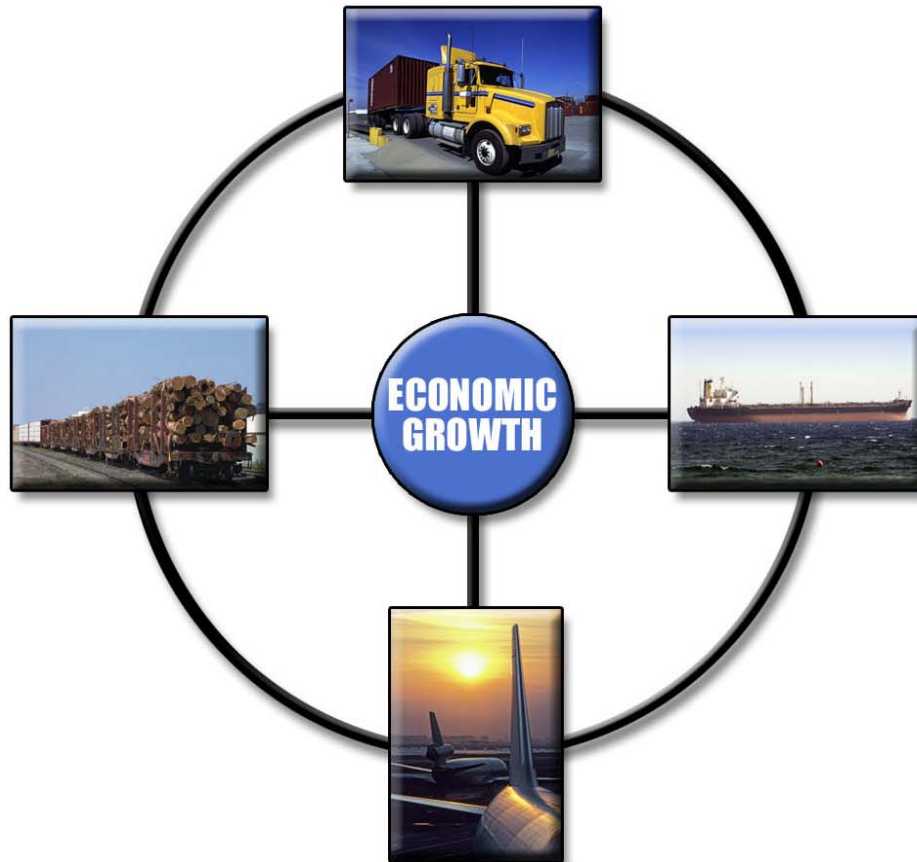


# Integrating Economics with Freight Mobility

October 2005



Prepared for:

*First Coast*  
**MPO** Metropolitan  
Planning  
Organization

Prepared by:

**RS&H**  
Reynolds, Smith and Hills, Inc.  
Architectural, Engineering, Planning and Environmental Services



Architectural, Engineering, Planning and Environmental Services

**Reynolds, Smith and Hills, Inc.**  
10748 Deerwood Park Boulevard, South  
Jacksonville, FL 32256-0597

October 27, 2005

Jeff Sheffield, Director of Planning  
First Coast Metropolitan Planning Organization  
1022 Prudential Drive  
Jacksonville, FL 32207

Dear Mr. Sheffield:

We are pleased to submit a final report of the First Coast Metropolitan Planning Organization's Phase II, Freight Mobility Study: Integrating Economics with Freight Mobility. This report features the First Coast MPO's endeavors to define and address freight mobility needs throughout the First Coast MPO area. It addresses federal and statewide requirements that regional transportation planning processes provide for consideration of freight and intermodal planning. It embraces the realization that an improved freight transportation infrastructure is linked to the region's economic success.

The enclosed report culminates in a Freight Mobility Strategy, detailing both policy and project improvement recommendations. Project recommendations include three project types: quick fix (short term projects suitable for annual, local capital improvement programs and FDOT maintenance plans); mid-term (to be or currently programmed in the TIP) and long term (to be or currently listed in the long range transportation plan). Integral to the study, the First Coast MPO developed and convened the Business, Industry and Government (BIG) Transportation Roundtable, a committee of private sector representatives within the freight transportation industry, along with business, economic development and public agency representatives. The report also contains a commodity flow analysis, a discussion of economic impacts of freight and an overview of Strategic Intermodal System (SIS) issues as related to freight movement within the First Coast MPO area.

On-going freight facility planning at the First Coast MPO is crucial to the continued success of the region's economy. As you know, there is an on-going need to review and update freight related data. JAXPORT's announcement of the addition of Mitsui OSK Lines Ltd. shows how quickly the regions goods movement industry is growing. The \$200 million terminal at Dames Point is estimated to bring about 5,000 jobs, double the port's capacity and eventually make Jacksonville one of the top 10 container ports in the country.

Contribution to the successful completion of this study came from First Coast MPO staff; BIG Roundtable members; and Reynolds, Smith and Hills staff. We value the opportunity to work together to complete this Freight Mobility Study.

Sincerely,

A handwritten signature in blue ink, appearing to read 'David Stroud', is written over the word 'Sincerely,'.

David Stroud, PE, AICP  
Project Manager

# INTEGRATING ECONOMICS WITH FREIGHT MOBILITY

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## **Executive Summary**

Phase II of the First Coast MPO's Freight Mobility Study: Integrating Economics with Freight Mobility defines and addresses freight mobility needs throughout the First Coast MPO area. The final report culminates in a Freight Mobility Strategy, detailing both policy and project recommendations, with an emphasis on "quick fix" freight mobility improvements. As an integral part of the study, the First Coast MPO developed and convened the Business, Industry and Government (BIG) Transportation Roundtable, a committee of private sector freight industry representatives, along with representatives of businesses and economic development agencies. The final report also includes a commodity flow analysis, a discussion of the local and regional economic impacts of freight, and an overview of the Florida Strategic Intermodal System (SIS) in relation to freight movements within the First Coast MPO area.

Phase I of the study, completed in the spring of 2002, inventoried and surveyed major freight facilities and developed a freight facility database, through the coordination and cooperation of a Freight Study Steering Committee. Using the information developed during Phase I, the Phase II study recommends freight improvements. The study incorporates extensive stakeholder involvement, rather than long-range technical analyses, as the primary basis for the identification and prioritization of freight mobility improvement projects.

### Freight Movement Within the First Coast MPO Area

Northeast Florida is located at the crossroads of 3 major interstates (I-10, I-95 and I-75) in addition to a network of major and minor arterials. Additionally, the First Coast MPO urban area features two Class I Railroads (CSX and Norfolk Southern), a major regional railroad (Florida East Coast Railway), three key seaport facilities, the Jacksonville International Airport, Jacksonville Naval Air Station, Mayport Naval Air Station, and Cecil Field Commerce Center. CSX and Florida East Coast Railway (FEC) are both headquartered in the First Coast MPO area, in Jacksonville and St. Augustine, respectively.

Over 81 million tons of freight are transported into, out of, within, and through the First Coast MPO area via truck, rail, air, and water modes. Although the majority of its total freight moves by truck, (about 58% or 40 million tons), the First Coast MPO area has a higher percentage of freight moved by rail than many other US and Florida metropolitan areas, due in part to this area's well-developed intermodal transportation system. Rail and water shipments on the area's transportation infrastructure account for a significant percentage of total freight movements, highlighting the importance of JAXPORT and this area's role as a rail hub for Florida and the Southeast.

### First Coast MPO Recommended Freight Mobility Strategy

With the emergence of the Florida Strategic Intermodal System (SIS) as the major source of state funding for transportation improvements, and recognizing the strategic importance of intermodal freight transportation to the Northeast Florida economy, the First Coast MPO's Freight Mobility Study: *Integrating Economics with Freight Mobility* recommends several freight mobility improvement projects. Many of the recommended projects will improve SIS corridors and connectors located in the First Coast MPO area. In the short term, the study recommends reducing delays caused by poorly timed traffic signals, inadequate turning lanes, insufficient curb radii, wayfinding problems and other more minor problems that jeopardize the timely movement of freight within our region. These quick-

fix projects are suitable for annual, local capital improvement programs and FDOT maintenance plans. In the mid and long term, the study recommends more involved projects, to be or currently programmed in the TIP, or the long-range transportation plan. Improvements are recommended both on and off the Statewide Strategic Intermodal System (SIS) and are represented throughout the First Coast MPO area, including Duval, St. Johns, Clay and Nassau Counties.

In addition to recommended projects, recommended policies ensure that SIS and other funds are spent where they are most needed. Policy recommendations encourage (1) SIS funding for multiple connectors to SIS hubs; (2) SIS and SU<sup>1</sup> funding for quick-fix projects; and (3) regional distribution centers on the SIS. Finally, a summary and conclusions section focuses upon describing efforts that will continue the consideration of freight into the First Coast MPO planning process, including an annual review of freight projects. It also features a discussion of lessons learned.

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<sup>1</sup> urban, surface transportation program funds

## **Section I. Introduction**

The commercial movement of goods and freight has a major impact on the mobility and economy of the First Coast Metropolitan Planning Organization's (First Coast MPO) area. The First Coast MPO area's arterial roadway network, interstate system, airports, ports and railroads are a major cornerstone of the area's economic prosperity. As the First Coast MPO area continues its high rate of growth, attracting new residents, visitors and businesses, mobility on and through these facilities becomes increasingly important.

Continued success of the region's economy depends upon identifying and anticipating the region's existing and future freight mobility needs and identifying projects that improve existing freight facilities, as appropriate to meet these needs; and providing efficient connections to, from and between these facilities and other parts of the First Coast MPO, as well as surrounding areas.

Phase II of the First Coast MPO's Freight Mobility Study: *Integrating Economics with Freight Mobility* continued the First Coast MPO's endeavors to define and address freight mobility needs. The study embraced the realization that an improved freight transportation infrastructure is linked to the success of the area's economy. The freight study's goal was to make the First Coast MPO area a better place to locate and do business.

### Study Description

First Coast MPO Freight Mobility Study, Phase II: *Integrating Economics with Freight Mobility* commenced in May 2004. Portions of the project were expanded when the urbanized boundary increased. The study area covers the First Coast MPO's recently expanded boundary: all of Duval County (the City of Jacksonville) and portions of Clay County (including Orange Park and Green Cove Springs), St. Johns County (including St. Augustine) and Nassau County (including Fernandina Beach and Amelia Island). Appendix A displays the study area.

Phase I of the study, completed in the spring of 2002, inventoried and surveyed major freight facilities and developed a freight facility database, through the coordination and cooperation of a Freight Study Steering Committee. Using the information and relationships developed during Phase I, Phase II recommended freight improvements, relative to the highway system.

### Objectives and Tasks

Freight Mobility Study, Phase II: *Integrating Economics with Freight Mobility* was designed to meet three objectives. These objectives served as the focus for all study activities and work products

1. Establish and maintain a dialogue with key public sector and private sector freight stakeholders.
2. Recommend improvements and other actions to be taken by both public and private sector entities to immediately address system deficiencies, as needed, to enhance safety, mobility, efficiency and competitive effectiveness of freight movement.
3. Establish a standing Economic Development Committee of the First Coast MPO. Freight and goods movement would be a key issue for the committee to address.



The Freight Mobility Study effort was divided into eight major tasks.

- Task 1.0 – Perform Presentations at Public Meetings
- Task 2.0 – Partner with Economic Development and Freight Stakeholders
- Task 3.0 – Collect and Research Major Freight Data and Information
- Task 4.0 – Identify Economic Benefits of Freight Movement
- Task 5.0 – Identify Freight Movement Needs and Improvements
- Task 6.0 – Evaluate Freight Mobility Improvements
- Task 7.0 – Develop Final Strategy/Recommendations
- Task 8.0 – Complete Final Study Deliverables

### Prior Study Efforts: Phase I

A major task of the phase I study was to perform an inventory of freight generating facilities. The inventory included facilities related to all modes of freight transportation. Based on an inventory of the major freight facilities, as well as other freight generators, a GIS database of over 270 freight facilities and generators was created. The database included trucking facilities, warehouses, industrial parks, mail and package carriers, rail yards, seaport and marine facilities and airports.

Using the information developed during Phase I of the Freight Mobility Study for the First Coast MPO, as well as field checks of key freight access routes during Phase II and one-on-one meetings with freight stakeholders, the First Coast MPO recommended a change in the designation of the SIS Connectors that serve the Norfolk Southern (NS) Intermodal Terminal in Jacksonville. Innovative methods for direct stakeholder involvement in freight facilities planning was achieved with one-on-one meetings held with freight industry marketing executives, as well as with terminal managers and dispatchers, resulting in a PD&E study for major access improvements to the Norfolk Southern Intermodal freight facility.

A review of the FDOT Connector Designation Rules indicated that the substitution of Pickettville Road for part of Edgewood Drive would satisfy the connector designation rule cited below.

*Identify connectors with potential community and environmental impacts for more detailed study with resource agencies and community partners.*

The use of Pickettville Road is a more direct route to the NS Terminal. It also avoids the adverse impacts that would ensue from modifications to Edgewood Drive. Edgewood Dr. was found to be a local street with major problems related to its poor alignment, substandard access controls and incompatible residential land use activities. Although there is a weight restriction on a bridge on Pickettville Road that prevents the usage of the road by heavy trucks, strategic investments to eliminate this weight restriction would be better than further investments in Edgewood Drive that might be made pursuant to its designation as an SIS Connector Road. Refer to Table 8, project #6 for a description of the recommended modified SIS Connector to the NS Intermodal Terminal.

Finally, during the Phase I study, there were many opportunities to receive input from freight stakeholders. It was found that the freight industry performs in a fast pace environment and wants to provide input into the transportation planning process. Their primary issues and concerns are noted below.

- Provide better access to freight facilities. Examples include improved shoulders, turn lanes, traffic signals, intersections and lane widening.
- Identify and implement more overnight truck parking and rest stop areas
- Reduce railroad-crossing delays.
- Consolidate rail tracks to reduce community isolation, minimize negative impacts to residential streets and neighborhoods and improve emergency vehicle mobility. Norfolk Southern (NS) was very much in favor of this. Trucks traveling to and from NS Simpson Yard currently travel on residential streets and through at least one school zone.
- Give truckers better signage and roadway information (via Highway Advisory Radio and Intelligent Transportation Systems).
- Convene a Standing Freight Committee to the First Coast MPO. The freight industry wants to communicate their needs and participate in the transportation planning process.
- Identify a Dedicated Funding Source. Many of the needs expressed were not major projects and compared to other roadway improvements would most likely have minimal costs and be relatively inexpensive.
- Security requirements in Florida Seaport Legislation put Florida at a competitive disadvantage.

### Federal Regional Planning Legislation

The First Coast MPO is mandated by Federal and State statutes to implement a continuing, cooperative and comprehensive (3-C) metropolitan transportation planning process in the Jacksonville Urbanized Area (currently made up of Duval and portions of Clay, St. Johns and Nassau Counties). For years the 3-C process primarily concentrated on the movement of people (home-to-work and work-to-home trips) within the urbanized area. The passage of both the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) and the 1998 Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) legislated the need to integrate the movement of freight and intermodalism into the MPO transportation planning process.

TEA-21 planning factors specifically, encourage freight planning, by mandating that the metropolitan and statewide transportation planning processes provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and nonmotorized users;

- Increase the accessibility and mobility options available to people and for freight;
- Protect and enhance the environment, promote energy conservation, and improve quality of life
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation; and
- Emphasize the preservation of the existing transportation system.

Thus, MPOs have revisited their planning processes whereby all post ISTEA and TEA-21 plans provide for the development of an intermodal transportation system that addresses a variety of passenger and freight transportation modes. The newly authorized SAFETEA-LU, Safe, Accountable, Flexible and Efficient Transportation Equity Act of 2003: A Legacy for Users) continues to encourage the integration of freight and intermodalism into the transportation planning process through fiscal year 2009.

## Section II. Commodity Flow Analysis

Understanding the characteristics of the freight and goods produced and consumed by a community, as well as the volume that passes through a region, is crucial to the development of an effective freight transportation program. As part of the Phase II Freight Mobility Study, a commodity flow analysis has been completed to quantify these characteristics.

For the commodity flow analysis analysis, the region (or area) was defined as Duval, St. Johns, and Clay counties. This region differs slightly from the official First Coast MPO study area, which covers an area consisting of Duval County and portions of Clay, St. Johns and Nassau Counties. It was not possible to match the study area exactly as the TRANSEARCH database does not disaggregate below the county level. Additionally, the commodity flow analysis was not scoped to include Nassau County.

The analysis includes the following:

- A description of data utilized and limitations
- Identification of total movements by weight (inbound, outbound, within, and through the region);
- Identification of the mode shares by weight for truck, rail, water, and air for each type of movement and at the aggregate level;
- Identification of key domestic trading partners by weight based on the defined origin/destination information in the database; and
- Identification of top commodities in the region by weight for each type of movement and at the aggregate level.

Other data description issues are summarized in Appendix I.

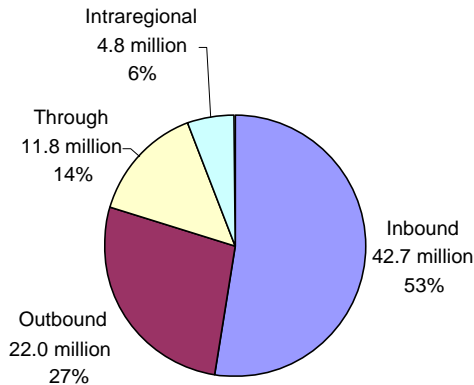
### Overview of Freight Flows

Over 81 million tons of freight was transported into, out of, within, and through the region via truck, rail, air, and water modes in 1998. The distribution of flows by type of movement indicates that the region consumes more than it produces. The data shows that inbound shipments by weight make up a significant percentage of overall freight shipments in the area (53 percent or 42.7 million tons). If through moves are removed from the calculation, the inbound shipments increase to 61 percent (see Figure 1).

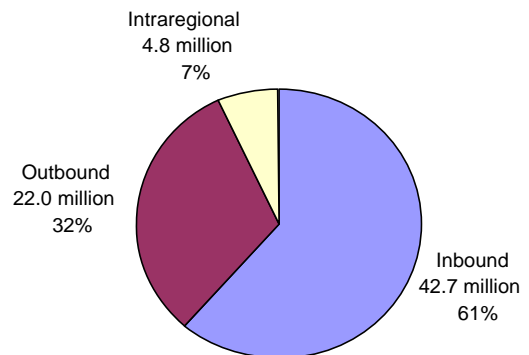
- *Inbound* movements (moves with an origin outside of the three-county region and a destination within the region) accounted for 53 percent, or 42.7 million tons, by weight.
- *Outbound* movements (moves with an origin within the three-county region and a destination outside the region) accounted for 27 percent, or 22.0 million tons, by weight.
- *Through* movements (moves within the region that have both origin and destination outside of the region) accounted for 14 percent, or 11.8 million tons, by weight.
- *Intraregional* movements (moves with both origin and destination within the three-county region) accounted for six percent, or 4.8 million tons, by weight. Intraregional movements account for seven percent when through movements are excluded.

**Figure 1. Total Freight Flows by Type of Movement (by weight, inclusive and exclusive of through trips)**

**Inclusive of Through Trips  
 (Total - 81.3 million tons)**



**Exclusive of Through Trips  
 (Total - 69.5 million tons)**



**Modes Shares**

An analysis of *how* freight is moving through the area (mode split analysis) highlights the area's importance as a multimodal hub and gateway to Florida. Northeast Florida is located at the crossroads of 3 major interstates (I-10, I-95 and I-75) in addition to a network of major and minor arterials. Additionally, the First Coast MPO urban area features two Class I Railroads (CSX and Norfolk Southern), three key seaport facilities, a regional railroad (Florida East Coast Railway), the Jacksonville International Airport, Jacksonville Naval Air Station, Mayport Naval Air Station, and Cecil Field Commerce Center. CSX and Florida East Coast Railway (FEC) are both headquartered in the First Coast MPO area, Jacksonville and St. Augustine, respectively.

The majority of freight movements in the United States and in Florida occur by truck, with about 71% of the goods moved utilizing this mode<sup>2</sup>. The First Coast MPO area also moves the majority of its total freight by truck, with this mode moving about 58% or 40 million tons (see Figure 2). The First Coast MPO area is less dependent on truck movements and has a higher percentage of freight moved by rail than many other metropolitan areas due, in part, to the area's well-developed intermodal transportation system.

Rail movement data show that the First Coast MPO area is an important rail hub, handling many of the shipments for all of Florida. Rail movements account for 27 percent (19.0 million tons) of all the freight moving into, out of, and within the region by weight. This is a much higher share than the national average (15 percent) or other Florida regions (18 percent for Florida as a whole). Appendix

<sup>2</sup> [http://ops.fhwa.dot.gov/freight/freight\\_analysis/state\\_info/florida/profile\\_fl.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/state_info/florida/profile_fl.htm)  
[http://ops.fhwa.dot.gov/freight/freight\\_news/FAF/talkingfreight\\_faf.htm](http://ops.fhwa.dot.gov/freight/freight_news/FAF/talkingfreight_faf.htm)

B<sup>3</sup> illustrates the importance of the First Coast MPO area as a rail hub, displaying total rail flows throughout the United States that travel to and from Florida. Truck and Water flows are shown, as well, in Appendix B.

The primary commodities moved by rail are generally low-value, high weight products. These products include coal, non-metallic minerals (including aggregate used in roadway and building construction), scrap, and lumber products. Rail is also a favored method for transporting hazardous materials such as chemicals.

Jacksonville's Seaports have a great economic impact to the area. According to commodity flow data, freight movements by water account for 15 percent, or approximately 10.6 million tons, of all freight shipments, by weight, in the region. The presence of JAXPORT (the Jacksonville Port Authority) makes waterborne movements an important mode for freight shipments in the First Coast MPO area.

It is important to recognize that the TRANSEARCH data does not reflect international maritime shipments as part of this 10.6 million. In fact, in 2002 the Port of Jacksonville handled 17.9 million tons of cargo (8.2 million domestic and 9.7 million international).<sup>4</sup> The international component is represented indirectly in the TRANSEARCH data as part of each mode, representing the domestic distribution of international traffic.

Air movements currently account for less than one percent, or 42 thousand tons, of all the freight moving into the region by weight. Air shipments are generally characterized as time sensitive, high-value, and low-weight. This is consistent with what is carried by air into and out of the First Coast MPO, including electronics, mail, and machinery. As the services sector of the area's economy continues to grow, the share of air shipments relative to other types of movements will likely increase. Note that as with water shipments, the TRANSEARCH data does not accurately reflect the *international* air shipments. In 2003, Jacksonville International Airport reported handling almost 71 thousand metric tons of cargo.<sup>5</sup> The difference here is in part due to growth between 1998 and 2003, and in part due to the international data issue. However, even using the 2003 number, the air mode share of freight flows in the area remains negligible.

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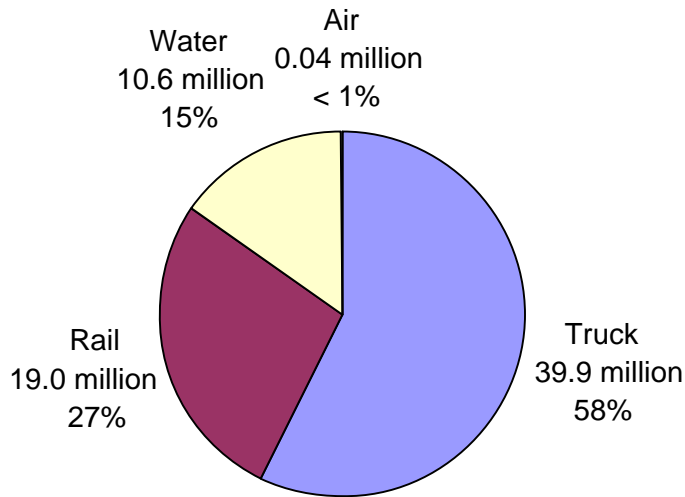
<sup>3</sup> U.S. Department of Transportation, Federal Railroad Administration, Office of Policy, Florida Total Rail Flows, 1999 ([http://www.ops.fhwa.dot.gov/freight/freight%5Fanalysis/state%5Finfo/florida/freightflow\\_fl.htm](http://www.ops.fhwa.dot.gov/freight/freight%5Fanalysis/state%5Finfo/florida/freightflow_fl.htm))

<sup>4</sup> <http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusatl02.pdf>

<sup>5</sup> The 2003 Airport Council International traffic report ranks JIA 40<sup>th</sup> (out of 175) in North America with a cargo volume of 70,650 metric tons.

## Figure 2. Mode Split for Freight Shipments

(By weight, Exclusive of Through Trips, Total of 69.5 million tons )



### Major Domestic Trading Partners

As discussed above, commodity flow data show that inbound shipments by weight make up a significant percentage of overall freight shipments in area (53 percent or 42.7 million tons). Outbound movements accounted for 27 percent, or 22.0 million tons, by weight. It is important to identify the area's key trading partners for these shipments – *where freight is coming from and where it is going*.

The region's top trading partner for inbound shipments is the West South Central United States (Texas, Oklahoma, Arkansas, and Louisiana), which accounts for over eight million tons (or 19 percent) of total inbound freight shipments by weight. The dominance of this region for inbound traffic is most likely due to large volumes of petroleum shipments being transported from the region to JAXPORT. Counties within Florida, such as Miami-Dade, Hillsborough, and Broward are still important trading partners for inbound shipments. Five of the top ten trading partners are Florida counties, representing 26 percent of total domestic inbound flows.

Following are details concerning the origins of goods shipped inbound to the region by mode.

- **Truck.** The origins of goods shipped into the region by truck are predominantly from the rest of Florida (50%) or from the Rest of Georgia (8.5%) region. However, as the "Rest of Georgia" includes significant warehousing areas around Savannah and Atlanta which often serve the Florida market, many of these truck shipments into the First Coast MPO area are likely to have started their journeys in much more distant parts of the United States.
- **Rail.** Reflecting the more long-haul nature of freight rail, the origins of goods shipped into the First Coast MPO area by rail are less local and thus more likely to be coming from more distant parts of the United States. The top-ranked U.S. regions include the East South Central states (25.4%) (Alabama, Kentucky, Mississippi, and Tennessee) and the East North Central States (14.6%) (Illinois, Indiana, Michigan, Ohio and Wisconsin). Miami-Dade County (21.2%), the southern terminus of the Florida East Coast Railroad's trunk line running down

the populated east coast of the peninsula is the second ranking origin for goods transported by rail into the First Coast MPO area.

- **Water.** The West South Central states (Arkansas, Louisiana, Oklahoma, and Texas) account for three-quarters of all domestic water shipments entering the area (73.2%). Louisiana and Texas both have some of the busiest ports in the country and are the national leaders in petroleum products (includes gasoline) and chemical production – both commodities that rank among the leading waterborne shipments into the area.
- **Air.** All of the top ranking origins for goods moving by air into the area are from regions outside Florida, not surprising given the long-haul nature of airfreight. Leading origin regions include the East South Central (17.4%), East North Central (15.5%), and Mid-Atlantic states (12.8%) (New Jersey, New York, and Pennsylvania). However, the top-ranking region is nearby Rest of Georgia (27.6%), which includes Atlanta, the country's largest air passenger hub and one of its top ranking airfreight hubs. Airfreight originating from throughout the United States and the world is likely to be processed in Atlanta before reaching its final destination in Jacksonville.

The area's domestic outbound shipments (by weight) are largely destined for other counties within Florida. Over 3.5 million tons (or 16 percent) of Jacksonville's domestic outbound shipments are destined for Miami-Dade County, alone. In fact, seven of the top ten domestic trading partners are Florida counties, representing 48 percent of total outbound flows.

Following are details concerning the destination of goods shipped from the First Coast MPO area by mode.

