

District One Rural Freight Mobility & Agribusiness

Heartland 2060 Summit
November 2019

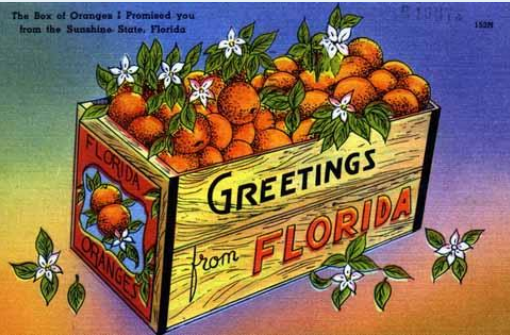
Keith Robbins
District Freight & Seaport Coordinator
FDOT District One



Purpose



To provide an overview of freight implications of the agriculture industry in Florida and District One emphasizing the impact to the transportation system; and to provide an update on recent activities related to freight mobility in support of agribusiness within District One.



“The state of Florida is comprised of 42 million acres. Farms & forests encompass more than 25 million acres in Florida, which is more than three-fifths of the state.”

Fresh From Florida Journal of Agriculture, 2019 Vol. 5

Freight Mobility and Agribusiness



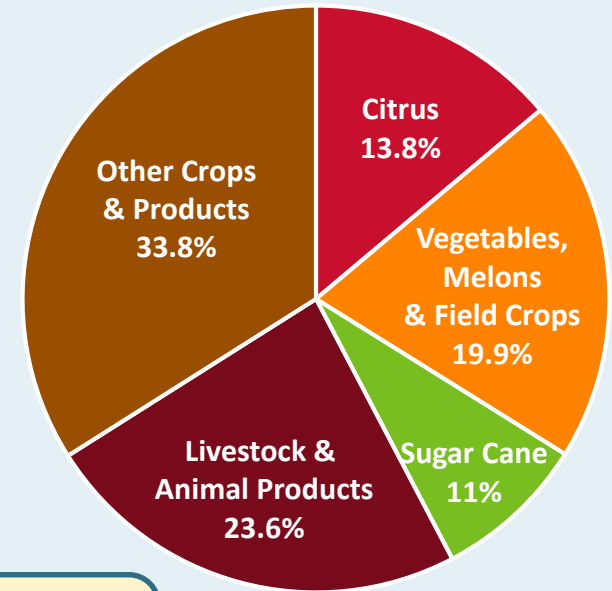
Market and Market Access...

- 2018 - Florida's Population 21.3 Million (U.S. Census Bureau)
- 100+ Million visitors annually consume A LOT of products
- Access to large portion of U.S. population w/in 2 days drive
- Deepwater seaports all around the state for import and export operations
- Network connectivity – highway and rail

What does this all mean to FDOT?

- *Huge numbers of trucks on the road – average truck volume exceeds 26% all traffic on US27 between Miami and Interstate 4*
- *Impact to bridges and other infrastructure*
- *Re-design / build intersections, adding highway capacity, etc.*
- *Permit application, registration, etc.*

Florida Agriculture Cash Receipts For 2017 = \$7.467 Billion



Source:
FDACS



“There is nothing that we produce in this country in agriculture and forest products that cannot be sourced somewhere else in the world. If we cannot deliver affordably and dependably, our customers will go elsewhere.”
Agriculture Transportation Coalition

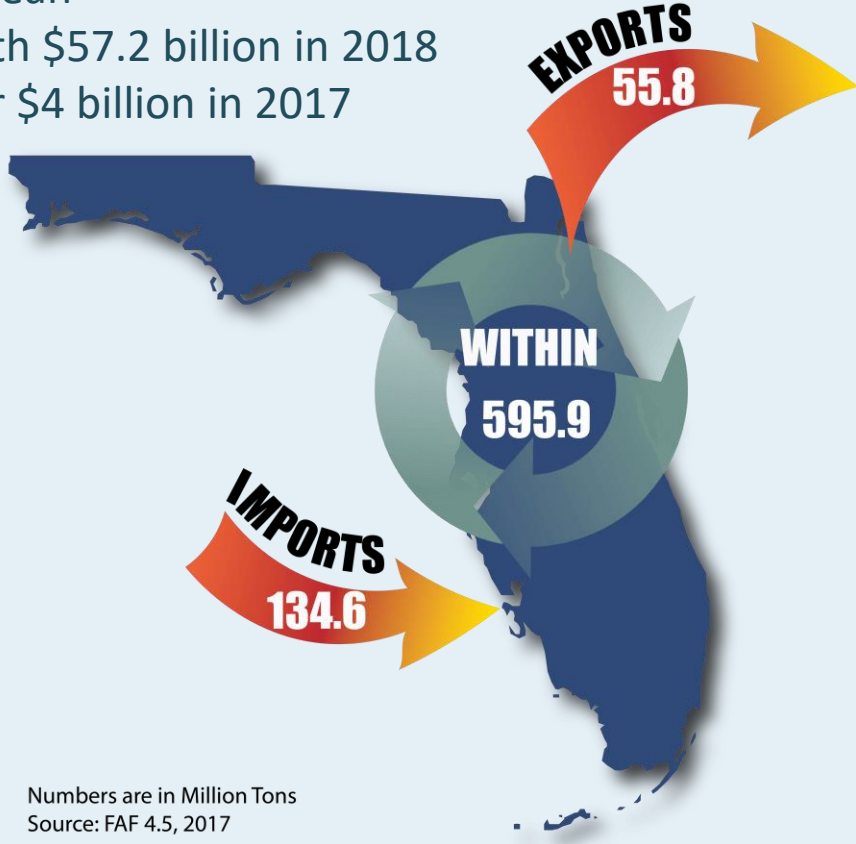
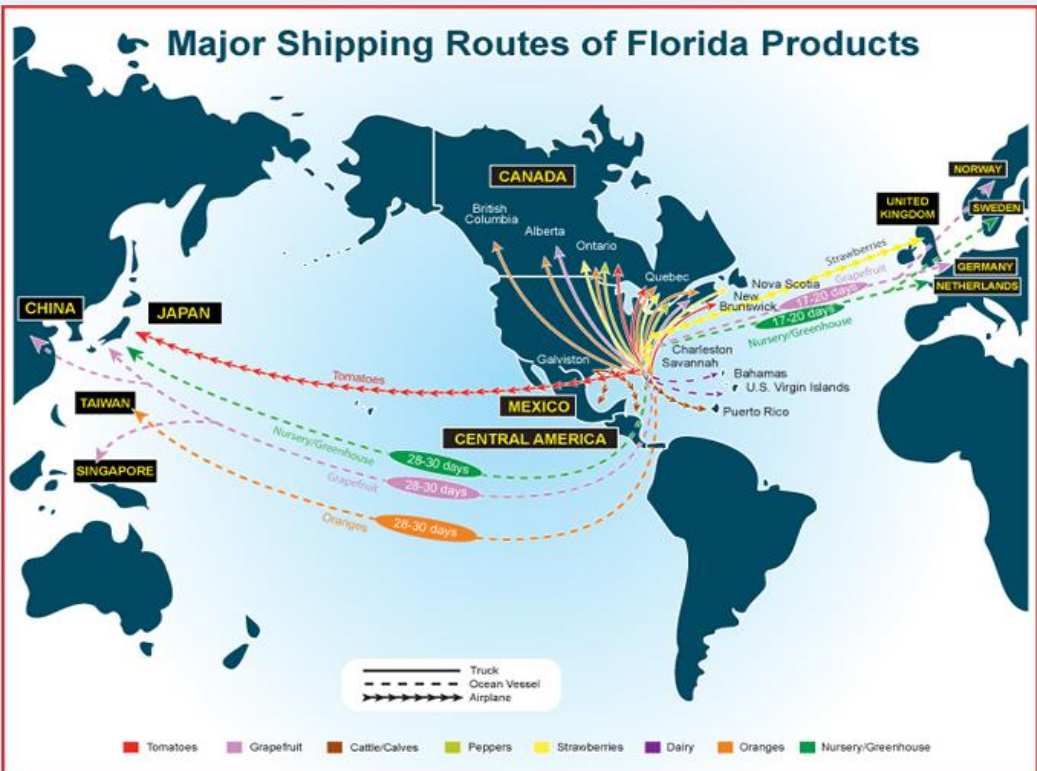


