SOUTH FLORIDA EAST COAST
CORRIDOR TRANSIT ANALYSIS STUDY

www.sfeccstudy.com

Phase 2 Permit Conditions and Construction Impacts Technical Memorandum

Prepared by:

Gannett Fleming

May 2010

Gannett Fleming

MEMORANDUM

To: Scott Seeburger

From: Rob McMullen

Date: May 13, 2010

Subject: South Florida East Coast Corridor Transit Analysis (SFECCTA) Study: Permit Conditions and Construction Impacts Technical Memorandum

INTRODUCTION

Purpose

This purpose of this technical memorandum is to present a preliminary discussion of the permits that may be required and potential construction impacts that may result from the proposed improvements. Permit conditions and potential construction impacts discussed in this technical memorandum will require continued consultation and coordination with regulatory agencies to reduce or avoid impacts during construction. Additional environmental assessments, conducted in subsequent project-level environmental analyses, would allow for a more precise evaluation of the required permits as well as construction related impacts for the proposed transit improvements.

Project Description

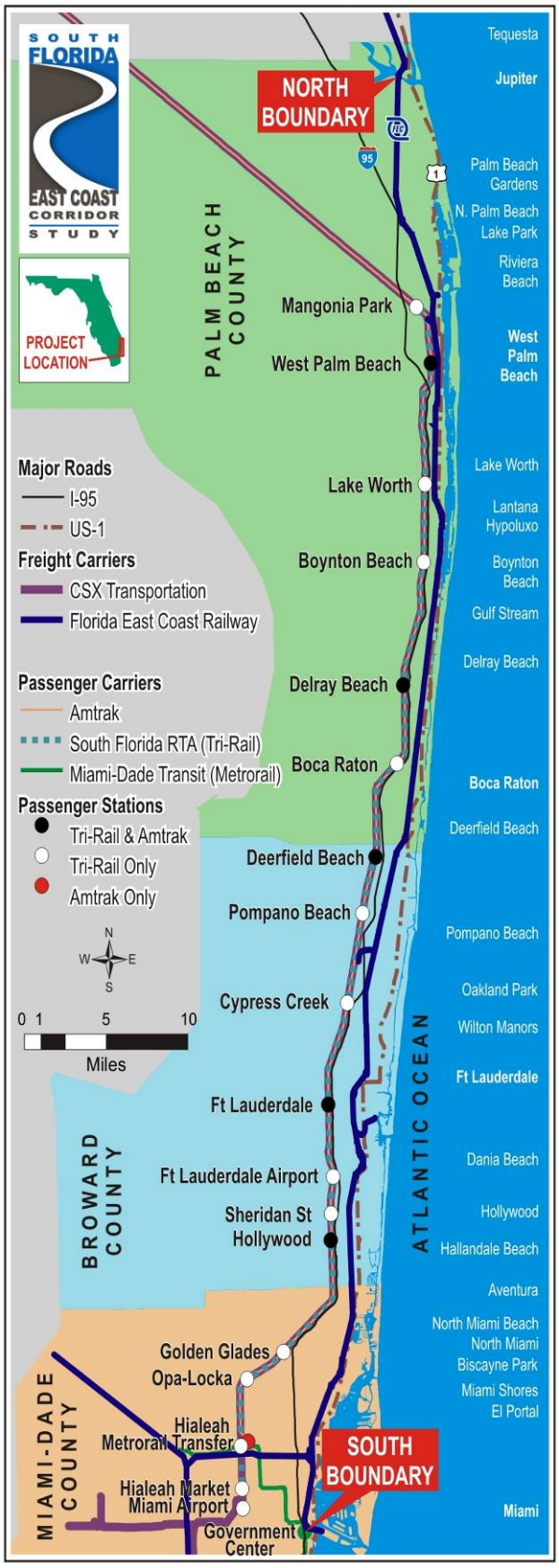
The Florida Department of Transportation (FDOT) initiated the multi-phased South Florida East Coast Corridor Transit Analysis (SFECCTA) study in December 2005 recognizing that the Florida East Coast (FEC) Railway was and is a unique transportation asset that should be evaluated and developed in the context of regional transportation issues, priorities and needs. The SFECCTA study is designed to evaluate the reintroduction of passenger service along a portion of the FEC Railway corridor from Miami to Jupiter. In its second phase, the SFECCTA study continued the Alternative Analysis (AA) – Early Scoping process that was initiated in Phase 1. A discussion of the Phase 1 AA may be found in the Phase 1 Conceptual Alternatives Analysis/Environmental Screening Report (AA/ESR) on the project website (http://www.sfeccstudy.com/).