- **Truck.** Goods shipped from the area by truck head predominantly to Florida's largest consumer markets and most populous counties, led by Miami-Dade (15.9%), Broward (7.3%), Hillsborough (7.3%), and Palm Beach (5.9%). Large-scale shipments to Polk County reflect that county's role as a distribution hub for much of Central and Southern Florida.
- **Rail.** Rail shipments leaving the area show a different pattern than trucks. While Florida's largest counties still rank among the top destinations (Miami-Dade-20.2%, Broward-12.5%, Palm Beach-5.8%), several more distant regions of the United States also receive very large volumes of rail shipments from the area. Following Miami-Dade County, the East North Central states (Illinois, Indiana, Michigan, Ohio, and Wisconsin) in the industrial heartland of the United States are the second ranking destination for rail freight volumes originating in the area (18.3%). Containers (included in the "mixed shipments" commodity) entering the United States through the Port of Jacksonville are transferred to rail at the port and then shipped to markets throughout the United States.
- **Water.** Outbound domestic water shipments from the area are primarily destined for large counties in Florida. This includes oil and petroleum products headed to other large ports, including those located in Palm Beach (22.2%) and Miami-Dade (17.8%) Counties.
- **Air.** Air shipments only represent a fraction of total shipments by weight leaving the Jacksonville area. The leading airfreight destinations are distant regions in the United States,



led by the East North Central (79.6%) and Pacific (Alaska, California, Hawaii, Oregon and Washington) states (19.6%).

### Top Commodities

In addition to knowing *how* goods are transported and *where freight is coming from and where it is going*, it is also important to understand *what*, in terms of commodity-types is being moved along the region's freight transportation infrastructure. The top three commodity groups in 1998 accounted for 41 percent of the total flows, or 29 million tons, by weight. These top commodity groups include clay, concrete, glass, or stone (16 percent); warehousing shipments (13 percent); and petroleum or coal products (12 percent).

The analysis of leading commodities highlights several points for the area. First, construction materials, consisting of clay, concrete, glass, and stone products are a major commodity group being shipped throughout the region. These movements can be attributed to the First Coast MPO area's ongoing and new construction activities, which are key economic engines and crucial to the area's growth. Warehousing shipments are also important, comprising 13 percent of the overall freight shipments by weight. This high volume of warehousing shipments operating within the area highlights the region's role as a distribution center to much of Florida and the Southeast. Finally, petroleum and coal products are a key commodity group for the area, reflecting the importance of JAXPORT as a regional gateway for energy products (coal, petroleum, and gasoline/jet fuel account for well over half of JAXPORT's total tonnage).

A analysis of the top commodity groups by direction of freight travel reveals that the top commodity for travel coming into the area is petroleum or coal products (16.0%); the top commodity for travel leaving the area is clay, concrete, glass or stone products (29.0%); and the top commodity for travel within the area is drayage traffic from/to intermodal rail yards (60.7%).

### **Section III. Economic Impacts of Freight to the Region**

One of the keys to a successful freight program is having the ability to assess the economic impact of freight transportation improvements and investments. As with all transportation improvement projects, planners want to have access to tools that allow them to estimate the potential impacts of a project and then compare those impacts to those of competing projects. This section presents the following:

- Economic and industry trends in the First Coast MPO area; this includes economic data concerning the area's goods movement industries;
- Data concerning the economic contribution from JAXPORT;
- Summaries of recent statewide studies on economic benefits of transportation investments that highlight the need for transportation improvement investments and their impact on Florida's economy;
- Findings from other national studies on the economic benefits of freight investments; and
- An analytical summary of the key findings for the First Coast area.

#### **Economic Contribution of Freight Movement Activities**

Within the First Coast MPO, economic entities have encouraged development of employment within the logistics industry sector. Specifically, the Jacksonville Economic Development Commission (JEDC) and the City of Jacksonville have a detailed written incentive policy that encourages business development in the distribution and logistics industries (freight movement/goods movement industries), as well as within other targeted industries and targeted growth areas of the City. Clay, St. Johns and Nassau Counties also encourage the development of logistics industry sector employment.

A brief employment profile of the Northeast Florida region was developed from the *New Cornerstone* economic study<sup>6</sup>. In this study, the Northeast Florida region was defined as 18 counties, containing 1.9 million residents (12 percent of the state total). Major metropolitan areas included Jacksonville (1.1 million), Ocala (250,000), Gainesville (200,000), and Daytona Beach (50,000). Generally, the profile revealed that population in the Northeast region of Florida is expected to grow by about 1.6 percent annually over the next decade, and that employment is expected to grow by 2.2 percent. Both growth factors are in line with statewide projections, and above U.S. average growth rates. These trends will drive growth in industry, leading to greater volumes of freight being generated and consumed in the region.

From an employment perspective, the Northeast region employs 12 percent of Florida's residents (850,000 people). The forecasted employment growth rate over the next ten years (2.2 percent) is above the national average (1.4 percent) but slightly below the state figure (2.3 percent). The Northeast region has the highest shares of employment in financial services (8.0 percent) and transportation (5.7 percent), and the second-highest concentration in manufacturing (7.9 percent).

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<sup>6</sup> "Florida's Economic Outlook: Trends, Opportunities, Risks" New Cornerstone Study, Florida Chamber Foundation, Tallahassee, Florida 2001.

The Northeast Florida region has a relatively small share (31.5 percent) of its employment in the service sector lagging behind state average by 5.8 points. Given the relatively high wages of financial, transportation, and manufacturing jobs, this indicates relatively high overall income relative to the rest of Florida. Over the next decade, employment opportunities in financial services and transportation are expected to grow at about 1.7 and 2.8 percent annually, while manufacturing jobs are forecasted to drop at an annual rate of 0.7 percent.

Average wages in the Northeast Florida region are second highest (\$30,500) in the state, though they are still about 15 percent below the national average (\$36,200). This is a statewide issue, tied to the heavy concentration of low-paying jobs, especially in services and tourism. Financial services jobs have increasingly shifted toward less-skilled call centers that are not location dependent. As these jobs are vulnerable to increases in labor costs, they may relocate in search of a cheaper workforce. Transportation, shipping, and warehousing industries, however, are expected to boom thanks to the area's established intermodal transportation network and increasing trade with Latin America. The following sections highlight the economic contribution of freight movement employment, including contributions from the Port of Jacksonville (JAXPORT).

### *Goods Movement Employment*

To assess the freight-related industries in the region, almost 20 industries with primary functions related to goods movement were grouped into five categories: trucking, warehousing and distribution, marine cargo, air freight, and rail freight. Appendix C lists these industry groups and their constituent industries at the four-digit level of the National American Industry Classification System (NAICS). It should be noted that some of these industries include components that provide non-goods movement transportation services, though efforts have been made to exclude these non-goods movement industries in this report. As with the commodity flow analysis, the region (or area) for the goods movement employment analysis was defined as Duval, St. Johns, and Clay counties. This analysis was not scoped to include Nassau County.

The industries included are significant contributors to the First Coast MPO area's economy. According to the Florida Labor Market Statistics within the Florida Agency for Workforce Innovation, the goods movement industries provided over 81,000 jobs in 2003 accounting for 16 percent of all employment in Clay, Duval, and St. Johns counties. This concentration of activity is significantly higher than found statewide (7.6%) and nationally (7.4%). Tables 1 through 3 indicate that Duval County has the largest share of total employment in goods movement industries at 17.2 percent. In each county, trucking industries provide the majority of freight employment, followed by air cargo. Duval County dominates the region, with about 90 percent of the three-county transportation-related employment.

**Table 1. Employment – Goods Movement-Related Industries**

<b>Industry Code Description</b>	<b>Clay</b>	<b>Duval</b>	<b>St Johns</b>	<b>Total</b>
Trucking industries	2,350	40,842	1,892	<b>45,084</b>
Warehousing and distribution	274	8,368	356	<b>8,998</b>
Marine cargo and shipping industries	54	5,596	30	<b>5,680</b>
Air cargo	1,458	15,452	1,654	<b>18,564</b>
Rail freight industries	54	2,974	64	<b>3,043</b>
<b>All goods movement-related industries</b>	<b>4,141</b>	<b>73,232</b>	<b>3,996</b>	<b>81,369</b>

Source: 2003 Florida Labor Market Statistics

**Table 2. Shares of Employment in Goods Movement-Related Industries**

<b>Industry Code Description</b>	<b>Clay</b>	<b>Duval</b>	<b>St Johns</b>	<b>Total</b>
Trucking industries	6.4%	9.6%	4.3%	<b>8.9%</b>
Warehousing and distribution	0.7%	2.0%	0.8%	<b>1.8%</b>
Marine cargo and shipping industries	0.1%	1.3%	0.1%	<b>1.1%</b>
Air Cargo	3.9%	3.6%	3.7%	<b>3.7%</b>
Rail freight industries	0.1%	0.7%	0.1%	<b>0.6%</b>
All goods movement-related industries	11.2%	17.2%	9%	<b>16.0%</b>
Other industries	88.8%	82.8%	91%	<b>84.0%</b>
<b>All industries</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: 2003 Florida Labor Market Statistics

**Table 3. Shares of Employment Activity in Goods Movement-Related Industry in the U.S., Florida, and the First Coast Region**

<b>Industry Code Description</b>	<b>U.S.</b>	<b>Florida</b>	<b>First Coast Region</b>
Trucking industries	2.0%	1.8%	8.9%
Warehousing and distribution	4.3%	4.7%	1.8%
Marine cargo and shipping industries	0.4%	0.4%	1.1%
Air cargo	0.4%	0.3%	3.7%
Rail freight industries	0.1%	0.0%	0.6%
All goods movement-related industries	7.4%	7.6%	16.0%
Other industries	92.6%	92.4%	84.0%
<b>All industries</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: 2003 Florida Labor Market Statistics

Average wages in the goods movement industries are slightly below the average for all industries (goods movement-related and other industries) in Clay (10 percent less) and Duval counties (3 percent less) as indicated in Tables 4 and 5; goods movement wages in St. Johns County, however, exceed the average for all industries by 13 percent. Although goods movement-related employment are 3 percent lower than wages in other industries in Duval County, the county has the highest average annual wage for both all goods movement related industries and all industries in the region, and as noted above, represents 90 percent of all transportation related employment in the region. *Note that employment tables are location of employment and not by the location of employer's or employee's residence.*

Air cargo wages are significantly lower when compared with other transportation and non-goods movement-related industry figures. This is probably due to the high concentration of relatively low-skilled jobs in this industry. Rail freight-related wages on the other hand, exceed both the average for all industries in general and the average for goods movement-related industries.

**Table 4. Average Annual Wage in Goods Movement-Related Industry**

<b>Industry Code Description</b>	<b>Clay</b>	<b>Duval</b>	<b>St Johns</b>
Trucking industries	\$25,917	\$38,302	\$44,664
Warehousing and distribution	\$32,920	\$36,809	\$29,237
Marine cargo and shipping industries	\$24,631	\$48,027	\$38,656
Air Cargo	\$18,450	\$23,147	\$21,682
Rail freight industries	\$57,276	\$48,468	\$31,501
All goods movement-related industries	\$24,164	\$36,089	\$33,521
<b>All industries</b>	<b>\$26,816</b>	<b>\$37,031</b>	<b>\$29,725</b>

Source: 2003 Florida Labor Market Statistics

**Table 5. Wage Index for Goods Movement-Related Industry**

<b>Industry Code Description</b>	<b>Clay</b>	<b>Duval</b>	<b>St Johns</b>
Trucking industries	0.97	1.03	1.50
Warehousing and distribution	1.23	0.99	0.98
Marine cargo and shipping industries	0.92	1.30	1.30
Air Cargo	0.69	0.63	0.73
Rail freight industries	2.14	1.31	1.06
All goods movement-related industries	0.90	0.97	1.13
<b>All industries</b>	<b>1.00</b>	<b>1.00</b>	<b>1.00</b>

Source: 2003 Florida Labor Market Statistics; county average wage = 1.00

### *Economic Contribution from JAXPORT*

JAXPORT is the third largest port in Florida (38<sup>th</sup> in the United States), by short tons, after Tampa and Port Everglades. It handled 17.9 million tons of cargo in 2002, as illustrated in Table 6. JAXPORT has the second largest container operation in Florida (14<sup>th</sup> in the United States) after Miami.

Additionally, the Port of Jacksonville is one of the largest vehicle handling port in the US, competing with NY and NJ, and more recently, Brunswick, Georgia.

The region imports significantly more than it exports. International trade reflects 54 percent of the port's total volume; imports account for 90 percent of international activity. JAXPORT has maintained a fairly consistent volume of traffic since the early 1990s, with domestic and foreign traffic representing about equal shares. Coal and petroleum products represented 44 percent and 65 percent of international and domestic traffic, respectively, in 2002. These commodities represented 62 percent and 86 percent, respectively, of total inbound international and domestic shipments.<sup>7</sup>

**Table 6. Overview of JAXPORT Cargo, 2002**

<b>Total Short Tons</b>		<b>17,905,831</b>	
• Domestic		<b>8,228,941</b>	<b>46%</b>
- Inbound		4,936,000	60%
- Outbound		2,714,000	33%
- Internal		580,000	7%
• Foreign		<b>9,676,890</b>	<b>54%</b>
- Imports		8,688,528	90%
- Exports		988,362	10%

Source: <http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusatl02.pdf>

The significant volume of freight handled by JAXPORT translates into direct and indirect economic impacts. A recent study by Martin Associates for the Jacksonville Port Authority (Business and Development Strategy, Port of Jacksonville, Presented April 25, 2005) conducted an economic impact analysis of JAXPORT's current port operations. The purpose of the analysis was to quantify the current economic benefits to the local economy and provide a structure to measure the potential economic benefits associated with expansion plans of current tenants as well as the economic benefits offered by potential markets. Economic impacts of FY 2004 Jacksonville Port Authority cargo operations are summarized below.

- It is estimated that 16,850 jobs were directly or indirectly supported by commodities and vessel calls handled by the public and private facilities on the St. John's River. Of these 16,850 jobs, 12,457 jobs were dependent on the JAXPORT public terminals of Talleyrand, Blount Island and Dames Point and over 4,300 jobs were generated by private dock located along the river.
- Of the 12,457 public terminal jobs, 4,425 jobs were *directly* generated by cargo activity with railroads, trucking companies, terminal operators and dependent shippers and consignees, barge operators, longshoreman, vessel agents, pilots, forwarders, and brokers, etc. Personal income spending by these job holders created another 4,469 *induced* jobs in the local economy. Finally, businesses employing the direct job holders were estimated to create an additional 3,562 *indirect* jobs by spending money in the local economy, purchasing goods and services to support their activities.

<sup>7</sup> <http://www.iwr.usace.army.mil/ndc/wcsc/pdf/wcusatl02.pdf>

- Over 28,000 jobs were *related* to cargo moving via the Port of Jacksonville public marine terminals. These related jobs would not likely disappear if the marine terminals were to close to marine cargo and vessel/barge activity. According to the Martin Associates' report, the purpose of these related job estimates was to provide a proxy for the magnitude of the more general economic development impact of the private and public port facilities. No estimates of income and taxes were developed from the related, not port dependent, jobs.
- The average annual earning of a port-dependent job is about \$45,530.

In a broader analysis of the full range of JAXPORT's activities, including spin-off and multiplier effects, it is estimated that over 45,000 jobs can be connected to JAXPORT, annually, with almost 27,000 direct jobs.<sup>8</sup> However, this impact includes both freight and non-freight activities (e.g., cruise ship-related spending). Additionally, JAXPORT generates approximately \$2.6 billion annually in economic impact. The following items account for the \$2.6 billion in economic impact:

\$1.3 billion paid in port wages and salaries  
\$742.9 million in business revenue  
\$239.1 million in local purchases  
\$119.3 million in state and local taxes

Recently, JAXPORT announced that Japan-based shipping company Mitsui OSK Lines Ltd. will build a \$200 million terminal at Dames Point, which is estimated to bring about 5,000 direct and indirect jobs (including jobs from distribution centers), double the port's capacity and eventually make Jacksonville one of the top 10 container ports in the country. Martin Associates projects the economic impact from the new terminal to be \$870 million annually for the Jacksonville community, including wages paid to private sector port workers; local and state taxes paid by area companies engaged in the service; revenue earned by businesses involved in the operations; and local services and supplies purchased by maritime-related companies related to Asian trade. The new terminal will bring in about \$7 million annually in new revenue for JAXPORT. (Impacts from the future Mitsui terminal are not included in this freight study analysis).

Mitsui OSK Lines Ltd will lease the land, which will serve as its East Coast hub, for 30 years. Ships will sail directly between the facility and ports in Asia, as well as Latin America. Construction will take about two years to complete. Trans Pacific Container Service Corporation (TraPac), a major container terminal operator and vessel stevedoring company owned by MOL, will operate the terminal.

The first phase of the terminal, which will include two 1,200-foot berths and six cranes that can handle the largest cargo ships in operation, is expected to take place next year. The company will begin with 158 acres at Dames Point, and can eventually expand to more than 200 acres of port authority land, including the cruise terminal, should it ever be vacated.

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<sup>8</sup> Total economic impacts obtained from the Jacksonville Port Authority web site (<http://www.jaxport.com/about/economic.cfm>).

The new terminal could make the First Coast MPO area a Southeast United States hub for exporters that don't want to pay to move shipments all the way down the state to the Port of Miami or across the country to California, and don't want to have to deal with the seaport congestion and cost of going through Savannah.

### Review and Findings from Recent Florida Economic Studies

A review of recent Florida economic studies highlighted the need for and benefits of transportation investments in Florida's transportation infrastructure to meet the growing demand in Florida, overall, and its metropolitan areas in particular. Statewide economic analyses of transportation investments indicate that benefits are generally expected to exceed costs, and that the growing importance of international trade increases the need for smooth and efficient freight transportation operations across all modes

Three recent studies on economic benefits of transportation investments and improvements are summarized in this section. The studies include the Florida Department of Transportation's "*Macroeconomic Impacts of the Department of Transportation Work Program*" study, the Florida Seaport Transportation and Economic Development Council's "*A Forecast of Florida's International Trade Flows and the Economic Impact of Florida Seaports*" study, and the Florida Transportation Commission and the Floridians for Better Transportation "*Transportation: An Investment in Florida's Future*" joint report.

The studies highlight the need for and benefits of transportation investments to meet growing demand in Florida, overall, and its metropolitan areas in particular. While the studies address statewide needs and short and long-term strategies, they are relevant to the First Coast MPO area where major in and outbound freight activity is encountered.

A summary of the studies' findings includes:

- A strong correlation was identified between transportation improvements and economic activity; specifically, investments are needed for highway infrastructure, airport and seaport expansion;
- From a statewide perspective, Work Program investments in highway, rail, and transit were found to yield \$5.50 worth of business and personal travel benefits for every dollar spent; capacity or service expansion at airports and seaports were found to return benefits in the range of \$2 to \$13 per dollar invested; and
- Florida seaports contribute \$35 billion in gross economic output annually, supporting 290,000 jobs, \$11.2 billion in labor income, and \$4.2 billion in capital income. The Seaport industry also is projected to contribute \$7.1 billion in fiscal revenues for state and local agencies from 2003 to 2008.

A detailed summary of each of the three studies is described below.

#### *Macroeconomic Impacts of the Department of Transportation Work Program*

Consultants for the Florida Department of Transportation (FDOT) estimated the economic impacts of the majority of Work Program (2002/2003-2006/2007) investments using the same economic model that the Florida Legislatures uses. The results of the analysis show a strong correlation between



transportation investments and key macroeconomic benefits including income for Florida residents, employment, and the value of goods and services produced in the state.

With respect to highway, rail, and transit, the study indicates that \$15.2 billion (year 2002 dollars) worth of investments result in an increase of \$44 billion in personal income (year 2002 dollars) over 25 years, generating 88,000 new permanent jobs by 2027. Many of these new jobs are expected to be generated and retained by 2007 due to travel efficiency improvements. Work Program investments also yield significant direct user economic benefits to personal travel in terms of reduced travel time, vehicle operating costs, and accident costs. The direct benefits for personal travel over the 25-year study period are estimated to be \$74 billion. Overall, every \$1.00 invested in highway, rail, and transit by FDOT is expected to yield \$5.50 worth of economic business and personal travel benefits.

Analysis tools to directly calculate benefits of Work Program investments in seaports and aviation, consistent with the approach used for other modes, were not available. However, available studies conducted in Florida and other states indicate that investments that increase the capacity or service at airports and seaports can return benefits in the range of \$2 to \$13 dollars per dollar invested. Investments in capacity projects in both industries are critical given anticipated growth in Florida and the sizeable economic activities that airports and seaports generate in the state. For example, Florida captures over five percent of the nation's annual aviation-related economic activity supporting 675,000 jobs with an annual payroll topping \$16 billion.

### *A Forecast of Florida's International Trade Flows and the Economic Impact of Florida Seaports*

For the Florida Seaport Transportation and Economic Development Council, the Washington Economics Group prepared an economic impact study to measure the contribution of Florida's seaports to the state's economy in terms of employment and income growth. The study investigates recent state trends and international trade forecasts and identifies market opportunities that will affect Florida as a result of free trade agreements. The study highlights the need for investments in seaport capacity projects to meet growing trade demands.

The study indicates that Florida seaports play a critical role in the state's economy, making a major contribution to employment and income growth. Approximately two-thirds of Florida's merchandise trade is shipped via seaports. Exports are relatively concentrated to the Latin American and Caribbean markets, while imports arriving at Florida ports also reveal the strong trade ties that exist between the United States, Europe, and East Asia.

Key findings from the study include:

- The direct economic contributions of Florida seaports are estimated to amount to \$17.2 billion in economic output, generating 90,000 jobs, \$4.1 billion in labor income, and \$1.6 billion in business income in the form of profits and interest payments.
- Overall, the study estimates that the seaport industry generates \$35.3 billion in gross economic output, supporting 290,000 jobs, \$11.2 billion in labor outcome, and \$4.2 billion in capital outcome when economic multiplier effects are considered.

- For the 2003 to 2008 time period, the seaport industry is anticipated to produce 11.4 percent more jobs, generate \$238 billion in cumulative gross economic output, provide \$75.5 billion in labor income to Florida workers, generate \$28.6 billion in capital income for private-sector businesses, and contribute \$7.1 billion in fiscal revenues for state and local agencies.

Sustained economic growth in Florida requires sizeable investment in capacity improvement projects in the seaport industry. However, due to mounting federal deficits and declining state revenues, state and local governments are severely constrained in their ability to provide for capital investment needs of their ports. In addition, new security measures are expected to produce longer delays and generate higher transportation costs. Nonetheless, failure to provide the resources that Florida ports need to meet the challenges of security and the efficient transportation of cargo may motivate companies to transfer their businesses to other, more accommodating ports, in either the United States or other countries. Creative solutions are required to meet these challenges. These include exploring user fees as a necessary revenue component, implementing cargo fast lanes to improve the flow of goods and services, information sharing among ports as a way to reduce security costs, and using the state's existing coastal and inland waterway assets to find solutions to growing congestion on the ground transportation network.

### *Transportation: An Investment in Florida's Future*

The Florida Transportation Commission and Floridians for Better Transportation jointly formed an independent commission of citizens and business people from Florida to investigate the relationship between transportation investments and economic strength. The report documents a strong correlation between transportation improvements and economic growth. With 17 million residents, 41 million annual visitors, 6.9 million jobs, and \$52 billion invested in international trade and tourism, transportation is an essential tool for timely receipt and delivery of material, products, and people; and access to labor, markets, and customers.

The study indicates that Florida has not kept pace with demands on highway capacity. Over the next fifteen years, vehicle miles traveled is expected to outpace new roads or additional lanes built by a six-to-one margin. In addition, the Center for Urban Transportation Research reports that failure to meet transportation demand challenges will cost every licensed driver an additional \$219 annually as a result of longer delays, more crashes, and higher vehicle maintenance.

The report identifies user and business benefits realized from investment in transportation. Over the next two decades, every \$1.00 invested in maintaining state and local roads is estimated to yield \$2.86 worth of user benefits (\$1.49 travel time savings, \$0.83 vehicle operating cost savings, and \$0.54 accident cost savings). For the same period, a \$1.00 investment in capital improvements to transportation facilities is estimated to result in an annual increase of \$0.35 in Florida's gross state product (e.g., the cumulative gain for the economy due to the transportation investment would equal the investment cost after three years).

In addition, Florida's air traffic demands are growing, and the state faces an estimated \$6 billion in airport capacity improvement needs over the next decade. Currently, sixty percent of the state's airports are at or near capacity, costing the airline industry (and hence passengers) over \$124 million

per year; without aviation system improvements, these costs are expected to quadruple over the next decade.

### Economic Benefits of Freight Investments (National Studies)

This section highlights a few recent case studies that have examined the relationship between freight transportation investments and economic benefits. There are a number of ways to capture the economic impacts of transportation. The focus here is not on the spending effect of new construction, but rather on the ability of freight transportation improvements to enhance the mobility and efficiency of moving goods (and people), and to relieve bottlenecks or avoid transportation capacity constraints. Transportation investments that benefit freight movements can generate economic impacts by making specific types of improvements. The following list provides several examples of the types or categories of improvements that can be undertaken to stimulate transportation and economic benefits:

- *High volumes of travel* – Additional capacity on facilities where current or projected traffic volumes exceed service standards, and where there is a significant percentage of truck traffic.
- *Opportunity for diversion* – Improvements that provide a faster or more reliable route between two or more large nodes of economic activity, thus, diverting from a slower route, can provide shippers and carriers with significant timesavings and make their trips more predictable.
- *Connecting centers of trade* – Improvements that provide a faster or more reliable service between trade centers (defined as having large population, employment, industry diversity, retail and service activity, and wholesale trade).
- *Access to manufacturing centers* – Transportation improvements that provide a faster or more reliable route between manufacturing centers and raw materials (e.g., mines, logging areas, petroleum), subcomponents and other intermediate inputs (e.g., chemicals, plastic and metal parts), and customers.
- *Access of agricultural centers to markets* – Improving the speed and/or reliability of transportation facilities that link agricultural regions (especially those producing high value crops) with customers and more competitive transshipment points (rail heads of competing railroads, barge loading facilities, air freight terminals for high value and perishable crops).

The following summary of results from several example studies highlight the range of impacts across modes to give some context to potential new investments under consideration in the First Coast MPO area.

- *Georgia Interstate System Plan.* A recent study by the Georgia Department of Transportation found that Georgia's industries currently spend approximately \$9.2 billion on trucking services that depend on the Georgia Interstate system as a component of producing goods and services. The future Interstate System Plan investments are expected to enhance gross state product (GSP) by \$450 million a year by 2035, adding 4,500 non-construction jobs due to improved economic vitality resulting from more efficient movement of goods and people.