Freight Trade Impacts

Over \$2.2 billion in agriculture imports in 2017 from top producers



- Major gateway for trade between North America, Latin America, the Caribbean and other world regions
- Widely recognized as a global hub for the Western Hemisphere, Florida accounts for 29% of total U.S. trade with Latin America and the Caribbean
- Florida ranks 8th in the nation in origin exports with \$57.2 billion in 2018
- Florida ranked 3^d in agricultural exports with over \$4 billion in 2017



Port Manatee Overview



Source: Manatee County Port Authority

Port generates more than \$2.3 billion in annual economic impact

- 2019 growth over 6% in total tonnage from 2018
- Double-digit growth in container throughput the last 3-years – nearly 50% increase in 2019
- Foreign Trade Zone
- 1,100 acres with nearly 5,000 acres available property surrounding the port
- 10 berths maintained at 40' draft



Port Manatee Cargo Overview



Dry Bulk	
Ammonium Nitrate	7,394
Cement	84,999
Fertilizer	202,238
Fly Ash	367,805
Glass Cullett	8,358
Granite	669,922
Gypsum	52,525
Limestone	154,277
Phosphate Rock (Dry)	341,212
Phosphate Rock (Wet)	113,646
Salt	112,801
Sulphur	124,786
Sub-Total	2,239,963

Liquid Bulk	
Asphalt	68,157
Bunker C	260,599
Citrus Concentrate	19,155
Concentrate Juice	17,758
Diesel	242,507
Ethanol	123,069
Gasoline	903,035
Natural Gas-Pipeline	4,549,644
Citrus NFC	330,882
Sub-Total	6,514,806

Containerized	Tonnage
Fruits & Vegetables	225,244
Juice	141,838
Linerboard	15,419
Empty Containers	51,180
Miscellaneous	101,495
Sub-Total	535,176

General Cargo	
Aluminum	83,927
Bananas	106,745
Concrete Pipe/Piling	200
Hardboard	189
Hazardous Products	130
Heavy Equipment	78
Lumber	73,032
Miscellaneous	1,455
Not From Concentrate	9,160
Partical Board	4,492
Pineapples	59,144
Plywood	4,685
Project Cargo	1,658
Salt, Bagged	13,432
Scrap Metal	28,253
Steel/Wire/Pipe	12,094
Water	17,622
Wood Pulp	69,695
Guaranteed Tons SF	305,804
Sub-Total	791,795

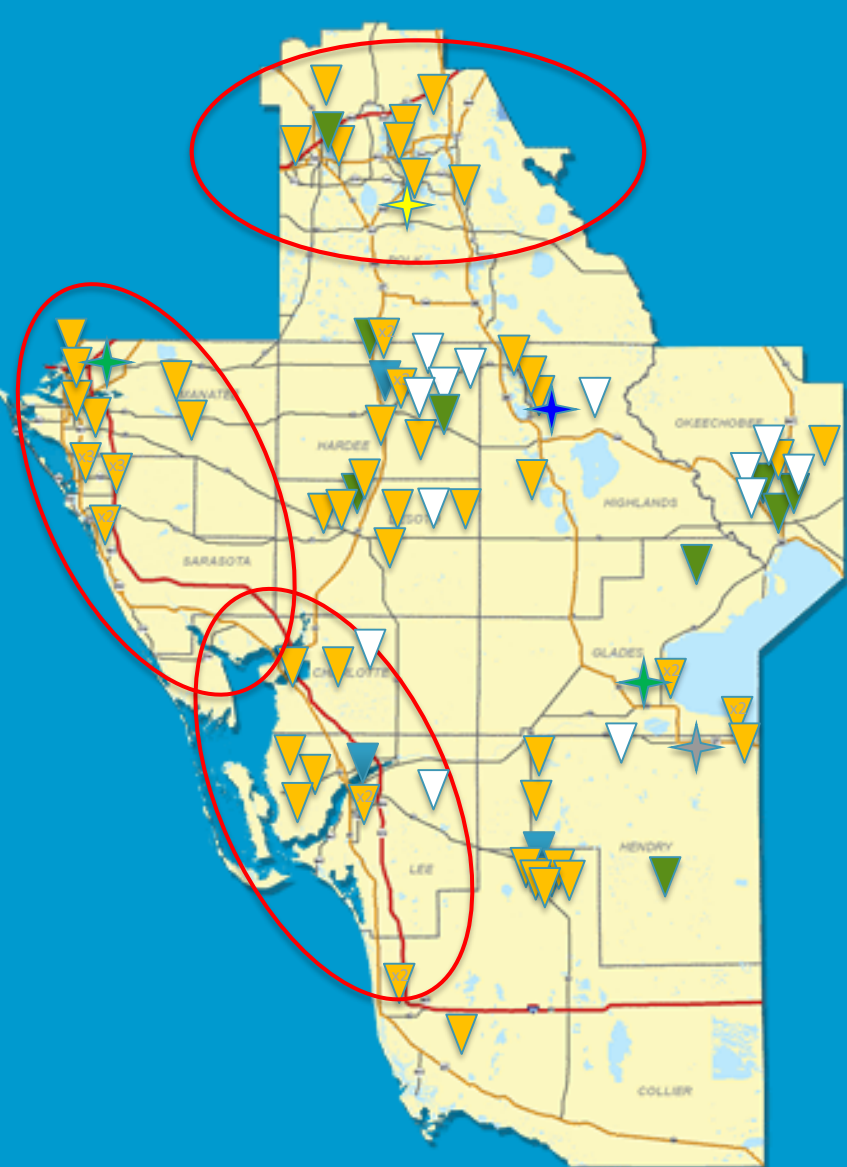
Type of Cargo	Import %	Export %
Containerized	82.5	17.5
Dry Bulk	93.7	6.3
Liquid Bulk	98.9	1.1
General Cargo	99.7	1
Total	93.7	6.3

