WETLANDS EVALUATION REPORT

FEC AMTRAK PASSENGER RAIL STUDY

From: Jacksonville (Duval County)
To: Miami (Miami-Dade County)

Federal Aid Project Number: FR-HSR-09-003

Florida Department of Transportation
District Four
3400 West Commercial Boulevard
Fort Lauderdale, Florida 33309

July 2010

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EXHIBITS

1.0 INTRODUCTION

The Florida Department of Transportation (FDOT), in conjunction with the Federal Railroad Administration (FRA), is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives to provide intercity passenger rail service along nearly 350 miles of Florida's east coast between Jacksonville in Duval County and Miami in Miami-Dade County.

The project proposes to restore passenger rail service, in the form of Amtrak, on the existing Florida East Coast (FEC) Railway freight rail line from Jacksonville to West Palm Beach, with service continuing south to Miami on the existing South Florida Rail Corridor (SFRC) Amtrak route. The proposed FEC Amtrak Passenger Rail project consists of the following infrastructure improvements in order to add two southbound and two northbound trips per day:

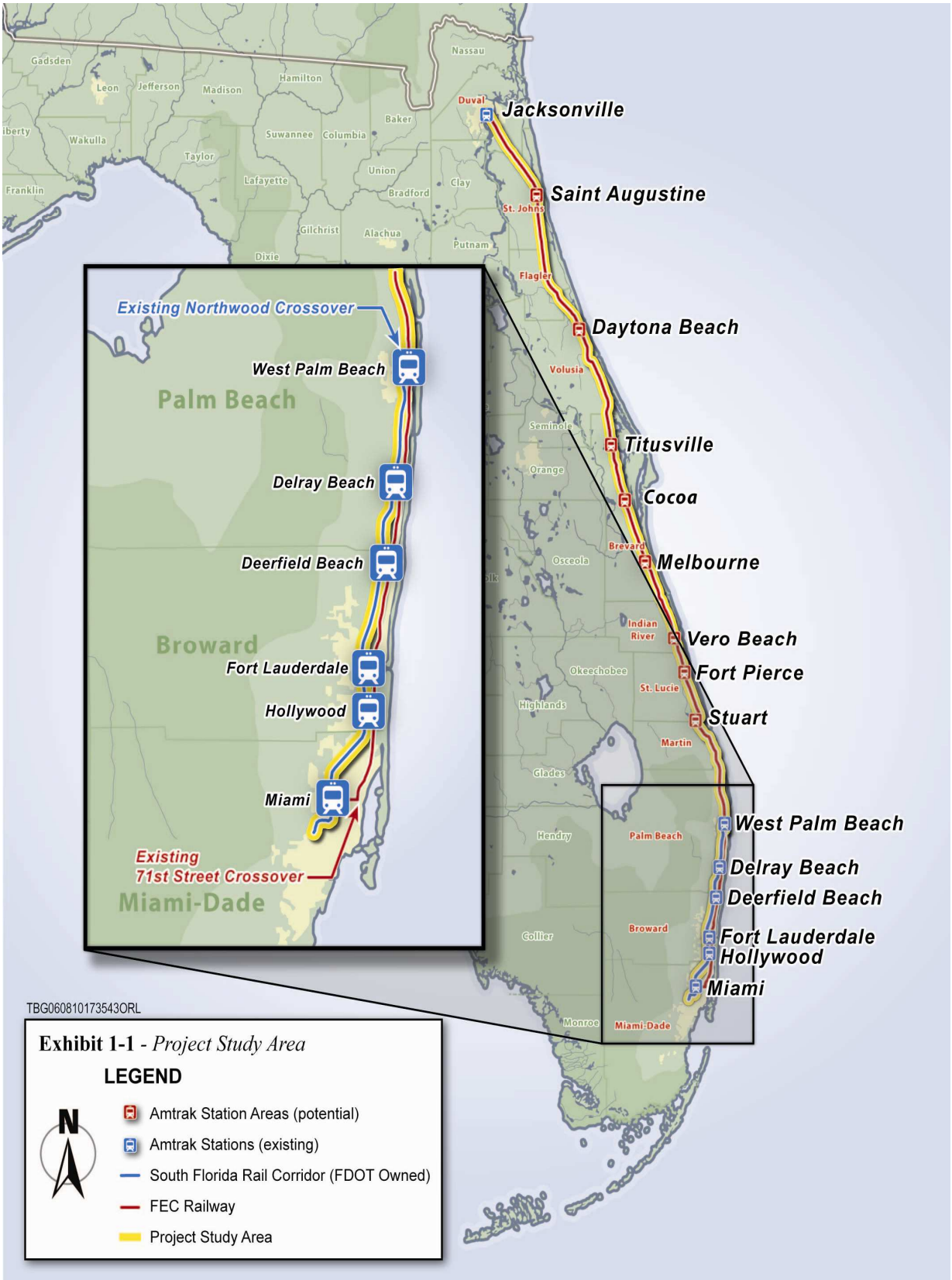
- improvements to the existing FEC rail line between Jacksonville and West Palm Beach
- eight new stations between St. Augustine and Stuart; and
- rebuilding the connector track (Northwood Crossover) to the existing SFRC.

As further described in Section 3.0, the need for the project stems from continued growth in long-distance travel to Florida's east coast cities; an incomplete, inconvenient, and overburdened transportation network; and depressed economic conditions.

Exhibit 1.1 shows the project study area and proposed station locations under evaluation. No infrastructure improvements are proposed south of the Northwood Crossover in West Palm Beach. Four related projects are proposed by others and are connected actions: planned Jacksonville Amtrak Station, the Miami Amtrak Station as part of the Miami Intermodal Center (under construction), completed Tri-Rail Double-Tracking project (on SFRC), and the South Florida East Coast Corridor Transportation Analysis (SFECCTA). The FEC Amtrak Passenger Rail project was also known as the Florida East Coast Amtrak Service project.

The U.S. Department of Agriculture Environmental Compliance Protection of Wetlands Executive Order 11990 was signed in 1977 in furtherance of the National Environmental Policy Act of 1969, as amended, to avoid adverse impacts from destruction or modifications of wetlands and to avoid new construction in wetlands wherever there is a practicable alternative.

The purpose of this report is to present the findings of a wetland evaluation for the proposed improvements and to meet the requirements of Section 404 of the Clean Water Act of 1972, Presidential Executive Order 11990 (May 23,1977), U.S. Department of Transportation (USDOT) Order 5660.1A (August 24, 1978), and Federal Highway Administration (FHWA) Technical Advisory T6640.8A (October 30, 1987). This report discusses the potential of the proposed improvements to impact wetlands and identifies potential mitigation to offset unavoidable impacts to wetlands.


Jacksonville
Saint Augustine
Daytona Beach
Titusville
Cocoa
Melbourne
Vero Beach
Fort Pierce
Stuart
West Palm Beach
Delray Beach
Deerfield Beach
Fort Lauderdale
Hollywood
Miami
Existing Northwood Crossover
West Palm Beach
Palm Beach
Delray Beach
Deerfield Beach
Broward
Fort Lauderdale
Hollywood
Miami
Existing
71st Street Crossover
Miami-Dade
TBG060810173543ORL
Exhibit 1-1 - Project Study Area
LEGEND
N
Amtrak Station Areas (potential)
Amtrak Stations (existing)
South Florida Rail Corridor (FDOT Owned)
FEC Railway
Project Study Area

2.0 PROJECT DESCRIPTION

The proposed FEC Amtrak Passenger Rail project consists of providing intercity passenger rail service along nearly 350 miles of Florida's east coast between Jacksonville and Miami on the existing FEC Railway freight rail line and the existing SFRC Amtrak route. Major infrastructure includes improvements to existing FEC railway between Jacksonville to West Palm Beach, eight new stations, and rebuilding the connector track (Northwood Crossover) to the existing SFRC. The proposed passenger service would be provided by expanding Amtrak's long distance passenger rail service from Jacksonville to West Palm Beach, with connecting service to Miami via the existing Amtrak route on the SFRC.

2.1 Project Study Area

The project study area primarily consists of the existing FEC Railway corridor from Jacksonville to the Northwood Crossover in West Palm Beach (approximately 280 miles), and the SFRC from the Northwood Crossover in West Palm Beach to Miami (approximately 65 miles). The project corridor traverses eleven counties along Florida's east coast: Duval, St. Johns, Flagler, Volusia, Brevard, Indian River, St. Lucie, Martin, Palm Beach, Broward and Miami-Dade as shown in Exhibit 1.1. The project study area also includes the Northwood Crossover (generally parallel to 27TH Street) from the FEC to the SFRC and the station alternatives in each of the eight cities proposed to include new stations.

The northern terminus will be the existing Jacksonville Amtrak station, with an ultimate terminus at the planned Jacksonville Regional Transportation Center (JRTC). The southern terminus will be at the Miami Central Station (MCS), which is part of the Miami Intermodal Center (MIC) project at Miami International Airport (MIA), and is scheduled for completion by 2012. The environmental effects associated with relocating Amtrak passenger service to the MCS from the existing Miami Amtrak Station were documented in a Final Environmental Impact Statement, which resulted in a Record of Decision (May 1998) for the MIC proposed improvements. Any improvements and project effects associated with the proposed JRTC or relocating Amtrak passenger service from the existing Jacksonville Amtrak station will be studied under a separate environmental determination and are not included in the FEC Amtrak Passenger Rail study and proposed action.

For the purposes of the ESBA, impacts were evaluated for the 100-foot-wide FEC right-of-way from the existing Jacksonville Amtrak Station to the Northwood Crossover. At the proposed station locations, the study area encompasses a 500-foot radius surrounding each location alternative. As the existing Amtrak passenger service is provided on the SFRC between West Palm Beach and the existing Miami Amtrak station, no infrastructure improvements are required on the SFRC south of the Northwood Crossover to accommodate the proposed action.

2.2 Proposed Improvements

The following infrastructure improvements are proposed between Jacksonville and West Palm Beach in order to provide intercity passenger rail service, accommodate the passenger trains at speeds up to 90 mph and continue FEC Railway's freight service:

- Eight new stations between Jacksonville and Stuart - St. Augustine, Daytona Beach, Titusville, Cocoa, Melbourne, Vero Beach, Fort Pierce, and Stuart
- New platforms at each of the proposed stations (approximately 1000 ft. long)
- New track sidings (double tracking approximately 2,500 feet in length) at the new stations;
- Track signal control;
- Twenty-nine (29) miles of surface replacement track work on the existing FEC rail line (from Jacksonville to West Palm Beach) within existing curves. This will involve adding 6 inches of grade to the rail bed to accommodate the increased speed.
- Upgrades at existing highway and pedestrian crossings on the FEC Railway corridor to enhance safety;
- New railroad crossings at sidings only; and
- Crossover track improvements at the Northwood Crossover in Palm Beach County.
- The proposed platforms, sidings and proposed curve track replacement are primarily located within the existing FEC right-of-way. Minimal right-of-way is anticipated for the proposed stations.

2.3 Proposed Northwood Crossover

The Northwood crossover is an existing track connecting the FEC railway with the SFRC in the Northwood section of West Palm Beach. This is a short connector track to the FEC railway located approximately 2,100 feet east of the SFRC. The existing connector is oriented in a northwest/southeast direction between the two rail lines. In its current configuration, the existing connector track is not usable for intercity passenger rail traffic due to a missing connection in the northeast quadrant leading to and from the FEC railway and points north. It is proposed that the Northwood crossover be replaced and reconstructed immediately south of its current alignment (generally parallel to, and north of, 25th Street) to accommodate train traffic to and from points north on the FEC railway (Exhibit 2-1). Minor right-of-way acquisition would be required at the proposed crossover in West Palm Beach.

2.4 Proposed Stations

Eight new passenger stations are proposed to be constructed between Jacksonville and Stuart as part of the project, at locations in:

- St. Augustine
- Daytona Beach
- Titusville
- Cocoa
- Melbourne
- Vero Beach
- Fort Pierce
- Stuart

The location of new stations along the FEC Railway was developed by the FDOT in consultation with local government agencies, regional planning councils, metropolitan planning organizations, Amtrak, and the FEC Railway. Interagency meetings were conducted with local officials of these cities. In addition, public workshops and station design sessions were held in each of the eight cities with proposed stations. Proposed alternative stations locations are shown in Exhibits 2-2 to 2-9.

EXHIBIT 2-1
Northwood Crossover

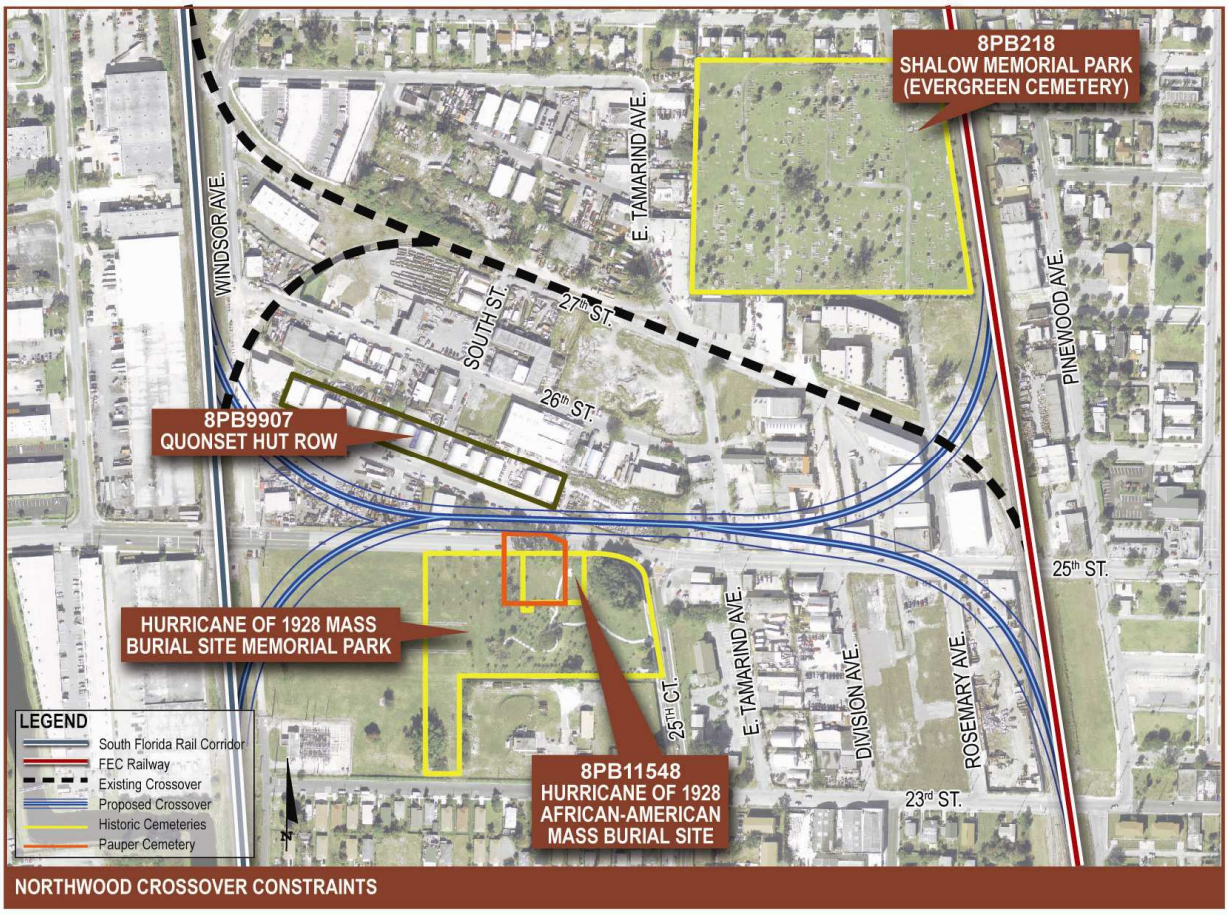
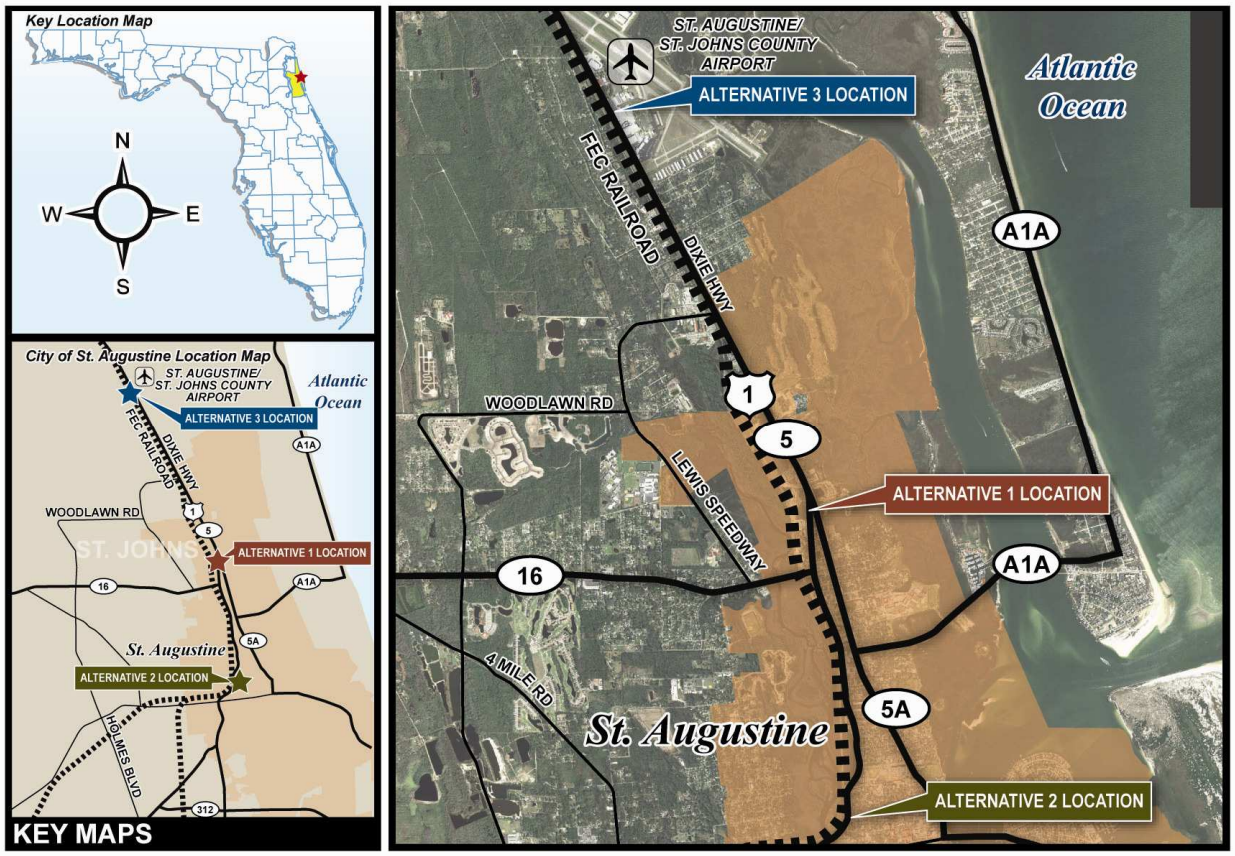


EXHIBIT 2-2
St. Augustine Project Location Map

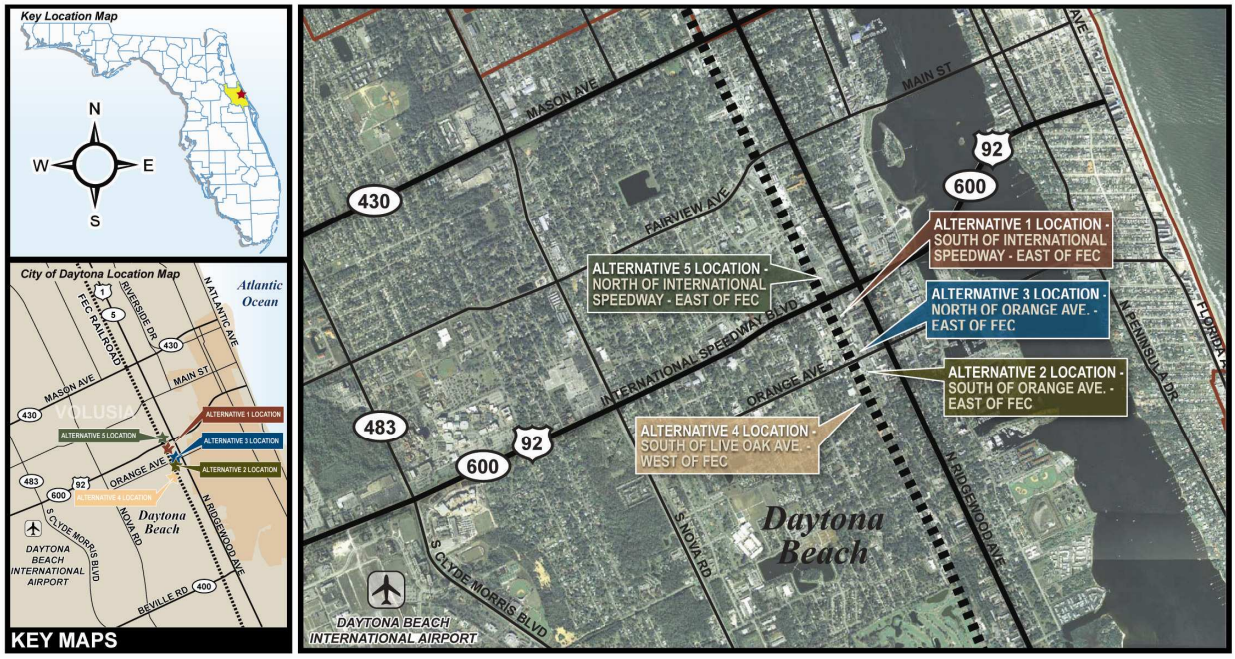


- **Alternative 1 (U.S. 1 at San Marco Avenue)** is located north of historic downtown St. Augustine east of the FEC Railway and west of U.S. 1 near the intersection of U.S. 1/San Marco Avenue. This site was the location of a former FEC passenger rail station (circa 1960) and turnaround for the FEC Railway. The property, maintenance yard and existing on-site buildings are owned by the FEC Railway.

