NATURAL RESOURCES EVALUATION

ADDENDUM TO THE 2016 WEBAR

Florida Department of Transportation

District 7

I-275 (SR 93) Design Change Re-evaluation

Project Development and Environment Study
from south of 54th Avenue South to north of 4th Street North

Pinellas County, Florida

Work Program Item Segment Number: 424501-1

ETDM Project Number: 12556

Federal-Aid Project Number: Not Available

Prepared by:

HDR Inc.

Tampa, Florida

AUGUST 2019

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to Title 23, Section 327 of the United States Code (23 U.S.C. § 327) and a Memorandum of Understanding dated December 14, 2016, and executed by FHWA and FDOT.

Executive Summary

The Florida Department of Transportation (FDOT), District Seven conducted a Re-evaluation to evaluate and document proposed changes to the previously approved Project Development and Environment (PD&E) study and subsequent Re-evaluations for I-275 (SR 93) from south of 54th Avenue South to north of 4th Street North in Pinellas County, Florida. This Natural Resources Evaluation (NRE) was prepared as a component of the PD&E Re-evaluation to evaluate Protected Species and Habitat, Wetlands and Other Surface Waters, and Essential Fish Habitat. This NRE identifies changes in resource impacts associated with the Re-evaluation design concept that differ from impacts previously evaluated in the Final Wetland Evaluation and Biological Assessment Report (WEBAR) dated April 2016. All impacts discussed herein fall within the study area reviewed as part of the Re-evaluation, including twelve preferred pond site alternatives. The proposed Pond Site Alternatives Technical Memorandum was completed in April 2019.

Protected Species and Habitat

The project was re-evaluated for federal and state protected wildlife and habitat. Federally protected species with the potential to occur within the study area reviewed as part of this Re-evaluation included fish (Gulf sturgeon and small-tooth sawfish), reptiles (sea turtles and eastern indigo snake), birds (wood stork, piping plover, and rufa red knot), and mammals (West Indian manatee). The non-listed, but federally protected bald eagle and osprey could also utilize the area. The project is not expected to impact these species. U.S. Fish and Wildlife Service (USFWS) designated critical habitat was not present; therefore, the proposed project would not result in the destruction or adverse modification of critical habitat. State-protected species with the potential to utilize the study area reviewed as part of this Re-evaluation included two reptiles and several avian species.

Since no federal or state-listed plant species were observed within the study area reviewed as part of this Re-evaluation, a determination of ***no effect*** is anticipated for federal or state protected plants.

Anticipated effects determinations were based on existing conditions, proposed project impacts, agency guidelines, and FDOT commitments. All species with the potential to utilize the study area were reviewed as part of this Re-evaluation to identify resource impacts due to changes associated with the Re-evaluation design concept. The project would be expected to result in the following effects determinations for federal species.

Federal Listed Species	Status	Project Impact Determination
Gulf sturgeon (*Acipenser oxyrinchus desotoi*)	T	***may affect, not likely to adversely affect***
Small-tooth sawfish (*Pristis pectinata*)	E	***may affect, not likely to adversely affect***
Loggerhead (*Caretta caretta*), green (*Chelonia mydas*), or Kemp's ridley (*Lepidochelys kempii*) sea turtles	T, T, E	***may affect, not likely to adversely affect***
Eastern indigo snake (*Drymarchon corais couperi*)	T	***may affect, not likely to adversely affect***
Wood stork (*Mycteria americana*)	T	***may affect, not likely to adversely affect***
Piping plover (*Charadrius melodus*)	T	***may affect, not likely to adversely affect***
Rufa red knot (*Calidris canutus rufa*)	T	***may affect, not likely to adversely affect***
West Indian manatee (*Trichechus manatus latirostris*)	T	***may affect, not likely to adversely affect***

Since the WEBAR was finalized in 2016, changes to the protection status for state-protected species has occurred. The following species were removed from the Florida list of threatened and endangered species – mangrove rivulus, gopher frog, snowy egret, white ibis, and the brown pelican. The protection status for several species was changed from “species of special concern” to “threatened”, including the American oyster catcher, black skimmer, several wading birds (roseate spoonbill, little blue heron, reddish egret, and tricolored heron), and the Florida burrowing owl. All state-protected species with the potential to utilize the study area were reviewed as part of this Re-evaluation to identify resource impacts due to changes associated with the Re-evaluation design concept. The project would be expected to result in the following effects determinations for state protected species.

State Listed Species		Protection Status 2016	Protection Status 2019	Project Impact Determination
Gopher tortoise		T	T	***No adverse effect anticipated***
Short-tailed snake		T	T	***No effect anticipated***
Wading birds	Roseate spoonbill (*Ajaja ajaja*)	SSC	T	***No adverse effect anticipated***
	Little blue heron (*Egretta caerulea*)			
	Reddish egret (*Egretta rufescens*)			
	Tricolored heron (*Egretta tricolor*)			
Nesting shorebird	American oystercatcher (*Haematopus palliatus*)	SSC	T	***No adverse effect anticipated***
	Snowy plover (*Charadrius alexandrinus*)	T		
	Least tern (*Sternula antillarum*)	T		
	Black skimmer (*Rynchops niger*)	SSC		
Florida burrowing owl		SSC	T	***No effect anticipated***

Wetlands and Surface Waters

Wetlands and surface waters were identified as part of this Re-evaluation to quantify impacts due to changes associated with the Re-evaluation design concept. A summary of potential impacts within the project areas reviewed as part of this Re-evaluation is provided below.

Wetland or Surface Water Type	WEBAR Impact Area (acres)	Design Change Impact Area (acres)	Impact Area Difference (acres)
Seagrasses (north of HFB)	0.25	1.42	0.684
Seagrasses (south of HFB)*	0.49	0.00	
Seagrasses (Big Island Gap)	0.00	0.004	
Forested saltwater wetlands	0.89	1.29	0.40
Herbaceous saltwater wetlands	0.00	0.21	0.21
Forested freshwater wetlands	0.59	3.08	2.49
Non-forested freshwater wetlands	0.15	0.59	0.44
Surface waters (Tidal)	0.16	0.34	9.78
Surface waters (Freshwater)	4.53	14.13	

* Due to northward shift to align with the Howard Frankland Bridge (HFB), seagrasses to the south of the causeway were avoided.

Wetland impacts would be avoided and minimized to the greatest extent practical during project design and permitting. Final mitigation requirements would be determined during permitting based on the project design and using the UMAM habitat scoring of impacts at that time. All jurisdictional wetland and seagrass impacts that result from the construction of this project will be mitigated pursuant to Section 373.4137, Florida Statue (F.S.), to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

Essential Fish Habitat

An EFH Assessment was conducted within the study area reviewed as part of this Re-evaluation to account for impact changes associated with the Re-evaluation design concept. The project will result in impacts to seagrass habitat due to the pedestrian trail along the Howard Frankland Causeway and in association with widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap. Estuarine habitat impacts would also be anticipated to construct the pedestrian trail north of Ulmerton Road. A summary of potential impacts within the project areas reviewed as part of this Re-evaluation is provided below.

Essential Fish Habitat Type	WEBAR Impact Area (acres)	Design Change Impact Area (acres)	Impact Area Difference (acres)
Seagrasses (north of HFB)	0.25	1.42	0.684
Seagrasses (south of HFB)*	0.49	0.00	
Seagrasses (Big Island Gap)	0.00	0.004	
Forested saltwater wetlands	0.89	1.29	0.40
Herbaceous saltwater wetlands	0.00	0.21	0.21
Surface waters (Tidal)	0.16	0.34	0.18

* Due to northward shift to align with the Howard Frankland Bridge (HFB), seagrasses to the south of the causeway were avoided.

Based on requirements to utilize standard water quality protection measures during construction, including regulatory requirements to protect Outstanding Florida Waters (OFW), as well as the requirement to coordinate with NMFS for in-water work associated with pile driving and/or blasting, and to provide mitigation for project impacts, the project is expected to ***minimally*** impact EFH or species listed in the FMPs of the GMFMC. All jurisdictional wetland and seagrass impacts that result from the construction of this project will be mitigated pursuant to Section 373.4137, Florida Statue (F.S.), to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. §1344.

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1.0 Introduction

1.1 Project Description

The Florida Department of Transportation (FDOT), District Seven is conducting a Design Change Re-evaluation to evaluate and document proposed changes to the originally approved Type II Categorical Exclusion (CE) and subsequent Re-evaluation for I-275 (SR 93) from south of 54th Avenue South to north of 4th Street North in Pinellas County, Florida. A Project Development and Environment (PD&E) study was conducted for the 16.3-mile corridor to analyze the need for operational improvements and evaluate the location, conceptual design, and social, economic, and environmental effects of any proposed improvements. Following a Public Hearing held on September 29, 2015, FHWA approved the Type II CE for this project on July 15, 2016.

Following approval of the Type II CE, FDOT performed a Design Change Re-evaluation in 2017 to evaluate a change to the approved Typical Section of Segment C (from Dr. MLK, Jr. Boulevard to north of 4th Street North). The 2017 Re-evaluation assessed the repurposing of one of the two approved express lanes to accommodate the provision of three general use through lanes, one auxiliary lane, and one express lane in each direction for this segment of the study corridor. The 2017 Design Change Re-evaluation was approved by FDOT on April 26, 2017.

FDOT is currently conducting another Design Change Re-evaluation to assess impacts of accommodating improvements for a second express lane in Segment C and the addition of two express lanes in Segment B from north of I-375 to south of Gandy Boulevard. These proposed improvements would tie-in with planned improvements to the Howard Frankland Bridge (FPID 422904-2 and 422904-4). This re-evaluation also analyzes replacing the I-275 ramp bridges on 4th Street North over Big Island Gap.

The current re-evaluation also analyzes replacing the I-275 ramp bridges on 4th Street North over Big Island Gap, providing trail connections from the Howard Frankland Bridge to 4th Street North and Ulmerton Road, and ramp connection modifications at the Gandy Boulevard and Gateway Expressway interchange areas. To meet drainage and stormwater requirements, pond sites will be needed to accommodate new impervious surface due to widening to accommodate express lanes. Several of these new pond site locations will be outside of the existing right of way.

1.2 Purpose and Need

The purpose of this project is to provide for operational improvements that maximize capacity within the I-275 corridor, improve lane continuity, and connect I-275 within Pinellas County to the future network of express lanes planned for the Tampa Bay Region. Improvements are needed within the I-275 corridor to help improve existing traffic congestion, enhance safety, and better accommodate future travel demands associated with projected growth in employment and population. The addition of express lanes is included in the Pinellas County Metropolitan Planning Organization (MPO) 2040 Long Range Transportation Plan (LRTP).

I-275 is a vital link in the local and regional transportation network and serves as a critical evacuation route. As a major north-south corridor through Pinellas County, I-275 links the Tampa Bay Region with the remainder of the state and the nation supporting commerce, trade, and tourism. Preserving the operational integrity and regional functionality of I-275 is critical to the mobility and economy of the Tampa Bay Region.

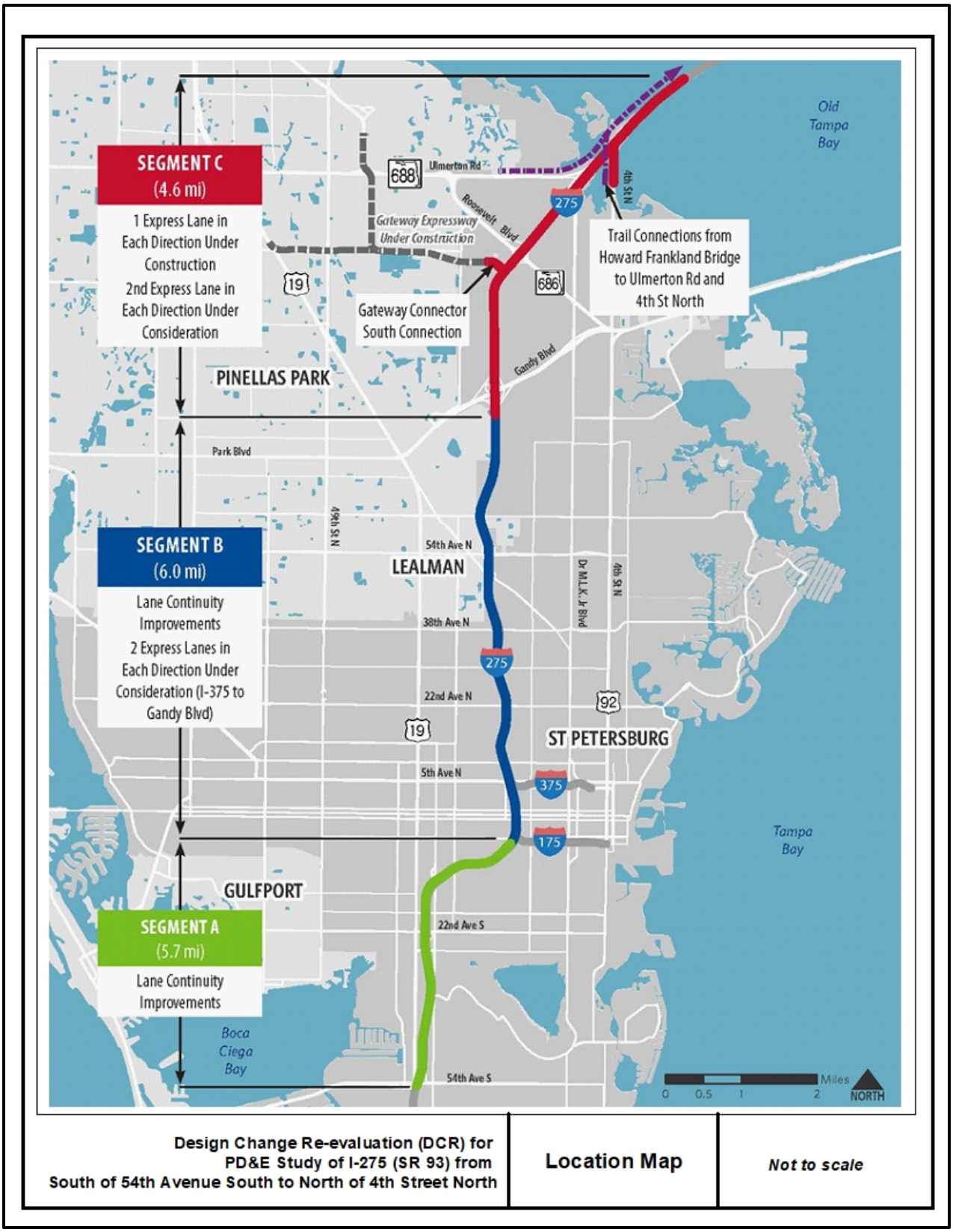

Figure 1. Project Location Map

1.3 Description of the Design Change

The current Design Change Re-evaluation includes a typical section change to extend two buffer-separated express lanes in both directions from I-375 to north of 4th Street North, as well as a 12-ft wide outside shoulder to accommodate bus-on-shoulder operations from I-375 to Gandy Boulevard. This concept supersedes the 2017 Design Change Re-evaluation concept. The current Design Change Re-evaluation also includes trail connections from the Howard Frankland Bridge to 4th Street North and Ulmerton Road. To accommodate the new trail connection, the 4th Street North bridge over Big Island Gap will undergo either widening or reconstruction.

The Gateway Expressway interchange area will also be modified under this re-evaluation. Ramps located to the south of the Gateway area will carry drivers from northbound I-275 Express Lanes to Gateway Expressway, as well as carry drivers from the Gateway Expressway to southbound I-275 Express Lanes. In addition, access to southbound I-275 from the Gandy Boulevard interchange will be modified by connecting the westbound-to-southbound loop on ramp and the eastbound-to-southbound on ramp into a frontage road system that provides one entry point onto southbound I-275. Finally, additional drainage and stormwater requirements, such as pond sites, will be needed to accommodate the new impervious surface due to the express lane widening. Several of these new pond site locations will be outside of the existing right of way.

The following sections identify changes in natural resource impacts associated with this Design Change Re-evaluation that differ from impacts previously evaluated in the WEBAR dated April 2016.

2.0 Field Assessments

This NRE assesses changes in resource impacts associated with the Design Change Re-evaluation that differ from impacts previously evaluated in the WEBAR dated April 2016. All surveys discussed herein fall within the study area reviewed as part of the Re-evaluation.

Seagrass surveys and mangrove delineations were conducted around Big Island Gap and along the Howard Frankland Causeway in September 2016 and June 2018 in support of the Environmental Resource Permit (ERP No. 43001034.012) for the Howard Frankland Bridge Replacement and I-275 Widening (FPID 422904-2-32-01 and 422904-4-32-01). The results of those surveys were utilized for this Re-evaluation. Additional field mapping surveys were performed in support of this Re-evaluation during November 2018. Wetlands and surface waters, seagrass, and wildlife habitats were mapped in and around Weedon Island Preserve near the convergence of Dr. M.L.K. Jr. Street N., north of Ulmerton Road (SR688), and at the Big Island Gap Bridges at I-275 and 4th Street N (SR 687). Field surveys were also conducted during January and February 2019 to assess conditions within twenty-five (25) pond site alternatives. The twelve preferred pond sites (2A, 7B, 11C, 12A, 13B, 14A, 15A, 16A, 17A, 18A, 19A, 20A) addressed within this NRE are shown on **Figure 2**.

Wetland and surface water determinations were in accordance with the Corps of Engineers Wetland Delineation Manual (1987); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (2010); the Florida Wetlands Delineation Manual (1995); and Rule 62-340, F.A.C., Delineation of the Landward Extent of Wetlands and Surface Waters.

