

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION  
**TECHNICAL REPORT COVERSHEET**

650-050-38  
ENVIRONMENTAL  
MANAGEMENT  
06/17

Natural Resources Evaluation

Florida Department of Transportation

District 7

SR 56 Southbound C-D Road/Ramps to I-75/I-275

Limits of Project: South of the I-75/I-275 Apex to SR 56

Hillsborough and Pasco Counties, Florida

Financial Management Number: 430573-4

ETDM Number: 14330

Date: July 2021

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

# **SR 56 Southbound C-D Road/Ramps to I-75/I-275**

## **Project Development & Environment (PD&E) Study**

### ***Natural Resources Evaluation***

Work Program Item Segment No. 430573-4

ETDM Project No. 14330

Hillsborough and Pasco Counties, Florida

Prepared for:



Florida Department of Transportation  
District Seven

Prepared by:

American Consulting Engineers of Florida, LLC  
2818 Cypress Ridge Boulevard, Suite 200  
Wesley Chapel, FL 33544

July 2021

## EXECUTIVE SUMMARY

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The Florida Department of Transportation (FDOT), District Seven, is conducting a Project Development and Environment (PD&E) study to evaluate location and design concepts for constructing a southbound collector-distributor (C-D) road system to carry the southbound on-ramps from State Road (SR) 56 to Interstate 75 (I-75) and I-275. The limits of the study are along I-75 from south of the I-75/I-275 Apex to SR 56 in Hillsborough and Pasco Counties. The study will improve the southbound operations between the I-75/I-275 and I-75/SR 56 interchanges and eliminate undesirable weaving movements. The design year for the improvements is 2045.

The PD&E study objectives include: determine proposed typical sections and develop preliminary conceptual design plans for proposed improvements, while minimizing impacts to the environment; consider agency and public comments; and ensure project compliance with all applicable federal and state laws. A Type 2 Categorical Exclusion is being prepared as part of this study. The proposed improvements will include construction of stormwater management and floodplain compensation facilities. The PD&E study satisfies all applicable requirements, including the National Environmental Policy Act (NEPA), to qualify for federal aid funding of subsequent development phases (design, right-of-way acquisition, and construction).

This *Natural Resources Evaluation* (NRE) summarizes potential impacts to federal and state listed species and their habitats, wetlands, and essential fish habitat (EFH). Several protected species have the potential to exist within the study area, though the project is not likely to adversely affect any protected species. Forested and non-forested freshwater wetlands exist along the west side of I-75 between the I-275 and SR 56 interchanges. Mitigation will be required for any impacts to wetlands pursuant to s. 373.4137, Florida Statutes (F.S.), through the purchase of mitigation credits at an approved mitigation bank, or the restoration or enhancement of wetlands within the same watershed. No EFH or protected waters are present in the project limits; therefore, no impacts to EFH are anticipated.

Identification of measures to avoid, minimize and mitigate for any potential impacts is also discussed. This NRE documents the results of geographic information system (GIS) data, field reviews, coordination to date with regulatory agencies including comments received through the Efficient Transportation Decision Making (ETDM) process, and aerial interpretation for potential impacts to the resources listed above. Coordination is being conducted with federal and state agencies throughout the study process.

### **Protected Species and Habitat**

The study area was assessed for the presence of suitable habitat for federal and/or state listed and protected species in accordance with *50 Code of Federal Regulations (CFR) Part 402 of the Endangered Species Act (ESA) of 1973*, as amended, *Chapter 5B-40: Preservation of Native Flora of Florida, Florida Administrative (F.A.C.), Chapter 68A-27: Rules Relating to Endangered or Threatened Species, F.A.C.*

and Part 2, Chapter 16 – Protected Species and Habitat of the FDOT PD&E Manual. A summary of the species effect determinations is provided below and in the table.

### **Federal Listed Faunal Species**

Desktop/agency database searches, analysis of GIS data, and field surveys were conducted in November and December of 2020 in order to determine protected species and suitable habitat that exists within the study area. Based on the evaluation, the FDOT has made an effect determination of may affect, not likely to adversely affect for the wood stork (*Mycteria americana*), eastern black rail (*Laterallus jamaicensis*) and eastern indigo snake (*Drymarchon corais couperi*) as well as a determination of no effect for the Florida scrub-jay (*Aphelocoma coerulescens*).

### **Federal Listed Floral Species**

Three federal listed floral were identified as having the potential to occur within the study area, which include the Brooksville bellflower (*Campanula robinsiae*), pygmy fringe-tree (*Chionanthus pygmaeus*), and Cooley's water willow (*Justicia cooleyi*). Minimal to no habitat is available within the study area and no species were observed; therefore, the FDOT has determined there is no effect to the long-term viability of these species by the proposed project.

### **State Listed Faunal Species**

As mentioned above, desktop and field reviews were conducted to determine if protected species and potential suitable habitat exists within the study area. Based on the evaluation, the FDOT has determined there is no adverse effect anticipated for the gopher tortoise (*Gopherus polyphemus*), southeastern American Kestrel (*Falco sparverius paulus*), Florida sandhill crane (*Grus canadensis pratensis*), short-tailed snake (*Lampropeltis extenuate*), roseate spoonbill (*Platalea ajaja*), little blue heron (*Egretta caerulea*), and tricolored heron (*Egretta tricolor*), as well as no effect anticipated for the Florida pine snake (*Pituophis melanoleucus mugitus*).

### **State Listed Floral Species**

Two state listed floral species have the potential to occur within the study area, which include the nodding pinweed (*Lechea cernua*) and leafless beaked orchid (*Sacoila lanceolata* var. *lanceolata*). The FDOT has determined only limited areas of existing habitat for these species are anticipated to be affected by the proposed project; therefore, there is no adverse effect anticipated to the long-term viability of these species by the proposed project.

### **Other Protected Species**

These are species that are no longer listed by U.S. Fish and Wildlife Service (USFWS) or Florida Fish and Wildlife Conservation Commission (FWC), but are still afforded protection. Included species are the bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), and Florida black bear (*Ursus americanus floridanus*).



### Potential Faunal Species Effect Determinations

| Species                               | Common Name                     | State Status (FWC) | Federal Status (USFWS) | Effect Determination          |
|---------------------------------------|---------------------------------|--------------------|------------------------|-------------------------------|
| <b>Reptiles</b>                       |                                 |                    |                        |                               |
| <i>Drymarchon corais couperi</i>      | Eastern indigo snake            | FT                 | T                      | MANLAA                        |
| <i>Gopherus polyphemus</i>            | Gopher tortoise                 | ST                 | C                      | No Adverse Effect Anticipated |
| <i>Lampropeltis extenuate</i>         | Short-tailed Snake              | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Pituophis melanoleucus mugitus</i> | Florida pine snake              | ST                 | --                     | No Effect Anticipated         |
| <b>Birds</b>                          |                                 |                    |                        |                               |
| <i>Aphelocoma coerulescens</i>        | Florida scrub-jay               | FT                 | T                      | No Effect                     |
| <i>Egretta caerulea</i>               | Little blue heron               | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Egretta tricolor</i>               | Tricolored (Louisiana) heron    | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Falco sparverius paulus</i>        | Southeastern American kestrel   | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Grus canadensis pratensis</i>      | Florida sandhill crane          | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Haliaeetus leucocephalus</i>       | Bald eagle <sup>1,2</sup>       | --                 | --                     | --                            |
| <i>Laterallus jamaicensis</i>         | Eastern Black Rail              | FT                 | T                      | MANLAA                        |
| <i>Mycteria americana</i>             | Wood stork                      | FT                 | T                      | MANLAA                        |
| <i>Pandion haliaetus</i>              | Osprey <sup>2</sup>             | --                 | --                     | --                            |
| <i>Platalea ajaja</i>                 | Roseate spoonbill               | ST                 | --                     | No Adverse Effect Anticipated |
| <b>Mammals</b>                        |                                 |                    |                        |                               |
| <i>Ursus americanus floridanus</i>    | Florida black bear <sup>3</sup> | --                 | --                     | --                            |

FWC=Florida Fish and Wildlife Conservation Commission, USFWS=United States Fish and Wildlife Service

MANLAA=May Affect, Not Likely to Adversely Affect

FT=Federal Threatened, T=Threatened, ST=State-designated Threatened, C=Candidate for listing under ESA

1 Protected under the Bald and Golden Eagles Protection Act (16 U.S.C. 668-668c)

2 Protected under the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

3 Protected under the Florida Black Bear Conservation Rule (68A-4.009, F.A.C.)

### Potential Floral Species Effect Determinations

| Species                                          | Common Name                     | State Status (FDACS) | Federal Status (USFWS) | Effect Determination  |
|--------------------------------------------------|---------------------------------|----------------------|------------------------|-----------------------|
| <i>Campanula robinsiae</i>                       | Brooksville bellflower          | FE                   | E                      | No Effect             |
| <i>Chionanthus pygmaeus</i>                      | Pygmy fringe-tree               | FE                   | E                      | No Effect             |
| <i>Justicia cooleyi</i>                          | Cooley's water willow           | FE                   | E                      | No Effect             |
| <i>Lechea cernua</i>                             | Nodding pinweed (scrub pinweed) | ST                   | --                     | No Effect Anticipated |
| <i>Sacoila lanceolata</i> var. <i>lanceolata</i> | Leafless beaked orchid          | ST                   | --                     | No Effect Anticipated |

FDACS=Florida Department of Agriculture and Consumer Services

FE=Federal Endangered, E=Endangered, ST=State-designated Threatened

### USFWS Critical Habitat

The study area was evaluated for Critical Habitat designated by Congress in 50 CFR 17. Review of the USFWS's available GIS data resulted in the identification of no Critical Habitat within the project area.

### Essential Fish Habitat

This study was evaluated for EFH in accordance with *Part 2, Chapter 17 – Essential Fish Habitat* of the FDOT *PD&E Manual* (July 2020) and the requirements of the *Magnuson-Stevens Fishery Conservation and Management Act* (Magnuson-Stevens Act) of 1996. No EFH is located within the study area; therefore, there will be no involvement with EFH for this study.

### Wetlands and Surface Waters

Wetlands and surface waters were classified based on the Florida Land Use, Cover and Forms Classification System (FLUCCS), the National Wetland Inventory (NWI) and the USFWS *Classification of Wetlands and Deepwater Habitats of the United States*. Within the study area there are forested and non-forested wetlands mainly along the west side of the interstate. The proposed Build Alternative would result in approximately 5.37 acres of wetland and 0.25 acre of surface water impacts based on the proposed conceptual design.

Pursuant to *Executive Order 11990* entitled *Protection of Wetlands* (May 1977), the U.S. Department of Transportation (USDOT) has developed a policy, *Preservation of the Nation's Wetlands* (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally funded highway projects to protect wetlands to the fullest extent possible. Wetland mitigation options include purchase of wetland mitigation credits through an approved mitigation bank, or creation, restoration or enhancement of wetlands within the project watersheds. Wetland impacts which will result from the

construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

#### Potential Wetland Impacts

| Wetland ID   | NWI / USFWS     | FLUCCS | Project Impact Acreage |
|--------------|-----------------|--------|------------------------|
| WL1          | PFO2F           | 6210   | 0.00                   |
| WL2          | PFO2F           | 6210   | 0.00                   |
| WL3          | PFO1/4C         | 6150   | 0.00                   |
| WL4          | PFO2F           | 6210   | 0.28                   |
| WL5          | PEM1Fx          | 6410   | 0.00                   |
| WL6          | PFO4/1C & PFO2F | 6150   | 2.35                   |
| WL8          | PFO4/1C & PFO2F | 6150   | 2.74                   |
| <b>TOTAL</b> |                 |        | <b>5.37</b>            |

NWI = National Wetlands Inventory

FLUCCS = Florida Land Use Cover and Forms Classification

#### Potential Surface Water Impacts

| Surface Water ID | NWI / USFWS | FLUCCS | Project Impact Acreage |
|------------------|-------------|--------|------------------------|
| SW7              | R2UBH       | 5100   | 0.25                   |
| <b>Total</b>     |             |        | <b>0.25</b>            |

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## **SECTION 1 INTRODUCTION**

### **1.1 PD&E STUDY PURPOSE**

The objective of the PD&E study is to assist the FDOT's Office of Environmental Management (OEM) in reaching a decision on the type, location, and conceptual design of the necessary improvements for the southbound on-ramps from State Road (SR) 56 to Interstate 75 (I-75) and I-275 to safely and efficiently accommodate future travel demand. This study documents the need for the improvements as well as the procedures utilized to develop and evaluate various improvements, including elements such as proposed typical sections, preliminary horizontal alignments, and interchange enhancement alternatives.

The PD&E study satisfies all applicable requirements, including the National Environmental Policy Act (NEPA), to qualify for federal-aid funding of subsequent development phases (design, right-of-way acquisition, and construction). This project was screened through the FDOT's Efficient Transportation Decision Making (ETDM) process as ETDM Project No. 14330. An ETDM Programming Screen Summary Report was published on February 21, 2018, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. A Type 2 Categorical Exclusion will be prepared as part of this PD&E study.

### **1.2 PROJECT PURPOSE AND NEED**

#### **1.2.1 Purpose**

The purpose of the project is to improve operations on southbound I-75 between SR 56 and the southbound off-ramp to I-275 (I-75/I-275 interchange).

#### **1.2.2 Need**

This project is needed to address the effect on operations by reducing the number of weaving vehicles in the project area.

#### **1.2.3 Roadway Capacity/Deficiencies**

I-75 currently operates at an acceptable level of service (LOS C). It is expected that by 2040 the study segment of I-75 will operate at an unacceptable level of service (LOS F).

#### **1.2.4 Safety**

The distribution of crash types on this segment of I-75 between 2014 and 2018 show that rear end crashes make up 35% of the crashes and sideswipe crashes make up 20%. These crash types are indicative of an inadequate weaving segment.

### **1.3 PROJECT DESCRIPTION**

This project consists of operational improvements on I-75/I-275 from south of County Line Road to SR 56 in Hillsborough and Pasco Counties, a distance of approximately 2.2 miles. See **Figure 1-1** for project location. This project consists of the construction of a southbound collector-distributor (C-D) road and the addition of new ramps to improve the southbound operations between the I-75/I-275 and I-75/SR 56 interchanges and eliminate undesirable weaving movements. This portion of I-75/I-275 is functionally classified by the FDOT as an urban principal arterial/interstate and is part of FDOT's Strategic Intermodal System (SIS).

### **1.4 EXISTING FACILITY AND PROPOSED IMPROVEMENTS**

Southbound I-75 from north of SR 56 consists of four through lanes. At the connection of the SR 56 southbound ramps to I-75, there are six lanes of traffic. The six lanes of traffic separate to four lanes that continue southbound on I-75 and three lanes that exit to southbound I-275. For vehicles entering I-75 from SR 56 to proceed on southbound I-75, they must weave with southbound I-75 vehicles that are exiting onto southbound I-275. The crash types in this area are indicative of an inadequate weave segment.

The Build Alternative proposes separating vehicles from the SR 56 southbound ramp and I-75 to eliminate the weave condition. Traffic from SR 56 would enter a southbound C-D road, separated from I-75 traffic. Lanes on the southbound C-D road would split traffic to I-75 and I-275 and enter the interstates downstream from the existing apex of the I-75/I-275 lane split. Southbound I-75 traffic would exit to southbound I-275 without the influence of southbound traffic from SR 56. A new bridge would be constructed south of County Line Road to carry the I-75 ramp to I-275 over the C-D road ramp to I-75. The proposed improvements would eliminate the traffic weave along I-75 between the entrance ramp to SR 56 and the exit to I-275. **Figure 1-2** shows a simplified schematic of the differences between the existing and proposed traffic routes for southbound I-75 and SR 56 ramp to I-275 and I-75 and the elimination of the existing weave zone. Additional details are found in the Preliminary Engineering Report (PER) and concept plans developed for this PD&E study.

### **1.5 REPORT PURPOSE**

This Natural Resources Evaluation (NRE) is one of several documents that are being prepared as part of this PD&E study. This report documents existing wildlife resources and habitat types found within the study area, and the potential for occurrences of federal and state listed protected plant and animal species and their suitable habitat, in accordance with *50 Code of Federal Regulation (CFR) Part 402 of the Endangered Species Act (ESA) of 1973, as amended, Chapters 5B-40 and 68A-27, Florida Administrative Code (F.A.C.), and Part 2, Chapter 16 – Protected Species and Habitat of the FDOT PD&E Manual (July 2020)*. Potential impacts to protected species and habitats that may support these species are also addressed in this report.

This report also documents the proposed project's wetlands and potential impacts. In accordance with *Part 2, Chapter 9 – Wetlands and other Surface Waters of the FDOT PD&E Manual (July 2020)*, the proposed Build alternative and a No-Build alternative were assessed to determine potential impacts to wetlands and other surface waters associated with each project.



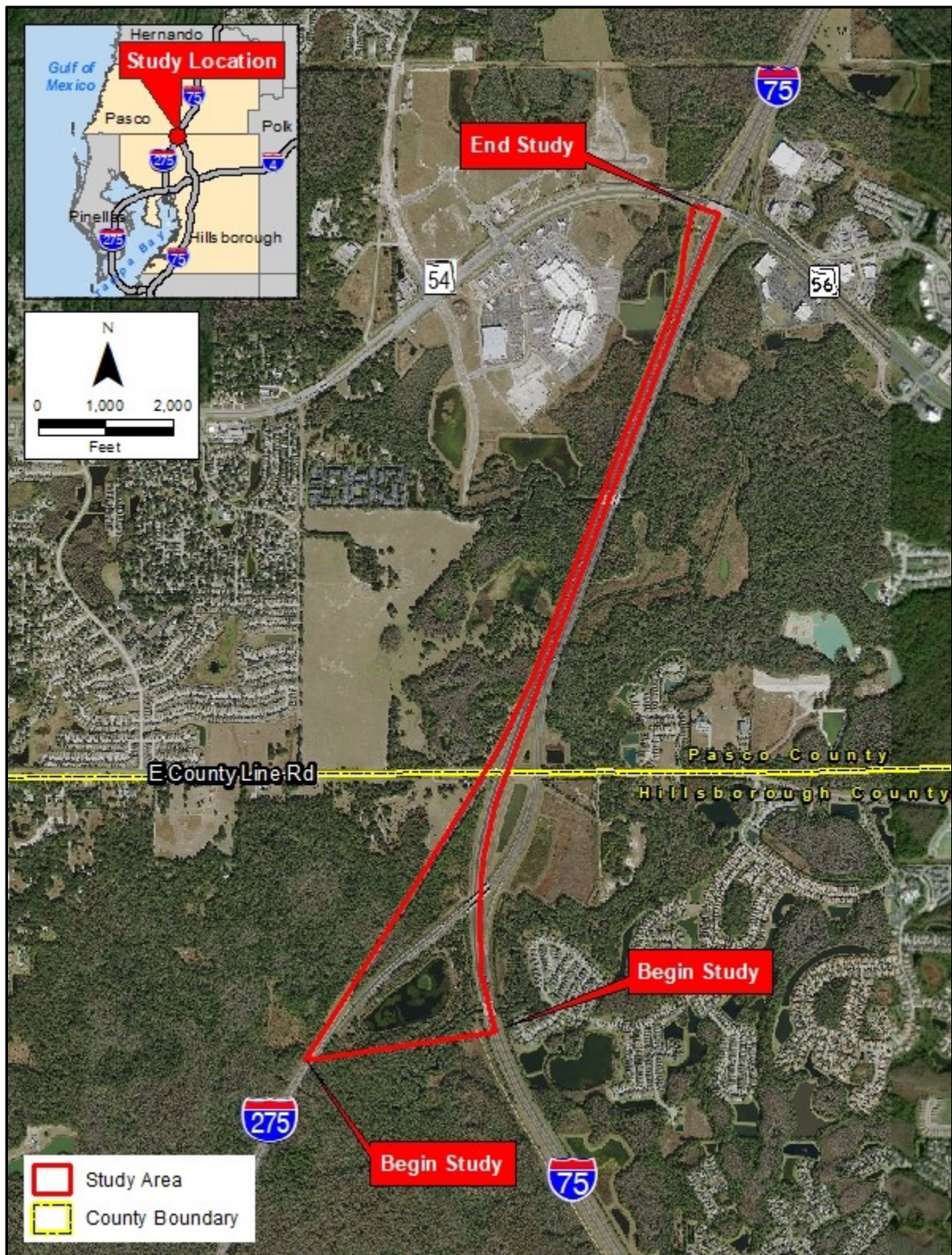
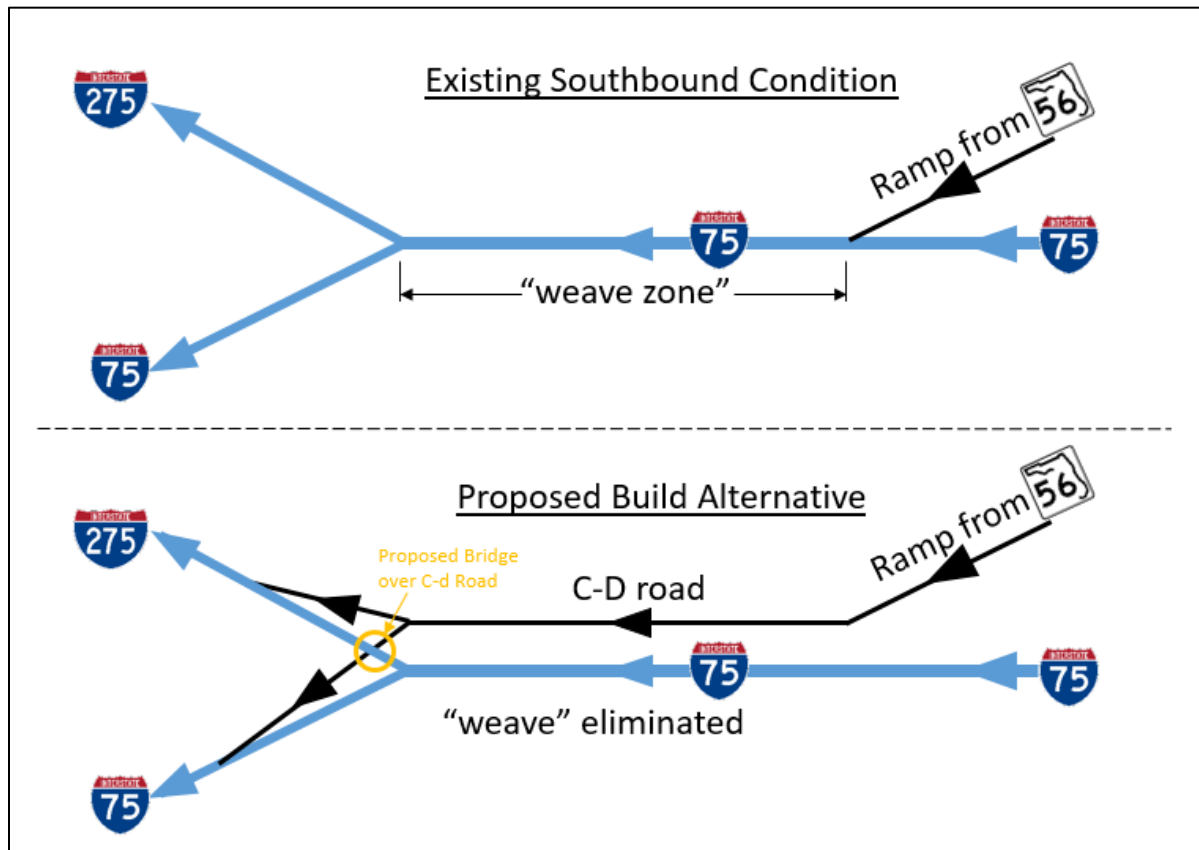


