Florida's Future Corridors

Tampa Bay to Northeast Florida Study Area Concept Report

TECHNICAL REPORT

Florida Department of Transportation
Office of Policy Planning

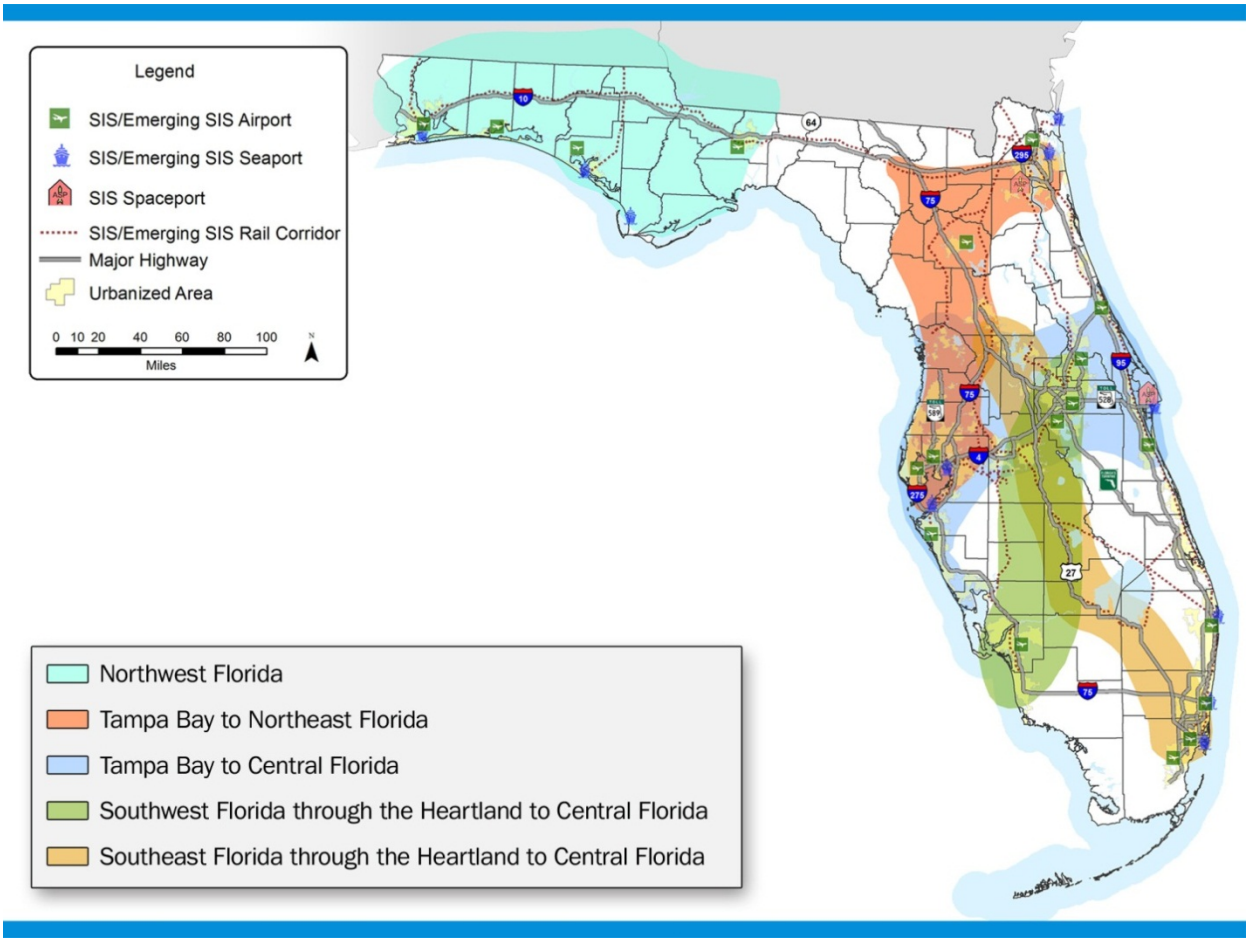
October 2013

Florida's Future CORRIDORS

What is the Future Corridors Initiative?

The Future Corridors initiative is a statewide effort led by the Florida Department of Transportation (FDOT) to plan for the future of major transportation corridors critical to the state's economic competitiveness and quality of life over the next 50 years. This initiative builds upon the 2060 Florida Transportation Plan which calls for planning a transportation system that maintains our economic competitiveness by meeting current and future transportation needs for moving people and freight.

Florida's Future Corridors Initial Study Areas



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1.0 Introduction

Tampa Bay and Northeast Florida are two of Florida's largest regions, both with large, diverse economies and growing transportation needs. Between these two regions, the Gainesville and Ocala areas are emerging in importance as regional employment centers, particularly in technology and logistics industries. Surrounding rural areas support a mix of agriculture, forestry, mining, recreation, and manufacturing industries, and are collaborating on economic development strategies.

More than 5.1 million people and 2.1 million jobs are located in a 18 county study area spanning 260 miles from Tampa to Jacksonville.[1] Following a deep recession, the study area's economy is rebounding and is expected to return to stronger growth. If recent trends continue, the region's population could expand nearly 70 percent by 2060, with approximately four out of five new residents locating in the Tampa Bay area or in the counties surrounding Jacksonville.

Freight, business, visitor, commuting, and personal trips in the study area are heavily dependent on the highway system. Economic activity and urbanized areas have organized around major highway corridors, particularly Interstate 75 and Interstate 10. Many of the rural counties are not well connected to the Interstate highways or other limited access highways today, and rely on other roads such as U.S. 19, U.S. 27, U.S. 41, and U.S. 301. Tampa and Jacksonville are the two largest urban centers in Florida without a direct connection today; travel between these two regions primarily occurs via I-75 and I-10, I-75 and U.S. 301, or I-4 and I-95.

CSX Transportation operates a major north/south freight rail line to the east of I-75, which connects to other rail corridors in the region. Tampa and Jacksonville are linked by Amtrak service through Orlando. Major commercial service airports, deepwater seaports, and freight and passenger rail systems provide connections to other regions, states, and nations (map on page 1-3).

This report identifies potential transportation strategies to help connect Tampa Bay and Northeast Florida and support the future growth of these two regions as well as the less urbanized North Central Florida region that lies between them. It is part of a broader statewide effort, known as Florida's Future Corridors initiative, through which the Florida Department of Transportation (FDOT) is working with state, regional, and local partners to plan for the future of the major transportation corridors critical to the State's economic competitiveness and quality of life (box on pages 1-4 through 1-6).

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[1] U.S. Department of Commerce, Bureau of the Census, 2010; U.S. Department of Commerce, Bureau of the Economic Analysis, 2010.

For the purposes of this report, the study area includes, north to south and west to east, Columbia, Baker, Duval, Suwannee, Union, Bradford, Clay, St. Johns, Gilchrist, Alachua, Levy, Marion, Citrus, Sumter, Hernando, Pasco, Pinellas, and Hillsborough counties. Data reported are for all the counties listed, including portions of the counties not in the study area boundary.

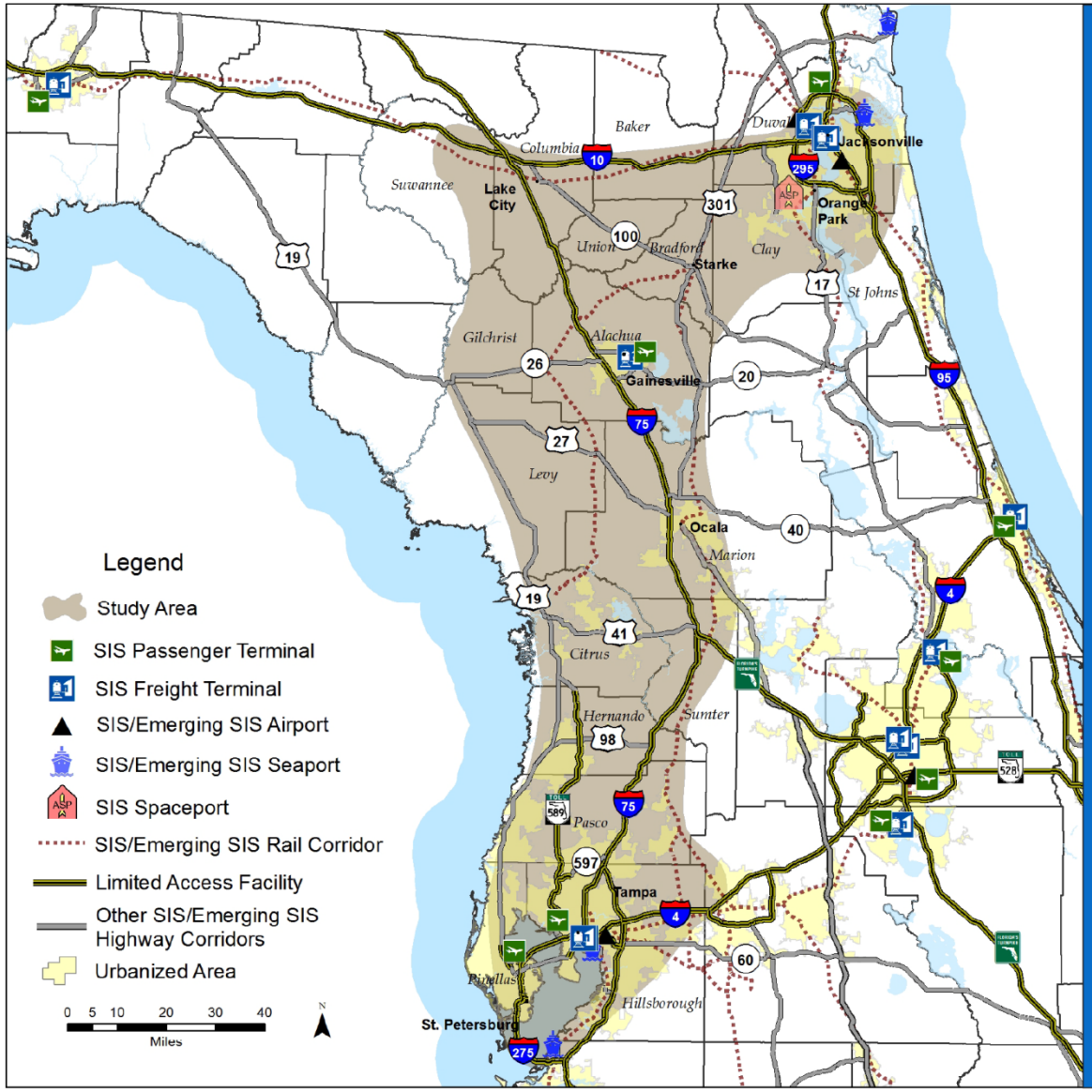
This Concept Report is the first product of a multi-stage process to plan for transportation investments of statewide significance in the Tampa Bay-Northeast Florida study area. The Concept Report is intended to:

- Identify anticipated statewide connectivity and mobility needs in the study area;
- Determine whether significant transportation corridor investments are needed and would be consistent with statewide policies and regional and community visions and plans for future growth;
- Identify key community and environmental issues to be considered in future stages of planning for transportation corridors; and
- Provide a framework for moving forward with a more detailed study of potential transportation corridor strategies and investments in one or more segments of the full study area.

This Concept Report is organized as follows:

- Section 2.0 documents key demographic and economic trends and conditions in the study area;
- Section 3.0 describes current and projected flows of people and freight in the study area;
- Section 4.0 documents the study area's existing and planned transportation system;
- Section 5.0 describes current community and environmental resources in the study area;
- Section 6.0 identifies and assesses potential high-level strategies for addressing the mobility and connectivity of people and freight in the study area over the next 50 years; and
- Section 7.0 identifies key actions for moving forward in this study area.

This Concept Report presents a snapshot of the wealth of data that are being collected and analyzed for Florida's Future Corridors. Additional information is available on the Future Corridors web site, http://www.flfuturecorridors.org.



FAST FACTS

- 18 counties, 80 cities
- 10,115 square miles of land area
- 5.1 million people, 2.1 million jobs
- Includes 7 counties designated as part of the North Central Florida Rural Area of Critical Economic Concern
- 5 major military installations
- 56 colleges and universities
- 3,310 centerline miles on the State Highway System, including 1,162 of centerline miles on Florida's Strategic Intermodal System (SIS)
- 1,229 centerline miles of freight rail and 88 freight terminals, including 4 SIS freight rail terminals
- 80 miles of passenger rail via Amtrak, with stations in Jacksonville and Tampa
- 3 deepwater seaports (Tampa, St. Petersburg, and Jacksonville) with 2 additional seaports in adjacent counties and 1 seaport under study in Citrus County
- 4 commercial service airports, 16 regional or general aviation airports, and a spaceport at Cecil Field
- Intercity bus service provided by Greyhound, including 8 stations

What Is the Future Corridors Initiative?

The Future Corridors initiative is a statewide effort led by the Florida Department of Transportation (FDOT) to plan the major transportation corridors critical to the State's economic competitiveness and quality of life over the next 50 years. This initiative builds upon the 2060 Florida Transportation Plan.

Why Are We Considering Future Statewide Corridors?

- Better coordinate long-range transportation and development visions and plans to identify long-range solutions to support statewide and regional goals for economic development, quality of life, and environmental stewardship.
- Provide solutions for or alternatives to major highways that already are congested today.
- Meet growing demand for moving people and freight using all modes: Florida's population is expected to increase 37 percent by 2040, visitors 44 percent by 2040, and freight tonnage 39 percent by 2035.
- Improve connectivity between Florida and other states and nations, and among Florida's regions, to better support economic development opportunities consistent with regional visions and the Florida Department of Economic Opportunity's Strategic Plan for Economic Development.

What Types of Corridors Are We Planning?

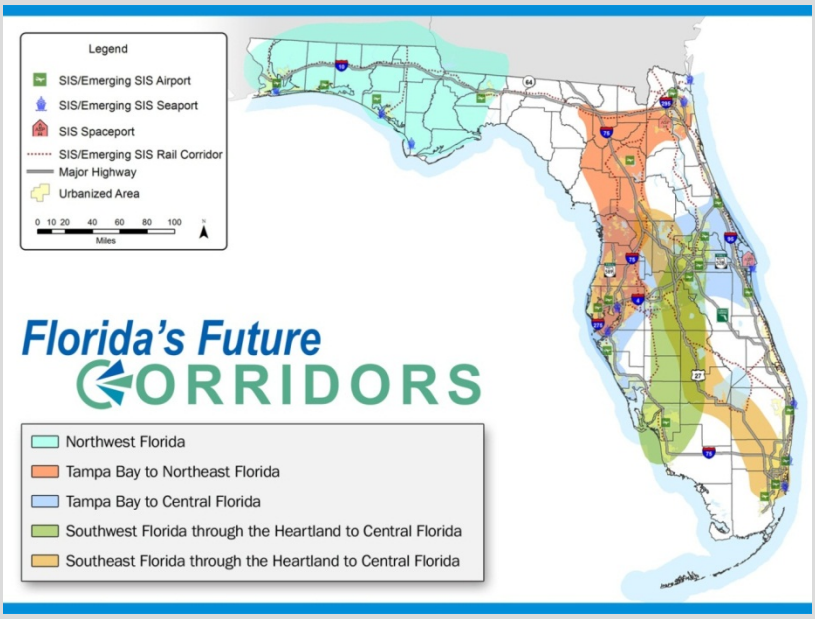
A statewide corridor that connects Florida to other states or connects broad regions within Florida, generally via high-speed, high-capacity transportation facilities such as major rail lines, waterways, air service, and Interstate or other limited access highways. These corridors may involve multiple modes of transportation as well as other linear infrastructure such as pipelines and utility transmission lines. There are two approaches to planning for our future corridors:

- Transforming *existing facilities* in a corridor to maximize their function, such as adding tolled express lanes, truck-only lanes, or bus rapid transit systems to an existing highway, or adding passenger service to an existing freight rail line.
- Identifying study areas for potential *new parallel facilities* to provide alternatives to existing congested facilities or potential *new multimodal corridors* in regions not well served by statewide corridors today.

FDOT has identified five regional pairs as initial study areas for this initiative (map on next page):

- Tampa Bay to Central Florida;
- Tampa Bay to Northeast Florida;
- Southeast Florida through the Heartland to Central Florida;
- Southwest Florida through the Heartland to Central Florida; and
- Northwest Florida connectivity to the Florida peninsula and neighboring states.

Initial Study Areas

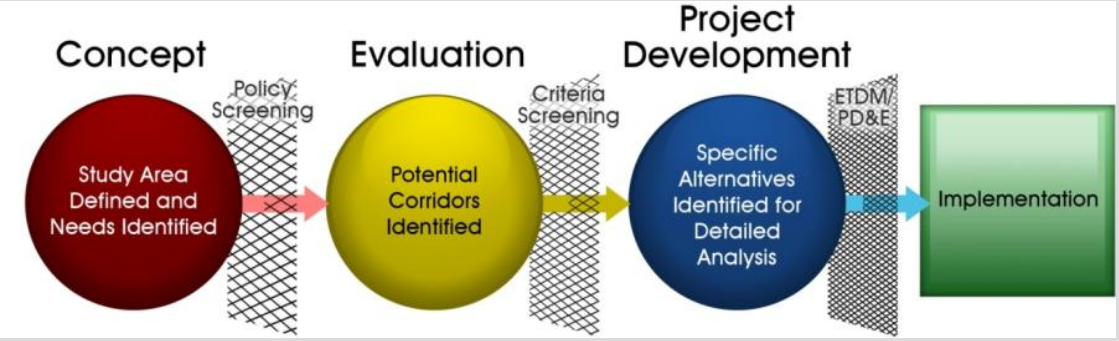


How Will Future Corridors Be Planned?

FDOT has developed a three-stage process for planning future statewide corridors (figure below):

- Prepare a high-level **Concept** report to identify anticipated statewide connectivity and mobility needs in the study area; determine whether a significant transportation corridor investment in the study area is consistent with statewide policies and available regional and community visions and plans for future growth; identify key community and environmental issues to be considered in future stages; and identify a framework for moving forward in this study area.
- Conduct an **Evaluation** study on one or more segments of the full study area to identify and assess potential alternative solutions to the anticipated mobility and connectivity needs; work with partners to build consensus around potential solutions; and develop an action plan for future work on viable corridors.
- Use FDOT's established **Project Development** processes to conduct more detailed analyses of specific alternative corridor improvements, continue coordination with partners, and advance projects into implementation.

Future Corridor Planning Process



When Will Future Corridors Be Developed?

FDOT began conducting Concept studies on priority study areas in 2012. The intent is to develop a long-range framework to guide future investment decisions in these study areas over the next 50 years. This strategy can be integrated over time into local and regional transportation, land use, and conservation plans. Evaluation and Project Development studies will be scheduled on specific segments as appropriate. Construction on some segments could move forward in the next few years, while other corridors may not be developed for a few decades.

Who Will Be Involved in Planning and Developing Future Corridors?

FDOT is the lead agency for this initiative, working with a full range of statewide, regional, and local partners. A state agency working group, including the Department of Environmental Protection, Fish and Wildlife Conservation Commission, Department of Economic Opportunity, Department of Agriculture and Consumer Affairs, and Federal Highway Administration is guiding the overall initiative. In specific study areas, FDOT will work with a wide range of partners, including environmental organizations, business and economic development organizations, utilities, local governments, metropolitan planning organizations, regional planning councils, and public and private landowners to better understand how they envision the future of Florida.

2.0 Population and Economic Trends

During the past several decades, population growth in the Tampa Bay, North Central, and Northeast Florida regions all exceeded the State and national growth averages. These regions have benefited from their appeal to workers, families, retirees, and visitors; historic strengths in natural resources, military, education, tourism, and distribution; and emerging strengths in technology and services. After a deep recession between 2007 and 2010, these regions are returning to growth.

Future projections suggest that the counties in the study area will continue to grow and change, as will the demands on the transportation system (Table 2.1).

Table 2.1 Population and Economic Trends and Implications for the Transportation System

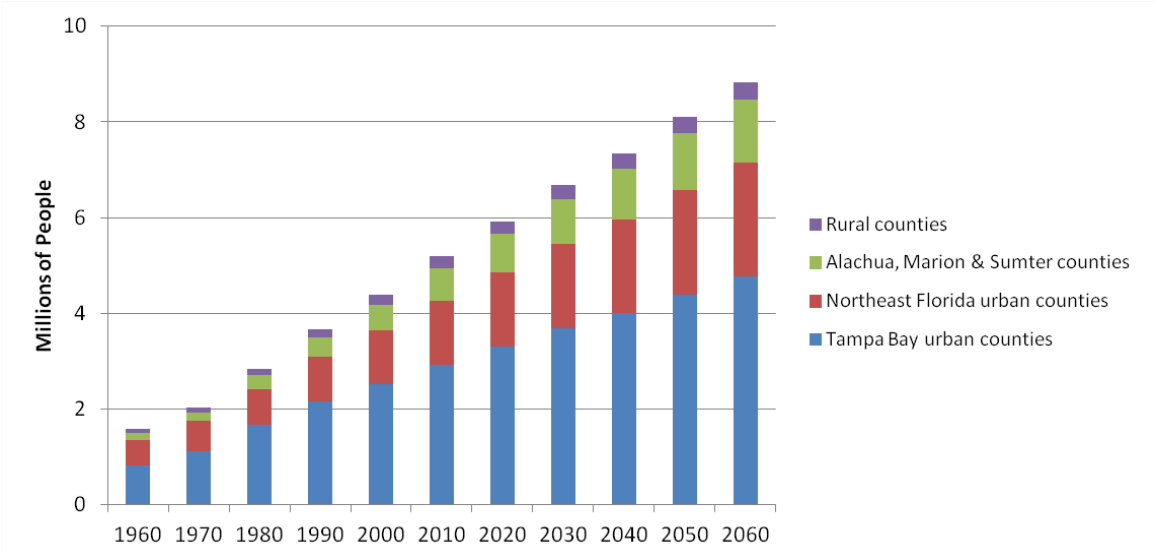
Trends	Implications for the Transportation System
Strong growth in population, jobs, and visitors is resuming.	Demand for moving people and freight will continue to grow.
The economy is diversifying, with growth in innovation, services, and logistics adding to historic strengths in agriculture, mining, forest products, tourism, and military.	Businesses require multiple modes of transportation; these modes must work together as an integrated system.
Businesses are expanding to serve national and global markets for products and services.	Seaports and airports must accommodate growth in global trade and travel with strategic capacity expansions and improved landside connections to consumers and exporters in the region and other states.
Population and employment growth is occurring in both established and emerging centers throughout the study area.	The existing multimodal transportation system may have gaps in regional connectivity to emerging and new economic centers.

■ Trend: Strong Growth in Population, Jobs, and Visitors

The study area's population expanded rapidly over the past 50 years, from 1.6 million residents in 1960 to just under 5.1 million residents in 2010 (Figure 2.1). FDOT projections based on current trends suggest the study area's population could reach 8.6 million residents in 2060, a nearly 70 percent increase over 2010 levels.[2]

[2] Florida Department of Transportation projection, based on University of Florida Bureau of Business and Economic Research forecast, 2013.

Figure 2.1 Total Population
1960-2060



Source: U.S. Department of Commerce, Bureau of the Census; FDOT projections based on the University of Florida Bureau of Economic and Business Research's mid-range estimate through 2040.

Population growth has concentrated in the two ends of the study area, Tampa Bay and Northeast Florida:

- **Tampa Bay:** Five counties located on or to the north of Tampa Bay – Citrus, Hernando, Hillsborough, Pasco, and Pinellas – totaled 2.9 million residents in 2010, nearly four times as high as in 1960.[3] If current trends continue, the population of these five counties will increase to 4.6 million residents in 2060.
- **Northeast Florida:** Three counties located near Jacksonville – Clay, Duval, and St. Johns – accounted for more than 1.2 million residents in 2010, up from 505,000 in 1960.[4] If current trends continue, the population of these three counties will increase to 2.1 million residents in 2060.
- **Alachua, Marion, and Sumter counties:** In the central part of the study area, Alachua, Marion, and Sumter counties host a string of fast growing urbanized areas, including Gainesville, Ocala, and Lady Lake-The Villages. The combined population of these three counties soared from 138,000 in 1960 to 672,000 in 2010; if current trends continue, it will nearly double to 1.2 million by 2060.

[3] Enterprise Florida, Inc. defines the Tampa Bay region as eight counties: Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk, and Sarasota counties. Because this study is examining connectivity to the north of Tampa Bay, the study area includes only five of these counties: Citrus, Hernando, Hillsborough, Pasco, and Pinellas.

[4] Enterprise Florida, Inc. defines the Northeast Florida region as seven counties: Baker, Clay, Duval, Flagler, Nassau, Putnam, and St. Johns. Because this study is examining connectivity to the south and west of Jacksonville, Flagler, Nassau, and Putnam counties are not included in the study area. Baker County statistics are reported with the other rural counties in the study area.

- **Rural counties:** Seven counties in the study area are classified as Rural Areas of Critical Economic Concern due to historically high levels of poverty and unemployment: Baker, Bradford, Columbia, Gilchrist, Levy, Suwannee, and Union. The population in these six counties tripled between 1960 and 2010, to about 196,000 residents; if current trends continue it is expected to increase to 293,000 residents by 2060.

Figure 2.2 demonstrates the growth of urbanized areas in the study area between 1990 and 2010. The Tampa Bay region expanded northward along the Gulf Coast and the I-75 corridor, with the Homosassa Springs-Beverly Hills-Citrus Springs area in Citrus County designated as a new urbanized area in 2010. The Jacksonville urbanized area spread southwest into Clay County. The smaller urbanized areas, Gainesville and Ocala, expanded within Alachua and Marion counties, respectively. At the same time, urbanized areas in Sumter and Lake counties expanded and became increasingly linked to the Central Florida/Orlando economy.

If current trends continue, the urban counties in Tampa Bay and Northeast Florida will account for nearly four out of every five new residents in this study area, with higher rates of growth occurring in areas north of Tampa and south and west of Jacksonville (Figure 2.3). Implementation of regional visions could change these projections somewhat by focusing more growth into existing large and small urban centers and concentrating the growth anticipated in outlying counties into more compact centers.

In the central portion of the study area, the emerging cluster of urban areas in Lake, Sumter, and Marion counties could become more significant, with existing transportation connections strengthening these areas' economic linkages to both Tampa Bay and Central Florida. Finally, in the rural portions of the study area, there is potential for a significant acceleration of population and employment growth if economic development initiatives are successful. The higher rates of growth would be likely in rural counties that border established urban areas and counties that serve as regional employment centers.

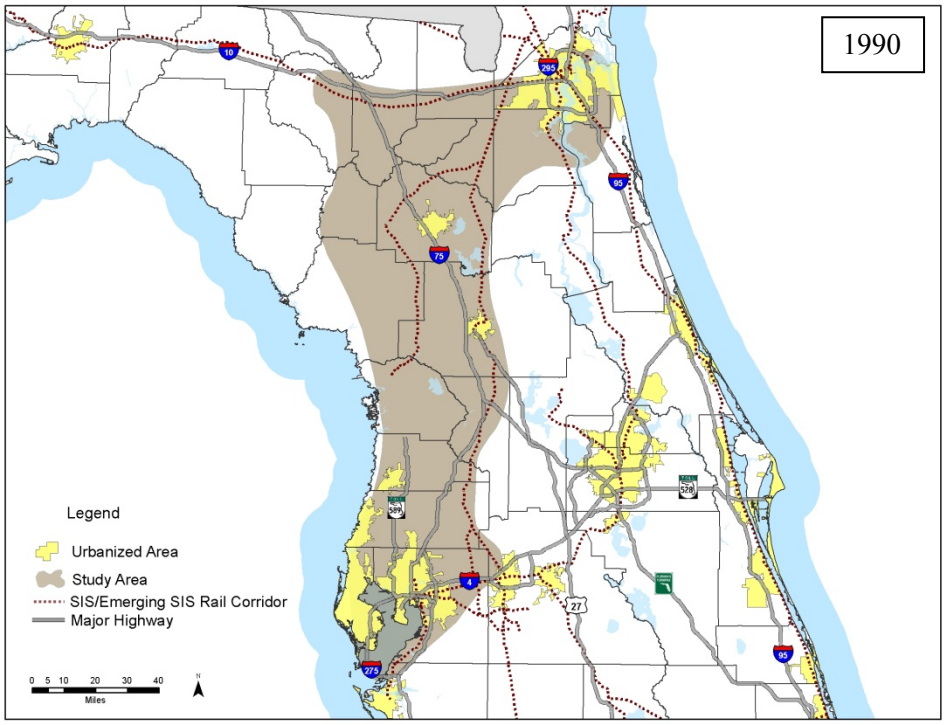
Employment also surged over the past four decades, from about 732,000 jobs in 1970 to a peak of 2.3 million in 2007. Employment dropped nearly 10 percent between 2007 and 2010 in the most severe recession to strike the region in the post-World War II era.[5] Recent data suggest the economy is turning the corner, but it will likely take several years for the region to regain all of the lost jobs.

The number of visitors also is expected to grow, with gains in both leisure and business travelers from domestic and international markets. Tampa Bay and Jacksonville are two of Florida's largest visitor destinations and contributors to the State's record 90 million out-of-state visitors in 2012.[6] The growth in population, employment, and visitors all will contribute to increased demand for moving people and freight to, from, and within the study area.

[5] U.S. Department of Labor, Bureau of Labor Statistics.

[6] VISIT FLORIDA, 2012 Florida Visitor Study.

Figure 2.2 Urbanized Area Boundaries
1990-2010



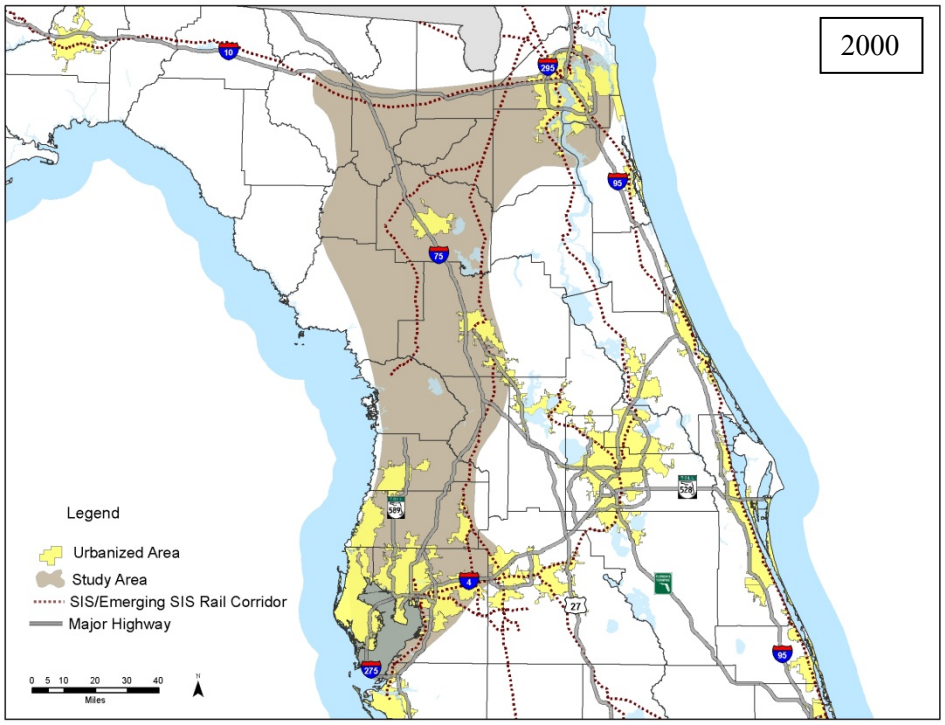
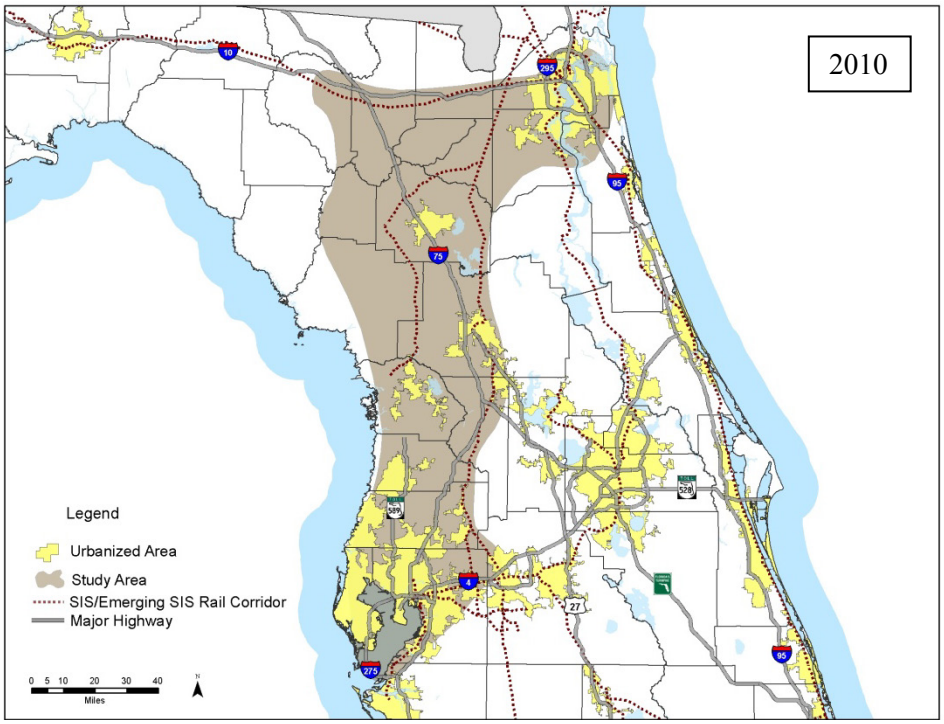
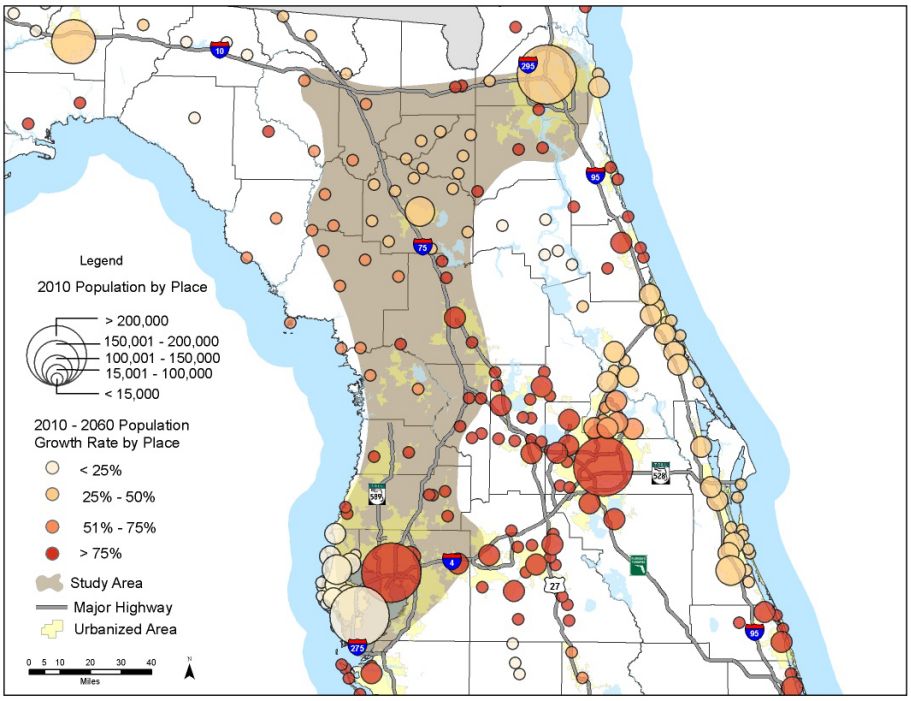


Figure 2.2 Urbanized Area Boundaries
1990-2010 (continued)



Source: U.S. Department of Commerce, Bureau of the Census.