- *Port of Long Beach bridge enhancements.* The Port of Long Beach is considering significant improvements to the Gerald Desmond Bridge (the main access bridge to the Port) to enhance the efficiency of truck and port activities. These improvements include widening the bridge to add highway lanes and raising the bridge to increase the air draft under the bridge, allowing larger ships to enter sections of the Port. Due to larger ships and lower average costs, marine shipping costs at the Port are expected to drop \$40 million annually by 2020. Including highway efficiency benefits due to increased capacity for trucks, total economic effects of the project are expected to add 365 jobs to California. In addition, a 25-year present value of \$300 million in benefits to California and \$750 million to the United States overall is estimated.
- *Vancouver Gateway – Major Commercial Transportation System (MCTS).* Vancouver, British Columbia is a leading sea and air gateway for Asian trade, as well as for rail and highway freight shipments across the US/Canada border. However, growth of these multi-modal port facilities has been putting increasing pressure on the region's ground transportation system. The growth of road and rail traffic has been particularly strong for commercial movements, which serve freight cargo moving to and from airport, marine ports, industrial parks, and international border crossing facilities. The Greater Vancouver Gateway Council defined the concept of a Major Commercial Transportation System (MCTS) as a multi-modal system with new infrastructure investments to maintain functional linkages between gateway facilities, industrial areas and the major trade routes by sea, air, road, and rail. A series of 18 major new investments, comprising major highway upgrades as well as new or improved rail links and river crossings (by both rail and road), were identified as necessary to maintain the movement of goods in the face of increasingly high levels of traffic congestion. Improvements to an additional 34 existing roadway segments, rail facilities, and rail/road crossings were also identified. The cost of completing all of these projects is estimated at \$6 billion. The study found that the Greater Vancouver Gateway transportation system directly or indirectly supports 145,000 jobs in the four western provinces. The analysis of future infrastructure investment scenarios showed that 7,000 to 16,000 jobs and \$500 million to \$1 billion of annual Gross Domestic Product are at stake and would be lost if adequate infrastructure investments are not made.
- *Greater Columbus Inland Port Program.* The Mid-Ohio Regional Planning Commission (MORPC) led a multi-phase study to define the elements of an "inland port" concept for the Columbus, Ohio area; measure the through-put of major facilities in the region for air freight, rail freight, and highway freight transportation; identify bottlenecks in the system; and assess the economic impacts of specific freight infrastructure improvements. The study looked carefully at local and regional logistics issues and determined that the truck value of time for full truckload shipments was \$55/hour and slightly less (\$35 to \$40/hour) for parcel and less-than-truckload shipments. In terms of total economic impacts, a number of highway improvements were investigated and then prioritized based on economic benefits (see the following Case Study concerning the process used by MORPC in evaluating investment decisions). For example, investments targeted to the I-70/I-71 split are expected to generate between 200 and 1,000 new jobs with \$25 to \$150 million in additional business sales per year. The improvements include: traffic information signs; an incident management program; and upgrades to the off- and on-ramps by adding extra lanes. Meanwhile,

improvements to S.R. 317 that enhance linkages to the Rickenbacker Airport are projected to generate 35 to 115 jobs with \$4 to \$15 million in annual business sales. Investments are targeted at widening shoulders, resurfacing and improving signal coordination.

## **Section IV. Overview of Florida's Strategic Intermodal System (SIS)**

The Transportation Infrastructure plays an important role in Florida's Economy. This infrastructure serves the daily commuters in the region while facilitating the travel between major cities in Florida, serving tourism and the freight industry. As was mentioned in the previous section, with 17 million residents, 41 million annual visitors, 6.9 million jobs, and \$52 billion invested in international trade and tourism, transportation within the state of Florida is an essential tool for timely receipt and delivery of material, products, and people; and access to labor, markets and customers<sup>9</sup>.

### **Defining the SIS**

In Florida, the SIS (Strategic Intermodal System) is a statewide system of high priority transportation facilities, with statewide and/or interregional significance. It includes the state's largest and most significant commercial service airports, spaceport, deepwater seaports, freight rail terminals, passenger rail and intercity bus terminals, rail corridors, waterways and highways. Within the SIS all of the Florida's transportation resources are grouped into three main categories.

**Nodes/Hubs** – Ports and terminals that move goods or people between regions in Florida or between Florida and major origin/destination markets in the United States and the rest of the world.

**Corridors** – Highways, rail lines, waterways, and other exclusive-use facilities that connect major origin/destination markets within Florida or between Florida and other states and nations.

**Connectors** – Airplanes, highways, rail lines, transit lines, or waterways that connect nodes, corridors, and modes.

The intent of the SIS is to create a transportation system that (1) Is made up of statewide and regionally significant facilities and services (strategic); (2) Contains all forms of transportation for moving both people and goods, including linkages that provide for smooth and efficient transfers between modes and major facilities (intermodal); (3) Integrates individual facilities, services, forms of transportation (modes) and linkages into a single, integrated transportation network (system).<sup>10</sup>

In the First Coast MPO area, the Port of Jacksonville (JAXPORT), CSX, Norfolk Southern (NS), Florida East Coast Railway (FEC) and the Jacksonville International Airport are major hubs included on the SIS. SIS highway corridors are generally, made up of the interstate system, as well as a few US and state roadways (I-95, I-295, I-10, SR 9A, SR 9B and portions of US 1). See Appendix D for a map and list of FDOT Northeast Economic Region SIS facilities and connectors, of which most are located in the First Coast MPO area.

### **Initial Development of the SIS**

Development of Florida's statewide SIS began in February 2002, with an SIS Steering Committee. A series of steps were required to form the SIS. To develop and implement an integrated, intermodal transportation systems planning process, the SIS Steering Committee created a policy framework. That first step entailed recognition of the key issues the SIS process would need to address to be successful. For the SIS to adequately support the state's economy, it was also necessary to identify

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<sup>9</sup> Florida Transportation Commission and the Floridians for Better Transportation "Transportation: An Investment in Florida's Future" joint report.

<sup>10</sup> Strategic Intermodal System Priority Projects, September 23, 2004, FCMPO.

what industries the state deemed most important in positioning Florida in the national, hemispherical and global marketplaces. An inventory of the state's transportation resources was then undertaken. The major components of the SIS were then defined by the role they played in the integrated system.

The SIS Steering Committee published its *Final Report: Recommendations for Designating Florida's Strategic Intermodal System* in December 2002. It was a policy framework and criteria for designating and implementing the SIS. The report was adopted by the legislature and Governor in July 2003 and incorporated by reference in s.339.61, Florida Statutes, which formally established the SIS.

## SIS Designation Criteria

### *SIS Hubs and Corridors*

The SIS Strategic Plan adopted January 20, 2005 (p. 15),<sup>11</sup> displays criteria for designating SIS hubs and corridors. The criteria are focused on national or industry standards for measures of transportation and economic activity for each SIS facility type (i.e., seaports, freight terminals, highways, etc.), using readily available data. Since they are based upon percentages of US activity, they can be easily adjusted to reflect growth and decline at the national level.

### *Emerging SIS Hubs and Corridors*

Designation criteria for emerging SIS hubs and corridors use the same measures of transportation and economic activity as the SIS hubs and corridors, but with lower thresholds (see Table 7). Emerging SIS facilities are also designated based upon the following criteria.

- Ability to serve clusters of transportation-intensive industries in fast-growing economic regions;
- Located greater than 50 miles driving distance from the nearest SIS hub (to help ensure ability to serve economic development needs in Florida's Rural Areas of Critical Economic Concern); and
- Where choices exist between potential facilities, community and economic screening criteria are applied to help identify the facility with the lower potential impact on the built and natural environment.

### *SIS Intermodal Connectors*

There are specific policies for the selection and designation of intermodal connectors<sup>12</sup>. Generally, SIS intermodal connectors are transportation facilities that link hubs and corridors. They are not intended to link SIS hubs and corridors to regional and local economic centers, such as central business districts and tourist destinations (Metropolitan Planning Organizations and other regional and local planning entities have this responsibility). Guidance in the designation of intermodal connectors can be found in the five SIS connector designation criteria.

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<sup>11</sup> <http://www.dot.state.fl.us/planning/sis/strategicplan/adopted012005.pdf>

<sup>12</sup> Florida Statutes 339.63(1)

**Table 7. Summary of SIS Hubs and Corridors Designation Criteria**

Facility Type	SIS Component	Emerging SIS Component
Commercial Service Airports	0.25% of U S activity	0.05% of U S activity OR Serves clusters of aviation-dependent industries AND More than 50 miles from SIS airport
Spaceports	Commercial or military payloads	Not applicable
Deepwater Seaports	250,000 passengers OR 0.25% of U S freight activity	50,000 passengers OR 0.05% of U.S. freight activity OR Serves clusters of seaport-dependent industries AND More than 50 miles from SIS seaport
Passenger Terminals	100,000 interregional passengers	50,000 interregional passengers OR Serves clusters of population and tourist activity AND More than 50 miles from SIS terminal
Freight Terminals	0.25% of U.S. activity	0.05% of U S. activity OR Serves clusters of rail-dependent industries AND More than 50 miles from SIS terminal
Passenger Rail Corridors	Existing service	Not applicable
Freight Rail Corridors	10 million gross ton-miles per track-mile	5 million gross ton-miles per track-mile OR Serves clusters of rail-dependent industries
Waterways	Intracoastal waterways and coastal shipping lanes OR 0.25% of total U.S. traffic	Inland interregional waterway AND 0.05% of total traffic OR Serves clusters of waterborne-dependent industries
Highways <sup>2</sup>	FIHS with 9,000 AADT OR FIHS with 20% truck traffic OR NHS connections to Alabama and Georgia	FIHS with 6,000 AADT OR FIHS with 13% truck traffic (minimum 800 trucks per day) OR SHS serving designated Rural Areas of Critical Economic Concern with 6,000 AADT OR SHS serving designated Rural Areas of Critical Economic Concern with 13% truck traffic (minimum 1,000 trucks per day)
Exclusive Use Busways, Truckways and Transit Facilities	Provides intercity or interregional service with connection to other modes	Provides alternative travel mode within designated SIS interregional highway or rail corridors

<sup>2</sup>Highway corridors analyzed in segments bounded by two SIS corridors. SIS highways must meet the criteria for at least 75 percent of segment length Emerging SIS highways must meet the criteria for at least 50 percent of segment length.

***SIS Intermodal Connectors***

SIS connector designation criteria are listed below.

1. Connect to the nearest or most appropriate SIS or Emerging SIS corridor.



2. Choose among multiple potential connectors based on frequency of use for interregional passengers or freight; ability to provide high-speed, high-capacity, limited access service; most direct access; and ability to provide two-way directional movement.
3. Designate more than one connector to a single hub when the hub meets both freight and passenger thresholds, has separate terminals or serves more than one mode.
4. Designate both an existing constrained and a planned future connector when the planned connector is funded in an adopted cost feasible plan.
5. Identify connectors with potential community and environmental impacts for more detailed study with resource agencies and community partners.

### *Planned SIS Facilities*

A planned facility can be designated as part of the SIS before it is operational if it meets three conditions.

1. It is projected to meet all applicable SIS or emerging SIS criteria and thresholds within the first 3 years of operation (based on acceptable forecasts reflecting national or industry standards).
2. The appropriate partners have reached consensus on the implementation of the planned facility or service, (as demonstrated by interagency record of decision or comparable process).
3. It is financially feasible, (as demonstrated by inclusion in the appropriate FDOT and partner cost feasible plans, work programs, capital improvement plans and/or other comparable document, or by agreement between FDOT and the appropriate partners).

### SIS Hub Connector Issues

The identification of freight needs and improvements for many projects within the First Coast MPO Freight Study began with windshield surveys (i.e., field trips) to major freight facilities (or hubs). Traffic conditions surrounding the major hubs were observed, particularly truck traffic to and from the facilities. Access routes utilized and potential problematic issues were documented.

For many of the SIS hubs observed, trucks were observed using the designated SIS intermodal connector. However, for other hubs trucks were observed using additional access routes. Trucks accessing hubs located in more built up areas, with the presence of more collector and/or local streets, typically used more than the SIS designated connectors. For example, the Florida East Coast (FEC) Intermodal Terminal, Norfolk Southern (NS) Intermodal Terminal and Talleyrand Marine Terminal were found to have many other potential connectors. Truckers tend to utilize many available options based upon convenience. They, like motorists in general, prefer routes that are more convenient over those that may be operationally indirect, unsafe, slow and/or hard to maneuver; and those conditions may change from month to month or even day to day, depending upon variables such as construction or incidents, for example.

Although not currently designated as SIS intermodal connectors, the additional non-SIS connector routes that trucks utilize to access SIS corridors or hubs play an important role in encouraging economic competitiveness. The SIS Strategic Plan (adopted January 20, 2005) encourages that regional transportation decision-making ensure that resources are made available to projects that provide connections to the SIS and provide access to regional activity centers. Many non-SIS roadways are regionally significant freight facilities that if coordinated with the SIS can further assist in the enhancement of regional, as well as statewide economic competitiveness.

### *CSX Intermodal Terminal*

SIS Connector: I-295 to Pritchard Rd to Sportsman Club Rd to entrance

Other Potential Connectors: Generally, no new routes were observed. Trucks use the designated SIS connector. However, Pickettville Rd could be extended to connect Pritchard Rd opposite to Sportsman Club Rd which may help trucks to access other terminals without using interstate interchanges (I-295/Commonwealth Ave and I-295/Pritchard Rd).

### *Florida East Coast (FEC) Intermodal Terminal*

SIS Connector: I-95 to Butler Blvd. to US-1/Phillip Highway to entrance

Other Potential Connectors: Trucks were observed using several additional routes, other than the SIS route.

- [1] I-95 (SB) to Phillips Hwy to FEC Hub
- [2] I-95 (NB) to Phillips Hwy to FEC Hub
- [3] I-95 (SB) to University Blvd to Phillips Hwy to FEC Hub
- [4] I-95 (NB) to Bowden Rd to Phillips Hwy to FEC Hub
- [5] I-95 (SB) to University Blvd to Richards St to Stepp Ave to FEC Hub
- [6] I-95 (SB) University Blvd to Richards St to Bowdendale Av to Phillips Hwy to FEC
- [7] FEC Hub to Bowden Rd to Spring Park Rd to University Blvd to I-95 NB
- [8] Jaxport Blount Island to SR9A to Beach Blvd to St. Johns Bluff Rd to J T Butler Blvd to Phillips Hwy to FEC Hub (ultimately SR 9A to JT Butler Blvd.)

#### Other Issues:

A potential improvement would involve relocation of the yard entrance to a point on Philips Highway opposite J T Butler Blvd. But there are potential problems involving rail facilities and operations, impacts on small businesses along Philips Highway, and wetlands/brownfields. Coordination with an ongoing highway project may reduce these problems.

### *Norfolk Southern (NS) Intermodal Terminal*

SIS Connector: I-295 to Pritchard Rd to Old Kings Rd to SR 111 (Edgewood Ave.) to Edgewood Drive to entrance.

Other Potential Connectors: Trucks were observed using several additional routes, other than the SIS route.

- [1] I-295 to Pritchard Rd to Old Kings Rd to Pickettville Rd to Edgewood Dr to terminal

- [2] I-295 to Pritchard Rd to Old Kings Rd to Soutel Dr to New Kings Rd to Edgewood Ave to Edgewood Drive to terminal
- [3] I-295 to New Kings Rd to Edgewood Av to Edgewood Dr to terminal
- [4] I-10 to Cassat Ave to Edgewood Av to Edgewood Dr to terminal
- [5] I-95 to MLK Jr. Parkway (US 1) to New Kings Rd to Edgewood Ave to Edgewood Dr to terminal

### *Jacksonville International Airport*

SIS Connector (freight): I-295 to Duval Rd to South International Airport Blvd to Woodwings Rd to Pecan Park Rd to cargo entrance.

SIS Connector (passenger): I-95 to SR 102/Airport Rd to passenger entrance

Other Potential Connectors: Trucks use designated SIS connectors. Trucks also use local roads to access Jacksonville Tradeport businesses. I-95 to Duval Rd to Pecan Park Rd to cargo entrance is another alternative for freight traffic to the airport.

### *Talleyrand Marine Terminal*

SIS Connector: I-95 to US 1 (via MLK Jr. Parkway) to Phoenix Avenue to 21<sup>st</sup> St to N Talleyrand Avenue to Jaxport entrance.

Other Potential Connectors: It was observed that most of the truck traffic to/from the port uses I-95 via 20<sup>th</sup> St Expressway (MLK Jr. Parkway) or Haines St. It was also observed that trucks follow either 21<sup>st</sup> St or 8<sup>th</sup> St based on final destination along the port. Along with the SIS designated route, another route that is significantly used by trucks to/from the port is Haines St (20<sup>th</sup> St Expwy/MLK Jr. Pkwy) to 8<sup>th</sup> St to Talleyrand Ave. Talleyrand Ave. also connects to the Hart Bridge through Duval St. I-95 to 8<sup>th</sup> St interchange was not significantly used to/from Talleyrand by trucks due to traffic signal delays.

- [1] I-95 to 20<sup>th</sup> St Expressway (MLK Jr. Pkwy) to 8<sup>th</sup> St to N Talleyrand Ave to Jaxport entrance
- [2] Hart Expressway (Hart Bridge) to Duval St/Jessie St/8<sup>th</sup> St to N Talleyrand Ave to Jaxport entrance
- [3] Arlington Expressway (Mathews Bridge) to MLK Jr. Pkwy to 8<sup>th</sup> St to N Talleyrand Ave to Jaxport entrance

### *Blount Island Marine Terminal*

SIS Connector: SR 9A to SR 105 (Heckscher Drive) to Dave Rawls Blvd/Blount Island Road to entrance.

Other Potential Connectors: Another potential connector is I-95 to SR 105 (Heckscher Drive) to Dave Rawls Blvd/Blount Island Road to entrance. Although Heckscher Drive from west of the Dames Point Terminal to I-95 is not an official SIS connector, trucks utilize this portion of Heckscher Drive to access tank farms along Heckscher Drive, as well as to access the Dames Point and Blount Island Terminals.

### *Dames Point Marine Terminal*

SIS Connector: SR 9A to SR 105 (Heckscher Drive) to August Drive to Entrance

Other Potential Connectors: Another potential connector is I-95 to SR 105 (Heckscher Drive) to August Road to entrance. Although Heckscher Drive from west of the Dames Point Terminal to I-95 is not an official SIS connector, trucks utilize this portion of Heckscher Drive to access tank farms along Heckscher Drive, as well as to access the Dames Point and Blount Island Terminals.

### *Port of Fernandina (Emerging SIS)*

Emerging SIS Connector: I-95 to SR A1A (SR200) to 8<sup>th</sup> St to Dade St to Front St. to entrance

Other Potential Connectors: Generally, no new routes observed. Trucks use emerging SIS connectors.

### Linking the SIS with Regional and Local Transportation Systems

The SIS Strategic Plan states that regional and local SIS partners, such as metropolitan planning organizations, should define transportation systems/facilities of regional significance that effectively link with the SIS. These regional and local transportation systems/facilities should include regional transportation corridors and regional transportation hubs. The SIS Strategic Plan (adopted January 20, 2005) encourages that regional transportation decision-making ensure that resources are made available to projects that provide connections to the SIS and provide access to regional activity centers.

Regional transportation corridors may include highways, waterways, rail and regional transit corridors serving regional military, commercial, industrial or medical facilities. Regional transportation hubs may include passenger terminals, commercial service and major reliever airports, deepwater and special generator seaports and major freight terminals and distribution centers.

Additionally, there are key opportunities for coordination between the SIS and regional or local transportation facilities with access to military facilities; emergency evacuation routes; regional freight networks; and transit, bicycle and pedestrian facilities.

### SIS Priorities/SIS Project Selection

According to the SIS Strategic Plan, the Florida Department of Transportation (FDOT) will establish SIS project priorities from a statewide, multimodal perspective, with an emphasis on interregional, interstate and international travel and transport. A system wide perspective will also be utilized that emphasizes the most effective solution for the entire system rather than an individual mode or facility. Additionally, projects that primarily emphasize safety, security and preservation will continue to be covered by existing programs and funding sources, not SIS funding. SIS funding should cover projects that increase mobility for people and freight, increase the system's reliability and efficiency and enhance Florida's economic competitiveness. However, SIS projects may provide secondary benefits of safety, security and preservation.

With this in mind, the process for recommending SIS priorities will be driven by policy and supported by three types of information. Assessment tools will be developed and refined over time to assist partners and FDOT in accessing the information.

- How well the project meets the goals and objectives of the SIS;
- Whether FDOT's partners have reached consensus; and
- The total project cost and mix of funds available to implement the project.

FDOT will select projects for SIS funding through its five-year work program process, a list of all transportation projects and planned expenditures by FDOT over the next five fiscal years. The SIS Cost Feasible Plan will be the primary source of SIS projects that are selected for the work program, however fluctuations in actual budgets and unanticipated opportunities and issues may result in differences between the work program and the SIS Cost Feasible Plan.

Various factors will be used to select projects, including:

- Meeting the goals and objectives of the SIS;
- Whether partners have agreed for the project to advance to the next phase of the project planning and delivery process and how far along the project is in that process;
- Cost and availability of partner financial contributions;
- Balance of quick-fix, operational improvements and longer-term capacity investments;
- Reasonable distribution of investments between SIS and emerging SIS facilities and among economic regions of the state; and
- Whether public benefits exceed public investment, where the facility is owned by private sector.

FDOT funding eligibility guidelines have been developed for SIS hub, corridor and connector projects for the development of the Work Program for Fiscal Years 2006 through 2010. Corridor and connector projects eligible for FDOT SIS funding include capacity and operational improvements, with emphasis on reducing bottlenecks and improving access to the hubs. Projects that improve the efficient movement of passengers and goods onto and off of SIS hubs will be eligible for funding, however most internal functions on hubs will not be funded by FDOT with SIS funds. Additionally, projects that primarily emphasize safety, security and preservation will continue to be covered by existing programs and funding sources, not SIS funding. However, SIS projects may provide secondary benefits of safety, security and preservation.

### Heckscher Drive Recommendations

In the interest of regional and statewide economic competitiveness, the First Coast MPO recommends that Heckscher Drive, from west of the Dames Point Terminal (August Drive) to I-95 be designated a SIS Connector. Currently, SR105 (Heckscher Drive) serves both the Blount Island and Dames Point seaport terminals as an SIS connector east and west of State Road (SR) 9A, an SIS corridor. Although Heckscher Drive from west of the Dames Point Terminal to I-95 is not an official SIS connector, trucks utilize this portion of Heckscher Drive to access tank farms along Heckscher Drive, as well as to access the Dames Point and Blount Island Terminals. This roadway is a regionally significant freight facility that if designated to SIS can further assist in the enhancement of regional, as well as statewide economic goals and objectives.

## Section V. Freight Stakeholder and Public Involvement

This section duplicates Technical Memorandums #1 and 2: Freight Stakeholder Participation Process documents the Study's public involvement efforts and Business, Industry and Government (BIG) Roundtable Meetings. The section is divided into four parts as listed below.

- Business, Industry and Government
- Stakeholder Organizations
- Stakeholder Involvement in Project Identification
- Stakeholder Surveys/CD
- Website

During the First Coast MPO Phase II Freight Mobility Study, opportunity for input was offered to both freight mobility stakeholders and the general public. Periodically during the course of the Phase II Freight Mobility Study, brief presentations were given to the First Coast MPO's Technical, Citizens Advisory Council and Board, all of which were advertised and open to the public to attend. These presentations updated the abovementioned committees on the study's status and invited comments. As is customary during transportation studies for the First Coast MPO, public involvement for the Phase II Freight Mobility Study was performed in accordance with provisions of the adopted Public Involvement Plan. The Public Involvement Plan was developed in accordance with Federal statutes and provides adequate opportunity for public officials, elected officials and citizen involvement in the development of transportation plans prior to their approval by the First Coast MPO.

Since the passage of ISTEA and TEA-21, metropolitan planning organizations have begun working with many new stakeholders, including freight industry representatives, port and air terminal administrators, and local government economic development officials. All of these stakeholders provided invaluable guidance related to their specific experiences and/or knowledge of freight movement patterns/characteristics. They helped to identify transportation problems affecting the movement of freight.

Specifically, freight stakeholders were involved in the study through the utilization of four involvement approaches: 1) a Business, Industry and Government (BIG) Transportation Roundtable; 2) meetings with stakeholder organizations, 3) a stakeholder survey; and 4) a website.

In addition, several meetings were held with interested stakeholders. The purposes of these meetings were to identify additional stakeholders and to develop more specific descriptions of potential freight mobility projects, as well as to discuss their potential involvement in the BIG Roundtable.

Throughout the nation, MPOs have reported difficulties in securing meaningful participation on behalf of freight industry stakeholders. An ITE table of institutional barriers and required cultural change<sup>13</sup>, noted that "freight industry representatives are reluctant to participate or share in a process that focuses on projects with multi-year lead times." It stated, "The process must incorporate short-range activities"...to provide 'value-added' to private sector representatives and yield contributions from them."

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<sup>13</sup> ITE Journal, May 2005, p. 31.

The Baltimore Metropolitan Council and the Chittendon County MPO summarized lessons learned from the Baltimore MPO's Freight Movement Planning Process in a paper entitled, *Incorporating Freight Issues into Baltimore's Regional Transportation Planning Agenda --- Progress-to-Date and Lessons Learned* (November, 1997). A list of the lessons learned from the Baltimore Region Freight Movement Task Force process, as cited in the paper, is listed below. These lessons learned can also be applied to the First Coast MPO Freight Study process.

- There is continual need to demonstrate the value of the planning process to participants.
- The dynamic nature of the freight movement industry demands that planners take a proactive approach.
- Ongoing networking with freight movement officials is the key to accessing information and data.
- It is critical to provide rapid response to major issues and questions identified by freight advisory board participants.
- Freight planning advisory groups expect an outcome oriented work approach, but do not overpromise.
- The MPO policy board needs to understand and accept the value of freight movement input to the metropolitan transportation planning process.

### Business, Industry and Government (BIG) Transportation Roundtable

In an effort to include private sector representation into the First Coast MPO structure, and embrace the realization that an improved freight transportation infrastructure is linked to the success of the area's economy, the First Coast MPO developed and convened the Business, Industry and Government (BIG) Transportation Roundtable. For this committee, private sector representatives within the freight transportation industry as well as business representatives from around the area were invited to participate in the decision-making process. Public agency representation was also included.

The intent in developing the BIG Roundtable was to gain input on the development of major projects, without dealing with the general housekeeping issues of the First Coast MPO, and focusing on the business community, economic development impacts and relevant transportation infrastructure issues. Keeping in mind the immediate, fast-paced and goal oriented nature of the private industry, the goal of the committee was to focus on addressing issues in the short-term, as much as possible, to provide value-added to committee representatives and generate contributions from them. Moreover, this was to be accomplished within the long-range transportation planning process and continued beyond this freight study.

The BIG Roundtable met quarterly (four times a year) in June 2004, August 2004, November 2004, February 2005, May 2005 and August 2005. Meetings were held for an hour. Meeting topics generally included those relating to the freight study, FDOT's Strategic Intermodal System (SIS), the First Coast MPO's 2030 Long Range Transportation Plan, timely and relevant freight/economic development issues and specific improvement/project issues for committee members.

Membership on the BIG Roundtable included about 37 individuals and was multi-modal in scope (see Appendix E for membership list). Actual membership attendance to the six BIG Roundtable meetings

averaged 8 members each meeting, not including representatives from First Coast MPO and consultant staff. The committee was representative of the public and private sector, including trucking, logistics, rail, marine and air industries. Chambers of Commerce and other business representatives from all First Coast MPO counties were also invited. Depending upon the meeting, about six to nine members participated in each meeting, with about one to four members from the private industry sector and two to three members from a business organization (i.e., chamber or economic development commission).

### Stakeholder Involvement in Project Identification

The study design called for extensive stakeholder involvement in the identification of freight projects. Freight stakeholders contributed to the development of projects. Staff met with and/or had regular contact with many representatives of the SIS hubs to discuss their individual issues and needs, including representatives from CSX, Norfolk Southern, FEC and JAXPORT, for example. Lengthy meetings were held on site at two of the three rail intermodal hubs located within the study area. The principal purpose of these meetings was to identify bottlenecks affecting the routing of trucks to and from these two hubs.

### Stakeholder Organizations

Representatives of the First Coast MPO and Reynolds, Smith and Hills (RS&H) participated in meetings of the First Coast Roundtable of the Council of Supply Chain Management Professionals (CSCMP, formerly the Council of Logistics Management). In December 2004, the First Coast MPO presented an overview of the freight study at the monthly meeting of the First Coast CSCMP, along with a general overview of the MPO itself.

In addition, First Coast MPO and RS&H staff met directly with the First Coast CSCMP leadership as well as with individual leaders of the CSCMP. This in turn led to additional meetings with Kendra Tanner, a representative of the Transportation Club of Jacksonville. Ms. Tanner assisted in the development of a freight industry stakeholder survey, as well as with the development of a targeted list of stakeholders to be surveyed.

### Stakeholder Surveys/CD

A survey of companies involved in the movement of freight was developed and implemented in January 2005. About twenty freight stakeholders (representing 12 trucking companies) were mailed a copy of a survey CD that included a presentation about the First Coast MPO and the Freight Mobility Study, a video about the role of MPOs in freight studies nationwide, a map of major freight routes and hubs in the First Coast MPO area, and two surveys, along with instructions. One survey was oriented to terminal managers, while the other to dispatchers and drivers.

