

NATURAL RESOURCE EVALUATION

Florida Department of Transportation

District 1

SR 70

Limits of Project: from Lorraine Road to CR 675/Waterbury Road

Manatee County, Florida

Financial Management Number: 414506-2

ETDM Number: 14263

Date: June 2019

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.

**FLORIDA DEPARTMENT OF TRANSPORTATION  
DISTRICT ONE**

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Tampa, Florida

**June 2019**

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# Executive Summary

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The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) study to evaluate the proposed widening of State Road (SR) 70 from Lorraine Road to CR 675/Waterbury Road in Manatee County, Florida. The purpose of the PD&E study is to evaluate engineering and environmental data and document information that will aid Manatee County, FDOT District One, and the FDOT Office of Environmental Management (OEM) in determining the type, preliminary design and location of the proposed improvements. The study was conducted in order to meet the requirements of the FDOT, the National Environmental Policy Act (NEPA) and other related federal and state laws, rules and regulations.

This Natural Resources Evaluation (NRE) is being prepared as a part of this PD&E study. This report reviews potential impacts to wetland systems and federal- and state-protected species. The identification of measures to avoid, minimize and mitigate for any potential impacts is also discussed. A summary of the analysis of potential project impacts for the proposed improvements to SR 70 is presented below.

Within the limits of this study, SR 70 is a two lane undivided facility. FDOT is evaluating one project build alternative and three project segments. The three segments are separated for analysis so this study can best address the local transportation needs. The build alternative widens Segment A to 6 lanes, Segment B to four lanes expandable to six lanes, and Segment C to four lanes. In addition to widening, seven roundabouts, one regional stormwater treatment pond and 3 floodplain compensation sites are evaluated in the build alternative.

## **Wetland Evaluation**

For the purposes of this document, wetlands are defined as per 62.340 Florida Administrative Code and Section 373.019 (27), Florida Statutes and *Corp of Engineers Wetland Delineation Manual* (Technical Report Y-87-1) (1987) with *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region* (ERDC/EL TR-10-20) (2010). Surface waters are defined as open water bodies or man-made, upland-cut water courses with a defined channel and bank structure.

Impacts resulting from the Preferred Alternative totaled 9.57 acres and include 5.64 acres of wetlands and 3.94 acres of surface waters. The No-Build Alternative would result in no impacts to wetlands or surface waters.

Although unavoidable wetland impacts will occur as a result of the proposed build alternative, these wetlands are located adjacent to, and/or within, the existing roadway right-of-way (ROW) and were previously disturbed by agricultural and residential development, roadway construction, maintenance activities, and the invasion of nuisance and exotic species. Wetlands to be impacted by the proposed improvements include the roadside edges of forested and herbaceous wetland communities. Surface waters impacted consist of natural streams and waterways and excavated ditches. A description of land use, dominant vegetation, soil types, and other pertinent remarks regarding these communities is provided in subsequent sections of this report.

The Uniform Mitigation Assessment Methodology (UMAM) analysis was performed on proposed wetland impact areas. Functional loss was calculated for the preferred alternative. Construction of the preferred alternative results in a loss of 5.46 functional units.

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. Compensatory mitigation for this project will be completed through the use of mitigation banks and other mitigation options that satisfy state and federal requirements.

Final determination of jurisdictional boundaries, in addition to mitigation requirements, will be coordinated between the FDOT and permitting agencies during the final design phase of the project. The results of this PD&E Study indicate there are no practicable alternatives to the proposed impacts due to the need to increase roadway capacity and safety considerations. Furthermore, all wetland impacts have been avoided and minimized to the greatest extent possible and have been limited to those areas of previous disturbance and which are required to meet minimum safety requirements.

### **Protected Species**

The project area was evaluated for potential occurrences of federal- and state-listed protected plant and animal species in accordance with Section 7 of the Endangered Species Act of 1973, as amended, and Chapters 5B-40 and 68A-27 of the Florida Administrative Code (F.A.C.). The evaluation included coordination with the U.S. Fish and Wildlife Service (FWS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Natural Areas Inventory (FNAI). The evaluation also included literature review, database searches, and field assessments of the project area to identify the potential occurrence of protected species and/or presence of federally-designated critical habitat. Field evaluations of the project area and adjacent habitats were conducted by project biologists in April and June 2017 and October 2018.

Based on evaluation of collected data and field reviews, the federal- and state-listed species discussed below were observed as having the potential to occur within or adjacent to the project area. An effect determination was made for each of these federal- and state-listed species based on an analysis of the potential impacts of the proposed project on each species.

**Table ES-1 Federal Protected Species Effect Determinations**

<b>Project Impact Determination</b>	<b>Federal Listed Species</b>
<b>“No effect”</b>	Crested caracara ( <i>Caracara cheriway</i> )
	Florida grasshopper sparrow ( <i>Ammodramus savannarum floridanus</i> )
	Florida scrub jay ( <i>Aphelocoma coerulescens</i> )
<b>“May affect, but is not likely to adversely affect”</b>	American alligator ( <i>Alligator mississippiensis</i> )
	Eastern indigo snake ( <i>Drymarchon couperi</i> )
	Wood stork ( <i>Mycteria americana</i> )

**Table ES-2 State Protected Species Effect Determinations**

<b>Project Impact Determination</b>	<b>State Listed Species</b>
<b>“No effect anticipated”</b>	Many-flowered grasspink ( <i>Calopogon multiflorus</i> )
	Tampa vervain ( <i>Glandularia tampensis</i> )
	Lowland loosestrife ( <i>Lythrum flagellare</i> )
	Florida spiny-pod ( <i>Matelea floridana</i> )
	Giant orchid ( <i>Pteroglossaspis ecristata</i> )
	Toothed maiden fern ( <i>Thelypteris serrata</i> )
	Broad-leaved nodding-caps ( <i>Triphora amazonica</i> )
<b>“No adverse effect anticipated”</b>	Gopher tortoise ( <i>Gopherus polyphemus</i> )
	Florida sandhill crane ( <i>Grus canadensis pratensis</i> )
	Southeastern American kestrel ( <i>Falco sparverius paulus</i> )
	Little blue heron ( <i>Egretta caerulea</i> )
	Roseate spoonbill ( <i>Platalea ajaja</i> )
	Tricolored heron ( <i>Egretta tricolor</i> )

**Table ES-3 Other Protected Species Effect Determinations**

<b>Project Impact Determination</b>	<b>Additional Protected Species</b>
<b>“May affect, but is not likely to adversely affect”</b>	Bald eagle ( <i>Haliaeetus leucocephalus</i> )
<b>“No adverse effect anticipated”</b>	Florida black bear ( <i>Ursus americanus floridanus</i> )
	Southern fox squirrel ( <i>Sciurus niger niger</i> )

**Essential Fish Habitat**

There is no involvement with Essential Fish Habitat.

# Section 1. Project Summary

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## *1.1 Project Description*

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) study to evaluate the proposed widening of 6.1 miles of State Road (SR) 70 from Lorraine Road (MP 9.478) to County Road (CR) 675/Waterbury Road (MP 15.567) and associated pond sites in Manatee County, as depicted in **Figure 1-1**.

This study evaluates the need for capacity improvements and provides engineering and environmental documentation and analysis to establish the optimal type and location of improvements to SR 70. In addition to widening, seven roundabouts, one regional stormwater treatment pond (Regional) and three floodplain compensation (FPC) sites were evaluated. The results of the study will aid Manatee County, FDOT and the FDOT Office of Environmental Management (OEM) in determining the type, preliminary design and location of the proposed improvements.

The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14263. An ETDM *Programming Screen Summary Report* containing comments from the Environmental Technical Advisory Team (ETAT) was published on April 3, 2018. The ETAT evaluated the project's effects on natural, physical, cultural, social and economic resources. As part of this evaluation, resource and regulatory agencies identified potential wetland and protected species impacts associated with construction of the project.

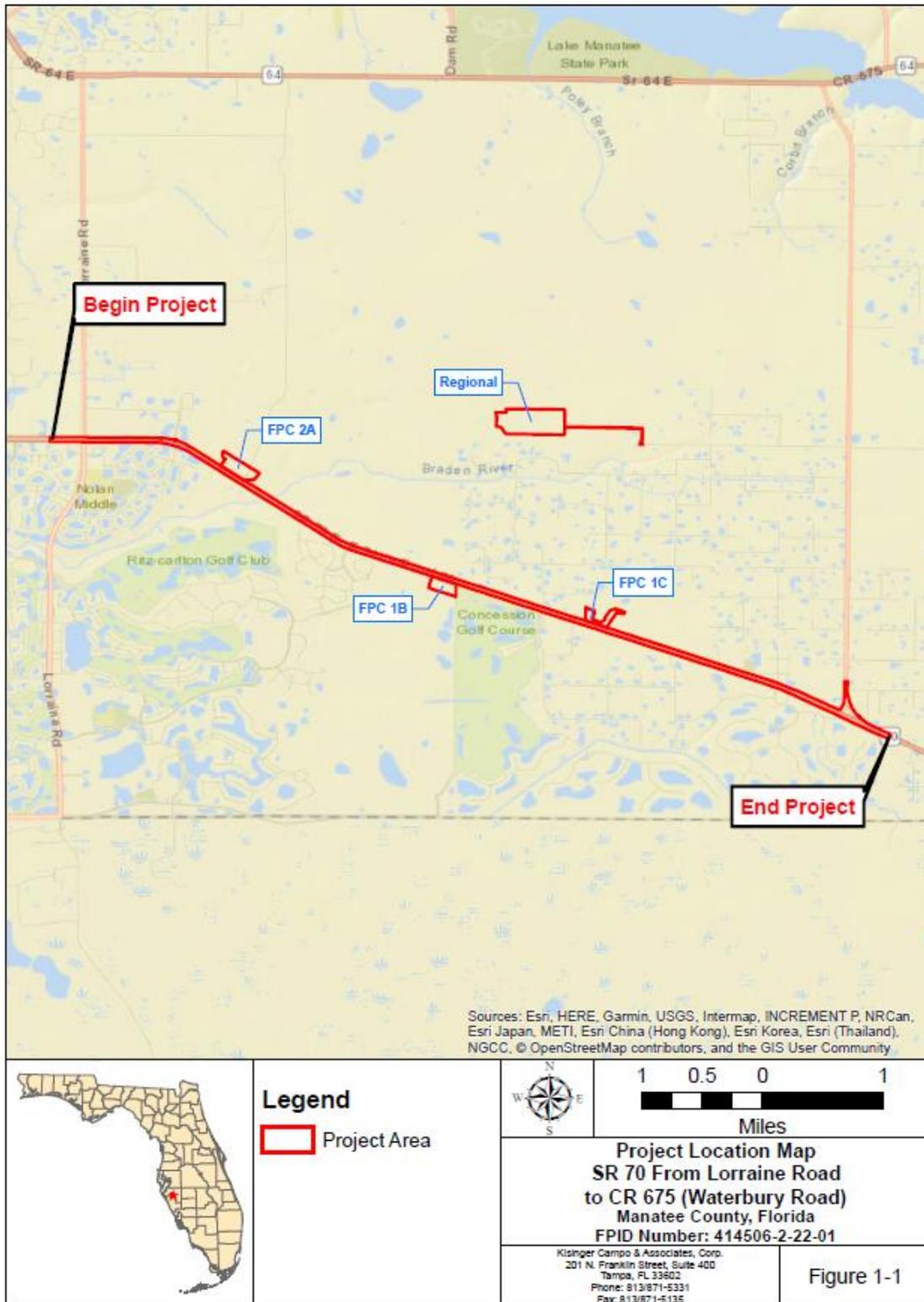
In the ETDM Screening, the Southwest Florida Water Management District (SWFWMD) and Army Corps of Engineers (USACE) commented that wetland impacts should be minimized and mitigated. The U.S. Fish and Wildlife Service (FWS) highlighted the wood stork, Eastern indigo snake, and wetlands habitat as key environmental concerns. Impacts to wetlands and species are discussed and addressed within this report.

Upon completion, this study will meet all requirements of the National Environmental Policy Act of 1969 (NEPA) as administered by FDOT - OEM and the requirements of other federal and state laws so as to qualify the proposed project for federal-aid funding.

## *1.2 Purpose and Need*

The purpose of this project is to improve traffic operational conditions along the SR 70 corridor from Lorraine Road to CR 675/Waterbury Road to accommodate projected travel demand, specifically increased commuter and freight traffic. Traffic flow within the corridor is of particular concern given the high percentage of heavy trucks mixed with non-truck traffic. The unique acceleration and deceleration characteristics of the trucks cause vehicular travel delay and, ultimately, impact the movement of commuter and freight traffic on the two-lane undivided roadway.

**Figure 1-1 Project Location Map**



Two Developments of Regional Impact (Cypress Banks and Northwest Sector) surround the western project terminus. Of the five Planned Unit Developments that are present, two are located at the western project terminus and three surround the eastern portion of the project corridor (two of these three are Panther Trace and Concession). Del Webb Lakewood Ranch is also present south of SR 70 near Uihlein Road. The corridor further abuts a master planned community, Lakewood Ranch, to the west.

Lakewood Ranch is also identified by Manatee County as one of four major growth and focus areas of the county. Growth along the project corridor is anticipated to occur most heavily within the area surrounding the western half of the corridor as the area will continue to support residential and mixed use community activities with commercial uses concentrated at the intersection of SR 70 and Lorraine Road.

Due to the fact that it provides regional access to agriculture and ranching operations, industrial/commercial areas, and freight distribution facilities throughout central Florida, particularly with its connections to several major transportation facilities, SR 70 has been designated as part of the SIS network. Accordingly, the project segment of SR 70 currently carries significant truck traffic.

This project is anticipated to improve traffic operations and preserve operational capacity along SR 70 to address increased travel demand as a result of projected growth along the corridor and higher volumes of heavy trucks on the corridor due to agricultural and ranching activities in the area. The proposed project is also anticipated to improve safety characteristics of the facility, which are particularly exacerbated by the high truck percentages, by enhancing overall traffic operations.

### ***1.3 Purpose of Report***

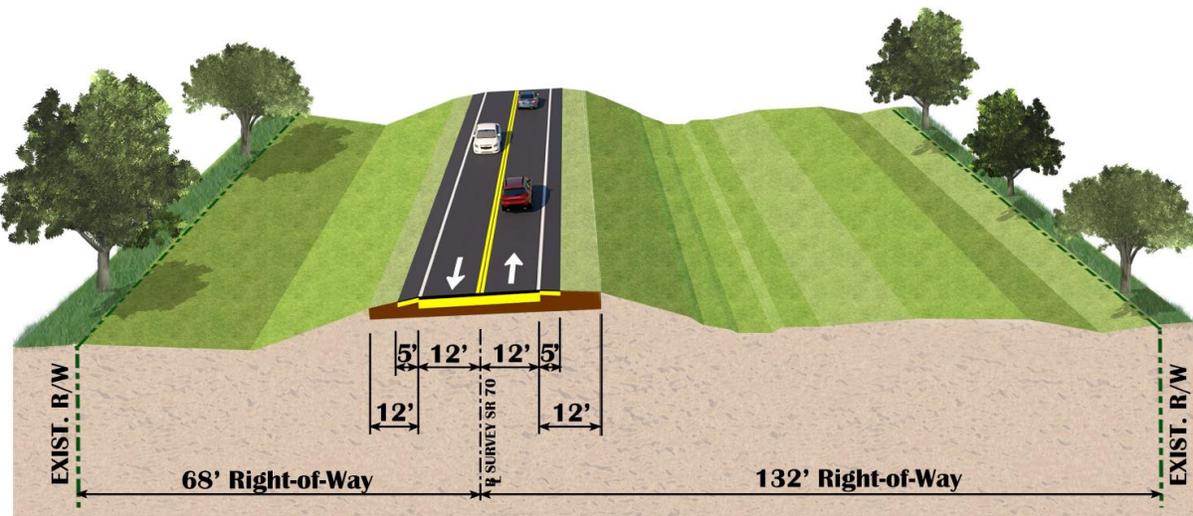
The purpose of this report is to document wetlands and protected species involvement within the proposed project's study corridor.

## Section 2. Project Description

### 2.1 Existing Facility

Throughout the limits of this study SR 70 is designated as a rural principal arterial highway, a SIS highway and an evacuation route. As defined by the FDOT Design Manual, Section 200, the context classification of the project is C3R – Suburban Residential. The existing SR 70 facility consists of a two-lane undivided facility with 12-foot travel lanes (one in each direction) and 12-foot shoulders (5 feet paved) (**Figure 2-1**). Within the study limits the existing right-of-way width is approximately 200 feet throughout the majority of the project corridor and approximately 250 feet near the intersection of SR 70 and CR 675/Waterbury Road. There are 14 cross drains, ranging in size from 24-inch pipes to a quadruple 10' x 7' box culvert. The posted speed limit within the project area is 60 miles per hour (mph).

**Figure 2-1 Existing Typical Roadway Section**



### 2.2 Proposed Action

The proposed action is to increase the capacity of the existing two-lane undivided roadway by widening it to a four or six-lane divided roadway to accomplish the purpose and need described in the previous section.

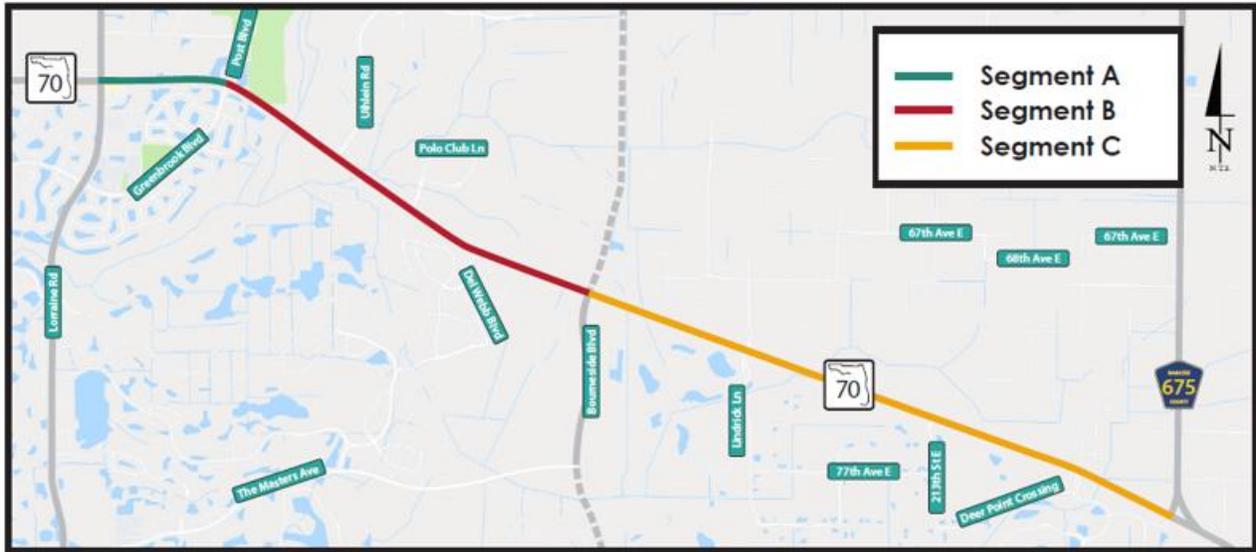
#### 2.2.1 Project Alternatives

Within the limits of this study, FDOT is evaluating one project build alternative and three project segments. The three segments are separated for analysis so this study can best address the local

transportation needs. Segment A extends from Lorraine Road to east of Greenbrook Boulevard, Segment B extends from east of Greenbrook Boulevard to Bourneside Boulevard, and Segment C extends from Bourneside Boulevard to the eastern project limit at CR 675 (Figure 2-2).

The No-Build alternative remains a viable alternative throughout the study process.

Figure 2-2 Project Location Map by Segment



### 2.2.2 Typical Sections

The designation of SR 70 as a SIS facility throughout the project limits presents a key variable for the design speeds for the project. The FDOT Design Manual (FDM), Part 2 Table 201.4.1 provides design speed controls for SIS facilities. For SIS facilities with a C3R context classification a minimum design speed of 50 mph is required. However, within the C3R context classification, if curbed roadways are proposed the design speed may be reduced to 45 mph. As designed, the proposed high-speed curbed typical sections proposed for Segment A meet the FDM criteria with a 45 mph design speed. The 50 mph design speed for Segments B and C meet the minimum design speed for an SIS facility.

Proposed build improvements for each of the three project segments include the follows:

#### Segment A

The proposed typical section for Segment A will provide a high-speed curbed roadway design with three 11-foot travel lanes in each direction, 7.0-foot paved outside shoulders (buffered bike lanes), a closed drainage system with curbs and gutters, and 8-foot sidewalks in both directions (Figure 2-3). The proposed improvements in this segment are anticipated to be accomplished within the existing 200-foot right-of-way.

### Segment B

The proposed typical section for Segment B will provide a high-speed curbed roadway design with two 12-foot lanes in each direction, 5.0-foot paved outside shoulders, a closed drainage system with curbs and gutters, and 8-foot sidewalks in both directions (**Figure 2-4**). The proposed roadway has been designed with a 54-foot wide median such that it is expandable to a six-lane section in the future, when traffic needs merit an expansion, by adding a 12-foot lane in each direction on the inside. The proposed improvements in this segment are anticipated to be accomplished primarily within the existing 200-foot right-of-way; minimal right-of-way will be needed to construct proposed roundabouts at Uihlein Road, Del Webb Boulevard, and Bourneside Boulevard.

### Segment C

The proposed typical section for Segment C will provide a high-speed curbed roadway design with two 12-foot lanes in each direction, 10-foot outside shoulders (5 feet paved), an open drainage system, and 8-foot sidewalks in both directions (**Figure 2-5**). The proposed improvements in this segment are anticipated to be accomplished primarily within the existing 200-foot right-of-way; minimal right-of-way will be needed to construct proposed roundabouts at 197<sup>th</sup> Street East/Lindrick Lane, 213<sup>th</sup> Street East, 225<sup>th</sup> Street East/Panther Ridge Trail, and CR 675.

**Figure 2-3 Segment A Proposed Typical Roadway Section**

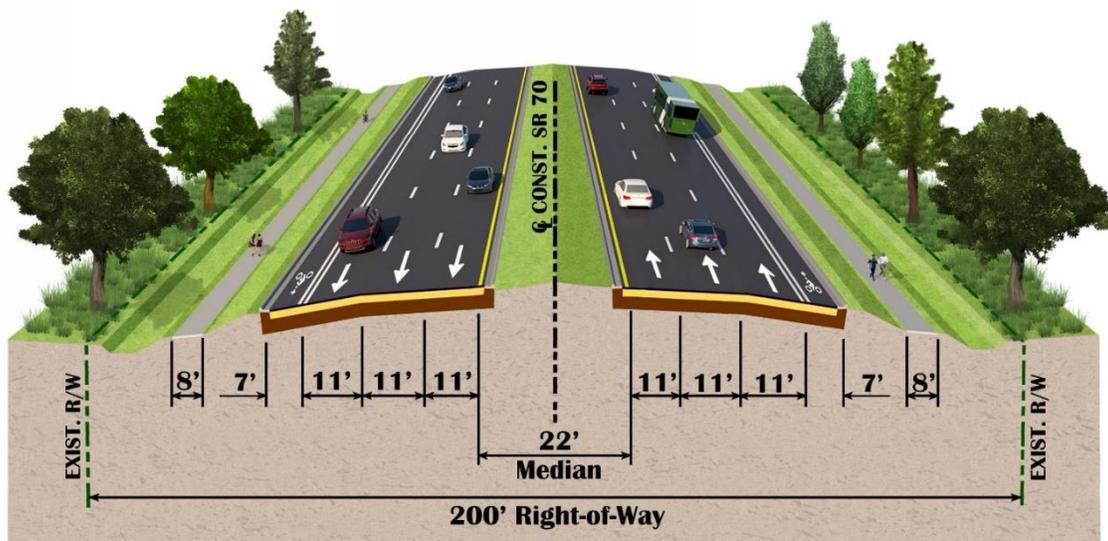


Figure 2-4 Segment B Proposed Typical Roadway Section

**\*Future Widening**

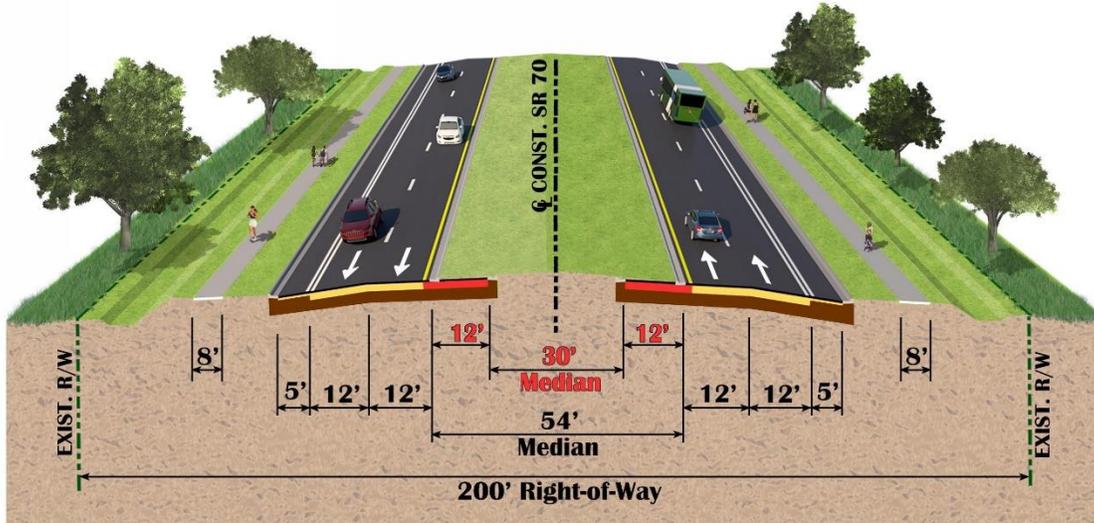
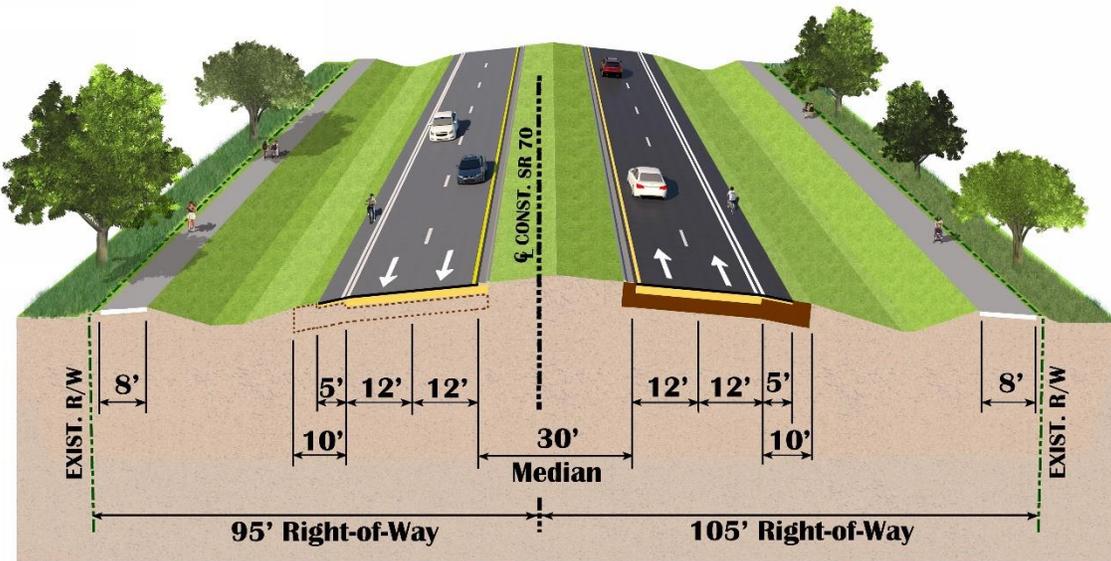


Figure 2-5 Segment C Proposed Typical Roadway Section



## Section 3. Existing Conditions

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### 3.1 Introduction

This section presents a description of existing conditions within the project study area, including soils and land use/vegetative cover types within both upland and wetland communities. **Section 4.0** presents a description of wetland and surface water impacts that would result from the construction of the proposed project and a discussion of the mitigation options to offset these impacts. **Section 5.0** presents a description of the potential impacts to federal- and state-protected species and proposed conservation measures to off-set these impacts.

### 3.2 Methodology

In order to assess the approximate locations and boundaries of existing wetland and upland communities within the project study area, the following site-specific data were collected and reviewed:

- Aerial photographs, (scale 1"=200') ESRI 2018;
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), Soil Survey of Manatee County, Florida, 1983;
- Florida Association of Environmental Soil Scientists, Hydric Soils of Florida Handbook, 4th ed., (Hurt et. al. 2007);
- Natural Resources Conservation Service Web Soil Survey, United States Department of Agriculture, (May 2018);
- USGS. 2015 7.5 Minute Topographical Quadrangle Map, Florida. U.S. Geological Survey
- Florida Department of Transportation (FDOT), Florida Land Use Cover, and Forms Classification System (FLUCFCS), 3rd ed., January 1999;
- SWFWMD, Florida Land Use, Cover and Forms Classification System GIS Database, (SWFWMD 2011);
- FWS, National Wetlands Inventory (NWI), Wetlands Online Mapper (January 2018); and
- FWS, Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et. al. 1979)

For the purposes of this document, wetlands are defined as per 62.340 Florida Administrative Code and Section 373.019 (27), Florida Statutes and *Corp of Engineers Wetland Delineation Manual* (Technical Report Y-87-1) (1987) with *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region* (ERDC/EL TR-10-20) (2010). Surface waters are defined as open water bodies or man-made, upland-cut water courses with a defined channel and bank structure. The project study area is defined as the existing and proposed right-of-

way of the preferred alternative, including ponds and floodplain compensation (FPC) sites.

Environmental scientists familiar with Florida natural communities conducted on-site field reviews of the project study area and adjacent habitats in April and June 2017 and October 2018. Field reviews consisted of pedestrian transects throughout all natural habitat types found within the project study area. The purpose of the reviews was to verify and/or refine preliminary habitat boundaries and classification codes established through in-office literature reviews and aerial photo interpretation. During field investigations, each wetland and surface water habitat within the project study area was visually inspected and photographed. Attention was given to identifying plant species and composition for each community. Exotic plant infestations and other disturbances such as soil subsidence, clearing, canals, power lines, etc., were noted. Attention was also given to identifying wildlife and signs of wildlife usage in each wetland and adjacent upland habitats within the project study area.

### **3.3 Results**

Based on site-specific data searches and field evaluations, a total of seven (7) soil types and 20 upland and six (6) wetland and surface water habitat types were identified within the project study area. The following subsections describe the soils, upland and wetland community types, and individual wetlands and surface waters that occur within the project study area.

#### **3.3.1 Soils**

Based on the *Soil Survey of Manatee County, Florida* (NRCS, 1983) the project study area is comprised of seven (7) soil types. **Appendix A** provides aerial maps depicting the boundaries of each soil type within the project study area in addition to individual soil descriptions and their general characteristics. According to the *NRCS Web Soil Survey*, three (3) of the soil types reported within the project study area are classified as hydric and four (4) are listed as non-hydric. Mapped hydric soils comprise 20.0 acres (7.0 percent) and non-hydric soils cover 267.5 acres (93.0 percent) of the project study area.

**Table 3-1** lists the soil types reported within the project study area, their corresponding NRCS reference numbers reported in the *Soil Survey of Manatee County, Florida*, their hydric classification, and their approximate acreage and percentage of the project study area.

**Table 3-1 Soil Types and Coverage within the SR 70 Project Study Area**

	Soil Type (In Manatee County)	Hydric (Y/N)	Area within the project study area (acres)	Percent of the Project Study Area
11	Cassia Fine Sand	N	2.58	0.9%
18	Delray-Pomona Complex	Y	1.26	0.4%
26	Floridana-Immokalee-Okeelanta Association	Y	15.23	5.3%
30	Myakka-Myakka, Wet, Fine Sands, 0 To 2 Percent Slopes	N	238.69	83.0%
35	Ona Fine Sand, Orstein Substratum	N	24.22	8.4%
38	Palmetto Sand	Y	3.49	1.2%
40	Pinellas Fine Sand	N	2.00	0.7%
Total Hydric			19.97	7.0%
Total Non-Hydric			267.49	93.0%
Total			287.47	100.0%

### 3.3.2 Existing Land Use and Vegetative Cover

A total of 18 upland and six (6) wetland habitat types were found within the project study area. Descriptions and aerial maps depicting existing land uses and habitats within the project study area are provided in **Appendix B. Table 2-2** provides land use and habitat types, their FLUCFCS classifications, and their total acreage and percent coverage within the project study area.

Upland communities comprise 272.7 acres (94.8 percent) of the project study area and include residential development, commercial development, open land, agriculture, shrub and brushland, palmetto prairies, pine flatwoods, mixed hardwoods and transportation. Wetland and surface water communities comprise 14.8 acres (5.2 percent) of the project study area and include streams and waterways, stream and bottomland swamp, mixed wetlands hardwoods, hydric pine flatwoods, wetland shrub, and freshwater marshes.

**Table 3-2 Existing Land Uses within the SR 70 Project Study Area**

<b>FLUCFCS Classification</b>	<b>FLUCFCS Description</b>	<b>FWS Classification</b>	<b>Acreage within Study Area</b>	<b>Percent in Study Area</b>
110	Residential Low Density < 2 Dwelling Units	N/A	0.56	0.20%
120	Residential Medium Density 2->5 Dwelling Unit	N/A	0.14	0.05%
190	Open Land	N/A	1.19	0.42%
210	Cropland and Pastureland	N/A	0.02	0.01%
212	Unimproved Pastures	N/A	26.97	9.55%
214	Row Crops	N/A	17.04	6.03%
260	Other Open Lands <Rural>	N/A	0.68	0.24%
261	Fallow Crop Land	N/A	47.37	16.78%
320	Shrub and Brushland	N/A	2.57	0.91%
321	Palmetto Prairies	N/A	9.36	3.31%
330	Mixed Rangeland	N/A	0.06	0.02%
411	Pine Flatwoods	N/A	43.62	15.45%
423	Oak - Pine – Hickory	N/A	0.61	0.21%
434	Hardwood Conifer Mixed	N/A	8.86	3.14%
438	Mixed Hardwoods	N/A	0.46	0.16%
810	Transportation	N/A	113.18	40.08%
830	Utilities	N/A	0.19	0.07%
<b>Total Uplands</b>			<b>272.88</b>	<b>96.62%</b>
510	Streams and Waterways	PUB3H, PEM1C/Ex, PSS1Ex	3.95	1.40%
615	Stream and Lake Swamps (Bottomland)	PUB2/3H	0.18	0.06%
617	Mixed Wetland Hardwoods	PFO1C	2.03	0.72%
625	Hydic Pine Flatwoods	PFO4C	0.38	0.13%
631	Wetland Shrub	PSS1C	1.16	0.41%
641	Freshwater Marshes	PEM1C	1.87	0.66%
<b>Total Wetlands and Surface Waters</b>			<b>9.57</b>	<b>3.38%</b>
<b>Total</b>			<b>282.45</b>	<b>100.00%</b>

### 3.3.3 Wetlands and Surface Waters

During field reviews of the project study area, environmental scientists delineated the approximate boundaries of existing wetland and surface water communities on 1"= 200' true-color aerial photographs. Each wetland and surface water habitat within the project study area was classified using FLUCFCS (FDOT 1999) and the FWS Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, et al., 1979). Approximate wetland boundaries were identified in accordance with the State of Florida Wetlands Delineation Manual [Chapter 62-340, Florida Administrative Code (F.A.C.)], the criteria found within the USACE 1987 Corps of Engineers Wetland Delineation Manual (Y-87-1) and 2010 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coast Plain Region (Version 2.0) (ERDC/EL TR-10-20), EO 11990, and Part 2, Chapter 9 - Wetlands and Other Surface Waters of the FDOT PD&E Manual.

SWFWMD conducted informal wetland and surface water reviews on June 14<sup>th</sup> and 29<sup>th</sup>, 2017. Boundaries were uploaded to the file of record on April 2, 2018. Informal wetland and surface water reviews for the pond sites were conducted on January 23, 2019. Boundaries were uploaded to the file of record on February 15, 2019.

Wetland and surface water habitats include forested wetlands, freshwater marshes, canals, and numerous excavated drainage features (e.g., ditches). Culverts under SR 70 provide hydrologic connections between wetland systems located on either side of the highway.

Individual wetlands are discussed in more detail in **Section 4.0**. **Appendix C** provides descriptions of all identified wetland and surface water habitats, a table of their acreage within the project study area, and aerial maps of the location of these systems within the project study area. When appropriate, these communities are discussed collectively depending upon their hydrologic connection. There are no wetlands or surface waters designated as Outstanding Florida Waterways within the project study area. Photographs of each wetland and surface water are provided in **Appendix D**.

# Section 4.0 Wetland Evaluation

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## 4.1 Introduction

In accordance with EO 11990 and Part 2, Chapter 9 of the PD&E Manual, the Florida Department of Transportation (FDOT) has undertaken all actions to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities. Nonetheless, the FDOT has determined that there is no practicable alternative to construction impacts occurring in wetlands. Any unavoidable impacts to wetlands will be mitigated to achieve no net loss of wetland function. Unavoidable wetland impacts would result from construction of the project and are necessary to accommodate transportation safety standards for side slopes, and additional lanes. However, potential wetland impacts have been minimized to the extent possible by incorporating a stormwater management system which would be constructed to meet state water quality criteria, thereby minimizing water quality impacts from stormwater discharges from roadway and bridge surfaces.

## 4.2 Methodology

For the purposes of this document, wetlands are defined as per 62.340 Florida Administrative Code and Section 373.019 (27), Florida Statutes and *Corp of Engineers Wetland Delineation Manual* (Technical Report Y-87-1) (1987) with *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region* (ERDC/EL TR-10-20) (2010). Surface waters are defined as open water bodies or man-made, upland-cut water courses with a defined channel and bank structure. Environmental scientists familiar with Florida natural communities conducted on-site field reviews of the project study area and adjacent habitats in April and June 2017 and October 2018. The project study area is defined as the right-of-way of the preferred alternative as described in **Section 2.0**, including ponds and FPC sites.

## 4.3 Results

The No-Build Alternative would result in no impacts to wetlands or surface waters. For the preferred alternative, potential direct impacts to wetlands and surface waters were assessed for the SR 70 corridor. **Table 4-1** shows the proposed wetland and surface water impacts within the project area. **Table 4-2** provides the proposed impacts to each wetland and surface water type. Indirect impacts will be assessed using the Uniform Mitigation Assessment Methodology (UMAM) at the time of permitting to determine loss within the 25-foot buffer of these systems.

