NATURAL RESOURCES EVALUATION TECHNICAL MEMORANDUM

Florida Department of Transportation

District Seven

US 41 (SR 45) at SR 54 PD&E Study

Pasco County, Florida

Work Program Item Segment Number: 419182-1

Efficient Transportation Decision Making (ETDM) Number: 7883

Date: April 2026

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 May 26, 2022 and executed by FHWA and FDOT.

US 41 (SR 45) at SR 54

Project Development and Environment (PD&E) Study

From South of the SR 54 Intersection to North of the SR 54 Intersection

Natural Resources Evaluation Technical Memorandum

Work Program Item Segment Number: 419182-1

Efficient Transportation Decision Making (ETDM) Number: 7883

Pasco County, Florida

April 2026

Executive Summary

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study to evaluate capacity and operational improvements at the intersection of United States (US) Highway 41/State Road (SR) 45 and State Road (SR) 54 in Pasco County, Florida. The project consists of modifying the US 41 at SR 54 intersection to a grade-separated interchange. Improvements will also include providing 10-foot sidewalks and seven-foot bicycle lanes in each direction along both US 41 and SR 54 to accommodate bicycles and pedestrians. The project includes the evaluation of stormwater management facilities (SMF) and floodplain compensation (FPC) sites.

This project was screened through the FDOT's Efficient Transportation Decision Making (ETDM) process as ETDM Project No. 7883. The ETDM Programming Screen Summary Report was published on December 7, 2012, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources.

This Natural Resources Evaluation (NRE) Technical Memorandum analyzes potential impacts to federal and state listed and protected species and their habitats, wetlands, and essential fish habitat (EFH). Identification of measures to avoid, minimize and mitigate any potential impacts is also discussed. This NRE Technical Memorandum documents the results of Geographic Information System (GIS) data, field reviews, coordination to date with regulatory agencies, including comments received through the ETDM process, and aerial interpretation for potential impacts to the resources listed above. Coordination is being conducted with federal and state agencies throughout the study process.

Protected Species and Habitat

The study area was assessed for the presence of suitable habitat for federal and/or state listed and protected species in accordance with: *50 Code of Federal Regulations (CFR) Part 402 of the Section 7 Endangered Species Act (ESA) of 1973, as amended; Chapter 5B-40 Preservation of Native Flora of Florida, Florida Administrative Code (F.A.C.); Chapter 68A-27: Rules Relating to Endangered or Threatened Species, F.A.C.;* and the *FDOT PD&E Manual*. **Section 3** includes details of the effect determinations summarized below.

Table ES-1: Federal, State, and Managed Species

Federally Listed Species				
Species	**Common Name**	**USFWS Status**	**Effect Determination**	**Potential for Occurrence**
Birds				
Aphelocoma coerulescens	Florida scrub-jay	T	No Effect	None
Laterallus jamaicensis	eastern black rail	T	No Effect	None
Rostrhamus sociabilis ssp. plumbeus	Everglade snail kite	E	No Effect	None
Reptiles				
Drymarchon couperi	eastern indigo snake	T	MANLAA	Moderate
Lampropeltis extenuatum	short-tailed snake	T	No Effect	Low
Mammals				
Perimyotis subflavus	tricolored bat	P (E)	MANLAA	Moderate
Insects				
Danaus plexippus	monarch butterfly	P (T)	N/A	Moderate
State Listed Species				
Species	**Common Name**	**FWC Status**	**Effect Determination**	**Potential for Occurrence**
Birds				
Falco sparverius paulus	southeastern American kestrel	T	No Effect Anticipated	None
Mycteria americana	wood stork	T	No Adverse Effect Anticipated	High
Ammodramus maritimus peninsulae	Scott's seaside sparrow	T	No Adverse Effect Anticipated	Moderate
Athene cunicularia floridana	Florida burrowing owl	T	No Effect Anticipated	None
Cistothorus palustris marianae	Marian's marsh wren	T	No Adverse Effect Anticipated	Moderate
Haematopus palliatus	American oystercatcher	T	No Effect Anticipated	None
Sternula antillarum	least tern	T	No Effect Anticipated	None
Egretta caerulea	little blue heron	T	Potential for Adverse Effects	High

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Egretta tricolor	tricolored heron	T	Potential for Adverse Effects	High
Grus canadensis pratensis	Florida sandhill crane	T	Potential for Adverse Effects	High
Reptiles				
Pituophis melanoleucus mugitus	Florida pine snake	T	No Adverse Effect Anticipated	Moderate
Gopherus polyphemus	gopher tortoise	T	No Adverse Effect Anticipated	Moderate
Plants				
Blechnum occidentale	hammock fern*	E	No Adverse Effect Anticipated	Low
Calopogon multiflorus	many-flowered grass-pink*	T	No Adverse Effect Anticipated	Low
Carex chapmanii	Chapman's sedge*	T	No Adverse Effect Anticipated	Low
Coelorachis tuberculosa	Florida jointgrass*	T	No Adverse Effect Anticipated	Low
Drosera intermedia	water sundew*	T	No Adverse Effect Anticipated	Low
Hexalectris spicata	spiked crested coralroot*	E	No Adverse Effect Anticipated	Low
Lilium catesbaei	Catesby's lily*	T	No Adverse Effect Anticipated	Low
Lobelia cardinalis	cardinal flower*	T	No Adverse Effect Anticipated	Low
Cheiroglossa palmata	hand fern*	E	No Adverse Effect Anticipated	Low
Glandularia tampensis	Tampa mock vervain*	E	No Adverse Effect Anticipated	Low
Litsea aestivalis	pondspice*	E	No Adverse Effect Anticipated	Low
Pinguicula caerulea	blueflower butterwort*	T	No Adverse Effect Anticipated	Low
Pinguicula lutea	yellow butterwort*	T	No Adverse Effect Anticipated	Low
Platanthera ciliaris	yellow fringed orchid*	T	No Adverse Effect Anticipated	Low

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Platanthera cristata	crested yellow orchid*	T	No Adverse Effect Anticipated	Low
Platanthera flava	southern tubercled orchid*	T	No Adverse Effect Anticipated	Low
Platanthera nivea	snowy orchid*	T	No Adverse Effect Anticipated	Low
Pogonia ophioglossoides	rose pogonia*	T	No Adverse Effect Anticipated	Low
Sacoila lanceolata var. lanceolata	leafless beaked ladiestresses*	T	No Adverse Effect Anticipated	Low
Sarracenia minor	hooded pitcherplant*	T	No Adverse Effect Anticipated	Low
Spiranthes laciniata	lacelip ladiestresses*	T	No Adverse Effect Anticipated	Low
Tricerma phyllanthoides	Florida mayten*	T	No Adverse Effect Anticipated	Low
Zephyranthes atamasca var. treatiae	Treat's zephyr lily*	T	No Adverse Effect Anticipated	Low
Nemastylis floridana	celestial lily*	E	No Adverse Effect Anticipated	Low
Pecluma ptilodon var. bourgeauana	comb polypody*	E	No Adverse Effect Anticipated	Low
Asplenium auritum	auricled spleenwort	E	No Adverse Effect Anticipated	Low
Centrosema arenicola	pineland butterfly pea	E	No Adverse Effect Anticipated	Low
Dendrophylax porrectus	needleroot airplant orchid	T	No Adverse Effect Anticipated	Low
Garberia heterophylla	garberia	T	No Adverse Effect Anticipated	Low
Myrcianthes fragrans	twinberry	T	No Adverse Effect Anticipated	Low
Monotropsis reynoldsiae	pygmy pipes	E	No Adverse Effect Anticipated	Low
Opuntia stricta	erect pricklypear	T	No Adverse Effect Anticipated	Low

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Tillandsia utriculata	giant airplant	E	No Adverse Effect Anticipated	Low
Pecluma dispersa	widespread polypody	E	No Adverse Effect Anticipated	Low
Pecluma plumula	plume polypody	E	No Adverse Effect Anticipated	Low
Managed Species				
Species	**Common Name**	**Protected By**	**Effect Determination**	**Potential for Occurrence**
Birds				
Haliaeetus leucocephalus	bald eagle	BGEPA and MBTA	Potential for Impacts	High
Pandion haliaetus	osprey	MBTA	No Adverse Impacts	High
Mammals				
Ursus americanus floridanus	Florida black bear	F.A.C 68A-4.009 BCR	No Adverse Impacts	Moderate
Ranking: P (T) – Proposed Threatened, P (E) - Proposed Endangered E - Endangered, T – Threatened, *Wetland plant species				

USFWS Critical Habitat

The study area was evaluated for Critical Habitat in accordance with *50 CFR 17* and the *FDOT PD&E Manual*. Review of the US Fish and Wildlife Service's (USFWS) available GIS data resulted in the identification of no Critical Habitat within the study area. Any future modifications to the project design are subject to revaluation of critical habitat in the area.

Wetland and Other Surface Water Evaluation

Wetlands and other surface waters were classified based on the National Wetland Inventory (NWI), Florida Land Use, Cover & Forms Classification System (FLUCFCS), and the USFWS guidelines. There are forested and non-forested wetlands within the study area which were field verified by project scientists in February 2024. Based on the Preferred Alternative, the project would result in approximately 0.90 acres of wetland and 9.12 acres of other surface water impacts.

Pursuant to *Executive Order 11990* entitled Protection of Wetlands, the US Department of Transportation (USDOT) has developed a policy, *Preservation of the Nation's Wetlands (USDOT Order 5660.1A)*, dated August 24, 1978, which requires all federally funded highway projects to fully protect wetlands. Wetland mitigation options include purchase of wetland mitigation credits through an approved mitigation bank, or creation, restoration, or enhancement of wetlands within the project watersheds. Wetland impacts which will result from the construction of this project will be mitigated pursuant to *Section 373.4137, Florida Statutes (F.S.),* to satisfy all mitigation requirements of *Part IV of Chapter 373, F.S., and 33 U.S.C. § 1344*.

Table ES-2: Potential Wetland and Surface Water Impacts

Wetland/ Surface Water ID	FLUCFCS Classification	FLUCFCS Description	NWI Classification	Impact Acreage
Wetlands				
WL 1	6210	Cypress	PEM1F	0.04
WL 2, 3, 4, & 6	6300	Wetland Forested Mixed	PSS1F/PSS7C	0.86
			Total Wetland Impacts	**0.90**
Surface Waters				
SW 1, 2, 3, 4, & 5	5300	Reservoirs	-	9.12
			Total Surface Water Impacts	**9.12**
			Total Wetland and Surface Water Impacts	**10.02**

Essential Fish Habitat

This study was evaluated for Essential Fish Habitat (EFH) in accordance with the requirements of the *Magnuson-Stevens Fishery Conservation and Management Act of 1996 (MSA)* and the *FDOT PD&E Manual*. Based on the location of the project, comments received from National Marine Fisheries Service (NMFS) and field review, the project will not be involved with EFH.

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APPENDICES

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1.0 Introduction

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study to evaluate capacity and operational improvements at the intersection of United States (US) Highway 41/State Road (SR) 45 and State Road (SR) 54 in Pasco County, Florida. The project consists of modifying the US 41 at SR 54 intersection to a grade-separated interchange. Improvements will also include providing 10-foot sidewalks and seven-foot bicycle lanes in each direction along both US 41 and SR 54 to accommodate bicycles and pedestrians. The project includes the evaluation of stormwater management facilities (SMF) and floodplain compensation (FPC) sites. The project is located in the census designated place of Land O' Lakes. US 41 is a major north-south arterial that provides access to Tampa, Lutz, Land O' Lakes, and Brooksville. SR 54 is a major east-west arterial that connects US 19 near New Port Richey to the west and US 301 in Zephyrhills to the east. Within the project limits, US 41 is a six-lane, divided roadway with curb and gutter and a six-foot sidewalk along the east side of the road. Near the intersection, SR 54 is a six-lane, divided roadway with curb and gutter with a four-foot bicycle lane and a six to eight-foot sidewalk on both sides of the travel lanes immediately adjacent to the roadway. US 41 is functionally classified by FDOT as an urban principal arterial with an existing posted speed limit of 50 miles per hour (mph). Near the US 41 intersection, SR 54 is functionally classified by FDOT as an urban principal arterial with an existing posted speed limit of 45 miles per hour (mph). The Project Location Map is shown in **Figure 1-1.**

This project was screened through the FDOT's Efficient Transportation Decision Making (ETDM) process as ETDM Project No. 7883. The ETDM Programming Screen Summary Report was published on December 7, 2012, containing comments from the Environmental Technical Advisory Team (ETAT) on the project's effects on various natural, physical, and social resources. A Type 2 Categorical Exclusion is the class of action for this PD&E study.

1.1 Report Purpose

This NRE Technical Memorandum documents existing federal and state listed and protected faunal and floral species resources and habitat types found within the study area, and the potential for occurrences of these species and their suitable habitat, in accordance with: 50 Code of Federal Regulation (CFR) Part 402 of the ESA of 1973, as amended; Chapters 5B-40 and 68A-27, Florida Administrative Code (F.A.C.); and the FDOT PD&E Manual. Potential impacts to EFH were evaluated in accordance with the requirements of the Magnuson-Stevens Fishery Conservation

and Management Act of 1996 (MSA) and FDOT PD&E Manual. Potential impacts to protected habitats that may support these species are also addressed in this report.

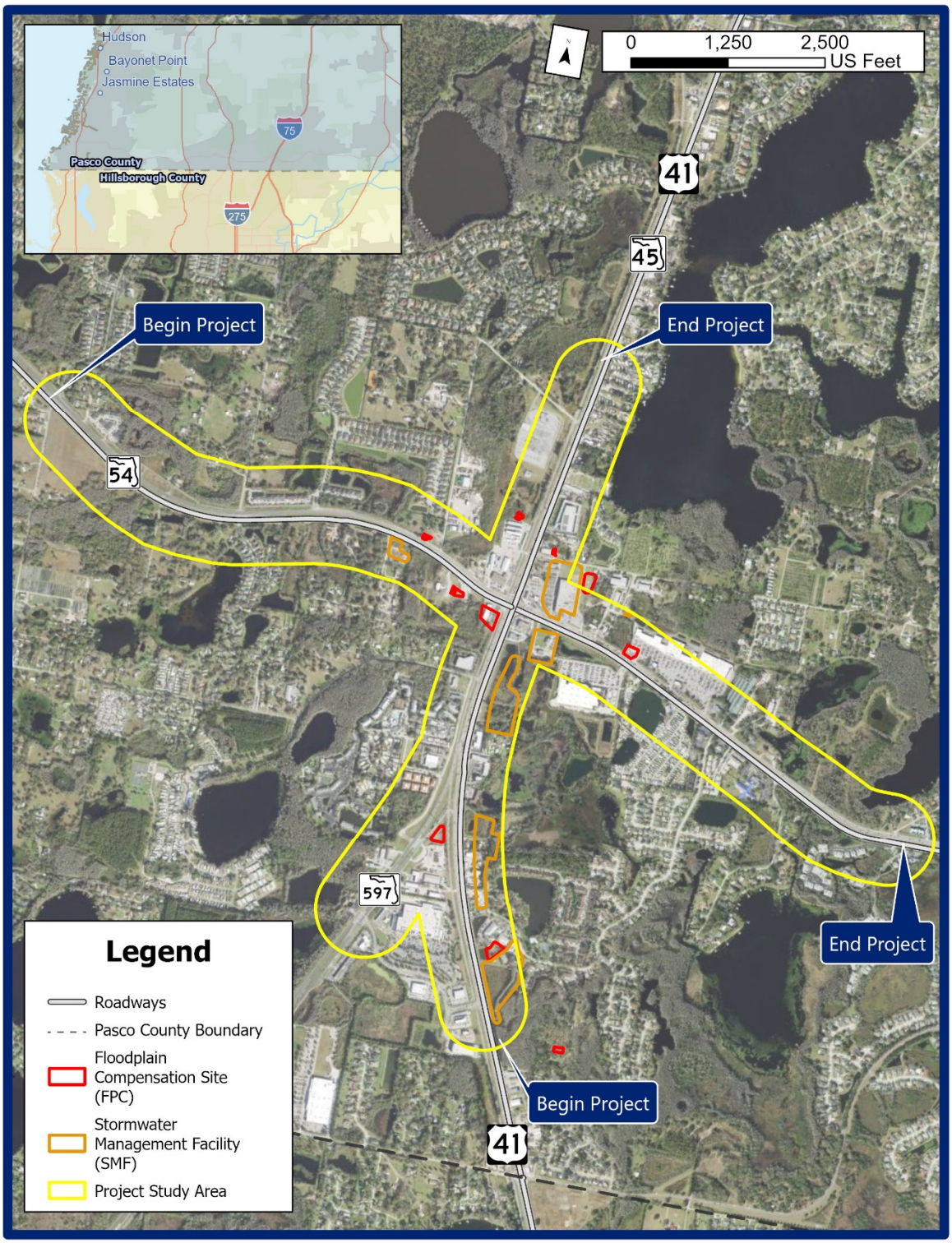

Figure 1-1: Project Location Map

This report also documents the proposed project's involvement with wetlands and other surface waters. Pursuant to Presidential Executive Order 11990 entitled Protection of Wetlands, (May 1977) the US Department of Transportation (USDOT) has developed a policy, Preservation of the Nation's Wetlands (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally funded highway projects to protect wetlands to the fullest extent possible. In accordance with this policy, as well as the FDOT PD&E Manual, a No-Build and Preferred Alternative were assessed to determine potential impacts to wetlands and other surface waters associated with each alternative.

1.2 Existing Facility

The typical sections of each of these roadways include three through lanes with two left turn lanes, and one right turn lane in all directions approaching the US 41/SR 54 intersection.

US 41 consists of two, 12-foot lanes and a single 14-foot lane with Type F curb and gutter on the outside in each direction separated by a grass raised median of varying width with Type E curb and gutter. The facility includes a six-foot sidewalk on the east side of the travel lanes, and a CSX railroad line on the west side of the travel lanes. ROW width in this section of US 41 is a minimum of 156 feet. No bicycle lanes are provided (see **Figure 1-2)**.

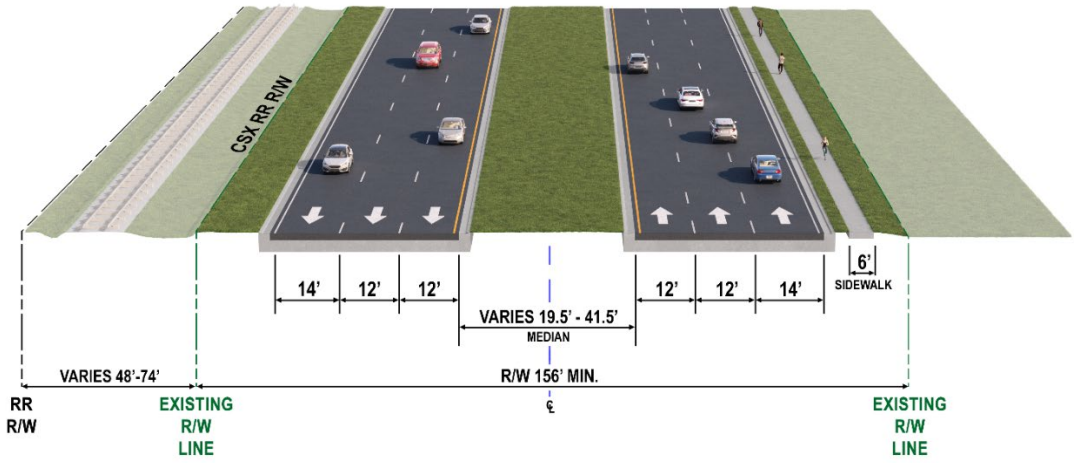

Figure 1-2: Existing Typical Section - US 41

Near the intersection of US 41, SR 54 is a six-lane divided facility with three 12-foot lanes in each direction separated by a 37.5-foot raised grass median with Type E curb and gutter. A six to eight-foot sidewalk is located on the north and south sides of the travel lanes immediately adjacent to

the roadway, along with Type F curb and gutter. A four-foot bike lane is located in each direction. ROW width for this section of SR 54 is approximately 141.5 feet (see **Figure 1-3**).

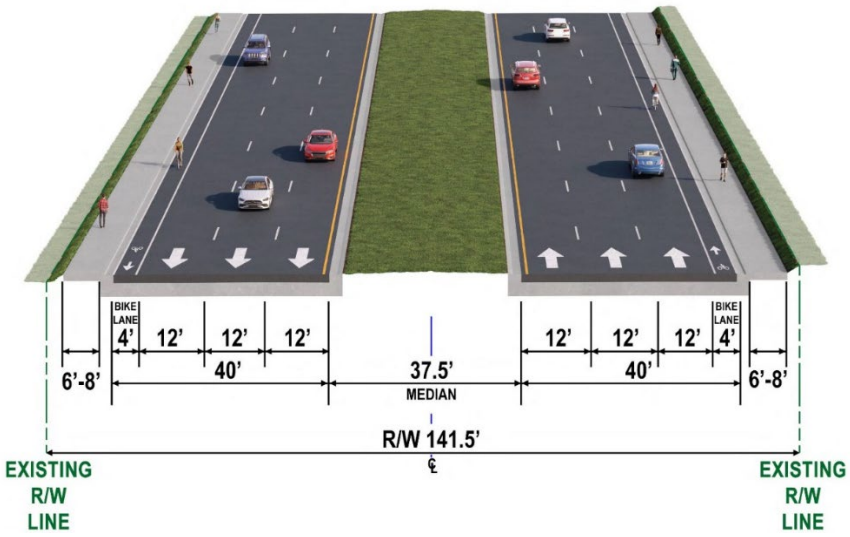

Figure 1-3: Existing Typical Section - SR 54 East and West of US 41 (Near Intersection)

Approximately one-half mile east of US 41, SR 54 consists of three 12-foot travel lanes, an eight-foot unpaved inside shoulder and an eight-foot paved outside shoulder with shoulder gutter, and five-foot sidewalks in each direction separated by a 49-foot depressed grass median. ROW width for this section of SR 54 is a minimum of 138 feet (see **Figure 1-4**).

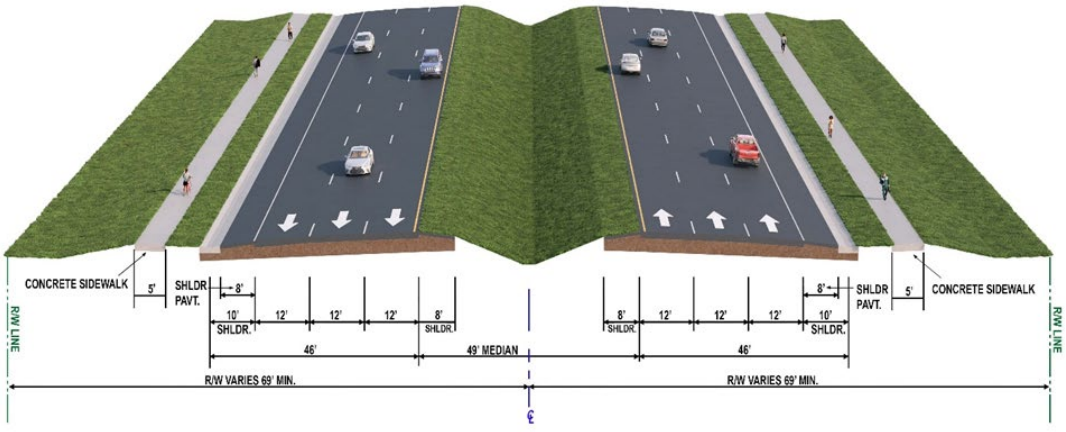

Figure 1-4: Existing Typical Section – SR 54 One – Half Mile East of 41

Approximately one-half mile west of US 41, SR 54 includes three 12-foot travel lanes, an eight-foot unpaved inside shoulder and a 10-foot outside shoulder including a paved five-foot bicycle lane, and five-foot sidewalks in each direction separated by an approximate 48-foot depressed grass median. The ROW width for this section of SR 54 is a minimum of 250 feet (see **Figure 1-5**).

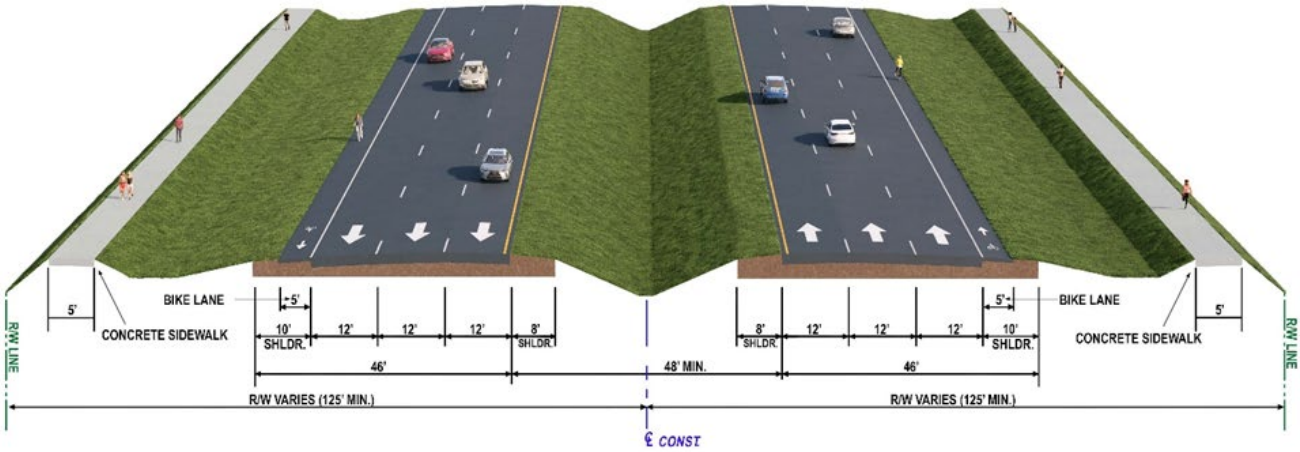

Figure 1-5: Existing Typical Section – SR 54 One – Half Mile West of US 41

1.3 Preferred Alternative

The Preferred Alternative, with Concept Plans shown in **Appendix A**, is a DDI with US 41 elevated over SR 54 and SR 597 (Dale Mabry Highway).

