-Wholesale	12,823,056	565
041-Light Manufacturing	278,105,527	10,994
042-Heavy Industrial	52,072,508	633
043-Lumber/Sawmill	12,905,655	474
044-Food Packing Plants	18,052,685	466
045-Canneries, Bottlers, etc.	11,980,958	115
046-Other Food Processing	15,688,924	326
047-Mineral Processing, gravel, etc.	11,407,696	1,043
048-Warehouse, DC, etc.	946,695,398	43,333
049-Open Storage	11,115,200	4,228
068-Dairies, Feed Lots	17,313,353	4,484
091-Utilities	34,958,565	10,381
092-Mining	2,061,950	1,408
096-Sewage, Solid Waste	359,598	19,535
Total	1,425,123,585	97,985

¹³ Final study report is not published yet.



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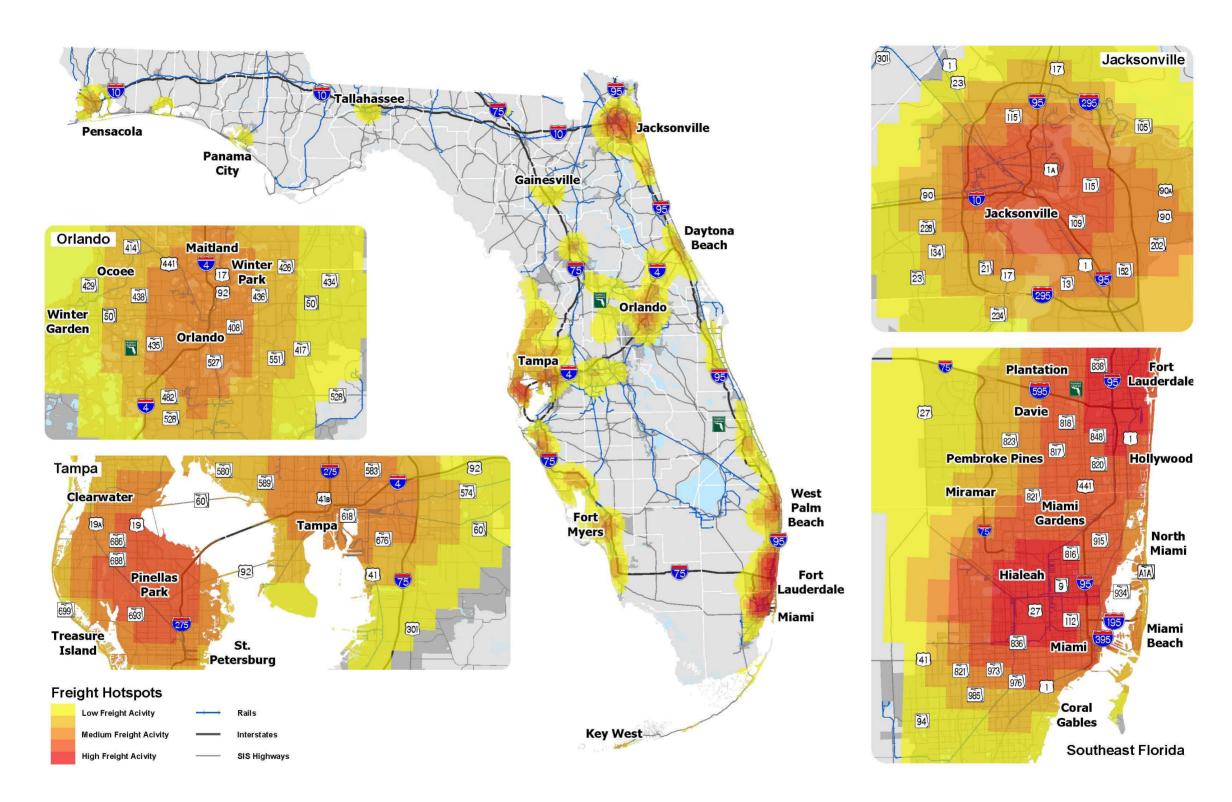


Figure 19 | Freight Intensive Areas in Florida



Major Freight and Freight Related Industries

Major freight and freight related industries have been analyzed in this section by looking at their contribution to the state's Gross Domestic Product (GDP), the number of freight related establishments, and number of employees. Florida ranks fourth in the nation's GDP. Table 17 provides the GDP % shares of different industry types for Quarter 1 2019. Freight related industries including construction, manufacturing, wholesale and retail trade, transportation warehousing, and waste management services have significant contributions to the state's GDP. The high share of trade related GDP further emphasizes that Florida is a consumer state.