Impacts resulting from the Preferred Alternative totaled 9.57 acres and include 5.64 acres of wetlands and 3.94 acres of surface waters.

**Table 4-1 Proposed Wetland and Surface Water Impacts**

<b>ID</b>	<b>FLUCFCS Classification<sup>1</sup></b>	<b>Description</b>	<b>FWS Classification<sup>2</sup></b>	<b>Impact Area</b>
WL-1L	641	Freshwater Marshes	PEM1C	0.09
WL-1LA	615	Stream and Lake Swamps (Bottomland)	PUB2/3H	0.18
WL-1R	641	Freshwater Marshes	PEM1C	0.82
WL-2L	641	Freshwater Marshes	PEM1C	0.01
WL-2R	631	Wetland Scrub	PSS1C	0.23
WL-3L	631	Wetland Scrub	PSS1C	0.07
WL-3R	617	Mixed Wetland Hardwoods	PFO1C	0.40
WL-4L	617	Mixed Wetland Hardwoods	PFO1C	0.12
WL-4Ra	617	Mixed Wetland Hardwoods	PFO1C	0.48
WL-4Rb	631	Wetland Scrub	PSS1C	0.35
WL-5L	631	Wetland Scrub	PSS1C	0.15
WL-5R	617	Mixed Wetland Hardwoods	PFO1C	0.23
WL-6L	631	Wetland Scrub	PSS1C	0.21
WL-6R	631	Wetland Scrub	PSS1C	0.15
WL-7R	617	Mixed Wetland Hardwoods	PFO1C	0.50
WL-8Ra	625	Hydric Pine Flatwoods	PFO4C	0.38
WL-8Rb	641	Freshwater Marshes	PEM1C	0.90
WL-9R	617	Mixed Wetland Hardwoods	PFO1C	0.30
WL-10R	641	Freshwater Marshes	PEM1C	0.05
SW-1LA	510	Streams and Waterways	PUB3H	0.08
SW-1R	510	Streams and Waterways	PUB3H	0.09
SW-2L	510	Streams and Waterways	PUB3H	0.04
SW-2R	510	Streams and Waterways	PUB3H	0.13
SW-3L	510	Streams and Waterways	PEM1Ex	0.02
SW-3R	510	Streams and Waterways	PUB3H	0.14
SW-4L	510	Streams and Waterways	PEM1Ex	0.02
SW-4R	510	Streams and Waterways	PEM1Ex	0.04
SW-5L	510	Streams and Waterways	PEM1C	0.06
SW-5R	510	Streams and Waterways	PEM1Ex	0.34
SW-6L	510	Streams and Waterways	PSS1Ex	0.12
SW-6R	510	Streams and Waterways	PSS1Ex	0.04
SW-7L	510	Streams and Waterways	PSS1Ex	1.35

SW-7R	510	Streams and Waterways	PUB3H	0.34
SW-8L	510	Streams and Waterways	PSS1Ex	0.42
SW-8R	510	Streams and Waterways	PUB3H	0.03
SW-9L	510	Streams and Waterways	PEM1Ex	0.04
SW-10L	510	Streams and Waterways	PSS1Ex	0.02
SW-11L	510	Streams and Waterways	PSS1Ex	0.57
SW-12L	510	Streams and Waterways	PEM1Ex	0.05
<b>Wetland Total</b>				<b>5.64</b>
<b>Surface Water Total</b>				<b>3.94</b>
<b>Total</b>				<b>9.57</b>

<sup>1</sup> FDOT, 1999.

<sup>2</sup> Cowardin, et al., 1979.

**Table 4-2 Proposed Wetland and Surface Water Impacts by Habitat Type**

<b>FLUCFCS Classification<sup>1</sup></b>	<b>Description</b>	<b>FWS Classification<sup>2</sup></b>	<b>Impact Area (acres)</b>
510	Streams and Waterways	PEM1C	0.06
510	Streams and Waterways	PEM1Ex	0.51
510	Streams and Waterways	PSS1Ex	2.53
510	Streams and Waterways	PUB3H	0.85
615	Stream and Lake Swamps (Bottomland)	PUB2/3H	0.18
617	Mixed Wetland Hardwoods	PFO1C	2.03
625	Hydric Pine Flatwoods	PFO4C	0.38
631	Wetland Scrub	PSS1C	1.16
641	Freshwater Marshes	PEM1C	1.87
<b>Total</b>			<b>9.57</b>

<sup>1</sup> FDOT, 1999.

<sup>2</sup> Cowardin, et al., 1979.

### 4.3.1 Uniform Mitigation Assessment Methodology

The UMAM per Chapter 62-345, F.A.C., is a state and federally approved method used to assess wetlands in the State of Florida. UMAM was developed by the Florida Department of Environmental Protection (FDEP) and the water management districts to determine the amount of mitigation required to offset adverse impacts to wetlands. The methodology was designed to assess functions provided by wetlands, the amount those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset the proposed functional losses. This method is also used to determine the degree of improvement in ecological value that will be created by proposed mitigation activities.

The UMAM assessment includes a Qualitative Characterization (Part 1) as well as a Quantitative

Assessment and Scoring (Part 2). The Qualitative Assessment is a basic descriptor of the site being evaluated. The variables described include the following:

- Significant nearby features,
- Water classifications,
- Assessment area size,
- Hydrology and relationship to contiguous off-site wetlands,
- Uniqueness of the assessment area,
- Functions of the assessment area, and
- Wildlife utilization.

The Quantitative Assessment provides a score of the assessment area in both the current condition and “with impact” condition. The assessment scoring evaluates the following parameters:

- Location and landscape support,
- Water environment, and
- Vegetative community.

#### **4.3.2 Uniform Mitigation Assessment Methodology Results**

UMAM scores were developed for each wetland and surface water (by FLUCFCS category) affected by the proposed project.

In order to calculate functional loss, the difference between the existing condition (current) scores and the proposed condition (with) scores for each wetland was multiplied by the acreage of proposed impact to determine the lost value of functions to fish and wildlife resulting from construction of the proposed project (see **Table 4-3**). The completed UMAM data sheets for each wetland are provided in **Appendix E**. Estimated functional loss per FLUCFCS classification was also calculated (see **Table 4-4**). Construction of the preferred alternative results in a loss of 5.46 functional units.

SWFWMD conducted an informal wetland and surface water reviews on June 14<sup>th</sup> and 29<sup>th</sup>, 2017. Boundaries and UMAM information, including scored, was uploaded to the file of record on April 2, 2018. Informal wetland and surface water reviews for the pond sites were conducted on January 23, 2019. Boundaries and UMAM information, including scores, were uploaded to the file of record on February 15, 2019 (**Appendix F**).

#### **4.3.3 Mitigation**

In 2008 the USACE and the U.S. Environmental Protection Agency (EPA) issued regulations governing compensatory mitigation for activities authorized by the Department of the Army (Federal Register, 2008). These regulations, as promulgated in 33 Code of Federal Regulations (CFR) Part 332, establish a hierarchy for determining the type and location of compensatory mitigation. To briefly summarize, the rule establishes a preference for the use of mitigation bank credits if a mitigation bank has the appropriate number and resource type of credits available. If the permitted impacts are not in the service area of an approved mitigation bank, or if the

appropriate number and resource type of credits are otherwise unavailable, then the rule establishes a preference for in lieu fee program credits. If an approved mitigation bank or in-lieu fee program cannot be used to provide the required compensatory mitigation, the rule establishes a preference for permittee responsible mitigation conducted under a watershed approach. 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.

Compensatory mitigation for this project will be completed through the use of mitigation banks and other mitigation options that satisfy state and federal requirements. The exact type of mitigation used to offset wetland impacts from the proposed SR 70 roadway improvements will be coordinated with the USACE and the SWFWMD during the permitting phase(s) of this project.

**Table 4-3 Estimated UMAM<sup>1</sup> Functional Loss from Wetland and Surface Water (Direct Impacts)**

ID	FLUCFCS Classification <sup>2</sup>	FWS Classification <sup>3</sup>	Impact Area	UMAM Delta	Functional Units Loss
WL-1L	641	PEM1C	0.09	0.60	0.06
WL-1LA	615	PUB2/3H	0.18	0.60	0.11
WL-1R	641	PEM1C	0.82	0.57	0.47
WL-2L	641	PEM1C	0.01	0.60	0.01
WL-2R	631	PSS1C	0.23	0.70	0.16
WL-3L	631	PSS1C	0.07	0.53	0.04
WL-3R	617	PFO1C	0.40	0.67	0.27
WL-4L	617	PFO1C	0.12	0.53	0.07
WL-4Ra	617	PFO1C	0.50	0.57	0.27
WL-4Rb	631	PSS1C	0.35	0.57	0.20
WL-5L	631	PSS1C	0.15	0.60	0.09
WL-5R	617	PFO1C	0.23	0.53	0.12
WL-6L	631	PSS1C	0.21	0.53	0.11
WL-6R	631	PSS1C	0.15	0.47	0.07
WL-7R	617	PFO1C	0.50	0.53	0.26
WL-8Ra	625	PFO4C	0.38	0.67	0.26
WL-8Rb	641	PEM1C	0.90	0.67	0.60
WL-9R	617	PFO1C	0.30	0.63	0.19
WL-10R	641	PEM1C	0.05	0.67	0.03
SW-1AL	510	PUB3H	0.08	0.60	0.05
SW-1R	510	PUB3H	0.09	0.63	0.06
SW-2L	510	PUB3H	0.04	0.63	0.02
SW-2R	510	PUB3H	0.13	0.63	0.08

SW-3L	510	PEM1Ex	0.02	0.57	0.01
SW-3R	510	PUB3H	0.15	0.63	0.09
SW-4L	510	PEM1Ex	0.02	0.47	0.01
SW-4R	510	PEM1Ex	0.04	0.50	0.02
SW-5L	510	PEM1C	0.06	0.60	0.04
SW-5R	510	PEM1Ex	0.34	0.47	0.16
SW-6L	510	PSS1Ex	0.12	0.53	0.06
SW-6R	510	PSS1Ex	0.04	0.50	0.02
SW-7L	510	PSS1Ex	1.35	0.53	0.72
SW-7R	510	PUB3H	0.34	0.57	0.19
SW-8L	510	PSS1Ex	0.42	0.43	0.18
SW-8R	510	PUB3H	0.03	0.57	0.02
SW-9L	510	PEM1Ex	0.04	0.47	0.02
SW-10L	510	PSS1Ex	0.02	0.50	0.01
SW-11L	510	PSS1Ex	0.57	0.50	0.29
SW-12L	510	PEM1Ex	0.05	0.50	0.02
<b>Total Wetland Functional Loss</b>					<b>3.39</b>
<b>Total Surface Water</b>					<b>2.07</b>
<b>Total</b>					<b>5.46</b>

<sup>1</sup> UMAM scores have completed informal review by permitting agencies, but are subject to change during the permitting process.

<sup>2</sup> FDOT, 1999.

<sup>3</sup> Cowardin, et al., 1979.

**Table 4-4 Estimated UMAM<sup>1</sup> Functional Loss Per FLUCFCS Classification (Direct Impacts)**

<b>FLUCFCS Classification<sup>2</sup></b>	<b>Description</b>	<b>FWS Classification<sup>3</sup></b>	<b>Functional Units Loss</b>
510	Streams and Waterways	PEM1C	0.04
510	Streams and Waterways	PEM1Ex	0.24
510	Streams and Waterways	PSS1Ex	1.28
510	Streams and Waterways	PUB3H	0.51
615	Stream and Lake Swamps (Bottomland)	PUB2/3H	0.11
617	Mixed Wetland Hardwoods	PFO1C	1.18
625	Hydric Pine Flatwoods	PFO4C	0.26
631	Wetland Scrub	PSS1C	0.67
641	Freshwater Marshes	PEM1C	1.17
<b>Total</b>			<b>5.46</b>

<sup>1</sup> UMAM scores have completed informal review by permitting agencies, but are subject to change during the permitting process.

<sup>2</sup> FDOT, 1999.

<sup>3</sup> Cowardin, et al., 1979.

# Section 5. Protected Species

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## 5.1 Introduction

Listed species are afforded special protective status by federal and state agencies. This special protection is federally administered by the United States Department of the Interior, FWS, and the National Oceanic and Atmospheric Administration – National Marine Fisheries Service (NOAA-NMFS) pursuant to the Endangered Species Act of 1973 (as amended). The FWS administers the federal list of animal species (50 CFR 17) and plant species (50 CFR 23). Federal protection of marine species is the responsibility of the NOAA-NMFS.

Administered by the FWC, the State of Florida affords special protection to animal species designated as State-designated Threatened or State Species of Special Concern, pursuant to Chapter 68A-27, F.A.C. The State of Florida also protects and regulates plant species designated as endangered, threatened or commercially exploited as identified on the Regulated Plant Index (5B-40.0055, F.A.C.), which is administered by the Florida Department of Agriculture and Consumer Services (FDACS), Division of Plant Industry, pursuant to Chapter 5B-40, F.A.C.

The following sections describe the methodology used to assess the potential for occurrence of protected species and to identify the effects that implementation of the preferred and no build alternatives may have on protected species.

## 5.2 Methodology

In order to determine federal- and state-listed protected plant and animal species that have potential to occur within and adjacent to the project study area, available site-specific data was collected and evaluated.

Literature reviewed and databases searched as part of this evaluation included:

- True color aerial imagery of the assessment area, (1" = 200'), ESRI 2018;
- USDA, Natural Resource Conservation Service (NRCS), Soil Survey of Manatee County, Florida, 1983;
- Florida Associated of Environmental Soil Scientists, Hydric Soils of Florida Handbook, 4<sup>th</sup> ed., (Hurt et. al. 2007);
- Florida Department of Transportation (FDOT), Florida Land Use Cover, and Forms Classification System (FLUCFCS), 3<sup>rd</sup> ed., January 1999;
- FDOT, Efficient Transportation Decision Making (ETDM) Screening Summary Report, Project #14263 – SR 70 Widen 2-4 Lanes;
- Florida Fish and Wildlife Conservation Commission (FWC), Florida's Endangered and Threatened Species, January 2016;
- FWC, Eagle Nest Locator Website  
<https://public.myfwc.com/FWRI/EagleNests/nestlocator.aspx>, November 2018;

- FWC, Fish and Wildlife Research Institute. Wading Bird Colonies Florida database ([http://ocean.floridamarine.org/TRGIS/Description\\_Layers\\_Terrestrial.htm](http://ocean.floridamarine.org/TRGIS/Description_Layers_Terrestrial.htm)); July 2018;
- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix Map Server (<http://www.fnai.org/biointro.cfm>), November 2018;
- FDACS, Notes on Florida's Endangered and Threatened Plants: Botany Contribution No. 38, 5th edition, (2010), website: (<http://freshfromflorida.s3.amazonaws.com/fl-endangered-plants.pdf>), November 2018;
- Southwest Florida Water Management District (SWFWMD), FLUCFCS, 2011;
- United States Fish and Wildlife Service (FWS), Critical Habitat Portal website (<https://ecos.fws.gov/ecp/report/table/critical-habitat.html>), November 2018;
- FWS, National Wetlands Inventory (NWI), Wetlands online Mapper (July 2018);
- FWS, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12, June 2007, June 2007, as amended;
- FWS, Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et. al. 1979);
- FWS, Information for Planning and Consultation (IPaC) Mapper (<https://ecos.fws.gov/ipac/location/index>);
- U.S. Fish and Wildlife Service. 2019. NWI, Wetlands Online Mapper; and
- FWS, Wood Stork database (<https://www.fws.gov/northflorida/woodstorks/wood-storks.htm>), November 2018.

Environmental scientists familiar with Florida natural communities conducted on-site field reviews of the project study area and adjacent habitats in April and June 2017 and October 2018. The project study area is defined as the right-of-way of the preferred alternative as described in **Section 2.0**, including ponds and FPC sites.

The purpose of the reviews was to verify and/or refine preliminary habitat boundaries and classification codes established through in-office literature reviews and aerial photo interpretation. During field investigations, each upland and wetland community within the project study area was visually inspected. Attention was given to identifying dominant plant species composition for each community. Additional attention was given to identifying wildlife and signs of wildlife usage in each wetland and upland community within the project study area. The FNAI was contacted for documentation occurrences of listed species within one mile of the project study area (see **Appendix F**).

Based on the evaluation of collected data, field reviews, the FNAI data report, and database searches, the federal- and state-listed protected species discussed in **Section 5.3** were considered as having the potential to occur within or adjacent to the project study area. For a species to be considered potentially present the project study area must be within the species' distribution range. An effect determination was then made for each federal- and state-listed species based on an analysis of the potential impacts of the proposed alternatives to each species.

## 5.3 Results

Based on the information collected and field reviews, a list of protected species with the potential to occur within the project study area was generated. This list includes a total of 22 federal or state protected species that have the potential for occurrence within the project study area. These protected species include seven (7) plants, three (3) reptiles, ten (10) birds, and two (2) mammals. **Appendix G** presents a list of protected species with the potential to occur within the project study area, their federal or state protection status, preferred habitat, and a ranking of potential occurrence. Locations of all listed species documented within one mile of the project study area as well as the locations of all protected species observed during field reviews are also provided in **Appendix G**.

The potential for occurrence for each species was designated as Low, Moderate, or High based on the type of habitat present within the project study area, its relative condition, and if the species has been previously documented or was observed in the project study area. A Low rating indicates that suitable habitat for that species was found within the project study area, but the species has not been documented within one mile of the project study area. A Moderate rating indicates that suitable habitat exists and the species has been documented within one mile of the project study area. A High rating indicates that suitable habitat exists and the species was observed during field reviews.

Impacts to wildlife habitat as a result of converting uplands to wetlands has been reduced by utilization of the direct runoff and compensatory treatment concepts for stormwater management. While the proposed project has taken all practicable measures to avoid and minimize impacts to potentially occurring protected species and their habitats, unavoidable impacts may occur as a result of roadway and pond site construction. A determination of the anticipated project “effect” on protected species was made based on their probability of occurrence within the project study area, the proposed changes to their habitat quality, quantity and availability as a result of project construction, and how each species is expected to respond to anticipated habitat changes. Listed below are the “effect” determinations for each species.

### 5.3.1 Federal Species

#### Animals

##### *Reptiles*

#### American Alligator (*Alligator mississippiensis*)

The American alligator is a large, rounded-snout crocodylian listed as *threatened* by the FWS due to its similarity of appearance to the American crocodile (*Crocodylus acutus*). Alligators thrive in a wide variety of wetland habitats including streams, ponds, lakes, freshwater marshes, and ditches. The American alligator’s exceptional adaptability would allow it to utilize the freshwater wetland and surface water systems throughout the project study area. There is suitable habitat for this species throughout the undeveloped communities of the project study area, and the American alligator was observed during the field reviews. As part of this project, wetland impacts will be mitigated to prevent a net loss of wetland functions and values. Since the mitigation of wetland impacts will be undertaken by the FDOT, it has been determined that the proposed project “**may affect, but is not likely to adversely affect**” the American alligator.

### **Eastern Indigo Snake (*Dymarchon couperi*)**

The Eastern indigo snake is a large, glossy black snake that is listed as *threatened* by the FWS. This species can be found in a variety of habitat types, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, as well as human-altered habitats. It may also utilize gopher tortoise burrows for shelter to escape hot or cold ambient temperatures within its range. While there is suitable habitat for this species throughout the undeveloped communities of the project study area, the Eastern indigo snake was not observed during field reviews. Additionally, according to FNAI data, no individuals have been documented within one mile of the project study area and the proposed project will impact no xeric habitat; however, it is reasonable to expect that these species could utilize suitable habitat within the project study area. To minimize potential adverse impacts to the Eastern indigo snake, the FDOT will implement the FWS-approved Standard Protection Measures for the Eastern Indigo Snake during construction of the proposed roadway improvements. The path followed through the Eastern indigo snake key was A>B>C>D>E>NLAA. With the implementation of the protection measures, it has been determined that the project “**may affect, but is not likely to adversely affect**” the eastern indigo snake.

### ***Birds***

### **Crested Caracara (*Caracara cheriway*)**

The crested caracara is a large, boldly patterned raptor with a crest that is listed as *threatened* by the FWS. This species often inhabits open country, such as dry prairie and pasturelands with scattered cabbage palms, cabbage palm/live oak hammocks, and shallow ponds and sloughs. It also requires cabbage palms or live oaks with low-growing surrounding vegetation for nesting. There is no suitable habitat for this species within the project study area, and the crested caracara was not observed during field surveys. The project study area falls within the FWS Crested Caracara Consultation Area, but it has not been documented within one mile of the project study area according to FNAI data. Based on these results, it has been determined that the project “**no effect**” the crested caracara.

### **Florida Grasshopper Sparrow (*Ammodramus savannarum floridanus*)**

The Florida grasshopper sparrow is a small, short-tailed, flat-headed sparrow that is listed as *endangered* by the FWS. This species requires large areas of frequently burned dry prairie habitat with patchy open areas sufficient for foraging. It may persist in pasture lands that have not been intensively managed. While the project study area lies within the FWS Florida Grasshopper Sparrow Consultation Area, there is no habitat for this species within the project study area and it was not observed during the field reviews or species-specific surveys. According to FNAI data, the Florida grasshopper sparrow has not been documented within one mile of the project study area. Based on this information, it has been determined that the project “**no effect**” the Florida grasshopper sparrow.

### **Florida Scrub Jay (*Aphelocoma coerulescens*)**

The Florida scrub jay is similar to the common blue jay in size and shape, with a pale blue crestless head, nape, wings, and tail. This species is listed as *threatened* by the FWS. Optimal scrub jay habitat consists of low growing, scattered scrub species with patches of bare sandy soil such as those

found in sand pine scrub and scrubby flatwoods habitats that are occasionally burned. In areas where these types of habitats are unavailable, Florida scrub jays may be found in less optimal habitats such as pine flatwoods with scattered oaks. Although the project study area is located within the FWS Florida Scrub Jay Consultation Area, there is no suitable habitat for this species. Additionally, the Florida scrub jay was not observed during field surveys. Based on this information, it has been determined that the project “**no effect**” the Florida scrub jay.

### **Wood Stork (*Mycteria americana*)**

The wood stork is a large, white, wading bird that is listed as *threatened* by the FWS. The wood stork is opportunistic and utilizes various habitat types including freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches. Water that is relatively calm, uncluttered by dense aquatic vegetation, and with a permanent or seasonal water depth between two and 15 inches is considered suitable foraging habitat for this species. Foraging habitat for the wood stork is present, and a wood stork was observed in the project study area.

According to the FWS wood stork colony website, the project study area is located within the 15-mile buffer of one (1) active wood stork nesting colony (Ayers Point); however, it is not located within one mile of the project study area (see **Figure 5-1** Wood Stork Core Foraging Area Map). The primary concern for this species is loss of suitable foraging habitat within the CFA of a wood stork colony. As part of this project, impacts to wetlands within the project study area will be mitigated for within the CFA of the affected rookery or at a regional mitigation bank that has been approved by the FWS or pursuant to Section 373.4137, F.S. The path followed through the wood stork key was A>B>C>D>E>NLAA. Therefore, it has been determined that the proposed project “**may affect, but is not likely to adversely affect**” the wood stork.

## **5.3.2 State Protected Species**

### **Plants**

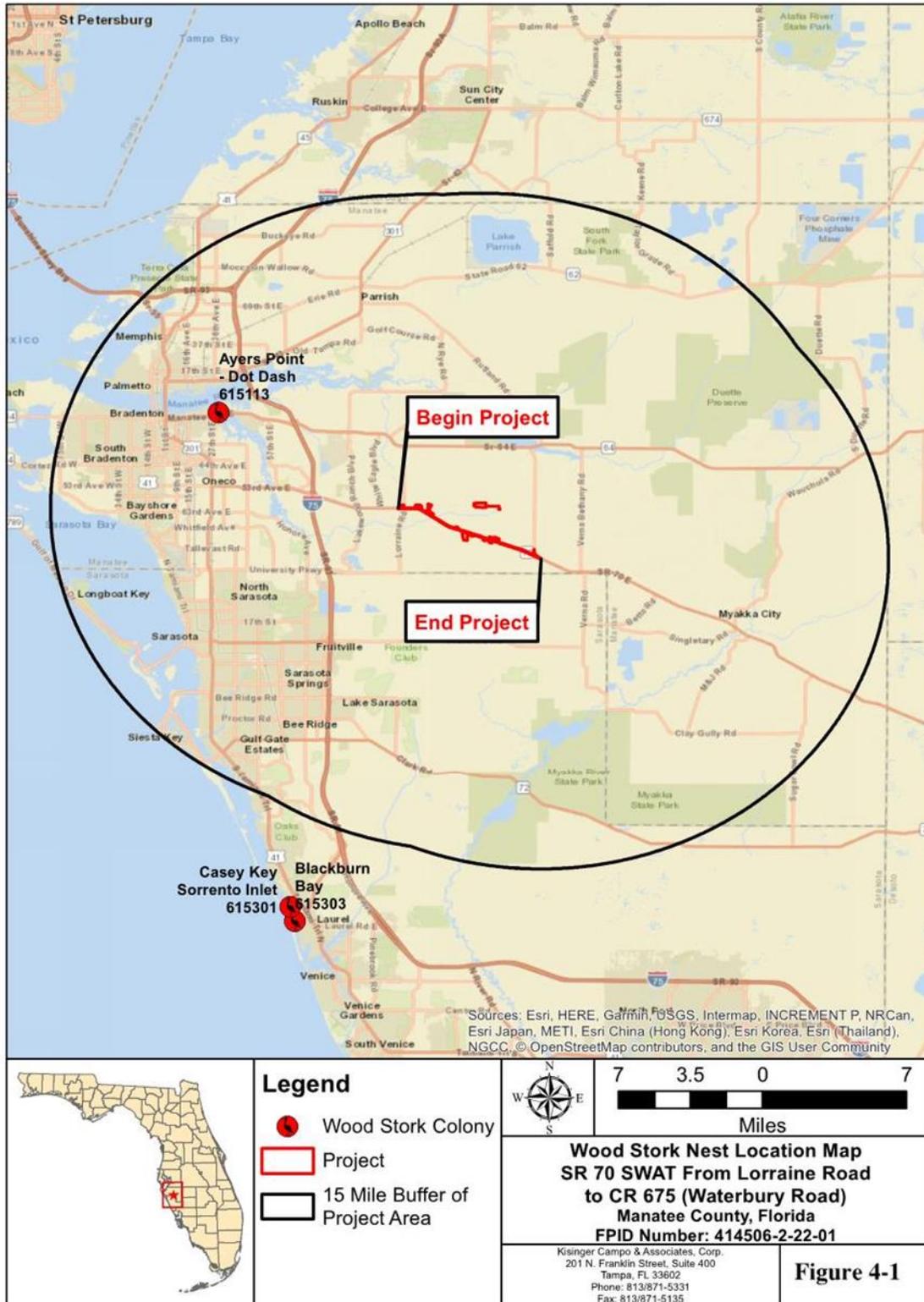
#### **Many-flowered Grasspink (*Calopogon multiflorus*)**

The many-flower grasspink is an herb with 1-2 basal, grass-like leaves and up to 15 dark pink flowers that is listed as *threatened* by the FDACS. This species is a member of the orchid (*Orchidaceae*) family and occurs on dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto. Suitable habitat for the many-flowered grasspink is not available within the project study area. According to FNAI data, many-flowered grasspink has the potential to occur in Manatee County, and it has been documented within one mile of the project study area (see **Appendix G** Protected Species Map). This species was not observed during field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on the many-flowered grasspink.

#### **Tampa Vervain (*Glandularia tampensis*)**

Tampa vervain is a perennial herb with four-sided, sprawling stems up to 2 feet long that is listed as *endangered* by the FDACS. This species is a member of the vervain (*Verbenaceae*) family and occurs in live oak–cabbage palm hammocks and pine–palmetto flatwoods. Suitable habitat for the Tampa vervain is available within the project study area within pine flatwoods habitat. According

Figure 5-1 Wood Stork Core Foraging Area Map



to FNAI data, Tampa vervain has the potential to occur within Manatee County; however, it has not been documented within one mile of the project study area. Additionally, this species was not observed during field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on the Tampa vervain.

#### **Lowland loosestrife (*Lythrum flagellare*)**

Lowland loosestrife is a perennial herb with creeping rhizomes and sprawling stems that is listed as **endangered** by the **FDACS**. This species is a member of the loosestrife (*Lythraceae*) family and occurs in the mucky peat of pond margins, ditch banks, and edges of cypress depressions. Suitable habitat for the lowland loosestrife is available within the project study along edges of surface waters. According to FNAI data, lowland loosestrife has the potential to occur within Manatee County; however, it has not been documented within one mile of the project study area. Additionally, this species was not observed during the field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on lowland loosestrife.

#### **Florida Spiny-pod (*Matelea floridana*)**

Florida Spiny-pod is a vine with leaves up to five cm long that is listed as **endangered** by the **FDACS**. This species is a member of the milkweed (*Asclepiadaceae*) family and occurs in upland hardwood forests. Suitable habitat for the Florida spiny-pod is available within the project study area within upland hardwood forest communities. According to FNAI data, Florida spiny-pod has the potential to occur within Manatee County; however, it has not been documented within one mile of the project study area. Additionally, this species was not observed during the field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on Florida spiny-pod.

#### **Giant Orchid (*Pteroglossaspis ecristata*)**

The giant orchid is a perennial herb with yellow flowers twisted in toward the stalk that is listed as **threatened** by the **FDACS**. This species is a member of the orchid family and occurs in sandhill, scrub, pine flatwoods, and pine rocklands. Suitable habitat for the giant orchid is available within the project study area within the scrub and brushland and pine flatwood communities. According to FNAI data, the giant orchid has the potential to occur within Manatee County; however, it has not been documented within one mile of the project study area. Additionally, this species was not observed during the field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on the giant orchid.

#### **Toothed Maiden Fern (*Thelypteris serrata*)**

Toothed maiden fern is a fern with large, evergreen fronds with hairy leafstalks that is listed as **endangered** by the **FDACS**. This species is member of the marsh fern (*Thelypteridaceae*) and occurs in cypress swamps, sloughs, and floodplains. Suitable habitat for the toothed maiden fern is not available within the project study area. According to FNAI data, the toothed maiden fern has the potential to occur within Manatee County; however, it has not been documented within one mile of the project study area. Additionally, this species was not observed during the field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on the toothed maiden fern.

### **Broad-leaved Nodding-caps (*Triphora amazonica*)**

Broad-leaved nodding-caps is a perennial herb with showy flowers that is listed as *endangered* by the **FDACS**. This species is a member of the orchid family and occurs in moist soils of upland hardwood hammocks. Suitable habitat for the broad-leaved nodding-cap is available within the project study area within upland hardwood forest communities. According to FNAI data, the broad-leaved nodding-cap has the potential to occur within Manatee County; however, it has not been documented within one mile of the project study area. Additionally, this species was not observed during the field reviews of the project study area. Based on this information, it has been determined that the proposed project will have “**no effect anticipated**” on the broad-leaved nodding-cap.

## **Animals**

### ***Reptiles***

#### **Gopher Tortoise (*Gopherus polyphemus*)**

The gopher tortoise is listed as *threatened* by the **FWC**. This species requires well-drained and loose sandy soils for burrowing, and low-growing herbs and grasses for food. These conditions are best found in the sandhill (longleaf pine-xeric oak) community, although tortoises are known to use many other habitats including sand pine scrub, xeric oak hammocks, dry prairies, pine flatwoods, and ruderal sites. Suitable habitat for the gopher tortoise is available, and one gopher tortoise burrow was observed during field reviews of the project study area. Based on current FWC regulations, any gopher tortoises located within 25 feet of the project construction area must be relocated to an FWC approved recipient site. The **FDOT** will survey the project area prior to construction to determine the presence of this species within the project area. If gopher tortoises or burrows are found within the project area, the **FDOT** will coordinate with the **FWC** to secure all permits needed to relocate the tortoises and associated commensal species prior to construction. With the implementation of these measures, it has been determined that this project will have “**no adverse effect anticipated**” on the gopher tortoise.

### ***Birds***

#### **Florida Sandhill Crane (*Grus canadensis pratensis*)**

The Florida sandhill crane is a tall, long-necked, long-legged crane that is listed as *threatened* by the **FWC**. This species requires wet and dry prairies, marshes, and marshy lake edges for nesting. Nests are generally a mound of herbaceous plant material in shallow water or on the ground in marshy areas. According to FNAI data, the Florida sandhill crane has the potential to occur within Manatee County, and it has not been documented within one mile of the project study area. However, a sandhill crane was observed adjacent to the project study area during field reviews. The **FDOT** will survey areas of suitable nesting habitat prior to construction if construction activities take place during the nesting season (January through July), and will coordinate with the **FWC** if nesting pairs are identified within 400 feet of the project’s construction limits. With the implementation of these measures, it has been determined that the project will have “**no adverse effect anticipated**” on the Florida sandhill crane.

### **Southeastern American Kestrel (*Falco sparverius paulus*)**

The Southeastern American kestrel is the smallest falcon species found in the United States and is listed as *threatened* by the FWC. This species requires pine scrub habitat, dry prairies, mixed pine hardwood forests, and pine flatwoods. Nests are typically built in tall dead trees or utility poles with an unobstructed view of surroundings. According to FNAI data, the Southeastern American Kestrel has the potential to occur in Manatee County; however, there has been no documentation of the species within one mile of the project study area and no suitable nesting cavities were observed within the project study area. Based on this information, it has been determined that the project will have “**no adverse effect anticipated**” on the Southeastern American kestrel.

### **Wading Birds - Little Blue Heron (*Egretta caerulea*), Tricolored Heron (*Egretta tricolor*), and Roseate Spoonbill (*Platalea ajaja*)**

The little blue heron, tricolored heron, and roseate spoonbill are listed as *threatened* by the FWC. While each species is distinct, wading birds are discussed collectively since they occupy similar habitats and have similar feeding patterns. These wading birds nest and forage among both fresh and saltwater habitats such as freshwater marshes, coastal beaches, mangrove swamps, cypress swamps, hardwood swamps, wet prairies and bay swamps. The populations of these species have been primarily impacted by the destruction of wetlands for development and by the drainage of wetlands for flood control and agriculture. Suitable habitat for these wading birds is available within the project study area within freshwater marshes, forested wetlands, ditches, and natural waterways. According to FNAI data and the FWC Wading Bird Rookery Database, none of these species or rookeries have been documented within one mile of the project study area. However, little blue herons were observed at two locations adjacent to the project study area.

The primary concern for impacts to these species is the loss of foraging habitat (wetlands). As part of implementing the proposed project, all wetland impacts will be mitigated to prevent a net loss of wetland habitat functions and values. Since the mitigation of impacts will be undertaken by the FDOT, it has been determined that the proposed project will have “**no adverse effect anticipated**” on the little blue heron, tricolored heron, and roseate spoonbill.

## **5.3.3 Other Protected Species**

### ***Birds***

#### **Bald Eagle (*Haliaeetus leucocephalus*)**

The bald eagle is a large raptor with a distinctive white head and yellow bill. This species has been de-listed by the FWS. However, it remains federally protected under the Bald and Golden Eagle Protection Act (BGEPA) in accordance with 16 United States Code 668 and the Migratory Bird Treaty Act of 1918. In addition, the FWC has implemented a bald eagle management plan (FWC 2008). The bald eagle tends to utilize riparian habitat associated with coastal areas, lake shorelines, and river banks. Nests are generally located near water bodies that provide a dependable food source. Nests within Florida are closely monitored by the FWC, and the FWC Center for Biostatistics and Modeling maintains a website of known bald eagle nest locations. According to this database, the closest bald eagle nest to the project study area is MN015 which is located less than 1 mile west

of SR 70 and Lorraine Road (see **Appendix G**). The project is located outside of the nest's primary (330 feet) and secondary (660 feet) buffer zones, therefore it does not require coordination and permitting through the FWS. This nest was last surveyed and determined active in 2016. Additionally, no bald eagle nests were observed within 660 feet of the project area during field reviews. During design and permitting, the FDOT will survey the project area for eagle nests. If a nest is observed within 660 feet of the project area, the FDOT will coordinate with the FWS to secure all necessary approvals prior to constructing the project. With the implementation of these measures, it has been determined that the proposed project “**may affect, but is not likely to adversely affect**” the bald eagle.

### *Mammals*

#### **Florida Black Bear (*Ursus americanus floridanus*)**

The Florida black bear is a large mammal with glossy black hair and a brown muzzle. This species has been de-listed by the FWC; however, it is managed under the FWC's Florida Black Bear Management Plan. The plan created Bear Management Units based on seven (7) geographically distinct bear subpopulations in Florida. The Florida black bear can be found statewide in a number of habitats including mixed hardwood pine communities, cabbage palm hammock, and forested wetland systems. This species tends to den alone within tree cavities, river banks, logs or caves. They will also den on the ground in palmetto thickets, gallberry, fetterbush, and sweet pepperbush. Suitable habitat for the black bear occurs in the project study area within the forested upland and wetland areas. According to FNAI data and FWC nuisance reports, a black bear has been documented on one (1) occasion, in 2015, within the project study area. The project study area is listed in the South-Central Bear Management Unit (see **Appendix G**). While the project study area in Manatee County is located within FWC-designated Occasional Range of the South-Central Bear Management Unit, no black bears were observed within the project study area during the field reviews. Due to the project's location outside of the FWC-designated Abundant and Common Ranges for the species, it has been determined that the proposed project will have “**no adverse effect anticipated**” on the Florida black bear.

#### **Southern Fox Squirrel (*Sciurus niger niger*)**

The Southern fox squirrel, their nest, and young are protected under 68A-29.002(1)(c) F.A.C. According to FNAI data, the Southern fox squirrel has the potential to occur within Manatee County; however, this species was not documented within one mile of the project study area and was not observed during field reviews. The FDOT will conduct surveys prior to construction in appropriate habitat for active Southern fox squirrel nests and construction activities will not occur within a 125 feet buffer zone of any active nest. If necessary, a Listed Species Incidental Take Permit will be obtained from the FWC to remove any nest tree(s) upon verifying that no young occupy the nest(s). With the implementation of these measures, it has been determined that the project will have “**no adverse effect anticipated**” on the Southern fox squirrel.

#### **5.3.4 Critical Habitat**

The project study area was evaluated for the occurrence of Critical Habitat as defined by the Endangered Species Act of 1973 as amended and 50 CFR part 424. The FWS is the authority, as a federal agency, to protect critical habitat from destruction or adverse modification of the biological or physical constituent elements essential to the conservation of listed species. Critical Habitat is defined as the specific areas within the geographical area occupied by a species on which are found those physical or biological features essential to the conservation of the species and which defined may require special management considerations or protection.