Figure 2.3 Projected Trend Population Growth in Census Places
2010-2060

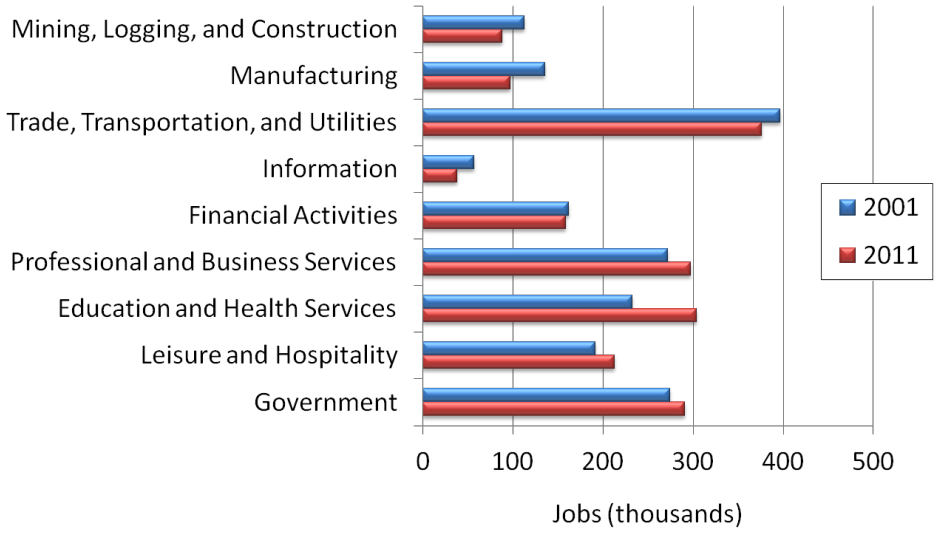


Source: Florida Department of Transportation, May 2013. The size of the circle is in proportion to 2010 population levels, and the color of the circle corresponds to projected growth, with the darker color indicating the highest growth rates.

■ Trend: Diversifying Economy

Similar to other parts of Florida, the study area's economy historically was based on natural resources (particularly agriculture, mining, and forestry), tourism, military, and industries tied to population growth, including construction, real estate, and retail trade. Over time, pockets of other industries developed such as insurance and distribution in Jacksonville, business support centers in Tampa Bay, and research in Gainesville. During the past decade, the study area lost jobs in resource-based industries, construction, manufacturing, and trade, transportation, and utilities. However, the study area experienced solid gains in professional and business services, education and health services, and leisure and hospitality (Figure 2.4).

Figure 2.4 Employment by Major Sector
2001 and 2011 (thousands)[a]



Source: U.S. Department of Commerce, Bureau of Labor Statistics.

[a] Data on industry-specific employment is available for metropolitan statistical area (MSA) only. As the major population center of the MSAs are located within the study area, the MSA statistics were used in determining employment in the study area.

Over the next few decades, the study area's economy may be driven by the growth of trade and logistics tied to the ports of Tampa Bay and Jacksonville; research and innovation associated with universities; continued growth of services and tourism; and a return to stronger population growth.

Key industries are spread throughout the study area, with increasing linkages between Tampa Bay, Northeast Florida, and North Central Florida in areas such as logistics and technology. Many of the key industries are dependent on transportation for access to labor, markets, suppliers, customers, and visitors. Each industry requires a different mix of transportation infrastructure and services – underscoring the need for an integrated, multimodal transportation system.

The following pages document existing activity in nine industry clusters:

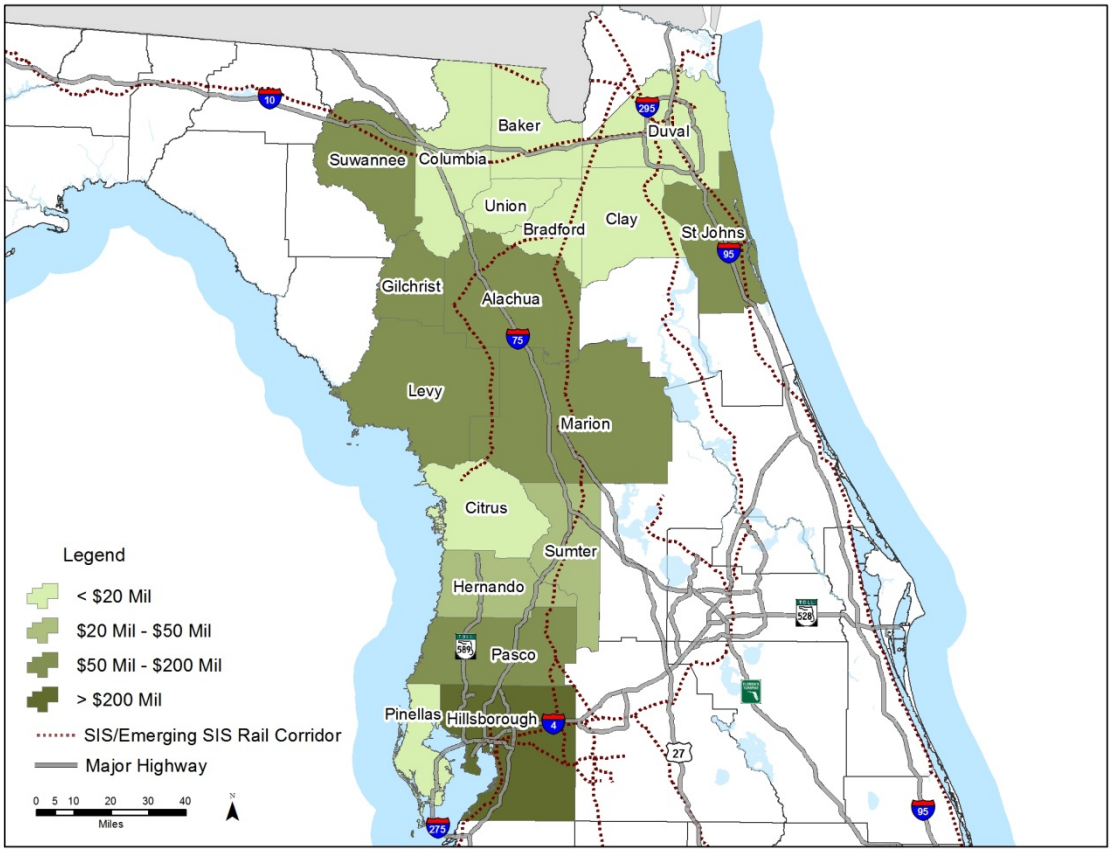
- Agriculture;
- Mining;
- Forestry and forest products;
- Military;
- Financial and business services;
- Trade and logistics;
- Manufacturing;
- Research and innovation; and
- Travel and tourism.

Agriculture – Agriculture remains a key foundation of the study area's economy. Agricultural receipts across the 18 counties totaled nearly $1.4 billion in 2007 (most recent data available). The study area is an important producer of citrus, fruits, vegetables, forage, dairy, and livestock. At the southern end of the study area, Hillsborough and Pasco counties are both major growers of vegeta-

bles and citrus (Figure 2.5). In the center of study area, Marion, Alachua, and Gilchrist counties cultivate fruits and vegetables and raise livestock, including dairy and horses. Levy County is a major producer of peanuts. In the northeast, St. Johns County is a major grower of vegetables.

Agriculture has been under pressure from global competition as well as conversion of agricultural land to urban development. However, growing demand for food regionally and globally, as well as the emergence of new products such as biofuels, creates potential for long-term growth. Agriculture relies heavily on all modes to transport raw materials to manufacturers and final products to consumers, including an extensive network of farm to market roads.

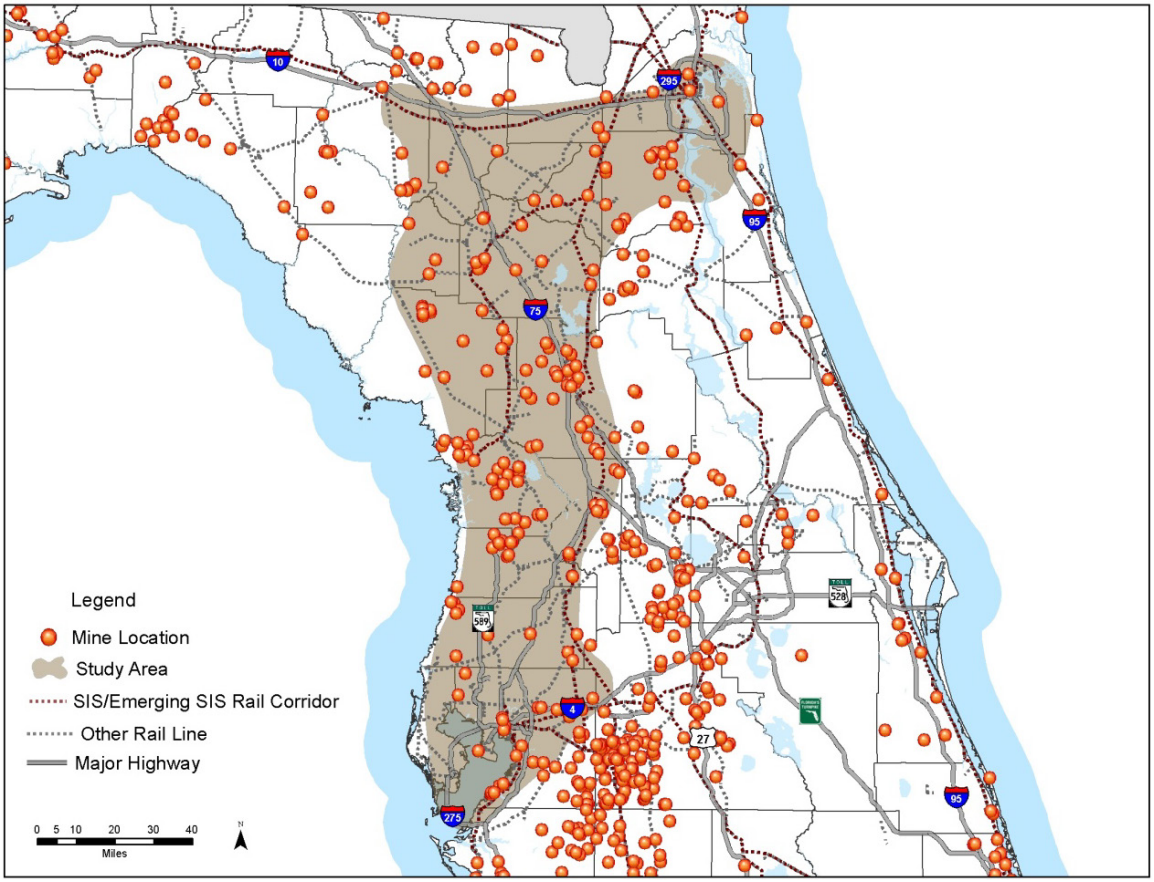
Figure 2.5 Agricultural Production by County
2007



Source: U.S. Department of Commerce, Census of Agriculture, 2007.

Mining – Mining historically has been an important industry across much of the study area (Figure 2.6). The southern portion of the study area is at the northern edge of one of the world's largest deposits of phosphates, a key ingredient in fertilizer. In addition, limestone, sand, and gravel quarries are located throughout the study area, producing materials for road building and construction. Many of these mines rely on rural roads or rail connections to bring products to market.

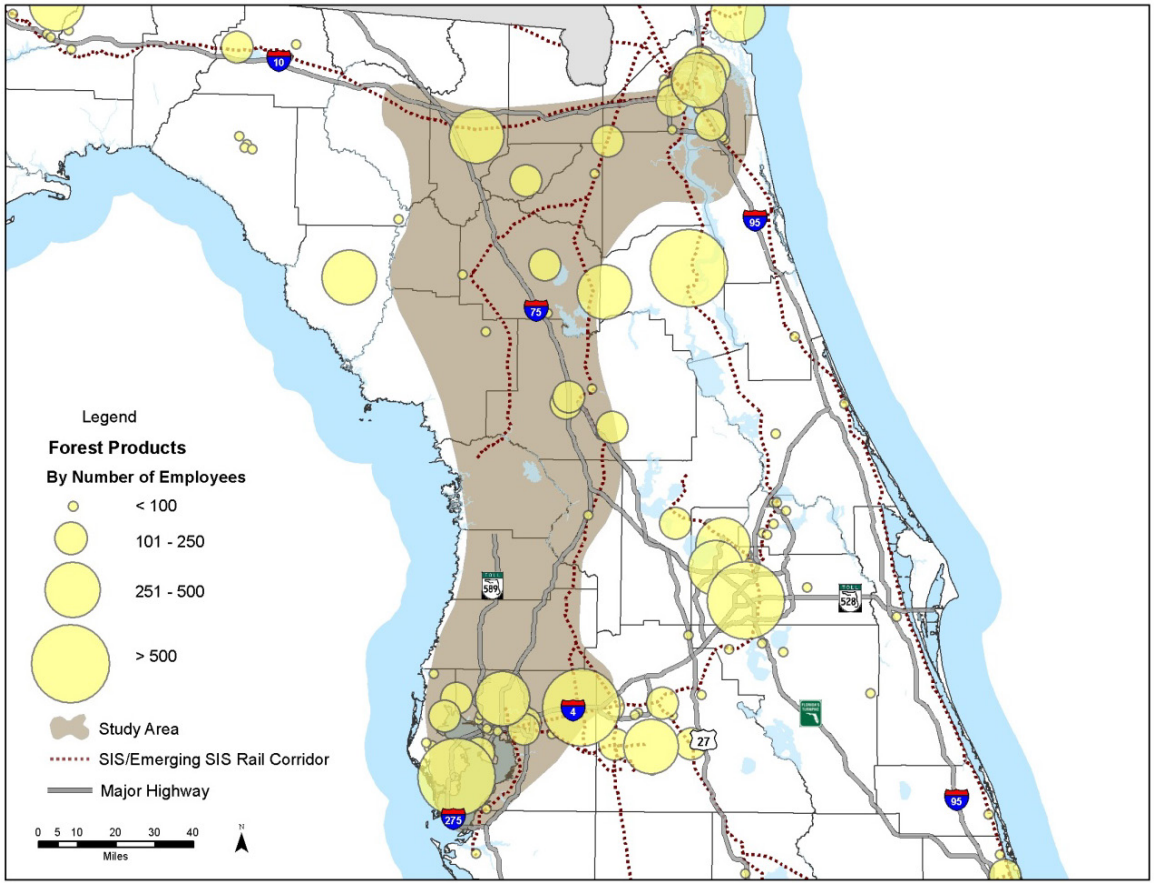
Figure 2.6 Mine Locations



Source: Mineral Resource Data System (USGS); Florida Department of Environmental Protection – Florida Geological Survey, 2012.

Forestry and forest products – The study area historically has been an important grower of trees and producer of lumber, wood, paper, and other forest products. Roundwood production statewide has hovered between 400 and 500 million cubic feet per year for most of the past decade.[7] The State's largest cluster of primary wood-using mills is concentrated in a band of counties from Taylor and Dixie on the Gulf coast to Nassau on the Atlantic coast. Related wood, paper, and furniture manufacturing activities are concentrated in the urban areas, requiring transport between the mills and production facilities (Figure 2.7).

Figure 2.7 Major Forest Products Employers



Source: InfoGroup 2010.

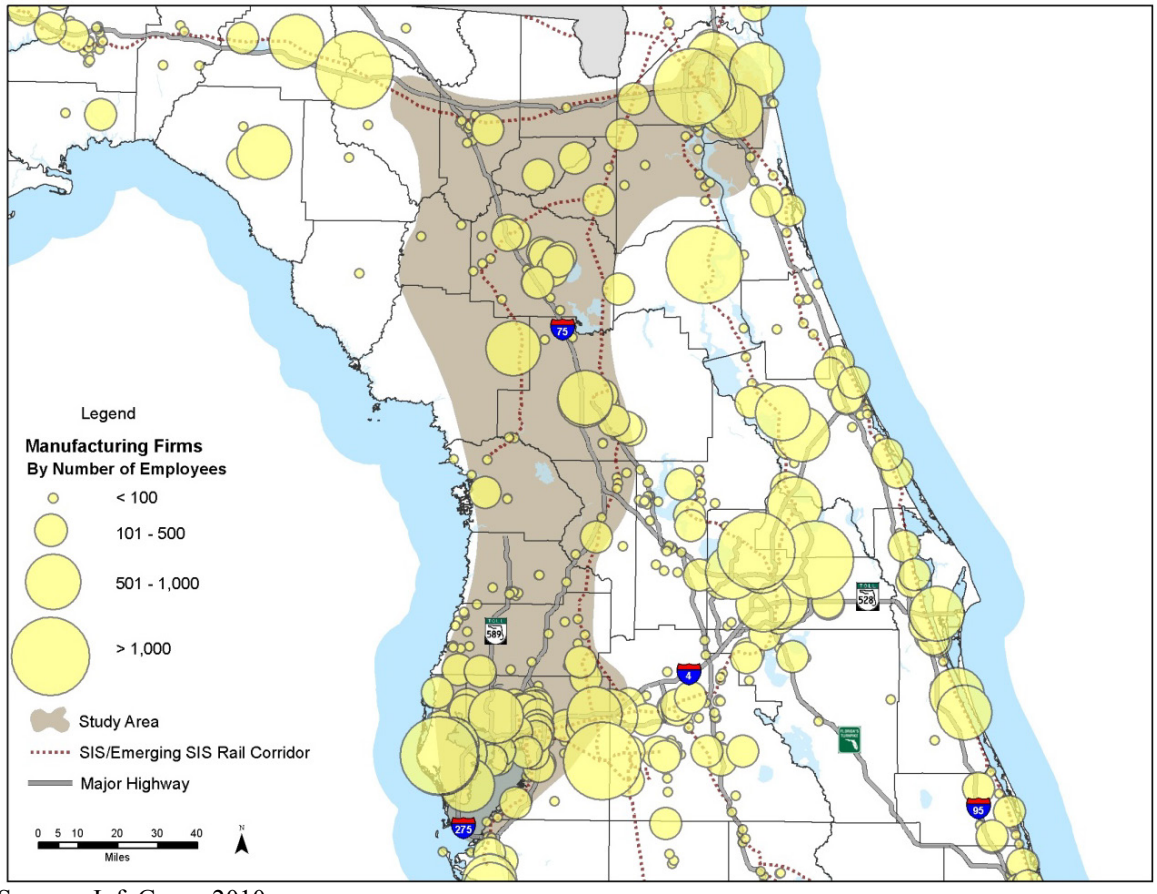
[7] U.S. Department of Agriculture, Forest Service, *Florida's Timber Industry – An Assessment of Timber Product Output and Use*, 2009.

Manufacturing – Manufacturing jobs declined during the recession but stabilized over the past two years. Manufacturing accounts for less than five percent of the region's jobs today. The manufacturing sector is evolving from its traditional focus on processed food, building materials, and marine industries to a more technologically oriented mix, including aerospace, medical equipment, and electronics. Manufacturing activity is spread throughout the region with concentrations in the large urban areas as well as along the I-75 corridor (Figure 2.8).

There is potential growth in value-added manufacturing related to rising global trade flows. The recent expansion of France-based Saft Battery in Duval County demonstrates that global manufacturers have recognized Florida as an effective platform for their operations.

All modes of transportation are important to the supply and distribution of manufactured products, including rail for bulk products and containerized shipments of consumer goods, trucking for long-distance hauls and regional distribution, and water and air for reaching export markets.

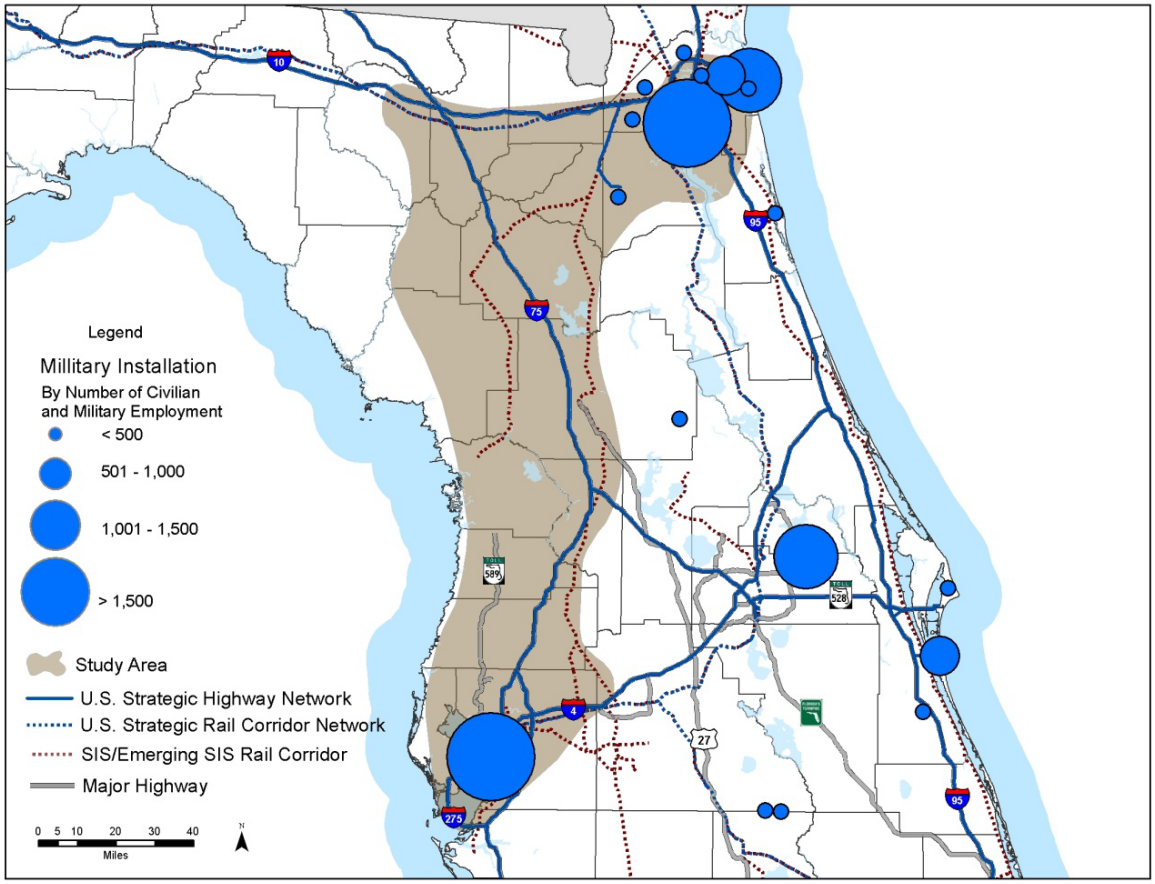
Figure 2.8 Major Manufacturing Employers



Source: InfoGroup 2010.

Military and defense – The study area is home to three large military bases: MacDill Air Force Base in Tampa and the Jacksonville Naval Air Station and Mayport Naval Station, both in Duval County (Figure 2.9). Mayport is one of the Navy's key logistics centers for activities worldwide. Numerous smaller military facilities are clustered in the Jacksonville area, as well as Camp Blanding, the primary military training and reservation base for the Florida National Guard and the State's alternate emergency operations center. The military is an intensive user of transportation to support its large workforce and supplier network as well as to support emergency preparedness.

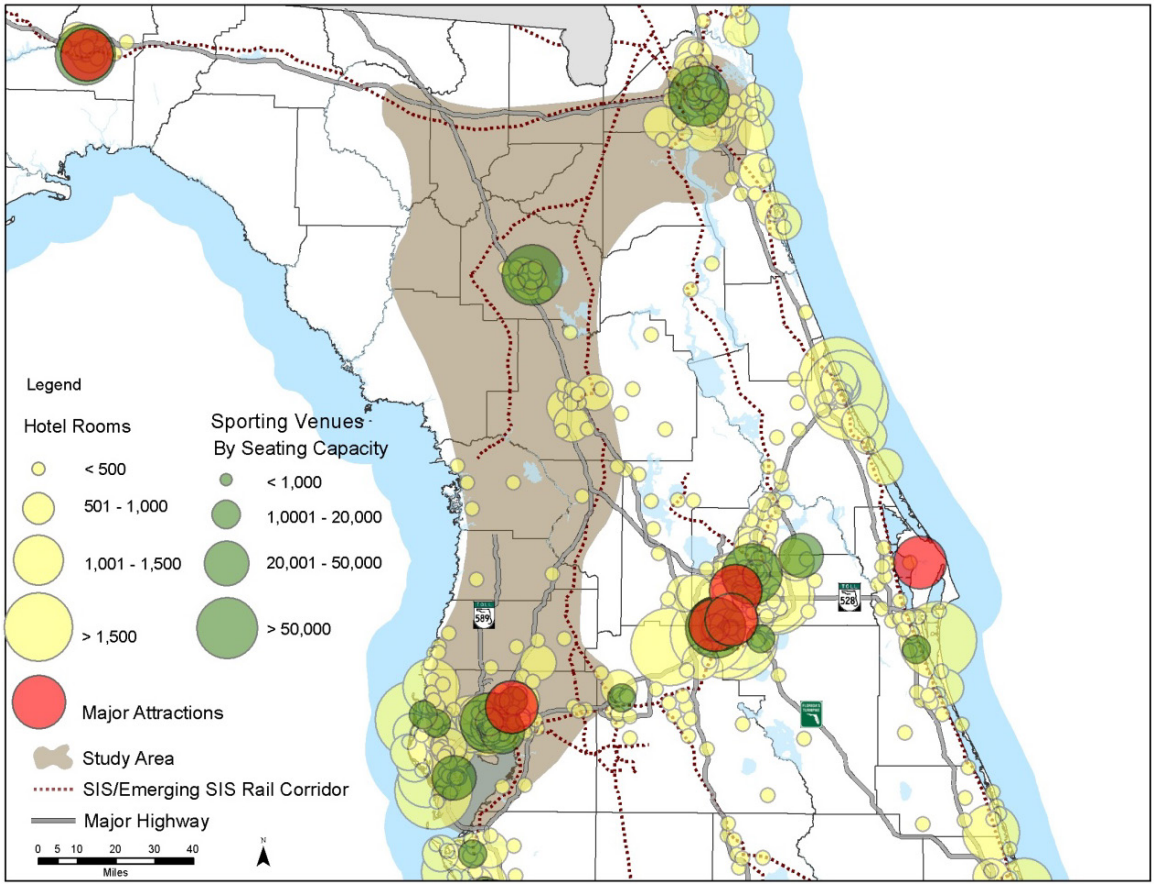
Figure 2.9 Military Installations



Source: Florida Defense Alliance, 2011.

Travel and tourism – The study area includes several visitor destinations, including one of the nation's leading theme parks, several of the nation's top ranked beaches, major convention centers, 13 major sporting facilities, and more than 75,000 hotel rooms. Key destinations include Tampa Bay and Jacksonville, with additional attractions in Gainesville and Ocala (Figure 2.10). With numerous parks, preserves, springs, and wildlife refuges, eco-tourism is becoming increasingly popular in both the inland and coastal counties between Tampa Bay and Jacksonville. The region's airports and highways are the primary means for bringing visitors to the study area. Improved connectivity can encourage more visitors to travel to multiple locations in the study area, as well as to travel to this area from Central Florida, one of the world's leading tourist destinations.

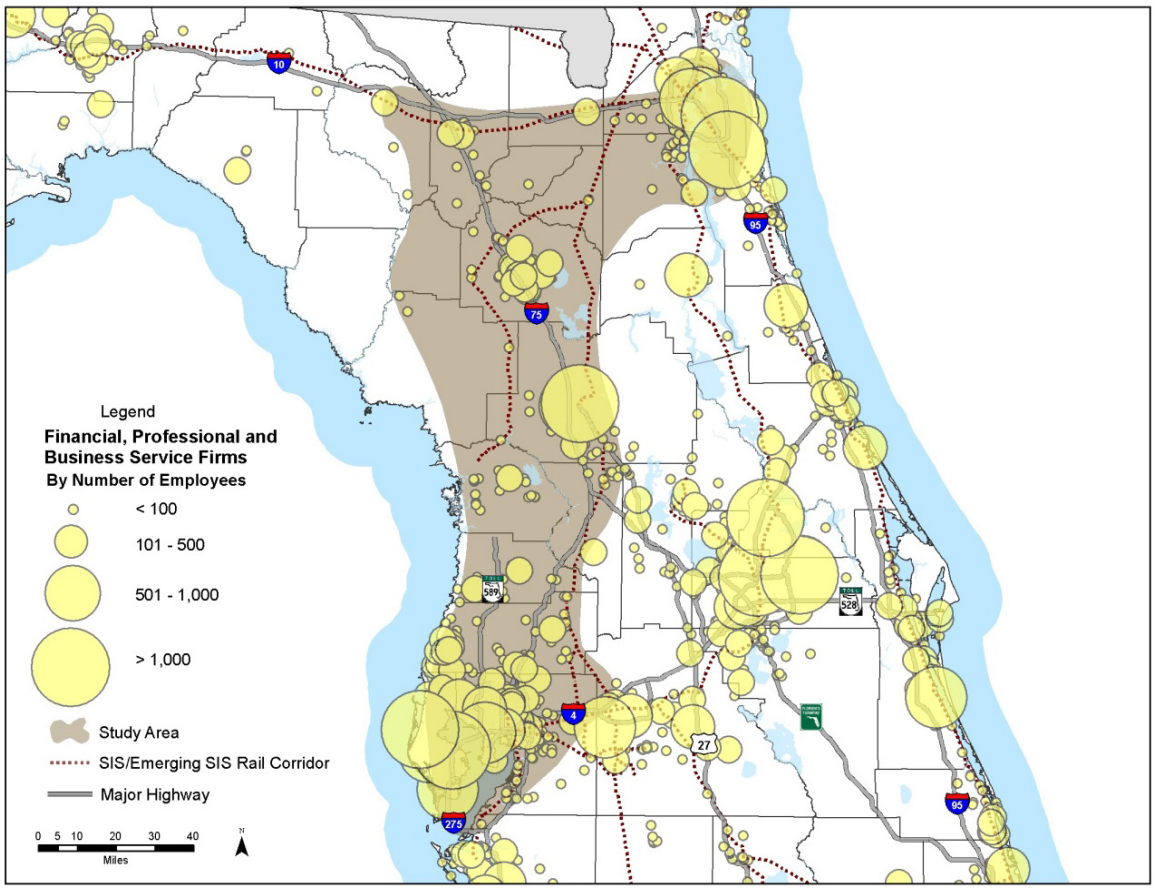
Figure 2.10 Major Travel and Tourism Destinations



Source: FDOT; Cambridge Systematics, Inc.

Financial and business services – Tampa and Jacksonville are both regional centers for financial services, including banking and insurance and business and professional services such as law and accounting (Figure 2.11). Tampa has a large concentration of call centers and other back office support services, including data management and financial transactions processing. Jacksonville is a regional financial center with particular strengths in mutual funds and insurance. Ocala and Gainesville are emerging as regional business centers. Finance and other professional services companies need easy access to customers within the region, as well as connectivity to airports for travel outside the region.