Data Source: Bureau of Economic Analysis

Table 17 | GDP % Shares of Industry Types

Industry types	2019-Quarter 1 (% Share)
Real estate and rental and leasing	16.61
Government and government enterprises	10.7
Health care and social assistance	8.61
Professional, scientific, and technical services	7.45
Retail trade	7.21
Wholesale trade	7.11
Finance and insurance	5.82
Construction	5.46
Accommodation and food services	4.53
Information	4.31
Administrative and support and waste management and	4.24
remediation services	
Transportation and warehousing	3.44
Durable goods manufacturing	3.3
Other services (except government and government enterprises)	2.6
Nondurable goods manufacturing	2.06
Utilities	1.65
Arts, entertainment, and recreation	1.63
Management of companies and enterprises	1.54
Educational services	1.04
Agriculture, forestry, fishing and hunting	0.58
Mining, quarrying, and oil and gas extraction	0.11
All industry total (Million Dollars)	1,072,672

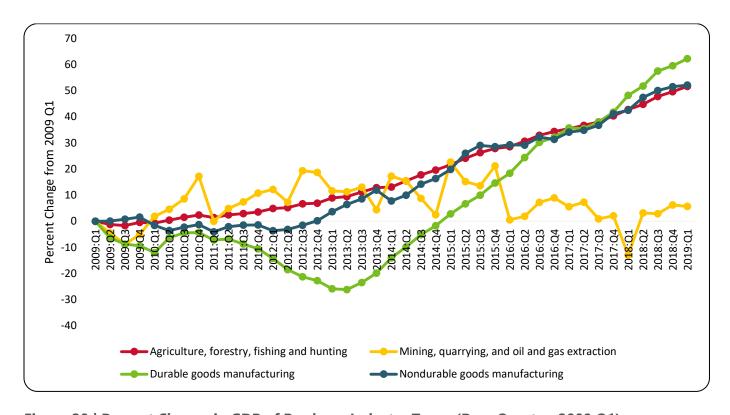


Figure 20 | Percent Change in GDP of Producer Industry Types (Base Quarter: 2009 Q1)

Data Source: Bureau of Economic Analysis

Figure 20 above depicts the percent change in GDP of producer industries. Goods manufacturing industries have seen tremendous growth with 50% growth for non-durable goods manufacturing and 60% growth for durable goods manufacturing industries between 2009 and 2019. Agriculture, forestry, fishing and hunting industry types have seen a 50% growth between 2009 and 2019. Mining, quarrying, and oil and gas extraction has seen no growth in the last decade. Figure 21 below depicts the percentage change in GDP of wholesale trade, retail trade, and transportation and warehousing industries. The trade sector has seen a 40% increase in wholesale trade and 80% in retail trade industries from 2009 to 2019. Transportation and warehousing industries have seen a 60% growth between the same years.



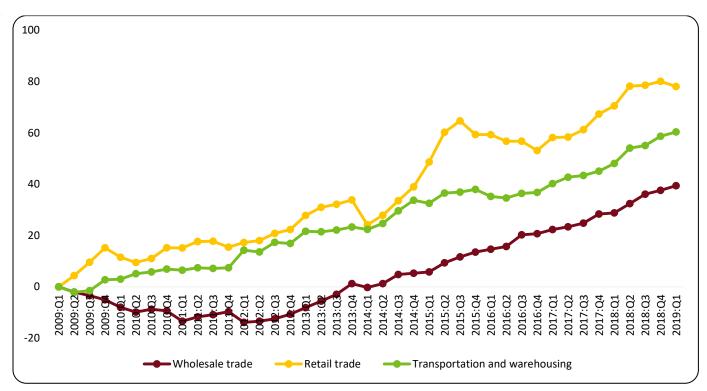


Figure 21 | Percent Change in GDP of Trade, Transportation and Warehousing Industries (Base Quarter: 2009 Q1)



Table 18 provides the percentage of establishments and percentage of employees in the state of Florida for different industries (NAICS 2 digit code) respectively.