Phase 2 of the SFECCTA was initiated in January 2009 and was designed to build upon the Phase 1 AA to refine and further develop through an iterative process the alternatives identified at the conclusion of the first phase. The primary focus of Phase 2 was to identify a locally preferred alternative (LPA) within the study area, in accordance with Federal Transit Administration (FTA) and FDOT project development processes, that could ultimately be submitted to FTA for federal assistance in the form of New Starts funding. A Phase 2 Draft Detailed Environmental Screening Report (ESR) has been prepared to describe the detailed environmental screening approach conducted as part of the Phase 2 AA and is supported by a series of technical memoranda and reports like the one presented here.

Project Area

The SFECCTA project area, illustrated on the Project Location Map (Figure 1), is bounded on the south by Flagler Street, just south of the Miami-Dade Government Center, in the City of Miami and on the north by the southern shoreline of the Loxahatchee River in the Town of Jupiter. The western boundary of the project area runs parallel to and 0.5-mile west of the South Florida Rail Corridor (SFRC)/Tri-Rail corridor from the Miami Intermodal Center (MIC) north to Mangonia Park then continues in a northwesterly direction parallel to and 0.5-mile west of I-95 to the southern shoreline of Southwest Fork of the Loxahatchee River (C-18). The eastern boundary of the project area runs parallel to and 0.5-miles east of Highway US-1 from the Central Business District (CBD) of the City of Miami north to the southern shoreline of the Loxahatchee River in Jupiter.

Figure 1: Project Location Map



Within the SFECCTA *project area* are several unique *study areas* that were developed specifically to define the affected environment and screen/evaluate the various project alternatives. Generally, the affected environment is a Geographic Information System (GIS) inventory of environmental, social, and cultural resources that could be affected by the proposed improvements. The affected environment and screening process are defined and documented in the Draft ESR.

The primary study area, where most of the improvements are expected to occur, is the FEC Railway corridor that extends from the CBD of the City of Miami north to the Town of Jupiter in Palm Beach County (a linear distance of approximately 83 miles). A detailed description of each study area and environmental screening methodology is provided in Chapter 3 and Appendix A, respectively, of the Draft ESR.

1.0 Permit Conditions

Implementing premium transit service within the SFECCTA study area would require federal, state, county, and municipal permits and approvals prior to the start of construction. Most federal and state permits would apply uniformly to the entire project area while county and city permits will vary between the three counties and 28 municipalities along the FEC Railway. City and county permits, while not a major focus at this stage in the development of the project, would need to be addressed for the construction of stations and operations and maintenance facilities within different cities along the

corridor. The requirements for these permits would be addressed in subsequent phases of the study.

The following list describes federal, state and local permits anticipated for this project:

- Section 404 General or Individual Permit — The U.S. Army Corps of Engineers (USACE) administers Section 404 of the *Clean Water Act* (CWA) on behalf of the EPA. Section 404(b)(1) regulates activities in "Waters of the United States," defined as navigable waterways and their tributaries. "Waters of the United States" may include wetlands with a surface water connection to a navigable waterway. A Section 404 individual permit would be required from the USACE for the discharge of dredged or fill material into "Waters of the United States".
- Section 401 Water Quality Certification — Section 401 of the CWA requires that an applicant for a federal permit that may result in a discharge to "Waters of the United States" must first obtain water quality certification from the applicable state (usually with the application for the Environmental Resource Permit).

Waters of the United States (40 CFR 230.3(s)) is defined by the EPA as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:

   (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   (iii) Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

The proposed project would cross three navigable waterways and 14 non-navigable waterways. It is possible that the construction or modification of railway bridges would impact adjacent or downstream wetlands. As such, a USACE Section 404 general permit and Section 401 Water Quality Certification would likely be required.

- U.S. Coast Guard (USCG) Bridge Permit – Federal law prohibits the construction of any bridge across navigable waters of the United States unless first authorized by the USCG. The USCG approves the location and clearances of bridges through the issuance of bridge permits or permit amendments, under the authority of Section 9 of the Rivers and Harbors Act of 1899, the General Bridge Act of 1946, and other statutes. This permit is required for new construction, reconstruction or modification of a bridge or causeway over navigable waters of the United States.