- **Alternative 2 (U.S. 1 at Carrera Street**) is located within historic downtown St. Augustine west of U.S. 1 across from Lemon Street and Carrera Street. This site is an open field along the east bank of the San Sebastian River.

- **Alternative 3 (St. Augustine/St. Johns County Airport)** is located north of St. Augustine to the west of U.S. 1 across from the St. Augustine/St. Johns County Airport. This site is a vacant wooded area owned by the airport authority.

EXHIBIT 2-3
Daytona Beach Project Location Map



- **Alternative 1 (South of International Speedway Boulevard)** is located adjacent to the east side of the FEC Railway between International Speedway Boulevard and Magnolia Avenue. This site is developed and situated near several residential, commercial and industrial areas.

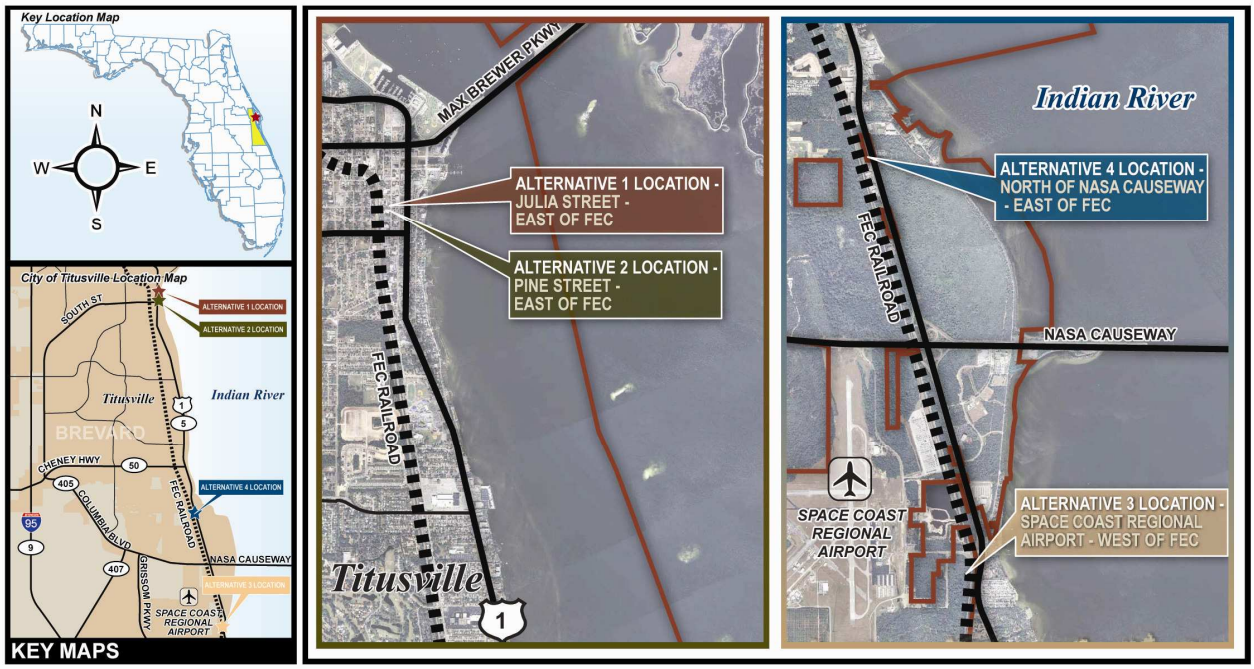
- **Alternative 2 (South of Orange Avenue)** is located adjacent to the east side of the FEC Railway between Orange Avenue and Live Oak Avenue. This site is developed and situated near several residential, commercial and industrial areas.

- **Alternative 3 (North of Orange Avenue)** is located adjacent to the east side of the FEC Railway and north of Orange Avenue. This site is developed and situated near several residential, commercial and industrial areas.

- **Alternative 4 (South of Live Oak Avenue)** is located adjacent to the west side of the FEC Railway between Live Oak Avenue and Loomis Avenue. This site is developed and adjacent to Live Oak Park (a public recreational facility). Several residential, commercial and industrial areas are located near the site.

- **Alternative 5 (North of International Speedway Boulevard)** is located adjacent to the east side of the FEC Railway north of International Speedway Boulevard. This site is developed and situated near several residential, commercial and industrial areas. A major transmission facility hub is located directly adjacent to the site.

EXHIBIT 2-4
Titusville Project Location Map



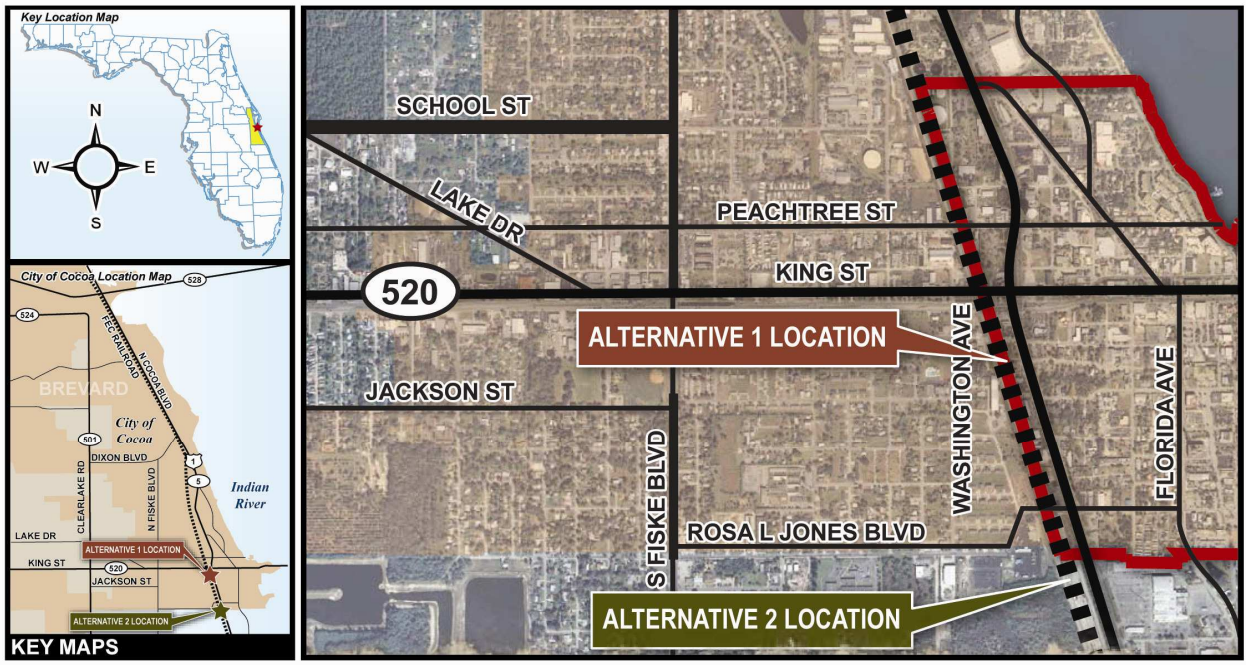
- **Alternative 1 (South of Julia Street)** is located in downtown Titusville to the east of the FEC Railway in the vicinity of Julia Street. This site is owned by FEC Railway and occupied by a FEC Railway storage and maintenance yard.

- **Alternative 2 (North of Pine Street)** is located in downtown Titusville to the east of the FEC Railway in the vicinity of Pine Street. This site was the former location of the passenger rail station in Titusville.

- **Alternative 3 (Space Coast Regional Airport)** is located west of the FEC Railway and U.S.1 near the Space Coast Regional Airport in Brevard County. This site is an undeveloped wooded property and the surrounding area is mostly undeveloped.

- **Alternative 4 (South of S.R. 50)** is located in Brevard County west of U.S. 1, east of the FEC Railway, north of the NASA Causeway and approximately 1 mile south of S.R. 50.

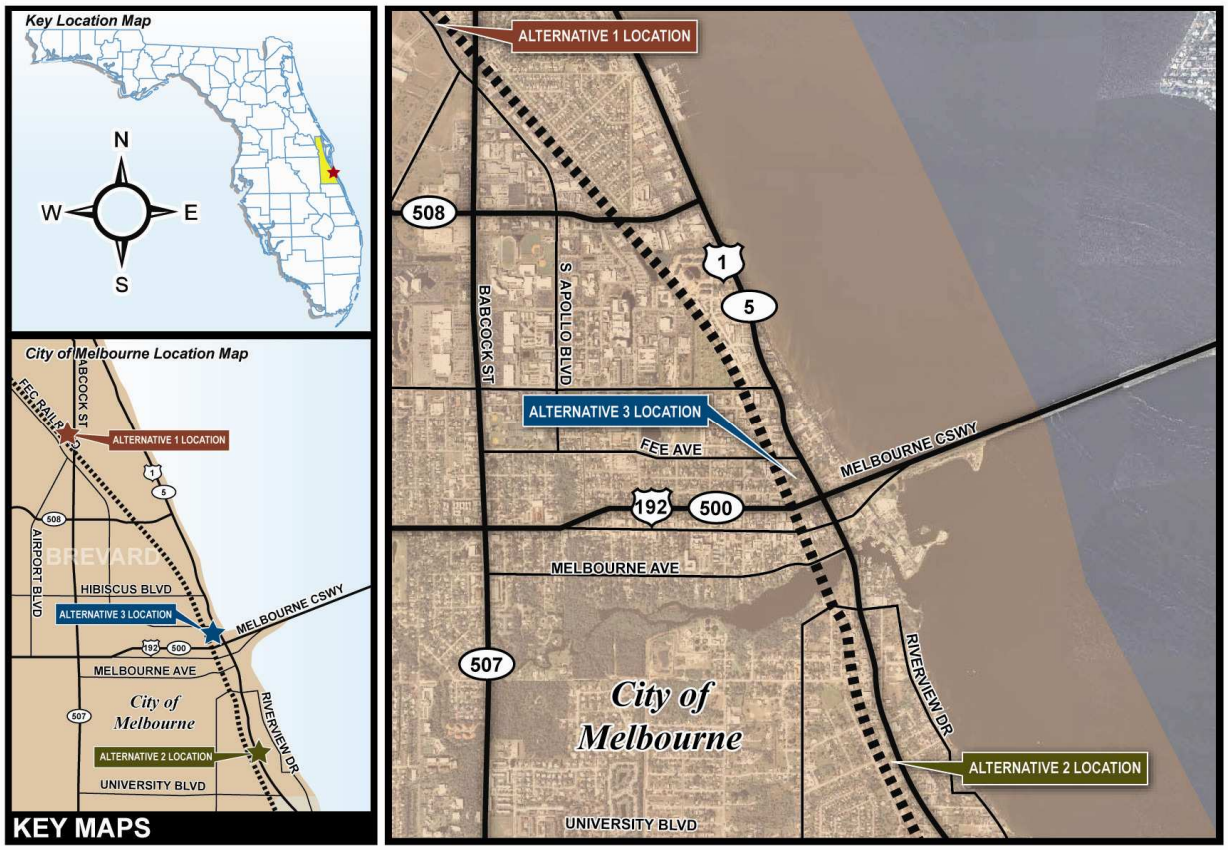
EXHIBIT 2-5
Cocoa Site Location Map



- **Alternative 1 (South of Stone Street)** is located in downtown Cocoa east of the FEC Railway, west of U.S. 1 and south of S.R. 520. The station site is located at the western terminus of Lemon Street adjacent to the FEC Railway. Alternative 1 involves parcels south of Stone Street that are vacant and undeveloped. There are several residential and commercial areas near the site.

- **Alternative 2 (South of Rosa L. Jones Boulevard)** is located south of downtown Cocoa, west of U.S. 1 and south of Rosa L. Jones Boulevard. This site is owned by FEC Railway and occupied by an FEC Railway storage and maintenance yard. One of the existing on-site buildings is the location of the former Cocoa passenger rail station.

EXHIBIT 2-6
Melbourne Site Location Map

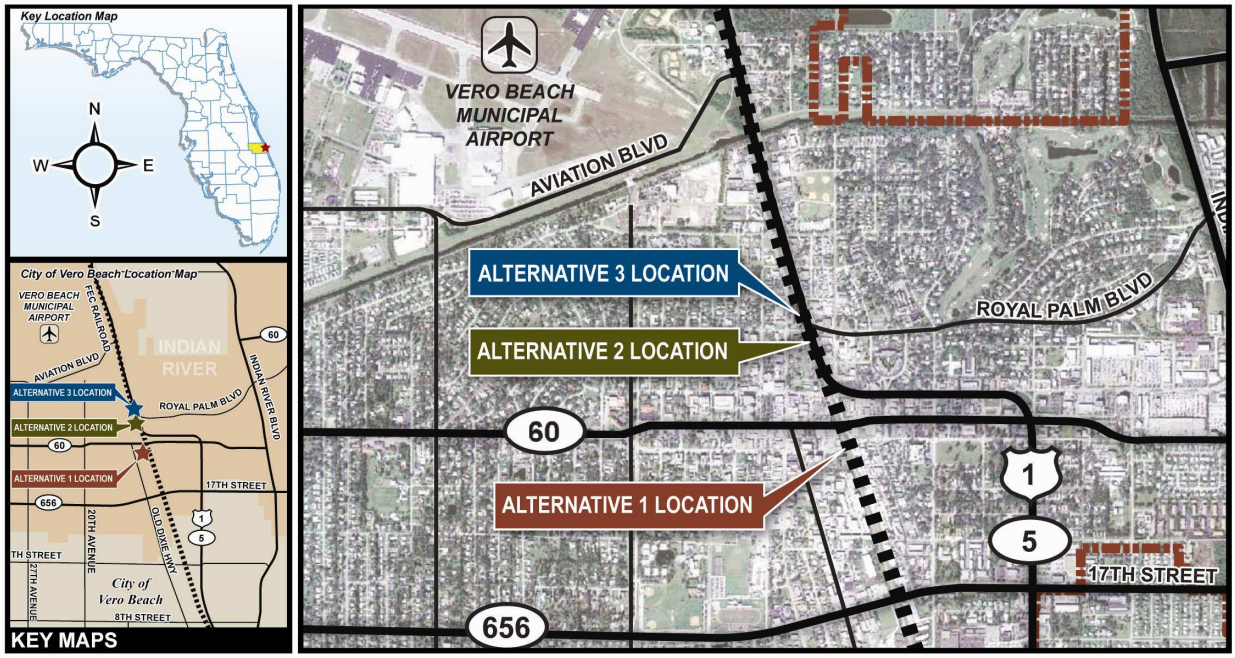


- **Alternative 1 (Melbourne International Airport)** is located north of the City of Melbourne, east of the Melbourne International Airport, and west of the FEC Railway. This site is mostly undeveloped vacant property located between South Apollo Boulevard and the FEC Railway. The site is situated near several residential neighborhoods.

- **Alternative 2 (South of U.S. 192)** is located east of the FEC Railway, west of U.S. 1, and south of U.S. 192. The station site is located just south of Jernigan Avenue in downtown Melbourne. This site is developed and situated near several residential, commercial and industrial areas.

- **Alternative 3 (North of U.S. 192)** is located east of the FEC Railway, west of U.S. 1, and north of U.S. 192/Melbourne Causeway. The station site is located just north of Palmetto Avenue in downtown Melbourne. This site is a vacant property owned by FEC Railway and situated near several residential and commercial/retail areas.

EXHIBIT 2-7
Vero Beach Project Location Map



- **Alternative 1 (South of 19th Place)** is located in downtown Vero Beach west of the FEC Railway and south of 19th Place. This site is occupied by a refurbished historical diesel plant building and situated near industrial land uses.

- **Alternative 2 (North of 21st Street)** is located in downtown Vero Beach west of the FEC Railway and north of 21st Street. This site is occupied by the Vero Beach Community Center which provides onsite public recreational facilities. The surrounding land uses are primarily commercial/retail and residential.

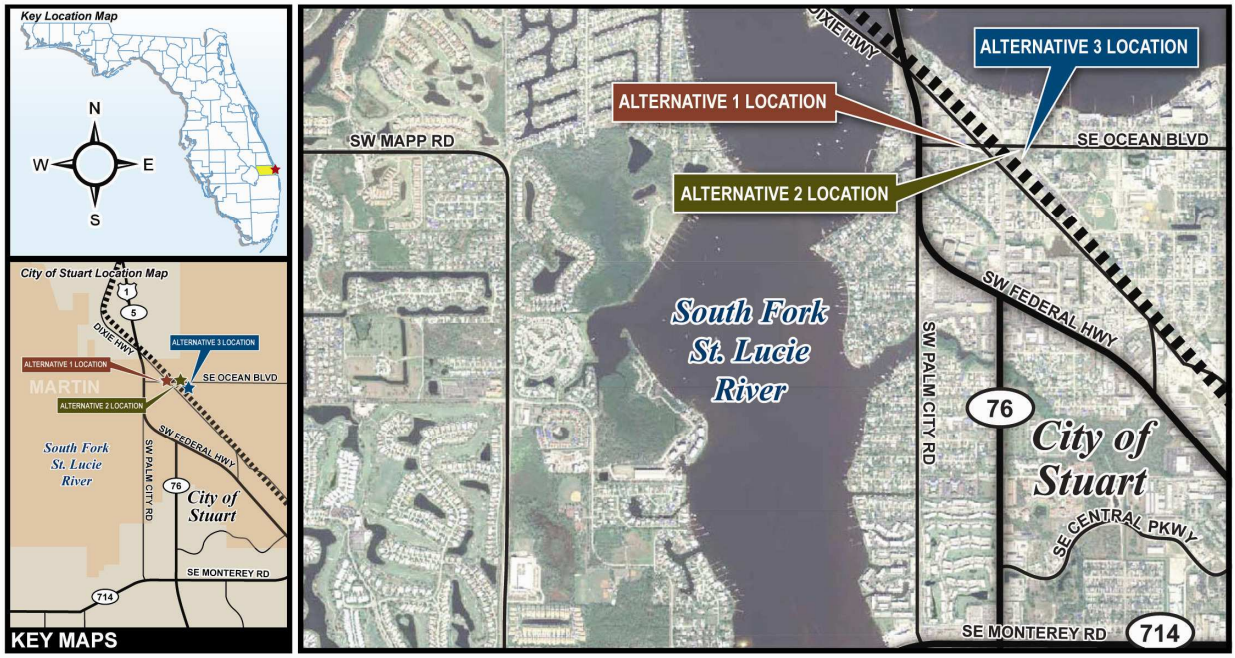
- **Alternative 3 (North of 23rd Street)** is located in downtown Vero Beach west of the FEC Railway and north of 23rd Street approximately 1 block north of Alternative 2. This site is occupied by the Indian River County Historical Society Museum. The surrounding land uses are primarily commercial/retail and residential.