TOTAL CARGO = 10,081,740 TONS

- Largest commodities by volume: Petroleum, Aggregate, Agriculture
- 21 “Juice Ships” in 2019, 15 planned for 2020
- Largest on port customer by revenue earned is TransMontaigne



Freight and Agribusiness Footprint



- ▼ State Farmer's Market
- ▼ Livestock Market / Company
- ▼ Mill or Packing House
- ▼ Dairy Farms
- ★ CSX CFILC
- ★ Multimodal Logistics Hub
- ★ Potential Intermodal Logistics Center
- ★ Potential Multimodal Logistics Hub
- Food Hubs

- District One has 8 of the Top 13 counties in Florida for Total Value of agricultural products sold representing almost **\$2.3 BILLION** in sales
- Consider the freight mobility implications of all this product moving from field to farm to processor to warehouse to distributor...

Florida Citrus Production

2.1M in
17/18

Total Exports from Florida

Citrus Crop Year	Total (1 000 Cartons)
2017-2018	2112
2016-2017	4300
2015-2016	5976
2014-2015	6986
2013-2014	7821
2012-2013	9226
2011-2012	9840
2010-2011	1248011151

Top Export Destinations from Florida

Destination (2017)	Total (Cartons)
Japan	676
Canada	576
Holland	279
Belgium	242
South Korea	214

Signature crop of Florida's agriculture industry – creates a \$8.6 billion annual economic impact – employs nearly 46K Floridians

Florida Citrus Statistics 2017 - 2018

Citrus Production by County	1,000 Boxes (2017-2018)	State Rank
Polk	9260	1
Highlands	7933	2
DeSoto	7751	3
Hardee	5362	4
Hendry	4785	5
St Lucie	3173	6
Indian River	2638	7
Collier	2153	8
Manatee	1611	9
Charlotte	890	10
Osceola	842	11
Lee	685	12
Lake	676	13
Glades	370	14
Hillsborough	312	15
Martin	252	16
Pasco	210	17
Okeechobee	185	18
Orange	118	19
Sarasota	106	20
Marion	81	21
Brevard	56	22
Volusia	54	23
Hernando	40	24
Seminole	24	25
Other (Alachua, Citrus & Putnam)	13	26
TOTAL:	49580	

Florida Production



Product	Percent of U.S. Value	FL Cash Receipts	U.S. Ranking
Oranges	56%	\$1.07 B	1
Grapefruit	54%	\$136 M	1
Cucumbers (Processing)	38%	\$97 M	--
Tomatoes (Fresh Market)	34%	\$262 M	1
Bell Peppers (Fresh Market)	32%	\$206 M	2
Cucumbers (Fresh Market)	32%	\$76.3M	1
Watermelon	23%	\$136M	2
Sweet Corn (Fresh Market)	22%	\$158 M	2
Snap Beans (Fresh Market)	21%	\$70.8 M	2
Squash	17%	\$29.7 M	-
Cabbage (Fresh Market)	11%	\$42 M	2
Strawberries	10%	\$337 M	2
Peanuts	9%	\$154 M	4

Commodity Ranking: Livestock Inventory



Top Livestock - # 2017	State Count	District Count	State %
Cattle and Calves	1,635,742	694,330	43%

County	Cattle & Calves	District %
Charlotte	14,899	2.1%
Collier	10,038	1.5%
DeSoto	94,893	13.7%
Glades	65,136	9.4%
Hardee	80,881	11.5%
Hendry	57,367	8.3%
Highlands	85,875	12.4%
Lee	10,839	1.6%
Manatee	39,430	5.7%
Okeechobee	133,975	19.3%
Polk	83,642	12%
Sarasota	17,355	2.5%

- Florida cattle inventory national rankings according to the USDA/NASS 2018:
 - # 9 in the U.S. for dairy cows
 - # 12 in the U.S. for beef cattle
- District One population based on USCB 2017 Survey:
 - 3,114,653 residents
 - Rough ratio of 1 cow to every 4 people



Commodity Comparisons



Cattle & Calves	County	Value of Sales	FL Rank (2016)	Universe	US Rank	Universe
	Okeechobee	Withheld	1	65	236	3055
	Highlands	\$25,959,000	4	65	609	3055
	Hardee	\$24,588,000	5	65	650	3055
	Hendry	\$23,164,000	6	65	700	3055
	Polk	\$21,080,000	7	65	758	3055
	TOTAL	>\$94,791,000				