No designated Critical Habitat for any federal listed species occurs within the project study area.

## **Section 6. Permitting and Approvals**

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Both the USACE and SWFWMD regulate impacts to wetlands within the project area. Other agencies, including the FWS, U.S. Environmental Protection Agency (EPA), and the FWC, review and comment on wetland permit applications. The FWC also issues permits for gopher tortoise relocation activities and nest take. In addition, the FDEP regulates stormwater discharges from construction site. The complexity of the permitting process will depend on the degree of the impact to jurisdictional areas. It is anticipated that the following permits will be required for this project:

<b><u>Permit</u></b>	<b><u>Issuing Agency</u></b>
Section 404 Dredge and Fill Permit	USACE
Environmental Resource Permit (ERP)	SWFWMD
National Pollutant Discharge Elimination System (NPDES)	FDEP
Gopher Tortoise Conservation Permit (as necessary)	FWC
Listed Species Incidental Take Permit (as necessary)	FWC

### ***Federal Permits***

#### **Section 404 Dredge and Fill Permit**

It is anticipated that an individual permit will be required from the USACE because wetland impacts will be greater than half an acre. An individual permit will require compliance with the 404(b)(1) guidelines, including verification that all wetland impacts have first been avoided to the greatest extent possible, that unavoidable impacts have been minimized to the greatest extent possible, and lastly that unavoidable impacts have been mitigated in the form of wetlands creation, restoration, and/or enhancement.

### ***State Permits***

#### **Environmental Resource Permit**

SWFWMD requires an ERP when construction of any project results in the creation of a new or modification of an existing surface water management system or results in impacts to waters of the state. As with USACE permits, the complexity associated with the ERP permitting process will depend on the size of the project and/or the extent of wetland impacts. Under current state rules, the SWFWMD will require an individual ERP for this project.

## **NPDES**

40 CFR Part 122 prohibits point source discharges of stormwater to waters of the U.S. without a NPDES permit. Under the State of Florida's delegated authority to administer the NPDES program, construction sites that will result in greater than half an acre of disturbance must file for and obtain either coverage under an appropriate generic permit contained in Chapter 62-621, F.A.C., or an individual permit issued pursuant to Chapter 62-620, F.A.C. A major component of the NPDES permit is the development of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP identifies potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site and discusses good engineering practices (i.e., best management practices) that will be used to reduce the pollutants.

## **Gopher Tortoise Conservation Permit**

According to the FWC Gopher Tortoise permitting guidelines, there are four available options to address the presence of gopher tortoises on lands slated for development:

1. Avoid development,
2. Avoid destruction of tortoise burrows,
3. Relocate tortoises on-site (permit required), or
4. Relocate tortoises off-site (permit required).

In accordance with the requirements of Rules 68A-25.002 and 68A-27.004 (F.A.C.), a permit for gopher tortoise capture/relocation/release activities must be secured from FWC before initiating any relocation work. A Conservation Permit is available for development projects that require the relocation of gopher tortoises when more than 10 burrows occur on the development site. The 10 or Fewer Burrows Permit is available for projects that contain 10 or fewer gopher tortoise burrows on the development site. Both of these permits allow for relocation either to an on-site preserve or off-site to a FWC-certified Recipient Site.

## **Incidental Take Permit (as necessary)**

Based on field reviews, suitable foraging and nesting habitat exists within the project study area for the Southern fox squirrel. Should an active Southern fox squirrel nest be identified during pre-construction surveys, in accordance with rules 68A-4.001 and 68A-29.002(1)(c), F.A.C. a permit for removal of inactive Southern fox squirrel nests must be secured from the FWC before initiating nest tree(s) removal. An Incidental Take Permit is available for development projects that require the removal of nest tree(s).

## *Easement*

### **Sovereign Submerged Lands Easement**

A Sovereign Submerged Lands Title Determination request was submitted to the Division of State Lands of DEP in Tallahassee for the Braden River and two (2) unnamed tributaries crossed by the proposed project. If the state determines that a portion of the project area is within state-owned lands, easements may be required. Typically, easements are generated during the permitting phases of the project. Based on their review, the Division of State Lands determined that the submerged lands have been dredged and altered, making the location of the mean highwater line prior to alterations difficult to ascertain, and it has been recommended that the proprietary requirements normally applied to state-owned lands not apply to this project. A copy of the correspondence with the Division of State Lands is provided in **Appendix I**.

# Section 7. Conclusions

## 7.1 Wetland Evaluation

The proposed project was evaluated for impacts to wetlands in accordance with EO 11990. Based on the type and location of project impacts, the FDOT has determined that there is no practicable alternative to the proposed construction in wetlands. In accordance with EO 11990, the FDOT has undertaken all actions to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency’s responsibilities. A UMAM analysis (**Appendix E**) was performed to determine the wetland functional loss due to wetland impacts from the preferred alternative. Construction of the preferred alternative results in a loss of 5.46 functional units. Unavoidable 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 Chapter 373, F.S. and 33 U.S.C. 1344. Compensatory mitigation for this project will be completed through the use of mitigation banks and other mitigation options that satisfy state and federal requirements.

Therefore, the proposed project will have no significant short-term or long-term adverse impacts to wetlands.

## 7.2 Protected Species and Habitat

The project area was evaluated for the presence of federal and/or state protected species and their habitat in accordance with Section 7 of the ESA and Part 2, Chapter 16 of the PD&E Manual. **Tables 7-1, 7-2, and 7-3** summarize the effect determination that has been made for each federal and state listed species based upon their probability ranking and the implementation measures and/or commitments to offset any potential impacts to each species.

No designated Critical Habitat for any federal listed species occurs within the project study area.

**Table 7-1 Federal Protected Species Effect Determinations**

Project Impact Determination	Federal Listed Species
"No effect"	Crested caracara ( <i>Caracara cheriway</i> )
	Florida grasshopper sparrow ( <i>Ammodramus savannarum floridanus</i> )
	Florida scrub jay ( <i>Aphelocoma coerulescens</i> )
"May affect, but is not likely to adversely affect"	American alligator ( <i>Alligator mississippiensis</i> )
	Eastern indigo snake ( <i>Drymarchon couperi</i> )
	Wood stork ( <i>Mycteria americana</i> )

**Table 7-2 State Protected Species Effect Determinations**

<b>Project Impact Determination</b>	<b>State Listed Species</b>
<b>“No effect anticipated”</b>	Many-flowered grasspink ( <i>Calopogon multiflorus</i> )
	Tampa vervain ( <i>Glandularia tampensis</i> )
	Lowland loosestrife ( <i>Lythrum flagellare</i> )
	Florida spiny-pod ( <i>Matelea floridana</i> )
	Giant orchid ( <i>Pteroglossaspis ecristata</i> )
	Toothed maiden fern ( <i>Thelypteris serrata</i> )
	Broad-leaved nodding-caps ( <i>Triphora amazonica</i> )
<b>“No adverse effect anticipated”</b>	Gopher tortoise ( <i>Gopherus polyphemus</i> )
	Florida sandhill crane ( <i>Grus canadensis pratensis</i> )
	Southeastern American kestrel ( <i>Falco sparverius paulus</i> )
	Little blue heron ( <i>Egretta caerulea</i> )
	Roseate spoonbill ( <i>Platalea ajaja</i> )
	Tricolored heron ( <i>Egretta tricolor</i> )

**Table 7-3 Other Protected Species Effect Determinations**

<b>Project Impact Determination</b>	<b>Additional Protected Species</b>
<b>“May affect, but is not likely to adversely affect”</b>	Bald eagle ( <i>Haliaeetus leucocephalus</i> )
<b>“No adverse effect anticipated”</b>	Florida black bear ( <i>Ursus americanus floridanus</i> )
	Southern fox squirrel ( <i>Sciurus niger niger</i> )

### **7.3 Implementation Measures**

Based on the field and literature reviews outlined in this report, federal- or state-listed protected species have the potential to occur within the project study area. In order to assure that the proposed project will not adversely impact these species, the FDOT will adhere to the following:

- The FDOT will perform updated wildlife surveys for Florida sandhill crane, Southern fox squirrel, bald eagle, gopher tortoise, and other wildlife species during the design phase. If these species are found to be present in the project area, then the appropriate measures discussed in this report will be followed.

### **7.4 Commitments**

Based on the field and literature reviews outlined in this report, federal- or state-listed protected species have the potential to occur within the project study area. In order to assure that the proposed project will not adversely impact these species, the FDOT will make the following commitments:

- The FWS *Standard Protection Measures for the Eastern Indigo Snake* will be implemented to assure that the Eastern indigo snake will not be adversely impacted by the project.
- Impacts to suitable foraging habitat for the federally-protected wood stork will be mitigated through the purchase of credits from a U.S. Fish and Wildlife Service-approved mitigation bank pursuant to Section 373.4137, F.S. or as otherwise agreed to by the FDOT and the appropriate regulatory agencies.

## Section 8. References

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## ***APPENDICES***

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***APPENDIX A***

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**Soils Descriptions and Map**

## **Manatee County Soils**

### **11 – Cassia Fine Sand**

Cassia fine sand is a nearly level, somewhat poorly drained soil on low ridges and knolls that are slightly higher than the adjacent flatwoods. Slopes range from 0 to 2 percent. The water table is at depth 15 to 40 inches for about 6 months of the year and below a depth of 40 inches during dry periods. Permeability is rapid in the surface and subsurface layers, moderate to moderately-rapid in the subsoil. The available water capacity is very low except in the subsoil, where it is medium. Cassia fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007).

### **18 – Delray-Pomona Complex**

Delray-Pomona complex consists of soils in nearly level, broad grassy sloughs where there are poorly defined stream channels in some places. Slopes are less than 2 percent. In most years, the water table is at or near the soil surface for 5 months or more out of the year. The available water capacity is high in the surface layer, medium in the subsoil, and low in the subsurface layer. Delray-Pomona complex is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007).

### **26 – Floridiana-Immokalee-Okeelanta Association**

Floridiana-Immokalee-Okeelanta association consists of nearly level, very poorly drained Floridana soils, poorly drained Immokalee soils, and very poorly drained Okeelanta soils. Slopes are less than 2 percent. In most years, Floridana soils are ponded for 6 to 9 months or more out of the year. The water table is at a depth of 40 inches for the rest of the year except for extensive dry periods. Permeability is moderate in the subsoil and rapid in the other layers. The available water capacity is medium in the subsoil, low in the surface layer, and very low in the other layers. Floridiana-Immokalee-Okeelanta Association is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007).

### **30 – Myakka Fine Sand**

Myakka fine sand is a poorly drained, nearly level soil in broad areas on flatwoods. Slopes range from 0 to 2 percent. The water table is at a depth of less than 10 inches for one to four months in most years. Permeability is rapid in the surface and subsurface layers, moderate to moderately-rapid in the subsoil, and rapid in the substratum. The available water capacity is very low above the subsoil, medium in the subsoil, and very low below the subsoil. Myakka fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). This soil may contain up to 25 percent hydric soil inclusions.

### **35- Ono Fine Sand, Orstein Substratum**

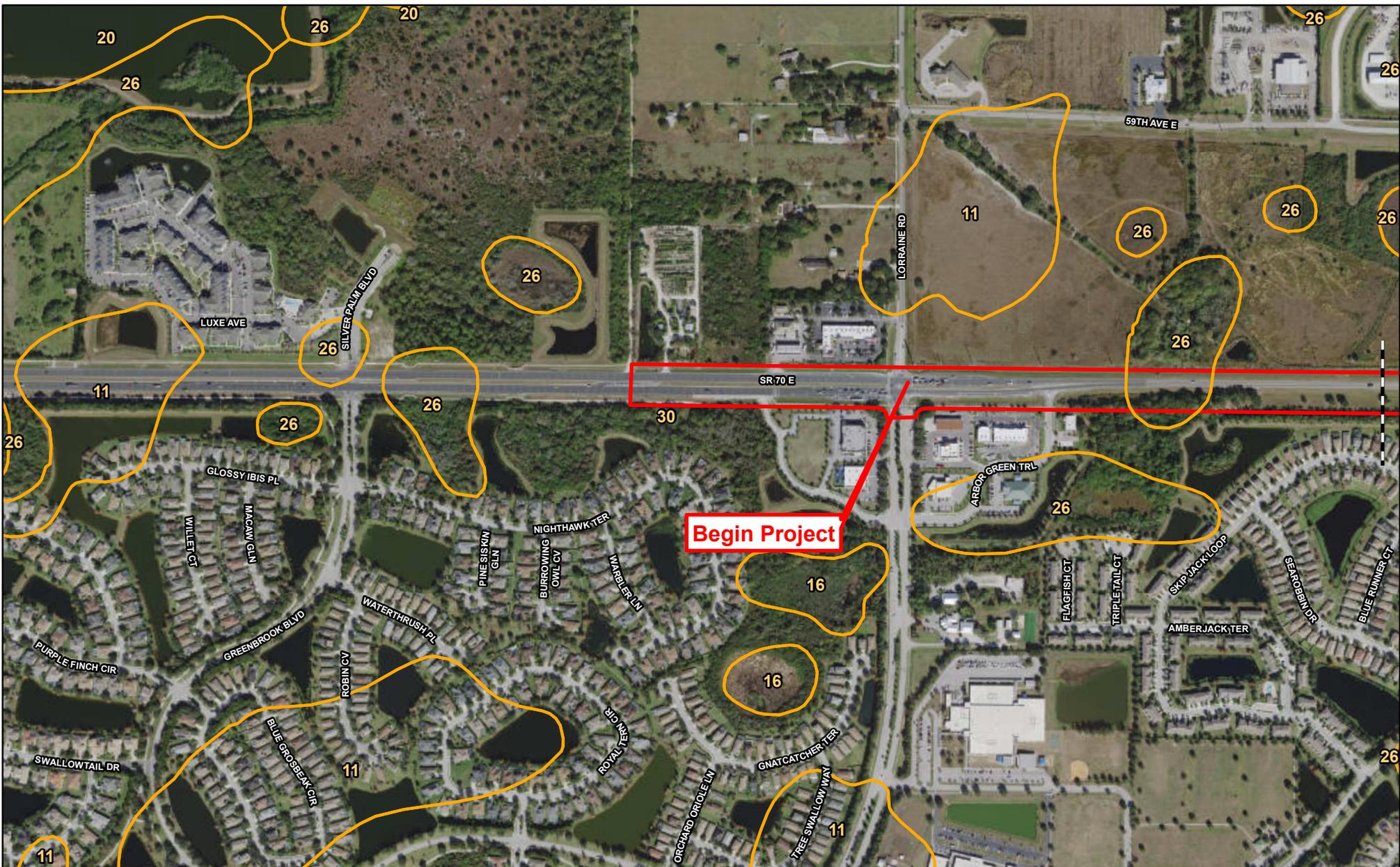
Ono fine sand is a poorly drained, nearly level soil in broad areas on flatwoods. Slopes are smooth and range from 0 to 2 percent. The water table is at a depth of 10 to 40 inches for four to six months in most years, but will rise to less than 10 inches for one to two months. Permeability is moderate in the upper part of the subsoil, slow to very slow in the lower part of the subsoil, and rapid in the other layers. The available water capacity is medium in the surface layer and subsoil and low in the layer between the two parts of the subsoil. Ono fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). This soil may contain up to 15 percent hydric soil inclusions.

### **38- Palmetto Sand**

Palmetto sand is a nearly level, poorly drained soil in the flatwoods. Slopes are smooth to slightly concave and are less than 2 percent. In most years, the water table is within 10 inches of the surface for 2 to 6 months out of the year. Permeability is rapid in the surface and subsurface layers and moderately slow in the subsoil. The available water capacity is low to medium in the surface layers and medium in the subsoil. Palmetto sand is classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007).

### **40 – Pinellas Fine Sand**

Pinellas fine sand is a nearly level, poorly drained soil in the areas of flatwoods bordering sloughs and depressions. Slopes are smooth and range from 0 to 2 percent. In most years, the water table is at a depth within 10 inches of the surface for less than 3 months and at a depth of 10 to 40 inches for 4 to 6 months. It may recede to a depth of more than 40 inches during exceedingly dry periods. Permeability is rapid in the surface and subsurface layers and moderate in the subsoil. The available water capacity is very low in the surface layer and medium in the subsurface layer and subsoil. Pinellas fine sand is not classified as hydric in the *Hydric Soils of Florida Handbook* (Hurt 2007). This soil may contain up to 19 percent hydric soil inclusions.



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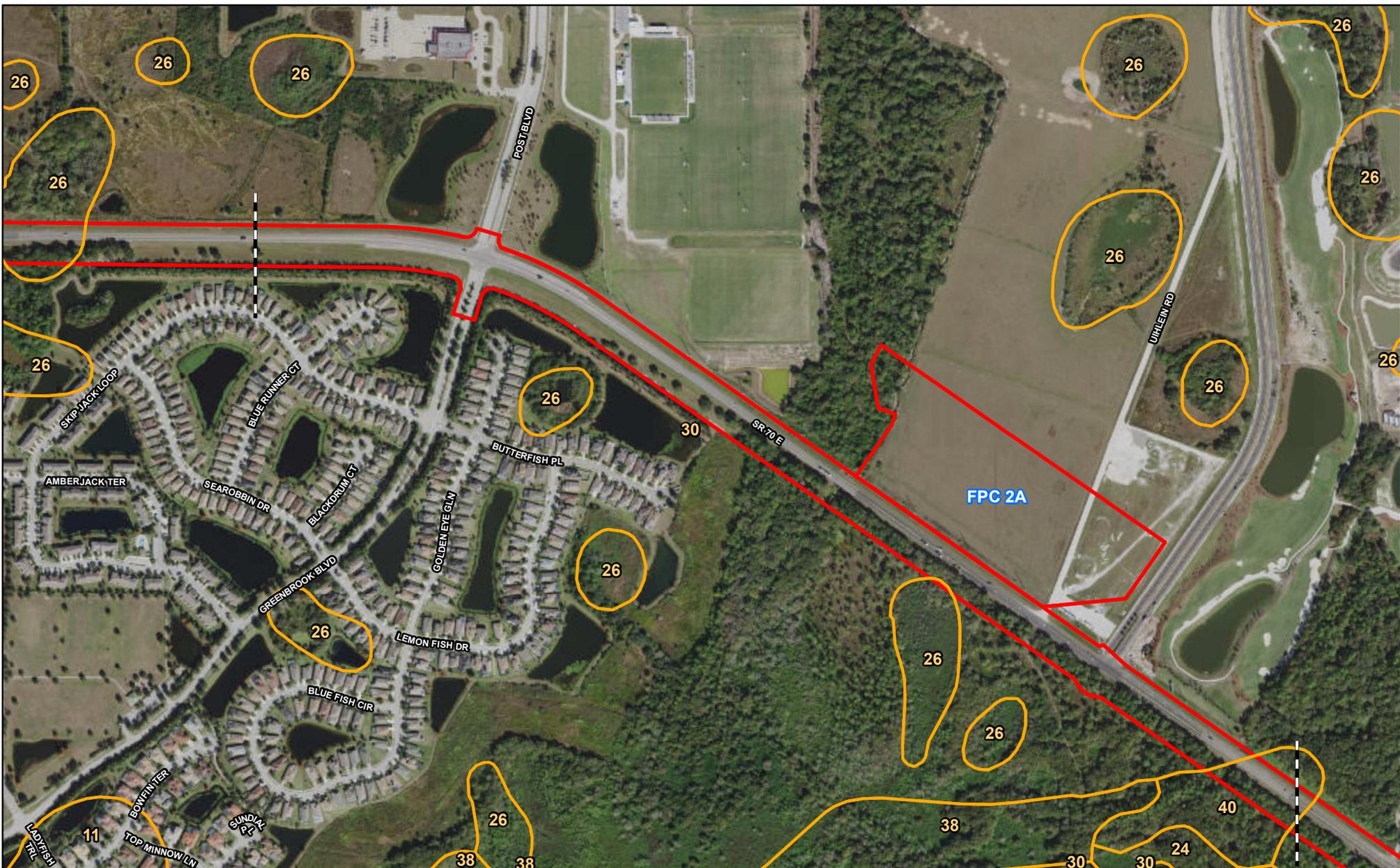
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Feet

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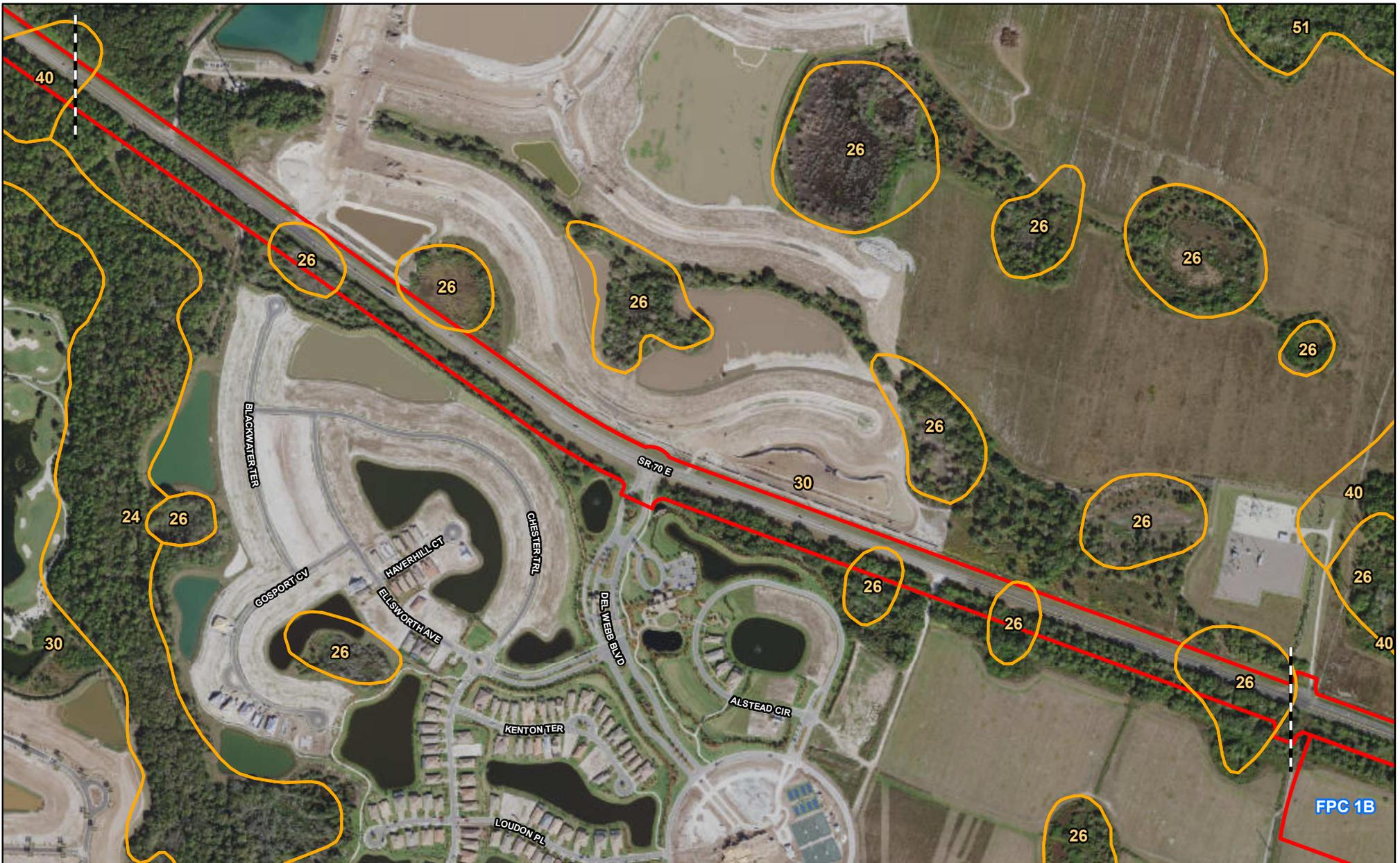
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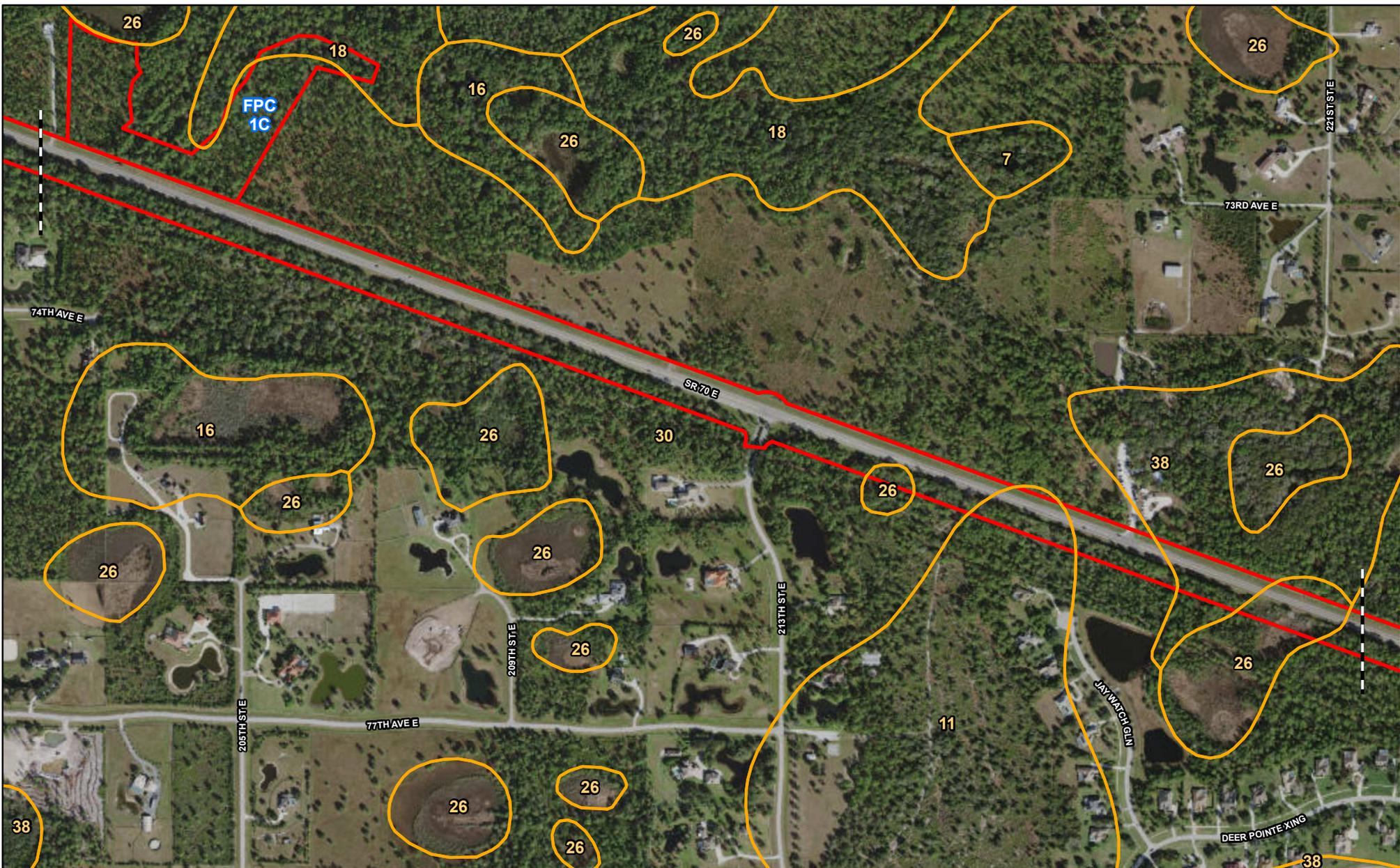
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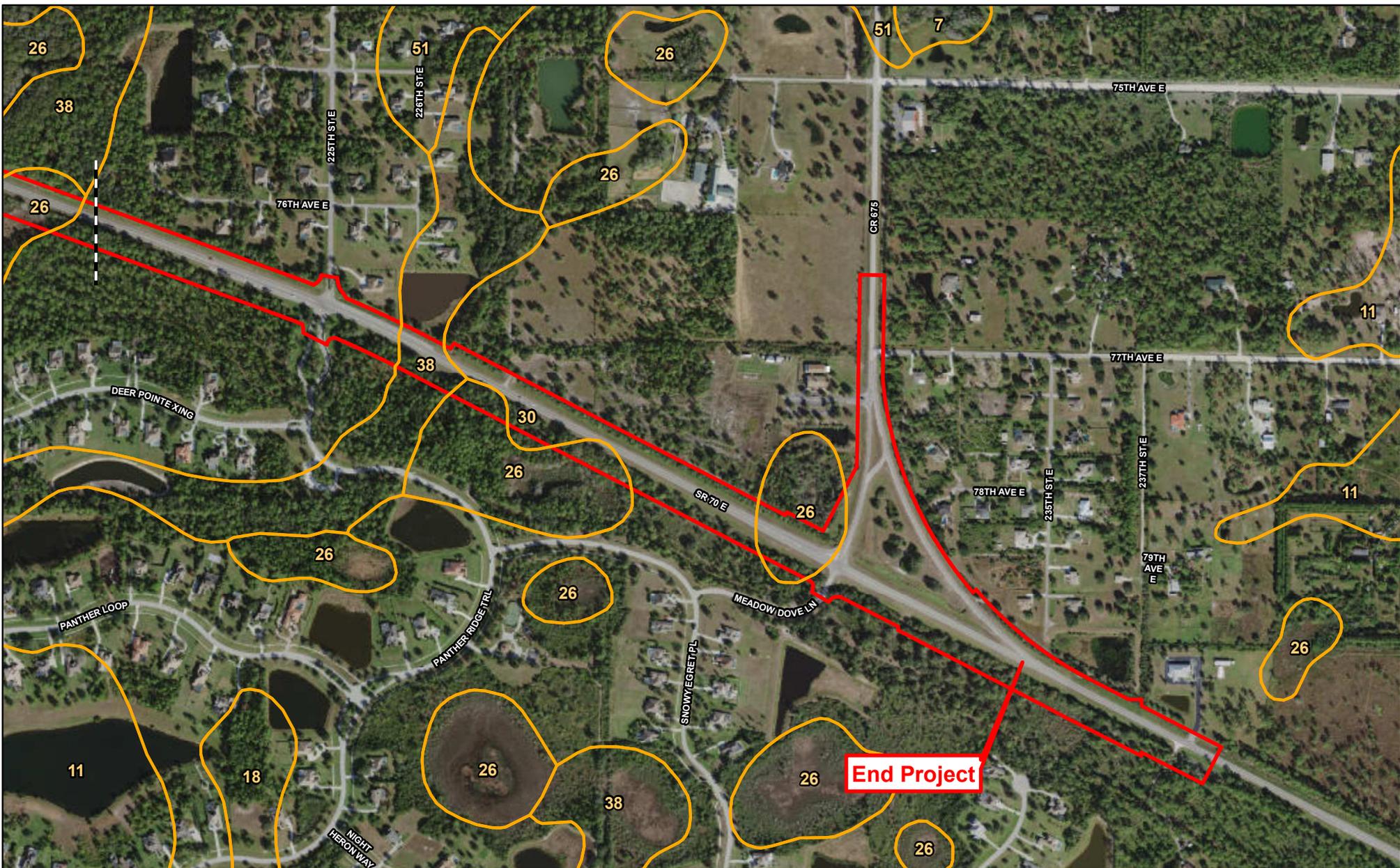
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***APPENDIX B***

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**Land Use Descriptions and Map**

## Upland Habitats and Land Uses

### **FLUCFCS: 110 (Residential, Low Density)**

The low density residential land use classification includes areas with less than two (2) fixed family or mobile home units per acre. This land use is found on the eastern end of the project study area on the south side of SR 70. While these areas have homes present, the surrounding lands remain cleared of natural vegetation for trails and maintained landscaping. Low-density residential areas comprise 0.56 acres (0.20 percent) of the project study area.

### **FLUCFCS: 120 (Residential, Medium Density)**

The medium density residential land use classification includes areas with two (2) to five (5) dwelling units per acre. This land use is concentrated on the western end of the project study area south of SR 70. The surrounding lands have mostly been cleared of natural vegetation for trails and maintained landscaping. Medium density residential areas comprise 0.14 acres (0.05 percent) of the project study area.

### **FLUCFCS: 190 (Open Land)**

The open land land use includes undeveloped land within urban areas and inactive land with street patterns, but without structures. Open land typically does not exhibit any indication of intended use, but may be in a transitional state and ultimately developed into an urban land use. This land use is located in the western end of the project study area, where active development is occurring south of SR 70. Open land within the project study area is comprised of weedy, ruderal species, including frog's bit (*Phyla nodiflora*), caesarweed (*Urena lobata*), dog fennel (*Eupatorium capillifolium*), and bahiagrass (*Paspalum notatum*), with scattered laurel oak (*Quercus laurifolia*) and slash pine (*Pinus elliottii*). Open land comprises 1.19 acres (0.42%) of the project study area.

### **FLUCFCS: 210 (Cropland and Pastureland)**

The cropland and pastureland land use includes agricultural land, which is managed for the production of row or field crops and improved, unimproved and woodland pastures. Cropland and pastureland include cropland harvested, or land from which crops are harvested, lands on which crops and pasture grasses are grown in rotation with one another, and pastureland used more or less permanently for livestock grazing. This land use is located within the center of the project study area. There are 0.02 acres (0.01 percent) of cropland and pastureland within the project study area.

### **FLUCFCS: 212 (Unimproved Pastures)**

The unimproved pastures land use is comprised of land that has been cleared of major stands of trees and brush where native grasses have been allowed to develop. This land is not typically managed with brush control and/or fertilizer applications. Vegetation within these areas includes bahiagrass, dog fennel, broomsedge (*Andropogon virginicus*), caesarweed, common ragweed (*Ambrosia artemisiifolia*), and saw palmetto (*Serenoa repens*). This land use is located at pond FPC 1B south of SR 70, and a location on the north side, east of FPC 1B. Unimproved pastures comprise 26.97 acres (9.55 percent) of the project study area.

### **FLUCFCS: 214 (Row Crops)**

The row crops land use is crop land that can be planted in rows wide enough to allow it to be tilled or cultivated by machinery. Crops are located in the western portion of the regional pond and include citrus crops. Row crops comprise 17.04 acres (6.03 percent) of the project study area.

### **FLUCFCS: 260 (Other Open Lands [Rural])**

The other open lands (rural) land use includes agricultural lands whose intended use cannot be determined. Other open lands are on the western end of the project study area north of SR 70. Vegetation within these areas is comprised predominately of weedy, ruderal species, including bahiagrass, dog fennel, spadeleaf

(*Centella asiatica*), and broomsedge with scattered clumps of saw palmetto. Other open lands (rural) comprise 0.68 acres (0.24 percent) of the project study area.

**FLUCFCS: 261 (Fallow Crop Land)**

The fallow crop land land use is harvested agricultural land not currently in crop production. Vegetation within these areas is comprised predominately of weedy, ruderal species, including bahiagrass, dog fennel, spadeleaf, and broomsedge. The majority of this is located in the regional pond. Fallow crop land comprises 47.37 acres (16.78 percent) of the project study area.

**FLUCFCS: 320 (Shrub and Brushland)**

The shrub and brushland land use includes communities comprised of saw palmetto, gallberry (*Ilex glabra*), wax myrtle (*Morella cerifera*) and other shrubs and brush. Shrub and brushland communities are located in the western end of the project study area. These communities consist of saw palmetto, saltbush (*Baccharis halimifolia*), wax myrtle, American beautyberry (*Callicarpa americana*), dog fennel, grapevine (*Vitis rotundifolia*), cogongrass (*Imperata cylindrica*), and broomsedge with scattered laurel oak and slash pine. Shrub and brushland communities comprise 2.57 acres (0.91 percent) of the project study area.

**FLUCFCS: 321 (Palmetto Prairies)**

The palmetto prairies land use is a mostly treeless grass dominated community that occupies broad flat regions where fire is frequent. Saw palmetto is the most prevalent plant cover intermixed with a wide variety of other woody scrub plant species, as well as various types of short herbs and grasses. The community generally consists of saw palmetto, slash pine, and live oak (*Quercus virginiana*). Palmetto prairies are located in the middle of the project study area on the south side of SR 70. Palmetto prairies communities comprise 9.36 acres (3.31 percent) of the project study area.

**FLUCFCS: 330 (Mixed Rangeland)**

The mixed rangeland land use generally includes a one-third intermixture of either grassland or shrub-brushland. Within the project study area, this land use is dominated by sparse cabbage palm (*Sabal palmetto*), grapevine, bluestem (*Andropogon* sp.), Brazilian pepper (*Schinus terebinthifolius*), and bahiagrass. This land use is located in a small area in the center of the project study area on the north side of SR 70. Mixed rangeland comprises 0.06 acres (0.02 percent) of the project study area.

**FLUCFCS: 411 (Pine Flatwoods)**

The pine flatwoods land use includes communities with a longleaf pine (*Pinus palustris*) or slash pine canopy with an understory of saw palmetto, wax myrtle, gallberry, and a variety of herbs and brush. Pine flatwoods communities are found throughout the length of the project study area on the north and south sides of SR 70. Within the project study area, these communities are comprised of a slash pine canopy with saw palmetto, wax myrtle, highbush blackberry (*Rubus argutus*), American beautyberry, Brazilian pepper, green brier (*Smilax bona-nox*), grapevine, and small-leaf viburnum (*Viburnum obovatum*). Pine flatwoods comprise 43.62 acres (15.45 percent) of the project study area.

**FLUCFCS: 423 (Oak-Pine-Hickory)**

The Oak-pine-hickory land use is a mixed forest community in which no single species is consistently dominant. However, this is a predominantly hardwood forest type in which various southern pines are major associate species. Oak-pine-hickory land use is small and located near the center of the project on the south side of SR 70. Oak-pine-hickory comprises 0.61 acres (0.21 percent) of the project study area.

**FLUCFCS: 434 (Hardwood Conifer Mixed)**

The hardwood conifer mixed land use is located throughout the project study area on the north and south sides of SR 70. The land use is reserved for those forested areas in which neither upland conifers nor

hardwoods achieve a 66 percent crown canopy dominance. This land use type consists of a canopy of laurel oak, live oak, and slash pine. Shrub and groundcover consist predominantly of laurel oak, slash pine, wax myrtle, saw palmetto, American beautyberry, green brier, poison ivy (*Toxicodendron radicans*), and grapevine. Hardwood conifer mixed uplands comprise 8.86 acres (3.14 percent) of the project study area.