At SR 54, US 41 will carry two lanes in each direction over SR 54 via a single bridge. The bridge will be expandable to three lanes in each direction for future traffic demand. Two lane exit ramps from US 41 in each direction will connect to SR 54. The northbound and southbound exit ramps will widen to two left turn lanes and two right turn lanes at the at-grade intersection with SR 54. Along SR 54, the westbound lanes will widen from three lanes to five lanes after the signalized intersection at the Village Lakes Shopping Plaza/Lowe's driveway. The five lanes will enter the first crossover intersection of the DDI. Prior to the first crossover intersection, a sixth lane will be developed for right turns only to northbound US 41. Of the five lanes entering the first crossover intersection, the inside lane will be a left turn only lane and the adjacent lane will be a shared left/through lane. The remaining three lanes will be through lanes. Four lanes will enter the 2nd

crossover intersection. After the 2nd crossover intersection, the inside lane will merge and end. Three lanes will continue westbound to match existing conditions.

Similarly, the eastbound lanes will widen from three lanes to five lanes as they approach the interchange. The five lanes will enter the first crossover intersection of the DDI. Prior to the crossover intersection, a sixth lane will be developed for right turns only to southbound US 41. Of the five lanes entering the first crossover intersection, the inside lane will be a left turn only lane and the adjacent lane will be a shared left/through lane. The remaining three lanes will be through lanes. Four lanes will enter the 2nd crossover intersection. After the 2nd crossover intersection, the outside lane will become a right turn only lane at the signalized intersection at the Village Lakes Shopping Plaza/Lowe's driveway. Three lanes will continue eastbound to match existing conditions.

A new roadway connection will be provided between Carson Drive and SR 54, east of US 41. From Carson Drive, the new connection will use the existing Raden Drive alignment before turning east towards the Village Lakes Shopping Plaza. The roadway will then connect to the existing signalized intersection of SR 54 at the Village Lakes Shopping Plaza/Lowe's driveway. This new roadway connection will require ROW acquisition to make the roadway available for public use.

At SR 597 (N. Dale Mabry Highway), northbound US 41 will carry two lanes over SR 597 (N. Dale Mabry Highway) via a bridge. Southbound US 41 will carry three lanes over SR 597 (N. Dale Mabry Highway) via a separate bridge. The third lane will come from SR 54 via a single lane southbound slip ramp. For the southbound direction, ramps are provided from SR 54 to southbound US 41 and southbound SR 597 (N. Dale Mabry Highway). For the northbound direction of US 41, the two-lane exit ramp from US 41 to SR 54 will form a signalized intersection at SR 597 (N. Dale Mabry Highway). The signal will manage the traffic from northbound US 41 to SR 54 and northbound SR 597 (N. Dale Mabry Highway) to SR 54. This intersection will allow a northbound US 41 to southbound US 41 U-turn via a "Texas U-turn". Traffic from northbound SR 597 (N. Dale

Mabry Highway) to northbound US 41 will utilize a free flow ramp and merge onto US 41 south of the bridge over SR 54.

The existing CSX rail crossings at SR 54 and SR 597 (N. Dale Mabry Highway) will be modified to accommodate roadway improvements.

Figure 1-6 shows the proposed US 41 typical section. US 41 provides three 12-foot through lanes in each direction, seven-foot bike lanes in each direction, and 10-foot sidewalks in each direction. A 22-foot-wide grass median separates the southbound and northbound lanes. The proposed ROW width is 171 feet. A CSX rail in a separate ROW corridor is located on the west side of US 41.

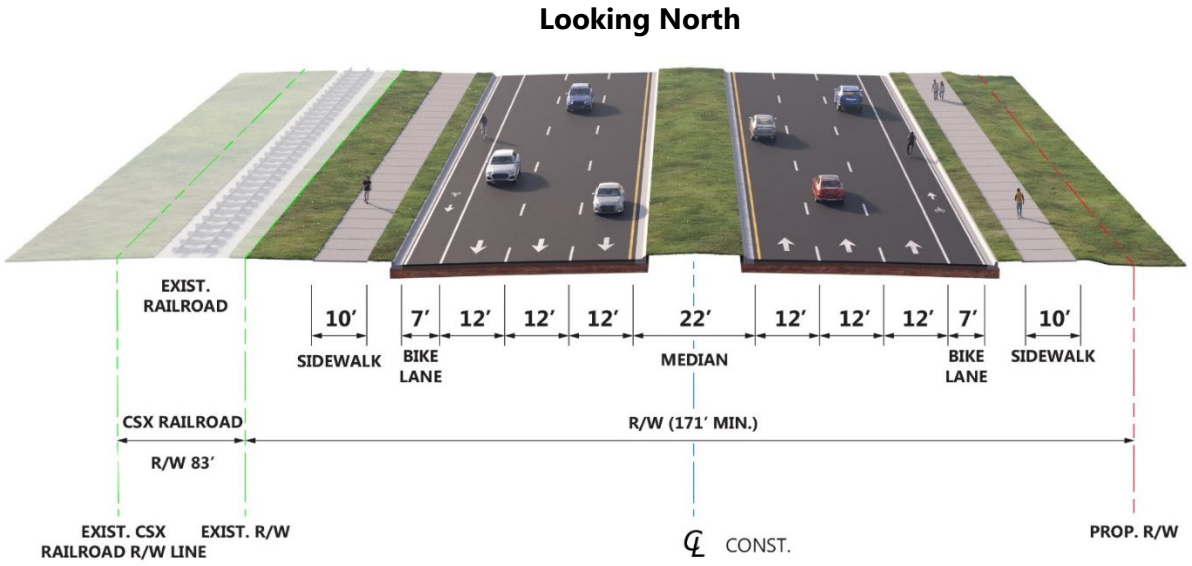

Figure 1-6: Proposed Typical Section - US 41

Figure 1-7 shows the proposed SR 54 typical section. SR 54 provides three 12-foot lanes with one 12-foot auxiliary lane in each direction, seven-foot bike lanes in each direction, and 10-foot sidewalks in each direction. A grass median of varying width separates the eastbound and westbound lanes. The maximum proposed ROW width is 286 feet.

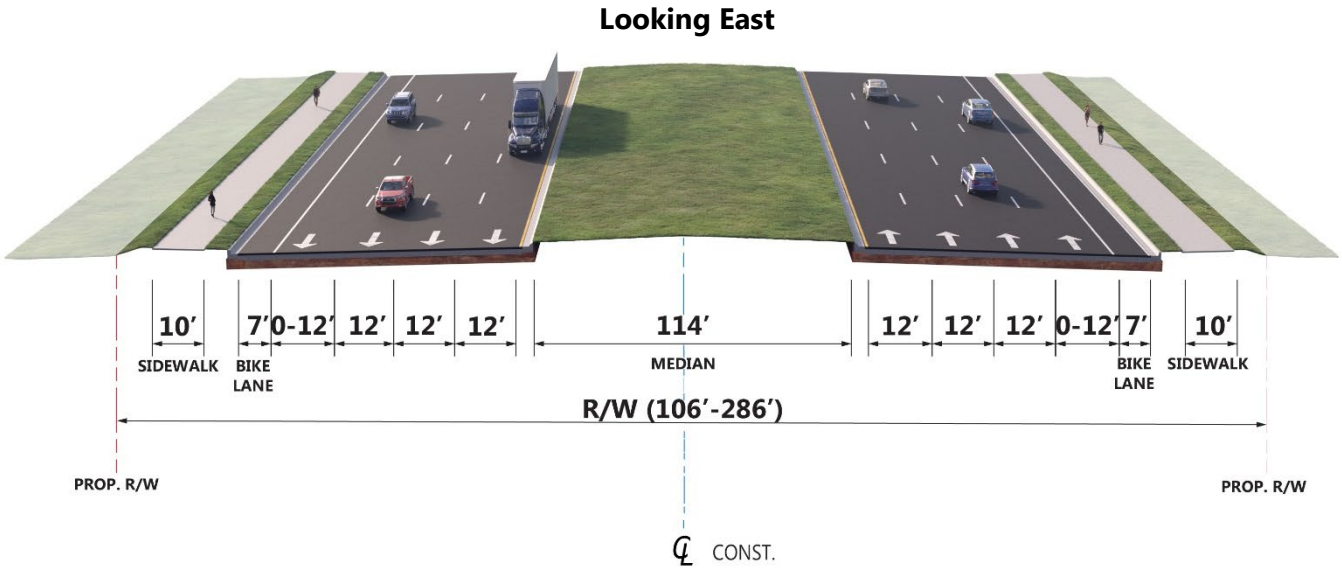

Figure 1-7: Proposed Typical Section - SR 54

Figure 1-8 shows the proposed typical section for the US 41 bridge over the SR 54 intersection. The bridge provides two 12-foot lanes and a 10-foot outside shoulder in each direction, separated by a 43′-4″ wide raised median. The bridge is expandable to three lanes in each direction.

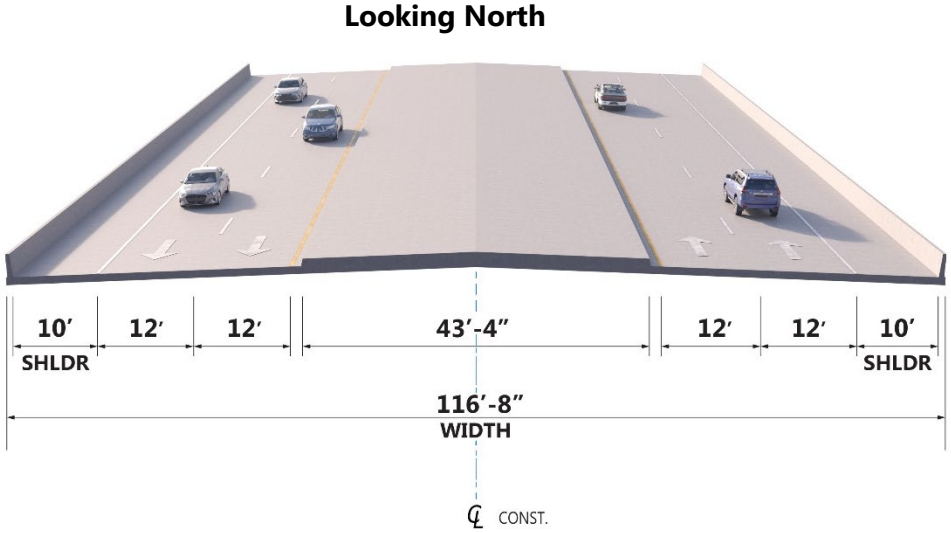

Figure 1-8: Proposed US 41 Bridge Typical Section

Figure 1-9 shows the proposed typical section for the southbound US 41 bridge over SR 597. The bridge provides three 12-foot lanes, a 10-foot inside shoulder, and a 10-foot outside shoulder.

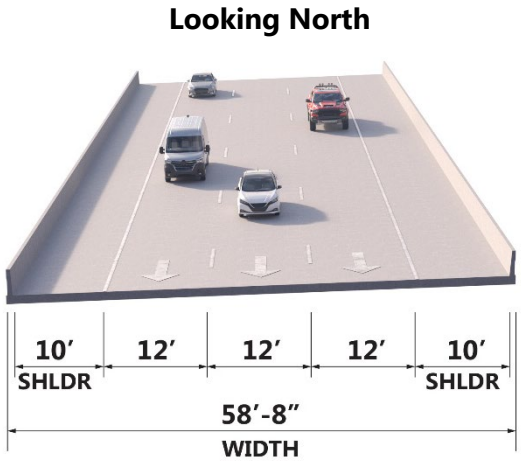

Figure 1-9: Proposed Southbound US 41 Bridge over SR 597 Typical Section

Figure 1-10 shows the proposed typical section for the northbound US 41 bridge over SR 597. The bridge provides two 12-foot lanes, an 8-foot inside shoulder, and a 10-foot outside shoulder.

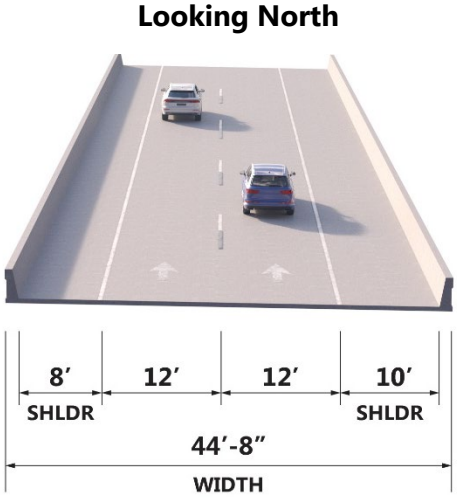

Figure 1-10: Proposed Northbound US 41 Bridge over SR 597 Typical Section

The proposed Preferred Stormwater Management Facility (SMF) and Floodplain Compensation (FPC) sites are located along US 41 and SR 54 (**Appendix A**). The selection of SMF and FPC sites were evaluated on several factors such as potential flood plain and wetland impacts, soil types, basins, and parcels impacted. All avoidance and minimization measures were considered in the selection of the preferred alternative.

1.4 Study Area

The limit of disturbance for the proposed improvements, including the SMFs and FPC sites, is referred to as the project action throughout the report. To evaluate land use, a buffer of 500-feet was used from the centerline of US 41 and SR 54. The project action area with the buffer is referred to as the study area, as defined by *50 CFR § 402.02*.

2.0 Existing Environmental Conditions

This section presents a description of existing conditions within the study area, including soil and land use cover types.

2.1 Existing Land Use

The land uses and vegetative covers within and adjacent to the study area were classified using FDOT's Florida Land Use, Cover and Forms Classification System (FLUCFCS). FLUCFCS data, aerial photographs, and additional wetland data from the National Wetlands Inventory (NWI) were utilized to determine current land uses and habitat types within the study area. Field investigations were conducted by environmental scientist's familiar with central Florida natural communities in February 2024. These pedestrian surveys focused on the remaining natural communities within the study area; in particular, on natural communities known to support listed plant and wildlife species.

Project biologists researched publicly accessible databases of federal, state, and local government agencies to gather information on known sightings of listed species and important habitats in Pasco County. These agencies included the US Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FWC), Florida Natural Areas Inventory (FNAI), and Southwest Florida Water Management District (SWFWMD). Other sources of area-specific information included the Environmental Screening Tool (EST), and the Florida Native Plant Society.

To assess the approximate locations and boundaries of existing wetland and upland communities within the study area, the following site-specific data was collected and reviewed:

- Aerial photographs, (scale 1" = 2,500') ESRI 2020 and Pasco County Property Appraiser 2025;
- Florida Association of Environmental Soil Scientists, Hydric Soils of Florida Handbook, 4th ed., (Hurt et al. 2007);
- FDOT, FLUCFCS Handbook, 3rd ed., January 1999.
- SWFWMD, FLUCFCS GIS Database, (SWFWMD 2016);
- US Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), Soil Survey of Osceola County, Florida, 1979 and 2021;
- USDA, NRCS Web Soil Survey, (July 2023);

The study area, located in Pasco County, is mostly developed consisting of commercial services and low, medium, and high-density residential areas (**Table 2-1**). Aerial maps depicting existing land uses and habitats within the study area are provided in **Appendix B**

Table 2-1: Existing Land Use and Cover Types

FLUCFCS Classification	FLUCFCS Description	Acres in Study Area	Percentage of Study Area
1100	Residential Low Density, <2 dwelling units/acre	46.8	7.5%
1200	Residential Medium Density, 2 To 5 dwelling units/acre	26.5	4.3%
1300	Residential High Density	63.7	10.2%
1400	Commercial and Services	171.3	27.5%
1500	Industrial	11.8	1.9%
1700	Institutional	3.8	0.6%
1900	Open Land	21.5	2.5%
2100	Cropland and Pastureland	14.4	2.3%
3200	Shrub and Brushland	3.3	0.5%
4110	Pine Flatwoods	1.7	0.3%
4340	Upland Hardwood - Coniferous Mix	7.6	1.2%
5100	Streams and Waterways	2.4	0.4%
5200	Lakes	20.8	3.3%
5300	Reservoirs	16.1	2.6%
6150	Stream and Lake Swamps (bottomland)	2.1	0.3%
6210	Cypress	33.9	5.4%
6300	Wetland Forested Mixed	24.3	3.9%
6400	Vegetated Non-Forested Wetlands	0.1	0.2%
6410	Freshwater Marshes	36.2	5.8%
8100	Transportation	112.6	19.1%
8200	Communications	1.4	0.2%
	Study Area Total	**622.2**	**100.0%**

2.2 Existing Upland Habitats

Land use within the study area is primarily commercial services with scattered low, medium, and high-density suburban development as well as some upland hardwood forest. There is very limited habitat within the study area, with narrow low diversity patches with wide swaths of commercial and high density residential, and high-volume roadways. The upland communities are classified according to FLUCFCS. Field reviews, conducted in January 2024, confirmed vegetation community types and any potential for occurrence of protected plant and wildlife species. The land cover communities identified are described as follows

Residential Low Density, <2 dwelling units/acre (1100)
This classification includes low-density rural areas characterized by a relatively small number of homes per acre. There are several low-density single-family residential homes within the study area, primarily located along SR 54 and the northern portion of US 41.

Residential Medium Density, 2 To 5 dwelling units/acre (1200)
There are several medium density residential communities within the study area, located along SR 54 and US 41. These communities consist of single-family homes and mobile homes.

Residential High-Density (1300)
There are several high-density residential communities within the study area, located along SR 54 and US 41. These communities consist of single-family homes, mobile homes, RV parks, and multi-family communities.

Commercial and Services (1400)
This land use classification makes up the largest percentage of the study area. The study area is heavily developed with office buildings, shopping centers, commercial developments, stores, gas stations, and dining facilities.

Industrial (1500)
There are two parcels classified as industrial within the study area. Tibbets Lumber Company is in the northwest corner of the US 41 and SR 54 intersection. There is a vacant parcel located in the southern portion of the study area (between Dale Mabry Highway and US 41) that appears to be the former site of Cemex.

Institutional (1700)
There are several churches within the study area, including Willow Bend Community Church, Keystone Community Church, and Assembly of God. These churches are located along SR 54, to the west of the US 41 and SR 54 intersection. Morton Plant North Bay Hospital is located south of US 54 and east of Osprey Lane.

Open Land (1900)
This classification includes undeveloped land within urban areas and inactive land with street patterns but without structures. There are several parcels classified as open land within the study

area. These areas consist mostly of maintained and mowed fields with sparse vegetation. The largest area of open land is located to the north of the US 41 and SR 54 intersection and south of Morgan Road. The Duke Energy electrical power facility is surrounded by this classification.

Cropland and Pastureland (2100)
This classification includes agricultural land which is managed to produce row or field crops and improved, unimproved and woodland pastures. This classification was preexisting, but it is now currently under construction.

Shrub and Brushland (3200)
This classification includes saw palmettos (*Serenoa repens*), gallberry (*Ilex glabra*), wax myrtle (*Morella cerifera*), and other shrubs and brush. There is one area north of SR 54 that is classified as shrub and brushland. This area is partially mowed and maintained in the center and surrounded by thick shrub vegetation on both sides.

Pine Flatwoods (4110)
This classification is dominated by either slash pine, longleaf pine or both and less frequently pond pine. There are two areas southeast of the US 41 and SR 54 intersection that are classified as pine flat woods. These areas are heavily vegetated with slash (*Pinus elliottii*) pine.

Upland Hardwood - Coniferous Mix (4340)
This classification is reserved for those forested areas in which neither upland conifers nor hardwood achieve a 66% crown canopy dominance. There are several areas along the western and eastern side of US 41 that are classified as upland hardwood. These areas are forested with a variety of vegetation.

Transportation (8100)
This land use classification makes up the second largest percentage of the study area and includes airports, railroads, bus and truck terminals, roads and highways, port facilities, canal and locks, oil, water or gas long distance transmission lines, auto parking facilities, transportation facilities under construction, and communications. Within the study area, there are several major roadways and highways, including SR 54, US 41, and Dale Mabry Highway. The CSX railroad is located along the western portion of US 41 within the study area.

Communications (8200)
This classification includes transmission towers, communications facilities, communications facilities under construction, and utilities. The Duke Energy electrical power facility is located to the north of the US 41 and SR 54 intersection and south of Morgan Road.

2.3 Existing Wetland and Other Surface Water Habitats

Wetlands and other surface waters were identified adjacent to or within the ROW, as well as the preferred SMF and FPC sites. Most of the wetlands are herbaceous systems consisting of freshwater marshes and forested wetlands. Wetlands and other surface waters that have the

potential to be impacted by the proposed project improvements have been classified by the FLUCFCS codes as well as the USFWS's Wetlands and Deepwater Habitats Classifications. Representative site photographs can be found in **Appendix C**, and a detailed wetland and other surface water maps depicting the anticipated impacts, which include the preferred SMF and FPC sites, can be found in **Appendix D**.

Streams and Waterways (5100)

There are several linear ditches along SR 54 that serve as a drainage feature during high water events. The vegetation that can be found within and around these linear ditches are bahia grass (*Paspalum notatum*) and marsh pennyworts (*Hydrocotyle* spp.).

Lakes (5200)

This classification includes inland water bodies, excluding reservoirs. Any islands within these lakes that are too small to map separately are included as part of the water area. Vegetation commonly found in and around the lakes includes live oak (*Quercus virginiana*), slash pine (*Pinus elliottii*), floating bladderwort (*Utricularia* spp.), and marsh pennywort. Three such features occur within the study area.

Reservoirs (5300)

Reservoirs are artificial impoundments, such as stormwater ponds and sumps. There are nine such features within the study area, five of which (SW1–SW5) may be impacted by the preferred alternative. Although impacts may occur, these features are typically exempt from wetland mitigation if they are man-made and less than one acre in size, or if they function as permitted stormwater treatment areas. One of these features, "Denim Pond," is an FDOT stormwater treatment area. The southern portion of Denim Pond was planted with appropriate wetland vegetation in 2008 through Pasco County's Adopt-A-Pond Program. According to SWFWMD's monitored-site database, this pond is associated with Environmental Resource Permit (ERP) No. 12854.1.

Stream and Lake Swamps (bottomland) (6150)

This community, often referred to as bottomland or stream hardwoods—typically occurs along rivers, creeks, and lake floodplains or overflow areas, though it is not limited to these settings. It is characterized by a diverse mix of hardwood species, with common components including red maple (*Acer rubrum*), water oak (*Quercus nigra*), sweetgum (*Liquidambar styraciflua*), water hickory (*Carya aquatica*), buttonbush (*Cephalanthus occidentalis*), bald cypress (*Taxodium distichum*), and slash pine. The project is not anticipated to impact this wetland community.

Cypress (6210)

There are several cypress-dominated communities within the study area. Vegetation found within these wetlands consists of bald cypress, Carolina willow (*Salix caroliniana*), primrose willow (*Ludwigia peruviana*), Brazilian pepper tree (*Schinus terebinthifolia*) and red maple. These wetlands have been altered by nearby development, allowing nuisance species such as primrose willow and Brazilian pepper to invade. The project is anticipated to impact a small portion of this habitat (WL 1).

Wetland Forested Mixed (6300)

There are five (5) wetland forested mixed systems within the study area. Vegetation in these wetland areas consists of a mix of large shrubs and small trees such as Carolina willow, cypress, red maple, and wax myrtle. These wetlands have been affected by adjacent activities such as maintenance of power line easements and landscaping. There are several such features located within the project limits (WL 1, 2, 3, 4 and 5).

Vegetated Non-Forested Wetlands (6400)

This classification includes marshes and seasonally flooded basins and meadows. These communities are usually confined to relatively low lying areas. The vegetation found within these vegetated non-forested wetlands consists of soft rush (*Juncus effusus*), sawgrass (*Cladium jamaicense*), cattail (*Typha latifolia*), and marsh pennywort. It is anticipated that the project will not impact this classification type.

Freshwater Marsh (6410)

There are several freshwater marshes located throughout the study area. This wetland type is characterized by the presence of Cuban bulrush (*Cyperus blepharoleptos*), maidencane (*Panicum hemitomon*), arrowhead (*Sagittaria lancifolia*), and cattail. There are two such features within the project limits (WL 4 and 6).

2.4 Soils

Based on the Soil Survey of Pasco County, Florida, the study area is comprised of 12 soil types within the 500-foot right-of-way buffer of the project limits (study area). **Appendix E** provides an aerial map depicting the boundaries of each soil type within the study area. According to the NRCS Web Soil Survey, five (5) soil types are classified as hydric soils in the study area and seven (7) are listed as non-hydric. Mapped hydric soil comprises approximately 62.4 percent and non-hydric 31.4 percent of the study area. Open water, classification name Water, comprises approximately 6.2 percent of the study area.

Table 2-2: NRCS Soil Types Within Study Area

Map Unit Symbol	Map Unit Soil Name	Acres in Study Area	Percentage of Study Area
5	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes*	219.4	35.3%
6	Tavares sand, 0 to 5 percent slopes	15.3	2.5%
8	Sellers mucky loamy fine sand	94.5	15.2%
11	Adamsville fine sand, 0 to 2 percent slopes*	139.6	22.4%
21	Smyrna fine sand	48.8	7.8%
23	Basinger fine sand, depressional, 0 to 1 percent slopes*	1.2	0.2%
24	Quartzipsamments, shaped, 0 to 5 percent slopes	6.4	1.0%
26	Narcoossee fine sand, 0 to 2 percent slopes	29.8	4.8%
38	Urban land, 0 to 2 percent slopes*	11.8	1.9%
46	Cassia fine sand, 0 to 5 percent slopes	0.7	0.1%
52	Samsula muck, frequently ponded, 0 to 1 percent slopes*	16	2.6%
99	Water	38.7	6.2%
	Study Area Total	**622.2**	**100%**

* Indicates Hydric Soil
Source: Web Soil Survey National Cooperative Soil Survey, March 2024

2.5 Existing Soil Descriptions

Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes (5)

The Myakka-Myakka component makes up 35.3% of the study area and is classified as hydric. This component is found more throughout the study area than any other soil component. The parent material consists of sandy marine deposits. The natural drainage class is poorly drained and water movement in the most restrictive layer is moderately high. This soil is not flooded nor is it ponded.

Tavares sand, 0 to 5 percent slopes (6)

The Tavares sand component makes up 2.5% of the study area. The parent material consists of eolian sandy marine deposits. The natural drainage class is moderately well drained and water movement in the most restrictive layer is high. This soil is not flooded nor is it ponded.

Sellers mucky loamy fine sand (8)

The Sellers mucky loamy fine sand component makes up 15.2% of the study area. The parent material consists of sandy marine deposits. The natural drainage class is very poorly drained and water movement in the most restrictive layer is high. The soil is not flooded but it is frequently ponded.

Adamsville fine sand, 0 to 2 percent slopes (11)

The Adamsville fine sand component makes up 22.4% of the study area and is classified as hydric. The natural drainage class is somewhat poorly drained. The water movement in the most restrictive layer is high. The available water to a depth of 60 inches is very low. This soil is not flooded nor is it ponded.