This Re-evaluation referenced available data to identify protected plants and wildlife and/or critical habitat occurring or potentially occurring within the project area. The following sources were referenced and analyzed using Geographic Information System (GIS):

- Pinellas County Aerial Imagery (2011)
- Florida Department of Environmental Protection Outstanding Florida Water (2019)
- Florida Fish and Wildlife Conservation Commission (FWC) Eagle Nest database (2016)
- Florida Fish and Wildlife Conservation Commission Florida Shorebird database (2018)
- Florida Fish and Wildlife Conservation Commission Manatee Synoptic Surveys (‘91-2014)
- Florida Fish and Wildlife Conservation Commission Wildlife Research Institute Data
    - Sea turtle data (2016)
- Florida Natural Areas Inventory Florida Conservation Lands (2014)
- Florida Natural Areas Inventory Element Occurrences Pinellas County (2007)
- Natural Resources Conservation Service Soils of Pinellas County Geodatabase (2012)
- Southwest Florida Water Management District (SWFWMD) Land Use Land Cover (2014)
- Southwest Florida Water Management District Seagrass Survey Data (2010/2016)
- U.S. Fish and Wildlife Service Wood Stork Nesting Colonies / Core Foraging Areas (2018).
- U.S. FWS Threatened and Endangered Species Act (ESA) Critical Habitat (2019)

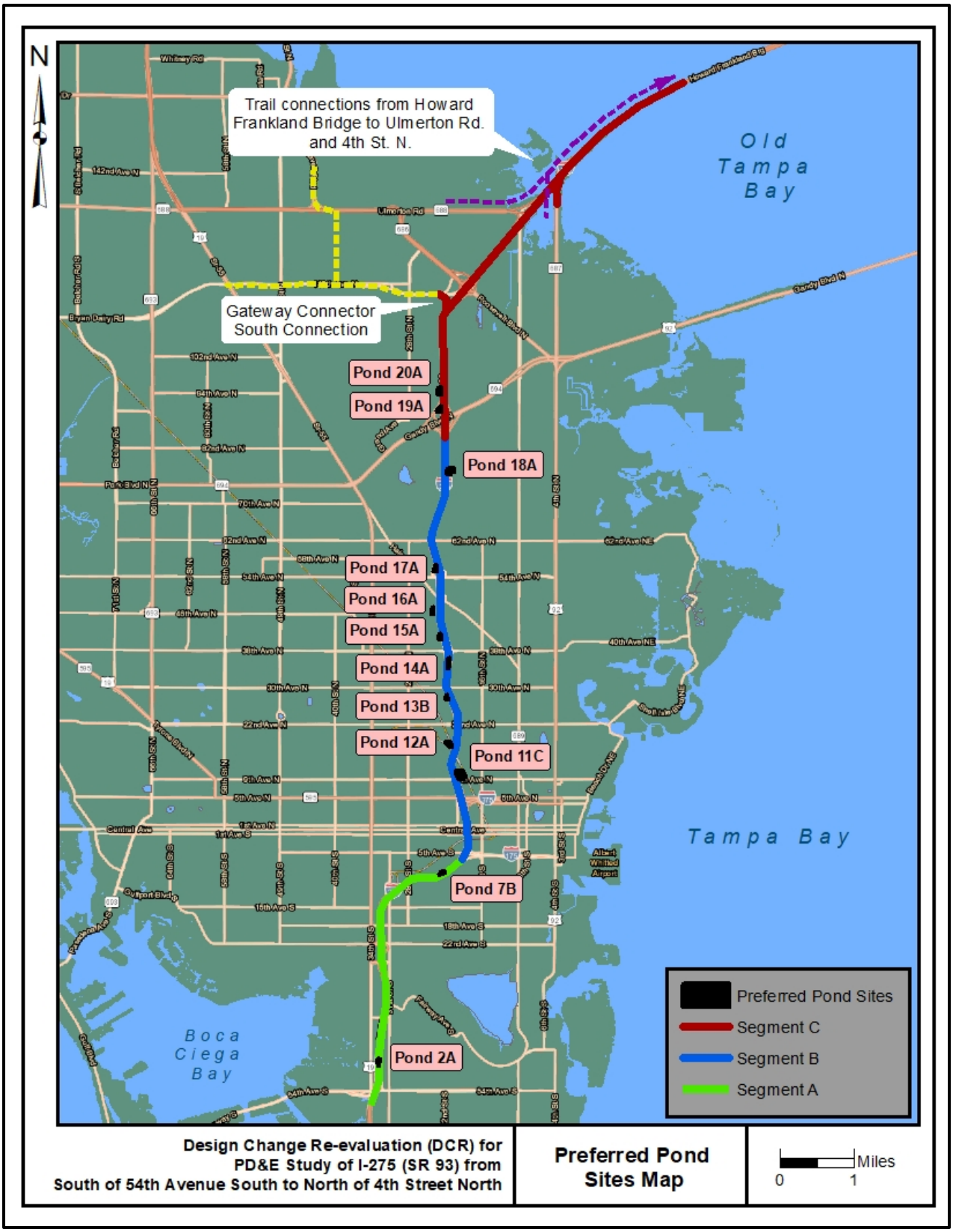

Figure 2. Preferred Pond Sites Map

3.0 Existing Conditions

3.1 Land Use

Existing conditions were evaluated within the study area reviewed as part of this Re-evaluation. Land use and land cover was verified in the field referencing the FLUCFCS (FDOT 1999) and the SWFWMD Land Use Land Cover geodatabase (2014). I-275 is a limited-access interstate highway that runs north-south through Pinellas County and extends east over Tampa Bay. The land use along the Howard Frankland Causeway, Big Island Gap bridges, and Ulmerton Road pedestrian trail was highway right-of-way. Additionally, four preferred pond sites (2A, 14A, 17A, and 19A) were within the I-275 highway right-of-way. The remaining eight preferred pond sites were outside of the highway right-of-way. Land uses included medium/high density residential (Ponds 13B, 16A, and part of 18A), urban land (Ponds 7B and 20A), a storage yard (Pond 15A), industrial (Pond 12A), forested wetland (part of Pond 18A), a gas pipeline (part of Pond 18A), and a reservoir (Pond 11C).

3.2 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey of Pinellas County (2006) and the NRCS geodatabase (2012), most soils within the project study area reviewed as part of this Re-evaluation were associated with urban fill, although hydric soils were mapped. **Table 1** provides details regarding the NRCS soils mapped within the twelve preferred pond site alternatives.

Table 1. Project Soils

#	Name (Pond Site)	Hydric	Drainage Class
4	Astatula Soils and Urban Land, 0 to 5 Percent Slopes (17A)	No	Excessively Drained
7	Basinger Find Sand, Depressional (18A)	Yes	Very Poorly Drained
12	Felda Fine Sand, Depressional (20A)	Yes	Very Poorly Drained
16	Matlacha and St. Augustine Soils and Urban Land (11C, 15A, 16A)	Unranked	Unranked
17	Myakka Soils and Urban Land (7B, 13B, 14A)	No	Poorly Drained
18	Okeechobee Muck (18A)	Yes	Very Poorly Drained
22	Pineda Soils and Urban Land (19A, 20A)	Unranked	Unranked
30	Urban Land (12A)	Unranked	Unranked

3.3 Natural and Biological Features

Wetlands and surface waters were present within the study area reviewed as part of this Re-evaluation including bay waters containing seagrass along the Howard Frankland Causeway, seagrass and mangroves around Big Island Gap, mangroves along Weedon Island Preserve, saltmarsh north of Ulmerton Road, and freshwater forested and non-forested wetlands between Roosevelt Boulevard and Sawgrass Lake Park. Wetlands and surface waters associated with the preferred pond sites included a freshwater forested wetland (Pond 18A), a surface water (Pond 2A), and open water within or adjacent to pond sites 11C and 16A. Roadside ditches were present along the mainline including a ditch within Basin 18 beneath I-275 at Sawgrass Lake Park that drains to Riviera Bay. Habitats specific to this Design Change Re-Evaluation, including those within the twelve preferred pond sites, are discussed in **Section 5.2**.

4.0 Protected Species and Habitat

The project study area was evaluated for potential occurrences of federal and state protected plant and animal species in accordance with Section 7 of the ESA of 1973, as amended and Chapters 5B-40 and 68A-27. This section documents wildlife resources in accordance with Part 2, Chapter 16 - Protected Species and Habitat - of the *PD&E Manual* (2019). This protected species and habitat evaluation examines conceptual design changes specific to the Design Change Re-evaluation with regard to impacts to these resources that differ from impacts previously evaluated in the WEBAR dated April 2016, and includes changes to species protection status as of July 2019. All impacts discussed herein fall within the study area reviewed as part of the Re-evaluation.

Each species is discussed based on recent data and field reviews as well as anticipated construction effects by addressing agency comments and referencing guidelines. The information is intended to provide details on the anticipated level of permitting coordination that may be required.

4.1 Agency Coordination and Methodology

Agency coordination was initiated as part of the ETDM screening (July 2013) and through Advanced Notification. Full agency comments are available in the ETDM Summary Report (ETDM No. 12556).

Methodology

Surveys were conducted in support of this Re-evaluation in November 2018 to evaluate habitat quality and document the presence or absence of terrestrial and aquatic wildlife. Surveys were conducted along the road right-of-way and tidal shores by vehicle, as well as in water pedestrian surveys. Habitat and wildlife observations were delineated using a Trimble GeoXT 6000 Series GPS and mapped using ArcMap 10.5.1. The Florida Natural Areas Inventory (FNAI) Biodiversity Matrix (February 2019) was queried to verify listed species occurrences. **Figure 3** and **Figure 4** depict species documented in the region. **Table 2** lists federal and state protected wildlife observed or potentially occurring within the study area reviewed as part of this Re-evaluation study area (see source references **Section 2.0**). Each potential species was designated as having a low, moderate or high likelihood of occurrence based on range, habitat type, location, patch size, and connectivity, as defined below.

Low	Species documented within Pinellas County, but with a low likelihood to occur within the project study area due to the limited presence of suitable habitat
Moderate	Species documented within Pinellas County or within nearby counties and for which suitable habitat is present within the project study area; however, no documented occurrences exist
High	Species highly likely to occur within the project study area based on known habitat ranges and the existence of suitable habitat within the project study area. Species are known to occur within or adjacent to the project study area or have been documented within the vicinity of the project

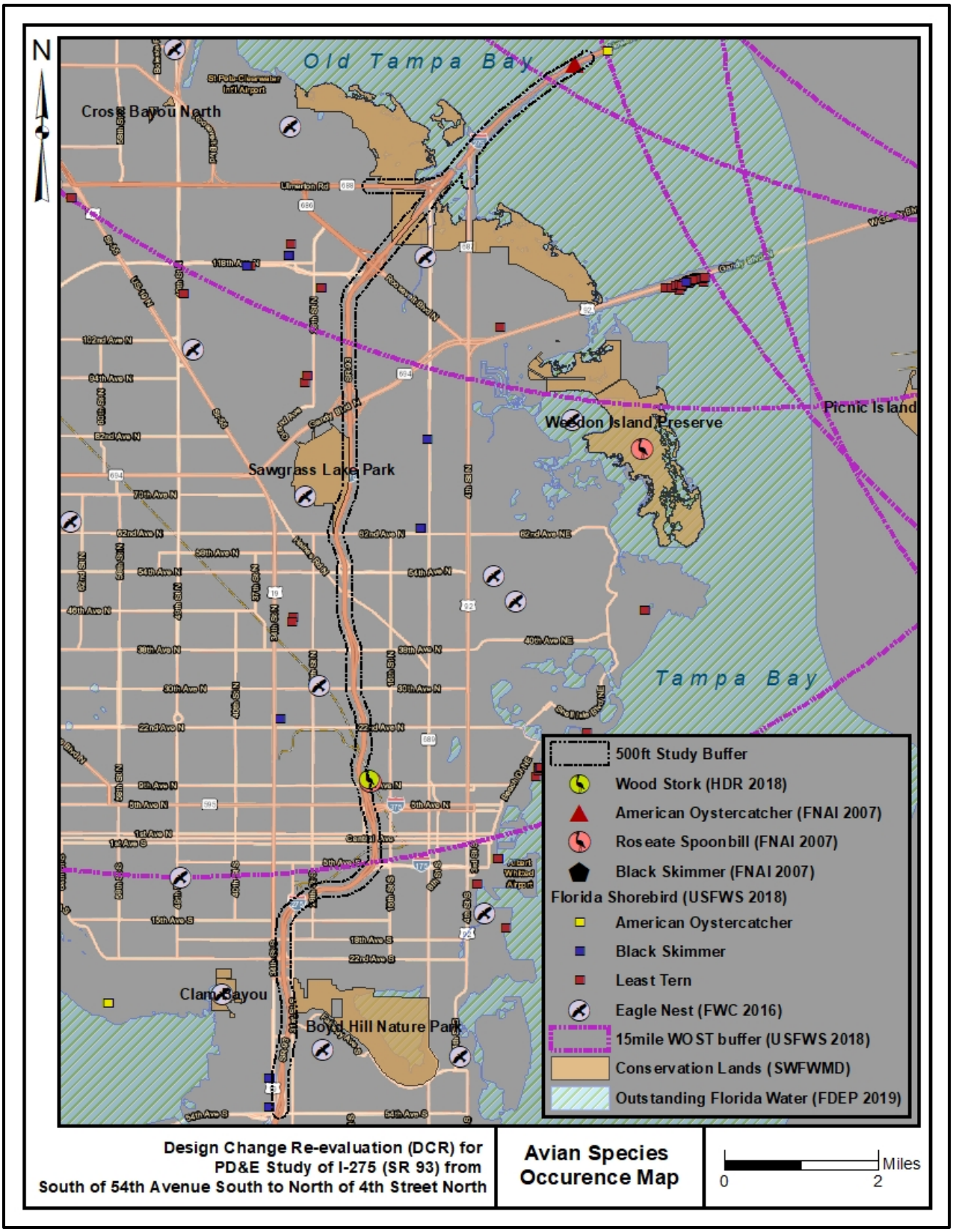

Figure 3. Avian Species Occurrence Map

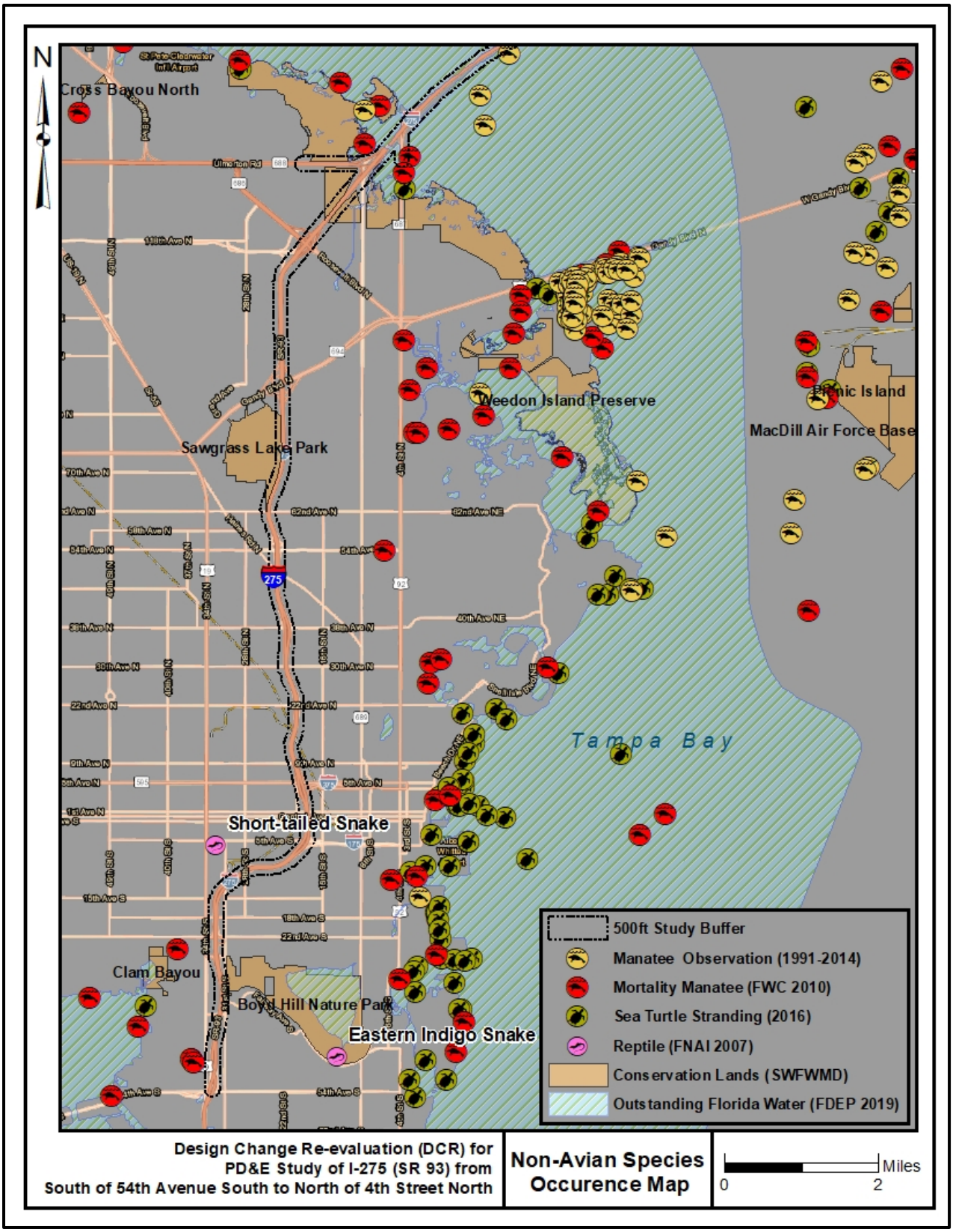

Figure 4. Non-Avian Species Occurrence Map

Table 2. Protected Wildlife Observed or Potentially Occurring within the Project Study Area

Scientific Name	Common Name	Federal Listing (USFWS)	State Listing (FWC)	Habitat	Likelihood of Occurrence
Fish					
Acipenser oxyrinchus desotoi	Gulf Sturgeon	T	T	Freshwater streams; coastal waters and estuaries	Low
Pristis pectinata	Small-tooth sawfish	E	E	Coastal waters; estuarine habitats (*e.g.* seagrass, mangroves)	Low
Reptiles and Amphibians					
Caretta caretta	Loggerhead sea turtle	T	T	Marine water; coastal bays and estuaries; nesting on beaches	Moderate
Chelonia mydas	Green sea turtle	T	T	Bays & estuaries; seagrass habitats; nesting on beaches	Low
Drymarchon corais couperi	Eastern indigo snake	T	T	Forested uplands; wooded wetlands; open fields	Low
Gopherus polyphemus	Gopher tortoise	C	T	Upland habitat with well-drained sandy soil & herbaceous forage	Low
Lampropeltis extenuata	Short-tailed snake	NL	T	Sandy upland habitats	Low
Lepidochelys kempii	Kemp's Ridley sea turtle	E	E	Shallow waters w/sandy or muddy bottoms; nest on beaches	Low
Birds					
Ajaja ajaja	Roseate spoonbill	**	T	Coastal marshes; wetlands; mangrove forest	Moderate
Athene cunicularia floridana	Florida burrowing owl	**	T	Upland fields	Low
Calidris canutus rufa	Rufa red knot	T | **	T	Migratory; intertidal and marine habitats; coastal inlets; estuaries and bays	Low
Charadrius melodus	Piping plover	T | **	T	Open, sandy or gravel shorelines; saltwater marsh	Moderate
Charadrius alexandrinus	Snowy plover	**	T	Dry, sandy beaches and mud/salt flats	Moderate
Egretta caerulea	Little blue heron	**	T	Marine and freshwater marshes; creeks and rivers	Observed
Egretta rufescens	Reddish egret	**	T	Saltwater marsh; mangrove; saltflats; estuarine areas	Moderate
Egretta tricolor	Tricolored heron	**	T	Marine and freshwater marsh; creeks and rivers	Moderate

Scientific Name	Common Name	Federal Listing (USFWS)	State Listing (FWC)	Habitat	Likelihood of Occurrence
Haematopus palliatus	American oystercatcher	**	T	Barren beaches and sandbars; shell rakes; salt marshes; sand flats	High
Haliaeetus leucocephalus	Bald eagle	* | **	NL	Gulf coast bays; inland lakes; rivers; forested habitats; marshes	Moderate
Mycteria americana	Wood stork	T | **	T	Estuarine/tidal marshes; streams, ponds, and ditches	Observed
Pandion haliaetus	Osprey	**	NL	Throughout coastal Florida	Observed
Rynchops niger	Black skimmer	**	T	Estuaries, bays, and tidal creeks; beaches; sandbars; shell rakes (dredge); marsh	Moderate
Sternula antillarum	Least tern	**	T	Sandy beaches; dunes; coastal open lands; saltwater marsh	High
Mammals					
Trichechus manatus latirostris	West Indian manatee	T	T	Bays and estuaries; tidal rivers and streams; springs	High

Species designations updated as of March 2019. E= Endangered; T= Threatened: C = Candidate for federal listing; NL = Not Listed. Protected - * Bald & Golden Eagle Protection Act and Migratory Bird Treaty Act ▪ ** Migratory Bird Treaty Act

4.2 Federally Listed Species and Critical Habitat

Federally listed wildlife observed or which have the potential to occur within the study area reviewed as part of this Re-evaluation include fish (Gulf sturgeon and small-tooth sawfish), reptiles (sea turtles and Eastern indigo snake), birds (wood stork, piping plover and rufa red knot), and mammals (West Indian manatee).

The project study area was re-evaluated for Critical Habitat as defined by Congress 50 CFR § 17.94. Review of GIS data obtained from the USFWS confirms there is no designated critical habitat within the study area reviewed as part of this Re-evaluation. Therefore, the proposed project will not result in the destruction or adverse modification of critical habitat.

4.2.1 Fish

Gulf Sturgeon (*Acipenser oxyrinchus desotoi*)

The federal status for the gulf sturgeon is threatened. It is known to forage in the Gulf of Mexico and associated estuaries and has been documented in Pinellas County. Critical habitat for the gulf sturgeon is not designated within the study area reviewed as part of this Re-evaluation.

