Gibsonton Drive
From Fern Hill Drive to US 301
Project Development & Environment (PD&E) Study

Natural Resources Evaluation

Work Program Item Segment No. 450438-1
ETDM Project No. 14493
Hillsborough County, Florida

Florida Department of Transportation
District Seven

In Coordination with:

Hillsborough County Florida

January 2024

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022, and executed by the Federal Highway Administration and FDOT.

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January 2024

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) District Seven, in cooperation with Hillsborough County, is conducting a Project Development and Environment (PD&E) study along Gibsonton Drive from Fern Hill Drive to U.S. Highway 301 (US 301), in Hillsborough County. The study focuses on widening this section of Gibsonton Drive from a 4-lane divided facility to a 6-lane divided facility and includes pedestrian and bicycle accommodations. The study also evaluates issues related to traffic operations, safety, access management, and freight movements. The proposed improvements will include construction of stormwater management facility (SMF) and floodplain compensation (FPC) sites. The proposed improvements in this study will connect to improvements at the I-75/Gibsonton Drive interchange as well as improvements at Gibsonton Drive/Fern Hill Drive intersection as proposed under other projects.

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

Protected Species and Habitat

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

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 U.S. 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.

Potential Species Effect Determination Summary

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Effect Determination
REPTILES				
Drymarchon corais couperi	Eastern indigo snake	FT	T	MANLAA
Gopherus polyphemus	Gopher tortoise	ST	--	No Adverse Effect Anticipated
Lampropeltis extenuata	Short-tailed snake	ST	PT	No Adverse Effect Anticipated
Pituophis melanoleucus mugitus	Florida pine snake	ST	--	No Adverse Effect Anticipated
BIRDS				
Ammodramus savannarum floridanus	Florida grasshopper sparrow	FE	E	No Effect
Aphelocoma coerulescens	Florida scrub jay	FT	T	No Effect
Athene cunicularia floridana	Florida burrowing owl	ST	--	No Effect Anticipated
Calidris canutus rufa	Rufa Red knot	FT	T	No Effect
Egretta caerulea	Little blue heron	ST	--	No Adverse Effect Anticipated
Egretta refescens	Reddish egret	ST	--	No Adverse Effect Anticipated
Egretta tricolor	Tricolored (Louisiana) heron	ST	--	No Adverse Effect Anticipated
Falco sparverius paulus	Southeastern American kestrel	ST	--	No Adverse Effect Anticipated
Grus canadensis pratensis	Florida sandhill crane	ST	--	No Adverse Effect Anticipated
Grus americana	Whooping crane	--	EXPN	--
Haliaeetus leucocephalus	Bald eagle[1]	--	--	--
Laterallus jamaicensis jamaicensis	Eastern black rail	FT	T	No Effect
Mycteria americana	Wood stork	FT	T	MANLAA
Platalea ajaja	Roseate spoonbill	ST	--	No Adverse Effect Anticipated
Polyborus plancus audubonii (Caracara plancus)	Audubon's crested caracara	FT	T	No Effect
Rostrahamus sociabilis plumbeus	Everglade snail kite	FE	E	No Effect
INSECTS				
Danaus plexippus	Monarch butterfly	--	C	--
MAMMALS				
Ursus americanus floridanus	Florida black bear[2]	--	--	--

MANLAA=May Affect, Not Likely to Adversely Affect
C= Candidate Species, EXPN= Experimental population, Non-essential
E= Endangered, FE= Federal Endangered T=Threatened, FT=Federal Threatened,
PT= Proposed Threatened, ST=State-designated Threatened --=Not Listed
[1] Protected under the Bald and Golden Eagles Protection Act (16 U.S.C. § 668-668c)
[2] Protected under the Florida Black Bear Conservation Rule (68A-4.009, F.A.C.)

Potential Floral Species Effect Determinations

Species	Common Name	State Status (FDACS)	Federal Status (USFWS)	Effect Determination
Centrosema arenicola	Sand butterfly-pea	SE	--	No Effect Anticipated
Chrysopsis floridana	Florida golden aster	FE	E	MANLAA
Chionanthus pygmaeus	Pygmy fringe-tree	FE	E	No Effect
Lechea cernua	Scrub pinweed	ST	--	No Effect Anticipated
Lechea divaricata	Spreading (pine) pinweed	SE	--	No Effect Anticipated
Nolina brittoniana	Britton's Beargrass	FE	E	MANLAA
Rhynchospora megaplumosa	Large-plumed beaksedge	SE	--	No Effect Anticipated
Campanula robinsiae	Brooksville bellflower	FE	E	No Effect
Bonamia grandiflora	Florida bonamia	SE	T	No Effect

FDACS=Florida Department of Agriculture and Consumer Services (FDACS)
MANLAA=May Affect, Not Likely to Adversely Affect
E=Endangered, SE=State-designated Endangered
T=Threatened, ST=State-designated Threatened

Wetlands and Other Surface Waters

Wetlands and other surface waters were classified based on the National Wetland Inventory (NWI), Florida Land Use, Cover & Forms Classification System (FLUCCS), and the USFWS guidelines. There are forested and non-forested wetlands within the study area which were field verified by project scientists in August 2022 and August 2023. Based on the Preferred Alternative, the project would result in approximately 0.17 acre of wetland and 0.17 acre of other surface water impacts.

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

Potential Wetland and Other Surface Waters Impacts

	Type of Wetland or Other Surface Water	Project Impact Acreage	Functional Loss
Project Totals	*Freshwater Herbaceous*	0.17	0.07
	Total Wetlands	**0.17**	**0.07**
	Riverine	0.17	--
	Total Other Surface Waters	**0.17**	**--**
	Project Total	**0.34**	**0.07**

Functional loss values are derived from the Uniform Mitigation Assessment Method (UMAM)

Essential Fish Habitat

This study was evaluated for EFH in accordance with the requirements of the *Magnuson-Stevens Fishery Conservation and Management Act* of 1996 (MSA) and the FDOT *PD&E Manual*. No EFH is located within the study area; therefore, there will be no involvement with EFH for this project.

Table of Contents

List of Figures

List of Tables

Appendices

Acronyms

BGEPA	Bald and Golden Eagle Protection Act
BMPs	Best Management Practices
CFA	Core Foraging Area
CFR	Code of Federal Regulations
EFH	Essential Fish Habitat
ERP	Environmental Resource Permit
ESA	Endangered Species Act
ETDM	Efficient Transportation Decision Making
ETAT	Environmental Technical Advisory Team
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
FDACS-DPI	Florida Department of Agriculture and Consumer Services Division of Plant Industry
FDEP	Florida Department of Environmental Protection
FDOT	Florida Department of Transportation
FLUCCS	Florida Lan Use, Cover and Forms Classification System
FNAI	Florida Natural Areas Inventory
FNPS	Florida Native Plant Society
FPC	Floodplain Compensation Site
F.S.	Florida Statutes
FWC	Florida Fish and Wildlife Conservation Commission
FT	Foot/Feet
FY	Fiscal Year
GIS	Geographic Information System
IPaC	Information for Planning and Conservation
MANLAA	May Affect Not Likely to Adversely Affect
MB	Mitigation Bank
MBTA	Migratory Bird Treaty Act
MPH	Miles per Hour
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NRE	Natural Resources Evaluation

NWI	National Wetlands Inventory
OEM	Office of Environmental Management
OSW	Other Surface Waters
PD&E	Project Development and Environment
PSSR	Programming Screen Summary Report
ROW	Right-of-Way
SFH	Suitable Foraging Habitat
SHCA	Strategic Habitat Conservation Areas
SMF	Stormwater Management Facility
SWFWMD	Southwest Florida Water Management District
SWPPP	Stormwater Pollution Prevention Plan
TPO	Transportation Planning Organization
US 301	U.S. Highway 301
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDA	United States Department of Agriculture
USDOT	U.S. Department of Transportation
UMAM	Uniform Mitigation Assessment Method
USFWS	U.S. Fish and Wildlife Service
USGS	United States Geological Survey
WL	Wetland

SECTION 1 INTRODUCTION

The objective of the Project Development and Environment (PD&E) study is to assist the Florida Department of Transportation's (FDOT) Office of Environmental Management (OEM) in reaching a decision on the type, location, and conceptual design of the proposed improvements for the widening of Gibsonton Drive. The PD&E study documents the need for the improvements as well as the procedures utilized to develop and evaluate various improvements, including elements such as proposed typical sections, preliminary horizontal alignments, and intersection enhancements. The PD&E study satisfies all applicable requirements, including the National Environmental Policy Act (NEPA), to qualify for federal-aid funding of subsequent development phases (design, right of way acquisition, and construction).

1.1 PROJECT DESCRIPTION

The project consists of widening Gibsonton Drive from Fern Hill Drive to US 301 in Hillsborough County, a distance of approximately 0.95 miles. Improvements will also include a wide sidewalk to accommodate bicycles and pedestrians. The project includes the evaluation of stormwater management facilities (SMF) and floodplain compensation (FPC) sites. The project traverses the unincorporated census designated place of Riverview and provides access to I-75 for the communities of Riverview, Boyette, Fish Hawk and Lithia. Within the project limits, Gibsonton Drive is a four-lane, divided roadway with paved shoulders and 5-foot (ft) sidewalks along both sides of the road. There are some gaps in the sidewalk on the south side (eastbound direction) of the road. Gibsonton Drive is functionally classified by Hillsborough County as an arterial with an existing posted speed limit of 45 miles per hour (mph). A project location map is provided in **Figure 1-1**.

This project was screened through the FDOT's Efficient Transportation Decision Making (ETDM) process as ETDM Project No. 14493. The ETDM Programming Screen Summary Report was published on October 27, 2022, 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.

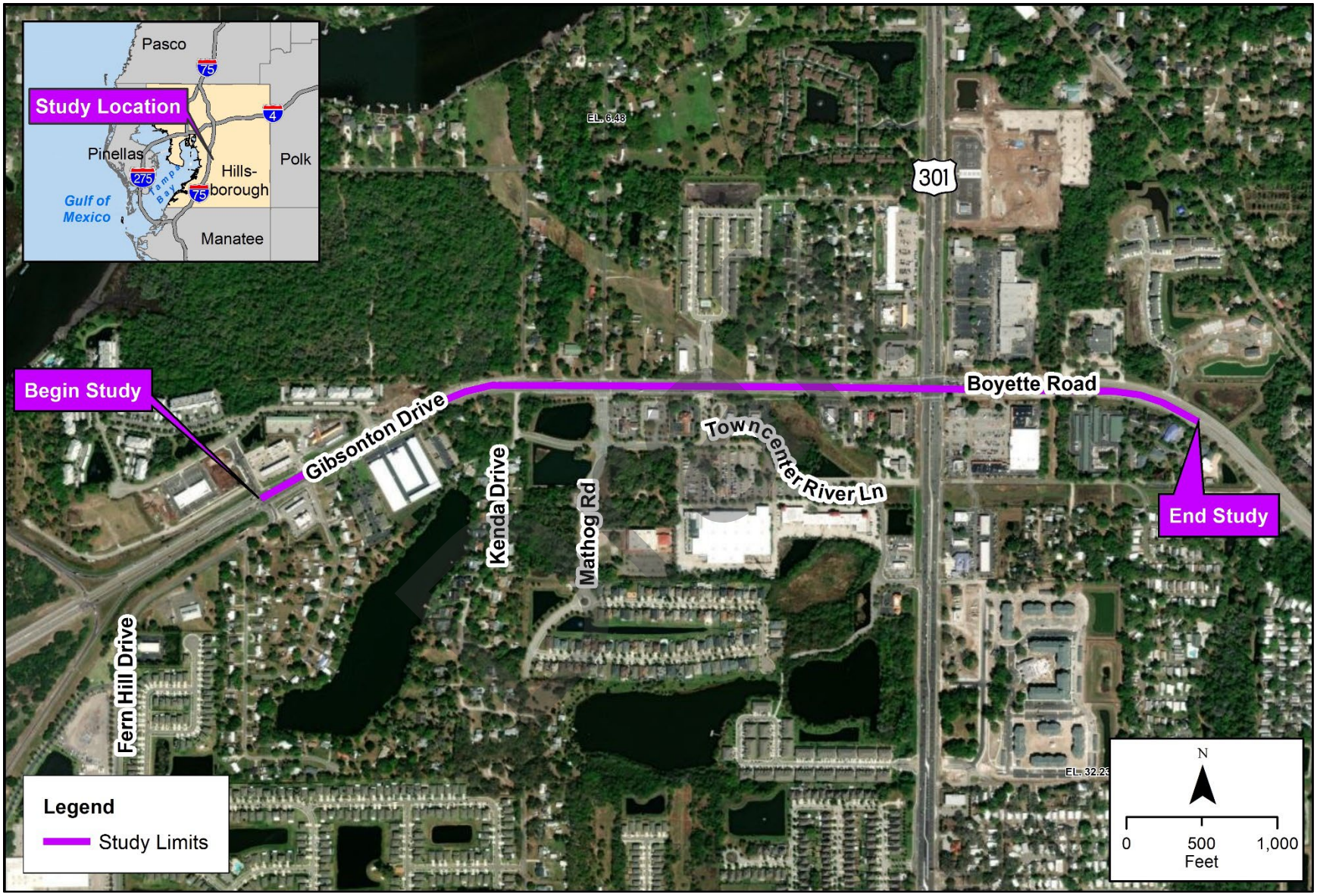


Figure 1-1 Project Location Map

1.2 EXISTING FACILITY AND PROPOSED IMPROVEMENTS

1.2.1 Existing Facility

Gibsonton Drive is owned and maintained by Hillsborough County. Within the project area, Gibsonton Drive is currently a four-lane divided facility functionally classified as an arterial roadway with a posted speed limit of 45 mph. The roadway has two 12-ft lanes in each direction, a 22-ft median and turn lanes at many locations along the corridor. The shoulders are approximately 10-ft wide (4-ft paved) on the south side and 6.5-ft minimum width (4-ft paved) on the north side throughout the corridor with no dedicated bicycle lanes. There is a 5-ft sidewalk on both sides of the road with a few gaps in the sidewalk on the south side, west of Kendra Drive. Approximately 230 linear feet of the sidewalk on the south side, east of Kendra Drive, is a wooden boardwalk. The existing right of way (ROW) varies along the corridor between 125 ft and 150 ft wide. The existing typical section is provided as **Figure 1-2**. There is one existing SMF east of US 301, but no SMF between Fern Hill Drive and US 301 and no existing FPC sites within the project corridor.

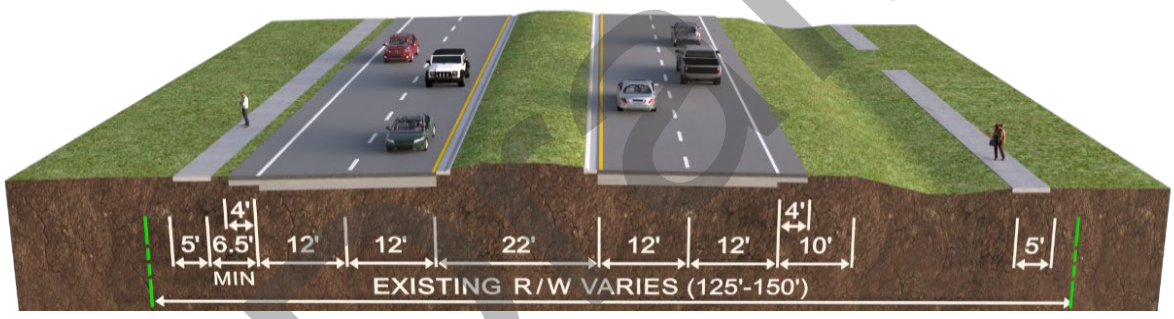


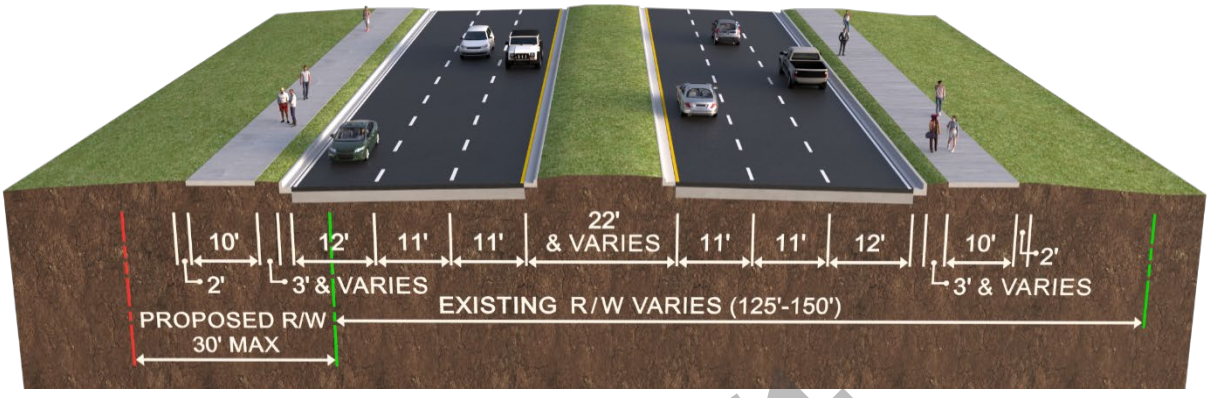
Figure 1-2 Gibsonton Drive – Existing Typical Section

1.2.2 Proposed Improvements

The proposed typical section shows widening Gibsonton Drive to a six-lane divided urban facility with a 22-ft raised median. There will be two 11-ft travel lanes and one 12-ft outside travel lane in each direction with curb and gutter, and 10-ft wide sidewalks. The proposed typical section is provided as **Figure 1-3**. Additional ROW will be required along the north side of Gibsonton Drive (0 to 30 ft in width) to accommodate the widening and along the south side of Gibsonton Drive (0 to 7 ft in width) in advance of

the US 301 intersection for intersection improvements. One off-site SMF and one off-site FPC are proposed. Additional ROW will be required for off-site SMF and FPC sites.

Figure 1-3 Gibsonton Drive – Proposed Typical Section



1.3 REPORT PURPOSE

This *Natural Resources Evaluation* (NRE) 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 Endangered *Species Act (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 Essential Fish Habitat (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.

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 U.S. Department of Transportation (USDOT) has developed a policy, *Preservation of the Nation's Wetlands* (USDOT Order 5660.1A), dated August 24, 1978, which requires all federally funded highway projects to protect wetlands to the fullest extent possible. 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.

1.4 STUDY AREA

The limit of disturbance for the proposed improvements, including the stormwater management facilities (SMFs) and floodplain compensation (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 Gibsonton Drive. The project action area with the buffer is referred to as the study area, as defined by 50 CFR § 402.02.

SECTION 2 EXISTING ENVIRONMENTAL CONDITIONS

2.1 EXISTING LAND USE

The land uses and vegetative cover within and adjacent to the study area were classified using FDOT's *Florida Land Use, Cover and Forms Classification System* (FLUCCS). FLUCCS data, aerial photographs, and wetland data from the National Wetlands Inventory (NWI) were utilized to determine current land uses and habitat types within the study area. The land uses and habitat types within the study area were subsequently ground-truthed for verification during field visits in August 2022 and August 2023. The land uses were identified by their FLUCCS description as well as the FLUCCS code (number that represents the type of land use). For evaluating existing land uses within the study area, a 500-foot buffer was created from the centerline of Gibsonton Drive as shown in **Appendix A**.

The study area, located in Hillsborough County, is mostly developed consisting of commercial services and low, medium, and high-density residential areas. The predominant land uses within the study area are as follows: 41% commercial and services (140), 25% residential (110, 120, & 130), 15% transportation (810), 7% upland hardwood – coniferous mix (434), and 6% open land (190). The remainder of the land uses and their percentage cover within the study buffer are shown in **Table 2-1**.

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 – coniferous mixed land. Open lands and upland coniferous mixed lands provide habitat to many wildlife and plant species, some of which are protected. The upland communities are classified according to FLUCCS. Field reviews confirmed vegetation community types and the presence or potential for occurrence of protected plant and wildlife species. The major upland communities identified within and directly adjacent to the study area are described below.

Open Land (FLUCCS 190)

These land use types include undeveloped land and inactive land with street patterns but without structures found within urban areas. These areas were generally cleared of canopy and shrub species and maintained low growing forbs and grass species. The species include but are not limited to, Bahiagrass (*Paspalum notatum* var. *saurae)*, switch grass (*Panicum* virgatum), and broom sedge (*Andropogon spp.*) with Brazilian pepper (*Schinus terebinthifolius)* dominating the fringes. No observations of protected species were documented within this land use type; however, this land use type likely provides habitat for the state listed southeastern American kestrel (*Falco sparverius paulus*) and grazing areas for the state listed gopher tortoise (*Gopherus polyphemus*).