Smyrna fine sand (21)

The Symrna fine sand component makes up 7.8% of the study area. The depth of a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. The available water to a depth of 60 inches is low. This soil is not flooded nor is it ponded.

Basinger fine sand, depressional, 0 to 1 percent slopes (23)

The Basinger fine sand component makes up 0.2% of the study area and is classified as hydric. The natural drainage class is very poorly drained. The available water to a depth of 60 inches is low. This soil is not flooded; it is frequently ponded. A seasonal zone of water saturation is at or above the natural ground surface during most of the year.

Quartzipsamments, shaped, 0 to 5 percent slopes (24)

The Quartzipsamments component makes up 1% of the study area. The natural drainage class is well drained. The available water to a depth of 60 inches is very low. This soil is not flooded nor is it ponded.

Narcoossee fine sand, 0 to 2 percent slopes (26)

The Narcoossee component makes up 4.8% of the study area. The natural drainage class is moderately well drained. The available water to a depth of 60 inches is very low.

Urban land, 0 to 2 percent slopes (38)

The Urban land component makes up 1.9% of the study area and is classified as hydric. This soil type consists of areas covered with streets, houses, commercial buildings, parking lots, and related facilities.

Cassia fine sand, 0 to 5 percent slopes (46)

The Cassia fine sand component makes up 0.1% of the study area. This soil has a high-water table during most of the year. The permeability is moderately rapid.

Samsula muck, frequently ponded, 0 to 1 percent slopes (52)

The Samsula components make up 2.6% of the study area and is classified as hydric. The natural drainage class is very poorly drained. The available water to a depth of 60 inches is very high.

Water (99)

This component makes up 6.2% of the study area. This component makes up wetlands, ponds, and stormwater areas within the project limits.

2.6 Strategic Habitat Conservation Areas

Strategic Habitat Conservation Areas (SHCA) are defined as regions not in public ownership, which are recommended for protection to maintain biological diversity. These SHCA designations are intended to indicate that the existing land use should be maintained to conserve state-wide biodiversity. There are no SHCA within proximity to the study area. As such, no impacts are anticipated because of the proposed project.

3.0 Protected Species and Habitat

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

3.1 Methodology

Project biologists researched publicly accessible databases of federal, state, and local government agencies to gather information on known sightings of listed species and important habitats in Pasco County. Literature reviews, agency database searches, and field surveys were conducted to document the potential presence of state and federal protected species, their habitat and critical habitat within the study area. Information sources and databases included the following:

- USFWS GIS Database(s)
- USFWS Information for Planning and Conservation (IPaC)
- Florida Natural Areas Inventory (FNAI) GIS Database(s)
- Florida Fish and Wildlife Conservation Commission (FWC) GIS Database(s)
- Soil Survey of Pasco County, Florida
- FWC – Strategic Habitat Conservation Areas (SHCA) (1994)
- USFWS – Critical Habitat for Threatened and Endangered Species
- USFWS – Wood Stork Colony Core Foraging Areas (CFA) 2010-2019 (15-mile radius)
- NWI GIS Data
- Southwest Florida Water Management District (SWFWMD) GIS Data
- Florida Geographic Data Library (FGDL)
- Florida Geographic Information Office (FGIO)
- Audubon Florida EagleWatch Nest Application (2025)

Field surveys of the study area were completed in February 2015, February 2024, and December 2025 to determine the presence of protected species and potential habitat.

3.2 Coordination with Resource Agencies

Coordination with both USFWS and FWC was performed through FDOT's ETDM Programming Screen Phase (ETDM No. 7883). The comments received from these agencies are summarized in the project's ETDM Summary Report (January 10, 2013). However, since the ETDM screening was

completed in 2013 information has become non-applicable now as species noted in the ETDM screening in 2013 are no longer state or federally listed (e.g., Shermans Fox Squirrel (*Sciurus niger shermani*), Florida Mouse (*Podomys floridanus*), Snowy Egret (*Egretta thula*), White Ibis (*Eudocimus albus*), and American Alligator (*Alligator mississippiensis*)). In the following species occurrence and effect determinations, these species will not be discussed.

3.3 Species Occurrence and Effect Determinations

State and federally protected species with the potential to occur within the region of the study area are listed in **Table 3-1, Table 3-2, and Table 3-3**. Each species listed in the table is assigned a potential for occurrence within the study area based on data reviews and assigned a low, moderate, or high likelihood for occurrence within the study area based on the following:

Likelihood of Species Presence Within the Project Corridor:

None –Species is known to occur in Pasco County, no suitable habitat is present in the study area and/or immediately adjacent areas, historic recorded occurrences were not indicated in the study area, surveys have confirmed a lack of presence, and/or the species is precluded from the area based on its habitat preferences or life history.
Low – Species is known to occur in Pasco County or the bioregion, but suitable habitat is limited within the study area, or the species is rare or has been extirpated.
Moderate - Species is known to occur in Pasco County or nearby counties, and for which suitable habitat is well represented within the study area, but no observations or positive indications exist to verify their presence.
High - Species is suspected within the study area based on known ranges and existence of sufficient suitable habitat within the vicinity of the project; are known to occur adjacent to the study area; have been observed; or have been previously observed or documented in the vicinity.

3.3.1 Federally Listed Species

The federal listing of a species is the process of placing an animal or plant species on the federal list of endangered or threatened species. Once an animal or plant species is listed, the species receives full federal protection under the Endangered Species Act (ESA). It is anticipated that four federally listed species have the potential to occur around or within the subject study area. However, during the 2013, 2024, and 2025 field reviews, no federally listed species were observed.

3.3.1.1 Florida Scrub-Jay

The Florida scrub-jay (*Aphelocoma coerulescens*) is listed as ***threatened*** by USFWS. The project falls within the consultation area of the Florida scrub-jay. The ideal habitat conditions for Florida scrub-jay consist of xeric areas dominated by scrub oaks growing on excessively well-drained sandy soils. In these habitats, bare sand patches are dominant, with sparse groundcovers consisting of various short grasses and shrubs. Sand pines are typically scattered with less than 10% cover and high-intensity fires maintain the habitat. Florida scrub-jays may also live in less desirable areas like pine flatwoods, oak-dominated communities, or orange groves that are not well maintained.

During field reviews, no suitable habitat was identified within the study area. The nearest documented scrub jay families are north of the project limits by Big Fish Lake in Greenfield. Field reviews conducted in 2024 and 2025 noted no observed Florida scrub-jay activity within the project limits and no suitable habitat. Therefore, the Florida scrub-jay potential of occurrence is 'none' and the project will have **no effect** on the species.

3.3.1.2 Eastern Black Rail

The eastern black rail (*Laterallus jamaicensis*) is listed as ***threatened*** by the USFWS. The eastern black rail may be found in salt and brackish marshes as well as densely vegetated upper tidal marshes along the Gulf coast from Florida to Texas. The species has been occasionally observed in inland marshes of the Florida peninsula, though prevalence is largely uninvestigated. This species' suitable habitat is shallow and grassy freshwater marshes. The freshwater marshes found in the study area have a thick vegetative cover that consists of cat tail (*Typha latifolia*), gall berry (*Ilex glabra*), coastal plain willow (*Salix caroliniana*), and brazilian pepper (*Schinus terebinthifolia*). This thick vegetative cover in the existing freshwater marshes does not provide suitable habitat for the eastern black rail, as the species prefer grassy and shallow marshes.

No individuals were observed during field surveys, which were during the species breeding season (April 1 through August 31). Therefore, due to the lack of suitable habitat the probability of occurrence is 'none' and an effect determination of **no effect** was made for the eastern black rail.

3.3.1.3 Everglade Snail Kite

The Everglade snail kite (*Rostrhamus sociabilis ssp. plumbeus*) is listed as ***endangered*** by USFWS. Suitable habitat for this species consists of lake perimeters and freshwater marshes due to the species diet consisting largely of apple snails. The study area is located within the consultation

area for the Everglade snail kite; however, the project isn't designated critical habitat for this species. The nearest Critical Habitat for the Everglade snail kite is around Lake Okeechobee in Glades County.

A suitable foraging habitat for the Everglade snail kite is typically a combination of low marsh with an interdigitated matrix of shallow open water, which is relatively clear and calm. Everglade snail kite requires foraging areas that are relatively clear and open to visually search for apple snails. Therefore, dense growth and vegetation found along the perimeters of the freshwater marshes within the study area is not conducive to efficient foraging. No Everglade snail kites or suitable habitat was observed within the study area during field visits. Therefore, due to the lack of suitable habitat within the project limits, the probability of occurrence is 'none' and it has been determined the project will have **no effect** on the Everglade snail kite.

3.3.1.4 Whooping Crane

The whooping crane (*Grus americana*) is protected by the MBTA and is protected as an ***endangered*** species by federal endangered species act and as a federally designated endangered non-essential experimental population by Florida's Endangered and Threated Species Rule. For the purposes of consultation, non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land, requiring consultation under Section 7(a)(2) of the ESA. However, for non-federal lands, they are treated as proposed species that do not require consultation. Since the species is listed as experimental and this project is not in a national forest or preserve, the Service does not need to consult on this species.

3.3.1.5 Eastern Indigo Snake

The eastern indigo snake (*Drymarchon couperi*) is federally listed as ***threatened*** by USFWS. This species inhabits pine flatwoods, hardwood forests, moist hammocks, and areas that surround cypress swamps. This species could occur in some of the improved pasture habitats but is often found in habitats containing gopher tortoises. However, there were no gopher tortoise burrows present during field reviews. The FWC Rare Snake Sightings GIS database was reviewed for eastern indigo snake sightings. No sightings have been documented within the study area. FDOT will implement the Standard Protection Measures for the eastern indigo snake, based on the eastern indigo snake effect determination key (A>B>C>D>E). Due to the presence of suitable habitat, the species is assigned a 'moderate' potential for occurrence, and the project **may affect, not likely to adversely affect** this species.

3.3.1.6 Short-tailed Snake

The short-tailed snake (*Lampropeltis extenuatum*) is listed as ***threatened*** by USFWS. It is an extremely slender, spotted snake with a cylindrical body rarely exceeding 20 in. (510 mm) total length. Preferred habitats for this species include dry upland habitats, principally sandhill, xeric hammock, and sand pine scrub. This species is a secretive burrower only rarely seen above ground or under cover objects. Except for small pockets of disturbed uplands, the entire project limits consist of developed land. No occurrences of the short-tailed snake have been documented by FNAI within one (1) mile of the project. Since there is little suitable habitat and no occurrences have been recorded, the species is assigned a 'low' for potential for occurrence and it's anticipated the project will have **no effect** anticipated.

3.3.1.7 Tricolored Bat

The tricolored bat (*Perimyotis subflavus*) is proposed as federally endangered under the ESA and is considered a 'Species of Greatest Conservation Need' in Florida. Tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. Tricolored bats will roost singly or in small groups, within caves, tree foliage, tree cavities, and have been known to use bat houses, buildings, and other man-made structures. Multiple landscape trees are found within the project study area, some of which may be impacted due to this project. During field reviews conducted in October 2024, no signs of bats were discovered but suitable habitat is present within the project area. There are no existing bridges present at the project location that would provide potential suitable roosting habitat. However, there are culverts present throughout the project area that can provide suitable roosting habitat for the tricolored bat.

Upon listing of the tricolored bat, if the project contains suitable habitat and FDOT needs to trim or clear trees or perform work on bridges/culverts during the maternity season and/or when the temperature is below 45 degrees Fahrenheit, then FDOT will survey the project area for evidence of the tricolored bat. The suitable habitat is well represented within the study area, it is assigned a "moderate" potential of occurrence, and the project **may affect, not likely to adversely affect** the tricolored bat.

3.3.1.8 Monarch Butterfly

The monarch butterfly (*Danaus plexippus*) is currently included in the 2022-2027 USFWS National Listing Workplan for FY24 as a ***proposed threatened candidate species*** for the ESA. Inclusion within the Workplan does not automatically list a species as endangered or threatened under the

ESA. The species is not currently protected by federal law under this act; however, federal agencies may voluntarily add conservation actions to their projects.

FDOT has agreed to adhere to the Nationwide Candidate Conservation Agreement for monarch butterfly on energy and transportation lands, containing an integrated Candidate Conservation Agreement with Assurances (CCAA). The intention of the agreement is to provide a net conservation benefit to monarch butterflies and to address the potential effects of maintenance and modernization activities within energy and transportation lands on the monarch butterfly and their populations. Through the agreement, eligible energy and transportation lands commit to implement conservation measures that create more ideal conditions for monarchs. Through implementation and partnership under the CCAA, FDOT will maintain and/or increase the occurrence and availability of Florida native milkweed (*Asclepias* spp.) and nectar resources (depending on geographic location) through transportation lands enrolled in the CCAA statewide.

Urban and suburban development is eliminating monarch habitat by supplanting agricultural landscapes where an estimated 90% of milkweeds, the monarch's host plant, occur. Monarchs have the potential to occur wherever their host plant is found; this includes roadsides, fields, and urbanized and suburbanized areas. The project area has the potential to sustain milkweed; therefore, the monarch butterfly has a "moderate" potential for occurrence within the project area.

If the listing status of the monarch butterfly is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, during the design and permitting phase of the proposed project, FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the monarch butterfly.

Table 3-1: Federally Listed Species

Species	Common Name	USFWS Status	Effect Determination	Potential for Occurrence
Birds				
Aphelocoma coerulescens	Florida scrub-jay	T	No Effect	None
Laterallus jamaicensis	eastern black rail	T	No Effect	None
Rostrhamus sociabilis ssp. plumbeus	Everglade snail kite	E	No Effect	None

Reptiles				
Drymarchon couperi	eastern indigo snake	T	MANLAA	Moderate
Lampropeltis extenuatum	short-tailed snake	T	No Effect	Low
Mammals				
Perimyotis subflavus	tricolored bat	P (E)	MANLAA	Moderate
Insects				
Danaus plexippus	monarch butterfly	P (T)	N/A	Moderate

Ranking: P (E) - Proposed Endangered, P (T)-Proposed Threatened, E - Endangered, T – Threatened
Effect Determination: MANLAA – May affect, not likely to adversely affect

3.3.2 State Listed Species

There are 46 individual state-listed species that have the potential for occurrence within the project limits. Seven (7) state-listed species are anticipated to have a moderate or high likelihood of presence within the project limits. The only state-listed species observed during the field reviews was the Florida sandhill crane.

3.3.2.1 Southeastern American Kestrel

The southeastern American kestrel (*Falco sparverius paulus*) is a non-migratory bird that is listed as ***threatened*** by the FWC. It is a small falcon found throughout Florida in a variety of habitats including pine flatwoods, sandhills, and open fields. The nesting season for this species takes place from March through June. A migratory population is present in Florida during the winter, known as the American kestrel (*Falco sparverius*). This species looks like the southeastern American kestrel, but it is not a listed species. Abandoned woodpecker cavities in dead pine trees, also known as snags, are a common nesting site. The entire project limits consist of developed land and no suitable habitat is noted. There were no documented occurrences of the southeastern American kestrel by FNAI within one mile of the project. The southeastern American kestrel may forage in the open areas of the project. However, due to the lack of snags and minimal foraging habitat within the project limits, the southeastern American kestrel is assigned a 'none' likelihood of presence and **no effect anticipated**.

3.3.2.2 Wood stork

As of March 12th, 2026, the wood stork is no longer a threatened species and is instead protected under the MBTA and its habitat is protected under the Clean Water Act (CWA). The U.S. Fish and Wildlife Service has removed the Southeast U.S. distinct population segment of the wood stork from the Federal List of Endangered and Threatened Wildlife, effective March 12, 2026. Federal

agencies (including FDOT under NEPA assignment) will no longer be required to consult with the Service under section 7 of the Act for the wood stork. The wood stork is now a state-listed threatened species, occurring on Florida's Endangered and Threatened Species List with state protections through the Florida Fish and Wildlife Conservation Commission (FWCC) who regulate and manage these species (68A-27, F.A.C.).

Wood storks have been observed within and near project limits, according to FGDL's eBird records and field review documented occurrences. The project does not anticipate impacting the species and their suitable habitat. Therefore, the potential for occurrence is 'high' and **no adverse effects anticipated** to the wood stork or its foraging and nesting habitat.

3.3.2.3 Scott's Seaside Sparrow

The Scott's seaside sparrow (*Ammodramus maritimus peninsulae*) is listed as ***threatened*** by FWC and is protected by the MBTA. This species inhabits saltwater marshes and freshwater non-forested wetlands, and its diet consists of crustaceans, insects, spiders, and seeds mainly from marsh floors. Their bills are used in foraging for prey in the mud on the marsh floor. Seaside sparrows nest in clumps of fallen cordgrass (*Spartina alterniflora)* and black needle rush (*Juncus roemarianus*). Nesting is unique because two different types of nests are built. Open nests are built deep in vegetation while more complicated domed nests are built in less dense vegetation. They will form a canopy over the nest by pulling down blades of grass.

The study area does have suitable habitat for the Scott's seaside sparrow, as there are several freshwater non-forested wetlands throughout the project limits. The site reviews in February 2015 and 2024, were completed outside of the nesting season March to May. During the reviews, no nests were identified within or adjacent to wetlands. A formal survey for Scott's seaside sparrow nest sites will be conducted during the design phase. If it is determined nest areas are found and could be impacted by the project, FDOT will coordinate with FWC to determine appropriate avoidance and minimization measures to apply during construction. Due to the suitable habitat present in the study area the seaside sparrow is assigned a 'moderate' potential for occurrence and **no adverse effect anticipated** on the species.

3.3.2.4 Florida Burrowing Owl

The Florida burrowing owl (*Athene cunicularia floridana*) is state listed as ***threatened*** and is known to inhabit open upland prairies in Florida that have very little understory vegetation. The Florida burrowing owls may also use golf courses, airports, pastures, agriculture fields, and vacant lots.

This species utilizes burrows year-round for nesting and roosting in winter. The burrows are either self-dug or dug by another species, such as gopher tortoises. During field reviews, no burrows were observed that appeared to be indicative of Florida burrowing owl presence and no suitable habitat was identified within the study area. Due to the lack of suitable habitat, the potential for occurrence is 'none' and the project will have **no effect anticipated** on the species.

3.3.2.5 Marian's Marsh Wren

The Marian's marsh wren (*Cistothorus palustris marianae*) is listed as ***threatened*** by FWC and is protected under the MBTA. This species of marsh wren has a dark brown neck, upper back, head, wings, and tail, and a light brown belly. As with all marsh wrens, they have a white band above their eye and a white-streaked black triangle on their back. It inhibits marshes dominated by black needle rush and cordgrass and diet consists of spiders, insects, and invertebrates.

The study area does have a suitable habitat for Marian's marsh wren, there are several marshes throughout the project limits that are vegetated with cordgrass. The site reviews in February 2015 and 2024 were outside of the nesting season of March and April. Surveys for Marian's marsh wren nest sites will be conducted during the design phase. If it is determined nest areas are found and could be impacted by the project, FDOT will coordinate with FWC to determine appropriate avoidance and minimization measures to apply during construction. Due to the presence of suitable habitat in the study area the Marian's marsh wren is assigned a 'moderate' potential for occurrence and the project will have **no adverse effect anticipated** on the species.

3.3.2.6 American Oystercatcher

The American oystercatcher (*Haematopus palliatus*) are protected by the MBTA and is listed as ***threatened*** by FWC. The American oystercatcher is a shorebird species that is easily identified by its striking in appearance: dark-brown, black, and white, with a bright red bill. Since it is one of the largest and heaviest of our shorebirds, the oystercatcher is unmistakable. The American oystercatcher is one of a few bird species that feed primarily on mollusks, although they will also eat jellyfish, worms, and insects. Because of their preference for mollusks, oystercatchers inhabit coastal areas that support intertidal shellfish. It inhabits beaches, sandbars, spoil islands, shell rakes, salt marshes, and oyster reefs. Oystercatchers can be found from the coast of the northeastern US down to Florida's Gulf Coast. The study area does not have the suitable habitat to support this species. Due to the lack of suitable habitat, the species potential for occurrence is 'none' and the project will have **no effect anticipated** on the American oystercatcher.

3.3.2.7 Least Tern

The least tern (*Sternula antillarum*) is protected under the MBTA and is listed as ***threatened*** by FWC. The least tern is the smallest tern in North America and can reach a length between 8.3-9.1 inches (21-23 centimeters) with a wingspan of 21-23 inches (53-58 centimeters). The least tern inhabits areas along the coasts of Florida including estuaries and bays, as well as areas around rivers. Their diet primarily consists of fish, but they will also feed on small invertebrates. Least terns do respond quickly to improved habitat, such as the removal of beach vegetation or the dumping of dredged sand. The study area does not have the suitable habitat to support this species; due to the lack of suitable habitat the species potential for occurrence is 'none' and the project will have **no effect anticipated** on the least tern.

3.3.2.8 Wetland Dependent Avian Species

This category includes state listed wetland dependent avian species that have a potential to occur or were observed within the study area. These include Florida sandhill crane (*Grus canadensis pratensis*) and protected wading birds are little blue heron (*Egretta caerulea*) and tricolored heron (*Egretta tricolor*) (**Table 3-2**). These three (3) species are state designated ***threatened*** by the FWC.

A pair of Florida sandhill cranes were observed in January 2013 at the Pasco County Fire Station located in the southeast quadrant of the intersection. During the December 2025 field review a little blue heron was observed wading in a stormwater pond (SW 3). There is suitable foraging and nesting habitat in the study area. It is likely that these species utilize wetlands and other surface waters in the study area. The project is anticipated to impact approximately 0.94 acres of wetland forested mixed and 9.12 acres of other surface waters. Wetland habitats are suitable foraging areas for wading birds. However, the other surface waters are more suitable for foraging and nesting habitat for the sandhill crane. Though there is a 'high' potential for occurrence for these wetland dependent avian species, the project has **potential for adverse effect** for wetland dependent species.

3.3.2.9 Florida Pine Snake

The Florida pine snake (*Pituophis melanoleucus mugitus*) is a state-listed ***threatened*** species that inhabits areas that feature well-drained sandy soils with a moderate to open canopy. This species commonly uses gopher tortoise burrows as refugia. There is suitable habitat for this species within the project limits, this would include pine flatwoods, shrub and brushland, and upland hardwood coniferous mix habitats.

The area will be surveyed for gopher tortoise burrows prior to construction and if any burrows are located, a relocation permit for gopher tortoise from the FWC will be obtained. Any relocation of associated commensal species (such as the Florida pine snake) will be conducted in accordance with the most updated FWC requirements. With the implementation of these measures and the 'moderate' potential for occurrence, it has been determined that the proposed project will have **no adverse effect anticipated** on the Florida pine snake.

3.3.2.10 Gopher Tortoise

The gopher tortoise (*Gopherus polyphemus*) is a large terrestrial tortoise, listed as ***threatened*** by the FWC. This species requires well drained and loose sandy soil 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.

The gopher tortoise is assigned a "moderate" likelihood of presence, due to the available suitable habitat. There is approximately 7.2% highly suited, 22.5% moderately suited, and 43.1% less suited soils present in the study area for gopher tortoises. During field reviews, no potentially occupied burrows were observed and through FWC database no gopher tortoise have been documented or observed in the study area.

The most recent FWC Gopher Tortoise Permitting Guidelines will be followed if gopher tortoises or their burrows are found within 25 feet of the limits of construction. If any gopher tortoises are discovered, in accordance with the requirements of Rules 68A-25.002 and 68A-27.004 (F.A.C.), a permit for gopher tortoise capture/release activities must be secured from the FWC before initiating any relocation work. The FWC will require a 100% gopher tortoise survey to be conducted within 90 days of construction commencement to support the permit application. An FWC gopher tortoise relocation permit may be required if this species is documented during project surveys. It has been determined that gopher tortoise has a high potential for occurrence, and the proposed project will result in **no adverse effect anticipated** on the species.

3.3.2.11 State Protected Plants

The state protected plants that have the potential to occur are classified in **Table 3-2**, including an indicator that differentiates the species from upland and wetland dependent. There were no state-protected plants observed during field reviews. There is suitable habitat present within and adjacent to the right-of-way for all species. However, the existing right-of-way is generally not conducive to supporting these listed plants given regular maintenance activities including mowing and nuisance/exotic species management.

Wetland Plants

These 25 listed plants have the potential to occur in wetlands and the edges of other surface waters. These habitat types exist in the study area and are mixed wetland hardwoods, lakes, and reservoirs. Although there are suitable habitats, no wetland plant species were observed during field reviews. The field reviews were conducted well outside of Florida's typical flowering season, which occurs from May to July. As needed, during the design and permitting phases of this project, a general plant survey during flowering season will be conducted. Wetlands and existing right-of-way adjacent to the project are disturbed as they are near commercial and residential developments. Existing right-of-way is also disturbed by activities such as mowing and exotic species management. Based on the poor quality of wetlands on and adjacent to the project site, these species have a 'low' potential for occurrence, and the project will have **no adverse effect anticipated** on state listed wetland plants.

Upland Plants

The 10 listed plant species associated with other upland habitat types, such as mesic flatwoods and upland hardwood forests, may occur in open, grassy areas, particularly where recent maintenance activities like mowing have taken place. Although these habitats are present within the study area, no individuals were observed during field surveys. Surveys are typically conducted during species-specific flowering seasons, which for many state-listed plants occur between spring and summer, often peaking from May through July.

As needed, during the design and permitting phases of this project, a general plant survey during flowering season will be conducted. If any threatened or endangered plant species are found within the right-of-way, coordination with Florida Department of Agriculture and Consumer Services (FDACS) would occur. If any protected plants are located, the department will coordinate with the FDACS prior to construction for possible conservation efforts for protected plants. Therefore, these species have a 'low' potential for occurrence, and the project will have **no adverse effect anticipated** on state listed upland plants.