Follow up phone calls were made to survey recipients to encourage returned surveys. Additional survey packages were mailed to a handful of recipients who stated they did not receive the initial package. Another couple of recipients either had trouble using the CD or could not use the CD on their computer. Paper copies were sent to these stakeholders. Everyone was encouraged to return the survey forms using a method convenient to them: mail, fax, phone or website.

Of the twenty surveys mailed to freight stakeholders, two responses were received, from the dispatcher and terminal manager for the same trucking company. Similar to other freight surveys



around the country, the low response rate most likely reflects the proprietary nature of the information requested. (See Appendix F for a blank copy of the survey form and cover letter.

### Website

The purpose of this task was to update and revamp a web site ([www.fcmpofreightstudy.com](http://www.fcmpofreightstudy.com)) for freight industry stakeholders, linking the website to First Coast MPO web site. The site was developed to allow stakeholders to post information of particular interest to freight industry stakeholders, including information on temporary road closures and detours. The updated and revamped web site will be used for ongoing stakeholder involvement in the overall First Coast MPO transportation planning process, through links to stakeholder surveys for terminal managers, dispatchers, and drivers. Finally, the web site will be a forum for a continuing dialogue between freight industry stakeholders and First Coast MPO transportation planners. Key components of the website include:

- A PowerPoint presentation featuring presentation (s) to the BIG Roundtable.
- Information about the Freight Mobility Study
- A map of freight facilities in the area, including SIS routes and major freight generators
- Stakeholder surveys
- A discussion forum for stakeholders to post and review articles
- FDOT road and traffic information (or a link to the information)

## **Section VI. Data Collection and Development**

Phase II of the Freight Mobility Study follows an innovative approach to data and information collection. Instead of following conventional systems planning methods, the study utilized field surveys and a wide range of stakeholder involvement mechanisms to develop a program of projects that is mainly focused upon the elimination of bottlenecks affecting freight movement within the existing regional intermodal network.

Within the same period that the Phase II Freight Mobility Study was underway, the Florida DOT designated a Statewide Intermodal System (SIS), consisting of intermodal hubs, corridors, and connector routes. Interim findings from Phase II were used to promote the designation of SIS connector routes that would provide optimal benefits both to stakeholders and to the region as a whole.

### **Freight Facility and Project Data**

At the conclusion of Phase I, a set of maps was prepared to show the locations of significant freight generators within the study area. At the beginning of Phase II, these maps were checked first for accuracy. Then the maps were revised, and a single map was prepared that focuses upon the most significant freight generators within the region, as well as the routes that provide access to these generators. Finally, designated and emerging SIS corridors, hubs and connectors were added to the working freight facilities map, along with state highways carrying significant volume of trucks (>3,600 per day in 2002). Appendix G contains a copy of this map (Freight Facilities Map), displaying (1) significant freight generators, (2) designated and emerging SIS corridors, hubs and connectors and (3) state highways carrying significant volume of trucks (>3,600 per day in 2002).

This map was presented to stakeholders at one-on-one meetings with stakeholders, at meetings of the BIG Committee, and at a meeting of the First Coast Roundtable of the Council of Supply Chain Management Professionals. In addition, a CD including the freight facilities map was mailed out to a list of stakeholders that was compiled for use in this study by Kendra Tanner, on behalf of the Transportation Club of Jacksonville, another stakeholder organization.

Using a working copy of the freight facilities map as a guide, RS&H staff conducted field surveys of all of the hubs and significant freight traffic generators that were identified on the map. Concurrently with these field surveys, one-on-one meetings were held with key stakeholders at two rail intermodal hubs within the region. The main purpose of these meetings was to identify bottlenecks affecting truck traffic to and from these hubs, and to develop ideas for projects that would overcome or eliminate these bottlenecks.

With assistance from the Transportation Club of Jacksonville, a stakeholders' survey was developed and mailed out on the same CD that included a copy of the freight facilities map. The intent of this survey was to obtain information from more stakeholders than could be consulted through one-on-one meetings. Unfortunately, only two responses to this survey were received.

Existing available freight facility project lists were obtained from the First Coast MPO. These lists were reviewed with stakeholders and revised and updated as needed.

After the study area was expanded to include parts of Nassau County and additional portions of St. Johns County, additional field reviews were conducted, in order to ensure that there would be a geographic balance of potential freight facility projects. Some of these field reviews included impromptu on-site interviews with local stakeholders and economic development officials, including Mr. Ted McGowan, of the Clay County Economic Development Commission. After field surveys of potential project sites were conducted in Nassau and St. Johns Counties, stakeholders in these counties were consulted via telephone and e-mail, including:

- Val Schwec, manager for Nassau Terminals,
- Shawn Collins of the St. Johns County Transportation Dept., and
- Kari Hall Keating, vice president for economic development for the St. Augustine and St. Johns County Chamber of Commerce.

In order to compile relevant information pertaining to potential freight study project in a consistent format, hub fact sheets were prepared. Each fact sheet pertains to a designated SIS hub or to a major freight traffic generator, and includes:

- the name and location of the hub
- contact information for a stakeholder responsible for day to day operations at the hub
- SIS information specifically pertinent to that hub
- access routes
- key intersections or interchanges on access routes
- railroad grade crossings on access routes
- potential problems affecting access routes, and
- additional notes

Following internal review of the project list conducted by RS&H staff, additional information was obtained from Mr. David Kaufman of JAXPORT, as well as from the consultant responsible for the preliminary design of the North Airport Parkway project. In addition, the draft project list was sent to James M. Green, District 2 Liaison to the First Coast MPO, who provided valuable comments. Using all of the information compiled above, a project list was prepared and reviewed at a meeting with First Coast MPO staff.

### Rail Crossing Data

In the First Coast MPO urban area there are over 300 at grade railroad crossings. Research and data collection related to rail crossing data is summarized below.

- Research for at-Grade Railroad Crossing Policy - The *Federal Railroad Administration (FRA)* policy on crossing consolidation and closure was reviewed. In 1994, the FRA guided states and railroads to reduce the number of grade crossings by 25 percent. The FRA had intended to update the 1994 document by the end of 2004, however the new target date for completion of the updated consolidation and closure manual is 2005.

*Section 335.141, Florida Statutes* mandate the Florida Department of Transportation's regulatory authority over all public railroad-highway grade crossings in the state, including the

authority to permit the opening and closing of such crossings. A "public railroad-highway grade crossing" is a location at which a railroad track is crossed at grade by a public road.

*Rule 14-57.012, Florida Administrative Code* governs the crossing opening and closing process and establishes the criteria that the Department must consider prior to taking any administrative actions. "The Department of Transportation may accept applications for the opening and closing of public railroad crossings from the governmental body that has jurisdiction over the public street or highway; any railroad operating trains through the crossing; any other applicant for a public grade crossing provided there is in existence an agreement between the applicant and governmental body to assume jurisdiction as a public crossing; or the Department, itself, on behalf of the State of Florida."

*Florida Administrative Code 14-57.012 (Standards for Opening and Closing of Railroad-Highway Grade Crossings-Opening and Closure (e, Grade Separation)* states that "When estimated highway traffic has 30,000 vehicles a day across main line tracks, an engineering and benefit-cost analysis must be performed by the applicant to determine if a grade separation is warranted."

- Identification of At-Grade Railroad Crossings - This task began with mapping existing railroad crossings into a GIS database, utilizing FDOT's Railroad/Highway Crossing Inventory (RHCI) data, as well as a CSX railroad map that displayed the location of CSX, Norfolk Southern and Florida East Coast track in Duval county. The RHCI inventory indicated at grade crossings and aerials were also utilized to help with differentiating between crossings that already had grade separations and those that did not. This information still requires field verification and was collected for use in future studies on railroad crossings within the First Coast MPO area. Appendix J contains a map of railroad crossing locations.
- Identification of Potential Locations for Grade Separation - This task began with a review of existing criteria for determining the eligibility of potential grade separation locations. Based on FDOT standards, roadways with greater than 30,000 vehicles a day (Average Annual Daily Traffic - AADT) at railroad grade crossings were given high priority for grade separation<sup>14</sup>. Additionally, roadways just under 30,000 AADT were examined. The 2005 Northeast Regional Planning Model (NERPM) was used to identify AADT. Additional indicators for potential grade separation locations included whether or not a committed project already existed, the number of trains per day, number of tracks, FDOT Safety Index Rank<sup>15</sup> and number of crashes at the crossing. Safety index ranks under 800 are considered by FDOT for potential improvements. Districts across the state utilize this data (i.e., safety index ranks under 800) to help prioritize crossings for a yearly diagnostic report. A formula for this index can be found in the FDOT's Rail Manual. The formula considers AADT, number of trains per day, average number of trains per day, posted vehicle speed limits, maximum

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<sup>14</sup> Florida Administrative Code 14-57.012 (Standards for Opening and Closing of Railroad-Highway Grade Crossings-Opening and Closure (e, Grade Separation) states that "When estimated highway traffic has 30,000 vehicles a day across main line tracks, an engineering and benefit-cost analysis must be performed by the applicant to determine if a grade separation is warranted."

<sup>15</sup> FDOT Safety Index Rank is listed in the RHCI. Crossings with the lowest safety index are assigned the highest priority by FDOT for receiving future improvements.

train speed limit, warning devices and crash history<sup>16</sup>. This information was collected for use in future studies on railroad crossings within the First Coast MPO area.

- Identification of Railroad Crossing Closures – In response to concerns expressed by railroad operators at a First Coast MPO Business, Industry and Government (BIG) Roundtable meeting and in order to get accurate railroad crossing information, the rail operators (Norfolk Southern, CSX, and Florida East Coast) were asked to correct/update any inaccurate information, as well as to indicate where they would ideally like to have two-mile sections of uninterrupted track – no at grade rail crossings, to reduce the number of stopped trains blocking roadways and to reduce the number of train conflicts with roadway traffic. They were sent copies of the FDOT Rail Highway Crossing Index (RHCI) Ad Hoc Reports, containing rail crossings throughout Duval, St. Johns, Clay and Nassau Counties, to mark up. This information was collected for use in future studies on railroad crossings within the First Coast MPO area. Appendix K contains information received from the rail operators, related to this request.

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<sup>16</sup> For reference to formula see: <http://www.dot.state.fl.us/rail/Publications/RailManual/appx-b.pdf>

## Section VII. Recommended Freight Mobility Strategy

The ability for freight providers to have fast and efficient access to the region's major intermodal hubs is crucial to improving freight mobility. As previously mentioned, rail and water shipments on the First Coast MPO's transportation infrastructure account for a significant percentage of total freight movements, highlighting the importance of the region's well-developed intermodal transportation system: JAXPORT and the area's role as a rail hub for Florida and the Southeast.

To encourage efficient freight movement to and from these hubs, the recommended Freight Mobility Strategy for the First Coast MPO area targets highway freight improvements at critical links in the regional logistics network. In the short term, it recommends improving delays caused by poorly timed traffic signals, inadequate turning lanes, insufficient curb radii, wayfinding problems, or other simple problems that jeopardize the timely movement of freight within our region. In the long term the freight mobility strategy ensures that SIS and other funds are spent where they are most needed.

### Policy Recommendations

#### 1. SIS Funding for Multiple Connectors to SIS Hubs

In the interest of regional and statewide economic competitiveness, the SIS should allow for multiple connectors to hub facilities. For many SIS hubs observed during the study, trucks traveled the designated SIS intermodal connector. However, for other hubs trucks were observed using non-SIS access routes. Trucks accessing hubs located in more built up areas, with the presence of more collector and/or local streets, typically used more than the SIS designated connectors. Truckers tend to utilize many available options based upon convenience. They, like motorists in general, prefer routes that are more convenient over those that may be operationally indirect, unsafe, slow and/or hard to maneuver; and those conditions may change from month to month or even day to day, depending upon variables such as construction or incidents, for example.

For example, it is recommended that Heckscher Drive, from west of the Dames Point Terminal (August Drive) to I-95, be designated a SIS connector. Currently, SR105 (Heckscher Drive) serves both the Blount Island and Dames Point seaport terminals as an SIS connector from State Road (SR) 9A, an SIS corridor. Although Heckscher Drive from west of the Dames Point Terminal to I-95 is not an official SIS connector, trucks utilize this portion of Heckscher Drive to access tank farms (private petroleum companies) along Heckscher Drive, as well as to access the Dames Point and Blount Island Terminals. The seaport business has separate private terminals all along Heckscher Drive that generate trucks and impact the roadway infrastructure. This roadway is a significant freight facility that if designated to SIS can further assist in the enhancement of both regional and statewide economic goals and objectives.

It is also recommended that US1, from I-95 at US1 north to I-95 at US1 south, be designated a SIS connector. Currently, US1 (Philips Hwy.) serves the FEC intermodal rail terminal as a SIS connector from SR202 (J.T. Butler Blvd), a SIS connector from I-95, to the FEC Terminal entrance at Stepp Ave. and US1. Although not all portions of US1 from I-95 at US1 north to I-95 at US1 south make up the SIS connector to FEC, trucks utilize these portions of US1 to

access the FEC terminal. Most trucks traveling south on I-95, exit at US1 and travel south to the FEC terminal, rather than traveling I-95 south to SR202. Furthermore, trucks traveling north on I-95 and exiting at SR202 are required to first travel east on SR202 and make a U-turn at Belfort Rd. to go west on SR202 to US1. Low bridge clearance and difficult maneuvering are issues for trucks making this U-turn.

Finally, it is recommended that US90 from US301 to SR23 (Brananfield Chafee Road) and SR23 from US90 to I-10 be designated as SIS connectors serving regional distribution centers located along (and near) US90 on the west side of the First Coast MPO. Examples of these regional distribution centers include Winn-Dixie, Publix and Michaels, as well as USPS Bulk Mail, UPS and FedEx facilities.

2. SIS Funding for Quick-fix Projects

The First Coast MPO supports recommending that SIS funding also fund quick fix projects, however the funds should be boxed (similar to what is currently done for the resurfacing program), so that quick fix projects are never programmed 5 years out. It is recommended that an annual element of freight improvements/projects using FDOT maintenance, county and city capital improvement programs be funded. Concurrently, the First Coast MPO should communicate the list of projects to the local governments. The quick fix projects will be locally funded until the SIS funding process can be changed.

3. SU Funding for Quick Fix Projects

The First Coast MPO should identify a source of SU funds to enable the programming of short term/quick fix freight improvements. This will help to integrate short-term project recommendations from the study into ongoing, operational and safety improvement projects of the First Coast MPO's member agencies. It may also add a freight component to existing short-term projects.

4. Include Regional Distribution Centers in Freight Planning and on the SIS

The FDOT SIS currently does not recognize regional distribution centers as SIS hubs. These facilities are important to the regional economy and generate significant numbers of trucks daily. Examples include Winn-Dixie, Publix and Michaels Regional Distribution Centers, as well as USPS Bulk Mail, UPS and FedEx facilities. Many of these facilities are located near or along US90 on the west side of the First Coast MPO area. As stated earlier, if these regional distribution centers were added to the SIS, then US90 from US301 to SR23 (Branan Field Chafee Road) and SR23 from US90 to I-10 would also need to be included as SIS connectors from these distribution centers to I-10. Additionally, private petroleum companies, such as those along Heckscher Drive (e.g., Hess), should be included in the SIS, as SIS hubs.

### Recommended Projects

The list of recommended projects represents practical rather than theoretical solutions to the region's freight mobility problems. This is a result of an innovative approach that has involved a wide range of approaches to securing direct stakeholder involvement.

### *Project List Overview*

The arterial local roadway network, interstate system, airports, ports and railroads located within the First Coast Metropolitan Planning Organization (First Coast MPO) area are a major keystone of the area's economic prosperity. The First Coast MPO area is one of the three leading seaports in Florida. Three major railroads serve this area (CSX, Norfolk Southern, and Florida East Coast), and two of these railroads have their headquarters here. Nearly all of Florida's rail freight enters or leaves the state through Jacksonville, and the region is also a major gateway for highway freight.

With the emergence of the Florida Strategic Intermodal System (SIS) as the major source of state funding for transportation improvements, and recognizing the strategic importance of intermodal freight transportation to the area's economy, the First Coast MPO's Freight Mobility Study: *Integrating Economics with Freight Mobility* recommends several freight mobility improvement projects. The study design called for extensive stakeholder involvement, rather than long-range technical analyses, as the primary basis for the identification and prioritization of freight mobility improvement projects. Field surveys and specialized traffic counts were also utilized.

The projects, which are generally categorized into short term ("quick fix"), mid term or long term improvements, address minor intersection and access needs, operational and intelligent transportation system (ITS) needs, capacity needs, major intermodal issues, and railroad grade separation issues. Needs are identified both on and off the Statewide Strategic Intermodal System (SIS) and are geographically represented throughout the First Coast MPO area, including Duval, St. Johns, Clay and Nassau Counties.

Recommended projects were developed out of both Phase I and Phase II of the Freight Study. Throughout the study there were many opportunities to receive input from both public and private freight industry stakeholders. Their primary mobility issues and concerns included better access to freight facilities; reduced railroad crossing delays; reduced community isolation and other negative impacts from multiple railroad tracks; and better signage and roadway information for truckers. Examples of improved access to freight facilities include better shoulders, turn lanes and traffic signals; and the improvement of substandard intersections.

Many of the recommended projects will improve SIS corridors and connectors located in the First Coast MPO area. These recommended improvements are consistent with SIS funding priorities, such as reducing bottlenecks; improving access to hubs; new highway lanes; double tracking a rail corridor; special use lanes; spot improvements; grade separations; and ITS or incident management. Additionally, the SIS Strategic Plan (adopted January 20, 2005) encourages that regional transportation decision-making ensure that resources are made available to projects that enhance overall state economic growth, provide connections to the SIS and provide access to regional activity centers.

Key projects in table of freight projects are further described by SIS hub or major area. Most of the quick fix projects are generally self-explanatory. They address more immediate needs that can be included in local capital improvement programs. The projects described below are primarily those that would likely be (or are currently) programmed in the First Coast MPO Transportation Improvement Program. Additionally, some longer term projects and projects that involve more complicated issues are discussed.



A. *CSX Intermodal Hub*

Pickettville Road Extension - The current SIS connector to the CSX Intermodal Terminal Hub is I-295 to Pritchard Road to Sportsman Club Road to the terminal entrance. The Pickettville Road Extension project involves the construction of approximately ½ mile extension of Pickettville Rd/(Robinson Rd W) to Pritchard Rd opposite to Sportsman Club Rd. Through field observations it was observed that this project might help trucks to access other terminals without using interstate interchanges (I-295/Commonwealth Ave and I-295/Pritchard Rd). The benefits of trucks not having to utilize interstate interchanges include potentially safer interchanges with more capacity for additional vehicles. The project is not listed in the most recent Florida Department of Transportation (FDOT) 5-Year Work Program or the First Coast MPO's Transportation Improvement Program (TIP). See Appendix H for a map of the project.

B. *FEC Intermodal Hub*

Projects addressing improvements to the FEC Intermodal Hub primarily include access improvements to the terminal via the current SIS connector as well as intersection improvements near the terminal. Many of these recommendations were a direct result of communication with FEC stakeholders. Additionally, the widening of US-1 from SR202 (Butler Boulevard) to Emerson Street, as well as the I-95 at SR202 (Butler Boulevard) Interchange Improvements are both listed in the TIP. See Appendix H for a map of the projects.

C. *Norfolk Southern Intermodal Hub*

Norfolk Southern (NS) Intermodal Terminal Hub Connector Improvements - This project involves roadway improvements that would provide trucks better access to the hub. It was initially recommended as a result of field observation and is supported by the First Coast MPO and included in the MPO's list of Strategic Intermodal System Priority Projects (dated 9/23/04). A PD&E is currently underway. The project is not listed in the TIP or FDOT Work Program.

The current SIS connector to the NS Intermodal Terminal Hub is I-295 to Pritchard Road to Old Kings Road to SR111 (Edgewood Avenue) to McLendon Street to Edgewood Drive to the terminal entrance. However, field reviews of traffic to and from the terminal using the current Edgewood Drive found major problems with alignment, substandard access controls and incompatible residential land use activities. Pickettville Road was found to be a more direct route to the terminal that avoids the adverse impacts of Edgewood Drive. The improved connector would connect NS to I-295 via Pickettville Road: I-295 to Pritchard Road to Old Kings Road to Pickettville Road to Edgewood Drive to the terminal entrance. Additionally, this project would require improvements to the Pickettville Road Bridge that would eliminate current weight restrictions to Pickettville Road.

Norfolk Southern Double Track Project – This project was recommended by Norfolk Southern. It involves adding 8,347 feet of track between the north end of NS Simpson Terminal to the south end of CSX Lacy Siding in order to provide connection between both yards at grade. For the general public, it is anticipated that this project will reduce some delay at grade crossings in the area, since trains should not have to block traffic as much.

Additionally, for the NS and CSX, delays to the waiting time for conflicting train traffic should be reduced. The plans for this project are ready and can be implemented as soon as 50/50 public/private matching funding can be arranged. See Appendix H for a map of the projects.

*D. Jacksonville International Airport (JIA)*

North International Airport Boulevard – This project is a proposed SIS project by the First Coast MPO in cooperation with Jacksonville Airport Authority (listed in the First Coast MPO's list of Strategic Intermodal System Priority Projects). Portions of the project are included in both the TIP and FDOT Work Program.

The project involves the addition of a new road (JIA North Access Road) as the continuation of International Airport Boulevard. It is needed to separate truck traffic using the warehouse and distribution facilities at the private Tradeport property and the public airport air cargo and US Postal facilities from the passenger traffic using SR102 (Airport Road) to access the main passenger terminal at JIA. By separating freight and passenger traffic both should have easier, more direct access to their destinations. The project will also relocate the functions currently on Pecan Park North. A PD&E is near completion. See Appendix H for a map of the projects.

*E. Jacksonville Port Authority (JAXPORT) Talleyrand*

Roadway projects addressing SIS connector improvements to the Talleyrand Hub are listed in the First Coast MPO's list of Strategic Intermodal System Priority Projects. The first project is a new interchange at the current SR15 (Martin Luther King Jr. Parkway)/21<sup>st</sup> Street/Phoenix Avenue interchange and the second project includes improvements to the 21<sup>st</sup> Street/Talleyrand Avenue intersection. Both projects should improve truck access to the port. They are both located on the current SIS system, although improvements to 21<sup>st</sup> Street at Talleyrand Avenue are not included in the TIP or FDOT Work Program.

Cargo Tracking Project –FDOT requested that this project be included in the FY 2004/05 to FY2008/09 TIP. This project will create a secure internet-based data management system to track containers entering and leaving the Blount Island Hub. This project results from a Congressional Earmark to fund a Cargo Tracking Project. JAXPORT must match the Federal Earmark of \$892,800 with an equal amount. As a Congressional Earmark, funding this project does not affect other projects in the TIP.

The final project is a Rail Switching Yard Expansion project which designs, permits and builds additional tracks from existing Talleyrand Marine Terminal on-site rail facilities to the F&J switching yard. It is also in the First Coast MPO's list of Strategic Intermodal System Priority Projects. Track capacity gains will help accommodate port's immediate needs for growth. Specifically, due to construction of a 550,000 S.F. warehouse, JAXPORT projects an annual increase of 8,000 rail cars---this capacity is not currently available at Talleyrand. Additions will also provide track space for car inspections, car cleaning, and light repairs. See Appendix H for a map of the roadway and rail projects.

*F. JAXPORT Blount Island and Dames Point*

Currently, SR105 (Heckscher Drive) serves both the Blount Island and Dames Point seaport terminals as an SIS connector from SR 9A, an SIS corridor. However, although Heckscher Drive from west of the Dames Point Terminal to I-95 is not an official SIS connector, trucks utilize this portion of Heckscher Drive to access tank farms along Heckscher Drive, as well as to access the Dames Point and Blount Island Terminals. This non-SIS roadway is a regionally significant freight facility that if coordinated with the SIS can further assist in the enhancement of regional, as well as statewide economic competitiveness.

New Berlin Road Extension – This project is listed in the First Coast MPO's list of Strategic Intermodal System Priority Projects and is supported by JAXPORT. The project involves extending New Berlin Road South (at the point it turns east under SR 9A, south of Heckscher Drive) south to Dames Point Road to provide another access to the Dames Point Terminal that is under development. The project also involves extending existing rail due south in the same area as the New Berlin Road South extension. Once on the terminal the rail will be looped to serve all port tenants. Benefits include an enhanced ability to further develop the Dames Point Terminal. See Appendix H for a map of the projects.

With the recent announcement about Mitsui OSK Lines Ltd., a Japanese-based shipping company, building a \$200 million terminal at Dames Point, the *New Berlin Road Extension Project* is timely. The new Dames Point terminal may bring over 5,000 jobs, double the port's capacity and eventually make Jacksonville one of the top 10 container ports in the country. It is estimated that of the 5,000 jobs, 1,800 would be created directly at the port, and another 3,800 in related industries would be created. The shipping company will lease the land, which will serve as its East Coast hub, for 30 years. Ships will sail directly between the facility and ports in Asia, as well as Latin America.

*G. Other Duval County Projects*

I-295 at Commonwealth Avenue Interchange Improvements – During field visits to this area, it was noticed that this interchange has a very significant amount of trucks entering and exiting I-295. West of the area, along US90 and I-10, three major distribution centers exist: Publix, Winn Dixie and Michaels. Trucks were observed to travel along US90 (Beaver St.) east to Pickettville Road to Commonwealth Avenue, avoiding the congested Marietta/I-10 interchange. Additionally, there is both a US Bulk mail and a FedEx facility west of the interchange, as well as industrial parks and small businesses east and west of this interchange. Improving this interchange will help truck traffic, over all. The project is included in the TIP as a PD&E Study. I-295 is an SIS corridor.

Another recommended freight improvement project that will improve truck travel to and from regional distribution centers along and near US90 is the major interchange reconstruction of SR23 (Branan Field-Chaffee Rd.) at US90 (and I-10). This project is currently included in the First Coast MPO's Cost Feasible Plan of the Long Range Transportation Plan.

Additionally, the reconstruction of the I-95 at I-295/SR9A interchange will improve overall truck movement. See Appendix H for a map of the projects.

*H. Port of Fernandina Emerging Hub (Nassau County Projects)*

Field visits were made to Nassau County to determine potential freight related improvements. Additionally, projects were recommended through Nassau County stakeholders. Based upon field visits, quick-fix improvements were recommended to the intersection of I-95 and SR 200. Improvements involve placing a yield sign along the NB I-95 off-ramp, as well as the consideration of an acceleration lane. The purpose of the project is to improve access to the Port of Fernandina by improving the ability of trucks to safely travel and maneuver through the interchange. Although this project is not programmed, other repairs are scheduled to begin at the interchange this year, which may impact these recommendations.

Another project to improve access to the Port includes improvements to widen 11 miles of SR200 from I-95 to the Amelia River Bridge (at the Intracoastal Waterway). Additional capacity will improve travel to and from the port. The project is listed in the First Coast MPO's list of Strategic Intermodal System Priority Projects. It is also included in the both the TIP and the FDOT Work Program.

Additional SR 200 recommended improvements include grade separated interchanges at US 17, Chester Road and CR 107, to promote free flow traffic along the emerging SIS connector. Currently, trucks do not always stop at the intersection and are slow to accelerate once they stop.

The two Nassau County projects that are not listed in either the TIP or FDOT Work Program include improvements to local streets in the Fernandina Beach area. Both projects are listed in the First Coast MPO's list of Strategic Intermodal System Priority Projects, and were recommended by Nassau County stakeholders. The intent of both projects is to improve truck access to the Port of Fernandina. See Appendix H for a map of the projects.