EXHIBIT 2-8
Fort Pierce Project Location Map

- **Alternative 1 (Orange Avenue – East of FEC)** is located in downtown Fort Pierce south of Orange Avenue, north of Citrus Avenue, and east of both U.S. 1 and the FEC Railway. The proposed station site is located within a parking area of a retail strip mall. The surrounding land uses are primarily commercial/retail.

- **Alternative 2 (Orange Avenue – West of FEC)** is located in downtown Fort Pierce south of Orange Avenue, north of Citrus Avenue, east of U.S. 1, and west of the FEC Railway. The proposed station site is located on an industrial property. This industrial site is the location of Rinker Industries which is serviced by FEC Railway via an onsite railroad spur to accommodate existing freight operations. The surrounding land uses are primarily commercial/retail and industrial

EXHIBIT 2-9
Stuart Project Location Map



- **Alternative 1 (Kiwanis Park)** is located in downtown Stuart adjacent and west of the FEC Railway just north of the intersection of SE Dixie Highway and SE 5th Street. The Kiwanis Park (a public playground/recreational facility) is located just west of this potential station location.

- **Alternative 2 (East Coast Lumber)** is located in downtown Stuart east of the FEC Railway, south of Ocean Boulevard, and west of SE Flagler Avenue. The existing land use is commercial/industrial and the site is occupied by East Coast Lumber.

- **Alternative 3 (Stypmann Boulevard)** is located in downtown Stuart east of the FEC Railway, south of Ocean Boulevard, and just south of the intersection of Stypmann Boulevard/SE Flagler Avenue. The proposed station operations would be located within a portion of the proposed Martin County Transit Depot. The transit center was awarded funding through ARRA and is under design with anticipated construction by 2011.

There are two types of stations proposed: small and medium. The small stations would be unstaffed and consist of a platform, canopy, signage, lighting, and a semi-enclosed shelter. Medium stations are planned for St. Augustine and Cocoa. Additionally, Daytona Beach is planned to be a seasonally-staffed station and will require a medium station building.

Paved parking may be provided at the proposed stations. The number of parking spaces would vary by location. As the stations are in highly-urbanized areas, limited or no parking facilities may

be provided at some locations. Patrons accessing these stations would be anticipated to either walk and/or use adjacent parking facilities to access the station. The stations have been located to facilitate potential future transit-oriented development and intermodal connections. The stations and parking areas would be compliant with the Americans with Disabilities Act.

New passing track (rail sidings 2,500 feet in length) would be added at stations to move Amtrak trains off the mainline tracks while serving the proposed stations. Improvements to the Jacksonville and Miami Amtrak stations have been proposed by others. Trains would use the existing Hialeah Yard for maintenance.

2.5 Description of the Intercity Corridor Service

As of June 2010, the State of Florida is served by two Amtrak auto trains which provide service between Lorton, VA and Sanford, FL, and four Amtrak intercity passenger service trains which provide service between New York and Miami: Numbers 91 and 92 – the Silver Star, and 97 and 98 – the Silver Meteor.

The proposed service would initially consist of two southbound and two northbound trains per day, with a total trip time between Jacksonville and Miami of less than seven hours. A phased approach to developing intercity passenger rail service is proposed. The first phase would provide the infrastructure, stations, and equipment (fleet) to extend Amtrak service from Jacksonville to Miami by 2012. Ensuing phases would expand passenger rail service along the corridor, such as relocating Amtrak's northern terminus to the downtown JRTC, adding corridor rail service south from the JRTC to St. Augustine, and extending existing Tri-Rail Commuter Rail service north from West Palm Beach to Jupiter.

Additional passenger trains may be required to support the proposed service both to accommodate growth anticipated from expansion of service to new cities, and to provide the necessary different types of cars. The Silver Star and Silver Meteor typically consist of a combination of baggage, dining, sleeping and coach cars. Currently offered First Class and Coach Class services would be operated on both the inland and coastal routes, consistent with Amtrak's current service quality standards for long distance trains. Train amenities include full dining service, first class sleeping accommodations, and checked baggage service. Station amenities would vary by location, but would be consistent with Amtrak's adopted station standards. Fare structure for the new service has not been determined, but would be consistent with the existing Amtrak fares in Florida.

The existing FEC railway track, signals, and grade crossings would be upgraded to accommodate passenger train speeds up to 90 mph. Other rail services to benefit from this program include the freight services of the FEC railway and the passenger rail services of Tri-Rail. The project increases capacity along the corridor for freight service and the proposed extension of Tri-Rail to Jupiter.

Phase 2 would add additional trains and expand passenger rail corridor service to include Jacksonville to Cocoa routes. The equipment and operation costs for the future phases are not included in the proposed action; however, the infrastructure improvements included in the proposed improvements will accommodate the Phase 2 improvements.

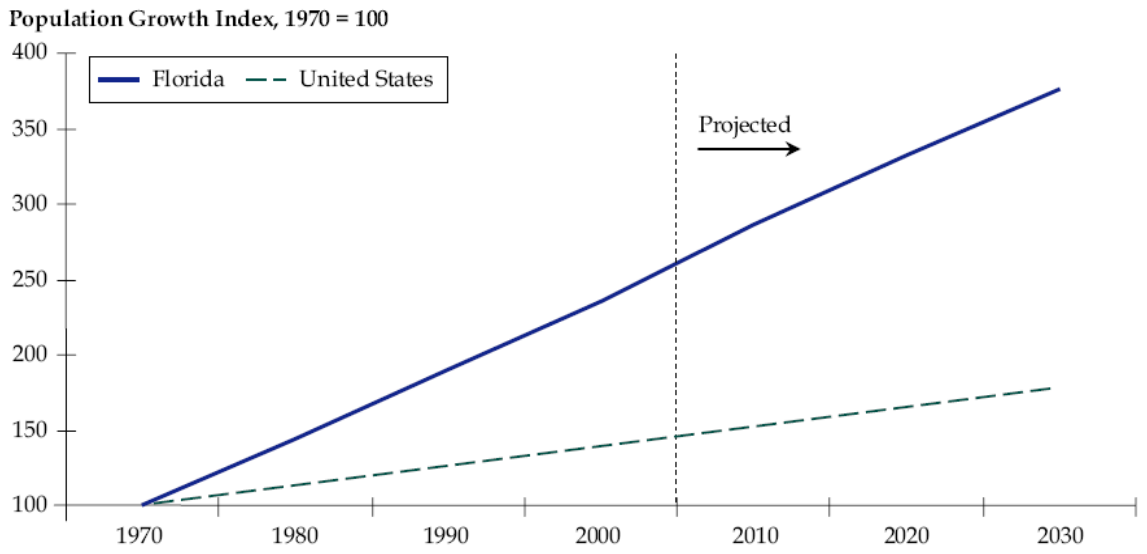
3.0 PROJECT NEED

The need for the project stems from continued growth in long-distance travel to Florida's east coast cities; an incomplete, inconvenient, and overburdened transportation network; and depressed economic conditions. The following sections describe the need for the project in more detail.

3.1 Improve Transportation Connectivity

The need for the expanded Amtrak service is directly related to the expected growth in population and intercity travel demand to Florida's eastern communities. Florida's population is expected to increase at a rate more than double the national average for the foreseeable future (refer to Exhibit 3-1) (FDOT, 2005).

EXHIBIT 3-1
Projected Population Growth, Florida vs. U.S.



Source: U.S. Census Bureau and Florida Office of Economic and Demographic Research.

Source: 2006 Florida Freight & Passenger Rail Plan (FDOT, February 2007)

The University of Florida estimates that 25 million people will live in the state by 2035, compared to the current population of approximately 17 million. Population in Duval County is projected to increase from 778,000 to 1.2 million residents by 2035. Florida's current transportation system has not kept pace with the tremendous increase in population, economic activity, and tourism in the state. The interstate highway system, regional commercial airports and conventional passenger rail system serving the intercity travel market are operating at or near capacity and will require large public investments for maintenance and expansion to meet existing demand and future growth.

Moreover, the ability to expand many major highways and strategic airports is uncertain as needed expansions may be impractical or may be constrained by physical, economic and/or other factors.

The influx of new residents is so significant, the state, despite careful planning and strategic investments in infrastructure, simply cannot adequately support transportation demand. This is especially true in its urban areas. In Florida and other high-growth states, highways cannot be constructed fast enough and airports currently operate at or above capacity. A growing travel market is associated with baby-boomers, retirees and new immigrants who are selecting Florida's east coast communities for second homes. St. Augustine, Vero Beach, Melbourne, Fort Pierce and Stuart are increasingly being selected for second homes for both northerners, who enjoy Florida's mild winter weather, and Floridians, who take respite from the urban stresses of Southeast Florida and Jacksonville.

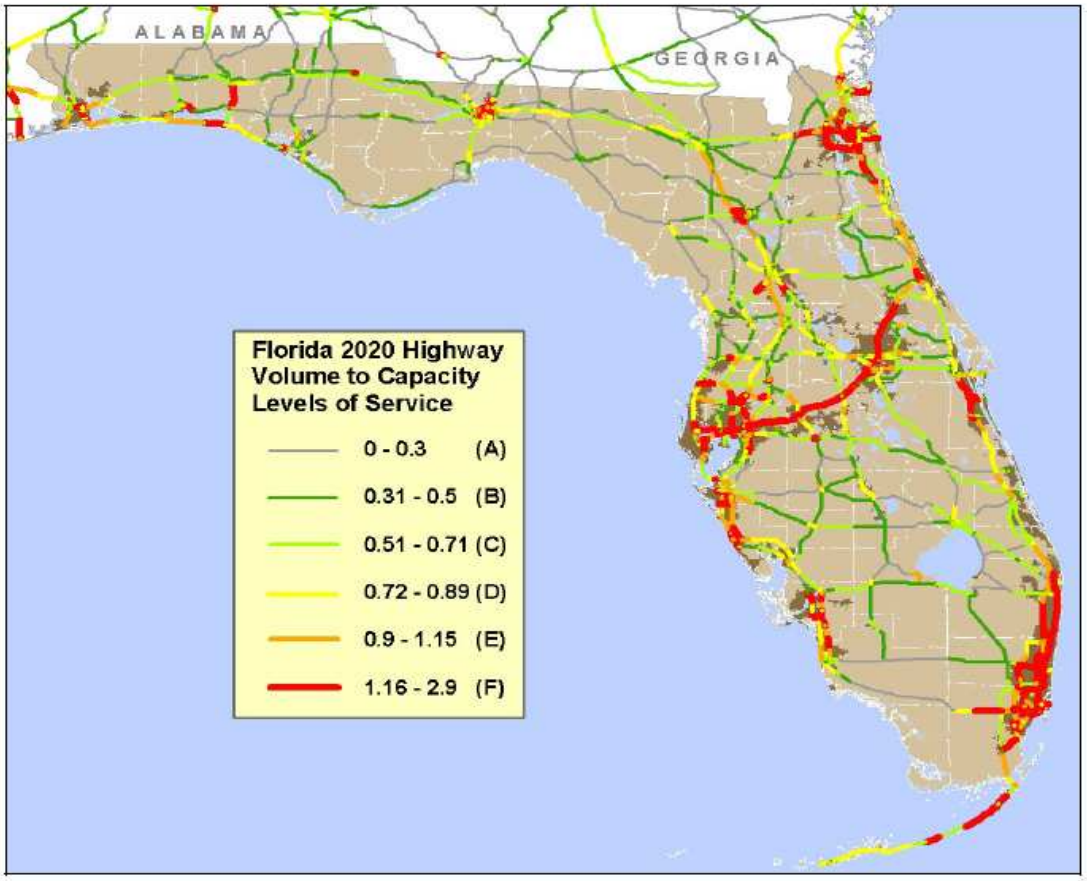
City-to-city travel is on the rise. One key city pair for intercity travel is Jacksonville and Miami. The stretch between this city pair is densely populated with several major population centers including St. Augustine, Daytona Beach, Titusville, Cocoa, Melbourne, Vero Beach, Fort Pierce and Stuart. There is no passenger rail service along the FEC railway to serve intercity travel between these communities. Instead they depend mainly upon roadway connections. The presence of several airports allows for limited connections for passengers via air. The FEC railway also connects these communities, however, only freight traffic moves on the corridor at this time. Substantial additional capacity is needed to assist seaports in meeting expected growth in freight and cruise activity. For rail and urban transit systems to serve as viable options for the movement of people and goods within and between urban areas, investments in additional passenger and freight rail capacity will also be needed.

The proposed action would connect to cruise ports, regional transit systems, and regional airports along the east coast of Florida. Passengers from the Northeast, Mid-Atlantic, and Southeast would not be reliant solely on the automobile to visit Florida’s east coast attractions, vacations homes, and business opportunities. Local shuttle services would provide connections for Amtrak passengers to tourist destinations, hotels, and other amenities. In addition, the proposed action would provide a mobility option for travel to Florida’s east coast communities for Florida residents. Use of these additional connections also plays a key role in improving transportation mobility. The FEC rail corridor between Miami and Jacksonville has the potential to serve over 8.6 million people by 2035.

3.2 Enhance Transportation Mobility

As the population grows, traffic congestion in Florida worsens, especially in the state’s booming urban areas. Many urban and inter-regional highway corridors are heavily congested during peak periods or are expected to be by 2020, even with planned capacity improvements (Exhibits 3-2). Florida's historic eastern cities are accessed by sparse commercial air service to one regional airport, limited intercity bus service, rental cars from distant major airports, and congested Interstate 95 (I-95). Exhibit 3-2 summarizes specific mobility issues facing the project corridor.

EXHIBIT 3-2
Florida Highway Congestion, 2020 Level of Service Estimates



Source: 2004 Passenger Rail Component of the Florida Rail Plan (June 2005)

With several large-scale developments recently completed, others under construction, and many more anticipated in both the short- and long-range time frames, it is evident that this overcapacity condition will become an even greater problem. The current and projected future roadway congestion will continue to result in deteriorating air quality, reduced reliability, and increased travel times on Florida highways. Out-of-town visitors are dependent on car rentals for intercity mobility. The dependence on automobile mobility and fuel cost fluctuations is negatively affecting the economy, quality of life, and air quality in Florida's metropolitan areas as the transportation system becomes less reliable as travel demand increases.

EXHIBIT 3-3
Mobility Issues

Travel Mode	Mobility Deficiency
Air	• Daytona Beach is the only airport with commercial air service, coming from either Charlotte or Atlanta. In-state air travelers must connect through these two cities to access project area cities. • Major airports at Jacksonville, Orlando and West Palm Beach have much higher commercial service, but rental cars and the interstate system must be used to access the project study area.
Greyhound	• Greyhound provides limited service to the project area. The cities of Stuart, Fort Pierce and Cocoa are not served by Greyhound. • No other communities in the project area are served by Greyhound.
Bus and Mass Transit	• St. Augustine, Titusville and Melbourne are served by two buses northbound and four buses southbound per day. • Daytona Beach has the highest service level with five buses per day in each direction.
Highway	• The current capacity and connectivity of Florida's transportation system is significantly insufficient to meet existing and especially future demand and mobility. • I-95 in Palm Beach is experiencing annual average daily traffic volumes from approximately 169,200 vehicles per day to almost 202,600 vehicles per day and is expected to experience daily traffic volumes of 290,000-plus vehicles per day by the year 2033.
Rail	• The existing intercity passenger service is limited to two round trip trains per day with limited stops serving an estimated population of 6 million people along the east coast of Florida.

Transportation mobility is defined as the ease with which people travel. Measures of mobility include travel time and traffic congestion, or level of service—measures linked to the efficiency of transportation movements. The proposed action would provide a mobility option to the congested I-95 corridor and the congested airways serving Orlando and Southeast Florida. More than 100 local governments, agencies, and other groups have adopted resolutions and letters of support requesting passenger service be established on this FEC railway along Florida's east coast. Passenger rail would steadily become more important as an alternative to the congestion on Florida's highways, and would increase the mobility of tourists, business travelers, and citizens, especially older Floridians (FDOT, 2009).

3.3 Stimulate Economic Development

Florida's economy has been battered by falling home prices, a spike in the number of foreclosures statewide, the collapse of national financial markets and the subsequent credit freeze, influx of immigrants from disaster areas including Haiti and Chile, retirement of the Space Shuttle program

and the effects of a global recession. Florida's unemployment rate continues its upward trend, with the seasonally-adjusted rate for December 2009 hitting 11.8 percent representing the highest level in 35 years. The state's jobless rate is up 4.2 percentage points from last year at this time and almost 2 points higher than the national average of 10 percent. The official unemployment rate does not include individuals who have stopped looking for work, those who have been forced into part-time work, or those who have accepted jobs far below their skill levels. When those people are added, the percentage of workers who are unemployed or underemployed exceeds 19.5 percent. Since April 2007, Florida has lost over 720,000 jobs across (virtually) all industries. The construction industry has taken the hardest hit. In addition, 23,000 project area jobs are expected to be lost due to the retirement of the Space Shuttle program at Cape Canaveral.

This proposed project will stimulate job growth in the construction and transportation sectors. In addition to short-term construction jobs, this project will create long-term employment associated with on-going attempts to economically revitalize the historical town centers in the project corridor.

3.4 Transportation Plan Consistency

In accordance with the Policy Element of the *2009 Florida Rail System Plan*, investments in Florida's rail system should support and spur desired economic growth. The plan establishes state policy directing investment in rail system capacity improvements to enhance interstate and intrastate movement of people and goods when public benefit can be demonstrated (FDOT, 2009). The proposed action is consistent with the Phase 1 implementation of Florida's Rail System Plan to provide intercity rail services to Florida's east coast communities. These communities are aggressively restoring their historic downtowns and have assumed Amtrak depots in their core areas to stimulate development of compact urban patterns.

The purpose of the project is consistent with recent federal transportation policy, most notably:

- the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005 (Public Law 109-59),
- the Transportation Equity Act for the 21st Century (TEA-21) of 1998 (Public Law 105-178), and the
- Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 (Public Law 102-240).

These acts encourage public transportation investment that increases national productivity and domestic and international competition while improving safety and social and environmental conditions. Specifically, these policies encourage investments that:

- link all major forms of transportation
- improve public transportation systems and services
- provide better access to seaports and airports
- enhance efficient operation of transportation facilities and service

4.0 WETLANDS IDENTIFICATION AND IMPACT ASSESSMENT

The project corridor was evaluated for wetlands following the methods established in the Federal Highway Administration (FHWA) Technical Advisory T6640.8A. Potential wetland areas are identified and delineated through an evaluation of the vegetation present at the site, hydric soil indicators, and hydrological indicators. The methods used to determine the impacts of the proposed project on wetlands include the following:

- Wetlands in the project area were identified using the U.S. Fish and Wildlife Service (FWS) National Wetland Inventory (NWI) mapping. Detailed field investigations were not performed along the entire FEC mainline corridor.