Figure 1-1 Project Location Map

**Figure 1-2 Existing and Proposed Traffic Routes for I-75, I-275 & SR 56 Ramp**



## SECTION 2 EXISTING ENVIRONMENTAL CONDITIONS

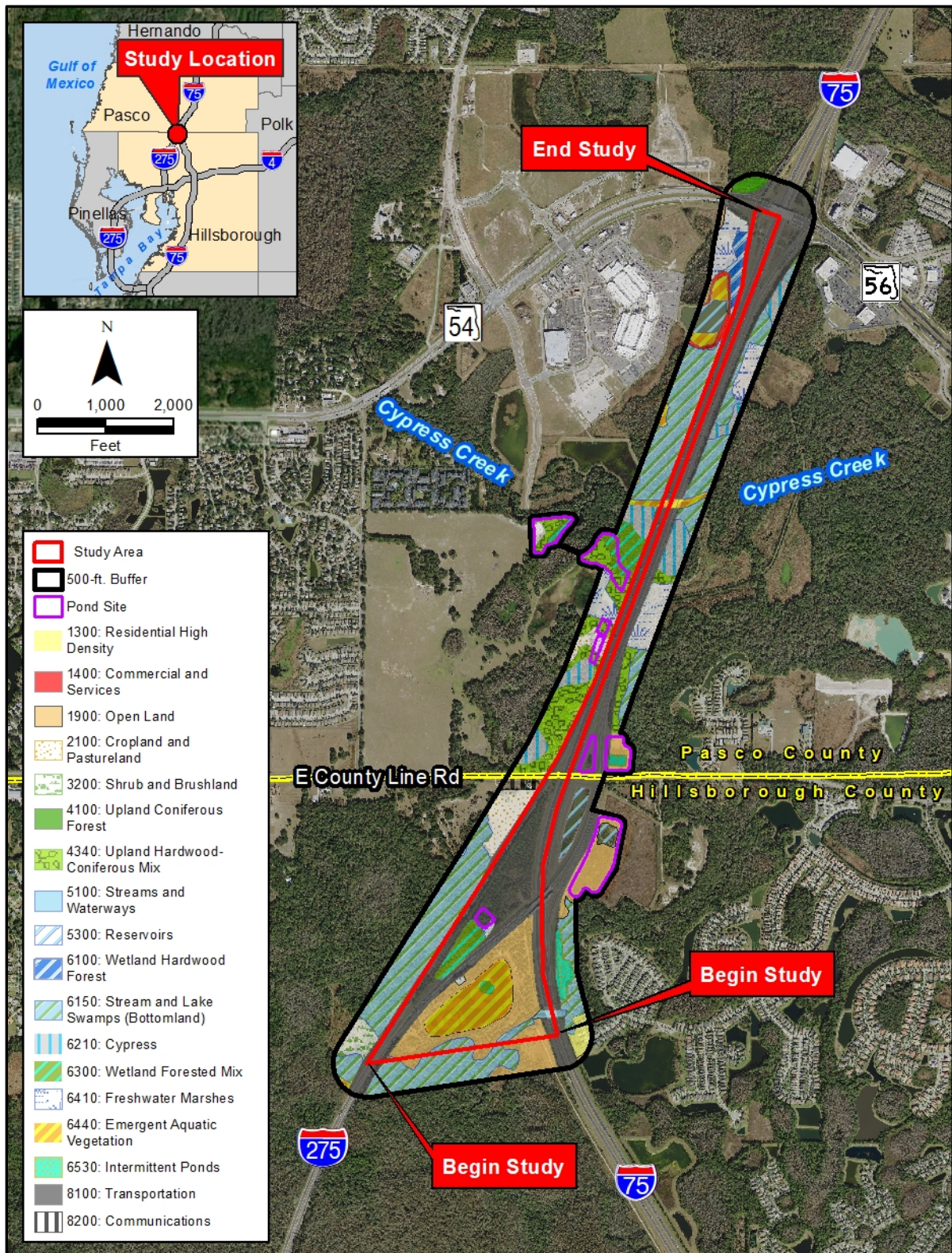
### 2.1 EXISTING LAND USE

Land use and vegetative cover within and adjacent to the study area was classified using the FDOT's *Florida Land Use, Cover and Forms Classification System* (FLUCCS). The study area, located in Hillsborough and Pasco Counties, is mostly undeveloped consisting of natural uplands and bottomlands outside of the existing interstate. FLUCCS data, aerial photographs and wetland data from the National Wetlands Inventory (NWI) were utilized to determine current land use and habitat types within the corridor. The land uses and habitat types within the project corridor were subsequently ground-truthed for verification during field visits in November and December, 2020. The land uses were identified by their FLUCCS description as well as the FLUCCS code (number that represents the type of land use). For evaluating existing land use within the study area, a 500-foot buffer was created from the existing right of way of I-75/I-275 southbound lanes from south of County Line Road to SR 56, as well as a 50-foot buffer around the proposed SMF and FPC sites. The predominant land uses within the 500-foot buffer of the study area is transportation (8100), followed by stream and lake swamps (bottomland) (6150), and open land (1900). The remainder of the land uses and their percent cover within the 500-foot buffer area are shown in **Table 2-1**. Land uses within the study area are shown in **Figure 2-1**.

**Table 2-1 Existing Land Use**

| FLUCCS       | Description                         | Acreage<br>(Approx. 500' from Centerline,<br>and SMF and FPC sites) | Percent<br>Cover |
|--------------|-------------------------------------|---------------------------------------------------------------------|------------------|
| 1300         | Residential High Density            | 3.5                                                                 | 0.6%             |
| 1400         | Commercial and Services             | 2.7                                                                 | 0.5%             |
| 1900         | Open Land                           | 59.0                                                                | 10.9%            |
| 2100         | Cropland and Pastureland            | 14.7                                                                | 2.7%             |
| 3200         | Shrub and Brushland                 | 5.2                                                                 | 1.0%             |
| 4100         | Upland Coniferous Forest            | 2.7                                                                 | 0.5%             |
| 4340         | Upland Hardwood-Coniferous Mix      | 32.7                                                                | 6.1%             |
| 5100         | Streams and Waterways               | 1.2                                                                 | 0.2%             |
| 5300         | Reservoirs                          | 11.5                                                                | 2.1%             |
| 6100         | Wetland Hardwood Forest             | 4.5                                                                 | 0.8%             |
| 6150         | Stream and Lake Swamps (Bottomland) | 118.3                                                               | 21.9%            |
| 6210         | Cypress                             | 21.9                                                                | 4.1%             |
| 6300         | Wetland Forested Mix                | 15.7                                                                | 2.9%             |
| 6410         | Freshwater Marshes                  | 26.1                                                                | 4.8%             |
| 6440         | Emergent Aquatic Vegetation         | 25.7                                                                | 4.8%             |
| 6530         | Intermittent Ponds                  | 4.6                                                                 | 0.9%             |
| 8100         | Transportation                      | 187.8                                                               | 34.8%            |
| 8200         | Communication                       | 2.4                                                                 | 0.4%             |
| <b>Total</b> |                                     | <b>540.2</b>                                                        | <b>100.0%</b>    |





**Figure 2-1 Land Use Map**

## **2.2 EXISTING UPLAND HABITATS**

As previously stated, the study area, located in Hillsborough and Pasco Counties, is mostly undeveloped consisting of natural uplands and bottomlands. The surrounding area (within 500') is largely made up of stream and lake swamps, open land, and freshwater marshes. Rural lands and wetlands provide habitat to many wildlife and plant species, some of which are protected. The upland communities are classified according to FLUCCS (FDOT 1999). Field reviews confirmed vegetation community types and the presence or potential for occurrence of protected wildlife and plant species. The major upland communities identified within and directly adjacent to the study area are described below. A description of federal and state protected species observed during field survey is also included, where applicable. These protected species are discussed in greater detail in **Section 3**.

### **Upland Hardwood-Coniferous Mix (FLUCCS 4340)**

Upland Hardwood-Coniferous Mix forests consist of well-developed, closed canopy forests dominated by deciduous and evergreen hardwood trees, mixed with conifer trees, on mesic soils with gently sloping terrain in areas sheltered from fire. This community type contains a diverse assemblage of deciduous and evergreen species in the canopy and mid-story, shade tolerant shrubs and sparse ground cover.

Observed canopy species include laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*), southern live oak (*Quercus virginiana*), slash pine (*Pinus elliottii*), cabbage palm (*Sabal palmetto*) and American elm (*Ulmus americana*). Grasses and herbaceous species observed include fourangle flatsedge (*Cyperus tetragonus*) and tall nutgrass (*Scleria triglomerata*). This land use provides potential habitat for the eastern indigo snake (*Drymarchon corais couperi*), Florida pine snake (*Pituophis melanoleucus mugitus*) and potential nesting for the bald eagle (*Haliaeetus leucocephalus*) and osprey (*Pandion haliaetus*), due to the nearby open surface waters.

### **Cropland and Pastureland (FLUCCS 2100)**

This land use type includes lands that are managed for pasture production of livestock. A mix of improved and unimproved pasturelands is present within the study area and consists of areas that are dominated by Bahia grass (*Paspalum notatum*). Land use along the SR 56 Southbound C-D Road/Ramps to I-75/I-275 study area is primarily pastureland for cattle and other livestock. Large areas of land to the west of the study area are used for housing and feeding for these animals. These open areas may provide foraging opportunities for avian species including Florida sandhill crane (*Grus canadensis pratensis*) as well as grazing for gopher tortoises (*Gopherus polyphemus*).

The ruderal and unimproved pasture sites include areas where the naturally occurring vegetation was previously cleared for agriculture, pasture or other intended uses, but were not maintained resulting in abundant pioneer species. Dominant ground cover species observed in these areas include Bahia grass and Pangola grass (*Digitaria eriantha*), mixed with pioneering native species such as common pricklypear (*Opuntia ficus-indica*) and southern blackberry (*Rubus trivialis*). Observed tree or shrub species include the common persimmon (*Diospyros virginiana*), black cherry (*Prunus serotina*), laurel



oak, and slash pine. These open areas can potentially provide foraging opportunities for avian species including Florida sandhill crane, as well as grazing for gopher tortoises.

#### **Shrub and Brushland (FLUCCS 3200)**

A variety of shrub species including saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), wax myrtle (*Morella cerifera*), dominate this habitat type within the study area. Occasional oak trees, slash pines, and cabbage palm are present in this habitat, though they do not form a full canopy. Understory vegetation consisted of bluestem grasses (*Andropogon* spp.). Nuisance and exotic species coverage in these areas is variable but generally considered low. This land use type within the study area may provide habitat for the eastern indigo snake as well as foraging opportunities for the gopher tortoise.

#### **Upland Coniferous Forest (FLUCCS 4100)**

Any natural forested habitat which is dominated by a coniferous canopy of at least 66 percent is included in this habitat type. Areas identified as this habitat type within the study area consist mainly of longleaf pine (*Pinus palustris*). Understory vegetation in these areas consists of cabbage palm and longleaf pine saplings. Other species observed included white beggar-ticks (*Bidens alba*) and Caesarweed (*Urena lobata*). Brazilian pepper (*Schinus terebinthifolia*) was the primary exotic species observed with low coverage. This land use type may provide foraging habitat for the gopher tortoise, though no species were observed during field reviews.

### **2.3 EXISTING WETLAND AND SURFACE WATER HABITATS**

Wetlands and jurisdictional surface waters were identified adjacent to or within the study ROW, as well as the preferred stormwater management facility (SMF) sites and floodplain compensation (FPC) locations. The majority of these wetlands are freshwater forested systems. There were also some freshwater marshes located within the study area. The majority of the surface waters identified are existing SMF sites. Wetlands and surface waters that have the potential to be impacted by the proposed project improvements have been classified by the FLUCCS codes (FDOT 1999) as well as the U.S. Fish and Wildlife Service's (USFWS) *Wetlands and Deepwater Habitats Classifications*. Representative site photographs can be found in **Appendix A**, and the locations of existing wetlands and surface waters within the study area, including SMF and FPC sites, can be found in **Appendix B**.

#### **Wetland Hardwood Forest (FLUCCS 6100)**

##### **Palustrine Forested Deciduous (PFO1&2)**

According to the FLUCCS manual, Wetland Hardwood Forests are those wetland areas which meet crown closure requirements for forestland as outlined under the Upland Forest Classification (400) (minimum 10 percent closure). One small wetland hardwood forest is located along the northern study limit, west of the SR 56 southbound on-ramp. Hydrologic conditions within these wetland areas generally consist of saturated soils to seasonal flooding. Observed species include slash pine, cabbage palm, American elm, red maple (*Acer rubrum*), and laurel, water, and live oaks. Oak species are

generally the dominant tree species found within this habitat type with red maple also abundant in some systems. Observed understory species within this habitat type include Carolina willow (*Salix caroliniana*) and fern species. No protected species were observed in this habitat type during the field reviews; however, this habitat provides foraging potential for the wood stork and other wading birds.

### **Stream and Lake Swamps (Bottomland) (FLUCCS 6150)**

#### **Palustrine Forested Deciduous (PFO1&2)**

Stream and lake swamps typically include large tree species, which have a tree cover (canopy), that meet the forested criteria threshold. For the majority of this type of freshwater forested wetland system within the study area, a mix of coniferous and deciduous trees were observed. Wetlands within the study area described as stream and lake swamps typically have a canopy including red maple, laurel oak, water oak, cabbage palms, and some live oak. Typical vegetation in the understory includes saltbush (*Baccharis halimifolia*), wax myrtle, elderberry (*Sambuca canadensis*), alligator flag (*Thalia geniculata*) and Carolina willow. No protected species were observed in this habitat type during the field reviews; however, this habitat provides foraging potential for the wood stork and other wading birds.

### **Cypress (FLUCCS 6210)**

#### **Palustrine Forested Deciduous (PFO2)**

According to the FLUCCS manual this community is composed of pond cypress (*Taxodium ascendens*) or bald cypress (*T. distichum*), which is either pure or predominant. There are areas consisting of majority cypress within the study area; however, cypress can be commonly found within the forested wetland systems throughout the study area. Hydrologic conditions within these wetland areas generally consist of saturated soils to seasonal flooding. Bald cypress is the primary canopy species present. Herbaceous and shrub species observed within this habitat type include primrose willow (*Ludwigia* spp.) and southern willow (*Salix* spp.). Muscadine grape (*Vitis rotundifolia*) is the only vining species identified. One wood stork was observed foraging within this land use type between County Line Road and Cypress Creek.

### **Wetland Forested Mix (FLUCCS 6300)**

#### **Palustrine Forested Deciduous (PFO1&2)**

According to the FLUCCS manual, this category is reserved for those wetland hardwood communities which are composed of a large variety of hardwood species tolerant of hydric conditions yet exhibit an ill-defined mixture of species. Hydrologic conditions within these wetland areas generally consist of saturated soils to seasonal flooding. Observed canopy species observed include slash pine, cabbage palm, laurel oak, and live oak. Canopy cover in these wetlands is high and most tree species are mature. Oaks are generally the dominant tree species but no one species type dominates the canopy. Herbaceous and shrub species observed within this habitat type include: swamp fern (*Blechnum serrulatum*), wax myrtle, and saw palmetto. Vining species observed include: Virginia creeper

(*Parthenocissus quinquefolia*), greenbriars (*Smilax* spp.), poison ivy (*Toxicodendron radicans*), and muscadine grape. These wetlands typically exhibit moderate to high cover by Brazilian pepper along the wetland fringe. All of the wetlands support a moderate level of disturbance and overall cover of nuisance and exotic species is low to moderate. Brazilian pepper was the primary nuisance and exotic species observed. No protected species were observed during field reviews; however, this habitat type could provide habitat for the wood stork and other wading birds.

#### **Freshwater Marshes (FLUCCS 6410)**

##### **Palustrine Emergent Persistent (PEM1)**

Freshwater marshes are vegetated herbaceous wetlands with no tree cover and minimal to no shrubs; however, many freshwater marshes can be surrounded by forested or scrub-shrub wetlands and/or uplands. Freshwater marshes are usually dominated by one or more emergent vegetation species. Observed vegetation within the freshwater marsh systems within the study area includes cattails (*Typha* spp.), pickerelweed (*Pontedaria cordata*), duck potato (*Sagittaria latifolia*), lance-leaf arrowhead (*Sagittaria lancifolia*), and alligator flag. Carolina willow and other similar shrub vegetation were observed within or on the edge of some of the freshwater marshes located within the study area. No protected species were observed during field reviews; however, this habitat type could provide habitat for the wood stork and other wading birds.

#### **Emergent Aquatic Vegetation (FLUCCS 6440)**

##### **Palustrine Emergent Persistent (PEM1)**

This category of wetland includes plant species that are both floating vegetation and vegetation which is found either partially or completely above the surface of water. Vegetation within the study area includes water lettuce (*Pistia stratiotes*), spatterdock (*Nuphar* spp.), duck weed (*Lemna* sp.), and water lily (*Nuphar* spp.). No protected species were observed during field reviews; however, this habitat type could provide habitat for the wood stork and other wading birds.

#### **Intermittent Ponds (FLUCCS 6530)**

##### **Palustrine Emergent Persistent (PEM1)**

According to the FLUCCS manual, this category of wetland is defined as a waterbody which exists for only a portion of the year. It may be referred to as a seasonal waterbody. Its existence relies upon water received directly from precipitation, runoff or spring flow. No protected species were observed during field reviews; however, this habitat type could provide habitat for the wood stork and other wading birds.

## **2.4 SOILS**

The NRCS *Soil Survey of Hillsborough County* (1989) and *Soil Survey of Pasco County* (1980) and geographic information system (GIS) data indicate that there are multiple soil types that exist within



and adjacent to the project area. The dominant soil types and their soil map unit identification numbers, listed by county, are as follows: Myakka fine sand, 0 to 2 percent slopes (HIL29); Basinger, Holopaw, and Samsula soils, depressional (HIL5); and Chobee soils, frequently flooded (PAS39). Soils within a 500-foot buffer from the existing right of way of the project were evaluated. Acreages and percentages of soil types within the project buffer can be found in **Table 2-2**. A detailed soils map can be found in **Figure 2-2**. A brief description of dominant soil types is provided below:

**Basinger, Holopaw, and Samsula soils, depressional (HIL5)** – This hydric soil is nearly level and very poorly drained in swamps and depressions on the flatwoods. Typically, the undrained areas in this unit are ponded for about six months. Permeability is rapid in Basinger and Samsula soils, though in the Holopaw soils it is rapid in the surface and subsurface layer and moderately slow to moderate in the subsoil. The available water capacity is low in Basinger soils, low or moderate in Holopaw soil, and high in Samsula soil. The natural vegetation consists of cypress.

**Immokalee fine sand, 0 to 2 percent slopes (HIL21)** – This soil is nearly level and poorly drained on broad plains of the flatwoods. The seasonal high water table fluctuates from the soil surface to a depth of ten inches for more than two months and recedes to a depth of ten to 40 inches for eight months or more. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The natural vegetation consists of longleaf pine and slash pine.

**Myakka fine sand, 0 to 2 percent slopes (HIL29)** – This hydric soil is nearly level and poorly drained on broad plains on the flatwoods. In most years, a seasonal high water table fluctuates from the soil surface to a depth of ten inches for one to four months and recedes to a depth of 40 inches during prolonged dry periods. Native vegetation consists of longleaf pine and slash pine, and an understory of gallberry, running oak (*Quercus pumila*), saw palmetto, pineland threeawn (*Aristida stricta*), and wax myrtle.

**Zolfo fine sand, 0 to 2 percent slopes (HIL61)** – This hydric soil is nearly level and somewhat poorly drained. It is on broad, low ridges on the flatwoods. In most years, a seasonal high water table is at a depth of 24 to 40 inches for more than two to six months and recedes to a depth of 60 inches during prolonged dry periods. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. Natural vegetation consists of live oak, turkey oak (*Quercus laevis*), longleaf pine, and slash pine.