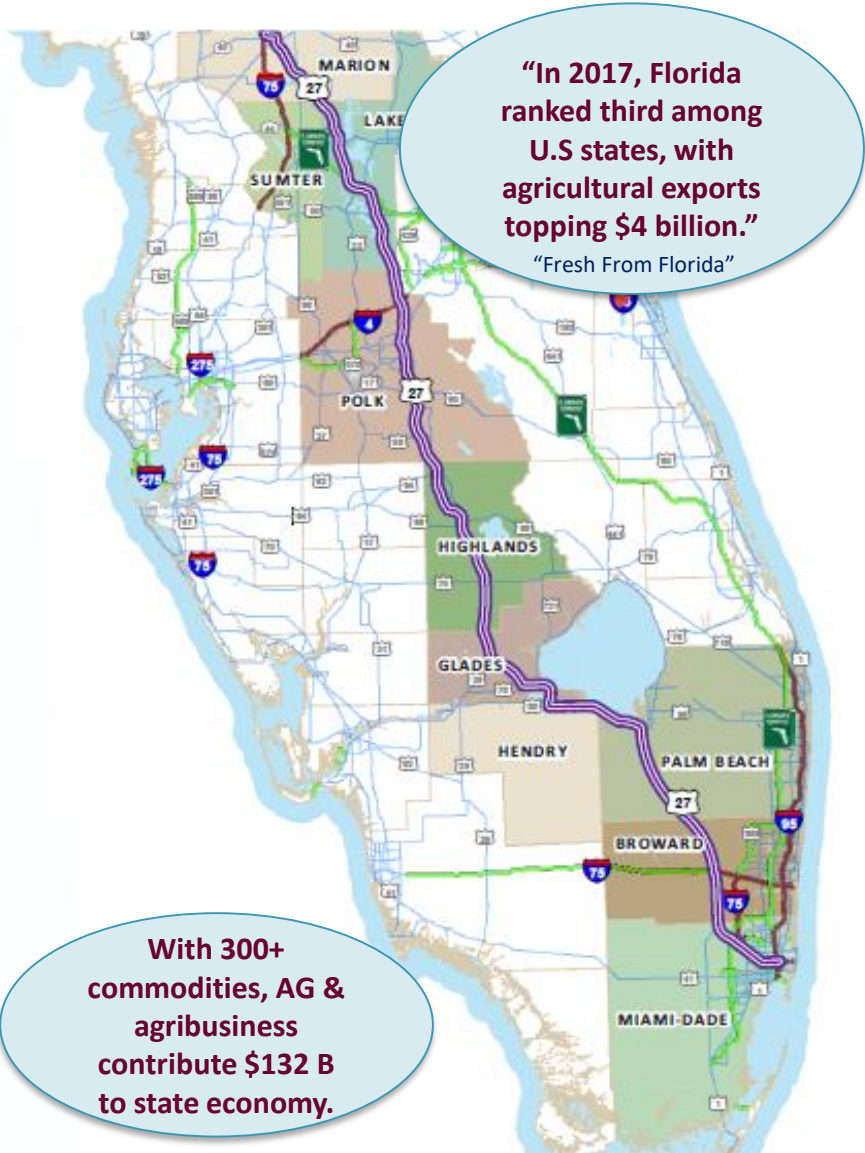
Milk from Cows	County	Value of Sales	FL Rank	Universe	US Rank	Universe
	Okeechobee	\$132,058,000	1	38	54	1892
	Hardee	\$56,364,000	2	38	150	1892
	Manatee	\$27,507,000	6	38	265	1892
	Highlands	\$24,319,000	8	38	287	1892
	De Soto	\$12,661,000	11	38	404	1892
	TOTAL	\$252,909,000				

Commodity Comparisons



Nursery – Floral, Sod, Greenhouse	County	Value of Sales	FL Rank	Universe	US Rank	Universe
	Highlands	\$38,629,000	13	65	79	2601
	Lee	\$40,802,000	12	65	75	2601
	Polk	\$48,647,000	7	65	63	2601
	TOTAL	\$126,078,000				
Veg, Melons, Potatoes & Sweet Potatoes	County	Value of Sales	FL Rank	Universe	US Rank	Universe
	Manatee	\$238,332,000	2	65	12	2821
	Collier	\$90,581,000	3	65	37	2821
	Lee	\$43,928,000	7	65	75	2821
	TOTAL	\$372,841,000				
Other Crops & Hay	County	Value of Sales	FL Rank	Universe	US Rank	Universe
	Hendry	\$96,846,000	2	65	12	3040
	Glades	\$24,674,000	4	65	90	3040
	TOTAL	\$121,520,000				

The “State Freight Corridor”



- Direct access between South and Central FL regions
- Part of the Strategic Intermodal System (SIS)
- Lifeline of the agriculture industry – citrus in particular
- Traffic Conditions – Multiple changes to lanes and speed limit
- Average truck volume and % in corridor = 2900 trucks; 25.46%

Top 10 Agricultural Exports (2017):

- *Meats, Fresh and Frozen* \$599 M
- *Miscellaneous, edible preps* \$454 M
- *Vegetables, Fruit, prepared* \$360 M
- *Dairy Products* \$346 M
- *Beverages* \$334 M
- *Edible Fruits, Nuts* \$329 M
- *Edible Vegetables* \$291 M

Recent Major Products



Port Manatee Site Utilization & Network Analysis Study
FDOT District One
April 2019

An aerial photograph of the Port Manatee site, showing various industrial buildings, docks, and a large body of water.

District-Wide Highway-Rail Grade Separation: GIS Suitability Model (Phase II)
FDOT District One
2019

A map showing a highway and a rail line crossing each other, with a truck and a train nearby.

Districtwide Freight Truck Parking Inventory
FDOT District One 2017

A collage of images showing various truck parking areas, including a large white truck, a red semi-truck, and a blue freight train.

Agricultural Growth and Development in District One and the Impacts to Transportation and Freight Logistics
FDOT District One
2017

A collage of images showing agricultural fields, a red semi-truck, an airplane, and a blue freight train.

District-Wide Freight Activity Center Connector Definition and Evaluation
FDOT District One
2019

A collage of images showing a large stack of shipping containers, a red semi-truck, an airplane, and a blue freight train.

