Freight Mobility and Trade Plan
Plan Update
April 2020
The Statewide Freight Plan
What is the FMTP?

- The Freight Mobility & Trade Plan is a comprehensive plan that focuses on the movement of goods in, out, and around Florida.
- It provides an integrated analysis to examine needs and solutions in a cross-cutting, multi-functional approach.
Florida invests heavily into its transportation system to lead the way for freight now and into the future.

The state leverages discretionary grant opportunities, the National Highway Freight Program and FDOT funds to support freight projects.
This FMTP uses tactical and strategic approaches to implement immediate opportunities while positioning Florida for future possibilities.

Florida’s House Bill 599 directed the State to create a freight plan.

Florida created its first Statewide Freight Plan in two parts; a Policy Element in 2013, and an Investment Element in 2014.

The Fixing America’s Surface Transportation (FAST) Act created a National Multimodal Freight Network (NMFN) and dedicating freight funding through the National Highway Freight Program (NHFP).

The Freight and Multimodal Operations (FMO) office was established within FDOT.

This FMTP uses tactical and strategic approaches to implement immediate opportunities while positioning Florida for future possibilities.

The Moving Ahead for Progress in the 21st Century Act (MAP-21) established national freight policy and goals and a formal national freight network.

A Brief History
The FMTP uses the seven goals from overarching Florida Transportation Plan.
The FMTP has ten objectives that were vetted and validated by the outreach process.
There are five recommendations per objective, based on a culmination of everything in the FMTP.
The FMTP includes an Action Plan that breaks down each recommendation into implementable pieces.
## Plan Objectives

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<tbody>
<tr>
<td>1</td>
<td>Leverage multisource data and technology to improve freight system safety and security</td>
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<td>2</td>
<td>Create a more resilient multimodal freight system</td>
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<td>3</td>
<td>Ensure the Florida freight system is in a state of good repair</td>
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<td>4</td>
<td>Drive innovation to reduce congestion, bottlenecks and improve travel time reliability</td>
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<td>5</td>
<td>Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains</td>
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<td>6</td>
<td>Improve last mile connectivity for all freight modes</td>
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<td>7</td>
<td>Continue to forge partnerships between the public and private sectors to improve trade and logistics</td>
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<td>8</td>
<td>Capitalize on emerging freight trends to promote economic development</td>
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<td>9</td>
<td>Increase freight-related regional and local transportation planning and land use coordination</td>
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<td>10</td>
<td>Promote and support the shift to alternatively fueled freight vehicles</td>
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Stakeholder Input
The Project Advisory Committee (PAC), an internal body consisting of representatives from FDOT offices related to freight, provided guidance on the development of the plan and helped validate the results along the way.

The Florida Freight Advisory Committee (FLFAC), consisting of public and private sector freight stakeholders, advised on freight-related priorities, issues, projects, and funding needs. The FLFAC ensured that the objectives and issues identified in the plan would effectively address Florida’s freight needs.
Regional Freight Forums

Regional freight forums were held in each FDOT District to give the public and stakeholders a venue to share knowledge, and explore freight issues and potential solutions.

<table>
<thead>
<tr>
<th>6 or 7 mentions</th>
<th>4 or 5 mentions</th>
<th>2 or 3 mentions</th>
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<tbody>
<tr>
<td>Automation</td>
<td>Education/Awareness</td>
<td>Alternative Fuel</td>
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<tr>
<td>Bottlenecks/Congestion</td>
<td>Data Sharing</td>
<td>Rural/Urbam Context</td>
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<tr>
<td>Collaboration/Coordination</td>
<td>Empty Backhaul</td>
<td>E-Commerce</td>
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<tr>
<td>Land Use</td>
<td>Inland Ports</td>
<td>Law Enforcement</td>
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<tr>
<td>Regulations</td>
<td>Funding</td>
<td>Limited Access/Signalization</td>
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<tr>
<td>Truck Only Lanes</td>
<td>Economic Competitiveness</td>
<td>Grade Separation</td>
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<tr>
<td>Truck Parking</td>
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<td>Blockchain</td>
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<tr>
<td>Labor Force</td>
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<td>Marketing/Outreach</td>
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<tr>
<td>First Mile/Last Mile Connectivity</td>
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<td>Intermodal Connectivity</td>
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<tr>
<td>Public/Private Partnerships</td>
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Technical Analysis
Florida’s multimodal freight and logistics infrastructure supports over 21 million residents and 126 million annual visitors while providing connectivity between freight modes.