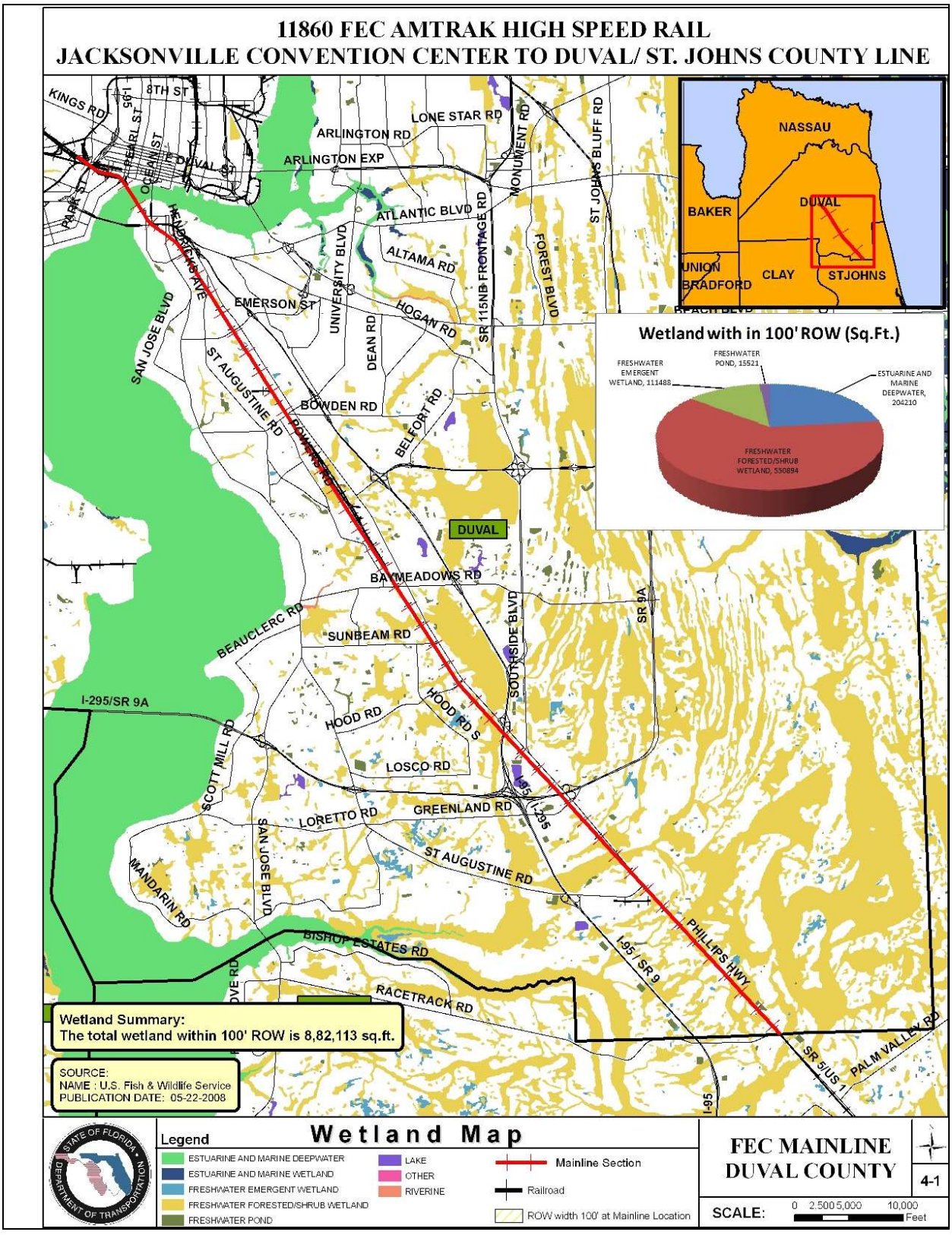
- At proposed station locations, wetlands were delineated according to the U.S. Army Corps of Engineers (ACOE) "Wetlands Delineation Manual," (1987) and the Florida Department of Environmental Protection's "Florida Wetlands Delineation Manual" (1995). Delineations of wetland boundaries were also aided with the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) Soil Surveys, aerial photos, and field observations.

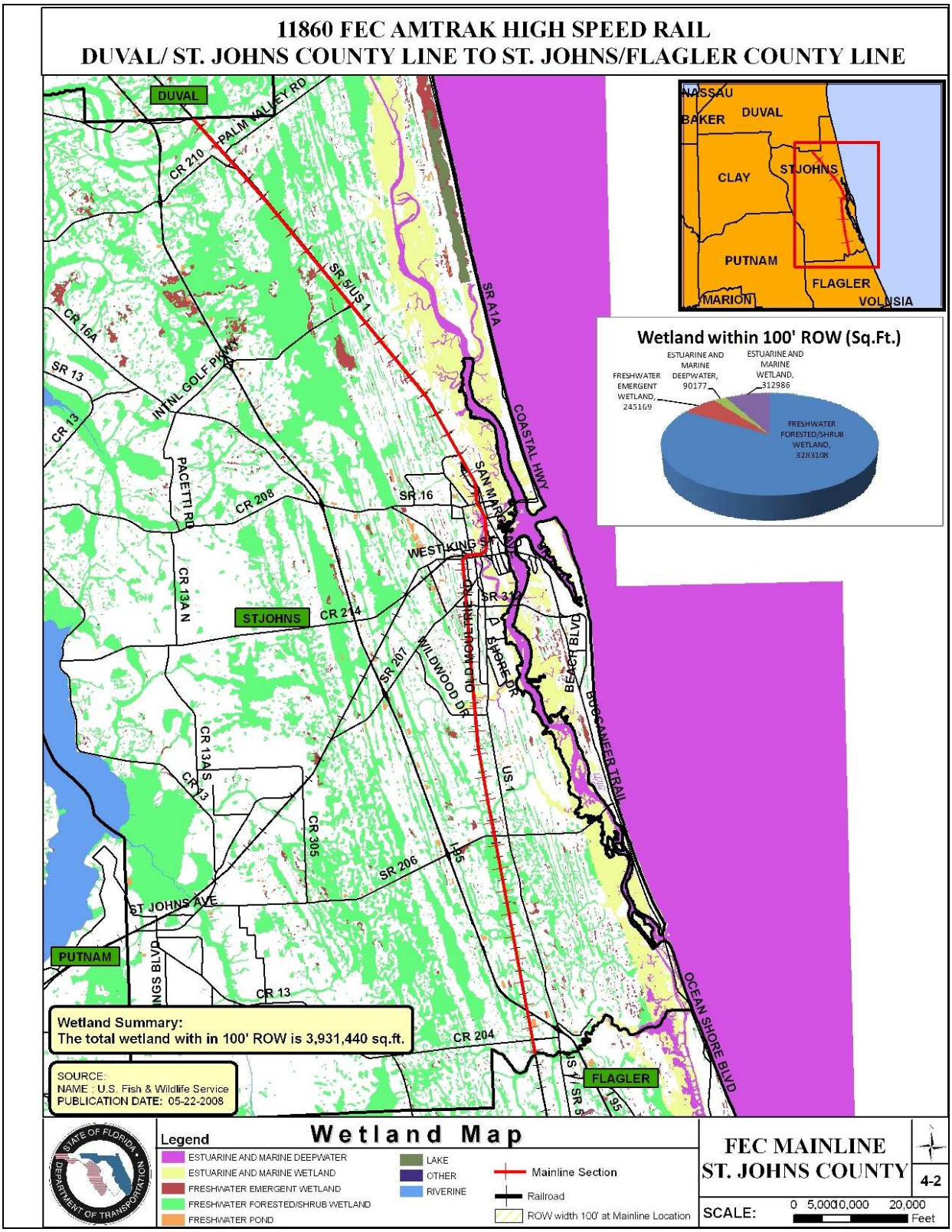
- Wetlands were classified using the Florida Land Use Cover Classification System (FLUCCS) and the FWS classification system as described in Cowardin's "Classification of Wetlands and Deepwater Habitats of the United States" to the subclass level.

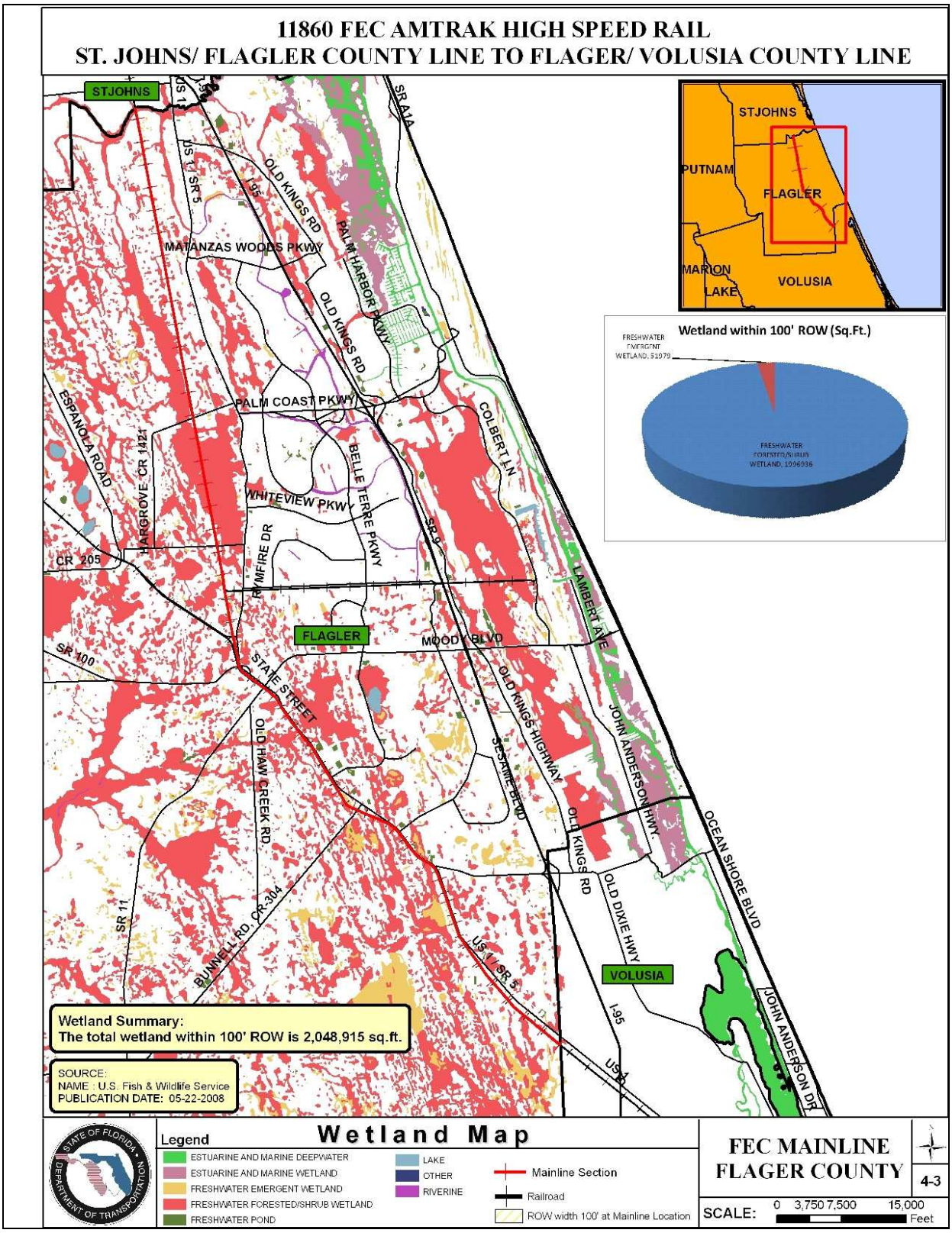
- The importance of the affected wetlands to the surrounding biological community was evaluated based on: importance of primary wetland functions (e.g., flood control, wildlife habitat, erosion control, etc.), relative importance of these functions to the total wetland resources of the area, and importance of the uniqueness of each wetland.

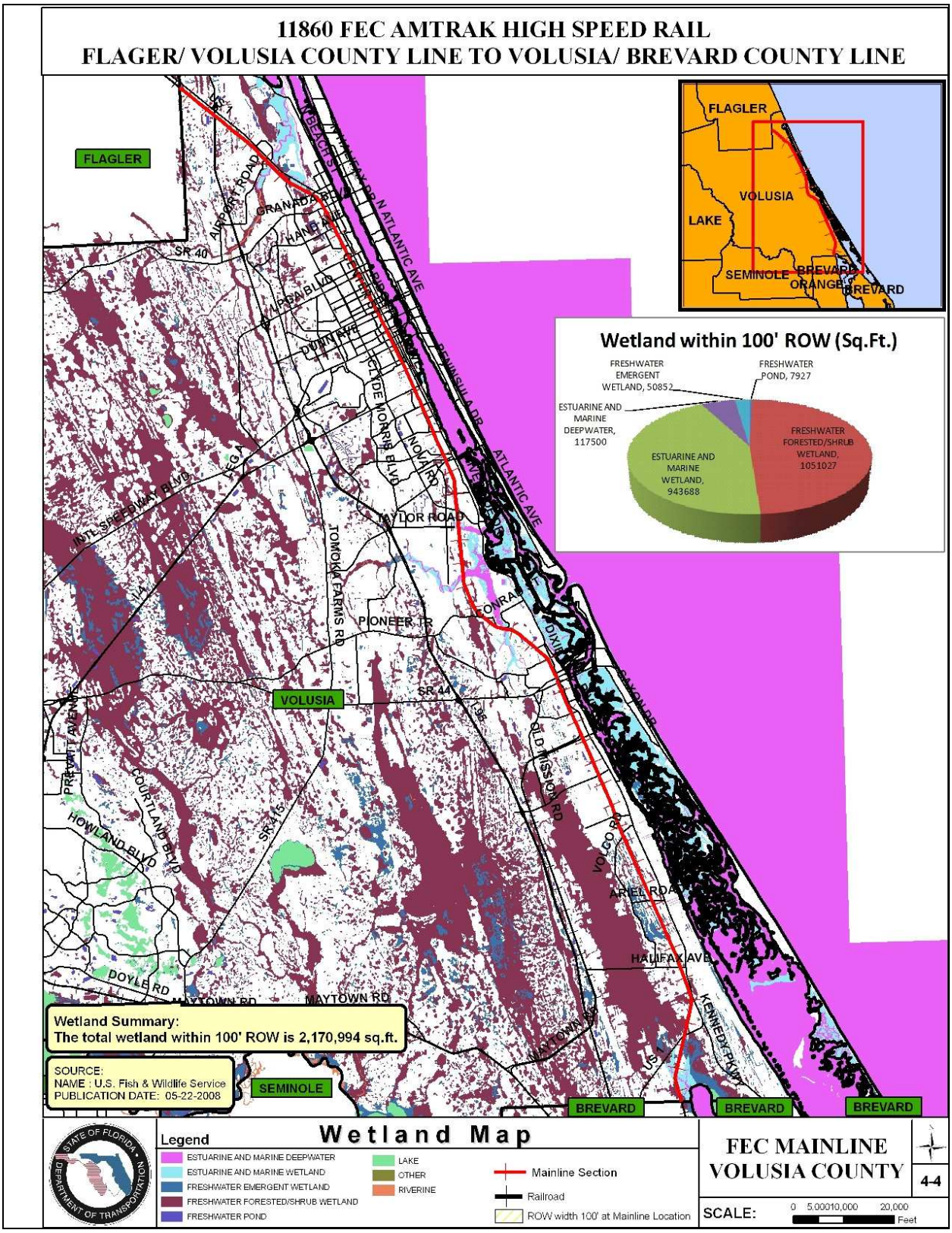
- The effects the project will have on wetland functions were evaluated and described. The significance of each alternative's impact on each wetland site was determined by evaluating the effects on flood control, erosion control, water pollution abatement, and wildlife habitat value; the effects on stability and quality of the wetland system; and short-term vs. long-term effects.

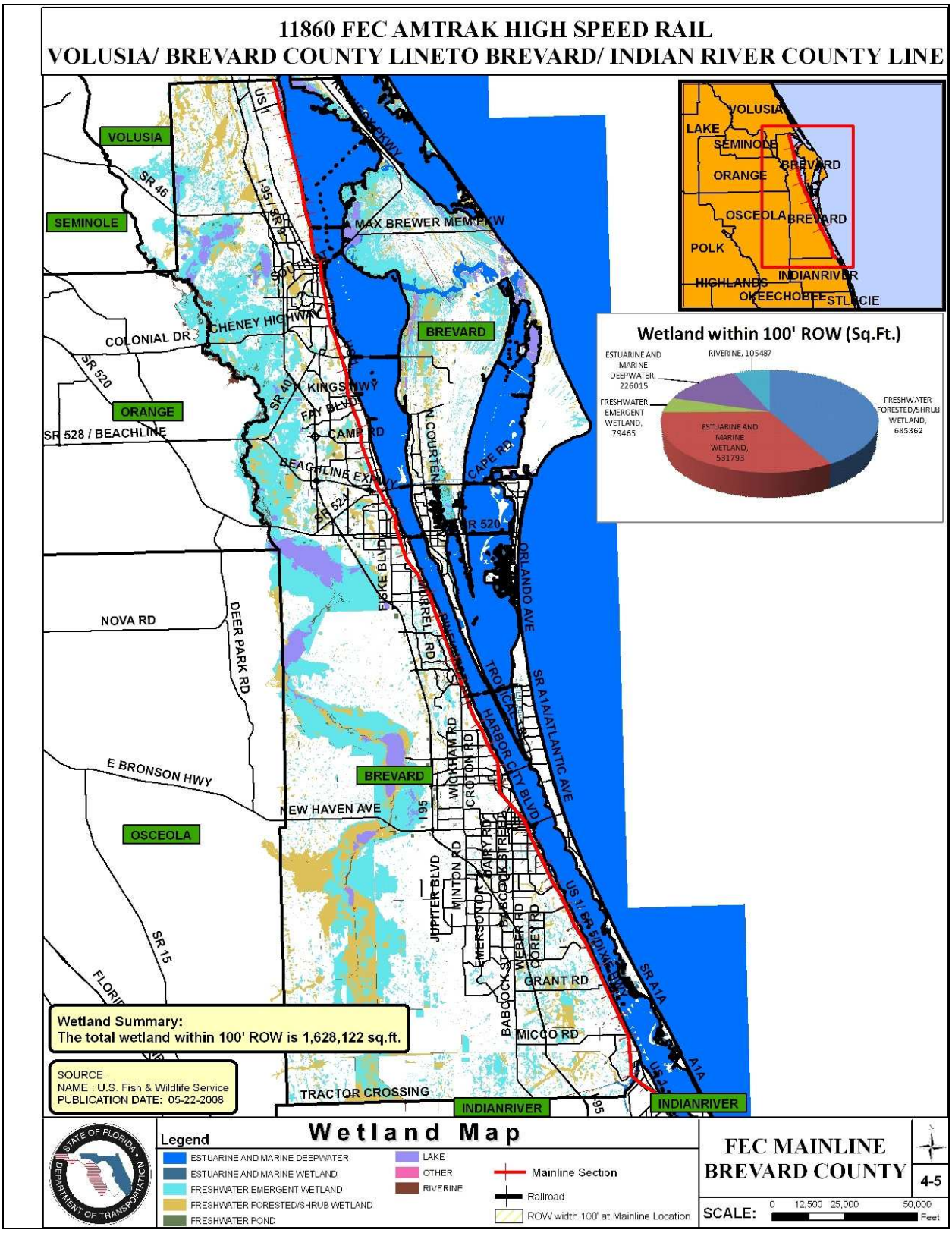
The FWS 2008 National Wetlands Inventory (NWI) wetlands within the project corridor are shown on Exhibits 4-1 to 4-9.