**Narcoossee fine sand, 0 to 2 percent slopes (PAS26)** – This somewhat poorly drained soil is on low knolls and ridges in the flatwoods. Slopes are less than 2 percent. In most years, under natural conditions, the water table is at a depth of two to 3.5 feet for four to six months. During extended dry periods, the water table recedes to a depth of more than 60 inches. During the wet season, after heavy rains, the water table may briefly rise above a depth of two feet. The available water capacity is very low or low. Permeability is rapid in all layers except in the subsoil, which has moderately rapid permeability. Natural vegetation consists of slash pine, longleaf pine, live oak, laurel oak, and willow oak (*Quercua phellos*).

**Table 2-2 Existing Soils (NRCS)**

| Map Unit Symbol                        | Description                                                         | Acreage<br>(Approx. 500' from<br>Centerline, and SMF<br>and FPC sites) | Percentage  |
|----------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------|-------------|
| <b><i>Pasco Soils (PAS)</i></b>        |                                                                     |                                                                        |             |
| 4                                      | Felda fine sand (0-2% slopes) – <i>hydric</i>                       | 2.9                                                                    | 0.5%        |
| 5                                      | Myakka-Myakka, wet, fine sands, (0-2% slopes) – <i>hydric</i>       | 0.9                                                                    | 0.2%        |
| 6                                      | Tavares sand (0-5% slopes)                                          | 1.0                                                                    | 0.2%        |
| 10                                     | Wabasso-Wabasso, wet, fine sand, (0-2% slopes) – <i>hydric</i>      | 18.3                                                                   | 3.4%        |
| 11                                     | Adamsville fine sand (0-2% slopes) – <i>hydric</i>                  | 2.3                                                                    | 0.4%        |
| 22                                     | Basinger fine sand (0-2% slopes) – <i>hydric</i>                    | 2.4                                                                    | 0.4%        |
| 26                                     | Narcoossee fine sand (0-2% slopes)                                  | 34.1                                                                   | 6.3%        |
| 27                                     | Anclote fine sand (0-2% slopes), ponded – <i>hydric</i>             | 34.4                                                                   | 6.4%        |
| 28                                     | Pits – <i>hydric</i>                                                | 5.0                                                                    | 0.9%        |
| 30                                     | Okeelanta-Terra Ceia association – <i>hydric</i>                    | 12.2                                                                   | 2.3%        |
| 35                                     | EauGaille fine sand – <i>hydric</i>                                 | 43.5                                                                   | 8.1%        |
| 39                                     | Chobee soils, frequently flooded – <i>hydric</i>                    | 60.7                                                                   | 11.2%       |
| 59                                     | Newnan fine sand (0-5% slopes)                                      | 12.1                                                                   | 2.1%        |
| 63                                     | Delray mucky fine sand – <i>hydric</i>                              | 26.3                                                                   | 4.9%        |
| 99                                     | Water                                                               | 8.2                                                                    | 1.5%        |
| <b><i>Hillsborough Soils (HIL)</i></b> |                                                                     |                                                                        |             |
| 5                                      | Basinger, Holopaw, and Samsula soils, depressional – <i>hydric</i>  | 67.3                                                                   | 12.5%       |
| 15                                     | Felda fine sand (0-2% slopes) – <i>hydric</i>                       | 4.6                                                                    | 0.9%        |
| 16                                     | Felda fine sand (0-2% slopes), occasionally flooded – <i>hydric</i> | 1.8                                                                    | 0.3%        |
| 21                                     | Immokalee fine sand (0-2% slopes) – <i>hydric</i>                   | 48.3                                                                   | 8.9%        |
| 27                                     | Malabar fine sand (0-2% slopes) – <i>hydric</i>                     | 6.8                                                                    | 1.3%        |
| 29                                     | Myakka fine sand (0-2% slopes) – <i>hydric</i>                      | 70.7                                                                   | 14.6%       |
| 46                                     | St. Johns fine sand – <i>hydric</i>                                 | 1.1                                                                    | 0.2%        |
| 59                                     | Winder fine sand (0-2% slopes) – <i>hydric</i>                      | 0.3                                                                    | 0.1%        |
| 60                                     | Winder fine sand, frequently flooded – <i>hydric</i>                | 15.6                                                                   | 2.9%        |
| 61                                     | Zolfo fine sand (0-2% slopes) – <i>hydric</i>                       | 36.0                                                                   | 6.7%        |
| 99                                     | Water                                                               | 15.3                                                                   | 2.8%        |
| <b>Total</b>                           |                                                                     | <b>540.2</b>                                                           | <b>100%</b> |



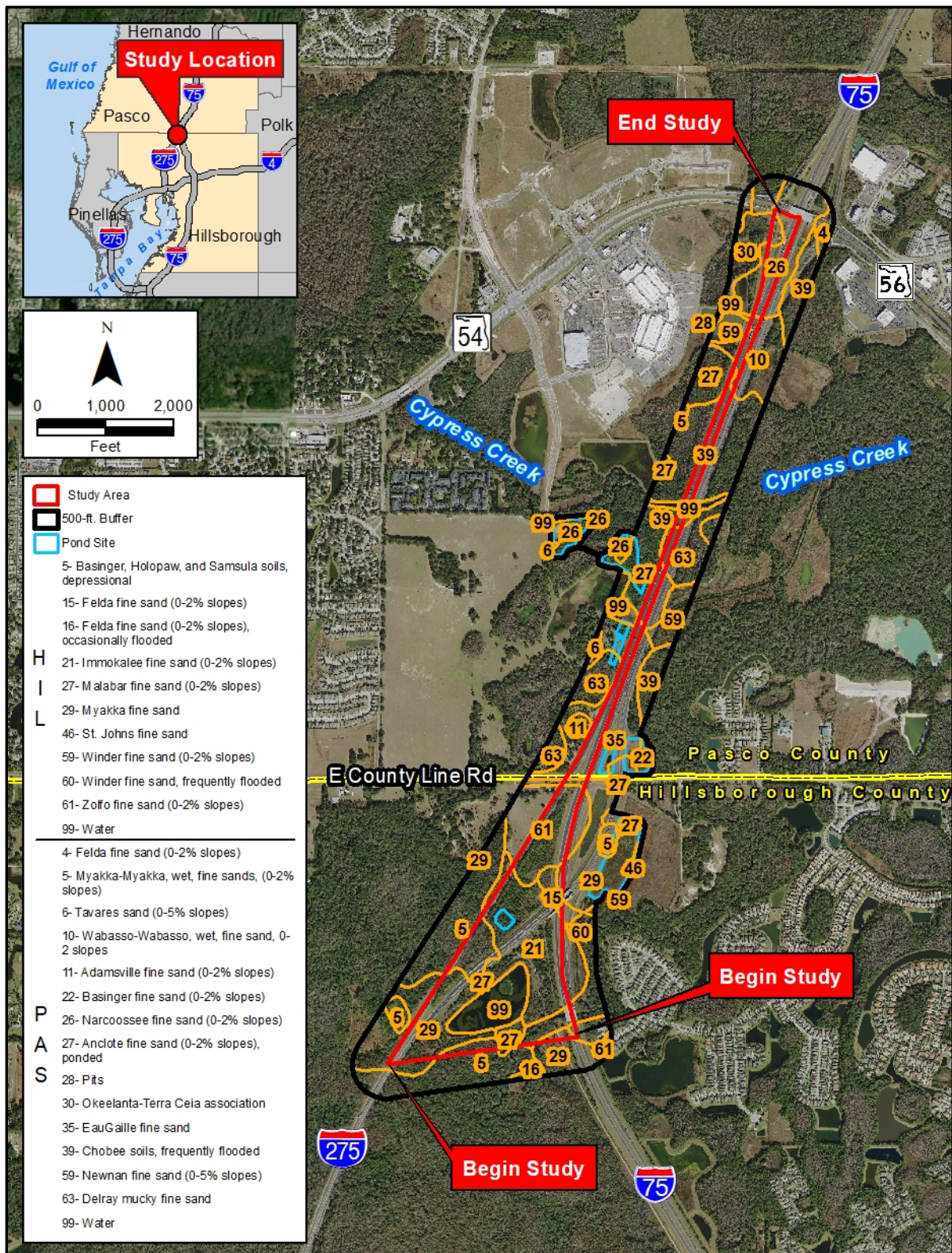


Figure 2-2 NRCS Soils Map

**Anclote fine sand (PAS27)** – This hydric soil is nearly level, very poorly drained in depressions along drainageways and in low areas surrounding some inland bodies of water. The water table is near or above the surface during wet seasons for three to six months, then recedes to a depth of more than 20 inches during dry seasons. The natural vegetation is cypress, cabbage palm, bay, and pond pine (*Pinus serotina*).

**EauGallie fine sand (PAS35)** – This hydric soil is nearly level and poorly drained located on low ridges in the flatwoods. Under natural conditions the water table is within a depth of ten inches for one to four months and within a depth of 40 inches for more than six months. Permeability is moderate to rapid in the subsoil and is rapid in the other layers. The natural vegetation includes longleaf pine, slash pine, and an understory of saw palmetto, gallberry, wax myrtle, and pineland threeawn.

**Chobee soils, frequently flooded (PAS39)** – This hydric soil is nearly level, very poorly drained in swamps along the floodplains of most of the major river and streams in Pasco County. In natural conditions, the water table of this soil is within ten inches of the surface for more than six months in most years. Flooding occurs frequently during the rainy season. Nearly all of the acreage in this soil unit remains in natural vegetation of water oak, cypress, elm (*Ulmus* spp.), ash (*Fraxinus* spp.), hickory (*Carya* spp.), red maple, and sweetgum (*Liquidambar styraciflua*).



## SECTION 3 PROTECTED SPECIES AND HABITAT

The study area was assessed for the presence of suitable habitat for federal and state listed and protected species in accordance with *50 CFR Part 402 ESA of 1973, as amended, Chapter 5B-40: Preservation of Native Flora of Florida, F.A.C., Chapter 68A-27: Rules Relating to Endangered or Threatened Species, F.A.C.* and *Part 2, Chapter 16 – Protected Species and Habitat* of the *FDOT PD&E Manual*.

### 3.1 METHODOLOGY AND ASSESSMENT

Literature reviews, agency database searches, and preliminary field reviews (November and December 2020) of potential habitat areas were conducted to identify federal and state protected species occurring or potentially occurring within the study area. The *Hillsborough County Soil Survey* and *Pasco County Soil Survey* as well as the recent aerial photographs (2019) were reviewed to determine habitat types occurring within and adjacent to the study area. Information sources and databases utilized include the following:

- USFWS GIS Database(s)
- USFWS Information for Planning and Conservation (IPaC)
- Florida Natural Areas Inventory (FNAI) GIS Database(s)
- Florida Fish and Wildlife Conservation Commission (FWC) GIS Database(s)
- Hillsborough County Soil Survey
- Pasco County Soil Survey
- ETDM Summary Report, ETDM No. 14330
- FWC - Strategic Habitat Conservation Areas (SHCA) (1994) (10-mile radius)
- USFWS - Critical Habitat for Threatened and Endangered Species
- USFWS - Wood Stork Colony Core Foraging Areas (CFA) 2005-2017 (15-mile radius)
- National Wetland Inventory (NWI) GIS Data
- Southwest Florida Water Management District (SWFWMD) GIS Data

Based on the results of database searches, preliminary field reviews and review of aerial photographs and soil surveys, field survey methods for specific habitat types and lists of target species were developed. Field reviews took place in November and December of 2020. These field reviews consisted of vehicular surveys, roadside observations and detailed pedestrian surveys through natural areas and altered habitats with the potential to support protected species. In the absence of physical evidence of a protected species, evaluation of the appropriate habitat was conducted to determine the likelihood of a species being present. Any observations of protected species or indicators of their



presence (i.e., vocalizations, tracks, scat, burrows, etc.) within or immediately adjacent to the study area were documented.

Based on the above methods, a list of potentially occurring protected species was developed, and each species was assigned a low, moderate or high likelihood for occurrence within habitats found within the study area. If a species or species indicator was observed during field reviews it is identified as such. **Table 3-1** lists the federal and state protected wildlife species with the potential to occur within the study area, based on potential availability of suitable habitat and known ranges. **Table 3-2** provides the same information for federal and state protected plant species. Species effect determinations are provided in **Section 3.4** through **Section 3.7**. Definitions for likelihood of occurrence are provided below:

- **Low** – Species with a low likelihood of occurrence within the study area are defined as those species that are known to occur in Hillsborough and Pasco Counties or the bio-region, but preferred habitat is limited within the study area, or the species is rare or has been extirpated.
- **Moderate** – Species with a moderate likelihood for occurrence are those species known to occur in Hillsborough and Pasco Counties or other nearby counties, and for which suitable habitat is well represented within or adjacent to the study area, but no observations or positive indications exist to verify their presence.
- **High** – Species with a high likelihood for occurrence are suspected within and adjacent to the study area based on known ranges and existence of sufficient preferred habitat within the vicinity of the study area; are known to occur adjacent to the study area; or have been previously observed or documented in the vicinity.

### **3.2 COORDINATION WITH PERMITTING AGENCIES**

Agency coordination was conducted as part of the ETDM screening and Advanced Notification review process (Project #14330). The ETDM screening process was used to become aware of any issues noted by the commenting agencies. ETDM coordination was conducted with USFWS, National Marine Fisheries Service (NMFS), FWC, and SWFWMD. Much of the coordination for potential species occurrence was conducted electronically utilizing databases from USFWS, FWC, SWFWMD and FNAI. A summary of the relevant agency comments during the ETDM screening is provided below:

#### **3.2.1 U.S. Fish and Wildlife Service**

The USFWS identified the wood stork (*Mycteria americana*) as a potentially affected species within the study area. The USFWS stated the project is within one mile of a wood stork colony (Cypress Creek I-75); and therefore, within the core foraging area and likely that wood storks are utilizing this area for foraging. The identified wood stork colony is located within project ROW, just south of the I-75/I-275 apex and was last known to be active in 2015. They also recommended coordination with the Office of Migratory Birds for an identified bald eagle nest adjacent to the corridor. If avoidance is not feasible, minimization measures should be employed to the maximum extent practicable. The USFWS stated that mitigation for wetland impacts should replace the habitat lost as a result of the road expansion and construction.

**Table 3-1 Potential and Observed Listed and Protected Faunal Species**

| Species                               | Common Name                   | State Listed (FWC) | Federal Listed (USFWS) | Habitat                                                                                                | Probability Of Occurrence |
|---------------------------------------|-------------------------------|--------------------|------------------------|--------------------------------------------------------------------------------------------------------|---------------------------|
| <b>REPTILES</b>                       |                               |                    |                        |                                                                                                        |                           |
| <i>Drymarchon corais couperi</i>      | Eastern indigo snake          | FT                 | T                      | Hydric hammock, palustrine, sandhill, scrub, upland pine forest, mangrove swamp                        | High                      |
| <i>Gopherus polyphemus</i>            | Gopher tortoise               | ST                 | C                      | Old field, sandhill, scrub, xeric hammock, ruderal, dry prairie, pine flatwood                         | High*                     |
| <i>Lampropeltis extenuate</i>         | Short-tailed snake            | ST                 | --                     | Old field, sandhill, scrub, xeric hammock, ruderal, dry prairie, pine flatwood                         | High                      |
| <i>Pituophis melanoleucus mugitus</i> | Florida pine snake            | ST                 | --                     | Sandhill, scrubby flatwoods, xeric hammock, pine flatwoods, ruderal                                    | Moderate                  |
| <b>BIRDS</b>                          |                               |                    |                        |                                                                                                        |                           |
| <i>Aphelocoma coerulescens</i>        | Florida scrub-jay             | FT                 | T                      | Scattered, often small and isolated patches of sand pine scrub, xeric oak scrub, and scrubby flatwoods | Low                       |
| <i>Egretta caerulea</i>               | Little blue heron             | ST                 | --                     | Estuarine, lacustrine, riverine, tidal marsh, tidal swamp                                              | High                      |
| <i>Egretta tricolor</i>               | Tricolored (Louisiana) heron  | ST                 | --                     | Estuarine, lacustrine, riverine, tidal marsh, tidal swamp                                              | High                      |
| <i>Falco sparverius paulus</i>        | Southeastern American kestrel | ST                 | --                     | Sandhill, mesic flatwoods, ruderal, dry prairie                                                        | Low                       |
| <i>Grus canadensis pratensis</i>      | Florida sandhill crane        | ST                 | --                     | Basin marsh, depression marsh, dry prairie, marl prairie, pastures                                     | High*                     |
| <i>Haliaeetus leucocephalus</i>       | Bald eagle                    | --                 | --                     | Estuarine, lacustrine, riverine, tidal marsh, tidal swamp                                              | Moderate                  |
| <i>Laterallus jamaicensis</i>         | Eastern black rail            | FT                 | T                      | Estuarine tidal swamps/marshes, lacustrine, wet sedge meadows, wet savannas                            | Moderate                  |
| <i>Mycteria americana</i>             | Wood stork                    | FT                 | T                      | Estuarine tidal swamps/marshes, lacustrine, seepage stream, ditches, ruderal                           | High*                     |
| <i>Pandion haliaetus</i>              | Osprey                        | --                 | --                     | Open Water; areas of cypress, mangrove, pine and swamp hardwoods for nesting                           | High                      |

| Species                            | Common Name        | State Listed (FWC) | Federal Listed (USFWS) | Habitat                                                                       | Probability Of Occurrence |
|------------------------------------|--------------------|--------------------|------------------------|-------------------------------------------------------------------------------|---------------------------|
| <i>Platalea ajaja</i>              | Roseate spoonbill  | ST                 | --                     | Coastal marsh, tidal ponds, sloughs, freshwater marsh, mudflats, tidal swamps | Low                       |
| <b>MAMMALS</b>                     |                    |                    |                        |                                                                               |                           |
| <i>Ursus americanus floridanus</i> | Florida black bear | --                 | --                     | Palustrine, terrestrial, pine flatwoods, sand pine scrub, cypress swamps      | Low                       |

FT=Federal Threatened, T=Threatened, ST=State-designated Threatened, C=Candidate for listing under ESA

\*Species or nest/burrow observed during species field survey or field review

**Table 3-2 Potential and Observed Listed and Protected Floral Species**

| Species                                          | Common Name                     | State Listed (FDACS) | Federal Listed (USFWS) | Habitat                                                                  | Probability Of Occurrence |
|--------------------------------------------------|---------------------------------|----------------------|------------------------|--------------------------------------------------------------------------|---------------------------|
| <i>Campanula robinsiae</i>                       | Brooksville bellflower          | FE                   | E                      | Brooksville Ridge, wet prairie, pond edges near pasture                  | Low                       |
| <i>Chionanthus pygmaeua</i>                      | Pygmy fringe-tree               | FE                   | E                      | Lake Wales Ridge, scrub, high pine, dry hammocks, and transitional areas | Low                       |
| <i>Justicia cooleyi</i>                          | Cooley's water willow           | FE                   | E                      | Brooksville Ridge, hardwood forests, low rises in wet hammocks or swamps | Moderate                  |
| <i>Lechea cernua</i>                             | Nodding Pinweed (Scrub Pinweed) | ST                   | --                     | In scattered opens in scrub & scrubby flatwoods – endemic to FL.         | Low                       |
| <i>Sacoila lanceolata</i> var. <i>lanceolata</i> | Leafless beaked orchid          | ST                   | --                     | Hammocks, wet flatwoods, prairies, roadsides & pasture                   | Moderate                  |

FE=Federal Endangered, E=Endangered, ST=State-designated Threatened

### **3.2.2 Florida Fish and Wildlife Conservation Commission**

The FWC identified the wood stork, eastern indigo snake, gopher tortoise, southeastern American kestrel (*Falco sparverius paulus*), Florida pine snake (*Pituophis melanoleucus mugitus*), little blue heron (*Egretta cearulea*), and tricolored heron (*Egretta tricolor*) as having potential to occur within the study area. The FWC identified the primary wildlife issues related to this project include: potential loss of habitat due to construction of the roadway and drainage retention areas and a potential for degradation of water quality due to increased stormwater runoff. The FWC also suggested measures be taken for conserving wildlife and fish habitat resources within and adjacent to the study area.

### **3.2.3 Southwest Florida Water Management District**

SWFWMD states that the project will potentially result in surface water and wetland impacts. SWFWMD commented that according to the 2003 FWC Habitat and Landcover GRID, the largest land coverage is High Impact Urban (27.99%). They have also identified the potential for Florida scrub-jay (*Aphelocoma coerulescens*) and wood stork occurrence. SWFWMD stated the project has the potential to eliminate the remnants of native habitat used by listed species for breeding and foraging.

## **3.3 SURVEY RESULTS**

Land use within the study area is primarily rural and undeveloped lands. Rural and undeveloped lands provide habitat to many wildlife and plant species, some of which are protected. Subsequently, wildlife observations were noted throughout the study area.