Table 2-1 Existing Land Use/Land Cover

FLUCCS Code	Description	Acreage (Approx. 500' from Centerline)	Percent Cover
110	Residential Low Density	10.1	6.1%
120	Residential Medium Density	22.0	13.2%
130	Residential High Density	8.7	5.2%
140	Commercial and Services	67.1	40.5%
190	Open Land	9.9	6.0%
434	Upland Hardwood – Coniferous Mix	11.5	6.9%
510	Streams and Waterways	0.3	0.2%
530	Reservoirs	5.6	3.4%
615	Stream and Lake Swamps	0.5	0.3%
630	Wetland and Forested Mixed	0.6	0.3%
641	Freshwater Marshes	2.1	1.4%
810	Transportation	24.7	14.9%
830	Utilities	2.6	1.6%
	TOTAL	**165.8**	**100%**

Hardwood Coniferous Mix (FLUCCS 434)

Hardwood conifer mixed forests consist of well-developed, closed canopy forests dominated by deciduous and evergreen hardwood trees, mixed with conifer trees, on mesic soils with gently sloping terrain in areas sheltered from fire. This community type contains a diverse assemblage of deciduous and evergreen species in the canopy and mid-story, shade tolerant shrubs and sparse ground cover. Observed canopy species include southern live oak (*Quercus virginiana*), laurel oak *(Quercus laurifolia)*, and longleaf pine (*Pinus palustris*). Observed mid-story species include saw palmetto *(Serenoa repens)* and cabbage palm (*Sabal palmetto*). Gallberry (*Ilex glabra*), winged sumac (*Rhus copallinum*), pawpaw (*Asimina triloba*), bracken fern (*Pteridium* spp.) and wiregrass (*Aristida stricta*) characterize the understory. No listed or protected species were observed within this land use type; however, this land use type provides potential habitat for the eastern indigo snake *(Drymarchon couperi)*, Florida black bear *(Ursus americanus floridanus)*, and potential nesting for the bald eagle (*Haliaeetus leucocephalus*).

2.3 EXISTING WETLAND AND OTHER SURFACE WATER HABITATS

Wetlands and jurisdictional other surface waters were identified adjacent to or within the ROW, as well as the preferred SMF and FPC sites. The majority of the wetlands are herbaceous systems consisting of freshwater marshes and wet prairies. Wetlands and other surface waters that have the potential to be impacted by the proposed project improvements have been classified by the FLUCCS codes as well as the USFWS's *Wetlands and Deepwater Habitats Classifications*. Representative site photographs can be found in **Appendix B**, and a detailed wetland and other surface water map depicting the anticipated impacts, which includes the preferred SMF and FPC sites, can be found in **Appendix C**.

Freshwater Marsh (FLUCCS 641)

Palustrine Emergent Persistent (PEM1)

Freshwater marshes are vegetated herbaceous wetlands with no tree cover and minimal to no shrubs; however, many freshwater marshes can be surrounded by forested or scrub-shrub wetlands and/or uplands. These communities are usually confined to relatively level, low-lying areas. Freshwater marshes are usually dominated by one or more emergent vegetation species. Vegetation identified within the freshwater marsh systems within the study limits includes Carolina willow *(Salix caroliniana)*, pickerelweed (*Pontederia cordata*), arrowhead (*Sagittaria lancifolia*), Brazilian pepper, red ludwigia (*Ludwigia repens*), spadeleaf (*Centella asiatica*), Soft rush (*Juncus effusus*), duckweed (*Lemna* spp.), and water lily (*Nymphaea* spp.) Wetlands (WL) 3, 4, 5, 10, and 13 are classified under this land use type. A group of sandhill cranes *(Grus canadensis), one* tricolored heron *(Egretta tricolor)* and one little blue heron *(Egretta caerulea)* were observed foraging in this land use type within the study area during the August 2022 field survey. Additionally, this land use type within the study area may provide potential habitat for the federally listed wood stork *(Mycteria americana)* as well as other state listed wading birds.

Streams and Waterways (FLUCCS 510)

Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded (R5UBH) and Riverine Unknown Perennial Unconsolidated Bottom Permanently Flooded Excavated (R5UBHx)

This category includes rivers, creeks, canals, and other linear water bodies. These streams originate from broad wetlands that overflow into narrow, shallow channels. Other surface waters 5, 8, 9, and 11 are classified as this habitat type. Vegetation in these other surface waters consists of golden club *(Orontium aquaticum)*, smartweed *(Polygonum hydropiperoides)*, sedges *(Cyperus spp.)*, and grasses *(Panicum spp., Polygonum spp., Urochloa mutica)*. No listed or protected species were observed in this habitat type during field reviews; however, it may provide foraging habitat for the wood stork and other state listed wading birds.

Reservoirs (FLUCCS 530)

Palustrine Unconsolidated Bottom Seasonally Flooded Excavated (PUBHx) and Palustrine Aquatic Bed Seasonally Flooded Excavated (PABHx)

This category of other surface water habitat consists of permanently flooded, excavated depressions for the purpose of storing water during floods, stormwater management, or the rainy season within the study area. Vegetation within these areas consists of water lily *(Nymphaea spp.)* and torpedo grass *(Panicum repens)*. Other surface waters (OSW) 1, 2, 6, 7, 12, 14, 15, and 16 are classified as this habitat type. No listed or protected species were observed in this habitat type during August 2022 and August 2023 field reviews; however, it may provide foraging habitat for the wood stork and other state listed wading birds.

Stream and Lake Swamps (Bottomland) (615)

Palustrine Freshwater Forested Freshwater Forested Broad-Leaved Deciduous Seasonally (PFO1C)

This community, often referred to as bottomland or stream hardwoods, is usually found on but not restricted to rivers, creeks, lake floodplain or overflow areas. This category has a wide variety of predominantly hardwood species of which include but are not limited to red maple, river birch, water oak, sweet gum *(Liquidambar styraciflua)*, willows *(Salix spp.)*, Brazilian pepper, tupelos *(Nyssa spp.)*, water hickory *(Carya aquatica)*, bays *(Gordonia lasianthus, Magnolia spp., Persea spp.)*, water ash *(Fraxinus caroliniana)*, and buttonbush *(Cephalanthus occidentalis)*. Associated species include cypress *(Taxodium spp.)*, slash pine *(Pinus elliottii)*, loblolly pine *(Pinus taeda)*, and spruce pine *(Pinus glabra)*. No listed or protected species were observed in this habitat type during field reviews; however, it may provide foraging habitat for the wood stork and other state listed wading birds.

Wetland Forested Mixed (630)

Palustrine Freshwater Forested Needle-Leaved Deciduous Seasonally Flooded PFO2C

This category includes mixed wetland forest communities in which neither hardwoods nor conifers achieve a 66 percent dominance of the crown canopy composition. Plant communities feature a mixture of willows, slash pine, loblolly pine, Brazilian Pepper, and cypress. Wetland 4 is classified as this habitat type. No listed or protected species were observed in this habitat type during field reviews however, it may provide foraging habitat for wood stork and other state listed wading birds.

2.4 SOILS

The Natural Resource Conservation Service (NRCS) *Soil Survey of Hillsborough County* (1989) and geographic information system (GIS) data indicate that there are multiple soil types that exist within and adjacent to the study area. Soils within a 500-foot buffer from the centerline of Gibsonton Drive were evaluated. Acreages and percentages of soil types within the study buffer can be found in **Table 2-2.** A detailed soils map can be found in **Appendix D**. The soil types in the project area and their soil map unit identification numbers are as follows: Myakka fine sand, 0 to 2 percent slopes (29); Candler fine sand, 0 to 5 percent slopes (7); Pomello fine sand, 0 to 5 percent slopes (41); Basinger, Holopaw, and Samsula soils, depressional (5); Winder fine sand, frequently flooded (60) and Zolfo fine sand, 0 to 2 percent slopes (61). Brief descriptions of soil types are provided below:

Myakka fine sand, 0 to 5 percent slopes (29) – This soil is nearly level to gently sloping on poorly drained soils. This soil has a moderate to high available water capacity in the upper six inches. The water table is below a depth of 6 to 18 inches. Natural vegetation consists of longleaf pine *(Pinus palustris)* and slash pine *(Pinus elliottii)*. The understory includes gallberry *(Ilex glabra)*, running oak *(Quercus pumila)*, saw palmetto *(Serenoa repens)*, pineland three-awn *(Aristida stricta)* and wax myrtle *(Morella cerifera)*.

Candler fine sand, 0 to 5 percent slopes (7) – This soil is nearly level to gently sloping on excessively drained soils. This soil has very low available water capacity in the upper 48 inches and low available water capacity below that depth. The water table is below a depth of 80 inches. Native vegetation consists of bluejack *(Quercus incana)*, post oaks *(Quercus stellata)*, and turkey oaks *(Quercus laevis)*; scattered longleaf and slash pines; and a sparse understory of Indiangrass *(Sorghastrum secundum)*, broomsedge

(Andropogon virginicus), pineland three-awn, torpedo grass *(Panicum repens)*, and annual forbs (Various herbaceous flowering plants not considered graminoids).

Pomello fine sand, 0 to 5 percent slopes (41) – This soil is nearly level to gently sloping and moderately well drained and occurs on low ridges on the flatwoods. The soil has a very low available water capacity. The water table exists between 40 to 60 inches, except during seasonally high water with the water table depth at 24 to 40 inches. In most areas, Pomello soil is used for native pastures, citrus crops or for homesite/urban development. The natural vegetation consists of longleaf pine, sand pine *(Pinus clausa)*, and slash pine. The understory includes little bluestem *(Schizachyrium scoparium)*, lopsided Indiangrass *(Sorghastrum secundum)*, running oak, saw palmetto, and wiregrass.

Basinger Holopaw, and Samsula soils, depressional (*Hydric)* (5) – This soil is nearly level and very poorly drained. These soils exist in swamps and depressions on the flatwoods. Characteristically, these soils are frequently ponded for long periods. In most years, these undrained soils are ponded for about six months. The natural vegetation consists of cypress *(Taxodium spp.)*, with an understory includes bluestem, maidencane *(Panicum hemitomon)*, Jamaica sawgrass *(Cladium mariscus ssp. Jamaicense)*, and cutgrass *(Leersia spp.)*.

Winder fine sand, frequently flooded (60) – This soil is nearly level and poorly drained. This soil exists on floodplains and may become flooded for long periods of time after intense rain. In most years, a seasonal high-water table fluctuates from the soil surface to a depth of about 10 inches for 2 to 6 months. Permeability is rapid in the surface and subsurface layers, slow or very slow in the subsoil, and rapid in the substratum. The available water capacity is moderate. In most areas, this Winder soil has been left idle in natural vegetation but has been observed in pasture use. The natural vegetation consists of Carolina willow *(Salix caroliniana)*, red maple *(Acer rubrum)*, cabbage palm *(Sabal palmetto)*, and sweetgum *(Liquidambar styraciflua)*.

Zolfo fine sand, 0 to 2 percent slopes (61) – This soil is nearly level and somewhat poorly drained. Zolfo fine soil exists on broad, low ridges on the flatwoods. In most years, a seasonal high-water table is at a depth of 24 to 40 inches for more than 2 to 6 months and recedes to a depth of 60 inches during prolonged dry periods. Permeability is frequent from the surface to subsurface and moderate in the subsoil. The natural vegetation consists of live oak *(Quercus virginiana)*, turkey oak, longleaf pine, and slash pine. The understory includes broomsedge *(Andropogon virginicus)*, bluestem, lopsided Indiangrass, saw palmetto, and pineland three-awn.

Table 2-2 Existing Soils (NRCS)

Map Unit Symbol	Description	Study Area Acreage	Study Area Percent Cover
5	Basinger, Holopaw, and Samsula soils (depressional) – hydric	6.4	3.9%
7	Candler fine sand (0-5% slopes)	33.6	20.3%
29	Myakka fine sand (0-2% slopes)	103.8	62.6%
41	Pomello fine sand (0-5% slopes)	16.5	9.9%
60	Winder fine sand, frequently flooded	3.6	2.2%
61	Zolfo fine sand 0 to 2% slopes	1.9	1.1%
	TOTAL	**165.8**	**100%**

2.5 PRESERVATION AREAS

The Alafia Scrub Nature Preserve, managed by Hillsborough County, is an approximately 124.2-acre site located at the northwest corner of Gibsonton Drive and Hagadorn Road. The preserve is located on the south shoreline of the Alafia River, and as such is within the boundaries of a Natural Greenway Corridor as designated on the Hillsborough County Greenways Master Plan. The Alafia Scrub Nature Preserve includes diverse habitats, including hammock, scrub, creeks, ravines, shoreline, and tidal marsh. The key feature of the preserve is the natural vegetative communities it contains, especially the remnant xeric oak scrub habitat in the southeast corner, closest in proximity to the study area. Gibsonton Drive's improvements will be limited to the right of way adjacent to the preserve; therefore, no direct impacts are anticipated to the preserve.

SECTION 3 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 AND ASSESSMENT

Literature reviews, agency database searches, field surveys were conducted to identify potential impacts to federal and state listed protected species. Field reviews consisted of a mix of vehicular and pedestrian surveys. Field surveys identified existing vegetation communities and conditions. Identification efforts consisted of identifying dominant plant species, their size, condition, compositional place within identified ecosystem, and landscape position within the surrounding area. Plant conditional assessments identified relative health, presence of disease or infestation, growth characteristics, and reproductive health. Vegetive community health assessments evaluated community structure, recruitment, transitions, conditions of edge or gaps, presence of invasives or exotics, and signs of wildlife or human use. Habitat quality is evaluated as to structure, forage, cover quality. The landscape position of ecosystems mapped includes patch dynamics, refugia, and landscape connectivity. Soils are assessed via the digging of soil pits noting biogeophysical conditions, physical interpretation of soil composition (clay, silt, sand, organic matters, pore space, water) and structure (stones, roots, clumping, layers, hydric indicators) visual and smell. The basics of soil attributes are: soil structure, soil type, moisture, rooting, ground water, fossorial wildlife and subsurface vegetation. Vegetation litter is inspected for signs of pathogens, decay rates, and ground structure. Vegetation communities are evaluated for quality as wildlife habitat, potential services to wildlife (forage, water, trails, connectivity, composition, denning/nesting/roosting). Within and adjoining the respective vegetative community is surveyed for wildlife use including direct observation (sight, sound inclusive of calls meaning, smell) and indirect observations (trails, tracks, scat, fur/scales/feathers/skins, markings, nest/dens/roosts).

Wetland and surface water communities are evaluated for seasonal changes in water supply, flow rates, and elevations, as well as water quality and physical structure within these systems. Prior to field surveys, while in the field, and post surveys, academic assessment is made for potential use by wildlife not observed. .

The density at which field surveys are physically conducted depends upon specifics of a site's physical conditions: line of sight, variability of vegetive cover, variability of the landscape matrix, physical structures (stones, hills, sloughs, etc.), biological structures, and wildlife observations. Vegetation communities (ecosystems including wetlands and surface waters) are identified by routine identification standards of Florida Land Use, Cover and Forms. Classification System (FDOT, 1999), The Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979), Ecosystems of Florida (Myers and Ewel, 1990), Florida Wetlands Delineation Manual (FDEP, 1195), other(s) as cited. Protected species status is identified by species lists published by US Fish and Wildlife Service (USFWS), State of

Florida, and local authorities. Species under consideration for protections, i.e., review for listing/candidate species, are included. Special protections for waters such as Outstanding Florida Waters, Water Quality Conditions under the Clean water Act, and similar, are taken from published lists by US Environmental Protection Agency and the State of Florida.

Information sources and databases utilized include the following:

- USFWS GIS Database(s)
- USFWS Information for Planning and Conservation (IPaC)
- Florida Natural Areas Inventory (FNAI) GIS Database(s)
- Florida Fish and Wildlife Conservation Commission (FWC) GIS Database(s)
- Soil Survey of Hillsborough 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)
- ETDM Project #14493, Programming Screen Summary Report (PSSR), published 10/27/2022.
- 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 (2023)
- Cornell Lab of Ornithology eBird Database (2023)

After review of the cited information and lists of potentially occurring species were developed.

Field surveys were completed in August 2022 and August 2023. The physical extent of field surveys were within the existing ROW of Gibsonton Drive, on adjacent publicly accessible lands, adjacent neighborhoods, including the preferred SMF and FPC sites. Field conditions were documented.

The project study area does not extend into the Alafia River. However, iPaC identified: west Indian manatee (Trichechus manatus), hawksbill sea turtle (Eretmochelys imbricata), leatherback sea turtle (Dermochelys coriacea), and loggerhead sea turtle (Caretta caretta). The project area is exclusively uplands, and there is no potential for occurrence of these aquatic species.

The list of potentially occurring protected species was developed, with each species assigned a low, moderate, or high likelihood or probability for occurrence within the study area. If a species or species indicator was observed during field reviews, it is specifically identified. **Table 3-1** lists the federal and state listed and protected faunal species with the potential to occur within the study area, based on availability of potentially suitable habitat and known ranges. **Table 3-2** provides the same information for federal, and state listed and protected floral species.

Table 3-1 Potentially Occurring and Observed Listed and Protected Wildlife Species

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Habitat	Probability of Occurrence
REPTILES					
Drymarchon corais couperi	Eastern indigo snake	FT	T	Hydric hammock, palustrine, sandhill, scrub, upland pine forest, mangrove swamp	Moderate
Gopherus polyphemus	Gopher tortoise	ST	--	Old field, sandhill, scrub, xeric hammock, ruderal, dry prairie, pine flatwood	High*
Lampropeltis extenuata	Short-tailed snake	ST	PT	Longleaf pine/xeric oak sandhills, scrub, xeric hammock	Low
Pituophis melanoleucus mugitus	Florida pine snake	ST	--	Sandhill, scrubby flatwoods, xeric hammock, pine flatwoods, ruderal	Low
BIRDS					
Ammodramus savannarum floridanus	Florida grasshopper sparrow	FE	E	Dry prairie	Low
Aphelocoma coerulescens	Florida scrub-jay	FT	T	Scrub, scrubby flatwoods	Low
Athene cunicularia floridana	Florida burrowing owl	ST	--	Dry prairie, sandhill, pastures, golf courses, ruderal, athletic fields	Low
Calidris canutus rufa	Rufa Red knot	FT	T	Beach dune, unconsolidated substrate, sandy beaches	Low
Egretta caerulea	Little blue heron	ST	--	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	High*
Egretta refescens	Reddish egret	ST	--	Coastal tidal flats, salt marshes, shores, lagoons	Moderate
Egretta tricolor	Tricolored (Louisiana) heron	ST	--	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	High*
Falco sparverius paulus	Southeastern American kestrel	ST	--	Sandhill, mesic flatwoods, ruderal, dry prairie	Low
Grus canadensis pratensis	Florida sandhill crane	ST	--	Basin marsh, depression marsh, dry prairie, marl prairie, pastures	High*
Grus americana	Whooping crane	--	EXPN	Coast marshes and estuaries, inland marshes, lakes, open ponds, shallow bays, salt marsh, pastures, agriculture fields, sand/tidal flats	None

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Habitat	Probability of Occurrence
Haliaeetus leucocephalus	Bald eagle	--	--	Estuarine, lacustrine, riverine, tidal marsh, tidal swamp	Low
Laterallus jamaicensis jamaicensis	Eastern black rail	FT	T	Estuarine tidal swamp/marshes, coastal prairie, freshwater marsh	Low
Mycteria americana	Wood stork	FT	T	Estuarine tidal swamps/marshes, lacustrine, seepage stream, ditches, ruderal	High
Platalea ajaja	Roseate spoonbill	ST	--	Coastal marsh, tidal ponds, sloughs, freshwater marsh, mudflats, tidal swamps	Low
Polyborus plancus audubonii (Caracara plancus)	Audubon's crested caracara	FT	T	Dry prairie, wet prairie, ruderal, prairie hammock, open xeric and mesic	Low
Rostrahamus sociabilis plumbeus	Everglade snail kite	FE	E	Freshwater marshes, shallow vegetated edges of natural and man-made lakes	Low
INSECTS					
Danaus plexippus	Monarch butterfly	--	C	Open fields, roadside areas, wet areas, and urban gardens where milkweed and flowering plants exist	Moderate
MAMMALS					
Ursus americanus floridanus	Florida black bear	--	--	Palustrine, terrestrial, pine flatwoods, sand pine scrub, cypress swamps	Low

FT=Federal Threatened, T=Threatened, PT= Proposed Threatened ST=State-designated Threatened, C=Candidate for listing under ESA, FE=Federal Endangered, E=Endangered, --=Not Listed EXPN= Experimental Population, Non-essential

**past Species use observed during August 2022 and/or August 2023 species field surveys*

Table 3-2 Potentially Occurring and Observed Listed Plant Species

Species	Common Name	State Status (FDACS)	Federal Listed (USFWS)	Habitat	Probability of Occurrence
Centrosema arenicola	Sand butterfly pea	SE	--	Upland hardwoods associated with *Quercus* and *Sabal palmetto*	Low
Chionanthus pygmaeus	Pygmy fringe-tree	FE	E	Scrub, sandhill, xeric hammock	Low
Chrysopsis floridana	Florida golden aster	FE	E	Scrub, xeric hammock	High*
Lechea cernua	Scrub pinweed	ST	--	Open sand-scrub, xeric pine/oak scrub	Low
Lechea divaricata	Spreading (pine) pinweed	SE	--	Dry, open sand-scrub and flatwoods	Low
Nolina brittoniana	Britton's beargrass	FE	E	Scrubby flatwoods and sandhill – endemic to Florida	Low
Campanula robinsiae	Brooksville bellflower	FE	E	Wet prairies	Low
Bonamia grandiflora	Florida bonamia	SE	T	scrub habitat, open, with dry sands	Low
Rhynchospora megaplumosa	Large-plumed beaksedge	SE	--	Scrubby flatwoods	Low

*FE=Federal Endangered, E=Endangered, ST=State-designated Threatened, --=Not Listed; *Species observed during August 2022 and/or August 2023 species field surveys*

Definitions noted on **Table 3-1** and **Table 3-2** for likelihood of occurrence are provided below:

None – Species is known to occur in Hillsborough County, no suitable habitat is present in the project action 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 habitats or life history.