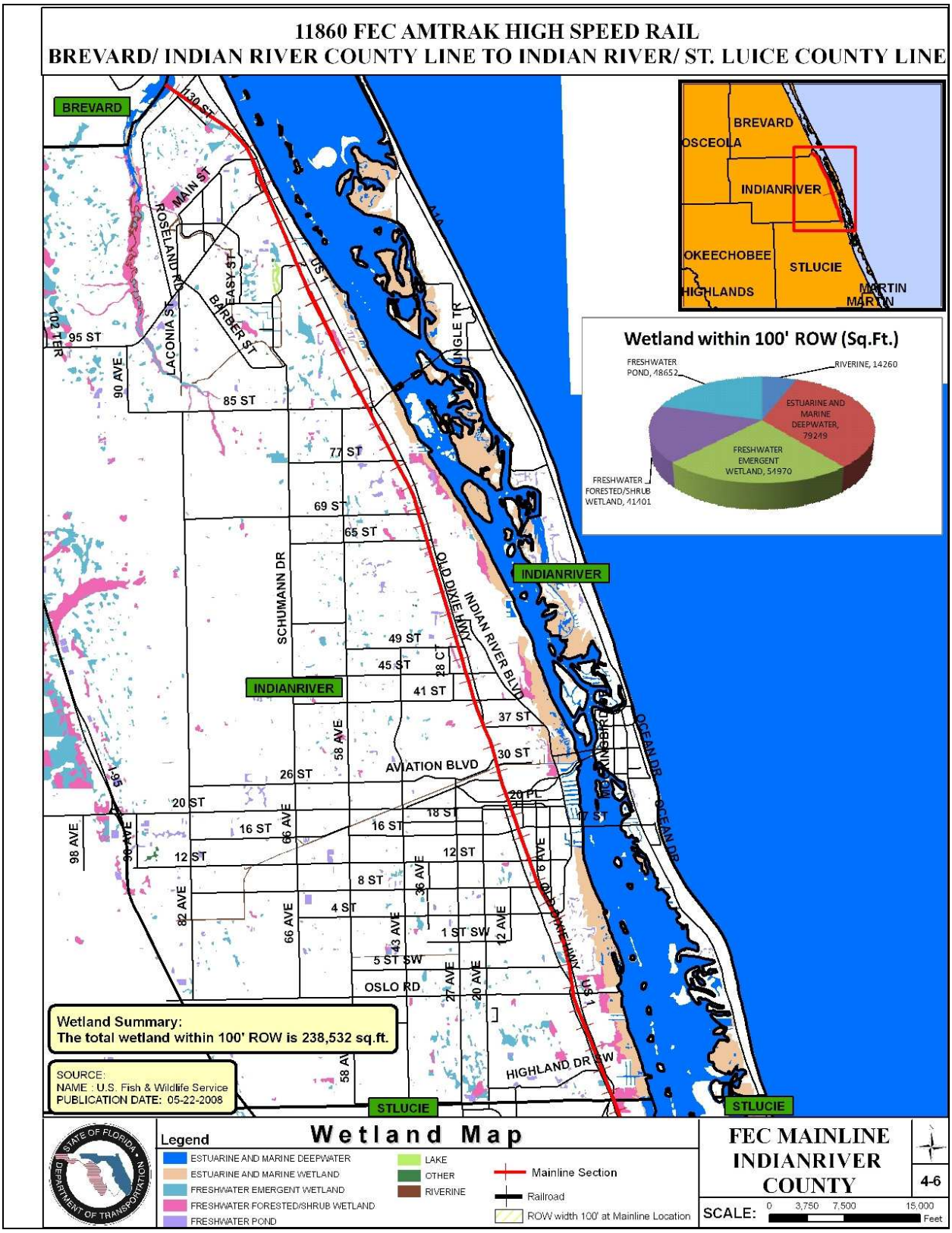

11860 FEC AMTRAK HIGH SPEED RAIL
JACKSONVILLE CONVENTION CENTER TO DUVAL/ ST. JOHNS COUNTY LINE
NASSAU
BAKER
DUVAL
UNION
BRADFORD
CLAY
STJOHNS
Wetland with in 100' ROW (Sq.Ft.)
FRESHWATER POND, 15521
FRESHWATER EMERGENT WETLAND, 111488
ESTUARINE AND MARINE DEEPWATER, 204210
FRESHWATER FORESTED/SHRUB WETLAND, 530894
KINGS RD
8TH ST
I-95
MAIN ST
PEARL ST
OCEAN ST
E DUVAL ST
PARK
HENDRICKS AVE
SAN JOSE BLVD
ST AUGUSTINE RD
EMERSON ST
UNIVERSITY BLVD
DEAN RD
ARLINGTON RD
ARLINGTON EXP
LONE STAR RD
MONUMENT RD
ST JOHNS BLUFF RD
ATLANTIC BLVD
ALTAMA RD
SR 115NB FRONTAGE RD
FOREST BLVD
HOGAN RD
BOWDEN RD
BELFORT RD
DUVAL
BAYMEADOWS RD
BEAUCLERC RD
SUNBEAM RD
SOUTHSIDE BLVD
SR 9A
I-295/SR 9A
HOOD RD
HOOD RD S
LOSCO RD
SCOTT MILL RD
GREENLAND RD
I-295
LORETTO RD
SAN JOSE BLVD
ST AUGUSTINE RD
MANDARIN RD
BISHOP ESTATES RD
I-95/ SR 9
PHILLIPS HWY
RACETRACK RD
SR 5/US 1
PALM VALLEY RD
I-95
Wetland Summary:
The total wetland within 100' ROW is 8,82,113 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
Legend
Wetland Map
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
DUVAL COUNTY
4-1
SCALE:
0 2,500 5,000 10,000
Feet

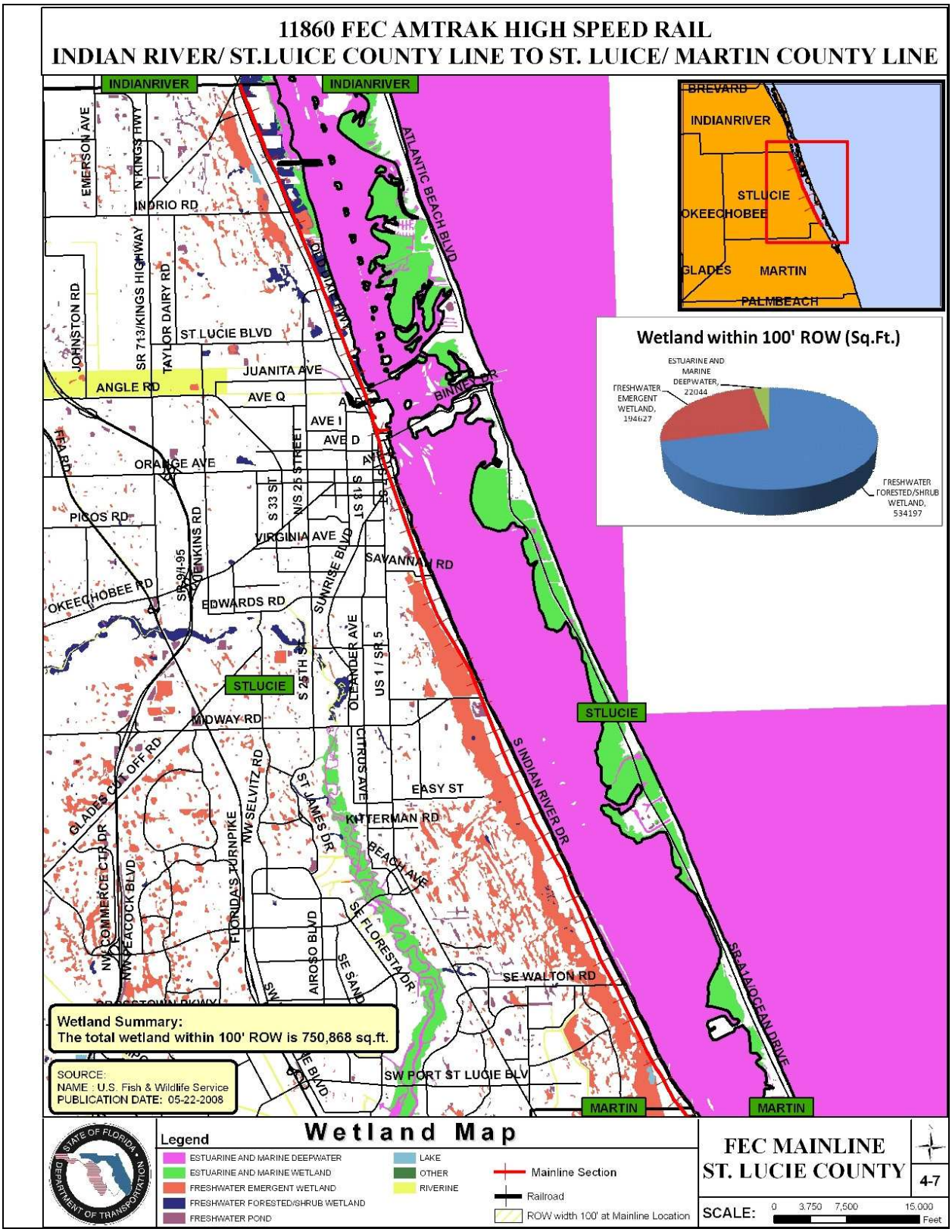

11860 FEC AMTRAK HIGH SPEED RAIL
DUVAL/ ST. JOHNS COUNTY LINE TO ST. JOHNS/FLAGLER COUNTY LINE
DUVAL
PALM VALLEY RD
CR 210
SR 5/US 1
SR A1A
CR 16A
SR 13
CR 13
INTNL GOLF PKWY
PACETTI RD
CR 208
COASTAL HWY
SAN MARCO AVE
SR 16
WEST KING ST
SR 312
OLD KINGS RD
BEACH BLVD
BOOTH RD
SHORE DR
WILDWOOD DR
STJOHNS
CR 214
CR 13A N
SR 207
CR 13AS
CR 13
CR 305
US 1
I-95
SR 206
ST JOHNS AVE
PUTNAM
CR 13
CR 204
FLAGLER
SR 5 / SR 5
OCEAN SHORE BLVD
NASSAU
BAKER
DUVAL
CLAY
STJOHNS
PUTNAM
FLAGLER
MARION
VOLUSIA
Wetland within 100' ROW (Sq.Ft.)
ESTUARINE AND MARINE DEEPWATER, 90177
ESTUARINE AND MARINE WETLAND, 312986
FRESHWATER EMERGENT WETLAND, 245169
FRESHWATER FORESTED/SHRUB WETLAND, 3283108
Wetland Summary:
The total wetland with in 100' ROW is 3,931,440 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
Wetland Map
FEC MAINLINE
ST. JOHNS COUNTY
4-2
SCALE:
0 5,000 10,000 20,000
Feet

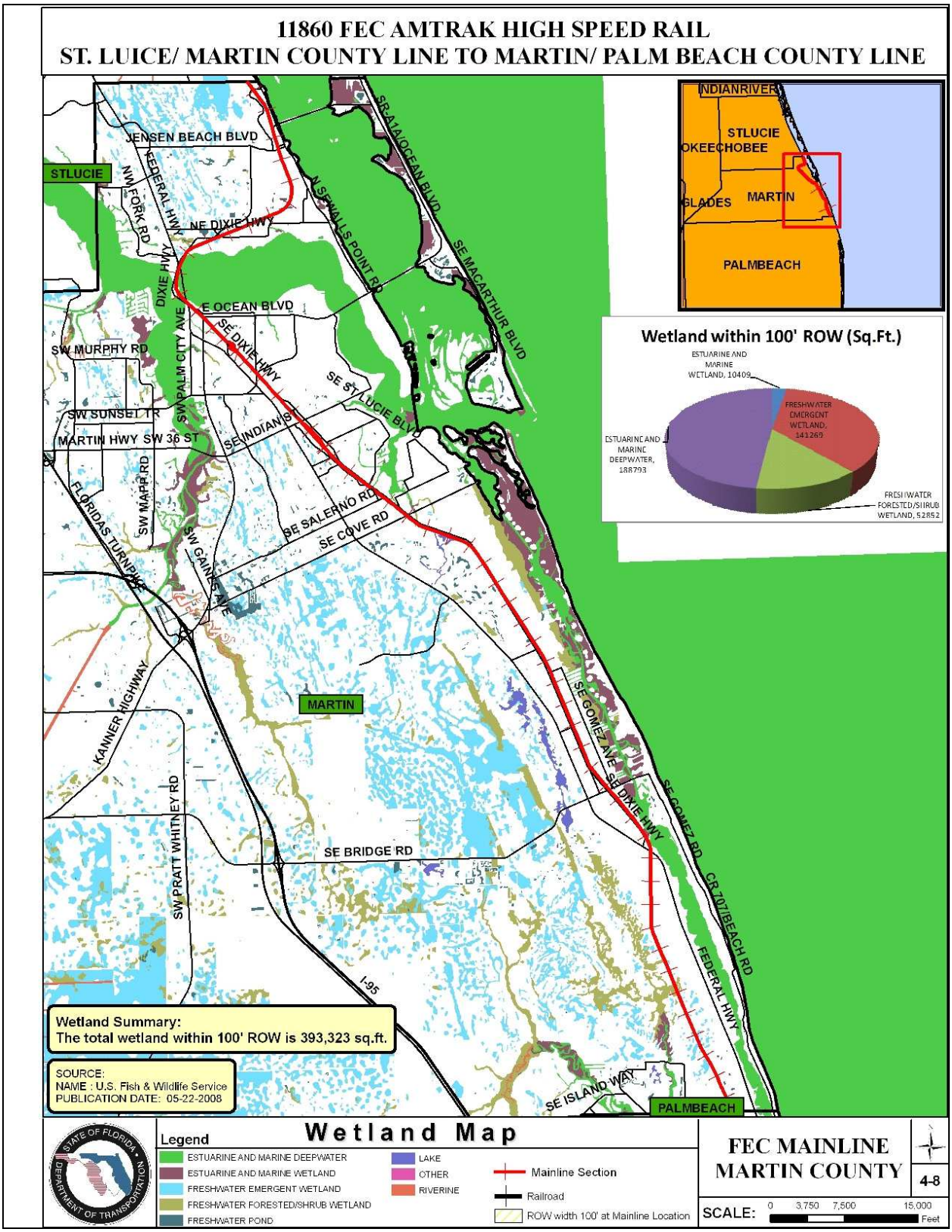

11860 FEC AMTRAK HIGH SPEED RAIL
ST. JOHNS/ FLAGLER COUNTY LINE TO FLAGER/ VOLUSIA COUNTY LINE
STJOHNS
FLAGLER
VOLUSIA
PUTNAM
MARION
LAKE
Wetland within 100' ROW (Sq.Ft.)
FRESHWATER EMERGENT WETLAND, 51979
FRESHWATER FORESTED/SHRUB WETLAND, 1996936
SR A1A
OLD KINGS RD
PALM HARBOR PKWY
MATANZAS WOODS PKWY
PALM COAST PKWY
ESPANOLA ROAD
HARGROVE CR 1421
WHITEVIEW PKWY
BELLE TERRE PKWY
COLBERT LN
SR 9
LAMBERT AVE
CR 205
MOODY BLVD
SR 100
STATE STREET
OLD HAW CREEK RD
OLD KINGS HIGHWAY
SESSIME BLVD
JOHN ANDERSON HWY
OCEAN SHORE BLVD
OLD DIXIE HWY
SR 11
BUNNELL RD CR-304
US 1/ SR 5
I-95
JOHN ANDERSON DR
Wetland Summary:
The total wetland within 100' ROW is 2,048,915 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
Wetland Map
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
FLAGER COUNTY
4-3
SCALE: 0 3,750 7,500 15,000 Feet

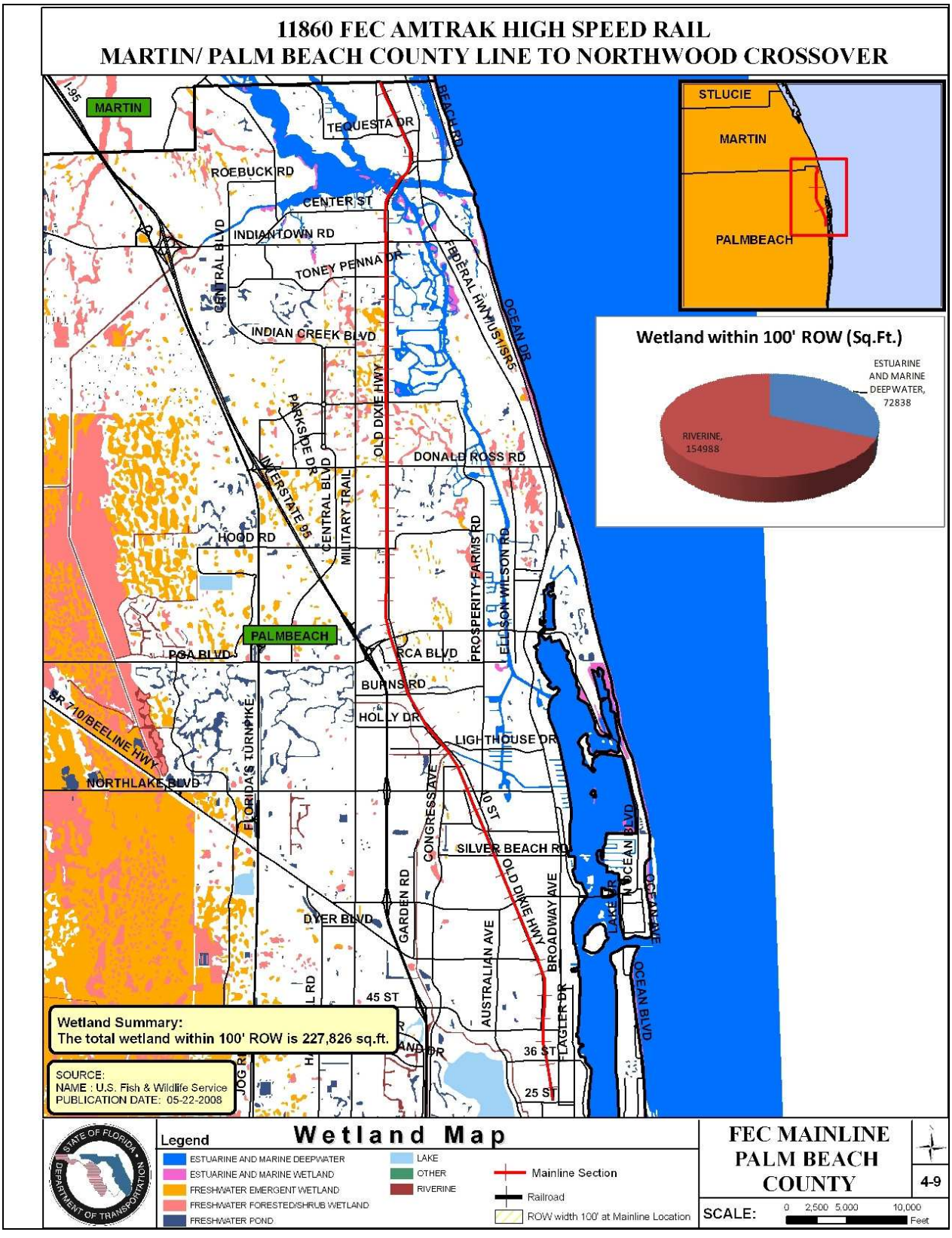

11860 FEC AMTRAK HIGH SPEED RAIL
FLAGER/ VOLUSIA COUNTY LINE TO VOLUSIA/ BREVARD COUNTY LINE
FLAGLER
VOLUSIA
LAKE
SEMINOLE
ORANGE
BREVARD
Wetland within 100' ROW (Sq.Ft.)
FRESHWATER EMERGENT WETLAND, 50852
FRESHWATER POND, 7927
ESTUARINE AND MARINE DEEPWATER, 117500
ESTUARINE AND MARINE WETLAND, 943688
FRESHWATER FORESTED/SHRUB WETLAND, 1051027
SR 1
AIRPORT ROAD
GRANADA BLVD
SR 40
A1A
DUNN AVE
CLYDE MORRIS BLVD
INDUSTRIAL
TAYLOR ROAD
TOMOKA FARMS RD
PIONEER TR
SR 44
VOLUSIA
PRITCHARD AVENUE
COURTLAND BLVD
HOWLAND BLVD
SR 415
DOYLE RD
MAYTOWN RD
OLD DIXIE
ARIEL RD
HALIFAX AVE
KENNEDY PKWY
US 1
Wetland Summary:
The total wetland within 100' ROW is 2,170,994 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
SEMINOLE
BREVARD
Wetland Map
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
VOLUSIA COUNTY
4-4
SCALE:
0 5,000 10,000 20,000
Feet


11860 FEC AMTRAK HIGH SPEED RAIL
VOLUSIA/ BREVARD COUNTY LINETO BREVARD/ INDIAN RIVER COUNTY LINE
VOLUSIA
SEMINOLE
ORANGE
OSCEOLA
BREVARD
INDIANRIVER
SR 46
COLONIAL DR
SR 520
SR 528 / BEACHLINE
CHENEY HIGHWAY
KINGS HWY
FAY BLVD
CAMP RD
BEACHLINE EXPWY
N COURTENAY
CAPE RD
FISKE BLVD
MURRELL RD
NOVA RD
DEER PARK RD
E BRONSON HWY
NEW HAVEN AVE
WICKHAM RD
CROTON RD
HARBOR CITY BLVD
ORLANDO AVE
SR A1A/ATLANTIC AVE
JUPITER BLVD
MINTON RD
DAIRY RD
BABCOCK ST
WEBER RD
COREY RD
GRANT RD
MICCO RD
TRACTOR CROSSING
SR 15
I 95
MAX BREWER MEMPKWY
Wetland within 100' ROW (Sq.Ft.)
ESTUARINE AND MARINE DEEPWATER, 226015
RIVERINE, 105487
FRESHWATER EMERGENT WETLAND, 79465
ESTUARINE AND MARINE WETLAND, 531793
FRESHWATER FORESTED/SHRUB WETLAND, 685362
Wetland Summary:
The total wetland within 100' ROW is 1,628,122 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
Wetland Map
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
BREVARD COUNTY
4-5
SCALE: 0 12,500 25,000 50,000 Feet