Data Source: Bureau of Labor Statistics

Table 18 | Establishments and Employment by Different Freight and Freight Related Industries

	Establis	hments	Emplo	yment	
Industries	Percent Share (2018)	Percent change (2014- 2018)	Percent Share (2018)	Percent change (2014- 2018)	
Agriculture, Forestry, Fishing and Hunting	0.72%	-1.70%	0.79%	-12.31%	
Mining, Quarrying, and Oil and Gas Extraction	0.06%	-6.51%	0.05%	0.73%	
Utilities	0.15%	11.32%	0.34%	5.30%	
Construction	10.25%	18.90%	6.22%	36.27%	
Wholesale Trade	5.79%	-4.85%	3.98%	5.47%	
Administrative and Support and Waste Management and Remediation Services	7.63%	19.49%	7.91%	17.34%	
Arts, Entertainment, and Recreation	1.57%	8.36%	2.77%	11.78%	
Accommodation and Food Services	6.64%	4.49%	11.52%	13.38%	
Manufacturing	2.97%	6.74%	4.27%	12.22%	
Retail Trade	11.77%	-2.95%	13.02%	8.26%	
Transportation and Warehousing	2.60%	11.26%	3.65%	18.93%	
All Industries (2018)	Total Establishn	ments = 691,780	Total Employment = 8,693,632		

Figures 22, 23 and 24 highlight the three major industry sectors in Florida with a statewide map identifying the major establishments in their respective sectors. The three major industry sectors include logistics and distribution centers, manufacturing, and aviation-spaceports. These maps, created by Enterprise Florida, highlight the emergence of strong freight activities. Some other important highlights of the freight and freight related industries are indicated below:

- Florida is rated as 2nd best state for Business by Chief Executive.
- Florida has the 3rd largest cluster of logistics and distribution centers in the U.S.
- It is a premier aerospace and space state and has aerospace manufacturing attractiveness. More than 470 industry companies excel in areas from aircraft parts and assembly, to intelligence, surveillance, and reconnaissance, to missiles.
- Florida is home to more than 260 biotech companies and world renowned R&D institutes specializing in therapeutics, diagnostics, industrial/ag biotech and other areas.

- Florida is 2nd among states for FDA registered medical device manufacturing facilities with more than 19,000 Floridians working in this industry, with a majority of companies located along the I-4 Corridor in Central Florida, the Jacksonville area, and in South Florida.
- More than 220 pharmaceutical and medicine manufacturing companies specialize in the development and manufacture of novel treatments, generics, pharmaceuticals and OTC drugs in the state. They employ nearly 4,500 researchers, engineers, technicians and workers.