**FLUCFCS: 438 (Mixed Hardwoods)**

The mixed hardwoods land use consists of hardwood communities in which no single species achieves a 66 percent canopy dominance. This class of hardwoods includes any combination of large and small hardwood tree species, none of which can be identified as dominating the canopy. Located near the western terminus of the project on the south side, mixed hardwood uplands consist of laurel oak, cabbage palm (*Sabal palmetto*) and Brazilian pepper, with small-leaf viburnum, and Virginia creeper (*Parthenocissus quinquefolia*). The mixed hardwoods land use comprises 0.46 acres (0.16 percent) of the project study area.

**FLUCFCS: 810 (Transportation)**

The transportation land use includes transportation facilities used for the movement of goods and people, including highways, right-of-ways, interchanges, and service facilities. Within the project study area, this land use encompasses SR 70 and associated roadways. Vegetation within the maintained portion of the right-of-ways includes bahiagrass, carpetgrass (*Axonopus* sp.), and various sedges. Transportation land use comprises 113.18 acres (40.08 percent) of the project study area.

**FLUCFCS: 830 (Utilities)**

The utilities land use consists of power generating facilities and water treatment plants including their related facilities, such as transmission lines for electric generation plants and aeration fields for sewage treatment sites. The utilities are located in the center of the project study area on the north side of SR 70 in a power substation. This area is cleared of natural vegetation containing only areas of bahiagrass. Utilities land use comprises 0.19 acres (0.07 percent) of the project study area.

**Wetland, Surface Water, and Other Surface Water Habitats**

<b>FLUCFCS: 510</b>	<b>Streams and Waterways</b>
<b>USFWS: PUB3H</b>	<b>(Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)</b>
<b>PEM1Ex</b>	<b>(Palustrine, Emergent, Persistent, Excavated)</b>
<b>PEM1C</b>	<b>(Palustrine, Emergent, Persistent, Seasonally Flooded)</b>
<b>PSS1Ex</b>	<b>(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)</b>

Streams and waterways land use includes rivers, creeks, canals, and other linear water bodies. Streams and waterways are present throughout the project study area and consist of excavated drainage ditches and canals dredged in hydric and non-hydric soils, natural creek systems, and the Braden River tributaries. Throughout the project study area, ditches and canals are located parallel to both sides of SR 70 and are often connected under SR 70 and residential driveways through pipes and culverts. Dominant vegetation within the streams and waterways consists of Carolina willow (*Salix caroliniana*), laurel oak, slash pine, wax myrtle, red maple (*Acer rubrum*), saltbush, cattail (*Typha* spp.), maidencane (*Panicum hemitomon*), Peruvian primrose willow (*Ludwigia peruviana*), Brazilian pepper, marsh pennywort (*Hydrocotyle umbellata*), pickerelweed (*Pontederia cordata*), and buttonbush (*Cephalanthus occidentalis*). Streams and waterways comprise 3.71 acres (1.31 percent) of the total study area.

**FLUCFCS: 615 Stream and Lake Swamps – Bottomland**  
**USFWS: PUB2/3H (Palustrine, Unconsolidated Bottom, Sand/Mud, Permanently Flooded)**

Stream and lake swamps (bottomland) land use is usually found on, but not restricted to river, creek and lake flood plains or overflow areas. This land use has a wide variety of predominantly hardwood species. The dominant vegetation of this habitat type within the project study area consists of Brazilian pepper, Peruvian primrose willow, Carolina willow, saltbrush, laurel oak, and buttonbush. This habitat type is located in one area on the western end of the project study area north on SR 70. Stream and lake swamps (bottomland) comprises 0.31 acres (0.11 percent) of the project study area.

**FLUCFCS: 617 (Mixed Wetland Hardwoods)**  
**USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)**

Mixed wetland hardwoods land use includes 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. The dominant vegetation of this habitat type within the project study area consists of slash pine, sweetbay magnolia, (*Magnolia virginiana*), dahoon holly (*Ilex cassine*), laurel oak, and swamp bay (*Persea palustris*) with a sparse shrub layer characterized by Brazilian pepper, Carolina willow, elderberry (*Sambucus nigra*), smartweed (*Polygonum hydropiperoides*), shield fern (*Dryopteris ludoviciana*), swamp fern (*Blechnum serrulatum*) and marsh pennywort. Mixed wetland hardwoods comprise 2.05 acres (0.72 percent) of the project study area.

**FLUCFCS: 625 (Hydric Pine Flatwoods)**  
**USFWS: PFO4C (Palustrine, Forested, Needle-Leaved Evergreen, Seasonally Flooded)**

Hydric pine flatwoods land use is forested wetland communities with a sparse to moderate canopy of slash pine. The understory generally includes grasses, wiregrass, forbs, and at times sparse saw palmetto. Hydric pine flatwoods are located in a small area south of SR 70. Dominant vegetation within this forested wetland type includes slash pine, sweetbay, wax myrtle, saw palmetto, Virginia chain fern (*Woodwardia virginica*), gallberry, grapevine, maidencane, swamp fern, bluestem, duck potato (*Sagittaria lancifolia*), pickerelweed, soft rush (*Juncus effuses*), marsh pennywort, and Peruvian primrose willow. Hydric pine flatwoods comprise 0.38 acres (0.14 percent) of the project study area.

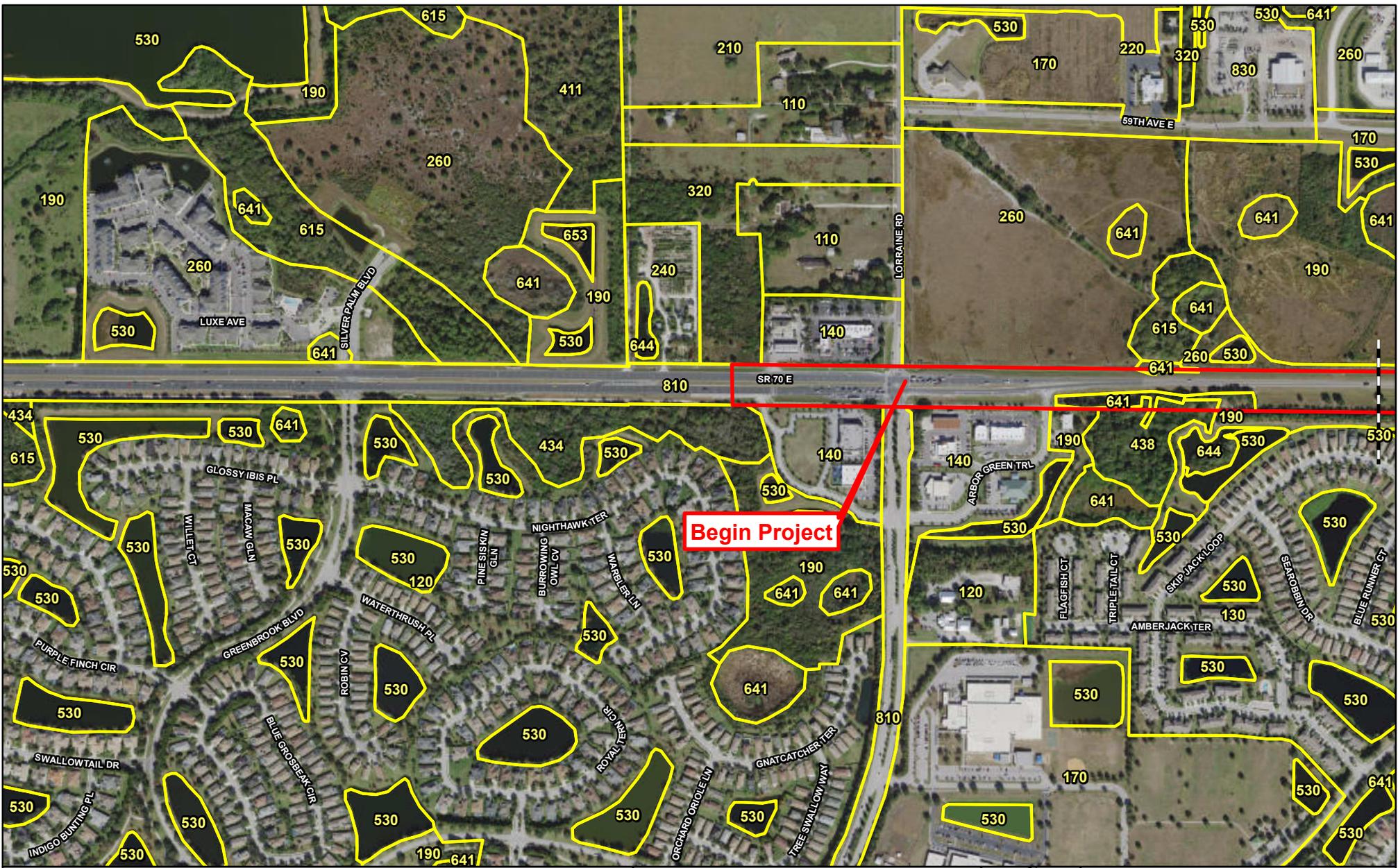
**FLUCFCS: 631 (Wetland Shrub)**  
**USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland shrub systems land use is forested wetland communities in which neither hardwoods or conifers achieve a 66 percent canopy dominance. Mixed forested wetlands are located throughout the project study area on the north side of SR 70. Dominant vegetation within this forested wetland type includes laurel oak, red maple, water oak (*Quercus nigra*), slash pine, and dahoon holly, wax myrtle, muscadine grape, bluestem, cinnamon fern (*Osmunda cinnamomea*), and beggarticks (*Bidens alba*). Wetland shrub communities comprise 1.16 acres (0.41 percent) of the project study area.

**FLUCFCS: 641 (Freshwater Marshes)**  
**USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Freshwater marshes land use is relatively level, low-lying areas and do not have a tree cover that meets the crown closure threshold (>10 percent) for forested communities. Freshwater marshes are located throughout the project study area along both sides of SR 70. Dominant vegetation within this habitat type includes wax myrtle, bluestem, cattail, dog fennel, spikerush, bog button (*Lachnocaulon anceps*), duck potato, Peruvian primrose willow, soft rush, stinkweed (*Pluchea odorata*), marsh pennywort, pickerelweed, whitetop sedge (*Rhynchospora colorata*), false indigo (*Amorpha* spp.), St. John's Wort

(*Hypericum* spp.), Virginia chain fern, and swamp fern. Freshwater marshes comprise 1.87 acres (0.66 percent) of the project study area.



Legend	
	Project Study Area
110:	RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS
120:	RESIDENTIAL MED DENSITY 2->5 DWELLING UNIT
130:	RESIDENTIAL HIGH DENSITY
140:	COMMERCIAL AND SERVICES
170:	INSTITUTIONAL
190:	OPEN LAND
210:	CROPLAND AND PASTURELAND
220:	TREE CROPS
240:	NURSERIES AND VINEYARDS
260:	OTHER OPEN LANDS <RURAL>
320:	SHRUB AND BRUSHLAND
411:	PINE FLATWOODS
434:	HARDWOOD CONIFER MIXED
438:	MIXED HARDWOODS
530:	RESERVOIRS
615:	STREAM AND LAKE SWAMPS (BOTTOMLAND)
641:	FRESHWATER MARSHES
644:	EMERGENT AQUATIC VEGETATION
653:	INTERMITTENT PONDS
810:	TRANSPORTATION
830:	UTILITIES

**Land Use Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**  
  
**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

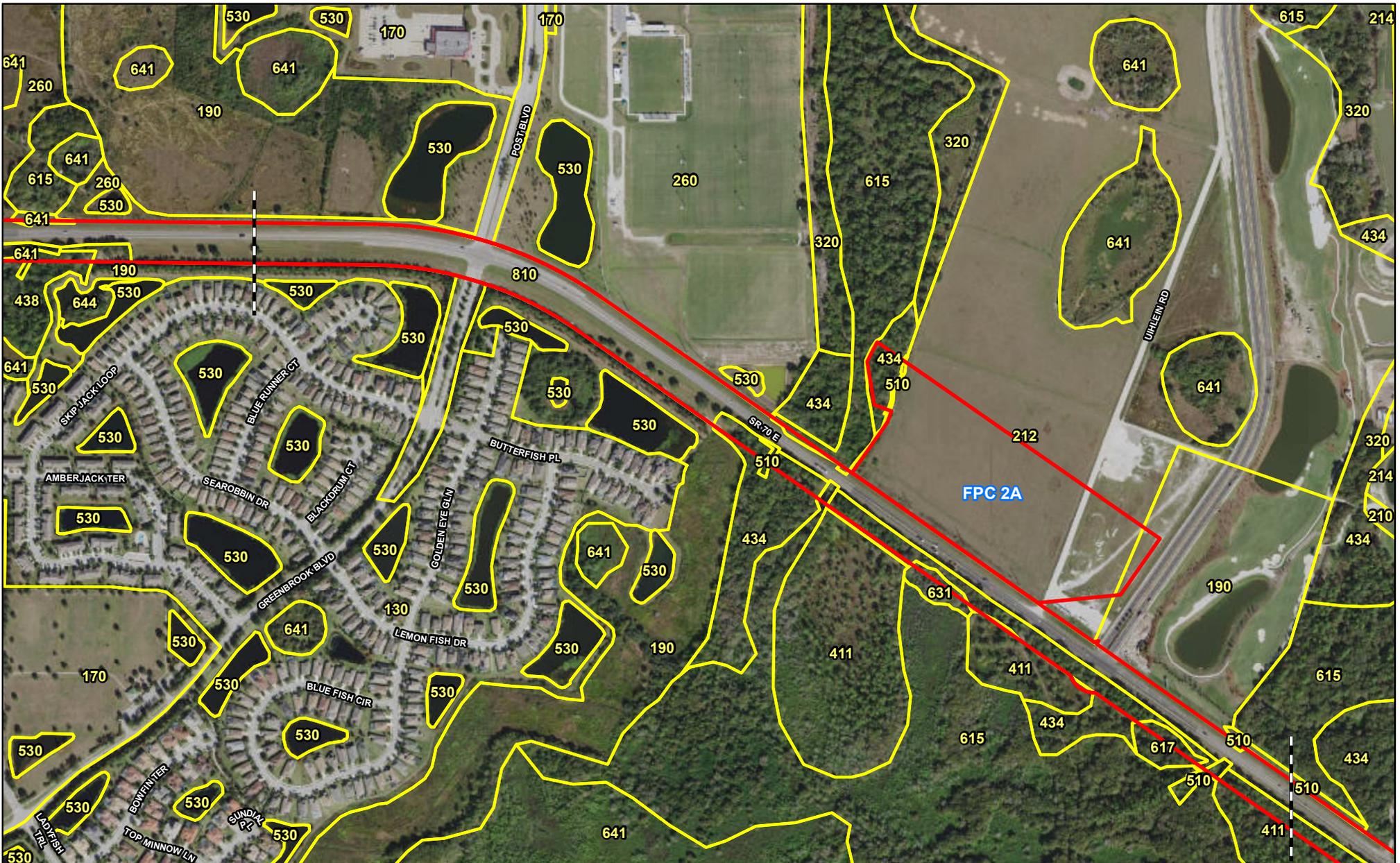
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Feet

Kisinger Campo & Associates, Corp.  
 201 N. Franklin Street, Suite 400  
 Tampa, FL 33602  
 Phone 813/871-5331  
 Fax 813/871-5153



Legend	
	Project Study Area
130:	RESIDENTIAL HIGH DENSITY
170:	INSTITUTIONAL
190:	OPEN LAND
210:	CROPLAND AND PASTURELAND
212:	UNIMPROVED PASTURES
214:	ROW CROPS
260:	OTHER OPEN LANDS <RURAL>
320:	SHRUB AND BRUSHLAND
411:	PINE FLATWOODS
434:	HARDWOOD CONIFER MIXED
438:	MIXED HARDWOODS
510:	STREAMS AND WATERWAYS
530:	RESERVOIRS
615:	STREAM AND LAKE SWAMPS (BOTTOMLAND)
617:	MIXED WETLAND HARDWOODS
631:	WETLAND SHRUB
641:	FRESHWATER MARSHES
644:	EMERGENT AQUATIC VEGETATION
810:	TRANSPORTATION

**Land Use Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**

**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

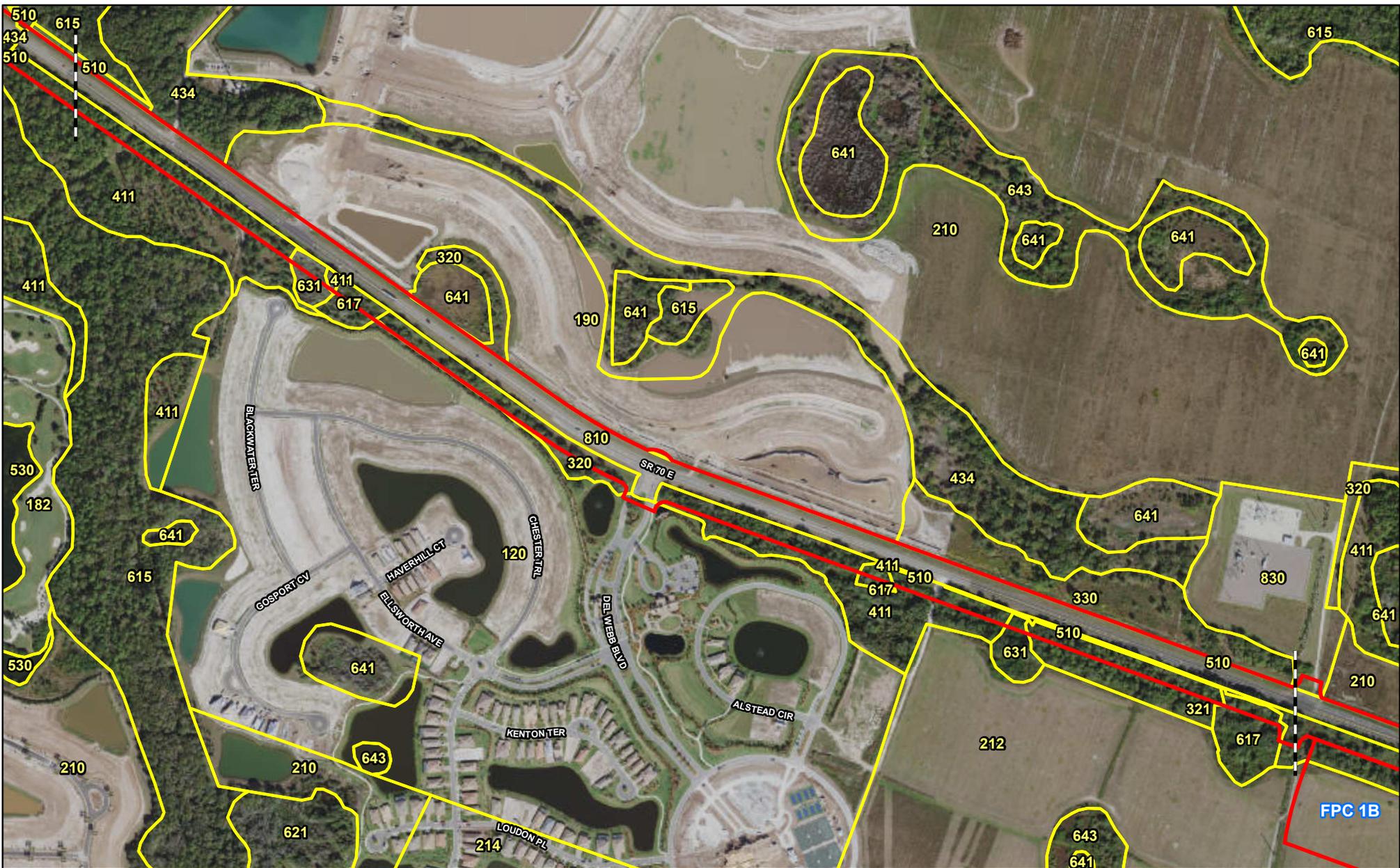
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Legend	
	Project Study Area
120:	RESIDENTIAL MED DENSITY 2->5 DWELLING UNIT
182:	GOLF COURSES
190:	OPEN LAND
210:	CROPLAND AND PASTURELAND
212:	UNIMPROVED PASTURES
214:	ROW CROPS
320:	SHRUB AND BRUSHLAND
321:	PALMETTO PRAIRIES
330:	MIXED RANGELAND
411:	PINE FLATWOODS
434:	HARDWOOD CONIFER MIXED
510:	STREAMS AND WATERWAYS
530:	RESERVOIRS
615:	STREAM AND LAKE SWAMPS (BOTTOMLAND)
617:	MIXED WETLAND HARDWOODS
621:	CYPRESS
631:	WETLAND SHRUB
641:	FRESHWATER MARSHES
643:	WET PRAIRIES
810:	TRANSPORTATION
830:	UTILITIES

**Land Use Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**

**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

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Legend	
 Project Study Area	423: OAK - PINE - HICKORY
110: RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS	510: STREAMS AND WATERWAYS
182: GOLF COURSES	530: RESERVOIRS
190: OPEN LAND	615: STREAM AND LAKE SWAMPS (BOTTOMLAND)
210: CROPLAND AND PASTURELAND	617: MIXED WETLAND HARDWOODS
212: UNIMPROVED PASTURES	630: WETLAND FORESTED MIXED
320: SHRUB AND BRUSHLAND	631: WETLAND SHRUB
321: PALMETTO PRAIRIES	641: FRESHWATER MARSHES
330: MIXED RANGELAND	643: WET PRAIRIES
411: PINE FLATWOODS	810: TRANSPORTATION
	830: UTILITIES

**Land Use Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**

**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

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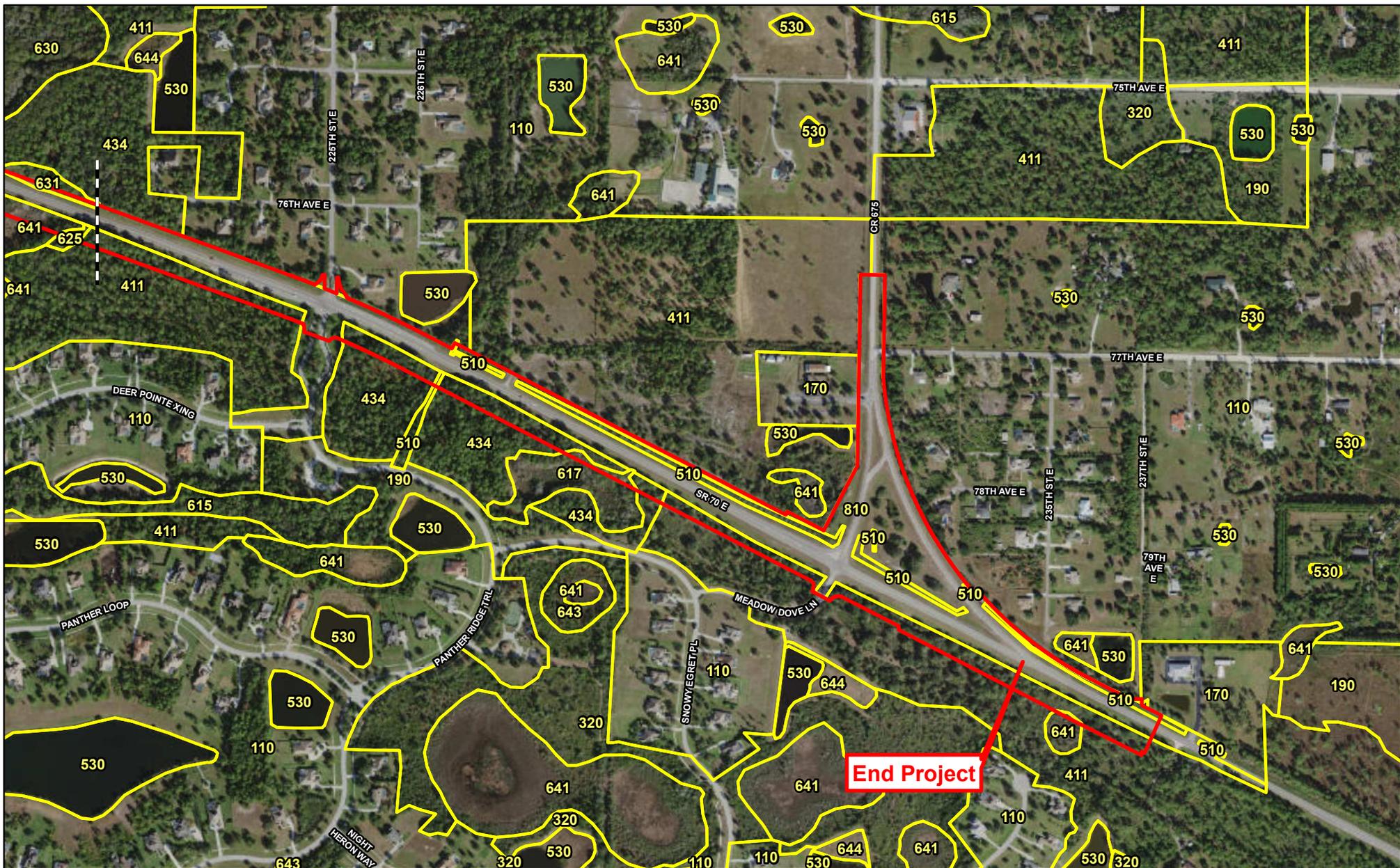




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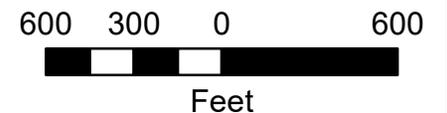


**Legend**

- Project Study Area
- 110: RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS
- 170: INSTITUTIONAL
- 190: OPEN LAND
- 320: SHRUB AND BRUSHLAND
- 411: PINE FLATWOODS
- 434: HARDWOOD CONIFER MIXED
- 510: STREAMS AND WATERWAYS
- 530: RESERVOIRS
- 615: STREAM AND LAKE SWAMPS (BOTTOMLAND)
- 617: MIXED WETLAND HARDWOODS
- 625: HYDRIC PINE FLATWOODS
- 630: WETLAND FORESTED MIXED
- 631: WETLAND SHRUB
- 641: FRESHWATER MARSHES
- 643: WET PRAIRIES
- 644: EMERGENT AQUATIC VEGETATION
- 810: TRANSPORTATION

**Land Use Map  
SR 70 from Lorraine Road  
to CR 675 (Waterbury Road)**

**Manatee County, Florida  
FPID Number: 414506-2-22-01**



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Legend	
	Project Study Area
110:	RESIDENTIAL LOW DENSITY < 2 DWELLING UNITS
210:	CROPLAND AND PASTURELAND
214:	ROW CROPS
260:	OTHER OPEN LANDS <RURAL>
261:	FALLOW CROP LAND
320:	SHRUB AND BRUSHLAND
411:	PINE FLATWOODS
434:	HARDWOOD CONIFER MIXED
510:	STREAMS AND WATERWAYS
530:	RESERVOIRS
615:	STREAM AND LAKE SWAMPS (BOTTOMLAND)
641:	FRESHWATER MARSHES
643:	WET PRAIRIES

**Land Use Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**

**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

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***APPENDIX C***

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**Individual Wetland and Surface Water Descriptions and  
Map**

## Individual Wetlands

### Wetland 1L

**FLUCFCS: 641 Freshwater Marshes**  
**USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Wetland 1L (WL 1L) is a freshwater marsh surrounded by SR 70, bottomland swamp, and other open lands. This system is comprised of soft rush (*Juncus effusus*), cattail (*Typha latifolia*), cinnamon fern (*Osmunda cinnamomea*), broomsedge (*Andropogon virginicus*), poison ivy (*Toxicodendron radicans*), umbrella sedge (*Fuirena scirpoidea*), and rosy camphorweed (*Pluchea baccharis*) with scattered elderberry (*Sambucus nigra*), Carolina willow (*Salix caroliniana*), saltbush (*Baccharis halimifolia*), Peruvian primrose-willow (*Ludwigia peruviana*), wax myrtle (*Morella cerifera*), and Mexican primrose-willow (*Ludwigia octovalvis*). WL 1L is located on the north side of SR 70 approximately 1200 feet east of Lorraine Road. This system is hydrologically connected to WL 1R under SR 70 through a culvert and comprises 0.09 acres of the project study area.

### Wetland 1LA

**FLUCFCS: 615 Stream and Lake Swamps (Bottomland)**  
**USFWS: PUB2/3H (Palustrine, Unconsolidated Bottom, Sand/Mud, Permanently Flooded)**

Wetland 1AL (WL 1AL) includes two tributaries of the Braden River that are hydrologically connected on the north side of SR 70 and branch apart under SR 70 to connect to SW 1R and SW 2R through culverts. WL 1AL contains open water and vegetated components and is surrounded by hardwood-conifer mixed uplands, bottomland swamp, other open lands, and SR 70. Existing vegetation is comprised of Brazilian pepper (*Schinus terebinthifolia*), Peruvian primrose-willow, saltbush, Carolina willow, elderberry, para grass (*Urochloa mutica*), maidencane (*Panicum hemitomon*), pale duckweed (*Spirodela polyrhiza*), caesarweed (*Urena lobate*), smartweed (*Polygonum hydropiperoides*), cinnamon fern, spreading dayflower (*Commelina diffusa*), cattail, and bigpod sesbania (*Sesbania herbacea*). WL 1AL is located on the north side of SR 70, 1800 feet east of Post Blvd., and comprises 0.18 acres of the project study area.

### Wetland 1R

**FLUCFCS: 641 Freshwater Marshes**  
**USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Wetland 1R (WL 1R) is a freshwater marsh surrounded by open land, commercial, SR 70, and mixed hardwood uplands. This system is comprised of red ludwigia (*Ludwigia repens*), smartweed, water sprite (*Ceratopteris thalictroides*), pennywort (*Hydrocotyle bonariensis*), cinnamon fern, pickerelweed (*Pontederia cordata*), spreading dayflower, and Florida pellitory (*Parietaria floridana*) with a shrub component of Peruvian primrose-willow, Brazilian, and Carolina willow. WL 1R is hydrologically connected to WL 1L under SR 70 through a culvert. WL1R is located on the south side of SR 70, approximately 1000 feet east of Lorraine, and comprises 0.82 acres of the project study area.

### Wetland 2L

**FLUCFCS: 641 Freshwater Marshes**  
**USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Wetland 2L (WL 2L) is a freshwater marsh surrounded by active development, scrub and brushland, and SR 70. WL 2L is an herbaceous marsh dominated by pickerelweed. Additional herbaceous cover is comprised of smartweed, caesarweed, maidencane (*Panicum hemitomon*), dog fennel (*Eupatorium capillifolium*), umbrella sedge, rushes, broomsedge, and cattail with a scattered shrub component of wax myrtle, Carolina willow, and Peruvian primrose-willow. WL 2L is located on the north side of SR 70, is approximately 1200 feet west of Del Webb Blvd, and comprises 0.01 acres of the project study area.

### Wetland 2R

**FLUCFCS: 631 Wetland Shrub**  
**USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 2R (WL 2R) is a wetland scrub community surrounded by pine flatwoods, bottomland swamps, and SR 70. This system is comprised of buttonbush (*Cephalanthus occidentalis*), Carolina willow, saw palmetto (*Serenoa repens*), Brazilian pepper, and St. John's wort (*Hypericum cistifolium*), with scattered red maple (*Acer rubrum*), laurel oak (*Quercus laurifolia*), royal fern (*Osmunda regalis*), swamp fern (*Telmatoblechnum serrulatum*), cinnamon fern, smartweed, spreading dayflower, sawgrass (*Cladium mariscoides*), and red maple saplings. WL 2R is located on the south side of SR 70, approximately 2400 feet east of Post Blvd., and comprises 0.23 acres of the project study area.

### Wetland 3L

**FLUCFCS: 631 Wetland Scrub**  
**USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 3L (WL 3L) is a wetland scrub surrounded by pine flatwoods and SR 70. This system is comprised of laurel oak, Carolina willow, wax myrtle, Brazilian pepper, and Peruvian primrose-willow. Groundcover consists of creeping oxeye (*Sphagneticola trilobata*), cattail, climbing hempvine (*Mikania scandens*), torpedograss (*Panicum repens*), broomsedge, maidencane, rosy camphorweed, and blue maidencane (*Amphicarpum muehlenbergianum*). WL 3L is located on the north side of SR 70, directly across from FPC 1B, and comprises 0.07 acres of the project study area.

### Wetland 3R

**FLUCFCS: 617 Mixed Wetland Hardwoods**  
**USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 3R (WL 3R) is a mixed wetlands hardwood community located on the south side of SR 70, approximately 800 feet east of Uihlein Road, and surrounded by pine flatwoods and bottomland swamp. This system is comprised of a predominately laurel oak canopy with dahoon holly (*Ilex cassine*), slash pine (*Pinus elliottii*), and Brazilian pepper. WL 3R includes a shrub component of buttonbush, Carolina willow, wax myrtle, saw palmetto, laurel oak, and Brazilian pepper along with an herbaceous component of cinnamon fern, spreading dayflower, and pennywort. A portion of WL 3R directly abuts SW 3R (a Braden River tributary) and comprises 0.40 acres of the project study area.

### Wetland 4L

**FLUCFCS: 617 Mixed Wetland Hardwoods**  
**USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 4L (WL 4L) is a mixed wetland hardwood system surrounded by pine flatwoods and SR 70. This system is comprised of a laurel oak, Brazilian pepper, and slash pine canopy and a laurel oak, Brazilian pepper, Carolina willow, swamp bay (*Persea palustris*), Peruvian primrose-willow, and wax myrtle understory. Herbaceous vegetation includes poison ivy, Virginia creeper (*Parthenocissus quinquefolia*), green-brier (*Smilax bona-nox*), caesarweed, cinnamon fern, and West Indian marsh grass (*Hymenachne amplexicaulis*). WL 4L is located on the north side of SR 70, approximately 500 feet east of FPC 1B, and comprises 0.12 acres of the project study area.

### Wetland 4Ra and 4Rb

<b>FLUCFCS:</b>	<b>617</b>	<b>Mixed Hardwood Wetlands</b>
	<b>631</b>	<b>Wetland Scrub</b>
<b>USFWS:</b>	<b>PFO1C</b>	<b>(Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)</b>
	<b>PSS1C</b>	<b>(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)</b>

Wetland 4R (WL 4R) is a wetland system with scrub and forested components. WL 4R is surrounded by pine flatwoods, SR 70, shrub and brushland, and residential development. The scrub portion of the system is comprised of coinwort (*Centella asiatica*), knotroot foxtail (*Setaria parviflora*), soft rushes, dog fennel, yellow-eyed grass (*Xyris* spp.), rosy camphorweed, Carolina redroot (*Lachnanthes caroliana*), and red maple saplings with St. John's wort, wax myrtle, saltbush, and scattered red maple, tupelo (*Nyssa sylvatica*), and slash pine. The forested portion of WL is comprised of red maple, laurel oak, and slash pine with a shrub stratum of St. John's wort, red maple, wax myrtle, Carolina willow, saltbush, and saw palmetto with a similar herbaceous strata as the scrub community. WL 4Ra and 4Rb are located on the south side of SR 70 near Blackwater Circle. WL 4Ra comprises 0.48 acres of the project study area and WL 4Rb comprises 0.35 acres of the project study area.

### Wetland 5L

<b>FLUCFCS:</b>	<b>631</b>	<b>Wetland Scrub</b>
<b>USFWS:</b>	<b>PSS1C</b>	<b>(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)</b>

Wetland 5L (WL 5L) is a wetland scrub system surrounded by pine flatwoods and SR 70. This system is comprised of laurel oak, Carolina willow, buttonbush, Peruvian primrose-willow, wax myrtle, and St. John's wort with soft rush, cinnamon fern, savanna iris (*Iris savannarum*), rosy camphorweed, broomsedge, and yellow-eyed grass. WL 5L is located on the north side of SR 70, approximately 800 feet west of Lindrick Ln., and comprises 0.15 acres of the project study area.

### Wetland 5R

<b>FLUCFCS:</b>	<b>617</b>	<b>Mixed Wetland Hardwoods</b>
<b>USFWS:</b>	<b>PFO1C</b>	<b>(Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)</b>

Wetland 5R (WL 5R) is a mixed wetland hardwood system surrounded by pine flatwoods, with a red maple, slash pine, laurel oak, and sweet bay (*Magnolia virginiana*) canopy and saltbush, Carolina willow, wax myrtle, Peruvian primrose-willow, and Brazilian pepper understory. The groundcover stratum is WL 5R consists predominately of cinnamon fern, swamp fern, poison ivy, smartweed, grapevine (*Vitis rotundifolia*), and red maple saplings. WL 5R is located on the south side of SR 70, 1200 feet east of Del Webb Blvd, and comprises 0.23 acres of the project study area.

### Wetland 6L

<b>FLUCFCS:</b>	<b>631</b>	<b>Wetland Scrub</b>
<b>USFWS:</b>	<b>PSS1C</b>	<b>(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)</b>

Wetland 6L (WL 6L) is a wetland scrub that is surrounded by hardwood-conifer mixed uplands and SR 70. WL 6L consists of wax myrtle, Carolina willow, sweet bay, buttonbush, saltbush, and Peruvian primrose-willow with scattered laurel oak and slash pine. Herbaceous vegetation includes sawgrass, savanna iris, smartweed, pennywort, soft rush, and paragrass (*Urochloa mutica*). WL 6L is located on the north side of SR 70, approximately 1200 feet west of 225<sup>th</sup> Street East, and comprises 0.21 acres of the project study area.

**Wetland 6R**

**FLUCFCS: 631 Wetland Scrub**  
**USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 6R (WL 6R) is a wetland scrub community dominated by Brazilian pepper, with Carolina willow, laurel oak, swamp fern, cinnamon fern, Peruvian primrose-willow, smartweed, and spreading dayflower. WL 6R is surrounded by pine flatwoods, a SW 4R, and unimproved pasture. WL 6R is located on the south side of SR 70, approximately 400 feet east of Alstead Circle, and comprises 0.15 acres of the project study area.

**Wetland 7R**

**FLUCFCS: 617 Mixed Wetland Hardwoods**  
**USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 7R (WL 7R) is a mixed hardwoods wetland system with a predominantly laurel oak and red maple canopy with scattered sweet bay and live oak (*Quercus virginiana*). Shrub and groundcover components consist of laurel oak, Brazilian pepper, buttonbush, sweet bay, wax myrtle, saw palmetto, cinnamon fern, royal fern, poison ivy, caesarweed, and swamp fern. WL 7R is surrounded by palmetto prairies, SW 5R, and unimproved pasture. WL 7R is located on the south side of SR 70, directly west of FPC 1B, and comprises 0.50 acres of the project study area.