Permanent impacts to spawning habitat would be unlikely during project construction. Impacts to potential foraging grounds for non-breeding individuals would be associated with widening due to the pedestrian trail along the Howard Frankland Causeway and in association with widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap. In order to protect water quality within Tampa Bay, stormwater management protocols will be designed to state standards for OFWs and

erosion control measures and BMPs will be required during construction. In-water construction, including temporary and/or permanent shading, pile driving, and/or blasting impacts could occur.

In project areas where the Gulf sturgeon could potentially occur, the FDOT will implement the NMFS and USFWS - *Construction Special Provisions - Gulf Sturgeon Protection Guidelines* (2012) (**Appendix B**) and will coordinate with the NMFS should pile driving and/or blasting be necessary in order to avoid adverse impacts to the Gulf sturgeon. Based on this information and given the low likelihood of occurrence within the project area, it is anticipated that the project ***may affect, but is not likely to adversely affect*** the Gulf sturgeon.

Smalltooth sawfish (*Pristis pectinata*)

The federal status for the smalltooth sawfish is endangered. The sawfish is found in shallow coastal and brackish waters including seagrass beds, oyster bars, mangrove shorelines, inshore bars and sea-walled canals. Critical habitat for the smalltooth sawfish was not designated within the study area reviewed as part of this Re-evaluation.

Improvements with the potential to impact the smalltooth sawfish would include widening due to the pedestrian trail along the Howard Frankland Causeway and in association with widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap, as well as impacts to tidal areas adjacent to Weedon Island Preserve. In order to protect water quality within Tampa Bay, stormwater management protocols will be designed to state standards for OFWs and erosion control measures and BMPs will be required during construction. In-water construction, including temporary and/or permanent shading, pile driving, and/or blasting impacts may occur in areas where sandy bottom, seagrass and mangrove are present.

The NMFS developed *Sea Turtle and Smalltooth Sawfish Construction Conditions* (2006) to protect the species during construction (**Appendix B**). The FDOT will adhere to these construction conditions and will coordinate with the NMFS should pile driving and/or blasting be necessary, in order to avoid impacts to the smalltooth sawfish. Based on this information and given the low likelihood of occurrence within the project area, it is anticipated that the project ***may affect, but is not likely to adversely affect*** the smalltooth sawfish.

4.2.2 Reptiles and Amphibians

Sea Turtles

Sea turtles utilize marine waters and estuarine environments for shelter and feeding and sandy beaches for nesting. The loggerhead (*Caretta caretta*), green (*Chelonia mydas),* and Kemp's Ridley (*Lepidochelys kempii*) sea turtles are listed as either threatened or endangered by the USFWS and have been observed within Tampa Bay (**Figure 4**). Juvenile sea turtles are known to frequent bays and inlet waters; therefore, their presence was assumed.

Sea turtle nesting habitat was not present within the study area reviewed as part of this Re-evaluation. However, sea turtles, in particular juvenile sea turtles, may use the waters of Tampa Bay and those around Big Island Gap where improvements would include widening due to the pedestrian trail along the Howard Frankland Causeway and in association with widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap. In-water construction, including temporary and/or permanent shading, pile driving and/or blasting impacts may occur in these areas. The FDOT will implement the NMFS *Sea Turtle and Smalltooth Sawfish Construction Conditions* (2006) (**Appendix**

B) and will coordinate with the NMFS should pile driving and/or blasting be necessary. Based on this information, it is anticipated that the project ***may affect, but is not likely to adversely affect*** sea turtles.

Eastern Indigo Snake (*Drymarchon corais couperi*)

The federal status for the Eastern indigo snake is threatened. The Boyd Hill Nature Park historically supported a population of the indigo snake (<10 circa 1990); however, the population is believed to have declined due to habitat fragmentation. A second record exists near Weedon Island Preserve (pre-1970). Potential low-quality, fragmented Eastern indigo snake habitat was documented within the study area reviewed as part of this Re-evaluation including in the vicinity of Pond 2A located 1.5 miles west of the Boyed Hill Nature Preserve and within Pond 18A in proximity to Sawgrass Lake Park; however, no snakes were observed. Gopher tortoise burrows were not observed during field reviews.

Due to the presence of fragmented habitat and historic occurrences of the indigo snake within Pinellas County, the USFWS *Standard Protection Measures for the Eastern Indigo Snake* (2013) (**Appendix B**) will be followed during construction. Given FDOT's commitment to protect the indigo snake during construction and per the Eastern Indigo Snake Programmatic Effect Determination Key (2013) (**Appendix C**), it is anticipated that the project ***may affect, but is not likely to adversely affect*** the Eastern indigo snake.

4.2.3 Birds

Wood Stork (*Mycteria americana*)

The federal status for the wood stork is threatened. This transient wading bird forages in shallow water containing high prey densities and utilizes freshwater and estuarine habitats for nesting and roosting. The USFWS recognizes a 15-mile Core Foraging Area (CFA) radius around wood stork rookeries in Central Florida. The project falls within the CFA of four wood stork colonies (Sheldon Rd #611309, East/Bellows Lake, North Lake Sagebrush, and Alligator Lake) (**Figure 3**). The nearest recorded active colony is Alligator Lake located approximately 6.5 miles to the northeast.

The USFWS recognizes the need to protect suitable foraging habitat (SFH), defined as calm, relatively open waters, uncluttered by dense vegetation with a seasonal water level between 2 and 15 inches (USFWS 2012). SFH exists within the study area reviewed as part of this Re-evaluation and a wood stork was observed foraging within the littoral zone around Pond 11C. Construction of the project, including impacts associated with the pedestrian trail north of Ulmerton Road and to surface waters and wetlands along the project mainline, could impact SFH. Construction of pond sites could also impact and/or create SFH. Potential impacts to SFH could total 15.27 acres.

All impacts to SFH will be quantified during design and permitting and measures to avoid and minimize impacts to SFH would be considered at that time. If necessary, these measures would include wetland mitigation pursuant to s.373.4137, F.S., Part IV, Chapter 373, F.S. and 33 U.S.C. §1344. Due to the requirements to re-evaluate the corridor for SFH and to enumerate and mitigate impacts to wetlands and SFH, and based on guidance from the USFWS Wood Stork Effect Determination Key (2008) (**Appendix C**), it is anticipated that the project ***may affect, but is not likely to adversely affect*** the wood stork.

Piping Plover (*Charadrius melodus*)

The federal status for the piping plover is threatened. Plovers forage along sandy beaches and saltwater shorelines, which are found within the study area reviewed as part of this Re-evaluation. Individuals from breeding populations over-winter in Florida, but nesting does not occur (USFWS). The project is within the USFWS Consultation Area for the piping plover and the piping plover has been recorded in Pinellas County. No USFWS Critical Habitat is designated within the project limits.

Temporary and/or permanent impacts could occur to saltwater marsh and shorelines. Minor impacts would occur to tidal shorelines adjacent to the I-275 Bridge and 4th Street North Bridge over Big Island Gap. Saltwater marsh was present north of Ulmerton Road where the pedestrian trail would be constructed. However, all areas were flanked by highway and frequented by pedestrians, recreationists, and off-road vehicles thereby limiting use by wintering birds. Given the unlikely presence of the species within the project area, it is anticipated that the project ***may affect, but is not likely to adversely affect*** the piping plover.

Rufa red knot (*Calidris canutus rufa*)

The federal status for the rufa red knot is threatened. This migratory shorebird breeds in the High Arctic during the summer before migrating south to wintering grounds. Migratory stops for the red knot are known along the Atlantic coast of South America and the Atlantic and Gulf of Mexico coasts of North America (USFWS 2015). According to the USFWS, the core of the southeast wintering zone for the red knot shifts between Florida (central Gulf coast), Georgia and South Carolina. No USFWS Critical Habitat is designated within the project limits.

Foraging habitats used by the red knot include sandy beaches, tidal flats, saltwater marsh, and mangroves, which are found within the study area reviewed as part of this Re-evaluation. The species typically forages along beaches and mudflats that contain an abundance of invertebrate prey. The species is most commonly observed in Florida during April and between August and October, but the red knot has been documented in Florida throughout the year.

Temporary and/or permanent impacts could occur to tidal flats, saltwater marsh, and mangroves. Minor impacts would occur around the tidal flats adjacent to the I-275 Bridge at Big Island Gap and the 4th Street North Bridge, as well as to the tidal creek adjacent to Weedon Island Preserve. Saltwater marsh with the potential to support the red knot was present north of Ulmerton Road where the pedestrian trail would be constructed. However, all areas were flanked by highway and frequented by pedestrians, recreationists, and off-road vehicles thereby limiting use. Given the unlikely presence of the species within the project impact area, it is anticipated that the project ***may affect, but is not likely to adversely affect*** the rufa red knot.

4.2.4 Mammals

West Indian manatee (*Trichechus manatus*)

The federal status for the West Indian manatee is threatened and the species is protected under the Marine Mammal Protection Act. The manatee utilizes coastal waters, bays, estuaries, and rivers preferring shallow waters where they forage on aquatic vegetation. The project study area reviewed as part of this Re-evaluation is located in the USFWS Consultation Area for the West Indian manatee although no federal sanctuaries, refuges, or critical manatee habitats exist within the project area. Big Island Gap is a marine mammal region; however, no individuals were observed during field surveys (**Figure 4**).

Improvements with the potential to impact the manatee would include widening due to the pedestrian trail along the Howard Frankland Causeway and widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap. In-water construction to facilitate these improvements, including temporary and/or permanent shading, pile driving and/or blasting, could occur. No stormwater outfalls to manatee waters would be expected. Mitigation pursuant to s.373.4137, F.S., Part IV of Chapter 373, F.S., and 33 U.S.C §1344 would be provided for any seagrass impacts.

The U.S. Army Corps of Engineers (USACE) *Standard Manatee Conditions for In-Water Work* (2011) (**Appendix B**) would be implemented during construction to eliminate the possibility of construction-related manatee injury or death and these guidelines would be incorporated as part of the final project design. Additionally, the FDOT would coordinate with the NMFS should pile driving or blasting be necessary. Since the *Manatee and Marine Turtle Construction Conditions for In-Water Work* would be implemented and impacts to seagrass habitat mitigated, and based on guidance from the USACE Effect Determination Key for the Manatee in Florida (2013), as amended (USFWS 2019) (**Appendix C**), it is anticipated that the project ***may affect, but is not likely to adversely affect*** the West Indian manatee.

4.3 State-Protected Species

State-protected species known to occur or with the potential to utilize habitat within the study area reviewed as part of this Re-evaluation included two reptiles and a variety of avian species.

4.3.1 Reptiles and Amphibians

Gopher Tortoise (*Gopherus polyphemus*)

The state status for the gopher tortoise is threatened and the tortoise is a candidate for federal listing. The gopher tortoise occupies a variety of habitats, including those with well-drained sandy soils and abundant herbaceous forage. Low-quality habitat with the potential to support the gopher tortoise was observed within Pond 7 and Pond 12; however, due to dense urbanization, presence would be unlikely. If the gopher tortoise or their burrows were documented prior to construction, the FDOT would apply for a relocation permit from the FWC. Due to the low likelihood of occurrence and the State of Florida requirement to relocate tortoises from development sites, ***no adverse effect is anticipated***.

Short-tailed snake (*Lampropeltis extenuata*)

The state status for the short-tailed snake is threatened. One historic FNAI record of the short-tailed snake was noted near Pond 7B; however, suitable habitat was not observed. Given the highly urbanized conditions in the area reviewed as part of this Re-evaluation, ***no effect is anticipated***.

4.3.2 Birds

Wading Birds

Avian species have the potential to utilize the project study area reviewed as part of this Re-evaluation, including wading birds listed by the FWC, but which were not federally listed. These species could utilize ditches, estuaries, and forested wetlands for foraging, roosting, or nesting.

State threatened wading birds with potential to utilize the project area reviewed as part of this Re-evaluation include the roseate spoonbill (*Ajaja ajaja*), little blue heron (*Egretta caerulea*), reddish egret (*Egretta rufescens*), and tri-colored heron (*Egretta tricolor*) (**Figure 3**). Improvements with the

potential to impact wading birds would include construction of the I-275 Bridge over Big Island Gap and the 4th Street North Bridge, construction of the trail north of Ulmerton Road, impacts to surface waters along I-275, and impacts to tidal areas adjacent to Weedon Island Preserve. FNAI records documented the rosette spoonbill forging within Pond 11C and foraging by wading birds would be expected adjacent to Pond 16A. Pond 18A contained potential habitat for roosting wading birds. Since all wetland impacts will be mitigated, ***no adverse effect is anticipated***.

Nesting Shorebirds

State-threatened nesting shorebirds with potential to utilize the project study area reviewed as part of this Re-evaluation included the American oystercatcher (*Haematopus palliatus*), snowy plover (*Charadrius alexandrines*), least tern (*Sternula antillarum*), and the black skimmer (*Rynchops niger*). Nesting shorebirds are protected under the Migratory Bird Treaty Act, 16 U.S.C. 703-712 (MBTA).

The American oystercatcher has been documented along the Howard Frankland Causeway and least tern and black skimmer nesting has occurred along Gandy Boulevard (**Figure 3**). Least terns utilize coarse beaches and shell, as well as saltwater marsh similar to habitats north of Ulmerton Road where the pedestrian trail would be constructed. Minimal project impacts could also be expected to tidal flats suitable for foraging around the I-275 and 4th Street North bridges over Big Island Gap. The American oystercatcher typically nests from March through August, the least tern from April through September, and the black skimmer May through early September (FWC).

Although nesting was not documented within the area reviewed as part of this Re-evaluation, nesting shorebirds have been recorded nearby. In order to prevent adverse effects to nesting shorebirds, pre-construction surveys will be completed prior to any construction that may occur during the breeding season. Since FDOT would require pre-construction surveys and would avoid impacting active shorebird nests, ***no adverse effect is anticipated***.

Florida Burrowing Owl (*Athene cunicularia Floridana*)

The state status for the Florida burrowing owl is threatened. The species requires dry, open, habitat with sandy soils. Although the burrowing owl has been found in Pinellas County, suitable habitat was not observed within the project study area reviewed as part of this Re-evaluation and field surveys did not identify any individuals or burrows. Due to the lack of suitable habitat for the Florida burrowing owl, ***no effect is anticipated***.

4.3.3 Other Protected Species or Habitats

Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle was removed from the USFWS List of Endangered and Threatened Wildlife effective August 8, 2007. The bald eagle continues to receive protections through the Bald and Golden Eagle Protection Act, 16 U.S.C. 668-668d (BGEPA), as amended and the MBTA. Construction activities are restricted within 330 feet of an active nest tree and the USFWS National Bald Eagle Management Guidelines (2007) are required if construction is within 660 feet of an active eagle nest during the nesting season (October 1 - May 15).

Bald eagle nest territories have been recorded in Pinellas County although no recorded nests were within 660 feet of the project study area reviewed as part of this Re-evaluation. The FDOT will resurvey during permitting and design. If a bald eagle nest is identified within 660 feet of the project, FDOT will coordinate with the USFWS in accordance with the BGEPA and MBTA. Because this

project will be consistent with the BGEPA and MBTA and will adhere to the USFWS Bald Eagle Management Guidelines, it is anticipated that the project will not impact the bald eagle.

Osprey (*Pandion haliaetus*)

Ospreys are afforded protection under the MBTA and are state protected by Chapter 68A of the F.A.C. Ospreys require nest sites in open surroundings for easy approach that are safe from ground predators, such as raccoons. They readily build nests on manmade structures, such as telephone poles and nest platforms designed especially for these birds. Nesting season typically occurs between December and February.

Although both active and inactive osprey nests are federally protected, only active nests require federal permits for taking. Under state rules, only inactive osprey nests may be taken, as determined by the absence of eggs or flightless young at the nest. Typically, a replacement nesting structure located in the immediate vicinity is required to be erected.

Surveys to update locations of active osprey nest sites will be conducted during the permitting phase of the project, and permits will be acquired if impacts during construction are unavoidable. Avoidance of the nest will take place and nest structure replacement will occur if removal is required. Because the project will be consistent with federal and state requirements, it is anticipated that the project will not impact the osprey.

4.4 Federal and State Listed Plants

The FNAI Biodiversity Matrix was queried to develop a list of plant species with the potential to occur within the project study area reviewed as part of this Re-evaluation (**Table 3**). According to the query, nine plants protected by the Florida Department of Agricultural and Consumer Services (FDACS) potentially occur within the area: six were classified as endangered by the state and three as threatened. None were federally listed and none were observed within the project study area reviewed as part of this Re-evaluation.

If protected plants were observed within the project area, coordination with the FDACS will be initiated; therefore, a determination of ***no effect*** is anticipated.

Table 3. Protected Plants Potentially Occurring within the Project Study Area

Common Name	Scientific Name	Federal Status	State Rank	Likelihood of Occurrence
Nuttali's rayless goldenrod	*Bigelowia nuttallii*	NL	E	Potential
Many-flowered grass-pink	*Calopogon multiflorus*	NL	E	Potential
Sand butterfly pea	*Centrosema arenicola*	NL	E	Potential
Hairy beach sunflower	*Helianthus debilis ssp. vestitus*	NL	E	Potential
Nodding pineweed	*Lechea cernua*	NL	T	Potential
Small's flax	*Linum carteri var. smallii*	NL	E	Potential
Celestial lily	*Nemastylis floridana*	NL	E	Potential
Florida beargrass	*Nolina atopocarpa*	NL	T	Potential
Giant orchid	*Pteroglossaspis ecristata*	NL	T	Potential

E = Endangered: plants native to Florida in imminent danger of extinction pursuant to the U.S. ESA. **T** = Threatened: plants native to Florida that are in rapid decline, but have not decreased enough as to cause them to be endangered. **NL** = Not currently listed, nor currently considered for listing.

5.0 Wetlands and Surface Waters

Pursuant to Presidential 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. In accordance with this policy, as well as Part 2, Chapter 9 - Wetlands and Other Surface Waters - of the *PD&E Manual*, this Re-evaluation examines the conceptual design changes referenced above with regard to these resources. This existing wetlands and surface waters evaluation quantifies resource impacts specific to the Re-evaluation design concept that differ from impacts previously evaluated in the WEBAR dated April 2016. The twelve preferred pond sites were also evaluated. All impacts discussed herein fall within the study area reviewed as part of the Re-evaluation.

5.1 Agency Coordination and Methodology

Agency coordination was initiated as part of the ETDM screening (July 2013) and the Advanced Notification. Agency comments are available in the ETDM Summary Report (ETDM No. 12556).

Methodology

The project study area was field reviewed as part of this Re-evaluation to identify existing wetland communities. Habitat surveys to facilitate resource mapping were conducted during November 2018 and February 2019. All habitats were mapped using a Trimble GeoXT 6000 Series GPS and mapped using ArcMap 10.5.1 software.

Habitats north of the Howard Frankland Causeway, north of Ulmerton Road, and within the vicinity of the I-275 Bridge and 4th Street North Bridge over Big Island Gap were reassessed in support of this Re-evaluation, including mapping and identification of mangroves, seagrass, and other submerged aquatic vegetation (SAV) and epiphytes. Additional surveys were conducted along the project mainline between Ulmerton Road and 54th Ave. South, as well as within the twelve preferred pond site alternatives.

Formal seagrass surveys and mangrove delineations were conducted along the Howard Frankland Causeway and around Big Island Gap in support of the Howard Frankland Bridge Replacement and I-275 Widening (FPID 422904-2-32-01 and 422904-4-32-01). Information collected during those surveys was incorporated in support of this Re-evaluation. All formal determinations were in accordance with the Corps of Engineers Wetland Delineation Manual (1987); Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (2010); the Florida Wetlands Delineation Manual (1995); and Rule 62-340, F.A.C., Delineation of the Landward Extent of Wetlands and Surface Waters

5.2 Wetland and Surface Water Descriptions

Wetlands and surface waters within the study area reviewed as part of this Re-evaluation included freshwater and tidal systems. The Howard Frankland Causeway crossed Tampa Bay and the I-275 Bridge and 4th Street North Bridge spanned Big Island Gap. The areas supported seagrasses and mangroves. Tidal creeks were present along Weedon Island Preserve and a saltwater marsh was north of Ulmerton Road. The majority of the freshwater wetlands were between Roosevelt Boulevard and Sawgrass Lake Park. Surface waters were observed throughout the mainline corridor.