Low – Species with a low likelihood of occurrence within the study area are defined as those species that are known to occur in Hillsborough County or the bioregion, but suitable habitat is limited within the study area, or the species is rare or has been extirpated.

Moderate – Species with a moderate likelihood of occurrence are those species known to occur in Hillsborough 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 with a high likelihood for occurrence are suspected within and adjacent to 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.

3.2 COORDINATION WITH RESOURCE AGENCIES

Agency coordination was conducted as part of the ETDM screening and Advanced Notification review process. The ETDM screening process was used to become aware of any issues noted by the commenting agencies. The ETDM process was conducted and included project limits from Fern Hill Drive to US 301. The PSSR was published October 27, 2022. Regulatory agencies included in the Programming Screen were USFWS, FWC, Florida Department of Agriculture and Consumer Services (FDACS), SWFWMD, and the Hillsborough County Transportation Planning Organization (TPO). Much of the coordination for potential species occurrence was conducted electronically utilizing databases from USFWS, FWC, SWFWMD and FNAI. Relevant portions of the ETDM report can be found in the project file**.** A summary of the relevant agency comments during the ETDM screening is provided below:

3.2.1 U.S. Fish and Wildlife Service

The USFWS stated that the action area falls within the CFA of the wood stork. It is very likely that wood storks are utilizing areas within the project limits for foraging. Depending upon the design of the project direct impacts should be avoided. To minimize adverse effects to the wood stork and other wetland dependent species, USFWS recommended that impacts to suitable foraging habitat be avoided. If avoidance is not possible, minimization measures should be employed and best management practices (BMPs) to avoid further degradation of the site. Mitigation for wetland impacts should be discussed with USFWS and will require further coordination. The USFWS commented that wetlands provide important habitat for fish and wildlife. BMPs should be used to prevent degradation of wetland and other aquatic resources from erosion, siltation, and nutrient discharges associated with the project site. The USFWS recommended that the project be designed to avoid these valuable resources to the greatest extent practicable. If impacts to wetlands are unavoidable, USFWS recommended that the FDOT provide

mitigation that fully compensates for the loss of wetland resources. USFWS determined the proposed project may result in minimal to moderate impacts to protected wildlife and habitat resources. The project Is not expected to have further consultation with USFWS. The project will have a consultation with FWC as stated protected wading birds were present in the study area.

3.2.2 Florida Fish and Wildlife Conservation Commission

The FWC identified numerous federal and state endangered and threatened species that may exist within the project corridor, as well as species that are part of the state's Imperiled Species Management Plan, including: eastern indigo snake, Florida grasshopper sparrow, wood stork, Florida scrub-jay, gopher tortoise, Florida sandhill crane, little blue heron, and tricolored heron. The FWC noted that the GIS analysis revealed land cover characteristics that indicate potential habitat of a quality that will require field verification to determine probability of presence or absence of listed wildlife species and the quality of habitat. The FWC found the project falls within the USFWS Consultation Areas of the Florida grasshopper sparrow and Florida scrub-jay, as well as within the USFWS Service Area for the Florida scrub-jay. The project is within the CFA of the wood stork, and within the Occasional Range of the Florida black bear.

The FWC stated the primary wildlife issues associated with this project include potential loss of habitat; the potential for increased vehicular mortality events; and potential water quality degradation because of additional stormwater runoff from the new roadway surface draining onto adjacent lands. FWC believes that direct and indirect effects of this project could be moderate, provided that wetland impacts are minimized and adequately mitigated, if roadway construction is confirmed to the existing cleared right of way to the maximum degree possible, any new drainage retention areas (DRAs) are not constructed within areas of natural habitat, and degradation of adjacent or downstream water quality is avoided via inclusion of BMPs in the project design.

3.2.3 Florida Department of Agriculture and Consumer Services

The FDACS stated that resources that may be impacted by project activities include: approximately 19 acres of Priority 1 Aquifer Recharge, 40 acres of Priority 3 Significant other Surface Waters/ other Surface Water Resource Priorities, 69 acres of Priority 5 lands in the Florida Ecological Greenways Network, the Greater Tampa Bay Ecosystem Management Area (124 acres of which are also a Florida Scrub-Jay Service Area and Wood Stork CFA), the Alafia Scrub Nature Preserve, and 69 acres of Priority 4 natural communities. The Florida golden aster (*Chrysopsis floridana*), Brooksville bellflower (*Campanula robinsiae*), Florida bonamia (*Bonamia grandiflora*), pygmy fringe-tree (*Chionanthus pygmaeus*), and sand butterfly pea (*Centrosema arenicola)* may occur adjacent to the project. The FDACS recommended the use of BMPs, including containment booms and silt fencing, to protect wetlands and other surface waters from construction impacts and contaminants. The FDACS recommended the following: surveys for rare and listed plants should be conducted, and if present, should be protected to the degree possible, or translocated to a suitable alternative site by an organization such as the Florida Native Plant Society (FNPS); caution should be exercised around invasive plants so as not to cause further spread; decontaminating equipment and machinery to prevent the spread of invasive, non-native plants is recommended; efforts should be made to minimize or mitigate impacts to rural lands and agricultural

operations; and to analyze the need and feasibility of using wildlife crossings, or other means to reduce the occurrences of wildlife from being hit by motor vehicles (fencing or other barriers; funneling wildlife towards stream crossings).

3.2.4 Southwest Florida Water Management District

The SWFWMD stated that coordination with FWC for potential gopher frog (*Lithobates capito*), black bear sites and other threatened or endangered species may also be required after additional wildlife survey(s) of the proposed site at the time of design. The SWFWMD stated an environmental resource permit (ERP) will be required; however, the final determination of the type of permit will depend upon the final design configuration.

3.2.5 Hillsborough County Transportation Planning Organization

The Hillsborough County TPO commented that the *Future Land Use Element* of the comprehensive plan emphasizes protection of environmentally sensitive areas and no net loss of significant wildlife habitat, and the proposed widening will have to account for any impacts to significant wildlife within its scope. The Mobility section also calls for the coordination of mobility improvements with natural resource agencies and County environmental staff to avoid, minimize or mitigate adverse impacts on wetlands, wildlife habitats and corridors, and other environmentally sensitive lands.

3.2.6 National Marine Fisheries Service

National Marine Fisheries Service (NMFS) conducted a site inspection on April 11, 2022, to assess potential concerns regarding living aquatic resources. The NMFS commented that there does not appear to be any direct or indirect impacts to NMFS trust resources, and that none of the natural resources to be affected in this project are within NMFS jurisdiction. No EFH is located within the study area; therefore, there will be no involvement with EFH for this project.

3.3 SURVEY RESULTS

Land use within the study area is primarily low to medium density residential and commercial; however, there are some natural, undeveloped areas within the study area including the Alafia Scrub Nature Preserve which provides habitat to many wildlife and plant species, some of which are protected. Wildlife observations were noted throughout the study area.

During the field survey conducted in August 2022, an occupied burrow belonging to the state-designated threatened gopher tortoise was observed within FDOT right of way on the north side of Gibsonton Drive. During the field survey conducted in August 2023, the burrow was observed to be abandoned but still could provide refuge to other protected species like the eastern indigo snake and the Florida pine snake. The federally listed endangered species, Florida golden aster, was observed north of the existing right of way within the Alafia Scrub Nature Preserve. **Figure 3-1** provides an overview of the recent observations and historical occurrences of listed and protected species that have a potential to occur within or adjacent to the project action area.

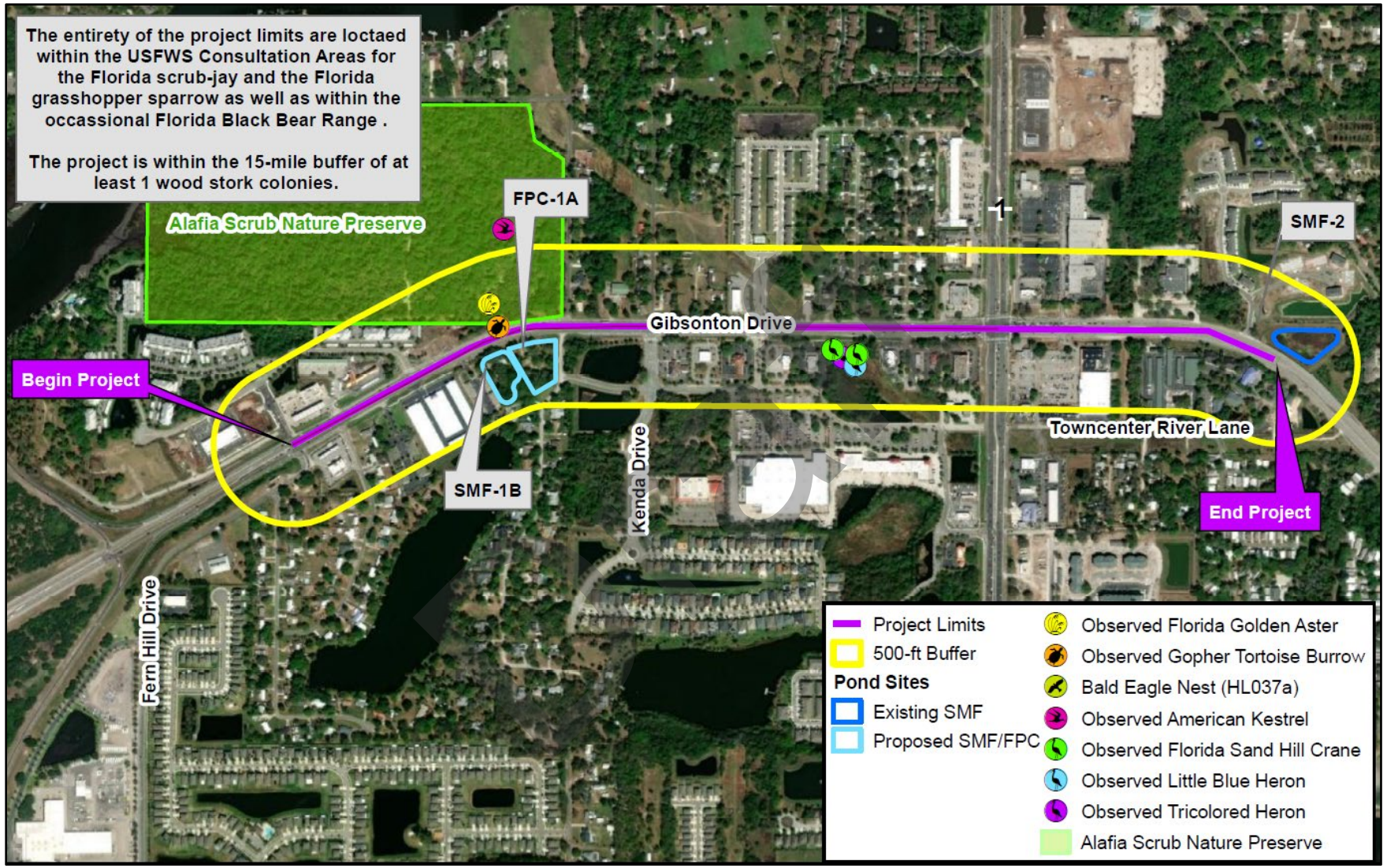


Figure 3-1 Protected Species Observations

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

3.4 FEDERAL LISTED FAUNAL SPECIES

Federally listed wildlife species which have been observed or determined as having potential for occurrence in the vicinity of the study area include: the eastern indigo snake, Florida grasshopper sparrow, Florida scrub-jay, eastern black rail, wood stork, and Audubon's crested caracara. All of these species are also afforded state protection. The effect determinations for each of the species, provided below, are for the Preferred Alternative since there would be no effect on protected species or their habitat by the No Build alternative.

3.4.1 Eastern Indigo Snake

The eastern indigo snake is federally listed as threatened. The eastern indigo snake occurs in a wide variety of habitats, including forested uplands and wetlands as well as, wet and dry prairies, pine flatwoods, scrubby flatwoods, floodplain edges, sand ridges, dry glades, tropical hammocks, muckland fields, coastal dunes, and xeric sandhill communities, and along ecotones of wetland ecosystems. The eastern indigo snake may utilize gopher tortoise burrows, holes, cavities and other refugia for protection; and a single burrow is within the study area, with others adjacent within Alafia Scrub Nature Preserve. No individuals were observed during the August 2022 and August 2023 field surveys. However, areas of poor quality habitat for this species occur throughout most of the study area, including the SMF and FPC sites. Probability of occurrence for the eastern indigo snake is moderate. The forage potential is limited, the traffic noise and vibrations, both significantly reduce the limited potential for this species occurrence within the study area. The project will impact the Gibsonton Drive ROW adjacent to the preserve; however, there will be no impact to habitat within the preserve. No records of occurrence of were identified in the project's vicinity. There is low quality habitat occurring within the study area.

To ensure the protection of this species during construction the FDOT will require that the USFWS's *Standard Protection Measures for the Eastern Indigo Snake* (**Appendix G**) be part of the environmental controls of the final project design. When the study advances to permitting and construction phases, the most current guidelines will be used. The revised August 2013 *Addendum to USFWS Concurrence Letter to U.S. Army Corps of Engineers Regarding Use of the Eastern Indigo Snake Programmatic Effect Determination Key* (**Appendix H**) was used for this study. The determination was determined the project may affect, not likely to adversely affect the eastern indigo snake (A→B→C→D→E MANLAA).

3.4.2 Florida Grasshopper Sparrow

The Florida grasshopper sparrow is federally listed as endangered. The Florida grasshopper sparrow relies on dry grassland prairie habitats in southern and central Florida. The project is within the USFWS consultation area for the Florida grasshopper sparrow. The Cornell Lab of Ornithology ebird database denotes a single historical observation, of a grasshopper sparrow – not the Florida subspecies – in the vicinity in January 2023. the quality of the observation cannot be assessed. There is suitable grasshopper sparrow / Florida grasshopper sparrow habitat in Alafia Scrub Nature Preserve. No suitable grasshopper

sparrow habitat is present within the project area and neither sparrow species were observed during field reviews. Therefore, an effect determination of no effect was made for Florida grasshopper sparrow.

3.4.3 Florida Scrub-Jay

The Florida scrub-jay is an endemic species which is federally listed as threatened. Florida scrub-jays use sand pine scrub, xeric oak scrub, and scrubby flatwoods occurring on well-drained, sandy ridges. The study area is located within the USFWS Consultation Area for the Florida scrub-jay. Three classes of scrub-jay habitat are defined by the USFWS Species Conservation Guidelines (2004): "Type I – any upland plant community in which percent cover of the substrate by scrub oak species is 15 percent or more. Type II – any plant community, not meeting the definition of Type I habitat, in which one or more scrub oak species is represented. Type III – any upland or seasonally dry wetland within 400 meters (0.25-miles) of any area designated as Type I or Type II habitat." A relatively small area of low-quality habitat Type I habitat exists adjacent to the study area within the Alafia Scrub Nature Preserve. This open xeric habitat consists of exposed sands and a limited number of tall trees; however, short scrubby oaks are not present, and the area does not appear to be fire maintained. These small patches were a consequence of past unauthorized ATV activity, which has been curtailed since the preserve was brought under county management (>20 years) The Preserve's master plan did not indicate Florida scrub-jay occurrence when written (1997). There are no historical occurrences of the Florida scrub-jay within the vicinity of the study area and no individuals were observed during field surveys. With no impacts to habitat proposed and the species not historically documented within the project study area, an effect determination of no effect was made for the Florida scrub-jay.

3.4.4 Rufa Red Knot

The rufa red knot is federally listed as threatened. This species was returned as part of iPAC report. However, as iPAC introduction states the species identified may be "potentially affected by activities". This potential is not only based upon planned actions taken but also because iPAC provides the broadest potential of occurrence, to set a list of species to be considered. The rufa red knot would not occur within this study's location. The area lacks ecosystems or conditions that the migrating birds would select for resting or foraging. There are suitable areas within the bird's migrating flyway it would select. Probability of occurrence is none, and thus FDOT makes a determination of no effect.

3.4.5 Eastern Black Rail

The eastern black rail is federally listed as threatened. The eastern black rail is present in Florida. 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. Suitable habitat consisting of a wet prairie and freshwater marsh is present south of Gibsonton Drive, east of Park Place Avenue. This non-forested wetland is densely vegetated with knotgrass (*Paspalum distichum*) cattails (*Typha spp.*), and Peruvian water primrose (*Ludwigia peruviana*). The density of herbaceous cover makes poor quality habitat for the species. No individuals were observed during the August 2022 and August 2023 field

surveys, both of which were conducted during the breeding season (April 1 through August 31). There are no historical observations of the eastern black rail within the project area. No observations, suitable habitat, and a low probability, result in an effect determination of no effect.

3.4.6 Wood Stork

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

The project is located within the 15-mile CFA of one wood stork colony; however, the study is not within 2,500 feet of a colony site (**Appendix I**). As defined by the USFWS, Suitable Foraging Habitat (SFH) for wood storks includes wetlands and other surface waters which have areas of water that are relatively calm, uncluttered by dense thickets of aquatic vegetation, and have permanent or seasonal water depth between 2 and 15 inches. Based upon these criteria, SFH has been identified within the study area (OSW 1, OSW 2, OSW 9, WL 10, OSW 11, OSW 12, WL 13, OSW 14, and OSW 15.), including small portions of the proposed SMF 2 and FPC-1A sites. Currently FPC 1A borders OSW 5 which provides SFH for the wood stork. However, the construction of SMF 1B and FPC 1A pond sites will likely create more foraging habitat for the wood stork and other wading birds. The project is anticipated to impact 0.17 acre of wetlands and 0.17 acre of other surface waters. The Cornell Lab of Ornithology ebird database denotes observations, as recent as May 2023, approximately 1-mile north of the project in the Alafia River. With SFH located in the study area and the study area located in the 15-mile CFA of one wood stork colony, the probability of occurrence is high for the wood stork. Using the *Effect Determination Key for the Wood Stork in Central and North Peninsular Florida* (**Appendix J**) it has been determined the project may affect, not likely to adversely affect the wood stork (A→B→C MANLAA).

3.4.7 Whooping Crane

The whooping crane in central Florida is a federally designated non-essential experimental population, which is defined as a population that has been established within its historical range under Section 10(j) of the ESA to aid in its recovery. The USFWS has determined a non-essential population is not necessary for the continued existence of the species. The experimental population never used areas this far south in the peninsula.

This species was returned as part of iPAC report. However, as iPAC introduction states the species identified may be “potentially affected by activities”. This potential is not only based upon planned actions taken but also because iPAC provides the broadest potential of occurrence, to set a list of species to be considered. The whooping crane would not occur within this study’s location. Probability of occurrence is none, and thus no effect. However, there needs to be no determination made for an USFWS experimental population.