**FREIGHT FACILITIES STATISTICS**

- 123,099 MILES OF PUBLIC ROADWAY
- 2,743 MILES OF MAINLINE RAILROAD TRACK
- 20 COMMERCIAL AIRPORTS
- 15 PUBLIC SEAPORTS
- 2 SPACEPORTS
- 10 SPACE LAUNCH-PADS
- 12,441 BRIDGES
- 5,899 MILES OF GAS TRANSMISSION & HAZARDOUS LIQUID PIPELINES
- 23 AGRICULTURAL INSPECTION STATIONS
- 20 MOTOR CARRIER SIZE AND WEIGHT STATIONS
- 298 TRUCK PARKING LOCATIONS (~10,093 SPACES)
- 21 FOREIGN TRADE ZONES

**Legend:**

- Aviation
  - Commercial Airport
  - Commercial Airport with Scheduled Cargo Activity
  - Spaceport

- Seaport
  - Seaport

- Railway
  - Railway

*Source: FDOT, 2017 - 2019*
The National Highway Freight Network (NHFN) helps strategically direct resources toward improved system performance for efficient movement of freight on highways.

**National Highway Freight Network**

- **Primary Highway Freight System**
- **Critical Urban Freight Corridor**
- **Critical Rural Freight Corridor**

*Source: NHFN, 2016*

**NHFN SUBSYSTEMS**

<table>
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<tr>
<th>Subsystem</th>
<th>Statewide Mileages</th>
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<tbody>
<tr>
<td>Primary Highway Freight System (PHFS) Routes</td>
<td>1,538.92</td>
</tr>
<tr>
<td>PHFS Intermodal Connectors</td>
<td>61.77</td>
</tr>
<tr>
<td>Interstate Not on the PHFS</td>
<td>54.63</td>
</tr>
<tr>
<td>Critical Urban Freight Corridors (CUFC)</td>
<td>159.86 (Max Allowable = 160.07)</td>
</tr>
<tr>
<td>Critical Rural Freight Corridors (CRFC)</td>
<td>309.89 (Max Allowable = 320.14)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,125.07</strong></td>
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Freight Intensive Areas

These clusters of freight facilities generate, distribute or attract large amounts of freight activity.
Performance Measures

- Truck Miles Traveled
- Combination Truck Miles Traveled
- Combination Truck Ton Miles
- Combination Truck Planning Time Index*
- Combination Truck Hours of Delay*
- Truck Travel Time Reliability*
- Percent of Travel Meeting LOS
- Highway Pavement Conditions
- Bridge Conditions
- Highway Safety
- Truck Empty Backhaul
- Truck Parking Utilization
- Rail Tonnage
- Rail Crashes
- Seaport Tonnage
- Aviation Tonnage
- Aviation Departure Reliability

* Federal Measures
Industry Trends
- Florida’s population is expected to reach 27.4 million by 2040. The U.S. freight system moves approximately 63 tons of goods per person per year.

- Over 2.4 million people visit Florida each day. The tourism industry creates significant freight demand.

- A growing population + a growing economy = more trucks on the road. The number of truck trips has increased while the average length of haul has declined.
An Economy Built on Freight

- The engine that powers Florida’s freight industry is its people. 55% of Florida’s 8.7 million employees work in industries related to freight.

- The trade sector of the Florida economy has seen tremendous growth since 2009, including retail trade, transportation & warehousing, and wholesale trade.

Florida has a gross domestic product of $1 trillion, ranked 4TH in the U.S. If Florida were an independent country, it would rank 17TH in the world.

Source: U.S. Bureau of Economic Analysis, 2019
• As e-commerce market share and rapid fulfillment expectations continue to grow, a shift is taking place from large delivery vehicles to smaller vans and personal vehicles

• The implementation of full autonomy throughout the motor carrier freight system will create industry-wide savings

• Nationally, fully electronic vehicles are projected to represent 8% of total automobiles sold by 2025
Top Challenges
There are growing numbers of vehicles on the road creating a mix of truck and passenger traffic and leading to bottlenecks/congestion and unpredictability in travel times. In 2017, there were 19,100 daily truck hours of delay in Florida. In Florida, the limited availability of truck parking spaces has caused overcrowding and overflow at existing truck parking locations. Analysis found that during peak periods truck parking demand can exceed 150 percent in some areas of the state. More than half of the trucks coming into the state between the years of 2015 and 2017 were full trucks, in comparison to nearly 38% that left the state during the same time period. While it is largely an economic issue outside of FDOT’s purview, addressing empty backhaul could reduce congestion/bottleneck issues, truck parking issues, costs, and environmental impacts for the commercial motor vehicle industry.
Delivering A Difference

The continued success of Florida’s freight system depends upon addressing the state’s top challenges. The FMTP helps implement solutions.