Wetland and surface water habitats and associated impacts are described below and impact maps are included in **Appendix A**.

Seagrass - discontinuous (FLUCFCS, 9113); Seagrass - continuous (FLUCFCS, 9116)

Bay waters within Tampa Bay north of the Howard Frankland Causeway and within Big Island Gap near the I-275 and 4th Street North bridges contained seagrasses; however, seagrass density varied and generally decreased near the concrete seawalls and bridge structures. The majority of seagrass observed was shoal grass (*Halodule wrightii*), but manatee grass (*Syringodium filiforme*) was present. Construction of the project areas reviewed as part of this Re-evaluation would result in additional impacts to seagrass habitat, including the pedestrian trail along the Howard Frankland Causeway (0.68 acres) and in association with widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap (0.004 acres). Formal seagrass surveys would be required to confirm presence or absence at the time of design and permitting.

Mangrove Swamp (FLUCFCS, 6120)

Mangroves were present abutting the I-275 Bridge over Big Island Gap, near the 4th Street N Bridge, along Weedon Island Preserve, and along the proposed pedestrian trail connection from the Howard Frankland Bridge to west of Ulmerton Road. Mangroves included red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*). The eastern oyster (*Crassostrea virginica*) was observed on red mangrove roots near Big Island Gap. Brazilian pepper (*Schinus terebinthifolius*) was present. Restored and landscaped buffers, including buttonwood (*Conocarpus erecta*), sea grape (*Coccoloba uvifera*), red cedar (*Juniperus virginiana*), and Australian pine (*Casuarina equisetifolia*) were landward of mangroves, beginning along Ulmerton Road toward the Howard Frankland Causeway. A total of 0.40 acres of mangrove impact would occur to areas around Big Island Gap that were reviewed as part of this Re-evaluation

Saltwater Marsh (FLUCFCS, 6422)

Saltwater marsh was present north of Ulmerton Road where the pedestrian trail would be constructed. Vegetation included saltgrass (*Distichlis spicata*), black needlerush (*Juncus roemerianus*), seaside goldenrod (*Solidago sempervirens*), and bluestem (*Andropogon* spp.) with scattered mangroves. A 0.21 acre area would be impacted for construction of the pedestrian trail.

Mixed Wetland Hardwood (FLUCFCS, 6170)

Mixed wetland hardwoods were present near Sawgrass Lake Park. Pond 18A contained disturbed and overgrown mixed wetland hardwoods with evidence of ground disturbance including interior spoil mounds and ditching and a perimeter containment berm. Species included a canopy of scattered red maple (*Acer rubrum*) and swamp bay (*Persea palustris*) and a subcanopy of Carolina willow (*Salix caroliniana*) and Brazilian pepper. A 1.21-acre area of forested wetland located within Pond 18A would be impacted.

Cypress (FLUCFCS, 6210)

Planted bald cypress (*Taxodium distichum*) were present along I-275 south of Roosevelt Boulevard within Segment C. With the addition of express lanes in Segments C, a 0.68 acre cypress stand would be impacted. Planted cypress were also present along I-275 east of Sawgrass Lake Park. This 0.60 acre cypress area would be impacted to construct express lanes and provide lane continuity improvements in Segment B.

Willow (FLUCFCS, 6180)

Non-forested, freshwater wetlands contained Carolina willow. In most cases, Carolina willow was predominant, but cypress, Brazilian pepper, and primrose willow (*Ludwigia* spp.) were present. Non-forested, freshwater wetlands were observed near Roosevelt Boulevard. Impacts as a result of changes associated with this Re-evaluation would total 0.44 acres.

Surface Waters (FLUCFCS, 5100)

Surface waters were evaluated as part of this Re-evaluation. Tidal surface waters were observed within the Turner Creek Ditch connecting Riviera Bay to Sawgrass Lake Park near Pond 18A, a mangrove waterway interconnecting Weedon Island Preserve south of the convergence of Ulmerton Road and I-275, tidal ditches north of Ulmerton Road near the proposed pedestrian trail, and around Big Island Gap. Impacts to tidal surface waters would occur at Big Island Gap including approximately 0.06 acres at the 4th Street North Bridge and 0.12 acres at the I-275 Bridge.

Linear, freshwater surface waters were present along the I-275 mainline. An estimated 4.78 acres of impact to those surface waters would be expected to support activities reviewed as part of this Re-evaluation. Pond sites also contained surface waters. Pond 2A contained a linear surface water of which 0.22 acres would be impacted to construct the pond. Pond 11C contained a 4.6-acre stormwater retention lake. The lake, including the 0.96 acre littoral zone would be impacted to construct Pond 11C.

5.3 Outstanding Florida Waters / Aquatic Preserves

This section has been prepared in accordance with Part 2, Chapter 10 – Aquatic Preserves and Outstanding Florida Waters of the *PD&E Manual.* Outstanding Florida Waters (OFW) and Aquatic Preserves were discussed in the ETDM Summary Report. The project crosses Old Tampa Bay within Pinellas County and a portion of the project is within the Pinellas County Aquatic Preserve, which is an Outstanding Florida Water (OFW) (FDEP, 2019). The Howard Frankland Causeway and the I-275 Bridge and 4th Street North Bridge over Big Island Gap cross this OFW.

This Re-evaluation considers construction impacts within this OFW including at the I-275 Bridge over Big Island Gap and the 4th Street North Bridge. Construction impacts associated with the Howard Frankland Bridge Replacement and I-275 Widening (FPID 422904-2-32-01 and 422904-4-32-01), including the pedestrian trail over Tampa Bay, was addressed as part of ERP No. 43001034.012.

Projects proposed to occur over an OFW must not reduce existing water quality, defined for this purpose as the water quality condition at the time a waterbody was designated as an OFW or the year prior to applying for a permit, whichever water quality level is better. Projects proposed to discharge to an OFW typically require additional stormwater treatment. Public Interest Criteria will also need to be addressed as part of the review of impacts to an OFW.

5.4 Wetland Impact Summary

Impacts to wetlands and surface waters were quantified to address impacts specific to the areas reviewed as part of this Re-evaluation. Actual impact areas may be more or less depending on project engineering and avoidance measures developed during the final design, permitting, and construction phases.

A summary of impacts associated with the project areas reviewed as part of this Re-evaluation is provided as **Table 4**. Wetland and surface water impact maps are provided in **Appendix A**.

Table 4. Wetland and Surface Water Impacts

Wetland or Surface Water Type	WEBAR Impact Area (acres)	Design Change Impact Area (acres)	Impact Area Difference (acres)
Seagrasses (north of HFB)	0.25	1.42	0.684
Seagrasses (south of HFB)*	0.49	0.00	
Seagrasses (Big Island Gap)	0.00	0.004	
Forested saltwater wetlands	0.89	1.29	0.40
Herbaceous saltwater wetlands	0.00	0.21	0.21
Forested freshwater wetlands	0.59	3.08	2.49
Non-forested freshwater wetlands	0.15	0.59	0.44
Surface waters (Tidal)	0.16	0.34	9.78
Surface waters (Freshwater)	4.53	14.13	

* Due to northward shift to align with the Howard Frankland Bridge (HFB), seagrasses to the south of the causeway were avoided.

5.5 Avoidance, Minimization and Erosion Control

Wetland impacts will be avoided and minimized to the greatest extent practical during project design and permitting. However, unavoidable direct wetland impacts would be expected. In addition, indirect secondary impacts would also require consideration. Regulatory agencies generally assume indirect secondary impacts based on reduction of functional habitat value within a 25-foot buffer on impacted wetlands. Temporary impacts would also be considered. Temporary impacts would be minimized utilizing best management practices (BMPs), maintaining a stormwater pollution prevention plan (SWPPP), and implementing FDOT design standards.

BMPs will be implemented during construction to protect water quality. Degradation of water quality resulting from construction or excess stormwater runoff from the project has the potential to adversely impact tidal habitats in and around Tampa Bay, including seagrasses and benthic communities. Water quality impacts from construction will be avoided and minimized through the use of BMPs including, but not limited to, construction phasing, sediment barriers, floating turbidity screenings, silt fences, and other construction techniques identified during design and permitting by the regulatory agencies.

Projects proposed to occur over an OFW must not reduce existing water quality. Projects proposed to discharge to an OFW typically require additional stormwater treatment. Public Interest Criteria will also need to be addressed as part of the review of impacts to an OFW.

5.6 Uniform Mitigation Assessment Method

Impacts to wetlands were evaluated using the Uniform Mitigation Assessment Method (UMAM) (Chapter 62-345, F.A.C.) (**Appendix D**). **Table 5** references preliminary UMAM scores based on existing habitat conditions at the time of the Re-evaluation study.

Table 5. Estimated UMAM Scores

Wetland Type	Location and Landscape Support		Water Environment		Vegetation		Impact area (acres)	Delta	FL
	Current	With	Current	With	Current	With			
Seagrass*	5	0	6	0	4	0	0.004	0.50	0.002
Forested Saltwater Wetland	4	0	5	0	5	0	0.40	0.47	0.19
Herbaceous Saltwater Wetlands	5	0	5	0	6	0	0.21	0.53	0.11
Forested Freshwater Wetland	4	0	5	0	6	0	2.49	0.50	1.25
Non-forested Freshwater Wetland	2	0	4	0	4	0	0.44	0.33	0.15

* UMAM scores for seagrass impacts north of the HFB were assessed and approved as part of ERP No. 43001034.012

5.7 Mitigation Requirements

The SWFWMD and USACE will require mitigation for wetland and seagrass impacts. The project is within the SWFWMD-designated Tampa Bay/Anclote River Watershed Area (SWFWMD, 2019). Project impacts specific to this Re-evaluation were within the service areas for the Tampa Bay and Mangrove Point Mitigation Banks. Final mitigation requirements would be determined during permitting based on the project design and using the UMAM habitat scoring of impacts at that time.

5.8 Mitigation Alternatives

Mitigation options for mangroves and seagrasses were evaluated. On-site mitigation was considered, but the option was eliminated because suitable land was not identified within the project area. Opportunities for partnerships to develop alternative mitigation solutions on nearby public lands could also be considered on a case-by-case basis depending on site-specific restoration needs at the time of permitting. Private mitigation banks offer a mitigation alternative when available within a project watershed, and mitigation banks are typically preferred by the permitting agencies. Mitigation bank credits were limited within the Tampa Bay/Anclote River Watershed Area at the time of this Re-evaluation and credits were only available to compensate impacts to estuarine herbaceous or mangrove wetlands. Freshwater forested and herbaceous credits were not available and would likely need to be purchased from an out-of-basin mitigation bank, which would require greater scrutiny, cumulative impact calculation and mitigation, and higher cost. Mitigation for impacts to seagrass habitat would require additional coordination as seagrass mitigation banks were not an option at the time of this re-evaluation. Based on this information, it was assumed that wetland and seagrass impacts that result from the construction of this project would 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.

5.9 Cumulative Impacts Assessment

The project falls within the Tampa Bay /Anclote River Watershed. To avoid the need to address cumulative wetland impacts, mitigation should be compensated within the watershed of impact.

6.0 Essential Fish Habitat

An Essential Fish Habitat (EFH) Assessment was conducted in accordance with Part 2, Chapter 17 - Essential Fish Habitat - of the *PD&E Manual* and the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) of 1996. The purpose of this EFH Assessment is to enhance communication and coordination among the National Marine Fisheries Service (NMFS), Fishery Management Councils (FMCs), and affected state and federal agencies. This section includes an EFH assessment that identifies changes in resource impacts associated with the Re-evaluation design concept that differ from impacts previously evaluated in the WEBAR dated April 2016. All impacts discussed herein fall within the study area reviewed as part of the Re-evaluation.

6.1 Magnuson-Stevens Act

EFH is defined by the MSFCMA of 1976, as amended in 1996. The Magnuson-Stevens Act was enacted by the U.S. Congress to protect marine fish stocks and their habitat, to prevent and stop overfishing, and to minimize by-catch. Congress defined EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity” (16 U.S.C. 1802 (10)). The MSFCMA (Public Law 94-265, as amended) was established, along with other goals, to promote the protection of EFH in the review of projects conducted under federal permits, licenses, or other authorizations that affect or have the potential to affect such habitat. Section 302 of the MSFCMA established eight FMCs. The Gulf of Mexico FMC is responsible for the creation of management standards for fishery resources in federal waters within the Gulf of Mexico from Florida to Texas and the implementation of the national standards in the Fishery Management Plans (FMP). In 1996, new habitat conservation provisions were added to the MSFCMA mandating the identification of EFH for all fish species federally managed by the FMCs and NMFS. Federal agencies that fund, permit, or implement activities that may adversely affect EFH must consult with the NMFS.

6.2 Agency Coordination and Methodology

Agency coordination occurred as part of the ETDM screening (July 2013) and Advance Notification. Agency comments are available in the ETDM Summary Report (ETDM No.12556).

Methodology

An EFH Assessment was conducted November 12, 2018 within the study area reviewed as part of this Re-evaluation. Field surveys were used to evaluate mangroves north of Ulmerton Road and along I-275 and seagrasses along the Howard Frankland Causeway and near the I-275 Bridge and 4th Street North Bridge over Big Island Gap. Field surveys were conducted by vehicle along the road and by foot along the shoreline. Additional seagrass surveys were conducted along the Howard Frankland Causeway and around Big Island Gap in June 2018 in support of Environmental Resource Permit (ERP No. 43001034.012). The results of the surveys were incorporated into this Re-evaluation analysis.

The limits of seagrass habitat were recorded using a Trimble GeoXT 6000 Series GPS and differentially corrected for accuracy. This EFH assessment included visual observation of seagrass habitat, identification of seagrass by species, documentation of other SAV and epiphytes, and identification of benthic organisms and other aquatic species.

6.3 EFH Involvement

The intent of this EFH Assessment was to evaluate whether the I-275 improvements would impact EFH designated by the NMFS and the Gulf of Mexico FMC. EFH reviewed as part of this Re-evaluation included estuarine habitats around the I-275 Bridge over Big Island Gap and around the 4th Street North Bridge. Habitat impact maps are provided in **Appendix A**.

EFH generally includes a variety of aquatic habitats, such as rivers and creeks; estuarine wetlands; estuarine scrub/shrub mangroves and other forested wetlands; SAV; oyster reefs and shell banks; intertidal flats and shorelines; and estuarine and marine water columns. Pursuant to section 305(b)(2) of the Magnuson-Stevens Act, federal agencies must consult with NMFS regarding any of its actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, that may adversely affect EFH. Measures recommended by the NMFS or any FMC to protect EFH are advisory, not proscriptive. An effective EFH consultation process is vital to ensuring that federal actions are consistent with the Magnuson-Stevens Act resource management goals. Guidance provided by NOAA (2004), states the following must accompany an EFH Assessment:

1. Description of the action,
2. Analysis of the potential adverse effects of the action on EFH and managed species,
3. Federal agency(s) conclusions regarding the effects of the action on EFH, and
4. Proposed mitigation, as applicable.

The Gulf of Mexico Fishery Management Council (GMFMC) manages 55 species for the Gulf of Mexico area. The GMFMC has identified and described EFH for 26 of the managed species. **Table 6** lists these species with their potential to occur within the study area reviewed as part of this Re-evaluation. Six EFH types were identified including: surface waters with direct connection to tidally influenced bays; three estuarine intertidal habitats (*i.e*. saltwater marsh, mangrove, and unconsolidated sand shoreline); and two estuarine subtidal habitats (*i.e*. SAV and bay bottoms). Predominant habitat types are described below.

Tidal Surface Waters (FLUCFCS, 5100)

Tidal surface waters were reviewed as part of this Re-evaluation. Tidal surface waters were observed within the Turner Creek Ditch connecting Riviera Bay to Sawgrass Lake Park near Pond 18A, a mangrove waterway interconnecting Weedon Island Preserve south of the convergence of Ulmerton Road and I-275, tidal ditches north of Ulmerton Road near the proposed pedestrian trail, around Big Island Gap, and within Tampa Bay. Impacts to tidal surface waters would occur at Big Island Gap including 0.06 acres at the 4th Street North Bridge and 0.12 acres at the I-275 Bridge.

Seagrass - discontinuous (FLUCFCS, 9113); Seagrass - continuous (FLUCFCS, 9116)

Bay waters within Tampa Bay north of the Howard Frankland Causeway and within Big Island Gap near the I-275 and 4th Street North bridges contained seagrasses; however, seagrass density varied and generally decreased near the concrete seawalls and bridge structures. The majority of seagrass observed was shoal grass, but manatee grass was present. Construction of the project areas reviewed as part of this Re-evaluation would result in additional impacts to seagrass habitat, including the pedestrian trail along the Howard Frankland Causeway (0.68 acres) and in association with widening the I-275 Bridge and the 4th Street North Bridge over Big Island Gap (0.004 acres). Formal seagrass surveys would be required to confirm presence or absence at the time of design and permitting.

Table 6. Gulf of Mexico EFH – Managed Species [1] Potential Occurrence

Fishery Management Plan	Species	Potential Occurrence[2]	Comments
Shrimp	Brown shrimp (*Penaeus aztecus*)	Low	Common in central & western Gulf of Mexico
	White shrimp (*P. setiferus*)	Low	Common in central & western Gulf of Mexico
	Pink shrimp (*P. duorarum*)	High	Occur throughout Tampa/Boca Ciega Bays
Red Drum	*Sciaenops ocellatus*	High	Occur throughout Tampa/Boca Ciega Bays
Coastal Migratory Pelagic Resources	King mackerel (*Scomberomorus cavalla*)	None	An off-shore species
	Spanish mackerel (*S. maculatus*)	Low	Off-shore/deep-water species; juveniles may inhabit estuaries; not estuarine-dependent
	Cobia (*Rachycentron canadum*)	Low	Off-shore/deep-water species; juveniles may inhabit estuaries; not estuarine-dependent
	Dolphin/dorado (*Coryphaena hippurus*)	None	An off-shore, high salinity species
	Little tunny (*Euthynnus alletteratus*)	None	An off-shore/deep-water species
Stone Crab	Florida stone crab (*Menippe mercenaria*)	Low	Prefers higher salinities
Spiny Lobster	*Panulirus argus*	None	Prefer off-shore coral reefs
Coral or Reef	Multiple groups/species	Low	Potential for scattered specimens
Reef Fish	Red grouper (*Epinephelus morio*)	None	Generally an off-shore species
	Black grouper (*Mycteroperca bonaci*)	None	Generally an off-shore species
	Gag grouper (*M. microlepis*)	Low	Prefer high salinities
	Scamp grouper (*M. phenax*)	None	Prefer deeper waters (12 – 189 meters)
	Red snapper (*Lutjanus campechanus*)	None	Prefer deeper waters (17 – 200 meters)
	Vermillion snapper (*Rhomboplites aurorubens*)	None	Prefer deeper waters (20 – 200 meters)
	Gray snapper (*L. griseus*)	High	Post-larvae & juvenile in most estuarine habitats
	Yellowtail snapper (*Ocyurus chrysurus*)	Low	Little information available. Juveniles found in *Thalassia* beds and mangrove roots
	Lane snapper (*L. synagris*)	High	Mangrove & grassy estuarine areas
	Greater amberjack (*Seriola dumerili*)	None	An off-shore species
	Lesser amberjack (*S. fasciata*)	None	An off-shore species
	Tilefish (*Lopholatilus chamaeleonticeps*)	None	An off-shore/deep-water species
	Gray triggerfish (*Balistes capriscus*)	None	An off-shore species

[1] From "Generic Amendment for Addressing EFH Requirements in the following Fishery Management Plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, U.S. Waters; Red Drum Fishery of the Gulf of Mexico; Reef Fish Fishery of the Gulf of Mexico; Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico and South Atlantic; Stone Crab Fishery of the Gulf of Mexico; Spiny Lobster in the Gulf of Mexico and South Atlantic; Coral and Coral Reefs of the Gulf of Mexico," Gulf of Mexico Fishery Management Council, October 1998. [2] Ratings are none, low, and high. Ratings based on species abundance and distribution data provided by NMFS at http://galveston.ssp.nmfs.gov/efh and http://ccma.nos.noaa.gov/products/biogeography/gom-efh/.