3.4.8 Monarch Butterfly

The monarch butterfly was identified as a candidate species for protection under the ESA by the USFWS on May 3, 2022. It is not yet proposed for listing and does not have designated Critical Habitat. Within North America, the monarch butterfly is a highly migratory species. This species requires a diversity of blooming nectar resources but of particular importance is milkweed (*Asclepias* spp.) upon which eggs are laid and serves as forage for caterpillars. Swamp milkweed is typically found in wetland habitats, including wet ditches. However, swamp milkweed was not observed during field reviews of wetland areas in the project action area. Although there are some shallow roadside swales, there are no wet roadside ditches in the project action area, and the roadside is largely mowed and maintained. Swamp milkweed was not observed in existing wetlands that would be connected to project outfalls. It is possible that milkweed may be present, but such would be limited individuals, and not a sought our ecosystem. Monarchs could forage on wildflowers within the project area, but due to maintenance activities these will be limited. Thus, the occurrence of monarchs is expected to be limited, and incidental to the species moving through the area, not of support to the species. While not required, an assessment would result in no effect.

As this species is currently a candidate species and not currently proposed for listing, consultation for this species is not required at this time. Further impact assessment for the species and a formal federal effect determination for the monarch butterfly may be required in the future should it be listed.

3.4.9 Everglade Snail Kite

The Everglade Snail Kite is a subspecies of snail kite that is designated by the USFWS as endangered. The Everglade snail kite is a medium-sized hawk with a wingspan of about 45 inches. A distinguishing feature is their long, curved bill used for picking apple snails (*Ampullariidae spp.)* from their shells. The breeding season varies widely from year to year as it is in response to seasonal water levels. Generally nesting occurs between January to May. Nest sites are over water in shrubs and low trees, usually 3-15 feet above water.

Suitable habitat for this species is not present within the study area and no individuals were observed during the August 2022 and August 2023 field surveys. Pursuant to the *Snail Kite Management Guidelines,* if a snail kite nest is identified within 1,640-feet of the active work area, work must stop while a report of the nest to the construction project administrator and coordination with the FDOT's office of environmental management. Due to lack of suitable habitat, no observations in the project area from historical records or field surveys and low potential of occurrence, the project will have no effect.

3.4.10 Audubon's Crested Caracara

The Audubon's crested caracara is federally listed as threatened. The crested caracara prefers prairies with scattered cabbage palms in south central Florida. It may also be found in open wooded areas with saw palmetto, cypress, scrub oaks, and pastures. The USFWS consultation area for the Audubon's crested caracara includes portions of Hillsborough County; however, this project lies approximately two miles outside of the consultation area limits. The suitable habitat for this species is not present within the study area and/or SMF/FPC sites, and probability of occurrence is low. No individuals were observed during the

August 2022 and August 2023 field surveys; however, there is a single historical observation from 2016 one-mile northwest of the Alafia River and west of I-75. The Audubon's crested caracara has a low probability of occurrence and there is no suitable habitat throughout the study area. Therefore, the project will have no effect.

3.5 FEDERAL LISTED FLORAL SPECIES

The study area was evaluated for the potential occurrence of federally listed plant species selected based upon previous documentation of occurrence within Hillsborough County and also identified by iPAC. With the exception of the Florida Golden Aster, no federally listed plant species were observed in the study area during field reviews. Additionally, the three plant species which were considered, all occur in scrub habitat. Suitable habitat is present along and near the ROW. Design phase plant surveys will be conducted prior to construction.

3.5.1 Britton's Beargrass

Britton's beargrass is federally listed as endangered. Endemic to central peninsular Florida, this species is found in scrub, sandhill, scrubby-flatwoods, and xeric hammock. More than 90% of Britton's beargrass habitat has been lost to agriculture and development. About 100 populations remain, with half of these occurring in 10 conservation areas. This perennial herb has long, stiff leaves in a grass-like clump rising from a bulbous stem. Young leaves are erect and older leaves reach up to 6 feet long and 0.5 inch wide, spreading on the ground. The flowering stalk reaches 3 to 6 feet in height and is topped by a large, showy cluster of small, white flowers. The fruit is a papery, symmetrical, three-lobed capsule, persisting through the summer. No individuals were identified during field reviews and no documented occurrences of this species are within the vicinity of the study area. Suitable habitat is not present. Due to lack of observations and low probability of occurrence, an effect determination of may affect, not likely to adversely affect was made for the Britton's beargrass.

3.5.2 Florida Golden Aster

The Florida golden aster is federally listed as endangered; however, it's proposed for removal from the *Federal List of Endangered and Threatened Plants*. Endemic to the Tampa Bay area, this species occurs in open areas of scrub and the adjacent sandhill communities and ecotone between scrub and flatwoods. The Florida golden aster is a perennial herb with stems that are woody toward the base and non-woody above, which distinguishes this species from other members of the genus. The golden yellow flower heads, which bloom mid-late Fall, are grouped into a flat-topped cluster of 1-25 heads at the top of the stem, each about 2.5 cm in diameter. Field surveys were conducted outside of the mid-late autumn flowering season. The Florida golden aster was observed within the Alafia Scrub Nature Preserve north of the project area. This population has been present at the Preserve since being acquired by Hillsborough County and maintains an estimated population of over 100 individuals, verified during the August 2022 and August 2023 field surveys. The location of species observations during field surveys is shown in **Figure 3-1.** Since open areas with exposed sand exist between the identified population and existing FDOT right of way, plant surveys will be conducted in this area during the appropriate survey season prior to

construction and if located, coordination with FWS/FDACS will occur and conservation measures such as relocation or seed collection for individuals that would be impacted by the project. The FDOT has determined only limited areas of existing habitat are anticipated to be affected by the proposed project; however, there are no anticipated effects to the Alafia Scrub Nature Preserve from the proposed project. The success of the long-term viability of the species will not be impacted. Suitable habitat in the adjacent Alafia Scrub Nature Preserve and a moderate probability of occurrence result in a determination of may affect, not likely to adversely affect.

3.5.3 Brooksville bellflower (Campanula robinsiae)

The Brooksville bellflower is federally listed as endangered, through its range. The species is endemic to Florida, with documented occurrences in Hillsborough County (Atlas of Florida Plants). It is short, to 6-inches and usually shorter, annual. Stems are smooth, angled, often rooting at the nodes. Leaves are small, 0.20-0.50 inch long, oval to lance shaped, with significant variability. Flowers are 0.5-inch blue to purple with 5 lobes growing from a bell-shaped tube. Fruits are small with a persistent calyx. Brooksville bellflower prefers moist slopes and pond edges, with open exposure. Only three populations are known. Surveys for occurrence are best January to May depending on water levels, with the highest probability of flowering March-April. The known populations are not in the vicinity of this project. The plants' very limited range indicate seed distribution is very limited even via avifauna. Probably of occurrence is very low. This plant will be part of surveys prior to construction activities. Limited areas of suitable soil and water regimes, dominated by robust vegetation cover, further reduce potential of occurrence. A determination is made of no effect.

3.5.4 Florida bonamia (Bonamia grandiflora)

The Florida bonamia, also known as Florida's lady's night cap and scrub morning glory, is a perennial vine. The Florida bonamia is federally listed as threatened and State of Florida listed as endangered. It is known to occur in Hillsborough County (Atlas of Florida Plants). There are fewer than 100 known populations. It is a perennial vine that trails on the ground to not more than 4-feet in length. The leaves are up to 2.5 inches in length, and leathery, grey green in color. The flower is showy, with an erect peduncle, approximately 3.25 inches wide and 4-inches long, petals purple at their tips fade to white in the throat of the flower. The anthers are long and showy, yellow at their tops. It is in the morning glory family, with flowers opening a single morning. The plant occurs in scrub habitat, open, with dry sands, and in gaps of sand pine stands. The plant blooms from spring to fall. It requires an open canopy and limited competition. The project areas mowing would prevent populations, a robust herbaceous layer outcompetes and prevent required niche environment. No population is in the vicinity of the project. Limited suitable habitat exists within the project. A determination is made of no effect.

3.5.5 Pygmy Fringe-tree

The pygmy fringe-tree is federally listed as endangered. This species is endemic to the sandy soils of dry hammocks and pine forests in central Florida, primarily on the Lake Wales Ridge. In natural conditions,

fire ecology maintains the open patches required by this species. This small tree is usually less than 10 feet tall with the stems often buried in sand. The twigs are gray, and the somewhat leathery, yellow-green leaves are two to four inches long. The white flowers, which bloom in spring, are less than one half inch long, each with four narrow petals, in showy clusters. Though the recommended survey times occur when the tree blooms in spring, survey efforts can be accomplished year-round due to other characteristics, unique in combination for this species. There are no documented occurrences of the pygmy fringe-tree adjacent to the study area and no individuals were observed during the August 2022 and August 2023 field reviews. Suitable habitat exists within the southeast corner of the Alafia Scrub Nature Preserve north of the study area, and there is a moderate probability of occurrence throughout the study area. The Preserve will remain undisturbed and no impacts to suitable habitat are proposed. Therefore, a determination is made of no effect.

3.6 STATE LISTED FAUNAL SPECIES

State listed wildlife species which have been identified as occurring or having a potential for occurrence in the vicinity of the project area include the Florida burrowing owl, southeastern American kestrel, gopher tortoise, short-tailed snake, Florida pine snake, Florida sandhill crane , and protected wading birds the little blue heron, tricolored heron, reddish egret (*Egretta rufescens*) and roseate spoonbill.

3.6.1 Florida Burrowing Owl

The Florida burrowing owl is state designated threatened by the FWC. This species may be found in native open prairies and cleared areas that offer short groundcover such as agricultural fields, pastures, golf courses, airports, and vacant lots in peninsular Florida. The owls usually dig their own burrows but are known to use armadillo or gopher tortoise burrows.

Wide open herbaceous cover, 6.5 acres of foraging habitat per pair (USFWS), is not represented within the study area. There are no documented occurrences within the vicinity, giving this species a low probability of occurrence. References identify the Florida burrowing owl as having been historically extirpated from Hillsborough County, with rare observations of dispersing individuals. No Florida burrowing owls were observed during field reviews. Therefore, an effect determination is no effect anticipated

3.6.2 Southeastern American Kestrel

The southeastern American kestrel is a state-designated threatened species. It is a non-migratory subspecies of kestrel found in open pine savannahs, sandhills, prairies, and pastures in Florida. Kestrels nest in cavities within large dead trees. Foraging habitat for the southeastern American kestrel is large open herbaceous dominated landscapes. There are small patches of mowed grass adjacent to the project area. These mowed areas do not offer suitable size or contiguous connections to provide suitable habitat. No impacts to these mowed areas are anticipated. No kestrels were observed within the study area during the August 2022 and August 2023 field surveys, although there are recent observations of the non-Florida species adjacent to the project within the Alafia Scrub Nature Preserve. The preferred nesting habitat for the southeastern American kestrel is not represented within the study area. There are no impacts to

suitable habitat anticipated. Due to lack of nesting and foraging habitat, as well as a moderate probability of occurrence, a determination is made of no adverse effect anticipated.

3.6.3 Gopher Tortoise

The gopher tortoise is a state-designated threatened species. Preferred habitats include xeric areas with sandy soils and open canopy. One abandoned gopher tortoise burrow was identified within existing Gibsonton Drive right of way. Gopher tortoise are present in the Alafia Scrub Nature Preserve, observed during the August 2022 field survey Scientists completed transects of the roadside area adjacent to the preserve, walking 10-feet apart , or closer as required, as to have 100% visual coverage, covering all of the ROW in the project area. No additional gopher tortoise burrows were observed during the August 2023 field review. Areas of potential suitable habitat include grassy roadsides which exist throughout the project area. Preferred habitat exists with the population in the Preserve Additionally, areas of potential species use are within and adjacent to the preferred SMF and FPC sites.

Impacts to suitable habitat are limited to grassy roadsides where Gibsonton Drive will be widened. Comprehensive surveys for tortoises and their burrows will be conducted prior to construction per the most recent FWC *Gopher Tortoise Permitting Guidelines*. Any construction activities that occur within 25 feet of a potentially occupied gopher tortoise burrow will require coordination with FWC and relocation of these tortoises to a FWC approved recipient site. Since the gopher tortoise population will be resurveyed prior to construction and current rules require the relocation of the species, the FDOT made an effect determination of no adverse effect anticipated.

3.6.4 Short-tailed Snake

The short-tailed snake is a state-designated threatened species and proposed federally threatened species, endemic to Florida. It primarily inhabits areas with well-drained sandy soils, particularly longleaf pine/xeric oak sandhills, but also scrub and xeric hammock habitats. It is fossorial and spends most of its time burrowed in sand. Areas dominated by longleaf pine and xeric oak are present within the study area; however, these areas only account for 7.6% of the study area. No individuals, or sign, were observed during the August 2022 and August 2023 field surveys. The edge of the roadway is poor potential habitat. A low probability of occurrence for the short-tailed snake is due to xeric hammock habitats existing in the Alafia Scrub Nature Preserve to the north of the project; however, no impacts to the Preserve are anticipated. Thus, FDOT makes a determination of no adverse effect anticipated.

3.6.5 Florida Pine Snake

The Florida pine snake is a state-designated threatened species whose habitat primarily includes scrub and open longleaf pine communities. Florida pine snakes usually construct their own burrows; however, the snakes are known to use gopher tortoise burrows, which have been identified in the study area and may provide nesting and sheltering opportunities. Suitable habitat for Florida pine snakes is poorly represented within the study area and minimal to no impacts to suitable habitat will occur by the proposed improvements. No individuals, or their sign, were observed during field reviews. Because of the

lone gopher tortoise burrow within the study area, FDOT makes a determination of no adverse effect anticipated.

3.6.6 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 and protected wading birds little blue heron, tricolored heron, reddish egret, and roseate spoonbill. These five species are state designated threatened by the FWC.

The little blue heron, tricolored heron, and Florida sandhill crane were observed within the study area during the August 2022 field survey. During the field review in August 2023, none of these five species were observed. There is suitable foraging and nesting habitat in the project corridor. It is likely that these species utilize wetland and other surface waters identified within the study area.

The project is anticipated to impact 0.17 acre of wetlands and 0.17 acre of other surface waters. Avoidance and minimization measures to wetlands will be made during the design phase in accordance with the FWC *Florida Sandhill Crane and Threatened Wading Birds Species Conservation Measures and Permitting Guidelines*. Unavoidable wetland impacts will be mitigated pursuant to state and federal regulations. Impacts to other surface water features will likely be compensated for within the preferred FPC sites. Additionally, nest surveys for the Florida sandhill crane will be conducted during nesting season and prior to construction, as necessary. FDOT will coordinate with FWC to determine appropriate avoidance and minimization measures during construction. Though there is a high probability of occurrence of these species there is no adverse effect anticipated.

3.7 STATE LISTED FLORAL SPECIES

The *Regulated Plant Index* from *Chapter 5B-40.0055*, *F.A.C.*, was used to assist in the identification of regulated plants within the State of Florida. Potential species within the study area include the sand butterfly pea (*Centrosema arenicola*), Scrub pinweed (*Lechea cernua*), pine pinweed (*Lechea divaricata*), and the large-plumed beaksedge (*Rhynchospora megaplumosa*). The FDOT has determined only limited areas of potential habitat for these species are anticipated to be impacted by the proposed project, and that the project will not be detrimental to the long-term viability of the identified species. Descriptions of the potential species and their habitats, as well as the anticipated effect determinations follow.

3.7.1 Sand Butterfly-pea

The sand butterfly-pea is listed as endangered by the State of Florida. This species is endemic to central Florida where it has been recorded in thirteen counties, including Hillsborough. The habitat requirements of the sand butterfly-pea include open areas in slash pine-turkey oak sandhills and scrubby flatwoods. This perennial herb has a vining nature with compound leaves composed of three leaflets each elliptical or oval in shape. The flowers are light lavender with fused petals that bloom from summer to fall. Very few plants have been documented in protected areas and overall, there have been minimal documented sightings in the last two decades. Surveys are most accurate when done when flowering occurs from June

to October. Suitable potential habitat for this species is located within the Alafia Scrub Nature Preserve north of the project. However, no impacts to the Preserve are planned. The sand butterfly-pea was not observed within the study area during field surveys. FDOT makes a determination of no effect anticipated.

3.7.2 Scrub Pinweed

The Scrub pinweed is listed as threatened by the State of Florida. The plant is a native endemic to Florida, with verified occurrences in Hillsborough county. This is a perennial herb that grows to about one-foot tall. The blooms are red and green and last from about March to May, producing a capsule fruit. Habitats include dry, open sand-scrub and flatwood margins. Survey season is best from summer to fall, flowering from July to October, fruits persist from October to March. The distinctive basal rosettes of unbranched, leafy vegetation remain in the winter months. The Scrub pinweed was not observed within the study area during field surveys and historical observations were found. There is suitable habitat is outside of the ROW in the Alafia Scrub Nature Preserve. No impacts are proposed to the Preserve. Impacts will be limited to the existing ROW. With no documented occurrence, and a low probability of occurrence, FDOT makes a determination of no effect anticipated.

3.7.3 Spreading (pine) pinweed

The pine pinweed is listed as endangered by the State of Florida. This plant is a native endemic plant verified to occur in Hillsborough County. This perennial herb, which reaches a maximum height of about two feet, can be found in scrub habitats and scrubby flatwoods. The erect flowering stems rise in such a way that form a dense mat of older stems. The leaves are less than a half inch long and disappear by flowering from May to October. Flowers form in tight clusters at the ends of short branches with three tiny, purple, or green petals, dropping quickly after opening. The entire plant is covered with spreading, gray hairs. Suitable habitat is present outside the ROW, within the Alafia Scrub Nature Preserve. The pine pinweed was not observed during field surveys. Impacts to the Preserve and suitable habitat are not proposed. Because of the low probability of occurrence, FDOT makes an effect determination of no effect anticipated.

3.7.4 Large-plumed Beaksedge

The large-plumed beaksedge is listed as endangered by the State of Florida, with verified documentation in only four counties including Hillsborough. This perennial herb species is endemic to central peninsular Florida, where it occurs in frequently burned sandy openings in scrubby flatwoods and scrubby to mesic transition areas. This species is classified as a facultative wetland species, though there have been sightings outside of wetlands. It is best distinguished from other species in its genus by the plumose bristles that are 3-4 times the length of the achene. Flowering and fruiting of the plant is strongly stimulated by fire. Fruits are present year-round for identification and flowering occurs from spring to fall, which is the best time to survey. The large-plumed beaksedge was not observed during field surveys; however, suitable habitat is present outside the ROW within the Alafia Scrub Nature Preserve. No impacts are proposed to the Preserve and no observations in the poor-quality habitat with the ROW, nor in the area between ROW and the Preserve; therefore, FDOT makes a determination of no effect anticipated.

3.8 OTHER PROTECTED SPECIES

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

3.8.1 Bald Eagle

Although the bald eagle is no longer afforded protection by the ESA, protection for the species is afforded through the *Migratory Bird Treaty Act* (MBTA) (1*6 U.S.C. § 703-712*) and *Bald and Golden Eagle Protection Act* (BGEPA). The USFWS will still regulate within 660 feet of a bald eagle's nest. Bald eagles are also no longer listed by the FWC, but monitoring may be required pursuant to the *FWC Eagle Management Guidelines* if construction occurs within 660 feet.

The most recent Audubon Florida EagleWatch Program data shows bald eagle nest (HL037a), within the vicinity of the study area, approximately 2,000 feet from existing ROW of Gibsonton Drive (**Figure 3-1**). Nest HL037a was documented as "unknown" during the 2022 season and noted the nest was not monitored by the Audubon EagleWatch Program last season. No bald eagle individuals were observed during field surveys and no additional nests were identified. With a nest near the area, there is a potential of an eagle perching on trees within the Preserve or on the edges of stormwater ponds, where they might forage. Surveys and Audubon Florida data reviews to update locations of active bald eagle nest sites will be conducted during the permitting phase of the project, and monitoring will take place pursuant to the USFWS *Bald Eagle Monitoring Guidelines* if new nests are identified within 660 feet of proposed construction activities. No impacts are anticipated.

3.8.2 Florida Black Bear

The Florida black bear is considered an "imperiled" species by the FWC but was removed from the State Endangered and Threatened Species List on August 23, 2012. However, the FWC's *Florida Black Bear Conservation Rule* (*Rule 68A-1.004, F.A.C.*) provides protections making it illegal to possess, injure, shoot, wound, trap, collect, or sell Florida black bears or their parts except as authorized by Commission rule or permit.

As noted by the FWC, the project is located within the Occasional Range of the Florida black bear. There is no black bear related calls, mortalities, or capture location occurrences within the vicinity of the study area. and the project is well outside any primary or secondary black bear range. The probability of occurrence for the Florida black bear is low. No impacts are anticipated.