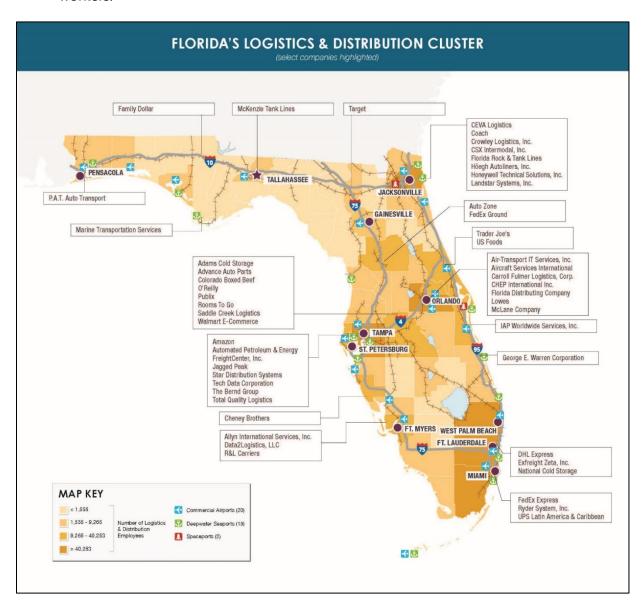


Figure 22 | Florida's Logistics and Distribution Clusters¹⁴

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¹⁴ Enterprise Florida, 2019

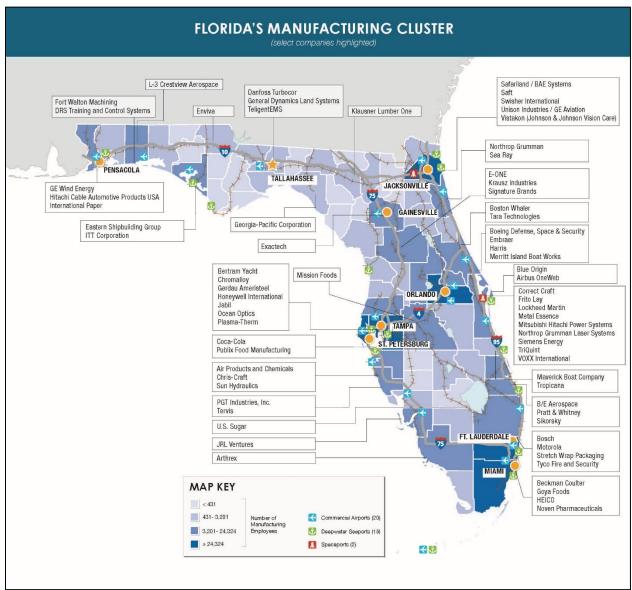


Figure 23 | Florida's Manufacturing Clusters¹⁵

¹⁵ Enterprise Florida, 2019

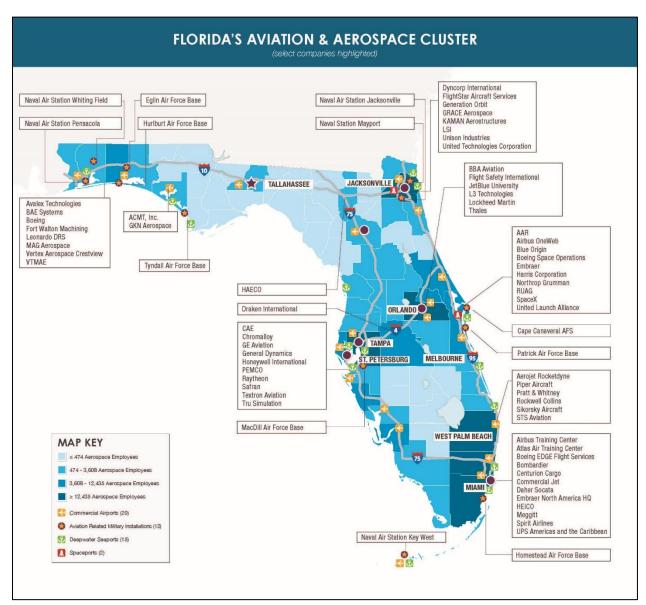


Figure 24 | Florida's Aviation and Aerospace Cluster¹⁶

¹⁶ Enterprise Florida, 2019



Appendix A - National Highway Freight Network Designation

The FAST Act establishes the National Highway Freight Program (NHFP) to improve the efficient movement of freight on the NHFN and support several goals, including:

- Investing in infrastructure and operational improvements that strengthen economic competitiveness, reduce congestion, reduce the cost of freight transportation, improve reliability, and increase productivity;
- Improving the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas;
- Improving the state of good repair of the NHFN;
- Using innovation and advanced technology to improve NHFN safety, efficiency, and reliability;
- Improving the efficiency and productivity of the NHFN;
- Improving State flexibility to support multi-State corridor planning and address highway freight connectivity; and
- Reducing the environmental impacts of freight movement on the NHFN. [23 U.S.C. 167
 (a), (b)]

The Fixing America's Surface Transportation Act (FAST Act) repealed both the Primary Freight Network and National Freight Network from Moving Ahead for Progress in the 21st Century Act (MAP-21), and directed the 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 the following subsystems of roadways:

- **Primary Highway Freight System (PHFS):** This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data.
- Other Interstate portions not on the PHFS: These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities.
- **Critical Rural Freight Corridors (CRFCs):** These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities.
- **Critical Urban Freight Corridors (CUFCs):** These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.