*I. Clay County Projects*

Based upon field visits to the Reynolds Industrial Park, improvements to the industrial park entrance (at SR 16 and Reynolds Boulevard) were recommended in order to improve truck access to the facility. Although this facility is not a SIS hub, it is important to the development of industry within Clay County. Recommended improvements are short term/quick-fix improvements, including the provision of left turn bays, signalization (if warranted) and a speed limit reduction. Although there is no project listed in the TIP or FDOT Work Program that directly addresses this project, there are two projects that are located adjacent to this project. One involves adding lanes and reconstructing from US 17 to Reynolds Industrial Park (FDOT Work Program) and the other involves resurfacing from Reynolds Boulevard to the Shands Bridge (TIP). See Appendix H for a map of the project.

*J. St. Johns County Projects*

Based upon field visits to areas of St. Johns County with significant truck travel, one quick-fix project and two mid term projects were recommended to improve truck traffic in the county. The projects include improvements to (1) I-95 at CR 210; (2) I-95 at SR 16; and SR 207 at Dobbs Road Cutoff (near Dobbs Road). The two improvement projects at I-95 interchanges, with nearby truck stops, involve improvements to turn storage lanes. The SR 207 improvement, located near several industrial sites, involves improving the turn radius at the

intersection. Currently, a PD&E study/interchange modification at I-95 and CR210 is listed in the TIP for FY 2008/09. Also, the St. Johns County Capital Improvement Program lists a widening project on CR 210 near I-95. These projects may impact the recommendations made to CR 210 and I-95. See Appendix H for a map of the projects.

### *Project List*

Table 8 contains the list of recommended freight projects. Appendix H contains a map of the Recommended Freight Projects.

**Table 8. Recommended Freight Projects**

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
<b>A. CSX INTERMODAL HUB</b>							
	1.	Pickettville Road Extension	North of Robinson Rd W to Pritchard Rd opposite to Sportsman Club Rd	Construction of approximately ½ mile extension of Pickettville Rd/(Robinson Rd W) to Pritchard Rd opposite to Sportsman Club Rd.	Help trucks to access other terminals without using interstate interchanges (I-295/Commonwealth Ave and I-295/Pritchard Rd).	Long Term.	\$1,906,000 **
<b>B. FEC INTERMODAL HUB</b>							
SIS Connector	2.	FEC – US1 Philips Highway Access Improvements	US1 Philips Highway at existing entrance to FEC Intermodal Facility	Installation of a signal and provision of adequate storage lengths at the FEC entrance at Stepp Ave/Philips Hwy intersection.	Improve access to the FEC Bowden Yard via major roads and will reduce the usage of local roads (Stepp Ave, Richards St and Bowdendale Ave).	Quick fix.	\$200,000**
SIS Connector	3.	US1 Philips Highway	SR202 (J. T. Butler Blvd) to SR126 (Emerson St.)	US 1 Philips Highway Improvements (6L) (SIS Project).	Improve over all truck movement to/from FEC intermodal hub.	Mid Term. SIS. TIP – Design in FY 2007/08.	\$56,000,000
	4.	US1 Philips Highway Intersection Improvements	Intersections of US1 Philips Highway at - Bowden Road	Improvements to the intersections of US1 Philips Hwy and Bowden Rd and Philips Highway and University Blvd.	Improve over all truck movement to/from FEC intermodal hub.	Quick-fix	\$200,000***

<sup>17</sup> SIS indicates that all or a portion of the project is currently on the SIS system (either on a SIS hub, SIS corridor or connector, or emerging SIS corridor or connector) and the project should be eligible for SIS funding.

<sup>18</sup> Benefits are related to freight and intermodal movement.

<sup>19</sup> Describes (1) Whether or not the project is recommended for Quick-fix: A short term project suitable for annual CIP and maintenance plans; Mid Term TIP; or Long Term: MPO LRTP, FDOT Work Program.

Describes (2) Whether or not the project is an SIS priority project (SIS); in the FDOT 5-Year Work Program (FDOT); in the First Coast MPO Long Range Transportation Plan (LRTP) or Transportation Improvement Program (TIP); or in a county Capital Improvement Program (CIP).

\*\* Generalized Planning Level Cost Estimate based on general, statewide averages; not to be used for work program estimating. Does not include right-of-way, landscaping, traffic signals, drainage, preliminary engineering and construction engineering inspection.

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
			and - SR 109 (University Blvd.)	The improvements include revised signal timings, signal coordination, and extended storage lengths on turn lanes used by trucks (SB left from University Blvd. and EB right from Philips Hwy).			
SIS Corridor and SIS Connector	5a.	I-95 at SR202 (J. T. Butler Blvd) Interchange Improvements	I-95 at SR202 (J. T. Butler Blvd) Interchange	The planning for major improvements to the US-1/ SR202 (J. T. Butler Blvd) and I-95/SR202 (J. T. Butler Blvd) intersections has been combined into one BJP <sup>20</sup> study. Currently, trucks exiting I-95 NB at SR202 (J. T. Butler Blvd) are required to make a U-turn at Belfort Rd. to go WB on SR202 (J. T. Butler Blvd). Low bridge clearance and difficulty maneuvering are issues for trucks making this U-turn.	Mitigate severe operational problems for truck traffic.	Mid Term. SIS. TIP.	BJP-2 program allocation is \$38 million.
SIS Connector	5b.	US-1 (Philips Hwy.) SR202 (J. T. Butler Blvd) Intersection Improvements	US-1 SR202 (J. T. Butler Blvd) Intersection	The planning for major improvements to the US-1/ SR202 (J. T. Butler Blvd) and I-95/ SR202 (J. T. Butler Blvd) intersections has been combined into one BJP study.	Mitigate severe operational problems for truck traffic.	Mid Term. TIP. Construction scheduled to begin 1 <sup>st</sup> quarter of 2009 and end 1 <sup>st</sup> quarter of 2011.	
<b>C. NORFOLK SOUTHERN INTERMODAL HUB</b>							
SIS Connector	6.	SIS Hub Connector	I-295 to NS Hub	Road Connector to NS Intermodal Hub – Roadway improvements to connect Norfolk Southern to Old Kings Rd. via Picketville Rd. (I-295 to Pritchard Rd, Pritchard Rd to Old Kings Rd, Old Kings Rd to	Provide trucks a better access to hub from I-295.	Mid Term. SIS. PD&E is underway.	\$4,600,000

<sup>20</sup> BJP - Better Jacksonville Plan

\*\*\*Assumes extension of 200 ft.; more detailed studies are required to confirm length. Also see \*\* on prior page.

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
				Pickettville Rd, Pickettville Rd to Edgewood Dr and Edgewood Dr. to NS Intermodal Terminal entrance).			
SIS Connector	7.	Edgewood Drive Intersection Improvements	Edgewood Drive at SR11 (Edgewood Ave. N) near US1 New Kings Road	I. Reconfigure the left turn storage at Edgewood Dr/ SR11 (Edgewood Ave. N). The current left turn storage, which provides access to Price Development Co., is not in use. There is a fence gate at this side of entrance). II. Increase the curb radius for trucks turning between Edgewood Dr. and SR11 (Edgewood Ave.). Trucks were observed to run over the existing curb due to insufficient turning radius.	Improve truck movement at this intersection.	Quick-fix; Currently, being studied by Norfolk Southern PDE.	\$100,000**
SIS Rail	8.	Norfolk Southern Double Track	North end of Simpson Yard to south end of Lacy Siding	Add track between north end of Simpson Yard and south end of Lacy Siding in order to provide double track connection between NS yard and CSX crossing at grade.	Reduce delays to both NS and CSX by reducing wait time for conflicting train traffic at the crossing; also reduce vehicle delay at RR crossing.	Long Term.	\$4,800,000
<b>D. JACKSONVILLE INTERNATIONAL AIRPORT HUB</b>							
Proposed as SIS by First Coast MPO	9.	North International Airport Blvd.	North of SR 102 (Airport Rd) to I-95.	In accordance with the airport master plan, extend International Airport Blvd north from SR 102 (Airport Rd) to I-95. The new 4-lane road will take over the functions of Pecan Park Road North.	Separate truck traffic using the warehouse and distribution facilities from the passenger traffic.	Long Term. FDOT, TIP. Recent PD&E study to determine alignment. Design in FY 2007/08. ROW in 2008/09.	\$22,000,000 Including Design, R/W and construction.
SIS Connector	10.	Truck Wayfinding Project	International Airport Blvd.	Improve signs along the newly constructed section of International Airport Blvd. South.	Guide trucks along Pecan Park Rd and Woodwings Rd from International Airport Blvd. Alleviate any confusion.	Quick-fix.	\$50,000** Includes cost for wayfinding study



SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
<b>E. JAXPORT TALLEYRAND HUB</b>							
SIS Connector	11.	Improvement to SR15 (MLK Jr. Parkway) /21 <sup>st</sup> St. E/Phoenix Interchange	SR15 (MLK Jr. Parkway) at 21 <sup>st</sup> St. and Phoenix	New Interchange at SR15 (MLK Jr. Parkway) at 21 <sup>st</sup> St. and Phoenix.	Improve access to the port.	Mid Term. SIS. FDOT. TIP: ROW in FY 2005/06 to FY 2007/08. Construction in FY 2007/08.	\$66,046,000
SIS Connector	12.	Improvement to 21 <sup>st</sup> St. at Talleyrand Ave. intersection	21 <sup>st</sup> St. at Talleyrand Ave.	Improvements to 21 <sup>st</sup> St/ Talleyrand Ave intersection. Provide additional storage lane for trucks from 21 <sup>st</sup> St east to Talleyrand Ave south. Also improve all turn radiuses; improve drainage; and resurface existing roadway.	Improve truck movement at this intersection, which is heavily used by trucks accessing port.	Mid Term. SIS.	\$950,000
SIS Hub	13.	Cargo Tracking Project	Talleyrand Marine Terminal	Secure internet-based system to track containers entering and leaving the port.	Create a secure system to track containers entering and leaving the port.	Mid Term. TIP.	\$1,785,600 (Congressional Earmark = 50%)
SIS Rail	14.	Rail Switching Yard Expansion	Talleyrand Marine Terminal (TMT)	Design, permit and build additional track capacity between existing TMT on-site rail facilities and F&J switching yard. Due to construction of a 550,000 S.F. warehouse, JAXPORT projects an annual increase of 8,000 rail cars--this capacity is not currently available at Talleyrand; will also provide track space for car inspections, car cleaning, and light repairs.	Help accommodate port's immediate needs for growth.	Long Term. SIS.	\$1,000,000
<b>F. JAXPORT BLOUNT ISLAND and DAMES POINT HUB</b>							
Recently Designated SIS Connector	15.	SR105 (Heckscher Drive) Improvements	Drummond Point to August Drive	Widen 2 miles of SR105 (Heckscher Drive) to a four-lane urban section with curbs and gutters, bike lanes and sidewalk on the south side of the road.	Improve truck movement to and from JAXPORT Hubs, as well as tank farms along Heckscher Dr. Trucks utilize this portion of Heckscher Dr.	Mid Term. TIP. Currently in design. Design and ROW acquisition	BJP-1 program allocation is \$11 million

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
					to access I-95.	scheduled for completion in 2006.	
	16a.	Extend New Berlin Road South	West of SR9A to Dames Point Rd	Extend New Berlin Rd S. (at the point it turns east under SR9A, south of SR105 Heckscher Dr.) west of SR9A south to Dames Point Rd.	Provide another access to Dames Point Terminal, which is under development.	Long Term. SIS.	\$9,200,000
SIS Rail	16b.	Extend Rail Access	Dames Point Terminal - West of SR9A to Dames Point Rd area	Extend existing rail due south in the same area as the New Berlin Road South extension. Once on the terminal the rail will be looped to serve all port tenants.	Provide additional rail access to Dames Point Terminal, which is under development.	Long Term. SIS	\$1,658,800
<b>G. OTHER DUVAL COUNTY PROJECTS</b>							
SIS Corridor	17.	I-295 at Commonwealth Ave. Interchange Improvements	I-295 at Commonwealth Ave.	Improvements to this interchange such as increasing acceleration and deceleration lane lengths to accommodate trucks. The planned PDE study should offer additional improvement suggestions. This interchange has a very significant amount of trucks entering and exiting I-295. There is both a US Bulk mail and a FedEx facility west of interchange and many other small businesses east and west of this interchange.	Improve over all truck movement in this area, through which many truck travel.	Long Term. TIP. PDE study for FY 2008/09.	To be determined during PDE.
SIS Corridor	18.	I-95 at I-295/SR9A Interchange	I-95 at I-295/SR9A North.	Reconstruct Interchange.	Improve over all truck movement.	Mid Term. SIS. FDOT. TIP-- Currently in multiple phases. Initial phase to provide flyover from SB I-95 to EB SR9A, with CST in FY 07; next phase to more completely	\$34,861,000 for construction of initial phase. CST not funded for next phase.

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
						reconstruct interchange – Design (PE) in FY06, ROW in FY10, CST not funded.	
	19.	SR23 (Branan Field-Chaffee Rd.) Interchanges	@ US90 (Beaver St.) and I-10	Major Interchange Reconstruction	Improve truck movement to and from regional distribution centers along and near US90 (Beaver St.), such as Winn Dixie, Publix and Michaels.	Long Term. LRTP. Listed in the Cost Feasible Plan of the LRTP as an interchange reconstruction at both US90 and I-10.	\$47, 800,000
<b>H. PORT OF FERNANDINA EMERGING HUB (NASSAU COUNTY PROJECTS)</b>							
SIS Corridor and Emerging SIS Connector	20.	I-95 at SR200 Interchange	I-95 at SR 200	Improvements to I-95 ramp terminal intersections with SR200. The I-95/SR 200 interchange has yield condition for NB off-ramp without an acceleration lane, and a stop condition for the SB off-ramp, both of which were observed to cause undesirable delays. Safety issue relative to sight distance. Consider signalization.	Improve truck access route to/from the emerging SIS hub via I-95.	Quick fix.	\$400,000**
Emerging SIS Connector	21.	SR200 Widening	East of I-95 to Amelia River Bridge (ICWW)	Improvements to widen 11 miles of SR200 from I-95 to Amelia River Bridge (ICWW).	Improve over all truck movement to/from the emerging SIS hub.	Mid Term. SIS. FDOT. TIP – ROW in FY 2007/08 to 2009/10.	\$48,000,000 (Preliminary Engineering and Construction)
Emerging SIS Connector	22.	Local Streets Reconstruction	Atlantic to Dade St.	Reconstruct Fernandina Beach local streets (8th St. from Atlantic Ave. to Dade St./ Dade St./ Front St. etc). 8th St. is a 2-lane undivided roadway from Atlantic Ave. to Dade St.	Improve truck access to the merging SIS hub and the paper mill.	Long Term. SIS	\$2,500,000 (Engineering and Construction)
	23.	3 <sup>rd</sup> Street to 8 <sup>th</sup> Street Connector	3 <sup>rd</sup> St. Extension to 8 <sup>th</sup> St.	Extend 3 <sup>rd</sup> St to connect to 8th St (SR200 in Fernandina).	Provide an alternative route for truck access to the emerging SIS hub.	Long Term. SIS	\$4,000,000 (Preliminary Engineering,

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
							R/W and Construction)
Emerging SIS Connector	24.	SR200 Grade Separated Interchanges	@ US17, Chester Rd. and CR107	Grade separate 3 intersections along SR200. Currently, trucks do not always stop at the intersections and are slow to accelerate once they stop.	Promote free flow traffic along the emerging SIS Connector.	Long Term. SIS.	\$1,500,000 for 3 PDE studies (\$500,000 each)
<b>I. CLAY COUNTY PROJECTS</b>							
	25.	Reynolds Industrial Park Access	Reynolds Blvd at SR16	Redesign entrance at intersection of Reynolds Industrial Park (Reynolds Blvd. and SR16). Recommended improvements include provision of left turn bays, signalization (if warranted), removal of median storage.	Improve truck access at industrial park.	Quick-fix.	\$120,000**
<b>J. ST. JOHNS COUNTY PROJECTS</b>							
SIS Corridor	26.	I-95 at CR210 ramp improvements	I-95 at CR210	Provide a right turn storage lane at the NB off-ramp from I-95 to CR210, which currently only has one lane at the intersection.	Improve truck operations at this interchange, at which a significant number of trucks were observed turning right.	Mid Term. TIP – PDE study/interchange modification report for FY 2008/09. CIP – CR210 widening near I-95 area, funded in prior years and FY2005.	\$500,000 for the PDE study.
SIS Corridor	27.	I-95 at SR16 roadway improvements	I-95 at SR16	Increase the left turn storage length for EB left-turn onto NB on ramp and WB left-turn onto SB on ramp. It is very short and may cause blockage of through lanes. Improve turn radius at NB off ramp where trucks run off the pavement for NB right turns.	Improve truck operations at this interchange, which serves retail outlet malls.	Mid Term	\$300,000 for PDE Study

SIS <sup>17</sup>	No.	PROJECT	LIMITS	DESCRIPTION	BENEFITS <sup>18</sup>	STATUS <sup>19</sup>	COST
	28.	SR207 at Dobbs Road Cutoff Intersection Improvements	SR207 at Dobbs Road Cutoff	Improve curb radius at the intersection of Dobbs Rd cutoff and SR207. Dobbs Rd cutoff connects SR207 to Dobbs Rd. Trucks were observed to run over the curb.	Improve truck operation at this intersection, which serves many small business and industrial sites.	Quick-fix	\$50,000**

## **Section VIII. Summary and Conclusions**

This section primarily focuses upon describing efforts that will continue the consideration of freight into the First Coast MPO planning process, including an annual review of freight projects.

### Continuous Role for the BIG Roundtable

In order to continue coordination and participation with/from freight stakeholders into the planning process, the First Coast MPO will continue to convene quarterly meetings of the BIG Roundtable. Meetings will initially focus on presentations from roundtable members. Meetings will also strive to bring resources to the attention of the roundtable.

### UPWP – Recommendations for Annual Update of Quick-Fix Projects

The Annual Unified Planning Work Program process should be used as the time to review, monitor and update freight projects, and specifically quick-fix projects. At this time the First Coast MPO will communicate the list of projects to the local governments, as well as the state, while planning the planning activities for the next fiscal year. It is recommended that an annual element of freight improvements/projects using FDOT maintenance, county and city capital improvement programs be funded.

### At-Grade Rail Separation Locations

The First Coast MPO supports working with the railroad companies to get mutual benefits (private and public) and cost sharing as related to potential at-grade rail closures or consolidations. For overpasses that are not feasible, the First Coast MPO supports a recommendation to investigate potential opportunities for closing crossings or for building overpasses at nearby locations.

### On-Going Freight Facility Planning

Funding is recommended for on-going freight facility planning at the First Coast MPO. There is an on-going need to review and update freight related data. Recently, JAXPORT announced that Japan-based shipping company Mitsui OSK Lines Ltd. will build a \$200 million terminal at Dames Point, which is estimated to bring about 5,000 jobs, double the port's capacity and eventually make Jacksonville one of the top 10 container ports in the country. Impacts from the future Mitsui terminal are not included in this freight study. It is anticipated that the anchor tenant (Mitsui) will cause spin off businesses and distribution centers and more inbound freight, as well as additional freight infrastructure improvement needs. Additionally, updated 2003 commodity flow data is now available to Florida MPOs via the FDOT.

### Lessons Learned

During the course of the study, several insights or lessons learned were obtained.

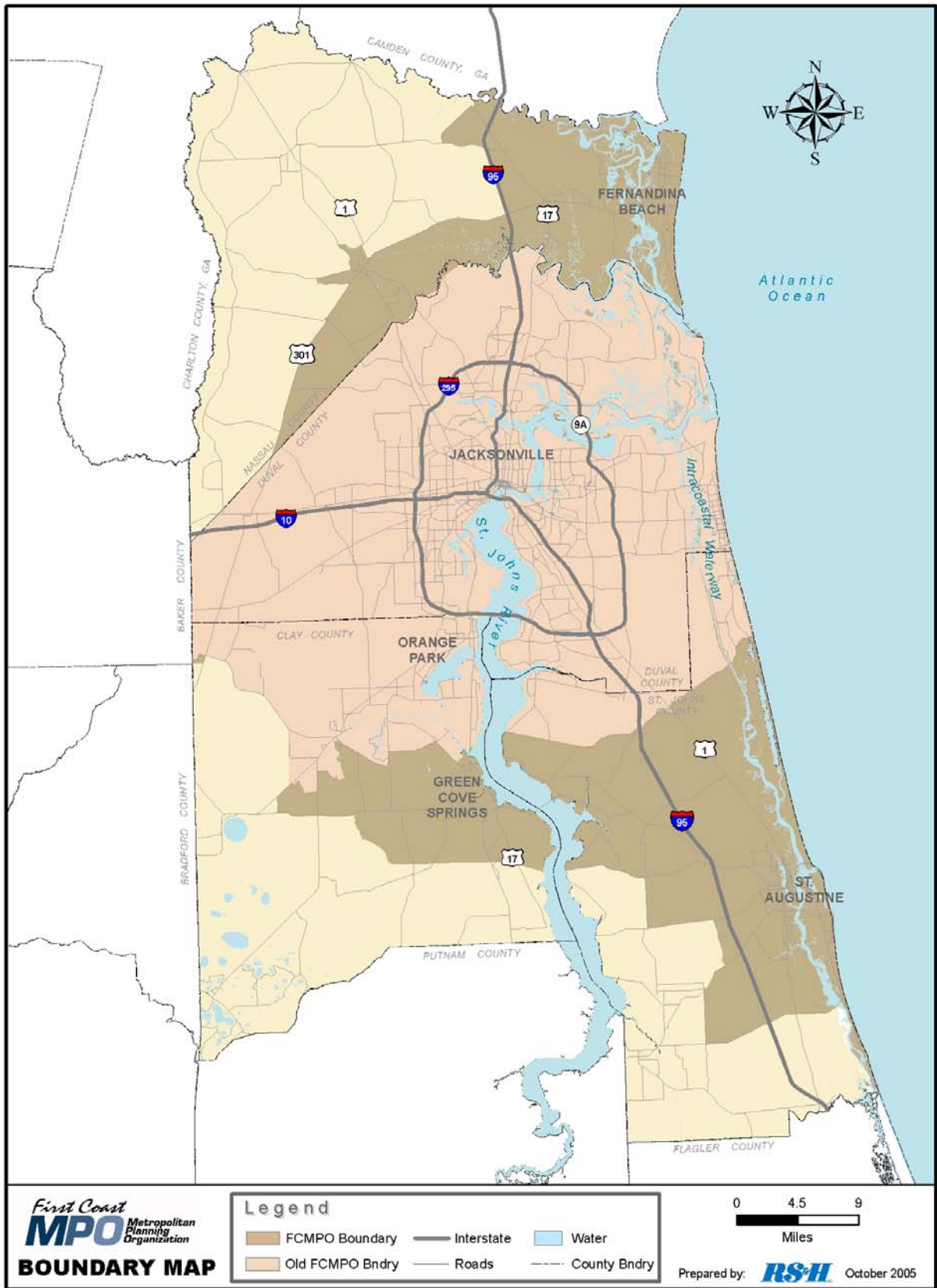
- *Private industry freight stakeholders have different planning horizons from typical long-range planning horizons often found in the typical MPO planning process. For example, typical MPOs have a twenty-year long-range transportation plan, while a long range plan in the business sector might be a five-, three- or one- year plan. Quick-fix projects were recommended within the study to address the different planning horizons.*

- *There is a continual need to communicate and demonstrate the value of the First Coast planning process to freight industry participants, otherwise they are not likely to participate.* Communicating and demonstrating the value of the MPO planning process includes providing fast response to major issues and questions, including timely and informative discussion items on the BIG Roundtable agenda and producing valuable freight related results from the process.
- *A continuous and ongoing dialogue with freight industry stakeholders is crucial to obtaining information and data; that is often proprietary.* Continued regular meetings of the First Coast MPO's BIG Roundtable will encourage ongoing dialogue and networking and facilitate the sharing of information. In some instances, particularly when stakeholder(s) do not attend the BIG Roundtable, it may be necessary to initiate periodic phone calls and/or set up periodic one-on-one meetings. One-on-one meetings went very well; participants appeared to be open and candid.
- *Meetings with the BIG Roundtable should be relevant to the stakeholders, focusing on developing freight projects, addressing freight issues in the short term and providing valuable freight related information; not on general First Coast MPO housekeeping issues.*
- *Meetings with the BIG Roundtable should be limited to an hour.* Focused, relevant and short agendas will achieve maximum input/participation with minimal time commitments.