USCG Bridge Permit(s) would be necessary for the construction of new railway bridges over the New River, Dania Cutoff Canal, and Hillsboro Canal.

- National Pollutant Discharge Elimination System (NPDES) – The EPA developed the federal NPDES stormwater permitting program in two phases. Phase I, promulgated in 1990, addresses the following sources:
    - "Large" and "medium" municipal separate storm sewer systems (MS4s) located in incorporated places and counties with populations of 100,000 or more, and
    - Eleven categories of industrial activity, one of which is large construction activity that disturbs five or more acres of land.
- Phase 2 of the NPDES, promulgated in 1999, addresses additional sources, including MS4s not regulated under Phase I, and small construction activity disturbing between one and five acres. In October 2000, EPA authorized the FDEP to implement the NPDES stormwater permitting program in the State of Florida (in all areas except Tribal lands).

A NPDES construction permit is required for all FDOT construction activities identified in the aforementioned NPDES *General Permit for Storm Water Discharges from Construction Activities* published in the Federal Register, (Vol. 63, No. 61, Tuesday, March 31, 1998). Stormwater discharge will be a factor for the vast majority of construction activities within the project area.

To use the General Permit, a Notice of Intent (NOI) must be submitted to the EPA at least two days before any soil disturbing activities take place. The NOI is a formal document that will be processed by the FDOT District Permit Coordinator. Before submitting the NOI, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared in consultation with Design, Construction and Environmental personnel, as required. A general SWPPP may be drafted to cover macro-level efforts to control stormwater while individual SWPPPs may be necessary to address the micro-level efforts at station sites, grade crossings, east-west connectors, and O&M facilities.

- South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP) – An ERP must be obtained before beginning any activity that could affect wetlands, alter surface water flows, or contribute to water pollution. The proposed drainage improvements resulting from the project-level NEPA study will require a preliminary conceptual master permit (Conceptual ERP). This conceptual master permit must be followed by permit modifications obtained for each project segment during the design phase (Construction Authorization Permits).

An ERP would be required for the construction of new railway bridges over the New River, Dania Cutoff Canal, Hillsboro Canal and any other waterway crossing affecting wetlands.

- SFWMD Right-of-Way (ROW) Occupancy Permit – A SFWMD ROW Occupancy Permit is actually a revocable license granted pursuant to the Water Management District's proprietary interest in the rights-of-way.

In addition to crossings over navigable waterways and tributaries, proposed SFRC-FEC Railway Connections are proposed to run along canal right-of-ways. Such an option, in addition to the previously mentioned waterway crossings, will require a SFWMD ROW Occupancy Permit.

- Florida Fish and Wildlife Conservation Commission (FWC) Site-Specific Relocation Permits – Authorize trapping and relocation of gopher tortoises either within the boundaries of the area being developed (on-site) or from one specific area to a certified recipient site (off-site).

The majority of the project corridor traverses urbanized and developed land that is void of natural habitat that would support native species requiring relocation. However, along the northern section of the FEC Railway corridor, through portions of Palm Beach County, are large tracts of natural habitat that may support native species. These native species would require trapping and relocation to avoid being impacted.

- FWC Eagle Permit – An FWC Eagle Permit would be required if the project is unable to:
    - Avoid clear-cutting within 330 feet of the nest at any time and emergency provision is not in effect.
    - Avoid construction of log transfer facilities and in-water log storage areas within 330 feet of the nest. Use of any existing road may continue at the historic rate, but avoid routing logging traffic within 330 feet of an active nest during the nesting season.
    - Avoid timber harvesting, replanting, or other silvicultural operations, including road construction and chain saw and yarding operations, within 660 feet of the nest tree during the nesting season.
    - Avoid prescribed burning within 330 feet of the nest or the installation or maintenance of fire lines within 660 feet of the nest during the nesting season.
    - Avoid use of heavy equipment within 50 feet of the nest tree is planned for an activity.

The FWC would work with the U.S. Fish and Wildlife Service (USFWS) to implement a single permit framework for bald eagles. Additional federal eagle nest permitting requirements may be imposed should bald eagles be found nesting within specified distances of the proposed project activities.

A survey of eagle nest locations within the SFECCTA study area was conducted during Phase 2 and no active eagle nests were discovered. This was confirmed by the FWC Fish and Wildlife Research Institute (FWRI) Bald Eagle Nest Data Coordinator.