Table 3-2: State-Listed Species

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Birds				
Falco sparverius paulus	southeastern American kestrel	T	No Effect Anticipated	None
Mycteria americana	Wood stork	T	NAEA	High

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Ammodramus maritimus peninsulae	Scott's seaside sparrow	T	No Adverse Effect Anticipated	Moderate
Athene cunicularia floridana	Florida burrowing owl	T	No Effect Anticipated	None
Cistothorus palustris marianae	Marian's marsh wren	T	No Adverse Effect Anticipated	Moderate
Haematopus palliatus	American oystercatcher	T	No Effect Anticipated	None
Sternula antillarum	least tern	T	No Effect Anticipated	None
Egretta caerulea	little blue heron	T	Potential for Adverse Effects	High
Egretta tricolor	tricolored heron	T	Potential for Adverse Effects	High
Grus canadensis pratensis	Florida sandhill crane	T	Potential for Adverse Effects	High
Reptiles				
Pituophis melanoleucus mugitus	Florida pine snake	T	No Adverse Effect Anticipated	Moderate
Gopherus polyphemus	gopher tortoise	T	No Adverse Effect Anticipated	Moderate
Plants				
Blechnum occidentale	hammock fern*	E	No Adverse Effect Anticipated	Low
Calopogon multiflorus	many-flowered grass-pink*	T	No Adverse Effect Anticipated	Low
Carex chapmanii	Chapman's sedge*	T	No Adverse Effect Anticipated	Low
Coelorachis tuberculosa	Florida jointgrass*	T	No Adverse Effect Anticipated	Low
Drosera intermedia	water sundew*	T	No Adverse Effect Anticipated	Low
Hexalectris spicata	spiked crested coralroot*	E	No Adverse Effect Anticipated	Low
Lilium catesbaei	Catesby's lily*	T	No Adverse Effect Anticipated	Low
Lobelia cardinalis	cardinal flower*	T	No Adverse Effect Anticipated	Low

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Cheiroglossa palmata	hand fern*	E	No Adverse Effect Anticipated	Low
Glandularia tampensis	Tampa mock vervain*	E	No Adverse Effect Anticipated	Low
Litsea aestivalis	pondspice*	E	No Adverse Effect Anticipated	Low
Pinguicula caerulea	blueflower butterwort*	T	No Adverse Effect Anticipated	Low
Pinguicula lutea	yellow butterwort*	T	No Adverse Effect Anticipated	Low
Platanthera ciliaris	yellow fringed orchid*	T	No Adverse Effect Anticipated	Low
Platanthera cristata	crested yellow orchid*	T	No Adverse Effect Anticipated	Low
Platanthera flava	Southern tubercled orchid*	T	No Adverse Effect Anticipated	Low
Platanthera nivea	snowy orchid*	T	No Adverse Effect Anticipated	Low
Pogonia ophioglossoides	rose pogonia*	T	No Adverse Effect Anticipated	Low
Sacoila lanceolata var. lanceolata	leafless beaked ladiestresses*	T	No Adverse Effect Anticipated	Low
Sarracenia minor	hooded pitcherplant*	T	No Adverse Effect Anticipated	Low
Spiranthes laciniata	lacelip ladiestresses*	T	No Adverse Effect Anticipated	Low
Tricerma phyllanthoides	Florida mayten*	T	No Adverse Effect Anticipated	Low
Zephyranthes atamasca var. treatiae	Treat's zephyr lily*	T	No Adverse Effect Anticipated	Low
Nemastylis floridana	celestial lily*	E	No Adverse Effect Anticipated	Low
Pecluma ptilodon var. bourgeauana	comb polypody*	E	No Adverse Effect Anticipated	Low

Species	Common Name	FWC Status	Effect Determination	Potential for Occurrence
Asplenium auritum	auricled spleenwort	E	No Adverse Effect Anticipated	Low
Centrosema arenicola	pineland butterfly pea	E	No Adverse Effect Anticipated	Low
Dendrophylax porrectus	needleroot airplant orchid	T	No Adverse Effect Anticipated	Low
Garberia heterophylla	garberia	T	No Adverse Effect Anticipated	Low
Myrcianthes fragrans	twinberry	T	No Adverse Effect Anticipated	Low
Monotropsis reynoldsiae	pygmy pipes	E	No Adverse Effect Anticipated	Low
Opuntia stricta	erect pricklypear	T	No Adverse Effect Anticipated	Low
Tillandsia utriculata	giant airplant	E	No Adverse Effect Anticipated	Low
Pecluma dispersa	widespread polypody	E	No Adverse Effect Anticipated	Low
Pecluma plumula	plume polypody	E	No Adverse Effect Anticipated	Low
Ranking: E - Endangered, T – Threatened; * Wetland Dependent Species				

3.3.3 Other Protected Species

The following species are listed under protection of the *Bald and Golden Eagle Protection Act (BGEPA), MBTA,* or *Bear Conservation Rule (BCR)*. The BGEPA and MBTA acts prohibit anyone without a permit from the FWS from "taking" any part of these birds, their eggs, or their nests. Additionally, the BCR protects bears by stating it is illegal to take, possess, injure, collect, or sell black bears.

3.3.3.1 Bald Eagle

The bald eagle (*Haliaeetus leucocephalus*) is **protected** by the BGEPA and the MBTA. The species suitable habitat includes estuaries, lakes, and reservoirs, near which they build nests in tall trees or other structures. During the December 2025 field review, a bald eagle was observed flying overhead at the intersection of US 41 and SR 54. In review of the Audubon Eagle Watch Database, there were no documented eagles' nests within or near the project limits. However, during the field review a large nest was identified on the cell phone tower located between Land O' Lakes Blvd and N Dale Mabry Hwy. The nest was large and had well-constructed characteristics, more consistent with a bald eagle's nest. During the field review the nest could not be identified as being occupied by a bald eagle or another species. Surveys to determine occupancy and update locations of active bald eagle nest sites will be conducted during the design phase, and permits will be acquired if there are unavoidable impacts during construction. These surveys will be conducted during the nesting season, from October 1st – May 15th.

A representative map of the location of the bald eagle nest can be found in **Figure 3-1**. The nest is located within the study area, placing it within the 330-foot protective buffer. Buffer zones are recommended in the USFWS's National Bald Eagle Management Guidelines and are based on the nature and magnitude of the project or activity. Monitoring should begin no later than October 1 and continue through fledging, if activity is anticipated or planned to occur within 660 feet of the nest tree during the nesting season. The USFWS's Bald Eagle Monitoring Guidelines provide information for whenever proposing construction activities within 660 feet of an active bald eagle nest during the nesting season. If the nest is determined to be active during the design phase, a permit will be obtained.

Coordination with USFWS will take place if impacts within regulatory buffers are proposed. Through adherence to USFWS's National Bald Eagle Management Guidelines, it has been determined the species has a 'high' potential for occurrence. As the project area is located within the 330 foot protective buffer, a USFWS permit is needed for activities with the potential to disturb nesting bald eagles, or to remove or "take" a bald eagle nest.

3.3.3.2 Osprey

The osprey (*Pandion haliaetus*) is **protected** by the MBTA. Although it is no longer listed as a Species of Special Concern, it is still included in the Imperiled Species Management Plan (ISMP). Habitat for this species includes estuaries, lakes, and reservoirs, near which they build nests in

trees or other structures. Ospreys and their nests were observed during a field review conducted in February 2024. During the December 2025 field review, the nests were found to be removed.

During the design and permitting phase, surveys will be conducted to determine if a nest is present, and if the nest contains eggs or young. The nesting season begins from December to late February, leading to the incubation and nestling period into the summer months. If determined the nest is inactive, Rule 68A-16.003, F.A.C. eliminates the need for an FWC permit for on-site destruction of an inactive nest (a nest that does not contain eggs or flightless young) of non-listed birds which are protected by the MBTA. The osprey is assigned a 'high' likelihood of presence, and **no adverse impacts** to the osprey are anticipated.

3.3.3.3 Florida Black Bear

Florida black bear (*Ursus americanus floridanus*) is no longer listed as a threatened species by the FWC. While it was removed from the state list of protected species in August 2012, it is still protected through the *Florida Administrative Code 68A-4.009* BCR. The project occurs within the common Black Bear range. The Bear Special Provisions will be included in the project since the project is within the common range. There have been no documented mortalities in the project limits, however there are two Florida Black Bear related calls just outside of the project limits. One call was at Ellendale Drive in 2010 and another call in 2013 at Send Way, both off SR 54 (**Figure 3-1**).

Although suitable habitat occurs surrounding the study area, this project is not anticipated to result in an increase in the chance for road-associated mortalities given the existing developed nature of the transportation corridor. Therefore, it has been determined that the project will have **no adverse impact** on the Florida black bear**.**

Table 3-3: Managed and Protected Species

Species	Common Name	Protected By	Effect Determination	Potential for Occurrence
Birds				
Haliaeetus leucocephalus	bald eagle	BGEPA and MBTA	Potential for impacts	High
Pandion haliaetus	osprey	MBTA	No Adverse Impacts	High
Mammals				
Ursus americanus floridanus	Florida black bear	F.A.C. 68A-4.009 BCR	No Adverse Impacts	Moderate

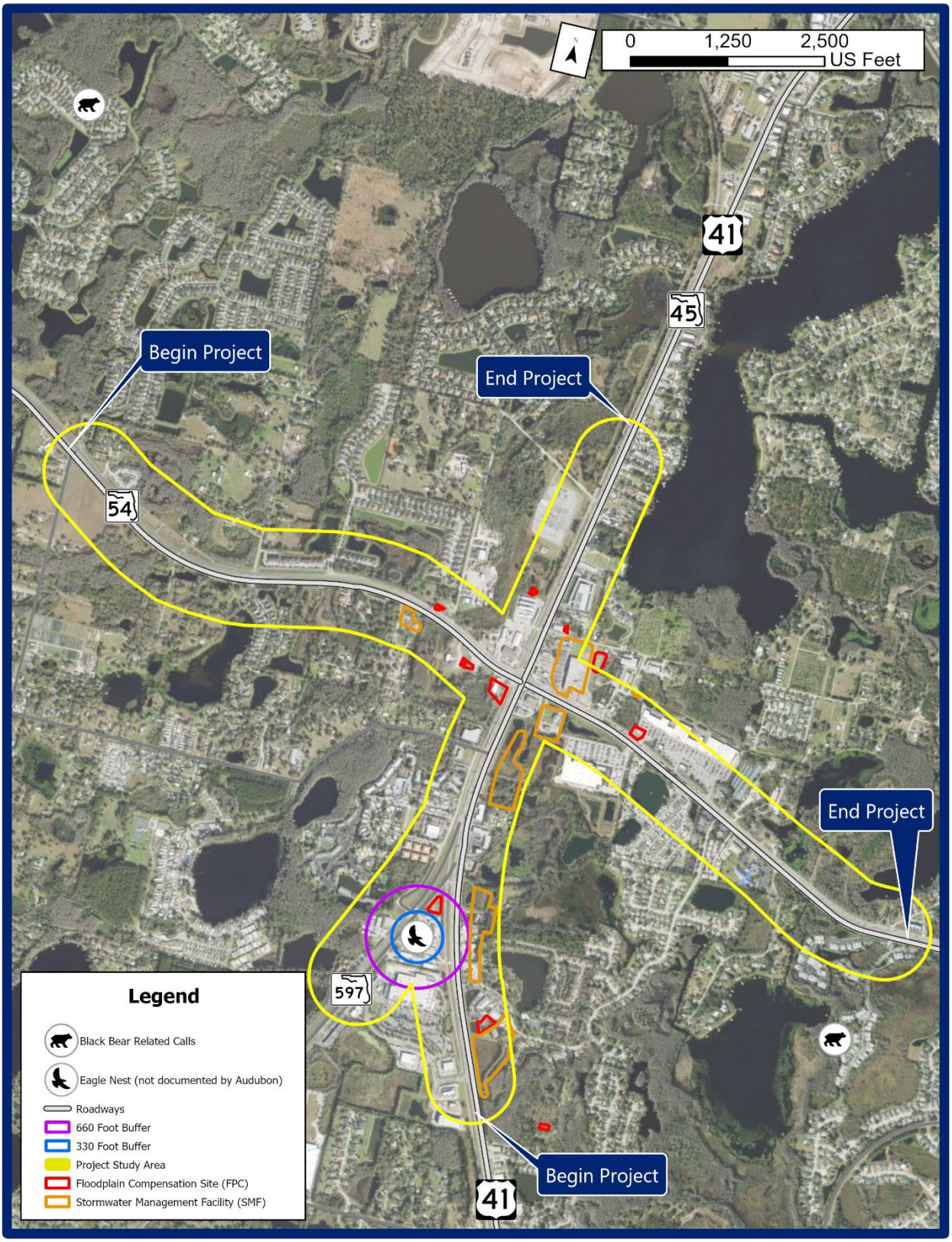

Figure 3-1: Protected and Recovered Species Map

4.0 Wetland and Other Surface Water Evaluation

4.1 Methodology and Assessment

The proposed project has been evaluated for potential impacts to wetlands in accordance with *Executive Order 11990, "Protection of Wetlands"*. Preliminary wetland evaluations were based on information from on-site field reconnaissance, the USGS topographic maps, USDA Soil Survey of Pasco County, NRCS soil type shapefiles, National Wetlands Inventory (NWI) maps, aerial photography, and GIS data from Florida Natural Areas Inventory (FNAI), the Southwest Florida Water Management District (SWFWMD), the Florida Fish and Wildlife Conservation Commission (FWC), the USFWS, Pasco County, and the Florida Geographic Database Library (FGDL). **Figure 4-1** illustrates the location of wetlands and surface waters within the study area.

Wetland boundaries were approximated using the *US Army Corps of Engineers (USACE) Manual for Identifying and Delineating Jurisdictional Wetlands, 1987, and the Florida Department of Environmental Protection's (FDEP) The Florida Wetland Delineation Manual, 1995 (Chapter 62-340, F.A.C.)*. Initial field reviews were conducted on January 15th and 16th, 2013 and January 2024. **Appendix G** shows the wetlands evaluated within the study area in 2013. However, since it has been over five years the jurisdictional wetland lines have expired. In that regard, formal wetland boundaries will be determined during the design and permitting phase of this project.

Wetlands were classified using the *USFWS's Classification of Wetlands and Deepwater Habitats Classification (Cowardin et. al. 1979)* methodology and the Florida Land Use, Cover and Forms Classification System (FLUCFCS) (FDOT, 1999). A breakdown of the wetland classifications and sites potentially impacted are shown in **Table 4-1**. The Uniform Mitigation Assessment Method (UMAM) data sheets are in **Appendix H**. Potentially impacted wetlands adjacent to the roadway were assessed using the UMAM, *Chapter 62-345, Florida Administrative Code (F.A.C.)*. The results of the functional analysis are described in **Section 4.3.** No wildlife was observed utilizing the wetlands or surface waters during field reviews. The landward extent of all wetland sites identified in the field, as collected with GPS, were imported into GIS to perform measurements and acreage calculations. Representative site photographs can be found in **Appendix C**.

To assess the approximate locations and boundaries of existing wetland and upland communities within the study area, the following site-specific data was collected and reviewed:

- US Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI), Wetlands Online Mapper (July 2023);
- USFWS, Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979).

The identified wetlands and surface water systems within the study limits (see **Figure 4-1**) are classified into FLUCFCS types. **Table 4-1** provides approximate acreage of each wetland and surface waters within the study area. Wetlands are classified according to the following FLUCFCS code subcategories described below.

Table 4-1: Wetland and Surface Waters Within Study area

Wetland/ Surface Water ID	FLUCFCS Classification	FLUCFCS Description	NWI Classification	Acres in Study Area	Percentage of Study Area
-	5100	Streams and Waterways	-	16.6	2.70%
-	5200	Lakes	PAB3H	15.1	2.40%
SW 1, 2, 3, 4, & 5	5300	Reservoirs	-	2.1	0.30%
-	6150	Stream and Lake Swamps (bottomland)	-	33.9	5.40%
WL 1	6210	Cypress	PEM1F	24.3	3.90%
WL 2, 3, 4, 5	6300	Wetland Forested Mixed	PSS1F/PSS7C	1.5	0.20%
-	6400	Vegetated Non-Forested Wetlands	-	33.8	5.40%
-	6410	Freshwater Marshes	PEM1F	3.2	0.50%
			Study Area Total	**130.6**	**20.80%**

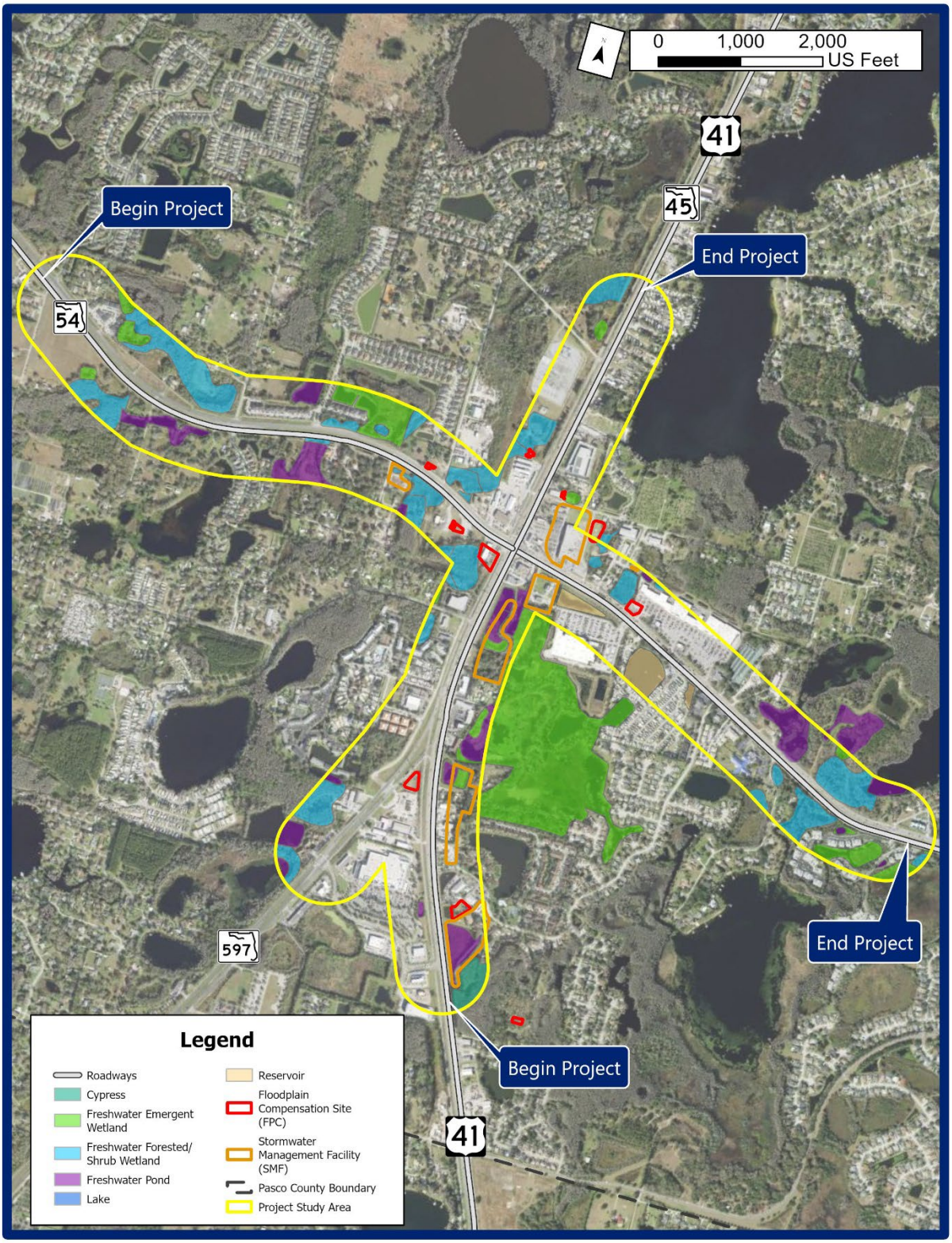

Figure 4-1: Wetland and Surface Water Locations

4.2 Build Alternative Wetland and Surface Water Impacts

Potential impacts to wetlands and surface waters associated with the preferred roadway alternative are summarized in **Table 4-2**. This roadway alternative is expected to impact approximately 0.68 acres of wetlands and 2.53 acres of surface waters**.** Potential wetland impacts for the preferred pond alternatives (0.11 acres) and the Preferred FPC sites (0.11 acres) are provided in **Tables 4-3** and **4-4**, respectively. **Appendix D** shows the locations of all anticipated wetland and surface water impacts, and **Appendix H** contains the UMAM assessment.

Table 4-2: Preferred Roadway Wetland and Surface Water Impacts

Wetland/ Surface Water ID	FLUCFCS Classification	FLUCFCS Description	NWI Classification	Impact Acreage
Wetlands				
WL 3	6300	Wetland Forested Mixed	PSS1F/PSS7C	0.02
WL 2	6300	Wetland Forested Mixed	PSS1F/PSS7C	0.62
WL 1	6210	Cypress	PEM1F	0.04
			Total Wetland Impacts	0.68
Surface Waters				
SW1,2,3,4, &5	5300	Reservoirs		2.53
			Total Surface Water Impacts	2.53
			Study Area Total	**3.21**

Table 4-3: Preferred Pond Alternatives Wetland Impacts

Wetland Identification	Pond Sites	Impact Area (Acres)	FLUCFCS Classification	FLUCFCS Description	NWI Classification
Wetland Impacts					
WL 2	SMF 5D	0.11	6300	Wetland Forested Mixed	PSS1F/PSS7C
Wetland Total		**0.11**			
Other Surface Water Impacts					
SW 1	SMF 4D	3.39	5300	Reservoirs	-
SW 2	SMF 3D	0.97	5300	Reservoirs	-
SW 3	SMF 2D	2.18	5300	Reservoirs	-
Surface Water Total		6.54			
Study Area Total		**6.65**			

Table 4-4: FPC Site Preferred Alternatives Wetland Impacts

Wetland Identification	FPC Sites	Impact Area (Acres)	FLUCFCS Classification	FLUCFCS Description	NWI Classification
Wetland Impacts					
WL 3	FPC 107D	0.10	6300	Wetland Forested Mixed	PSS1F/PSS7C
WL 4	FPC 110D	0.001	6300	Wetland Forested Mixed	PSS1F/PSS7C
WL 6	FPC 119D	0.01	6300	Wetland Forested Mixed	PSS1F/PSS7C
Wetland Total		**0.11**			
Surface Water Impacts					
SW 4	FDP 109D	0.05	5300	Reservoirs	-
Surface Water Total		0.05			
Study Area Total		**0.16**			

4.2.1 Avoidance and Minimization

Minimization and avoidance measures for wetland impacts were taken into consideration during this study. Impacts to wetlands have been avoided and minimized to the maximum extent practicable. Additionally, utilizing existing roadway fill areas for bridge approaches and roadway widening and siting storm-water treatment and flood compensation facilities outside of wetland areas to the extent feasible were also done to avoid and minimize wetland impacts. There are no practical avoidance alternatives to the construction of the proposed project to avoid all wetland areas. All practicable measures to reduce impacts to wetlands will be implemented during design and construction of this project. Any temporary construction-related impacts will be minimized by adherence to *FDOT's "Standard Specifications for Road and Bridge Construction"*.

The project has the potential to generate stormwater runoff and increase sedimentation that could degrade water quality in downstream systems. For this reason, best management practices (BMP) will be implemented during construction to avoid additional impacts to wetlands and other surface waters. A Stormwater Pollution Prevention Plan (SWPPP) and an erosion and sediment control plan will be implemented during construction. The erosion control devices will be designed per the FDOT Standard Specifications for Road and Bridge Construction. Additional

opportunities to avoid and minimize impacts to wetlands will be further evaluated during the Design Phase of the project.

4.2.2 Indirect and Cumulative Effects

Indirect effects are reasonably foreseeable effects that occur because of an action but occur later in time or are removed from the action location. Indirect impacts resulting from construction of the project include secondary wetland and other surface water impacts in the proposed study area. These impacts are anticipated to be minor since they are already associated with the existing roadway and interchanges. Secondary impacts may be avoided by use of appropriate BMPs. Habitats along the edge of the existing roadway and interchanges were disturbed when these areas were constructed and have since experienced constant disturbance from right-of-way maintenance and exposure to nuisance/exotic species. This "edge effect" will continue with the construction of the proposed project but would migrate to the new transitional area between remaining wetlands and new construction. Therefore, these disturbed edges are not expected to increase in areas where the roadway and interchanges already exist.

Cumulative effects result from the incremental impact of the action when added to other past, present, and reasonably near future actions regardless of what agency or person undertakes such other actions. Since wetland impacts resulting from the construction of this project will be mitigated, no cumulative impacts are anticipated to occur. A cumulative impact analysis will be conducted if mitigation is not available within the same basin or watershed.

4.3 Wetland Functional Analysis

The Uniform Mitigation Assessment Method (UMAM) was established under *Chapter 62-345, F.A.C.* to fulfill the mandate of subsection 373.414(18), F.S., which requires the establishment of a uniform mitigation assessment method to determine the amount of mitigation needed to offset adverse impacts to wetlands. Functional loss was calculated by wetland and other surface water habitat types for the project using UMAM. The wetland quality ratings (delta values) are expressed numerically with numbers ranging between 0 and 1, with 1 representing an extremely high-quality wetland and 0 reflecting an extremely low-quality wetland, or an area that is no longer functioning as a wetland. The functional loss of a wetland system is the estimated loss of function by the proposed project impacts and is calculated by multiplying the delta value by the impact acreage. Functional loss values are used to determine the amount of mitigation that would be required to offset the loss of wetland and other surface water's function caused by the proposed project. **Table 4-5** provides a summary of the UMAM evaluation for wetlands anticipated to be impacted

by the proposed project. The functional assessment will be refined and finalized during permitting. Construction of the project results in an estimated loss of 0.5 UMAM functional loss units.

Table 4-5: UMAM Summary

Wetland Identification	Wetland Type	UMAM Score (Delta Value)	Impact Acreage	Functional Loss
WL 1	Cypress	0.50	0.04	0.02
WL 2	Wetland Forested Mixed	0.57	0.73	0.42
WL 3	Wetland Forested Mixed	0.57	0.12	0.07
WL 4	Wetland Forested Mixed	0.53	0.001	0.00
WL 6	Wetland Forested Mixed	0.50	0.01	0.01
		Total	**0.901**	**0.52**

UMAM datasheets for each potentially impacted wetland are included in **Appendix H**. These scores are subject to agency review and revisions are anticipated during the permitting process.

4.4 Wetland Findings

Additionally, there are no practical avoidance alternatives to the construction of the proposed project design within wetland areas. Measures have been taken to avoid and minimize harm to wetlands. These measures are discussed in **Section 4.2.1**. Wetland impacts will be further refined during future project phases and minimization/avoidance measures will be implemented to the extent practicable as discussed above.

Adequate and appropriate mitigation for wetland impacts will be required because of the proposed roadway improvements. Wetland impacts resulting 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 USC. §1344*. Compensatory mitigation for this project will be completed using mitigation banks and any other mitigation options that satisfy state and federal requirements. The proposed project will have no significant short-term or long-term adverse impacts to wetlands because any unavoidable impacts to wetlands will be mitigated to achieve no net loss of wetland function.