Saltwater Marsh (FLUCFCS 6422)

Saltwater marsh was present north of Ulmerton Road where the pedestrian trail would be constructed. Vegetation included saltgrass, black needlerush, seaside goldenrod, and bluestem with scattered mangroves. A 0.21 acre area would be impacted for construction of the pedestrian trail.

Mangrove Swamp (FLUCFCS, 6120)

Mangroves were present abutting the I-275 Bridge over Big Island Gap, near the 4th Street N Bridge, along Weedon Island Preserve, and along the proposed pedestrian trail connection from the Howard Frankland Bridge to west of Ulmerton Road. Mangroves included red mangrove, black mangrove and white mangrove. A total of 0.40 acres of mangrove impact would occur as part of the I-275 bridge work near Big Island Gap.

6.4 Analysis of Effect of EFH

Tampa Bay contains EFH utilized by federally managed species and their prey. Improvements associated with this Re-evaluation, including bridge widening over Big Island Gap, will require coordination with the NMFS. Fisheries known in Tampa Bay include the red drum (*Scianenops ocellatus*), coastal migratory pelagics, reef fish, pink shrimp (*Farfantepenaeus duorarum*), stone crab (*Minippe mercenaria*), and spiny lobster (*Panulirus argus*). Potential impacts to these species were reviewed as part of this EFH Assessment.

Red Drum is a nearshore species found in estuaries along the Gulf of Mexico, including Tampa Bay. They inhabit a range of habitats including estuaries, tidal inlets, tidal flats, seagrass, oyster reefs, as well as deep water habitats. The red drum is a euryhaline species able to adapt to a range of salinities from freshwater to very high salinity waters (Florida Museum of Natural History 2017). The red drum can also tolerate a range of temperatures. The red drum lives the majority of its lifecycle in nearshore waters and estuaries and would be expected to utilize the waters around Big Island Gap.

Estuaries provide nursery habitat for the red drum. In-water construction, including temporary and/or permanent shading or pile driving impacts associated with the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap would occur in potential red drum habitat. Habitat impacts would be minimal and permanent impacts to nursery habitat unlikely. Deterioration of water quality or loss of habitat can dramatically affect survival of juvenile red drum. In project areas where the red drum could occur, the FDOT will deploy construction BMPs and will coordinate with the NMFS should pile driving or blasting be necessary. Based on the above information and the requirement to mitigate pursuant to s.373.4137, F.S., Part IV, Chapter 373, F.S. and 33 U.S.C. §1344, and due to the ability of the species to utilize nearby habitats, impacts to this species are expected to be ***minimal***.

The **Reef Fish** FMP includes various species of snappers, groupers, triggerfishes, jacks, tilefishes, and wrasses. Gray (mangrove) snapper (*Lutjanus griseus*) is abundant in Tampa Bay. Gray snapper spawn offshore but eggs and larvae move by currents into estuaries, including seagrass and mangrove habitats. Larvae, juveniles, and smaller adults are common in seagrass and around mangrove roots, pilings, seawalls, and jetties. Juvenile snappers forage during the day in seagrass beds (Bortone and Williams 1986) and feed primarily on penaeid shrimp and crabs (Rutherford *et al.* 1989a). Adult gray snapper are nocturnal predators that consume fish, shrimp, and crabs (Harrigan *et al.* 1989; Hettler 1989).

In-water construction, including temporary and/or permanent shading or pile driving impacts associated with the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap would occur in waters potentially utilized by the gray snapper. Impacts to overall habitat would be minimal as a result of the project. In project areas where the gray snapper could occur, the FDOT will deploy construction BMPs and will coordinate with the NMFS should pile driving or blasting be necessary. Based on the above information and the requirement to mitigate pursuant to s.373.4137, F.S., Part IV, Chapter 373, F.S. and 33 U.S.C. §1344, and due to the ability of the species to utilize nearby habitat, impacts to this species are anticipated to be ***minimal***.

The **Coastal Migratory Pelagics** FMP includes estuaries along the U.S. and Mexico border south to the South Atlantic Fishery Management Council (SAFMC) boundary. The GMFMC and SAFMC joint FMP includes king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*S. maculatus*), and cobia (*Rachycentron canadum*). Species included in the fishery, but not the management unit include cero (*S. regalis*), little tunny (*Euthynnus alletteratus*), dolphin/ dorado (*Coryphaena hippurus*), and bluefish (*Pomatomus saltatrix*). Spanish mackerel, although not considered estuarine-dependent are known to occur in Tampa Bay (FWC, 2019). Due to the infrequent occurrence of this species in bays and estuaries, impacts from construction are expected to be ***minimal***.

Shrimp are included in the species management unit of the shrimp FMP, including brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), pink shrimp (*Farfantepenaeus duorarum*), and royal red shrimp (*Pleoticus robustus*). **Pink shrimp** occupy seagrass habitats and in particular, shoal grass beds. Juvenile shrimp are commonly found in estuaries where they burrow into the substrate by day and emerge at night (FWC, 2019). Juveniles inhabit estuaries around the Gulf and are abundant in Florida, and both adults and juveniles are present within Tampa Bay.

In-water construction, including temporary and/or permanent shading or pile driving impacts associated with the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap would occur in potential waters utilized by pink shrimp. In project areas where pink shrimp are expected, the FDOT will deploy construction BMPs and will coordinate with the NMFS should pile driving or blasting be necessary. Based on the above information and requirements to mitigate pursuant to s.373.4137, F.S., Part IV, Chapter 373, F.S. and 33 U.S.C. §1344, and due to the productivity of shrimp and ability of shrimp populations to rebound quickly from one year to the next, short-term and long-term impacts to this species are anticipated to be ***minimal***.

Spiny lobster has been found offshore from Tampa Bay. Although the FMP covers the Gulf regions north to Tarpon Springs, the spiny lobster is not expected to occur within the project area. The project is not expected to impact this species.

As of October 2011, the **Stone crab** fishery is solely managed by the State of Florida. Although there is no formal FMP for the stone crab, its presence is regarded as valuable throughout Florida and it contributes to the Florida fishery. It is also an important species in the assessment of EFH. There are two species of stone crabs found in Florida, including the Florida stone crab (*Menippe mercenaria*) and the Gulf stone crab (*M. adina*). These species interbreed creating a hybrid crab that displays traits from each species (FWC, 2019). The Florida stone crab is abundant in SW Florida preferring hard bottom habitats with rocky outcrops and seagrasses. The Florida stone crab occurs extensively in Tampa Bay and is harvested for food.

In-water construction associated with the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap would occur in potential waters utilized by the stone crab. The FDOT will deploy construction BMPs to protect the stone crab. Based on the above information and requirements to mitigate pursuant to s.373.4137, F.S., Part IV, Chapter 373, F.S. and 33 U.S.C. §1344, and due to the resilience of this fishery and mobility of the species, short-term and long-term impacts are anticipated to be ***minimal***.

6.5 Project Impacts

Construction of the I-275 project would impact EFH. Impacts to open bay bottom, seagrasses and/or mangroves would occur as a result of the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap and impacts to saltwater marsh would occur to construct the pedestrian trail north Ulmerton Road. The project areas evaluated as part of this Re-evaluation would result in the following additional impacts to EFH.

Table 7. Essential Fish Habitat Impacts

Essential Fish Habitat Type	WEBAR Impact Area (acres)	Design Change Impact Area (acres)	Impact Area Difference (acres)
Seagrasses (north of HFB)	0.25	1.42	0.684
Seagrasses (south of HFB)*	0.49	0.00	
Seagrasses (Big Island Gap)	0.00	0.004	
Forested saltwater wetlands	0.89	1.29	0.40
Herbaceous saltwater wetlands	0.00	0.21	0.21
Surface waters (Tidal)	0.16	0.34	0.18

* Due to northward shift to align with the Howard Frankland Bridge (HFB), seagrasses to the south of the causeway were avoided.

6.6 Avoidance, Minimization, and Mitigation

Impacts to EFH will be avoided and minimized to the greatest extent practical during project design. It is anticipated that unavoidable impacts would occur as a result the proposed pedestrian trail along the Howard Frankland Causeway and bridge widening at the I-275 Bridge and 4th Street North Bridge over Big Island Gap and impacts to saltwater marsh would occur to construct the pedestrian trail north Ulmerton Road.

Temporary impacts would be minimized by utilizing BMPs and incorporating FDOT design standards, as well as through coordination with NMFS should in-water pile driving or blasting be necessary. All seagrass habitat would be evaluated during design as part of the state-wide environmental resource permit (ERP) program under Part IV of Chapter 373 of the Florida Statutes (F.S.). Wetland and seagrass impacts that result from the construction of this project would 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.

Given the above information, this project is expected to have ***minimal*** impact on EFH.

7.0 Anticipated Permits

It is anticipated that the following permits will be required to construct the project:

Agency	Permit
SWFWMD	Individual Environmental Resource Permit
USACE	Section 404 Individual Dredge and Fill Permit
USCG	Bridge Permit for I-275 at Big Island Gap Bridge and 4th Street North Bridge
FDEP	National Pollutant Discharge Elimination System Permit

8.0 Conclusion

8.1 Protected Species & Habitat

Federally protected wildlife observed or with the potential to occur within the study area reviewed as part of this Re-evaluation included fish (Gulf sturgeon and small-tooth sawfish), reptiles (sea turtles and Eastern indigo snake), birds (wood stork, piping plover, and rufa red knot), and mammals (West Indian manatee). The following findings were made for federally protected species.

Federal Listed Species	Status	Project Impact Determination
Gulf sturgeon (*Acipenser oxyrinchus desotoi*)	T	***may affect, not likely to adversely affect***
Small-tooth sawfish (*Pristis pectinata*)	E	***may affect, not likely to adversely affect***
Loggerhead (*Caretta caretta*), green (*Chelonia mydas*), or Kemp's ridley (*Lepidochelys kempii*) sea turtles	T, T, E	***may affect, not likely to adversely affect***
Eastern indigo snake (*Drymarchon corais couperi*)	T	***may affect, not likely to adversely affect***
Wood stork (*Mycteria americana*)	T	***may affect, not likely to adversely affect***
Piping plover (*Charadrius melodus*)	T	***may affect, not likely to adversely affect***
Red knot (*Calidris canutus rufa*)	T	***may affect, not likely to adversely affect***
West Indian manatee (*Trichechus manatus latirostris*)	T	***may affect, not likely to adversely affect***

Although the bald eagle is no longer listed as threatened or endangered, it remains protected by the MBTA and BGEPA. Because this project will be consistent with the BGEPA and MBTA, it is anticipated that the project will not impact the bald eagle. Osprey nests are also protected by the MBTA. Since the FDOT will adhere to state and federal requirements that protect osprey nests; it is anticipated that the project will not impact the osprey.

Designated critical habitat does not fall within the project limits. Therefore, the proposed project will not result in the destruction or adverse modification of critical habitat.

State-protected species known to occur or with the potential to utilize habitat within the project study area reviewed as part of this Re-evaluation include two reptiles and a variety of avian species. The project would be expected to result in the following impacts to state protected species.

State Listed Species		Protection Status 2016	Protection Status 2019	Project Impact Determination
Gopher tortoise		T	T	***No adverse effect anticipated***
Short-tailed snake		T	T	***No effect anticipated***
Wading birds	Roseate spoonbill (*Ajaja ajaja*)	SSC	T	***No adverse effect anticipated***
	Little blue heron (*Egretta caerulea*)			
	Reddish egret (*Egretta rufescens*)			
	Tricolored heron (*Egretta tricolor*)			
Nesting shorebird	American oystercatcher (*Haematopus palliatus*)	SSC,	T	***No adverse effect anticipated***
	Snowy plover (*Charadrius alexandrinus*)	T		
	Least tern (*Sternula antillarum*)	T		
	Black skimmer (*Rynchops niger*)	SSC		
Florida burrowing owl		SSC	T	***No effect anticipated***

Nine state-protected plants potentially occur within the project study area reviewed as part of this Re-evaluation area; none were observed.

A determination of ***no effect*** is anticipated for protected plants.

Wetlands and Surface Waters

Wetlands and surface waters were identified as part of this Re-evaluation to quantify impacts due to changes associated with the Re-evaluation design concept. A summary of impacts within the project areas reviewed as part of this Re-evaluation is provided below.

8.2 Wetland

Wetlands were characterized and quantified within the project areas reviewed as part of this Re-evaluation. Impacts were approximated based on the conceptual design. Due to the design change, the project is expected to result in the following additional impacts.

Wetland or Surface Water Type	WEBAR Impact Area (acres)	Design Change Impact Area (acres)	Impact Area Difference (acres)
Seagrasses (north of HFB)	0.25	1.42	0.684
Seagrasses (south of HFB)*	0.49	0.00	
Seagrasses (Big Island Gap)	0.00	0.004	
Forested saltwater wetlands	0.89	1.29	0.40
Herbaceous saltwater wetlands	0.00	0.21	0.21
Forested freshwater wetlands	0.59	3.08	2.49
Non-forested freshwater wetlands	0.15	0.59	0.44
Surface waters (Tidal)	0.16	0.34	9.78
Surface waters (Freshwater)	4.53	14.13	

* Due to northward shift to align with the Howard Frankland Bridge (HFB), seagrasses to the south of the causeway were avoided

Wetland impacts would be avoided and minimized to the greatest extent practical during project design and permitting. Final mitigation requirements would be determined during permitting based on the project design and using the UMAM habitat scoring of impacts at that time. All jurisdictional wetland impacts that result from the construction of this project would 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.

8.3 Essential Fish Habitat

An EFH Assessment was conducted within the study area reviewed as part of this Re-evaluation. Impacts were approximated based on the conceptual design. Due to the design change, the project is expected to result in the following additional impacts.

Essential Fish Habitat Type	WEBAR Impact Area (acres)	Design Change Impact Area (acres)	Impact Area Difference (acres)
Seagrasses (north of HFB)	0.25	1.42	0.684
Seagrasses (south of HFB)*	0.49	0.00	
Seagrasses (Big Island Gap)	0.00	0.004	
Forested saltwater wetlands	0.89	1.29	0.40
Herbaceous saltwater wetlands	0.00	0.21	0.21
Surface waters (Tidal)	0.16	0.34	0.18

* Due to northward shift to align with the Howard Frankland Bridge (HFB), seagrasses to the south of the causeway were avoided.

Based on requirement to utilize standard water quality protection measures during construction, including regulatory requirements to protect Outstanding Florida Waters (OFW), as well as requirements to coordinate with NMFS for in-water work associated with pile driving and/or blasting and to provide mitigation for project impacts, the project is expected to ***minimally*** impact EFH or species listed in the FMPs of the GMFMC. Mitigation will be provided pursuant to s.373.4137, F.S., Part IV, Chapter 373, F.S. and 33 U.S.C. §1344.

9.0 Implementation Measures

Measures required to be implemented by the FDOT per construction procedure, standard specifications, or other agency requirements issued in a later project phase are listed below to help address project effects and facilitate efficient review of this NRE.

- Water quality impacts from construction will be avoided and minimized through the implementation of BMPs including, but not limited to, construction phasing, sediment barriers, floating turbidity curtains, silt fences, and other techniques identified during design and permitting by the regulatory agencies and later during construction by the selected contractor.
- Activities proposed to occur over an OFW must not reduce existing water quality. Activities proposed to discharge to an OFW typically require additional stormwater treatment. Public Interest Criteria will also need to be addressed as part of the review of impacts to an OFW.
- If a gopher tortoise or a potentially occupied burrow is discovered in or within 25’ of the project construction corridor, the FDOT will coordinate with the FWC to secure a Gopher Tortoise Relocation Permit.
- If a bald eagle nest is identified within 660 feet of the project prior to or during construction, FDOT will coordinate with the USFWS and the FWC in accordance with the BGEPA and MBTA and will adhere to the USFWS *Bald Eagle Management Guidelines*.
- Surveys to update locations of active osprey nest site(s) will be conducted during the permitting phase of the project. If an osprey nest is identified, FDOT will coordinate with the USFWS and/or the FWC depending on the activity status of the nest.
- The FDOT will conduct benthic surveys during the seagrass growing season (June-September) to support the permit approval process.
- The FDOT will re-initiate informal Endangered Species Act Section 7 consultation with the USFWS for the Gulf sturgeon and manatee during future project phases.

10.0 Commitments

To ensure that adverse impacts will not occur to protected species or habitat, wetlands or surface waters, or essential fish habitat as a result of the project, the FDOT will abide by standard protection measures in addition to the following commitments:

- The FDOT will implement the USACE *Standard Manatee Conditions for In-Water Work* (most current version) and will incorporate guidelines per the FDOT Program Management Standard Specifications included in the July 2019 Workbook. These guidelines will be incorporated as part of the final project design.
- Additional special conditions for manatees will be addressed during construction and include the following:
    - Barges will be equipped with fender systems that provide a minimum standoff distance of four feet between wharves, bulkheads and vessels moored together to prevent crushing manatees. All existing slow speed or no wake zones will apply to all work boats and barges associated with construction; and
    - Although culverts are unlikely for this project, any culverts larger than eight inches and less than eight feet in diameter should be grated to prevent manatee entrapment. The spacing between the bridge pilings will be at least 60 inches to allow for manatee movement in between the pilings. If a minimum of 60-inch spacing is not provided between piles, further coordination will be conducted with the USFWS.
- The FDOT will implement a Marine Wildlife Watch Plan (MWWP) for the West Indian manatee during project construction to eliminate the possibility of construction-related manatee injury or death.
- The FDOT will inform the construction contractor of the requirements to adhere to the most current NMFS's *Sea Turtle and Smalltooth Sawfish Construction Conditions* during project construction.
- The FDOT will inform the construction contractor of the requirement to adhere to the most current NMFS's the *Construction Special Provisions - Gulf Sturgeon Protection Guidelines* for the protection of the Gulf Sturgeon.
- The FDOT will coordinate with the NMFS if in-water acoustical work is required in association with pile driving and/or blasting to facilitate construction of the pedestrian trail north of the Howard Frankland Causeway and the I-275 Bridge and the 4th Street North Bridge over Big Island Gap.
- The size/style of piles, quantity of piles, number of piles driven per day, number of strikes per pile, and other information needed to determine potential hydroacoustic impacts to marine wildlife is currently unknown. The FDOT will continue coordination with the NMFS, USFWS, and the USACE (as appropriate) on potential impacts associated with pile driving activities.
- The contractor would be required to use a ramp-up procedure during the installation of piles. This procedure allows for a gradual increase in noise level to give sensitive species ample time to flee prior to initiation of full noise levels. This approach can also reduce the likelihood of any secondary or sub-lethal effects from sound impulses associated with pile driving.

- No blasting is proposed. If blasting is required, formal Section 7 Consultation will be re-initiated with the USFWS for the manatee and with the NMFS for swimming sea turtles, the smalltooth sawfish, and the Gulf sturgeon. A blast plan and MWWP would be developed and submitted to the USFWS, NMFS and FWC for their approval prior to beginning blasting activities.
- No nighttime in-water work will be performed. In-water work will be conducted from official sunrise until official sunset times.
- The FDOT will adhere to the most current version of USFWS *Standard Protection Measures for the Eastern Indigo Snake* during construction.
- The FDOT will ensure nesting shorebird protection during construction by surveying appropriate habitat during the nesting season.