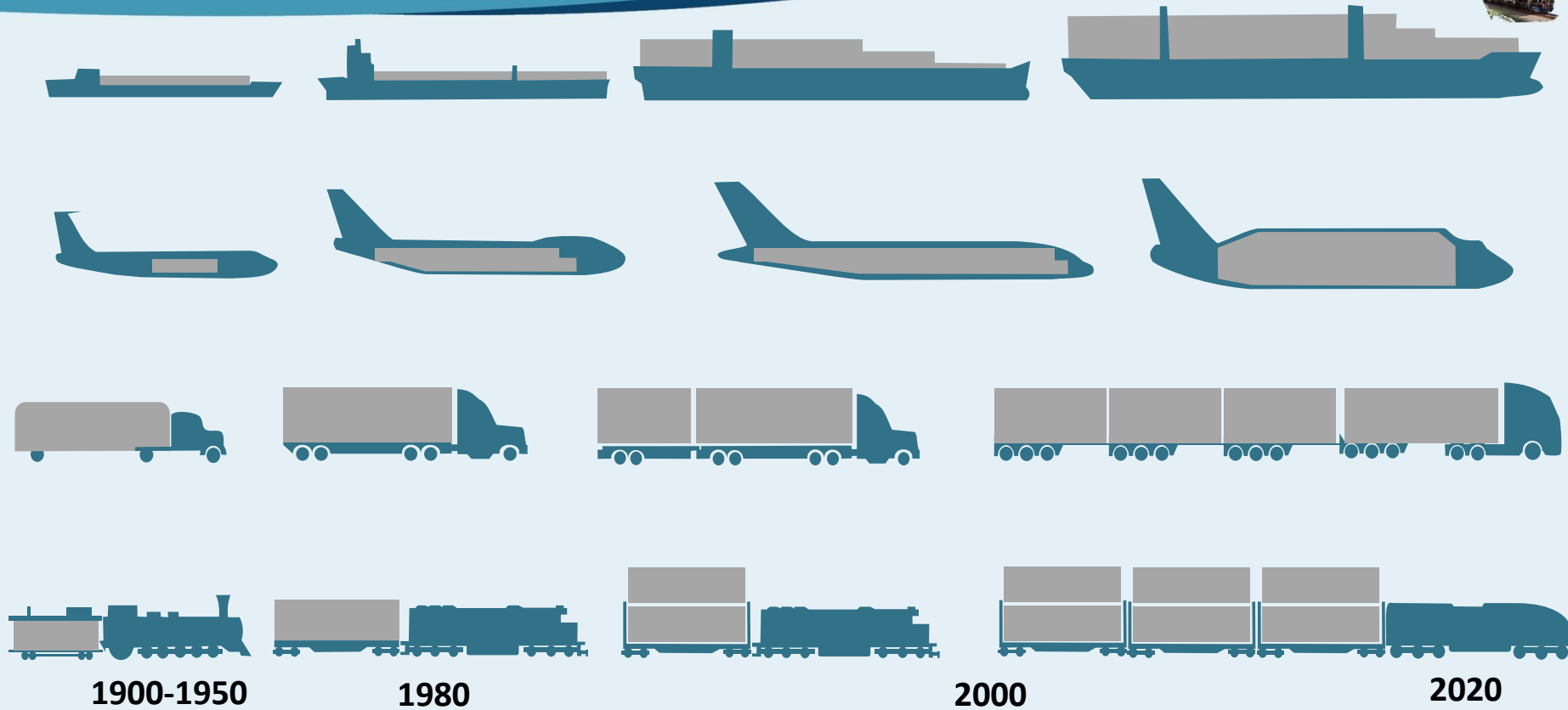
FDOT DISTRICT 1

A graphic with a blue and orange background, featuring the FDOT logo and the text "Freight Mobility and Trade Plan 2019 Update". It includes several circular icons showing different transportation modes and infrastructure.