During the mitigation process, special attention will be given to forested wetland systems, which are more challenging and costly to mitigate. The use of off-site regional mitigation banks are viable options for mitigation of wetland impacts for this project. There are three mitigation banks

that service this study area: Tampa Bay Mitigation Bank, North Tampa Bay Mitigation Bank, and Boarshead Ranch (conceptual only). The Tampa Bay Mitigation Bank does not currently have freshwater credits available. The project straddles the Tampa Bay Mitigation Bank on the west and the North Tampa Bay Mitigation Bank on the east. Unless another mitigation bank becomes available, it is anticipated that the North Tampa Bay Mitigation Bank will be used for off-site mitigation. Other wetland mitigation options may include a combination of wetland creation, restoration, or preservation within the study watersheds. The permitting agencies will determine if the mitigation proposed during the design and permitting process is appropriate to offset the adverse wetland impacts of this project.

All preliminary UMAM scores, UMAM calculations, and wetland boundaries are subject to revision and approval by regulatory agencies during the permitting process. The exact amount and type of mitigation used to offset wetland impacts from the project will be determined through coordination with the FDEP based on the final design plans of this project.

4.5 Special Designations

This project does not include any areas designated as Outstanding Florida Waters, Aquatic preserves, Scenic Highways or Wild and Scenic Rivers.

5.0 Essential Fish Habitat

The NMFS is the regulatory agency responsible for the nation's living marine resources and their habitats, including EFH. This authority is designated by the *Magnuson-Stevens Fishery Conservation and Management Act* (MSFCMA), as amended. The MSFCMA defines EFH as "Those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". Based on the ETDM coordination, the NMFS concluded that the study area will not directly or indirectly impact EFH and provided a no involvement determination. Based on the Essential Fish Habitat chapter of the PD&E Manual, location of the project, comments received from NMFS and field reviews, the project will not be involved with EFH. Further coordination or consultation with NMFS is not necessary unless future modifications to the project are proposed that may result in adverse impacts to EFH.

6.0 Anticipated Permits

A pre-application meeting was held with the SWFWMD on March 13, 2014. The minutes from that meeting are included in **Appendix I**. A new Environmental Resource Permit (ERP) will be required which will replace all other existing ERPs associated with this roadway intersection. Continued coordination with the proper federal and state agencies will be conducted during the design phase of this project. All necessary permits will be acquired.

Environmental permits will be required from the following agencies:

- USACE - Section 404 Individual Dredge and Fill Permit
- SWFWMD – Individual Environmental Resource Permit
- FDEP - National Pollution Discharge Elimination System Permit

Species specific permits may be necessary, depending on the outcome of species surveys. Regarding other managed species like the osprey, a permit is needed if nest is deemed to have eggs or young. Coordination with the USFWS Region 4 Migratory Bird Permit Office will be required to determine what federal authorization or permits are required for any activity involving non-listed and listed migratory bird species, their nests, and any part thereof.

7.0 Conclusion

7.1 Protected Species and Habitat

The study area was evaluated for the presence of federal and/or state protected species and their suitable habitat in accordance with Section 7 of the Endangered Species Act (ESA) and the PD&E Manual. The following lists summarize the effect determinations that have been made for each federal- and state-managed/protected species based upon their probability ranking and the implementation measures and/or commitments to offset any potential impacts to each species and potential impacts to wetlands and other surface waters. Listed below in **Table 7-1** and **Table 7-2** are the effect determinations made for federal, state, and managed species. **Section 3** includes details of the effect determinations summarized below.

Table 7-1: Federal, State, and Managed Species

Scientific Name	Common Name	Effect Determination
Danaus plexippus	monarch butterfly	N/A
Pandion haliaetus	osprey	No Adverse Impacts
Ursus americanus floridanus	Florida black bear	
Aphelocoma coerulescens	Florida scrub-jay	No Effect
Laterallus jamaicensis	eastern black rail	
Rostrhamus sociabilis ssp. *plumbeus*	Everglade snail kite	
Lampropeltis extenuatum	short-tailed snake	
Falco sparverius paulus	southeastern American kestrel	No Effect Anticipated
Athene cunicularia floridana	Florida burrowing owl	
Haematopus palliatus	American oystercatcher	
Sternula antillarum	least tern	
Ammodramus maritimus peninsulae	Scott's seaside sparrow	No Adverse Effect Anticipated
Cistothorus palustris marianae	Marian's marsh wren	
Pituophis melanoleucus mugitus	Florida pine snake	
Gopherus polyphemus	gopher tortoise	
Egretta caerulea	little blue heron	Potential for Adverse Effects
Egretta tricolor	tricolored heron	
Grus canadensis pratensis	Florida sandhill crane	
Haliaeetus leucocephalus	bald eagle	Potential for Impacts
Mycteria americana	wood stork	MANLAA
Drymarchon couperi	eastern indigo snake	

Table 7-2: State Listed Plant Species

Scientific Name	Common Name	Effect Determination
Calopogon multiflorus	many-flowered grass-pink*	No Adverse Effect Anticipated
Carex chapmanii	Chapman's sedge*	
Coelorachis tuberculosa	Florida jointgrass*	
Drosera intermedia	water sundew*	
Hexalectris spicata	spiked crested coralroot*	
Lilium catesbaei	Catesby's lily*	
Lobelia cardinalis	cardinal flower*	
Cheiroglossa palmata	hand fern*	
Glandularia tampensis	Tampa mock vervain*	
Litsea aestivalis	pondspice*	
Pinguicula caerulea	blueflower butterwort*	
Pinguicula lutea	yellow butterwort*	
Platanthera ciliaris	yellow fringed orchid*	
Platanthera cristata	crested yellow orchid*	
Platanthera flava	southern tubercled orchid*	
Platanthera nivea	snowy orchid*	
Pogonia ophioglossoides	rose pogonia*	
Sacoila lanceolata var. lanceolata	leafless beaked ladiestresses*	
Sarracenia minor	hooded pitcherplant*	
Spiranthes laciniata	lacelip ladiestresses*	
Tricerma phyllanthoides	Florida mayten*	
Zephyranthes atamasca var. treatiae	Treat's zephyr lily*	
Nemastylis floridana	celestial lily*	
Pecluma ptilodon var. bourgeauana	comb polypody*	
Asplenium auritum	auricled spleenwort	
Centrosema arenicola	pineland butterfly pea	
Dendrophylax porrectus	needleroot airplant orchid	
Garberia heterophylla	garberia	
Myrcianthes fragrans	twinberry	
Monotropsis reynoldsiae	pygmy pipes	
Opuntia stricta	erect pricklypear	
Tillandsia utriculata	giant airplant	
Pecluma dispersa	widespread polypody	
Pecluma plumula	plume polypody	
Blechnum occidentale	hammock fern*	

7.2 USFWS Critical Habitat

The study area was evaluated for Critical Habitat in accordance with *50 CFR 17* and the *FDOT PD&E Manual*. Review of the US Fish and Wildlife Service's (USFWS) available GIS data resulted in the identification of no Critical Habitat within the study area. Any future modifications to the project design are subject to re-evaluation of critical habitat in the area.

7.3 Wetland and Other Surface Water Evaluation

The wetlands and other surface waters within the study area were overlaid with the Preferred Alternative for the roadway and pond sites to identify areas of impacts. Anticipated wetland impacts for the preferred alternative are 0.90 acres and 9.12 acres of surface water impacts (**Table 7-3**).

Table 7-3: Potential Wetland and Surface Water Impacts

Wetland/ Surface Water ID	FLUCFCS Classification	FLUCFCS Description	NWI Classification	Impact Acreage
Wetlands				
WL 1	6210	Cypress	PEM1F	0.04
WL 2, 3, 4, & 6	6300	Wetland Forested Mixed	PSS1F/PSS7C	0.86
			Total Wetland Impacts	**0.90**
Surface Waters				
SW1,2,3,4, & 5	5300	Reservoirs	-	9.12
			Total Surface Water Impacts	**9.12**
			Total Wetland and Surface Water Impacts	**10.02**

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.

The project has been evaluated in accordance with *Executive Order 11990 – "Protection of Wetlands."* Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. As the project advances through subsequent phases, avoidance and minimization of wetland impacts will

continue to be considered to the maximum extent practicable. Therefore, through appropriate mitigation during the design and permitting phase, the proposed project is expected to result in no significant impacts to wetlands.

7.4 Commitments

- The most recent version of the USFWS Standard Protection Measures for the Eastern Indigo Snake will be utilized during construction.
- FDOT will provide mitigation for impacts to wood stork Suitable Foraging Habitat within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank.
- FDOT will require contractors to remove garbage daily from the construction site or use bearproof containers for securing food and other debris from the project work area to prevent these items from becoming an attractant for the Florida black bear. Any interaction with nuisance bears will be reported to the FWC Wildlife Alert hotline 888-404-FWCC (3922).
- If the listing status of the tricolored bat is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area during the design and permitting phase of the proposed project, and the FDOT commits to reinitiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the tricolored bat.
- If the listing status of the monarch butterfly is elevated by USFWS to Threatened or Endangered and the Preferred Alternative is located within the consultation area, during the design and permitting phase of the proposed project, the FDOT commits to re-initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the monarch butterfly.

7.5 Implementation Measures

- Surveys to update locations of active osprey and/or bald eagle nest sites will be conducted during the design phase, and permits will be acquired if there will be unavoidable impacts during construction. Coordination with USFWS and FWC will take place as necessary.
- Surveys for gopher tortoise burrows, as well as commensal species, will be conducted during the design phase and permits to relocate tortoises and commensals as appropriate will be obtained from the FWC.
- Surveys for Scott's seaside sparrow nest sites will be conducted during the design phase. If it is determined nest areas are found and could be impacted by the project, FDOT will

coordinate with FWC to determine appropriate avoidance and minimization measures to apply during construction.

- The project will implement FWC osprey conservation measures and guidelines before and during construction.
- FDOT will seek approximately 0.94 acres of mitigation for project impacts.
- BMP will be incorporated during construction to minimize wetland impacts and provide sediment and erosion control.

8.0 References

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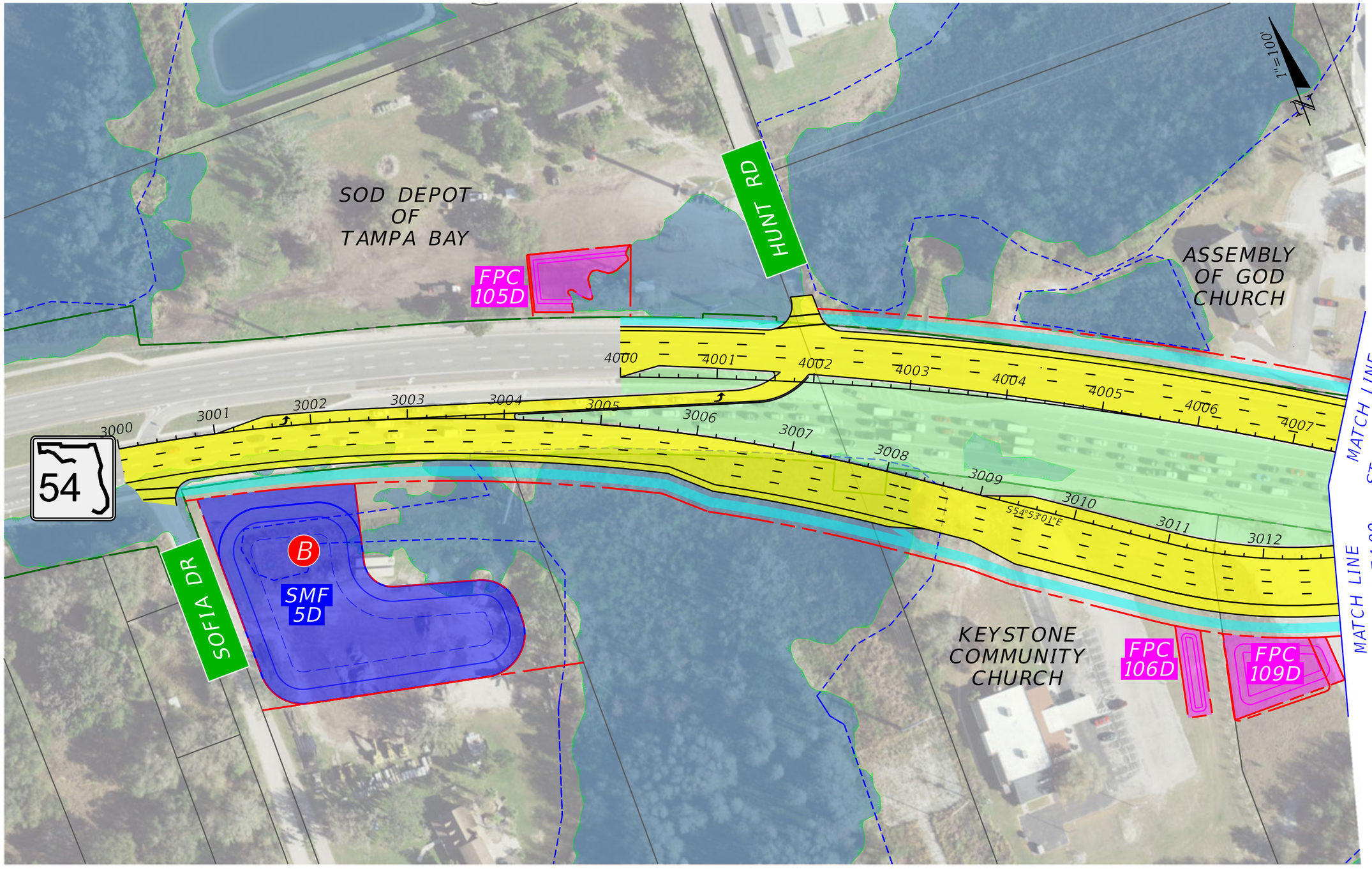
Appendix A
Preferred Alternative Concept Plans/Pond and Floodplain Compensation Sites



LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 1

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

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MATCH LINE STA. 1065+32.00
SEE CONCEPT PLAN (8)

TIBBETTS LUMBER COMPANY

MCDONALDS

BIG LOTS

PARTY LIQUORS

SMF 2D

SUBWAY

DUKE ENERGY

7-ELEVEN

1"=100'

MATCH LINE STA. 4007+45.00

MATCH LINE STA. 3012+74.00

MATCH LINE STA. 4021+23.00

MATCH LINE STA. 3026+80.00

54

41

MCOR AUTOMOTIVE

FPC 110D

MUV DISPENSARY

CVS

PINCH-A-PENNY

HUNGRY HOWIES

FPC 118D

PASCO COUNTY FIRE RESCUE NO. 23

MATCH LINE STA. 1056+80.00
SEE CONCEPT PLAN (7)

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD
- GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
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RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 2

FAC NOTE

INSET A-A

SMF 2D

SMF 2D

INSET A-A

1"=100'

1"=100'

B

C

VILLAGE LAKE SHOPPING CENTER

JIFFY LUBE

WENDY'S

DUKE ENERGY

C

B

FPC 117D

AYR DISPENSARY

MATCH LINE STA. 4021+23.00

MATCH LINE STA. 3026+80.00

4022 4023 4024 4025 4026 4027 4028 4029 4030 4031

S75°28'19"E

3027 3028 3029 3030 3031 3032 3033 3034 3035

S85°39'54"E

Existing

54

LAKE DR

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD
- GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

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RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 3

FAC NOTE

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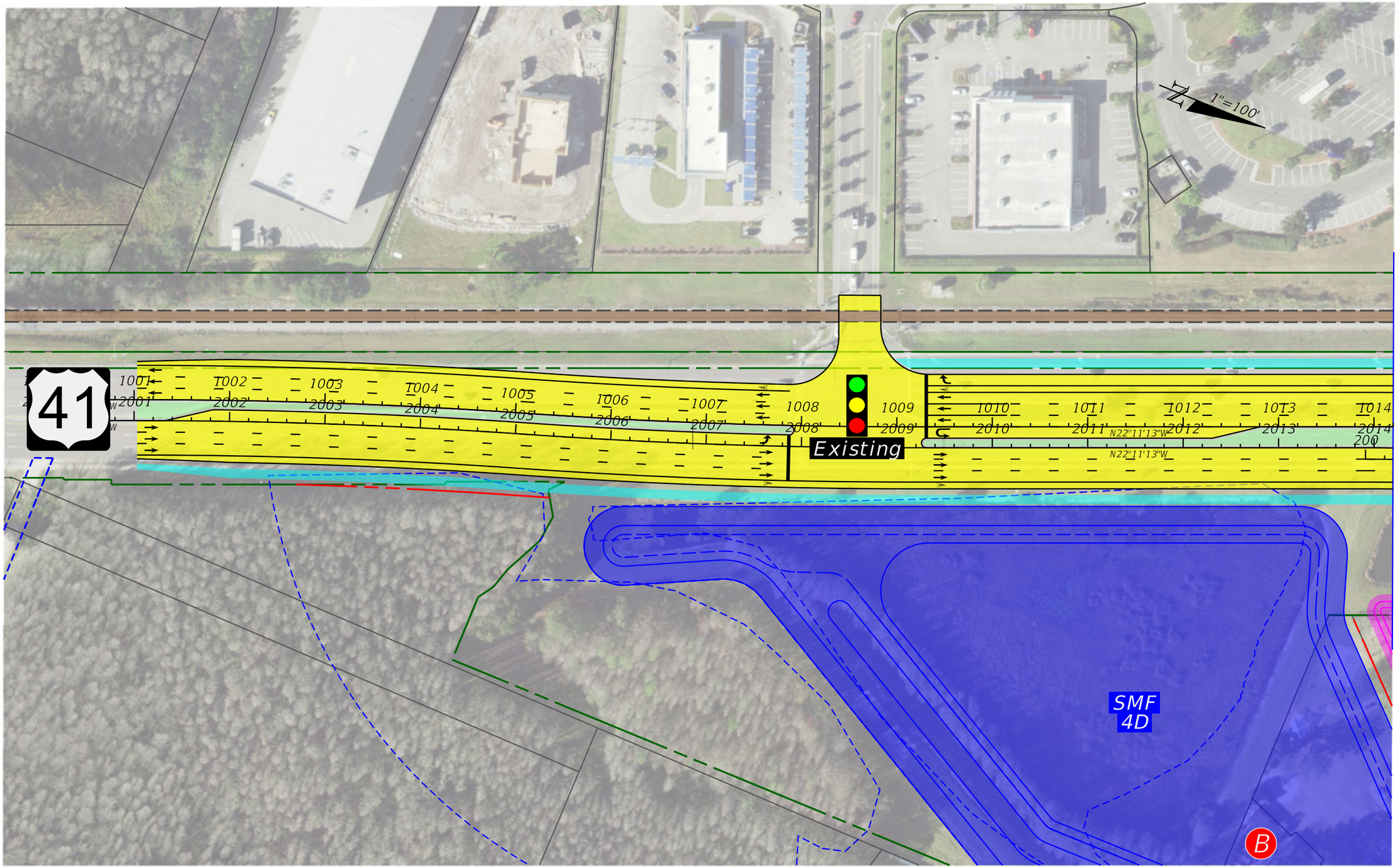

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD
- GRADE SEPARATION
- PROPOSED ROADWAY
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1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 4

FAC NOTE

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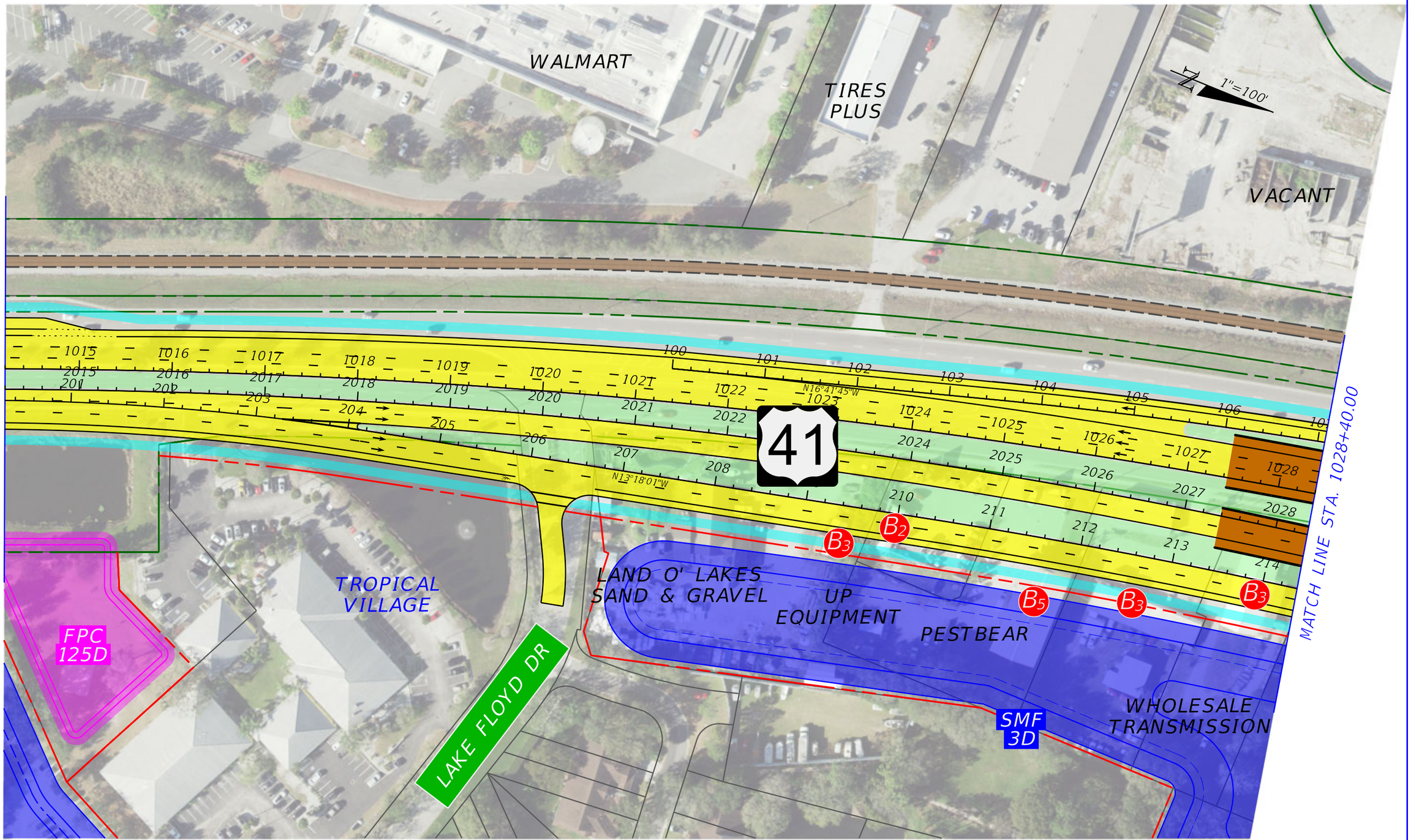

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 5

FAC NOTE

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MATCH LINE STA. 409+70.00
SEE CONCEPT PLAN (10)

MATCH LINE STA. 1028+40.00

MATCH LINE STA. 1042+92.00

TERRACES AT PARADISE LAKES

CALIBER COLLISION

BRINSON ROAD

1"=100'

PARADISE LAKES RV PARK

41

BECK GALLERY

SMF 3D

LAKE FRANCISCO PLAZA

ST. LUKE'S DENTAL

HARBOUR VILLAGE

POTENTIAL NOISE BARRIER

TROPICANA TRAILER PARK

B4 B8 B4 B10 R3

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 6

FAC NOTE

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PARADISE LAKES RV PARK

THE FOUNTAINS AT PARADISE LAKES

TIRE KINGDOM

CAR WASH

LEONARD RD

CITY ELECTRIC CENTRE

1"=100'

BRINSON ROAD

MATCH LINE STA. 1042+92.00

MATCH LINE STA. 1056+80.00
SEE CONCEPT PLAN (2)

41

B7

B

POTENTIAL NOISE BARRIER

SMF 2D

SMF 2D

N11°00'29"E

N12°01'16"E

N12°01'16"E

N15°40'28"E

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD
- GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 7

FAC NOTE

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MATCH LINE STA. 1065+32.00
SEE CONCEPT PLAN (2)

MATCH LINE STA. 1079+28.00

FPC 107D

1"=100'

N

41

N11°01'40"E

N04°50'10"E

N02°03'31"W

MCDONALDS

SMF 2D

CARSON DR

FPC 112D

RUSSELL ADAMS REALTY

CAMROCK FOUNDATIONS

EXTRASPACE STORAGE

LOUD MOUTH'S BAR & KITCHEN

MEINEKE

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD
- GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 8

FAC NOTE

1"=100'