Figure 2.11 Major Financial and Business Service Employers



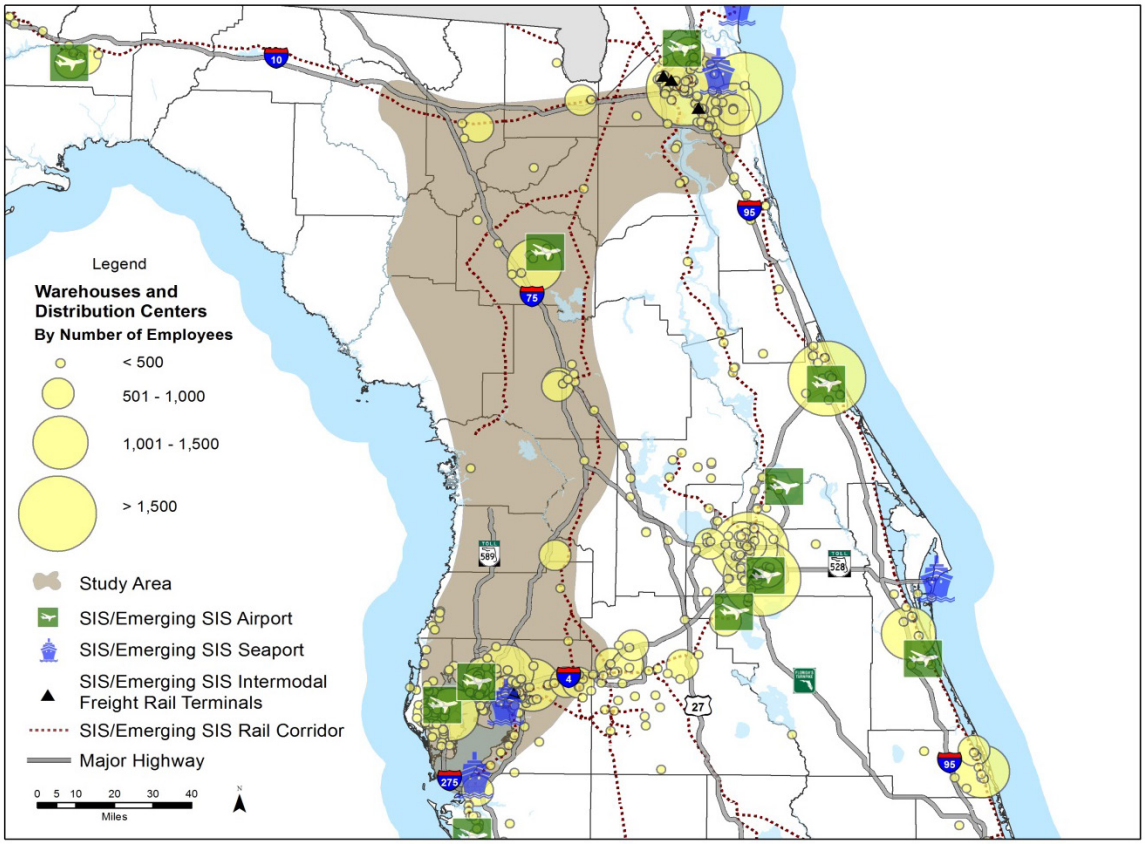
Source: InfoGroup, 2010.

Trade and logistics – The study area is bookended by two major deepwater seaports, the Port of Tampa and the Port of Jacksonville. The Port of Tampa is the top seaport in Florida by tonnage and Jacksonville ranks among the Atlantic Coast's leading seaports for containers and automobiles. Port Manatee, the Port of St. Petersburg, and the Port of Fernandina are all located in or nearby the study area.

A large freight transportation and distribution industry has developed with concentrations in both Tampa Bay and Jacksonville (Figure 2.12). Jacksonville is an attractive location for distribution centers processing consumer goods that the country through the Port of Jacksonville and are distributed to Florida or other Southeastern markets via I-10, I-75, and I-95. The Tampa Bay seaports have tended to serve regional markets across central Florida. Over time, a series of distribution centers have developed along the I-75 corridor in Ocala, Gainesville, and Lake City. These distribution centers generally cater to the Florida market, including food, beverages, and consumer goods.

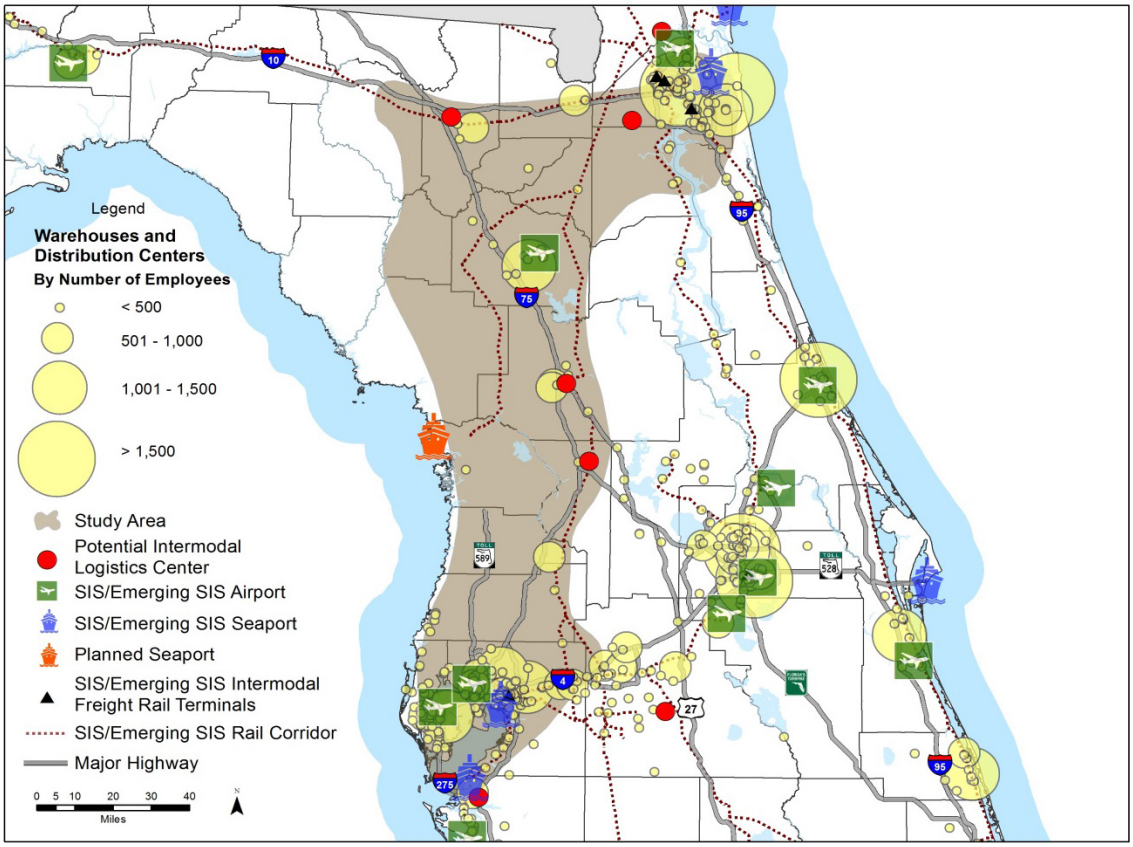
The region's logistics cluster may change as global and domestic trade expand. Citrus County is studying the feasibility of developing a seaport at Port Citrus. In addition, intermodal logistics centers (ILC) – centers for transportation, logistics, and value-added processing – are proposed or planned in Duval, Columbia, Marion, and Sumter counties. The planned ILC in Columbia County is a designated site as part of Enterprise Florida's Rural Catalyst program (Figure 2.13).

Figure 2.12 Major Trade Gateways and Distribution Centers Today



Source: InfoGroup 2010; Florida Department of Transportation.

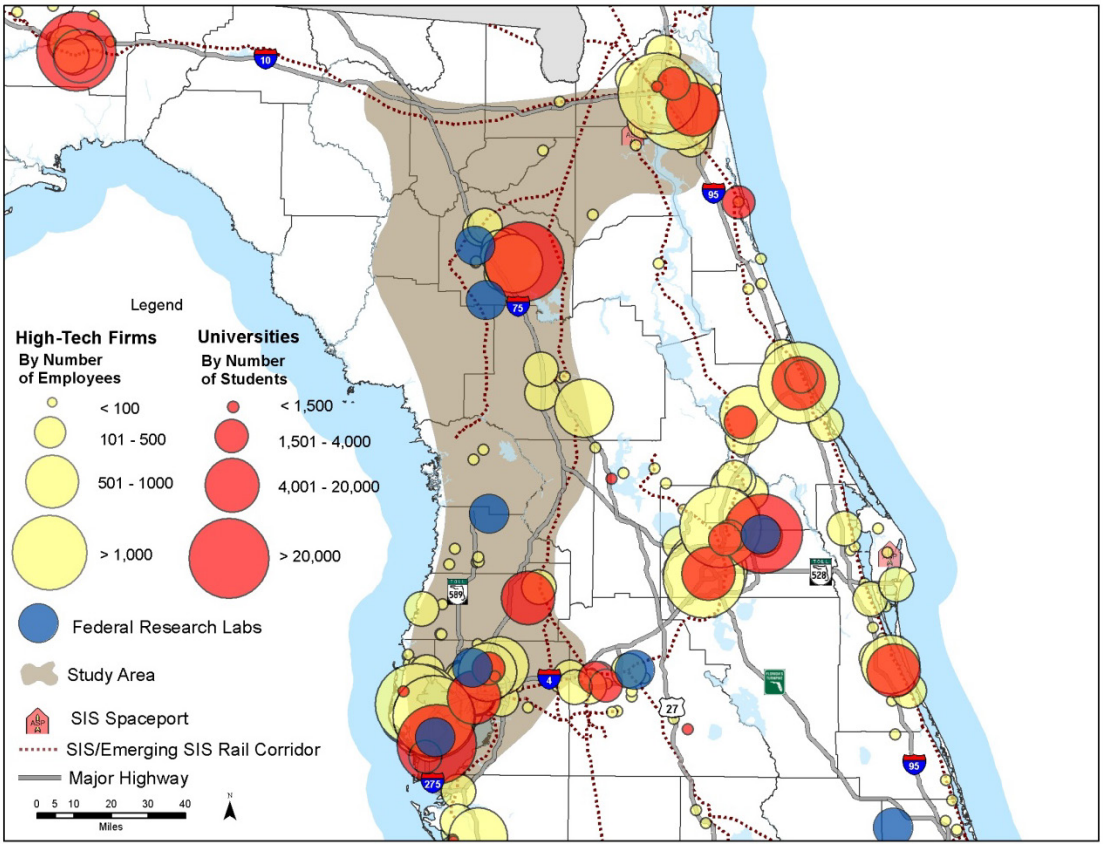
Figure 2.13 Potential Future Trade Gateways and Distribution Centers



Source: InfoGroup, 2010; Florida Department of Transportation.

Research and technology – Several parts of the study area are targeting growth in technology industries such as life sciences, aerospace, and electronics. These industries require access to major universities and research laboratories, interaction with other firms, a skilled workforce, and connectivity to global markets. The Carnegie Foundation ranks both the University of Florida and the University of South Florida as major research universities, reflecting their graduate programs, doctoral degrees, and research expenditures. Florida's High-Tech Corridor Council, which began by linking the counties along I-4, now includes 23 counties as far north as Alachua. Clusters of technology businesses are developing in Tampa Bay, Gainesville, and Jacksonville (Figure 2.14). Quality transportation infrastructure and services that foster collaborations between researchers, universities, and businesses can help develop advanced industries.

Figure 2.14 Major Research and Technology Employers

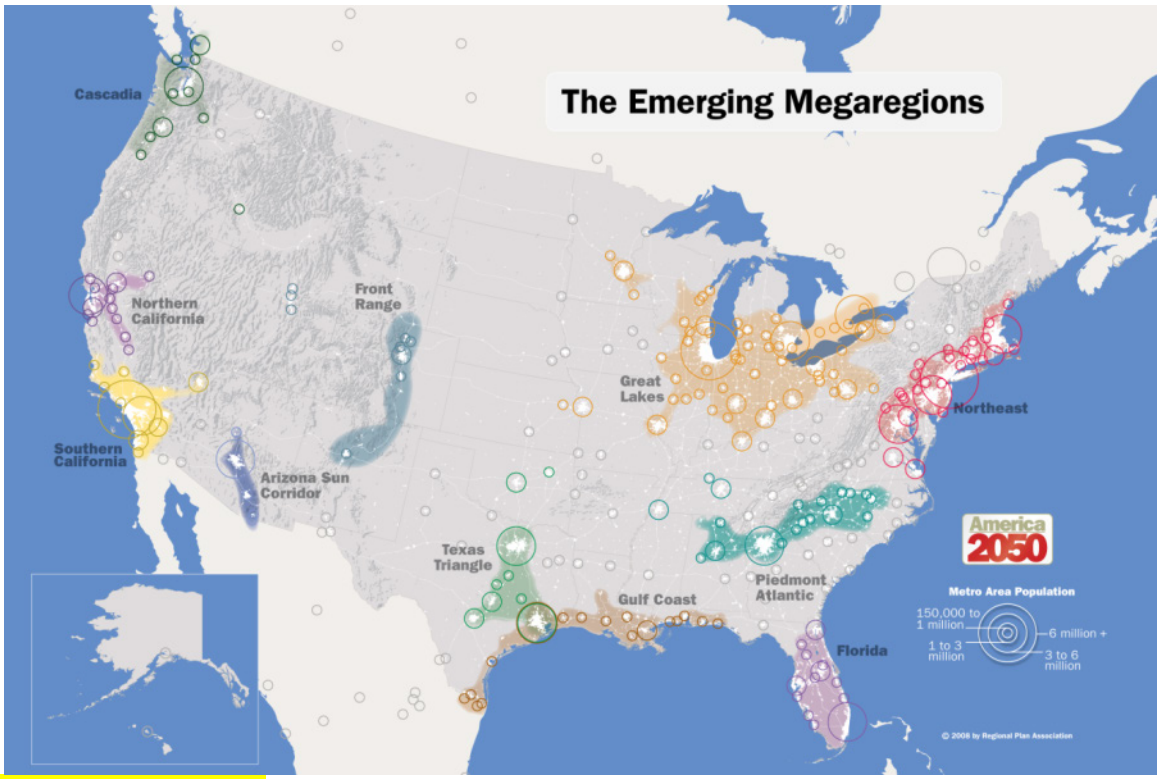


Sources: InfoGroup, 2010; Florida Division of Emergency Management, 2008; Federal Laboratory Consortium for Technology Transfer, 2012; Florida Department of Transportation, 2012.

■ Trend: Expanding Statewide, National, and Global Markets

The markets for these industry clusters are expanding from regional to national and global. Studies by America 2050 and other national organizations suggest that over the next few decades, the entire Florida peninsula will be linked together into a single 'megaregion' (Figure 2.15). The Florida megaregion will be one of 10 to 12 megaregions that account for 75 percent of all United States population and employment growth during that period. The Tampa Bay-Northeast Florida study area is at the northern edge of this megaregion. As the megaregion emerges, travel between Tampa Bay/Northeast Florida and Southeast, Southwest, and Central Florida will become more significant, as will connections to the other U.S. megaregions.

Figure 2.15 Emerging Megaregions



Source: To be provided.

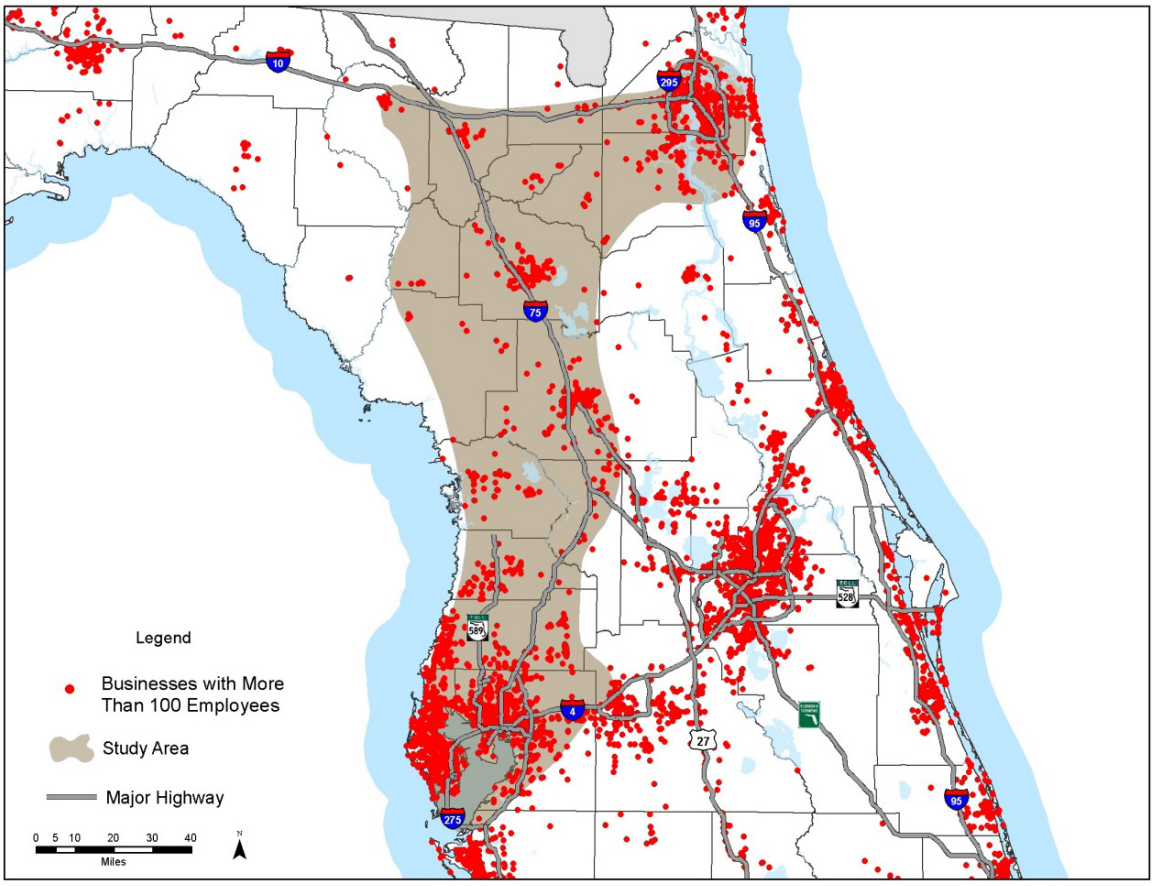
The Tampa Bay, North Central, and Northeast Florida regions also are becoming more significant exporters. Merchandise exports originating in the four metropolitan statistical areas located in these regions totaled $10.6 billion in 2011, up 78 percent from 2005.[8] Key export markets include Asia, Europe, South America, and the Caribbean. Key export goods include computers and electronics, chemicals, transportation equipment, and industrial machinery.

■ Trend: Growth Concentrating in Existing and New Centers

Population and jobs in the study area are concentrated in a relatively small number of established urban centers, but new economic centers are emerging over time. Many centers have located on major transportation corridors – 70 percent of the study area's population and 68 percent of its jobs are located within five miles of limited access highway corridors (Figure 2.16).

[8] U.S. Department of Commerce, Bureau of the Census, Origin of Movement Based Series.

Figure 2.16 Location of Major Businesses



Source: InfoGroup, 2010.

The two largest concentrations of jobs are clustered at the ends of the study area, Tampa Bay and Jacksonville. The Tampa-St. Petersburg urbanized area includes portions of Hillsborough, Pinellas, and Pasco counties. Pinellas County is nearly built out and is focusing on redevelopment and urban infill for future growth. Hillsborough County, which includes Tampa, still has significant room for both redevelopment and new development in areas like New Tampa.

The Zephyrhills and Spring Hill urbanized areas are located in Pasco and Hernando counties, to the north of Tampa. These developed as bedroom communities for Hillsborough and Pinellas counties and amenity-rich retirement communities that are attractive for the large Baby Boom generation that has just begun to leave the workforce. These counties are trying to diversify their economic base. Industry is growing along I-75, U.S. 19, and the Suncoast Parkway, and growth is targeted around key sites such as the Hernando County Airport Industrial Park in Brooksville.

Following the 2010 Census, three Citrus County cities – Homosassa Springs, Beverly Hills, and Citrus Springs – became one of the nation's newest urbanized areas, with a combined population exceeding 80,000 residents. The new urbanized area extends into part of Marion County. Citrus County is studying the feasibility of developing Port Citrus as the State's 15th deepwater seaport, and also developing business incubators and airport industrial parks to help expand innovation industries.

The Leesburg-Eustis-Tavares and Lady Lakes-The Villages urbanized areas are located in neighboring Lake and Sumter counties (the Lady Lakes urbanized area also includes part of Marion County). Both were designated urbanized areas as of the 2000 Census and grew rapidly during the next decade. Sumter County is exploring development of a major industrial center near the intersection of Florida's Turnpike and I-75 in Wildwood, and Lake County is exploring development of the Leesburg Airport, redevelopment of historic downtown areas such as Tavares, and targeted new developments.

To the north, Marion County, home to the city of Ocala, is a regional business center. The city and county are targeting growth in logistics and distribution, including development of an airport industrial park and an intermodal logistics center. The Institute for Human and Machine Cognition located its second Florida campus in downtown Ocala, helping seed an innovation cluster in the county. Silver Springs, adjacent to Ocala, is home to a major theme park and serves as the gateway into Silver Springs State Park.

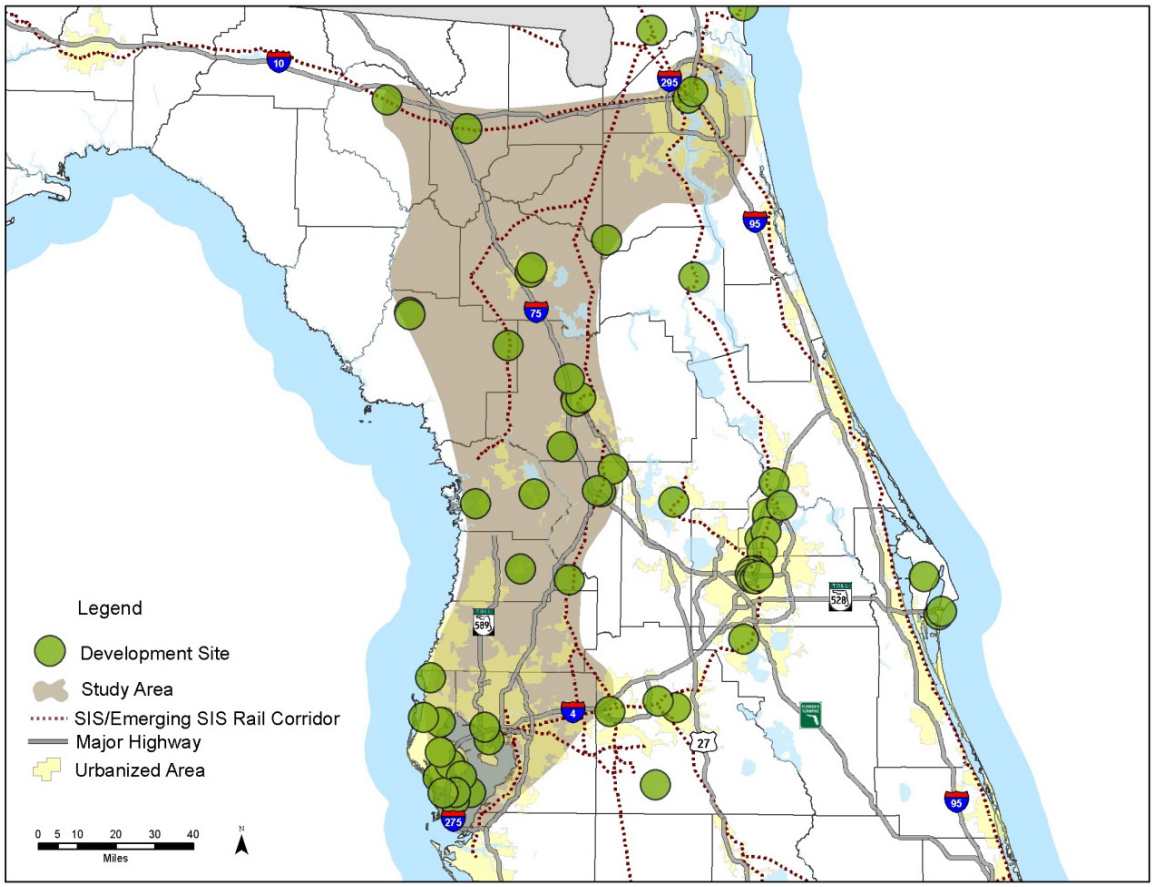
Further north, Alachua County is the home of the city of Gainesville and the University of Florida. Gainesville has enjoyed slow but steady growth but is increasingly focusing on becoming a regional innovation hub. There is potential for significant new development of technology parks and other facilities.

Six rural counties surround Marion and Alachua counties: Levy, Gilchrist, Columbia, Baker, Union, and Bradford. Each is part of the North Central Florida Rural Area of Critical Economic Concern. This part of the State historically focused on agriculture, mining, forest products, basic manufacturing, and recreation. These areas face a range of future opportunities. Levy County may become more tied to the cluster of urbanized areas in Citrus, Sumter, and Marion counties over time. Baker County is becoming more integrated with the Jacksonville area. With a strategic location at the interchange of I-10 and I-75, Columbia County is developing an intermodal logistics center.

At the northeastern end of the study area, the Jacksonville urbanized area includes Duval and portions of Clay and St. Johns counties. This region is anticipated to expand. The First Coast Outer Beltway will reinforce the shift in growth to the southern and western suburbs.

Regional visions and economic development plans adopted by the study area's regional planning councils and economic development organizations define future priorities. The development sites identified in Comprehensive Economic Development Strategies and other strategic plans are spread throughout the region – some in redevelopment areas close to existing infrastructure, and some in greenfield locations (Figure 2.17). Proposed developments of regional impact are concentrated primarily in the counties to the north of Tampa Bay along the Gulf Coast and I-75 and in Northeast Florida (Figure 2.18). These sites are in various stages of development, ranging from visioning to construction. Some of these sites have been entitled but not fully developed, and have significant remaining capacity for development. As some or all of these projects and plans move forward, they have the potential to reshape the region's economic geography and associated demand for moving people and freight.

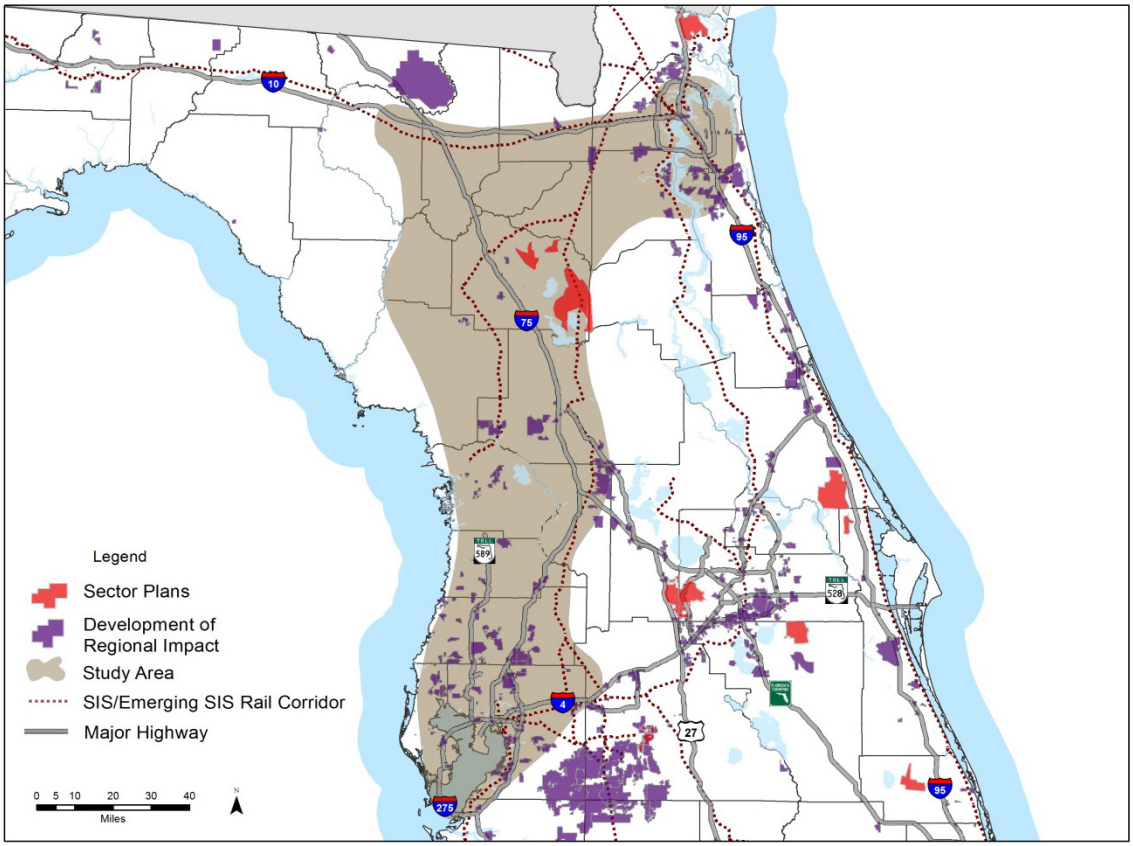
Figure 2.17 Future Development Sites Identified in Comprehensive Economic Development Strategies



Sources: Central Florida Regional Planning Council Comprehensive Economic Development Strategy, 2012; East Central Florida Regional Planning Council Comprehensive Economic Development Strategy, 2012, Southwest Florida Regional Planning Council Comprehensive Economic Development Strategy, 2012, Tampa Bay Regional Planning Council Comprehensive Economic Development Strategy, 2012, Withlacoochee Regional Planning Council Comprehensive Economic Development Strategy, 2012.

Future land use plans are documented in local government comprehensive plans and in a variety of long-term master plans. Existing local government comprehensive plans typically cover a period of 10 to 20 years, far short of the 50-year horizon used for the Future Corridors initiative. Additional analysis may be need to determine the increment of new growth that could be accommodated in already designated areas, many of which may have significant un-built entitlements, as well as the increment that might be accommodated in new centers.

Figure 2.18 Locations of Sector Plans and Developments of Regional Impact



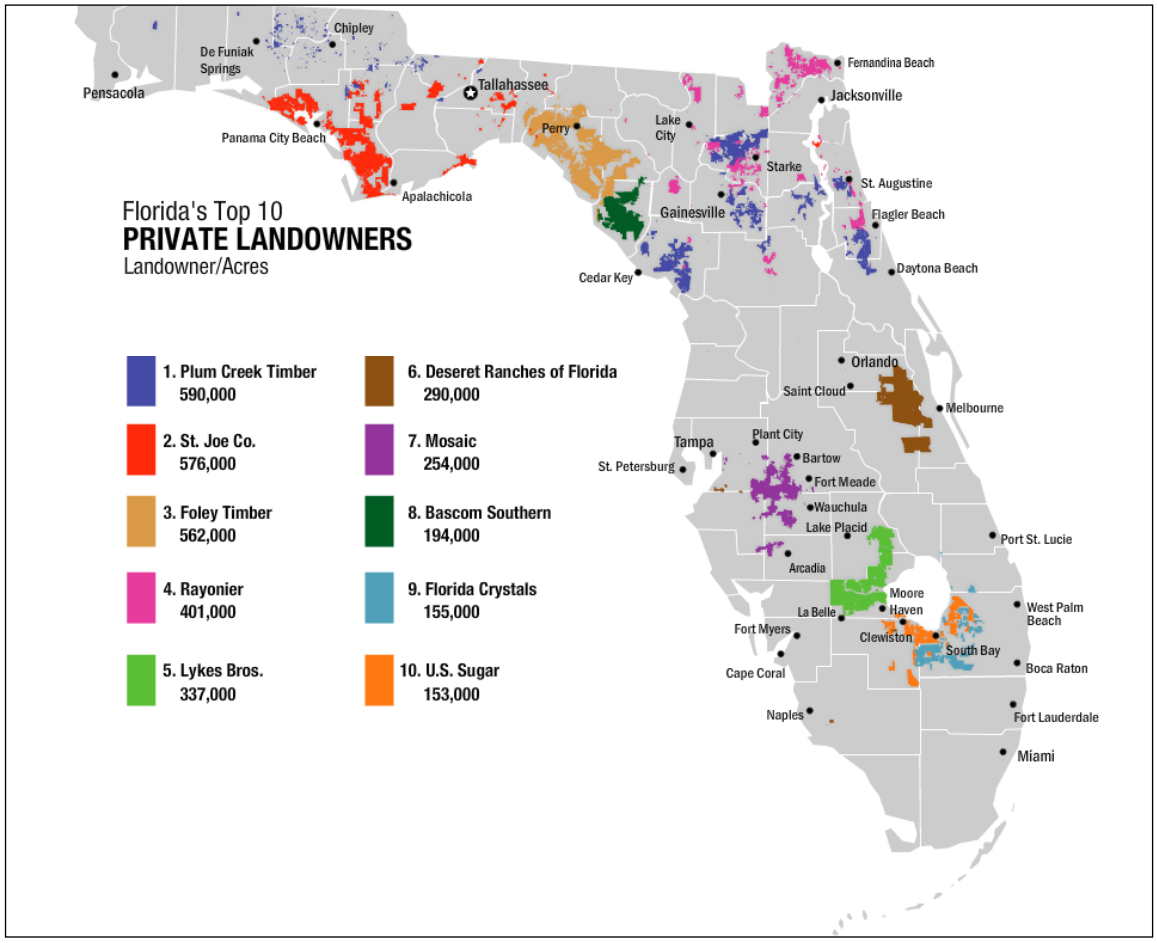
Source: Florida Department of Economic Opportunity, 2012.

The evolving plans of private landowners also could have significant impacts on the future development of parts of the study area. Four of Florida's largest private landowners have significant holdings in or close to this study area (Figure 2.19):

- Plum Creek Timber is the largest private landowner in the United States, with 6.6 million acres nationwide. In Florida, Plum Creek owns 590,000 acres in 22 counties, including significant concentrations in Levy, Alachua, Bradford, Union, and St. Johns counties in this study area. Plum Creek's core business is timber used for the production of lumber, plywood, and other wood products. The company also manages land for conservation, recreation, natural resources, and development. Plum Creek is supporting several strategic initiatives in North Central Florida, including the planning for an intermodal logistics center near I-10 and I-75 and CSX rail in Columbia County. Plum Creek also has been a major supporter of Envision Alachua, a strategic planning process to create a vision for guiding the future growth of east Alachua County. This vision may lead to a sector planning process in the East Alachua area.
- Rayonier, Inc. owns approximately 400,000 acres in Northeast and North Central Florida, including Bradford, Columbia, and Alachua counties in the study area. Rayonier's core business includes forestry products, production of performance fibers, and real estate. Rayonier is cooperating with a number of long-range planning efforts, including the Columbia County intermodal logistics center, the First Coast Outer Beltway, certification of a mega-site for economic development at the CSX/Norfolk Southern crossing, and conservation projects.