11860 FEC AMTRAK HIGH SPEED RAIL
BREVARD/ INDIAN RIVER COUNTY LINE TO INDIAN RIVER/ ST. LUICE COUNTY LINE
BREVARD
INDIANRIVER
STLUCIE
OSCEOLA
OKEECHOBEE
HIGHLANDS
MARTIN
Wetland within 100' ROW (Sq.Ft.)
FRESHWATER POND, 18652
RIVERINE, 14260
ESTUARINE AND MARINE DEEPWATER, 79219
FRESHWATER EMERGENT WETLAND, 51970
FRESHWATER FORESTED/SHRUB WETLAND, 41101
Wetland Summary:
The total wetland within 100' ROW is 238,532 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
Wetland Map
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
INDIANRIVER
COUNTY
4-6
SCALE: 0 3,750 7,500 15,000 Feet
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION


11860 FEC AMTRAK HIGH SPEED RAIL
INDIAN RIVER/ ST.LUICE COUNTY LINE TO ST. LUICE/ MARTIN COUNTY LINE
INDIANRIVER
STLUCIE
MARTIN
BREVARD
OKEECHOBEE
GLADES
PALMBEACH
Wetland within 100' ROW (Sq.Ft.)
ESTUARINE AND MARINE DEEPWATER, 22044
FRESHWATER EMERGENT WETLAND, 194627
FRESHWATER FORESTED/SHRUB WETLAND, 534197
Wetland Summary:
The total wetland within 100' ROW is 750,868 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
Wetland Map
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
ST. LUCIE COUNTY
4-7
SCALE: 0 3,750 7,500 15,000 Feet


11860 FEC AMTRAK HIGH SPEED RAIL
ST. LUICE/ MARTIN COUNTY LINE TO MARTIN/ PALM BEACH COUNTY LINE
INDIANRIVER
STLUCIE
OKEECHOBEE
GLADES
MARTIN
PALMBEACH
Wetland within 100' ROW (Sq.Ft.)
ESTUARINE AND MARINE WETLAND, 10409
FRESHWATER EMERGENT WETLAND, 141269
ESTUARINE AND MARINE DEEPWATER, 188793
FRESHWATER FORESTED/SHRUB WETLAND, 52852
JENSEN BEACH BLVD
STLUCIE
FEDERAL HWY
NW FORK RD
NE DIXIE HWY
DIXIE HWY
SR A1A/OCEAN BLVD
N SEWALLS POINT RD
SE MACARTHUR BLVD
E OCEAN BLVD
SE DIXIE HWY
SW PALM CITY AVE
SW MURPHY RD
SW SUNSET TR
MARTIN HWY SW 36 ST
SE INDIAN ST
SE ST LUCIE BLVD
SW MAPP RD
FLORIDAS TURNPIKE
SE SALERNO RD
SE COVE RD
SW GAINES AVE
KANNER HIGHWAY
MARTIN
SE GOMEZ AVE
SE DIXIE HWY
SE GOMEZ RD
CR 707/BEACH RD
FEDERAL HWY
SW PRATT WHITNEY RD
SE BRIDGE RD
I-95
SE ISLAND WAY
PALMBEACH
Wetland Summary:
The total wetland within 100' ROW is 393,323 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
STATE OF FLORIDA • DEPARTMENT OF TRANSPORTATION
Wetland Map
Legend
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
MARTIN COUNTY
4-8
SCALE: 0 3,750 7,500 15,000 Feet


11860 FEC AMTRAK HIGH SPEED RAIL
MARTIN/ PALM BEACH COUNTY LINE TO NORTHWOOD CROSSOVER
MARTIN
PALMBEACH
STLUCIE
Wetland within 100' ROW (Sq.Ft.)
ESTUARINE AND MARINE DEEPWATER, 72838
RIVERINE, 154988
Wetland Summary:
The total wetland within 100' ROW is 227,826 sq.ft.
SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008
Legend
Wetland Map
ESTUARINE AND MARINE DEEPWATER
ESTUARINE AND MARINE WETLAND
FRESHWATER EMERGENT WETLAND
FRESHWATER FORESTED/SHRUB WETLAND
FRESHWATER POND
LAKE
OTHER
RIVERINE
Mainline Section
Railroad
ROW width 100' at Mainline Location
FEC MAINLINE
PALM BEACH
COUNTY
4-9
SCALE:
0 2,500 5,000 10,000
Feet

Approximately 282 acres of jurisdictional wetlands are found within the existing FEC right of way as shown in Exhibit 4-10. The No-build Alternative would not impact wetlands. Potential wetland impacts from the build alternative would be limited to the St. Augustine station alternatives and select locations along the main line where curves may be improved to account for the higher train speeds. Potential direct wetland impacts include 14.4 acres along the main line; and 0.35 acres and 2.82 acres at the station alternative locations in St. Augustine Alternatives 1 and 2, respectively.

Exhibit 4-10: *Mainline NWI Wetlands within 100' R-O-W*

	Palustrine (ac.)					Estuarine (ac.)				Riverine	Total
County	AB	EM	FO	SS	UB	AB	EM	SS	UB	(ac.)	Wetlands (ac.)
Duval	0	2.6	12.7	0	0.4	0	0	0	4.7	0	**20.4**
St. Johns	0	5.6	73.9	1.5	0	0	8.2	0	1.1	0	**90.3**
Flagler	0	1.2	44.2	1.6	0	0	0	0	0	0	**47**
Volusia	0	1.2	24.1	0	0.2	0	21.7	0	2.7	0	**49.9**
Brevard	0	1.8	6.4	9.4	0	3	10.9	1.3	2.2	2.4	**37.4**
Indian River	0	1.3	0.9	0.1	1.1	0	0	0	1.8	0.3	**5.5**
St. Lucie	0	4.5	4.8	7.4	0	0	0	0	0.5	0	**17.2**
Martin	0.1	3.2	1.1	0.1	0	0	0	0.2	4.3	0	**9**
Palm Beach	0	0	0	0	0	0	0	0	1.7	3.6	**5.3**
Total Wetland Acreage	**0.1**	**21.4**	**168.1**	**20.1**	**1.7**	**3**	**40.8**	**1.5**	**19**	**6.3**	**282**

AB – Aquatic Bed
EM – Emergent
FO - Forested
SS - Scrub Shrub
UB - Unconsolidated Bottom

On the mainline, curve upgrades may require adjustment to compensate for the increased speeds. These improvements would involve increasing the super elevation of the curves by approximately 6 inches. The following curves may require modifications:

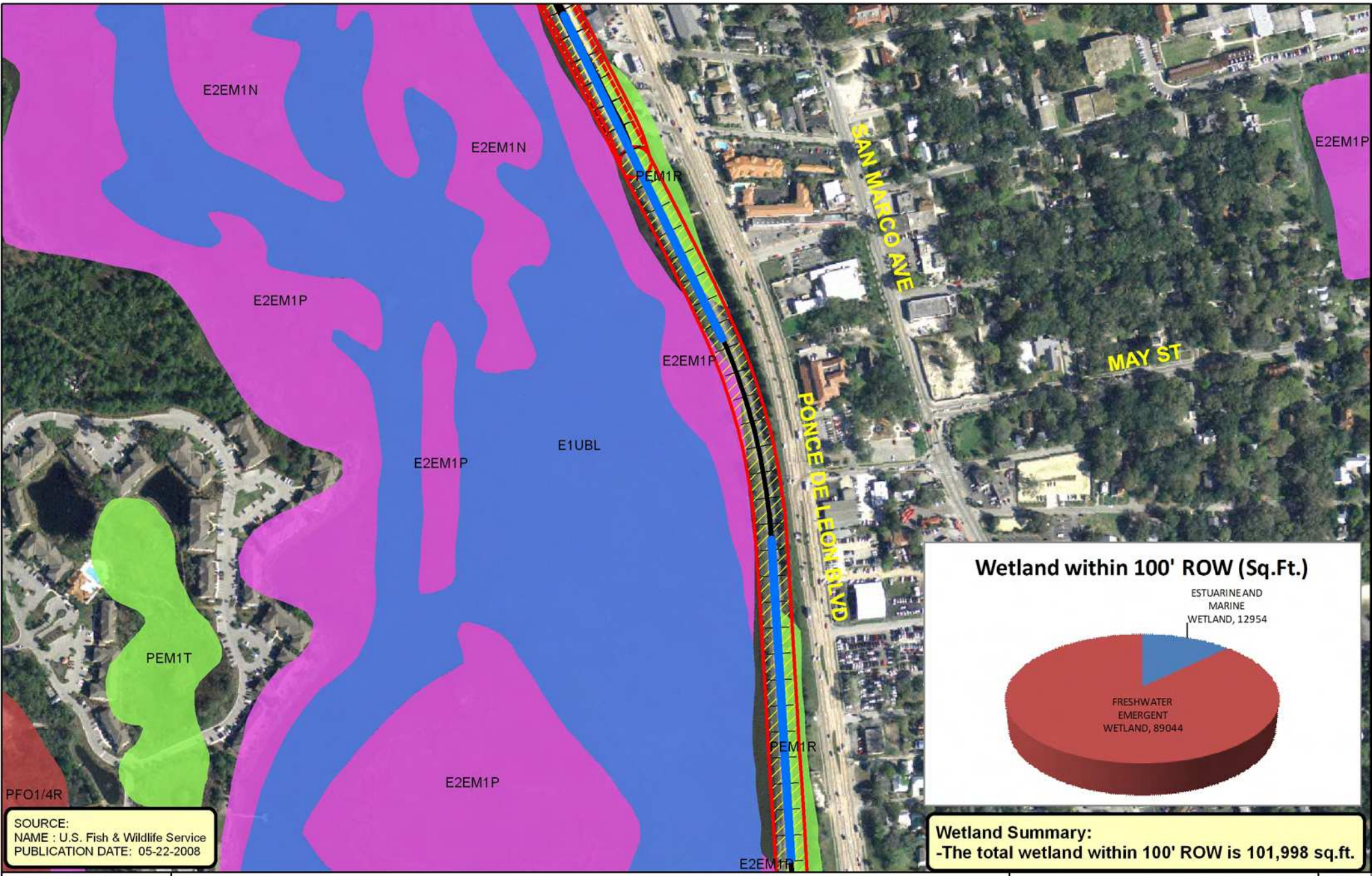
Curve 1 – St. Augustine near SR 16 (St. Johns County)
Curve 2 – St. Augustine near Old Moultrie Junction (St. Johns County)
Curve 3 – St. Augustine near SR 214 (St. Johns County)
Curve 4 – Dorena near SR 100 (Flagler County)
Curve 5 – Bunnell near SR 11 (Flagler County)
Curve 6 – Dupont near CR 304 (Flagler County)
Curves 7, 8 and 9 – Between Dupont and Korona between CR 304 and Cemetery Rd (Flagler County)
Curve 10 – Turnbull near Turnbull Bay Rd (Volusia County)
Curve 11 – Turnbull near Whispering Pine Dr. (Volusia County)
Curve 12 – New Smyrna Beach near Eleanor Ave. (Volusia County)
Curve 13 – Fullerton near Turnbull Creek (Volusia County)
Curve 14 – Titusville near US 1 and SR 406 (Brevard County)
Curve 15 – Roseland near SR 514 (Brevard County)

Curve 16 – Ft. Pierce near Ave D (St. Lucie County)
Curve 17 – Jensen Beach near Skyline Dr. (St. Lucie/Martin County)
Curve 18 – Jensen Beach near Palmetto Ave (Martin County)
Curve 19 – Stuart near Alice St (Martin County)
Curve 20 – Stuart over St. Lucie River (Martin County)
Curve 21 – Salerno near Cove Rd (Martin County)
Curve 22 – Salerno near SR A1A (Martin County)
Curve 23 – Hobe Sound near US 1 (Martin County)
Curve 24 – Hobe Sound within Jonathon Dickinson State Park near Park Rd (Martin County)
Curves 25 and 26 – Jupiter between Tequesta Dr and Center St (Palm Beach County)
Curve 27 – Earman River near Richard Rd. (Palm Beach County)

To determine potential wetland impacts within these areas it was assumed impacts may be incurred in an area defined by the worst case of 1,000 linear feet of approaches into the curve and 100 feet of the FEC right-of–way. Since bridges would not be modified under this scope of work, bridge crossings were not considered for wetland impacts. Impacts based on the engineered designs are anticipated to be much less. As shown on Exhibit 4-11, wetland impacts would occur in 4 of the 9 counties and would involve only 8 of the 27 curves potentially modified. Exhibits 4-12 to 4-18 show the potential areas of impact at these curve locations.

Exhibit 4-11: *Mainline NWI Wetland Impact*

	Mainline Wetland Impact (ac.)		
County	Total in R-O-W (Ac.)	Direct Impact (Ac.)	Comment
Duval	20.4	0	No Proposed Curve Improvements
St. Johns	90.3	5.8	Curves 1-3 near St. Augustine. Estuarine emergent, Estuarine deepwater, Palustrine emergent, Palustrine scrub/shrub
Flagler	47.0	1.3	Curve 8 north of CR 325 in Korona. Palustrine Forested.
Volusia	49.9	6.5	Curve 13 south of Turnbull Creek near Fullerton. Estuarine emergent and deepwater
Brevard	37.4	0	No wetland involvement with proposed curve improvements.
Indian River	5.5	0	No Proposed Curve Improvements
St. Lucie	17.2	0	No wetland involvement with proposed curve improvements.
Martin	9.0	0.8	Curve 19 near Alice Street in Stuart, Curve 21 near Manatee Creek tributary in Salerno, and Curve 23 near US 1 at Hobe Sound. Palustrine emergent, Palustrine scrub/shrub, Palustrine Aquatic Bed, Estuarine scrub shrub.
Palm Beach	5.3	0	No wetland involvement with proposed curve improvements.
Total	282	14.4	



Wetland Map

Legend

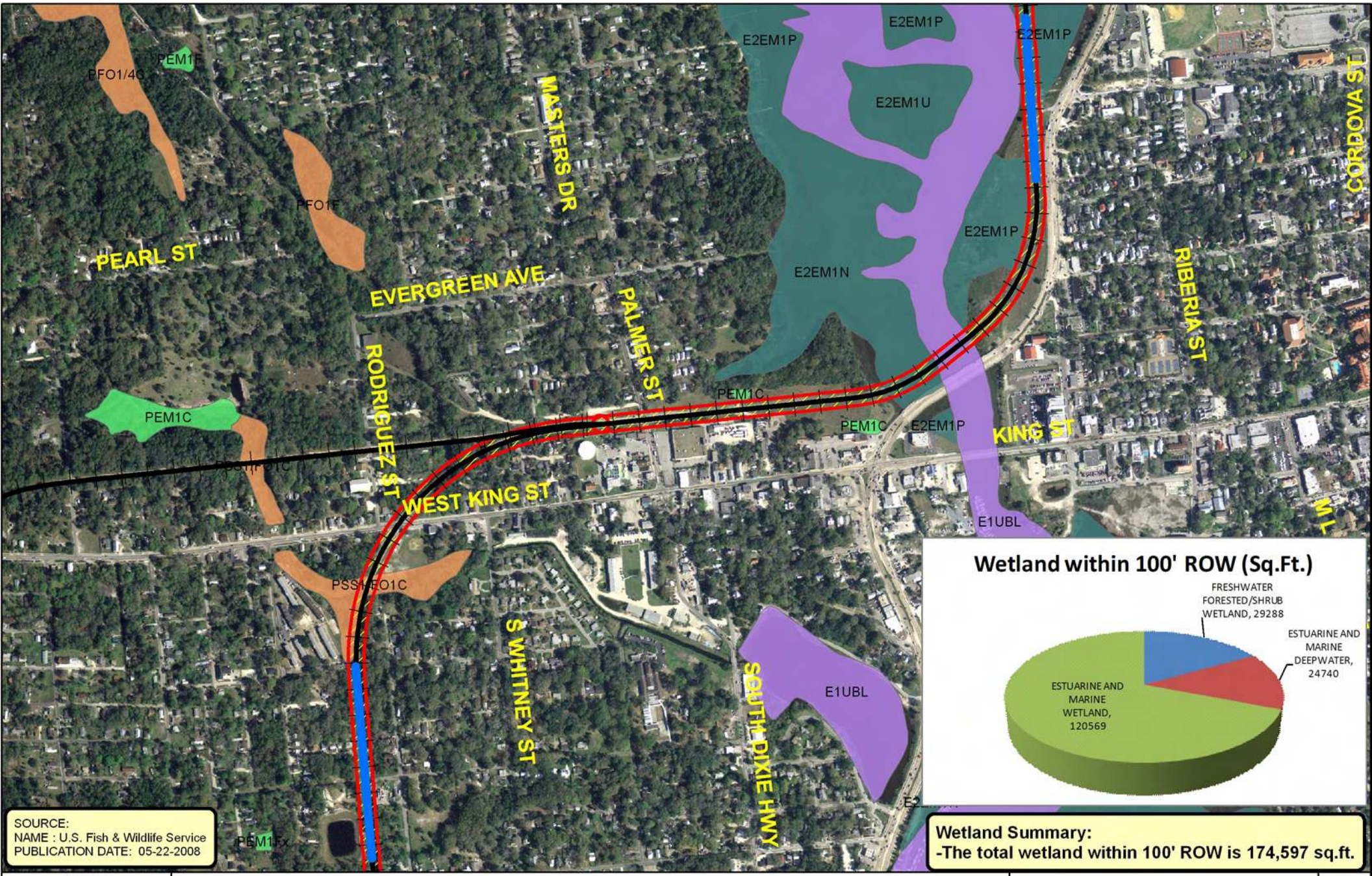
- ESTUARINE AND MARINE DEEPWATER
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- 1,000' limits along the corridor
- Railroad
- Curve 1 100' ROW

CURVE 1
ST. AUGUSTINE
(ST. JOHNS COUNTY)

N

4-12

SCALE: 0 125 250 500 Feet



Wetland Map

Legend

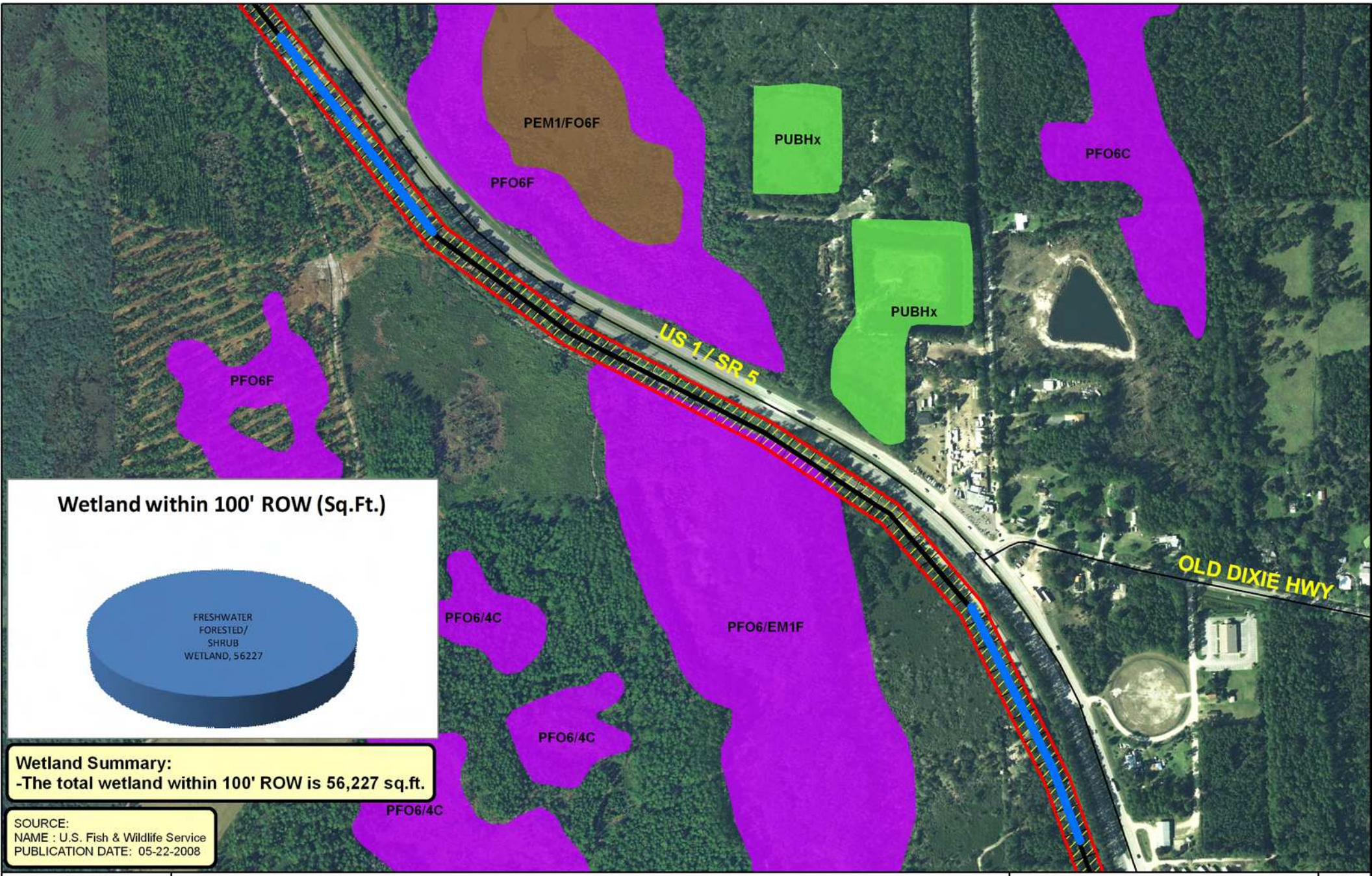
- ESTUARINE AND MARINE DEEPWATER
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- 1,000' limits along the corridor
- Railroad
- Curve 2 & 3 100' ROW

CURVE 2 & 3
ST. AUGUSTINE
(ST. JOHNS COUNTY)

N

4-13

SCALE: 0 250 500 1,000 Feet



Wetland within 100' ROW (Sq.Ft.)