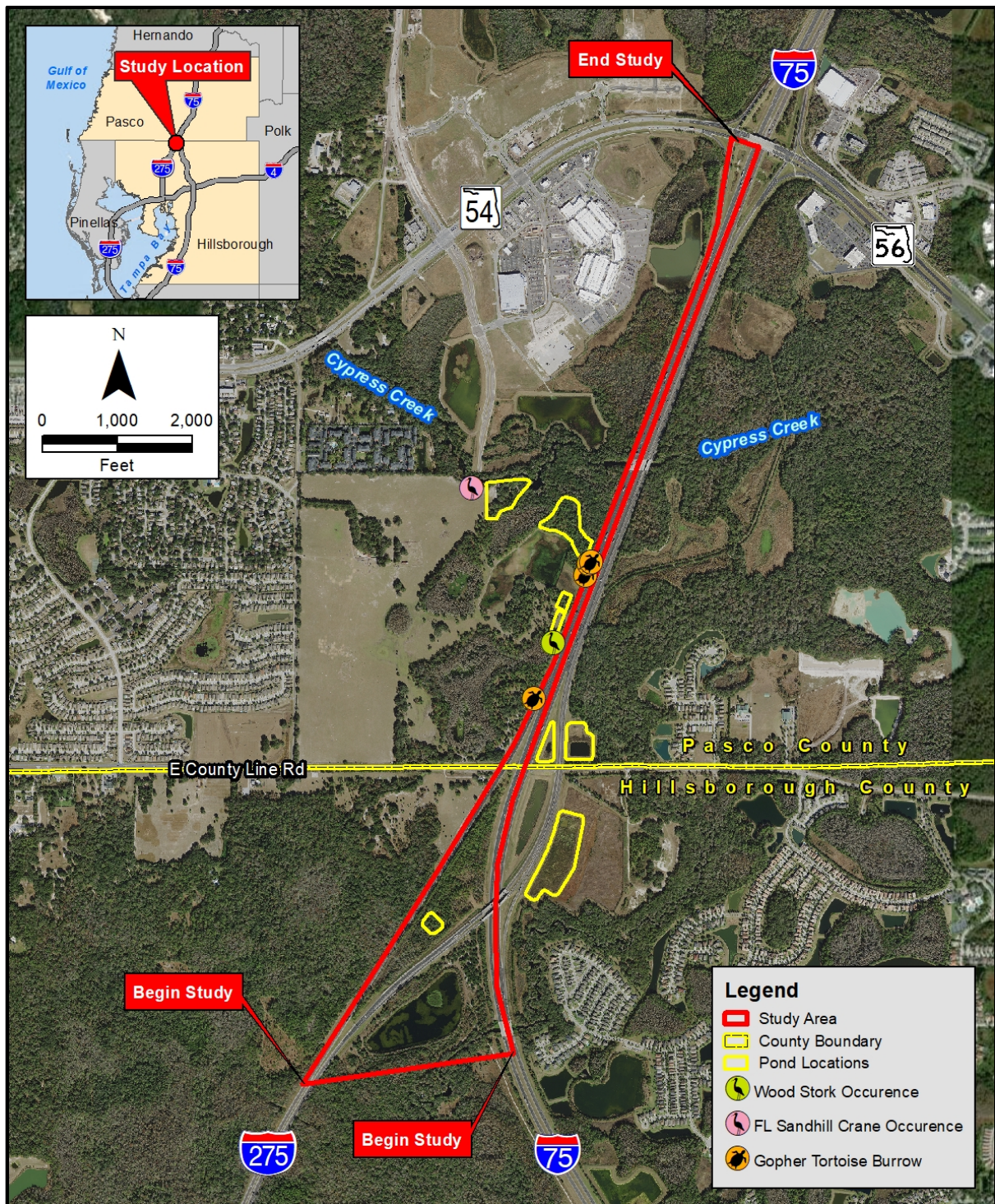
During the two species field surveys conducted in November and December 2020, one federal listed species, the wood stork, was observed foraging in the study area and one state listed species, the Florida sandhill crane, was observed. There were potentially occupied gopher tortoise burrows documented in the study area, although no individuals were identified. Gopher tortoise burrows were observed primarily north of County Line Road and south of Cypress Creek. No federal listed or state listed floral species were observed. Observed protected species occurrences are depicted on **Figure 3-1**, whereas **Figure 3-2** provides recent and historic species occurrence results from the database searches, based on a one-mile radius from the study area.

Descriptions are provided in the sections below for those species which have been observed within the vicinity of the study area or have the potential to occur within habitats identified within the vicinity of the study limits.

## **3.4 FEDERAL LISTED FAUNAL SPECIES**

Federal listed wildlife species which have been observed or determined as having the potential to occur within the vicinity of the study area include the wood stork, eastern black rail (*Laterallus jamaicensis jamaicensis*), Florida scrub-jay, and eastern indigo snake. Federal listed species are also considered state listed species. Descriptions of the potential species and their habitats, as well as the anticipated effect determinations are provided below. The effect determinations for each of the species are for the Build alternative, since there would be no effect on protected species or their habitat by the No Build alternative.





**Figure 3-1 Protected Species Field Observations**



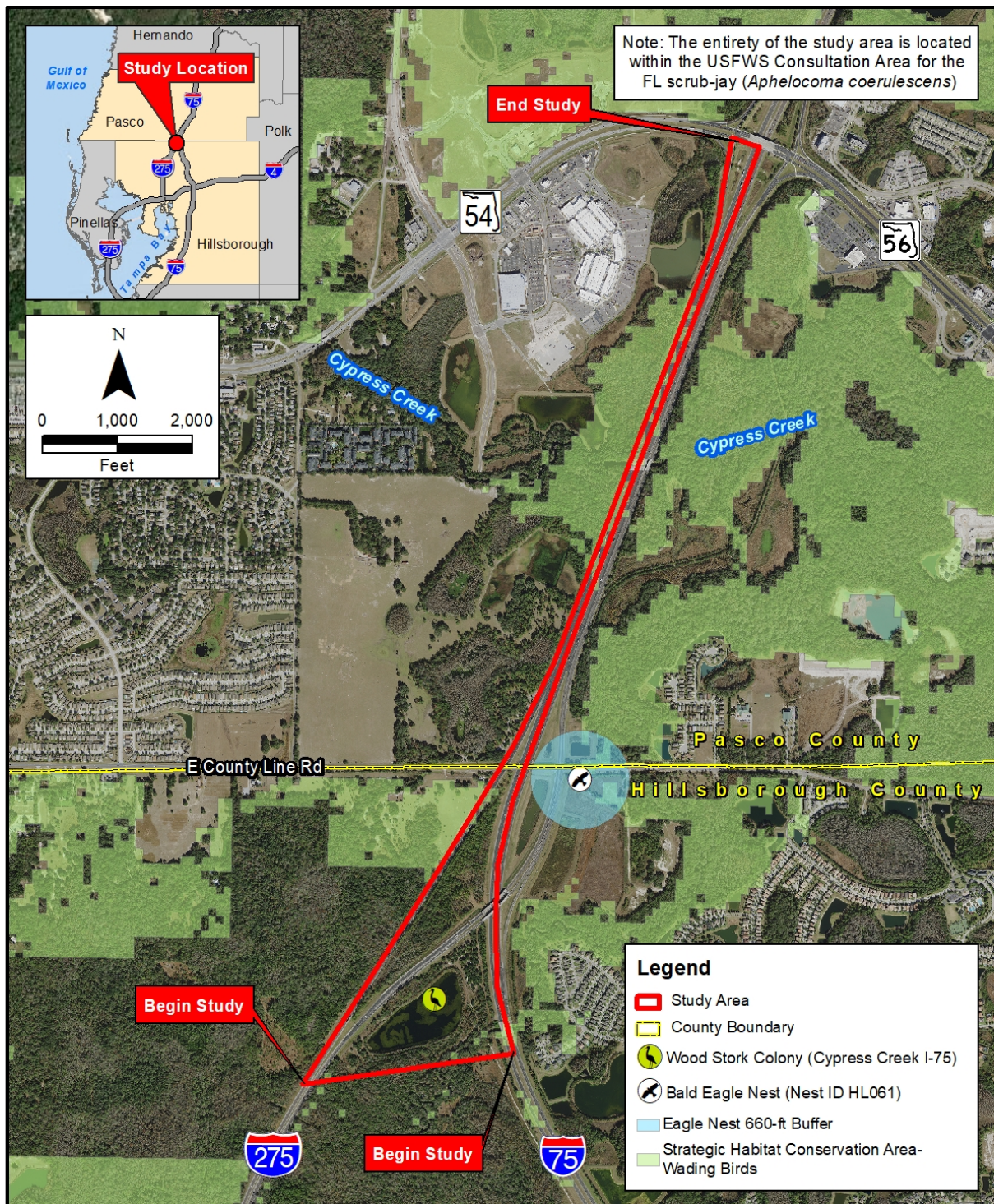


Figure 3-2 Protected Species Occurrence Data

### 3.4.1 Wood Stork

The wood stork is federal listed as threatened. Wood storks utilize freshwater and estuarine habitats for nesting, foraging, and roosting. Wood storks typically are colonial nesters and construct their nests in medium to tall trees located within wetlands or on islands.

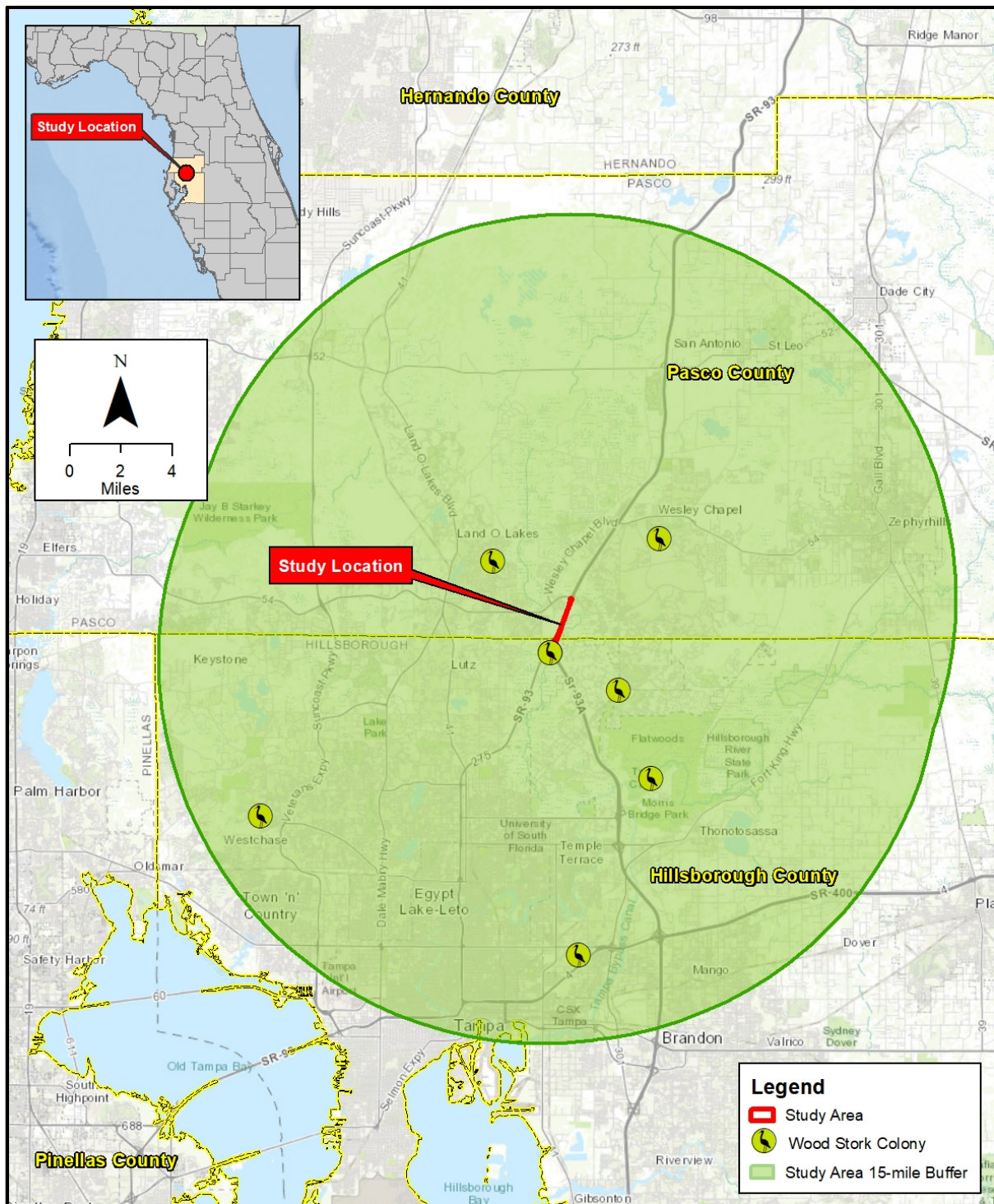
One individual was seen foraging south of Wetland 5 (WL 5) during the field review conducted in November 2020. The study falls within the 15-mile CFA of seven active wood stork colonies (**Figure 3-3**). There is also one identified colony (Cypress Creek I-75) located within the study area south of the I-75/I-275 apex. According to USFWS comments in the ETDM Summary Report, this colony was last identified as being active in 2015. In a field review conducted April 27, 2021, the colony was confirmed as active for the 2021 season, and individuals were identified. As defined by the USFWS, suitable foraging habitat (SFH) for wood storks includes wetlands and surface waters which have areas of water that are relatively calm, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between 2 and 15 inches. The project limits are within 2,500 feet of the Cypress Creek I-75 colony – based on the *Effect Determination Key for the Wood Stork in Central and North Peninsular Florida* (**Appendix C**), the project would result in a may affect determination. However, impacts to wetlands and SFH will occur greater than 2,500 feet from the Cypress Creek I-75 colony and will be avoided and minimized to the greatest extent practicable. Unavoidable impacts to wetlands and SFH will be mitigated. Coordination was conducted with USFWS via email in December 2020 (**Appendix C**) to discuss conservation measures to address potential impacts to the colony. In this discussion, it was decided that the FDOT has covered all of the required conservation measures to achieve a MANLAA effect determination. Therefore, it was determined the project may affect, not likely to adversely affect the wood stork.

### 3.4.2 Eastern Indigo Snake

The eastern indigo snake is federal listed as threatened. The eastern indigo snake occurs in a wide variety of habitats, including forested uplands and wetlands as well as wet and dry prairies. The eastern indigo snake utilizes gopher tortoise burrows, holes, cavities and other refugia for protection. No individuals were observed during the field surveys; however, areas of potential suitable habitat for this species occur within and adjacent to the large majority of the study area, including the preferred SMF and FPC sites. Less than 25 gopher tortoise burrows were identified, and the project will not impact 25 acres or more of xeric habitat.

To assure the protection of this species during construction, when it is most likely to be affected, the FDOT will adhere to the USFWS's *Standard Protection Measures for the Eastern Indigo Snake* (**Appendix D**). When the project proceeds to permitting and construction phases, the most current guidelines will be obtained and followed. The *Eastern Indigo Snake Programmatic Effect Determination Key* (revised July 2017) [**Appendix E**] was used for this study, and it was determined the project may affect, not likely to adversely affect the eastern indigo snake.





**Figure 3-3 Wood Stork Colonies**

### **3.4.3 Eastern Black Rail**

The eastern black rail is federal listed as threatened. The eastern black rail can be found in salt and brackish marshes as well as densely vegetated upper tidal marshes along the Gulf coast from Florida to Texas. The species is also found in inland marshes of the Florida peninsula, though prevalence is largely uninvestigated. The eastern black rail is one of the most secretive birds in North America, so presence is usually determined by sound. Freshwater marsh and wet prairie habitats are minimal within the study area and are not part of larger systems in adjacent lands. Minimal impacts to these habitats are anticipated by the project. Wetland mitigation will be provided for impacts to wetlands pursuant to Section 373.4137 F.S. No eastern black rails were seen or heard during field reviews. Therefore, it was determined the project may affect, not likely to adversely affect the eastern black rail.

### **3.4.4 Florida Scrub-Jay**

The Florida scrub-jay is an endemic species to Florida which is federal listed as threatened. Scrub-jays are limited to patches of sand pine scrub, xeric oak scrub, and scrubby flatwoods occurring on well-drained, sandy ridges. The project is located within the USFWS Consultation Area for the Florida scrub-jay, but suitable habitat does not exist within or immediately adjacent to the project area, including the preferred SMF and FPC sites. There were no individuals seen during the field review. Xeric habitats adjacent to the project area do not consist of the fire-maintained short scrubby oaks, open patches of sand, and limited number of tall trees required by this species; therefore, the project will have no effect on the Florida scrub-jay.

## **3.5 FEDERAL LISTED FLORAL SPECIES**

Three federal listed floral species have been determined as having the potential to occur within in the vicinity of the study area. These species include the Brooksville bellflower (*Campanula robinsiae*), pygmy fringe-tree (*Chionanthus pygmaeus*) and Cooley's water willow (*Justicia cooleyi*). Federal listed species are also considered state listed species. No federal listed floral species were observed or are documented within the study area during fields reviews in November and December 2020; however, their potential for occurrence exists. Surveys should be conducted during design or prior to construction during the appropriate seasons. If protected species are located, coordination with the USFWS, FWC and/or the Florida Department of Agriculture and Consumer Services - Division of Plant Industry (FDACS–DPI) will be initiated to determine permit requirements or modifications to construction activities that may be required.

Descriptions of the potential species and their habitats, as well as the anticipated effect determinations are provided below. The effect determinations for each of the species are for the Build alternative, since there would be no effect on protected species or their habitat by the No Build alternative.



### **3.5.1 Brooksville Bellflower**

The Brooksville bellflower is federal listed as endangered. Native to the Brooksville Ridge, this species is found in wet prairies and along the edges of ponds near pastureland. The number of plants seem to vary yearly, depending on water levels. It is an annual herb with a slender taproot and four-angled stems, 0.4 to six inches tall. Its largest leaves are ovate to elliptic and located at the base of the plant. Leaves are narrower and shorter closer to the top. Many of this plant's flowers are closed and inconspicuous; however, those that open are a deep purple with 0.04 to 0.10-inch long sepals. Flowering occurs in the spring during March and April. Minimal areas of potential habitat exist within the study area, no individuals were identified during field reviews and no documented occurrences of this species exist within the vicinity. Therefore, the project will have no effect on the long term viability of the Brooksville bellflower.

### **3.5.2 Pygmy Fringe-tree**

The pygmy fringe-tree is federal listed as endangered. It is a large shrub that occurs primarily in scrub as well as high pineland, dry hammocks, and transitional habitats in central Florida. Its historical range includes the Mount Dora Ridge within Sumter, Polk, Osceola, and Highlands counties; however, much of this species habitat has been lost because of land clearing for citrus production and residential development. The pygmy fringe-tree is often less than three feet tall, but can grow to about 13 feet tall. The twigs are opposite or sub-opposite and stiff, while the leaves are simple, mostly one to four inches long. The flowers are regular and perfect with four green sepals and four white petals. The fruit is a drupe two to 2.5 centimeters (cm) long, oval, and green, becoming purplish-brown when ripe. Suitable habitat for this species is not well represented within the study area; however, the plant is protected wherever found. No individuals were identified during field reviews, and no documented occurrences of this species are within the vicinity of the study area. Therefore, the project will have no effect on the long term viability of the pygmy fringe-tree.

### **3.5.3 Cooley's Water Willow**

The Cooley's water willow is federal listed as endangered. Native to the Brooksville Ridge, this species is found in hardwood forests on uplands or hills; some are situated on low rises in wet hammocks or swamps. Two known populations are located in modified forest habitats. One population occurs on a wide highway ROW among a group of trees. The Cooley's water willow is a short perennial herb less than 16 inches tall with upright, quadrangular stems and leaves up to two inches long. Flowers are located on forked, zigzag branches which are slightly longer than the leaves. The petals are fused into a two-lipped corolla with a slightly longer lower lip. The lower lip is a mottled lavender and white, while the rest of the flower is a bright lavender-rose. Although not located on the Brooksville Ridge, the study area provides similar habitats in which this species has been found. No individuals were identified during field reviews, and no documented occurrences of this species are within the vicinity of the study area. Therefore, the project will have no effect on the long term viability of the Cooley's water willow.

### **3.6 STATE LISTED FAUNAL SPECIES**

State listed wildlife species which have been identified as occurring or having a high probability for occurrence in the vicinity of the study area include the gopher tortoise, Florida pine snake, southeastern American kestrel, roseate spoonbill, Florida sandhill crane, little blue heron, and tricolored heron. Descriptions of the potential species and their habitats, as well as the anticipated effect determinations are provided below. The effect determinations for each of the species are for the Build alternative, since there would be no effect on protected species or their habitat by the No Build alternative.

#### **3.6.1 Southeastern American Kestrel**

The southeastern American kestrel is state-designated threatened. It is a non-migratory subspecies of kestrel found in open pine savannahs, sandhills, prairies, and pastures in Florida. Kestrels nest primarily in large dead trees in cavities previously excavated or hollowed out by woodpeckers. No kestrels were observed during the field surveys, and minimal habitat is available within the study area. Therefore, there is no adverse effect anticipated for the southeastern American kestrel.

#### **3.6.2 Gopher Tortoise**

The gopher tortoise is state-designated threatened and is a candidate for federal listing. Preferred habitats include xeric areas with sandy soils and open canopy with low groundcover. Identified potentially occupied gopher tortoise burrows are located within the study area north of County Line Road and south of Cypress Creek, as shown in **Figure 3-2**.

Comprehensive surveys for tortoises and their burrows will be conducted during the final design phase per FWC guidelines. If gopher tortoise burrows are observed and cannot be avoided, a permit will be obtained from the FWC and relocation will be conducted prior to construction per the FWC guidelines. Commensal species that may utilize the burrows will also be relocated if encountered. There is no adverse effect anticipated for the gopher tortoise.

#### **3.6.3 Short-tailed Snake**

The short-tailed snake is a state-designated threatened species. Preferred habitats are very similar to that of the gopher tortoise, including xeric areas with sandy soils and open canopy with low groundcover. In the field reviews conducted in November and December 2020, there were potentially occupied gopher tortoise burrows identified, which could indicated the presence of the short-tailed snake. As it has been determined that any commensal species will be relocated, there is no adverse effect anticipated for this species.