DUKE ENERGY

MORGAN RD

MATCH LINE STA. 1079+28.00

1080 1081 1082 1083 1084 1085 1086 1087 1088 1089 1091 1092 1093

2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2091 2092

N11°01'40"E

41

AREA 41 AUTO SALES

ACCURATE SIGN

VACANT

OUTDOOR KITCHEN COMPANY

WHIPPLES RUSTIC LODGE

COAKLEY COVE

COAKLEY LANE

MCKAIG LANE

PAOLI DRIVE

C

LEGEND

- EXISTING PARCEL
- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 9

FAC NOTE

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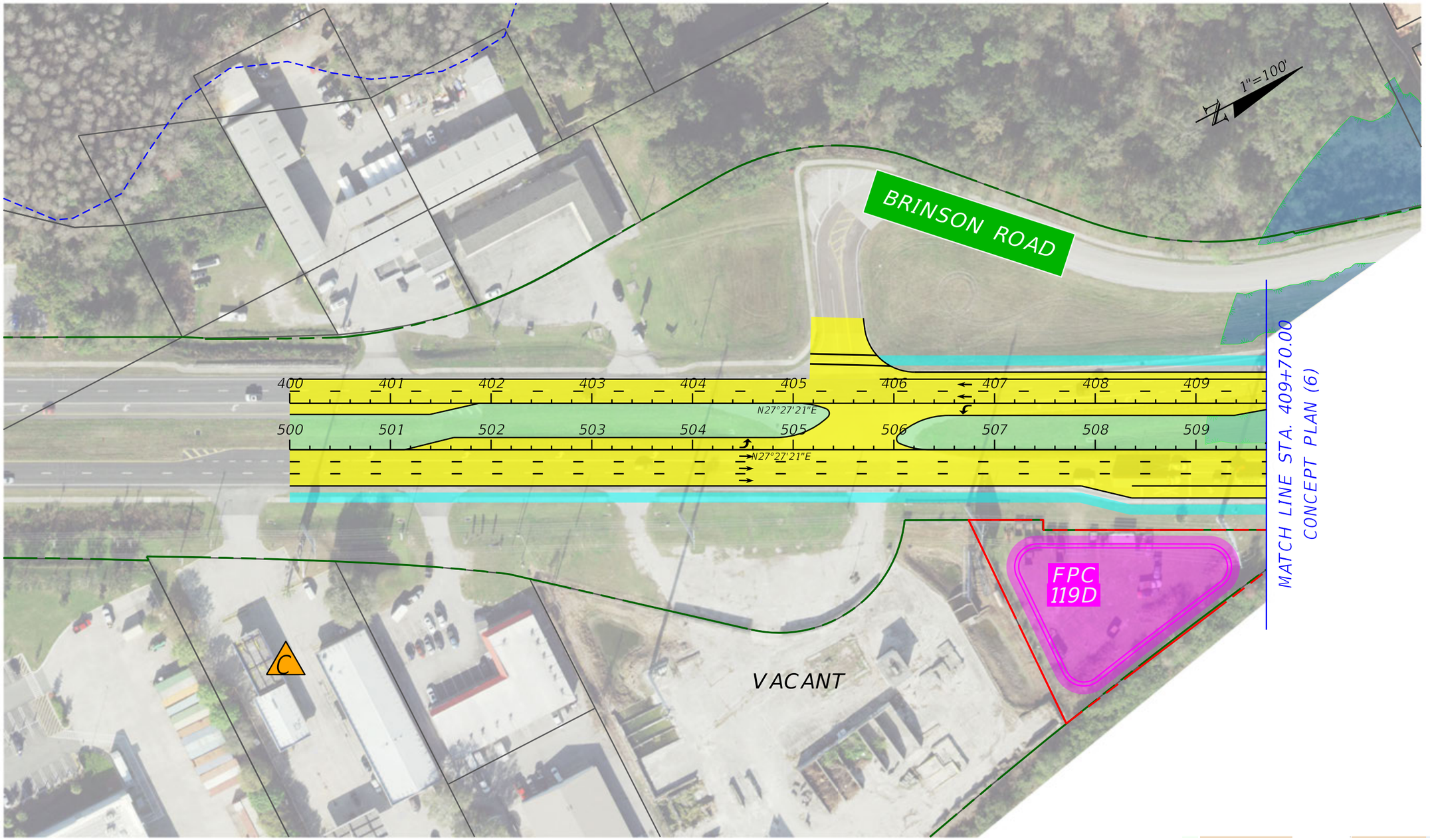

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LEGEND

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- EXISTING R/W LINE
- PROPOSED R/W
- EXISTING WETLAND
- OSW LINE
- EXIST. CSX RAILROAD GRADE SEPARATION
- PROPOSED ROADWAY
- PROPOSED MEDIAN
- PROPOSED SIDEWALK
- PROPOSED BRIDGE
- PREFERRED POND SITE
- FLOODPLAIN
- FPC SITE
- PROPOSED TRAFFIC SIGNAL
- POTENTIAL CONTAMINATION SITE
- POTENTIAL BUSINESS/PUBLIC /RESIDENTIAL RELOCATIONS

ENGINEER OF RECORD

RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 600
TAMPA, FL 33607

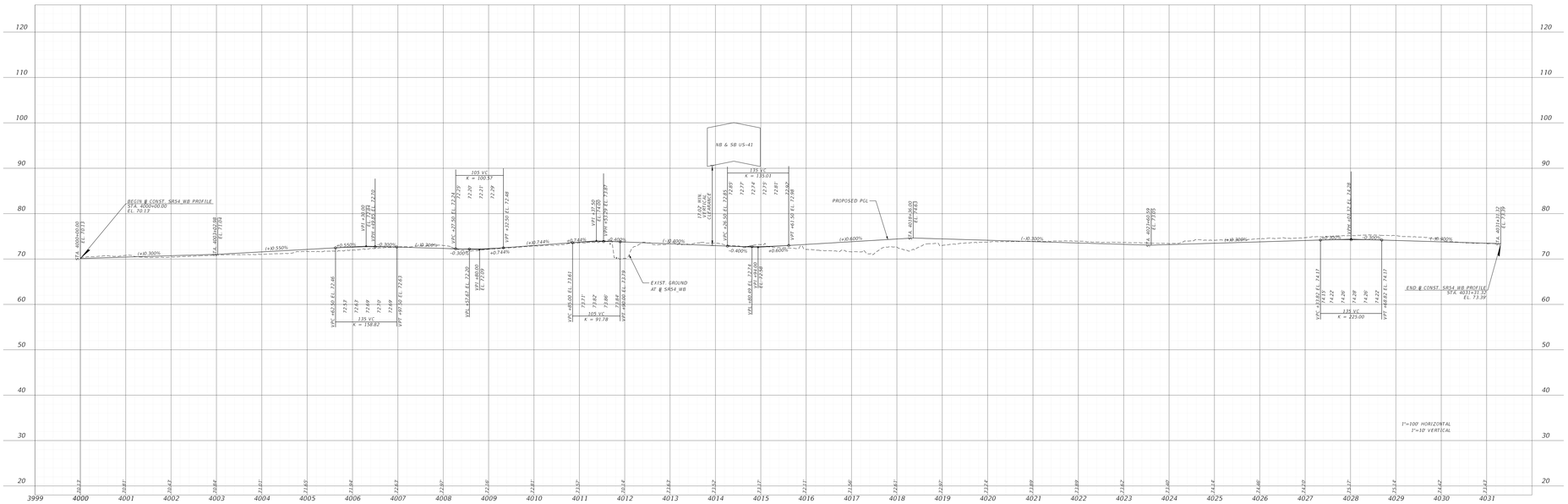
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

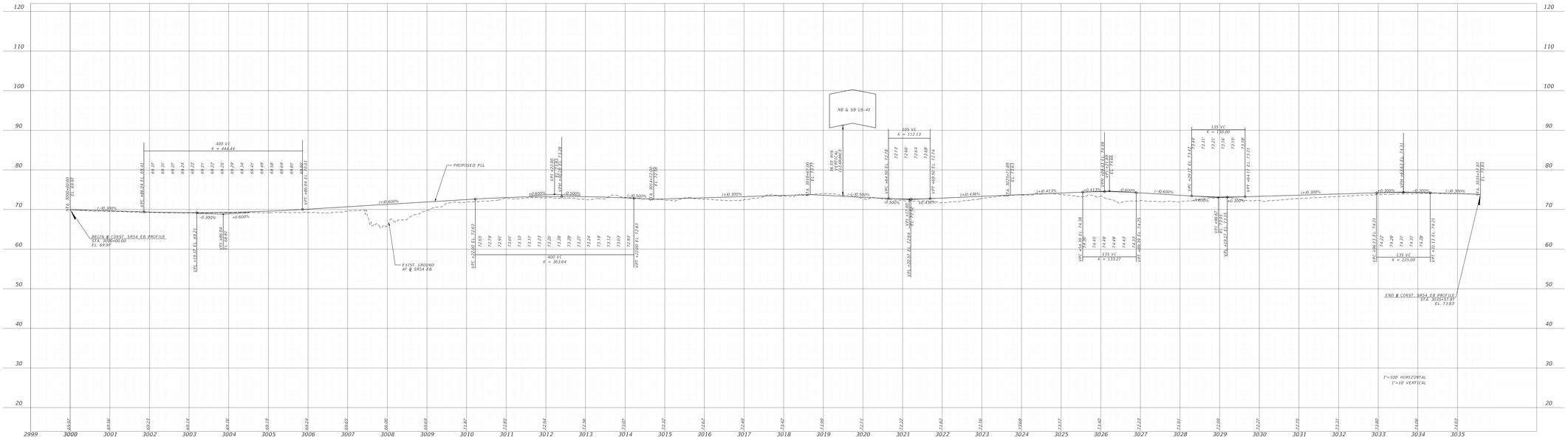
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419182-1-22-10

PREFERRED ALTERNATIVE

DDI - US 41 OVER SR 54

SHEET NO. 10





THE OFFICIAL RECORD OF THIS PLAN SHEET IS THE ONE THAT IS DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

ENGINEER OF RECORD
RICK LANGLASS, P.E.
LICENSE NUMBER: 62498
RS&H, INC.
1715 N WESTSHORE BLVD., SUITE 900
TAMPA, FL 33607

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 54	PASCO	419082-2-22-10

PROFILE SHEET (1)
SR 54

SHEET NO.

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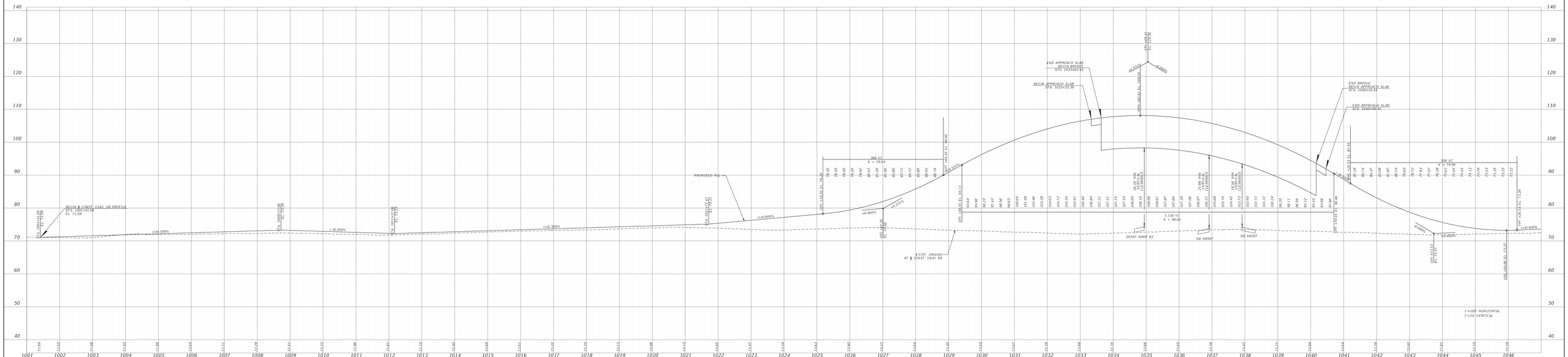

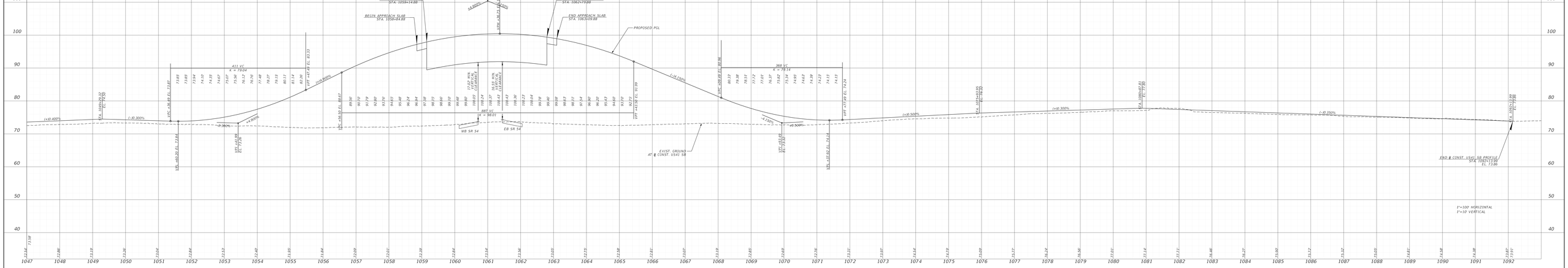

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.	ENGINEER OF RECORD RICK LAVGLASS, P.E. FLORIDA PE NUMBER: 62498 HDR, Inc. 1715 N WESTSHORE BLVD., SUITE 600 TAMPA, FL 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID: SR 54 / PASCO / 419982-1-22-10	PROFILE SHEET (2) US-41 SB	SHEET NO.

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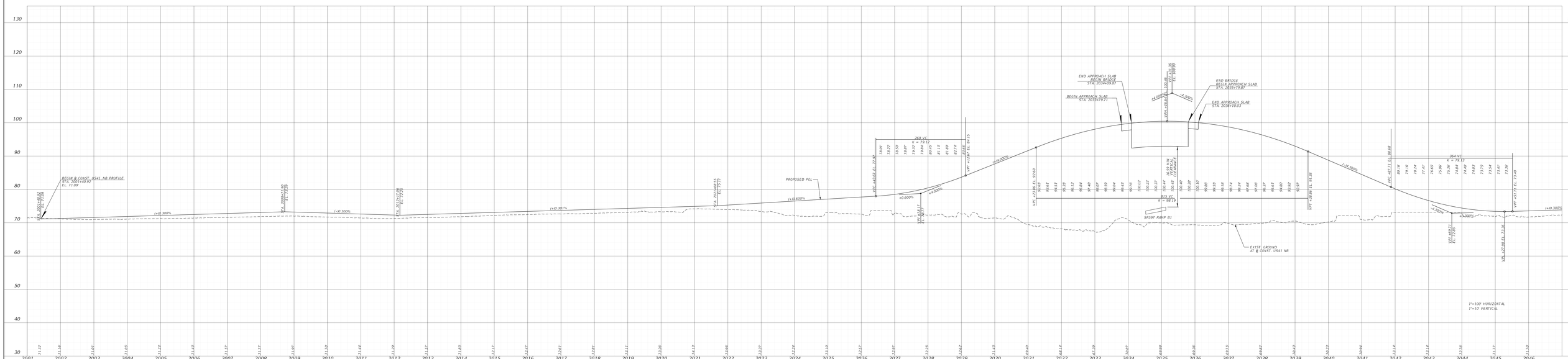

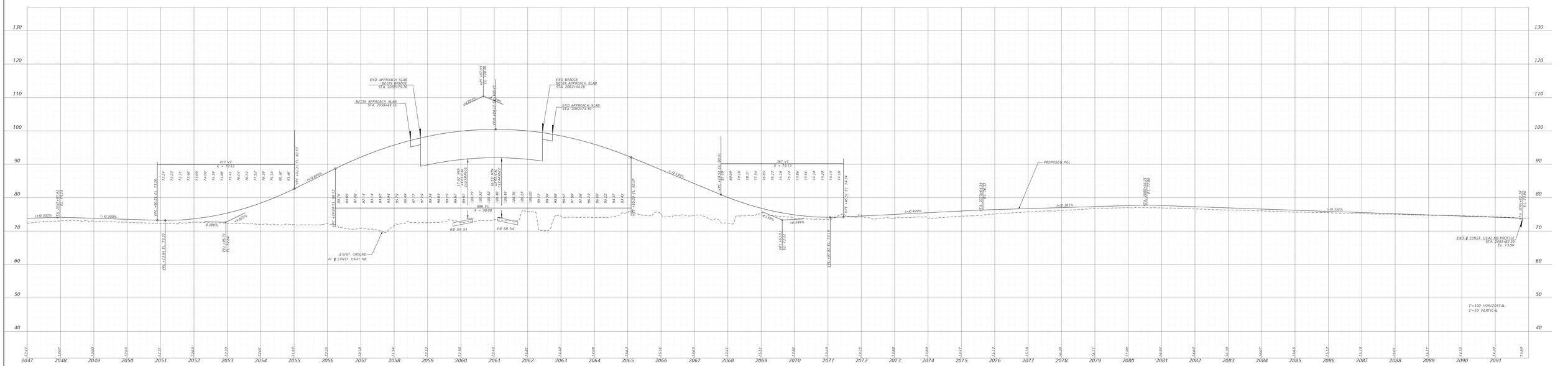

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.	ENGINEER OF RECORD RICK LAVGLASS, P.E. FDOT ID NUMBER: 62498 HDR, Inc. 1715 N WESTSHORE BLVD., SUITE 600 TAMPA, FL 33607	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD NO. / COUNTY / FINANCIAL PROJECT ID: SR 54 / PASCO / 419982-1-22-10	PROFILE SHEET (5) US-41 NB	SHEET NO.

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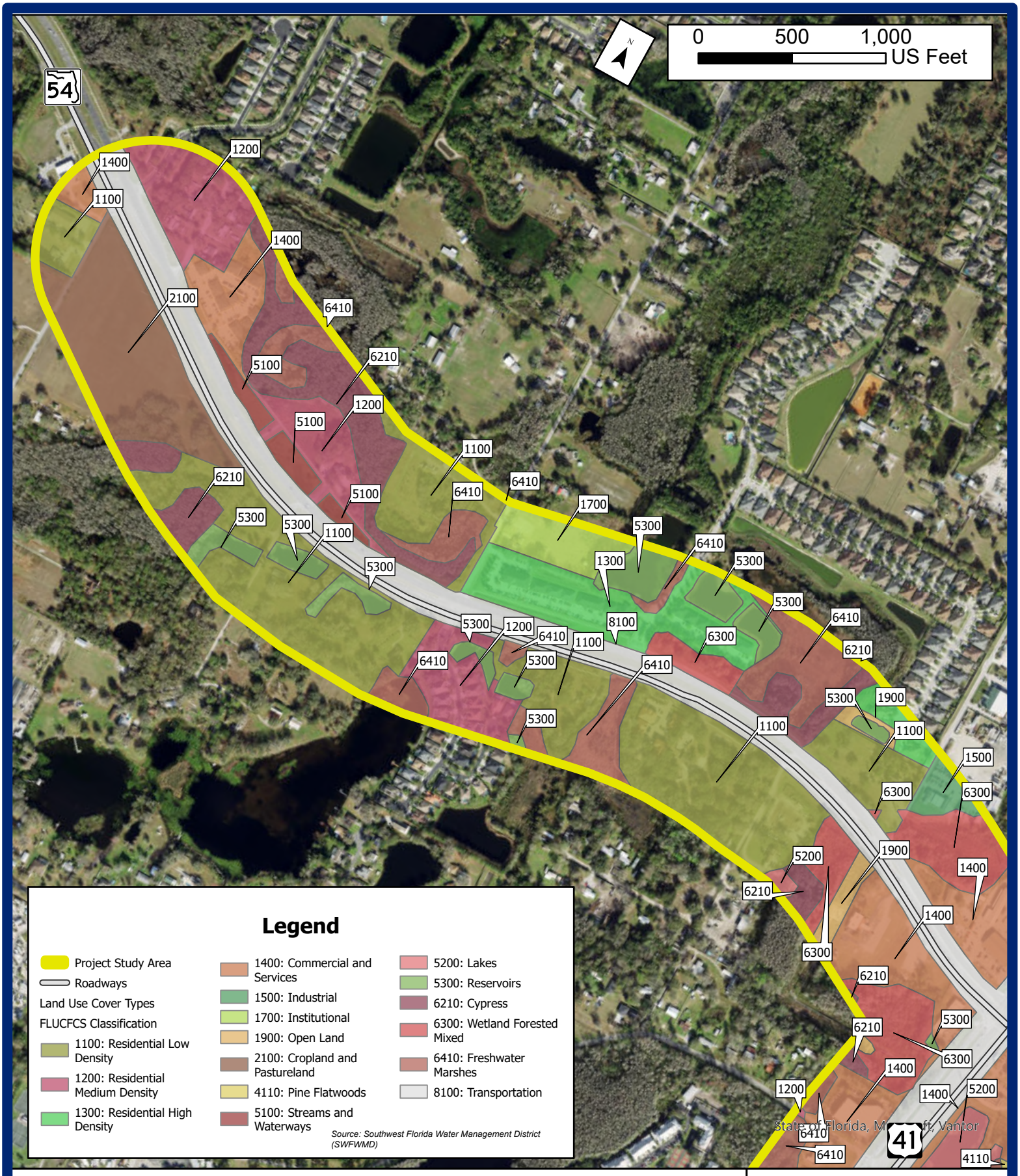
Appendix B