The FMTP identifies the state’s top 100 bottlenecks. The geographic locations of these bottlenecks are factored into the prioritization of freight projects.

FDOT is rolling out a Truck Parking Availability System (TPAS), and the FMO Office is leading a research study to identify future needs and solutions. The FMTP recommendations build upon each of these initiatives.

The FMTP highlights the need for FDOT to continue to work with other agencies to promote manufacturing and greater trailer utilization to combat the imbalance.
Prioritization
The FMTP helps to determine which projects submitted from around the state will receive funding from the National Highway Freight Program, and this FMTP created a new methodology for project prioritization.

**FMTP Prioritization**

1. **Identification of Projects**
2. **Project Classification and Funding Eligibility Screening**
3. **Quantitative and Qualitative Evaluation**
Screening Process

- Screening for National Highway Freight Program Eligibility
- Tier 2 Needs List (focused list of freight projects)
- Screening for FMO Policy & Evaluation (qualitative & quantitative)
- Freight Investment Plan
- Screening for committed projects (SIS, modal, etc.)
- Committed Projects
- Screening for grant program eligibility (BUILD, INFRA, ATCMTD, etc.)
- Portfolio of projects for discretionary grant programs
- Funded Grant Projects
Each project that meets the eligibility and screening requirements is scored in two parts.

The quantitative score is based on geographical/locational factors, while the qualitative score weighs a project's ability to effect FMO priorities.

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<tr>
<th><strong>QUANTITATIVE</strong></th>
<th><strong>QUALITATIVE</strong></th>
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<tr>
<td>Labor Force Size (Ratio of labor force by county population relative to average statewide ratio)</td>
<td>Does this project address grade separation?</td>
<td></td>
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<tr>
<td>(Truck Injuries/Truck VMT) x1000</td>
<td>Does this project implement safety or security enhancements?</td>
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<tr>
<td>(Truck Fatalities/Truck VMT) x1000</td>
<td>Is this a technology driven or TSM&amp;O project?</td>
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<tr>
<td>Crime Index</td>
<td>Does this project improve the State's data gathering efforts?</td>
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<td>Roadways within 100 Year Flood Zones</td>
<td>Does this project improve multimodal freight connectivity?</td>
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<tr>
<td>Presence of Structurally Deficient Bridges</td>
<td>Does this project address the environmental or economic resiliency of the freight system?</td>
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<tr>
<td>Presence of Poor Pavement Condition Segments</td>
<td>Does this project use public/private partnerships (P3)?</td>
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<tr>
<td>Roadways with Top Bottlenecks</td>
<td>Does this project optimize the functionality and efficiency of existing roadways?</td>
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<td>Truck AADT</td>
<td>Does this project capitalize on emerging freight trends?</td>
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<td>Vicinity to Hubs</td>
<td>Does this project preserve the existing State Highway System?</td>
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<td>Roadways within Freight Intensive Areas</td>
<td>Does this project promote the use of LNG/CNG/electric vehicles?</td>
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<td>On Designated Alternative Fuels Corridors</td>
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<tr>
<td>Number of Alternative Fueling Stations within 1 Mile of Roadway</td>
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Getting to Action
Each of the 10 objectives identified in the FMTP have 5 associated recommendations based on a combination of:

- Technical Analysis Results
- Stakeholder Input
- Considering Emerging Market Trends and Opportunities

### OBJECTIVE 1

- Identify commercial vehicle high crash segments and intersections, analyze causal factors, and develop counter measures
- Provide more safe and secure truck parking facilities
- Identify and implement freight related automated and connected vehicle projects to improve safety and mobility
- Prioritize rail-highway grade separation needs and implement select projects depending on funding availability
- Partner with freight related industries to support development of electronic freight management systems that enhance freight flow visibility throughout the entire supply chain, expedite communication among supply chain partners and government agencies, and enhance system security
Each of the 50 recommendations is broken down further into action steps for implementation, including partner offices/agencies and a timeframe for scheduling.
The resulting 154 action items make up the action plan for implementation. The primary focus of the initial implementation phase will be:

- Truck Parking
- Freight Resiliency
- Safety
- Intermodal Connections
- Electric Vehicle Adoption

For information on implementation progress, visit FDOT.gov/FMTP
Other FMO Updates
The statewide truck parking study was recently completed.

Visit FDOT.gov/truckparking to learn more!
Research Initiatives

• FMO is pursuing:
  – An off-hours delivery study with FSU
  – A land-use study focused on empty backhaul
  – A new optimization model for improving safety at rail crossings
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