#### **3.6.4 Florida Pine Snake**

The Florida pine snake is a state-designated threatened species whose habitat primarily includes scrub and open longleaf pine communities. Minimal suitable habitat for this species is present within the study area. For this reason, this species is not anticipated to be impacted by the project. There were no snakes identified during the field review. There is no effect anticipated for the Florida pine snake.

### **3.6.5 Wetland Dependent Avian Species**

This category includes state listed wetland dependent avian species that have the potential to occur or were observed within the study area. These species include: roseate spoonbill, Florida sandhill crane, little blue heron, and tricolored heron. These four species are state designated-threatened by the FWC.

The sandhill crane was the only species observed during field reviews; however, the potential for occurrence for other wetland dependent avian species and utilization of the wetlands areas within the study area exists. Little blue herons, roseate spoonbills, and tricolored herons were not observed in the 2020 field surveys; however, suitable habitat is present throughout the study area. No rookeries for these or other species were observed during field surveys.

Wetlands and surface waters that provide foraging potential for the wetland dependent avian species include ditches/swales, ponds, forested systems, herbaceous wetlands, and riverine systems. Unavoidable wetland impacts will be mitigated as appropriate. Therefore, there is no adverse effect anticipated for these wetland dependent avian species.

### **3.7 STATE LISTED FLORAL SPECIES**

The *Regulated Plant Index* from Chapter 5B-40.0055, F.A.C., was used to assist in the identification of regulated plants within the State of Florida. Two state listed floral species, the nodding pinweed (*Lechea cernua*) and leafless beaked orchid (*Sacoila lanceolata* var. *lanceolata*), have the potential to occur within the study area. Neither of these species were observed within the study area during field reviews in November and December 2020. State regulations do not prohibit landowners from removing or destroying listed plant species. Permits are required only when the plants are to be used or transported for commercial purposes. Surveys should be conducted during design or prior to construction during the appropriate seasons. If protected species are located, coordination with the FWC and/or the Florida Department of Agriculture and Consumer Services - Division of Plant Industry (FDACS-DPI) will be initiated to determine permit requirements or modifications to construction activities that may be required.

Descriptions of the potential species and their habitats, as well as the anticipated effect determinations are provided below. The effect determinations for each of the species are for the Build alternative, since there would be no effect on protected species or their habitat by the No Build alternative.

#### **3.7.1 Nodding Pinweed**

The nodding pinweed is listed as threatened by the State of Florida. This is a terrestrial, perennial herb that grows to about one-foot tall. Their blooms are red and green and last from about March to May. Habitats include dry, open sand-scrub and flatwood margins. The nodding pinweed was not observed within the study area during field reviews; therefore, there is no effect anticipated on the long term viability of nodding pinweed by the proposed project.

### **3.7.2 Leafless Beaked Orchid**

The leafless beaked orchid is listed as threatened by the State of Florida. This is a terrestrial, perennial herb that produces a solitary flowering spike 20 – 60 cm tall. Plants can be flowering from April to June. Flowers may number from ten to 40 on a single, terminal spike. The fruit is a capsule up to two cm long. Habitats include hardwood hammocks, pine flatwoods, old fields, road shoulders and median strips along highways with mixed pine-oak-hickory hardwoods. The leafless beaked orchid was not observed within the study area during field reviews; therefore, there is no effect anticipated on the long term viability of the leafless beaked orchid by the proposed project.

## **3.8 OTHER PROTECTED SPECIES**

This section discusses species that are no longer listed by USFWS or FWC, but are still afforded protection. Species that have the potential to exist within the study area include the bald eagle, osprey, and Florida black bear.

### **3.8.1 Bald Eagle**

Although the bald eagle is no longer afforded protection by the *ESA*, protection for the species is afforded through the Migratory Birds Program per the *MBTA* and *Bald and Golden Eagle Protection Act (BGEPA)*. The USFWS will still regulate activities if an active eagle nest is within 660 feet of a proposed activity. Bald eagles are also no longer listed but monitoring may be required pursuant to the USFWS *Bald Eagle Management Guidelines* if construction occurs within the 660 feet.

The most recent data from the Audubon Florida EagleWatch Program database show a bald eagle nest in the vicinity of the study area at approximately 760 feet from the centerline of I-75 (**Figure 3-3**). The Audubon Florida EagleWatch Program database indicates that this nest was destroyed prior to the 2020 nesting season. Surveys and FWC data reviews to update locations of active bald eagle nest sites will be conducted during the permitting phase of the project, and monitoring will take place per USFWS *Bald Eagle Management Guidelines* if new nests are constructed within 660 feet of proposed activities. There were no eagles identified during the field review.

### **3.8.2 Osprey**

Ospreys are afforded protection under the *Migratory Bird Treaty Act (MBTA)* (16 U.S.C.703-712) and are state protected by *Chapter 68A* of the F.A.C. Ospreys require nest sites in open surroundings for easy approach that are safe from ground predators, such as raccoons. They readily build nests on manmade structures, such as telephone poles and nest platforms designed especially for these birds.

Despite the high potential for occurrence, there were no individuals observed during the field surveys. Surveys to update locations of active osprey nest sites will be conducted during the permitting phase of the project, and permits will be acquired if impacts during construction are unavoidable. Avoidance of the nest will take place and nest structure replacement will occur if removal is required.



### **3.8.3 Florida Black Bear**

The Florida black bear is considered an “imperiled” species by the FWC, but was removed from the State Endangered and Threatened Species List on August 23, 2012. However, the FWC’s *Florida Black Bear Conservation Rule* (Rule 68A-1.004, F.A.C.) provides protections making it illegal to possess, injure, shoot, wound, trap, collect, or sell Florida black bears or their parts except as authorized by Commission rule or permit. It is unlikely that black bears frequently utilize or move through habitats within the study area, as the study area is well outside any black bear range. Additionally, there were no individuals identified during the field review.

### **3.9 USFWS CRITICAL HABITAT**

The study area was evaluated for Critical Habitat designated by Congress in 50 CFR 17. Review of the USFWS’s most current available online Critical Habitat Mapper GIS data resulted in the identification of no Critical Habitat within the study area.

### **3.10 AVOIDANCE AND MINIMIZATION**

Most of the proposed improvements for SR 56 Southbound C-D Road/Ramps to I-75/I-275 are outside of the existing ROW. Walls may be used in some areas within the study limits to reduce the footprint and potentially reduce impacts to wetlands and habitats utilized by listed and protected species. SMF and FPC sites are evaluated in this report, and the preferred SMF and FPC sites were determined to have minimal impacts on wetlands and minimal potential impacts on listed species. Opportunities to minimize impacts to listed species and habitat will continue to be evaluated during the project design phase.

## SECTION 4 WETLAND AND SURFACE WATER IMPACTS

### 4.1 METHODOLOGY AND ASSESSMENT

The proposed project has been evaluated for potential effects to wetlands. A variety of resources including NWI maps and GIS data, Soil Survey of Hillsborough and Pasco Counties, United States Geological Survey (USGS) topographical maps, and aerial photographs (2019) were utilized to identify wetlands that occur within the study area. Environmental scientists identified wetlands and surface waters within the study area during field reviews in November and December 2020. Field reviews of the study area were conducted to collect pertinent data to perform an assessment of the quality of the existing wetlands and surface waters. Wetland boundaries were identified using the U.S. Army Corps of Engineers (USACE) *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* and the Florida Department of Environmental Protection's (FDEP) *Delineation of the Landward Extent of Wetlands and Surface Waters* (1995) (Chapter 62-340, F.A.C.).

The study area consists of a 500-foot buffer from the existing ROW of I-75/I-275 southbound lanes from south of County Line Road to SR 56, as well as a 50-foot buffer surrounding the proposed SMF and FPC sites. The assessment consisted of a review of wetland and upland habitats within the study area. Wetlands were classified using the FLUCCS codes (FDOT, 1999) and the USFWS's *Wetlands and Deepwater Habitats Classification* (Cowardin et al. 1979) methodology. The extents of all wetland sites identified in the field were digitized over aerial photography of the study area in order to perform measurements and acreage calculations. An overview of the wetlands and surface waters within the study vicinity is provided in **Figure 4-1**.

#### 4.1.1 Wetland Descriptions

A breakdown of wetland and surface water descriptions and classifications are shown in **Table 4-1**. This table provides an overview of the wetlands and surface waters, as well as their USFWS and FLUCCS codes. Representative site photographs can be found in **Appendix A**.

**Table 4-1 Wetlands and Surface Water Descriptions**

| Wetland ID | NWI / USFWS     | FLUCCS | Wetland Description                 |
|------------|-----------------|--------|-------------------------------------|
| WL1        | PFO2F           | 6210   | Cypress                             |
| WL2        | PFO2F           | 6210   | Cypress                             |
| WL3        | PFO1/4C         | 6150   | Stream and Lake Swamps (Bottomland) |
| WL4        | PFO2F           | 6210   | Cypress                             |
| WL5        | PEM1Fx          | 6410   | Freshwater Marshes                  |
| WL6        | PFO4/1C & PFO2F | 6150   | Stream and Lake Swamps (Bottomland) |
| SW7        | R2UBH           | 5100   | Streams and Waterways               |
| WL8        | PFO4/1C & PFO2F | 6150   | Stream and Lake Swamps (Bottomland) |



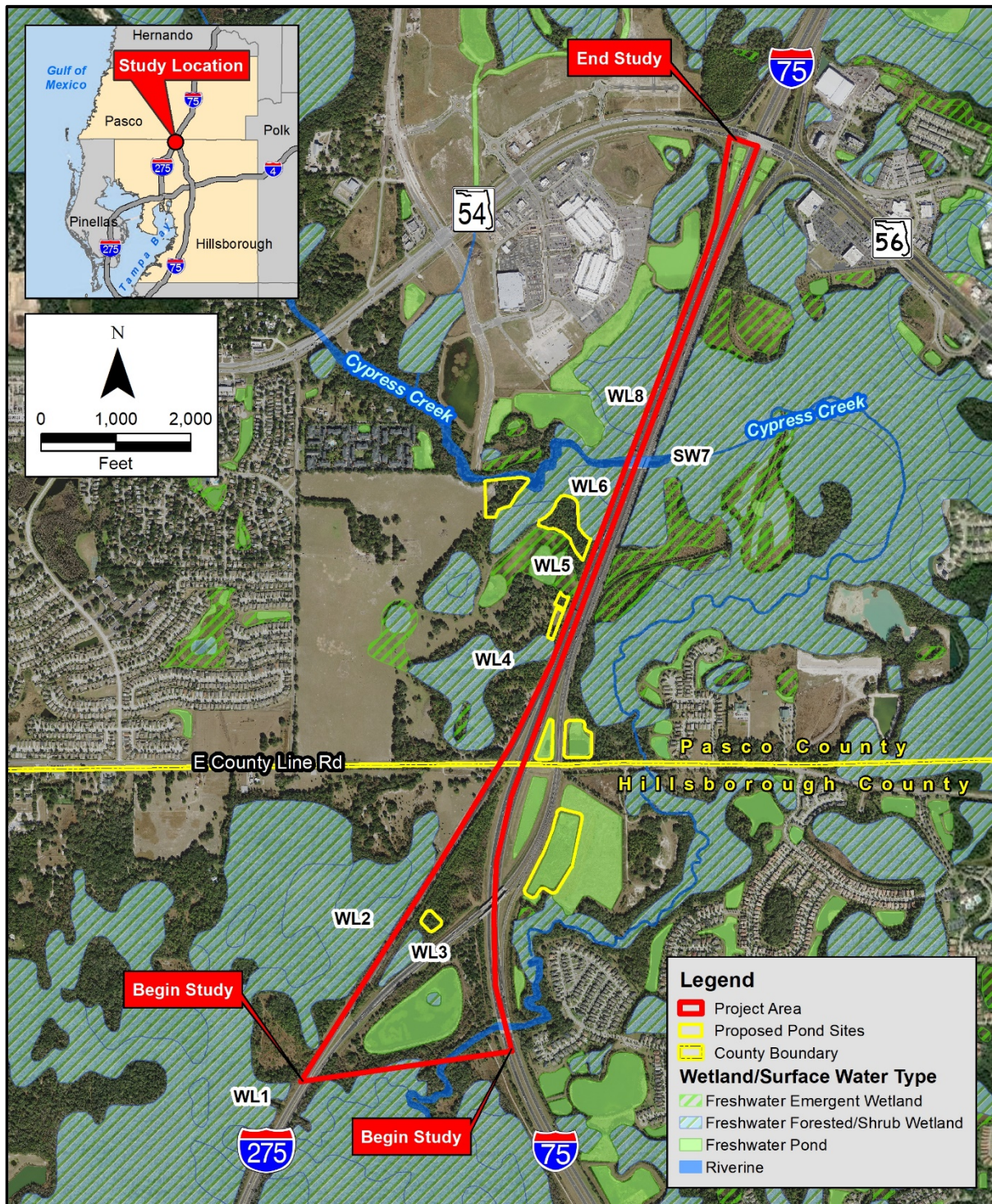


Figure 4-1 Wetland and Surface Water Overview Map

## 4.2 WETLAND EVALUATION AND IMPACTS

The Build and No-Build alternatives were evaluated in developing this study. Under the No-Build alternative, no changes would be made to the existing roadway system, and this alternative would have no impact on wetlands and surface waters. Below is a description of potential impacts from the Build alternative. Field reviews were conducted in November and December 2020 to evaluate wetlands within the study area. During the field review in December 2020, SMF and FPC sites were evaluated for potential impacts to wetlands, and wetlands were identified within the proposed pond locations.

### 4.2.1 Project Impacts

The Build alternative for the construction of the SR 56 southbound C-D road and proposed interchange improvements, will result in 5.37 acres of wetland impact and 0.25 acre of surface water impact. Impacts were evaluated to the proposed ROW west of I-75, and at the preferred SMF and FPC sites. The breakdown of impacts per wetland, surface water, and habitat type is shown in **Table 4-2** and **Table 4-3**. Impacts will occur to wetlands WL4, WL6, and WL8, as well as SW7. Wetland and surface water impacts will need to be further evaluated during the design phase once detailed survey data is available.

### 4.2.2 Cumulative Impacts

Cumulative impacts result from the total effect of the proposed project when added to other past, present, and reasonably foreseeable future projects or actions. Cumulative impacts would be avoided if mitigation is present within the same basin or watershed at the time of permitting with agencies. A cumulative impact analysis would be conducted if mitigation is not available within the same basin or watershed. Walls may also be evaluated in areas to avoid additional impacts. Examples of cumulative impacts that could result from the construction of the SR 56 southbound C-D road and proposed interchange improvements include altered hydrologic regime, water quality degradation, and edge effects. These impacts will be further evaluated during future project phases based on more-detailed design and construction techniques.

**Table 4-2 Wetland Impacts**

| Wetland ID | NWI / USFWS     | FLUCCS | Project Impact Acreage |
|------------|-----------------|--------|------------------------|
| WL1        | PFO2F           | 6210   | 0.00                   |
| WL2        | PFO2F           | 6210   | 0.00                   |
| WL3        | PFO1/4C         | 6150   | 0.00                   |
| WL4        | PFO2F           | 6210   | 0.28                   |
| WL5        | PEM1Fx          | 6410   | 0.00                   |
| WL6        | PFO4/1C & PFO2F | 6150   | 2.35                   |
| WL8        | PFO4/1C & PFO2F | 6150   | 2.74                   |
| TOTAL      |                 |        | 5.37                   |

NWI = National Wetlands Inventory

FLUCCS = Florida Land Use Cover and Forms Classification



**Table 4-3 Surface Water Impacts**

| Surface Water ID | NWI / USFWS | FLUCCS | Project Impact Acreage |
|------------------|-------------|--------|------------------------|
| SW7              | R2UBH       | 5100   | 0.25                   |
| TOTAL            |             |        | 0.25                   |

### **4.3 AVOIDANCE AND MINIMIZATION**

The construction of the SR 56 southbound C-D road would require additional ROW on the west side of I-75. Walls will likely be used to the outside to reduce the footprint from fill materials and side slopes. The project will result in 5.37 acres of impact to wetlands and 0.25 acres of impact to surface waters. The SMF and FPC sites will also require additional ROW and were also evaluated in this report. Pond sites located adjacent to existing wetlands have the potential to draw down wetlands, which could alter the hydrology, vegetative communities, habitat and wildlife utilization. This will be evaluated further during design.

BMPs will be implemented during construction to avoid impacts to wetlands that are not to be directly impacted by the proposed roadway improvements, as mentioned above regarding secondary impacts. Both vegetative and structural BMPs will be utilized during construction. A Stormwater Pollution Prevention Plan (SWPPP) and an erosion and sediment control plan will be developed during the design phase of this project and implemented during construction. The erosion control devices will be designed per the FDOT *Standard Specifications for Road and Bridge Construction*. Opportunities to minimize impacts to wetlands will be evaluated during future project phases.

### **4.4 WETLAND FUNCTIONAL ANALYSIS**

The UMAM was used to assess functions and values for the wetlands within the study area, in accordance with Chapter 62-345, F.A.C. The UMAM scores are based on the FLUCCS categories and not developed for individual wetlands within the study area. UMAM scores for specific wetlands will be completed during the design/permitting phase. The wetland quality ratings (delta values) are expressed numerically with numbers ranging between 0 and 1, with 1 representing an extremely high-quality wetland and 0 reflecting an extremely low-quality wetland, or an area that is no longer functioning as a wetland. The delta values for the wetland habitat types within the study area range from 0.70 – 0.77.

The functional loss of a wetland system is the estimated loss of function by the proposed project impacts and is calculated by multiplying the delta value by the impact acreage. Functional loss values are used to determine the amount of mitigation that would be required to offset the loss of wetland and surface water function caused by the proposed project. The total functional loss value is 3.78 for wetlands within the study area. **Table 4-4** summarizes impact acreage, delta values and functional loss for each wetland and surface water habitat. The UMAM assessments are included in **Appendix F**.

**Table 4-4 Functional Loss Analysis by Habitat Types**

| FLUCCS Code   | Wetland / Surface Water Description | Impact Acreage | Delta Values (UMAM) | Functional Loss Values |
|---------------|-------------------------------------|----------------|---------------------|------------------------|
| 6150          | Stream and Lake Swamps (Bottomland) | 5.09           | 0.70                | 3.56                   |
| 6210          | Cypress                             | 0.28           | 0.77                | 0.22                   |
| 6410          | Freshwater Marshes                  | 0.00           | 0.00                | 0.00                   |
| <b>TOTALS</b> |                                     | <b>5.37</b>    |                     | <b>3.78</b>            |

#### 4.5 WETLAND IMPACT MITIGATION

There are 5.37 total acres of impacts to wetlands which will require mitigation. The entire study area is located within the service area of the Hillsborough River/North Tampa Mitigation Bank. At the time of this study, the Hillsborough River Mitigation Bank has palustrine emergent credits and forested credits available, and the North Tampa Mitigation Bank has palustrine forested credits available. The currently available credits would satisfy the mitigation needs for this project. Wetland mitigation options include purchase of wetland mitigation credits through an approved mitigation bank if the appropriate credits are available, or creation, restoration or enhancement of wetlands within the study watersheds. Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

Pursuant to *Executive Order 11990* entitled *Protection of Wetlands* (May 1977), the U.S. Department of Transportation (USDOT) has developed a policy, *Preservation of the Nation's Wetlands* (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally funded highway projects to protect wetlands to the fullest extent possible. There are no practical avoidance alternatives to the construction of the proposed project design within wetland areas. Wetland impacts will be further refined during future project phases and minimization/avoidance measures will be implemented to the extent practicable as discussed above. The proposed project will have no significant long-term or short-term adverse impacts to wetlands.

#### 4.6 COORDINATION WITH PERMITTING AGENCIES

All necessary permits will be acquired prior to construction of the proposed project improvements. Coordination and/or permitting will be conducted with the following agencies during the design phase of this project as shown in **Table 4-5**.

**Table 4-5 Permit Coordination**

| Coordinating Agency                                     | Permit             |
|---------------------------------------------------------|--------------------|
| Southwest Florida Water Management District (SWFWMD)    | ERP Permit         |
| Florida Department of Environmental Protection (FDEP)   | Section 404 Permit |
|                                                         | NPDES Permit       |
| Florida Fish and Wildlife Conservation Commission (FWC) | Species permitting |

## SECTION 5 CONCLUSIONS AND COMMITMENTS

### 5.1 PROTECTED SPECIES AND HABITAT

The study area was assessed for the presence of suitable habitat for federal and state listed and protected species in accordance with 50 CFR Part 402 of the ESA of 1973, as amended, Chapter 5B-40: Preservation of Native Flora of Florida, F.A.C., Chapter 68A-27: Rules Relating to Endangered or Threatened Species, F.A.C., and Part 2, Chapter 16 – Protected Species and Habitat of the FDOT PD&E Manual.

#### Federal Listed Faunal Species

Desktop/agency database searches, analysis of GIS data, and field surveys were conducted in November and December of 2020 in order to determine protected species and suitable habitat that exists within the study area. Based on the evaluation, the FDOT has determined a finding of may affect, not likely to adversely affect for the wood stork (*Mycteria americana*), eastern black rail (*Laterallus jamaicensis*), and eastern indigo snake (*Drymarchon corais couperi*) as well as a determination of no effect for the Florida scrub-jay (*Aphelocoma coerulescens*). These effect determinations are summarized in **Table 5-1**.

#### Federal Listed Floral Species

Three federal listed floral were identified as having the potential to occur within the study area, which include the Brooksville bellflower (*Campanula robinsiae*), pygmy fringe-tree (*Chionanthus pygmaeus*), and Cooley's water willow (*Justicia cooleyi*). Minimal to no habitat is available within the study area and no species were observed; therefore, the FDOT has determined there is no effect to the long-term viability of these species by the proposed project. These effect determinations are summarized in **Table 5-2**.