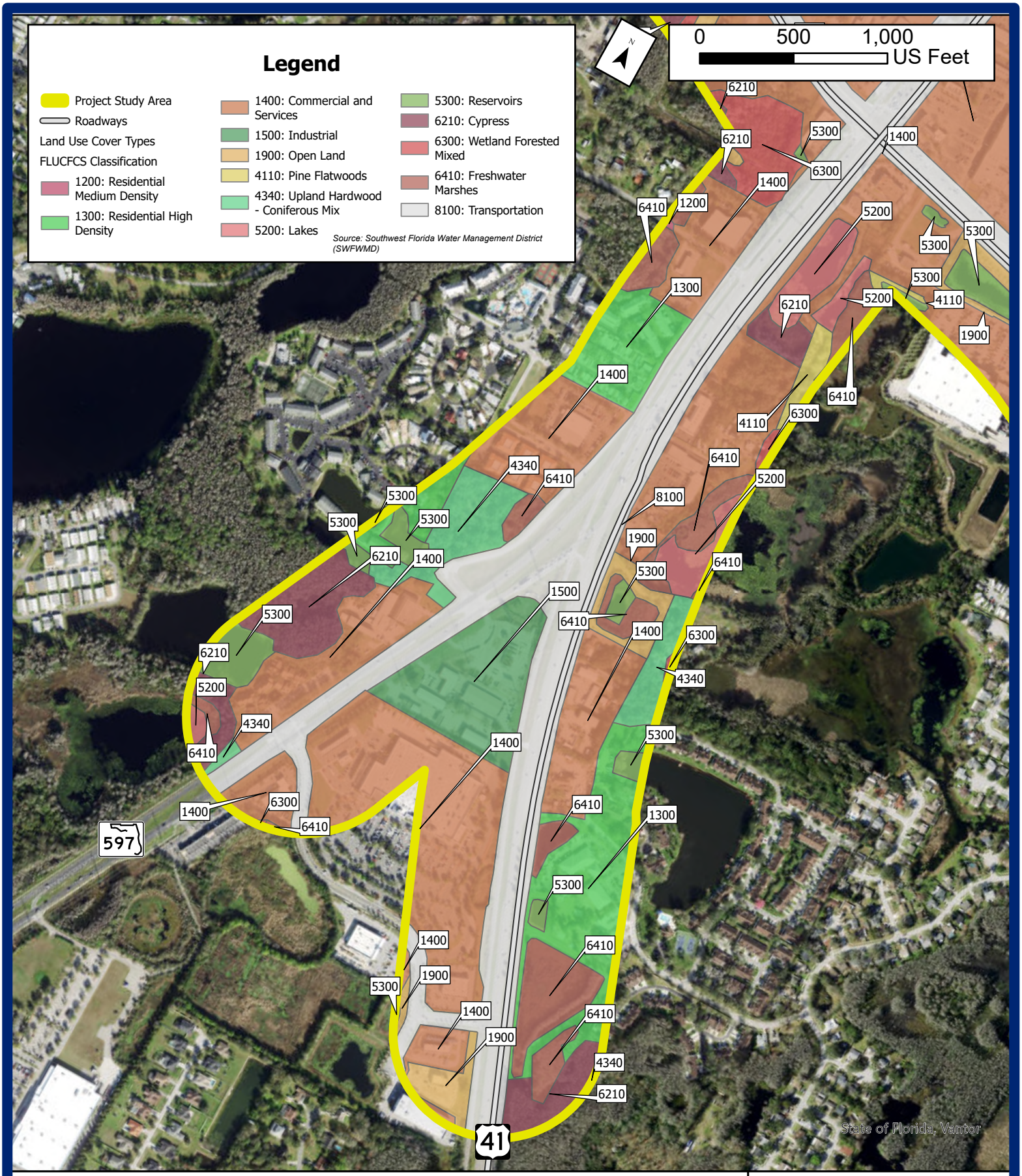
Florida Land Use Land Cover Map



US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

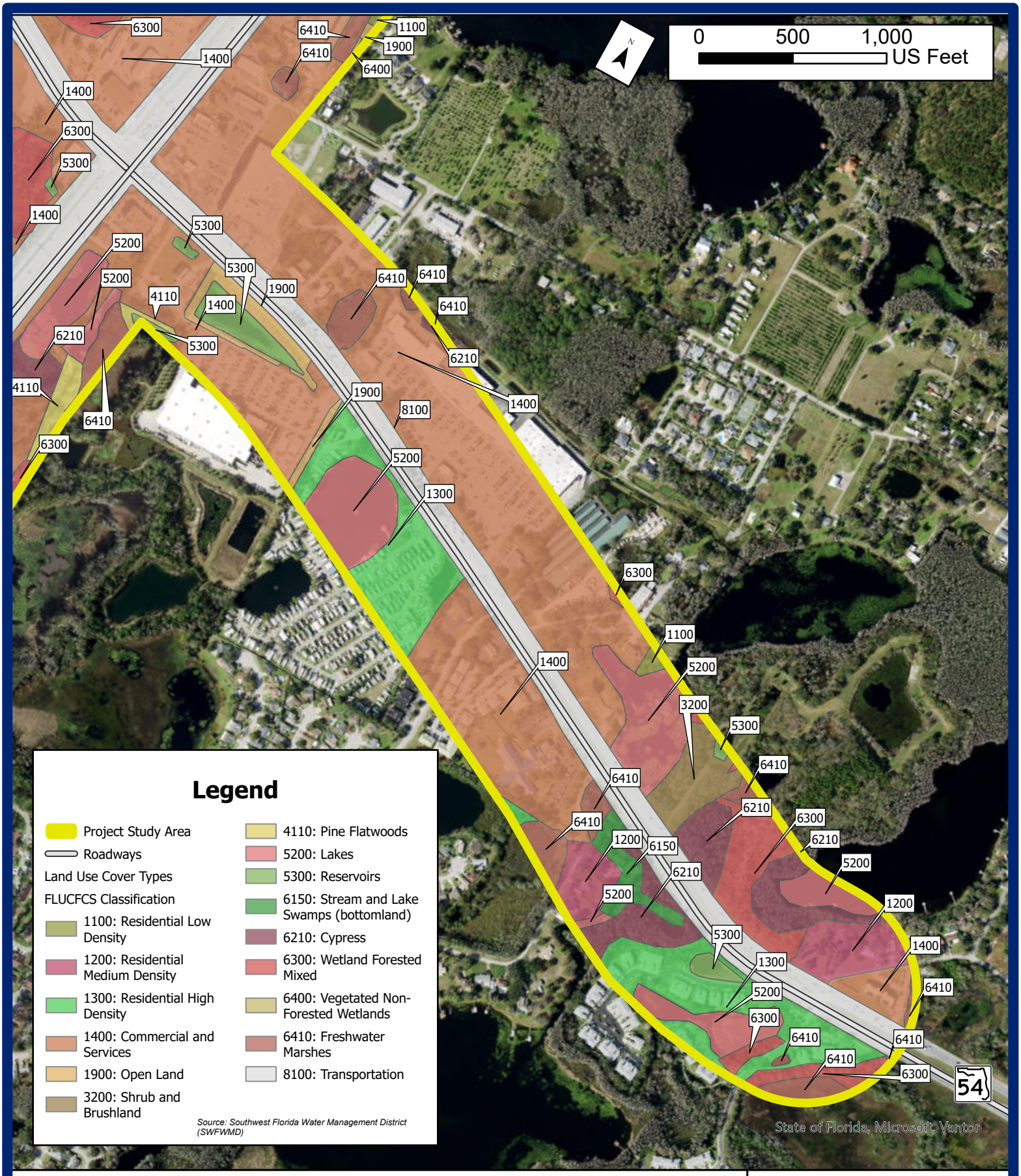
Appendix B



US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

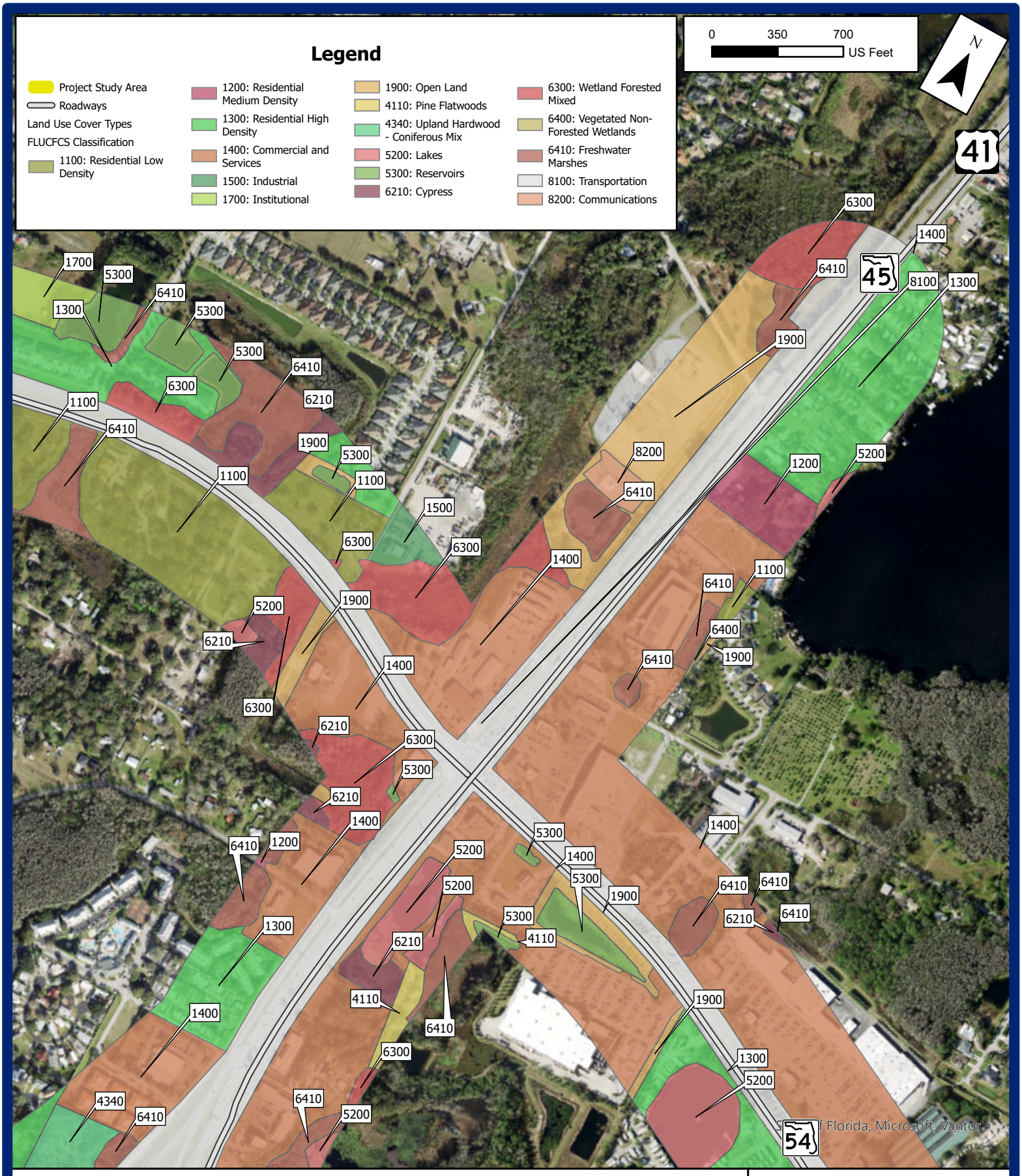
Appendix B



US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

Appendix B



US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

Appendix B

Appendix C
Representative Site Photos

Representative Photos

Representative Photos of Observed Nest:

Representative photo of potential eagles' nest (Photo Taken December 3, 2025)

Representative Photos of Upland, Wetlands, and Plant Species:

Representative photo of wetland 1 (Photo Taken December 3, 2025)

Representative Photo of Forested Wetland (Photo Taken Feb 27th, 2024)

Representative Photo of Upland communities (Photo Taken Feb 27th, 2024)

Representative photo of Wetland 2 (Photo Taken Feb 27th, 2024)

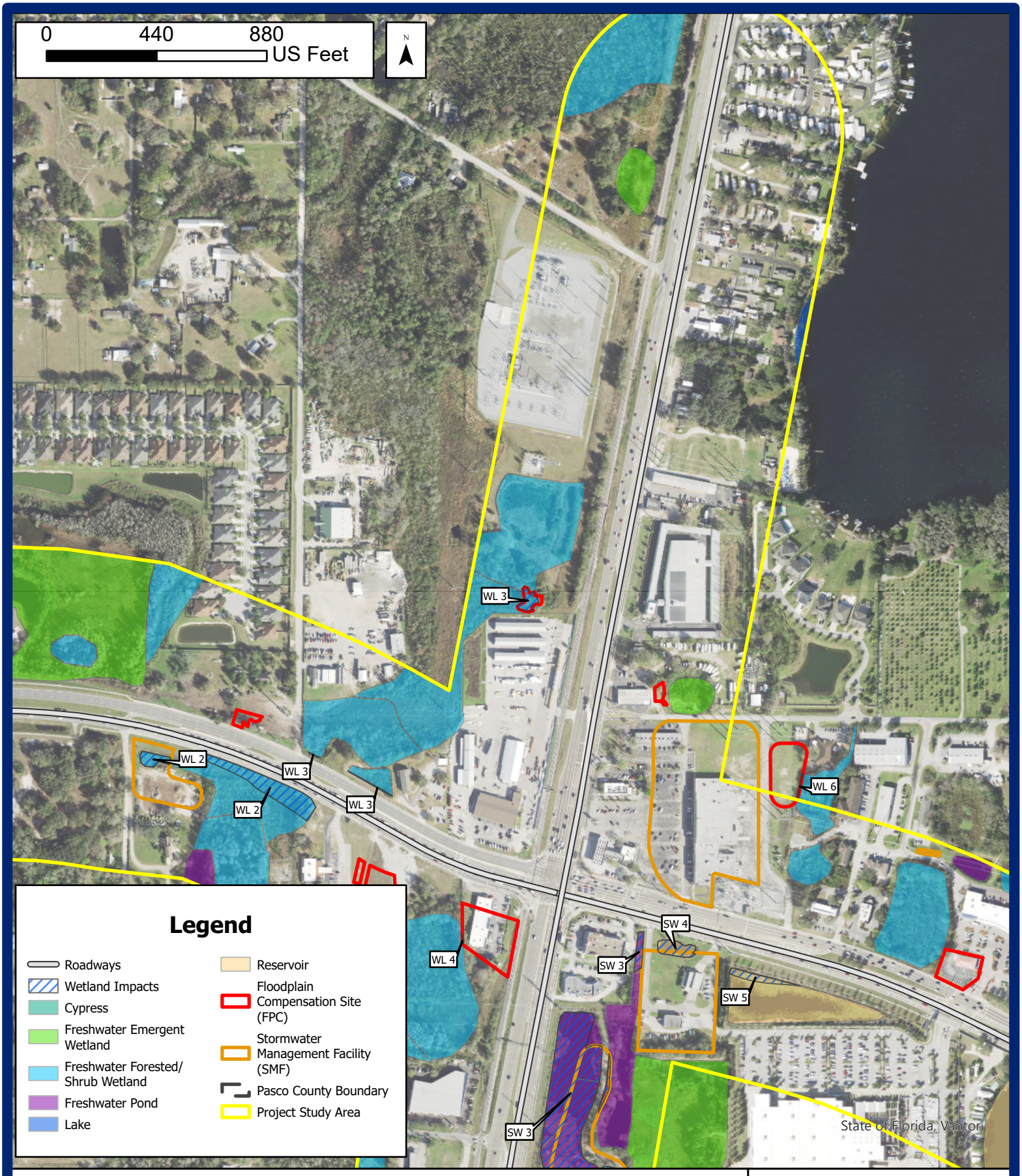
Representative photo of FDOT stormwater pond (Photo Taken December 3,2025)

Representative Photos of Roadway, Businesses, and Residential:

Representative Photo of SR 54 (Photo Taken Feb 27th, 2024)

Representative Photo of Shopping Plaza on SR 54 (Photo Taken Feb 27th, 2024)

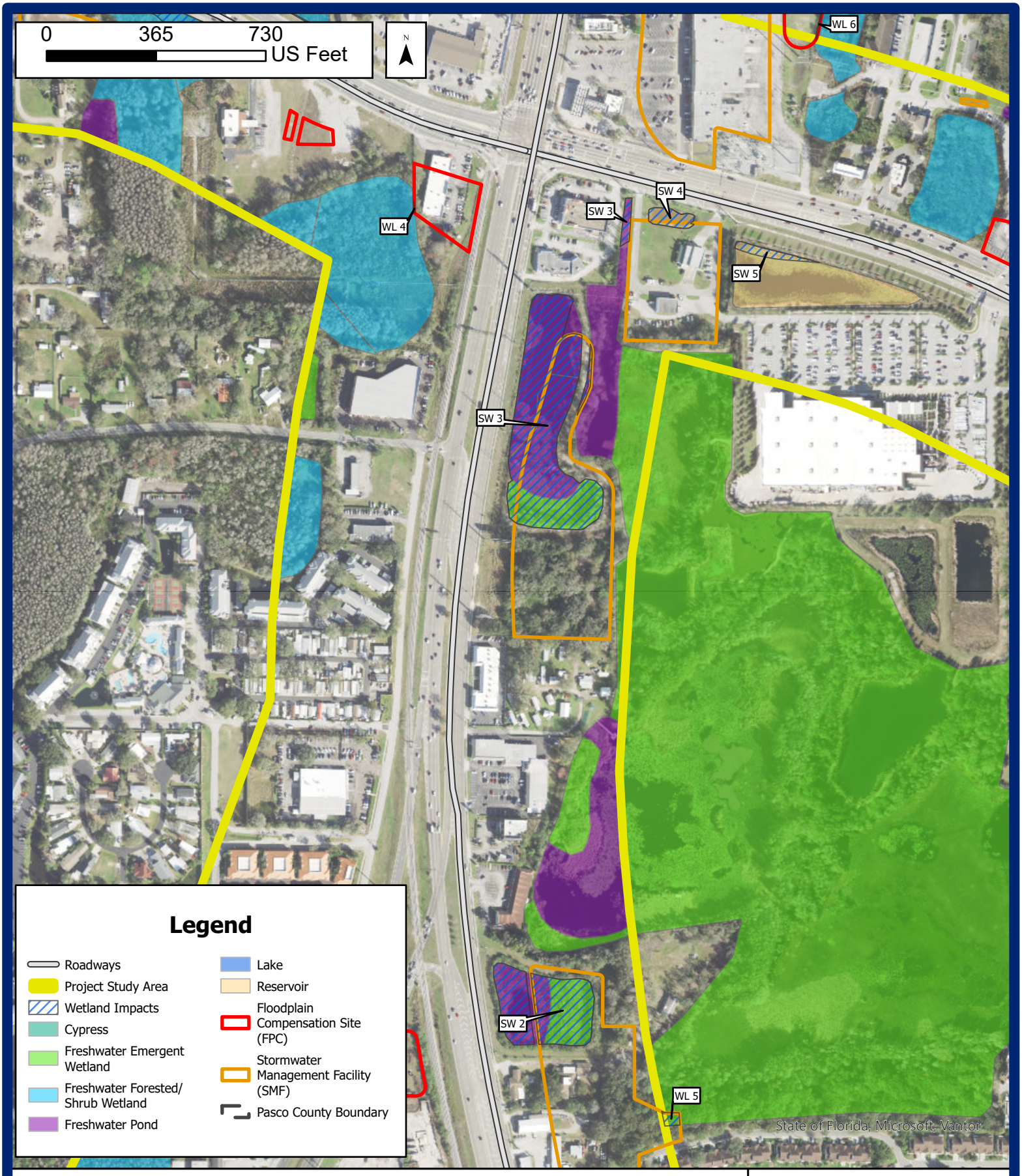
Appendix D
Wetland and Surface Water Impacts



US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

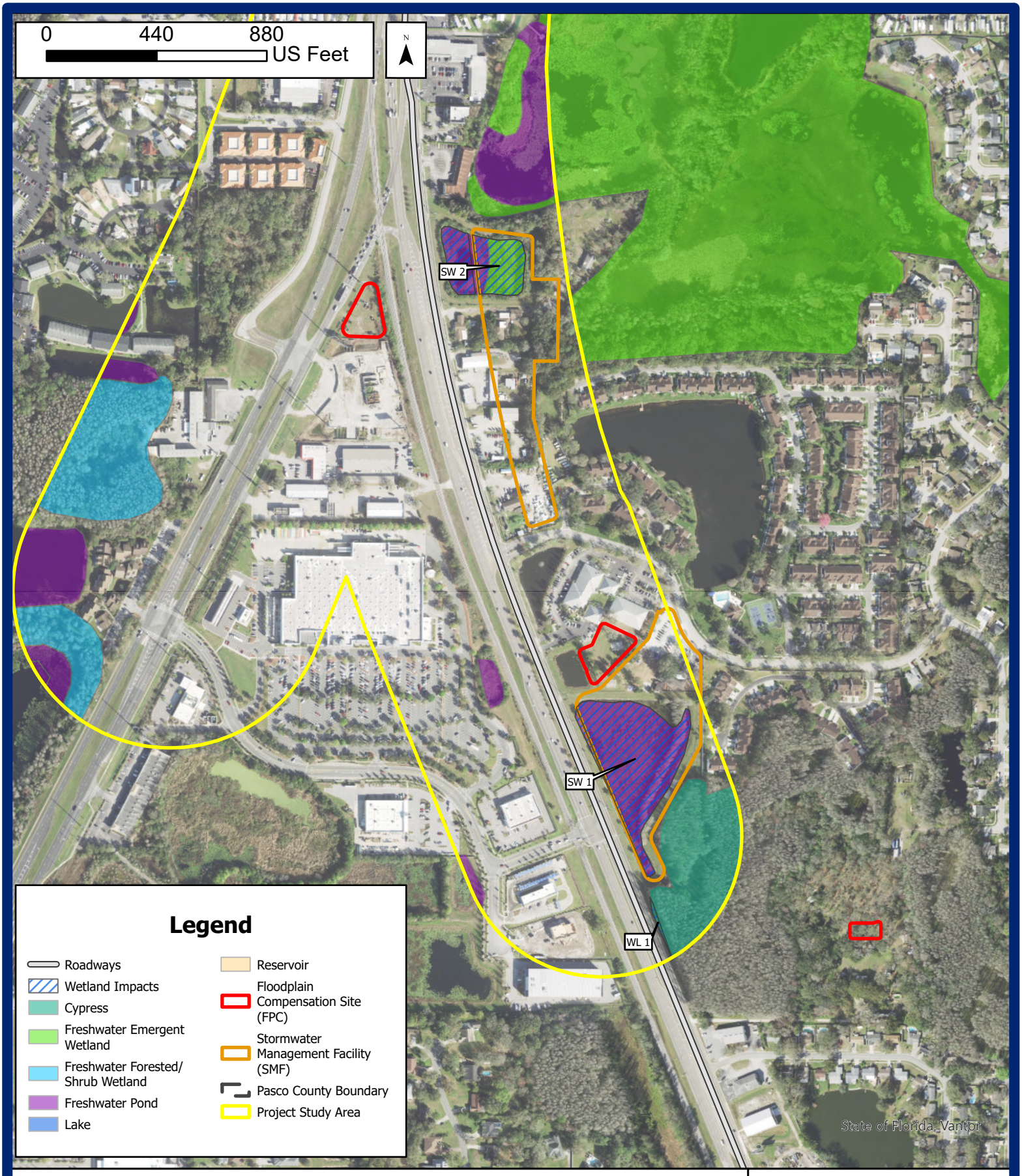
Appendix D



US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

Appendix D



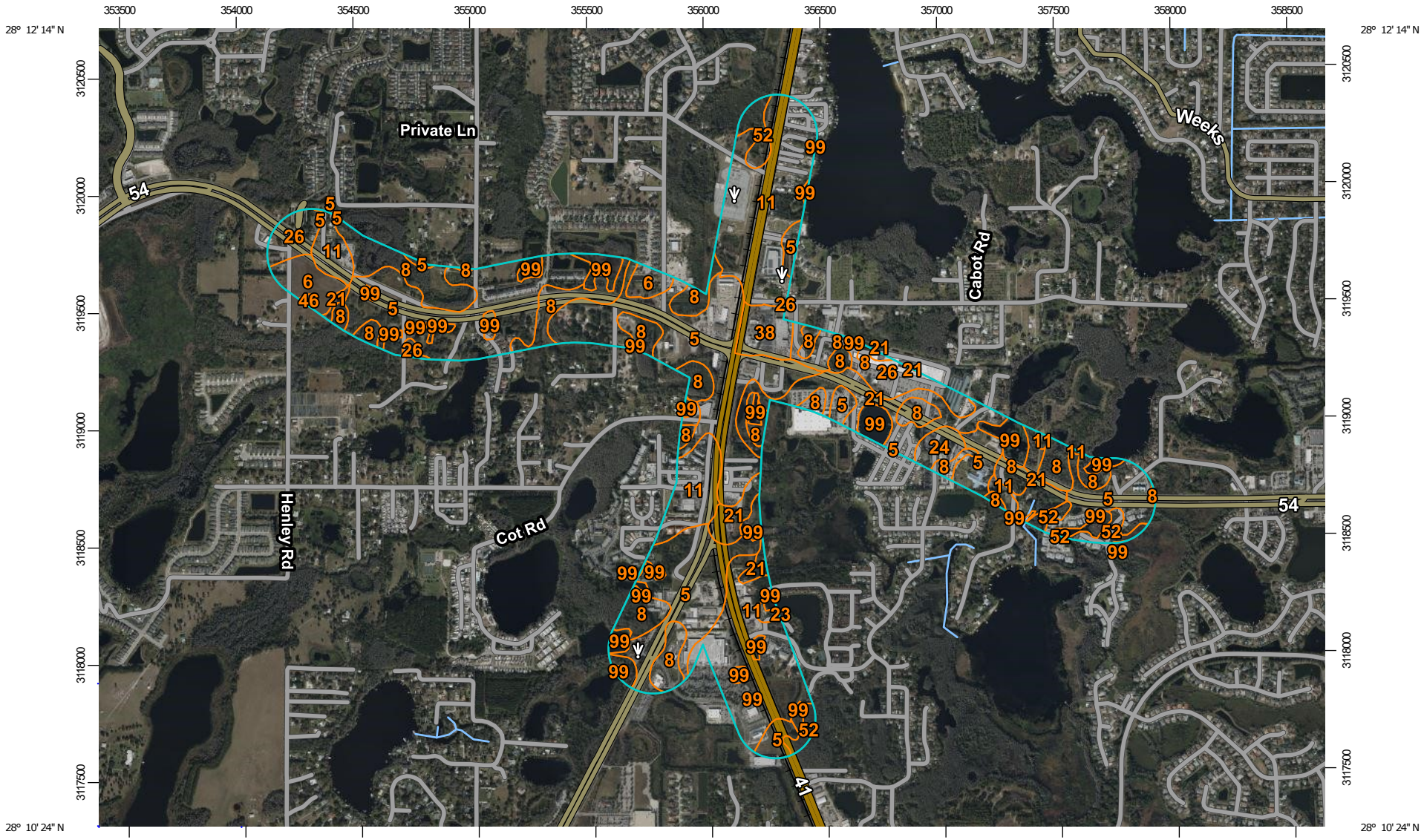
US 41 at SR 54 PD&E Study

from South of SR 54 Intersection to North of SR 54 Intersection

Appendix D

Appendix E
NRCS Soils Map

Soil Map—Pasco County, Florida
(SR 45 (US 41) at SR 54 PD&E Study - Soils Map)



Map Scale: 1:24,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 350 700 1400 2100

Feet: 0 1000 2000 4000 6000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Pasco County, Florida
Survey Area Data: Version 22, Sep 6, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jan 6, 2022—Jan 30, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
5	Myakka-Myakka, wet, fine sands, 0 to 2 percent slopes	219.4	35.3%
6	Tavares sand, 0 to 5 percent slopes	15.3	2.5%
8	Sellers mucky loamy fine sand	94.5	15.2%
11	Adamsville fine sand, 0 to 2 percent slopes	139.6	22.4%
21	Smyrna fine sand	48.8	7.8%
23	Basinger fine sand, depressional, 0 to 1 percent slopes	1.2	0.2%
24	Quartzipsamments, shaped, 0 to 5 percent slopes	6.4	1.0%
26	Narcoossee fine sand, 0 to 2 percent slopes	29.8	4.8%
38	Urban land, 0 to 2 percent slopes	11.8	1.9%
46	Cassia fine sand, 0 to 5 percent slopes	0.7	0.1%
52	Samsula muck, frequently ponded, 0 to 1 percent slopes	16.0	2.6%
99	Water	38.7	6.2%
Totals for Area of Interest		**622.2**	**100.0%**

Appendix F

USFWS/FWC Effect Determination Keys

FWS Effect Determination Key for the Eastern Indigo Snake

United States Department of the Interior

U. S. FISH AND WILDLIFE SERVICE

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

IN REPLY REFER TO:
August 13, 2013

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

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

Dear Colonel Dodd:

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

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

On Page 2

The following replaces the last paragraph above the signatures:

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

On Page 3

The following replaces both paragraphs under "Scope of the key":

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

On Page 4

The following replaces the first paragraph under Conservation Measures:

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

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

On Page 4 and Page 5 (Couplet D)

The following replaces D. under Conservation Measures:

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

The project will impact more than 25 acres of xeric habitat (scrub, sandhill, or scrubby flatwoods) or more than 25 active and inactive gopher tortoise burrows and consultation with the Service is requested[2].....*"may affect"*

On Page 5

The following replaces footnote #3:

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

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

Sincerely,

Dawn Jennings
Acting Field Supervisor

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

United States Department of the Interior

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

January 25, 2010

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

Service Federal Activity Code: 41420-2009-FA-0642
Service Consultation Code: 41420-2009-I-0467
41910-2010-I-0045
Subject: North and South Florida Ecological Services Field Offices Programmatic Concurrence for Use of Original Eastern Indigo Snake Key(s) Until Further Notice

Dear Mr. Hobbie:

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

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

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

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

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

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

Sincerely,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

David L. Hankla
Field Supervisor
North Florida Ecological Services Office

Enclosure

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

Eastern Indigo Snake Programmatic Effect Determination Key

Scope of the key

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

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

Habitat

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

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

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

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

Conservation Measures

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

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

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

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

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

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

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

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

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

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

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

Permit will not be conditioned as outlined above and consultation with the Service is requested[2] ..... *"may affect"*

---

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

[2]Consultation may be concluded informally or formally depending on project impacts.