11.0 References

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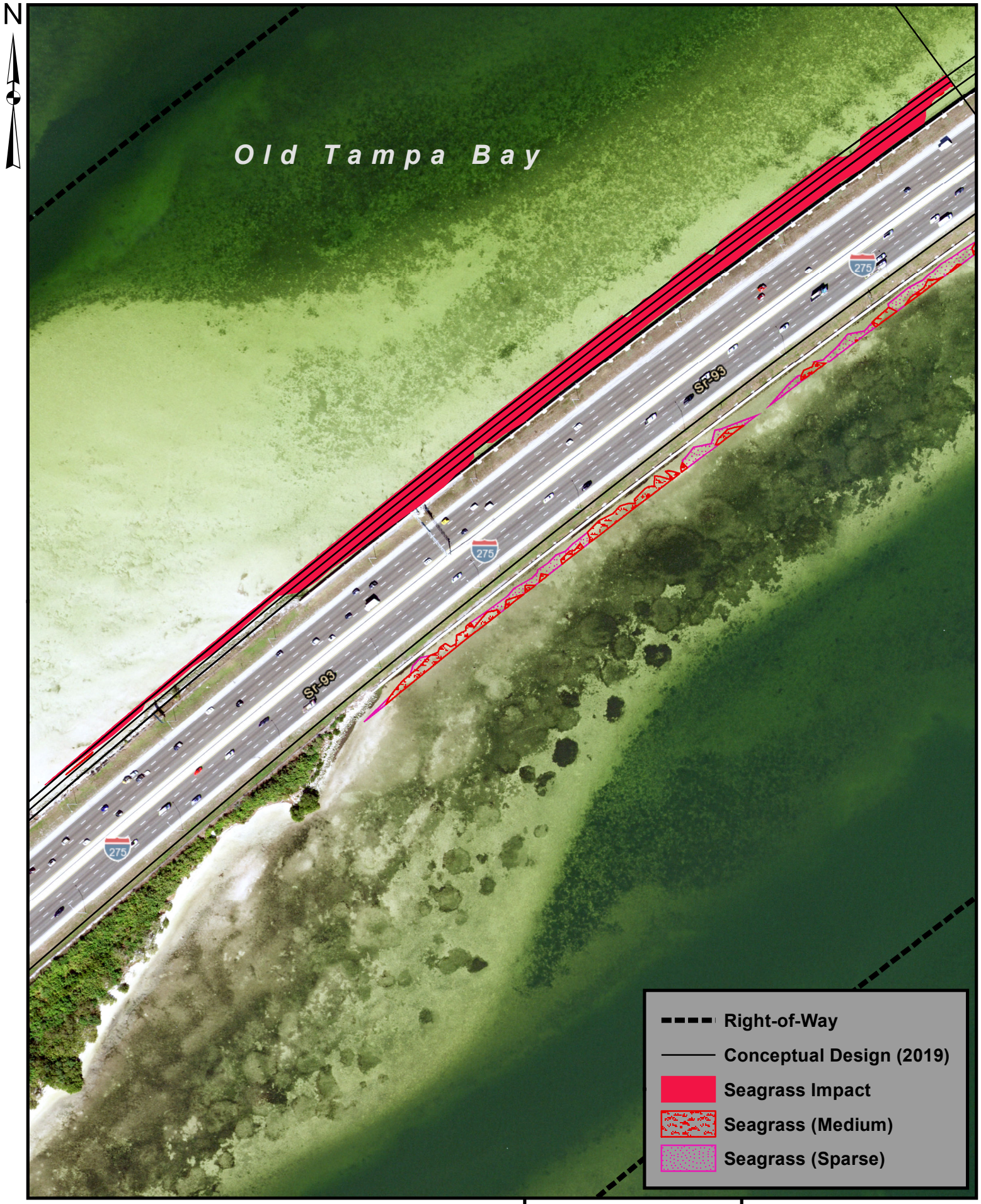
Appendix A

WETLAND AND SEAGRASS IMPACT MAPS



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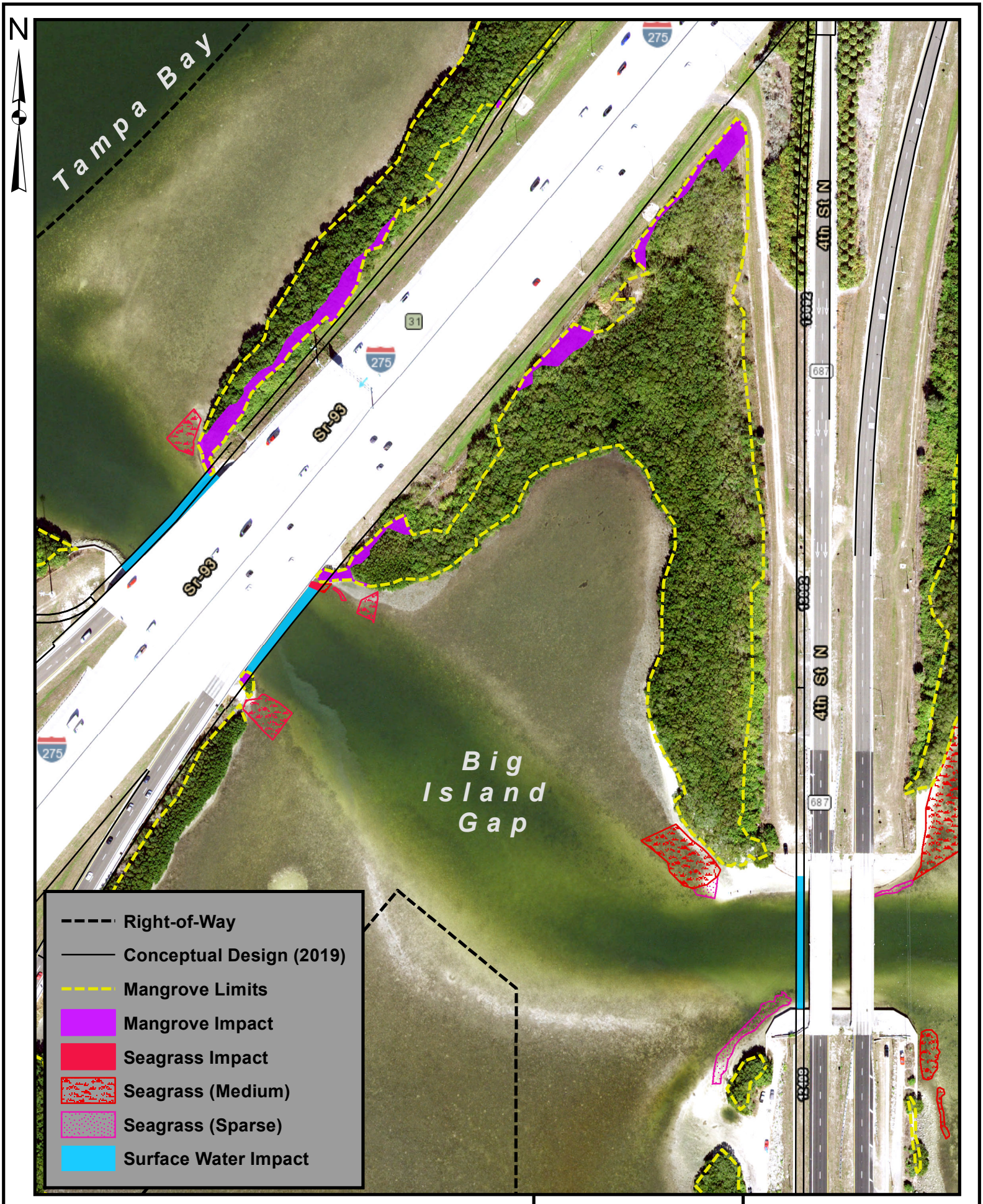

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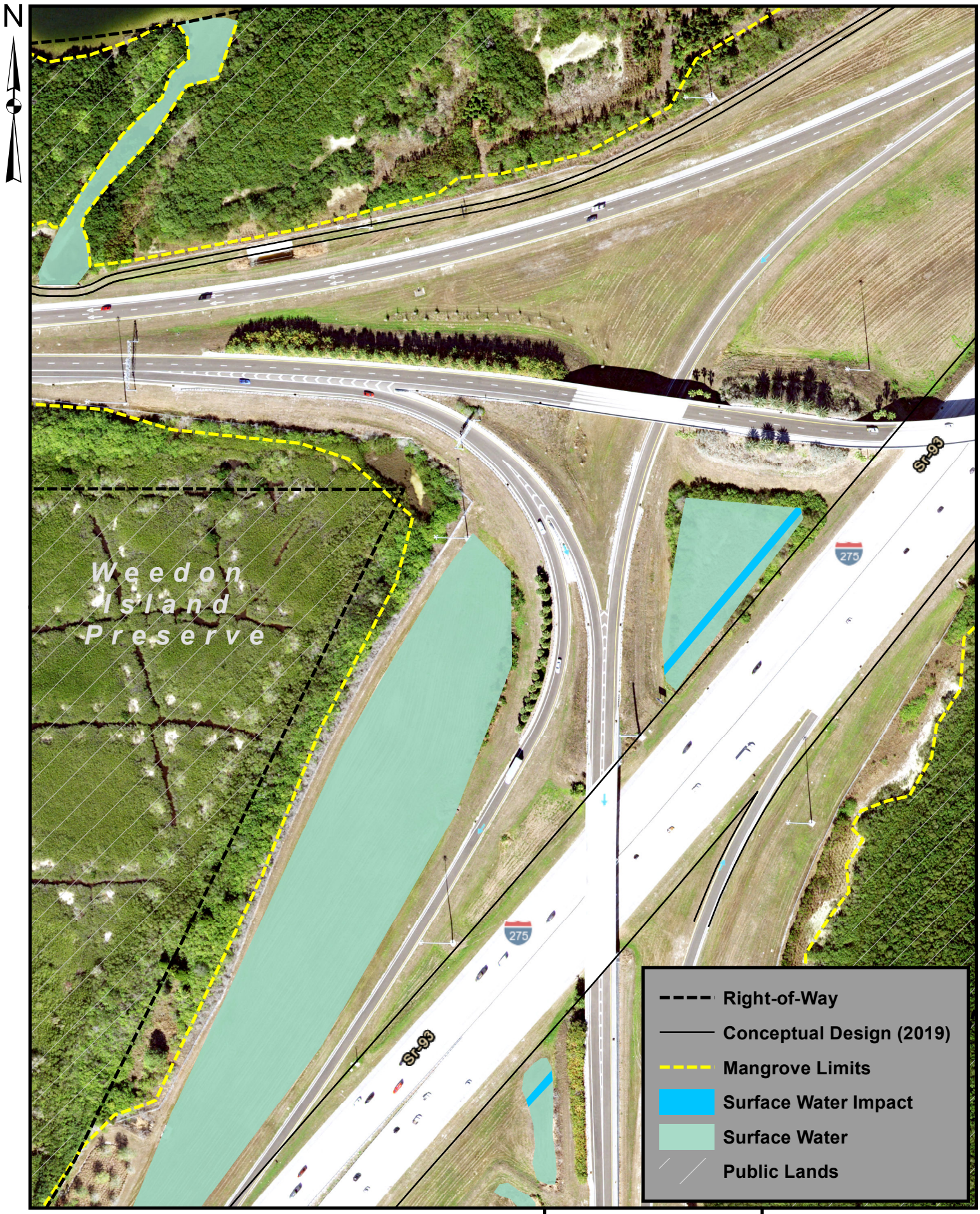

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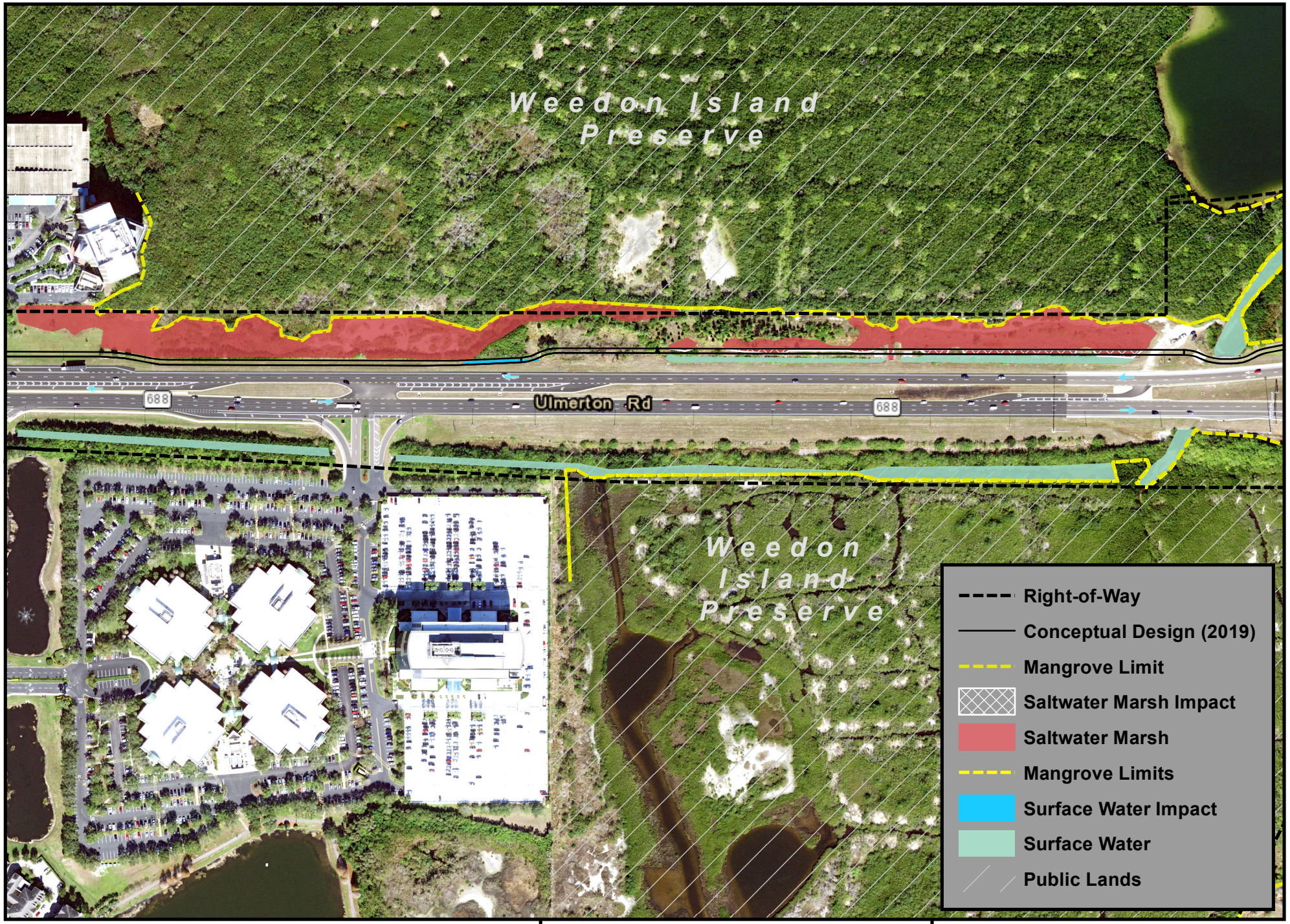

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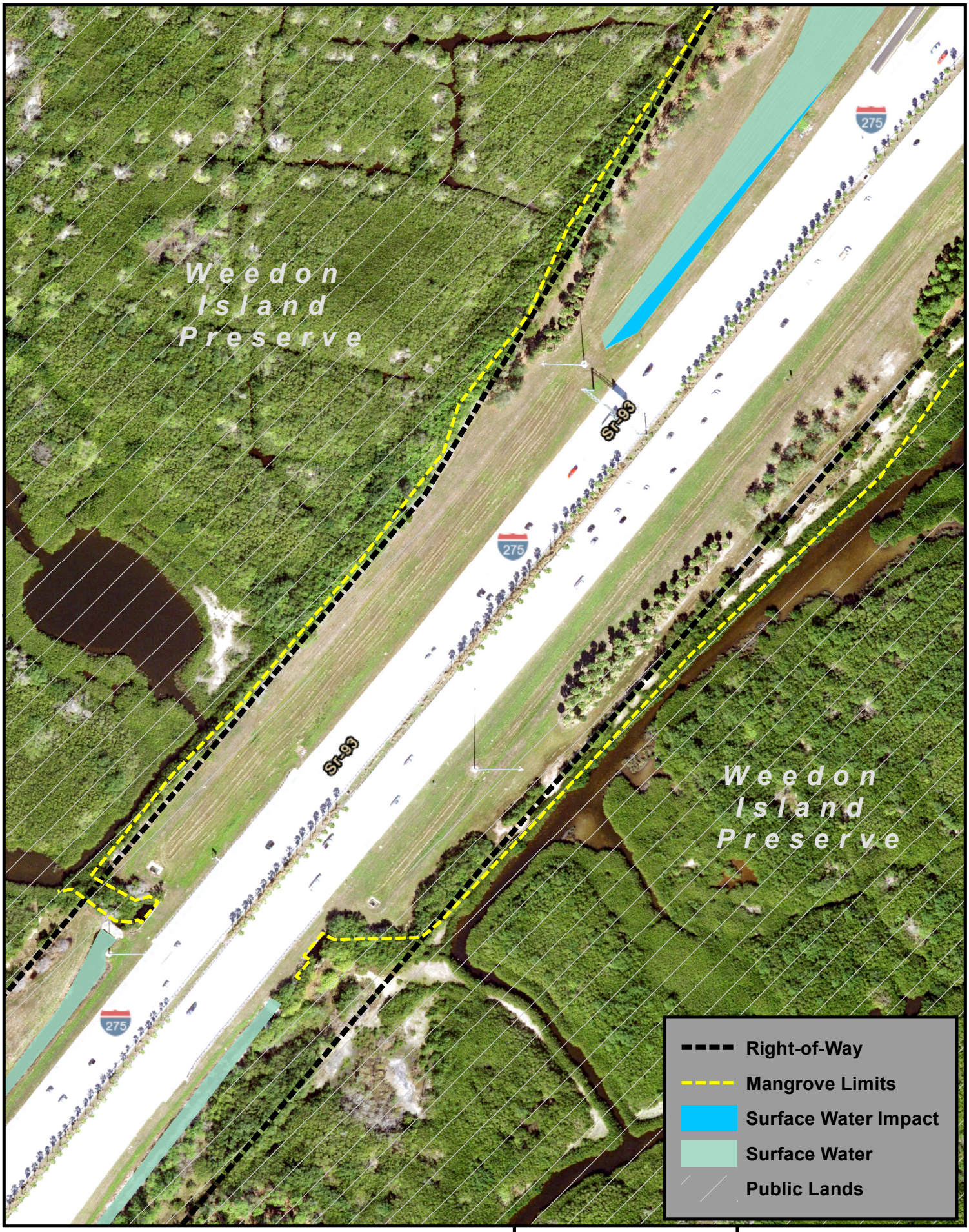