#### State Listed Faunal Species

As mentioned above, desktop and field reviews were conducted to determine if protected species and potential suitable habitat exists within the study area. Based on the evaluation, the FDOT has determined there is no adverse effect anticipated for the gopher tortoise (*Gopherus polyphemus*), southeastern American Kestrel (*Falco sparverius paulus*), Florida sandhill crane (*Grus canadensis pratensis*), short-tailed snake (*Lampropeltis extenuate*), roseate spoonbill (*Platalea ajaja*), little blue heron (*Egretta caerulea*), and tricolored heron (*Egretta tricolor*), as well as no effect anticipated for the Florida pine snake (*Pituophis melanoleucus mugitus*). These effect determinations are summarized in **Table 5-1**.

#### State Listed Floral Species

Two state listed floral species have the potential to occur within the study area, which include the nodding pinweed (*Lechea cernua*) and leafless beaked orchid (*Sacoila lanceolata var. lanceolata*). The FDOT has determined only limited areas of existing habitat for these species are anticipated to be affected by the proposed project; therefore, there is no effect anticipated to the long-term viability of these species by the proposed project. These effect determinations are summarized in **Table 5-2**.

**Table 5-1 Potential Faunal Species Effect Determinations**

| Species                               | Common Name                     | State Listed (FWC) | Federal Listed (USFWS) | Effect Determination          |
|---------------------------------------|---------------------------------|--------------------|------------------------|-------------------------------|
| <b>Reptiles</b>                       |                                 |                    |                        |                               |
| <i>Drymarchon corais couperi</i>      | Eastern indigo snake            | FT                 | T                      | MANLAA                        |
| <i>Gopherus polyphemus</i>            | Gopher tortoise                 | ST                 | C                      | No Adverse Effect Anticipated |
| <i>Lampropeltis extenuate</i>         | Short-tailed Snake              | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Pituophis melanoleucus mugitus</i> | Florida pine snake              | ST                 | --                     | No Effect Anticipated         |
| <b>Birds</b>                          |                                 |                    |                        |                               |
| <i>Aphelocoma coerulescens</i>        | Florida scrub-jay               | FT                 | T                      | No Effect                     |
| <i>Egretta caerulea</i>               | Little blue heron               | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Egretta tricolor</i>               | Tricolored (Louisiana) heron    | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Falco sparverius paulus</i>        | Southeastern American kestrel   | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Grus canadensis pratensis</i>      | Florida sandhill crane          | ST                 | --                     | No Adverse Effect Anticipated |
| <i>Haliaeetus leucocephalus</i>       | Bald eagle <sup>1,2</sup>       | --                 | --                     | --                            |
| <i>Laterallus jamaicensis</i>         | Eastern Black Rail              | FT                 | T                      | MANLAA                        |
| <i>Mycteria americana</i>             | Wood stork                      | FT                 | T                      | MANLAA                        |
| <i>Pandion haliaetus</i>              | Osprey <sup>2</sup>             | --                 | --                     | --                            |
| <i>Platalea ajaja</i>                 | Roseate spoonbill               | ST                 | --                     | No Adverse Effect Anticipated |
| <b>Mammals</b>                        |                                 |                    |                        |                               |
| <i>Ursus americanus floridanus</i>    | Florida black bear <sup>3</sup> | --                 | --                     | --                            |

FWC=Florida Fish and Wildlife Conservation Commission, USFWS=United States Fish and Wildlife Service

MANLAA=May Affect, Not Likely to Adversely Affect

FT=Federal Threatened, T=Threatened, ST=State-designated Threatened, C=Candidate for listing under ESA

1 Protected under the Bald and Golden Eagles Protection Act (16 U.S.C. 668-668c)

2 Protected under the Migratory Bird Treaty Act (16 U.S.C. §§ 703-712)

3 Protected under the Florida Black Bear Conservation Rule (68A-4.009, F.A.C.)



**Table 5-2 Potential Floral Species Effect Determinations**

| Species                                          | Common Name                     | State Status (FDACS) | Federal Status (USFWS) | Effect Determination  |
|--------------------------------------------------|---------------------------------|----------------------|------------------------|-----------------------|
| <i>Campanula robinsiae</i>                       | Brooksville bellflower          | FE                   | E                      | No Effect             |
| <i>Chionanthus pygmaeus</i>                      | Pygmy fringe-tree               | FE                   | E                      | No Effect             |
| <i>Justicia cooleyi</i>                          | Cooley's water willow           | FE                   | E                      | No Effect             |
| <i>Lechea cernua</i>                             | Nodding pinweed (scrub pinweed) | ST                   | --                     | No Effect Anticipated |
| <i>Sacoila lanceolata</i> var. <i>lanceolata</i> | Leafless beaked orchid          | ST                   | --                     | No Effect Anticipated |

FDACS=Florida Department of Agriculture and Consumer Services

FE=Federal Endangered, E=Endangered, ST=State-designated Threatened

### **Other Protected Species**

These are species that are no longer listed by U.S. Fish and Wildlife Service (USFWS) or Florida Fish and Wildlife Conservation Commission (FWC), but are still afforded protection. Included species are the osprey (*Pandion haliaetus*), Florida black bear (*Ursus americanus floridanus*), and bald eagle (*Haliaeetus leucocephalus*).

### **USFWS Critical Habitat**

Review of the USFWS's available GIS data resulted in the identification of no Critical Habitat within the study area.

### **Essential Fish Habitat**

This study was evaluated for EFH in accordance with *Part 2, Chapter 17 – Essential Fish Habitat* of the FDOT *PD&E Manual* (July 2020) and the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) of 1996. No EFH is located within the study area; therefore, there will be no involvement with EFH for this study.

## **5.2 WETLANDS**

The proposed Build Alternative would result in approximately 5.37 acres of wetland and 0.25 acre of surface water impacts based on the proposed conceptual design. Wetland mitigation options include purchase of wetland mitigation credits through an approved mitigation bank, or creation, restoration or enhancement of wetlands within the project watersheds. Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

**Table 5-3 Potential Wetland Impacts**

| Wetland ID   | NWI / USFWS     | FLUCCS | Project Impact Acreage |
|--------------|-----------------|--------|------------------------|
| WL1          | PFO2F           | 6210   | 0.00                   |
| WL2          | PFO2F           | 6210   | 0.00                   |
| WL3          | PFO1/4C         | 6150   | 0.00                   |
| WL4          | PFO2F           | 6210   | 0.28                   |
| WL5          | PEM1Fx          | 6410   | 0.00                   |
| WL6          | PFO4/1C & PFO2F | 6150   | 2.35                   |
| WL8          | PFO4/1C & PFO2F | 6150   | 2.74                   |
| <b>TOTAL</b> |                 |        | <b>5.37</b>            |

NWI=National Wetlands Inventory

FLUCCS=Florida Land Use Cover and Forms Classification

**Table 5-4 Potential Surface Water Impacts**

| Surface Water ID | NWI / USFWS | FLUCCS | Project Impact Acreage |
|------------------|-------------|--------|------------------------|
| SW7              | R2UBH       | 5100   | 0.25                   |
| <b>TOTAL</b>     |             |        | <b>0.25</b>            |

### 5.3 IMPLEMENTATION MEASURES

- Surveys for potentially affected gopher tortoise burrows will be conducted prior to construction, and permits to relocate tortoises and commensals, as appropriate, will be obtained from the FWC.
- Wetland mitigation for unavoidable impacts will account for wood stork suitable foraging habitat, as part of the wetland mitigation provided for federal and state permitting.

### 5.4 COMMITMENTS

- The FDOT will incorporate the most current USFWS guideline *Standard Protection Measures for the Eastern Indigo Snake* during construction. **Appendix D** provides an example of the currently approved construction guidelines.
- Surveys to update locations of active osprey and bald eagle nest sites will be conducted during the permitting phase of the project, and permits will be acquired if there are unavoidable impacts during construction. Coordination with USFWS and FWC will take place as necessary.
- Plant surveys should be conducted prior to construction during the appropriate survey season. If protected species are located, coordination with the Florida Department of Agriculture and Consumer Services - Division of Plant Industry (FDACS–DPI) will be initiated to determine requirements.

## SECTION 6 REFERENCES

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- USFWS. Last updated December 19, 2017, *Bald Eagle Management Guidelines and Conservation Measures*. Located at <http://www.fws.gov/southeast/es/baldeagle/index.html>.
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## APPENDICES

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|            |                                                                                                             |
|------------|-------------------------------------------------------------------------------------------------------------|
| APPENDIX A | Wetland Site Photographs                                                                                    |
| APPENDIX B | Locations of Existing Wetlands                                                                              |
| APPENDIX C | Effect Determination Key for the Wood Stork in Central and North Peninsular Florida<br>& USFWS Coordination |
| APPENDIX D | USFWS Standard Protection Measures for Eastern Indigo Snake                                                 |
| APPENDIX E | Eastern Indigo Snake Programmatic Effect Determination Key                                                  |
| APPENDIX F | UMAM Assessments                                                                                            |

## **APPENDIX A** Wetland Site Photographs

Appendix A  
Wetland and Surface Water Photographs

SR 56 Southbound C-D Road/Ramps to I-75/I-275 PD&E Study  
WPI Segment No. 430573-4

Wetlands



**Wetland 1**





**Wetland 2**





**Wetland 3**





**Wetland 4**





**Wetland 5**





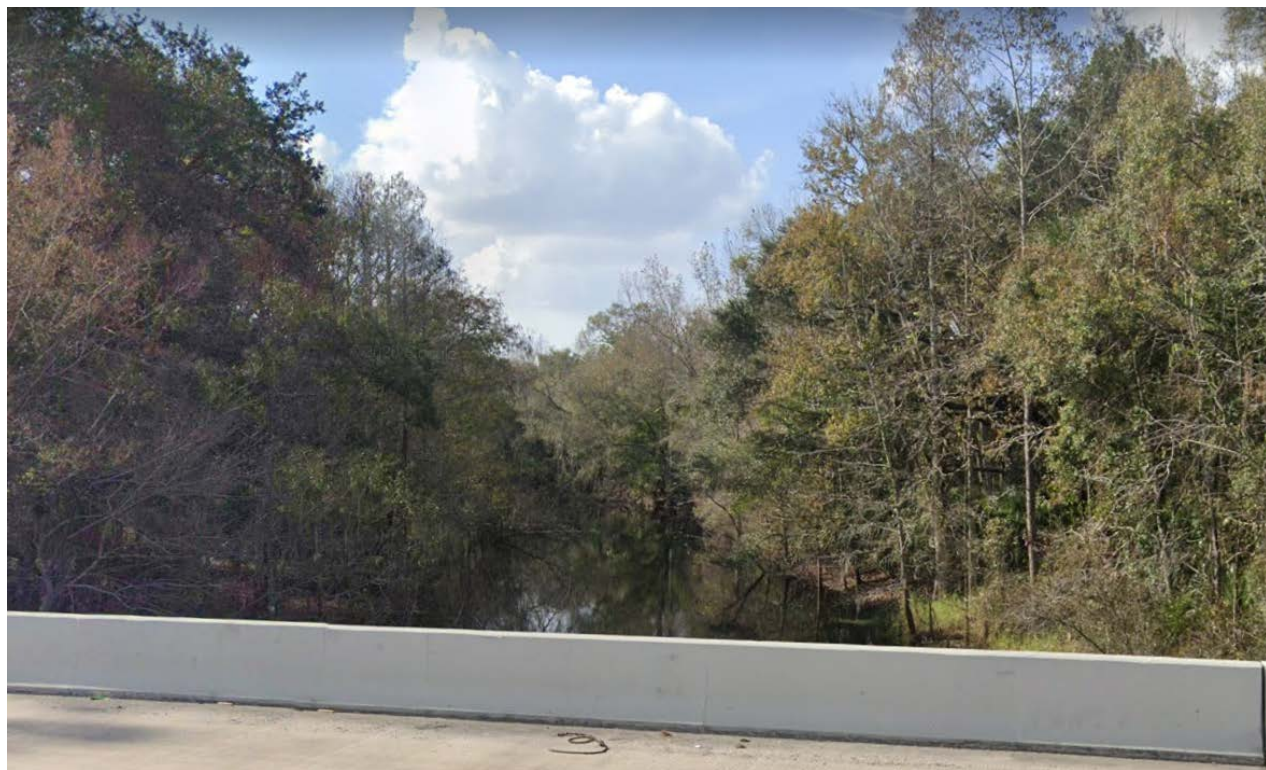
**Wetland 6**





**Wetland 8**

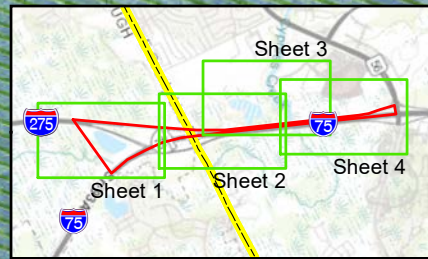
Surface Water



**Surface Water 7**

## **APPENDIX B** Locations of Existing Wetlands





WL1

Begin Project

WL2

275

WL3

SMF-800A-1

75

SMF-J2

Begin Project

**Legend**

- Existing Right of Way
- County Boundary
- Proposed Pond Sites

**Wetland/Surface Water Type**

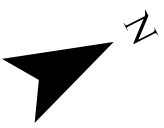
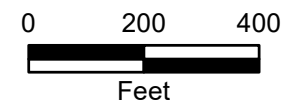
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



**SR 56 (SB) C-D Road/Ramps to I-75/I-275**  
 FPID: 254552-1-22-19 // WPI No.: 430573-4  
 Hillsborough and Pasco Counties

**Locations of Existing Wetlands**

**Appendix B  
 Sheet 1 of 4**



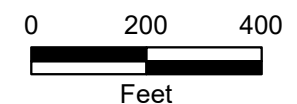




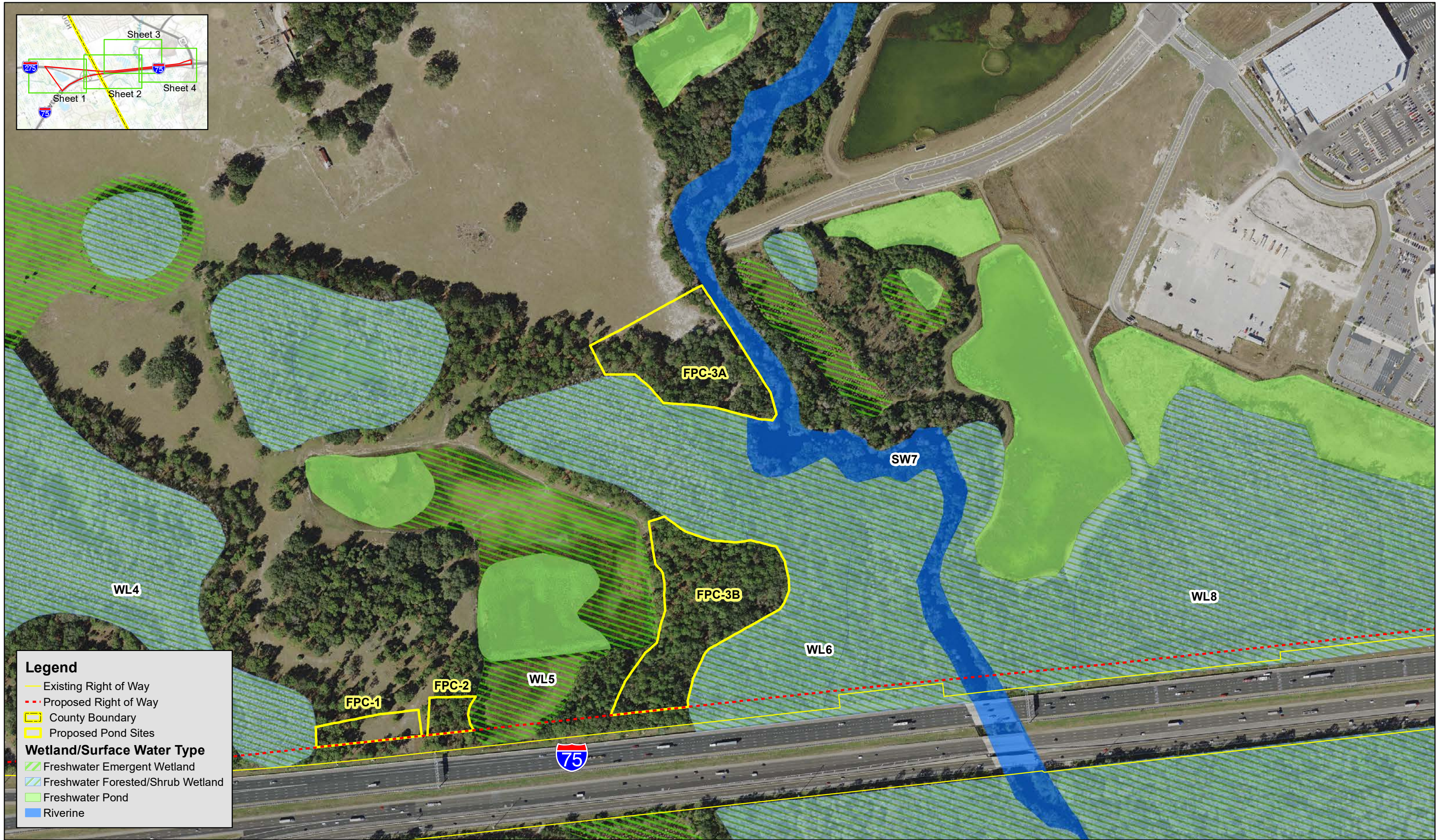
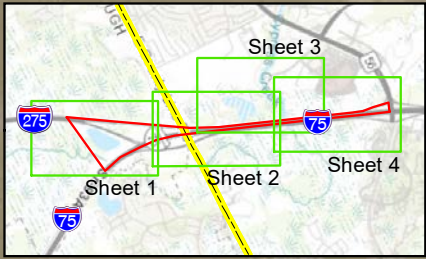
**SR 56 (SB) C-D Road/Ramps to I-75/I-275**  
 FPID: 254552-1-22-19 // WPI No.: 430573-4  
 Hillsborough and Pasco Counties

## Locations of Existing Wetlands

**Appendix B**  
**Sheet 2 of 4**







**Legend**

- Existing Right of Way
- Proposed Right of Way
- County Boundary
- Proposed Pond Sites

**Wetland/Surface Water Type**

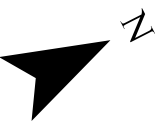
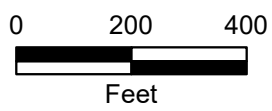
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine



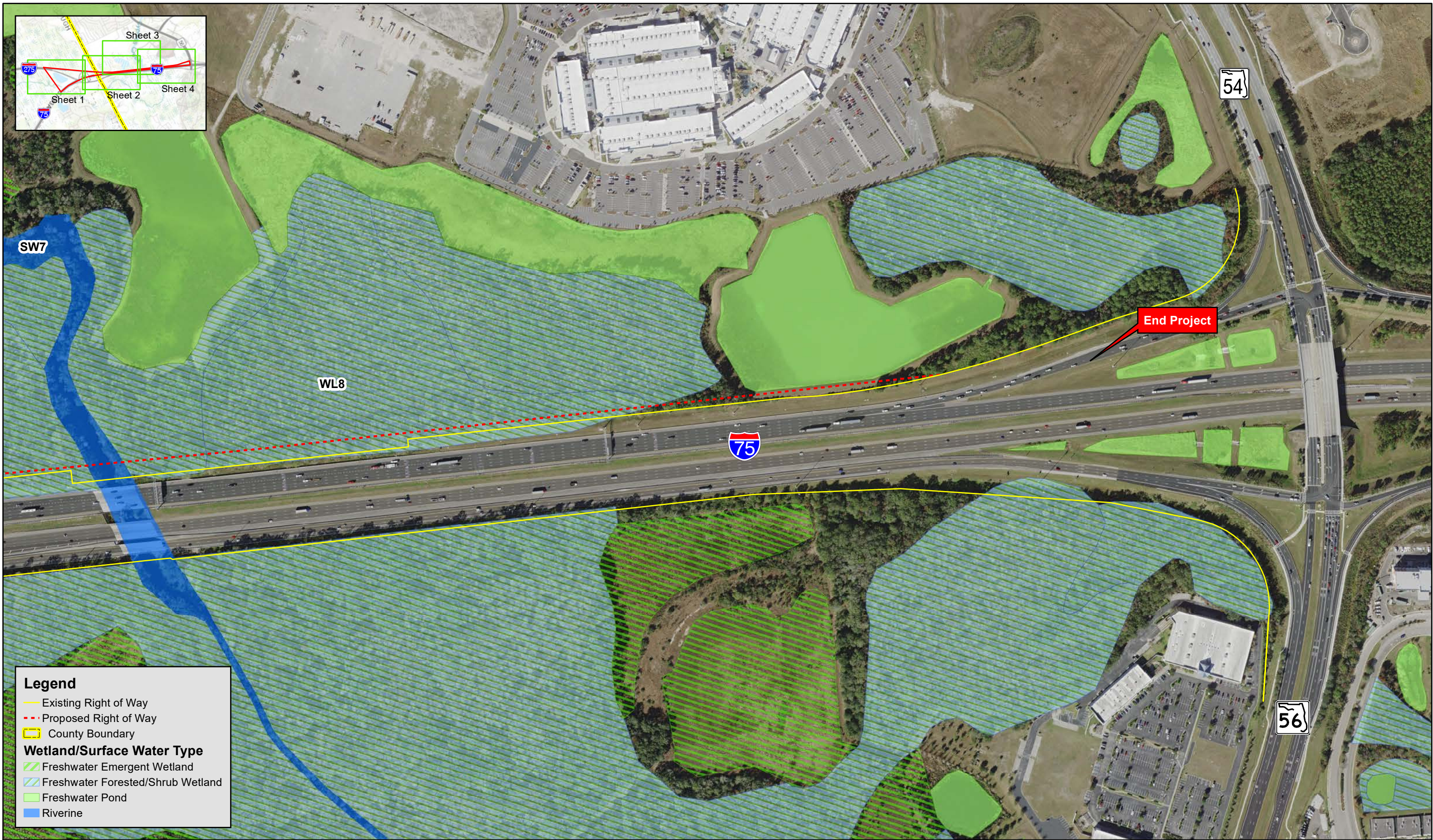
SR 56 (SB) C-D Road/Ramps to I-75/I-275  
FPID: 254552-1-22-19 // WPI No.: 430573-4  
Hillsborough and Pasco Counties