# **APPENDIX A**

## Study Area



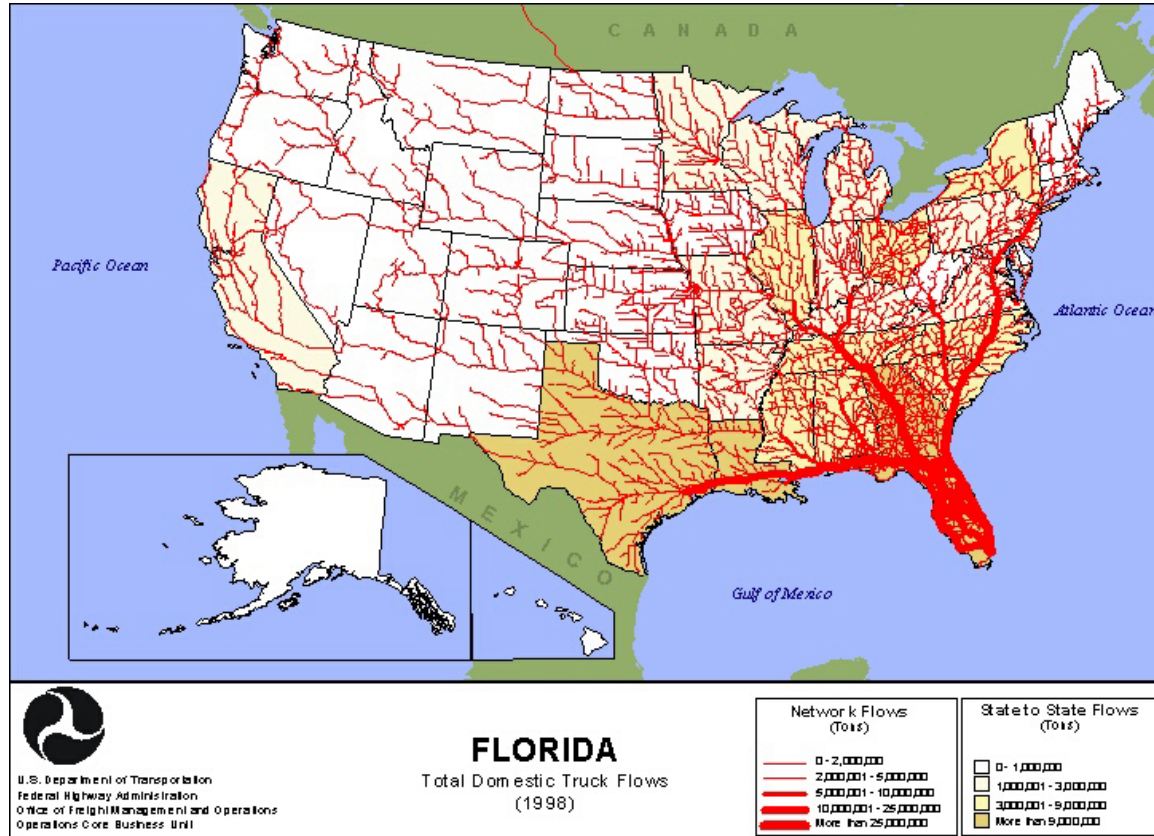


## **APPENDIX B**

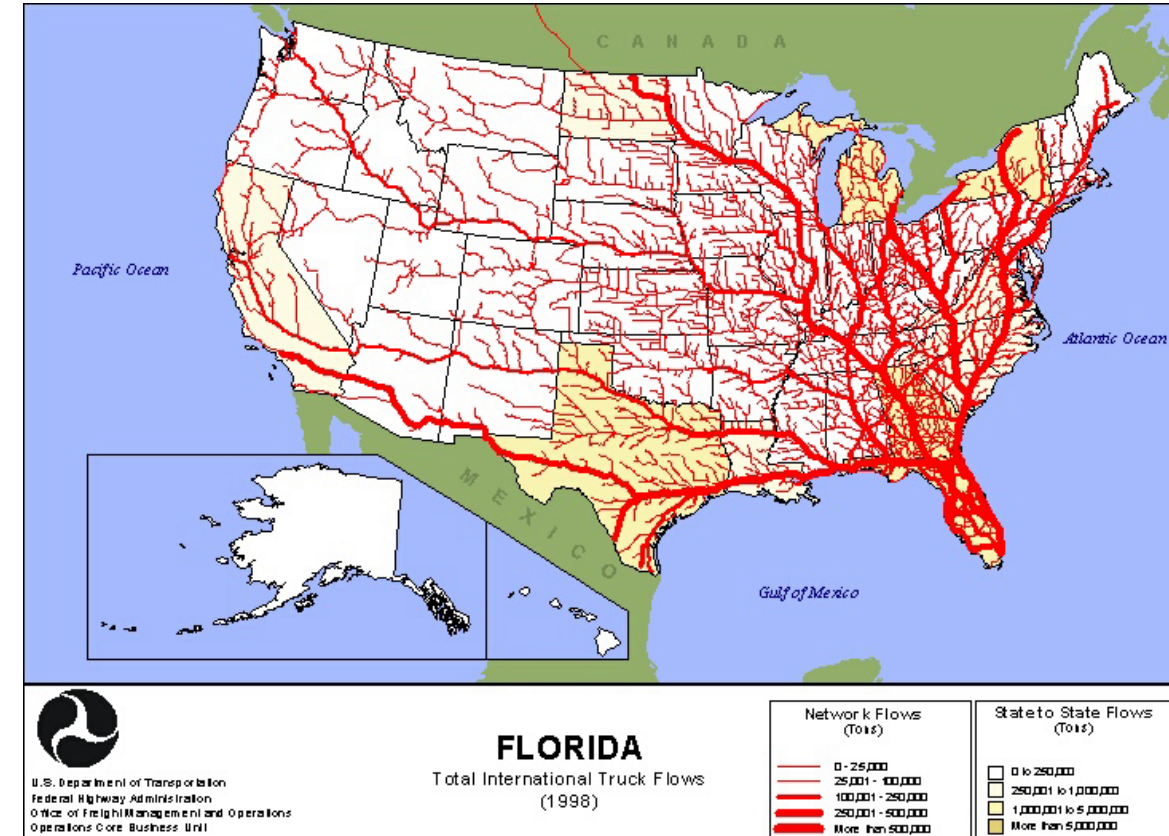
Total Freight Flows throughout the U.S. Traveling to and From Florida



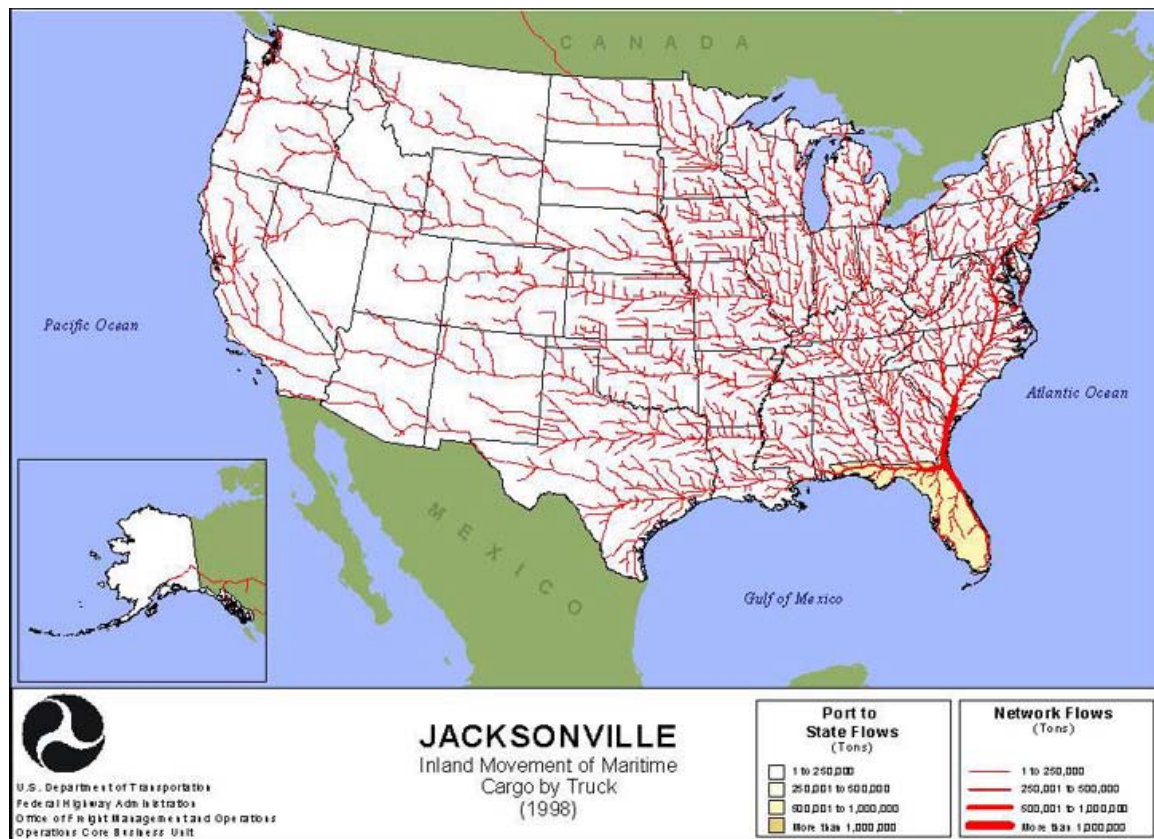
US map showing freight network flows by rail in all 48 contiguous states, with close to 20 million tons for the year (1999) shown on rail networks within Florida and between Florida and Louisiana, Illinois, Kentucky and Georgia.



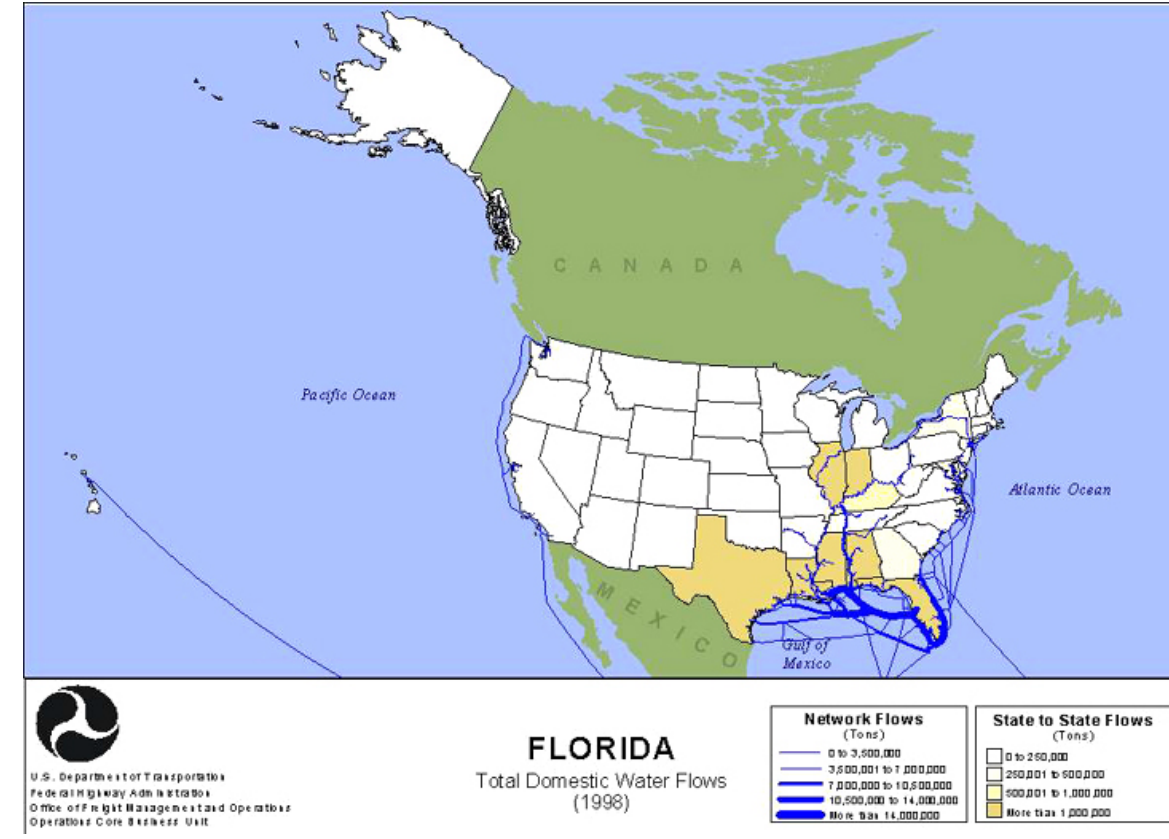
U.S. map showing 1998 freight flows by truck, with more than 9 million tons shown flowing within Florida and between Florida and Georgia, Louisiana and Texas. Network flows by truck also are shown in all 48 contiguous states, with more than 25 million tons shown on networks between Florida and Texas, Tennessee and Virginia.



U.S. map showing 1998 freight flows by truck, with between 1 and 5 million tons shown flowing within Florida and between Florida and Georgia, Texas, Michigan and New York. Network flows by truck also are shown in all 48 contiguous states, with more than 500,000 tons shown on networks between Florida and Georgia, South Carolina, Virginia, New York, Texas, Michigan, North Dakota and California.



U.S. map showing 1998 freight flows by truck, with between 500,000 and 1 million tons flowing from the Jacksonville port within Florida. Network flows by truck form gateways also shown in Alaska and all 48 contiguous states, with between 500,000 and 1 million tons on networks within Florida and to Georgia, and between 250,000 and 500,000 tons along the East Coast.



Map of North America showing 1998 freight flows by water, with more than 1 million tons shown between Florida and Alabama, Mississippi, Louisiana, Texas, Illinois and Indiana. Network flows by water also are shown, with more than 14 million tons flowing along the East Coast of Florida and the Gulf Coast of Florida, Alabama, Mississippi and Louisiana.

## **APPENDIX C**

### Freight-Related Industries in the Region (NAICS)

## Appendix C. Goods Movement Industry Cluster

Industry	Description
<b>Trucking</b>	
Trucking and courier services (4841, 4842, 4921, 4922, 5621)	This general category of trucking activities is divided into four groups described below, but excludes air cargo: <ul style="list-style-type: none"> <li>• Local trucking without storage includes the largest group of commercial truckers.</li> <li>• Trucking includes household goods (moving) and owner-operators engaged in <i>over-the-road</i> service. Does not include local trucking and small package couriers (e.g., less than 100 pounds).</li> <li>• Local trucking with storage includes most local moving and storage companies.</li> <li>• Courier services include small package, letter, and parcel, including car-based and bicycle operations as well as light trucking, but excluding air couriers.</li> </ul>
U.S. Postal Service and support services for trucking and courier (3262, 3362, 4211, 4218, 4413, 4543, 5321, 8111)	<ul style="list-style-type: none"> <li>• Motor vehicles and motor vehicle equipment. Truck and bus bodies, including ambulances, and truck trailers.</li> <li>• Motor vehicles and motor vehicle parts. This category includes truck and trailer manufacturers, but is principally passenger cars.</li> <li>• Machinery, equipment, and supplies. Transportation equipment and supplies includes supplies and parts for both freight and passenger vehicles, but excludes entire motor vehicles.</li> <li>• Automotive rental and leasing without drivers. This includes truck rental and leasing without drivers.</li> <li>• Automotive repair shops. This category includes tire re-treading and repair shops, which are most involved with goods movement, because retreads are common in trucking.</li> <li>• Fuel.</li> <li>• Tires.</li> </ul>

Industry	Description
<b>Warehousing and Distribution</b>	
Public warehousing and storage (4931, 5311)	<p>This general category of activities involves industries that are major truck trip generators and divides into four groups described below:</p> <ul style="list-style-type: none"> <li>• Farm product warehousing and storage. Primarily grain elevators, etc.</li> <li>• Refrigerated warehousing and storage. Primarily cold storage, meat, foods, pharmaceuticals, and dairy.</li> <li>• General warehousing and storage. Includes self-store, mini-storage, and other businesses that handle personal possessions rather than commercial goods.</li> <li>• Special warehousing and storage, warehousing activities not classified elsewhere.</li> </ul>
Terminal and joint terminal maintenance (4884)	This includes terminal maintenance facilities for motor freight.
<b>Marine Cargo and Shipping</b>	
Deep sea foreign transportation of freight and Deep sea domestic transportation of freight (4831)	
Water transportation of freight (4832)	This excludes freight transportation on the Great Lakes-St. Lawrence Seaway
Services incidental to water transportation (4883, 5324)	This includes marine cargo handling; towing and tugboat services, many of which are engaged in towing recreational boats; and a mix of commercial and recreational firms' water transportation services that are not classified elsewhere. Marinas are not included, because they are almost entirely recreational.
<b>Air Cargo</b>	
Air transportation, scheduled and air courier (4811, 4812, 4879, 4881, 4921, 5617, 6219)	Includes both passenger and cargo carriers, which are mostly passenger, but separates out air courier services couriers of letters and parcels. This group excludes non-scheduled air transportation and airports, flying fields, and airport terminal services, which are mostly passenger services.
<b>Rail Freight</b>	
Railroads and support service for railroads (3339, 3365, 4885)	Includes line-haul operations for both freight and passenger railroads, specifically Amtrak and regional commuter agencies and railroad switching and terminal establishments mostly local switching services and short-lines. This also includes rental of railroad cars and ancillary services, such as rail car cleaning and passenger and railroad equipments

## **APPENDIX D**

FDOT Northeast Economic Region SIS Hubs, Corridors and Connectors  
(<http://www.dot.state.fl.us/planning/sis/atlas/neregion.pdf>)



## Appendix D – SIS Hubs, Corridors and Connectors

### Northeast Economic Region

Table NE3. SIS Hubs and Corridors that Meet Adopted Criteria and Thresholds











	SIS commercial service airports	Jacksonville International
	SIS deepwater seaports	Port of Jacksonville
	SIS interregional or interstate passenger terminals	<b>Greyhound Intercity Bus Terminals</b> Jacksonville <b>Intermodal Centers</b> Jacksonville Multimodal Terminal Center ( <i>planned</i> )
	SIS spaceport	None
	SIS intermodal freight rail terminals	<b>FEC Intermodal Terminals</b> Jacksonville <b>CSX Intermodal Terminal</b> Jacksonville <b>Norfolk Southern Intermodal Terminal</b> Jacksonville
	SIS highways	<b>Interstates</b> I-10, I-95, I-295 (entire lengths) <b>Turnpikes and Expressways</b> Jacksonville Eastern Beltway (SR 9A) Jacksonville Eastern Beltway (SR 9B) ( <i>planned</i> ) <b>Other FHHS Facilities</b> U.S. 301/SR A1A from SR 326 to I-95 SR 26, SR 331, SR 20 and SR 207 from U.S. 19/98 to I-95 U.S. 1 from I-295 to the Georgia State Line

Table NE3. SIS Hubs and Corridors that Meet Adopted Criteria and Thresholds (continued)



	SIS freight rail corridors	<b>CSX Lines</b> From Auburndale north to Jacksonville via Orlando and Sanford From Plant City north to Baldwin via Zephyrhills, Wildwood, and Ocala From Baldwin north to Callahan From Jacksonville northwest to Georgia State Line via Dinsmore and Callahan From the Alabama State Line east to Jacksonville via Pensacola, Chattahoochee, Tallahassee, and Baldwin <b>FEC Lines</b> From Miami north to Jacksonville <b>Norfolk Southern Lines</b> From Jacksonville northwest to the Georgia state line
	SIS interregional or interstate passenger rail corridors	<b>Amtrak Corridors</b> From Auburndale north to Jacksonville via Orlando and Sanford (along CSX tracks) From Vitis north to Baldwin via Zephyrhills, Wildwood, and Ocala (along CSX tracks) From Jacksonville northwest to Georgia State Line via Dinsmore and Callahan (along CSX tracks) From the Alabama State Line east to Jacksonville via Pensacola, Chattahoochee, Tallahassee, and Baldwin (along CSX tracks)
	SIS waterways	Atlantic Intracoastal Waterway and shipping lanes

**Northeast Economic Region**

**Table NE4. SIS Intermodal Connectors that Meet Adopted Criteria and Thresholds**








	SIS road connectors	<p><b>Port of Jacksonville</b>                  Talleyrand: I-95 to U.S. 1 (via MLK Jr. Parkway) to Phoenix Avenue to 21<sup>st</sup> Street to North Talleyrand Avenue to 11<sup>th</sup> Street entrance                  Blount Island: SR 9A to SR 105 (Heckscher) to Dave Rawls Boulevard/Blount Island Road to entrance                  Dames Point: SR 9A to SR 105 (Heckscher) to August Drive to entrance</p> <p><b>Jacksonville International Airport</b>                  I-95 to SR 102 (Airport Road) to passenger entrance                  I-295 to Duval Road to South International Airport Boulevard to air cargo access road to cargo entrance</p> <p><b>Jacksonville FEC Intermodal Freight Terminal</b>                  I-95 to J Turner Butler Boulevard to U.S. 1 to entrance</p> <p><b>Jacksonville CSX Intermodal Freight Terminal</b>                  I-295 to Pritchard Road to Sportsman Club Road to entrance</p> <p><b>Jacksonville NS Intermodal Freight Terminal</b>                  I-295 to Pritchard Road to Old Kings Road to SR 111 (Edgewood Avenue) to Edgewood Drive to entrance</p> <p><b>Jacksonville Greyhound Bus Terminal</b>                  I-95 to Forsyth Street to Pearl Street to Bay Street entrance; exit to Forsyth Street to Pearl Street to Bay Street to Broad Street to Adams Street to I-95</p> <p><b>Jacksonville Multimodal Terminal Center</b>                  I-95 to Forsyth Street to Lee Street to entrance; exit to Lee Street to Adams Street to I-95 <i>(planned)</i></p>
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**Table NE4. SIS Intermodal Connectors that Meet Adopted Criteria and Thresholds (continued)**




	SIS rail connectors	<p><b>Port of Jacksonville</b>                  Talleyrand: On-dock JAXPORT Talleyrand Terminal Railroad (third party operator) from seaport property to CSX and Norfolk Southern Lines                  Blount Island: On-dock CSX connection from seaport property on Blount Island to CSX and Norfolk Southern Lines                  Dames Point: CSX connection from seaport property on Dames Point to CSX and Norfolk Southern Lines</p> <p><b>Jacksonville FEC Intermodal Freight Terminal</b>                  On Jacksonville-Miami FEC line</p> <p><b>Jacksonville CSX Intermodal Freight Terminal</b>                  Connection to CSX line</p> <p><b>Jacksonville NS Intermodal Freight Terminal</b>                  On Norfolk Southern line from Jacksonville northwest to Georgia</p> <p><b>Jacksonville Multimodal Terminal Center</b>                  On Jacksonville-Miami FEC line <i>(planned)</i></p>
		SIS waterway connectors

**Northeast Economic Region**

**Table NE5. SIS Hubs and Corridors that Meet Adopted Criteria and Thresholds**

	Emerging SIS commercial service airports	None
	Emerging SIS deepwater seaports	Port of Fernandina
	Emerging SIS interregional or interstate passenger terminals	None
	Emerging SIS intermodal freight rail terminals	None
	Emerging SIS highways	<b>Non-FIHS Routes</b> U.S. 17 from I-4 to I-295 SR 100/SR 100A/U.S. 41 from I-95 to I-10
	Emerging SIS freight rail corridors	None
	Emerging SIS waterways	<b>St. Johns River</b> Between the Florida East Coast Railway Bridge in Jacksonville and Lake Harney on the Seminole-Volusia county border

**Table NE6. Emerging SIS Intermodal Connectors that Meet Adopted Criteria and Thresholds**

	Emerging SIS road connectors	<b>Port of Fernandina</b> I-95 to SR A1A to 8 <sup>th</sup> Street to Dade Street to Front Street to entrance
	Emerging SIS rail connectors	<b>Port of Fernandina</b> On-dock CSX rail from seaport property to CSX and Norfolk Southern lines in Jacksonville
	Emerging SIS waterway connectors	<b>Port of Fernandina</b> Atlantic Intracoastal Access waterway connector

## **APPENDIX E**

### **BIG Roundtable Membership/Invitation List**

## Appendix E

Mr. Charles Lynch, Vice President  
Transportation  
Florida East Coast Industries, Inc.  
One Malaga Street  
St. Augustine, FL 32085  
[clynch@feci.com](mailto:clynch@feci.com)  
904-826-2427

Mr. Chip Seymour  
Jacksonville Airport Authority  
P O Box 18018  
Jacksonville, FL  
32229-0018  
[cseymour@jaa.aero](mailto:cseymour@jaa.aero)  
904 741 2000

Mr. Hussein Cumber, Public Relations  
Florida East Coast Industries, Inc.  
P O Box 1048  
St. Augustine, FL 32085-1048  
[hcumber@feci.com](mailto:hcumber@feci.com)  
904-826-2280

Mr. David Kaufman  
Jacksonville Port Authority  
2831 Tallyrand Ave.  
Jacksonville, FL 32206  
[David.Kaufman@jaxport.com](mailto:David.Kaufman@jaxport.com)  
904 630 3044

Mr. David Yarber  
Asst. Terminal Trainmaster  
Florida East Coast Industries, Inc.  
7150 Philips Highway  
Jacksonville, FL 32256  
[dyarber@feci.com](mailto:dyarber@feci.com)

Ms. Deborah Thompson, Vice  
President/COO  
First Coast African American Chamber of  
Commerce  
1817-A North Myrtle Avenue  
Jacksonville, FL 32209  
[dthompson@fcaacc.org](mailto:dthompson@fcaacc.org)

Mr. Eric Lindstrom  
Jacksonville Economic Development  
Commission  
128 East Forsyth Street, Suite 600  
Jacksonville, FL 32202  
[ericl@coj.net](mailto:ericl@coj.net)

Mr. Eric Peterson, P.E.  
Asst. Chief Engineer, Public Projects  
CSX Transportation  
4901 Belfort Rd., Suite 130 (S/C J370)  
Jacksonville, FL 32256  
[Eric.Peterson@csx.com](mailto:Eric.Peterson@csx.com)  
904 245 1245

Mr. Gary Henderson  
Norfolk Southern Corp.  
600 West Peachtree Stt. NW, Suite 1700  
Atlanta, GA 30308  
[gyhender@nscorp.com](mailto:gyhender@nscorp.com)

Mr. Jack Lueders  
Gate Petroleum  
5880 Channel View Drive  
Jacksonville, FL 32226  
[jlueders@gatepetro.com](mailto:jlueders@gatepetro.com)  
904-751-3405 (info is dated - from phase I  
list)

Mr. Jeff Spence  
2625 West 5<sup>th</sup> Street  
Jacksonville, FL 32254  
[jspence@icslogistics.com](mailto:jspence@icslogistics.com)  
904-786-8038

Mr. Jim Handoush  
Landstar Logistics  
13410 Sutton Park Drive South  
Jacksonville, FL 32224  
[jhandoush@landstar.com](mailto:jhandoush@landstar.com)

Mr. Joe Wall, Gen. Supt.  
Amtrak  
8301 Cypress Plaza Drive, Suite 107B  
Jacksonville, FL 32256  
[wallj@amtrak.com](mailto:wallj@amtrak.com)

Mr. John Lucas, V.P./G.M., Intermodal  
Marketing and Sales  
Florida East Coast Industries, Inc.  
One Malaga Street  
P.O. Box 1048  
St. Augustine, FL 32085-1048  
[jlucas@feci.com](mailto:jlucas@feci.com)  
904-669-0191 (cell)  
904-826-2250 (Phone)  
904-826-2252 (Fax)

Ms. Kari Hall Keating  
St. Augustine Chamber of Commerce  
1 Riberia Street  
St. Augustine, FL 32084  
[director@staugustinechamber.com](mailto:director@staugustinechamber.com)

Ms. Kelli Jo Kilberg  
Clay County Chamber of Commerce  
1737 Kingsley Avenue  
Orange Park, FL 32073  
[kjkilberg@claychamber.com](mailto:kjkilberg@claychamber.com)

Ms. Kendra Tanner  
Director, Business Development  
Allstates WorldCargo  
#4 Lakeside Drive South, PO Box 959  
Forked River, NJ 08731  
[ktanner@allstatesair.com](mailto:ktanner@allstatesair.com)

Ms. Melanie Ferreira, Executive Director  
Nassau County Economic Development  
Board  
760 William Burgess Blvd.  
Yulee, FL 32097  
[mferreira@nassaucountyfla.com](mailto:mferreira@nassaucountyfla.com)

Mr. Peter Rutski, Senior Associate  
The Tioga Group  
329 North Roscoe Blvd.  
Ponte Vedra Beach, FL 32082  
[prutski@tiogagroup.com](mailto:prutski@tiogagroup.com)

Mr. Phil Worth  
District Public Transit Manager  
Florida Dept. of Transportation  
2250 Irene Street  
Jacksonville, FL 32204  
[Phil.worth@dot.state.fl.us](mailto:Phil.worth@dot.state.fl.us)

Mr. Robert Sandlin  
Patriot Transportation  
Art Museum Drive Location  
[rsandlin@patriottrans.com](mailto:rsandlin@patriottrans.com)  
904-396-5733

Ms. Lisa Pate  
Landstar Logistics  
13410 Sutton Park Drive South  
Jacksonville, FL 32224  
[lpate@landstar.com](mailto:lpate@landstar.com)

Mr. Ted McGowan  
Clay County Economic Development  
Organization  
PO Box 477  
Green Cove Springs, FL 32043  
[gatorpted@aol.com](mailto:gatorpted@aol.com)  
904-284-3676

Mr. Terry Haber  
TNT Logistics  
10751 Deerwood Park Blvd., Suite 200  
Jacksonville, FL 32256  
[Terry.haber@tntlogistics.com](mailto:Terry.haber@tntlogistics.com)

Mr. Todd Duncan, Executive Director  
Keep Nassau Beautiful, Inc.  
493 US Highway 17 North, Suite 3  
Yulee, FL 32097  
[tood@keepnassaubeautiful.org](mailto:tood@keepnassaubeautiful.org)

Mr. Val Schwec  
Nassau Terminals  
501 North 3<sup>rd</sup> Street  
Fernandina Beach, FL 32034  
[vschwec@nassauterminals.com](mailto:vschwec@nassauterminals.com)  
904-261-0753

Ms. Amy Whitman  
Director, Government Affairs  
Jacksonville Chamber of Commerce  
3 Independent Drive  
Jacksonville, FL 32202  
[Amy.whitman@myjaxchamber.com](mailto:Amy.whitman@myjaxchamber.com)

Commissioner Ed Gandy, Chairman  
BIG Transportation Roundtable  
Nassau Ocean Highway and Port Authority  
97236 Pirates Way  
Yulee, FL 32097  
[edgandy@bellsouth.net](mailto:edgandy@bellsouth.net)

Commissioner Cyndi Stevenson  
St. Johns County Commission  
PO Box 349  
St. Augustine, FL 32085-0349  
[cyndistevenson@aol.com](mailto:cyndistevenson@aol.com) or  
[bccd1@co.st-johns.fl.us](mailto:bccd1@co.st-johns.fl.us)

Barbara A. Spaulding, CFRE  
Executive Director, St. Johns Vision  
PO Box 146  
St. Augustine, FL 32085  
[director@stjohnsvision.com](mailto:director@stjohnsvision.com)

**FIRST COAST MPO STAFF**

Ms. Elizabeth De Jesus  
First Coast MPO  
1022 Prudential Drive  
Jacksonville, FL 32207  
[edejesus@fcmo.com](mailto:edejesus@fcmo.com)  
904-306-7505

**RS&H STAFF**

Mr. Monty Selim  
Reynolds, Smith and Hills Inc.  
10748 Deerwood Park Blvd. South  
Jacksonville, FL 32256  
[Monty.selim@rsandh.com](mailto:Monty.selim@rsandh.com)  
904-256-2147

Mr. David Stroud  
Reynolds, Smith and Hills Inc.  
10748 Deerwood Park Blvd. South  
Jacksonville, FL 32256  
[David.stroud@rsandh.com](mailto:David.stroud@rsandh.com)  
904-256-2306



Mr. Stephen Tocknell  
Reynolds, Smith and Hills Inc.  
10748 Deerwood Park Blvd. South  
Jacksonville, FL 32256  
[Stephen.tocknell@rsandh.com](mailto:Stephen.tocknell@rsandh.com)  
904-256-2232

# **APPENDIX F**

## **Stakeholder Survey Form and Cover Letter**



## Appendix F

**FREIGHT MOBILITY STUDY PHASE 2**  
**INTEGRATING ECONOMICS WITH FREIGHT MOBILITY**

**DISPATCHER AND DRIVER SURVEY**

---

(1/6) Date (mmddyy):

Name:  Telephone:  Fax:

Your title:  Email Address:

Company/Agency Name:

Terminal Street Address:  Terminal Zip/Postal Code:

(2/6) **In general terms, what are the transportation problems that affect freight shipments to or from your Jacksonville area terminal?**

(3/6) **What are the transportation benefits that help the timely delivery or pick-up of freight at your Jacksonville area terminal?**

(4/6) **In your opinion, how can the Jacksonville area transportation system be improved?**

(5/6) **Using the examples below as a guide, please list and briefly describe any major or minor transportation problems that delay or obstruct truck shipments to/from your Jacksonville area terminals. Please also describe any potential solution(s) that you recommend.**

LOCATION	PROBLEM	POTENTIAL SOLUTION
Philips Hwy at Terminal entrance	High speed traffic on Philips Hwy	Install traffic signal
I-95 at Bowden Rd	Dangerous weaving required	Rebuild interchange
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

(6/6) **Comments:**

Print a copy for your records before submitting. **Thank You**

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 Revised: January 13, 2005 Page 1 of 1



**FREIGHT MOBILITY STUDY PHASE 2  
INTEGRATING ECONOMICS WITH FREIGHT MOBILITY**



**TERMINAL MANAGER SURVEY**

(1/7) Date (mmdyy):

Name:  Telephone:  Fax:

Your title:  Email Address:

Company/Agency Name:

Terminal Street Address:  Terminal Zip/Postal Code:

(2/7) **In general terms, what are the transportation problems that affect freight shipments to or from your Jacksonville area terminal?**

(3/7) **What are the transportation benefits that help the timely delivery or pick-up of freight at your Jacksonville area terminal?**

(4/7) **In your opinion, how can the Jacksonville area transportation system be improved?**

(5/7) **In the next twelve months, do you expect your business to:**

- increase the volume of freight shipped to or from your Jacksonville area terminal,
- reduce the volume of freight shipments received in or sent from the Jacksonville area,
- relocate its terminal(s) to a different Jacksonville location,
- relocate its terminal(s) away from the Jacksonville area, or
- remain about the same.