3.9 AVOIDANCE AND MINIMIZATION

Avoidance and minimization of wetlands and other surface waters impacts will be made during the design phase. Environmental controls installations and implementation of BMPs will help ensure no effects to protected species and their habitats. Although these areas are not likely to provide optimal suitable habitat for the species listed above, the potential to impact habitat for protected species still exists. Further opportunities to avoid and minimize impacts to listed species and habitat will continue to be

evaluated during the Design Phase of the project. Additional protected species surveys will be completed prior to construction, as appropriate.

3.10 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 USFWS's available GIS data resulted in the identification of no Critical Habitat within the study area; therefore, the project will result in no destruction or adverse modification of critical habitat. Any modifications to the project design are subject to a revaluation of critical habitat in the area.

SECTION 4 WETLAND AND OTHER SURFACE WATERS IMPACTS

4.1 METHODOLOGY AND ASSESSMENT

In accordance with Executive Order 11990, *Protection of Wetlands*, and the Wetlands and Other Surface Waters chapter of the FDOT *PD&E Manual*, the proposed project has been evaluated for potential effects to wetlands. A variety of resources including NWI maps, mapping by SWFWMD, open-source GIS data, United States Department of Agriculture (USDA) soil surveys, United States Geological Survey (USGS) topographical maps, and aerial photographs (2020) were utilized to identify wetlands that occur within the study area. Project scientists identified wetlands and other surface waters within the study area during field reviews in August 2022 and August 2023. These field reviews collected data to perform an assessment of the quality of the existing wetlands and other surface waters. Wetland boundaries were identified using the U.S. Army Corps of Engineers (USACE) *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0)* and the Florida Department of Environmental Protection's (FDEP) *Delineation of the Landward Extent of Wetlands and Surface Waters* (1995) (Chapter 62-340, F.A.CA map of the wetlands and other surface waters within the project vicinity is provided in **Figure 4-1**, and a more detailed map depicting the anticipated impacts, which includes the preferred SMF and FPC sites, can be found in **Appendix C**.

A review of the ETDM PSSR was conducted to gather comments from participating regulatory agencies. Summaries of each of the agency's comments are provided above in **Section 3.2**. Comments from the agencies include the following:

- Perform delineations and conduct functional analysis of wetlands;
- Avoidance/minimization of wetland impacts;
- Evaluation of stormwater pond sites;
- Maximum effort should be made to treat stormwater runoff from the increase in impervious surface area; and
- Mitigation plans to compensate for adverse impacts to wetlands.

The ETDM PSSR indicated there are approximately 4.20 acres of palustrine-freshwater pond, 0.31 acre of palustrine-freshwater emergent wetland, and 0.29 acre of riverine wetlands within the 500-foot project buffers.

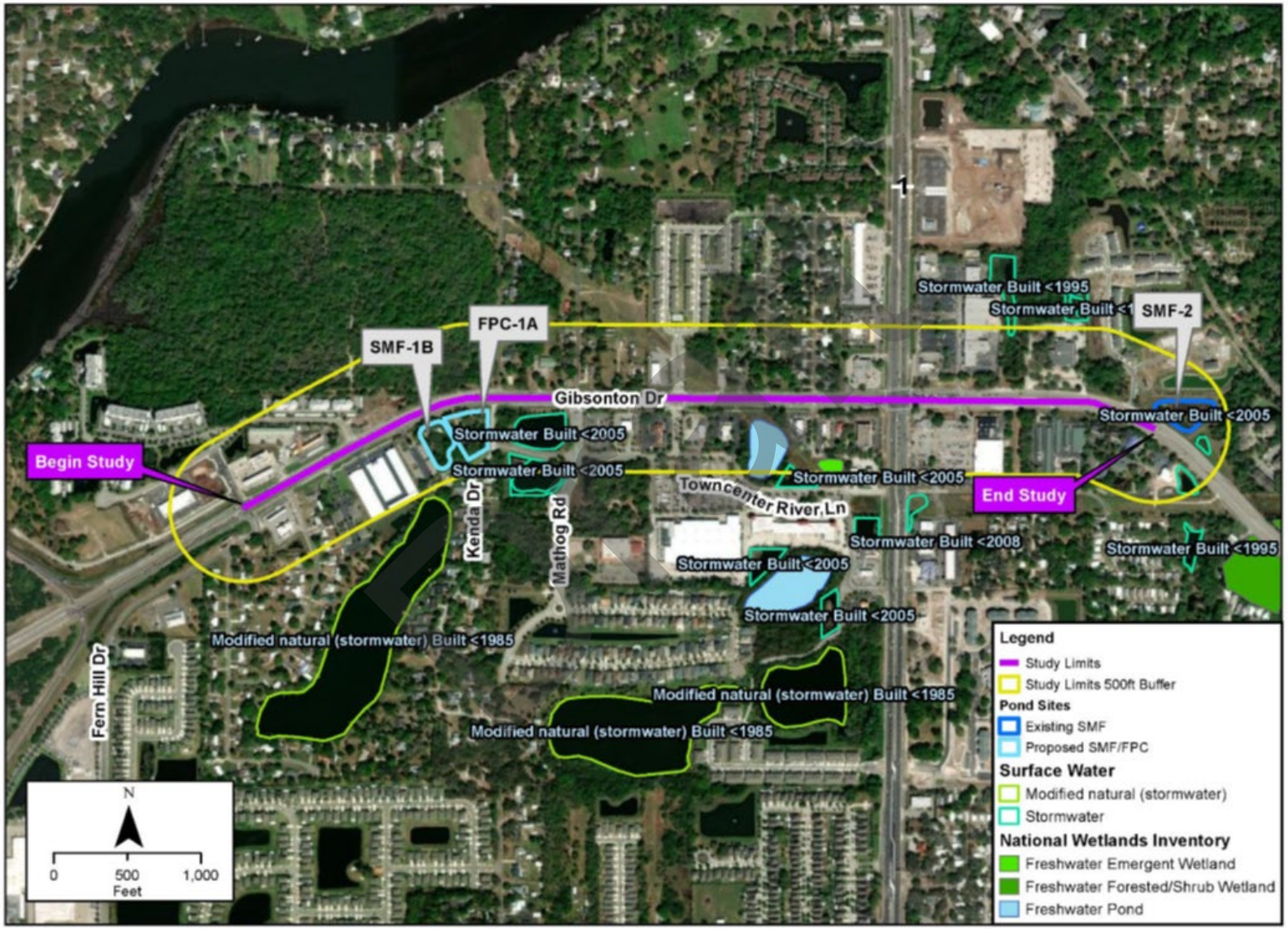


Figure 4-1 Wetland and Other Surface Waters Overview

The study area includes all areas within the existing and proposed FDOT ROW, and the SMF and FPC sites. The areas adjacent to the existing and proposed ROW were also evaluated to document nearby wetlands and systems that extend outside the proposed ROW. The assessment consisted of a review of wetland and upland habitats. Wetlands were classified using the FLUCCS codes (FDOT, 1999) and the USFWS's *Wetlands and Deepwater Habitats Classification* (Cowardin et al. 1979) methodology. A breakdown of wetland and other surface waters descriptions and classifications are shown in **Table 4-1**. The table provides a summary of the wetlands and other surface waters, as well as their FLUCCS and USFWS codes. The wetlands and other surface waters identified are named according to their approximate location within the study area limits. Potential wetland impacts were assessed using the *Uniform Mitigation Assessment Method* (UMAM), *Chapter 62-345*, *F.A.C.* The extents 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 B.**

Table 4-1 Wetland and Other Surface Water Descriptions

Wetland/Surface Water ID	NWI/USFWS	FLUCCS	Wetland Description	Acreage Within Study Area
WETLANDS				
WL3	PEM1C	641	Freshwater Emergent Wetland	0.18
WL4	PFO2C	630	Freshwater Forested Shrub Wetland	0.42
WL10	PEM1F	641	Freshwater Emergent Wetland	0.97
WL13	PEM1Fx	641	Freshwater Emergent Wetland	0.32
OTHER SURFACE WATERS				
OSW1	PUBHx	530	Freshwater Pond/Reservoir	0.33
OSW2	PUBHx	530	Freshwater Pond/Reservoir	0.14
OSW5	R5UBHx	510	Roadside Ditch/Swale	0.04
OSW6	PUBHx	530	Freshwater Pond/Reservoir	1.78
OSW7	PUBHx	530	Freshwater Pond/Reservoir	0.67
OSW8	R5UBH	510	Freshwater Stream/Creek	0.26
OSW9	R5UBHx	510	Roadside Ditch/Swale	0.08
OSW11	R5UBHx	510	Roadside Ditch/Swale	0.07
OSW12	PUBHx	530	Freshwater Pond/Reservoir	1.07
OSW14	PUBHx	530	Freshwater Pond/Reservoir	0.41
OSW15	PUBHx	530	Freshwater Pond/Reservoir	0.15
OSW16	PUBHx	530	Freshwater Pond/Reservoir	0.41

4.2 WETLAND EVALUATION AND IMPACTS

Pursuant to Executive Order 11990, *Protection of Wetlands,* federal actions should avoid to the extent possible, the long- and short-term adverse effects of the destruction or modification of wetlands and avoid direct or indirect support of construction in wetlands wherever there is a practicable alternative. Unavoidable wetland impacts resulting from construction of the project will occur under the Preferred Alternative given the presence of wetlands in the existing ROW adjacent to Gibsonton Drive and Kenda Drive. The proposed project will have no **significant** short-term and long-term impacts on wetlands in the project area. Additionally, there is no practicable alternative to construction in the wetlands. Measures have been taken to avoid and minimize harm to wetlands. These measures are discussed in section 4.3. Field reviews were conducted in August 2022 and August 2023 to assess wetlands within the study area. The entirety of the study area, including the preferred SMF and FPC sites, were evaluated for potential impacts to wetlands. Wetlands and other surface waters were identified within two of the three preferred SMF and FPC sites.

The widening of Gibsonton Drive will result in 0.17 acre of wetland and 0.17 acre of other surface waters impact. A summary of wetland and other surface water impacts is presented **Table 4-2**. The proposed improvements are anticipated to impact 0.17 acre of freshwater herbaceous wetlands (Wetland 3) and 0.17 acre of riverine other surface waters (Other surface waters 8, 9, and 11). Secondary impacts are defined as effects that are caused by and result from an activity, although they may happen later in time or are further removed in distance but are still reasonably foreseeable. Secondary impacts may be avoidable by use of appropriate BMPs. Cumulative impacts result from the total effect of the proposed project when added to other past, present, and reasonably foreseeable future projects or actions. Cumulative impacts will be mitigated if mitigation is present within the same basin or watershed at the time of permitting with agencies. A cumulative impact analysis will be conducted if mitigation is not available within the same basin or watershed. Examples of secondary and cumulative impacts that could result from the Gibsonton Drive widening project include altered hydrologic regime, water quality degradation, and edge effects. SWFWMD commented that the project has the potential to impact 25-foot wetland buffer of wetlands adjacent to and within the existing/proposed right-of way. The removal or reduction of the wetland buffer increases the possibility for secondary impacts to occur to wetlands during and post construction. The construction and alteration of stormwater facilities adjacent to wetlands could intercept groundwater and surface water flows that historically maintained wetland hydroperiods. Such wetlands may be dewatered and altered, with impacts to wetland vegetation communities, habitat, and wildlife populations. These impacts will be further evaluated during future project phases based on more-detailed design and construction methods.

Table 4-2 Wetland and Other Surface Waters Impacts

Wetland/Surface Water ID	NWI/USFWS	FLUCCS	Project Impact Acreage		Total Project Impacts
			Roadway	SMF & FPC	
WETLANDS					
WL3	PEM1C	641	0.17	--	0.17
WL4	PF02C	630	--	--	--
WL10	PEM1F	641	--	--	--
WL13	PEM1Fx	641	--	--	--
Total Wetland Impacts			**0.17**	**--**	**0.17**
OTHER SURFACE WATERS					
OSW1	PUBHx	530	--	--	--
OSW2	PUBHx	530	--	--	--
OSW5	R5UBHx	510	--	--	--
OSW6	PUBHx	530	--	--	--
OSW7	PUBHx	530	--	--	--
OSW8	R5UBH	530	0.02	--	0.02
OSW9	R5UBHx	510	0.08	--	0.08
OSW11	R5UBHx	510	0.07	--	0.07
OSW12	PUBHx	530	--	--	--
OSW14	PUBHx	530	--	--	--
OSW15	PUBHx	530	--	--	--
OSW16	PUBHx	530	--	--	--
Total Other Surface Waters Impacts			**0.17**	**--**	**0.17**
Total Project Impacts			**0.34**	**--**	**0.34**

NWI = National Wetlands Inventory
FLUCCS = Florida Land Use Cover and Forms Classification

4.3 AVOIDANCE AND MINIMIZATION

Proposed improvements to Gibsonton Drive include widening the current two-lane urbanized facility to a four-lane divided facility. Most of the proposed improvements, including the Preferred SMF and FPC sites, require additional ROW within upland or wetlands systems. These activities will have an impact on wetlands and other surface waters.

BMPs 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.

4.4 WETLAND FUNCTIONAL ANALYSIS

The UMAM was used to assess functions and values for the wetlands within the study area, in accordance with *Chapter 62-345*, *F.A.C.* The UMAM scores were developed for individual wetlands identified within the study area. 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. The functional loss for the herbaceous wetlands within the study area is 0.07. Mitigation is not typically required by SWFWMD for other surface waters impacts. **Table 4-3** summarizes impact acreage and functional loss for each wetland. For a detailed summary of individual wetland impacts, please refer to the UMAM Sheets provided in **Appendix K**.

Table 4-3 Functional Loss Analysis

FLUCCS	Wetland / Other Surface Waters Description	Impact Acreage	Functional Loss Value
641	Freshwater Herbaceous	0.17	0.07

4.5 WETLAND IMPACT MITIGATION

Although some wetland impacts may be unavoidable, any impacts will be further refined during future project phases with avoidance and minimization implemented to the extent practicable. Wetland impacts 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 proposed project is located within the primary service area of three SWFWMD approved wetland mitigation banks (MB): Mangrove Point MB, Tampa Bay MB, and the Alafia River MB. As of March 2023, the Tampa Bay Mitigation Bank is the only MB to have sufficient freshwater herbaceous credits to offset unavoidable impacts from the preferred alternative. Other wetland mitigation options may include a combination of wetland creation, restoration, or preservation within the study watersheds. The UMAM analysis will determine the extent of mitigation needed to offset the proposed impacts. Mitigation options will be investigated further during the final design phase of the study.

Based upon final designs, mitigation to be considered will include mitigation banking credits, water management district mitigation services, and FDOT designed, constructed, and maintained sites.

SECTION 5 ANTICIPATED PERMITS

All necessary permits will be acquired prior to construction of the proposed project improvements. Coordination and/or permitting is anticipated to be conducted with the following agencies as shown in **Table 5-1**.

Table 5-1 Permit Coordination

Coordinating Agency	Permit
Florida Department of Environmental Protection (FDEP)	404 Permit
	NPDES Permit
Florida Fish and Wildlife Conservation Commission (FWC)	Gopher Tortoise Relocation Permit
Southwest Florida Water Management District (SWFWMD)	Individual ERP Permit

SECTION 6 CONCLUSIONS AND COMMITMENTS

6.1 PROTECTED SPECIES AND HABITAT

The study area was assessed for the presence of federal and state listed, proposed, and protected species as well as their suitable habitat 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 FDOT *PD&E Manual*.

Table 6-1 Potential Faunal Species Effect Determinations

Species	Common Name	State Status (FWC)	Federal Status (USFWS)	Effect Determination
REPTILES				
Drymarchon corais couperi	Eastern indigo snake	FT	T	MANLAA
Gopherus polyphemus	Gopher tortoise	ST	--	No Adverse Effect Anticipated
Lampropeltis extenuata	Short-tailed snake	ST	PT	No Adverse Effect Anticipated
Pituophis melanoleucus mugitus	Florida pine snake	ST	--	No Effect Anticipated
BIRDS				
Ammodramus savannarum floridanus	Florida grasshopper sparrow	FE	E	No Effect
Aphelocoma coerulescens	Florida scrub jay	FT	T	No Effect
Athene cunicularia floridana	Florida burrowing owl	ST	--	No Effect Anticipated
Calidris canutus rufa	Rufa Red knot	FT	T	No Effect
Egretta caerulea	Little blue heron	ST	--	No Adverse Effect Anticipated
Egretta refescens	Reddish egret	ST	--	No Adverse Effect Anticipated
Egretta tricolor	Tricolored (Louisiana) heron	ST	--	No Adverse Effect Anticipated
Falco sparverius paulus	Southeastern American kestrel	ST	--	No Adverse Effect Anticipated
Grus canadensis pratensis	Florida sandhill crane	ST	--	No Adverse Effect Anticipated
Grus americana	Whooping crane	--	EXPN	--
Haliaeetus leucocephalus	Bald eagle[1]	--	--	--
Laterallus jamaicensis jamaicensis	Eastern black rail	FT	T	No Effect
Mycteria americana	Wood stork	FT	T	MANLAA
Platalea ajaja	Roseate spoonbill	ST	--	No Adverse Effect Anticipated
Polyborus plancus audubonii (Caracara plancus)	Audubon's crested caracara	FT	T	No Effect
Rostrahamus sociabilis plumbeus	Everglade snail kite	FE	E	No Effect
INSECTS				
Danus plexippus	Monarch butterfly	--	C	--
MAMMALS				
Ursus americanus floridanus	Florida black bear[2]	--	--	--

--=Not Listed, MANLAA=May Affect, Not Likely to Adversely Affect
C= Candidate Species, EXPN=Experimental population, Non-essential
E= Endangered, FE= Federal Endangered.,
T=Threatened, FT=Federal Threatened, PT=Proposed Threatened, ST=State-designated Threatened
[1] Protected under the Bald and Golden Eagles Protection Act (16 U.S.C. 668-668c)
[2] Protected under the Florida Black Bear Conservation Rule (68A-4.009, F.A.C.)

Table 6-2 Potential Floral Species Effect Determinations

Species	Common Name	State Status (FDACS)	Federal Status (USFWS)	Effect Determination
Centrosema Arenicola	Sand butterfly pea	SE	--	No Effect Anticipated
Chionanthus pygmaeus	Pygmy fringe-tree	FE	E	No Effect
Chrysopsis floridana	Florida golden aster	FE	E	MANLAA
Lechea cernua	Scrub pinweed	ST	--	No Effect Anticipated
Lechea divaricata	Spreading (pine) pinweed	SE	--	No Effect Anticipated
Nolina brittoniana	Britton's beargrass	FE	E	MANLAA
Rhynchospora megaplumosa	Large-plumed beaksedge	SE	--	No Effect Anticipated
Campanula robinsiae	Brooksville bellflower	FE	E	No Effect
Bonamia grandiflora	Florida bonamia	SE	T	No Effect

FDACS=Florida Department of Agriculture and Consumer Services (FDACS)
MANLAA=May Affect, Not Likely to Adversely Affect
FE=Federal Endangered, E=Endangered, SE=State-designated Endangered, ST=State-designated Threatened

6.2 WETLANDS

The proposed Build Alternative would result in approximately 0.17 acre of wetland and 0.17 acre of other surface waters impacts based on the Preferred Alternative. Wetland mitigation options will be pursuant to *373.4137*, *F.S.*, and may include purchase of wetland mitigation credits through an approved mitigation bank, or creation, restoration, or enhancement of wetlands within the project watersheds. The mitigation will satisfy the requirements of *Part IV*, *Chapter 373*, *F.S.* and *33 U.S.C. § 1344*. A summary of impacts is provided below in **Table 6-3**.

Table 6-3 Wetland and Other Surface Waters Impacts

	Type of Wetland or Other Surface Waters	Project Impact Acreage	Functional Loss
Project Totals	*Freshwater Herbaceous*	0.17	0.07
	Total Wetlands	**0.17**	**0.07**
	Riverine	0.17	--
	Total Other Surface Waters	**0.17**	**--**
	Project Total	**0.34**	**0.07**

Functional loss values are derived from the Uniform Mitigation Assessment Method (UMAM)

6.3 IMPLEMENTATION MEASURES

- 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 FWC.
- Surveys for Florida sandhill crane nests sites will be conducted during the design phase. If it is determined nest areas are found and could be impacted by the project, FDOT coordinate with FWC to determine appropriate avoidance and minimization measures to apply during construction.
- FDOT will provide 0.17 acres of mitigation at Tampa Bay Mitigation Bank for unavoidable wetland impacts.
- Wildlife surveys will be performed prior to final design and prior to construction initiation, per state and federal guidelines.
- Best Management Practices will be incorporated during construction to minimize wetland impacts, as well as provide sediment and erosion control.