**Wetland 8Ra and 8Rb**

**FLUCFCS: 625 Hydric Pine Flatwoods**  
**641 Freshwater Marshes**  
**USFWS: PFO4C (Palustrine, Forested, Needle-Leaved Evergreen, Seasonally Flooded)**  
**PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Wetland 8R (WL 8R) is a wetland system with herbaceous and forested components located on the south side of SR 70 between 213<sup>th</sup> Street East and 225<sup>th</sup> Street East. WL 8R is surrounded by pine flatwoods and SR 70. The freshwater marsh system is comprised predominantly of saw grass, broomsedges, rosy camphorweed, spadeleaf, yellow-eyed grass, cattail, and soft rush with wax myrtle, St. John's wort, Carolina willow, buttonbush, and scattered laurel oak, slash pine, sweet bay, water oak (*Quercus nigra*), and red maple. The forested system is comprised of a predominantly slash pine canopy with laurel oak, water oak (*Quercus nigra*), and red maple. Scrub and herbaceous components are minimal and consist of wax myrtle, cabbage palm (*Sabal palmetto*), cinnamon fern, cattail, St. John's wort, and blue maidencane. WL 8Ra comprises 0.38 acres of the project study area and WL 8Rb comprises 0.90 acres of the project study area.

**Wetland 9R**

**FLUCFCS: 617 Mixed Wetland Hardwoods**  
**USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)**

Wetland 9R (WL 9R) is a mixed wetland hardwoods system surrounded by hardwood-conifer mixed uplands and SR 70. This system includes a laurel oak, red maple, dahoon holly, and slash pine canopy with a wax myrtle, laurel oak, saltbush, and St. John's wort shrub component. Herbaceous vegetation in WL 9R is comprised of St. John's wort, cinnamon fern, royal fern, rosy camphorweed, coinwort, and pennywort. WL 9R is located on the south side of SR 70, approximately 1500 feet east of 225<sup>th</sup> Street East, and comprises 0.30 acres of the project study area.

### **Wetland 10R**

**FLUCFCS: 641 Freshwater Marshes**  
**USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Wetland 10R (WL 10R) is an herbaceous marsh located within pine flatwoods. WL 10R is comprised predominantly of rosy camphorweed, water hyssops (*Bacopa monnieri*), pipeworts (*Eriocaulon* spp.), cinnamon fern, broomsedge, yellow-eyed grass, and blue maidencane with scattered St. John's wort and wax myrtle. WL 10R is located on the south side of SR 70, approximately 1400 feet east of Meadow Dove Lane, and comprises 0.05 acres of the project study area.

### **Individual Surface Waters**

#### **Surface Water 1LA**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 1AL (SW 1AL) consists mainly of open water. SW 1AL is surrounded by pastureland and stream and lake swamps (bottomland). It is hydrologically connected to WL 1AL, SW 1R, and SW 2R with surface waters to its south. SW 13L comprises 0.08 acres of the project study area.

#### **Surface Water 1R**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 1R (SW 1R) is a tributary of the Braden River located on the south side of SR 70 and is comprised predominately of open water. This system is surrounded by hardwood-conifer mixed uplands and SR 70. Slash pine, wax myrtle, Brazilian pepper, cabbage palm, elderberry, Peruvian primrose-willow, and Mexican primrose-willow are present along the edges with an herbaceous component of pale duckweed (*Lemna valdiviana*), smartweed, spreading dayflower, cinnamon fern, pennywort, and cattail. SW 1R is connected to SW 1L under SR 70 through a culvert, approximately 1600 feet east of Post Blvd., and comprises 0.09 acres of the project study area.

#### **Surface Water 2L**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 2L (SW 2L) is a tributary of the Braden River and is comprised predominantly of open water. This system is surrounded by SR 70, open land, a SW 3L, and bottomland swamp. Existing vegetation within includes Carolina willow, Peruvian primrose-willow, Mexican primrose-willow, spreading dayflower, caesarweed, smartweed, limpoglass (*Hemarthria altissima*), and mock bishopweed (*Ptilimnium capillaceum*). SW 2L is located on the north side of SR 70, approximately 1200 feet east of Uihlein Road, and comprises 0.04 acres of the project study area.

#### **Surface Water 2R**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 2R (SW 2R) is a tributary to the Braden River located on the south side of SR 70 and is comprised predominately of open water. This system is surrounded by hardwood-conifer mixed uplands, pine flatwoods, and SR 70. Slash pine, Carolina willow, Brazilian pepper, and Peruvian primrose-willow are present along the edges with an herbaceous component of pale duckweed, maidencane, and cattail. SW 2R is connected to SW 1L under SR 70 through a culvert, approximately 1200 feet west of Uihlen Rd., and comprises 0.13 acres of the project study area.

### **Surface Water 3L**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Excavated)**

Surface Water 3L (SW 3L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads and is dominated by torpedograss with spreading dayflower, Carolina willow, buttonbush, Peruvian-primrose willow, caesarweed, and limpgrass. This system is surrounded by bottomland swamp, a Braden River tributary (SW 2L), hardwood-conifer mixed uplands, and SR 70. SW 3L is located on the north side of SR 70, approximately 1500 feet east of Uihlein Road, and comprises 0.02 acres of the project study area.

### **Surface Water 3R**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 3R (SW 3R) is a continuation of the Braden River tributary (SW 2L). The banks of the tributary are dominated by laurel oaks, slash pine, Brazilian pepper, saw palmetto, grapevine, Virginia creeper, and poison ivy. This system is surrounded by bottomland swamp and SR70. SW 3R is located on the south side of SR 70, approximately 1300 feet east of Uihlein Road, and comprises 0.14 acres of the project study area.

### **Surface Water 4L**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)**

Surface Water 4L (SW 4L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads. The vegetative community is comprised of Peruvian primrose-willow, elderberry, bahiagrass sod (*Paspalum notatum*), smartweed, caesarweed, alligatorweed (*Alternanthera philoxeroides*), bog hemp (*Boehmeria cylindrica*), knotroot foxtail, and Florida pellitory. This system is bounded by mixed rangeland and SR 70. SW 4L is located on the north side of SR 70, 400 feet west of FPC 1B, and comprises 0.02 acres of the project study area.

### **Surface Water 4R**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)**

Surface Water 4R (SW 4R) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads with a shrub component of Carolina willow, laurel oak, saltbush, wax myrtle, and buttonbush. The groundcover component of SW 4R is comprised of spadeleaf (*Centella asiatica*), smartweed, swamp fern, red ludwigia, Peruvian primrose-willow, and West Indian chickweed (*Drymaria cordata*). This system is surrounded by pine flatwoods, a mixed hardwood wetland (WL 5R), and SR 70. SW 4R is located on the south side of SR 70, directly west of Alstead Circle, and comprises 0.04 acres of the project study area.

### **Surface Water 5L**

**FLUCFCS: 510 Streams and Waterways**  
**USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)**

Surface Water 5L (SW 5L) is an unnamed creek system that contains minimal vegetative cover and is surrounded by SR 70 and bottomland swamps. Existing vegetation along the banks includes laurel oak, slash pine, buttonbush, saw palmetto, smartweed, lanceleaf arrowhead (*Sagittaria lancifolia*), cattail, and pennywort. SW 5L is located on the north side of SR 70, 2000 feet east of Lindrick Lane, and comprises 0.06 acres of the project study area.

### **Surface Water 5R**

**FLUCFCS: 510**

**USFWS: PEM1Ex**

**Streams and Waterways**

**(Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)**

Surface Water 5R (SW 5R) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads with forested and shrub components of red maple, laurel oak, Carolina willow, saltbush, wax myrtle, Brazilian pepper, and buttonbush. The groundcover stratum of SW 5R includes coinwort, swamp fern, smartweed, and bahiagrass. This system is surrounded by pine flatwoods, a mixed hardwood wetland (WL 7R), a scrub wetland (WL 6R), and SR 70. SW 5R is located on the south side of SR 70, directly west of Alstead Circle, and comprises 0.34 acres of the project study area.

### **Surface Water 6L**

**FLUCFCS: 510**

**USFWS: PSS1Ex**

**Streams and Waterways**

**(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)**

Surface Water 6L (SW 6L) is a man-made ditch constructed for the purpose of collecting stormwater runoff from roads within the SR 70 right-of-way. SW 6L is surrounded by pine flatwoods and residential development and is dominated by Carolina willow, Peruvian primrose-willow, red maple, wax myrtle, pickerelweed, broomsedge, tickseed (*Coreopsis* sp.), smartweed, climbing hempvine, and lanceleaf arrowhead. SW 6L is located on the north side of SR 70, approximately 700 feet east of 225<sup>th</sup> Street East, and comprises 0.12 acres of the project study area.

### **Surface Water 6R**

**FLUCFCS: 510**

**USFWS: PSS1Ex**

**Streams and Waterways**

**(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)**

Surface Water 6R (SW 6R) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads with a canopy and sub-canopy dominated by laurel oak and Brazilian pepper with Carolina willow, wax myrtle, elderberry, saltbush, Peruvian primrose-willow, royal fern, cinnamon fern, netted chain fern (*Woodwardia areolata*), and pennywort. This system is surrounded by pine flatwoods and SR 70. SW 6R is located on the south side of SR 70, 500 feet east of FPC 1B, and comprises 0.04 acres of the project study area.

### **Surface Water 7L**

**FLUCFCS: 510**

**USFWS: PSS1Ex**

**Streams and Waterways**

**(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)**

Surface Water 7L (SW 7L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads within the SR 70 right-of-way. SW 7L is surrounded by pine flatwoods and is dominated by Carolina willow, Peruvian primrose-willow, red maple, wax myrtle, pickerelweed, broomsedge, tickseed, smartweed, climbing hempvine, and lanceleaf arrowhead. SW 7L is located on the north side of SR 70, at CR 675, and comprises 1.35 acres of the project study area.

### **Surface Water 7R**

**FLUCFCS: 510**

**USFWS: PUB3H**

**Streams and Waterways**

**(Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 7R (SW 7R) is an unnamed tributary with vegetation present along the banks and is surrounded by pine flatwoods and SR 70. Vegetation on the banks consists of buttonbush, Carolina willow, wax myrtle, Florida pellitory, cattail, smartweed, dog fennel, and West Indian marsh grass. SW 7R is located on the south side of SR 70, 1600 feet east of Lindrick Lane, and comprises 0.34 acres of the project study area.

### **Surface Water 8L**

**FLUCFCS: 510**

**USFWS: PSS1Ex**

**Streams and Waterways**

**(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)**

Surface Water 8L (SW 8L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads within the SR 70 right-of-way that is comprised predominantly (70 percent coverage) of dead vegetation, potentially due to right-of-way maintenance. Remaining vegetation is comprised of wax myrtle, Carolina willow, Peruvian primrose-willow, buttonbush, cattail, smartweed, beggarticks (*Bidens alba*), lanceleaf arrowhead, rushes, and umbrella sedge. SW 8L is located on the north side of SR 70, directly adjacent to CR 675, and comprises 0.42 acres of the project study area.

### **Surface Water 8R**

**FLUCFCS: 510**

**USFWS: PUB3H**

**Streams and Waterways**

**(Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)**

Surface Water 8R (SW 8R) is an unnamed creek system with vegetation solely along the banks consisting of American beautyberry (*Callicarpa americana*), water oak, saw palmetto, poison ivy, and grapevine. This system is surrounded by hardwood-conifer mixed uplands and SR 70. SW 8R is located on the south side of SR 70, approximately 1100 feet west of CR 675, and comprises 0.03 acres of the project study area.

### **Surface Water 9L**

**FLUCFCS: 510**

**USFWS: PEM1Ex**

**Streams and Waterways**

**(Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)**

Surface Water 9L (SW 9L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads. Vegetation within the ditch is comprised of rushes, carpetgrass (*Axonopus* sp.), pink sundew (*Drosera capillaris*), yellow-eyed grass, meadowbeauty (*Rhexia* sp.), and yellow colicroot (*Aletris lutea*). SW 9L is located on the north side of SR 70, at CR 675, and comprises 0.04 acres of the project study area.

### **Surface Water 10L**

**FLUCFCS: 510**

**USFWS: PSS1Ex**

**Streams and Waterways**

**(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)**

Surface Water 10L (SW 10L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads. Vegetation within this ditch is comprised of Carolina willow, Peruvian primrose-willow, smartweed, dog fennel, broomsedge, coinwort, and maidencane. SW 10L is surrounded by residential and SR 70. SW 10L is located on the north side of SR 70, at CR675, and comprises 0.02 acres of the project study area.

### **Surface Water 11L**

**FLUCFCS: 510**

**USFWS: PSS1Ex**

**Streams and Waterways**

**(Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)**

Surface Water 11L (SW 11L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads and includes Carolina willow, saltbush, Peruvian primrose-willow, red maple, wax myrtle, buttonbush, pickerelweed, water hyssops, smartweed, coinwort, cattail, and maidencane. This system is surrounded by an institutional facility, SR 70, and residential areas. SW 11L is located on the north side of SR 70, directly east of CR 675, and comprises 0.57 acres of the project study area.

**Surface Water 12L**

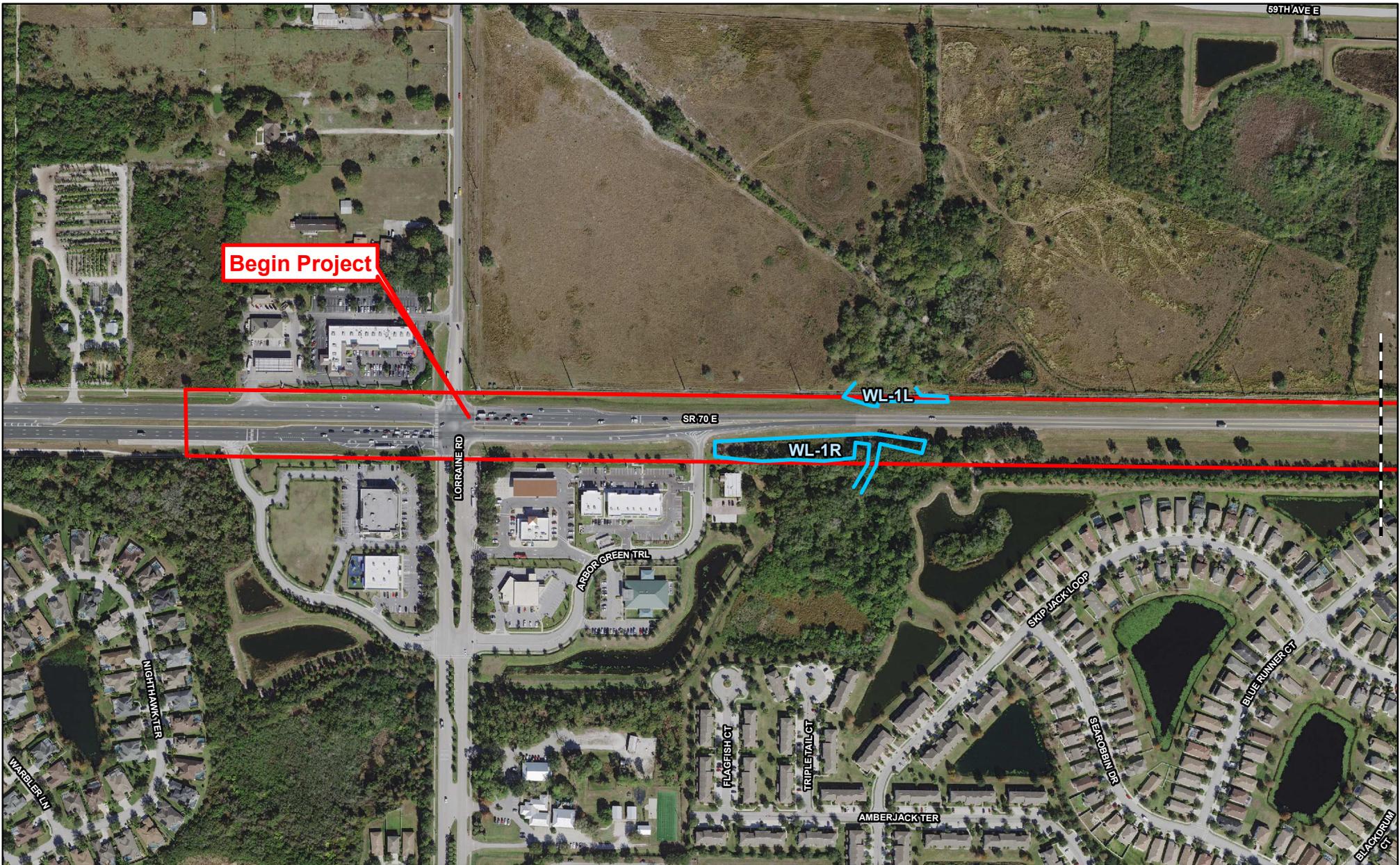
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**USFWS: PEM1Ex**

**Streams and Waterways**

**(Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)**

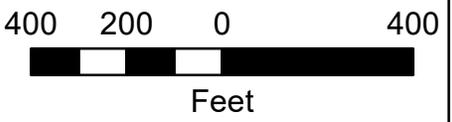
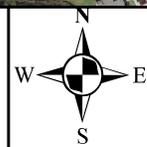
Surface Water 12L (SW 12L) is a roadside man-made ditch constructed for the purpose of collecting stormwater runoff from roads. Vegetation within this ditch is comprised of pickerelweed, smartweed, and frog's bit (*Phyla nodiflora*) with scattered buttonbush, saltbush, and Carolina willow. SW 12L is surrounded by an institutional facility and located on the north side of SR 70, approximately 1200 feet east of CR 675, and comprises 0.05 acres of the project study area.



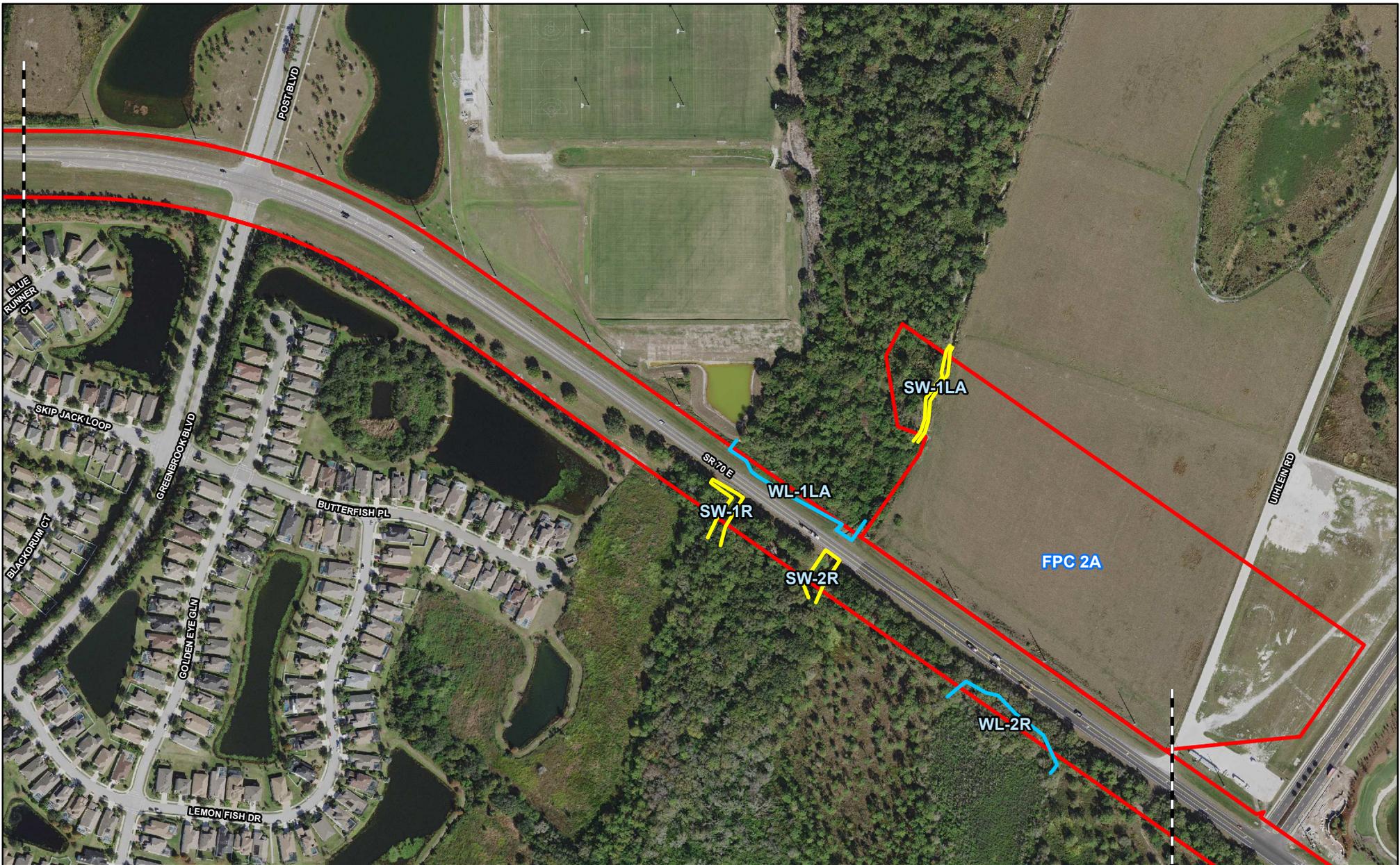
**Legend**

- Project Study Area
- Surface Water
- Wetland

**Wetlands and Surface  
 Waters Location Map**  
**SR 70 from Lorraine Road  
 to CR 675 (Waterbury Road)**  
**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**



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 Tampa, FL 33602  
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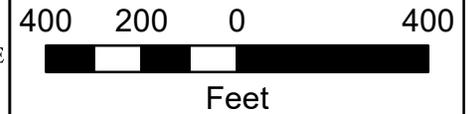
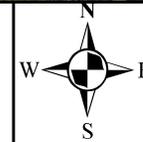


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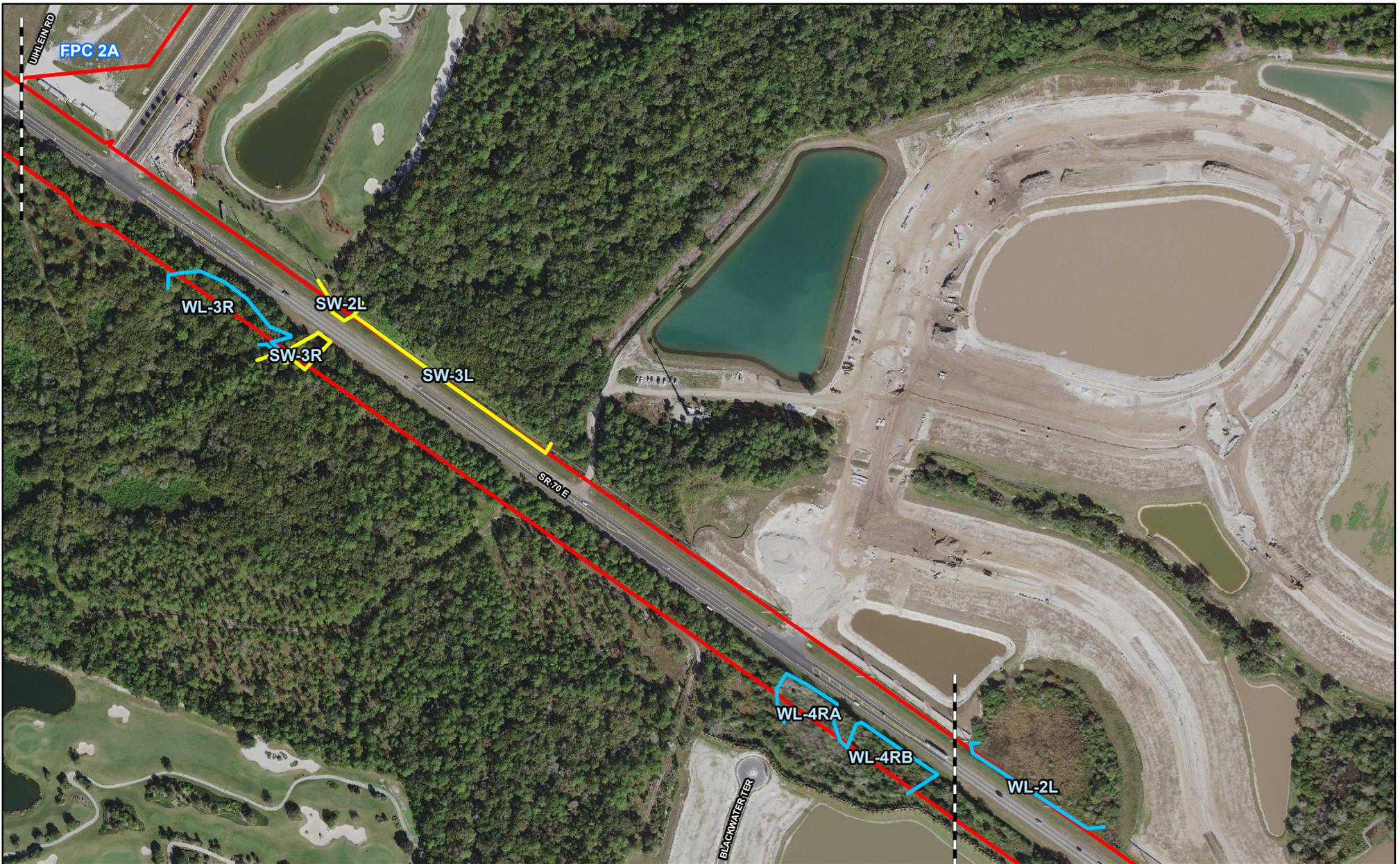
- Project Study Area
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**Wetlands and Surface  
Waters Location Map  
SR 70 from Lorraine Road  
to CR 675 (Waterbury Road)**

**Manatee County, Florida  
FPID Number: 414506-2-22-01**



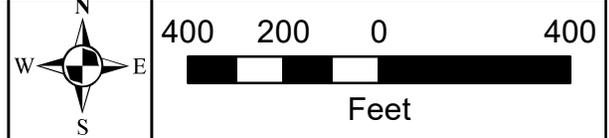
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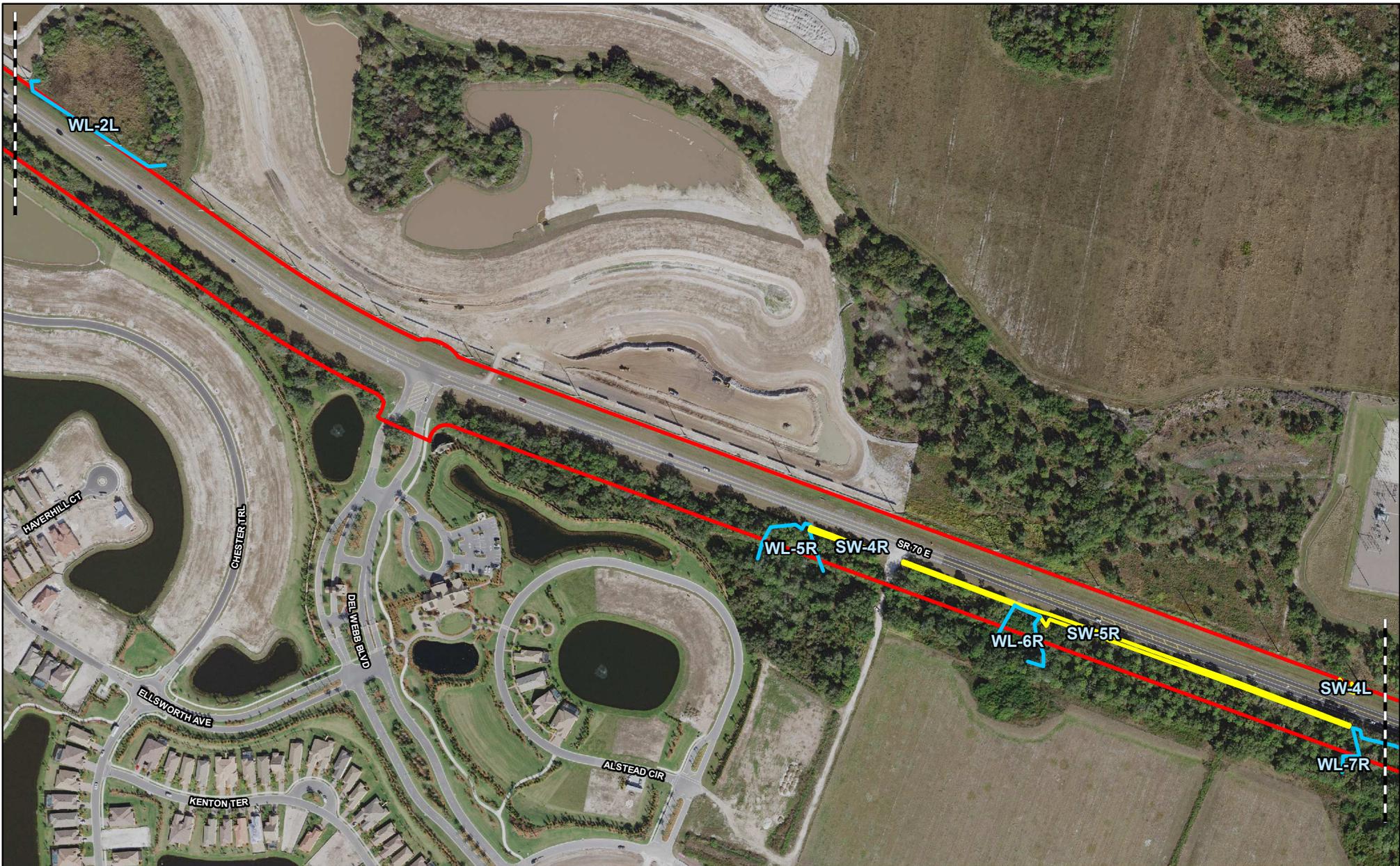
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**Wetlands and Surface  
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**SR 70 from Lorraine Road  
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Path: M:\41450623201.PM.SR70\_LorraineRoad\_To\_CR675\7\_PERMITS\_KCA\GIS\Maps\Figures\NRE\Appendix C - Wetlands Map2.mxd 4/18/2019

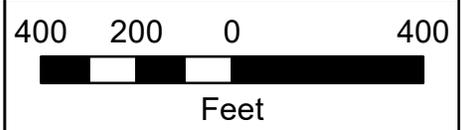
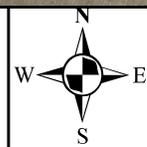


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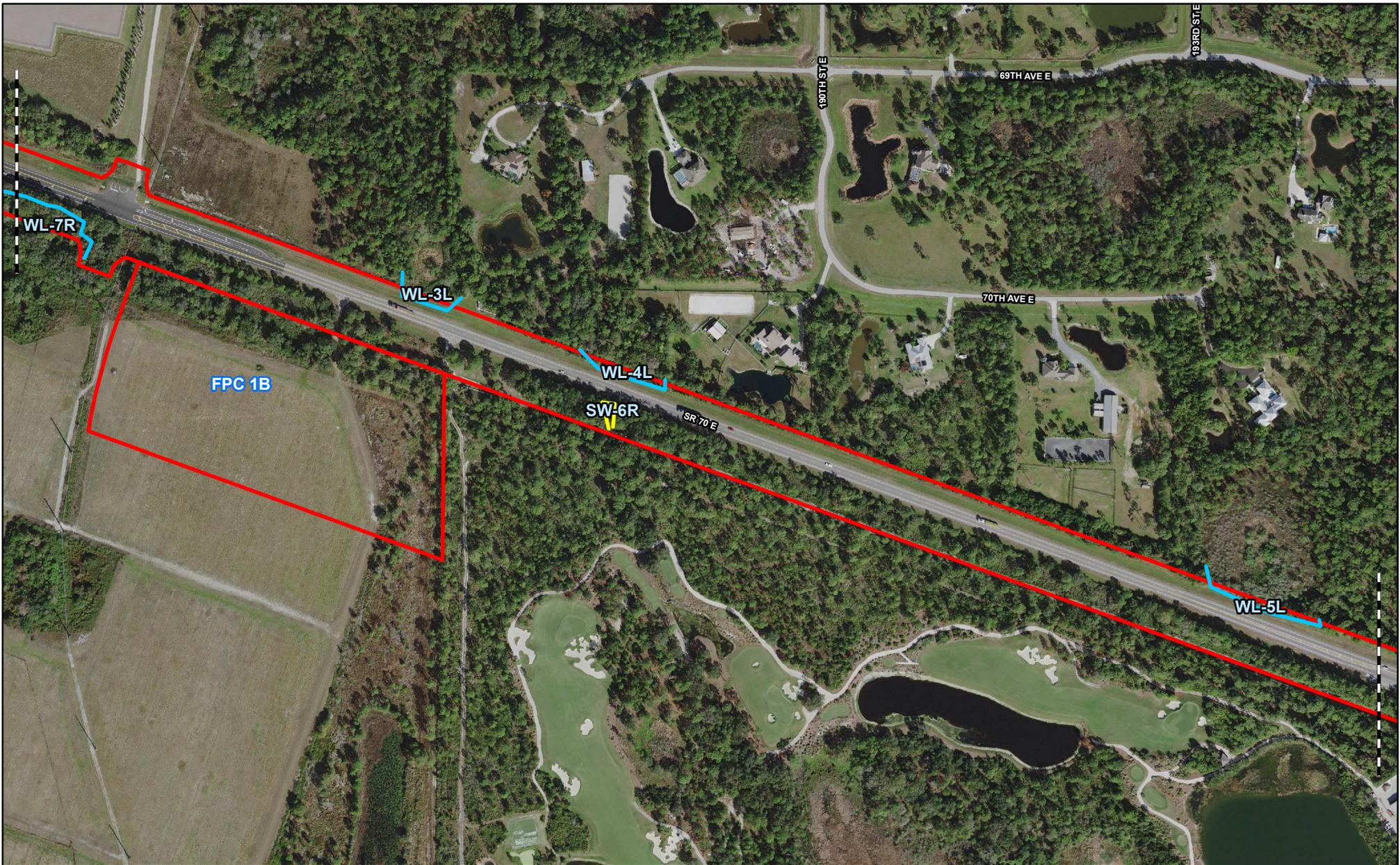
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**Wetlands and Surface  
Waters Location Map  
SR 70 from Lorraine Road  
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**Manatee County, Florida  
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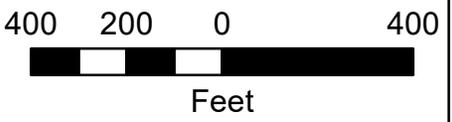


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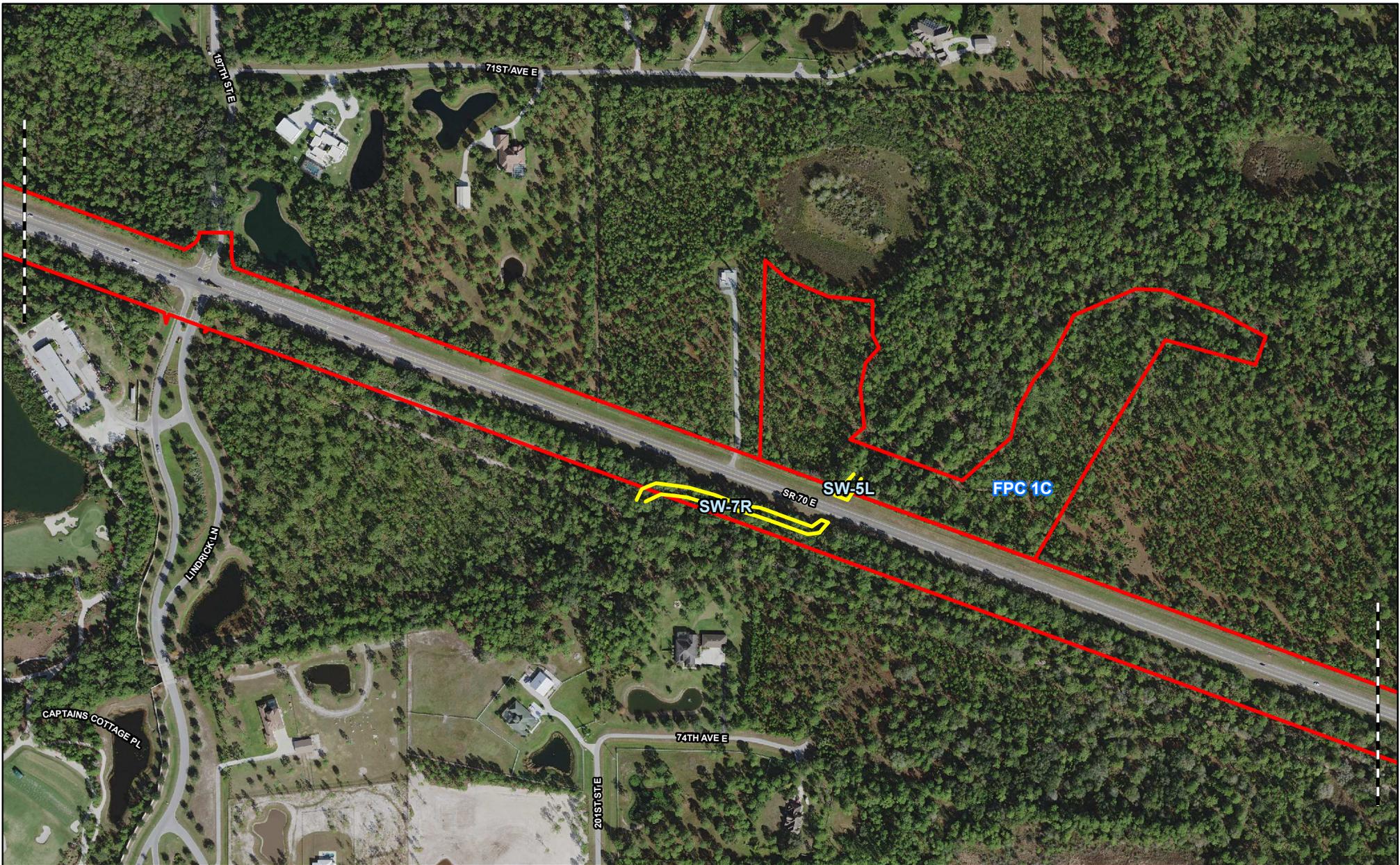
- Project Study Area
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- Wetland