Wetland Summary:
-The total wetland within 100' ROW is 56,227 sq.ft.

SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008

Wetland Map

Legend

- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- 1,000' limits along the corridor
- Railroad
- Curve 8 100' ROW

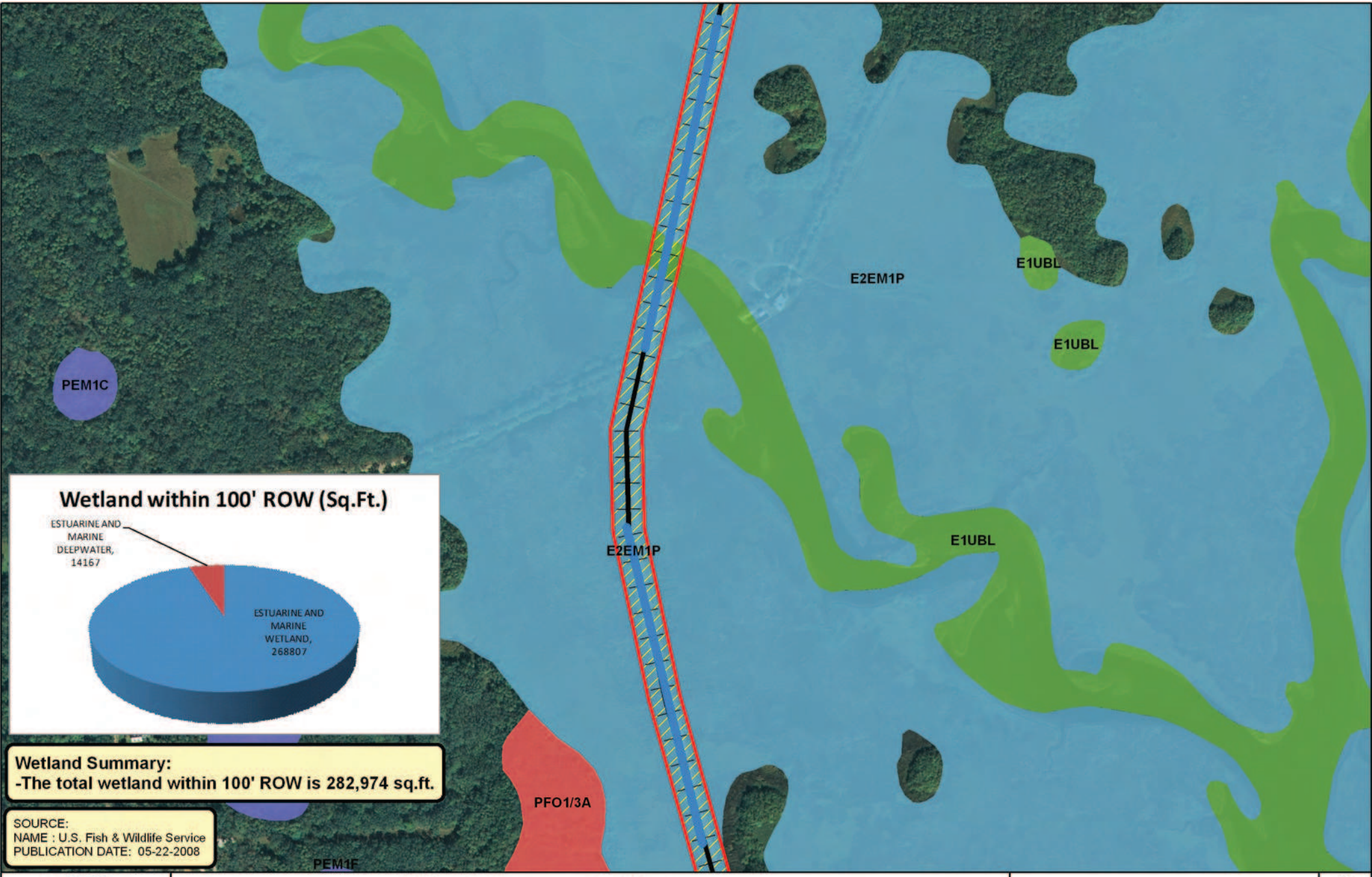
CURVE 8 & 9

(FLAGER COUNTY)

N

4-14

SCALE: 0 125 250 500 Feet



Wetland Summary:
-The total wetland within 100' ROW is 282,974 sq.ft.

SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008

Wetland Map

Legend

- ESTUARINE AND MARINE DEEPWATER
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- 1,000' limits along the corridor
- Railroad
- Curve 13 100' ROW

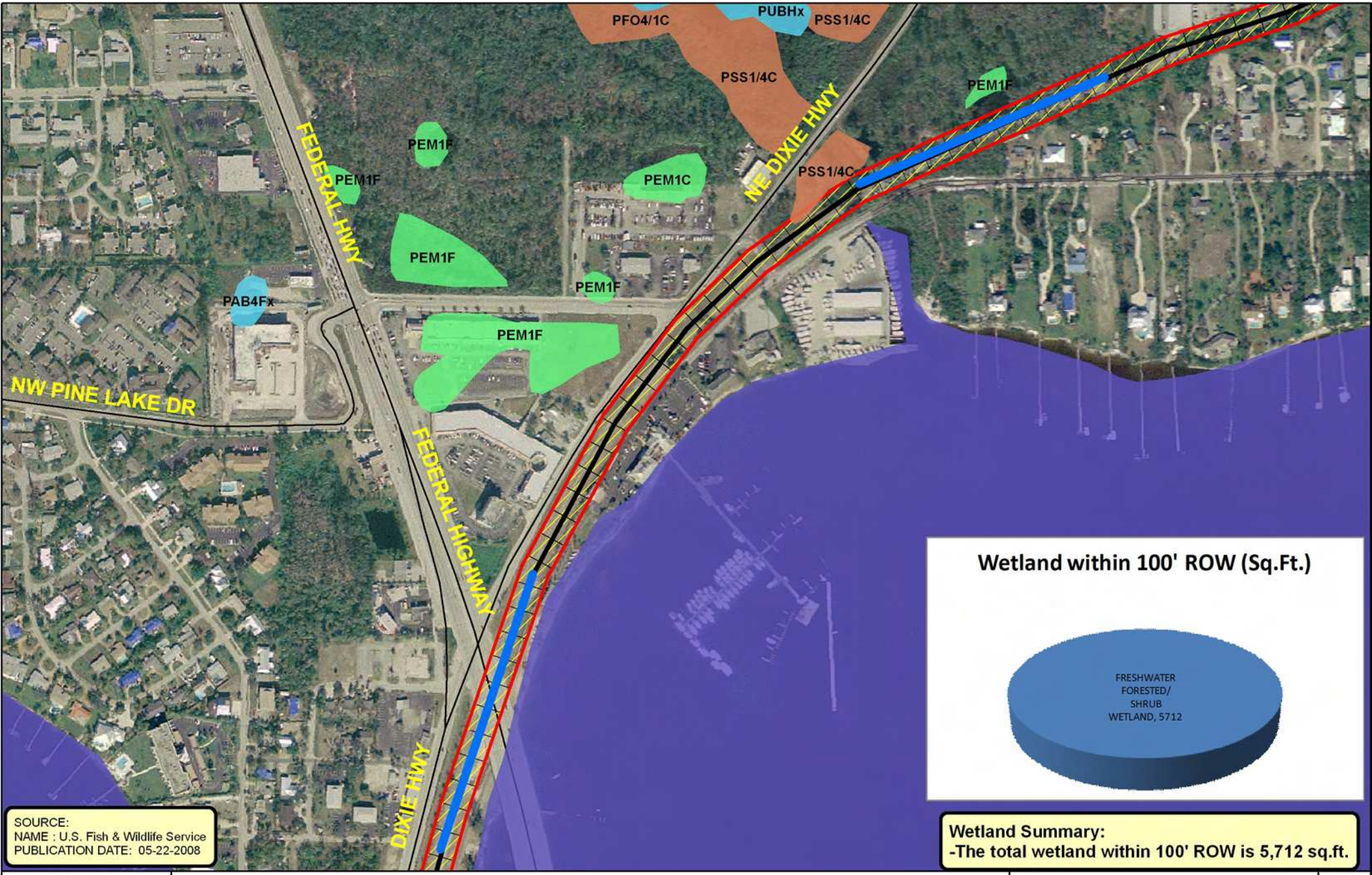
FEC MAINLINE CURVE 13

(VOLUSIA COUNTY)

N

4-15

SCALE: 0 125 250 500 Feet



Wetland Map

Legend

- ESTUARINE AND MARINE DEEPWATER
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- 1,000' limits along the corridor
- Railroad
- Curve 19 100' ROW

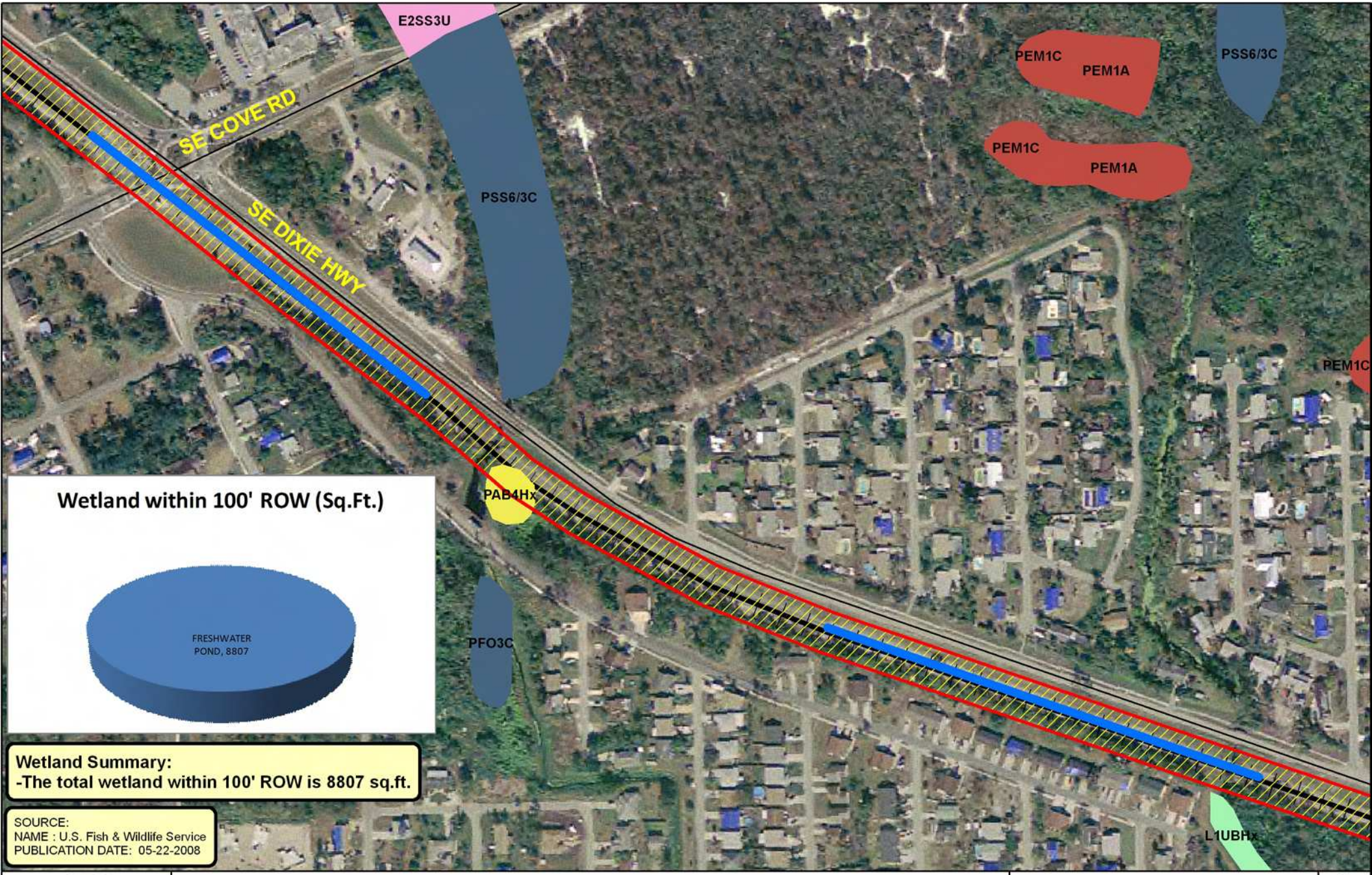
FEC MAINLINE CURVE 19

(MARTIN COUNTY)

N

4-16

SCALE: 0 125 250 500 Feet



Wetland within 100' ROW (Sq.Ft.)

Wetland Summary:
-The total wetland within 100' ROW is 8807 sq.ft.

SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008

STATE OF FLORIDA • DEPARTMENT OF TRANSPORTATION

Legend

- ESTUARINE AND MARINE DEEPWATER
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND
- LAKE
- 1,000' limits along the corridor
- Railroad
- Curve 21 100' ROW

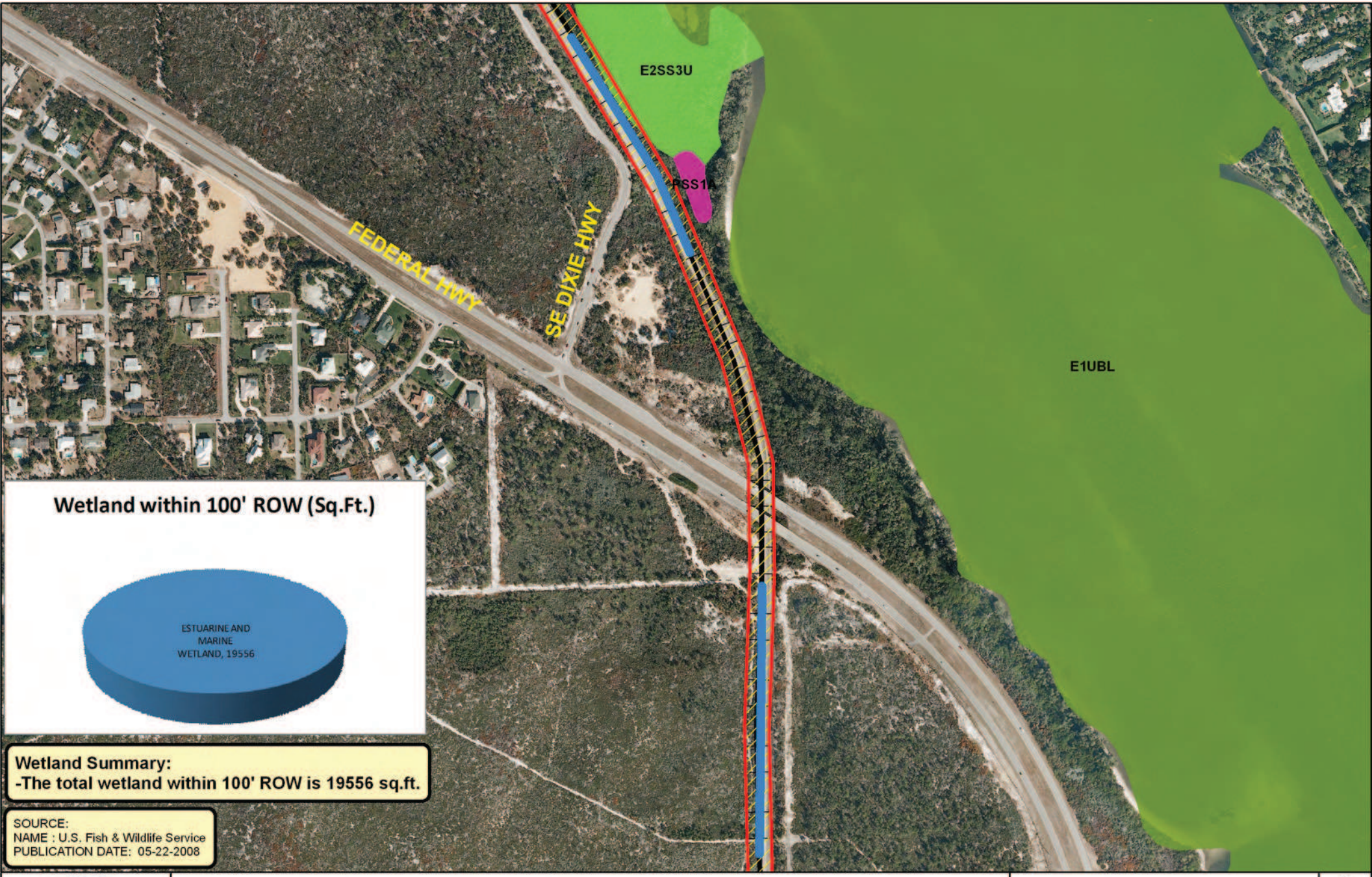
FEC MAINLINE CURVE 21

(MARTIN COUNTY)

N

4-17

SCALE: 0 125 250 500 Feet



Wetland within 100' ROW (Sq.Ft.)

Wetland Summary:
-The total wetland within 100' ROW is 19556 sq.ft.

SOURCE:
NAME : U.S. Fish & Wildlife Service
PUBLICATION DATE: 05-22-2008

STATE OF FLORIDA • DEPARTMENT OF TRANSPORTATION

Legend

- ESTUARINE AND MARINE DEEPWATER
- ESTUARINE AND MARINE WETLAND
- FRESHWATER EMERGENT WETLAND
- FRESHWATER FORESTED/SHRUB WETLAND
- FRESHWATER POND

- 1,000' limits along the corridor
- Railroad
- Curve 23 100' ROW

FEC MAINLINE CURVE 23

(MARTIN COUNTY)

N

4-18

SCALE: 0 125 250 500 Feet

Impacted wetlands would be fringe wetlands along the FEC corridor associated, in most cases, with larger wetland systems. Impacts to these areas based on worst case estimates would range from 0.13 acres of fresh water scrub/shrub habitat to 6.17 acres of estuarine emergent habitat. Potential wetland communities impacted are discussed further below.

These wetlands provide some of the following hydrologic functions: water quality enhancement/ pollution abatement - capacity to retain or absorb waterborne particulates or chemical compounds; water detention/flood and erosion control - capacity to regulate surface water runoff, reducing downstream peak flows during flood periods and maintaining base flows during dry periods; and round water recharge/discharge - capacity to interact with subsurface aquifers. These wetlands are not used for recreational or scientific uses, cultural uses or values, food and fiber (timber) uses, or public water supply system uses. Wetlands along the project corridor have been subjected to physical alterations or influences resulting from human activities which can affected the structure and/or function of the wetlands. These alterations and influences include regional hydrology alterations, exotic species infestations, and point and non-point pollution sources.