- Foley Timber and Land Company owns approximately 560,000 acres in Taylor, Lafayette, Dixie, Madison and Jefferson counties, all of which are to the west of the study area. The company sustainably harvests more than one million tons of timber annually and has substantial limestone reserves. In 2007, Foley joined a regional effort to develop a vision for guiding the future growth of Taylor County, where the majority of its landholdings are located. Taylor County is a rural coastal county just outside of the study area and midway between Tallahassee and Gainesville. Working in concert with a variety of stakeholders, Taylor County and Foley master planned more than 127,000 acres in Taylor County. Through amendments to Taylor County's Comprehensive Land Use Plan, development policies were established that allow for, and will guide, the long-term development of more than 25,000 units on over 30,000 mixed use acres and an additional 14,500 acres dedicated to industrial/nonresidential development.
- Bascom Southern owns approximately 190,000 acres of land, primarily in Dixie County, which is just outside of the study area.

Figure 2.19 Florida's Top-10 Private Landowners



Source: Florida Trend Economic Yearbook, 2011.

3.0 Person and Freight Travel Trends

Population and economic trends are causing significant changes in the demand for moving people and freight in the study area (Table 3.1).

Table 3.1 Travel Demand Trends and Implications for the Transportation System

Trends	Implications for the Transportation System
An expanding population and economy, as well as a strategic location for distributing goods in Florida, is increasing regional and long-distance freight flows.	Truck and rail traffic are increasing and more freight will be moving into and out of the study area's seaports and airports. Greater connectivity could alleviate freight bottlenecks at seaports, airports, and on highways.
Travel demand is increasing for all types of person trips, including longer distance trips between economic regions.	Local and long-distance trips both rely on I-75 and I-10 as key highways. There may be a need to investigate alternative routes and modes to accommodate an overall increase in the number of trips throughout the region.

■ Trend: Increasing Trade and Freight Flows

The regions in the study area generate significant demand for moving freight, including:

- Long-distance imports of consumer goods from other states and nations – some of which enter the United States through seaports and airports in the study area, and some of which enter through gateways in other parts of Florida and other states;
- Exports of locally produced food, minerals, forest products, and manufactured goods to other states and nations – again, some using the study area's seaports and airports, and others flowing through other gateways;
- Regional flows of raw materials from farms, mines, and forests to processing facilities;
- Regional flows of supplies and intermediate products between businesses;
- Regional distribution to and from warehouse and logistics centers;
- Final delivery of finished goods to stores, businesses, and homes; and
- Related services such waste removal.

About 400 million tons of domestic and international trade moved to, from, through, and within the 18 county area in 2010. If current trends continue, this volume is projected to increase 83 percent by 2060, reaching approximately 733 million tons.[9]

This growth in trade and freight flows reflects multiple factors:

- Strong anticipated growth in population and employment in many parts of the study area will create more demand among businesses and consumers for raw materials, intermediate inputs, and final goods.
- Key industries such as agriculture, forest products, mining, and manufacturing produce significant freight flows. The region is diversifying into new markets such as technology-oriented manufacturing, which may further increase freight flows.
- The study area is well positioned to serve as a distribution platform to the rest of Florida for inbound freight from other states and nations. Businesses are developing warehouses and distribution centers in the study area to handle imports to consumer markets in the region and elsewhere in the State of Florida.
- The widening of the Panama Canal, along with continued growth in Latin American and Caribbean trade, is expected to increase the total flow of trade through Florida's seaports and airports.

Trucking is the dominant mode for domestic and international trade in the study area, carrying 70 percent of all trade volume. The balance is roughly split between water (15 percent) and rail (14 percent). Rail accounts for a larger share of activity in this region compared to the rest of the State, reflecting the historic concentration on bulk movements of heavy commodities. Air cargo accounts for a small percentage of trade volume but generally carries high-value commodities.

Resource-based industries such as agriculture and mining typically produce large bulk shipments that transport by rail and barge/ship. Emerging innovation and service industries generate demand for smaller, higher value parcels that move by truck and air. Statewide forecasts project that the fastest growing modes for trade flows include international air cargo and intermodal/containerized rail, truck, and water shipments – all of which may double by 2035.[10]

Duval and Hillsborough counties are the major generators and consumers of trade in the study area today. Hillsborough and Duval counties are among Florida's leading producers of phosphates, aggregate, paper, lumber, and agricultural products. Both also are part of major urbanized areas with large demand for consumer goods and are important centers for distribution and manufacturing.

The top domestic trading partners for the study area are other counties within Florida and the states of Georgia, Indiana, Alabama, Texas, and New York (in decreasing size). Significant international trading partners for the study area include Central America, South America, and the Caribbean. Trade with Asia is expected to increase after the Panama Canal widening.

[9] Florida Chamber Foundation, *Florida Trade and Logistics Study*, December 2010. These totals do not include local delivery or non-freight truck trips, such as waste, utilities, repairs, and other services.

[10] Florida Chamber Foundation, *Florida Trade and Logistics Study*, December 2010.

The seaports in or near the study area handled 68 percent of the waterborne cargo ultimately consumed in the study area in 2010, compared to an average of 55 percent statewide. The remaining waterborne cargo arrives at a seaport in another part of Florida or the United States and is moved via truck or rail to the study area for final consumption, often via a distribution center in another state. Key seaports serving imports to the region include Gramercy, Southern Louisiana, and Savannah. Atlanta, New Orleans, and Memphis are the major distribution centers serving the region. The State is attempting to attract more imports directly through Florida seaports. If this initiative is successful, the study area may see a significant shift in trade flows. The proportion of long-distance truck and rail movements from Louisiana and Georgia could shrink, and the proportion of shorter haul flows on regional highways between Florida seaports and regional customers could grow. It is possible that Florida will become a platform for foreign shippers to serve the Southeastern United States; if this occurs, more long-distance flows would leave Florida seaports and move via truck or rail to destinations in other states.

The State also has set a goal of doubling the value of Florida origin exports between 2010 and 2015. The farms, mines, forests, and factories in the study area all produce goods that could be sold worldwide. As exports grow, these goods producers will need efficient and reliable connections to seaports and airports to reach global markets.

The study area's seaports are preparing for this shift. Major expansions of container and other freight operations are underway at the Port of Tampa, the Port of Jacksonville, and Port Manatee. The Port of Tampa and Port of Jacksonville are becoming important feeders for the entire State, attracting imports that previously were served outside of the State. Citrus County is studying the feasibility of developing Port Citrus.

In addition, a new type of freight hub is emerging in the region with CSX Corporation's decision to locate a major national scale intermodal logistics center (ILC) in nearby Winter Haven (Polk County) to serve the entire Florida peninsula. An ILC is a group of facilities serving as an intermodal transfer point for freight and providing related logistics, consolidation, and other value-added activities. One example is the Cecil Commerce Center in Jacksonville, which is a master planned facility for logistics and manufacturing linked to the port of Jacksonville. Several additional ILC sites are proposed in the region, including Plum Creek Inland Port (Columbia County), the Ocala 489 Site (Marion County), and the Central Florida Mixing Center/Monarch ILC (Sumter County). As such facilities develop, distribution trips between the ILCs, the seaports, and final customers will increase.

I-75 and I-10, along with CSX main rail lines, are the principal arteries for moving this increasing flow of domestic and international trade to, from, and through the study area, as well as between key markets such as Tampa and Jacksonville. Exporters and importers both use I-75 to access the international gateways in Tampa Bay and, with a connection to I-10, in Jacksonville. As ILCs and distribution centers expand, many will be located on or near the I-75 corridor. Improvements to the freight transportation network, particularly the crucial I-75 corridor, can make the movement of goods faster, more efficient, and more reliable.

Trend: Changing Personal Travel Patterns

Person travel in the study area is a mix of trips for commuting to work; carrying out business activities; and traveling to schools, health care, shopping, recreation, and social activities. The majority of the trips occur at a regional or local scale, rather than across the full study area. However, long-distance and interregional trips appear to be growing, with emphasis in two areas:

- Business-related trips, particularly in service and innovation industries that are increasingly spread throughout the study area; and
- Personal travel to the study area from other parts of Florida and other states and nations.

Vehicle miles traveled (VMT) in the 18 county area peaked in 2007 and declined during the recession, mirroring national and statewide trends. As the economy recovers and population growth resumes, the region should experience an increase in the number of trips for all purposes. However, total VMT declined in 2011 even as population and employment edged higher, suggesting that the traditional relationship between population, employment, and VMT may be changing.

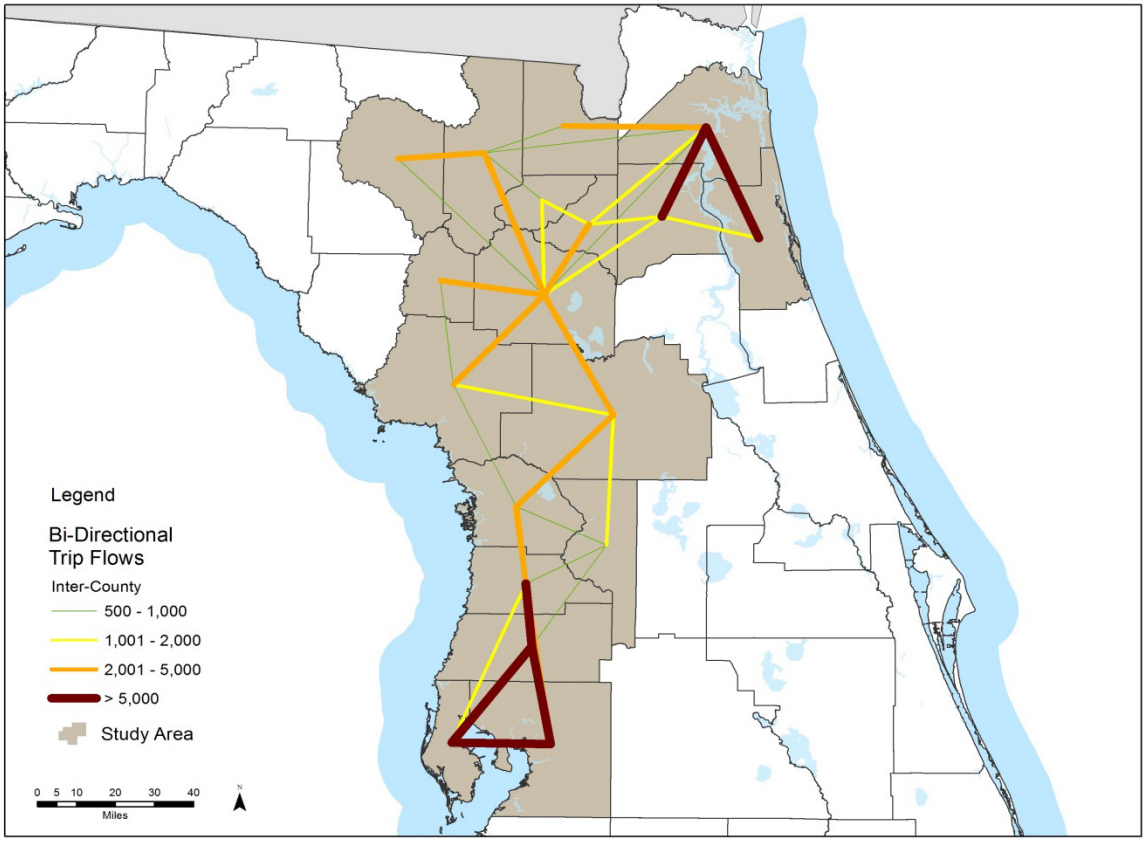
Although the focus of this study is on interregional connectivity, it is important to understand the commuting and other regional and local trips that share the same transportation system.

Commuting and daily trips. Between 2006 and 2010, over 357,000 workers in the study area, or roughly 17 percent, work in a different county from their county of residence. Significant cross-county commuting flows are clustered in three portions of the study area (Figure 3.1):

- **Tampa Bay.** Hillsborough County attracts workers from around the Tampa Bay region to downtown Tampa, to tourist attractions, and to businesses clustered around the Port of Tampa and Tampa International Airport. Hillsborough and Pinellas counties have close economic ties, with large flows of commuters between the two counties in both directions. Additionally, Hillsborough and Pinellas counties attract commuters from Pasco and Hernando counties.
- **Marion, Citrus, and Sumter counties.** Marion County's businesses traditionally have drawn workers from Citrus and Sumter counties. The growth of new urbanized areas in Citrus and Sumter counties increased flows in both directions in recent years.
- **Northeast Florida.** Duval County attracts workers from around the region to downtown Jacksonville, to tourist attractions, and to businesses clustered around the Port of Jacksonville and Jacksonville International Airport. St. John's and Clay counties have close economic ties with Duval County, with large flows of commuters between these counties in both directions.

Commuter flows may shift with the planned development of regional employment centers in rural counties. Regional employment centers are being planned in locations such as Lake City, Live Oak, and Levy County to provide more job opportunities for residents in rural areas.

Figure 3.1 Commuting Flows in the Study Area



Source: 2006-2008 American Community Survey/Census Transportation Planning Package Journey-to-Work Flow Data.

Given these dispersed commuting patterns and the limited availability of public transportation options, the automobile remains the predominant mode used for commuting today. From 2005 to 2010, more than 90 percent of workers in the 18 county area used an automobile as their primary means of commuting to work, either as the sole driver or as part of a carpool.[11] In contrast, less than 3 percent of commuters used a bicycle or walked to their place of employment, 1 percent used public transportation, and nearly 5 percent worked from their homes.

In recent years, both the Tampa Bay and Jacksonville regions expanded inland, resulting in longer commuting and other personal trips. Regional visions and plans that would focus growth in mixed-use compact centers may reduce the number and length of many commute and daily trips in future years. Potential expansions of transit and rail service, telecommuting and other flexible work arrangements, and changes in energy prices also may impact the rate of growth of commuting and other daily trips in the urban portions of the study area.

Long-distance trips – Patterns in the development of technology-oriented manufacturing and logistics industry clusters suggest that longer distance business trips between regions are increasing. There also is potential for more demand for longer distance non-work travel as people living in the

[11] U.S. Department of Commerce, Bureau of the Census, American Community Survey.

middle of the region travel to Tampa and Jacksonville for urban amenities such as medical specialists located in larger population centers or specialty goods in stores that have a limited number of outlets across the region. Students and sports fans will make long-distance trips to the universities. In addition, as retirement communities are being constructed in Marion, Citrus, Sumter, and other parts of the region, the travel needs of the aging population (primarily access to social and medical services) must be met. Additional data on travel patterns could inform decisions about future mobility needs in this study area. Future studies could analyze the implications of alternative assumptions regarding future VMT growth on the region's transportation system.

Visitor travel – Tourist and business travel are expected to grow the study area. Hillsborough, Pinellas, and Duval counties rank among the top 10 counties in Florida for visitors, accounting for about one in six statewide.[12] Just over half of the domestic out-of-state visitors to the 19 county area arrive via automobile. Many out-of-state visitors often are from Northeastern or Midwestern states and arrive in the study area using major highways such as I-75 and I-95. Most of the remaining visitors arrive via air; Tampa International Airport and Jacksonville International Airport are the two largest airports in the study area.

With their growing economies and large convention facilities, Tampa Bay and Northeast Florida account for about one-fifth of all business travelers to Florida. Most business travelers either rent a car or take a taxi between the airport and their final destination, traveling over the regional highway network.

International travelers from overseas and Canada also are an important component of tourism within the study area. International travelers tend to stay longer and spend more than visitors who fly from other U.S. states. Visitor destinations in the study area include research universities, Atlantic and Gulf coast beaches, and natural springs and ecotourism attractions.

[12] VISIT FLORIDA, 2010 Florida Visitor Study.

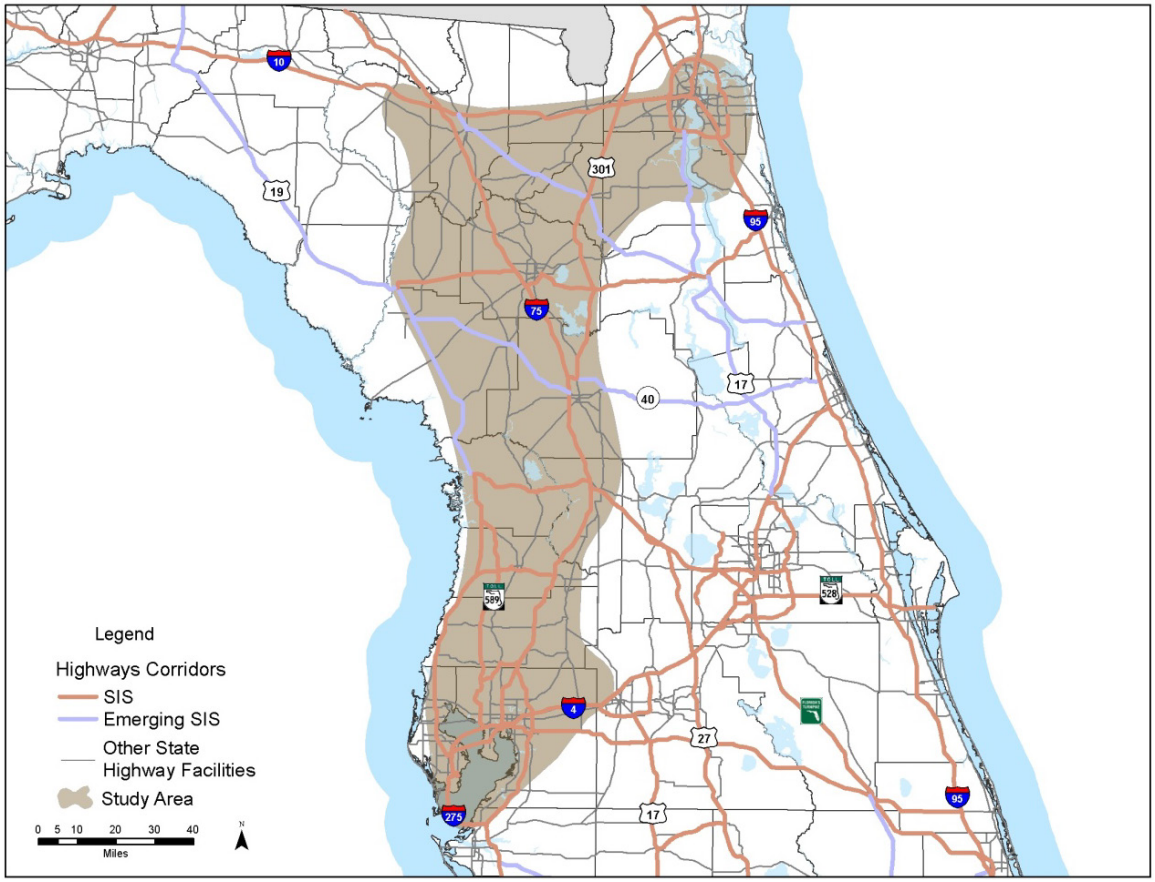
4.0 Multimodal Transportation System

Increasing demand for moving people and freight will create mobility challenges. This chapter profiles the study area's existing transportation system and identifies key issues.

■ Highways

The 18 county area includes 3,310 centerline miles of state highways (Figure 4.1). A total of 1,162 miles are part of Florida's Strategic Intermodal System (SIS), a network of transportation hubs, corridors, and connectors that are of statewide or interregional significance.

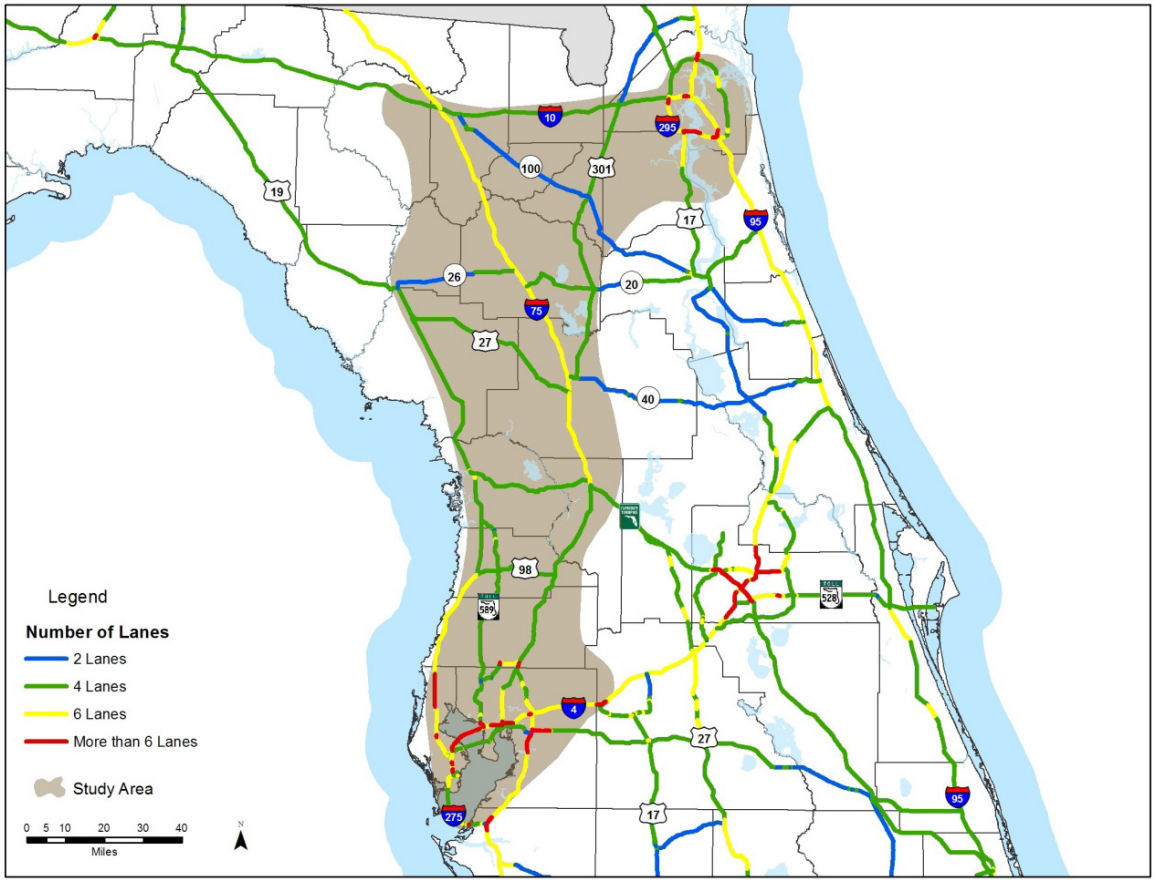
Figure 4.1 Strategic Intermodal System and Other State Highways



Source: Florida Department of Transportation.

Although the highway system is extensive, there are few options for interregional or long-distance trips, and relatively few facilities with more than two lanes (Figure 4.2)

Figure 4.2 State Highways by Number of Lanes



Source: Florida Department of Transportation.

Key interregional highway corridors include:

- I-75, the primary north-south route through most of the study area, connects the study area to Southwest Florida, Georgia, and other states. I-75 has six lanes for most of its length in the study area, dropping to four lanes between the junction with Florida's Turnpike in Wildwood and the Pasco/Hillsborough county line.
- I-10 serves as the major east-west route in the northern portion of the study area, connecting Jacksonville and I-75. I-10 provides a vital link between the Florida Peninsula and Northwest Florida and the Gulf Coast. I-10 has six lanes close to Jacksonville and four lanes between Jacksonville and I-75.
- I-4 and I-95 also pass through portions of the study area.
- The mainline of Florida's Turnpike originates at Wildwood in Sumter County and progresses south to Orlando and Southeast Florida.
- U.S. 19 is the major north/south highway along the Gulf Coast, connecting Pinellas County to Levy County in the study area and continuing northwest toward Tallahassee.

- The Veteran's Expressway and Suncoast Parkway together provide a limited access, toll road alternative to U.S. 19 from I-275 near Tampa International Airport in Hillsborough County to U.S. 98 in Hernando County.
- U.S. 301 runs parallel to I-75 from Tampa Bay to Ocala and then progresses northeast to the Jacksonville area.
- U.S. 41 runs parallel to and mainly west of I-75 from the Tampa Bay region to the Georgia border.
- U.S. 27 connects inland central Florida to Marion County and then overlaps with U.S. 41 in Alachua County before turning west to join U.S. 19 in Levy County.
- U.S. 17 connects Jacksonville to Putnam County on the eastern edge of the study area and then continues into Central Florida.
- The SR 26/SR 20/SR 207 corridor provides an east-west connection in the middle part of the study area, connecting Levy County to St. Johns County.

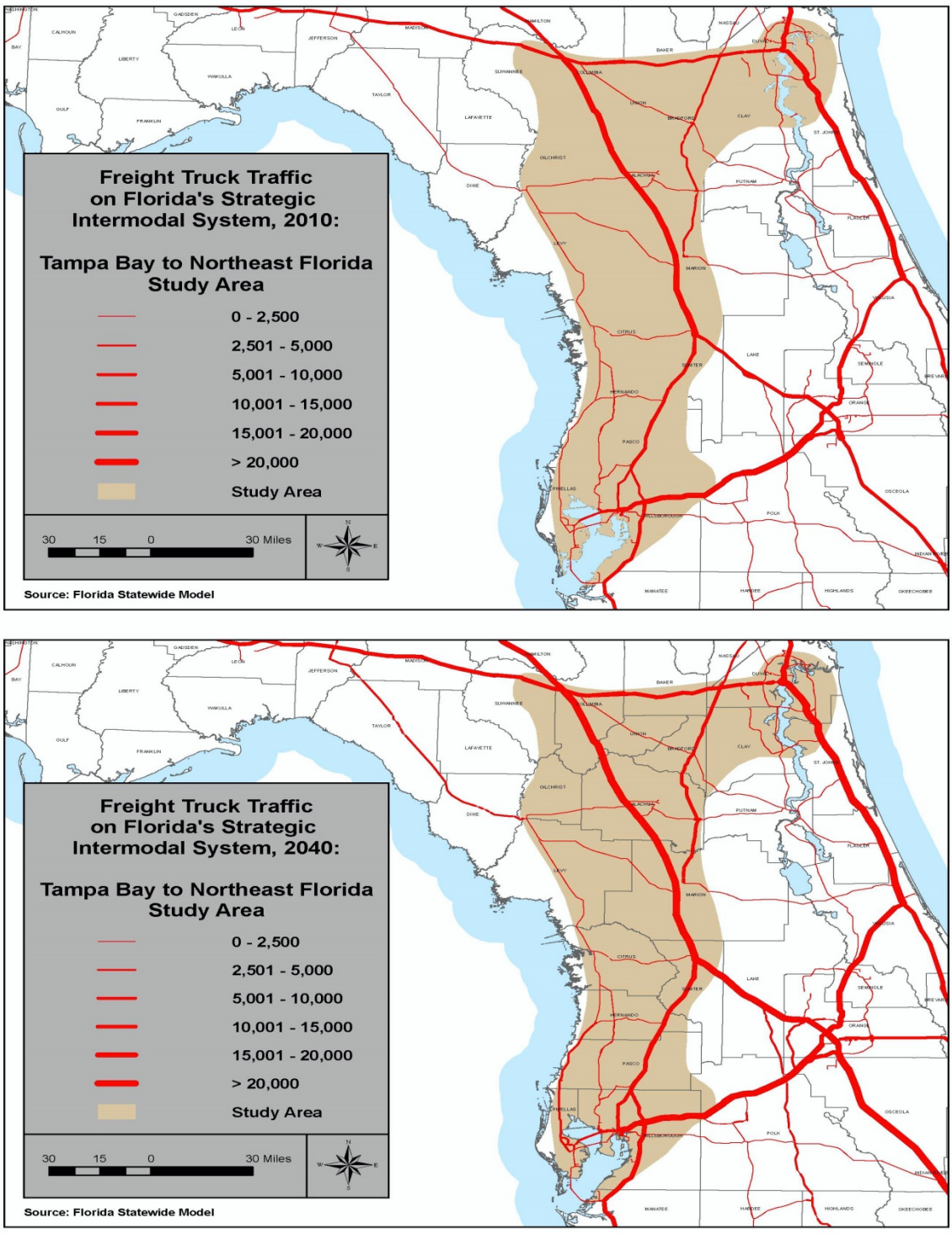
Aside from the Interstates, Turnpike, and urban expressways, many of the major roads in the region are controlled access facilities, often passing through existing communities and business districts. The only options for high-speed, high-capacity travel between Tampa Bay and Jacksonville are I-75 to I-10 or I-4 to I-95. There is no limited access highway alternative for travel between Tampa Bay and Georgia or Northwest Florida.

I-75 plays multiple roles – as a major trade corridor between Florida and the rest of the United States, as the only limited access highway in most of the study area, and as a connector for a large number of local trips in the Tampa, Ocala, and Gainesville areas. Average annual daily traffic (AADT) along I-75 in 2010 averaged over 45,000 vehicles per day from I-10 south to Gainesville, reaching 71,500 near Gainesville and 78,000 near Ocala. AADT reached levels above 150,000 in Tampa. If current trends continue, traffic will grow quickly, more than doubling in some segments in Hillsborough, Pasco, and Hernando counties by 2035.

Traffic on I-10 is highest near Jacksonville, peaking at 170,000 AADT near the I-10 and I-95 interchange. If current trends continue, AADT consistently will exceed 200,000 vehicles per day along I-10 throughout the Jacksonville region.

Truck traffic is high among many highways in the study area, particularly the Interstates (Figure 4.3). Truck volumes approach 30 percent of total traffic in many of the rural areas of U.S. 301, and hover between 15 and 20 percent along the majority of the length of I-75. Strong growth in truck flows is anticipated along I-75, I-10, and the Turnpike, as well as portions of U.S. 19 and U.S. 301.

Figure 4.3 Average Annual Daily Truck Traffic on SIS Highways
2010 and 2040



Source: To be provided.

During the past few decades, numerous projects have added capacity to the study area's highway system. I-75 and I-10 both were constructed initially as four-lane highways. Today, I-75 is six lanes from the I-10/I-75 interchange until it meets Florida's Turnpike. In both Tampa and Jacksonville, portions of I-75 and I-10 have expanded to eight or more lanes.

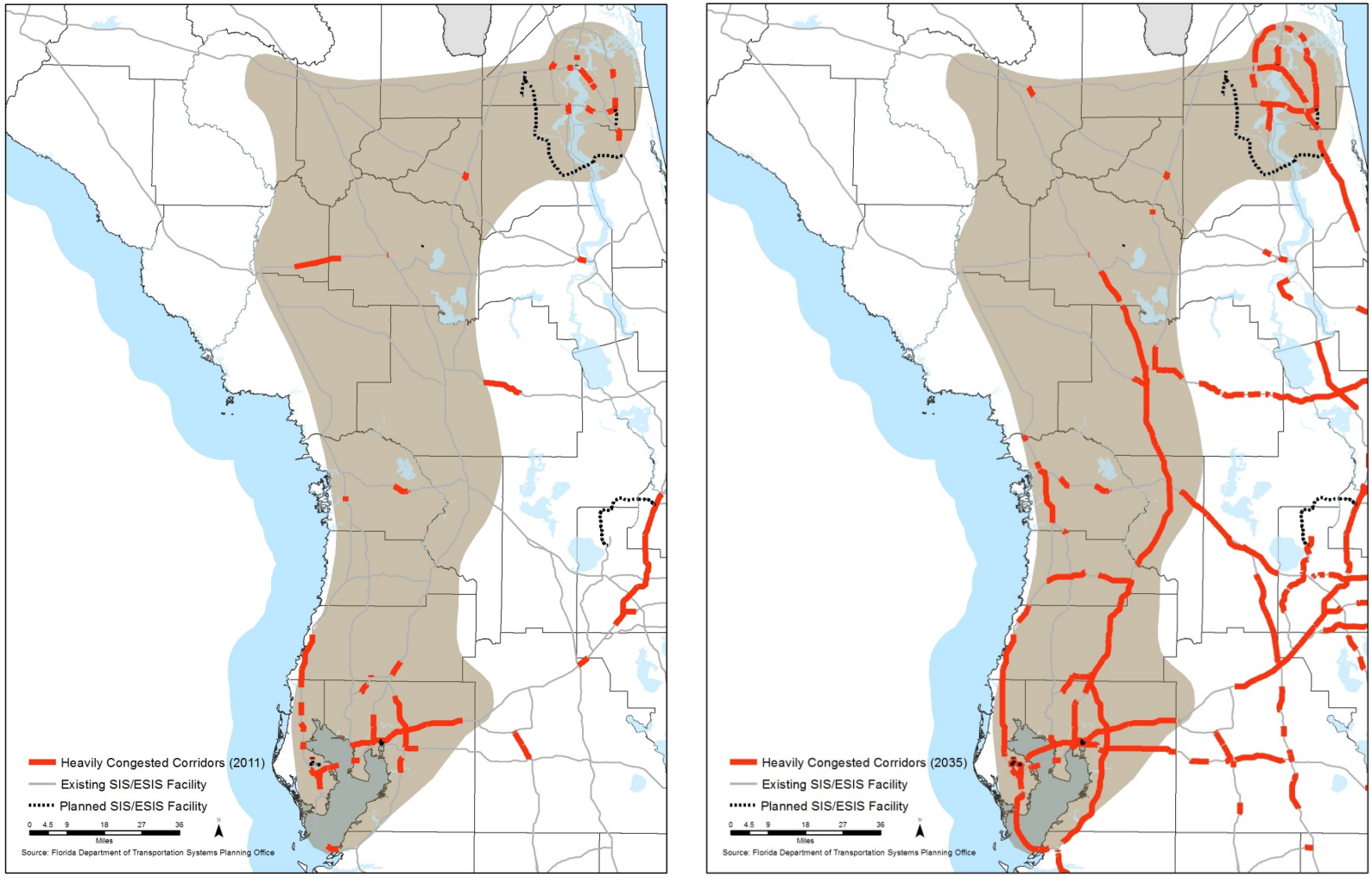
Despite these and other investments, the highway system has not expanded at the pace of growth in travel demand, leading to increases in congestion and delay. Nationally significant freight bottlenecks already exist at the interchanges of I-4 and I-275 in Tampa, I-10 and I-95 in Jacksonville, and I-75 and I-10 in Lake City.[13]

Among the SIS highways in the study area, approximately 24 percent of the urban highway miles and 5 percent of rural and transitioning area highway miles were congested during peak periods in 2010. If current development and travel patterns continue, these shares could increase to 38 percent of urban miles and 22 percent of rural and transitioning miles by 2035 – even after accounting for expenditures in FDOT's SIS Cost-Feasible Plan during that period.[14] This projection suggests the complete length of the I-75 corridor will be congested during peak periods in 2035, as will most of the Turnpike and several spots on rural roads (Figure 4.4).