**Wetlands and Surface  
Waters Location Map  
SR 70 from Lorraine Road  
to CR 675 (Waterbury Road)**

**Manatee County, Florida  
FPID Number: 414506-2-22-01**



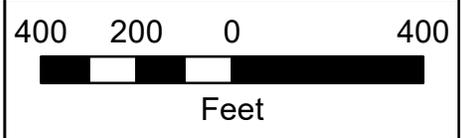
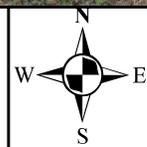
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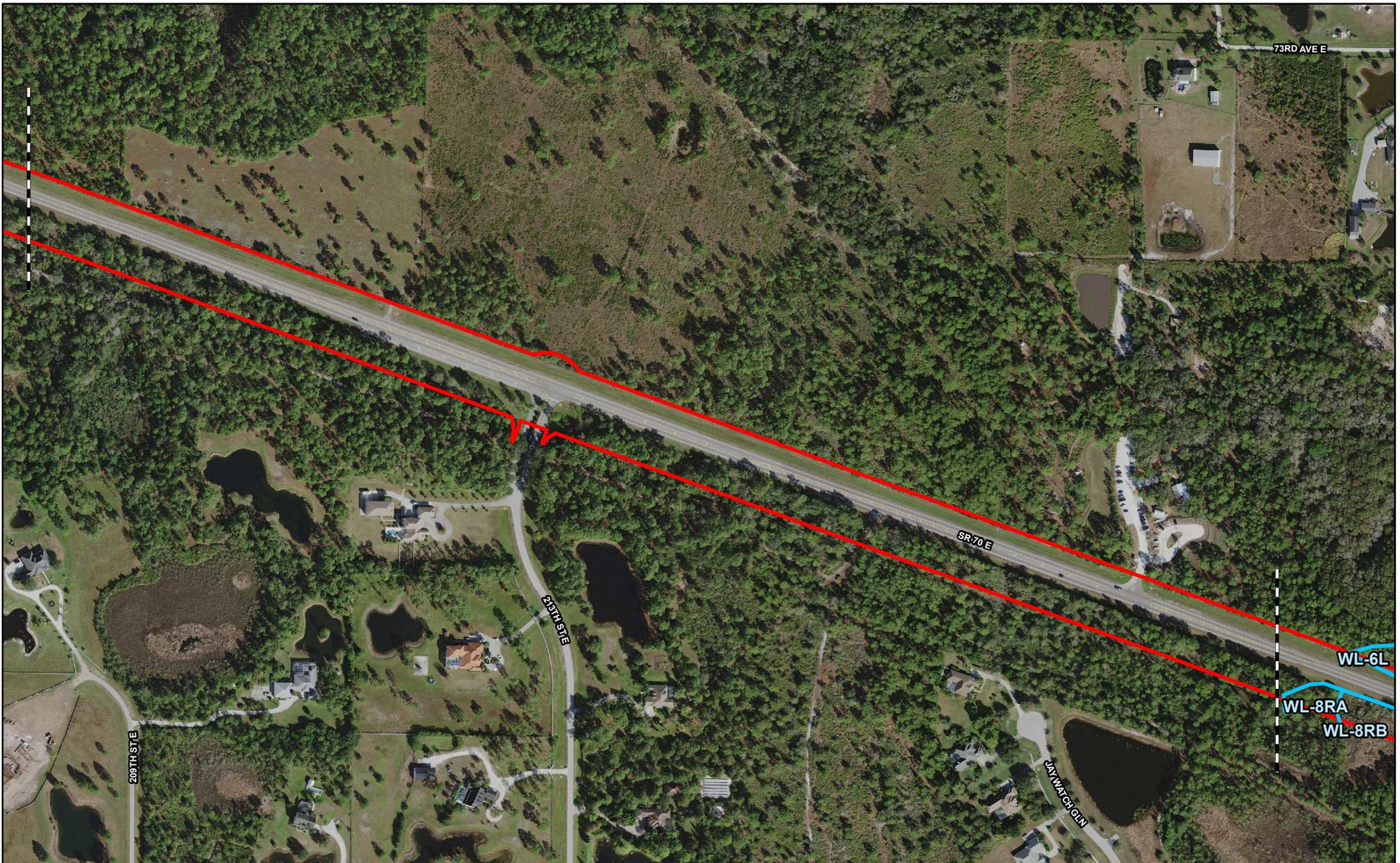
**Legend**

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**Wetlands and Surface  
 Waters Location Map**  
**SR 70 from Lorraine Road  
 to CR 675 (Waterbury Road)**  
  
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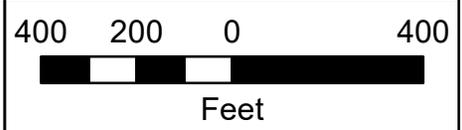


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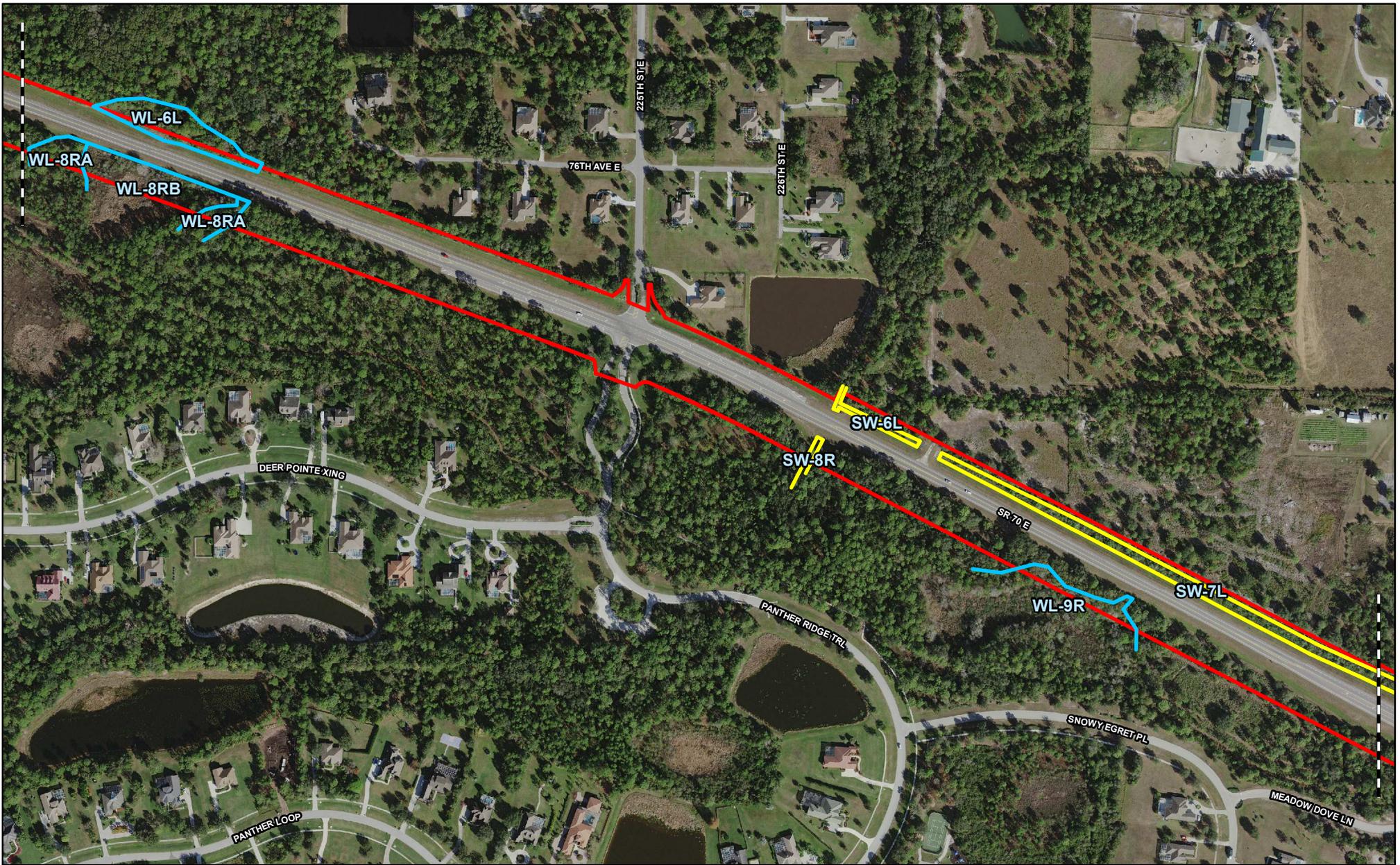
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**Wetlands and Surface  
Waters Location Map  
SR 70 from Lorraine Road  
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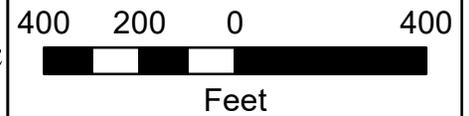
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Waters Location Map  
SR 70 from Lorraine Road  
to CR 675 (Waterbury Road)**

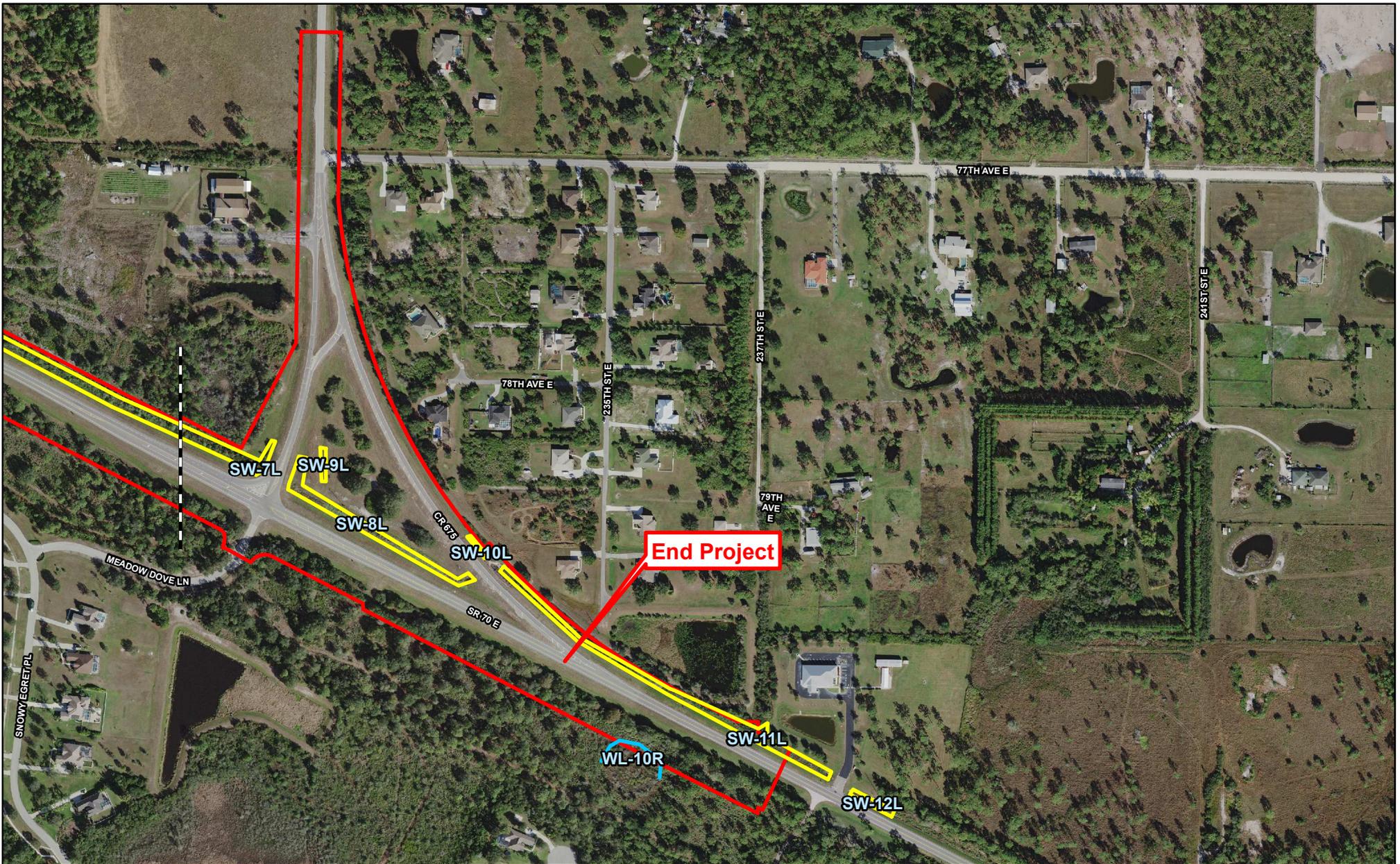
**Manatee County, Florida  
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Appendix C

Page 8 of 11



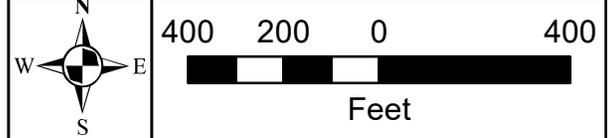
Kisinger Campo & Associates, Corp.  
201 N. Franklin Street, Suite 400  
Tampa, FL 33602  
Phone 813/871-5331  
Fax 813/871-5153



**Legend**

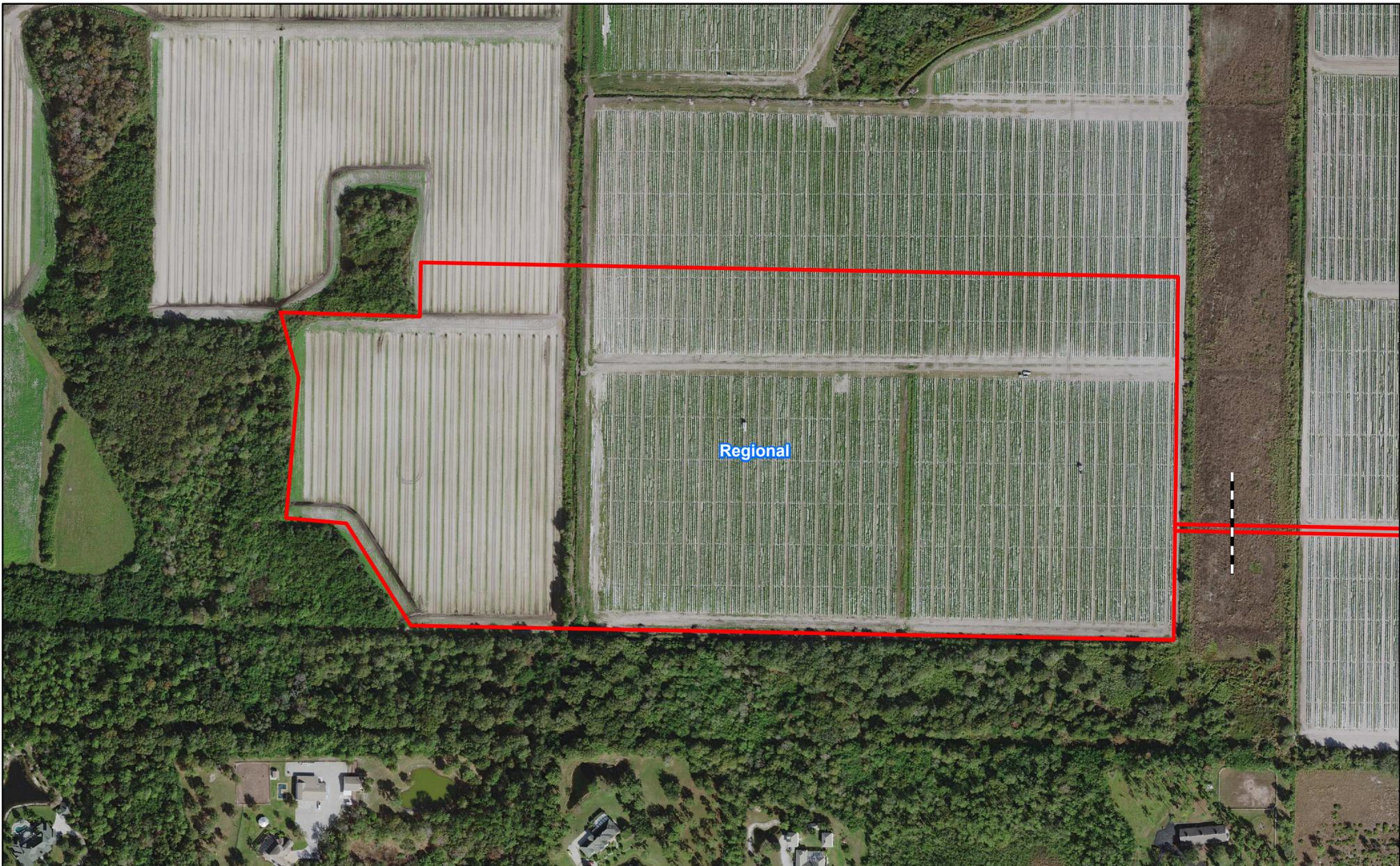
- Project Study Area
- Surface Water
- Wetland

**Wetlands and Surface Waters Location Map**  
**SR 70 from Lorraine Road to CR 675 (Waterbury Road)**  
 Manatee County, Florida  
 FPID Number: 414506-2-22-01



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Path: M:\41450623201.PM.SR70\_LorraineRoad\_To\_CR675\7\_PERMITS\_KCA\GIS\Maps\Figures\NRE\Appendix C - Wetlands Map2.mxd 4/18/2019

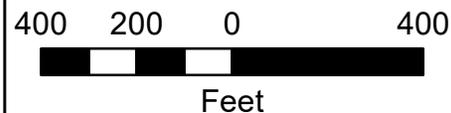


**Legend**

- Project Study Area
- Surface Water
- Wetland

**Wetlands and Surface Waters Location Map  
SR 70 from Lorraine Road to CR 675 (Waterbury Road)**

**Manatee County, Florida  
FPID Number: 414506-2-22-01**



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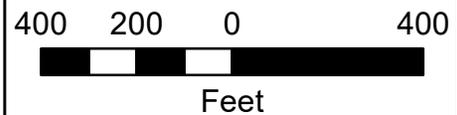
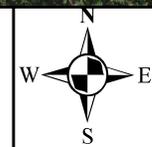


**Legend**

- Project Study Area
- Surface Water
- Wetland

**Wetlands and Surface Waters Location Map  
SR 70 from Lorraine Road to CR 675 (Waterbury Road)**

**Manatee County, Florida  
FPID Number: 414506-2-22-01**



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***APPENDIX D***

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**Individual Wetland and Surface Water Photographs**



Surface Water 1LA

FLUCFCS: 510 - Streams and Waterways

USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 1R

FLUCFCS: 510 - Streams and Waterways

USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 2L

FLUCFCS: 510 - Streams and Waterways

USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 2R

FLUCFCS: 510 - Streams and Waterways

USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 3L  
FLUCFCS: 510 - Streams and Waterways  
USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Excavated)



Surface Water 3R  
FLUCFCS: 510 - Streams and Waterways  
USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 4L

FLUCFCS: 510 - Streams and Waterways

USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)



Surface Water 4R

FLUCFCS: 510 - Streams and Waterways

USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)



Surface Water 5L

FLUCFCS: 510 - Streams and Waterways

USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)



Surface Water 5R

FLUCFCS: 510 - Streams and Waterways

USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)



Surface Water 6L  
FLUCFCS: 510 - Streams and Waterways  
USFWS: PSS1Ex (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally  
Flooded/ Saturated, Excavated)



Surface Water 6R  
FLUCFCS: 510 - Streams and Waterways  
USFWS: PSS1Ex (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally  
Flooded/ Saturated, Excavated)



Surface Water 7L

FLUCFCS: 510 - Streams and Waterways

USFWS: PSS1Ex (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)



Surface Water 7R

FLUCFCS: 510 - Streams and Waterways

USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 8L

FLUCFCS: 510 - Streams and Waterways

USFWS: PSS1Ex (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)



Surface Water 8R

FLUCFCS: 510 - Streams and Waterways

USFWS: PUB3H (Palustrine, Unconsolidated Bottom, Mud, Permanently Flooded)



Surface Water 9L  
FLUCFCS: 510 - Streams and Waterways  
USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated,  
Excavated)



Surface Water 10L  
FLUCFCS: 510 - Streams and Waterways  
USFWS: PSS1Ex (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally  
Flooded/ Saturated, Excavated)



Surface Water 11L

FLUCFCS: 510 - Streams and Waterways

USFWS: PSS1Ex (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/ Saturated, Excavated)



Surface Water 12L

FLUCFCS: 510 - Streams and Waterways

USFWS: PEM1Ex (Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated, Excavated)



Wetland 1L

FLUCFCS: 641 - Freshwater Marshes

USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)



Wetland 1LA

FLUCFCS: 615 - Stream and Lake Swamps (Bottomland)

USFWS: PUB2/3H (Palustrine, Unconsolidated Bottom, Sand/Mud, Permanently Flooded)



Wetland 1R

FLUCFCS: 641- Freshwater Marshes

USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)



Wetland 2L

FLUCFCS: 641 - Freshwater Marshes

USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)



Wetland 2R

FLUCFCS: 631 - Wetland Shrub

USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 3L

FLUCFCS: 631 - Wetland Scrub

USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 3R

FLUCFCS: 617 - Mixed Wetland Hardwoods

USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 4L

FLUCFCS: 617 - Mixed Wetland Hardwoods

USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 4R

FLUCFCS: 617 - Mixed Hardwood Wetlands

631 - Wetland Scrub

USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)

PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 5L

FLUCFCS: 631 - Wetland Scrub

USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 5R

FLUCFCS: 617 - Mixed Wetland Hardwoods

USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 6L

FLUCFCS: 631 - Wetland Scrub

USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 6R

FLUCFCS: 631 - Wetland Scrub

USFWS: PSS1C (Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 7R

FLUCFCS: 617 - Mixed Wetland Hardwoods

USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 8R

FLUCFCS: 625 - Hydric Pine Flatwoods

641 - Freshwater Marshes

USFWS: PFO4C (Palustrine, Forested, Needle-Leaved Evergreen, Seasonally Flooded)

PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)



Wetland 9R

FLUCFCS: 617 - Mixed Wetland Hardwoods

USFWS: PFO1C (Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded)



Wetland 10R

FLUCFCS: 641 - Freshwater Marshes

USFWS: PEM1C (Palustrine, Emergent, Persistent, Seasonally Flooded)

***APPENDIX E***

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**Uniform Mitigation Assessment Methodology Forms**

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 1L	
FLUCCs code 641	Further classification (optional) Freshwater marsh		Impact or Mitigation Site? Impact	Assessment Area Size 0.094
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Emergent (PEM1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Hydrologically connected under SR 70 via a concrete box culvert to WL 1R to the south. There is a bottomland swamp immediately north adjacent to WL 1L. Uplands consists of a forest adjacent to the north and pastureland. To the east via a ditch there is a connection to a small retention pond. WL 1L has a connection to Wolf Slough River to the west.				
Assessment area description Wetland 1L (WL 1L) is a freshwater marsh bordered by SR 70 to the south, a bottomland swamp adjacent to the north, and open lands surrounding the immediate area. There is a culvert at the southern boundary that leads under SR 70.				
Significant nearby features SR 70 to the south, commercial and residential development in the surrounding area.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, water storage, flow attenuation, and water quality improvement.		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 1L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <table border="1"> <tr> <td>6</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	6	with		0	AA is surrounded by urban open land and SR70. Wildlife access partially limited by barriers (SR70, residential development).
6	with				
	0				
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <table border="1"> <tr> <td>6</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	6	with		0	Water quality is adversely affected by runoff received from SR 70 and pasturelands. Man-made ditch and retention pond dug within wetlands outside of AA. Hydrology connected under SR 70 through a concrete box culvert to another wetland (WL 1R) to the south.
6	with				
	0				
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>6</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	6	with		0	This system is comprised of soft rush, cattail, cinnamon fern, broomsedge, poison ivy, umbrella sedge, and rosy camphorweed with scattered elderberry, Carolina willow, saltbush, Peruvian primrose-willow, wax myrtle, and Mexican primrose-willow. Nuisance and/or exotic species coverage appx. 30%. Early successional species dominate shrub stratum.
6	with				
	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.600	0

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

For impact assessment areas
FL = delta x acres = 0.056

Delta = [with-current]
0.600

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 1LA	
FLUCCs code 615	Further classification (optional) Stream/River		Impact or Mitigation Site? Impact	Assessment Area Size 0.182
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB2/3H)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Surface Water 1L (SW 1L) includes two tributaries to the Braden River that are hydrologically connected on the north side of SR 70 and branch apart under SR 70 to connect to SW 1R and SW 2R through concrete box culverts.				
Assessment area description SW 1L contains open water and vegetated components and is surrounded by hardwood-conifer mixed uplands, bottomland swamp, and SR 70.				
Significant nearby features SR70 and the Braden River.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 1LA
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <table border="1"> <tr> <td>7</td> <td>with</td> <td>0</td> </tr> </table>	7	with	0	AA is surrounded by hardwood conifer mixed uplands, pastureland, and SR70. Wildlife access partially limited by distance and barriers (SR70).
7	with	0		
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <table border="1"> <tr> <td>6</td> <td>with</td> <td>0</td> </tr> </table>	6	with	0	Water quality is adversely affected by runoff received from SR70. Hydrologically connected under SR70 through a concrete box culvert to another surface water (SW1) to the south. Hydrology potentially altered outside of AA by land-uses (pasturelands/excavated ditches).
6	with	0		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>5</td> <td>with</td> <td>0</td> </tr> </table>	5	with	0	25 to 50% nuisance/exotic species coverage. Portions of vegetation disturbed by right-of-way maintenance. Open water and vegetated components. Existing vegetation is comprised of Brazilian pepper, Peruvian primrose-willow, saltbush, Carolina willow, elderberry, paragrass, maidencane, pale duckweed, caesarweed, smartweed, cinnamon fern, spreading dayflower, cattail, and bigpod sesbania.
5	with	0		

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.6	0

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

For impact assessment areas
FL = delta x acres = 0.109

Delta = [with-current]
0.06

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 1R
FLUCCs code 641	Further classification (optional) Freshwater marsh	Impact or Mitigation Site? Impact	Assessment Area Size 0.822
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Emergent (PEM1C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands WL 1R is hydrologically connected to wetland WL 1L to the north via a culvert. Uplands immediately adjacent to WL 1R include a hardwood forest to the south, open land to the east. Significant surface waters adjacent to WL 1R include a few retention ponds to the south and a roadside swale to the north. WL 1R may have a distant connection with Wolf Slough River to the west.			
Assessment area description Wetland 1R (WL 1R) is a freshwater marsh with low lying herbaceous vegetation inter-mingled with shrubs. There is a culvert from WL 1R that runs north under SR 70. This culvert spills out into a canal that runs south through the wetland. Immediately north is a swale that drains the area with upland hardwoods and SR 70 shedding water into the area.			
Significant nearby features SR70 is located just north of WL 1R, and there is a residential community just south of the wetland.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape	
Functions Provides wildlife habitat, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), and roseate spoonbill (ST).	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, Northern cardinal, raccoon.			
Additional relevant factors:			
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017	

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 1R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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  w/o pres or current <b>6</b> with <b>0</b>	Bounded by SR 70 and associated roadways, residential areas, open land, mixed hardwoods and retention ponds. Wildlife access is limited throughout some portions due to barriers (roadways, residential) and adjacent land uses (urban development). Minimal habitat availability outside of AA.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <b>6</b> with <b>0</b>	Water quality is adversely affected by runoff received from SR70 and associated roadways. AA hydrology is potentially altered by adjacent land uses (retention ponds, roadside swales), reducing the duration and amplitude of water storage within this area, and is connected to another wetland system through a culvert under SR 70.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <b>5</b> with <b>0</b>	This system is comprised of red ludwigia, smartweed, water sprite, pennywort, cinnamon fern, pickerelweed, spreading dayflower, limpgrass, and Florida pellitory ( with a shrub component of Peruvian primrose-willow, Brazilian pepper, and Carolina willow. Nuisance/exotic species (Brazilian pepper, Peruvian primrose willow limpgrass) coverage approximately 50%.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <b>0.567</b> with <b>0</b>

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

For impact assessment areas FL = delta x acres = 0.466
---

Delta = [with-current] <b>0.567</b>
--

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number WL 2L	
FLUCCs code 641		Further classification (optional) Freshwater marsh		Impact or Mitigation Site? Impact	
Assessment Area Size 0.014					
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914		Affected Waterbody (Class) Class I		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Emergent (PEM1C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 2L (WL 2L) is hydrologically connected to a retention pond to its west. The upland area north and west adjacent has been graded and contains residential homes. A swale runs along its southern boundary.					
Assessment area description WL 2L is an herbaceous marsh with minimal shrubs.					
Significant nearby features SR 70 to the south and the Braden River to the north and east.			Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), and roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 2L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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  w/o pres or current 5	with 0	AA is entirely bounded by active construction (residential) and SR70. Minimal habitat availability outside of AA.	
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 6	with 0		Water quality is adversely affected by runoff received from SR70. Water levels appear appropriate for TOS.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 7	with 0		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres 0.600	with 0

If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = 0.008
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Delta = [with-current] 0.600
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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0.00426

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 2R	
FLUCCs code 631	Further classification (optional) Wetland scrub		Impact or Mitigation Site? Impact	Assessment Area Size 0.232
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Schrub Srcub (PSS1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  WL 2R is extends outside the assessment area and may have a hydrological connection to the Braden river.				
Assessment area description  Wetland 2R (WL 2R) is a wetland scrub community bordered by pine flatwoods and SR 70 to the north.				
Significant nearby features  SR70 to the north and the Braden River to the south.		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; Bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  Brown anole, songbirds				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 2R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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

<b>.500(6)(a) Location and Landscape Support</b>  w/o pres or current <table border="1"> <tr> <td>7</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	7	with		0	AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70). Area land uses have minimal adverse impacts to wildlife and function of AA. Minimal nuisance/exotic coverage.
7	with				
	0				
<b>.500(6)(b)Water Environment (n/a for uplands)</b>  w/o pres or current <table border="1"> <tr> <td>7</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	7	with		0	Water quality is adversely affected by runoff received from SR70. Appropriate vegetation community zonation. No signs of hydrologic stress on vegetation.
7	with				
	0				
<b>.500(6)(c)Community structure</b>  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>7</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	7	with		0	This system is comprised of buttonbush, Carolina willow, saw palmetto, Brazilian pepper, and St. John's wort with scattered red maple and laurel oak, royal fern, swamp fern, cinnamon fern, smartweed, spreading dayflower, sawgrass, and red maple saplings. Majority of plant species in all strata of AA are appropriate and desirable. Plant condition appears generally good and regeneration and recruitment near-normal. Nuisance/exotic coverage less than 10%.
7	with				
	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.700	0

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

For impact assessment areas
FL = delta x acres = 0.162

Delta = [with-current]
0.700

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 3L	
FLUCCs code 631	Further classification (optional) Wetland scrub		Impact or Mitigation Site? Impact	Assessment Area Size 0.075
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Shrub Scrub (PSS1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetland 3L (WL3L) is hydrologically connected to another wetland just north. WL3L is surrounded by pine flatwoods and SR 70 to the south.				
Assessment area description  WL 3L is a shrub wetland.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; Bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  Green anole				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 3L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70, residential).
6	0		
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Water quality is adversely affected by runoff received from SR70. AA hydrology is potentially altered by adjacent land uses (retention ponds, roadside swales), reducing the duration and amplitude of water storage within this area, and there appears to have been a conveyance system/ditch cut through the wetland.
5	0		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Comprised of laurel oak, Carolina willow, wax myrtle, Brazilian pepper, and Peruvian primrose-willow. Groundcover consists of creeping oxeye, cattail, climbing hempvine, torpedograss, broomsedge, maidencane, rosy camphorweed, and blue maidencane. Nuisance/exotic species cover approximately 10-25%, concentrated along the road edge.
5	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.533      0

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

For impact assessment areas
FL = delta x acres = 0.040

Delta = [with-current]
0.533

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number WL 3R	
FLUCCs code 617		Further classification (optional) Mixed wetland hardwoods		Impact or Mitigation Site? Impact	
Assessment Area Size 0.404		Basin/Watershed Name/Number Manasota/Manatee River Watershed		Affected Waterbody (Class) Class III	
				Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO1C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 3R (WL 3R) has connectivity to bottomland swamp to the south which may have hydrological connectivity with the Braden River. Adajacent uplands include pine flatwoods and and hardwood conifer mixed forests.					
Assessment area description WL 3R is a mixed wetlands hardwood community located on the south side of SR 70, east of Uhlein Road, and surrounded by hardwood-conifer mixed uplands and bottomland swamp.					
Significant nearby features SR70 to the north and the Braden River to the south.			Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Northern cardinal, barred owl, pileated woodpecker, red-bellied woodpecker, Carolina wren, brown anole, Northern parula					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 3R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <input type="checkbox"/> 7 <input type="checkbox"/> with	AA is surrounded by hardwood conifer mixed uplands, bottomland swamp, and SR70. Wildlife access partially limited by barriers (SR70). Area land uses have minimal adverse impacts to wildlife and function of AA. Minimal nuisance/exotic coverage.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <input type="checkbox"/> 6 <input type="checkbox"/> with 0	Water quality is adversely affected by runoff received from SR70. No signs of hydrologic stress on vegetation. Portions within AA appear excavated with standing water.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <input type="checkbox"/> 7 <input type="checkbox"/> with 0	This system is comprised of a predominately laurel oak canopy with dahoon holly, slash pine, and Brazilian pepper. This wetland includes a shrub component of buttonbush, Carolina willow, wax myrtle, saw palmetto, laurel oak, and Brazilian pepper along with an herbaceous component of cinnamon fern, spreading dayflower, and pennywort. Majority of plant species in all strata of AA are appropriate and desirable. Plant condition appears generally good and regeneration and recruitment near-normal. Nuisance/exotic coverage less than 10%.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.667 <input type="checkbox"/> with 0

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

For impact assessment areas
FL = delta x acres = 0.269

Delta = [with-current]
0.667

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 4L	
FLUCCs code 617	Further classification (optional) Mixed wetland hardwoods		Impact or Mitigation Site? Impact	Assessment Area Size 0.123
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetland 4L (WL4L) is hydrologically connected to SW6R via culvert under SR 70. WL4L is surrounded by pine flatwoods and SR 70.				
Assessment area description  WL 4L is a mixed wetland hardwood system.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  wood stork (FT), little blue heron (ST), tricolored heron (ST), reddish egret (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; Bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  Northern parula, wood stork flyover				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 4L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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  w/o pres or current	AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70, residential).		
	6	with	0
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current	Water quality is adversely affected by runoff received from SR70. AA hydrology is potentially altered by adjacent land uses (retention ponds, roadside swales), reducing the duration and amplitude of water storage within this area, and is connected to a linear surface water system through a culvert under SR 70.		
	5	with	0
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current	Contains a laurel oak, Brazilian pepper, slash pine, and Carolina willow canopy with a laurel oak, Brazilian pepper, Carolina willow, swamp bay, Peruvian primrose-willow, and wax myrtle understory. Herbaceous vegetation includes poison ivy, Virginia creeper, saw green-brier, caesarweed, cinnamon fern, and West Indian marsh grass. Nuisance/exotic species cover 10-25% of each stratum.		
	5	with	0

Score = sum of above scores/30 (if uplands, divide by 20)	
current	with
or w/o pres	
0.533	0

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

For impact assessment areas
FL = delta x acres = 0.065

Delta = [with-current]
0.533

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 4Ra
FLUCCs code 617	Further classification (optional) Mixed wetland hardwoods	Impact or Mitigation Site? Impact	Assessment Area Size 0.5
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO1C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 4Ra (WL 4Ra) is an isolated wetland, combined with 4Rb, that is bordered by upland pine flatwoods to the east and shrub and brushland west adjacent. A retention pond to the southwest may have a hydrological connection to WL 4Ra.			
Assessment area description WL 4Ra is a wetland system with forested components located on the south side of SR 70. There is residential development to the south that borders WL 4Ra and a retention pond to the southwest.			
Significant nearby features SR70 directly to the north and the Braden River to the west and north.	Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement	Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None			
Additional relevant factors:			
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017	

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 4Ra
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b>
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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current                      with</p> <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	<p>Almost entirely bounded by barriers to wildlife movement (SR70 to north, development with sound barrier wall to the south). WL 4R is surrounded by pine flatwoods, SR 70, shrub and brushland, and residential development. Minimal habitat availability outside of AA.</p>
5	0		
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current                      with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>No standing water present at time of assessment. Water quality is adversely affected by runoff received from SR70. Recruitment of early successional species and non-distinct water level indicators.</p>
6	0		
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current                      with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>This system is comprised of red maple, laurel oak, and slash pine with a shrub stratum of St. John's wort, red maple, wax myrtle, Carolina willow, saltbush, and saw palmetto with a similar herbaceous strata as the scrub community. Majority of plant cover is by desirable plant species. Land management (residential area construction) has resulted in an elevated berm and sound barrier wall immediately south of the wetland outside of the AA.</p>
6	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres                      with
0.570                      0

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

For impact assessment areas
FL = delta x acres = 0.27

Delta = [with-current]
0.570

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 4Rb
FLUCCs code 631	Further classification (optional) Wetland scrub	Impact or Mitigation Site? Impact	Assessment Area Size 0.348
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) Palustrine Scrub Shrub (PSS1C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 4Rb (WL 4Rb) is an isolated wetland, combined with 4Ra, that is bordered by upland pine flatwoods to the east and shrub and brushland west adjacent. A retention pond to the southwest may have a hydrological connection to WL 4Rb.			
Assessment area description WL 4Rb is a wetland system with scrub components located on the south side of SR 70. There is residential development to the south that borders WL 4Ra and a retention pond to the southwest.			
Significant nearby features SR70 directly to the north and the Braden River to the west and north.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape	
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None			
Additional relevant factors:			
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017	

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 4Rb
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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<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  w/o pres or current 5                      with 0	Almost entirely bounded by barriers to wildlife movement (SR70 to north, development with sound barrier wall to the south). WL 4R is surrounded by pine flatwoods, SR 70, shrub and brushland, and residential development. Minimal habitat availability outside of AA.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 6                      with 0	No standing water present at time of assessment. Water quality is adversely affected by runoff received from SR70. Recruitment of early successional species and non-distinct water level indicators.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 6                      with 0	This system is comprised of coinwort ( <i>Centella asiatica</i> ), knotroot foxtail ( <i>Setaria parviflora</i> ), soft rushes, dog fennel, yellow-eyed grass ( <i>Xyris</i> spp.), rosy camphorweed, Carolina redroot ( <i>Lachnanthes caroliniana</i> ), and red maple saplings with St. John's wort, wax myrtle, saltbush, and scattered red maple, tupelo ( <i>Nyssa sylvatica</i> ), and slash pine. Majority of plant cover is by desirable plant species. Land management (residential area construction) has resulted in an elevated berm and sound barrier wall immediately south of the wetland outside of the AA.