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

USFWS Effect Determination Key for the Wood Stork

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

Purpose and Background

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

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

Scope of the key

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

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

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

Summary of General Wood Stork Nesting and Foraging Habitat Information

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

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

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

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

WOOD STORK KEY

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

A. Project within 2,500 feet of an active colony site[1]……*May affect*

Project more than 2,500 feet from a colony site……go to B

B. Project does not affect suitable foraging habitat[2] (SFH)…….*no effect*

Project impacts SFH[2]……go to C

C. Project impacts to SFH are less than or equal to 0.5 acre[3]…….....*NLAA*[4]

Project impacts to SFH are greater than or equal to 0.5 acre..……..go to D

D. Project impacts to SFH not within a Core Foraging Area[5] (see attached map) of a colony site, and no wood storks have been documented foraging on site…….....NLAA[4]

Project impacts to SFH are within the CFA of a colony site, or wood storks have been documented foraging on a project site outside the CFA ……..….go to E

E. Project provides SFH compensation within the Service Area of a Service-approved wetland mitigation bank or wood stork conservation bank preferably within the CFA, or consists of SFH compensation within the CFA consisting of enhancement, restoration or creation in a project phased approach that provides an amount of habitat and foraging function equivalent to that of impacted SFH (see *Wood Stork Foraging Habitat Assessment Procedure*[6] for guidance), is not contrary to the Service's *Habitat Management Guidelines For The Wood Stork In The Southeast Region* and in accordance with the CWA section 404(b)(1) guidelines……*NLAA*[4]

Project does not satisfy these elements.……....……...*May affect*

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

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

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

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

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

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

Monitoring and Reporting Effects

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

Literature Cited

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

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

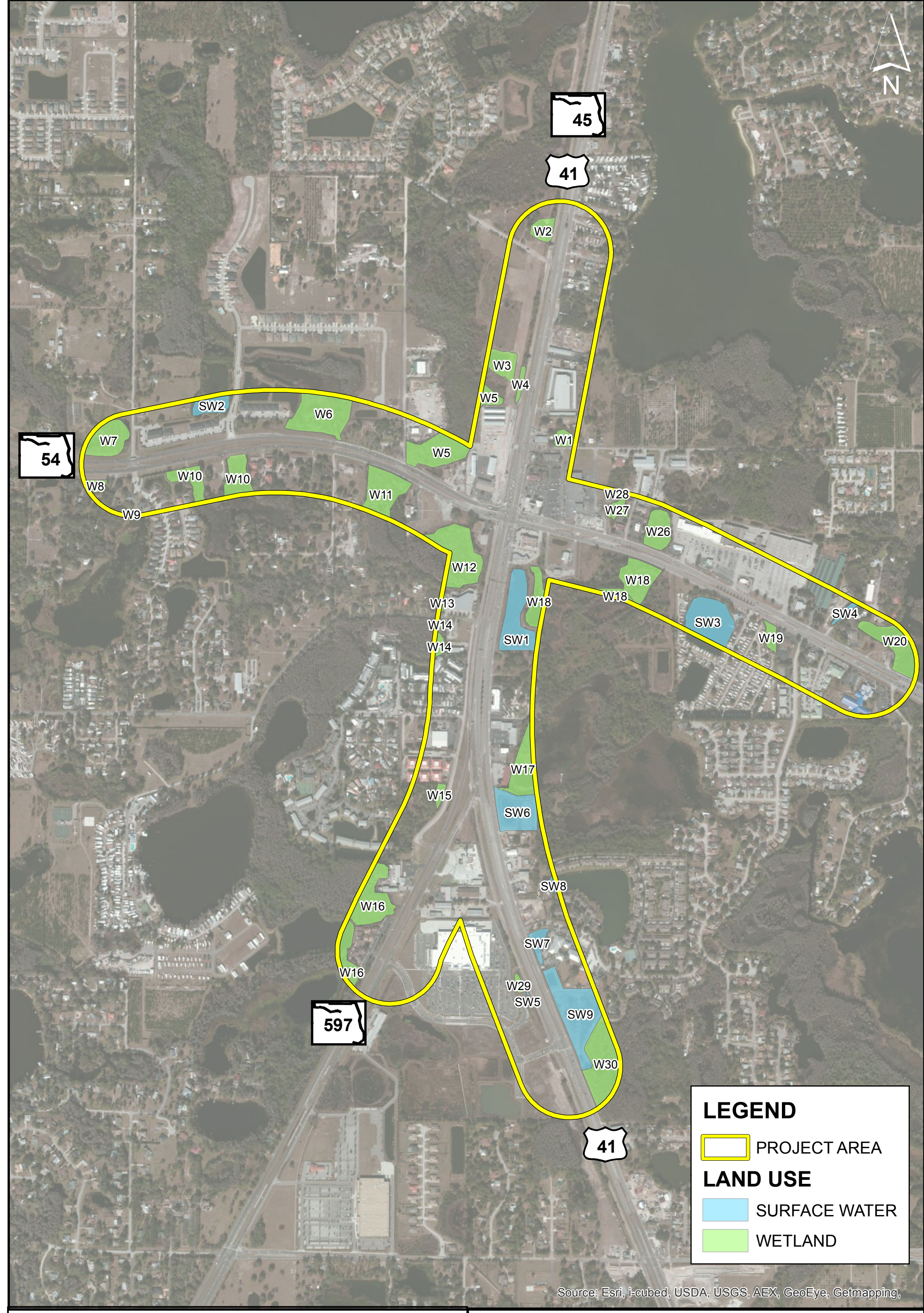
Rodgers, J.A. Jr., A.S. Wenner, and S.T. Schwikert. 1987. Population dynamics of wood storks in northern and central Florida, USA. Colonial Waterbirds 10:151-156.

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

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

Appendix G

2013 Wetland Delineation Map



US 41 (SR 45) FROM SOUTH OF THE
SR 54 INTERSECTION TO
NORTH OF THE SR 54 INTERSECTION
WPI Segment No.: 419182-1
Pasco County, Florida

Appendix G
WETLAND AND SURFACE WATERS
LOCATION MAP

0 250 500 1,000 1,500 2,000
Feet

Appendix H

UMAM Forms

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART I - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.400 F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 at SR 54		**WL1**

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6210		**Impact**	**0.04** Acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
South Lakes		**N/A**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This cypress wetland coniferous forest is connected to a small freshwater marsh, but is otherwise isolated by development.

Assessment area description

Wetland east of Land O Lakes Blvd (SR 41)

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
US 41 (Major roadway in the area)	**Common**

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, water quality enhancement, flood attenuation.	**N/A**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading Birds	**American Alligator**

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:	Assessment date(s):
A. Gagne and B. Hartung	**12/3/2025**

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART II - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name:	Application Number:	Assessment Area Name or Number:
US 41 at SR 54	**-**	**WL1**
Impact or Mitigation:	Assessment Conducted by:	Assessment Date:
Impact	**A. Gagne and B. Hartung**	**12/03/25**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

		Current	With Impact
.500(6)(a) Location and Landscape Support	a. Quality and quantity **of habitat support** outside of AA.		
	b. **Invasive plant species.**	X	
	c. **Wildlife access** to and from AA (proximity and barriers).	X	
	d. **Downstream benefits** provided to fish and wildlife.		
	e. Adverse impacts to wildlife in AA from **land uses** outside of AA.		
	f. **Hydrologic connectivity** (impediments and flow restrictions).		
	g. **Dependency** of downstream habitats on quantity or quality of discharges.		
	h. Protection of wetland functions provided by uplands (**upland** AAs only).		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
5	**0**	Three (3) potential encampments/tents were visible from the adjacent sidewalk. It should be noted that several people may reside here. Trash from the roadway was abundant, and the impacted portion of the wetland is susceptible to runoff and debris from the nearby roadway. Due to development being surrounded by the wetland the limit for wildlife access is limited	

		Current	With Impact
.500(6)(b) Water Environment (n/a for uplands)	a. Appropriateness of **water levels and flows**.		
	b. Reliability of **water level indicators**.		
	c. Appropriateness of **soil moisture**.		
	d. **Flow rates**/points of discharge.		
	e. **Fire frequency**/severity.		
	f. **Type of vegetation**.	X	
	g. **Hydrologic stress** on vegetation.		
	h. **Use by animal**s with hydrologic requirements.		
	i. **Plant community composition** associated with water quality (i.e., plants tolerant of poor WQ).		
	j. **Water quality of standing water by observation** (I.e., discoloration, turbidity).	X	
	k. **Water quality data** for the type of community.		
	l. **Water depth, wave energy, and currents**.		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
5	**0**	At the time of field review, no standing water was present. However, there were several high water level indicators such as marks on trees were visible. There was little to no zonation, upland recrutment into wetland. Due to the proximity to the nearby major roadway, water quality would be affected by runoff and pollution.	

		Current	With Impact
.500(6)(c) Community Structure X Vegetation _____ Benthic _____ Both	I. Appropriate/desirable species		
	II. Invasive/exotic plant species	X	
	III. Regeneration/recruitment		
	IV. Age, size distribution.		
	V. Snags, dens, cavity, etc.		
	VI. Plants' condition.	X	
	VII. Land management practices.		
	VIII. Topographic features (refugia, channels, hummocks).		
	IX. Submerged vegetation (only score if present).		
	X. Upland assessment area		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
5	**0**	Impact area vegetation is dominated by Brazilian pepper, bracken fern, cypress, lauren oak, and black willow. The plant conditions were optimal and new recruitment of bald cypress was observed.	

Raw Score = Sum of above scores/30 (if uplands, divide by 20)	
Current	**With Impact**
0.50	0.00

Impact Delta (ID)	
Current - w/Impact	0.50

Impact Acres =	0.04

Functional Loss (FL) [For Impact Assessment Areas]:	
FL = ID x Impact Acres =	0.02

NOTE: If impact is proposed to be mitigated at a mitigation bank that was assessed using UMAM, then the credits required for mitigation is equal to Functional Loss (FL). If impact mitigation is proposed at a mitigation bank that was not assessed using UMAM, then UMAM cannot be used to assess impacts; use the assessment method of the mitigaiton bank.

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART I - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.400 F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 at SR 54		**WL2**

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6300		**Impact**	**0.73** Acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
South Lakes		**N/A**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This isolated forested wetland is located along SR 54 and is surrounded by residential communites.

Assessment area description

This isolated forested wetland is located next to a community church and a residential home.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Located next to Keystone Community Church	**Common**

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, water quality enhancement, flood attenuation.	**N/A**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading Birds	**Sandhill Cranes and American Alligator**

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:	Assessment date(s):
A. Gagne and B. Hartung	**12/3/2025**

Form 62-345.900(1), F.A.C. [effective date]

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART II - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name:	Application Number:	Assessment Area Name or Number:
US 41 at SR 54	**-**	**WL2**
Impact or Mitigation:	Assessment Conducted by:	Assessment Date:
Impact	**A. Gagne and B. Hartung**	**12/03/25**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

		Current	With Impact
.500(6)(a) Location and Landscape Support	a. Quality and quantity **of habitat support** outside of AA.	X	
	b. **Invasive plant species.**	X	
	c. **Wildlife access** to and from AA (proximity and barriers).		
	d. **Downstream benefits** provided to fish and wildlife.		
	e. Adverse impacts to wildlife in AA from **land uses** outside of AA.		
	f. **Hydrologic connectivity** (impediments and flow restrictions).		
	g. **Dependency** of downstream habitats on quantity or quality of discharges.		
	h. Protection of wetland functions provided by uplands (**upland** AAs only).		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
6	**0**	The assessment are is connected via culvert system and is near a busy roadway, that could effect wildlife to travel to the wetland. Outside of the wetland, there is little supporting habitat. The assessment area does have invasive plant species present, such as the brazilian pepper and cat tail. Which is dominated around the wetland.	

.500(6)(b) Water Environment (n/a for uplands)	a. Appropriateness of **water levels and flows**.		
	b. Reliability of **water level indicators**.		
	c. Appropriateness of **soil moisture**.		
	d. **Flow rates**/points of discharge.		
	e. **Fire frequency**/severity.		
	f. **Type of vegetation**.	X	
	g. **Hydrologic stress** on vegetation.		
	h. **Use by animal**s with hydrologic requirements.		
	i. **Plant community composition** associated with water quality (i.e., plants tolerant of poor WQ).		
	j. **Water quality of standing water by observation** (I.e., discoloration, turbidity).	X	
	k. **Water quality data** for the type of community.		
	l. **Water depth, wave energy, and currents**.		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
5	**0**	At the assessment area water was present at the time of review, however the water looked tonic and discolored. Indicating the water has been sitting for a period of time and could be conaminated by run off as there was a silky film at surface of the water. As well, there was no supporting vegitation. The vegetation present was mostly upland plant species and the dominated brazilian pepper.	

.500(6)(c) Community Structure X Vegetation _____ Benthic _____ Both	I. Appropriate/desirable species		
	II. Invasive/exotic plant species	X	
	III. Regeneration/recruitment		
	IV. Age, size distribution.		
	V. Snags, dens, cavity, etc.		
	VI. Plants' condition.	X	
	VII. Land management practices.		
	VIII. Topographic features (refugia, channels, hummocks).		
	IX. Submerged vegetation (only score if present).		
	X. Upland assessment area		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
6	**0**	The assessment area was mostly dominated by brazilian pepper, however there were other identifiable species such as the Chain Fern, Elephant Ear, Cinnamin Fern, Maple Tree, and Cat tail.	

Raw Score = Sum of above scores/30 (if uplands, divide by 20)

Current	**With Impact**
0.57	0.00

Impact Delta (ID)	
Current - w/Impact	0.57

Impact Acres =	0.73

Functional Loss (FL) [For Impact Assessment Areas]:	
FL = ID x Impact Acres =	0.42

NOTE: If impact is proposed to be mitigated at a mitigation bank that was assessed using UMAM, then the credits required for mitigation is equal to Functional Loss (FL). If impact mitigation is proposed at a mitigation bank that was not assessed using UMAM, then UMAM cannot be used to assess impacts; use the assessment method of the mitigaiton bank.

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART I - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.400 F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 at SR 54		**WL3**

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6300		**Impact**	**0.12** Acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
South Lakes		**N/A**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This isolated forested wetland is located near roadways and surrounding residential communites and businesses

Assessment area description

This isolated forested wetland is located near roadways and surrounding residential communites and businesses. The wetland connects to a culvert system that goes under the roadway and connects to a marsh.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
This wetland can be found along SR 54 and surrounded by businesses and residential communites.	**Common**
Functions	Mitigation for previous permit/other historic use
Wildlife habitat, water quality enhancement, flood attenuation.	**N/A**
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading Birds	**Sandhill Cranes and American Alligator**

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:	Assessment date(s):
A. Gagne and B. Hartung	**12/3/2025**

Form 62-345.900(1), F.A.C. [effective date]

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART II - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name:	Application Number:	Assessment Area Name or Number:
US 41 at SR 54	**-**	**WL3**
Impact or Mitigation:	Assessment Conducted by:	Assessment Date:
Impact	**A. Gagne and B. Hartung**	**12/03/25**

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

	Current	With Impact
a. Quality and quantity **of habitat support** outside of AA.	x	
b. **Invasive plant species.**	x	
c. **Wildlife access** to and from AA (proximity and barriers).		
d. **Downstream benefits** provided to fish and wildlife.		
e. Adverse impacts to wildlife in AA from **land uses** outside of AA.		
f. **Hydrologic connectivity** (impediments and flow restrictions).		
g. **Dependency** of downstream habitats on quantity or quality of discharges.		
h. Protection of wetland functions provided by uplands (**upland** AAs only).		

Current	With Impact
6	0

Notes: The assessment are is connected via culvert system and is near a busy roadway, that could effect wildlife to travel to the wetland. Outside of the wetland, there is little supporting habitat. The assessment area does have invasive plant species present, such as the brazilian pepper and cat tail. Which is dominated around the wetland.

Place an "X" in the box above next to the two (2) most important criteria used in scoring this section

.500(6)(b) Water Environment (n/a for uplands)

	Current	With Impact
a. Appropriateness of **water levels and flows**.		
b. Reliability of **water level indicators**.		
c. Appropriateness of **soil moisture**.		
d. **Flow rates**/points of discharge.		
e. **Fire frequency**/severity.		
f. **Type of vegetation**.	x	
g. **Hydrologic stress** on vegetation.		
h. **Use by animal**s with hydrologic requirements.		
i. **Plant community composition** associated with water quality (i.e., plants tolerant of poor WQ).		
j. **Water quality of standing water by observation** (I.e., discoloration, turbidity).	x	
k. **Water quality data** for the type of community.		
l. **Water depth, wave energy, and currents**.		

Current	With Impact
5	0

Notes: At the assessment area water was present at the time of review, however the water looked tonic and discolored. Indicating the water has been sitting for a period of time and could be conaminated by run off as there was a silky film at surface of the water. Algal matting was observed.

Place an "X" in the box above next to the two (2) most important criteria used in scoring this section

.500(6)(c) Community Structure

X Vegetation

_____ Benthic

_____ Both

	Current	With Impact
I. Appropriate/desirable species		
II. Invasive/exotic plant species	x	
III. Regeneration/recruitment		
IV. Age, size distribution.		
V. Snags, dens, cavity, etc.		
VI. Plants' condition.	x	
VII. Land management practices.		
VIII. Topographic features (refugia, channels, hummocks).		
IX. Submerged vegetation (only score if present).		
X. Upland assessment area		

Current	With Impact
6	0

Notes: The assessment area was mostly dominated by brazilian pepper and melaleuca, however there were other identifiable species such as arrowhead, saw palmetto, and black willow.

Place an "X" in the box above next to the two (2) most important criteria used in scoring this section

Raw Score = Sum of above scores/30 (if uplands, divide by 20)

Current	With Impact
0.57	0.00

Impact Delta (ID)	
Current - w/Impact	0.57

Impact Acres =	0.12

Functional Loss (FL) [For Impact Assessment Areas]:	
FL = ID x Impact Acres =	0.07

NOTE: If impact is proposed to be mitigated at a mitigation bank that was assessed using UMAM, then the credits required for mitigation is equal to Functional Loss (FL). If impact mitigation is proposed at a mitigation bank that was not assessed using UMAM, then UMAM cannot be used to assess impacts; use the assessment method of the mitigaiton bank.

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART I - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.400 F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 at SR 54		**WL4**

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6300		**Impact**	**0.001** Acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
South Lakes		**N/A**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This wetland forested mixed area is connected to a larger wetland system to the north, east, and south.

Assessment area description

This isolated forested wetland is located next to the intersection of Land O lakes Blvd and SR 54.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Land O Lakes Blvd, SR 54	**Common**

Functions	Mitigation for previous permit/other historic use
Wildlife habitat, water quality enhancement, flood attenuation.	**N/A**

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading Birds	**American Alligator**

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

Bald Eagle observed overhead

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
A. Gagne and B. Hartung	**12/3/2025**

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART II - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name:	Application Number:	Assessment Area Name or Number:
US 41 at SR 54	**-**	**WL4**
Impact or Mitigation:	Assessment Conducted by:	Assessment Date:
Impact	**A. Gagne and B. Hartung**	**12/03/25**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

		Current	With Impact
.500(6)(a) Location and Landscape Support	a. Quality and quantity **of habitat support** outside of AA.	X	
	b. **Invasive plant species.**	X	
	c. **Wildlife access** to and from AA (proximity and barriers).		
	d. **Downstream benefits** provided to fish and wildlife.		
	e. Adverse impacts to wildlife in AA from **land uses** outside of AA.		
	f. **Hydrologic connectivity** (impediments and flow restrictions).		
	g. **Dependency** of downstream habitats on quantity or quality of discharges.		
	h. Protection of wetland functions provided by uplands (**upland** AAs only).		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
6	**0**	The assessment are is near a large intersection, decreasing the ability for wildlife to cross/access. The assessment area does have invasive plant species present, such as the brazilian pepper and cat tail. Which is dominated around the wetland.	

		Current	With Impact
.500(6)(b) Water Environment (n/a for uplands)	a. Appropriateness of **water levels and flows**.		
	b. Reliability of **water level indicators**.		
	c. Appropriateness of **soil moisture**.		
	d. **Flow rates**/points of discharge.		
	e. **Fire frequency**/severity.		
	f. **Type of vegetation**.	X	
	g. **Hydrologic stress** on vegetation.		
	h. **Use by animal**s with hydrologic requirements.		
	i. **Plant community composition** associated with water quality (i.e., plants tolerant of poor WQ).		
	j. **Water quality of standing water by observation** (I.e., discoloration, turbidity).	X	
	k. **Water quality data** for the type of community.		
	l. **Water depth, wave energy, and currents**.		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
5	**0**	At the time of field review, no standing water was present. However, there were several high water level indicators such as marks on trees were visible. Due to the proximity to the nearby major roadway, water quality would be affected by runoff and pollution.	

		Current	With Impact
.500(6)(c) Community Structure X Vegetation _____ Benthic _____ Both	I. Appropriate/desirable species		
	II. Invasive/exotic plant species	X	
	III. Regeneration/recruitment		
	IV. Age, size distribution.		
	V. Snags, dens, cavity, etc.		
	VI. Plants' condition.	X	
	VII. Land management practices.		
	VIII. Topographic features (refugia, channels, hummocks).		
	IX. Submerged vegetation (only score if present).		
	X. Upland assessment area		

Current	**With Impact**	Notes:	Place an "X" in the box above next to the two (2) most important criteria used in scoring this section
5	**0**	The assessment area was mostly dominated by brazilian pepper. However there were other identifiable species such as arrowhead, saw palmetto, and black willow. The plant conditions looked healthy and identified recruitment of new plant species	

Raw Score = Sum of above scores/30 (if uplands, divide by 20)	
Current	**With Impact**
0.53	0.00

Impact Acres =	0.001

Functional Loss (FL) [For Impact Assessment Areas]:	
FL = ID x Impact Acres =	0.00

Impact Delta (ID)	
Current - w/Impact	0.53

NOTE: If impact is proposed to be mitigated at a mitigation bank that was assessed using UMAM, then the credits required for mitigation is equal to Functional Loss (FL). If impact mitigation is proposed at a mitigation bank that was not assessed using UMAM, then UMAM cannot be used to assess impacts; use the assessment method of the mitigaiton bank.

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART I - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.400 F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 41 at SR 54		**WL 6**

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6300		**Impact**	**0.01** Acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Hillsborough River		**N/A**

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

This wetland forested mixed area is connected to another forested wetland via culvert.

Assessment area description

This forested wetland is located adjacent to Gorman Company, Jiffy Lube, Countyside Montessori, and strip mall.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Carson Road is approximatly 20 feet north and SR 54 is approximatly 180 feet south	**Common**
Functions	Mitigation for previous permit/other historic use
Wildlife habitat, water quality enhancement, flood attenuation.	**N/A**
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading Birds	**American Alligator**

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:	Assessment date(s):
A. Gagne and B. Hartung	**12/3/2025**

UNIFORM WETLAND MITIGATION ASSESSMENT WORKSHEET - PART II - IMPACT
Form 62-345.900(2), F.A.C. (See Sections 62-345.500 and .600, F.A.C.)

Site/Project Name:	Application Number:	Assessment Area Name or Number:
US 41 at SR 54	**-**	**WL 6**
Impact or Mitigation:	Assessment Conducted by:	Assessment Date:
Impact	**A. Gagne and B. Hartung**	**12/03/25**

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	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

		Current	With Impact
.500(6)(a) Location and Landscape Support	a. Quality and quantity **of habitat support** outside of AA.		
	b. **Invasive plant species.**	X	
	c. **Wildlife access** to and from AA (proximity and barriers).	X	
	d. **Downstream benefits** provided to fish and wildlife.		
	e. Adverse impacts to wildlife in AA from **land uses** outside of AA.		
	f. **Hydrologic connectivity** (impediments and flow restrictions).		
	g. **Dependency** of downstream habitats on quantity or quality of discharges.		
	h. Protection of wetland functions provided by uplands (**upland** AAs only).		
Current 5	Notes: The assessment area is near two roads and highly developed areas, that could affect wildlife to travel to the wetland. The assessment area has invasive plant species present, such as the brazilian pepper. Which is dominated around the wetland.		**With Impact** 0
		Place an "X" in the box above next to the two (2) most important criteria used in scoring this section	

.500(6)(b) Water Environment (n/a for uplands)	a. Appropriateness of **water levels and flows**.		
	b. Reliability of **water level indicators**.		
	c. Appropriateness of **soil moisture**.		
	d. **Flow rates**/points of discharge.		
	e. **Fire frequency**/severity.		
	f. **Type of vegetation**.	X	
	g. **Hydrologic stress** on vegetation.		
	h. **Use by animal**s with hydrologic requirements.		
	i. **Plant community composition** associated with water quality (i.e., plants tolerant of poor WQ).		
	j. **Water quality of standing water by observation** (I.e., discoloration, turbidity).	X	
	k. **Water quality data** for the type of community.		
	l. **Water depth, wave energy, and currents**.		
Current 5	Notes: At the time of field review, no standing water was present. However, there were several high water level indicators such as marks on trees were visible. Due to the proximity to nearby businesses and roadways, there is potential for water quality imparement.		**With Impact** 0
		Place an "X" in the box above next to the two (2) most important criteria used in scoring this section	

.500(6)(c) Community Structure X Vegetation ____ Benthic ____ Both	I. Appropriate/desirable species		
	II. Invasive/exotic plant species	X	
	III. Regeneration/recruitment		
	IV. Age, size distribution.		
	V. Snags, dens, cavity, etc.		
	VI. Plants' condition.	X	
	VII. Land management practices.		
	VIII. Topographic features (refugia, channels, hummocks).		
	IX. Submerged vegetation (only score if present).		
	X. Upland assessment area		
Current 5	Notes: Impact area vegetation is dominated by Brazilian pepper, bracken fern, cinnamon fern, cypress, lauren oak, marsh pennywort, and black willow.		**With Impact** 0
		Place an "X" in the box above next to the two (2) most important criteria used in scoring this section	

Raw Score = Sum of above scores/30 (if uplands, divide by 20)

Current	**With Impact**
0.50	0.00

Impact Delta (ID)	
Current - w/Impact	0.50

Impact Acres =	0.01

Functional Loss (FL) [For Impact Assessment Areas]:	
FL = ID x Impact Acres =	0.01

NOTE: If impact is proposed to be mitigated at a mitigation bank that was assessed using UMAM, then the credits required for mitigation is equal to Functional Loss (FL). If impact mitigation is proposed at a mitigation bank that was not assessed using UMAM, then UMAM cannot be used to assess impacts; use the assessment method of the mitigaiton bank.

Appendix I

SWFWMD Pre-Application Meeting Notes

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL "PROMPT LIST" OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES

FILE NUMBER:

PA 400962

Date:	March 13, 2014
Time:	10:00 AM
Project Name:	FDOT- SR 54 & US41- Interchange Improvements
Attendees:	Richard Alt; Blake Meinecke; Robert Johnson, Robert.e.johnson@urs.com; Chris Dailey Chris.dailey@rsandh.com, Cynthia Grizzle, Cynthia.grizzle@rsandh.com

County:	Pasco Co.	**Sec/Twp/Rge:**	25/26/18
Total Land Acreage:	100+	**Project Acreage:**	100+ acres

Prior On-Site/Off-Site Permit Activity:

- Existing roadway - 43012854.000

Project Overview:

- SR 54 flyover US 41
- 2 scenarios 3A (2.82 acres wetland impacts, 104 acres project) and 3C (0.45acre impact, 88 acres project)

Environmental Discussion: (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)

- Include limits of wetlands and surface waters on plans, will review wetland limits as part of application review.
- Include limits of proposed wetland/surface water impacts on plans.
- Provide appropriate mitigation using UMAM for impacts, if applicable.
- Potential to use two different mitigation banks to offset proposed functional losses, or provide cumulative impact analysis.
- Review potential mitigation area located in “Denim Pond” and address impacts to it, if applicable.

Site Information Discussion: (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)

- WBIDs 1463O – not impaired and 1451D1 – not impaired
- Floodplain on site – preliminary revised flood maps available

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour riverine floodplain impacts if applicable.

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Provide water quality treatment for required project area.
- Will acknowledge compensatory treatment to offset pollutant loads associated with portions of the project area that cannot be physically treated.

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- N/A

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to the FDOT.
- Provide proof of ownership in the form of a deed, contract for sale, or easements.
- Provide appropriate O&M instructions.

Application Type and Fee Required:

- SWERP – Sections A, C and E of the ERP Application. 3A - $3,106.00, 3C - $2,798.00

Other: (Future Pre-Application Meetings, Fast Track, Submittal Date, Construction Start Date, Required District Permits – WUP, WOD, Well Construction, etc.)

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Disclaimer: The District ERP pre-application meeting process is a service made available to the public to assist interested parties in preparing for submittal of a permit application. Information shared at pre-application meetings is superseded by the actual permit application submittal. District permit decisions are based upon information submitted during the application process and Rules in effect at the time the application is complete.