**An explanation or description of your business plans can be entered here.**

(6/7) Using the examples below as a guide, please list and briefly describe any major or minor transportation problems that delay or obstruct truck shipments to/from your Jacksonville area terminals. Please also describe any potential solution(s) that you recommend.

LOCATION	PROBLEM	POTENTIAL SOLUTION
Philips Hwy at Terminal entrance	High speed traffic on Philips Hwy	Install traffic signal
I-95 at Bowden Rd	Dangerous weaving required	Rebuild interchange

(7/7) Comments:

Print a copy for your records before submitting.

**Thank You**



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 Revised: January 13, 2005



**FREIGHT MOBILITY STUDY PHASE 2**  
 INTEGRATING ECONOMICS WITH FREIGHT MOBILITY



**The Transportation Club of Jacksonville, Inc.**  
P. O. Box 54719  
Jacksonville, FL 32245-4719  
(904) 813-1628



February 11, 2005

Brian Zeron  
AAA Cooper Transportation  
1700 Flag St.  
Jacksonville, FL 32209

Dear Brian:

On behalf of the Transportation Club of Jacksonville, I am asking for your help in making the Jacksonville area a better place for moving freight.

The First Coast MPO, a regional transportation planning agency, is conducting a freight mobility study for the Jacksonville area. The consultant for this study is Reynolds, Smith and Hills, Inc. The study is entitled "Integrating Economics with Freight Mobility." It is currently scheduled for completion in April 2005.

The study has two purposes:

- 1- to develop a list of the long term and short term road improvements that will do the most to improve freight mobility in Jacksonville, and
- 2- to develop a mechanism for freight stakeholders to have meaningful input into the overall planning of transportation projects.

For the study to be successful we need your personal involvement. We also need your help in identifying dispatchers and truck drivers who can provide additional information.

I have enclosed a CD that includes a presentation about the First Coast MPO and this study. The CD also includes a video about the role of MPO's in freight studies nationwide, a map of major freight routes and hubs in the Jacksonville area, and two similar surveys:

- 1-a survey oriented to terminal managers, and
- 2-a survey oriented to dispatchers and drivers.

Once you have reviewed the overview of the freight mobility study and the freight facilities map, please click on the terminal manager's icon and complete the survey. You can print a copy for your records and then click the submit button. Please request your dispatcher to review the enclosed information as well and complete the dispatcher's survey. Please encourage your dispatcher to ask for input from the local P&D driver's in order to identify problem areas throughout the Jacksonville area.

If you have any questions please call me at (904) 813-1628 or call Mr. Tocknell at (904) 256-2232.

Your participation will make a big difference. Thank you very much!

Regards,

*Kendra Tanner*

Kendra Tanner  
Transportation Club of Jacksonville, Inc.

INTEGRATING ECONOMICS WITH FREIGHT MOBILITY  
STAKEHOLDER PARTICIPATION CD INSTRUCTIONS

This Stakeholder participation disc has been prepared using Microsoft PowerPoint, Microsoft Windows Media Player and Adobe Acrobat Reader software.

System Requirements: the following is needed to use the disc as suggested.

- Internet access (browser of your choice)
- Email access (software of your choice)
- Media Player (software of your choice)
- Adobe Acrobat Reader software

The Integrating Economics with Freight Mobility Stakeholder participation disc should automatically start the PowerPoint show when inserted in your CD-ROM reader. The Main menu will be displayed. If autorun programs are blocked on your computer go to your browser, view the CD, right click the *FreightMenu.pps* file, then click Show or Open.

To end the Stakeholder Participation disc click the Close button in the bottom-right corner of the Main menu and close PowerPoint.

This CD contains

1. The Integrating Economics with Freight Mobility Presentation,
2. The Intermodal Freight – Planning for Progress Video,
3. A Freight Network Map,
4. A Terminal Manager Survey, and
5. A Dispatcher and Driver Survey.

Click the Integrating Economics with Freight Mobility Presentation button to advance to the presentation slide show. In the bottom-right corner of each presentation slide are buttons for Forward and Backward movement and an End Show button that will return you to the Main menu. The slide show provides information on the study project and offers opportunities to view the freight video and network map, and to complete a survey.

Clicking the Freight Video button will open your media player software and begin the *Intermodal Freight – Planning for Progress* video. You can adjust your media player to your specifications and enjoy the show. Close your media player when finished and return to the Main menu.

Clicking the Freight Network Map button opens an interactive map in Acrobat Reader. You can pan around the map and focus into a specific area that you want to review by using the Acrobat Reader toolbar functions.

Click either the Terminal Manager or Dispatcher and Driver survey button to open a survey form in Acrobat Reader. Please note Acrobat Reader cannot save the survey form after you enter data. You can print, submit and reset the form. After completing the form print a copy for your records then click Submit Form. (Your e-mail software should be active, if not a window requesting your exchange server information will pop-up. Provide the e-mail data and continue.) A new e-mail message will open addressed to Stephen Tocknell at RS&H. The data you entered will be attached. Please press Send to route the e-mail. After submitting you can close Acrobat Reader and return to the Main menu.

If you prefer you can print the blank survey form, then complete and mail it to:

Stephen Tocknell, AICP  
Reynolds, Smith and Hills, Inc.  
10748 Deerwood Park Blvd South  
Jacksonville FL 32256

Thank you.

# **APPENDIX G**

## Freight Facilities Map



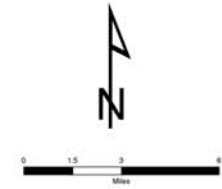
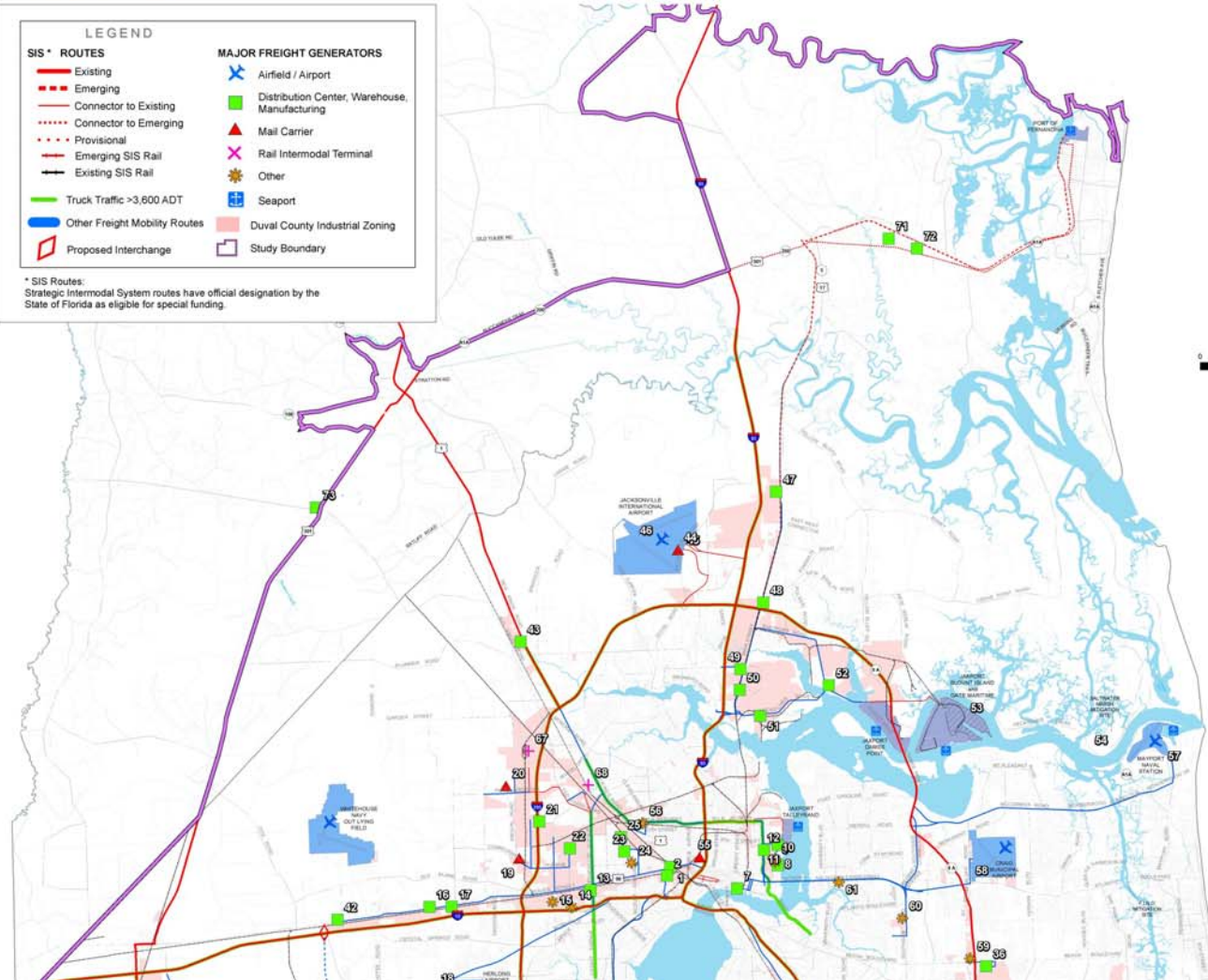
FCMPO FREIGHT MOBILITY ROUTES & GENERATORS  
 Duval and portions of Clay, Nassau and St. Johns Counties



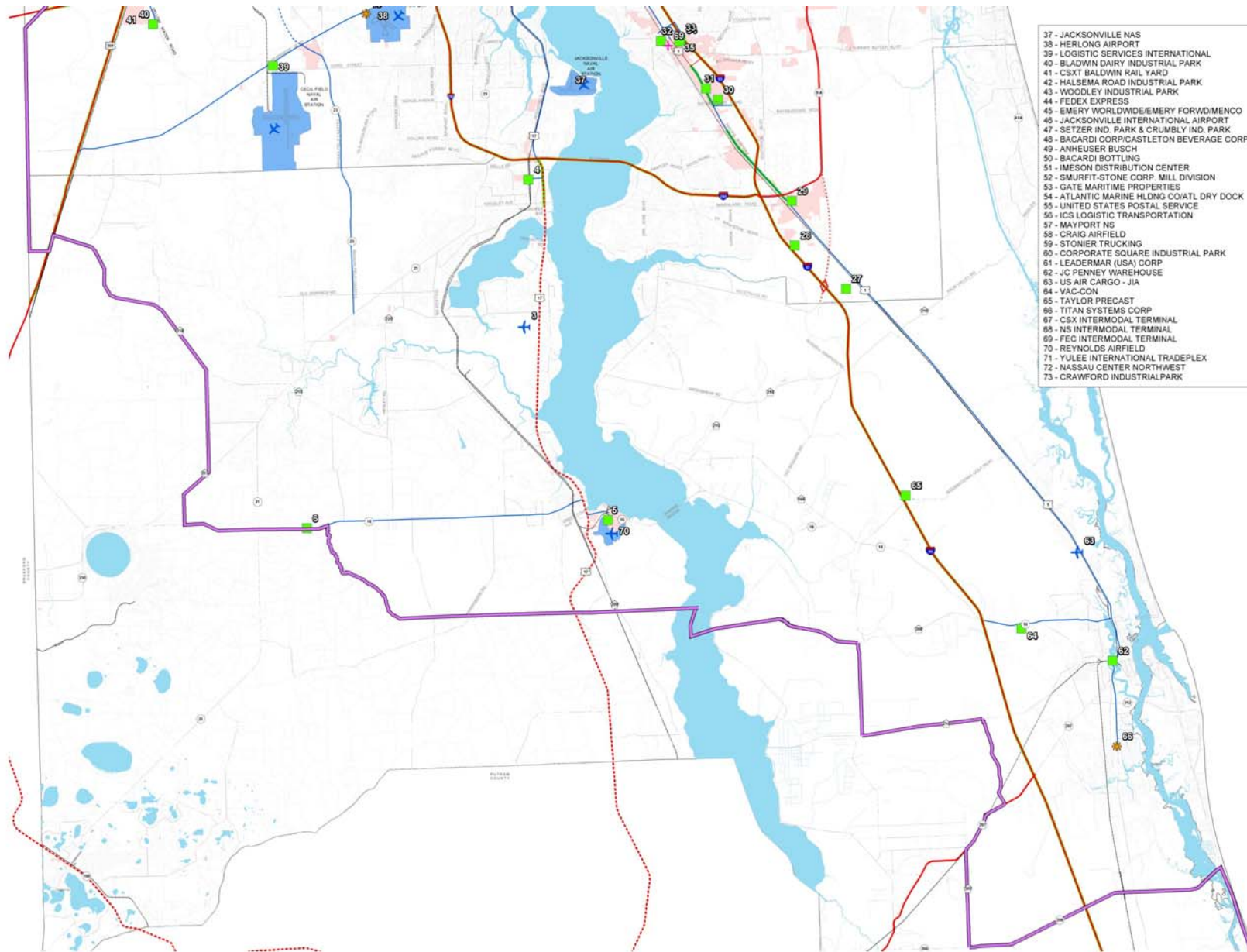
**LEGEND**

<b>SIS* ROUTES</b>	<b>MAJOR FREIGHT GENERATORS</b>
— Existing	✕ Airfield / Airport
- - - Emerging	■ Distribution Center, Warehouse, Manufacturing
— Connector to Existing	▲ Mail Carrier
- - - Connector to Emerging	✕ Rail Intermodal Terminal
- - - Provisional	★ Other
— Emerging SIS Rail	⚓ Seaport
— Existing SIS Rail	■ Duval County Industrial Zoning
— Truck Traffic >3,600 ADT	□ Study Boundary
— Other Freight Mobility Routes	
◊ Proposed Interchange	

\* SIS Routes: Strategic Intermodal System routes have official designation by the State of Florida as eligible for special funding.



- 1 - PUBLIX QUICK FREEZING AND COLD STORAGE
- 2 - SOUTH ATLANTIC COLD STORAGE
- 3 - FLEMING ISLAND AIRFIELD
- 4 - ABC INDUSTRIAL PARK
- 5 - REYNOLDS INDUSTRIAL PARK
- 6 - PENNEY FARMS LANDING FIELD
- 7 - MAXWELL HOUSE COFFEE CO.
- 8 - RINKER MATERIALS CORP.
- 9 - AMERICAN MARINE TRANSPORT
- 10 - CROWLEY LINER SERVICES, INC.
- 11 - SOUTHEAST TOYOTA DISTRIBUTORS, LLC
- 12 - SOUTHERN PACKAGING & DIST CTR #6
- 13 - WINN DIXIE STORES, INC.
- 14 - MCGRIFF TRANSPORTATION
- 15 - FEDEX FREIGHT
- 16 - PUBLIX DIST CTR
- 17 - MICHAELS ARTS AND CRAFTS DIST CTR
- 18 - WHITE LINE TRUCKING
- 19 - UNITED STATES POSTAL SERVICE BULK CTR
- 20 - UPS
- 21 - AIM CARRIBEAN EXPRESS, INC.
- 22 - SOUTHERN PACKAGING AND DIST CTR
- 23 - COCA-COLA BOTTLING CO.
- 24 - CITY OF JACKSONVILLE PUBLIC WORKS
- 25 - ANCHOR GLASS CONTAINER CORP.
- 27 - GONEDIAN CORP INDUSTRIAL PARK
- 28 - FL EAST COAST US 1 INDUSTRIAL PARK
- 29 - R.W. WILLIAMS INDUSTRIAL PARK
- 30 - SOUTHEAST TOYOTA DISTRIBUTORS, LLC
- 31 - BURLINGTON AIR EXPRESS
- 32 - BODY SHOP OF AMERICA, INC.
- 33 - CANADA DRY OF FLORIDA
- 34 - CANADA DRY BEVERAGES (SE All Corp)
- 35 - SOUTHEAST ATLANTIC BEVE CORP. (Can Dry)
- 36 - VENUS SWIMWEAR, INC.














# **APPENDIX H**

## Recommended Freight Projects



## LEGEND

### SIS \* ROUTES

-  Existing
-  Emerging
-  Connector to Existing
-  Connector to Emerging
-  Provisional
-  Emerging SIS Rail
-  Existing SIS Rail
-  Other Freight Mobility Routes
-  Freight Project

### MAJOR FREIGHT GENERATORS

-  Airfield / Airport
-  Seaport
-  Rail Intermodal Terminal
-  Duval County Industrial Zoning
-  Study Boundary

\* SIS Routes:

Strategic Intermodal System routes have official designation by the State of Florida as eligible for special funding.



## CSX Intermodal Hub

- Pickettville Road Extension





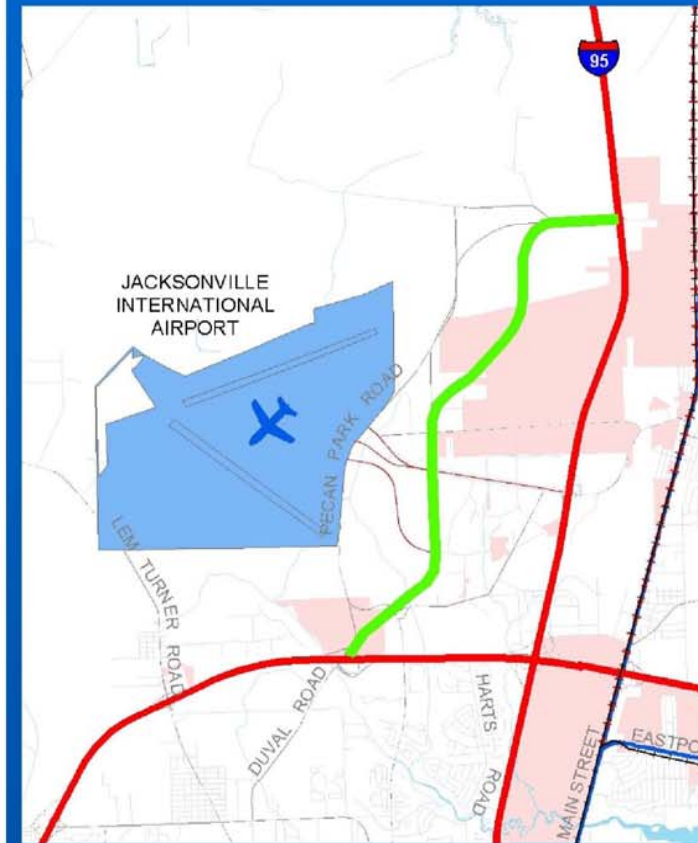
## FEC Intermodal Hub

- FEC Access Improvements
- US1 Corridor Improvements
- US1 Intersection Improvements
- Butler Blvd. Improvements



## Norfolk Southern Intermodal Hub

- Connector Improvements
- Edgewood Dr. at Edgewood Ave. Intersection
- Norfolk Southern Double Track



## Jacksonville International Airport Hub

- **Extend N. International Airport Blvd.**
- **Truck Wayfinding Project (Improve signs)**



## JAXPORT - Talleyrand Hub

- **New Interchange at MLK Jr. Parkway/21<sup>st</sup> St./Phoenix**
- **21<sup>st</sup> St. at Talleyrand Ave. Improvements**
- **Cargo Tracking Project**
- **Rail Switching Yard Expansion**



## JAXPORT – Blount Island and Dames Point Hubs

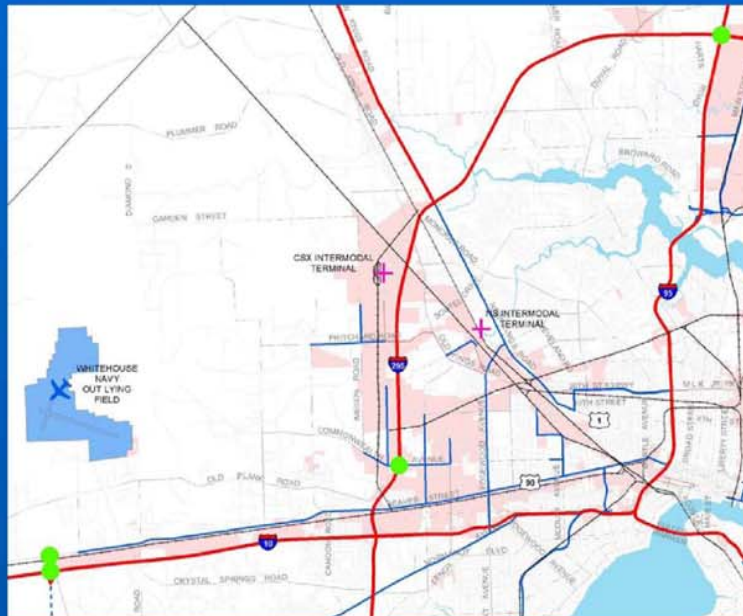
- Improve Hecksher Dr.
- Extend New Berlin Rd. S.
- Extend Dames Point Terminal Rail Access





## Other Duval County Projects

- I-295 at Commonwealth Ave. Interchange Improvements
- I-95 at I-295/SR9A Interchange
- SR23 (Branan Field-Chaffee Rd.) Major Interchange Reconstruction at US90 and I-10





## Nassau County/Port of Fernandina Emerging Hub

- I-95 at SR200 Interchange Improvements
- SR200 Widening
- Reconstruct 8<sup>th</sup> St. from Atlantic Ave. to Dade St.
- Extension of 3<sup>rd</sup> St. to 8<sup>th</sup> St. (SR200)
- SR200 Grade Separated Interchanges @ US17, Chester Rd and CR107





## Clay County

- **Improve Access to Reynolds Industrial Park at Reynolds Blvd. and SR16**

The map shows a coastal area with a red dashed line representing a proposed route. Key features include 'GREEN COVE' and 'SHANDS BRIDGE'. Road markers for SR 16, SR 17, and SR 209 are visible. A green dot and a blue airplane icon are also present on the map.





## St. Johns County

- **I-95 at CR210 Ramp Improvements**
- **I-95 at SR16 Road Improvements**
- **SR207 at Dobbs Rd. Cutoff Intersection Improvements**

# **APPENDIX I**

## **Data Description and Issues**

## Data Description and Issues

The analyses presented in this report are based on a review and analysis of a variety of data sources, including commodity flows, employment and labor data, and specific case studies. Each of these sources reflects time specific data ranging from the mid 1990s to 2004. Although the time differences among the data sources and current conditions may introduce some variances, they reflect the best available for a synthesis of this type, and do not dramatically impact the relevance of the trends being presented and discussed.

A key example of the time impact would be the changes in commodity flow patterns or facility operations following the tragedies of September 11, 2001. Since September 11<sup>th</sup>, changes in security have impacted freight operations, as well as trade patterns and growth projections. These changes are not reflected in the commodity flow data presented here, which are for 1998 (the most recent year currently available). However, the purpose of the analyses presented in this report is to discuss in broader terms the overall commodity profile of the First Coast MPO area, and the potential for developing economic benefits from transportation investment decisions. While the potential economic impact of a specific investment will need to incorporate these current conditions as part of the calculation, the broader illustration of how freight moves in the First Coast MPO area, as presented in this report, is unlikely to have changed fundamentally.

The Florida specific 1998 TRANSEARCH database purchased and made available by the Florida DOT was used to analyze the commodity flow patterns in the First Coast MPO area. The commodity flow data utilized in this project were derived from a TRANSEARCH database developed by Reebie Associates. This database, originally developed to support the development of Florida's Statewide Intermodal Highway Freight Model, has been organized and analyzed to describe commodity flows moving into, out of, within, and through the First Coast MPO area.

While TRANSEARCH is generally accepted as the best available commodity flow data, it should be noted that there are some limitations in how this database should be used and interpreted. Although they do restrict the use of the data in some instances, there are no better sources of data at this time. For example, in some cases, data are not available for certain types of flows. The Rail Waybill data used by Reebie Associates, for example, are based on data collected from Class I railroads. The waybill data contain some data for regional and short-line railroads, but only in regards to interline service associated with a Class I railroad. The rail tonnage movements provided by the TRANSEARCH database, therefore, are a conservative estimate. This is especially true for states like Florida, which have significant rail service provided by Class II or III railroads (e.g., Florida East Coast Railway).

There are additional examples of some of the limitations encountered with the data.

- Use of Multiple Data Sources – The commodity flow data developed by Reebie Associates consist of a national database built from company-specific data and other available databases. As part of the database development process, these multiple sources must be integrated into once commodity flow estimate. This requires the development of assumptions that sometimes compromise individual databases.
- Data Collection and Reporting – In most available databases that are based on industry surveys, the accuracy of the data decreases as the geographic regions become smaller. In

addition, the validity of some data is limited by the reporting variances. For example, the level of detail provided from specific companies limits the commodity flow data generated by Reebie Associates. Therefore, the data is only as good as the source.