Score = sum of above scores/30 (if uplands, divide by 20) current or w/o pres 0.570                      with 0
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = 0.20
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Delta = [with-current] 0.570
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Section 62-345.400, F.A.C.)**

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 5L	
FLUCCs code 631	Further classification (optional) Wetland scrub		Impact or Mitigation Site? Impact	Assessment Area Size 0.149
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Shrub Scrub (PSS1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 5L (WL5L) is surrounded by pine flatwoods and SR 70.				
Assessment area description WL 5L is a shrub wetland.				
Significant nearby features SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 5L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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<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

<p>.500(6)(a) Location and Landscape Support</p> <p>AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70, residential). Invasive species coverage is moderate/moderate adverse effects on function. Habitat availability outside of AA is fair to moderate.</p>	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	6	0
w/o pres or current	with				
6	0				
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Water quality is adversely affected by runoff received from SR70. Water levels and flow appear appropriate for TOS.</p>	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	6	0
w/o pres or current	with				
6	0				
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>Wetland comprised of laurel oak, Carolina willow, buttonbush, Peruvian primrose-willow, wax myrtle, and St. John's wort with soft rush, cinnamon fern, savanna iris, rosy camphorweed, broomsedge, and yellow-eyed grass. Nuisance/exotic species coverage is approximately 10-25% of each stratum (herbaceous and shrub). Natural recruitment of desirable species observed.</p>	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	6	0
w/o pres or current	with				
6	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.600	0

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

For impact assessment areas
FL = delta x acres = 0.089

Delta = [with-current]
0.600

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 5R	
FLUCCs code 617	Further classification (optional) Mixed wetland hardwoods		Impact or Mitigation Site? Impact	Assessment Area Size 0.226
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Uplands include pine flatowods that abut Wetland 5R (WL 5R) and SR 70 to the north.				
Assessment area description WL5R is a mixed wetland hardwood system surrounded by pine flatwoods.				
Significant nearby features SR70.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Yellow-throated vireo				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 5R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b>
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	Almost entirely bounded by barriers to wildlife movement (SR70 to north, agriculture to the south). Minimal habitat availability outside of AA.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>		w/o pres or current	with	5
w/o pres or current	with			
5	0			
.500(6)(b)Water Environment (n/a for uplands)	No standing water present at time of assessment. Water quality is adversely affected by runoff received from SR70, agricultural fields, abutting ditch, and associated roadways.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>		w/o pres or current	with	5
w/o pres or current	with			
5	0			
.500(6)(c)Community structure	This system includes a red maple, slash pine, laurel oak, and sweet bay canopy with a saltbush, Carolina willow, wax myrtle, Peruvian primrose-willow, and Brazilian pepper understory. The groundcover stratum in this system consists predominately of cinnamon fern, swamp fern, poison ivy, smartweed, muscadine grapevine, and red maple saplings. Nuisance/exotic coverage less than 10%.			
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>6</td> <td>0</td> </tr> </table>		w/o pres or current	with	6
w/o pres or current	with			
6	0			

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.533	0

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

For impact assessment areas
FL = delta x acres = 0.120

Delta = [with-current]
0.533

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 6L	
FLUCCs code 631	Further classification (optional) Wetland scrub		Impact or Mitigation Site? Impact	Assessment Area Size 0.214
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Shrub Scrub (PSS1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 6L (WL 6L) is surrounded by hardwood-conifer mixed uplands and SR 70.				
Assessment area description WL6L is a shrub wetland.				
Significant nearby features SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 6L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <table border="1"> <tr> <td>6</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	6	with		0	AA is surrounded by hardwood conifer mixed uplands and SR70. Wildlife access partially limited by barriers (SR70, residential). Invasive species coverage is moderate/moderate adverse effects on function. Habitat availability outside of AA is moderate to optimal.
6	with				
	0				
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <table border="1"> <tr> <td>5</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	5	with		0	Water quality is adversely affected by runoff received from SR70. Water levels appear lower than expected and water level indicators non-distinct.
5	with				
	0				
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>5</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	5	with		0	This wetland consists of wax myrtle, Carolina willow, sweet bay, buttonbush, saltbush, and Peruvian primrose-willow with scattered laurel oak and slash pine. Herbaceous vegetation includes sawgrass, savanna iris, smartweed, pennywort, soft rush, and paragrass. Nuisance/exotic species coverage is approximately 25% of each stratum (herbaceous and shrub).
5	with				
	0				

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres
0.533
with
0

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

For impact assessment areas
FL = delta x acres = 0.114

Delta = [with-current]
0.533

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 6R	
FLUCCs code 631	Further classification (optional) Wetland scrub		Impact or Mitigation Site? Impact	Assessment Area Size 0.147
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Shrub Scrub (PSS1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Wetland 6R (WL 6R) is surrounded by pine flatwoods to the west, palmetto prairie to the west, open pasture to its south, and SR 70 to the north. There is a ditch that abuts SW6R.				
Assessment area description WL6R is a wetland scrub community dominated by Brazilian pepper.				
Significant nearby features SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 6R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <input type="checkbox"/> 5      with <input type="checkbox"/> 0	Almost entirely bounded by barriers to wildlife movement (SR70 to north, agriculture to the south). Minimal habitat availability outside of AA.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <input type="checkbox"/> 5      with <input type="checkbox"/> 0	Water quality is adversely affected by runoff received from SR70, agricultural fields, abutting ditch, and associated roadways. Portions of AA appear disturbed and excavated due to land-use to the south.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <input type="checkbox"/> 4      with <input type="checkbox"/> 0	This wetland scrub community is dominated by Brazilian pepper, with Carolina willow, laurel oak, swamp fern, cinnamon fern, Peruvian primrose-willow, smartweed, and spreading dayflower. Nuisance/exotic species cover the majority of the system.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.467      with <input type="checkbox"/> 0

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

For impact assessment areas
FL = delta x acres = 0.069

Delta = [with-current]
0.467

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 7R	
FLUCCs code 617	Further classification (optional) Mixed Wetland Hardwoods		Impact or Mitigation Site? Impact	Assessment Area Size 0.496
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetland 7R (WL 7R) is surrounded by palmetto prairie, open pasture, and SR 70.				
Assessment area description  WL7R is a mixed hardwoods wetland system.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  Hogs				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 7R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current: 5      with: 0	Almost entirely bounded by barriers to wildlife movement (SR70 to north, agriculture to the south). Minimal habitat availability outside of AA.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current: 5      with: 0	No standing water present at time of assessment. Water quality is adversely affected by runoff received from SR70. [add more]
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current: 6      with: 0	This wetland includes a predominantly laurel oak and red maple canopy with scattered sweet bay and live oak. Shrub and groundcover components consist of laurel oak, Brazilian pepper, buttonbush, sweetbay, wax myrtle, saw palmetto, cinnamon fern, royal fern, poison ivy, caesarweed, and swamp fern. Nuisance/exotic coverage less than 10%.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres: 0.533      with: 0

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

For impact assessment areas
FL = delta x acres = 0.265

Delta = [with-current]
0.533

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number WL 8Ra	
FLUCCs code 625		Further classification (optional) Hydic Pine Flatwoods		Impact or Mitigation Site? Impact	
Assessment Area Size 0.38					
Basin/Watershed Name/Number Manasota/Manatee River Watershed		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO4C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetland 8Ra (WL 8Ra) and WL 8Rb are surrounded by pine flatwoods and SR 70.					
Assessment area description  Wetland 8Ra (WL 8Ra) is an herbaceous marsh.					
Significant nearby features  SR70			Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 8Ra
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b>
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

<p>.500(6)(a) Location and Landscape Support</p> <p>AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70, residential). Invasive species coverage is minimal/minimal adverse effects on function. Habitat availability outside of AA is moderate to optimal.</p>	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	7	0
w/o pres or current	with				
7	0				
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>Water quality is adversely affected by runoff received from SR70. Appropriate vegetation community zonation. No signs of hydrologic stress on vegetation.</p>	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">6</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	6	0
w/o pres or current	with				
6	0				
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>Wetland 8Ra is comprised of a predominately slash pine canopy with laurel oak, water oak, and red maple. Shrub and herbaceous components are minimal and consist of wax myrtle, cabbage palm, cinnamon fern, cattail, St. John's wort, and blue maidencane. Desirable species composition and natural regeneration observed within AA.</p>	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td align="center">7</td> <td align="center">0</td> </tr> </table>	w/o pres or current	with	7	0
w/o pres or current	with				
7	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.667	0

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

For impact assessment areas
FL = delta x acres = 0.26

Delta = [with-current]
0.667

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number WL 8Rb	
FLUCCs code 641		Further classification (optional) Freshwater Marshes		Impact or Mitigation Site? Impact	
Assessment Area Size 0.896					
Basin/Watershed Name/Number Manasota/Manatee River Watershed		Affected Waterbody (Class) Class III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Emergent (PEM1C)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetland 8Rb (WL 8Rb) and WL 8Ra are surrounded by pine flatwoods and SR 70.					
Assessment area description  Wetland 8Rb (WL 8Rb) is an herbaceous marsh.					
Significant nearby features  SR70			Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WL 8Rb
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b>
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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current                      with</p> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70, residential). Invasive species coverage is minimal/minimal adverse effects on function. Habitat availability outside of AA is moderate to optimal.</p>
7	0		
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current                      with</p> <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	<p>Water quality is adversely affected by runoff received from SR70. Appropriate vegetation community zonation. No signs of hydrologic stress on vegetation.</p>
6	0		
<p>.500(6)(c)Community structure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current                      with</p> <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	<p>Wetland 8Rb is comprised predominantly of saw grass, broomsedges, rosy camphorweed, coinwort, yellow-eyed grass, cattail, and soft rush with wax myrtle, St. John's wort, Carolina willow, buttonbush, and scattered laurel oak, slash pine, sweetbay, and red maple. Desirable species composition and natural regeneration observed within AA.</p>
7	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres                      with
0.667                      0

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

For impact assessment areas
FL = delta x acres = 0.60

Delta = [with-current]
0.667

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 9R	
FLUCCs code 617	Further classification (optional) Feshwater marsh/Hydric Pine Flatwoods		Impact or Mitigation Site? Impact	Assessment Area Size 0.305
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine Forested (PFO1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetand 9R (WL9R) is surrounded by hardwood-conifer mixed uplands and SR 70.				
Assessment area description  WL 9R is a mixed wetland hardwoods system.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST), moderate potential for foraging and nesting; bald eagle and osprey		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WI 9R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <input type="text" value="6"/> with <input type="text" value="0"/>	AA is surrounded by hardwood conifer mixed uplands and SR70. Wildlife access partially limited by barriers (SR70, residential). Invasive species coverage is minimal/minimal adverse effects on function. Habitat availability outside of AA is fair to moderate.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <input type="text" value="6"/> with <input type="text" value="0"/>	Water quality is adversely affected by runoff received from SR70. Appropriate vegetation community zonation. No signs of hydrologic stress on vegetation.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <input type="text" value="7"/> with <input type="text" value="0"/>	System with a laurel oak, red maple, dahoon holly, and slash pine canopy and a wax myrtle, laurel oak, saltbush, dahoon holly, and St. John's wort shrub component. Herbaceous vegetation is comprised of round-pod St. John's wort, cinnamon fern, royal fern, rosy camphorweed, coinwort, and pennywort. Majority of plant cover is by desirable plant species and natural recruitment observed.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="text" value="0.633"/> with <input type="text" value="0"/>

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

For impact assessment areas
FL = delta x acres = 0.193

Delta = [with-current]
0.633

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number WL 10R	
FLUCCs code 641	Further classification (optional) Freshwater Marsh		Impact or Mitigation Site? Impact	Assessment Area Size 0.047
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine emergent (PEM1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Wetland 10R (WL 10R) is surrounded by pine flatwoods and SR 70.				
Assessment area description  WL10R is an herbaceous marsh located within pine flatwoods.				
Significant nearby features  Surrounded by urban open land and SR70.		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number WI 10R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <input type="checkbox"/> 7      with <input type="checkbox"/> 0	AA is surrounded by pine flatwoods and SR70. Wildlife access partially limited by barriers (SR70, residential). Invasive species coverage is minimal/minimal adverse effects on function. Habitat availability outside of AA is moderate to optimal.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <input type="checkbox"/> 6      with <input type="checkbox"/> 0	Water quality is adversely affected by runoff received from SR70. Appropriate vegetation community zonation. No signs of hydrologic stress on vegetation.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <input type="checkbox"/> 7      with <input type="checkbox"/> 0	An herbaceous marsh comprised predominantly of rosy camphorweed, water hyssops, pipeworts, cinnamon fern, broomsedge, yellow-eyed grass, and blue maidencane with scattered St. John's wort and wax myrtle. Majority of plant cover is by desirable plant species.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.667      with <input type="checkbox"/> 0

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

For impact assessment areas
FL = delta x acres = 0.032

Delta = [with-current]
0.667

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

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

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

Site/Project Name SR 70 Lorraine Rd to CR 675		Application Number		Assessment Area Name or Number SW 1LA	
FLUCCs code 510		Further classification (optional) Stream		Impact or Mitigation Site? Impact	
Assessment Area Size 0.08					
Basin/Watershed Name/Number Manasota/Manatee River		Affected Waterbody (Class) CLASS III		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Riverine (R5UBH)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands SW13L is surrounded by pasture land, hardwood-conifer mixed forests, and stream and lake swamps (bottomland). It is hydrologically connected with surface waters to its south (SW1L, SW1R and SW2R).					
Assessment area description SW13L consists mainly of open water with vegetation along its upper banks.					
Significant nearby features SR 70 and the Braden River to the south.			Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor and food chain support.			Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None.					
Additional relevant factors:					
Assessment conducted by: R. Bruce Williams			Assessment date(s): 1/3/2019		

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

Site/Project Name SR 70 Lorraine Rd to CR 675	Application Number	Assessment Area Name or Number SW 1LA
Impact or Mitigation Impact	Assessment conducted by: R. Bruce Williams	Assessment date: 1/3/2019

<b>Scoring Guidance</b> 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  /o pres or current      with 7                              0	The areas immediately adjacent to SW13L consisted of open pasture with cattle, bottomland swamp, and hardwood-conifer mixed forests. The larger surrounding landscape consisted of residential/commercial development, SR 70 and the Braden River.
.500(6)(b)Water Environment (n/a for uplands)  /o pres or current      with 6                              0	The water environment was clear and moving swiftly. Runoff from the open pasture may contain fecal coliform and nitrates from cattle waste in the adjacent open pasture. There was barbed wire fence keeping cattle from directly accessing SW13L at a setback of approximately 50 feet. The stream bed consisted of sandy soils.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  /o pres or current      with 5                              0	Vegetation was mostly non-existent within SW13L and it consisted mainly of open water. There were some snags that would be suitable as aquatic invertebrate habitat. Small fish (possibly mosquitofish) were observed in the stream.

Score = sum of above scores/30 (if uplands, divide /o pres or current      with 18                              0
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = 0.60 x 0.08= 0.05
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Delta = [with-current] 0.6
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Section 62-345.400, F.A.C.)**

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 1R	
FLUCCs code 510	Further classification (optional) Stream/River		Impact or Mitigation Site? Impact	Assessment Area Size 0.093
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB3H)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Surface Water 1R (SW 1R) is a tributary to the Braden River and is located on the south side of SR 70.				
Assessment area description SW1R is comprised predominately of open water.				
Significant nearby features SR70 and the Braden River.		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW1R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">7</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>	AA is surrounded by hardwood conifer mixed uplands and SR70. Wildlife access partially limited by barriers (SR70, residential development).
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">6</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>	Water quality is adversely affected by runoff received from SR70. Hydrologically connected under SR70 through a concrete box culvert to another surface water (SW20) to the north. Hydrology potentially altered outside of AA by land-uses (pasturelands/excavated ditches).
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">6</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>	Predominately open water, mix of desirable and undesirable species present in ground and shrub strata. Slash pine, wax myrtle, Brazilian pepper, cabbage palm, elderberry, Peruvian primrose-willow, and Mexican primrose-willow are present along the edges with an herbaceous component of pale duckweed, smartweed, spreading dayflower, cinnamon fern, pennywort, and cattail.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
<div style="display: flex; justify-content: space-around;"><div style="border: 1px solid black; padding: 2px;">0.63333</div><div style="border: 1px solid black; padding: 2px;">0</div></div>

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

For impact assessment areas
FL = delta x acres = 0.059

Delta = [with-current]
0.633333333

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 2L (Braden River)	
FLUCCs code 510	Further classification (optional) Stream/River		Impact or Mitigation Site? Impact	Assessment Area Size 0.036
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB3H)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  This open water system is surrounded by SR 70, open land, a roadside ditch, and bottomland swamp.				
Assessment area description  Surface Water (SW 2L) is within the Braden River and consists mainly of open water.				
Significant nearby features  SR70 and the Braden River.		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  American alligator (x2), Cooter				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW2L (Braden River)
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <table border="1"> <tr> <td>7</td> <td>0</td> </tr> </table>	7	0	Immediately surrounded by bottomland swamp and SR 70. Wildlife access to/from AA is partially limited by distance or barriers (SR 70, pasturelands, residential construction in progress to west and east).
7	0		
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	Water quality is adversely affected by runoff received from SR70. Construction in progress outside of AA to east with excavated ditches, potentially altering hydrology. Culvert in northwest portion of wetland from unknown source. Directly abuts SW18 and is hydrologically connected to SW3 under SR70 through a concrete box culvert.
6	0		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <table border="1"> <tr> <td>6</td> <td>0</td> </tr> </table>	6	0	Predominately open water, mix of desirable and undesirable species present in ground and shrub strata. Existing vegetation within includes Carolina willow, Peruvian primrose-willow, Mexican primrose-willow, spreading dayflower, caesarweed, smartweed, limpgrass, and mock bishopweed. Signs of turbidity in water and banks are unstable.
6	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.6

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

For impact assessment areas
FL = delta x acres = 0.023

Delta = [with-current]
0.6

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number SW 2R (Braden River Trib)	
FLUCCs code 510		Further classification (optional) Stream/River		Impact or Mitigation Site? Impact	
Assessment Area Size 0.123		Basin/Watershed Name/Number Manasota/Manatee River Watershed		Affected Waterbody (Class) Class III	
				Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB3H)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Surface Water 2R (SW 2R) is within a tributary to the Braden River located on the south side of SR 70.					
Assessment area description SW 2R is comprised predominately of open water and is surrounded by hardwood conifer mixed uplands and SR 70 to the north.					
Significant nearby features SR70 and the Braden River.			Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW2R (Braden River Trib)
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <div style="display: flex; justify-content: space-around; width: 100%;"> <span>7</span> <span>0</span> </div>	AA is surrounded by hardwood conifer mixed uplands and SR70. Wildlife access partially limited by barriers (SR70).
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <div style="display: flex; justify-content: space-around; width: 100%;"> <span>6</span> <span>0</span> </div>	Water quality is adversely affected by runoff received from SR70. Hydrologically connected under SR70 through a concrete box culvert to another surface water (SW20) to the north. Hydrology potentially altered outside of AA by land-uses (pasturelands/excavated ditches). Appears recently excavated.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <div style="display: flex; justify-content: space-around; width: 100%;"> <span>6</span> <span>0</span> </div>	Predominately open water, mix of desirable and undesirable species present in ground and shrub strata. Appears recently excavated. Slash pine, Carolina willow, Brazilian pepper, and Peruvian primrose-willow are present along the edges with an herbaceous component of pale duckweed, maidencane, and cattail. Signs of turbidity in water and banks are unstable.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.63333      0

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

For impact assessment areas
FL = delta x acres = 0.084

Delta = [with-current]
0.633333333

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number SW 3L	
FLUCCs code 510		Further classification (optional) Ditch		Impact or Mitigation Site? Impact	
Assessment Area Size 0.02					
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914		Affected Waterbody (Class) Class I		Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1Ex)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  This system is surrounded by bottomland swamp, the Braden River, hardwood-conifer mixed uplands, and SR 70.					
Assessment area description  Surface Water 3L (SW 3L) is a roadside ditch.					
Significant nearby features  SR70 and the Braden River.			Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 3L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <table border="1"> <tr> <td>7</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	7	with		0	Immediately surrounded by bottomland swamp and SR 70. Wildlife access to/from AA is partially limited by distance or barriers (SR 70, pasturelands, residential construction in progress to west).
7	with				
	0				
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <table border="1"> <tr> <td>6</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	6	with		0	Water quality is adversely affected by runoff received from SR70. Directly abuts SW19.
6	with				
	0				
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <table border="1"> <tr> <td>4</td> <td>with</td> </tr> <tr> <td></td> <td>0</td> </tr> </table>	4	with		0	Dominated by torpedograss with spreading dayflower, Carolina willow, buttonbush, Peruvian-primrose willow, caesarweed, and limpograss. Greater than 75% nuisance/exotic species (torpedograss, Peruvian primrose willow). Monoculture of undesirable species.
4	with				
	0				

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.56667	0

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

For impact assessment areas
FL = delta x acres = 0.011

Delta = [with-current]
0.5667

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 3R (Braden River)	
FLUCCs code 510	Further classification (optional) Stream/River		Impact or Mitigation Site? Impact	Assessment Area Size 0.144
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB3H)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands Hydrologically connected to SW2L under SR70 via concrete box culvert. SW3R is surrounded by stream and lake swamps and pine flatwoods.				
Assessment area description Surface Water 3R (SW 3R) is located on the south side of SR 70 and consists of the Braden River.				
Significant nearby features SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW3R (Braden River)
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current: <input type="text" value="7"/> with: <input type="text" value="0"/>	AA is surrounded by hardwood conifer mixed uplands and SR70. Wildlife access partially limited by barriers (SR70).
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current: <input type="text" value="6"/> with: <input type="text" value="0"/>	Water quality is adversely affected by runoff received from SR70 and associated roadways. Hydrologically connected to SW19 under SR70 via concrete box culvert. Oil sheen and signs of turbidity in water present.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current: <input type="text" value="6"/> with: <input type="text" value="0"/>	Predominately open water, mix of desirable and undesirable species present in ground and shrub strata. Vegetation along the banks of the river include laurel oaks, slash pine, Brazilian pepper, saw palmetto, muscadine grapevine, Virginia creeper, and poison ivy. Signs of turbidity in water and banks are unstable.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres: <input type="text" value="0.63333"/> with: <input type="text" value="0"/>

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

For impact assessment areas
FL = delta x acres = 0.091

Delta = [with-current]
0.633

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 4L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.017
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  This system is bounded by shrub and brushland and SR 70.				
Assessment area description  Surface Water 4L (SW 4L) is a roadside ditch.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW4L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed
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<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  w/o pres or current 5 with 0	Roadside ditch that runs perpendicular to SR 70. Wildlife access to/from AA is partially limited by distance or barriers (SR 70, development).
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 5 with 0	Water quality is adversely affected by runoff received from SR70.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 4 with 0	Comprised of Peruvian primrose-willow, elderberry, bahiagrass sod, smartweed, caesarweed, alligatorweed, bog hemp, knotroot foxtail, and Florida pellitory. 50% of ditch is planted with bahia sod (dead).

Score = sum of above scores/30 (if uplands, divide by 20)  current or w/o pres 0.4667 with 0
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If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = 0.008
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Delta = [with-current] 0.4667
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Section 62-345.400, F.A.C.)**

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 4R	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.035
Basin/Watershed Name/Number Manasota/Manatee River Watershed/1914	Affected Waterbody (Class) Class I	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW4R is connected to another surface water via culvert. It is surrounded by pine flatwoods with SR 70 to the north.				
Assessment area description  Surface Water 4R (SW 4R) is a roadside ditch that partially overlays hydric soils with shrub components.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 4R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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	Roadside ditch that runs parallel to SR 70. Almost entirely bounded by barriers to wildlife movement (SR70 to north, agriculture to the south). Minimal habitat availability outside of AA.	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0
w/o pres or current	with					
5	0					
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by the runoff it conveys from SR70 and associated roadways. AA is connected to another surface water via culvert.	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0
w/o pres or current	with					
5	0					
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	Water quality is adversely affected by the runoff it conveys from SR70 and associated roadways. AA is connected to another surface water via culvert.	<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0
w/o pres or current	with					
5	0					

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.5	0

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

For impact assessment areas
FL = delta x acres = 0.018

Delta = [with-current]
0.5

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 5L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.06
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1C)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW5L is surrounded by pine flatwoods with SR 70 to the south. There is a connection via culvert under SR 70 to SW7R.				
Assessment area description  Surface Water 5L (SW 5L) is an unnamed channelized water conveyance system that contains minimal vegetative cover.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 5L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <input type="text" value="7"/> with <input type="text" value="0"/>	AA is immediately surrounded by SR 70 and pine flatwoods. Wildlife access to/from AA is partially limited by barriers (SR 70).
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <input type="text" value="5"/> with <input type="text" value="0"/>	Water quality is adversely affected by runoff received from SR70. AA is connected to SW7R under SR 70 via culvert.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <input type="text" value="6"/> with <input type="text" value="0"/>	Minimal vegetative cover. Existing vegetation along the banks includes laurel oak, slash pine, buttonbush, saw palmetto, smartweed, lanceleaf arrowhead, cattail, and pennywort. Majority of species present along banks are desirable and structural features appear typical for TOS.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="text" value="0.6"/> with <input type="text" value="0"/>

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

For impact assessment areas
FL = delta x acres = 0.036

Delta = [with-current]
0.6

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 5R	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.343
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW5R is connected to SW4 via culvert and is directly adjacent to WL6R.				
Assessment area description  Surface Water 5R (SW 5R) is a roadside ditch that partially overlays hydric soils with forested and shrub components				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 5R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Roadside ditch that runs parallel to SR 70. Almost entirely bounded by barriers to wildlife movement (SR70 to north, agriculture to the south). Minimal habitat availability outside of AA.
5	0		
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Water quality is adversely affected by runoff received from SR70 and associated roadways. AA is connected to another surface water via culvert and directly abuts a wetland.
5	0		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <table border="1"> <tr> <td>4</td> <td>0</td> </tr> </table>	4	0	This surface water includes minimal forested and shrub components of red maple, laurel oak, Carolina willow, saltbush, wax myrtle, Brazilian pepper, and buttonbush. The groundcover stratum includes coinwort, swamp fern, smartweed, and dead bahiagrass sod. The majority of the ditch is comprised of dead vegetation and bare ground.
4	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.4667      0

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

For impact assessment areas
FL = delta x acres = 0.160

Delta = [with-current]
0.4667

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 6L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.117
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PSS1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW6L is connected via culverts to SW8R and SW SW7L.				
Assessment area description  Surface Water 6L (SW 6L) is a roadside ditch within the SR 70 right-of-way that is contains shrub and herbaceous components				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 6L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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	Bounded by SR 70 and associated roadways, residential areas, and retention ponds. Wildlife access is limited throughout some portions due to barriers (roadways, residential) and adjacent land uses (urban development).	w/o pres or current 6	with 0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from SR70. This surface water is hydrologically connected to other surface waters via culverts along SR 70. Portion of surface water was potentially a natural feature that was straightened out and channelized. Deeply incised.	w/o pres or current 5	with 0
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	Shrub and herbaceous components, including Carolina willow, Peruvian primrose-willow, red maple, wax myrtle, pickerelweed, broomsedge, tickseed, smartweed, climbing hempvine, and lanceleaf arrowhead. Nuisance/exotic species comprise approximately 10-25% of vegetative coverage.	w/o pres or current 5	with 0

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.5333	0

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

For impact assessment areas
FL = delta x acres = 0.062

Delta = [with-current]
0.5333

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number		Assessment Area Name or Number SW 6R	
FLUCCs code 510		Further classification (optional)		Impact or Mitigation Site? Impact	
Assessment Area Size 0.043		Basin/Watershed Name/Number Manasota/Manatee River Watershed		Affected Waterbody (Class) Class III	
				Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PSS1Ex)	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands SW6R is surrounded by pime flatwoods and SR 70 north adjacent.					
Assessment area description Surface Water 6R (SW 6R) appears to be an unnamed channelized creek.					
Significant nearby features SR70			Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement			Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.			Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): None					
Additional relevant factors:					
Assessment conducted by: Sarah Johnson			Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW6R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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  w/o pres or current 5	with 0	Incised linear surface water, perpendicular to SR 70. AA is bounded by SR 70 to the north and a paved human use trail to the south (with a high chain link fence).	
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current 5	with 0		Water quality is adversely affected by runoff received from SR70.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current 5	with 0		This surface water includes a canopy and sub-canopy dominated by laurel oak and Brazilian pepper with Carolina willow, wax myrtle, elderberry, saltbush, and Peruvian primrose-willow. Groundcover is minimal and comprised of royal fern, cinnamon fern, netted chain fern, and pennywort.

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres 0.5	with 0

If preservation as mitigation, Preservation adjustment factor = Adjusted mitigation delta =
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For impact assessment areas FL = delta x acres = 0.021
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Delta = [with-current] 0.5
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If mitigation Time lag (t-factor) = Risk factor =
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For mitigation assessment areas RFG = delta/(t-factor x risk) =
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**PART I – Qualitative Description  
(See Section 62-345.400, F.A.C.)**

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 7L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 1.353
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PSS1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW7L has a connection via culverts to SW6L and SW8L. Uplands consists of roadways and pinf flatwoods.				
Assessment area description  Surface Water 7L (SW 7L) is a roadside ditch within the SR 70 right-of-way that contains shrub and herbaceous components.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW7L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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	Bounded by SR 70 and associated roadways, residential areas, and retention ponds. Wildlife access is limited throughout some portions due to barriers (roadways, residential) and adjacent land uses (urban development).	w/o pres or current 6	with 0
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from SR70. This surface water is hydrologically connected to other surface waters via culverts along SR 70.	w/o pres or current 5	with 0
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community	Shrub and herbaceous components, including Carolina willow, Peruvian primrose-willow, red maple, wax myrtle, pickerelweed, broomsedge, tickseed, smartweed, climbing hempvine, and lanceleaf arrowhead. Nuisance/exotic species comprise approximately 10-25% of vegetative coverage.	w/o pres or current 5	with 0

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres
6 0.533
with 0

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

For impact assessment areas
FL = delta x acres = 0.722

Delta = [with-current]
0.533

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 7R	
FLUCCs code 510	Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 0.338
Basin/Watershed Name/Number Manasota/Manatee River Watershed	Affected Waterbody (Class) Class III	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB3H)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Surface Water 7R (SW 7R) connects to SW 5L via culvert under SR 70. Sorrounded by pine flatwoods and SR 70 to its north.				
Assessment area description  SW7R is an excavated water coveyance system with minimal vegetation present.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 7R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

Scoring Guidance 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	Deeply incised meandering surface water within pine flatwoods. AA is within the bounds of SR 70 (to the north) and a paved human use trail (to the south).	w/o pres or current 6	with 0
.500(6)(b) Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from SR70. The AA is deeply incised and appears to receive pulses of high flow from runoff. Connects to SW 5L via culvert under SR 70.	w/o pres or current 5	with 0
.500(6)(c) Community structure	Vegetation present along the banks. Vegetation consists of buttonbush, Carolina willow, wax myrtle, Florida pellitory, cattail, smartweed, dog fennel, and West Indian marsh grass. Nuisance/exotic coverage less than 10% across all strata. Banks unstable and deeply incised.	w/o pres or current 6	with 0

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres 0.567	with 0

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

For impact assessment areas
FL = delta x acres =0.192

Delta = [with-current]
0.567

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 8L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.422
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PSS1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  This ditch is entirely bounded by SR 70 and associated roadways. It is connected to SW7L, SW9L and SW10L via culverts.				
Assessment area description  Surface Water 8L (SW 8L) is a roadside ditch within the SR 70 right-of-way that is comprised predominantly (70 percent coverage) of dead vegetation				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 8L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <table border="1"> <tr> <td>4</td> <td>0</td> </tr> </table>	4	0	Roadside ditch that runs parallel to SR 70. Ditch is entirely bounded by SR 70 and associated roadways. Minimal habitat availability outside of AA.
4	0		
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.
5	0		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <table border="1"> <tr> <td>4</td> <td>0</td> </tr> </table>	4	0	Comprised predominantly (70 percent coverage) of dead vegetation, potentially due to right-of-way maintenance. Remaining vegetation is comprised of wax myrtle, Carolina willow, Peruvian primrose-willow, buttonbush, cattail, smartweed, beggarticks, lanceleaf arrowhead, rushes, and umbrella sedge.
4	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.433      0

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

For impact assessment areas
FL = delta x acres = 0.183

Delta = [with-current]
0.433

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 8R	
FLUCCs code 510	Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 0.033
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PUB3H)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW8R is connected to SW6L via culvert under SR 70. It is surrounded by hardwood conifer mixed forests and SR 70.				
Assessment area description  Surface Water 8R (SW 8R) is an unnamed chanelized creek system with vegetation solely along the banks				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the asesment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 8R
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current: <input type="text" value="6"/> with: <input type="text" value="0"/>	Bounded by SR 70 and associated roadways, residential areas, and retention ponds. Wildlife access is limited throughout some portions due to barriers (roadways, residential) and adjacent land uses (urban development).
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current: <input type="text" value="5"/> with: <input type="text" value="0"/>	Water quality is adversely affected by runoff received from SR70. This surface water is hydrologically connected to other surface waters via culverts along SR 70. Potentially a natural feature that was straightened out and channelized. The AA is deeply incised and appears to receive pulses of high flow from runoff.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current: <input type="text" value="6"/> with: <input type="text" value="0"/>	Vegetation is solely along the banks, consisting of American beautyberry, water oak, saw palmetto, poison ivy, and muscadine grapevine. Banks unstable and deeply incised.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres: <input type="text" value="0.567"/> with: <input type="text" value="0"/>

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

For impact assessment areas
FL = delta x acres = 0.019

Delta = [with-current]
0.567

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 9L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.036
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  Ditch is entirely bounded by SR 70 and associated roadways. It is connected via culverts to other surface waters.				
Assessment area description  Surface Water 9L (SW 9L) is a roadside ditch within the SR 70 right-of-way that is comprised of herbaceous vegetation.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 9L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <table border="1"> <tr> <td>4</td> <td>0</td> </tr> </table>	4	0	Roadside ditch that runs parallel to SR 70. Ditch is entirely bounded by SR 70 and associated roadways. Minimal habitat availability outside of AA.
4	0		
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.
5	0		
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <table border="1"> <tr> <td>5</td> <td>0</td> </tr> </table>	5	0	Comprised of low growing, mowed herbaceous vegetation, including rushes, carpetgrass, pink sundew, yellow-eyed grass, meadowbeauty, and yellow colicroot
5	0		

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.467      0

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

For impact assessment areas
FL = delta x acres = 0.017

Delta = [with-current]
0.467

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 10L	
FLUCCs code 510	Further classification (optional)		Impact or Mitigation Site? Impact	Assessment Area Size 0.021
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PSS1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW10L is connected via culvert to SW8L and SW11L. It is bounded by SR 70 and residential development.				
Assessment area description  Surface Water 10L (SW 10L) is a roadside ditch within the SR 70 right-of-way				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):  None.				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 10 L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current <input type="checkbox"/> 5      with <input type="checkbox"/> 0	Roadside ditch that runs parallel to SR 70. Ditch is bounded by SR 70 and residential development. Minimal habitat availability outside of AA.
.500(6)(b)Water Environment (n/a for uplands)  w/o pres or current <input type="checkbox"/> 5      with <input type="checkbox"/> 0	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.
.500(6)(c)Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current <input type="checkbox"/> 5      with <input type="checkbox"/> 0	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres <input type="checkbox"/> 0.500      with <input type="checkbox"/> 0

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

For impact assessment areas
FL = delta x acres = 0.010

Delta = [with-current]
0.500

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 11L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.573
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PSS1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands  SW1L is connected via culvert to SW12L and SW10L.				
Assessment area description  Surface Water 11L (SW 11L) is a roadside ditch with shrub and herbaceous components. This system is surrounded by an institutional facility, SR 70, and residential areas.				
Significant nearby features  SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.)  This system is not a unique feature in the regional landscape		
Functions  Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use  This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found )  Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)  Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 11L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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  w/o pres or current      with <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>	Roadside ditch that runs parallel to SR 70. Ditch is bounded by SR 70 and residential development. Minimal habitat availability outside of AA.
.500(6)(b) Water Environment (n/a for uplands)  w/o pres or current      with <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.
.500(6)(c) Community structure  1. Vegetation and/or 2. Benthic Community  w/o pres or current      with <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">5</div> <div style="border: 1px solid black; padding: 2px;">0</div> </div>	Ditch with shrub and herbaceous components, including Carolina willow, saltbush, Peruvian primrose-willow, red maple, wax myrtle, buttonbush, pickerelweed, water hyssops, smartweed, coinwort, cattail, and maidencane. Large portion recently cleared of vegetation.

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
<div style="display: flex; justify-content: space-around;"><div style="border: 1px solid black; padding: 2px;">0.500</div><div style="border: 1px solid black; padding: 2px;">0</div></div>

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

For impact assessment areas
FL = delta x acres = 0.287

Delta = [with-current]
0.500

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

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

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

Site/Project Name SR-70 from Lorraine Road to CR 675 (Waterbury Road)		Application Number	Assessment Area Name or Number SW 12L	
FLUCCs code 510	Further classification (optional) Ditch		Impact or Mitigation Site? Impact	Assessment Area Size 0.05
Basin/Watershed Name/Number Manasota/South Coastal Darinage/1924	Affected Waterbody (Class) Class III F	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance) Palustrine (PEM1Ex)		
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands SW 12L is surrounded by an institutional facility and located on the north side of SR 70, at the eastern terminus of the project. SW12L is connected via culvert to SW11L.				
Assessment area description Surface Water 12L (SW 12L) is a roadside ditch.				
Significant nearby features SR70		Uniqueness (considering the relative rarity in relation to the regional landscape.) This system is not a unique feature in the regional landscape		
Functions Provides wildlife habitat, wildlife corridor food chain support, water storage, flow attenuation, and water quality improvement		Mitigation for previous permit/other historic use This system is not part of a previously permitted system		
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found ) Various small fish, invertebrates, amphibians, snakes, turtles, wading birds, and small mammals could utilize the assessment area.		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Wood stork (FT), little blue heron (ST), tricolored heron (ST), roseate spoonbill (ST).		
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):				
Additional relevant factors:				
Assessment conducted by: Sarah Johnson		Assessment date(s): 6/6/2017, 6/14/2017		

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

Site/Project Name I-70 from Lorraine Road to CR 675 (Waterbury Road)	Application Number	Assessment Area Name or Number SW 12L
Impact or Mitigation Impact - Direct	Assessment conducted by: Sarah Johnson	Assessment date: 6/6/2017

<b>Scoring Guidance</b> 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	Roadside ditch that runs parallel to SR 70. Ditch is bounded by SR 70 and residential development. Minimal habitat availability outside of AA.						
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0			
w/o pres or current	with						
5	0						
.500(6)(b)Water Environment (n/a for uplands)	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.						
<table border="1"> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	w/o pres or current	with	5	0			
w/o pres or current	with						
5	0						
.500(6)(c)Community structure	Water quality is adversely affected by runoff received from SR70 and associated roadways. This ditch is hydrologically connected to other surfaces waters via culverts along SR 70.						
<table border="1"> <tr> <td>1. Vegetation and/or</td> <td>2. Benthic Community</td> </tr> <tr> <td>w/o pres or current</td> <td>with</td> </tr> <tr> <td>5</td> <td>0</td> </tr> </table>	1. Vegetation and/or	2. Benthic Community	w/o pres or current	with	5	0	
1. Vegetation and/or	2. Benthic Community						
w/o pres or current	with						
5	0						

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.500	0

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

For impact assessment areas
FL = delta x acres = 0.023

Delta = [with-current]
0.500

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

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

***APPENDIX F***

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**Agency Correspondence**

## Nicole Selly

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**From:** Lee Hughes <Lee.Hughes@swfwmd.state.fl.us>  
**Sent:** Friday, February 15, 2019 9:13 AM  
**To:** Bruce Williams  
**Cc:** Mark Easley; Nicole Selly  
**Subject:** RE: SR 70 from Lorraine Road to CR 675/Waterbury Road (Compliance Number 392565): Pond Sites

Thanks Bruce. I uploaded all the information to the existing Informal JD file (CT No 392565). I assume I will be the one assigned to it when you submit the application but to be safe maybe include a statement in your cover letter that I have prior involvement. Thanks.