6.4 COMMITMENTS

- The most recent version of the *USFWS Standard Protection Measures for the Eastern Indigo Snake* will be utilized during construction.
- Seasonal surveys for the Florida golden aster will be performed during the design phase and coordination with USFWS or Florida Department of Agriculture and Consumer Services – Division of Plant Industry (FDACS-DPI) will occur if impacts to the species are anticipated.

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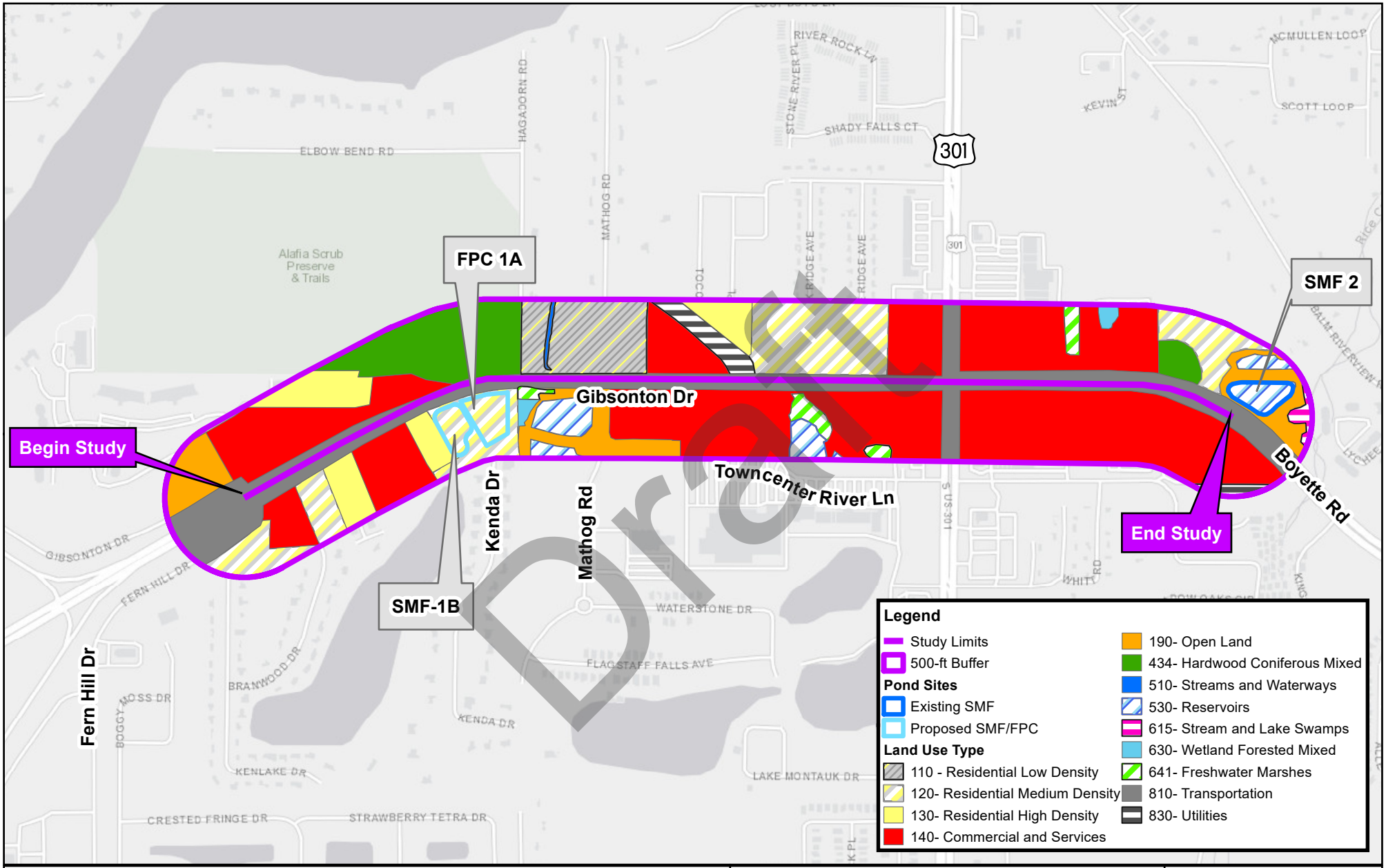
List of Appendices

APPENDIX A

Existing Land Use Map



Gibstonton Drive PD&E Study

From Fern Hill Drive to US 301

FPID: 450438-1

Hillsborough County

Appendix A: FLUCCS and Existing Land Use Map

Source: SWFMWD, ESRI

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APPENDIX B

Wetland and Other Surface Waters Photographs

Appendix B

Photographs of Wetlands

Gibsonton Drive

WPI Segment No. 450438-1

1. Other Surface Waters 1 (OSW-1) facing southwest, from Alafia Preserve Drive.

2. OSW-2 facing southeast behind Mobil gas station, adjacent to Gibsonton Drive

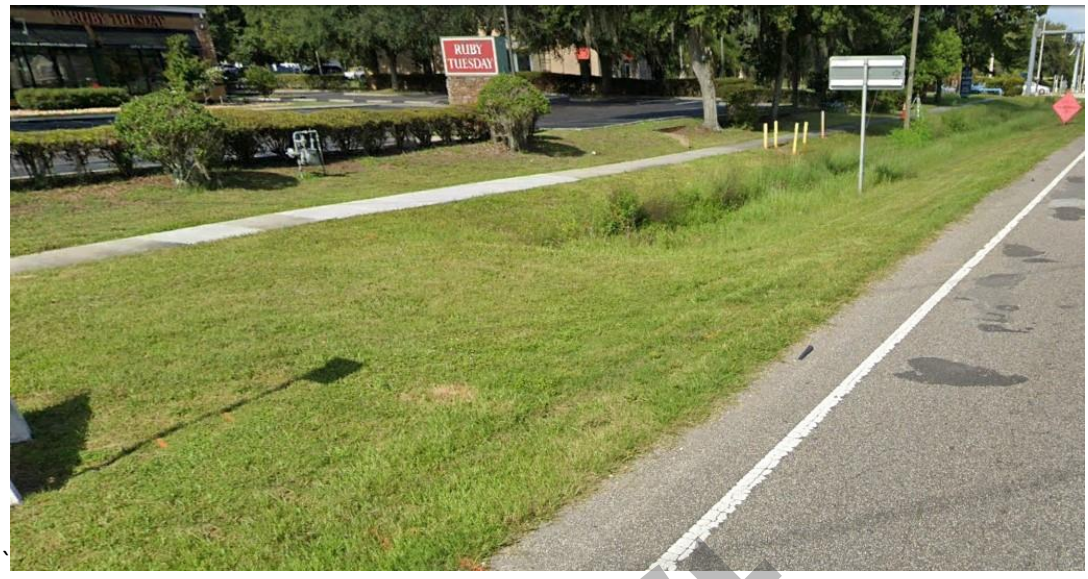
3. Wetland-3 (WL-3) and WL-4, facing east along Gibsonton Drive.

4. OSW-5 facing east, located along Kenda Drive.

5. OSW-6 facing northeast, located along Town Center River Lane.

6. OSW-7 facing southeast, located along Town Center River Lane.

7. OSW-8 facing northwest, located along Gibsonton Drive.



8. OSW-9 a roadside drainage ditch, facing southwest along Gibsonton Drive

9. WL-10 facing southeast, located along Gibsonton Drive

10. OSW-11 a drainage ditch, facing southeast located along Gibsonton Drive.

11. OSW-12 facing southwest, located behind WL-10 along Gibsonton Drive.

12. WL-13 facing southeast, located on the utility easement adjacent to Gibsonton Drive.

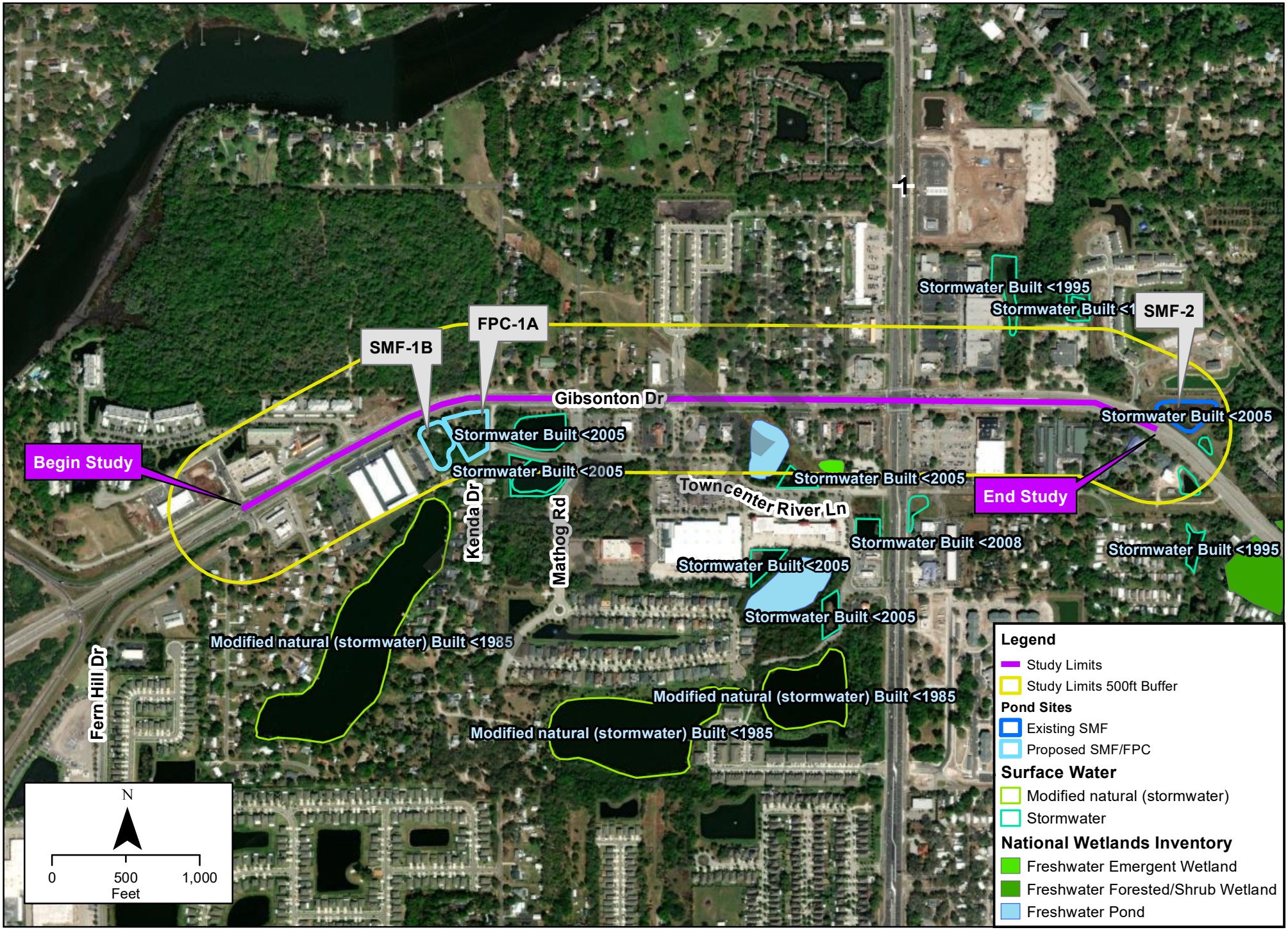
13. OSW-14 (SMF-2) facing east, located adjacent to Gibsonton Drive.

14. OSW-15 facing east, located adjacent to Gibsonton Drive.

15. OSW-16 facing west, located adjacent to Gibsonton Drive.

APPENDIX C

Detailed Wetland and Other Surface Waters Map


SMF-1B
FPC-1A
SMF-2
Gibsonton Dr
Begin Study
End Study
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Stormwater Built <2005
Stormwater Built <2005
Stormwater Built <1995
Stormwater Built <1
Stormwater Built <2005
Towncenter River Ln
Stormwater Built <2008
Stormwater Built <1995
Stormwater Built <2005
Stormwater Built <2005
Kenda Dr
Mathog Rd
Fern Hill Dr
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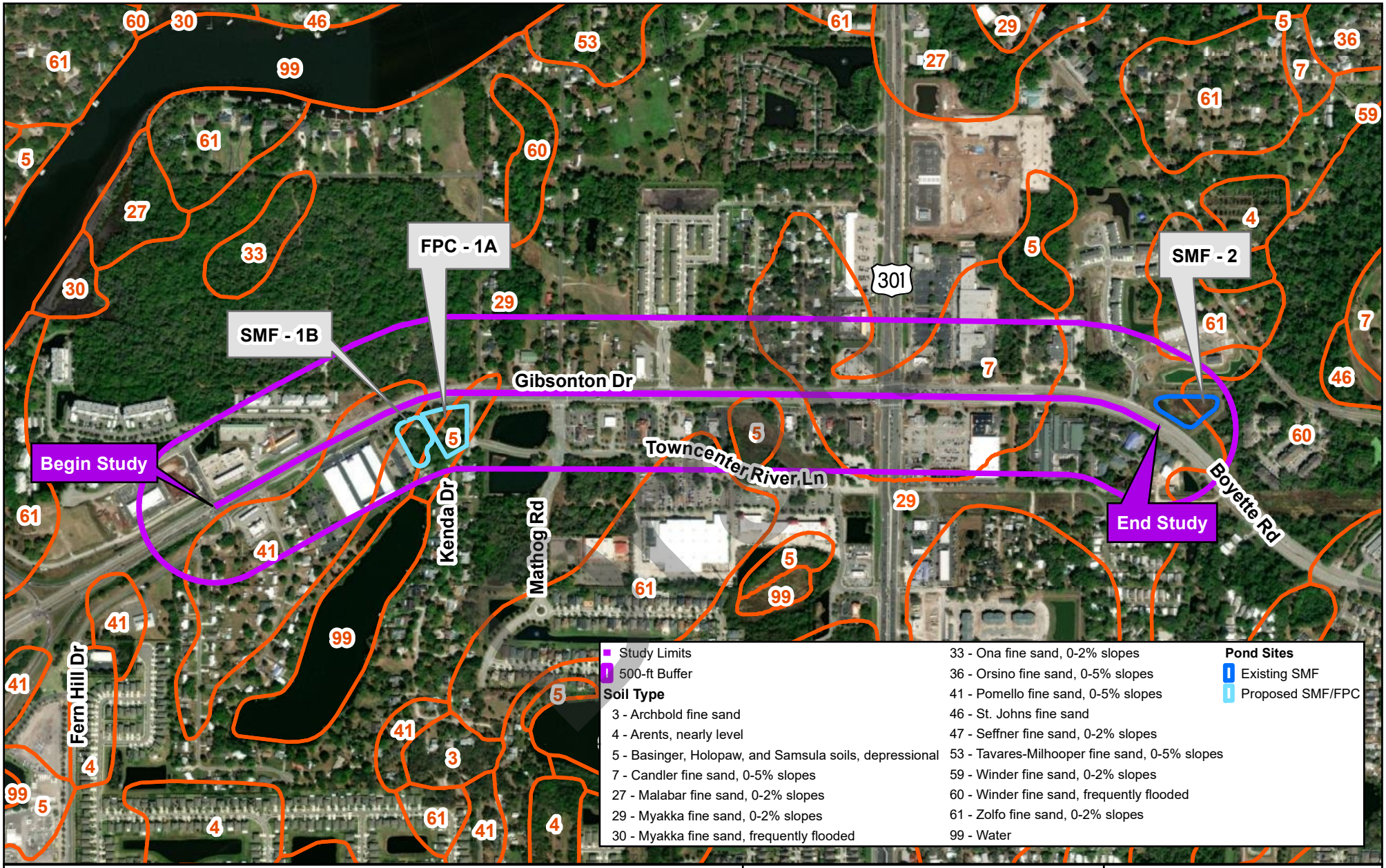
Modified natural (stormwater) Built <1985
Modified natural (stormwater) Built <1985
N
0
500
1,000
Feet
Legend
Study Limits
Study Limits 500ft Buffer
Pond Sites
Existing SMF
Proposed SMF/FPC
Surface Water
Modified natural (stormwater)
Stormwater
National Wetlands Inventory
Freshwater Emergent Wetland
Freshwater Forested/Shrub Wetland
Freshwater Pond

APPENDIX D

NRCS Soils Map



Gibstonton Drive PD&E Study

From Fern Hill Drive to US 301

FPID: 450438-1

Hillsborough County

Appendix D: NRCS Soils Map

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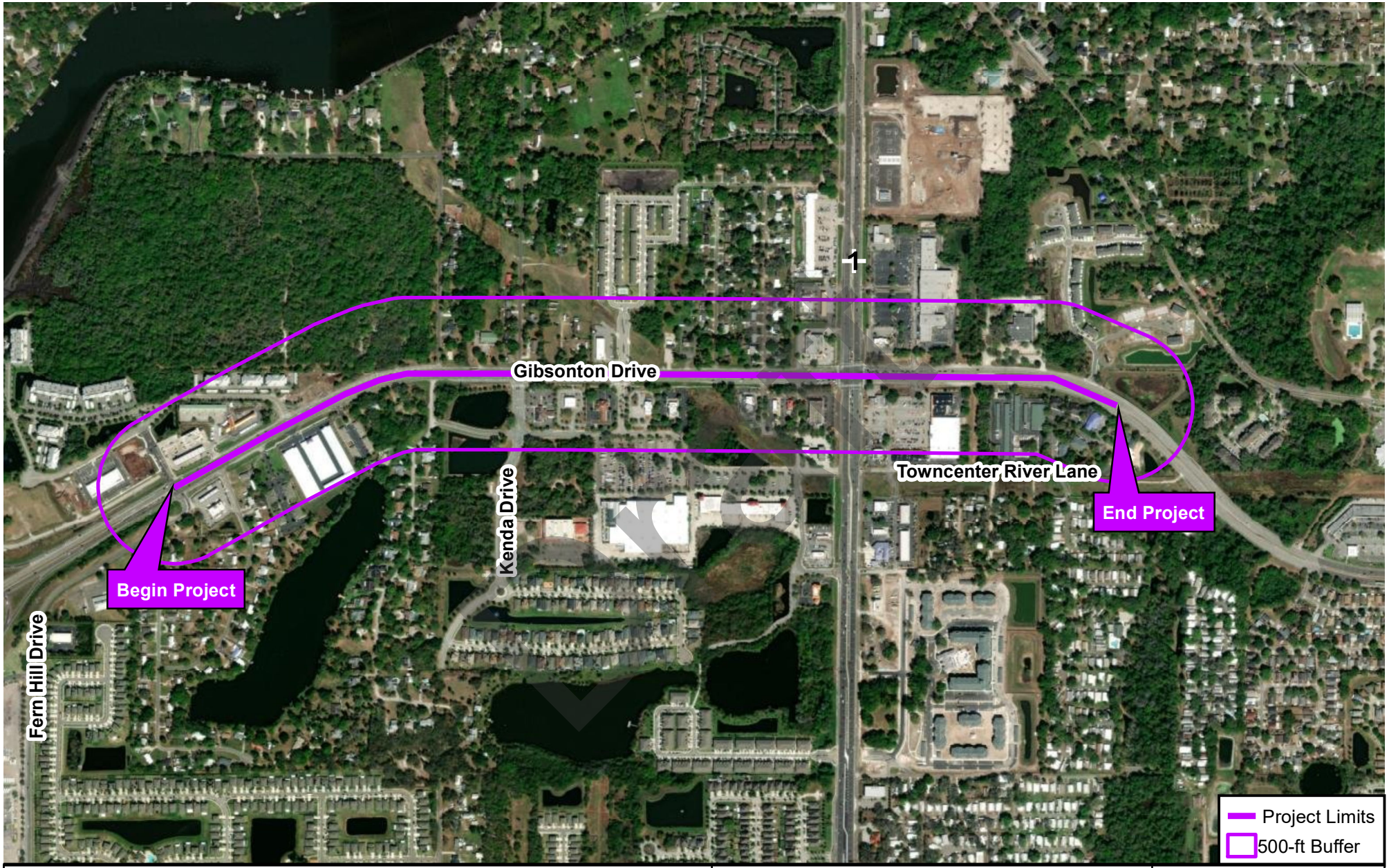
Source: ESRI, NRCS