Locations of Existing Wetlands

Appendix B  
Sheet 3 of 4







**SR 56 (SB) C-D Road/Ramps to I-75/I-275**  
 FPID: 254552-1-22-19 // WPI No.: 430573-4  
 Hillsborough and Pasco Counties

## Locations of Existing Wetlands

**Appendix B**  
**Sheet 4 of 4**

0 200 400  
 Feet





## **APPENDIX C** Effect Determination Key for the Wood Stork in Central and North Peninsular Florida & USFWS Coordination

**THE CORPS OF ENGINEERS, JACKSONVILLE DISTRICT, U. S. FISH AND  
WILDLIFE SERVICE, JACKSONVILLE ECOLOGICAL SERVICES FIELD  
OFFICE AND STATE OF FLORIDA EFFECT DETERMINATION KEY FOR  
THE WOOD STORK IN CENTRAL AND NORTH PENINSULAR FLORIDA  
September 2008**

**Purpose and Background**

The purpose of this document is to provide a tool to improve the timing and consistency of review of Federal and State permit applications and Federal civil works projects, for potential effects of these projects on the endangered wood stork (*Mycteria americana*) within the Jacksonville Ecological Services Field Office (JAFL) geographic area of responsibility (GAR see below). The key is designed primarily for Corps Project Managers in the Regulatory and Planning Divisions and the Florida Department of Environmental Protection or its authorized designee, or Water Management Districts. The tool consists of the following dichotomous key and reference material. The key is intended to be used to evaluate permit applications and Corps' civil works projects for impacts potentially affecting wood storks or their wetland habitats. At certain steps in the key, the user is referred to graphics depicting known wood stork nesting colonies and their core foraging areas (CFA), footnotes, and other support documents. The graphics and supporting documents may be downloaded from the Corps' web page at <http://www.saj.usace.army.mil/permit> or at the JAFL web site at <http://www.fws.gov/northflorida/WoodStorks>. We intend to utilize the most recent information for both the graphics and supporting information; so should this information be updated, we will modify it accordingly. **Note: This information is provided as an aid to project review and analysis, and is not intended to substitute for a comprehensive biological assessment of potential project impacts. Such assessments are site-specific and usually generated by the project applicant or, in the case of civil works projects, by the Corps or project co-sponsor.**

**Explanatory footnotes provided in the key must be closely followed whenever encountered.**

**Scope of the key**

This key should only be used in the review of permit applications for effects determinations on wood storks within the JAFL GAR, and not for other listed species. Counties within the JAFL GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

The final effect determination will be based on project location and description, the potential effects to wood storks, and any measures (for example project components, special permit conditions) that avoid or minimize direct, indirect, and/or cumulative



impacts to wood storks and/or suitable wood stork foraging habitat. Projects that key to a “no effect” determination do not require additional consultation or coordination with the JAFL. Projects that key to “NLAA” also do not need further consultation; however, the JAFL staff will assist the Corps if requested, to answer questions regarding the appropriateness of mitigation options. Projects that key to a “may affect” determination equate to “likely to adversely affect” situations, and those projects should not be processed under the SPGP or any other programmatic general permit. For all “may affect” determinations, Corps Project Managers should request the JAFL to initiate formal consultation on the Wood stork.

### **Summary of General Wood Stork Nesting and Foraging Habitat Information**

The wood stork is primarily associated with freshwater and estuarine habitats that are used for nesting, roosting, and foraging. Wood storks typically nest colonially in medium to tall trees that occur in stands located either in swamps or on islands surrounded by relatively broad expanses of open water (Ogden 1991; Rodgers et al. 1996). Successful breeding sites are those that have limited human disturbance and low exposure to land based predators. Nesting sites protected from land-based predators are characterized as those surrounded by large expanses of open water or where the nest trees are inundated at the onset of nesting and remain inundated throughout most of the breeding cycle. These colonies have water depths between 0.9 and 1.5 meters (3 and 5 feet) during the breeding season.

In addition to limited human disturbance and land-based predation, successful nesting depends on the availability of suitable foraging habitat. Such habitat generally results from a combination of average or above-average rainfall during the summer rainy season, and an absence of unusually rainy or cold weather during the winter-spring breeding season (Kahl 1964; Rodgers et al. 1987). This pattern produces widespread and prolonged flooding of summer marshes that tends to maximize production of freshwater fishes, followed by steady drying that concentrate fish during the season when storks nest (Kahl 1964). Successful nesting colonies are those that have a large number of foraging sites. To maintain a wide range of foraging opportunities, a variety of wetland habitats exhibiting short and long hydroperiods should be present. In terms of wood stork foraging, the Service (1999) describes a short hydroperiod as one where a wetland fluctuates between wet and dry in 1 to 5-month cycles, and a long hydroperiod where the wet period is greater than five consecutive months. Wood storks during the wet season generally feed in the shallow water of short-hydroperiod wetlands and in coastal habitats during low tide. During the dry season, foraging shifts to longer hydroperiod interior wetlands as they progressively dry down (though usually retaining some surface water throughout the dry season).

Because of their specialized feeding behavior, wood storks forage most effectively in shallow-water areas with highly concentrated prey. Typical foraging sites for the wood stork include freshwater marshes, depressions in cypress heads, swamp sloughs, managed impoundments, stock ponds, shallow-seasonally flooded roadside or agricultural ditches, and narrow tidal creeks or shallow tidal pools. Good foraging conditions are characterized by water that is relatively calm, open, and having water depths between 5 and 15 inches (5 and 38 cm). Preferred foraging habitat includes wetlands exhibiting a mosaic of submerged and/or emergent aquatic vegetation, and shallow, open-water areas subject to hydrologic

regimes ranging from dry to wet. The vegetative component provides nursery habitat for small fish, frogs, and other aquatic prey, and the shallow, open-water areas provide sites for concentration of the prey during daily or seasonal low water periods.



## WOOD STORK KEY

**Although designed primarily for use by Corps Project Managers in the Regulatory and Planning Divisions, and State Regulatory agencies or their designees, project permit applicants and co-sponsors of civil works projects may find this key and its supporting documents useful in identifying potential project impacts to wood storks, and planning how best to avoid, minimize, or compensate for any identified adverse effects.**

- A. Project within 2,500 feet of an active colony site<sup>1</sup>.....*May affect*  
Project more than 2,500 feet from a colony site.....go to B
- B. Project does not affect suitable foraging habitat<sup>2</sup> (SFH).....*no effect*  
Project impacts SFH<sup>2</sup>.....go to C
- C. Project impacts to SFH are less than or equal to 0.5 acre<sup>3</sup>.....*NLAA*<sup>4</sup>  
Project impacts to SFH are greater than or equal to 0.5 acre.....go to D
- D. Project impacts to SFH not within a Core Foraging Area<sup>5</sup> (see attached map) of a colony site, and no wood storks have been documented foraging on site.....*NLAA*<sup>4</sup>  
Project impacts to SFH are within the CFA of a colony site, or wood storks have been documented foraging on a project site outside the CFA .....go to E
- E. Project provides SFH compensation within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank preferably within the CFA, or consists of SFH compensation within the CFA consisting of enhancement, restoration or creation in a project phased approach that provides an amount of habitat and foraging function equivalent to that of impacted SFH (see *Wood Stork Foraging Habitat Assessment Procedure*<sup>6</sup> for guidance), is not contrary to the Service's *Habitat Management Guidelines For The Wood Stork In The Southeast Region* and in accordance with the CWA section 404(b)(1) guidelines.....*NLAA*<sup>4</sup>  
Project does not satisfy these elements.....*May affect*

<sup>1</sup> An active nesting site is defined as a site currently supporting breeding pairs of wood storks, or has supported breeding wood storks at least once during the preceding 10-year period.

<sup>2</sup> Suitable foraging habitat (SFH) is described as any area containing patches of relatively open (< 25% aquatic vegetation), calm water, and having a permanent or seasonal water depth between 2 and 15 inches (5 to 38 cm). SFH supports and concentrates, or is capable of supporting and concentrating small fish, frogs, and other aquatic prey. Examples of SFH include, but are not limited to, freshwater marshes and stock ponds, shallow, seasonally flooded roadside or agricultural ditches, narrow tidal creeks or shallow tidal pools, managed impoundments, and depressions in cypress heads and swamp sloughs. See above *Summary of General Wood Stork Nesting and Foraging Habitat Information*.

<sup>3</sup> On an individual basis, projects that impact less than 0.5 acre of SFH generally will not have a measurable effect on wood storks, although we request the Corps to require mitigation for these losses when appropriate. Wood Storks are a wide ranging species, and individually, habitat change from impacts to less than 0.5 acre of SFH is not likely to adversely affect wood storks. However, collectively they may have an effect and therefore regular monitoring and reporting of these effects are important.

<sup>4</sup> Upon Corps receipt of a general concurrence issued by the JAFL through the Programmatic Concurrence on this key, "NLAA" determinations for projects made pursuant to this key require no further consultation with the JAFL.

<sup>5</sup> The U.S. Fish and Wildlife Service (Service) has identified core foraging area (CFA) around all known wood stork nesting colonies that is important for reproductive success. In Central Florida, CFAs include suitable foraging habitat (SFH) within a 15-mile radius of the nest colony; CFAs in North Florida include SFH within a 13-mile radius of a colony. The referenced map provides locations of known colonies and their CFAs throughout Florida documented as active within the last 10 years. The Service believes loss of suitable foraging wetlands within these CFAs may reduce foraging opportunities for the wood stork.

<sup>6</sup>This draft document, *Wood Stork Foraging Habitat Assessment Procedure*, by Passarella and Associates, Incorporated, may serve as further guidance in ascertaining wetland foraging value to wood storks and compensating for impacts to wood stork foraging habitat.

## **Monitoring and Reporting Effects**

For the Service to monitor cumulative effects, it is important for the Corps to monitor the number of permits and provide information to the Service regarding the number of permits issued that were determined "may affect, not likely to adversely affect." It is requested that information on date, Corps identification number, project acreage, project wetland acreage, and latitude and longitude in decimal degrees be sent to the Service quarterly.

## **Literature Cited**

Kahl, M.P., Jr. 1964. Food ecology of the wood stork (*Mycteria americana*) in Florida. *Ecological Monographs* 34:97-117.

Ogden, J.C. 1991. Nesting by wood storks in natural, altered, and artificial wetlands in central and northern Florida. *Colonial Waterbirds* 14:39-45.

Rodgers, J.A. Jr., A.S. Wenner, and S.T. Schwikert. 1987. Population dynamics of wood storks in northern and central Florida, USA. *Colonial Waterbirds* 10:151-156.



Rodgers, J.A., Jr., S.T. Schwikert, and A. Shapiro-Wenner. 1996. Nesting habitat of wood storks in north and central Florida, USA. *Colonial Waterbirds* 19:1-21.

U.S. Fish and Wildlife Service. 1999. South Florida multi-species recovery plan. Fish and Wildlife Service; Atlanta, Georgia. Available from:  
<http://verobeach.fws.gov/Programs/Recovery/vbms5.html>.

**From:** Conner, Allison <Allison.Conner@dot.state.fl.us>  
**Sent:** Tuesday, January 5, 2021 9:12 AM  
**To:** Salicco, Christopher; Daniel, Thomas  
**Cc:** Rhinesmith, Robin  
**Subject:** FW: [EXTERNAL] 430573-4: SR 56 C-D Road

Good morning Chris and Tom,

Happy New Year!

Please see response from Zakia below regarding this project's involvement with the wood stork. If you have any additional questions or concerns as we prepare the NRE, please let me know.

Thank you,



**Allison Conner**  
*Environmental Specialist III*  
Florida Department of Transportation  
District Seven – Planning & Environmental Management Office  
(813) 975-6455 / (800) 226-7220 x6455  
[Allison.Conner@dot.state.fl.us](mailto:Allison.Conner@dot.state.fl.us)

---

**From:** Williams, Zakia <[zakia\\_williams@fws.gov](mailto:zakia_williams@fws.gov)>  
**Sent:** Tuesday, January 5, 2021 9:09 AM  
**To:** Conner, Allison <[Allison.Conner@dot.state.fl.us](mailto:Allison.Conner@dot.state.fl.us)>  
**Subject:** Re: [EXTERNAL] 430573-4: SR 56 C-D Road

**EXTERNAL SENDER: Use caution with links and attachments.**

Good Morning Allison,

Happy New Year!! It looks as though FDOT have covered all the conservation measures that will be required. Please let me know if you have further questions.

Thank you,  
Zakia

*Zakia Williams*  
Fish and Wildlife Biologist  
US Fish and Wildlife Service  
7915 Baymeadows Way, Ste. 200  
Jacksonville, Florida 32256  
(o) 904-731-3119



**Allison Conner**  
*Environmental Specialist III*  
Florida Department of Transportation  
District Seven – Planning & Environmental Management Office  
(813) 975-6455 / (800) 226-7220 x6455  
[Allison.Conner@dot.state.fl.us](mailto:Allison.Conner@dot.state.fl.us)

## **APPENDIX D** USFWS Standard Protection Measures for Eastern Indigo Snake

**STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE**  
**U.S. Fish and Wildlife Service**  
**August 12, 2013**

The eastern indigo snake protection/education plan (Plan) below has been developed by the U.S. Fish and Wildlife Service (USFWS) in Florida for use by applicants and their construction personnel. At least **30 days prior** to any clearing/land alteration activities, the applicant shall notify the appropriate USFWS Field Office via e-mail that the Plan will be implemented as described below (North Florida Field Office: [jaxregs@fws.gov](mailto:jaxregs@fws.gov); South Florida Field Office: [verobeach@fws.gov](mailto:verobeach@fws.gov); Panama City Field Office: [panamacity@fws.gov](mailto:panamacity@fws.gov)). As long as the signatory of the e-mail certifies compliance with the below Plan (including use of the attached poster and brochure), no further written confirmation or “approval” from the USFWS is needed and the applicant may move forward with the project.

If the applicant decides to use an eastern indigo snake protection/education plan other than the approved Plan below, written confirmation or “approval” from the USFWS that the plan is adequate must be obtained. At least 30 days prior to any clearing/land alteration activities, the applicant shall submit their unique plan for review and approval. The USFWS will respond via e-mail, typically within 30 days of receiving the plan, either concurring that the plan is adequate or requesting additional information. A concurrence e-mail from the appropriate USFWS Field Office will fulfill approval requirements.

The Plan materials should consist of: 1) a combination of posters and pamphlets (see **Poster Information** section below); and 2) verbal educational instructions to construction personnel by supervisory or management personnel before any clearing/land alteration activities are initiated (see **Pre-Construction Activities** and **During Construction Activities** sections below).

### **POSTER INFORMATION**

Posters with the following information shall be placed at strategic locations on the construction site and along any proposed access roads (a final poster for Plan compliance, to be printed on 11” x 17” or larger paper and laminated, is attached):

**DESCRIPTION:** The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat. These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

**SIMILAR SNAKES:** The black racer is the only other solid black snake resembling the eastern indigo snake. However, black racers have a white or cream chin, thinner bodies, and WILL BITE if handled.

**LIFE HISTORY:** The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida. Although they have a preference for uplands, they also utilize some wetlands



and agricultural areas. Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

**PROTECTION UNDER FEDERAL AND STATE LAW:** The eastern indigo snake is classified as a Threatened species by both the USFWS and the Florida Fish and Wildlife Conservation Commission. “Taking” of eastern indigo snakes is prohibited by the Endangered Species Act without a permit. “Take” is defined by the USFWS as an attempt to kill, harm, harass, pursue, hunt, shoot, wound, trap, capture, collect, or engage in any such conduct. Penalties include a maximum fine of \$25,000 for civil violations and up to \$50,000 and/or imprisonment for criminal offenses, if convicted.

Only individuals currently authorized through an issued Incidental Take Statement in association with a USFWS Biological Opinion, or by a Section 10(a)(1)(A) permit issued by the USFWS, to handle an eastern indigo snake are allowed to do so.

**IF YOU SEE A LIVE EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and allow the live eastern indigo snake sufficient time to move away from the site without interference;
- Personnel must NOT attempt to touch or handle snake due to protected status.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

**IF YOU SEE A DEAD EASTERN INDIGO SNAKE ON THE SITE:**

- Cease clearing activities and immediately notify supervisor or the applicant’s designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- Take photographs of the snake, if possible, for identification and documentation purposes.
- Thoroughly soak the dead snake in water and then freeze the specimen. The appropriate wildlife agency will retrieve the dead snake.

**Telephone numbers of USFWS Florida Field Offices to be contacted if a live or dead eastern indigo snake is encountered:**

**North Florida Field Office – (904) 731-3336**

**Panama City Field Office – (850) 769-0552**

**South Florida Field Office – (772) 562-3909**

## **PRE-CONSTRUCTION ACTIVITIES**

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.
2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5" x 11" paper and then properly folded, is attached). Photos of eastern indigo snakes may be accessed on USFWS and/or FWC websites.
3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

## **DURING CONSTRUCTION ACTIVITIES**

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).
2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.
3. Periodically during construction activities, the applicant's designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

## **POST CONSTRUCTION ACTIVITIES**

Whether or not eastern indigo snakes are observed during construction activities, a monitoring report should be submitted to the appropriate USFWS Field Office within 60 days of project completion. The report can be sent electronically to the appropriate USFWS e-mail address listed on page one of this Plan.

# **APPENDIX E** Eastern Indigo Snake Programmatic Effect Determination Key





# United States Department of the Interior

## U. S. FISH AND WILDLIFE SERVICE

7915 BAYMEADOWS WAY, SUITE 200  
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:

August 13, 2013

Colonel Alan M. Dodd, District Engineer  
Department of the Army  
Jacksonville District Corps of Engineers  
P.O Box 4970  
Jacksonville, Florida 32232-0019  
(Attn: Mr. David S. Hobbie)

RE: Update Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers  
Regarding Use of the Attached Eastern Indigo Snake Programmatic Effect Determination Key

Dear Colonel Dodd:

This letter is to amend the January 25, 2010, letter to the U.S. Army Corps of Engineers regarding the use of the attached eastern indigo snake programmatic effect determination key (key). It supersedes the update addendum issued January 5, 2012.

We have evaluated the original programmatic concurrence and find it suitable and appropriate to extend its use to the remainder of Florida covered by the Panama City Ecological Services Office.

### **On Page 2**

The following replaces the last paragraph above the signatures:

“Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to Annie Dziergowski (North Florida ESO) at 904-731-3089, Harold Mitchell (Panama City ESO) at 850-769-0552, or Victoria Foster (South Florida ESO) at 772-469-4269.”

### **On Page 3**

The following replaces both paragraphs under “Scope of the key”:

“This key should be used only in the review of permit applications for effects determinations for the eastern indigo snake within the State of Florida, and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH).”

### **On Page 4**

The following replaces the first paragraph under Conservation Measures:

“The Service routinely concurs with the Corps’ “not likely to adversely affect” (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that

our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2013) located at: <http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes.htm> will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.”

**On Page 4 and Page 5 (Couplet D)**

The following replaces D. under Conservation Measures:

D. The project will impact less than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or less than 25 active and inactive gopher tortoise burrows.....go to E

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested<sup>2</sup>..... ”may affect”

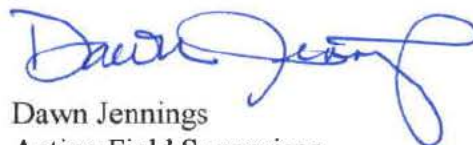
**On Page 5**

The following replaces footnote #3:

“<sup>3</sup>If excavating potentially occupied burrows, active or inactive, individuals must first obtain state authorization via a FWC Authorized Gopher Tortoise Agent permit. The excavation method selected should also minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the most current Gopher Tortoise Permitting Guidelines found at <http://myfwc.com/gophertortoise> .”

Thank you for making these amendments concerning the Eastern Indigo Snake Key. If you have any questions, please contact Jodie Smithem of my staff at the address on the letterhead, by email at [jodie\\_smithem@fws.gov](mailto:jodie_smithem@fws.gov), or by calling (904)731-3134.

Sincerely,



Dawn Jennings  
Acting Field Supervisor

cc:

Panama City Ecological Services Field Office, Panama City, FL  
South Florida Ecological Services Field Office, Vero Beach, FL



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
South Florida Ecological Services Office  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960



January 25, 2010

David S. Hobbie  
Chief, Regulatory Division  
U.S. Army Corps of Engineers  
Post Office Box 4970  
Jacksonville, Florida 32232-0019

Service Federal Activity Code: 41420-2009-FA-0642

Service Consultation Code: 41420-2009-I-0467

41910-2010-I-0045

Subject: North and South Florida  
Ecological Services Field Offices  
Programmatic Concurrence for Use  
of Original Eastern Indigo Snake  
Key(s) Until Further Notice

Dear Mr. Hobbie:

The U.S. Fish and Wildlife Service's (Service) South and North Florida Ecological Services Field Offices (FO), through consultation with the U.S. Army Corps of Engineers Jacksonville District (Corps), propose revision to both Programmatic concurrence letters/keys for the federally threatened Eastern Indigo Snake (*Drymarchon corais couperi*), (indigo snake), and now provide one key for both FO's. The original programmatic key was issued by the South Florida FO on November 9, 2007. The North Florida FO issued a revised version of the original key on September 18, 2008. Both keys were similar in content, but reflected differences in geographic work areas between the two Field Offices. The enclosed key satisfies each office's responsibilities under the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C.1531 *et seq.*).