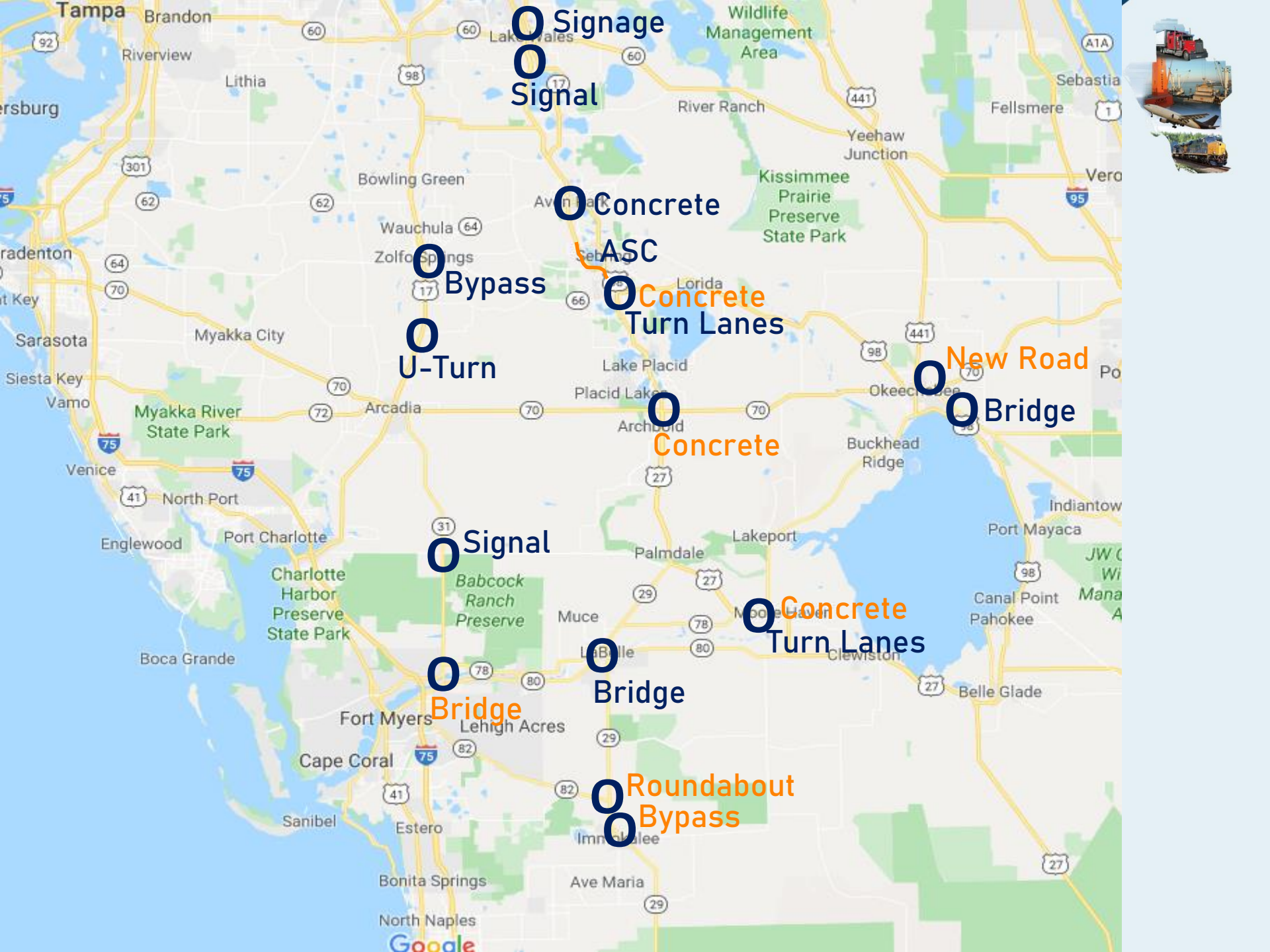
Statewide Truck Parking Study

Freight Mobility and Trade Plan
2019 Update

Changing Face of Freight Vehicles



- Transport influences location of manufacturing plants and distribution facilities
 - Influences very pronounced for firms producing or marketing globally
- Influences are dynamic – as economic activity locations shift, the pattern of transport demand also shifts and vice versa



Signage
Signal

Concrete

ASC

Concrete
Turn Lanes

Bypass

U-Turn

New Road
Bridge

Concrete

Signal

Concrete
Turn Lanes

Bridge

Bridge

Roundabout
Bypass

Bypass

Freight Mobility and Agribusiness Support Effort



Agricultural Growth and Development in District One and the Impacts to Transportation and Freight Logistics
FDOT District One
2017

FDOT DISTRICT 1 **FLP**



This report:

- Aims at identifying where encroachment will likely occur
- Looks at where shift will occur
- Looks at how shift will impact the transportation network
- Findings focus on:
 - Regional impacts
 - Impact on key corridors and state roads
 - Impact on local roads
 - Identification of areas for future hubs for freight activity
 - How this information may be useful in other transportation planning efforts.

Pop Growth and Urban Development in Coastal Counties

Encroachment upon existing commercial Ag production land

Causes Ag production to shift to other counties inland

Creates impact to transportation system in multiple ways

Impact of Agricultural Shifts and Freight Movement Patterns on a Regional and County Basis



- **Coastal counties expected to lose anywhere from 8% truck volume to 49%. Inland counties expected to grow anywhere from 8% truck volume to 12%.**
- **Without encroachment, anticipated truck volumes represent more than 57,000 truck trips through inland counties by 2035.**
- **Significant freight movement through inland counties will allow for**
 - Towns like LaBelle and Moore Haven to become major agricultural hubs.
 - Immokalee will continue to grow.
- **Bridges are a bottleneck for agricultural freight movements; many bridges not built to handle overweight trucks, including:**
 - US 27 Fish Eating Creek (limited restrictions)
 - SR 31 Wilson Pigott Bridge (strengthening in 2020)
 - SR 29 LaBelle Bridge – strengthened in December 2018
- **Other bridges along county roads are susceptible to issues stemming from increased truck traffic.**
 - Load rating limitations for oversize and overweight permitted trucks

Report Conclusion

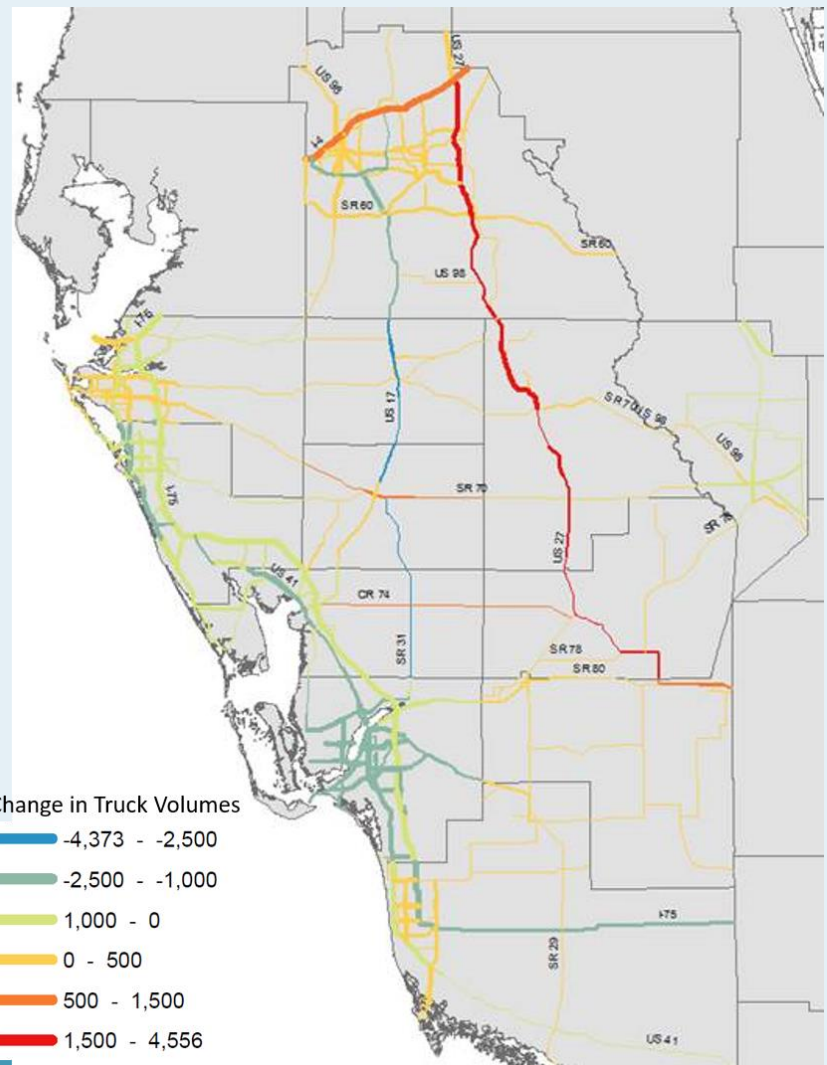


- Coastal towns to experience significant urbanization, agriculture will shift inland
- Inland shift means shift in truck traffic towards the center of the state, US 27 and county roads
- County roads in Hendry and Glades will serve as major facilities for freight movement changes. These places will become hubs for agriculture; places like Immokalee will flourish
- Majority of freight movements will transfer from major roads in the north of District 1 to southern and inland counties; these freight movements will be traveling county roads
 - County roads significantly less equipped to handle the change, will lead to deterioration
- Results can be used for the Statewide Heavy Truck Traffic (HTT) Model; further information required to determine impact of the whole freight network