APPENDIX E

FWC Strategic Habitat Conservation Areas



Gibstonton Drive PD&E Study

From Fern Hill Drive to US 301

FPID: 450438-1

Appendix E: FWC Strategic Habitat Conservation Areas Map

Source: ESRI, FWC

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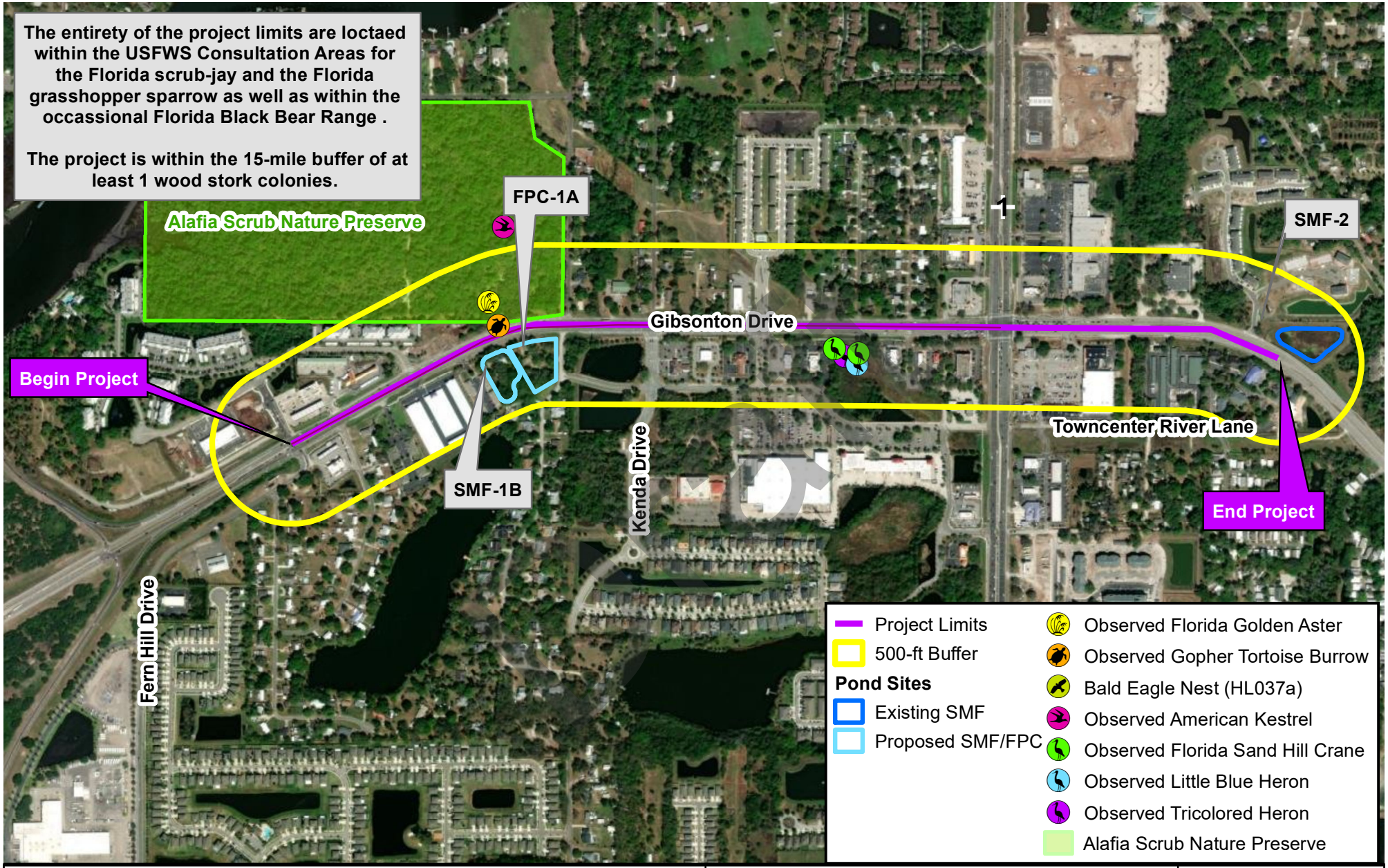
APPENDIX F

Observed Listed and Protected Species Map



Gibstonton Drive PD&E Study

From Fern Hill Drive to US 301

FPID: 450438-1

Appendix F: Observed Listed and Protected Species Map

Source: ESRI, USFWS, FWS

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Feet

APPENDIX G

Standard Protection Measures for the Eastern Indigo Snake

STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service

March 23, 2021

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

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

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

POSTER INFORMATION

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

DESCRIPTION: The eastern indigo snake is one of the largest non-venomous snakes in North America, with individuals often reaching up to 8 feet in length. They derive their name from the glossy, blue-black color of their scales above and uniformly slate blue below. Frequently, they have orange to coral reddish coloration in the throat area, yet some specimens have been reported to only have cream coloration on the throat.

These snakes are not typically aggressive and will attempt to crawl away when disturbed. Though indigo snakes rarely bite, they should NOT be handled.

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

LIFE HISTORY: The eastern indigo snake occurs in a wide variety of terrestrial habitat types throughout Florida and Georgia. Although they have a preference for uplands, they also utilize some wetlands and agricultural areas and often move seasonally between upland and lowland habitats, particularly in the northern portions of its range (North Florida and Georgia). Eastern indigo snakes will often seek shelter inside gopher tortoise burrows and other below- and above-ground refugia, such as other animal burrows, stumps, roots, and debris piles. Reliance on xeric sandhill habitats throughout the northern portion of the range in northern Florida and Georgia is due to the dependence on gopher tortoise burrows for shelter during winter. Breeding occurs during October through February. Females may lay from 4 - 12 white eggs as early as April through June, with young hatching in late July through October.

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

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

IF YOU SEE A <u>LIVE</u> EASTERN INDIGO SNAKE ON THE SITE:

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

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

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

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

North Florida Field Office: (904) 731-3336
Panama City Field Office: (850) 769-0552
South Florida Field Office: (772) 562-3909
Georgia Field Office: (706) 613-9493

PRE-CONSTRUCTION ACTIVITIES

1. The applicant or designated agent will post educational posters in the construction office and throughout the construction site, including any access roads. The posters must be clearly visible to all construction staff. A sample poster is attached.

2. Prior to the onset of construction activities, the applicant/designated agent will conduct a meeting with all construction staff (annually for multi-year projects) to discuss identification of the snake, its protected status, what to do if a snake is observed within the project area, and applicable penalties that may be imposed if state and/or federal regulations are violated. An educational brochure including color photographs of the snake will be given to each staff member in attendance and additional copies will be provided to the construction superintendent to make available in the onsite construction office (a final brochure for Plan compliance, to be printed double-sided on 8.5 x 11in paper and then properly folded, is attached). Â Photos of eastern indigo snakes may be accessed on USFWS and/or FWC or GADNR websites.

3. Construction staff will be informed that in the event that an eastern indigo snake (live or dead) is observed on the project site during construction activities, all such activities are to cease until the established procedures are implemented according to the Plan, which includes notification of the appropriate USFWS Field Office. The contact information for the USFWS is provided on the referenced posters and brochures.

DURING CONSTRUCTION ACTIVITIES

1. During initial site clearing activities, an onsite observer may be utilized to determine whether habitat conditions suggest a reasonable probability of an eastern indigo snake sighting (example: discovery of snake sheds, tracks, lots of refugia and cavities present in the area of clearing activities, and presence of gopher tortoises and burrows).

2. If an eastern indigo snake is discovered during gopher tortoise relocation activities (i.e. burrow excavation), the USFWS shall be contacted within one business day to obtain further guidance which may result in further project consultation.

3. Periodically during construction activities, the applicants designated agent should visit the project area to observe the condition of the posters and Plan materials, and replace them as needed. Construction personnel should be reminded of the instructions (above) as to what is expected if any eastern indigo snakes are seen.

POST CONSTRUCTION ACTIVITIES

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

APPENDIX H

Eastern Indigo Snake
Programmatic Effect Determination Key

United States Department of the Interior
U. S. FISH AND WILDLIFE SERVICE
7915 BAYMEADOWS WAY, SUITE 200
JACKSONVILLE, FLORIDA 32256-7517

IN REPLY REFER TO:
August 13, 2013

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

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

Dear Colonel Dodd:

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

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

On Page 2

The following replaces the last paragraph above the signatures:

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

On Page 3

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

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

On Page 4

The following replaces the first paragraph under Conservation Measures:

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

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

On Page 4 and Page 5 (Couplet D)

The following replaces D. under Conservation Measures:

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

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

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"*

---

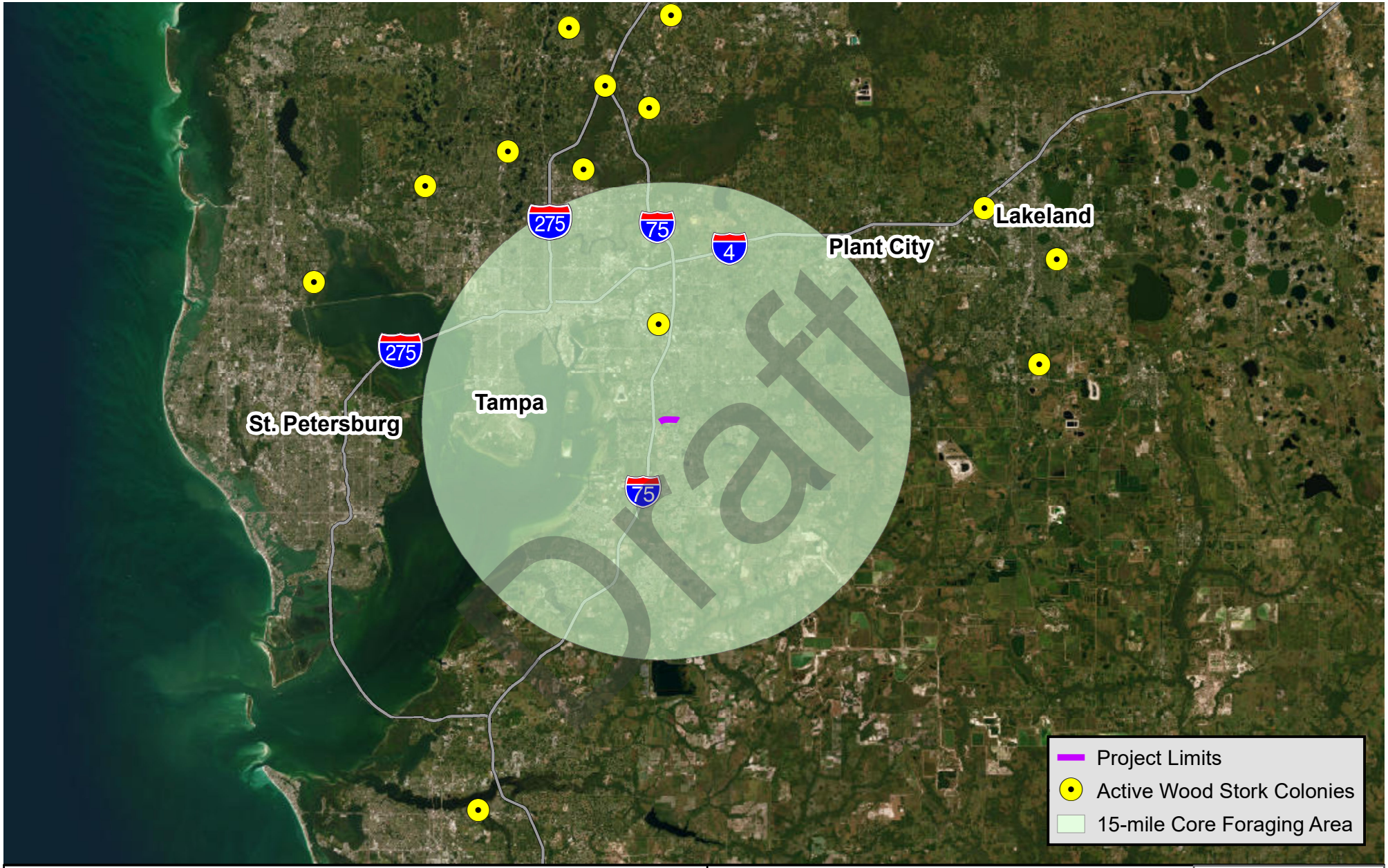
[1]With an outcome of "no effect" or "NLAA" as outlined in this key, the requirements of section 7 of the Act are fulfilled for the eastern indigo snake and no further action is required.

[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.

APPENDIX I

Wood Stork Colonies



FDOT

Gibstonton Drive PD&E Study

From Fern Hill Drive to US 301

FPID: 450438-1

Appendix I: Wood Stork Colonies Map

Source: ESRI, USFWS, FWS

N

0 5 10

Miles

APPENDIX J

Effect Determination Key for the Wood Stork in Central and North Peninsular Florida

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

APPENDIX K

Uniform Mitigation Assessment Method Sheets

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

Site/Project Name	Application Number	Assessment Area Name or Number
Gibsonton Drive		Wetland 3

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
641	PEM1C	Impact	0.17 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Alafia River	3M	N/A

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

Connected to impounded man-made reservoirs from the south east by underground culvert/outflow device on southside of wetland.

Assessment area description

This wetland is a freshwater emergent wetland on the southside of Gibsonton Drive adjacent to Kenda Drive. It consists mostly of low-lying emergent and shrub species such as maidencane, ludwigia and sedges, along with Carolina willow, and Brazilian pepper on the fringes. There was no standing water in this wetland but water marks on the boardwalk and larger shrubs show water levels do fluctuate to around 4-inches.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
This wetland is bounded by Gibsonton Drive on east, west, and north sides. A large boardwalk traverses through the wetland to connect sidewalk segments.	This type of wetland is not unique to the area.

Functions	Mitigation for previous permit/other historic use
This wetland provides water collection from roadway runoff, and exhibits low wildlife habitat availability.	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)
Sheepshead minnow, various species of killifish, Florida banded water snake, great blue heron, great egret, greenbacked heron, snowy egret, white ibis, little blue heron, tricolored heron, and white heron.	Wood stork (federally-threatened), Florida sandhill crane (state-threatened); little blue heron (state-threatened), tricolored heron (state-threatened); low intensity foraging

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

There was no evidence of wildlife utilization at the time of the field survey.

Additional relevant factors:

N/A

Assessment conducted by:	Assessment date(s):
Cameron Jones and Tom Daniel	August 2023

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

Site/Project Name	Application Number	Assessment Area Name or Number
Gibsonton Drive	N/A	Wetland 3
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Cameron Jones	August 2023

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	w/o pres or current: **2**	with: **0**
This wetland is located on the south side of Gibsonton drive, east of Kenda Drive. Two impounded man-made reservoirs to the southeast are connected to the wetland, making its purpose as a stormwater collection/outflow site. The developed area surrounding the wetland makes it less acccessable by terrestrial species. The area is approximately 175-feet long by 40-feet wide.		
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: **4**	with: **0**
There was water present in this wetland and the vegetation suggest that this wetland holds water at times throughout the year, especially during the rainy season. This wetland provides storage for drainage water coming off of both Gibsonton Drive and and Kenda Road, and may be connected to a tributary of the Phillippi Creek. As a result it is likely saturated a majority of the year and inundated in the wet season, but the water quality may diminish at times given the sources of the water.		
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	w/o pres or current: **6**	with: **0**
This wetland is a shrubby/herbaceous wetland consisting mostly of pickerelweed, elderberry, ludwigia and sedges, along with a few small oak, brazilian pepper and carolina willow trees. Lichen lines on the trees, along with the types of vegetation present, indicate that there are healthy levels of water to sustain this wetland.		

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres: **0.40**	with: **0**

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

For impact assessment areas
FL = Delta x acres = 0.07

Delta = [with-current]
0.40

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

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

APPENDIX L

Gibsonton Drive Concept Plans

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

STATE OF FLORIDA

DEPARTMENT OF TRANSPORTATION

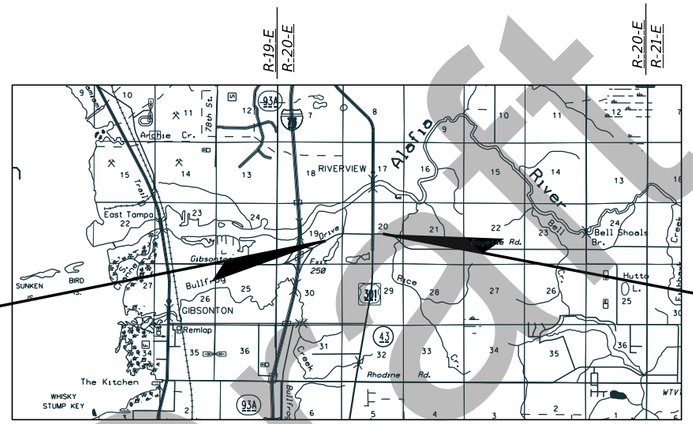
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY CONCEPT PLANS

WPI SEGMENT NO. 450438-1

HILLSBOROUGH COUNTY

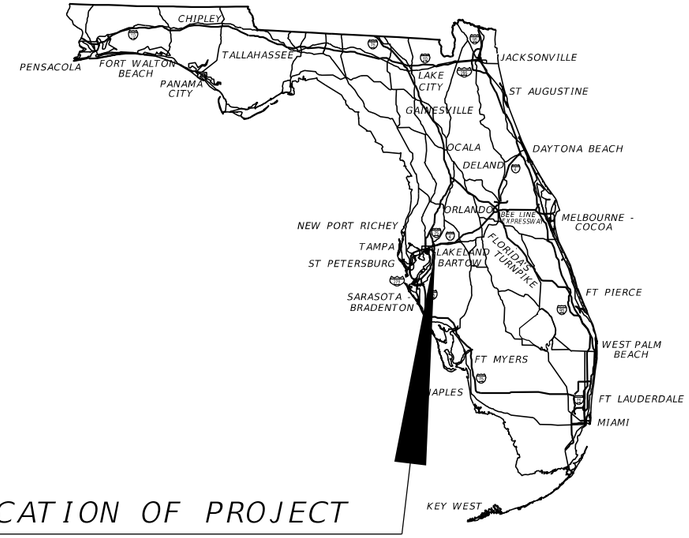
GIBSONTON DRIVE

From west of Fern Hill Drive to East of US 301



BEGIN PROJECT
STA 77+26.71 ℄ SURVEY=
STA 98+26.71 ℄ CONST

END PROJECT
STA 109+87.58 ℄ SURVEY=
STA 150+02.09 ℄ CONST



LOCATION OF PROJECT

ROADWAY PLANS
ENGINEER OF RECORD:

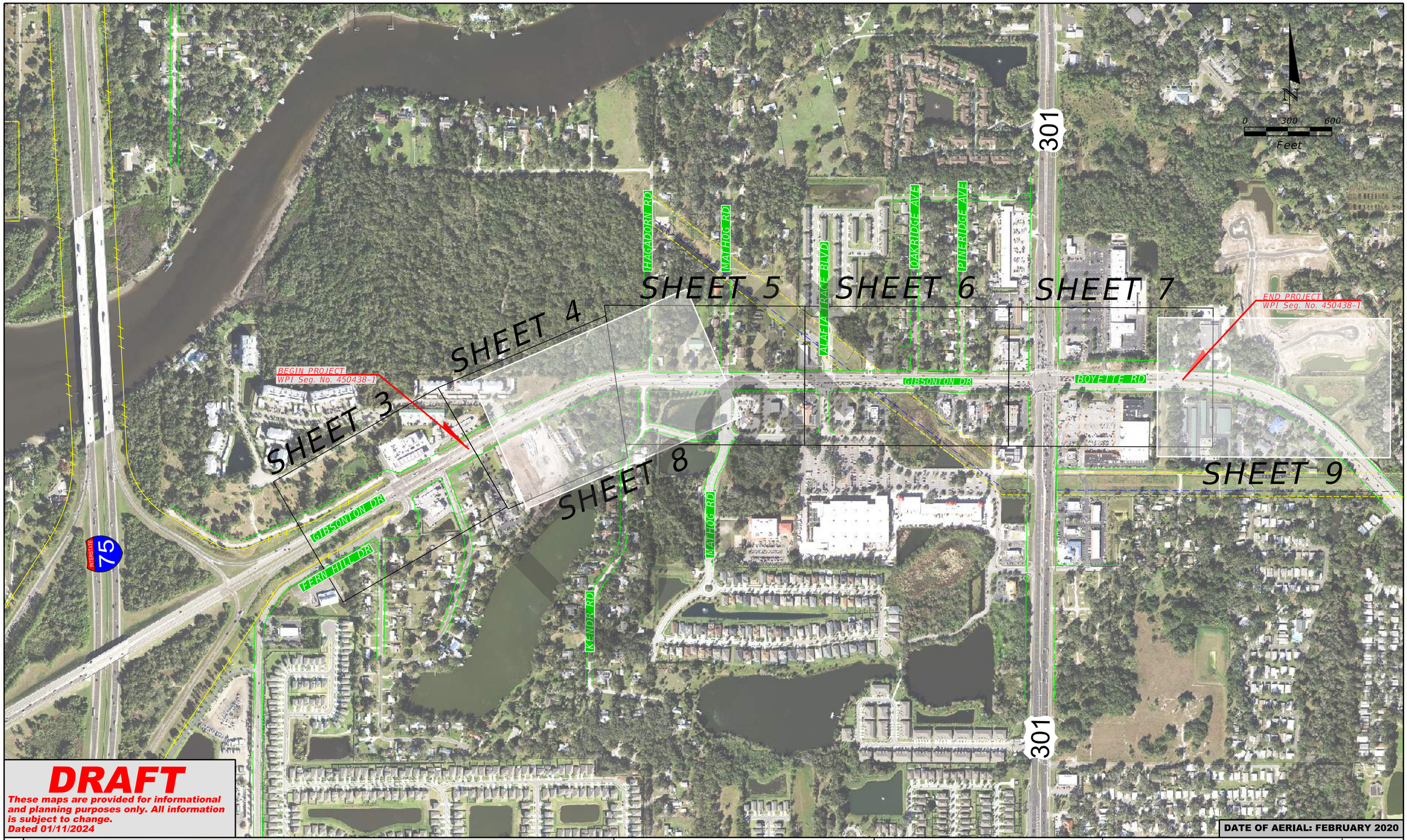
JEFFREY S. NOVOTNY, P.E., AICP, RSP1
P.E. LICENSE NUMBER 51083
AMERICAN CONSULTING PROFESSIONALS, LLC
2818 CYPRESS RIDGE BLVD., SUITE 200
WESLEY CHAPEL, FLORIDA 33544
ENGINEERING BUSINESS NO.: EB7110

FDOT PROJECT MANAGER:

ASHLEY HENZEL, P.E.