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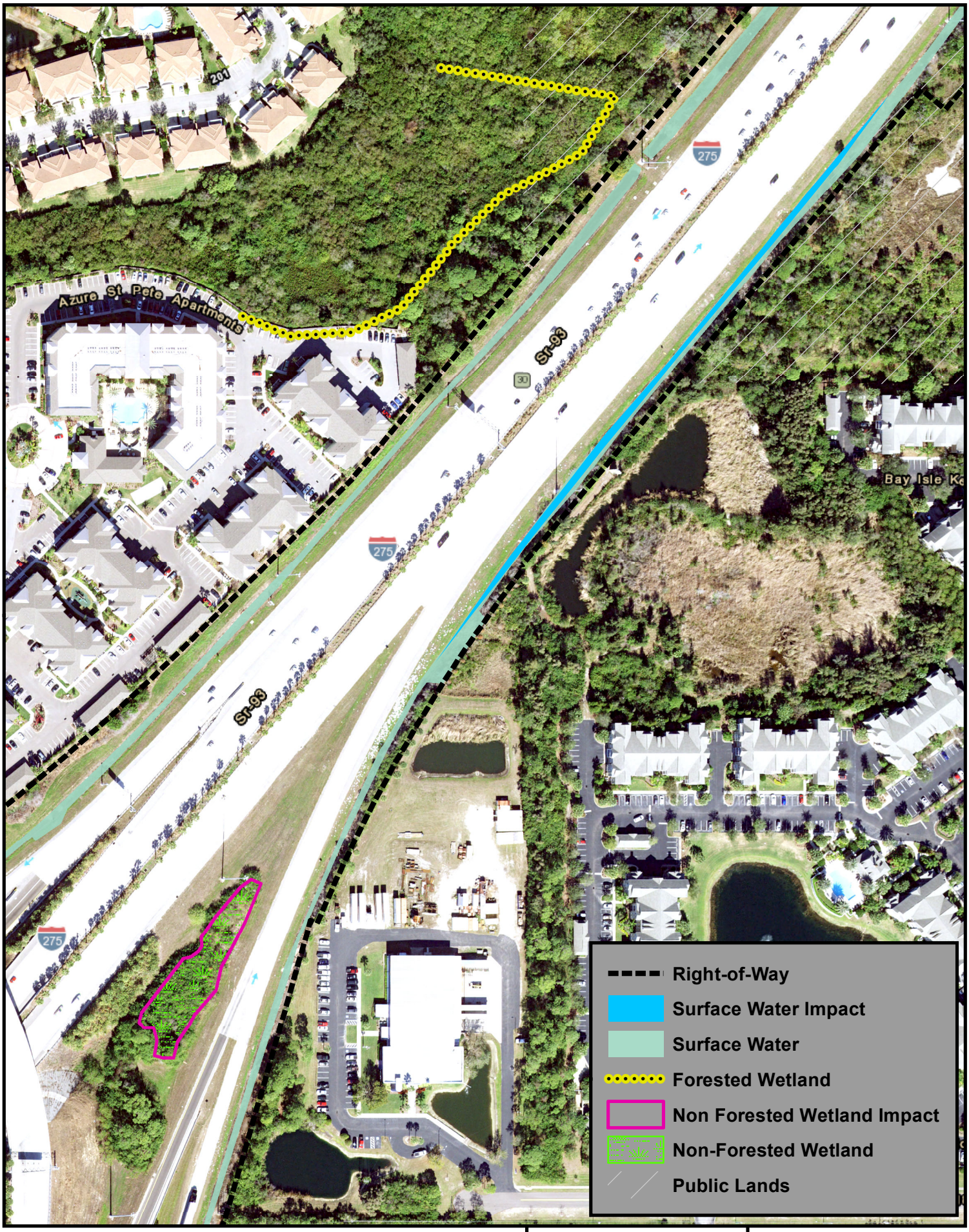

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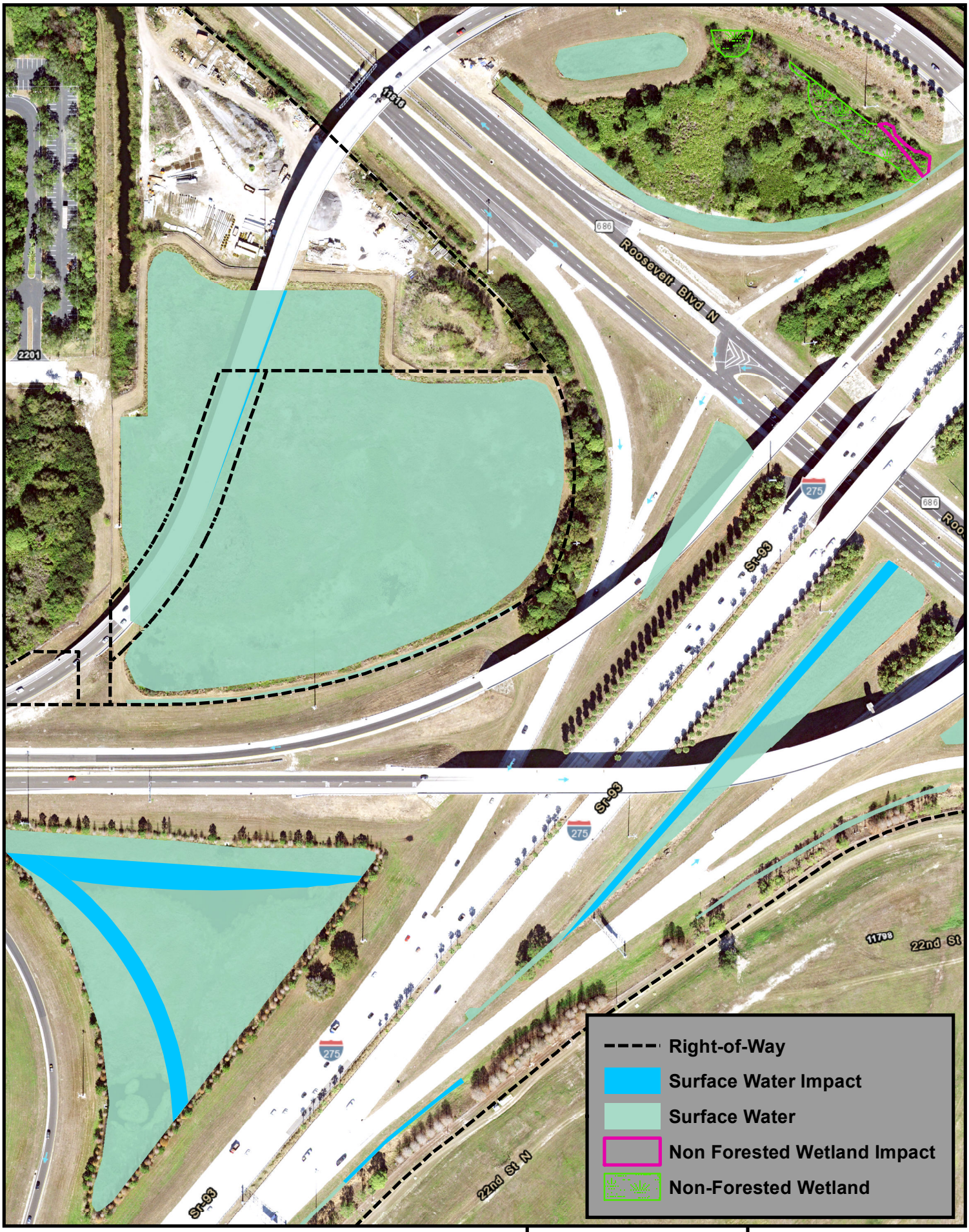

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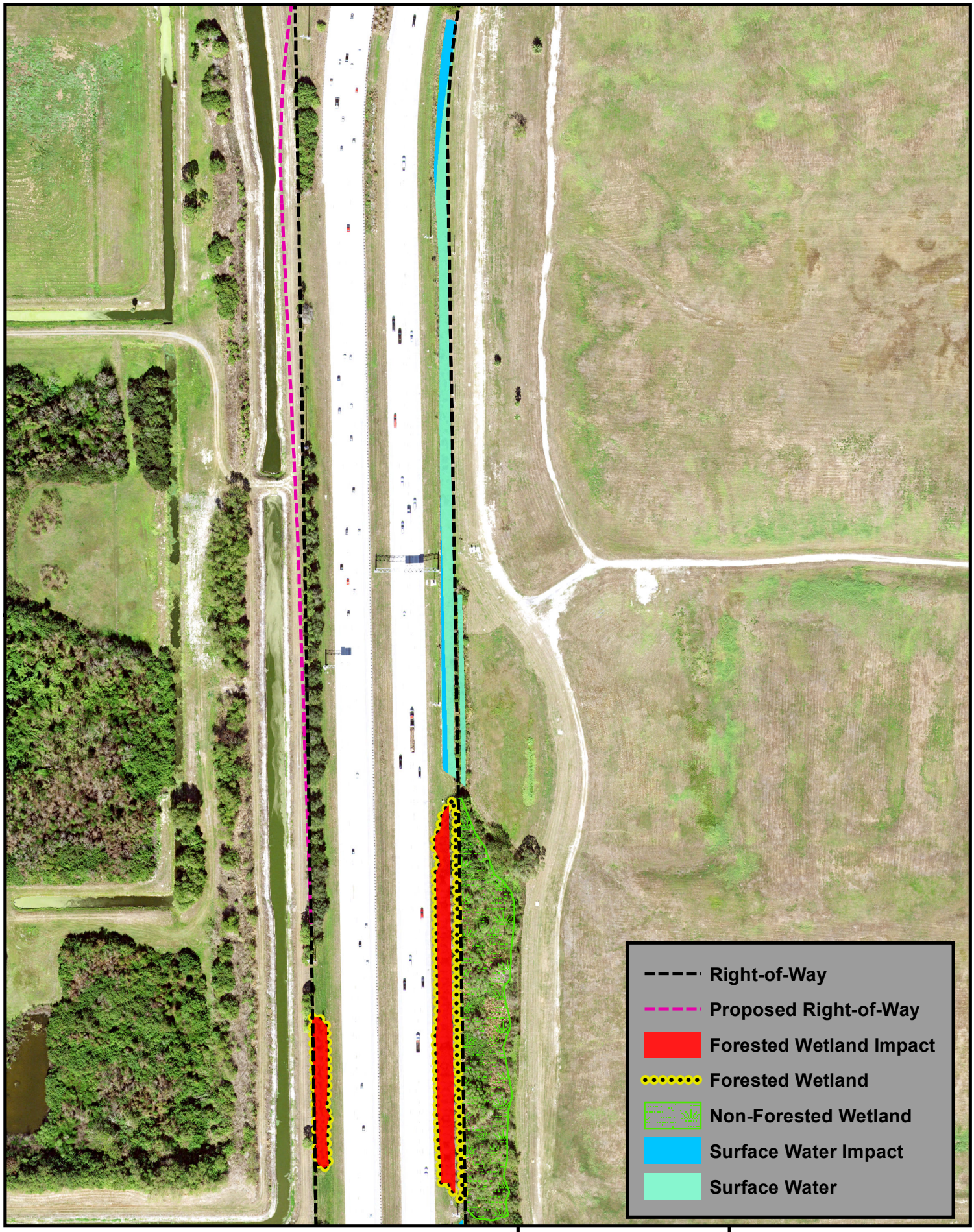

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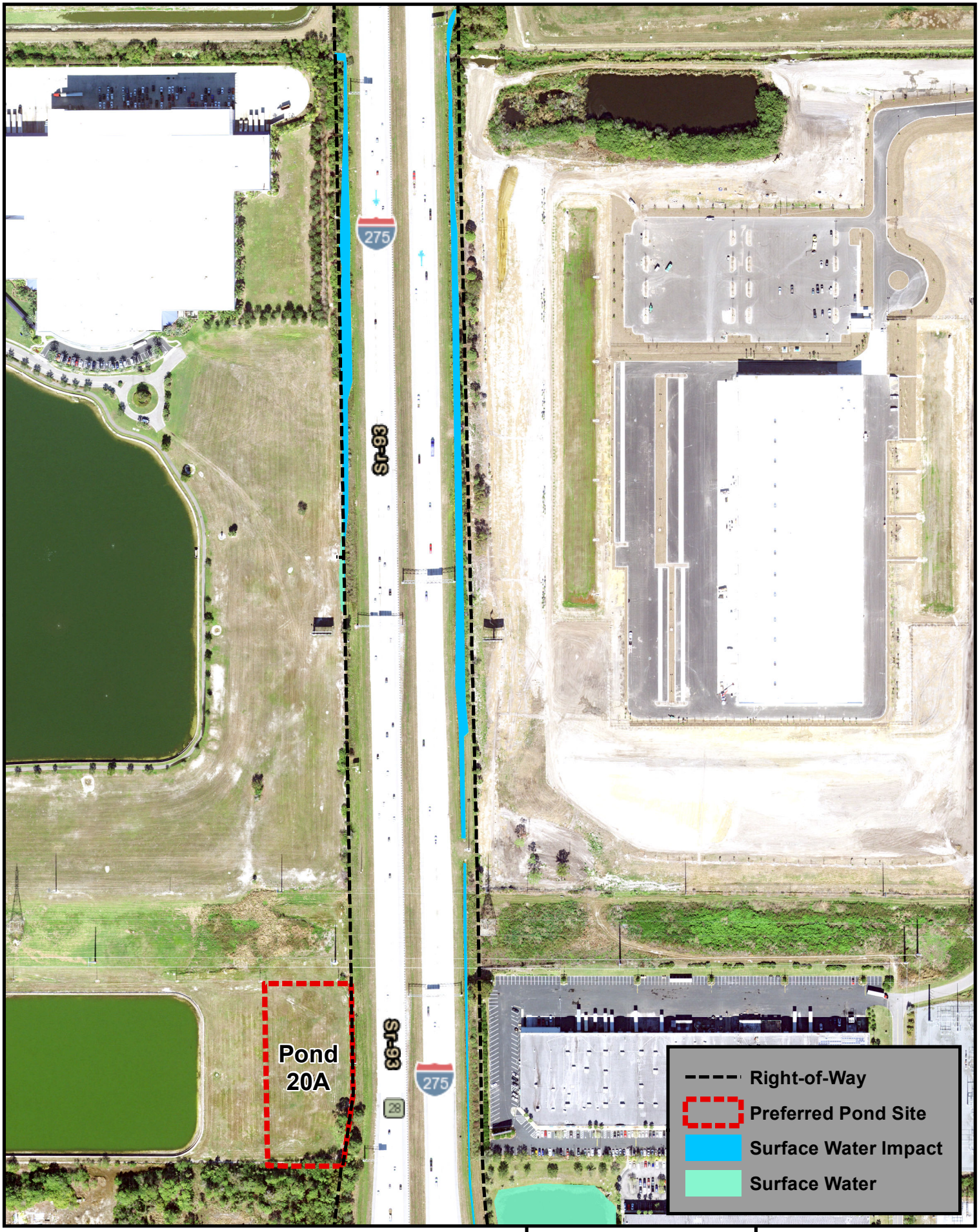

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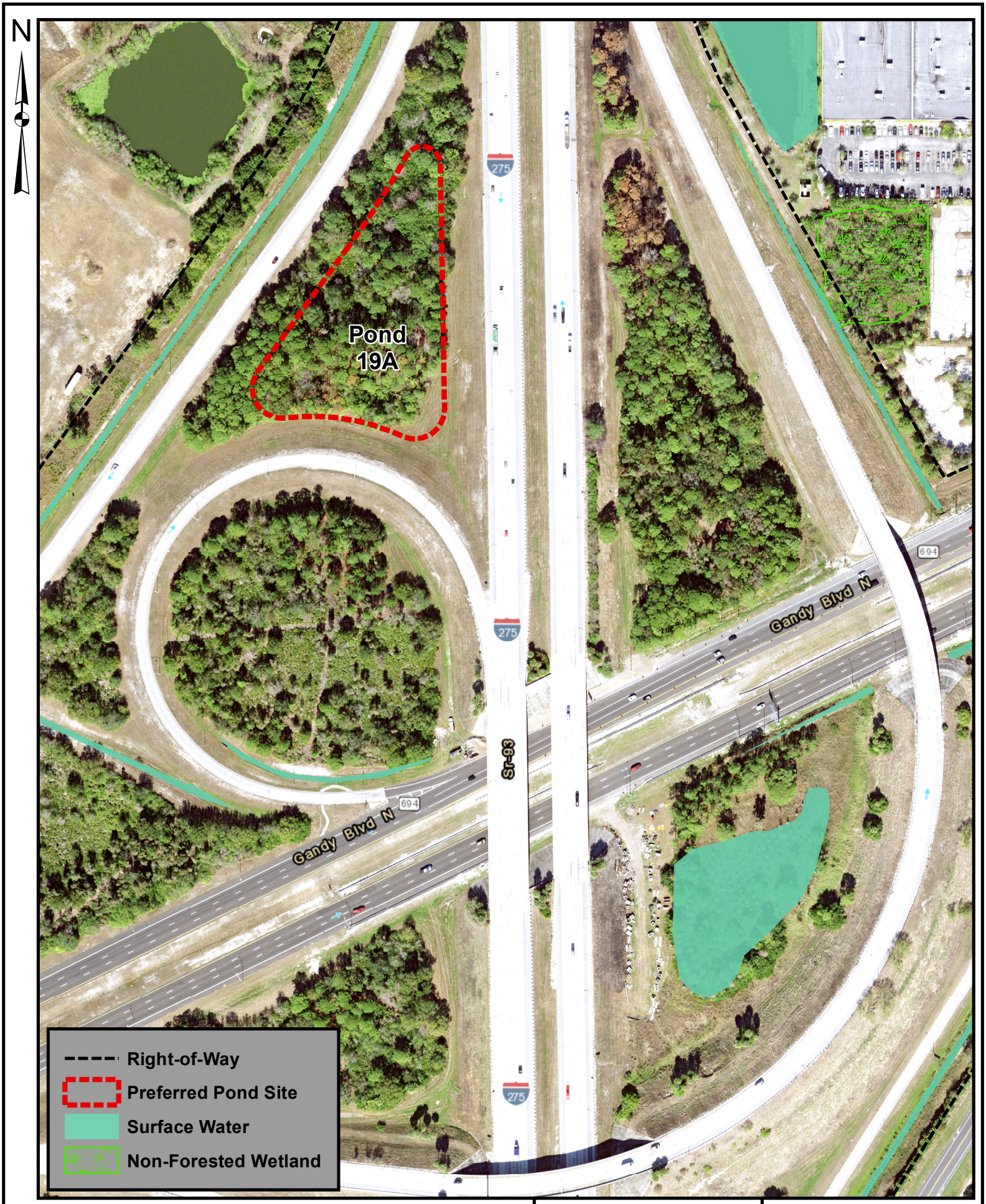

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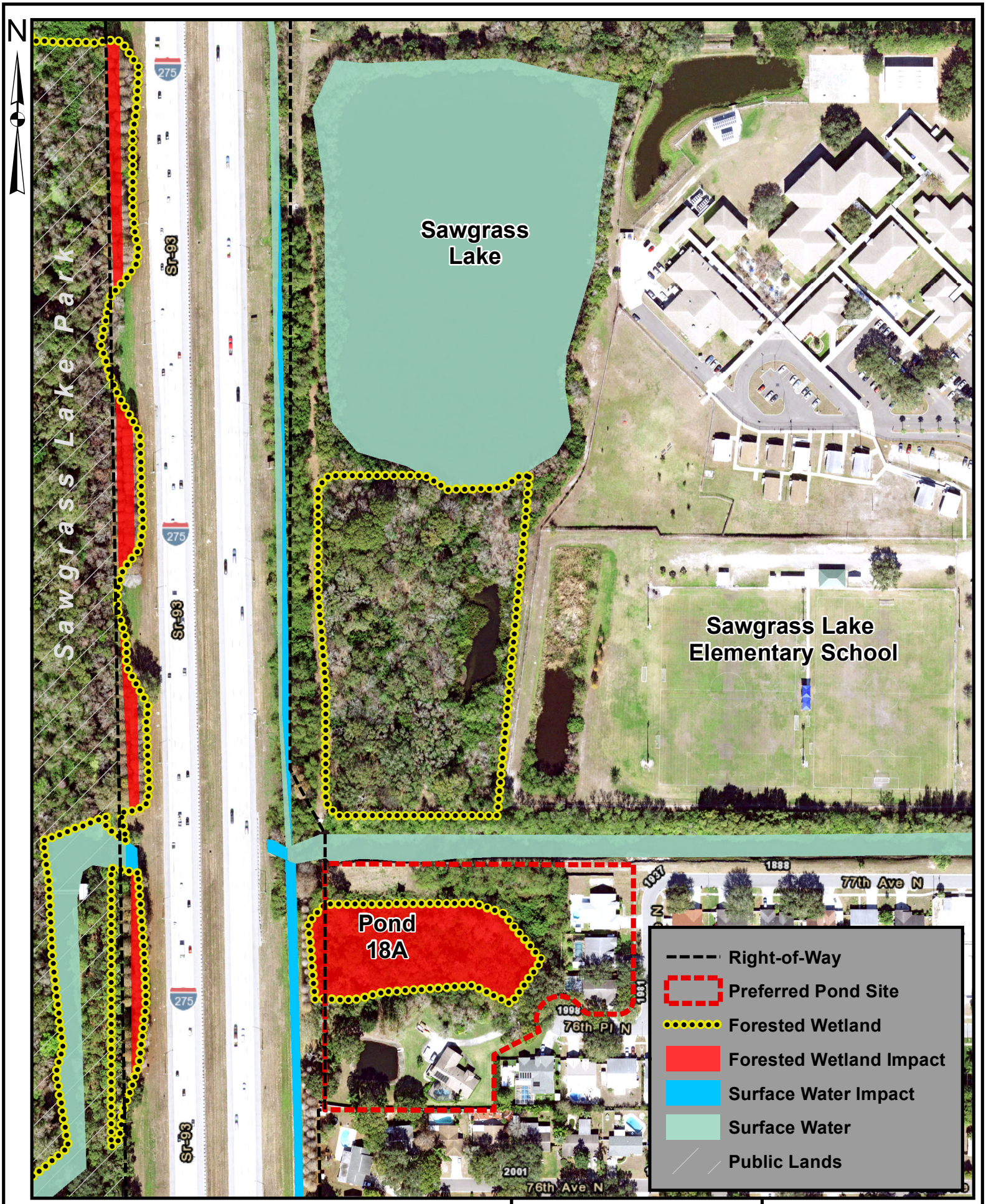