[13] American Transportation Research Institute, FPM Congestion Monitoring at 250 Freight Significant Highway Locations, American Transportation Research Institute, October 2011 http://atrionline.org/2011/10/01/fpm-congestion-monitoring-at-250-freight-significant-highway-locations/.

[14] This analysis is based on which roadway segments meet level of service standards during peak periods. In urban areas, congested corridors are defined as roadways where traffic is moving bumper to bumper or stop and go during period periods, equivalent to Level of Service E or lower. In rural areas, congested corridors are defined as roadway where traffic during peak periods is so heavy that changing lanes is difficult, equivalent to Level of Service D or lower. This analysis assumes continuation of current trends in travel demand and development patterns, and assumes that those projects identified in the SIS Cost Feasible plan are implemented.

Figure 4.4 Congestion on SIS Highways
2011 and 2035



Source: Florida Department of Transportation.

FDOT and its partners are planning or studying several additional highway capacity expansion projects:

- FDOT has set aside funding to widen I-75 from four to six lanes between SR 54 and Florida's Turnpike and to improve interchanges at U.S. 441 and U.S. 90 over the next five years.
- The Tampa Bay Area Regional Transportation Authority has long-term plans to work with FDOT to build four managed lanes (two in each direction) on I-75 from Martin Luther King, Jr. Boulevard to SR 52, subject to availability of funding.
- FDOT is studying additional managed-lane projects on I-4 in Tampa Bay and on I-95 and I-295 in Jacksonville.
- There also are long-term plans to widen I-75 to 10 lanes from Florida's Turnpike to U.S. 27 near Ocala and then 8 lanes from U.S. 27 to the I-10 interchange. Future studies will determine whether these lanes will be managed lanes or general purpose lanes.
- Florida's Turnpike Enterprise is studying Suncoast Parkway Phase II, which will extend the existing 42-mile Suncoast Parkway 27 miles north from its current terminus near Brooksville into Hernando and Citrus counties. If completed, the "Suncoast II" project will provide relief to local roadways in one of the fastest growing areas of the State.
- FDOT and Pasco County are planning a series of projects to transform SR 54 into a high-speed, east-west corridor to serve the growing Suncoast region. By 2025, SR 54 could have six divided lanes from U.S. 19 east to I-75 and beyond, along with interchange improvements.
- Florida's Turnpike Enterprise also is studying a northern extension of Florida's Turnpike – known as the "Nature Coast Parkway" – from its current terminus at I-75 near Wildwood into Citrus and Levy counties, eventually terminating at U.S. 19.
- FDOT is planning to build the First Coast Outer Beltway in Duval, Clay, and St. Johns counties, a 46.5-mile road that will provide increased connectivity to communities between I-10 and I-95.
- FDOT is planning to construct a bypass of Starke on U.S. 301. In the longer term, there are plans to widen U.S. 301 from four to six lanes from Ocala to I-10.

The study area is home to eight metropolitan planning organizations (MPO) and transportation planning organizations (TPO). These organizations develop Long-Range Transportation Plans (LRTP) that set priorities for future transportation improvements. Many MPOs identify both unfunded needs as well as a cost-feasible plan of projects that can be funded based on assumptions of anticipated future revenues. These plans are updated at least once every five years (Table 4.1).

Table 4.1 MPO/TPO LRTP Adoption Schedule

MPO/TPO	LRTP Adoption Date	Next LRTP Adoption Date
Gainesville MTPO	11/3/2010	11/3/2015
Hernando County MPO	12/15/2009	12/15/2014
Hillsborough County MPO	12/9/2009	12/9/2014
Lake Sumter MPO	12/8/2010	12/8/2015
North Florida TPO	11/12/2009	11/12/2014
Ocala-Marion County MPO	11/29/2010	12/29/2015
Pasco County MPO	12/10/2009	12/10/2014
Pinellas County MPO	12/9/2009	12/9/2014

From 2006 to 2010, the SIS highways within the study area had over 79,000 crashes. Highways with high crash rates include the Interstates and urban expressways in Tampa Bay and Jacksonville (Figure 4.5). The crash rate along segments of I-75 in Marion County between Ocala and Wildwood, and in Alachua County near Gainesville, are as high as those along Interstates in large urban areas, reflecting the mix of cars and trucks and local and long-distance traffic using this facility. Portions of U.S. 19 in Pinellas through Citrus counties and U.S. 301 in Bradford County also have high crash rates. Both of these highways contains segments where the five-year crash rate exceeds 50 crashes per mile. Along U.S. 17 south of I-295, rates exceed 61 crashes per mile. U.S. 301 near SR 100 averaged over 70 crashes per mile. The rate along some segments of U.S. 19 was nearly 150 crashes per mile.

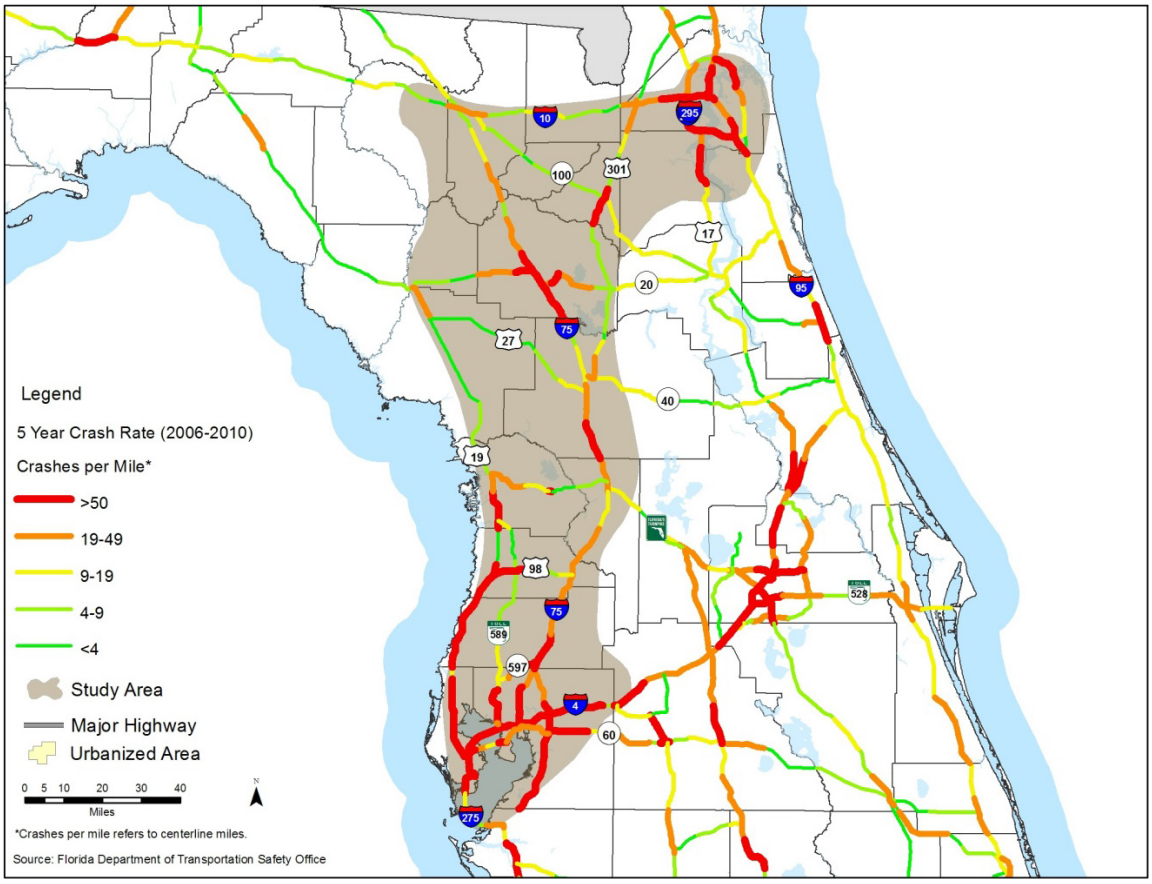
A continued risk of hurricanes and other natural and man-made emergencies highlights the limited alternatives and concerns about the resiliency of the region's highway system. A lack of longer distance transportation options forces both passenger and freight traffic onto a small number of facilities such as I-75. Because the highway system has few high-capacity routes, a crash, incident, or even planned construction activities and special events can result in severe delays.

This issue increases in significance during emergency events. I-75, I-4, and portions of I-275 are the main evacuation routes from Tampa Bay for the most common regional evacuations.[15] In a moderate to major evacuation scenario, the most critical bottleneck exists along I-75 from Pasco County north, with the worst queuing in Sumter County approaching the interchange between I-75 and Florida's Turnpike and continuing north.

If a severe storm required evacuation of much of Tampa Bay, the entire regional highway network, including major limited access roads and urban arterials, would experience extreme congestion. In addition, significant portions of I-75 near major river crossings in Hillsborough County along the east side of Tampa Bay could be inundated by a storm surge in a major hurricane.

[15] Statewide Regional Evacuation Study Program, Volume 1-8, 2010.

Figure 4.5 Crash Rates on SIS Highways



Source: Florida Department of Transportation.

Similarly, an emergency evacuation would place great strain upon the transportation system in the Northeast Florida area. In addition to the major roadways such as I-10, I-95, U.S. 17, and U.S. 301, many smaller state and county roads would have high vehicle queue levels and heavy congestion.[16]

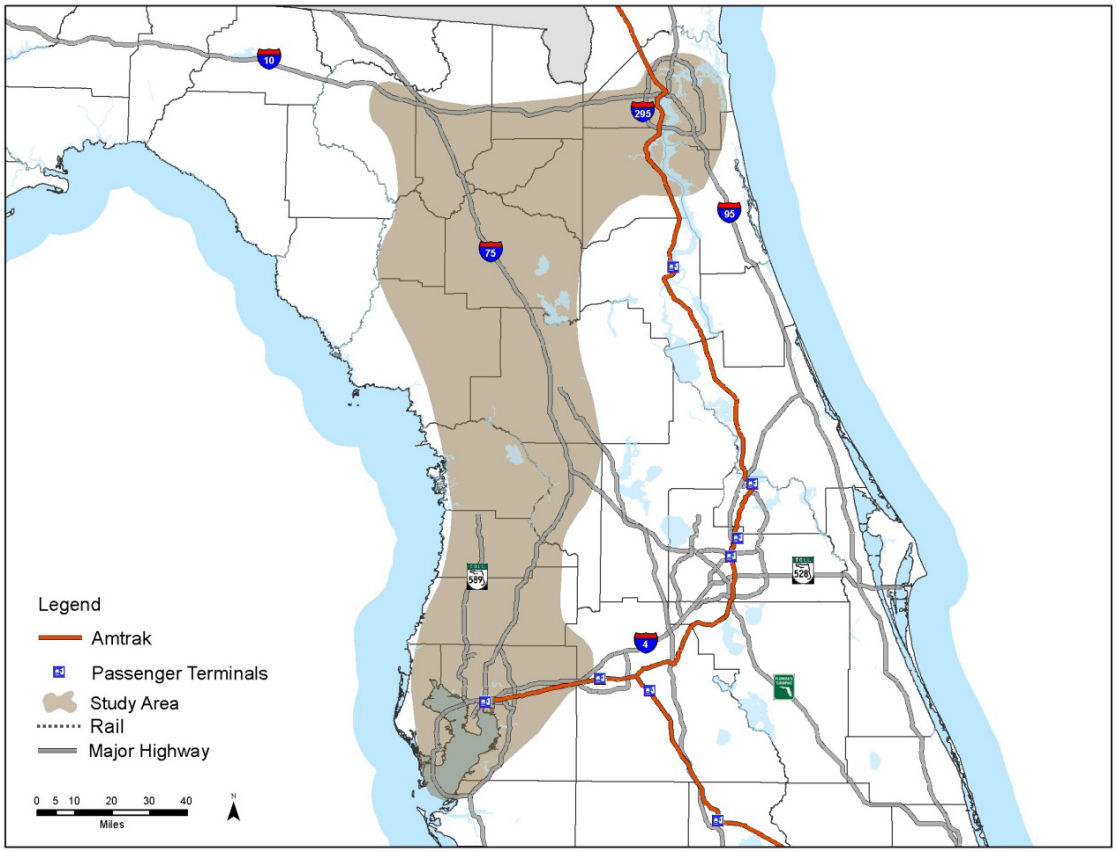
Passenger Rail and Transit

Passenger rail, intercity bus, and local transit systems provide alternatives to the highway system:

- Amtrak currently operates daily intercity passenger service along an inland route from Jacksonville and points north through Orlando to Lakeland and Tampa (Figure 4.6). From Lakeland, some Amtrak trains run on an inland route to Southeast Florida. Amtrak's Thruway bus services provide an extension of intercity rail services to cities between Jacksonville and Tampa and in Southwest Florida.

[16] Statewide Regional Evacuation Study Program, Volume 1-4, 2010.

Figure 4.6 Amtrak Service



Source: Florida Department of Transportation, 2012.

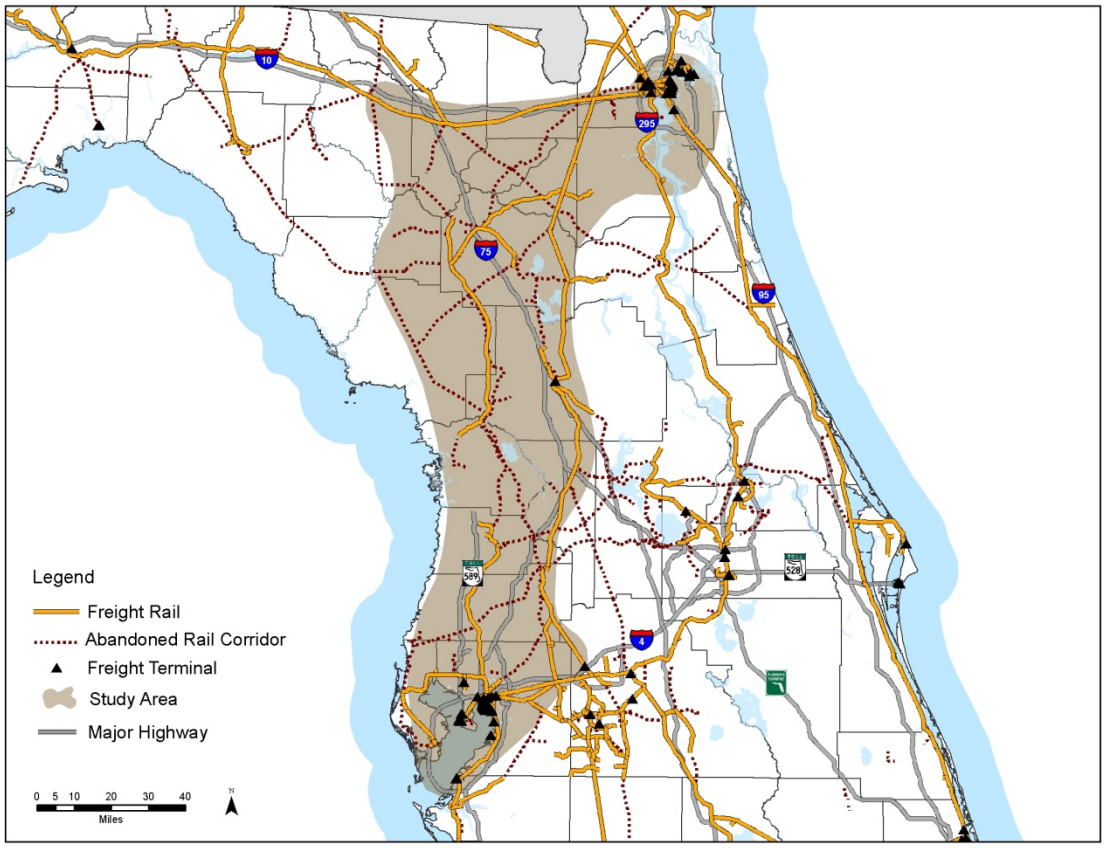
- Intercity bus services operated by Greyhound and other private operators provide connections between large centers, small towns, and rural areas. Intercity buses also serve major passenger transportation hubs, including airports and rail stations. Greyhound offers scheduled service to locations, including Clearwater, Crystal River, Gainesville, Hastings, Hawthorne, Interlachen, Jacksonville, Lake City, Ocala, St. Augustine, St. Petersburg, Spring Hill, and Tampa. In other parts of the country, high-quality intercity bus services with frequent and reliable service, non-stop trips, and amenities like on-board wireless service have proven that buses can generate impressive ridership numbers beyond the traditional market for intercity buses (although some of the demand is induced by low fares and heavy marketing). With their large student populations, Gainesville, Tampa, and Jacksonville are candidates for such a service.
- Eight fixed route transit systems operate in the study area, including Gainesville Regional Transit System, Hernando County, Hillsborough Area Regional Transit Authority, Jacksonville Transportation Authority, Pasco County Public Transportation, Pinellas Suncoast Transit Authority, St. Johns County, and SunTran (Ocala). The Tampa Bay Area Regional Transit Authority (TBARTA) was created in 2007 to coordinate transit planning in Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, and Sarasota counties. TBARTA's current Master Plan proposes a multi-county express bus, bus rapid transit, light rail, and commuter rail system connecting regional centers and desired development areas identified in the ONE BAY regional vision. The Jacksonville Transportation Authority has developed a long-range vision with

similar concepts, and is working with partners to create a regional transportation commission in Northeast Florida.

Freight Rail System

Rail provides an alternative for moving freight to, from, and through the study area (Figure 4.7).

Figure 4.7 Active and Abandoned Freight Rail Corridors and Terminals[a]



Source: Florida Department of Transportation, 2012.

[a] Some abandoned rail corridors depicted on this map may have been converted for other uses since the publication of these data.

CSX Transportation, a national railroad based in Jacksonville, is the largest freight railroad in Florida. CSX connects the study area to the rest of the national rail network via three mainlines:

- The "A line" runs from Jacksonville south along the west bank of the St. Johns River to Orlando and Winter Haven and then curves west to Lakeland and Tampa. CSX sold the portion of this line between DeLand and Poinciana to FDOT in 2011; this 61-mile stretch will host the SunRail commuter rail service in Central Florida. CSX will continue to operate freight trains on the remainder of the A line. CSX also has rights to operate trains between DeLand and Poinciana when passenger trains are not running.
- The "S line" runs from Jacksonville south through Ocala and then splits into two branches that intersect the A line at Plant City and Lakeland. This line has seen significant growth and will be CSX's primary line for moving north-south freight in the future. CSX has committed to making major improvements to this line. As CSX develops a major new intermodal facility in Winter Haven and expands operations in Southeast Florida (also served by this line), the S line will see increased long-distance train traffic.
- An east-west line runs from Jacksonville to Northwest Florida and the Gulf Coast, roughly parallel to I-10.

CSX also operates several significant spurs. One spur runs from Starke to Crystal River, mainly serving the Crystal River power plant. The other spurs are in the Tampa Bay region serving industrial customers on the east side of Tampa Bay and a mine north of Tampa near Brooksville.

Norfolk Southern Corporation (NS), also a national railroad, operates over 149 route miles in Northeast and North Central Florida. NS owns two main lines in Florida, terminating at Jacksonville and Navair (near Lake City), respectively. The two lines join at Valdosta, Georgia and interchange with the NS Interstate network at Macon, Georgia.

The Florida East Coast Railway (FEC) is a regional railroad operating between Jacksonville and Miami. FEC maintains the second largest railroad network in the State after CSX and provides the only north-south mainline along the Atlantic coast between West Palm Beach and Jacksonville.

The Florida Northern Railroad (FNOR) is a local or shortline railroad serving customers in Alachua, Citrus, Levy, and Marion counties. FNOR operates 24.3 route miles between Lowell and Candler in Marion County with an interchange with CSX at Ocala; 76 miles of track between High Springs and Red Level, with an interchange at Newberry; and 2.7 miles of industrial track in Ocala.

Key rail terminals include:

- CSX intermodal truck-to-rail transfer terminals in Tampa and Jacksonville;
- NS intermodal terminal in Jacksonville;
- FEC intermodal terminal in Jacksonville;
- rail loading points in and near the Port of Tampa and the Port of Jacksonville; and
- bulk transfer terminals serving individual customers and operated by CSX, NS, FEC, and the short-line railroads throughout the study area.

The region also includes significant segments of abandoned rail infrastructure that could be reactivated for future service or used as right-of-way for future transportation corridors. Some of the abandoned rail right-of-way has been converted to multi-use trails or other purposes.

Seaports and Airports

The study area is home to three deepwater seaports: the Port of Tampa, Port of Jacksonville, and Port of St. Petersburg. The Port of Tampa and Port of Jacksonville are designated as part of the SIS. Port Manatee, a SIS seaport, and the Port of Fernandina, an Emerging SIS seaport, are located close to the study area. Due to its proximity to phosphate mines and processing plants in Polk and Hillsborough counties, the Port of Tampa is the State's largest in terms of tonnage. It handles more than 34 million tons of cargo in the 12 months ending September 2011. The Port of Tampa also is a major cruise ship embarkation point with more than 1 million annual passengers in 2011. Port Manatee, also located on Tampa Bay, handled an additional 7 million tons of cargo in 2011.

The Port of Jacksonville is the State's third largest by tonnage, handling 19 million tons in 2011 and dominating trade with Puerto Rico. Jacksonville also is the second largest Florida seaport for container shipments and a major gateway for automobile shipments. Nearby Port of Fernandina provides terminal service to more than 10 pulp and paper producers located throughout Florida and the Southeast; provides export services to several steel mills in the Southeast, and supports several independent container lines.[17]

These seaports are positioning to compete for the opportunities created by changing trade lanes and growing trade volumes. Seaport strategies include aggressive marketing activities as well as infrastructure improvements (waterside, terminal, and landside) to make sure the necessary capacity is in place to accommodate deeper draft and wider vessels and increased cargo and passengers. The Port of Tampa, Port of Jacksonville, and Port Manatee are exploring expansion of existing terminals and creation of new terminals to accommodate potential future cargo tonnage growth, as well as the need to dredge shipping channels to accommodate larger vessels. Each seaport also is working to enhance on-dock rail connections and to improve access routes to nearby Interstate highways. FDOT is working with the seaports and local governments to create direct connectors between the Interstate highway system and seaport facilities in Tampa and Manatee.

Citrus County is studying the feasibility of developing Port Citrus at the entrance to the partially completed Cross Florida Barge Canal. The seaport would be capable of handling conveyor barges, a shallow draft vessel that transports containers and other commodities from much larger ships. This facility could provide shippers with an option north of Tampa Bay for handling freight, including local commodities such as timber.

The study area includes four commercial service airports: Tampa, St. Petersburg-Clearwater, Jacksonville, and Gainesville. These airports offer scheduled service to destinations around the nation and world. All are designated as part of the SIS or Emerging SIS. Tampa International and Jacksonville International are the study area's largest airports, with 8 and 2.5 million passenger enplanements in 2012, respectively. They also handle significant volumes of air cargo.

[17] Florida Seaport Transportation and Economic Development Council, *Charting a Course for Economic Success: The Five-Year Florida Seaport Mission Plan,* 2012.

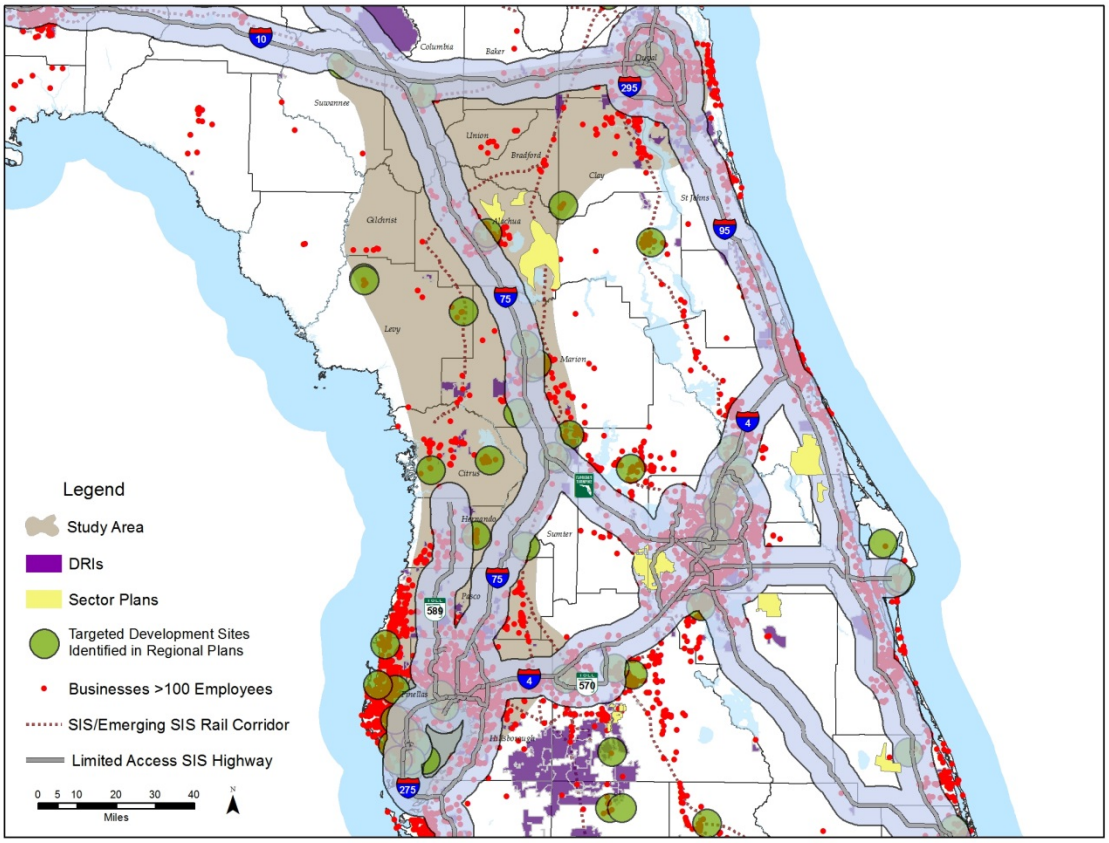
Both Tampa and Jacksonville International Airports are continuously improving their airside capacity to keep up with demand for passenger and air cargo traffic. FDOT recently completed a large-scale expansion of the main passenger entrance to Tampa International Airport as a part of improvements to I-275, SR 60, and the Veterans Expressway.

Key Issues

The study area's transportation system faces several challenges in meeting the evolving mobility and connectivity needs of residents, visitors, and businesses in the coming decades:

- The highway system, particularly the major limited access corridors, does not have the capacity to accommodate future growth in population, employment, and visitors, assuming VMT resumes its long-term growth trend. Growing congestion and safety concerns along I-75 are particularly significant, as are safety issues on some rural roads. The region must focus on maximizing the efficiency of its existing highway system; promote alternatives to highways for both commuting and longer distance trips; encourage greater use of telecommuting and other strategies for reducing growth in travel demand; and identify strategic investments in new highway capacity that support regional visions for the future.
- Increasing domestic and international trade flows will place greater pressure on the region's major truck routes, freight rail system, seaports, and air cargo facilities. Strategic investments in the capacity and connectivity of these systems will be critical.
- Passenger rail and public transit systems today do not have the connectivity or quality of service needed to become a competitive travel option in many parts of the study area, particularly for long-distance travel.
- The transportation system has few options for high-capacity, high-speed travel in many parts of the study area, especially for long-distance travel between Tampa Bay and Jacksonville or Georgia.
- Nearly one out of every four jobs is located more than five miles from a limited access highway, an asset desired by most businesses. Future economic development is likely to occur in a combination of existing and new employment centers; many of these newer centers are not well connected to interregional highways. The location of potential development sites identified in Comprehensive Economic Development Strategies and regional visions, developments of regional impact, and significant landholdings under single ownership that could enter master planning processes all point to the potential for significant new economic development to occur in the Suncoast area north of Tampa, the string of smaller urbanized areas along I-75 from Alachua to Sumter counties, Clay and Baker counties to the west of Jacksonville, and targeted regional employment centers in rural areas such as Lake City (Figure 4.8). Some of these sites are well situated on or near existing major highway or rail corridors, but others are not well connected today. Further analysis is needed to determine the significance of these connectivity "gaps" to the regional economy.

Figure 4.8 Potential Regional Connectivity Gaps



Sources: InfoGroup 2010, Regional Planning Councils; Florida Department of Economic Opportunity.

5.0 Community and Environmental Resources

Federal law as well as sound transportation practices require FDOT to consider both the natural and human environment during the development of plans and projects. Florida's Future Corridors will be planned in the context of established local and regional visions and plans, as well as an understanding of and respect for the human and natural environment.

Regional Visions and Plans

During the past five years, public, private, and civic leaders in the Tampa Bay and Northeast Florida regions developed long-range regional visions through processes that involved extensive citizen input. These regional visions – ONE BAY in Tampa Bay and First Coast Vision in Northeast Florida include similar sets of recommendations and guiding principles (Table 5.1). Partners in each region today are incorporating those visions and associated principles into local government comprehensive plans, strategic regional policy plans, long-range transportation plans, and other regional and local plans. FDOT has been and will continue to be engaged in these processes.

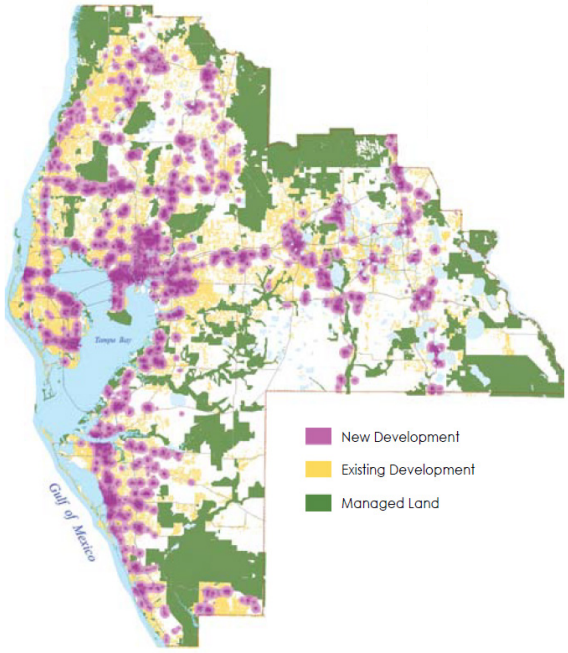
Table 5.1 Guiding Principles from Regional Visions

ONE BAY Guiding Principles	First Coast Vision Guiding Principles
• Preserving natural resources; balancing jobs and housing for an affordable quality of life.	• Protect and conserve open spaces, agricultural lands and natural resources.
• Clustering higher density developments around transportation corridors.	• Promote compact and sustainable mixed-use development.
• Maximizing mobility using multimodal transportation.	• Provide mobility choices.
• Attracting higher paying jobs and strengthening economic development initiatives.	• Promote infill development.
• Preserving farmland and sustaining the role of agriculture.	• Promote economic vitality and competitiveness.
• Promoting quality communities to create a sense of place by uniquely clustering higher density mixed-use development, organized around transportation corridors.	• Capitalize on regional assets and promote community identity.

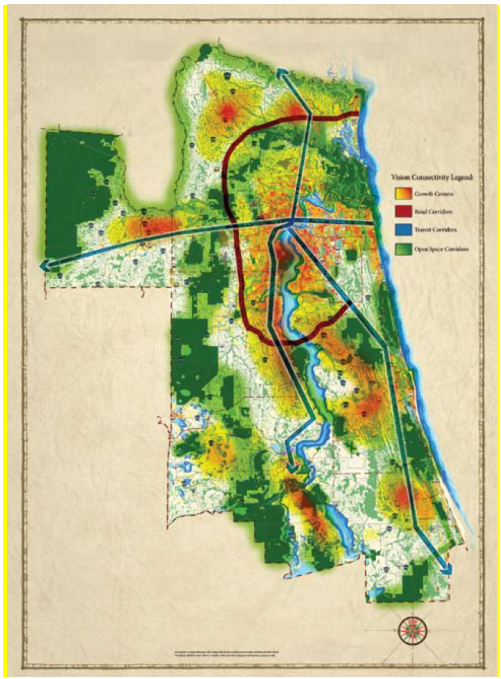
Source: ONE BAY: A Shared Regional Vision for Tampa Bay, 2010; First Coast Vision web site, http://www.firstcoastvision.com/First_Coast_Vision.html, accessed December 2012.

Figure 5.1 shows representations of the desired development patterns that resulted from the regional visioning processes in Tampa Bay and Northeast Florida.