Two of the curve locations; however, may involve wetlands associated with National Wildlife Refuges. Curve 13 in Volusia County may impact 6.5 acres of estuarine emergent and deep water habitat associated with Turnbull Creek within the Merritt Island National Wildlife Refuge. Turnbull Creek is also listed as an Outstanding Florida Waterway. Similarly, Curve 23 in Martin County may impact 0.45 acres of estuarine scrub/shrub wetland associated with the Hobe Sound National Wildlife Refuge. Wildlife utilization of wetlands and waterways within these refuges include West Indian manatees (*Trichechus manatus floridanus*), Wood storks (*Mycteria americana*), Florida salt marsh snakes (*Nerodia clarkia*), American alligators (*Alligator mississippiensis*), and various wading birds.

Wetlands along the corridor are important to the surrounding biological communities because they provide primary wetland functions (e.g., wildlife habitat, erosion control, etc.). However the impacted wetlands would be along the fringes of larger wetland systems that provide the majority of these functions. Therefore, the importance of these functions provided by the smaller fringe wetlands and the uniqueness of these fringe wetlands relative to the total wetland resources they are associated with would be negligible. The larger system would still function comparatively the same after the improvements had been made.

In addition, there are several stormwater management systems throughout the project corridor that contain hydrophytic vegetation. The vegetation in these systems is typically mowed by FDOT or FEC maintenance crews when surface water is not present or mechanically excavated when the vegetation affects the management capacity of the stormwater systems. Furthermore, it is believed that FDOT or FEC would have already mitigated for the wetlands that were impacted by the original construction of the FEC corridor and adjacent roadways, including wetland impacts resulting from the construction of the stormwater management systems. The hydrophytic vegetation persists in the stormwater management systems or has colonized them due to manmade hydrology.

Regulatory agencies would typically not require additional mitigation for impacts to such stormwater management systems because mitigation has already been provided to offset the loss of the wetlands that existed prior to the construction of the stormwater management systems.

However, recently USACE has stated they would require mitigation for stormwater areas that exhibit wetland qualities. Therefore, if at the time of permitting any of the regulatory agencies claim jurisdiction over the stormwater management systems and require impacts to them to be mitigated, these areas will be further delineated based on conditions at that time and the extent of impacts determined based on the best available design estimates. Any loss of wetland function would be mitigated by replacement of the drainage feature in-kind. Changes to the existing stormwater management system resulting from the proposed improvements are not anticipated.

4.1 Wetland Classification and Description

The following provides a description of potential unavoidable wetland community impacts. Because the PD&E phase only requires preliminary design to be completed, some of the impact areas may change during the Final Design phase.

Estuarine Emergent Marsh

FLUCCS: 6420 – Saltwater Marsh
USFWS: E2EM1P / E2EM1U

These wetland communities have a representative suite of salt tolerant emergent plant species such as Cordgrasses (*Spartina* sp.), Needlerush (*Juncus* sp.), Seashore Saltgrass (*Distichlis spicata)*, Saltwort (*Batis maritime*), Glasswort (*Sarcocornia ambigua*), Seashore Dropseed (*Sporobolus virginicus*), and Seaside Ox-eye Daisy (*Borrichia frutescens*). Periods of inundation are dictated by tidal fluctuations, with vegetation communities stretching from tidal flats to near uplands boundaries.

(3.07 acres in St. Johns County and 6.17 acres in Volusia County)

Estuarine Deepwater Tidal Habitats and Adjacent Tidal Wetlands

FLUCCS: 5110 – Natural Waterways
USFWS: E1UBL

These systems are semi-enclosed by land but have open, partly obstructed, or sporadic access to the ocean, with ocean-derived water at least occasionally diluted by freshwater runoff from the land. The unconsolidated bottom contains less than 30% vegetative cover.

(0.57 acres in St. Johns County and 0.33 acres in Volusia County)

Estuarine Scrub-Shrub Wetland

FLUCCS: 6120 – Mangrove Swamp
USFWS: E2SS3U

Coastal hardwood community composed of red mangrove (*Rhizophora mangle*) and/or black mangrove (*Avicennia germinans*) which is pure or predominant. The major associates include white mangrove (*Laguncularia racemosa*), buttonwood (*Conocarpus erectus*), cabbage palm (*Sabal palmetto*) and sea grape (*Coccoloba uvifera*).

(0.45 acres in Martin County)

Palustrine Emergent Marsh

FLUCCS: 6410 – Freshwater Marsh
USFWS: PEM1R

Seasonal freshwater tidal wetlands dominated by emergent vegetation. These areas are characterized by erect, rooted, herbaceous hydrophytes, such as Sawgrass (*Cladium jamaicensis*), Cattails (*Typha sp.*), Arrowhead (*Sagittaria sp.*), Buttonbush (*Cephalanthus occidentalis*), Cordgrass (*Spartina bakeri*), Switchgrass (*Panicum virgatum*), Bulrush (*Scirpus americanus*), and Needlerush (*Juncus effuses*).

(2.04 acres in St. Johns County)

Palustrine Mixed Scrub-Shrub Wetland

FLUCCS: 6460 – Mixed Scrub Wetland
USFWS: PSS1

Nontidal freshwater wetlands dominated by broad-leaved deciduous woody vegetation less than 6 m (20 feet) tall.

(0.67 acres in St. Johns County and 0.13 acres in Martin County)

Palustrine Forested Wetland – Cypress

FLUCCS: 6210 – Cypress
USFWS: PFO6F

This freshwater community is composed of pond cypress (*Taxodium ascendens*) or bald cypress (*Taxodium distichum*) which is either pure or predominant. In the case of pond cypress, common associates are swamp tupelo (*Nyssa sylvatica*) and slash pine (*Pinus elliottii*). In the case of bald cypress, common associates are red maple (*Acer rubrum*), American elm (*Ulmus Americana*), Carolina ash (*Fraxinus caroliniana*), and water hickory (*Carya aquatica*).

(1.29 acres in Flagler County)

Palustrine Freshwater Aquatic Beds (man-made excavation)

FLUCCS: 6450 – Submerged Aquatic Vegetation
USFWS: PAB4Hx

Freshwater wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season, primarily in protected portions of slow-flowing rivers modified by man.

(0.2 acres in Martin County)

Wetlands in the area of the St. Augustine station Alternatives 1 and 2 are similar and can be classified as saltwater marsh and deepwater tidal habitats. These estuarine wetland communities have a representative suite of salt tolerant plant species such as Cordgrasses (*Spartina* sp.),

Needlerush (*Juncus* sp.), Seashore Saltgrass (*Distichlis spicata*), Saltwort (*Batis maritime*), Glasswort (*Sarcocornia ambigua*), Seashore Dropseed (*Sporobolus virginicus*), and Seaside Ox-eye Daisy (*Borrichia frutescens*).

4.2 Secondary Impacts

Significant hydrological and water quality impacts are not anticipated to result from the project since the proposed improvements are within the existing facility's right of way and any impacts would be confined to the right of way. Stormwater management systems would not be impacted. Any potential minor increase in impacts would be negligible considering the existing impacts to which these wetlands are currently subjected.

4.3 Cumulative Impacts

Cumulative impacts are defined as the direct and indirect effects of the proposed project under consideration as well as other projects that may be proposed for the general vicinity in the foreseeable future. The proposed improvements to the FEC rail corridor would contribute to cumulative impacts in the specific area of the rail.

The potentially impacted wetlands are along an existing rail corridor that has not seen, nor is anticipated to experience, a significant amount of pressure for development. Contributions to cumulative effects associated with the build alternative on wetlands would be limited to those derived from the direct and secondary impacts of the action. Although improvements along the corridor are not known at this time, there is an increased potential for development in the vicinity of the proposed stations. All but one preferred station location are in urban cores with no available wetland habitat.

The cumulative loss of wetland habitat from any project needs to be addressed in the mitigation provided for them. Section 7.0 describes the conceptual mitigation plan for the FEC Amtrak project with the intent of no net loss of wetland habitat.

5.0 ESSENTIAL FISH HABITAT

The proposed project was also evaluated for potential impacts to Essential Fish Habitat (EFH) as required by the Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended 1996 (Magnuson-Stevens Act). The 1996 amendments to the Magnuson-Stevens Act set forth a number of mandates for the National Marine Fisheries Service (NMFS), eight regional Fishery Management Councils (FMCs), and other federal agencies to identify and protect important marine and anadromous fish habitat. The EFH identified in Fishery Management Plan Amendments of the South Atlantic FMC includes estuarine areas, estuarine emergent wetlands, estuarine scrub/shrub mangroves, submerged aquatic vegetation, oyster reefs and shell banks, intertidal flats, palustrine emergent and forested wetlands, aquatic beds and estuarine water column.

The rules also direct FMCs to consider a second, more limited habitat designation for each species in addition to EFH. Habitat Areas of Particular Concern (HAPCs) are described in the rules as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. In general, HAPCs include high value intertidal and estuarine habitats, offshore areas of high habitat value or vertical relief, and habitats used for migration, spawning and rearing of fish and shellfish.

EFH and HAPCs are found throughout portions of the study area for the following species as shown in Exhibit 5-1 (SAFMC, 2009):

- ***Snapper Grouper Complex***. Includes 21 species of sea bass and groupers (family Serranidae), the wreckfish (*Polyprion americanus*), 14 species of snappers (family Lutjanidae), 9 species of porgies (family Sparidae), 11 species of grunts (family Haemulidae), 8 species of jacks (family Carangidae), 3 species of tilefishes (family Malacanthidae), 3 species of triggerfishes (family Balistidae), 2 species of wrasses (family Labridae), and the Atlantic spadefish (*Chaetodipterus faber*).

- ***Penaeid Shrimp***. Includes White shrimp (*Litopenaeus setiferus*), Pink shrimp (*Farfantepenaeus duorarum*), Brown shrimp (*Farfantepenaeus aztecus*), Rock shrimp (*Sicyonia brevirostris*), and Royal red shrimp (*Pleoticus robustus*).

- ***Spiny Lobster*** (*Panulirus argus*).

- ***Coral Reef and Hard Bottom***. Varied coral species and coral reef communities

The proposed stations and the adjoining areas in Daytona Beach, Titusville, Cocoa, Melbourne, Vero Beach, Fort Pierce and Stuart do not contain EFH or HAPCs. The San Sebastian River contains EFH and HAPCs in the vicinity of the St. Augustine station locations. If rail alignment is determined to be necessary, rail improvements as part of the station development may impact 0.28 acres or 0.29 acres of estuarine deepwater subtidal habitat within the FEC Railway right-of-way at Alternatives 1 and 2, respectively.

EFH and HAPCs within the project corridor are associated with the bridge crossings as identified in Exhibit 5-1. Bridge improvements are not proposed under this proposed action; however, the curved approach to Turnbull Creek Bridge may require realignment. Approximately 0.33 acres of intertidal estuarine deepwater EFH within the FEC Railway right-of-way are traversed by the bridge and are not anticipated to be impacted by the proposed curve improvements. No other EFH or HAPCs would potentially be impacted due to proposed rail improvements.

EXHIBIT 5-1
Mainline and Preferred Stations Potential Essential Fish Habitat

County	Location	EFH Type	HAPC Type	Habitat Type	Potential Effect
St. Johns	San Sebastian River	SG, SL	SG, PS	Estuarine Deepwater Subtidal	St. Augustine Station Alternative 1 - 0.28 ac St. Augustine Station Alternative 2 – 0.29 ac
Volusia	Tomoka River	SG, SL	--	Estuarine Deepwater Subtidal & Intertidal	None
	Rose Bay	SG, SL,	--	Estuarine Deepwater Subtidal	None
	Turnbull Bay	SG, SL	--	Estuarine Deepwater Subtidal	None
	Turnbull Creek	SG, SL	--	Estuarine Deepwater Intertidal	Curve improvement - 0.33 ac
Brevard	Eau Gallie River	SG, SL,		Riverine Tidal	None
	Crane Creek	SG,SL		Riverine Tidal	None
	Turkey Creek	SG, SL,		Riverine Tidal	None
Indian River	Sebastian River	SG, SL		Estuarine Deepwater Intertidal	None
St. Lucie	Taylor Creek	SG, SL,		Estuarine Deepwater Subtidal	None
Martin	St. Lucie River	SG, SL,	SG, PS	Estuarine Deepwater Sub-tidal	None
Palm Beach	Jupiter River	SG, SL,	SG, PS, CR	Estuarine Deepwater Subtidal	None

Notes:
1. Abbreviations:
   SG - Snapper Grouper Complex
   PS – Penaeid Shrimp
   SL - Spiny Lobster
   CR – Coral Reef and Hard Bottom
2. Study area does not include EFH in Duval and Flagler Counties

The No-build Alternative would not impact EFH or HAPCs. The preferred alternative has a potentially to impact a total of 0.61 acres of EFH (0.28 acres as a result of the St. Augustine Station Alternative 1 and 0.33 acres as a result of the proposed curve improvements). Since bridge

improvements are not included under this proposed scope of work, EFHs would not be impacted at Turnbull Creek. Rail improvements at the preferred St. Augustine station may modify the existing bank along the waterway which provides shelter and substrate to which algae and invertebrate food sources can affix. However, it is anticipated that this bank area will be replaced with similar substrate so that algae and invertebrate food sources will once again be able to affix and shelter would be available. Therefore, any impact would be considered temporary. In addition, since the permanent impacts to EFH also would permanently impact jurisdictional wetlands, the preferred mitigation options will offset the permanent impacts to both. Consequently, this project will not adversely affect areas identified as EFH.

6.0 AVOIDANCE AND MINIMIZATION ANALYSIS

Federal, state and local regulations require that efforts be made to avoid and/or minimize impacts to wetlands whenever practicable.

Every opportunity to avoid impacts to wetlands was explored to the extent practicable in the selection of alignments and designs. The "No-Build" alternative was also investigated and would not involve wetland impacts. This alternative, however, would not provide the opportunity for additional service on the existing rail facility addressing the need for increased regional commuter options. The "No-Build" alternative will remain a viable option through the public hearing process.

While some impacts to jurisdictional wetlands associated with the rail curves are unavoidable, minimization of these impacts will be ensured through innovative rail design, including cross-sections of minimum practicable width and adherence to standard erosion and turbidity control measures.

Wetland impacts will be mitigated with the replacement of these wetland functions at a minimum ratio of 1:1 within the same basin to not only meet the environmental resource permitting regulations, but also provide improved wetland quality in the area. Additional opportunities for avoidance and minimization will continue to be explored throughout the project. Furthermore, minimization will be implemented during construction through the use of any measures included in FDOT's "Standard Specifications for Road and Bridge Construction".

7.0 CONCEPTUAL MITIGATION

As the project is further developed and proceeds through permitting, specific wetland impacts would be further defined. The functions and values of impacted wetlands will be evaluated using the "Florida Uniform Wetland Mitigation Assessment Methodology" (UMAM) (Chapter 62-345, Florida Administrative Code) during the permitting process. UMAM is a process developed by FDEP and SFWMD that is to be used by all permitting agencies in the State of Florida to assess the amount of mitigation required to offset adverse impacts to wetlands and other surface waters and to determine mitigation bank credits awarded and debited.

To determine the value of functions provided by impact and mitigation sites, the method considers current condition of the site; hydrologic connection; uniqueness; location; fish and wildlife; time lag;

and mitigation risk. The wetland function of a site is scored and the wetland functional loss of the impact site is calculated to determine the amount to be offset by an equal value of functional gain at the proposed mitigation site.

It is anticipated that wetland impacts that would result from the construction of this project would be mitigated pursuant to S. 373.4137 F.S. to satisfy all mitigation requirements of Part IV. Chapter 373, F.S. and 33 U.S.C.s. 1344. Any mitigation requirements would be coordinated further during permitting.

As per 373.4137 Florida Statutes (commonly referred to as Senate Bill 1986), compensatory mitigation of wetland impacts resulting from FDOT projects as of July 1, 1997, will be implemented by the appropriate Florida Water Management District (WMD) where the impacts occur. FDOT will fund such compensatory mitigation activities at a rate of $75,000 per impact acre (1997 dollars adjusted for inflation), with implementation to be performed by the WMDs. Mitigation performed by a WMD must be coordinated with US Army Corps of Engineers (USACE) and must satisfy all state and federal mitigation requirements. FDOT will document a clear commitment to mitigate for unavoidable impacts either through the provisions of 373.4137 Florida Statutes or through an individual project conceptual mitigation plan.

In addition, any impacted component of the stormwater drainage system would be replaced in kind, so that stormwater conveyance and treatment of the area is maintained. This would account for any potential loss of existing wetland function provided by drainage areas.

Additional wetland mitigation opportunities will continue to be evaluated throughout the subsequent Final Design phases.

8.0 COORDINATION

The Efficient Transportation Decision Making (ETDM) process was developed by FDOT to facilitate the interaction among transportation planners, regulatory and resource agencies, and affected communities to review and provide input on transportation projects. Coordination through ETDM is accomplished through an Environmental Technical Advisory Team (ETAT). The ETAT consists of planning, regulatory and resource agencies established for each of the seven geographic FDOT Districts. Each agency appoints a representative or representatives that are responsible for coordinating and performing all agency actions to satisfy their responsibility with respect to the planning and development of transportation projects. Agency responsibilities are documented in the Agency Operating Agreements with FDOT. The ETAT representatives have agency authority and responsibility to coordinate internally and represent their agency's positions.

ETDM coordination is accomplished through the Environmental Screening Tool (EST) which is an internet-accessible GIS application that provides information about planned transportation projects and the surrounding environment, enabling ETAT members and the community to examine potential project effects on natural, cultural, and community resources.

On March 11, 2010, the projects were made available on EST to the ETAT members, which include the USACE, National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (FWS), US Environmental Protection Agency (EPA), Florida Fish and Wildlife Conservation Commission (FWC), Florida Department of Environmental Protection (FDEP), and South Florida Water Management District (SFWMD) as well as local environmental agencies and other governmental agencies. The ETDM identified potential involvement with the wetlands described in this report.

During the months of April and May 2010 responses were received from EPA, USACE, NMFS, FWS, FDEP, FWC, and SFWMD in regards to wetland impacts. Degree of Effect ranged from Minimal to Moderate for the Mainline and St. Augustine Station Alternatives and from None to Minimal for the other station locations. Overall, the responses supported the assessment of potential wetland impacts, the avoidance minimization of impacts, and mitigation for the unavoidable impacts.

Regulatory coordination will continue throughout project level design development and permitting.

9.0 CONCLUSION

Potential impacts to wetlands were evaluated for the proposed improvements along the existing FEC corridor from Palm Beach to Jacksonville, including alternatives for eight potential station locations and the Northwood Crossover to meet the requirements of Section 404 of the Clean Water Act of 1972, Presidential Executive Order 11990 (May 23,1977), U.S. Department of Transportation (USDOT) Order 5660.1A (August 24, 1978), and Federal Highway Administration (FHWA) Technical Advisory T6640.8A (October 30, 1987).

Considering all wetlands within the existing 100 foot FEC right-of-way 1,000 feet into and out of the curves, there is a potential for direct impacts to approximately 14.4 acres of freshwater and estuarine wetlands associated with curve improvements along the existing FEC mainline track. This estimate is intended to be conservative and actual impacts will be dictated by the final curve designs. In addition, the preferred Station Alternative (Alternative 1) in St. Augustine would account for approximately 0.35 acres of estuarine impacts.

Along with the wetlands there is a potentially to impact a total of 0.61 acres of EFH (0.28 acres as a result of the St. Augustine Station Alternative 1 and 0.33 acres as a result of the proposed curve improvements). Since bridge improvements are not anticipated, EFHs would not be impacted at the curve improvements. Improvements at the preferred St. Augustine station would be considered temporary if occurred. Consequently, this project would not adversely affect areas identified as EFH.

As the project is further developed it will be ensured that all additional avoidance and minimization opportunities are implemented. For unavoidable wetland/habitat impacts associated with the proposed project, mitigation will be provided in accordance with Chapter 373.4137 Florida Statutes. Additional wetland mitigation opportunities will continue to be investigated throughout the subsequent Final Design phases.

No significant impacts are anticipated to wetlands as a result of the proposed project; however, all necessary agency coordination would take place at the 'project-level' analysis stage for permitting requirements.