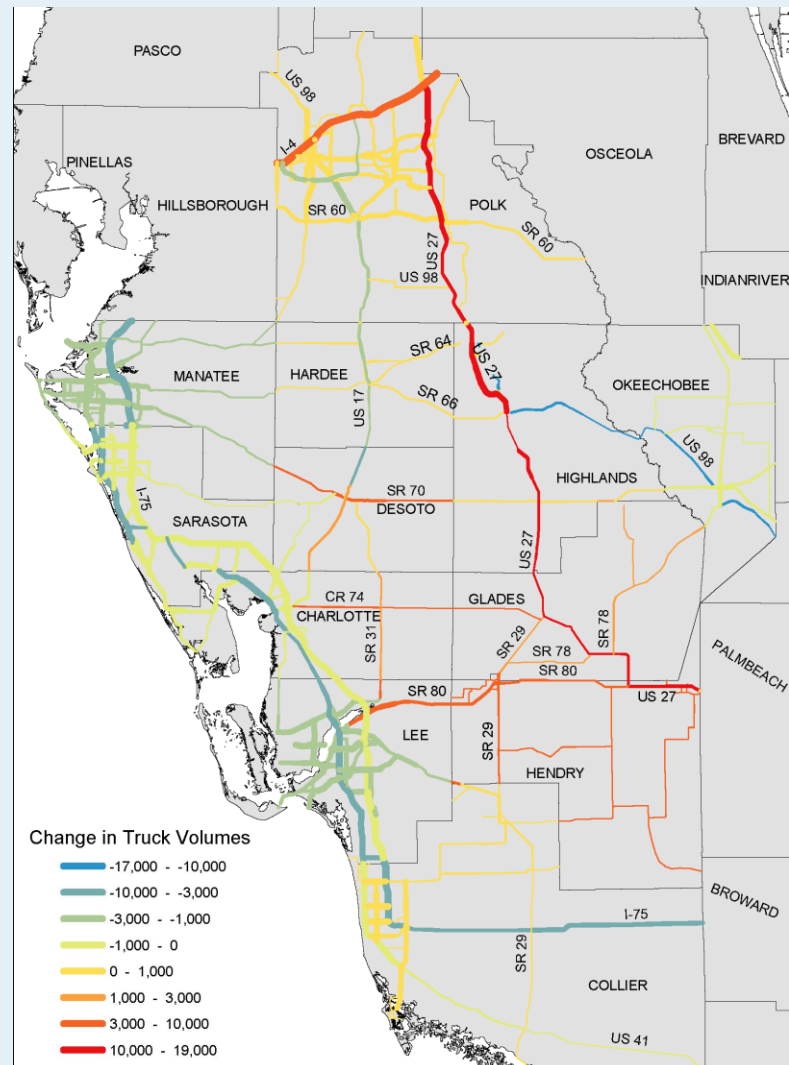
Forecasted Changes in Truck Vol Due to Urban Growth and Encroachment



Truck Volumes in Year 2020 (# of trucks)



Truck Volumes in Year 2035 (# of trucks)



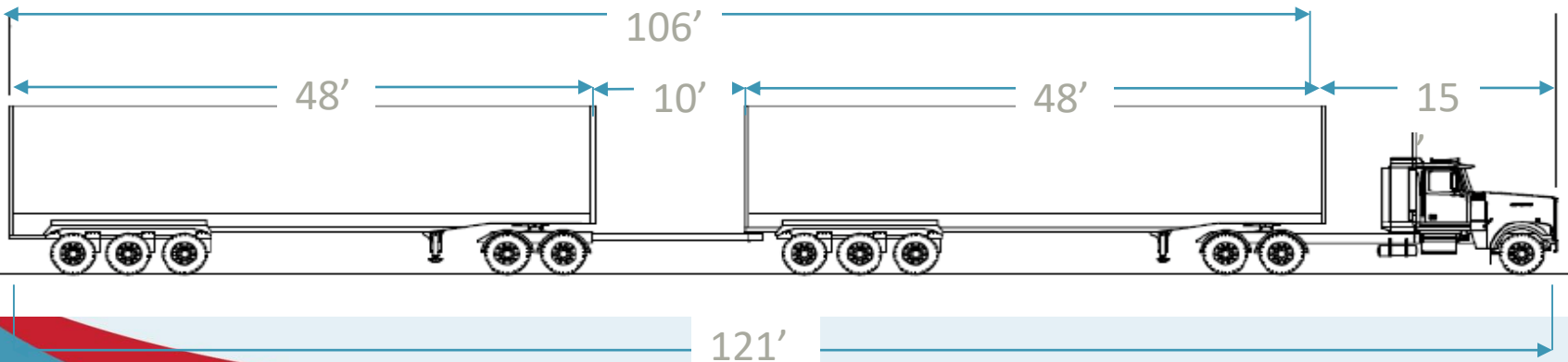
Note: Line thickness depicts 2013 AADT levels, an indication of current road conditions for all vehicle traffic. The thickness of the line is not related to the color displayed on the roads

HB 725 Overview Relating to EAA Tandem Trailers



By NLT January 1, 2020 FDOT and DHSMV shall develop a permitting program...