Figure 5.1 Maps from Adopted Regional Visions for Tampa Bay (top) and Northeast Florida (bottom)



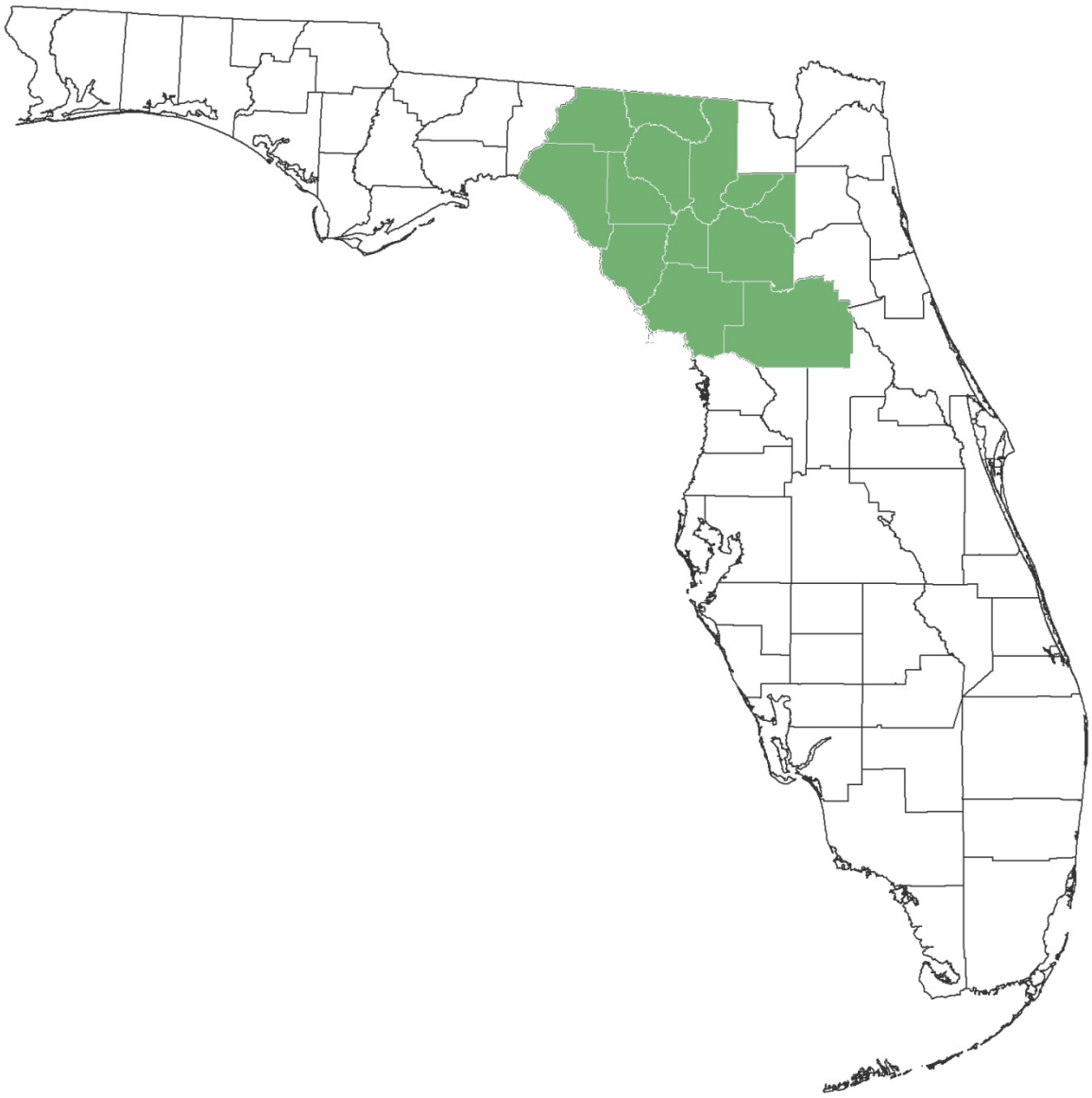
Source: "ONE BAY, A Shared Regional Vision for Tampa Bay," 2010.



Source: First Coast Vision, 2011.

The North Central Florida Regional Planning Council is convening an effort to create a regional vision for the central portion of the study area (potential area shown in Figure 5.2). This regional vision will reflect the unique opportunities and issues facing rural and emerging markets.

Figure 5.2 Potential Region for North Central Florida Visioning Process



Source: North Central Florida Regional Planning Council.

A process may be needed to integrate and reconcile differences among these three regional visions. The three visions together can guide decisions about major transportation investments across the entire study area. If significant investments in existing or new transportation corridors are carefully located and thoughtfully designed, they can be an integral part of the implementation of regional visions and can help the partners in each visioning process achieve their shared goals and objectives.

Community Resources

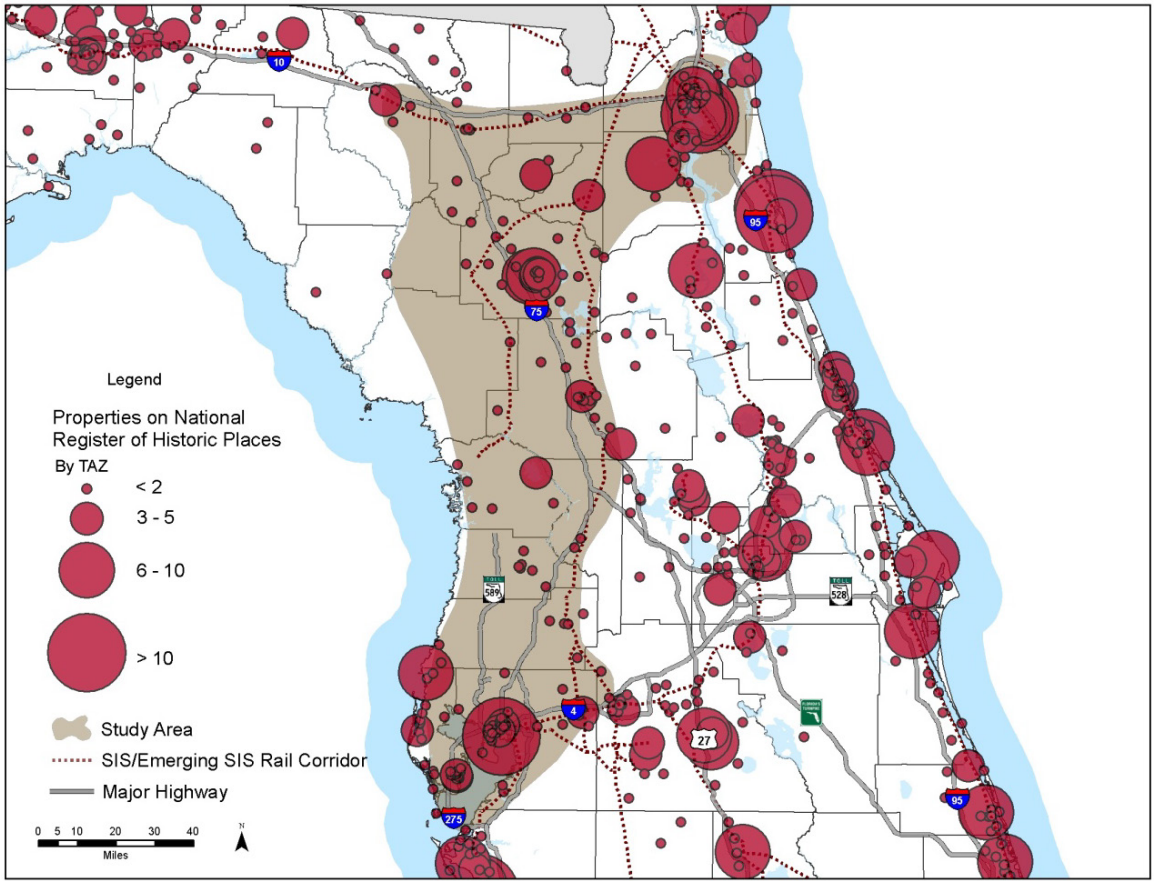
Transportation improvements can be used to enhance quality of life, ensure mobility, and improve and maintain economic prosperity. FDOT uses a variety of methods to consider how its plans and projects affect people and their communities. FDOT also forms partnerships with stakeholders, local governments, environmental groups, and the public to help create transportation systems that are in harmony with community visions and values.

The study area includes 80 cities comprising hundreds of unique communities and neighborhoods. The regional visions call for supporting a diverse set of centers, from villages and towns to large cities. Each community offers its own historic, cultural, and social resources that contribute to the quality of life, ranging from Williston to Lake City and Brooksville to Gainesville. Many of those resources are more appropriately addressed in detailed alignment studies. Nonetheless, early identification of resources and coordination with partners can help ensure that transportation corridor investments support community goals and avoid or minimize negative impacts on individual communities and their valued resources. Consistency with regional and community visions and local government comprehensive plans can help ensure that the unique character and resources of communities are appropriately considered as corridor decisions are made.

FDOT has a long history of providing opportunities for the public to be engaged and involved in decision-making processes. FDOT uses its Sociocultural Effects (SCE) Evaluation process to identify and address potential community impacts, using data and community outreach to evaluate social, economic, mobility, land use, aesthetic, and relocation effects. Understanding the potential impacts of plans and projects allows FDOT to plan ahead for avoidance, minimization, or mitigation of these effects. Figure 5.3 shows an example of one type of community resource (the National Register of Historic Places) that is considered in the SCE Evaluation process.

The SCE Evaluation process incorporates FDOT's proactive and extensive public involvement program that goes above and beyond the State and Federal requirements to ensure that stakeholders have opportunities for input into community-based solutions to address community concerns. FDOT's public involvement policy directs it to use public involvement techniques adapted to local area conditions and project requirements. Thus, FDOT will plan and implement the most appropriate levels of public outreach and information exchange activities related to the various phases of transportation corridor planning and project development.

Figure 5.3 Properties on the National Register of Historic Places



Source: National Park Service, 2011. The circles are in proportion to the number of listed properties in each traffic analysis zone of FDOT's statewide travel demand model.

Environmental Resources

Residents and visitors are drawn to Florida by its environment and natural resources. Beaches, lakes, rivers, springs, parks, and other recreational areas contribute to the quality of life, and there is demand for access to these amenities via the transportation network. Other natural resources are undeveloped and must be protected so that the study area has a safe, reliable water supply and its ecological systems can continue to support a rich and diverse set of plant and animal species. These outcomes require designing a transportation system that avoids and minimizes impacts to the environment while providing appropriate access to recreational and natural resources.

The study area's location spanning the Florida peninsula makes it a connecting point for important and fragile natural systems and wildlife corridors, such as those connecting the Green Swamp, Paynes Prairie, Ocala National Forest, Osceola National Forest, and Okefenokee Swamp. FDOT must work collaboratively with its environmental partners to ensure that new transportation corridors avoid, minimize, and mitigate for effects to natural systems and wildlife corridors. FDOT also must recognize the needs to improve connectivity between existing conservation lands and habits to facilitate wildlife corridors and to strengthen ecosystems. In areas where wildlife corridors could be

affected, this may include the design of facilities that allow wildlife to safely pass from one side to the other, through crossings where appropriate and feasible. Coordination with local governments is needed regarding the impacts of land uses related to transportation corridors on natural systems and wildlife corridors.

The Florida Wildlife Corridor, an ongoing outreach and education initiative to highlight the opportunity to protect and restore a functional ecological corridor from the Everglades to Okefenokee in Georgia, underscores the importance of that connectivity to the viability of the region's natural systems. The Florida Department of Environmental Protection (FDEP) Florida Greenways and Trails Plan has similar goals, identifying land trails, water trails, and ecological greenways that represent the areas necessary for the protection of a statewide network of conservation lands and the connecting wildlife corridors designed to maintain large landscape-scale ecological functions.

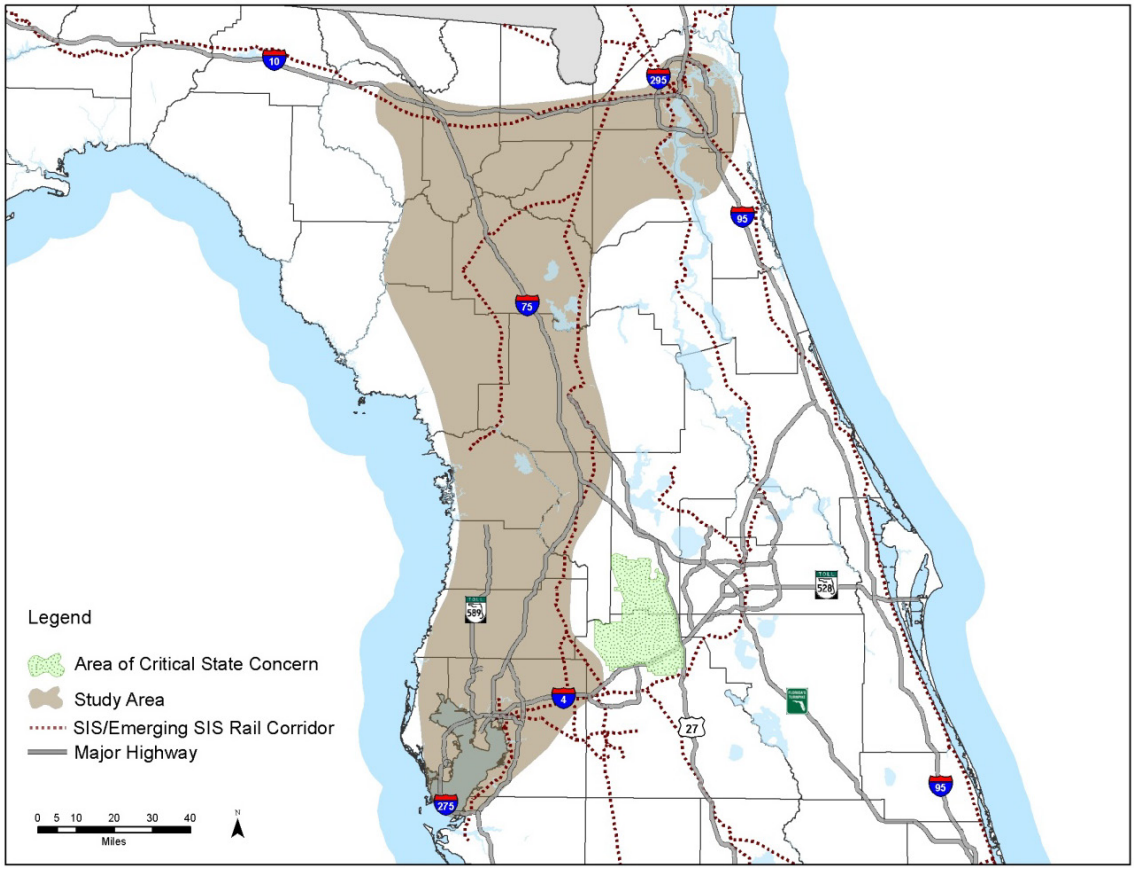
Also important is the study area's location in multiple watersheds, including the Suwannee-Santa Fe River system, the Withlacoochee River system, and the Tampa Bay watershed. The Okefenokee Swamp, one of the oldest and best preserved freshwater ecosystems in North America and the headwaters of the Suwannee River, is just beyond the northern border of the study area. A string of coastal preserves, including the Chassahowitzka National Wildlife Refuge, are just beyond the western border of the study area. There are many freshwater springs in the study area, including Silver Spring, Weeki Wachee Spring, and Rainbow Spring. FDOT is committed to using best management practices and design standards to ensure proper treatment of storm water and that operations and maintenance practices minimize watershed impacts.

The region's abundant resources underscore the 2060 Florida Transportation Plan's objective of planning and developing transportation systems and facilities in a manner that protects and, where feasible, restores the function and character of the natural environment and avoids or minimizes environmental impacts. To accomplish this objective, FDOT is building on prior and ongoing initiatives by partners at the State, regional, and local levels to identify critical environmental or ecosystem connectivity needs. Through these partner-led processes and through its environmental processes, including Efficient Transportation Decision-Making (ETDM) and Project Development and Environment (PD&E), FDOT will engage partners on an early and ongoing basis to guide future corridor studies and consider how to develop projects in a way that avoids, minimizes, and, where needed, mitigates for impacts on natural habitat and other critical lands and waters.

FDOT currently is participating in or reviewing multiple efforts to identify lands, waters, recreation areas, habitats and species, including the following:

- Areas of Critical State Concern (Figure 5.4);
- Critical Land and Waters Identification Project (CLIP);
- Florida Department of Environmental Protection Florida Greenways and Trails System;
- Florida Fish and Wildlife Conservation Commission (FFWCC) Cooperative Conservation Blueprint; and
- U.S. Fish and Wildlife Service (USFWS) Peninsular Florida Landscape Conservation Cooperative.

Figure 5.4 Areas of Critical State Concern



Source: Florida Department of Economic Opportunity, 2012.

Those initiatives and previous work undertaken by FDOT and its partners draw on a wealth of environmental data available from multiple sources. For example, FDOT's Environmental Screening Tool,[18] which contains more than 550 data sets, provides project information and visualization tools that give agencies that are members of the ETDM Environmental Technical Advisory Team (ETAT) and other stakeholders the opportunity to provide input to assist FDOT in scoping potential projects prior to PD&E. The data can be used early in the Future Corridors planning process to initiate conversations about environmental resources and potential avoidance, minimization, or mitigation opportunities. The data then can be applied in FDOT's ETDM project screening and/or Alternative Corridor Evaluation processes during a more detailed corridor-specific analysis.

The following pages contain a sampling of environmental resources typically considered in transportation planning decisions. On each map, representation of an area does not imply that these are the only environmental considerations relevant to the study area and potential corridors. Rather, the information is intended to be used at each stage in the Future Corridors planning and screening process to help define existing conditions, help decide if a concept, alternative, or project should move forward, and help determine if additional data are required.

[18] More information available at http://www.dot.state.fl.us/emo/EST-Overview.shtm.

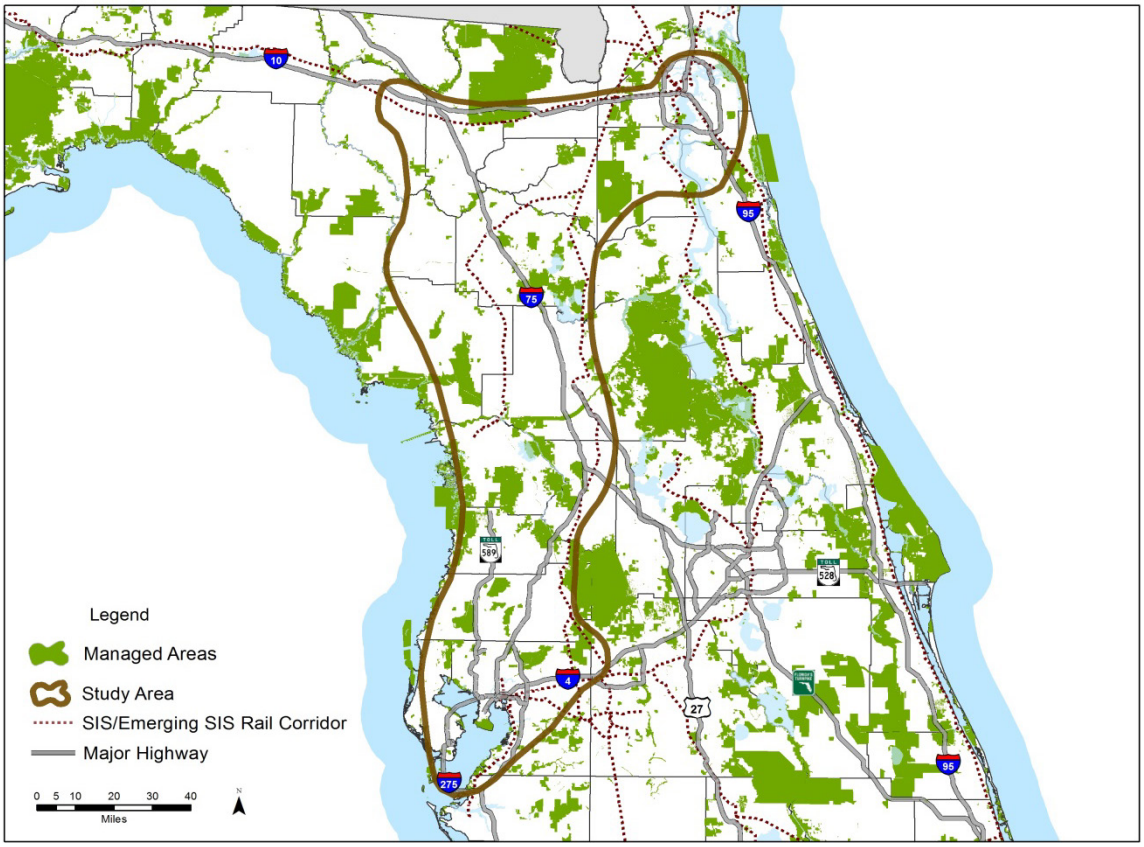
Example: Managed Areas

Managed areas include existing lands in public ownership, such as Federal, state and local parks, wildlife refuges, forests, and conservation areas. Lands currently in public ownership are shown in Figure 5.5.

Examples include:

- Silver River State Park, which is part of the Cross Florida Greenway;
- Paynes Prairie Preserve State Park and the Lochloosa Wildlife Conservation Area; and
- Withlacoochee, Gothe, Jennings, and Osceola State Forests.

Figure 5.5 Managed Areas in the Study Area



Source: Florida National Areas Inventory, Florida Department of Environmental Protection 2011.

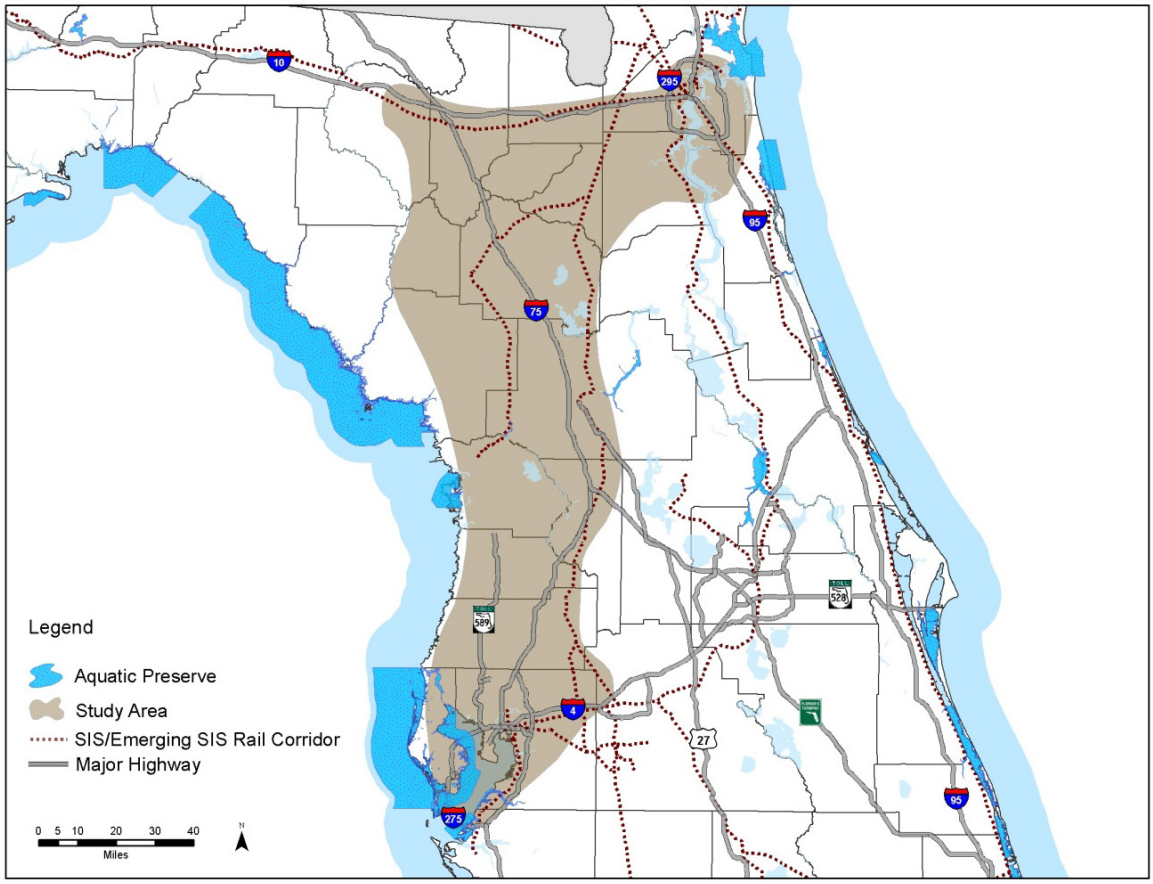
Example: Water Resources

Examples of water resources include:

- Aquatic preserves (Figure 5.6);
- Wetlands catalogued by the U.S. Fish and Wildlife Service (Figure 5.7);

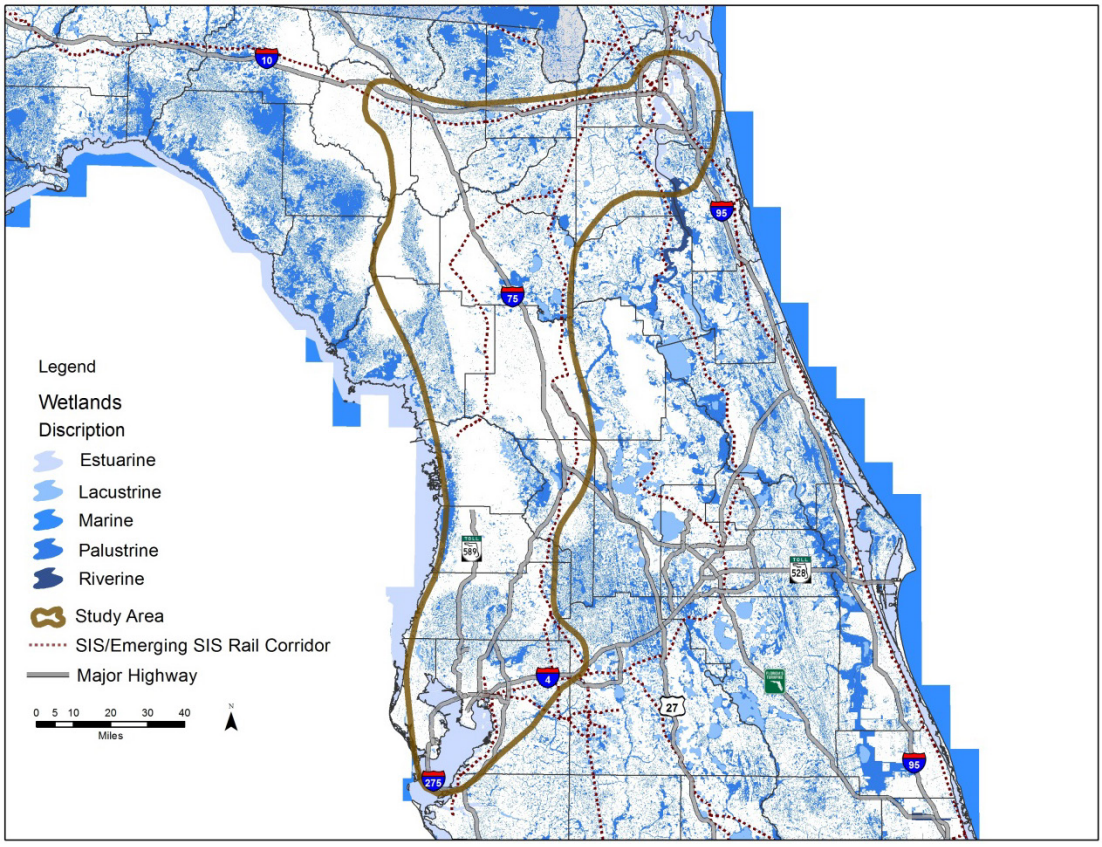
- Outstanding Florida Waters designated by the Florida Department of Environmental Protection;
- Springs;
- Groundwater resources and aquifer recharge zones; and
- Watersheds, including those that containing rare and imperiled species.

Figure 5.6 Aquatic Preserves in the Study Area



Source: Florida Department of Environmental Protection Office of Coastal and Aquatic Managed Areas, 2008.

Figure 5.7 Wetlands in the Study Area



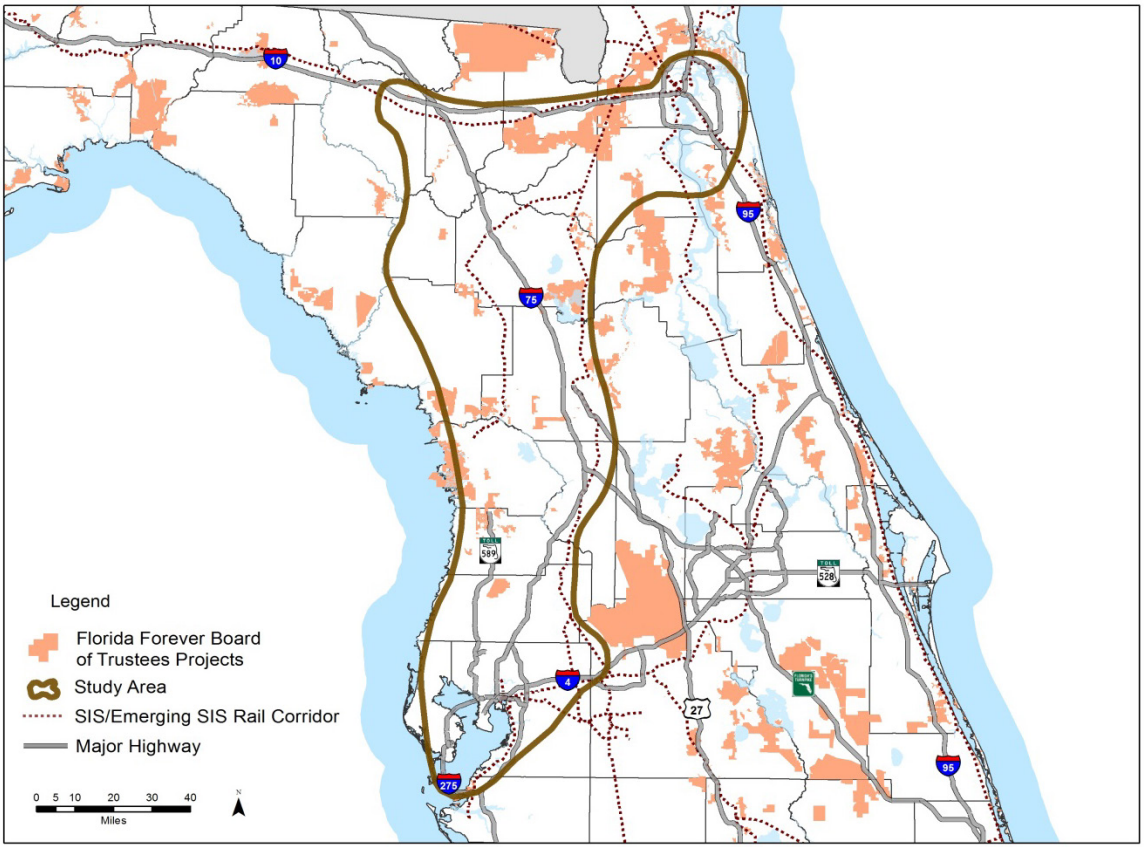
Source: U.S. Fish and Wildlife Service, 2013.

Example: Priorities for Future Conservation

Several public and non-profit entities have identified parcels of land that are considered priorities for future conservation via easements or via direct acquisition by the public or private sector. Examples include:

- Florida Forever Board of Trustees projects (shown in Figure 5.8);
- The Florida Fish and Wildlife Conservation Commission's (FFWCC) Cooperative Conservation Blueprint regional pilot project; and
- FDEP's Florida Greenways and Trails Systems (FGTS) Plan, particularly the ecological greenways that represent the areas necessary for the protection of a statewide network of conservation lands that maintain ecosystem functions a the requisite landscape scale.

Figure 5.8 Florida Forever Board of Trustees Projects



Source: Florida Natural Areas Inventory, 2011.

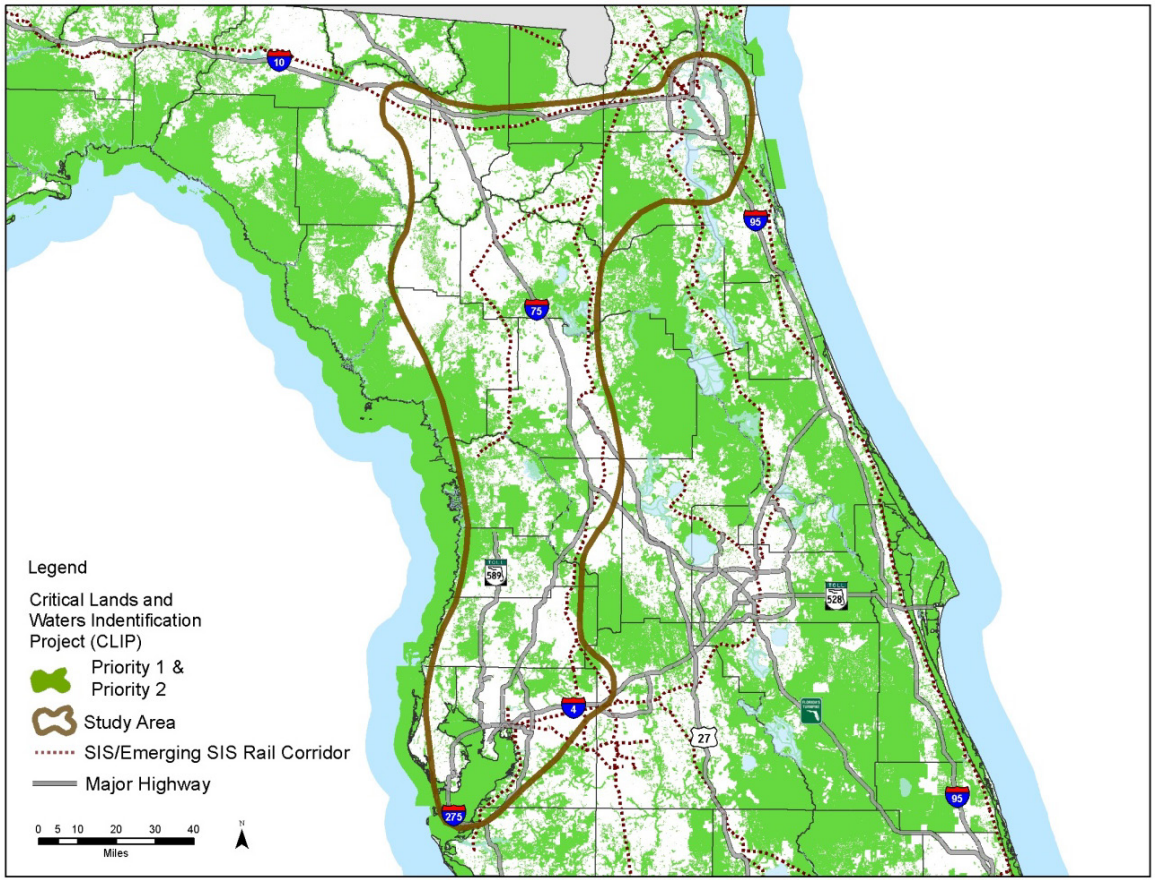
Example: Parcel-Level Prioritization Initiatives

Initiatives to rank the ecological significance of lands and water resources in Florida include:

- Critical Land and Waters Identification Project (CLIP) (Figure 5.9);
- FFWCC Integrated Wildlife Habitat Ranking System;
- FFWCC Strategic Habitat Conservation Areas; and
- FFWCC Cooperative Conservation Blueprint.