*Lee Hughes, P.W.S., C.N.R.P.*

Senior Environmental Scientist  
Environmental Resource Program  
Southwest Florida Water Management District  
813-985-7481 ext. 2305

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**From:** Bruce Williams <Bruce.Williams@kisingercampo.com>  
**Sent:** Thursday, February 14, 2019 12:18 PM  
**To:** Lee Hughes <Lee.Hughes@swfwmd.state.fl.us>  
**Cc:** Mark Easley <Mark.Easley@kisingercampo.com>; Nicole Selly <Nicole.Selly@kisingercampo.com>  
**Subject:** SR 70 from Lorraine Road to CR 675/Waterbury Road (Compliance Number 392565): Pond Sites

Good afternoon Lee,

Please see the attached wetland flagging maps (SR 70 – Lorraine to Waterbury – Pond Wetland Flagging) for the pond sites associated with the SR 70 Lorraine Road to CR 675/Waterbury Road project (Compliance number 392565- see attached SWFWMD\_Correspondence)).

These are the pond sites we reviewed in the field on January 23<sup>rd</sup>, 2019. I have also attached the UMAM sheet (SR 70 SWAT UMAM SW13L) for surface water 13L (SW13L) as you requested, and project location/topo maps (Figures 1 and 2),

You have the FLUCCS and Soils maps previously sent.

All surface waters indicated on the maps, with the exception of SW13L, were considered upland cut ditches.

Thank you and let me know if there is anything else you may need,

Bruce



**Bruce Williams**  
**Senior Environmental Scientist**

Email: [Bruce.Williams@kisingercampo.com](mailto:Bruce.Williams@kisingercampo.com)  
Work: 813.871.5331  
Cell: 863.289.4777  
201 N Franklin St., Ste 400, Tampa, FL 33602

CONFIDENTIALITY NOTE: This communication may be privileged and confidential. It should not be disseminated to others. If received in error, please immediately reply that you have received this communication in error and then delete it. Thank you.



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# Southwest Florida Water Management District

**Bartow Service Office**  
170 Century Boulevard  
Bartow, Florida 33830-7700  
(863) 534-1448 or  
1-800-492-7862 (FL only)

**Sarasota Service Office**  
6750 Fruitville Road  
Sarasota, Florida 34240-9711  
(941) 377-3722 or  
1-800-320-3503 (FL only)

**Tampa Service Office**  
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Tampa, Florida 33637-6759  
(813) 985-7481 or  
1-800-836-0797 (FL only)

2379 Broad Street, Brooksville, Florida 34604-6899

(352) 796-7211 or 1-800-423-1476 (FL only)

TDD only: 1-800-231-6103 (FL only)

On the Internet at [WaterMatters.org](http://WaterMatters.org)

April 05, 2018

Nicole Monies, FDOT  
801 N. Broadway Ave.  
Bartow, FL 33830

Subject: **Informal Wetland/Surface Water Review**  
Compliance No.: 392565  
County: Manatee  
Sec/Twp/Rge: Sections 15, 22, 23, 24 & 25 / 35South / 19East  
Sections 28, 29, 30, 33, & 34 / 35 South / 20 East

Dear Ms. Monies:

During the site visits on June 14, 2017 and June 29, 2017, District staff determined that the site referenced above contains wetlands and/or surface waters defined by Chapter 62-340, Florida Administrative Code (F.A.C.). The established wetland and surface water boundaries are shown on the aerial photos uploaded to the File of Record on April 02, 2018. Please note that this is an informal, non-binding review. This review does not constitute final agency action and is subject to change. Furthermore, this review does not bind the District, nor does it convey any legal rights, expressed or implied. Persons obtaining an informal determination are not entitled to rely upon it for purposes of compliance with law or District rules.

The District's formal acknowledgement of wetland and surface water boundaries may be accomplished through the issuance of an Environmental Resource Permit (ERP) or a formal wetland and other surface water determination, issued pursuant to Rule 62-330.201, F.A.C. Unless exempt as provided in Rules 62-330.051 and .0511, F.A.C., any construction, alteration, operation, maintenance, removal or abandonment of a project in, on, or over wetlands and other surface waters requires an ERP. Environmental water quality and quantity concerns related to site development will be evaluated during the District's review of the permit application.

If you have questions, please contact me at (941) 377-3722, extension 2305 in the Sarasota Service Office.

Sincerely,

Lee Hughes, P.W.S  
Senior Environmental Scientist  
Environmental Resource Program  
Regulation Division

cc: Ashley Abdel-Hadi, Kisinger Campo & Associates

***APPENDIX G***

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**Protected Species Potential for Occurrence and Map**

**Appendix G - Listed Species Documented Within Manatee County**

Species		Designated Status			Habitat Preference <sup>4</sup>	Potential for Occurrence On-Site <sup>5</sup>
Scientific	Common	USFWS <sup>1</sup>	FDACS <sup>2</sup>	FWC <sup>3</sup>		
<b>Plants</b>						
<i>Calopogon multiflorus</i>	Many-flowered Grasspink	-	T	-	Dry to moist flatwoods with longleaf pine, wiregrass, and saw palmetto	Moderate
<i>Glandularia tampensis</i>	Tampa Vervain	-	E	-	Live oak-cabbage palm hammocks and pine-palmetto flatwoods	Low
<i>Lythrum flagellare</i>	Lowland loosestrife	-	E	-	Mucky peat of pond margins, ditch banks, and edges of cypress depressions	Low
<i>Matelea floridana</i>	Florida Spiny-pod	-	E	-	Upland hardwood forests	Low
<i>Pteroglossapsis ecristata</i>	Giant Orchid	-	T	-	Sandhill scrub, pine flatwoods, and pine rocklands	Low
<i>Thelypteris serrata</i>	Toothed Maiden Fern	-	E	-	Cypress swamps, sloughs, and floodplains	Low
<i>Triphora amazonica</i>	Broad-leaved Nodding-caps	-	E	-	Rich, well-drained, moist humus of upland hardwood hammocks	Low
<b>Reptiles</b>						
<i>Alligator mississippiensis</i>	American Alligator	SAT	-	-	Freshwater and brackish marshes, ponds, lakes, rivers, swamps, bayous, canals, and large spring runs	High (2017)
<i>Drymarchon couperi</i>	Eastern Indigo Snake	T	-	-	Scrub and sandhill to wet prairies and mangrove swamps; often utilizes gopher tortoise burrows for winter refugia	Low
<i>Gopherus poluphemus</i>	Gopher Tortoise	-	-	T	Dry upland habitats, including sandhills, scrub, xeric oak hammock, pine flatwoods, pastures, old fields, and road shoulders	High (2017)
<b>Avian</b>						
<i>Aphelocoma coerulescens</i>	Florida Scrub Jay	T	-	-	Scrub oaks between 3 and 10 feet tall with open sand and clumps of herbaceous vegetation.	Low
<i>Ammodramus savannarum floridanus</i>	Florida Grasshopper Sparrow	E	-	-	Large areas of frequently burned dry prairie habitat with patchy open areas sufficient for foraging	Low
<i>Caracara cheriway</i>	Crested Caracara	T	-	-	Dry prairie, pasture lands with cabbage palm, cabbage palm/live oak hammocks, shallow ponds and sloughs	Low
<i>Mycteria americana</i>	Wood Stork	T	-	-	Shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches	High (2017)
<i>Grus canadensis pratensis</i>	Florida Sandhill Crane	-	-	T	Prairies, freshwater marshes, and pasture lands	High (2017)
<i>Egretta caerulea</i>	Little Blue Heron	-	-	T	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, manmade impoundments, and ditches	High (2017)
<i>Egretta tricolor</i>	Tricolored Heron	-	-	T	Permanently and seasonally flooded wetlands, streams, lakes, and swamps, manmade impoundments, and ditches	Low
<i>Platalea ajaja</i>	Roseate Spoonbill	-	-	T	Shallow water of variable salinity, including marine tidal flats and ponds, coastal marshes, mangrove-dominated inlets and pools, and freshwater sloughs and marshes	Low
<i>Falco sparverius paulus</i>	Southeastern American Kestrel	-	-	T	Open pine habitats, woodland edges, prairies, and pastures	Low
<b>Other Species of Concern</b>						
<i>Haliaeetus leucocephalus</i>	Bald Eagle	N <sup>6</sup>	-	N <sup>6</sup>	Areas close to coastal areas, bays, rivers, lakes, or other bodies of water; nests in tall trees, particularly live pines	Moderate
<i>Ursus americanus floridanus</i>	Florida Black Bear	-	-	N <sup>7</sup>	Forested communities, including wetlands	Moderate
<i>Sciurus niger niger</i>	Southern Fox Squirrel	-	-	N <sup>8</sup>	Sandhills (high pine), pine flatwoods, and pastures and other open, ruderal habitats with scattered pines and oaks	Low

**1. As listed by the U.S. Fish and Wildlife Service in 50 CFR Part 17.**

SC = Not currently listed, but considered a “species of concern” to USFWS. T = Threatened. E = Endangered. SAT = Treated as threatened due to similarity of appearance to a species which is federally listed such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species. N = Not currently listed, nor currently being considered for listing.

**2. Plant species listed by the Florida Department of Agriculture and Consumer Services pursuant to Chapter 5B.40, F.A.C.**

T = Threatened. E = Endangered.

**3. Protected species status designations are in accordance with the Florida Fish and Wildlife Conservation Commission's Imperiled Species Management Plan, approved November 2016.**

T = Threatened. N = Not currently listed, nor currently being considered for listing.

**4. Habitat Preference described by:**

Wunderlin, R. P., and B. F. Hansen. 2011. Guide to the Vascular Plants of Florida, Third Edition. Gainesville: University Press of Florida.

Florida Natural Areas Inventory (FNAI). Field Guide to the Rare Plants and Animals of Florida: Online. Florida Natural Areas Inventory, Tallahassee, FL. Available <http://www.fnai.org/FieldGuide/index.cfm>. (Accessed: April 2019)

**5. Potential for Occurrence on Site:**

Low = Preferred habitat found within the project area, but the species has not been documented within one (1) mile of project area.

Moderate = Suitable habitat exists and the species has been documented within one (1) mile of project area.

High = Suitable habitat exists and species observed on-site.

**6. Bald Eagle**

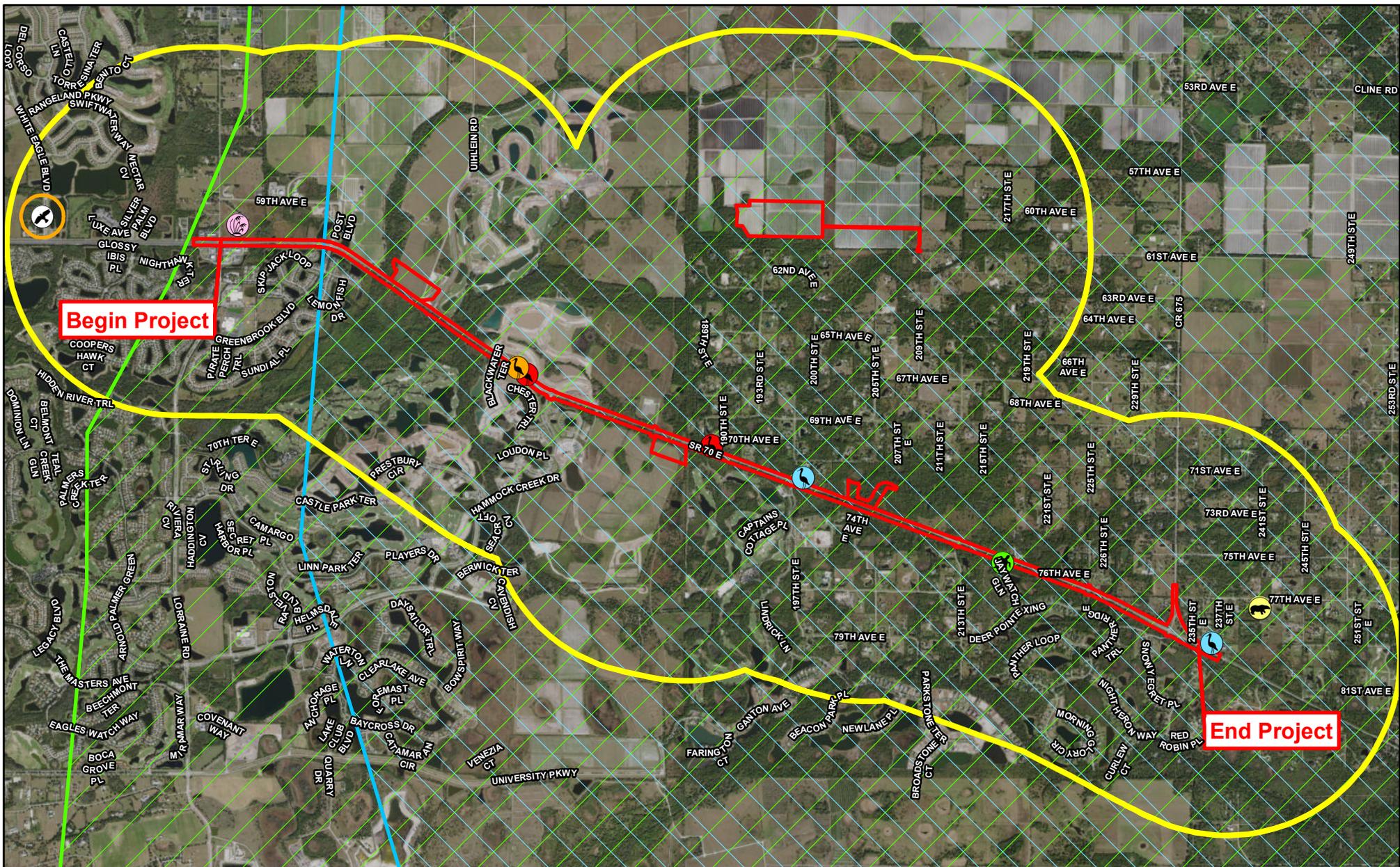
The bald eagle is afforded federal protection by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act and afforded state protection by the FWC's bald eagle rule (F.A.C. 68A-16.002).

**7. Florida Black Bear**

The Florida black bear is managed by the FWC's Florida Black Bear Conservation rule (68A-4.009, F.A.C.).

**8. Southern Fox Squirrel**

Although they are no longer a listed species, southern fox squirrels, their nests, and young are afforded protection under 68A-29.002(1)(c) F.A.C.



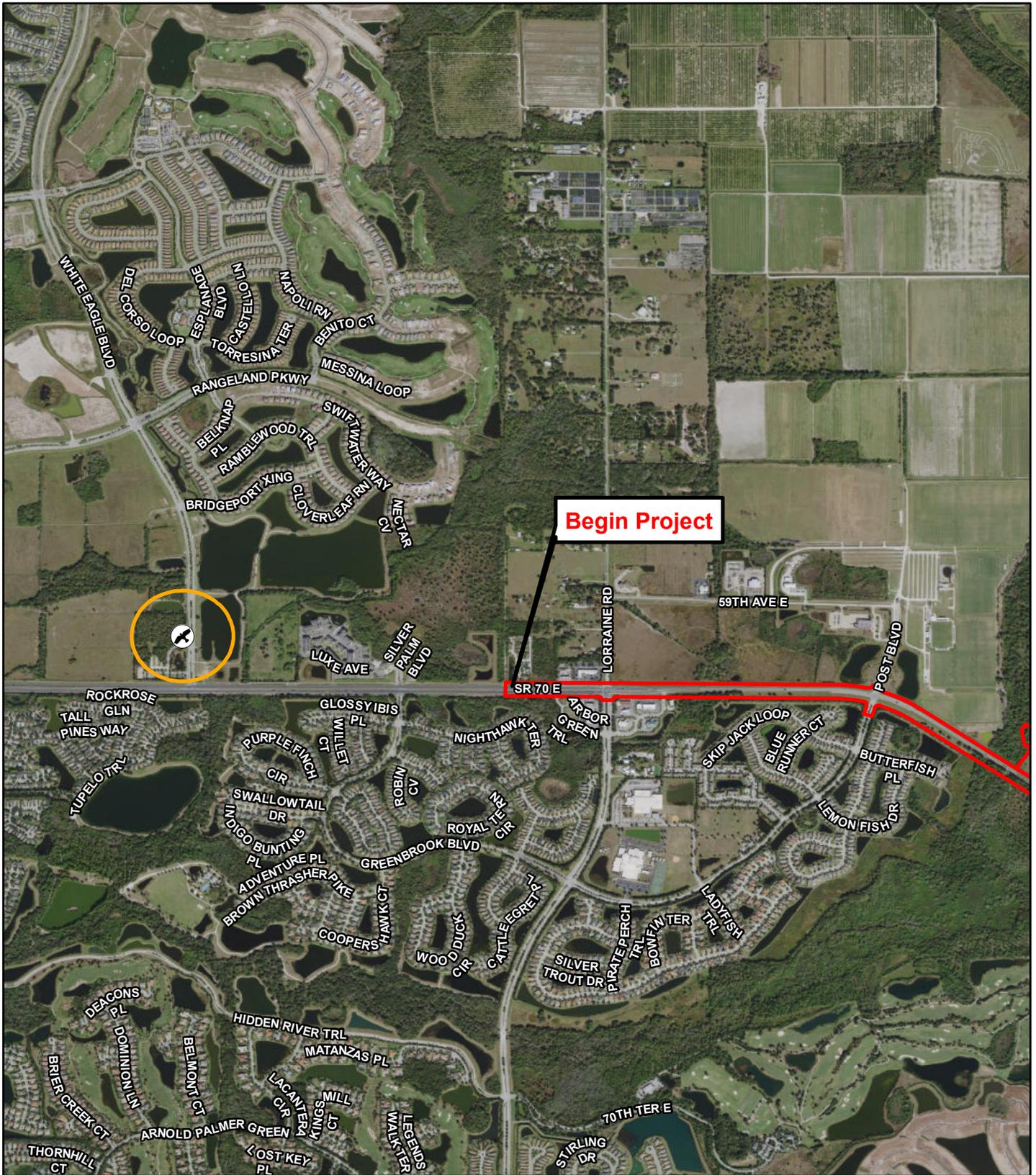
Legend	
	Project Study Area
	1 Mile Buffer of Project Study Area
	660ft Eagle Nest Buffer
	Bald Eagle Nest
	Many-flowered Grass-pink
	Florida Black Bear Calls
	Florida Sandhill Crane
	Gopher Tortoise Burrow
	Little Blue Heron
	Wood Stork
	Crested Caracara Consultation Area
	Florida Grasshopper Sparrow Consultation Area
<b>Entire Area Covered by:</b>	
Florida Black Bear Management Units (South Central)	
Florida Black Bear Range (Occasional)	
Florida Scrub Jay Consultation Area	
Florida Scrub Jay Service Area	

**Protected Species Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**  
  
**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

Appendix G      Page 1 of 1

4,000 2,000 0 4,000  
Feet

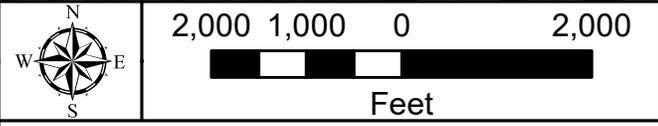
Kisinger Campo & Associates, Corp.  
 201 N. Franklin Street, Suite 400  
 Tampa, FL 33602  
 Phone 813/871-5331  
 Fax 813/871-5153



**Begin Project**



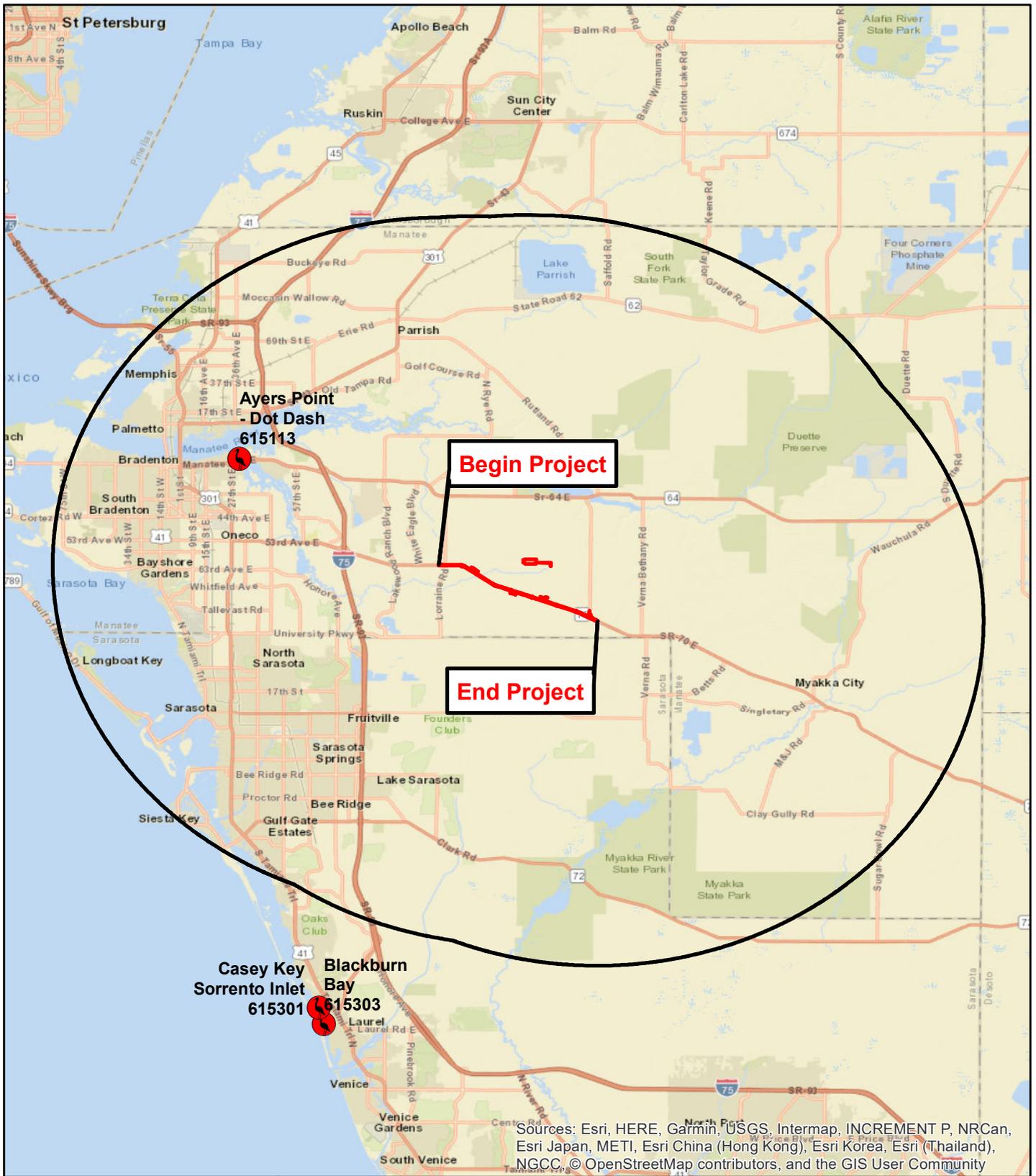
- Legend**
- Project Study
  - Bald Eagle Nest
  - 660ft Eagle Nest Buffer



**Bald Eagle Nest Location Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**  
**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

Kisinger Campo & Associates, Corp.  
 201 N. Franklin Street, Suite 400  
 Tampa, FL 33602  
 Phone: 813/871-5331  
 Fax: 813/871-5135

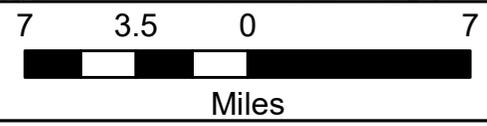
Appendix G



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



- Legend**
-  Wood Stork Colony
  -  Project Study
  -  15 Mile Buffer of Project Area



**Wood Stork Nest Location Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**  
**Manatee County, Florida**  
**FPID Number: 414506-2-22-01**

Kisinger Campo & Associates, Corp.  
 201 N. Franklin Street, Suite 400  
 Tampa, FL 33602  
 Phone: 813/871-5331  
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Appendix G

***APPENDIX H***

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**Standard Protection Measures for the 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 I***

---

**Sovereign Submerged Land Correspondence**

March 26, 2018

Division of State Lands  
Florida Department of Environmental Protection  
3900 Commonwealth Boulevard, MS 101  
Tallahassee, FL 32399

Re: **Sovereignty Submerged Lands Determination Request**  
**SR 70 from Lorraine Road to CR 675 (Waterbury Road)**  
**Manatee County**  
**Sections 15, 22, 23, 24, and 25, Township 35S, and Range 19E**  
**Sections 27, 28, 29, 30, 33, and 34, Township 35S, and Range 20E**  
**FPID Numbers: 414506-2-22-01/414506-2-32-01**

To Whom It May Concern,

Kisinger Campo & Associates is conducting an environmental analysis on the behalf of the Florida Department of Transportation, District 1 (FDOT D1) for proposed improvements to a 6.1 mile segment of SR 70 extending from Lorraine Road to CR 675 (Waterbury Road) in Manatee County, Florida. The project crosses two branches of the Braden River and two freshwater creeks: the Braden River North Branch, Braden River South Branch, an unnamed tributary to the Braden River, and an unnamed tributary to the Gum Slough. Their locations can be seen on the attached Project Location Map and Quadrangle Map, and include:

- **Braden River North Branch** is a freshwater river that flows southwestward. The river branch runs under SR 70 through a box culvert. Field reviews show that the flow of this river branch appears to have been altered by surrounding land-use changes. It is located at Latitude: 27.428661° Longitude: -82.379226°.
- **Braden River South Branch** is a freshwater river that flows southwestward. The river branch runs under SR 70 through a box culvert. Field reviews show that the flow of this river branch appears to have been altered by excavation and surrounding land-use changes. It is located at Latitude: 27.424928° Longitude: -82.373180°.
- **Unnamed tributary to the Braden River** is an intermittent freshwater creek that flows southeastward to its confluence with the Braden River. The creek runs under SR 70 through a box culvert. Field reviews show that the flow of this creek has been altered due to channelization and surrounding land-use changes. It is located at Latitude: 27.409782° Longitude: -82.334479°.
- **Unnamed tributary to the Gum Slough** is an intermittent freshwater creek that flows southeastward to its confluence with the Gum Slough. The creek runs under SR 70 through a box culvert. Field reviews show that the flow of this creek has been altered due to channelization and surrounding land-use changes. It is located at Latitude: 27.401721° Longitude: -82.310289°.

As part of our environmental analysis, we are requesting a Sovereignty Submerged Lands determination for the above listed waterways. Please refer to the attached figures to facilitate your determination.

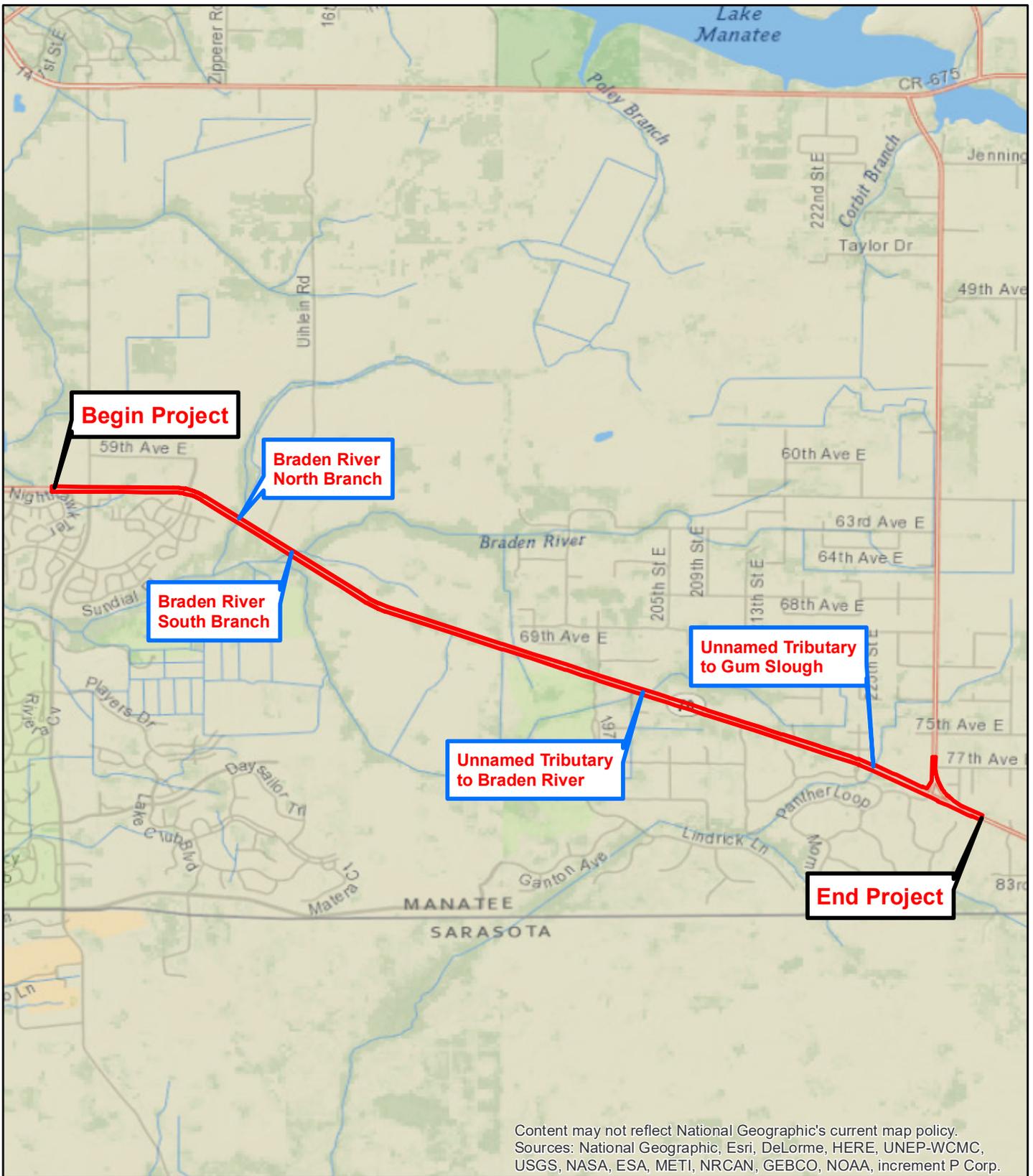
We appreciate your prompt response to this request for a Sovereignty Submerged Lands determination for the referenced channels. If you have any questions or require additional information, please contact me at [ashley.abdel-hadi@kisingercampo.com](mailto:ashley.abdel-hadi@kisingercampo.com) or 813.871.5331.

Sincerely,

  
Ashley Abdel-Hadi  
Environmental Scientist

Attachments: Project Location Map  
Project Quadrangle Map

cc. Files



Content may not reflect National Geographic's current map policy.  
 Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



**Legend**

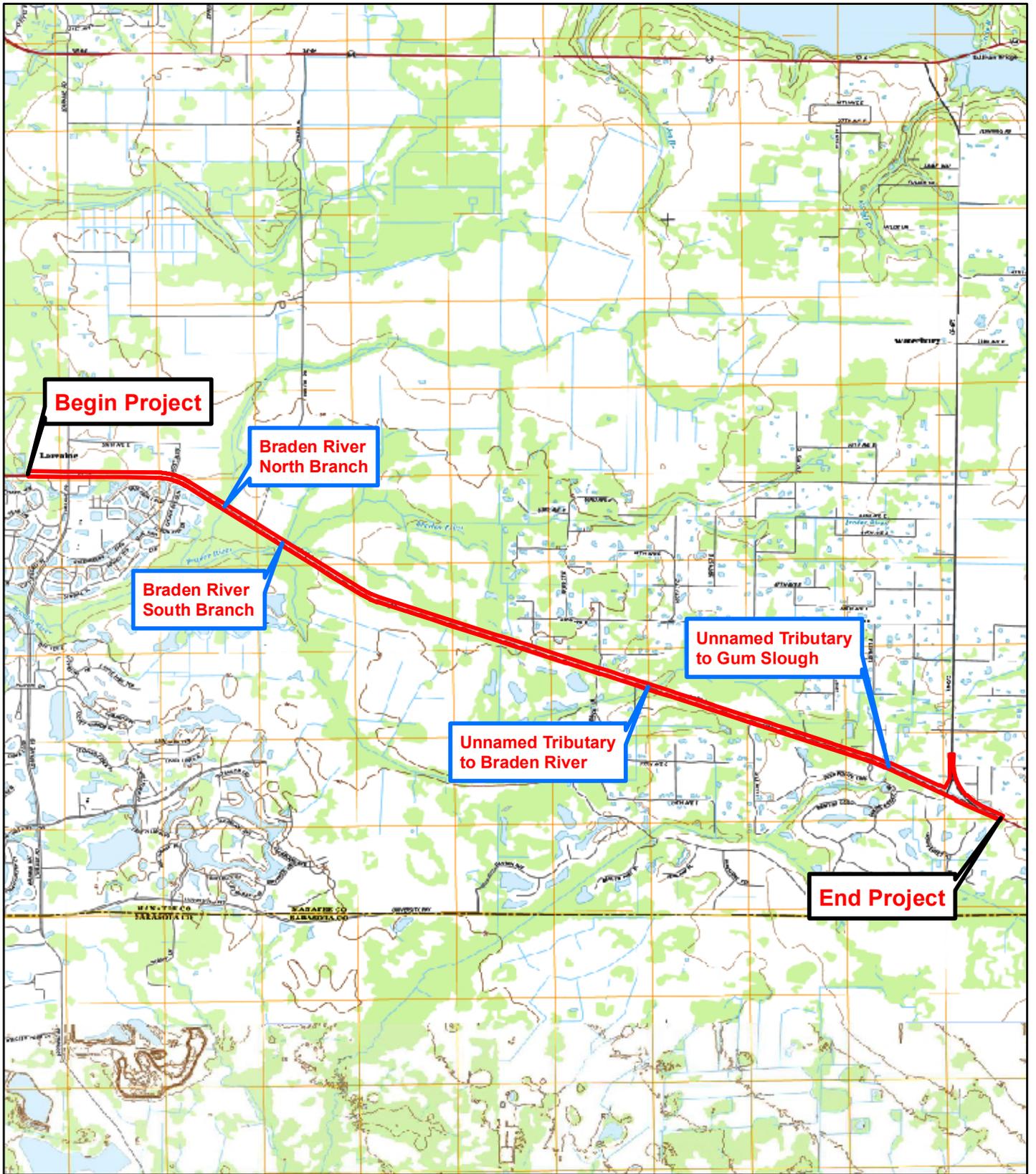
Project Area



**Project Location Map**  
**SR 70 from Lorraine Road**  
**to CR 675 (Waterbury Road)**  
**Manatee County, Florida**  
**FPID Number: 414506-2-22-01/414506-2-32-01**

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 Fax: 813/871-5135

Figure 1



**Begin Project**

**Braden River North Branch**

**Braden River South Branch**

**Unnamed Tributary to Gum Slough**

**Unnamed Tributary to Braden River**

**End Project**



**Legend**

 Project Area



**Project Quadrangle Map  
SR 70 from Lorraine Road  
to CR 675 (Waterbury Road)  
Manatee County, Florida**

**FPID Number: 414506-2-22-01/414506-2-32-01**

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Fax: 813/871-5135

**Figure 2**



## Florida Department of Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

Rick Scott  
Governor

Carlos Lopez-Cantera  
Lt. Governor

Noah Valenstein  
Secretary

July 6, 2018

Catie Neal  
Kisinger Campo Associates  
201 North Franklin Street, Suite 400  
Tampa, Florida 33602

Re: SR 70 crossings of Braden River and tributaries; Manatee County

Thank you for your inquiry requesting a determination of whether the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida owns the submerged lands of the Braden River and two unnamed tributaries located along the State Road 70 right-of-way between Lorraine Road and County Road 675. The crossings of interest are the two branches of the Braden River in Section 23, Township 35 South, Range 19 East, and two tributary canals located in Sections 28/33 and 29, Township 35 South, Range 20 East.

Currently, our records contain insufficient information to determine whether the submerged lands at these locations are state owned. Therefore, we would recommend that the proprietary requirements normally applied to state owned lands not apply to activities at these sites. However, regulatory requirements may still apply. You may contact Mike Lynch, Environmental Administrator, at the Department's Southwest District Office at [Mike.Lynch@FloridaDEP.gov](mailto:Mike.Lynch@FloridaDEP.gov), or (813) 470-5746.

If this office can be of any further assistance regarding this determination, please address your questions to Melanie Knapp, Program Consultant, mail station No. 108 at the above letterhead address, or by telephone at (850) 245-2801.

Sincerely,

A handwritten signature in blue ink that reads "Marcus J. Ashman".

Marcus J. Ashman, PSM, Program Manager  
Bureau of Survey and Mapping  
Division of State Lands

MJA/mjk  
F:\TITLE\MELANIE\1819-1\SR-70.docx