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
_____	__	000

1/11/2024 2:59:16 PM 5devorm
c:\pw_work\american-pw-01\d0638984\KEYSRD01.dgn



DRAFT

These maps are provided for informational and planning purposes only. All information is subject to change.
Dated 01/11/2024

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- EASEMENT LINE
- EXISTING ROW
- EXISTING LA ROW
- PLAN SHEET BOUNDARY
- STORMWATER MANAGEMENT FACILITY/FLOODPLAIN COMPENSATION SITE SHEET BOUNDARY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	HILLSBOROUGH	450438-1-22-01

American Consulting Professionals, LLC
2818 Cypress Ridge Blvd. Suite 200
Wesley Chapel, Florida 33544
Phone: (813) 435-2600 Fax: (813) 435-2601
Engineering Business No. EB7110
Jeffrey S. Novotny, P.E. No. 51083

GIBSONTON DR PD&E STUDY
From FERN HILL DR to US 301
Preferred Alternative Concept Plan
Sheet Layout Map

WPI No.: 450438-1

SHEET NO. 2

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NOTE:
FPID No. 437650-1 GIBSONTON DR FROM WEST OF I-75 TO EAST OF I-75 DIVERGING DIAMOND INTERCHANGE (DDI) PROPOSED ROADWAY IMPROVEMENTS.

HILLSBOROUGH COUNTY CIP No. 69600311
FERN HILL DR AT GIBSONTON DR
INTERSECTION IMPROVEMENTS.

0 20 100
Feet

STARS & STRIPES COMMERCIAL PARK

RACETRAC

STARS & STRIPES CAR WASH

BUS STOP
HART ROUTE 31

UPPER ALAFIA CT

GIBSONTON DR

BEGIN PROJECT
WPI Seg. No. 450438-1

STA 98+26.71
BEGIN ℄ CONST

N59°48'10"E

MOBIL

BUS STOP
HART ROUTE 31

FERN HILL DR

KENLAKE DR

BRANWOOD DR

BOARD WALK
OF RIVERVIEW

MATCH LINE. SEE SHEET 4

DRAFT

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Dated 01/11/2024

DATE OF AERIAL: FEBRUARY 2020

LEGEND

- WETLANDS BOUNDARY
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- PROPOSED MEDIAN (SOD)
- PROPOSED TRAFFIC SEPARATOR
- IMPROVEMENT BY COUNTY

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
	HILLSBOROUGH	450438-1-22-01

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Concept Plans
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SHEET NO. 3

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SHEET NO. 4

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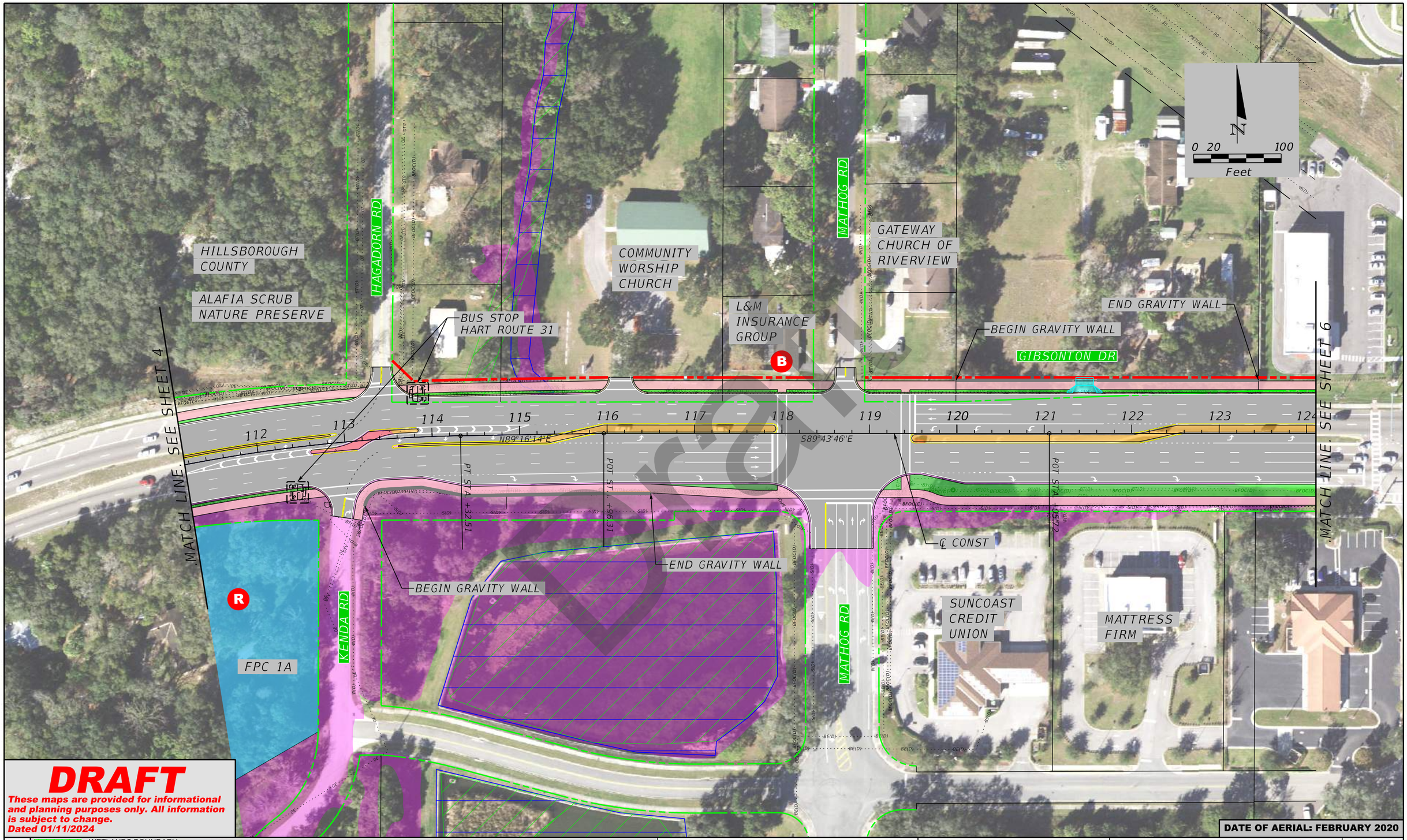

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SHEET NO. 5

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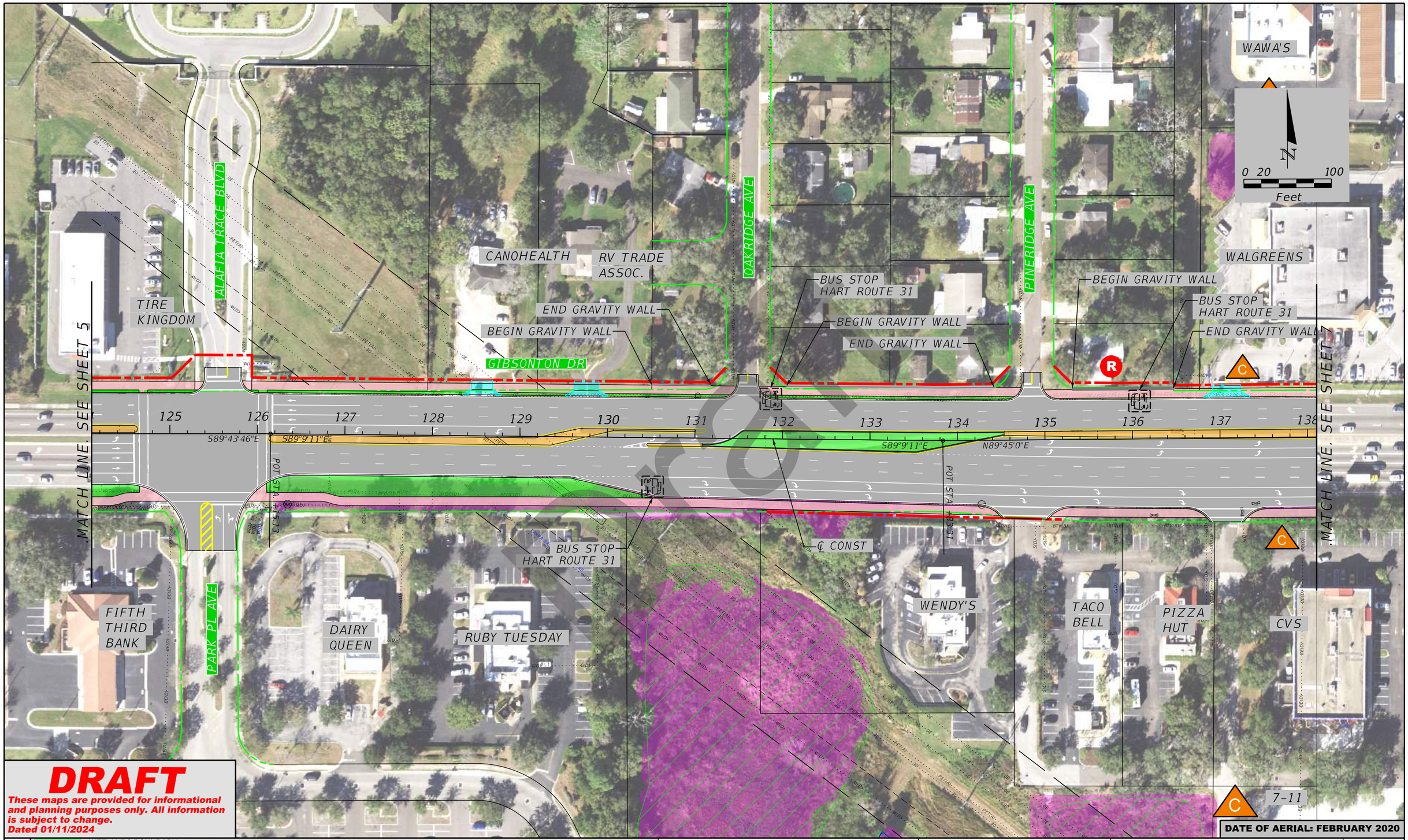

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SHEET NO. 6

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WAWA'S

B & B CASH
GROCERY STORES, INC

UNITED STATES
POSTAL SERVICE

℄ SURVEY US 301

BUS STOP
HART ROUTE 31

BURGER KING

WALGREENS

BUS STOP
HART ROUTE 24LX

BOYETTE RD

END PROJECT
WPI Seg. No. 450438-1

MATCH LINE. SEE SHEET 6 OF 11

N89°45'0"E

℄ CONST

BANK OF
AMERICA

BUS STOP
HART ROUTE 24LX

PI STA. 150+02.09

STA 150+02.09
END ℄ CONST

CVS

RIVERBAY PLAZA BH LLC

LIFE STORAGE-RIVERVIEW

N0°37'34"E

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SHEET NO. 7

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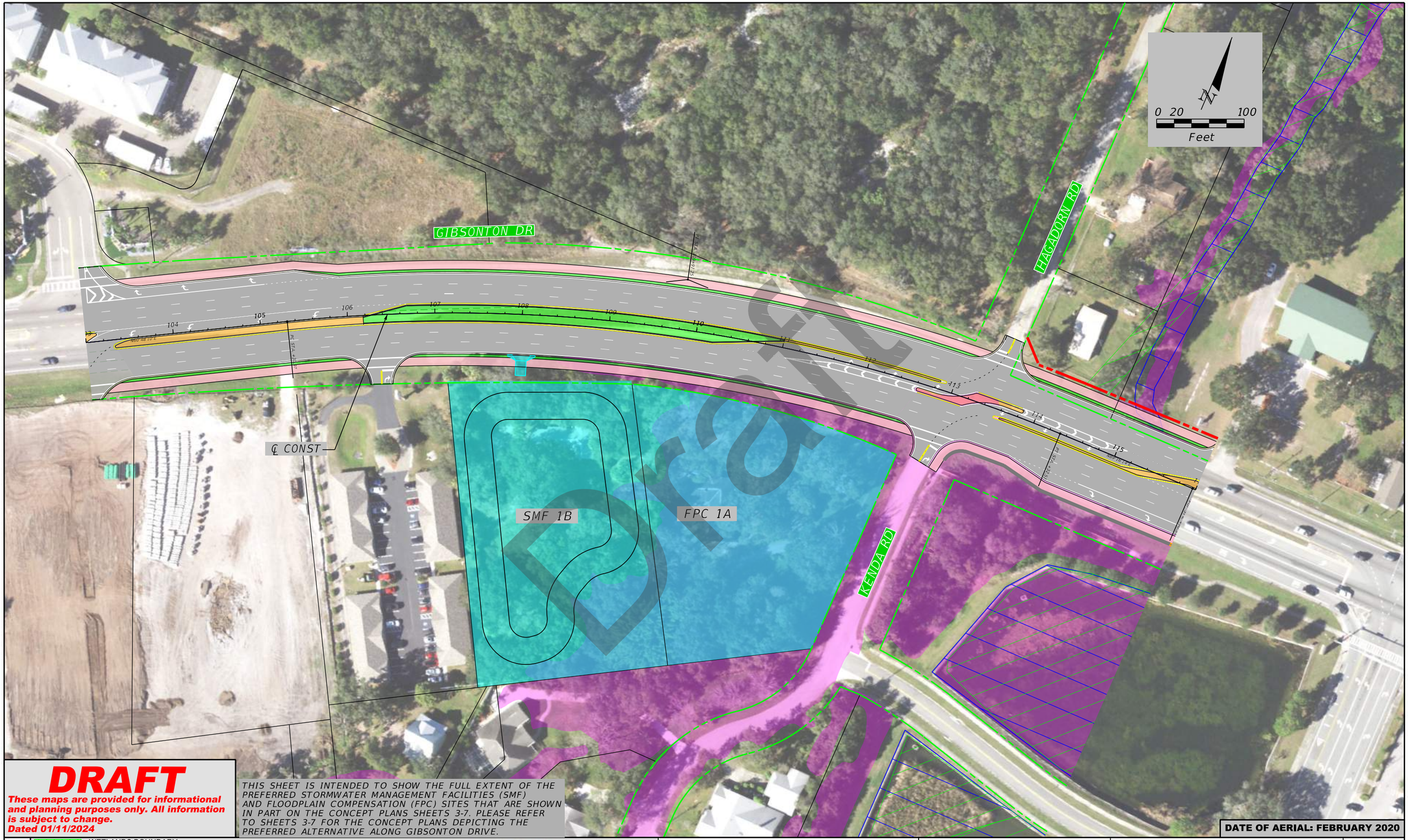

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THIS SHEET IS INTENDED TO SHOW THE FULL EXTENT OF THE PREFERRED STORMWATER MANAGEMENT FACILITIES (SMF) AND FLOODPLAIN COMPENSATION (FPC) SITES THAT ARE SHOWN IN PART ON THE CONCEPT PLANS SHEETS 3-7. PLEASE REFER TO SHEETS 3-7 FOR THE CONCEPT PLANS DEPICTING THE PREFERRED ALTERNATIVE ALONG GIBSONTON DRIVE.

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SHEET NO. 8

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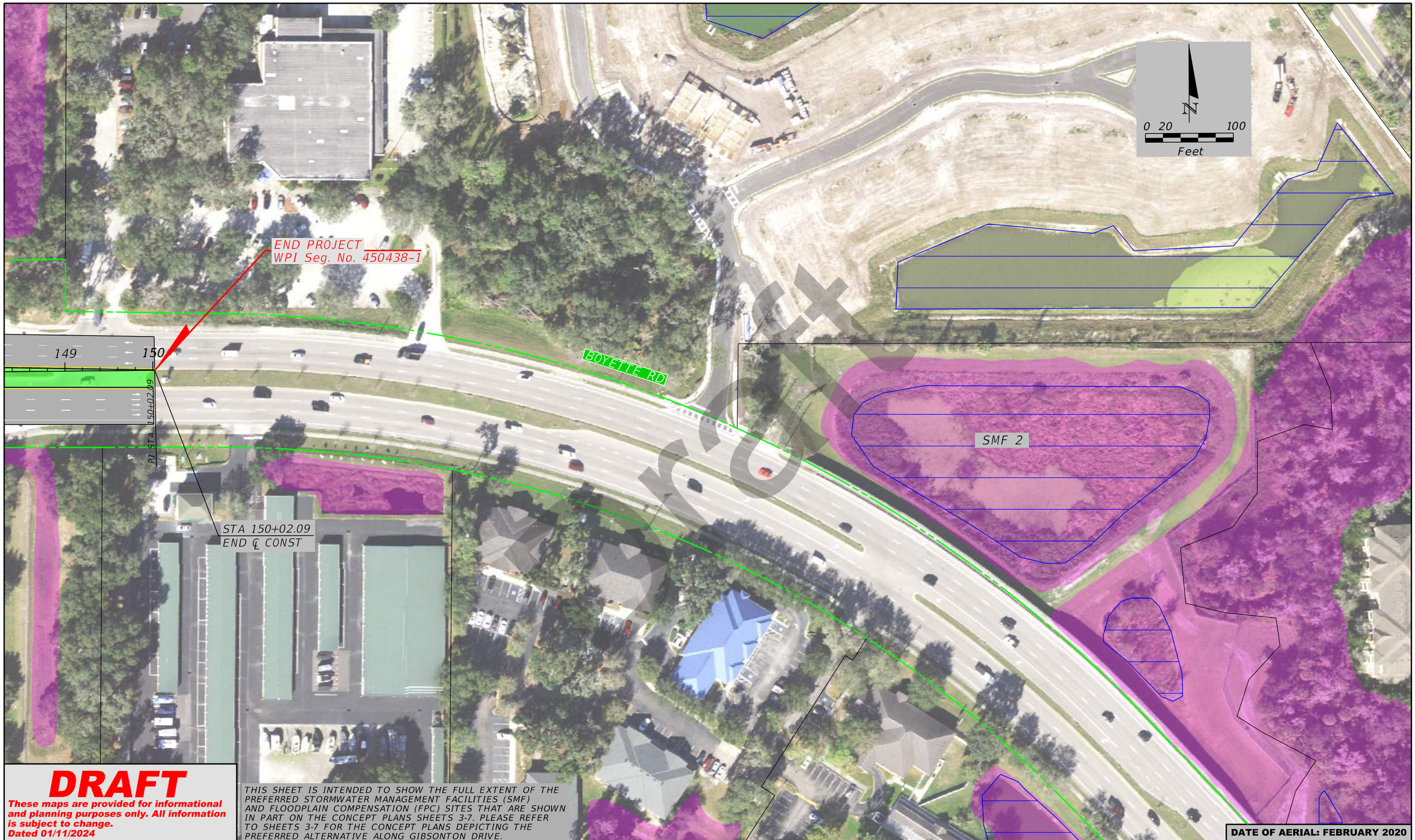

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SHEET NO. 9

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