Note that there is no set threshold for which a parcel is deemed off limits to construction. Prioritization processes such as those mentioned above are intended to be used as tools to help build consensus among FDOT and its stakeholders regarding land on which impacts should be avoided or minimized during construction and operation of a transportation facility.

Figure 5.9 Critical Lands and Waters Identification Project Priority 1 and 2



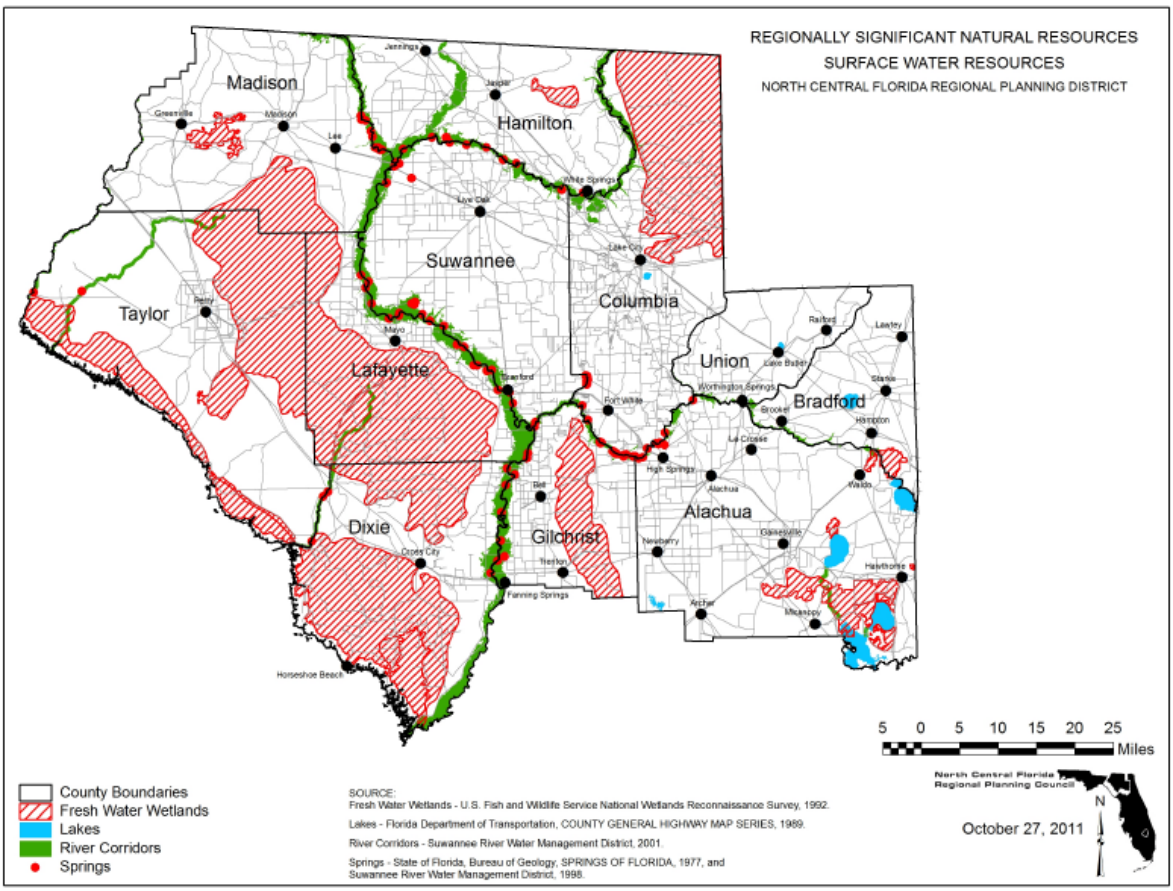
Source: Florida Fish and Wildlife Conservation Commission, 2009.

Regional Conservation Planning and Environmental Management Initiatives

Initiatives Led by Regional Planning Councils

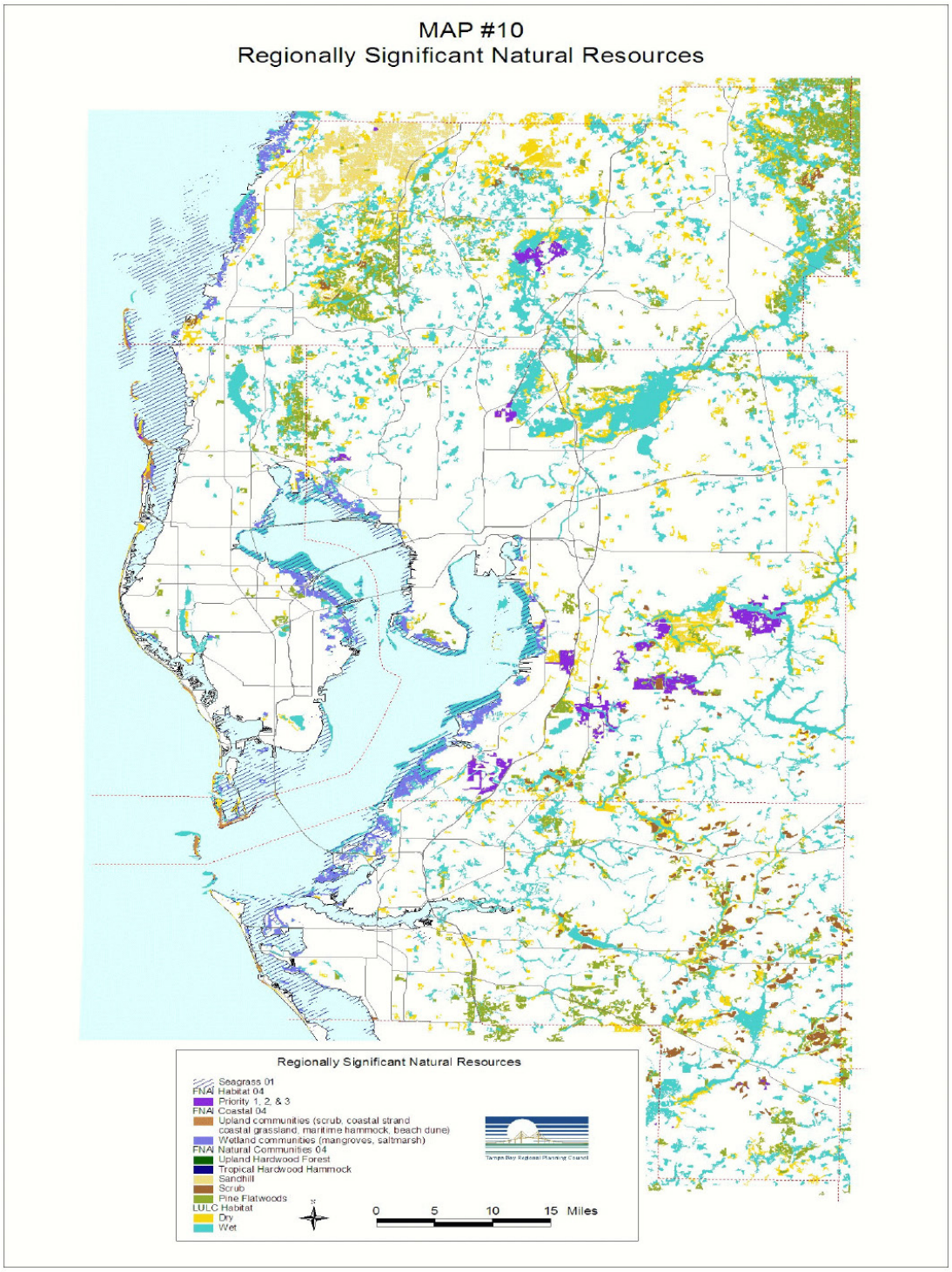
Several regional land conservation and ecosystem planning initiatives have been undertaken or are in progress in the study area – an area that includes portions of the Withlacoochee Regional Planning Council (RPC), the North Central Florida RPC, Tampa Bay RPC, and the Northeast Florida Regional Council. These initiatives build on, or in some cases have been developed in parallel with, regional visioning efforts to determine desired locations for future development. All of the RPCs, through their Strategic Regional Policy Plans (SRPP), have identified strategies for managing water supplies and conserving ecological resources. Figures 5.10 and 5.11 show examples of the types of maps and analyses included in the SRPPs.

Figure 5.10 North Central Florida Regional Planning Council Regionally Significant Natural Resources: Surface Water Resources



Source: North Central Florida Regional Planning Council Strategic Regional Policy Plan, 2011.

Figure 5.11 Tampa Bay Regional Planning Council Regionally Significant Natural Resources



Source: Tampa Bay Regional Planning Council Strategic Regional Policy Plan, 2005.

Initiatives Led by Other Stakeholder Groups

Other initiative undertaken by national partners also can provide input into lands that could be set aside for conservation purposes. The U.S. Fish and Wildlife Service has undertaken the Peninsular Florida Landscape Conservation Cooperative to inform resource management decisions in an integrated fashion across Florida's landscapes at a broader scale than any individual partner's responsibility.

FDOT will leverage various statewide and regional initiatives in an appropriate manner to support sound decision-making about corridor selection and location, including avoidance, minimization, and mitigation opportunities such as consideration of wildlife crossing/bridging where appropriate. FDOT's primary data source is the Florida Geographic Data Library, augmented with additional data and commentary from Federal, state, and local sources. Once a project is identified, the Environmental Screening Tool provides a structured process for agency partners to review and comment on these data. The data sources and analyses will become progressively more detailed as an alternative moves from the high-level Concept studies to the Evaluation and Project Development stages.

As each corridor improvement alternative moves through the Future Corridors planning and screening process, FDOT will continue to work with its partners to ensure that the selection of corridors for further study, the modes of transportation to be included in each corridor, and the specific locations and design elements included in new or expanded infrastructure are consistent with statewide, regional and local environmental and community visions and plans.

6.0 Potential Strategies to Address Future Transportation Needs

Based on the issues and opportunities identified in the prior chapters, this chapter identifies and assesses a range of high-level options for improving statewide and interregional mobility and connectivity in the study area. These strategies include:

- Transformation of Interstate 75 from Hillsborough County to Interstate 10;
- Improvements to intercity and commuter passenger rail;
- Improvements to freight rail connectivity and access;
- One or more full or partial reliever corridors running parallel to Interstate 75; and
- Several potential options for closing regional connectivity gaps throughout the study area.

Each of the concepts identified in this section will be screened against the following criteria to determine if it should advance into the Evaluation stage:

- A statewide mobility or connectivity need is identified;
- Potential solutions are consistent with 2060 Florida Transportation Plan and other statewide policy goals;
- Potential solutions are consistent with regional vision(s) or equivalent local plans;
- Sufficient information is available to scope future stages; and
- Support exists from state, regional, and local partners to continue study.

Interstate 75 Corridor Transformation

Interstate 75 is a critical trade and tourism corridor for the State of Florida, connecting most of the Florida peninsula to the interior Southeast, the Midwest, and the rest of the United States. Between Lake City, where I-75 intersects with I-10, and Wildwood, at the northern end of Florida's Turnpike, I-75 is the only Interstate highway available to serve these connections. The importance of I-75 to the State's economy cannot be overstated.

I-75 was designed to serve long-distance flows of people and freight, and to a large degree it still does. As Florida grows, more people drive into and out of the State from the rest of the country, and more freight is moving between Florida and trading partners in the rest of North America and the rest of the globe. However, as places like Gainesville, Ocala, and Lake City grow, and as new economic centers emerge in the counties north of Tampa and northwest of Orlando, I-75 is becoming a more significant route for daily commute trips and trips to destinations like medical

specialists, shopping opportunities, and passenger hubs found in the region's largest centers. Sections of I-75 near Ocala and Gainesville see travel patterns that resemble an urban freeway, with peak-period congestion on weekdays and relatively high numbers of incidents. Even on non-holiday and non-football weekends, bottlenecks like the I-75/Turnpike merge can cause significant delays for tourists and day-trippers.

Despite significant investment since its initial construction, the design of sections of I-75 in these urban areas still resembles a rural freeway, with interchanges that are designed for low levels of traffic and an inadequate number of through lanes to accommodate through and local traffic. As a result, I-75 is vulnerable to major accidents, surges in demand during hurricane evacuation, and other anticipated and unanticipated events – no matter what time of day or day of the week they occur.

If I-75 is to continue to serve as a vital trade corridor, tourism route, and regional lifeline, the roadway must be transformed to anticipate what demand for people and freight movement will look, like over the next 50 years. FDOT and its partners are undertaking multiple investments on I-75, including, in the near term, adding one lane in each direction from SR 56 in Pasco County to the merge with Florida's Turnpike in Sumter, so the facility has at least six lanes from Venice, Florida to just north of Chattanooga, Tennessee.

FDOT has completed several evaluations of I-75 in the study area, including the following:

- The **I-75 Transportation Alternatives Study**, completed in 2012, sets the overall vision for development of I-75 and lays the foundation for more detailed studies of specific projects, operational strategies, and policies that could apply to one or more segments of the roadway.[19]
- The **I-75 Sketch Interstate Plan** outlines actions to improve the mobility of users of I-75. One portion of the Sketch Interstate Plan between CR 476B in Sumter County and the Georgia state line was completed in 2010 and forecasts future travel demand and capacity needs through year 2035 for the I-75 mainline. An **I-75 Sketch Interstate Plan Mainline Vision Report** for the portion of I-75 from SR 29 in Collier County to CR 476B in Sumter County was completed in 2011. The I-75 Sketch Interstate Plan and the Mainline Vision Report both call for further study of which sections of I-75 may need to be widened to 8, 10, or more lanes. Multiple new or modified interchanges will be needed to accommodate the full build out of I-75.[20]

These documents propose a variety of alternatives for the future of I-75. For example, the Transportation Alternatives Study proposes 10 categories of improvements. Several improvement categories, like transportation system management and operations, transportation demand management programs, or development of intraregional transit services, are assumed to be undertaken as part of or in concert with any of the strategies in this chapter. Others categories provide the starting point for envisioning the future transformation of I-75 or support other strategies outlined in this chapter.

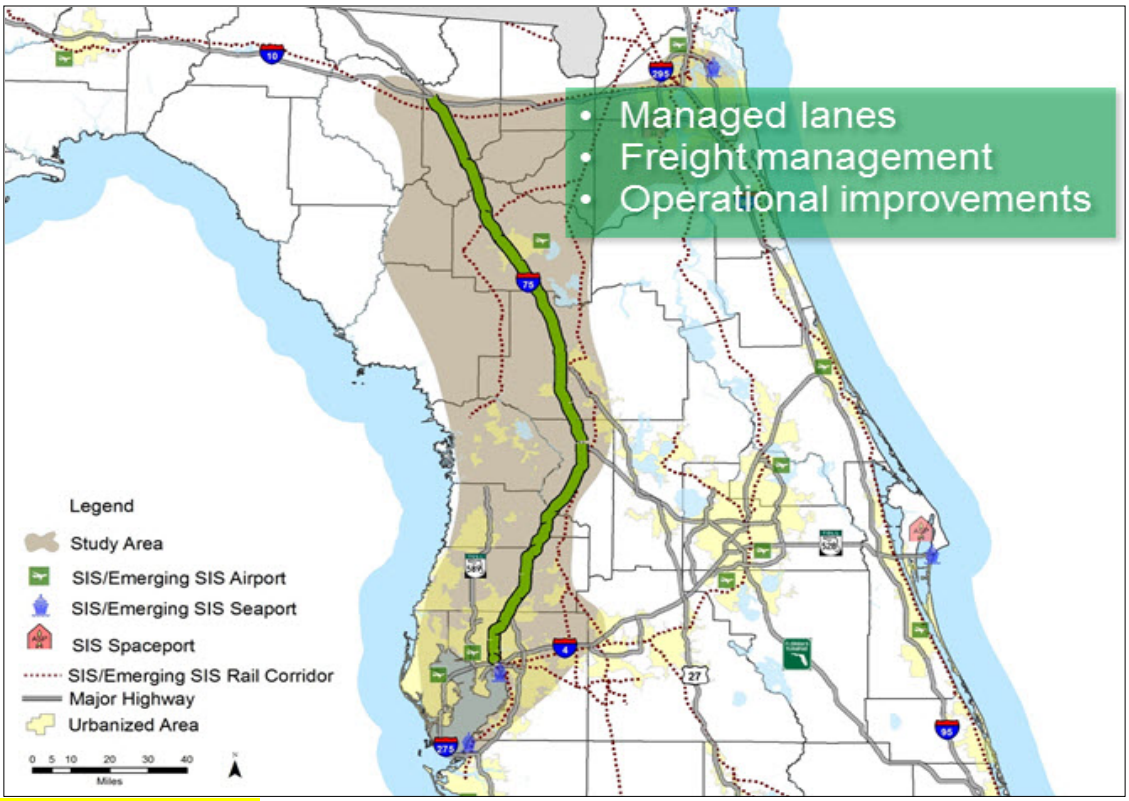
[19] Florida Department of Transportation, *I-75 Transportation Alternatives Study*, September 2012.

[20] Florida Department of Transportation, *I-75 Sketch Interstate Plan,* August 2010.

Several approaches could be used to modernize and optimize the existing I-75 roadway and right-of-way using 21st century transportation technology, approaches, and standards. They could include (Figure 6.1):

- Incorporate managed lanes on exclusive guideways in the I-75 right-of-way. Managed lanes add capacity and improve travel time reliability for residents, visitors, and freight. Managed lanes can be used to separate long-haul truck traffic from automobiles to improve safety, and in urban areas, managed lanes can speed trips for express buses as part of a regional transit network.
- Implement truck-only and other features to accommodate increasing truck volumes, such as a network of truck parking facilities and staging areas along I-75 and improved access to seaports and intermodal logistics centers along the corridor.
- Modernize and optimize the efficiency of I-75 using Transportation Systems Management and Operations (TSM&O) strategies. I-75 can be a test bed for the latest transportation technologies such as connected vehicles and fully automated vehicles. TSM&O strategies can help manage I-75 and parallel highways and arterials as a system so that drivers have better information and more options to move north and south along this critical corridor.

Figure 6.1 I-75 Corridor Transformation Strategies



Source: To be provided.

All of these concepts could be examined as part of an "Ultimate Plan" for the entire I-75 corridor to provide a comprehensive, long-term package of investments that together will maximize the efficiency of moving people and freight within the constraints of existing development and natural features adjacent to the right-of-way.

Anticipated Benefits:

- Maximizes passenger and freight capacity available within the rights-of-way of an existing high-speed, high-capacity transportation corridor.
- Improves highway safety.
- Helps improve the efficiency and reliability of I-75 during everyday congestion and during planned and unplanned events.
- Strengthens I-75's role as a major trade corridor.
- Sustains a vital lifeline between rural communities and larger economic centers in the region.

Issues:

- Does not provide a more direct connection from Tampa Bay to Jacksonville.
- Does not provide additional system redundancy, including during major evacuation events.
- Does not address gaps in system connectivity, particularly where regional visions for future growth include development of population and job centers outside the I-75 corridor.

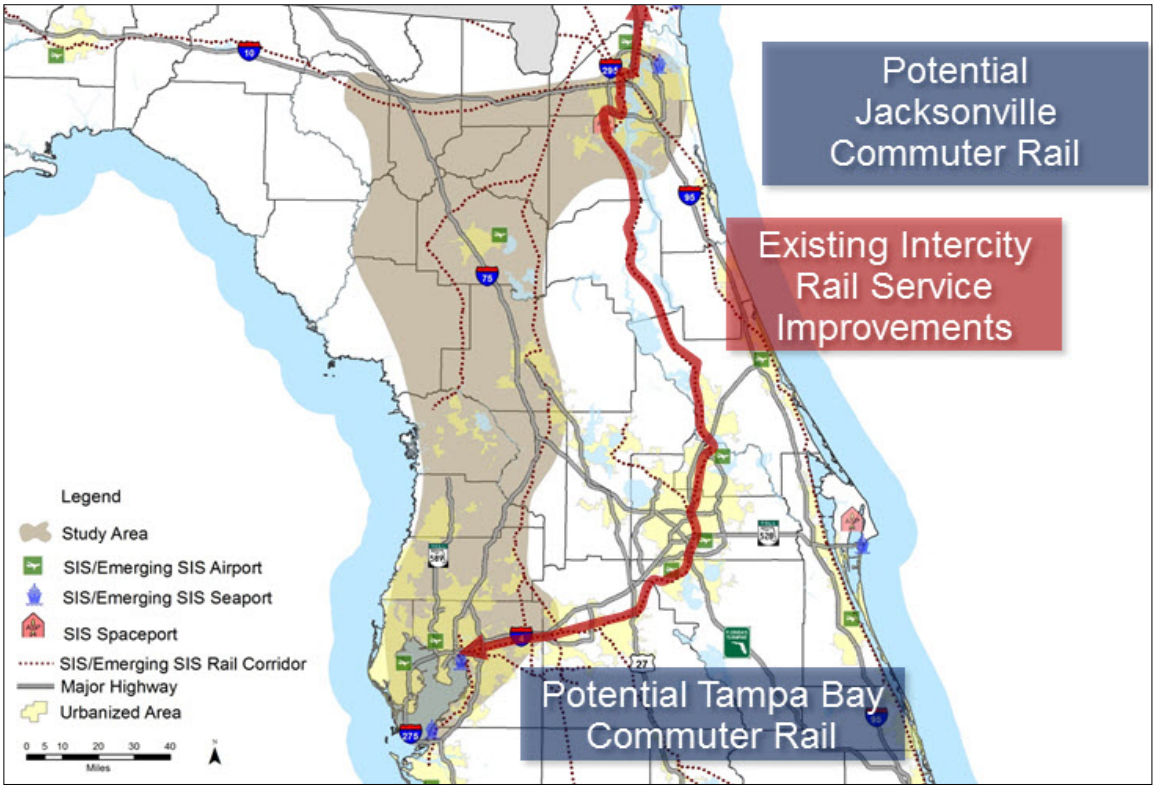
Intercity Passenger Rail Improvements

The 2060 FTP sets a long-range objective to develop and operate a statewide intercity passenger rail system connecting all regions of the State. The system would link to existing regional commuter rail services and to public transportation services in rural and urban areas. The passenger rail connection today between Tampa and Jacksonville runs through Lakeland and Orlando and then on the east side of the St. Johns River through DeLand and Palatka before reaching Jacksonville. One train per day runs each way between Tampa and Jacksonville, part of a longer service operated by Amtrak between Tampa and New York City. The service has frequent delays because it must share track with freight trains along most of its length.

The 2060 FTP envisions frequent passenger rail service operating between major Florida cities throughout the day, with seamless connections to urban and rural transit services. To realize this vision, FDOT, private-sector rail operators, and regional and local partners should work together to resolve operational issues and provide additional capacity to improve the frequency and reliability of intercity passenger rail service.

Improving existing Amtrak service in the near term could expand intercity rail capacity in the study area. In the longer term, proposed commuter rail and transit initiatives in the Tampa Bay and Jacksonville regions could form the initial components of a transformed and enhanced intercity passenger rail network (Figure 6.2).

Figure 6.2 Existing and Potential Passenger Rail Strategies



Source: To be provided.

The Tampa Bay Area Regional Transportation Authority Master Plan includes several regionally significant projects that begin with express buses and bus rapid transit services linking major centers in Tampa Bay. Over time, corridors with parallel rail lines could become candidates for commuter rail service, including connections from Hillsborough to Polk, Manatee, and Pasco counties. CSX Corporation maintains almost 100 miles of rail corridors in the Tampa Bay region that currently are used for freight service, but could accommodate passenger service with additional capacity and safety improvements. In Northeast Florida, the First Coast Commuter Rail proposal includes one branch that would run from downtown Jacksonville south to Green Cove Springs via the CSX A line. The CSX A line currently carries Amtrak intercity passenger trains from Jacksonville to Orlando and Tampa.

Combined with Central Florida's SunRail system that eventually will run from DeLand to Poinciana, a high-quality intercity service would need to bridge short gaps in commuter rail service between Green Cove Springs and DeLand (about 80 miles) and between Poinciana and Plant City (about 50 miles). All Aboard Florida, the proposed new passenger rail service to be operated by Florida East Coast Railway from Miami to Orlando, could one day connect Tampa to Orlando and Jacksonville via existing or new tracks.

In the longer term, additional routes connecting Jacksonville and Tampa with growing parts of the study area like Gainesville, Ocala, and communities in the Suncoast could be integrated into planned extensions of existing corridors like the Suncoast Parkway Phase II and existing or new multimodal I-75 reliever corridors (discussed below).

In any of these plans, specific station locations would need to be determined in the context of established regional visions. Well designed and well located passenger rail stations could provide a focus for vibrant urban centers in a manner that is consistent with ONE BAY and First Coast Vision. Passenger rail stations also could function as intermodal passenger transportation hubs for local and regional transit and intercity bus service, all of which together could provide a reliable, time-competitive, affordable, and accessible alternative to driving in the study area's two major metropolitan regions.

More accessible, frequent and reliable intercity service would provide options for travel between existing and emerging cities in the study area. Enhanced intercity services also could connect cities in the study area with nearby destinations (like Savannah, Georgia) for which passenger rail could be competitive with driving and flying on a cost and time basis.

Anticipated Benefits:

- Maximizes passenger capacity primarily through modest improvements to existing transportation infrastructure in the near term.
- Provides modal options for passengers on regional and long-distance trips, preserving capacity on interregional highway corridors for longer distance and through traffic.
- Supports compact centers consistent with adopted regional visions.
- Reduces environmental impacts by carrying more people with fewer emissions and lower fuel consumption than an automobile.

Potential Issues:

- Would not accommodate demand for passenger travel outside major regional centers.
- Must be complemented by a robust regional transit network, bike sharing, and car rental/sharing services to provide door-to-door service at both ends of the trip.
- Would require shared track with freight trains (and complex operational agreements), or significant new capital investment to build separate tracks.
- May require capital investments to replace at-grade highway-rail crossings with overpasses, straighten curves, construct infrastructure to power electric locomotives, purchase more and longer trains, control access to prevent trespassing, and enlarge stations.
- Creates noise that can disturb neighboring properties, particularly sensitive locations like schools, places of worship, and recreation areas.
- Must identify sources or capital as well as ongoing operating and maintenance costs.

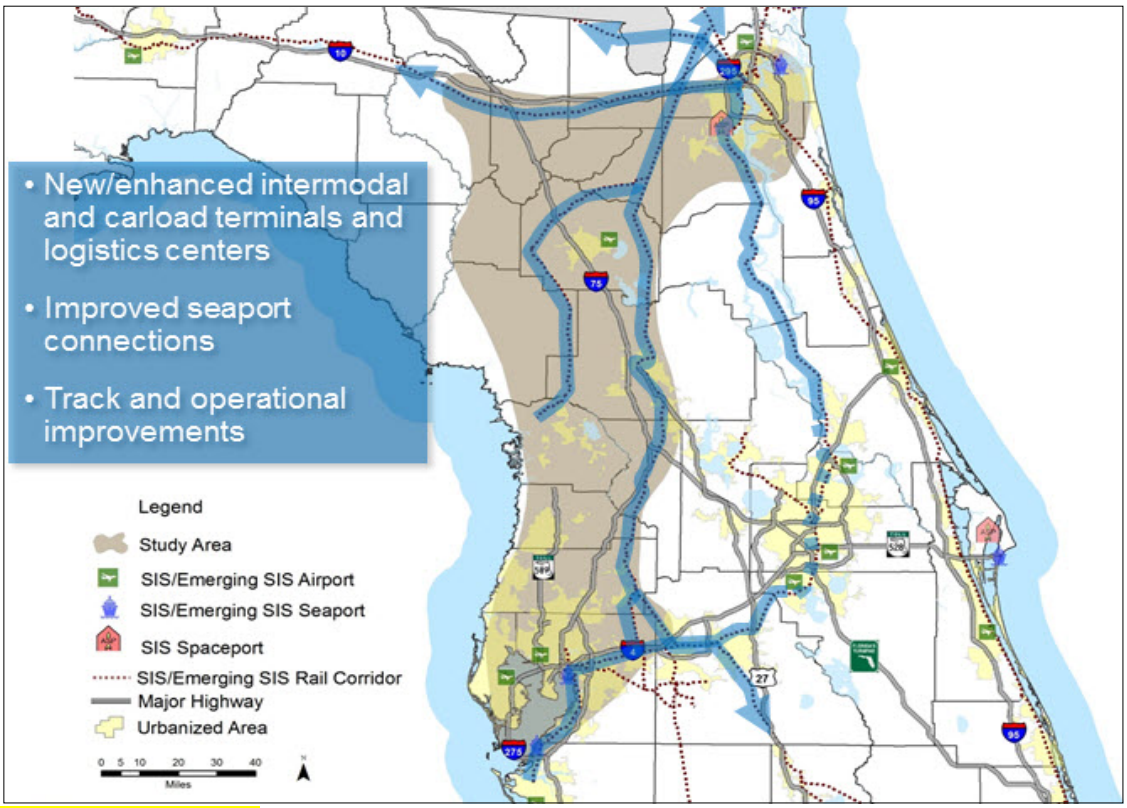
Improvements to Freight Rail Connectivity and Access

The study area's freight rail network is evolving in response to changes in how freight moves to, from, and within Florida. Strategic investment in the freight transportation network can bring substantial benefits as more freight is transported into and, increasingly, out of the region by rail.

Freight rail already is a viable alternative to highways for certain freight trips and commodities. For trips longer than 750 miles, freight trains can offer substantial savings in operating cost compared to trucks, particularly for freight transported in intermodal shipping containers. Even at shorter distances, some heavy and bulky freight shipments are most economically transported by rail. However, freight rail can be viable only where active tracks and services exist. Several enhancements to the region's freight rail system are planned to improve access and connectivity to existing and emerging economic centers and to improve the operational efficiency of the existing rail network (Figure 6.3):

- CSX is planning improvements to its track to add capacity and provide more flexible operations, for example by constructing more frequent passing sidings to allow trains to pass each other where there is a single through track.
- CSX is working with FDOT and local partners to identify highway-rail-grade crossings that create safety and/or operational issues and replace them with grade separations.
- FDOT, the U.S. DOT, the Port of Jacksonville (Jaxport), and CSX are working together to develop an intermodal container transfer facility within Jaxport's Dames Point terminal. In 2012, the Port of Tampa inaugurated its Gateway Rail Terminal, which serves unit trains carrying ethanol from the Midwest. The Port of Tampa and Jaxport both are investigating further improvements to rail service both on dock and near dock.

Figure 6.3 Potential Freight Rail Strategies



Source: To be provided.

An efficient and reliable freight rail system can provide an important option for freight moving to and from the study area, as well as through traffic such as trade moving to or from the Southeast Florida seaports. A long-term regional rail investment strategy is needed to help identify:

- Where improved connectivity to seaports is needed to position for future growth in trade;
- Where improved connectivity to employment centers and intermodal logistics centers (ILC) can help future growth in freight traffic take better advantage of capacity in the rail system;
- How existing intermodal terminals in Tampa and Jacksonville can complement ILCs planned at the Cecil Commerce Center, in Lake City, and in Sumter and Marion counties that could become regional hubs of freight rail activity;
- Where additional access points are needed to serve more dispersed businesses that are not currently located near a rail terminal but could benefit from rail access;
- Where existing freight rail lines may need to be relocated to reduce impacts on centers that are planned to accommodate residential and commercial development that is not compatible with freight rail;
- How to accommodate growth in through traffic flowing to and from Southeast Florida that must compete for space with growing regional origin and destination traffic in the Tampa Bay-Northeast Florida study area;
- Where abandoned rail lines could be reactivated to accommodate growth in demand; and
- When and where additional capacity in the freight rail system will be needed to accommodate and generate future economic development.

Anticipated Benefits:

- Maximizes freight capacity using existing transportation infrastructure.
- Provides modal options for freight to, from, and through the study area, preserving capacity on interregional roadways for shorter distance truck trips for goods that cannot be efficiently transported by rail.
- Supports development patterns that are consistent with adopted regional visions.
- Transports freight with more efficient fuel consumption and lower emissions than trucks.

Potential Issues:

- May need to share tracks with passenger trains in the short term, limiting capacity and resulting in suboptimal operations.
- May require significant long-term capital investment in tracks, structures, and stations, as well as ongoing maintenance funding.
- May not easily serve all emerging employment centers without new rail construction.
- May be difficult for short-line railroads to maintain service and invest in future infrastructure upgrades.
- May be difficult to reactivate service on abandoned rail rights-of-way due to encroachment of development or conversion to trails.