Bald eagle nesting within the project area will continue to be monitored for the duration of the construction of the project in case a nest does become active and a FWC Eagle Permit is necessary.

Additional environmental assessments conducted in subsequent project-level environmental analyses would allow for more precise evaluations of local required permits. The following is a list of potential county permits that may be required:

- Miami-Dade County Department of Environmental Resource Management(DERM):
    - Surface Water Management General Permit (Drainage)
    - Class II Permit (Storm Water Management)
    - Class III Permit (Construction within Canal Right-of-Way)
    - Class V Permit (Dewatering and Excavation)
- Broward County
    - Broward County delegates drainage permits to SFWMD
    - Surface Water Management License: Projects greater than or equal to one acre in size are required to be submitted by the applicant for a formal review.

- Palm Beach
    - Palm Beach County delegates drainage permits to SFWMD

Drainage Technical Memorandum No. 2 (submitted to FDOT March 10, 2010) was produced in Phase 2 of the SFECCTA study. This memorandum documents a preliminary concept for the project stormwater management and drainage system, which has been designed in accordance with the SFWMD criteria specified in the May 1994 *Management and Storage of Surface Waters, Permit Information Manual*, Volume IV and the related documents from the other involved permitting agencies which include, Palm Beach County, Lake Worth Drainage District, Northern Palm Beach County Improvement District, Broward County Department of Planning and Environmental Protection (BCDPEP), Miami Dade County Department of Environmental Resources (DERM), and the City of West Palm Beach.

2.0 Construction

Construction activities for the proposed implementation of premium transit services along the FEC Railway will generally have temporary air, noise, vibration, water quality, vegetation, utility, traffic flow, public safety, and visual impacts for those residents and travelers within the immediate vicinity of the project area. These temporary impacts will vary along the entire corridor as stations, operations and maintenance (O&M) facilities, bridges, overpasses, and other proposed improvements are implemented. Impacts to the public stemming from the installation of these proposed improvements inside the right-of-way will be lessened somewhat since public access to the FEC Railway is restricted. However, construction outside the FEC Railway would likely have a greater potential to affect the public since it will bring the project in direct contact with public land and the motoring public. With proper planning and sequencing, construction related impacts to sensitive natural resources such as wetlands, floodplains, and critical habitats and to cultural resources would be avoided. All construction activities would involve complete coordination with FEC Railway authorities and potential coordination with SFRC/Tri-Rail and Amtrak.

Air quality impacts would result primarily from diesel-powered construction equipment emissions and dust from embankments, haul road areas, exposed subgrade surfaces, and demolition activities. Emissions from construction equipment can be minimized by properly maintaining engines. Air pollution associated with the creation of airborne particles will be effectively controlled through the use of watering or the application of other controlled materials in accordance with the latest edition of the FDOT's Standard *Specifications for Road and Bridge Construction* as directed by the FDOT Project Engineer.

Noise and vibration impacts would generally result from construction activities such as pile driving, vibratory compaction, pavement breaking and other heavy equipment operations. Buildings in the immediate vicinity of construction sites may be affected: from imperceptible effects at the lowest levels to slight foundation damage at the highest levels. Noise control measures will include those contained in the latest edition of the FDOT's *Specifications for Road and Bridge Construction*. Noise and vibration impact during construction would be evaluated according to the FTA guidance manual. The type of assessment, either qualitatively or quantitatively and the level of analysis would be determined based on the scale of the project and the surrounding land use. Contractors would be required to adhere to local construction noise and construction vibration ordinances.

Water quality impacts resulting from erosion, sedimentation, and underwater/subaqueous construction would be controlled in accordance with the latest edition of the FDOT's *Specifications for Road and Bridge Construction,* through the use of Best Management Practices, and applicable permits (e.g. National Pollutant Discharge Elimination System (NPDES) Permit).

Maintenance of traffic and sequencing of construction activities would be scheduled in order to minimize vehicle and freight train traffic delays throughout the project. Appropriate signage would be used to notify motorists of road closures, railway crossing closures, waterway closures, detours, and other pertinent information. The local news media would be notified in advance of road closings and other construction-related activities that could excessively inconvenience the community so that motorists, residents, and business persons could plan travel routes in advance.

Signage, advising of the name, address, telephone number, and email address of a FDOT contact person would be displayed at numerous on-site locations. This information would assist the public in obtaining immediate answers to questions and submitting complaints about project activity.