States and in certain cases, Metropolitan Planning Organizations (MPOs), are responsible for designating public roads for the CRFCs and CUFCs in accordance with section 1116 of the FAST Act. State designation of the CRFCs is limited to a maximum of 150 miles of highway or 20 percent of the PHFS mileage in the State, whichever is greater. State and MPO designation of the CUFC is limited to a maximum of 75 miles of highway or 10 percent of the PHFS mileage in the State, whichever is greater. Guidance in accordance with the FAST Act section 1116 will be developed to provide information on the identification, designation, and certification of these corridors

Designation/Re-Designation of the Primary Highway Freight System (PHFS)

The initial designation of the Primary Highway Freight System (PHFS) was set by the FAST Act as the 41,518 mile network identified during the designation process for the MAP-21 highway-only primary freight network (PFN) under 23 U.S.C. 167(d). The FHWA Administrator is required to redesignate the PHFS every 5 years to reflect changes in freight flows, including emerging freight corridors and critical commerce corridors.

The FAST Act requires FHWA to re-designate the PHFS every 5 years. Each re-designation is limited to a maximum 3 percent increase in the total mileage. The FHWA Office of Operations will develop a process for re-designation that, in accordance 23 U.S.C. 167(d), uses measurable data, fully considers the factors outlined in 23 U.S.C. 167(d)(2)(E), and provides an opportunity to State freight advisory committees to provide input. The process for re-designating the PHFS will include data that FHWA currently collects as well as new tools and data such those developed in accordance with 49 U.S.C. 70203, Transportation investment data and planning tools. To the maximum extent practicable, FHWA is required to use measurable data to assess the significance of goods movement, including consideration of points of origin, destinations, and linking components of the United States global and domestic supply chains.

Data sources currently available or under development include the Freight Analysis Framework (FAF), truck weigh-in-motion data, truck flow data, HPMS data, and the National Performance Management Research Data Set (NPRMDS). States with PHFS mileage greater than or equal to 2 percent of the total PHFS mileage in all States may only obligate funds for projects on the PHFS, the CRFC, and the CUFC.

Critical Rural Freight Corridors (CRFC)

These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities. States are responsible for designating public roads in their State as CRFCs. In accordance with 23 U.S.C. 167(e), a State may designate a public road within the borders of the State as a CRFC if the public road is not in an urbanized area, and meets one or more of the following seven elements:





- 1. is a rural principal arterial roadway and has a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks (FHWA vehicle class 8 to 13);
- 2. provides access to energy exploration, development, installation, or production areas;
- 3. connects the PHFS or the Interstate System to facilities that handle more than—
 - 50,000 20-foot equivalent units per year; or
 - 500,000 tons per year of bulk commodities;
- 4. provides access to—
 - a grain elevator;
 - an agricultural facility;
 - a mining facility;
 - a forestry facility; or
 - an intermodal facility;
- 5. connects to an international port of entry;
- 6. provides access to significant air, rail, water, or other freight facilities in the State; or
- 7. is determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State.

The designation of the CRFC is limited to a maximum of 150 miles of highway or 20 percent of the PHFS mileage in the State, whichever is greater.

Table below lists CRFC Critical Rural Freight Corridor Routes and Connectors.





ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
SR 20	SR 79	County Road 83 Alternate	10.37	В	Provides access to energy Exploration, development, installation, or production areas.	Required link to complete connection from key freight facility to NHFN	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 20	US 231	SR 79	1.17	А	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 20	US 231	SR 79	16.68	С	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
SR 331	US 301	County Road 225 Alternate	1.87	А	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity



ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
SR 528	SR 417	I-95	37.00	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Connects key freight facilities to NHFN	Multimodal freight connection route to create seamless freight mobility operations	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances import/export of connected key freight facility
US 231	I-10	Bayou George Drive	26.76	А	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 231	I-10	Bayou George Drive	42.34	D	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	E Palm Beach Road	l 75	6.17	Α	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity



ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	Fort Meade Road	Highlands County Line	0.43	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	Highlands County Line	SR 80	6.12	А	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	Lake Josephine Drive	County Road 17N	1.00	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	Masterpiece Rd	Fort Meade Rd	9.69	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity



ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	Old US 27 Highway	E Palm Beach Road	0.84	А	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	S Sun and Lakes Blvd	Highlands County Line	3.08	А	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	SR 80	Lewis Blvd	3.92	Α	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 301	Clay County Line	NE 193rd Street	26.88	Α	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity



ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 301	NE Waldo Road	NW 77th Street	98.27	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 301	S Walnut Street	NE Waldo Road	17.30	А	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
		Total Mileage	309.89						



Critical Urban Freight Corridors (CUFC)

These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities. In an urbanized area with a population of 500,000 or more, the metropolitan planning organization (MPO), in consultation with the State, is responsible for designating the CUFCs. In an urbanized area with a population of less than 500,000, the State, in consultation with the MPO, is responsible for designating the CUFCs. Regardless of population, a public road may be designated as a CUFC if it is in an urbanized area, and meets one or more of the following four elements:

- 1. connects an intermodal facility to;
 - the PHFS
 - the Interstate System; or
 - an intermodal freight facility;
- 2. is located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement;
- 3. serves a major freight generator, logistic center, or manufacturing and warehouse industrial land; or
- 4. is important to the movement of freight within the region, as determined by the MPO or the State.

The designation in limited to a maximum of 75 miles of highway or 10 percent of the PHFS mileage in the State, whichever is greater. 23 U.S.C. 167(f).

Table below lists Critical Urban Freight Corridor Routes and Connectors.





ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
I- 295	I-95	Heckscher Drive	6.77	Н	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
I- 295	SR 202	I- 95	8.07	Н	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Connects key freight facilities to NHFN		Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
SR 105	Bount Island Road	I-295	1.22	Н	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances import/export of connected key freight facility
SR 263	I-10	SR 363	6.76	К	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN		Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity



ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
SR 528	McCoy Road (SR 482)	SR 417	7.44	К	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 528	SR 417	I-95	0.18	К	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN		Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 869	I- 95	I- 75	24.96	К	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 231	Bayou George Drive	US 98	10.40	Н	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances import/export of connected key freight facility



ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	County Road 17N	S Sun and Lakes Blvd	7.94	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	E Palm Beach Road	I-75	0.15	J	Serves a major freight generator, logistic center, or manufacturing and warehouse industrial land.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	Highlands County Line	Lake Josephine Drive	20.67	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	I -4	SR 60	25.75	К	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity



ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	I-75	US 301	2.84	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	Lewis Blvd	Old US 27 Highway	3.13	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	Old US 27 Highway	E Palm Beach Road	0.07	J	Serves a major freight generator, logistic center, or manufacturing and warehouse industrial land.	Required link to complete connection from key freight facility to NHFN		Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 301	I-10	Clay County Line	7.51	К	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity





ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 301	NE 193rd Street	S Walnut Street	4.38	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
US 301	NW 10th Street	Silver Springs Boulevard	0.69	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
US 301	NW 77th Street	NW 10th Street	4.89	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
US 41	S 22 ST	Big Bend Rd	11.58	Н	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Required link to complete connection from key freight facility to NHFN		Multimodal freight connection route to create seamless freight mobility operations	Enhances import/export of connected key freight facility



ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 98	US 231	Sun Harbor Road	4.47	Н	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Connects key freight facilities to NHFN		Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
		Total Mileage	159.86						



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