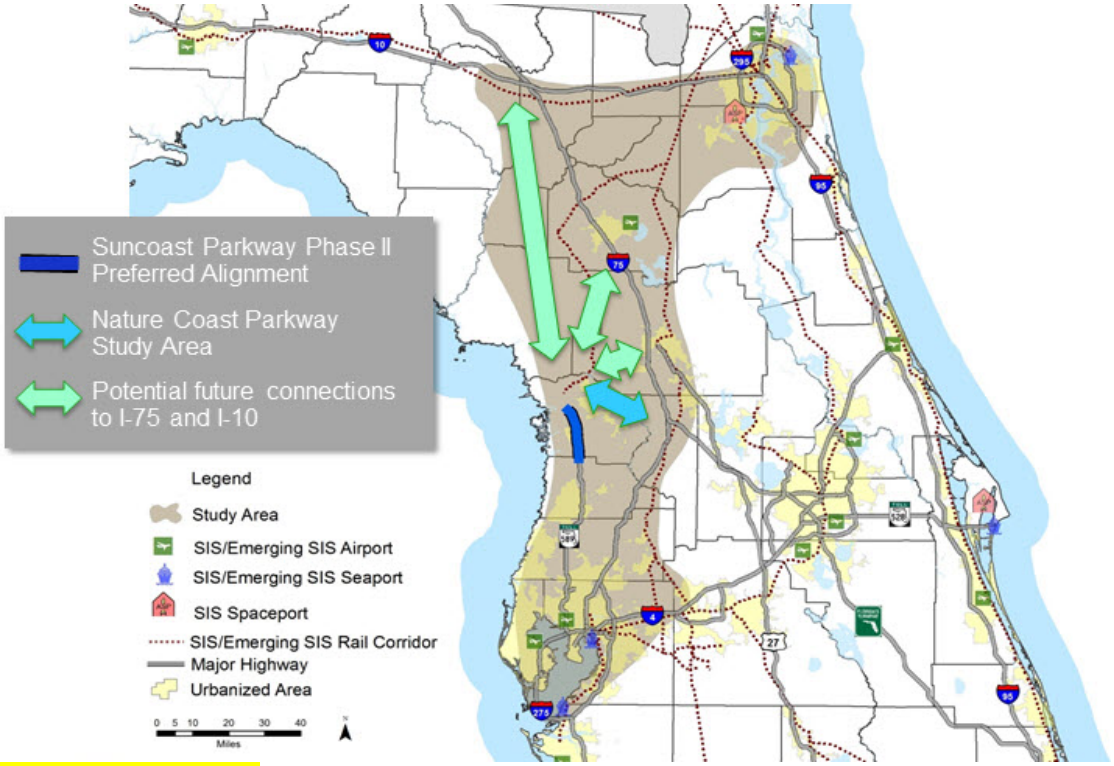
- Must accommodate significant truck traffic to intermodal logistics centers and other rail access points.
- Creates noise and vibrations that can disturb surrounding residents, businesses, and the natural environment.

Interstate 75 Relievers

As a vital trade and tourism corridor, I-75 must accommodate increasing demand for moving people and freight. The Veterans Expressway and the first phase of the Suncoast Parkway from Tampa to U.S. 98 north of Brooksville provide a high-speed, high-capacity roadway alternative for north-south traffic north of Tampa, but there are no other limited access alternatives to I-75 for people or freight from Sumter County to the Georgia state line. In particular, the section of I-75 between Wildwood (the northern end of Florida's Turnpike) and Gainesville may require 10 or more lanes by 2035 if current growth trends continue and no other alternative facilities are developed to relieve the traffic.

Several proposals could provide significant additional connectivity and alternatives (Figure 6.4):

Figure 6.4 Potential I-75 Parallel Relievers



Source: To be provided.

- The northern extension of the Suncoast Parkway (Suncoast II) into Citrus County and the proposed development of the Nature's Coast Parkway, a northern extension of Florida's Turnpike into Levy County, could help relieve portions of I-75 in Sumter and Marion counties.

- A further extension of the Suncoast Parkway – "Suncoast III" – could relieve additional segments of I-75. A potential approach would be to extend the Suncoast Parkway and connect it to I-75 near Ocala, Gainesville, or Lake City. This would provide a more direct route between Tampa Bay and the central to northern portion of the study area, as well as to Georgia. This facility could be evaluated with multiple connections to I-75, depending on how it might support a future vision for this region.
- Several proposals for an "Outer Beltway" east of I-75 in the Tampa Bay region could relieve the southernmost segments of I-75 in this study area.
- Parallel highways such as U.S. 19, U.S. 27, U.S. 41, U.S. 441, U.S. 301, and U.S. 127 have sections that already are four lanes with medians. Sections of these highways that are not in developed areas could be upgraded through stricter access control (or even fully limited access) and could be integrated into longer I-75 reliever corridors. For example, segments of U.S. 19 in Pinellas County are undergoing significant upgrades to transform portions of the facility into a limited access highway, but many segments in established communities north of Pinellas County still have frequent intersections and driveways that would require considerable expense to convert U.S. 19 into a limited access highway.
- Freight rail improvements mentioned in the previous section could encourage shippers to shift their freight from highway to rail if the improvements make rail more cost and time competitive.
- The M-10 Marine Highway from Tampa Bay to Brownsville, Texas was designated by the U.S. Maritime Administration as part of an initiative to encourage the use of seaports and waterways to relieve the nation's busiest trade corridors. Truck ferries and barge services along the M-10 Marine Highway could help relieve I-75 between Tampa Bay and I-10.

Specific corridor locations, particularly those in North Central Florida, would be determined based on the outcomes of regional visioning efforts and based on projections of future travel demand and travel patterns. Over time, multimodal improvements could be linked together in a coordinated fashion to form one or more continuous I-75 relievers throughout this study area.

Where and how various reliever facilities connect to I-75 would be a particularly important issue to coordinate on a statewide scale. For example, adding multiple system interchanges to the portion of I-75 north of Wildwood could exacerbate the congestion problem in the future. Developing Port Citrus as a deepwater seaport could help relieve demand for freight movements on I-75, but trucks would need appropriate connections to I-75 or other components of the regional highway network. Regional and local partners must coordinate closely to ensure that facilities are located and related development occurs in locations that are consistent with regional and local plans and visions.

Anticipated Benefits:

- Provides additional north-south capacity in the study area to relieve I-75 traffic and add redundancy for emergency evacuations.
- Provides access and connectivity to emerging regional centers in the study area.
- Could be designed to emphasize interregional traffic, with interchanges focused on locations with intensive economic development.

Potential Issues:

- Requires significant coordination between FDOT, the Florida Turnpike, and local governments.
- Depending on the alignment, could impact undeveloped areas or areas designated for conservation.
- Must ensure that future intersections of major interregional highways are located in places that are intended to develop into regional centers, or ensure access management policies are in place so that development occurs as planned.
- Likely to require significant capital investment; the combination of capital plus operating and maintenance costs can exceed the revenue generated from highway users on some segments.

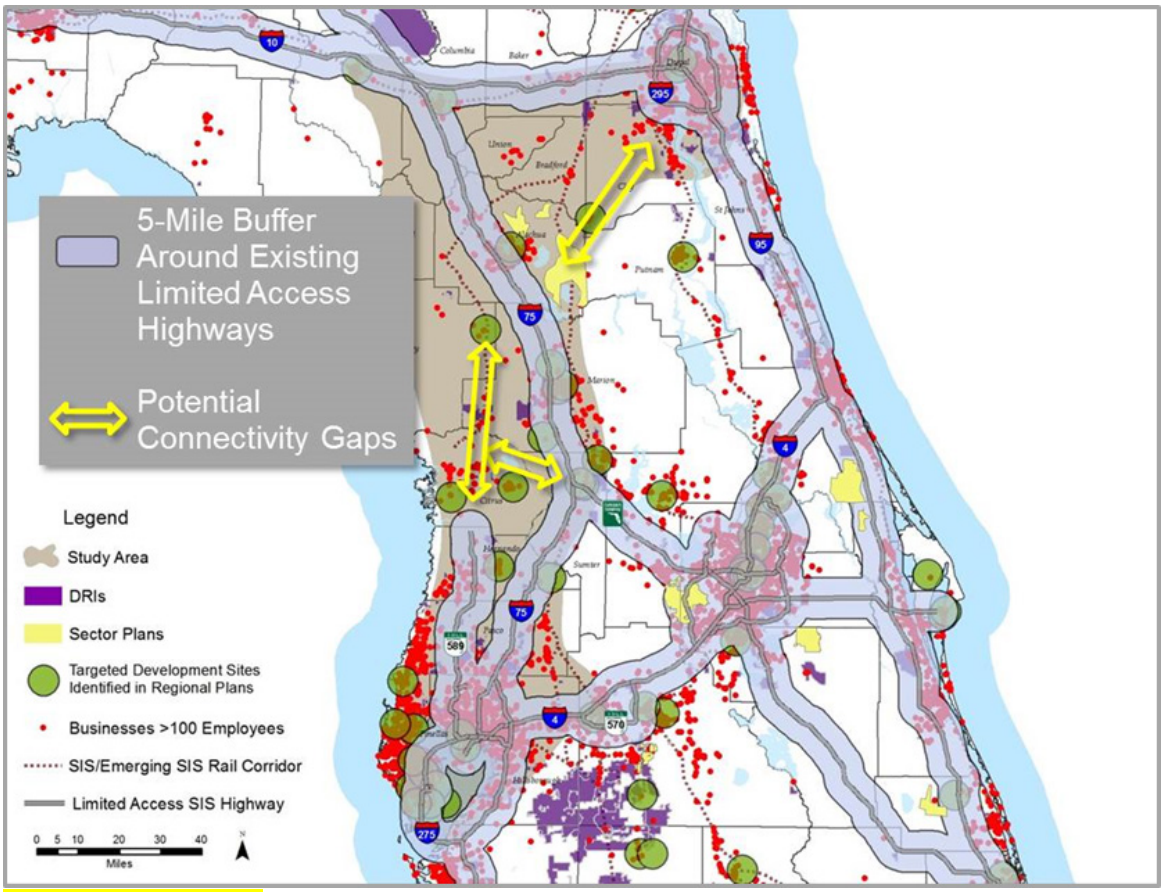
Closing Regional Connectivity Gaps

Figure 6.5 shows existing employment, developments of regional impacts, and targeted development sites identified in Comprehensive Economic Development Strategies developed by the regional planning councils. A five-mile buffer is overlaid on the existing limited access highways. Yellow arrows indicate potential regional connectivity gaps where existing and emerging population and economic centers may not be well served by the existing multimodal transportation network. These include:

- Tampa Bay to Citrus County north-south connectivity to link priority development sites, including Port Citrus to Tampa Bay;
- Suncoast region east-west connectivity to I-75 and Florida's Turnpike to connect fast-growing Suncoast communities to Central Florida and Northeast Florida; and
- Gainesville/Ocala to Jacksonville.

Several alternatives, ranging from concepts to specific facilities, have been proposed to fill many of these connectivity gaps. The Future Corridors initiative provides an opportunity to reexamine these concepts and propose new ones, considering them all from the perspective of statewide goals and objectives and the region's growth visions. Additional analysis is needed to determine which of these gaps are of statewide significance and to assess alternative solutions, including improvements to existing highway and rail facilities and development of new facilities to close the gaps.

Figure 6.5 Potential Regional Connectivity Gaps



Source: To be provided.

Tampa to Citrus County

Some of the region's strongest growth may occur along the Suncoast to the north of Tampa Bay. The new urbanized area, Homosassa Springs-Beverly Hills-Citrus Springs, indicates the growth that is occurring in Citrus County. This growth could accelerate with the proposed development of Port Citrus. These counties are becoming increasingly integrated with the Tampa Bay region.

North/south connectivity to Citrus County is provided primarily by U.S. 19, which has varying degrees of access control, including rural sections with few driveways and urban sections that function as local streets. The Florida Turnpike Enterprise has proposed the Suncoast II extension northward approximately 27 miles through Hernando and Citrus counties from U.S. 98 to U.S. 19. As discussed previously, connections from the Suncoast Parkway northeast to I-75 could provide a reliever route for I-75, allowing people and freight to move between the Tampa Bay region, Gainesville/Ocala, and Northeast Florida.

In addition, a freight rail line runs from Tampa north to Brooksville parallel to the Suncoast Parkway. The rail line ends at a mine less than five miles from the current northern terminus of the Suncoast Parkway. If Suncoast II were to incorporate a shared highway and rail right-of-way, an extension of this rail line north to the existing CSX line serving the location of the closed Crystal

River power plant could provide a new continuous north-south rail route between Jacksonville and Tampa running through Citrus County and other rapidly developing communities in Hernando and Pasco counties.

Suncoast Region East-West Connectivity

Existing and emerging centers in Citrus, Hernando and Pasco counties are not well connected to I-75, I-4, or Florida's Turnpike, and therefore they lack strong connections to other parts of Florida and neighboring states.

Existing two- and four-lane facilities already run west from I-75 to communities in Pasco, Hernando, and Citrus counties that are growing into regional centers, including Brooksville, Spring Hill, and New Port Richey. These facilities currently function as local roads, but portions could be redesigned to more safely and efficiently accommodate flows of interregional passenger and freight traffic. If the proposed intermodal logistics centers (ILC) in Sumter County and Marion County move forward, east-west connectivity could help attract industries to the Suncoast that ship goods via intermodal containers passing through the ILCs.

Several current or recent proposals would improve east/west connectivity in this region. Pasco County currently is studying the feasibility of adding toll lanes to the existing SR 54 corridor from U.S. 19 to U.S. 301, crossing both the Suncoast Parkway and I-75. Previously, FDOT District 7 evaluated a proposed West Central Florida Outer Beltway, a portion of which would run west from I-4 in eastern Hillsborough or western Polk County across I-75 to the Suncoast Parkway or U.S. 19 in Pasco County. Further north, the proposed Nature's Coast Parkway would extend from its present northern terminus of Florida's Turnpike at I-75 near Wildwood in Sumter County to U.S. 19/98 south of Lebanon Station in Levy County.

Gainesville/Ocala to Jacksonville

Gainesville, anchored by the University of Florida, has established itself as one of the State's innovation hubs. Nearby Ocala recently became the site for the second campus of the Institute for Human and Machine Cognition. These growing economic centers in the middle of the study area needs better connections to the rest of the State, nation, and world. Researchers and start-up firms need access to sources of venture capital and interactions with other centers of innovation and ideas. High-technology manufacturers need to access suppliers of parts and raw materials and access to markets to sell their products. Health care and life sciences establishments like Shands Medical Center can benefit from stronger connections to the Mayo Clinic in Jacksonville and other medical centers statewide.

Jacksonville is the closest major metropolitan area to Gainesville, but the two cities do not have strong transportation connections. As a result, the high-tech triangle that is developing between Tampa, Orlando, and Gainesville does not easily extend northward to include Jacksonville. With the high-tech sector becoming one of the major drivers of the State's economy, there could be substantial benefits to investing in better transportation links between Gainesville, Ocala, and Jacksonville so that these cities can become more economically integrated.

Gainesville and Ocala also are at the midpoint of a vital trade corridor linking Tampa to Jacksonville and points north. Freight traffic on U.S. 301 is growing between Jacksonville and Ocala. Travel times and, more importantly, travel time reliability on the U.S. 301 to I-75 route are

holding steady even as the Interstate Highway System route via I-95 south to I-4 west becomes increasingly congested. Furthermore, statewide and regional economic development initiatives could add more trucks to U.S. 301, SR 21, and other corridors between Gainesville/Ocala and Jacksonville. First, plans to increase Florida-origin exports and to increase the share of Florida imports that arrive via Florida seaports will add more trucks to the roadways between two of the State's largest seaports, Tampa and Jacksonville. Second, plans to expand Cecil Commerce Center and build new intermodal logistics centers in Marion and Sumter Counties could increase truck traffic on connecting roadways in the northeastern portion of the study area.

There are several options for improving connectivity in this region, including improvements to existing passenger and freight rail service as discussed above, expansion of an existing roadway like U.S. 301 or SR 21, or construction of a new facility. There are challenges associated with improvements to existing highways or construction of a new facility. For example:

- U.S. 301 was designed originally as an interregional highway, with two lanes in each direction separated by a center median. Over time the addition of new driveways and intersections have created a mix of local, regional, and long-distance traffic that uses it today. U.S. 301 passes through several small towns like Starke (where a bypass is planned), Waldo, Halwthorne, and Citra, where lower speed limits are required and U.S. 301 essentially functions as a local street. Costly bypasses would have to be built around these communities. A major CSX rail line runs adjacent to the U.S. 301 in several sections, limiting the options for expanding the facility's right-of-way (for example, to build frontage roads to provide access to existing driveways or to build interchange ramps to replace major intersections).
- Significant portions of SR 21 (for example, in Middleburg and for a few miles south of I-295) are lined with commercial development and have frequent driveways and intersections. Some small segments that do have excess right-of-way and strong access management standards in place could be upgraded to a limited access highway with frontage roads. South of Camp Blanding, SR 21 is rural in character with one lane in each direction. A combination of the First Coast Outer Beltway and a new limited access facility along or parallel to SR 21 could connect eventually to U.S. 301 east of Gainesville, but potential impacts to existing communities would need to be examined.
- A new alignment west of U.S. 301 would not be significantly shorter than the current I-75 to I-10 route between Tampa and Jacksonville.
- Any alignment east of U.S. 301 would encounter existing and planned development that could limit viable locations for a new right-of-way when combined with existing surface waters (lakes and wetlands) and other environmental features.

Improvements to existing alignments or development of a new facility could be designed to accommodate multiple modes, such as freight or passenger rail. Significant environmental concerns would have to be addressed in planning for any new facility in this corridor. As mentioned in Chapter 5, there are major wildlife corridors and environmental resources in the corridor that would have to be discussed among FDOT's partners, and significant mitigation measures would be needed in areas where sensitive land cannot be avoided.

Anticipated Benefits:

- Addresses gaps in system connectivity to existing and emerging economic centers.
- Provides additional options moving people and freight consistent with adopted regional visions.
- Creates new system capacity to accommodate expected growth in regional centers and in other communities.
- Safely accommodates longer distance regional trips as well as through trips on high-speed, high-capacity facilities.
- Provides redundancy to make the system more resilient and facilitates emergency evacuation and response.

Potential Issues:

- May need to acquire new right-of-way with potential disruptions for existing residents and businesses.
- Must take care to avoid or minimize impacts to critical environmental resource or to existing communities.
- Must take care to avoid inducing unintended growth.

Summary

The following matrix is designed to help FDOT and its partners determine which strategies could move forward into the Evaluation phase. The matrix is a qualitative assessment of whether each strategy has the potential to address a statewide mobility or connectivity need; is consistent with the goals and objectives of the 2060 FTP; is consistent with regional and local visions and plans; and has sufficient information and partner and public support to move forward.

Table 6.1 Policy Screening of Alternative Strategies

	Interstate 75 Corridor Transformation	Intercity Passenger Rail Improvements	Freight Rail Connectivity and Access	Interstate 75 Relievers	Closing Regional Connectivity Gaps
Statewide mobility and connectivity need					
Has potential to address statewide mobility or connectivity needs	●	●	●	●	●
Consistency with 2060 Florida Transportation Plan Goals					
Economic Competitiveness	●	●	●	●	●
Community Livability	●	●	○	○	○
Environmental Stewardship	●	●	●	○	○
Safety and Security	●	●	●	●	●
Maintenance and Operations	●	●	●	●	●
Mobility and Connectivity	●	●	●	●	●
Consistency with Visions and Plans					
Solutions are consistent with regional or community visions or equivalent local plans	●	●	●	●	●
Implementation					
Information is available to inform future stages	●	●	●	●	●
Support exists from state, regional, and local partners to continue study	○	○	○	○	○
Key:					
●	Alternative is ready to move into evaluation stage.				
○	Additional work needed, and/or issue will need to be closely monitored as alternatives advance through the Future Corridors planning and screening process.				

7.0 Framework for Moving Forward

FDOT has identified the following steps to continue corridor planning activities in the study area:

1. **Support development of a regional vision for North Central Florida and the integration of this vision with those of surrounding regions.**

The ONE BAY regional vision in Tampa Bay and the First Coast Vision in Northeast Florida provide valuable guidance for future conservation, development, and infrastructure decisions. Just as important, these visioning processes created the relationships and trust among a wide of partners that is needed to make collaborative decisions on major long-range investments such as new or enhanced transportation corridors in a timely and effective manner.

Study Area Partners

- 18 counties
- 80 cities
- 8 metropolitan planning organizations
- 1 regional transportation authority
- 8 transit authorities
- 1 expressway authority
- 2 Class I railroads, 1 Class II railroad, and 1 shortline railroad
- 3 deepwater seaports with 2 others located in adjacent counties and 1 under study
- 4 commercial service airports
- 2 regional visioning groups
- 4 regional planning councils
- 3 water management districts
- Economic development organizations
- Public and private utilities
- Landowners

The area between Tampa Bay and Northeast Florida has not yet developed a long-range vision. The North Central Florida region includes medium sized urbanized areas such as Gainesville and Ocala as well as multiple counties designated as Rural Areas of Critical Economic Concern. The region includes unique environmental resources such as the Suwannee River and the Nature's Coast. The region's economic assets include natural resources such as farmlands, forests, and mines; tourist attractions; and the University of Florida and other education and research centers. With a relatively low cost of living, available land, and a strategic location at the edge of the Florida megaregion, this region may be poised for significant growth and change. Transportation and other infrastructure can be an important catalyst to – or limit on – growth and development in this region. A collaborative visioning process can help the North Central Florida region make informed choices about its future in the context of regional values. Tampa Bay, Central Florida, and other parts of the State have learned that the upfront investment in a visioning process pays off by producing more effective and collaborative decisions. For this reason, FDOT should participate actively in a regional vision for North Central Florida, working under the leadership of the North Central Florida Regional Planning Council.

As this vision is completed, it can provide strategic guidance to future corridor planning decisions, particularly those involving new facilities or significant upgrades to existing facilities. The North Central Florida regional vision also must be integrated with the ONE BAY and First Coast vision recommendations to provide an overall structure for examining the connectivity needs between Tampa Bay and Northeast Florida. The large number of transportation partners in the study area underscores the need for continued collaboration on long-term visions and investment plans at an interregional scale.

2. **Develop an integrated strategy for the future transformation of Interstate 75 to meet the needs of the next 50 years.**

I-75 plays multiple roles between Tampa Bay and the Georgia state line, functioning as a critical trade corridor connecting Florida to the rest of the United States; the primary north-south corridor connecting many cities and counties within the study area; and a heavily used element of the regional transportation network in cities such as Ocala and Gainesville. The continued growth in demand for moving both people and freight is placing increasing pressure on the existing I-75 facility, resulting in increased delay, reduced reliability, and growing safety concerns.

Over the past few years, FDOT has conducted multiple studies to identify both short- and long-term improvements to I-75, including operational improvements, interchange modifications, additional travel lanes to bring the entire corridor up to at least six lanes, and managed lanes. Building on this work, FDOT should adopt and program an ongoing, coordinated series of improvements to transform the I-75 to meet the mobility needs of the next 50 years. An "Ultimate Plan" for the entire I-75 corridor could define a comprehensive, long-term strategy for maximizing the efficiency of moving people and freight within the constraints of existing development and natural features adjacent to the right-of-way.

3. **Work with the rail industry to develop long-term strategies for continued enhancements to freight and passenger service.**

The study area's economy increasingly depends on its ability to efficiently and reliably send and receive goods from other domestic and global markets. In addition, because I-75 is the principal corridor connecting Southeast, Southwest, and Central Florida to Atlanta and the Midwest United States, its effective operation is critical to the entire State. The presence of multiple modal options in the study area allows people and freight to move via the most efficient route and mode for each trip, whether by rail, truck, ship, plane, or some combination of modes. For this reason, FDOT should continue to work with CSX and other rail providers to ensure the long-term competitiveness of rail for moving trade to and from Florida. CSX's recent commitment to enhance its S line connecting Tampa Bay to Northeast Florida and the national rail network, as well as to create a national-scale logistics hub at Winter Haven, is significant investment in the region's future. FDOT should continue to work with CSX and other freight railroads to develop long-term rail investment strategies, including plans for enhanced access to seaports, intermodal logistics centers, and major shippers and receivers in the region.

At the same time, FDOT should continue to work with rail providers and regional and local partners to advance opportunities to enhance intercity passenger rail service between Tampa, Orlando, and Jacksonville, as well as to identify long-term strategies for extending intercity or commuter rail to other cities in this study area.

4. **Conduct an Evaluation study for developing a parallel multimodal corridor between the Suncoast and the northern portion of I-75.**

I-75 is the only limited access north-south corridor that extends the full distance from Tampa Bay to the Georgia state line. The lack of options forces traffic to I-75 and puts the Tampa Bay and North Central Florida regions at risk from disruptions due to crashes, special events, or weather emergencies.

The planned extension of the Suncoast Parkway from its current terminus in Hernando County to Citrus County would provide additional connectivity to the fast growing Suncoast region. FDOT

should continue planning and development activities for this extension, which has been on hold since the economic downturn began.

FDOT also should explore the feasibility of improving existing east-west highways or extending Florida's Turnpike to provide additional east-west connectivity between the Suncoast counties and I-75. A northern extension of Florida's Turnpike from its current terminus in Sumter County into Levy County has been proposed for the past few decades. Now labeled the Nature's Coast Parkway, this facility could connect with Suncoast II and help improve overall connectivity in the southern portion of the study area.

FDOT also should explore extensions of the Suncoast Parkway or the Turnpike, as well as additional alternatives, to provide longer distance alternatives to I-75. An extension of the Suncoast Parkway beyond Phase II to connect back into I-75 near Ocala, Gainesville, or Lake City could provide a limited access alternative for trips between Tampa Bay, these communities, and points north. This concept could provide significant relief to I-75 while also improving connectivity to growing urbanized areas and creating growth opportunities in the rural areas. There are multiple alternatives for addressing this need, including upgrades to existing highways as well as development of new multimodal corridors.

FDOT should move this segment of the study area forward into the Evaluation stage of the Future Corridors planning process. An Evaluation study would provide a structured approach for convening partners to accomplish the following:

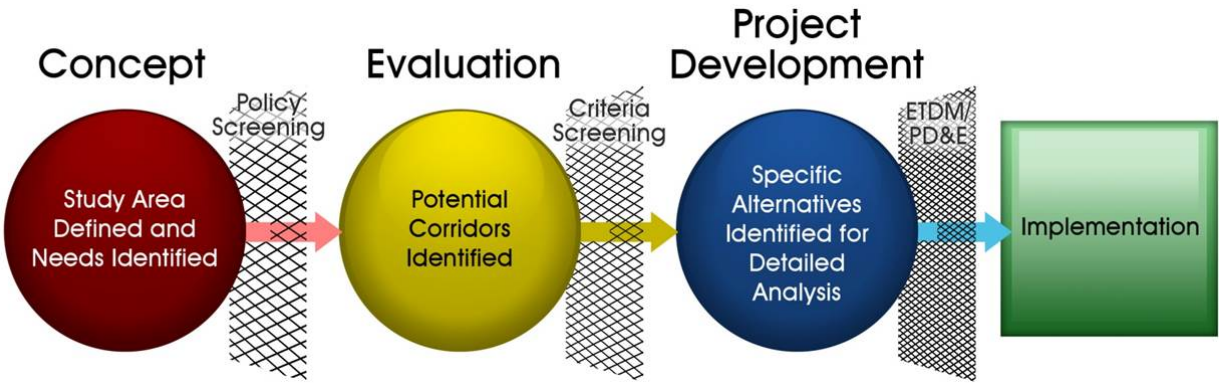
- Identify likely future land use and economic development patterns in the pilot area;
- Identify future mobility and connectivity needs in light of these patterns;
- Evaluate and build consensus around alternative strategies for addressing the mobility and connectivity needs;
- Develop model processes for coordinating future corridor planning with conservation plans, economic development plans, local government comprehensive plans, MPO long-range transportation plans, expressway authority master plans, and others; and
- Test potential public/private partnerships with expressway authorities, railroads, public and private landowners, and utilities; develop sample agreements.

5. Conduct initial analyses to better document mobility and connectivity needs in the remaining portions of the study area.

In addition, FDOT should begin initial technical work to document mobility and connectivity needs in the eastern portion of the study area. This task should include a synthesis of adopted and developing regional visions and plans, such as the build out of the Cecil Commerce Center and other growth targeted to the southwest of Jacksonville, to understand connectivity needs between Ocala/Gainesville and Jacksonville. FDOT also should collect information on current and future freight flows along highways such as U.S. 301, as well as updating information on capacity and safety needs on the existing highway system. Potential connectivity solutions should be addressed not only in terms of how well they meet regional needs, but also whether they could link with new or enhanced corridors to the east of I-75 to provide a complete corridor from Tampa Bay to Jacksonville.

Longer term, FDOT also should explore opportunities and needs in the far western portion of the study area, including the role that U.S. 19 plays connecting Northwest Florida to Tampa Bay and the Suncoast region. FDOT should monitor the plans of several large landowners in this area to understand potential build out plans and related mobility needs.

Future Corridor Planning Process

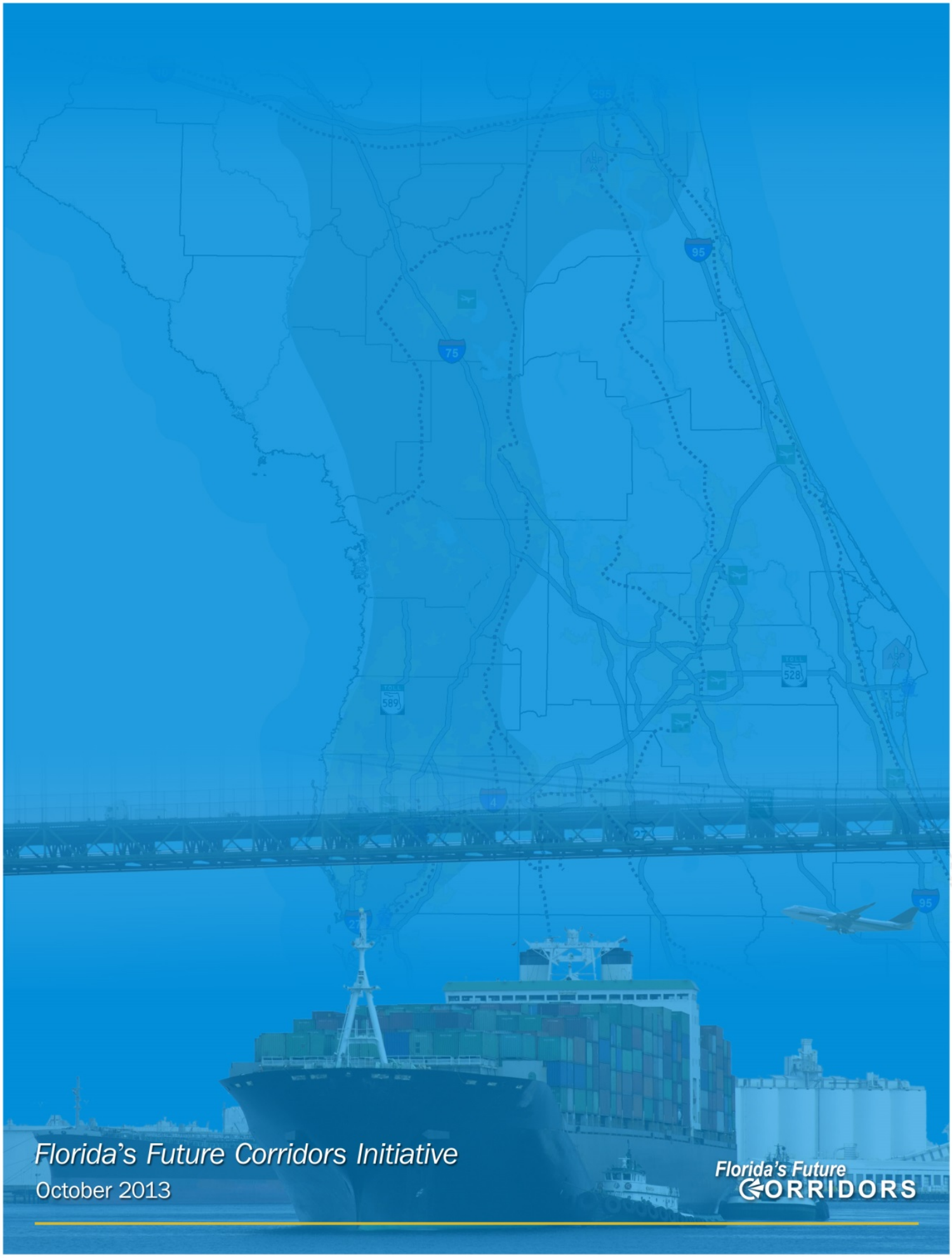


How Will Future Corridors Be Planned?

FDOT has developed a three-stage process for planning future statewide corridors (figure above):

- Prepare a high-level **Concept** report to identify anticipated statewide connectivity and mobility needs in the study area; determine whether a significant transportation corridor investment in the study area is consistent with statewide policies and available regional and community visions and plans for future growth; identify key community and environmental issues to be considered in future stages; and identify a framework for moving forward in this study area.
- Conduct an **Evaluation** study on one or more segments of the full study area to identify and assess potential alternative solutions to the anticipated mobility and connectivity needs; work with partners to build consensus around potential solutions; and develop an action plan for future work on viable corridors.
- Use FDOT's established **Project Development** processes to conduct more detailed analyses of specific alternative corridor improvements, continue coordination with partners, and advance projects into implementation.

For more information, please go to www.FLFutureCorridors.org or contact the Project Administrator Huiwei Shen at (850) 414-4800 or huiwei.shen@dot.state.fl.us.



Florida's Future Corridors Initiative

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