Access to all businesses and residences would be maintained to the extent practical through controlled construction scheduling. Traffic congestion throughout the project corridor would be expected to be minimal since a large portion of the work would occur within FEC right-of-way, which is already off-limits to vehicular and pedestrian traffic. However, increased traffic congestion may be expected at those railroad grade crossings modified made in this project because of the funneling of traffic through these locations. Partial or complete closings of crossings will be planned and scheduled in a manner so as to minimize the impact to local traffic. Construction of transit stations would likely lead to increased traffic congestion around station areas. In such instances narrow lanes or lane closures may be necessary.

Traffic delays would be controlled within the limits of the project for the duration of construction activities. The contractor would be required to maintain traffic in each direction at railroad crossings according to Section 102 Maintenance of Traffic in the latest edition of the FDOT's *Specifications for Road and Bridge Construction*. The same applies to roads impacted by station or O&M facility construction.

For the residents living along the FEC Railway right-of-way, some of the materials stored for the project may be displeasing visually; however, this is a temporary condition and should pose no substantial problem in the long term.

Construction of the railroad, crossings, and bridges requires excavation of unsuitable material (muck), placement of embankments, and use of materials, such as limerock, asphaltic concrete, ballast rock, and portland cement concrete. Demucking is anticipated at most of the wetland sites and would be controlled by Section 120 of FDOT's *Specifications for Road and Bridge Construction*.

Structures and debris would be removed in accordance with local and state agency regulations governing this type of operation. The contractor is responsible for his methods of controlling pollution on haul roads, borrow pits, and areas used for disposal of waste materials from the project. Temporary erosion control features as specified in the FDOT's Standard Specifications, Section 104, will consist of temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms.

Construction of the stations, crossings, O&M facilities, and SFRC-FEC Railway Connections could require utility relocations. Temporary service disruptions may be experienced during the relocation process. Construction activities would be planned and scheduled to minimize utility service disruptions.

Particular attention would be given to the maintenance of public safety during the duration of construction. Public access to construction sites should be limited to the greatest extent possible. This could be accomplished with temporary fencing, warning signs, and other safety precautions.

References

Florida. Department of Transportation – Specifications and Estimates Office. Standard Specifications for Road and Bridge Construction 2010. 15 Jun. 2009. 13 May. 2010 <http://www2.dot.state.fl.us/SpecificationsEstimates/Implemented/2010Bk/2010Bk.aspx>.

Florida. Fish and Wildlife Conservation Commission. Bald Eagle Disturbance Permit Application. 14 Apr. 2009. 13 May. 2010 < http://myfwc.org/docs/LicensesPermits/Eagle_DisturbancePermit.pdf>.

Florida. Fish and Wildlife Conservation Commission. Bald Eagle Management Plan. 9 Apr. 2008. 2 Nov. 2009 <http://myfwc.com/docs/WildlifeHabitats/Eagle_Plan_April_2008.pdf>.

Miami-Dade County. Department of Environmental Resource Management. Environmental Resources. 13 May. 2010 <http://www.miamidade.gov/derm/>.

South Florida Water Management District. Environmental Resource Permits. 13 May. 2010 <http://www.sfwmd.gov/portal/page/portal/levelthree/permits>.

South Florida Water Management District. Right of Way Permits. 13 May. 2010 <http://www.sfwmd.gov/portal/page/portal/levelthree/permits>.

United States Coast Guard. Bridge Guide Clearances. (33 CFR Chapter 1, Subchapter J – Bridges). 2 Nov. 2009 <http://www.uscg.mil/hq/cg5/cg5411/Bridge.asp>.

United States. Environmental Protection Agency. Clean Water Act. 33 U.S.C. §1251 et seq. (1972). 2 Nov. 2009 <http://www.epa.gov/lawsregs/laws/cwa.html>.

United States. Environmental Protection Agency. NPDES General Permit for Storm Water Discharges from Construction Activities. Federal Register. Vol. 68. No. 126. 31 Mar. 1998.

United States. Environmental Protection Agency. Region 4: Groundwater Protection. 2 Nov. 2009 <http://www.epa.gov/region4/water/groundwater/r4ssa.html>.

United States. Fish and Wildlife Service. Endangered Species. 2 Nov. 2009 <http://www.fws.gov/endangered>.