- Limitations of International Movements – The TRANSEARCH database is limited in its reporting of international movements. In some cases, the volume of freight is included in the domestic numbers, and in other cases it is omitted. The Reebie dataset also does not completely report international petroleum and oil imports through maritime ports, a particular concern for JAXPORT, a major petroleum-importing facility. Reebie assigns commodity data only to truck, rail, air, and water movements, but a large percentage of all foreign imports by weight are oil and petroleum, which frequently travel by pipeline to storage and distribution points. Finally, TRANSEARCH does not report international air shipments through regional gateways.

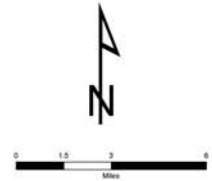
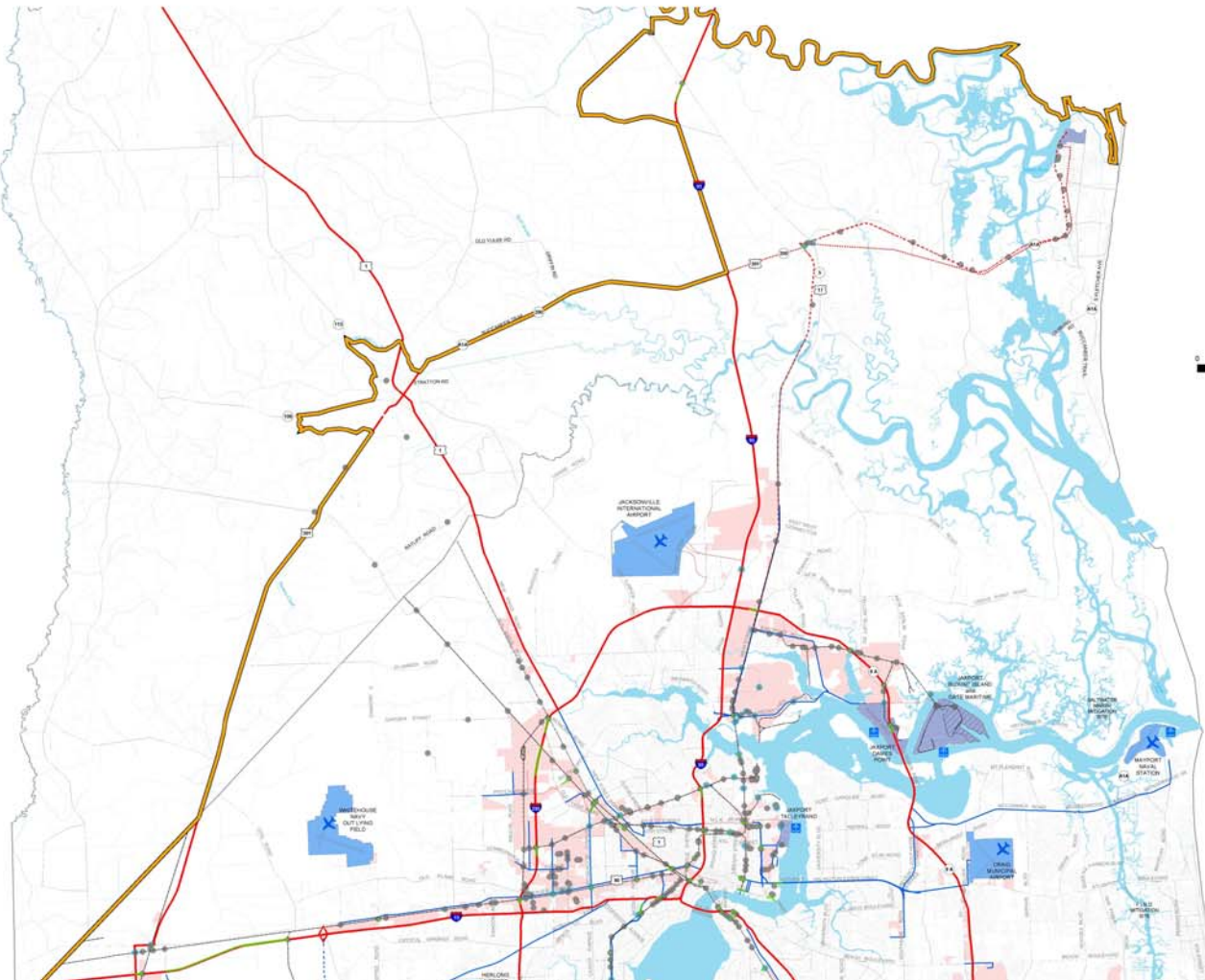
## **APPENDIX J**

### Map of Railroad Crossing Locations

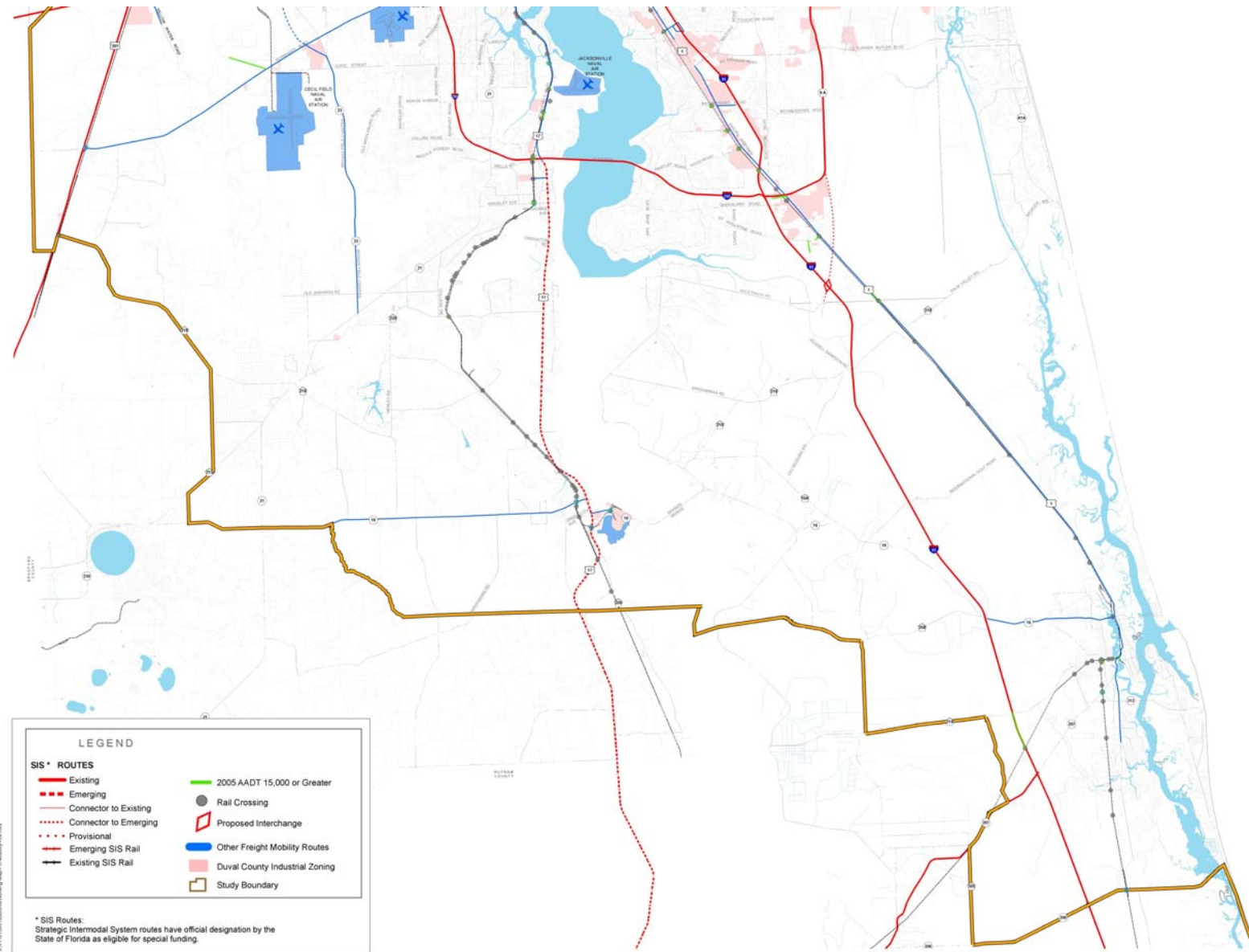




FCMPO FREIGHT MOBILITY ROUTES  
with  
RAIL CROSSINGS AND 15,000 PLUS 2005 AADT



NOTE: The rail crossings on this map have not been field verified. Rail track shapes/files have not been updated. The state rail crossing contained milepost data, these are highlighted with a blue outline.



# **APPENDIX K**

## Requested Rail Operator Information



Norfolk Southern Corporation  
Industrial Development Department  
1200 Peachtree Street, N.E.  
Suite 1244  
Atlanta, Georgia 30309  
404/529-1853  
404/529-1057 FAX

Gary V. Henderson, P.E., C.S.P.  
Manager Site Development and  
Environmental Evaluation

September 16, 2005

Ms. April J. Bacchus  
Reynolds, Smith & Hills, Inc.  
10748 Deerwood Park Blvd. South  
Jacksonville, FL 32256

Dear Ms. Bacchus,

Per your request, I have returned an annotated copy of your printout of the Norfolk Southern grade crossings in the First Coast MPO area indicating the crossings that need to be closed and/or replaced with overpasses to accomplish four sections of track that we would like to see uninterrupted by road crossings in order to accommodate the passing of trains with minimum delay to vehicle traffic. I have also included an annotated copy of our track chart for our main line in Duval and Nassau counties which shows two of these areas highlighted in a pictorial (line) fashion. I understand that this data will be used in the Freight Mobility Study you are providing for the First Coast MPO.

The first section of track is just north of Simpson Yard and would involve the replacement of the grade crossing at Old Kings Road (713523A) with an overpass. This grade crossing divides what will be the new Lacy Siding into two nearly equal, but sub-optimal lengths.

The second section of track is just south of Simpson yard and would involve the closing of five crossings and replacing them with one overpass. The crossings to be closed are Old Kings Road (713556M and 713559H), 20<sup>th</sup> Street (713557U and 713558B) and St. Clair Street (713562R). These crossings would be replaced with one bridge over our main line in the area of 12<sup>th</sup> and Huron Streets such that Huron would extend north over our main line to Old Kings Road west of our main line, thereby serving all the property owners cut off by the associated crossing closures.

The Third section of track is on our Springfield Line, which (considering the coming boom in port traffic) we will be nominating as an Emerging SIS Connector. This section will involve the closure of the Canal Street crossing (713574K) and the replacement of the Fairfax Avenue crossing (713575S) with an overpass, which will allow us to build a passing siding between the

Operating Subsidiary: Norfolk Southern Railway Company

grade crossings at Division and Myrtle Streets so that we can meet trains coming and going from our yard to the port.

The forth section of track is also on our Springfield Line. It involves the closing of the Evergreen Avenue crossing (713608C) building a new intersection for Evergreen and 27<sup>th</sup> Street (NE quadrant) to handle traffic to and from Evergreen Avenue and Main Street, and the replacement of the Wigmore Street crossing (713609J) with an overpass. This will allow us to queue trains between 21<sup>st</sup> Street and the St. Johns River for the increased port traffic we see coming to that area.

If you have any questions, please give me a call.

Sincerely,



G. V. Henderson

1/24/2004		RHCI AD-HOC REPORT														
Crossing Number	AA DT	School Bus Count	Total Trains	Number of Accidents	Safety Index Rank	District	County	City	Railroad Company	Crossing Status	Public/Private	Crossing Position	Warning Device	Crossing Condition	Transition Typ	Hump Sign?
353	914869H	0	0		4,463	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Private	At Grade	Xbucks			
		Local Street Name:		PVT(DIDNOTFIND) X												
354	914870C	435	0	1	3,026	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	Xbucks			
		Local Street Name:		FOURTH STREET ✓												
355	914871J	855	0	1	2,617	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	Stop Signs		Smooth	
		Local Street Name:		EAST THIRD STREET ✓												
356	915132P	1,160	2	16	1,794	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	CFL&G		Rough	
		Local Street Name:		YORKTOWN ROAD												
357	916911L	0	0	1	4,104	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Private	At Grade	Xbucks	Good	Rough	X
		Local Street Name:		20th ST X												
358	918419A	0	0		4,922	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	CFL&G	Excellent	Smooth	X
		Local Street Name:		Ramp - Dave Rawls												
359	918420U	0	0		4,917	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	CFL&G		Smooth	
		Local Street Name:		DAVE RAWLS BLVD.												
360	918534G	0	0		4,924	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	CFL&G		Smooth	
		Local Street Name:		CHANNEL VIEW ROAD												
361	918535N	0	0	0	4,625	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks		Smooth	
		Local Street Name:		PRIVATE ROAD X												
362	918536V	0	0	0	4,620	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks			
		Local Street Name:		PRIVATE ROAD X												
363	918537C	0	0	0	4,925	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	CFL&G		Smooth	
		Local Street Name:		BLOUNT ISLAND BLV												
364	918546B	0	0	0	4,624	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks		Rough	
		Local Street Name:		REALCO RECYCLING X												
365	918547H	0	0	0	4,621	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks			
		Local Street Name:		US NAVY X												
366	918548P	0	0	0	4,623	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks		Smooth	
		Local Street Name:		US NAVY X												
367	918549W	0	0		6,155	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	RR Under	None		Smooth	
		Local Street Name:		ARLINGTON EXPWY												
368	918550R	0	0	0	4,622	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks		Smooth	
		Local Street Name:		PRIVATE ROAD X												

1/24/2004

RHCI AD-HOC REPORT

Crossing Number	AADT	School Bus Count	Total Trains	Number of Accidents	Safety Index Rank	District	County	City	Railroad Company	Crossing Status	Public/Private	Crossing Position	Warning Device	Crossing Condition	Transition Typ	Hump Sign?	
49	620819P	1,855	0	4	3,389	02	NASSAU	FERNANDINA BE	CSX	Open-Track Active	Public	At Grade	FL&G	Fair	Rough	X	
	Local Street Name:		ASH ST														
50	620820J	2,634	0	4	2,966	02	NASSAU	FERNANDINA BE	CSX	Open-Track Active	Public	At Grade	FL&G	Excellent	Rough	X	
	Local Street Name:		CENTRE ST														
51	620821R	2,634	0	4	1,164	02	NASSAU	FERNANDINA BE	CSX	Open-Track Active	Public	At Grade	Stop Signs	Fair	Rough	X	
	Local Street Name:		DADE ST														
52	620822X	19,596	17	6	591	02	NASSAU	FERNANDINA BE	CSX	Open-Track Active	Public	At Grade	CFL&G	Good	Smooth	X	
	Local Street Name:		HWY A1A		CANNON LOC												
53	620823E	1,536	16	6	2,446	02	NASSAU	CALLAHAN	CSX	Open-Track Active	Public	At Grade	FL	Good	Rough	X	
	Local Street Name:		HARTS RD														
54	643153E		0	6	4,304	02	NASSAU	CALLAHAN	CSX	Open-Track Active	Private	At Grade	Xbucks	Good	Rough	X	
	Local Street Name:		PRIVATE X														
55	644210U	308	8	45	876	02	NASSAU	CALLAHAN	CSX	Open-Track Active	Public	At Grade	FL	Good	Rough	X	
	Local Street Name:		CRAWFORD RD		1 Thomas Creek Rd. 2 Locs (see 52) Crawford Wood Rd.												
56	644211B		0	45	2,442	02	NASSAU	CALLAHAN	CSX	Open-Track Active	Private	At Grade	Xbucks	Fair		N	
	Local Street Name:		PVT X														
57	713528J	100	8	24	1,683	02	NASSAU	CALLAHAN	NS	Open-Track Active	Public	At Grade	Stop Signs	Good		N	
	Local Street Name:		LARSEN RD														
58	713529R	206	0	24	2,781	02	NASSAU	CALLAHAN	NS	Open-Track Active	Public	At Grade	FL	Good		N	
	Local Street Name:		CRAWFORD RD		Thomas Creek Rd / Crawford Wood Rd (see 55)												
59	713531S		0	10	24	02	NASSAU	CALLAHAN	NS	Open-Track Active	Public	RR Under	None		Smooth		
	Local Street Name:		US 301														
60	713535P	100	0	10	2,599	02	NASSAU	FERNANDINA BE	NS	Open-Track Active	Public	At Grade	Stop Signs	Good		N	
	Local Street Name:		WOODS BL		Lane off Crawford Road - which is west off of US 301												
61	713535U		0	10	2,152	02	NASSAU	CALLAHAN	NS	Open-Track Active	Private	At Grade	Xbucks	Good		N	
	Local Street Name:		PRIVATE X														
62	713536B		0	24	3,107	02	NASSAU	CALLAHAN	NS	Open-Track Active	Private	At Grade	Xbucks	Good		N	
	Local Street Name:		PRIVATE ROAD X														
63	713537H	100	0	24	1,937	02	NASSAU	FERNANDINA BE	NS	Open-Track Active	Public	At Grade	Xbucks	Good		N	
	Local Street Name:		PRIVATE		Callahan												
64	713538P		0	24	2,449	02	NASSAU	FERNANDINA BE	NS	Open-Track Active	Private	At Grade	Xbucks	Good		N	
	Local Street Name:		PVT X		Callahan												





1/24/2004

RHCI AD-HOC REPORT

	Crossing Number	AA DT	School Bus Count	Total Trains	Number of Accidents	Safety Index Rank	District	County	City	Railroad Company	Crossing Status	Public/Private	Crossing Position	Warning Device	Crossing Condition	Transition Typ	Hump Sign?
289	643853L		0	0		4,457	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	Xbucks			
	Local Street Name:			JEA (PVT) X													
290	643855A	2,060	4	0		3,887	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	FL&G		Rough	
	Local Street Name:			OLD KINGS RD (US)													
291	644178D		0	0		6,609	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	RR Under	None		Smooth	
	Local Street Name:			DAME POINT EXPWY													
292	644182T	2,041	4	0		2,309	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	Xbucks		Rough	
	Local Street Name:			LEWIS INDUSTRIAL no sign													
293	644183A		0	19		6,606	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	RR Under	None		Smooth	
	Local Street Name:			I 295													
294	644184G		0	0		6,605	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	RR Under	None			
	Local Street Name:			I 295													
295	644190K		0	30		2,807	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Private	At Grade	None		Rough	
	Local Street Name:			WHITEHOUSE X													
296	644212H		0			6,604	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	RR Under	None			
	Local Street Name:			I 295													
297	713523A	2,060	34	24		1,014	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Excellent		N
	Local Street Name:			KINGS RD overpass													
298	713525N	4,000	26	24		565	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL&G	Excellent		N
	Local Street Name:			GARDEN RD ✓													
299	713526V	206	8	24	2	637	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Excellent	Rough	X
	Local Street Name:			PLUMMER RD ↓													
300	713527C	206	13	24		2,393	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Excellent	Smooth	X
	Local Street Name:			ACREE RD ↘													
301	713552K	2,974	28	32		714	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL	Excellent	Smooth	X
	Local Street Name:			SOUTEL RD overpass currently planned													
302	713553S	2,087	4	36		990	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Good	Rough	N
	Local Street Name:			EDGEWOOD DR ✓													
303	713554Y		10	10		6,279	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	RR Under	None			
	Local Street Name:			EDGEWOOD AVE ↘													
304	713556M	1,000	11	50		1,675	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL	Good		N
	Local Street Name:			OLD KINGS RD ↘ no gates													



1/24/2004		RHCI AD-HOC REPORT															
Crossing Number	AA DT	School Bus Count	Total Trains	Number of Accidents	Safety Index Rank	District	County	City	Railroad Company	Crossing Status	Public/Private	Crossing Position	Warning Device	Crossing Condition	Transition Typ	Hump Sign?	
321	713575S	9,347	20	8	1	625	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL&G	Good	Rough	X
	Local Street Name:		FAIRFAX AVE	✓	<i>overpass</i>												
322	713576Y	6,440	28	8		1,546	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL&G	Good	Rough	X
	Local Street Name:		MYRTLE AVE	✓													
323	713577F	6,376	29	8		1,555	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Good	Rough	X
	Local Street Name:		MONCRIEF RD	✓													
324	713578M		0	8		6,275	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	RR Under	Xbucks			
	Local Street Name:		I 95	✓													
325	713579U	4,005	4	8	1	847	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL	Good		N
	Local Street Name:		DAVIS ST	✓													
326	713580N	3,605	13	8		2,006	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL	Good	Rough	X
	Local Street Name:		BOULEVARD ST	✓													
327	713581V	4,170	13	8		1,882	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Good	Rough	X
	Local Street Name:		PEARL ST	✓													
328	713584R	20,000	2	8		860	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL&G	Excellent	Smooth	X
	Local Street Name:		N MAIN	✓													
329	713586E	4,672	9	8		1,799	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL&G	Good	Rough	N
	Local Street Name:		HUBBARD ST	✓													
330	713588T	676	2	2		4,183	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Good	Rough	X
	Local Street Name:		N MARKET ST	✓													
331	713589A	1,888	12	8		2,593	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Good	Smooth	X
	Local Street Name:		N LIBERTY ST	✓													
332	713594W	8,123	18	4		1,993	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	CFL&G	Fair	Rough	X
	Local Street Name:		EIGHTH ST	✓													
333	713595D	3,615	6	8		846	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	Xbucks	Good	Rough	X
	Local Street Name:		FIRST ST	✓													
334	713604A		0	0		6,258	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	RR Under	None			Y
	Local Street Name:		EXPRESS WAY	✓													
335	713607V	4,330	6	0		4,058	02	DUVAL	JACKSONVILLE	CSX	Open-Track Active	Public	At Grade	FL&G	Fair	Rough	X
	Local Street Name:		TWENTY FIRST ST	✓													
336	713608C	3,768	1	4	1	1,030	02	DUVAL	JACKSONVILLE	NS	Open-Track Active	Public	At Grade	FL&G	Fair	Rough	X
	Local Street Name:		EVERGREEN AVE	✓	<i>close</i>												



**Bacchus, April**

---

**From:** Greggley, Lacoia [Lacoia\_Greggley@CSX.com]  
**Sent:** Friday, August 26, 2005 11:24 AM  
**To:** Bacchus, April  
**Subject:** RE: CSX Locations for Number of Train Data



Potential-RR-Locations 4.xls

April:

I have attached your original spreadsheet with the train count information that I found highlighted in yellow. The information is accurate as of August 25, 2005. The information is subject to change. If you need any additional information please give me a call.

LaCoya Greggley  
Public Projects Engineer  
500 Water Street (S/C J301)  
Jacksonville, FL 32202  
(904) 359-2234  
Lacoia\_Greggley@CSX.com

-----Original Message-----

From: Bacchus, April [mailto:April.Bacchus@rsandh.com]  
Sent: Tuesday, August 16, 2005 10:47 AM  
To: Greggley, Lacoia  
Subject: RE: CSX Locations for Number of Train Data

I believe the numbers you request are listed in the attached spreadsheet (see column D, Crossing Number). Thank you.

-----Original Message-----

From: Greggley, Lacoia [mailto:Lacoia\_Greggley@CSX.com]  
Sent: Tuesday, August 16, 2005 9:56 AM  
To: Bacchus, April  
Subject: RE: CSX Locations for Number of Train Data

April:

Do you have federal inventory numbers for the crossings? The DOT crossing numbers are six numbers followed by a letter, i.e. 000000A. I need some way to identify the precise crossings and that number would help. Please Advise. Thanks.

LaCoya Greggley  
Public Projects Engineer  
500 Water Street (S/C J301)  
Jacksonville, FL 32202  
(904) 359-2234  
Lacoia\_Greggley@CSX.com

-----Original Message-----

From: Bacchus, April [mailto:April.Bacchus@rsandh.com]  
Sent: Tuesday, August 16, 2005 9:17 AM

To: Greggley, Lacoia  
Subject: FW: CSX Locations for Number of Train Data

LaCoya,  
I have forwarded the e-mail below, which lists the locations for which we are interested, along with FDOT data. Thank you very much for your assistance.

> -----Original Message-----  
> From: Bacchus, April  
> Sent: Thursday, June 30, 2005 4:07 PM  
> To: 'eric.peterson@csx.com'  
> Cc: Tocknell, Stephen  
> Subject: CSX Locations for Number of Train Data  
>  
> Mr. Peterson,  
>  
> In follow-up to my phone call to you today, we are looking for the number  
> of trains that cross the following locations in this area. We have number  
> of train data from FDOT's Rail Highway Crossing Inventory (RHCI), however  
> we would like to verify that information (RHCI data is in parenthesis).  
> This data will be used as support documentation in a freight study that we  
> are performing for the First Coast Metropolitan Planning Organization  
> (First Coast MPO). Specifically, we are identifying potential crossing  
> locations to recommend for grade separation. Finally, if available,  
> number of train info for all of your at-grade crossings in the area  
> (Duval, Clay, St. Johns and Nassau Counties) would really assist us in  
> having up to date information for CSX. Thank you for your assistance.  
>  
> \* Lane Avenue and Edgewood Avenue, near US 90 (RHCI: 0)  
> \* Doctor's Inlet Road /CR220, east of College Drive, in Clay County  
> (RHCI: 15)  
> \* New Kings Road, north of 25th Street, (RHCI:19)  
> \* Soutel Drive, near New Kings Road, (RHCI: 62)  
> \* SRA1A/Buccaneer Trail near US 17 in Nassau County (RHCI: 6)  
> \* Kingsley Ave., near US 17 (RHCI: 16)  
>  
>  
>  
> April J. Bacchus, AICP  
> Senior Planner  
>  
> Reynolds, Smith and Hills, Inc.  
> 10748 Deerwood Park Boulevard South  
> Jacksonville, FL 32256-0597  
> 904-256-2151 (phone)/ 904-256-2501 (fax)  
> april.bacchus@rsandh.com  
>  
>  
>

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Table 1.

DRAFT. Potential Railroad Crossing Locations

June 2005

Roadway	Near Street	RR	Crossing Number	County	AADT (1)	Committed Crossing Project	# Tracks	RHCI Data (2)			# of Lanes
								# of Trains	Safety Index Rank (3)	# of Crashes	
Old St. Augustine Rd.	US 1	FEC	271830A	Duval	35900		2	20	301	0	4
New Kings Rd.	N of 25th St.	CSX	621226B	Duval	30700	BJP/JTA	1	* 17	223	0	4
Soutel Drive	Old Kings Road	NS	713552K	Duval	15400	BJP/JTA	1	32	714	0	4
Soutel Drive	New Kings Road	CSX	621188U	Duval	16400		2	* 43	195	1	4
Old Kings Rd.	W. of New Kings	CSX	621191C	Duval	16900		5	* 39	832	0	2
Lane Ave.	US 90	CSX	620619F	Duval	25500		2	* 15	748	1	4
Edgewood Ave.	US 90	CSX	621275X	Duval	18000		3	* 18	1719	0	4
Doctor's Inlet Rd/CR220	E of College Dr.	CSX	620917F	Clay	25500		1	* 19	194	0	4
Prudential Dr.	I-95	FEC	271800H	Duval	17400		2	40	192	0	4
San Marco Blvd.	I-95	FEC	271801P	Duval	17700		2	26	422	0	4
Hendricks Ave.	I-95	FEC	271809U	Duval	21700		2	26	266	1	4
Sunbeam	US 1	FEC	271824W	Duval	23700		2	20	414	0	4
Shad	US 1	FEC	271825D	Duval	19400		2	20	278	0	5
SR 207	US 1	FEC	271891R	St. Johns	18300		2	22	61	2	4

(1) AADT Source: 2005 Northeast Regional Planning Model (NEPRM)

(2) RHCI: FDOT Railroad/Highway Crossing Inventory

(3) Safety Index Rank:

High # = Safe

Low # = Unsafe

Safety Index Ranks under 800 are considered by FDOT for potential improvements.

Districts across the state utilize safety index ranks under 800 to help prioritize crossings for an annual diagnostic report.



*Architectural, Engineering, Planning and Environmental Services*

**Reynolds, Smith and Hills, Inc.**  
10748 Deerwood Park Boulevard, South  
Jacksonville, Florida 32256



**First Coast Metropolitan Planning Organization**  
1022 Prudential Drive  
Jacksonville, FL 32207