- Cannot conflict with federal law and applicable provisions
 - Truck Tractor, Semi Trailer, and Trailer Combination (Trailer units up to 48')
 - Transporting farm products within the Everglades Agricultural Area (EAA)
- Traveling on a prescribed route(s) approved by FDOT for public safety purposes taking into account, at a minimum:
 - Point of origin and destination
 - Traffic and pedestrian volume
 - Turning radius at intersections along the route
 - Potential for damage to roadways or bridges on the route
 - Operations within a 60 mile radius from loading point
 - Can only operate on state and local roadways – no interstate travel
 - Overall gross weight 155,000 pounds (max gross 88k truck tractor-1st trailer; 67k on dolly and 2d trailer)
 - Expires on January 1, 2025 unless reauthorized by legislature
 - May not be implemented or continued if the Federal Government notifies the department that implementation will adversely affect the allocation of federal funds to the state



Everglades Agricultural Area (EAA) Tandem Trailers



NOTICE OF DEVELOPMENT OF RULEMAKING

DEPARTMENT OF TRANSPORTATION

RULE NO.: RULE TITLE:

[14-26.00435](#) Everglades Agricultural Area Tandems

PURPOSE AND EFFECT: To address permitting of longer combination vehicles within the Everglades Agricultural Area as authorized by Chapter 2019-149, s.4, Laws of Florida.

SUBJECT AREA TO BE ADDRESSED: Requirements for permitting of longer combination vehicles.

RULEMAKING AUTHORITY: [316.5501](#), [334.044\(2\)](#), F.S.

LAW IMPLEMENTED: [316.302](#), [316.515](#), [316.535](#), [316.550](#), [316.5501](#), FS.

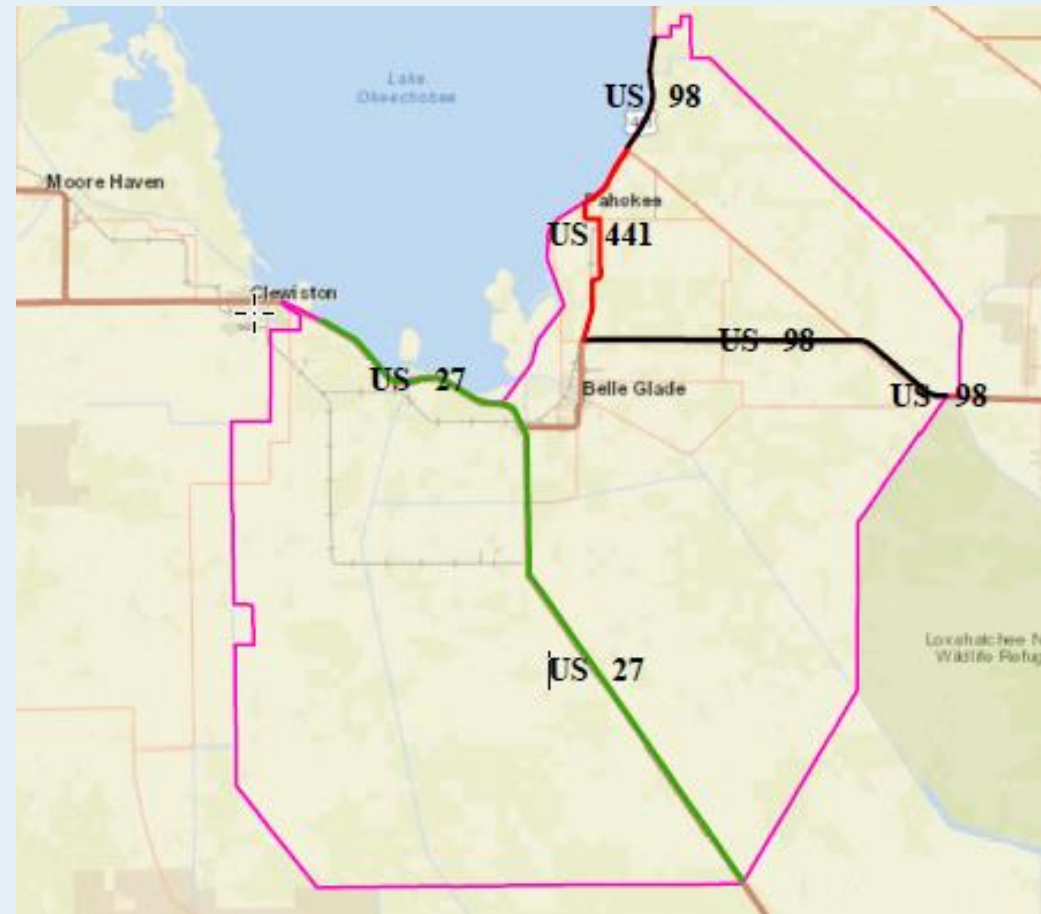
A RULE DEVELOPMENT WORKSHOP WILL BE HELD AT THE DATE, TIME AND PLACE SHOWN BELOW:

DATE AND TIME: November 20, 2019, 5 P.M.

PLACE: Belle Glade Library Civic Center, 725 NW 4th Street, Belle Glade Florida, Note: This is a correction to the erroneous location listed in the November 4, 2019 notice of rule development.

THE PERSON TO BE CONTACTED REGARDING THE PROPOSED RULE DEVELOPMENT AND A COPY OF THE PRELIMINARY DRAFT, IF AVAILABLE, IS: Susan Schwartz, (850)414-5392, susan.schwartz@dot.state.fl.us
THE PRELIMINARY TEXT OF THE PROPOSED RULE DEVELOPMENT IS: to be posted when available at:

www.fdot.gov/maintenance



What's Next?



- Airport Regional Transportation and Industrial Development Analysis (ARTIDA) – *In Progress*
- Port Manatee Piney Point Road Purpose and Need Development (*from Port Manatee Study*) – *In Progress*
- US27 Mobility Stakeholder Working Group (TBD) – Corridor studies updates for US 27, SR 70 and SR 80
- Update to the District One Freight Mobility and Trade Plan following the State FMTP update approval by FHWA
- EAA Tandems Public Meeting, 20 November at 5pm in Belle Glade

Challenges

- Permit regulations and restrictions
- Population growth and land development
- Transportation network and infrastructure
- Environmental constraints and limitations

Opportunities

- Meet with me
- Get to know your local Metropolitan or Transportation Planning Organization (MPO / TPO)
- Infrastructure improvements
- Stay plugged in...

Questions?

Keith Robbins
District Freight & Seaport Coordinator,
FDOT District One, Bartow
(863) 519-2913
Keith.Robbins@dot.state.fl.us