Footnote number 3 in the original keys indicated "A member of the excavation team should be authorized for Incidental Take during excavation through either a section 10(a)(1)(A) permit issued by the Service or an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission (FWC)." We have removed this reference to a Service issued Section 10(a)(1)(A) permit, as one is not necessary for this activity. We also referenced the FWC's revised April 2009 Gopher Tortoise Permitting Guidelines with a link to their website for updated excavation guidance, and have provided a website link to our Standard Protection Measures. All other conditions and criteria apply.

We believe the implementation of the attached key achieves our mutual goal for all users to make consistent effect determinations regarding this species. The use of this key for review of projects



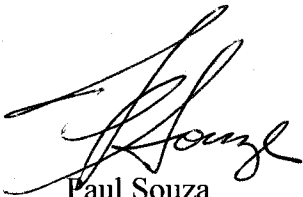


located in all referenced counties in our respective geographic work areas leads the Service to concur with the Corps' determination of "may affect, not likely to adversely affect" (MANLAA) for the Eastern indigo snake. The biological rationale for the determinations is contained within the referenced documents and is submitted in accordance with section 7 of the Act.

Should circumstances change or new information become available regarding the eastern indigo snake or implementation of the key, the determinations may be reconsidered as deemed necessary.

Thank you for your continued cooperation in the effort to conserve fish and wildlife resources. Any questions or comments should be directed to either Allen Webb (Vero Beach) at 772-562-3909, extension 246, or Jay Herrington (Jacksonville) at 904-731-3326.

Sincerely,



Paul Souza  
Field Supervisor  
South Florida Ecological Services Office



David L. Hankla  
Field Supervisor  
North Florida Ecological Services Office

Enclosure

cc: electronic only  
FWC, Tallahassee, Florida (Dr. Elsa Haubold)  
Service, Jacksonville, Florida (Jay Herrington)  
Service, Vero Beach, Florida (Sandra Sneckenberger)

## Eastern Indigo Snake Programmatic Effect Determination Key

### Scope of the key

This key should be used only in the review of permit applications for effects determinations within the North and South Florida Ecological Services Field Offices Geographic Areas of Responsibility (GAR), and not for other listed species or for aquatic resources such as Essential Fish Habitat (EFH). Counties within the **North** Florida GAR include Alachua, Baker, Bradford, Brevard, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Hillsborough, Lafayette, Lake, Levy, Madison, Manatee, Marion, Nassau, Orange, Pasco, Pinellas, Putnam, St. Johns, Seminole, Sumter, Suwannee, Taylor, Union, and Volusia.

Counties in the **South** Florida GAR include Broward, Charlotte, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Lee, Indian River, Martin, Miami-Dade, Monroe, Okeechobee, Osceola, Palm Beach, Polk, Sarasota, St. Lucie.

### Habitat

Over most of its range, the eastern indigo snake frequents several habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (Service 1999). Eastern indigo snakes appear to need a mosaic of habitats to complete their life cycle. Wherever the eastern indigo snake occurs in xeric habitats, it is closely associated with the gopher tortoise (*Gopherus polyphemus*), the burrows of which provide shelter from winter cold and summer desiccation (Speake et al. 1978; Layne and Steiner 1996). Interspersion of tortoise-inhabited uplands and wetlands improves habitat quality for this species (Landers and Speake 1980; Auffenberg and Franz 1982).

In south Florida, agricultural sites, such as sugar cane fields, created in former wetland areas are occupied by eastern indigo snakes (Enge pers. comm. 2007). Formerly, indigo snakes would have only occupied higher elevation sites within the wetlands. The introduction of agriculture and its associated canal systems has resulted in an increase in rodents and other species of snakes that are prey for eastern indigo snakes. The result is that indigos occur at higher densities in these areas than they did historically.

Even though thermal stress may not be a limiting factor throughout the year in south Florida, indigo snakes still seek and use underground refugia. On the sandy central ridge of central Florida, eastern indigos use gopher tortoise burrows more (62 percent) than other underground refugia (Layne and Steiner 1996). Other underground refugia used include armadillo (*Dasypus novemcinctus*) burrows near citrus groves, cotton rat (*Sigmodon hispidus*) burrows, and land crab (*Cardisoma gualanhum*) burrows in coastal areas (Service 2006). Natural ground holes, hollows at the base of trees or shrubs, ground litter, trash piles, and crevices of rock-lined ditch walls are also used (Layne and Steiner 1996). These refugia are used most frequently where tortoise burrows are not available, principally in low-lying areas off the central and coastal ridges. In extreme south Florida (the Everglades and Florida Keys), indigo snakes are found in tropical

hardwood hammocks, pine rocklands, freshwater marshes, abandoned agricultural land, coastal prairie, mangrove swamps, and human-altered habitats (Steiner et al. 1983). It is suspected that they prefer hammocks and pine forests, because most observations occur in these habitats disproportionately to their presence in the landscape (Steiner et al. 1983). Hammocks may be important breeding areas as juveniles are typically found there. The eastern indigo snake is a snake-eater so the presence of other snake species may be a good indicator of habitat quality.

### **Conservation Measures**

The Service routinely concurs with the Corps' "not likely to adversely affect" (NLAA) determination for individual project effects to the eastern indigo snake when assurances are given that our *Standard Protection Measures for the Eastern Indigo Snake* (Service 2004) located at: <http://www.fws.gov/northflorida/IndigoSnakes/indigo-snakes> will be used during project site preparation and project construction. There is no designated critical habitat for the eastern indigo snake.

In an effort to reduce correspondence in effect determinations and responses, the Service is providing an Eastern Indigo Snake Effect Determination Key, similar in utility to the West Indian Manatee Effect Determination Key and the Wood Stork Effect Determination Keys presently being utilized by the Corps. If the use of this key results in a Corps' determination of "no effect" for a particular project, the Service supports this determination. If the use of this Key results in a determination of NLAA, the Service concurs with this determination and no additional correspondence will be necessary<sup>1</sup>. This key is subject to revisitation as the Corps and Service deem necessary.

**A. Project is not located in open water or salt marsh.....go to B**

Project is located solely in open water or salt marsh..... "no effect"

**B. Permit will be conditioned for use of the Service's *Standard Protection Measures For The Eastern Indigo Snake* during site preparation and project construction.....go to C**

Permit will not be conditioned as above for the eastern indigo snake, or it is not known whether an applicant intends to use these measures and consultation with the Service is requested<sup>2</sup> ..... "may affect"

**C. There are gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities .....go to D**

There are no gopher tortoise burrows, holes, cavities, or other refugia where a snake could be buried or trapped and injured during project activities ..... "NLAA"

**D. The project will impact less than 25 acres of xeric habitat supporting less than 25 active and inactive gopher tortoise burrows.....go to E**



The project will impact more than 25 acres of xeric habitat or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested<sup>2</sup>..... "may affect"

- E. Any permit will be conditioned such that all gopher tortoise burrows, active or inactive, will be evacuated prior to site manipulation in the vicinity of the burrow<sup>3</sup>. If an indigo snake is encountered, the snake must be allowed to vacate the area prior to additional site manipulation in the vicinity. Any permit will also be conditioned such that holes, cavities, and snake refugia other than gopher tortoise burrows will be inspected each morning before planned site manipulation of a particular area, and, if occupied by an indigo snake, no work will commence until the snake has vacated the vicinity of proposed work..... "NLAA"

Permit will not be conditioned as outlined above and consultation with the Service is requested<sup>2</sup> ..... "may affect"

---

<sup>1</sup>With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

<sup>2</sup>Consultation may be concluded informally or formally depending on project impacts.

<sup>3</sup> If burrow excavation is utilized, it should be performed by experienced personnel. The method used should minimize the potential for injury of an indigo snake. Applicants should follow the excavation guidance provided within the Florida Fish and Wildlife Conservation Commission's revised April 2009 Gopher Tortoise Permitting Guidelines located at [http://myfwc.com/License/Permits\\_ProtectedWildlife.htm#gophertortoise](http://myfwc.com/License/Permits_ProtectedWildlife.htm#gophertortoise). A member of the excavation team should be authorized for Incidental Take during excavation through an incidental take permit issued by the Florida Fish and Wildlife Conservation Commission.

## **APPENDIX F** UMAM Assessments

**PART I – Qualitative Description**  
**(See Section 62-345.400, F.A.C.)**

|                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                           |                                                                                                                                                                                                                                                           |                                                                                                    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--|
| Site/Project Name<br>SR 56 Southbound C-D Road/Ramps to I-75/I-275                                                                                                                                                                                                                                                                                                                     |  | Application Number                                        |                                                                                                                                                                                                                                                           | Assessment Area Name or Number<br>Streams and Lake Swamps (Bottomland)                             |  |
| FLUCCs code<br>6150                                                                                                                                                                                                                                                                                                                                                                    |  | Further classification (optional)<br>PFO4/1C & PFO2F/EM1F |                                                                                                                                                                                                                                                           | Impact or Mitigation Site?<br>Impact                                                               |  |
|                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                           |                                                                                                                                                                                                                                                           | Assessment Area Size<br>5.09 acres                                                                 |  |
| Basin/Watershed Name/Number<br>Hillsborough River                                                                                                                                                                                                                                                                                                                                      |  | Affected Waterbody (Class)                                |                                                                                                                                                                                                                                                           | Special Classification (i.e. OFW, AP, other local/state/federal designation of importance)<br>None |  |
| Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands<br>Located on the southwest end and middle of the project area, connected to areas of Freshwater Emergent Wetlands.                                                                                                                                                                   |  |                                                           |                                                                                                                                                                                                                                                           |                                                                                                    |  |
| Assessment area description<br>Vegetation identified within the freshwater forested/shrub wetland systems was cypress trees ( <i>Taxodium</i> spp.), cabbage palm ( <i>Sabal palmetto</i> ), laurel oak ( <i>Quercus laurifolia</i> ), and red maple ( <i>Acer rubrum</i> ). Standing water and assorted grasses along with pickerel weed ( <i>Pontederia cordata</i> ) also observed. |  |                                                           |                                                                                                                                                                                                                                                           |                                                                                                    |  |
| Significant nearby features<br>Wetlands, uplands, and agricultural land surround most of the sites.                                                                                                                                                                                                                                                                                    |  |                                                           | Uniqueness (considering the relative rarity in relation to the regional<br>Not unique to this region.                                                                                                                                                     |                                                                                                    |  |
| Functions<br>These wetlands could provide habitat to birds, amphibians and other wildlife. It also helps in filtering of nutrients and storage of runoff from the surrounding areas.                                                                                                                                                                                                   |  |                                                           | Mitigation for previous permit/other historic use<br>N/A                                                                                                                                                                                                  |                                                                                                    |  |
| Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)<br>Wood stork, white ibis, little blue heron, tricolored heron, and white heron.                                                                                                                                      |  |                                                           | Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)<br>wood stork (FT), little blue heron (ST), tricolored heron (ST), Florida sandhill crane (ST) |                                                                                                    |  |
| Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):<br>Species observed within the project corridor (not specific to wetland type) include: Florida sandhill crane, wood stork                                                                                                                 |  |                                                           |                                                                                                                                                                                                                                                           |                                                                                                    |  |
| Additional relevant factors:<br>N/A                                                                                                                                                                                                                                                                                                                                                    |  |                                                           |                                                                                                                                                                                                                                                           |                                                                                                    |  |
| Assessment conducted by:<br>S. Canfield                                                                                                                                                                                                                                                                                                                                                |  |                                                           | Assessment date(s):<br>November 2020                                                                                                                                                                                                                      |                                                                                                    |  |



**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

|                                                                    |  |                           |  |                                                                        |  |
|--------------------------------------------------------------------|--|---------------------------|--|------------------------------------------------------------------------|--|
| Site/Project Name<br>SR 56 Southbound C-D Road/Ramps to I-75/I-275 |  | Application Number<br>N/A |  | Assessment Area Name or Number<br>Streams and Lake Swamps (Bottomland) |  |
| Impact or Mitigation                                               |  | Assessment conducted by:  |  | Assessment date:                                                       |  |
| Impact                                                             |  | S. Canfield               |  | November 2020                                                          |  |

|                                                                                                                                               |                                                                         |                                                                                                |                                                             |                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------|
| <b>Scoring Guidance</b><br>The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed | <b>Optimal (10)</b>                                                     | <b>Moderate(7)</b>                                                                             | <b>Minimal (4)</b>                                          | <b>Not Present (0)</b>                                               |
|                                                                                                                                               | Condition is optimal and fully supports wetland/surface water functions | Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions | Minimal level of support of wetland/surface water functions | Condition is insufficient to provide wetland/surface water functions |

|                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .500(6)(a) Location and Landscape Support<br><br><div style="display: flex; justify-content: space-between;"> <span>w/o pres or current</span> <span>with</span> </div> <div style="display: flex; justify-content: space-between;"> <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">0</span> </div> | Wetland systems impacted by the proposed project are located adjacent to the project corridor. Most of the surrounding areas are rural in nature for most of the wetland systems. Wetlands, uplands, and agricultural land surround most of the sites. The majority of the SR 56 Southbound C-D Road/ Ramps tol-75/I-275 corridor has undeveloped habitat that provides movement for wildlife. The area is blocked to the east by I-75. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .500(6)(b)Water Environment (n/a for uplands)<br><br><div style="display: flex; justify-content: space-between;"> <span>w/o pres or current</span> <span>with</span> </div> <div style="display: flex; justify-content: space-between;"> <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">0</span> </div> | Hydroperiods seem to fluctuate within the surface waters along the corridor. There are some years where there is little water within this wetland type and other years that water levels have been relatively high. In years where water levels are low, vegetation may appear in the surface waters. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| .500(6)(c)Community structure<br><br>1. Vegetation and/or<br>2. Benthic Community<br><br><div style="display: flex; justify-content: space-between;"> <span>w/o pres or current</span> <span>with</span> </div> <div style="display: flex; justify-content: space-between;"> <span style="border: 1px solid black; padding: 2px;">7</span> <span style="border: 1px solid black; padding: 2px;">0</span> </div> | Vegetation identified within the freshwater forested/shrub wetland systems consisted of cypress trees, cabbage palms, laurel oak, and red maple, with light grassy cover including pickeral weed in standing water. |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                   |                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Score = sum of above scores/30 (if uplands, divide by 20)<br><br><div style="display: flex; justify-content: space-between;"> <span>current</span> <span>with</span> </div> <div style="display: flex; justify-content: space-between;"> <span style="border: 1px solid black; padding: 2px;">0.70</span> <span style="border: 1px solid black; padding: 2px;">0</span> </div> | If preservation as mitigation,<br>Preservation adjustment factor =<br>Adjusted mitigation delta = | For impact assessment areas<br><div style="border: 1px solid black; padding: 5px; text-align: center;">           FL = Delta x acres = 3.56         </div> |
| Delta = [with-current]<br><br><div style="border: 1px solid black; padding: 2px; text-align: center;">0.70</div>                                                                                                                                                                                                                                                               | If mitigation<br>Time lag (t-factor) =<br>Risk factor =                                           | For mitigation assessment areas<br><div style="border: 1px solid black; padding: 5px;">           RFG = delta/(t-factor x risk) =         </div>           |

**PART I – Qualitative Description**  
**(See Section 62-345.400, F.A.C.)**

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--|
| Site/Project Name<br>SR 56 Southbound C-D Road/Ramps to I-75/I-275                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | Application Number                           |                                                                                                                                                                                                                                                                        | Assessment Area Name or Number<br>Cypress                                                         |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| FLUCCs code<br>6210                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | Further classification (optional)<br>PFO4/1C |                                                                                                                                                                                                                                                                        | Impact or Mitigation Site?<br>Impact                                                              |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                              |                                                                                                                                                                                                                                                                        | Assessment Area Size<br>0.28 acres                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| Basin/Watershed Name/Number<br>Hillsborough River                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Affected Waterbody (Class)                   |                                                                                                                                                                                                                                                                        | Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)<br>None |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands<br>Forested systems impacted by the proposed project are located adjacent to I-75/I-275. Most of the surrounding areas are rural in nature for most of the wetland systems. Wetlands (marsh pockets within forested system), uplands, and agricultural land surround most of the sites.                                                                                                                                                      |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| Assessment area description<br>Cypress trees dominate these wetland systems within the project area. Occasional other species deciduous trees are present, including red maple. Wetlands within the project area described as forested wetlands typically have a canopy dominated by cypress trees, with red maple and other deciduous trees.                                                                                                                                                                                                 |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| Significant nearby features<br><br>Wetlands, uplands, and agricultural land surround most of the sites.                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                              | Uniqueness (considering the relative rarity in relation to the regional<br><br>Not unique to this area.                                                                                                                                                                |                                                                                                   |  |
| Functions<br>These wetlands could provide habitat to birds, amphibians and other wildlife. It also helps in filtering of nutrients and storage of runoff from the surrounding areas.                                                                                                                                                                                                                                                                                                                                                          |  |                                              | Mitigation for previous permit/other historic use<br><br>N/A                                                                                                                                                                                                           |                                                                                                   |  |
| Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)<br>Marbled salamander, mole salamander, three-lined salamander, slimy salamander, five-lined skink, ringneck snake, gray rat snake, eastern king snake, cottonmouth, red-tailed hawk, turkey, yellow-billed cuckoo, screechowl, great-horned owl, ruby-throated hummingbird, acadian flycatcher, pileated woodpecker, hermit thrush, cedar waxwing, yellow-throated warbler, |  |                                              | Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the<br><br>eastern indigo snake (T), wood stork (FT), little blue heron (ST), tricolored heron (ST), Florida sandhill crane (ST) |                                                                                                   |  |
| Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):<br><br>Species observed within the project corridor (not specific to wetland type) include: Florida sandhill crane, woodstork                                                                                                                                                                                                                                                                     |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| Additional relevant factors:<br><br>N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                              |                                                                                                                                                                                                                                                                        |                                                                                                   |  |
| Assessment conducted by:<br>S. Canfield                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                              | Assessment date(s):<br>November 2020                                                                                                                                                                                                                                   |                                                                                                   |  |

**PART II – Quantification of Assessment Area (impact or mitigation)**  
**(See Sections 62-345.500 and .600, F.A.C.)**

|                                                                    |                           |                                           |
|--------------------------------------------------------------------|---------------------------|-------------------------------------------|
| Site/Project Name<br>SR 56 Southbound C-D Road/Ramps to I-75/I-275 | Application Number<br>N/A | Assessment Area Name or Number<br>Cypress |
| Impact or Mitigation                                               | Assessment conducted by:  | Assessment date:                          |
| Impact                                                             | S. Canfield               | November 2020                             |

| Scoring Guidance<br>The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed | Optimal (10)                                                            | Moderate(7)                                                                                     | Minimal (4)                                                 | Not Present (0)                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------|
|                                                                                                                                        | Condition is optimal and fully supports wetland/surface water functions | Condition is less than optimal, but sufficient to maintain most wetland/surface water functions | Minimal level of support of wetland/surface water functions | Condition is insufficient to provide wetland/surface water functions |

|                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |   |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---|
| .500(6)(a) Location and Landscape Support | Wetland systems impacted by the proposed project are located adjacent to the project corridor. Most of the surrounding areas are rural in nature for most of the wetland systems. Wetlands, uplands, and agricultural land surround most of the sites. The majority of the SR 56 Southbound C-D Road/ Ramps to I-75/I-275 corridor has undeveloped habitat that provides movement for wildlife. The area is blocked to the east by I-75. |  |  |   |
| o pres or current                         | with                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |   |
| 8                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  | 0 |

|                                                |                                                                                                                                                                                                                                                                                                                                                             |  |  |   |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---|
| .500(6)(b) Water Environment (n/a for uplands) | Hydroperiods seem to fluctuate within the surface waters along the corridor. There are some years where there is little water within these cypress wetland areas and other years that water levels have been relatively high. In years where water levels are low, vegetation may appear in the surface waters. Supporting varying levels of Cypress trees. |  |  |   |
| o pres or current                              | with                                                                                                                                                                                                                                                                                                                                                        |  |  |   |
| 7                                              |                                                                                                                                                                                                                                                                                                                                                             |  |  | 0 |

|                                              |                                                                                                                                                                                          |  |  |   |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---|
| .500(6)(c) Community structure               | Vegetation identified within the freshwater forested/shrub wetland systems was dominated by Cypress trees, with other deciduous trees including red maple, cabbage palm, and laurel oak. |  |  |   |
| 1. Vegetation and/or<br>2. Benthic Community |                                                                                                                                                                                          |  |  |   |
| o pres or current                            | with                                                                                                                                                                                     |  |  |   |
| 8                                            |                                                                                                                                                                                          |  |  | 0 |

|                                                              |      |
|--------------------------------------------------------------|------|
| Score = sum of above scores/30<br>(if uplands, divide by 20) |      |
| current w/o pres                                             | with |
| 0.77                                                         | 0    |

|                                  |
|----------------------------------|
| If preservation as mitigation,   |
| Preservation adjustment factor = |
| Adjusted mitigation delta =      |

|                             |
|-----------------------------|
| For impact assessment areas |
| FL = Delta x acres = 0.22   |

|                        |
|------------------------|
| Delta = [with-current] |
| 0.77                   |

|                       |
|-----------------------|
| If mitigation         |
| Time lag (t-factor) = |
| Risk factor =         |

|                                 |
|---------------------------------|
| For mitigation assessment areas |
| RFG = delta/(t-factor x risk) = |