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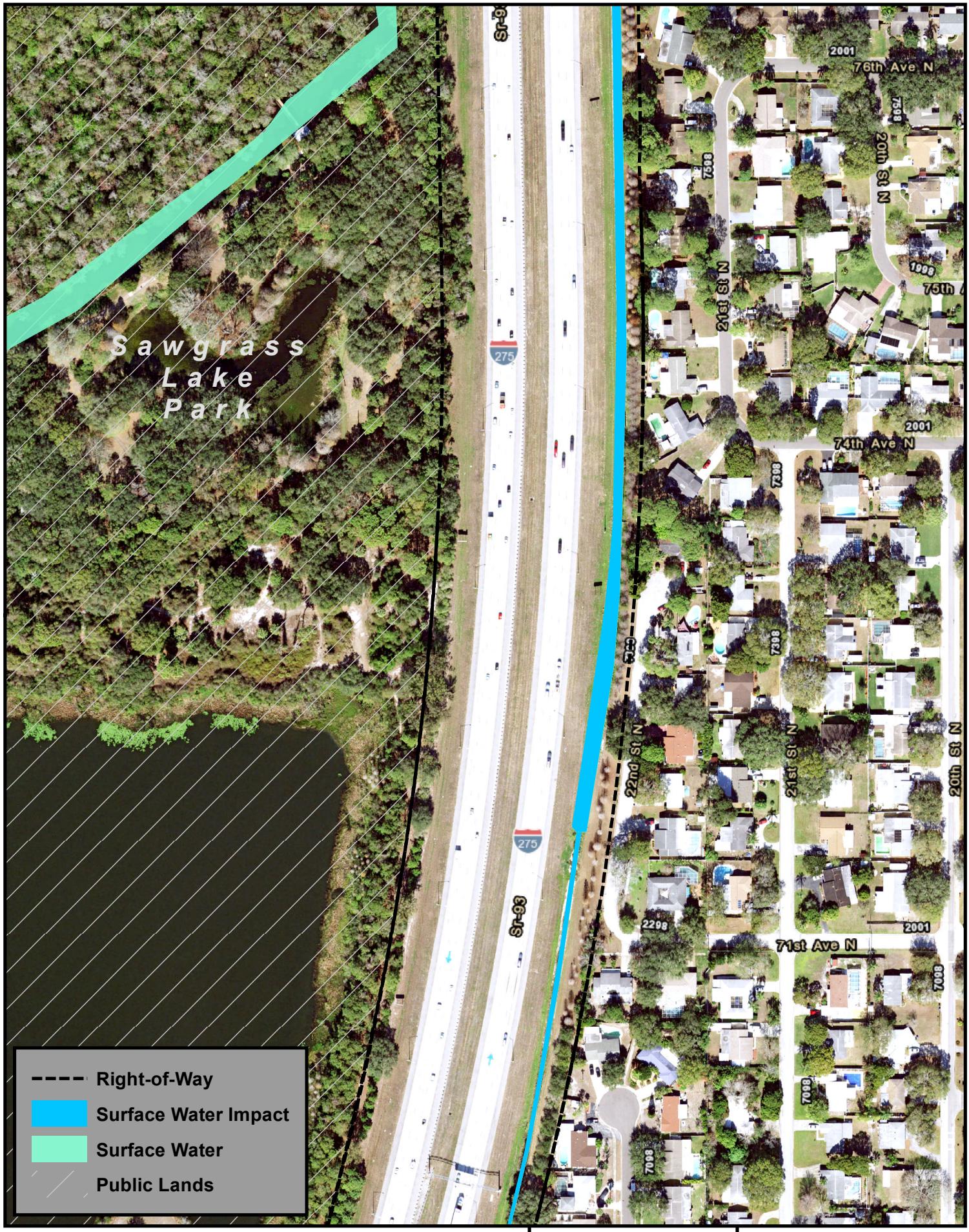

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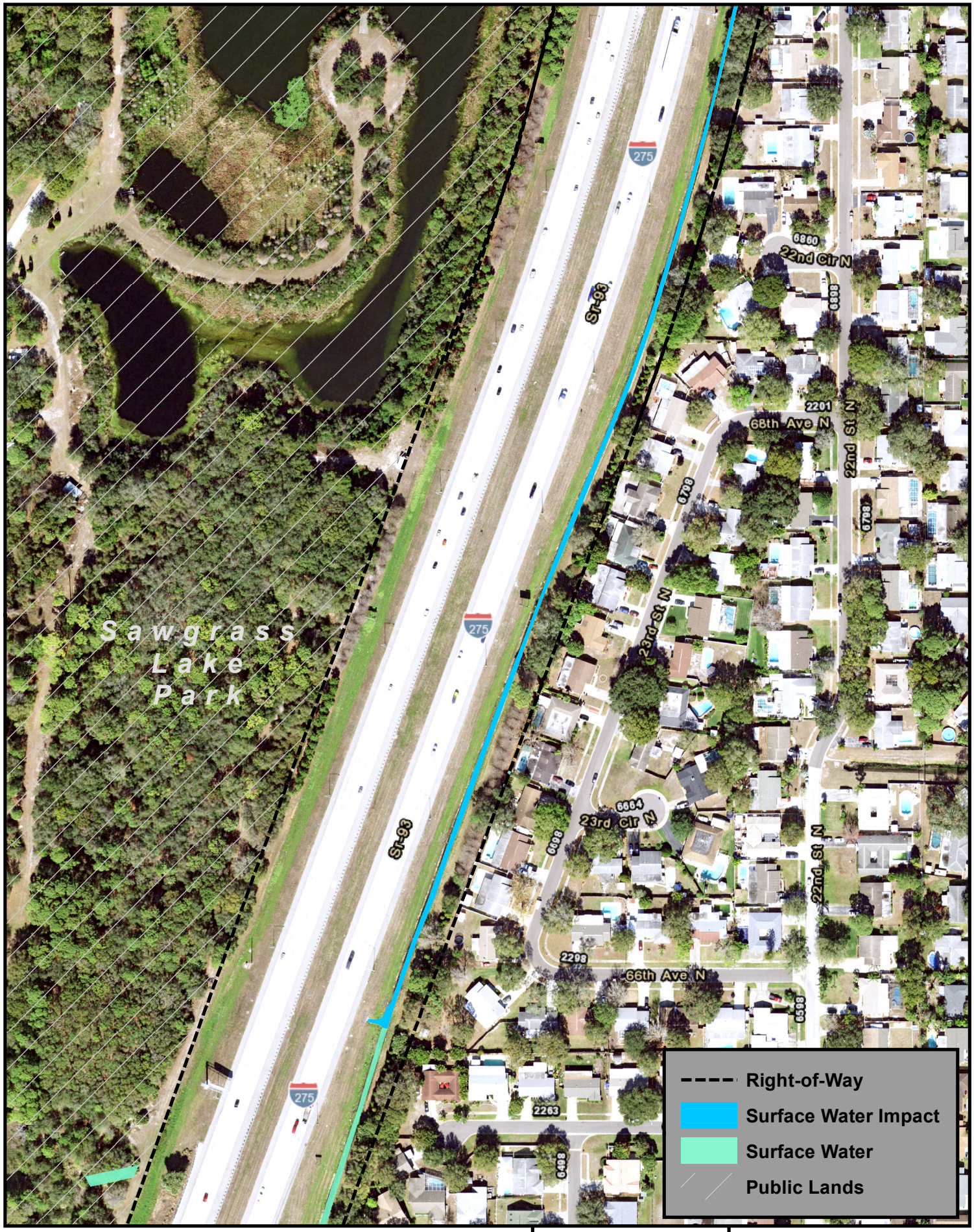

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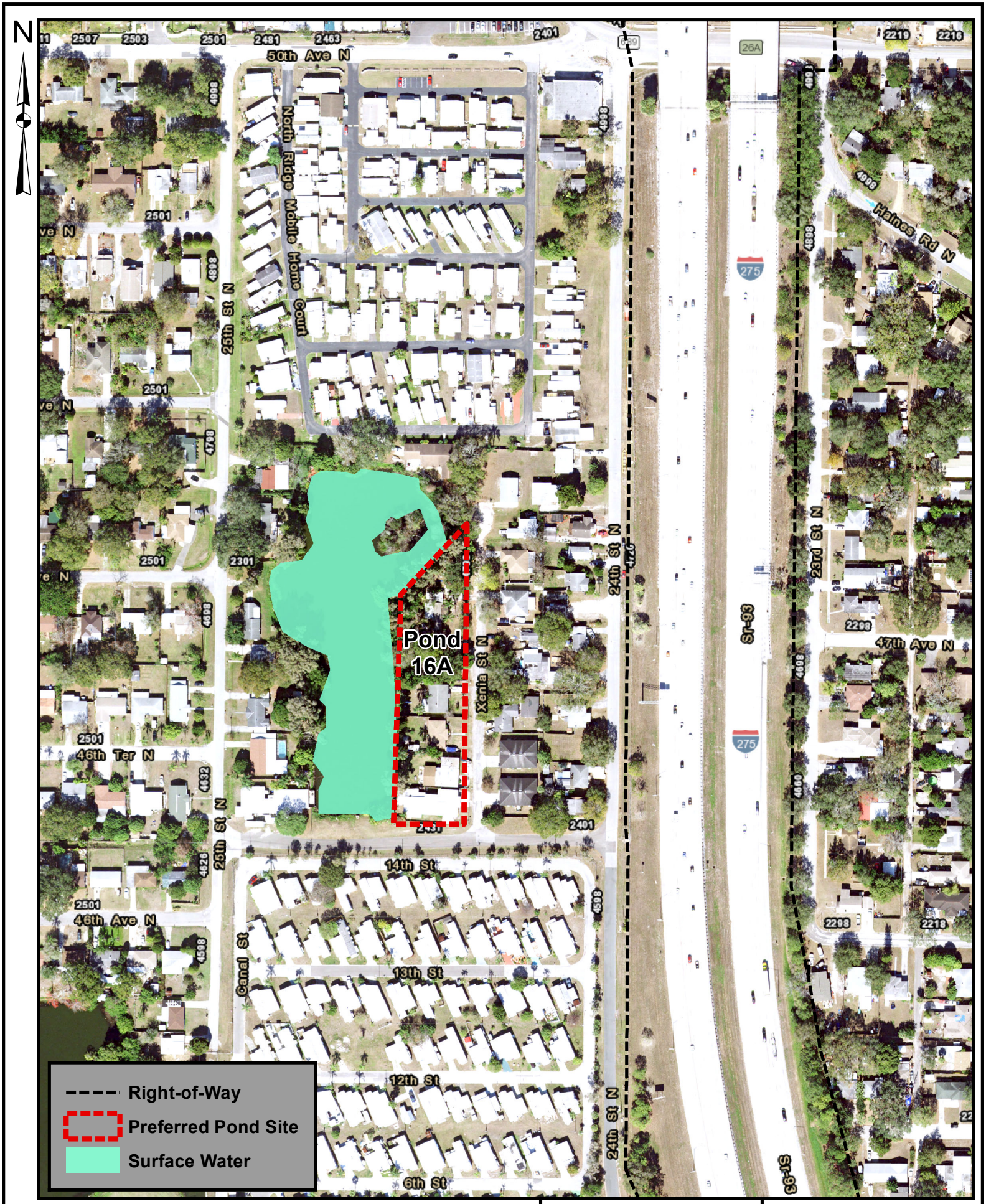

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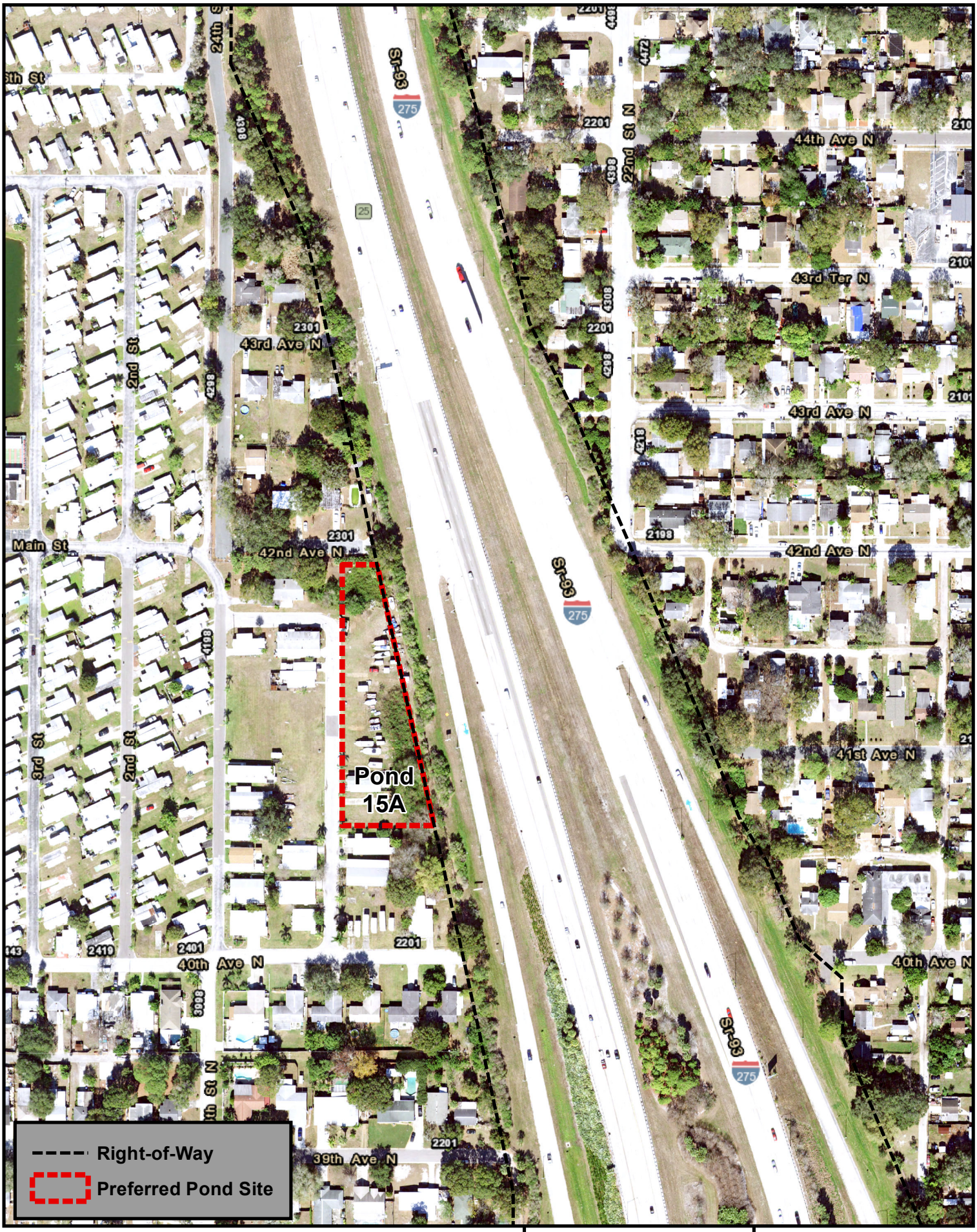

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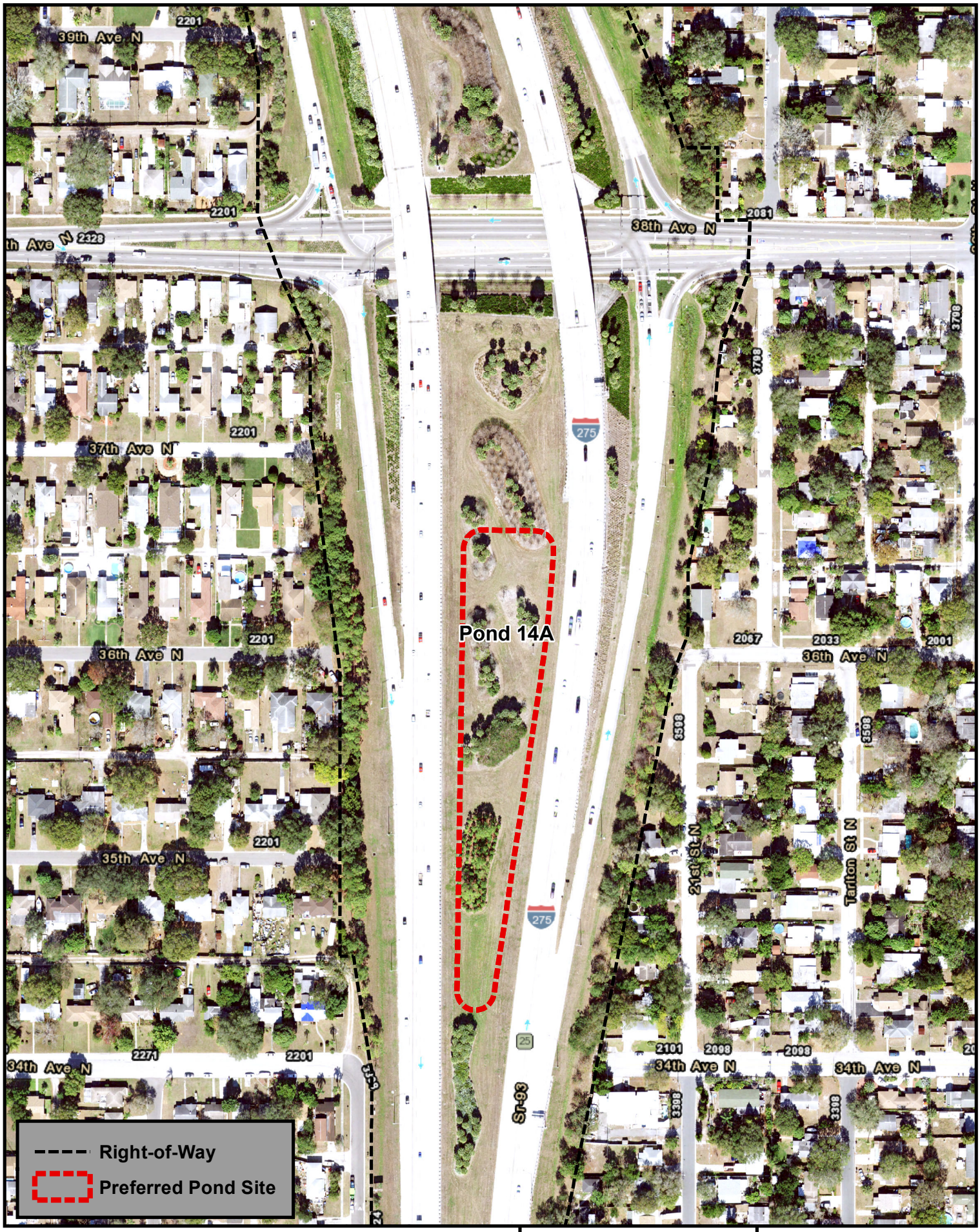

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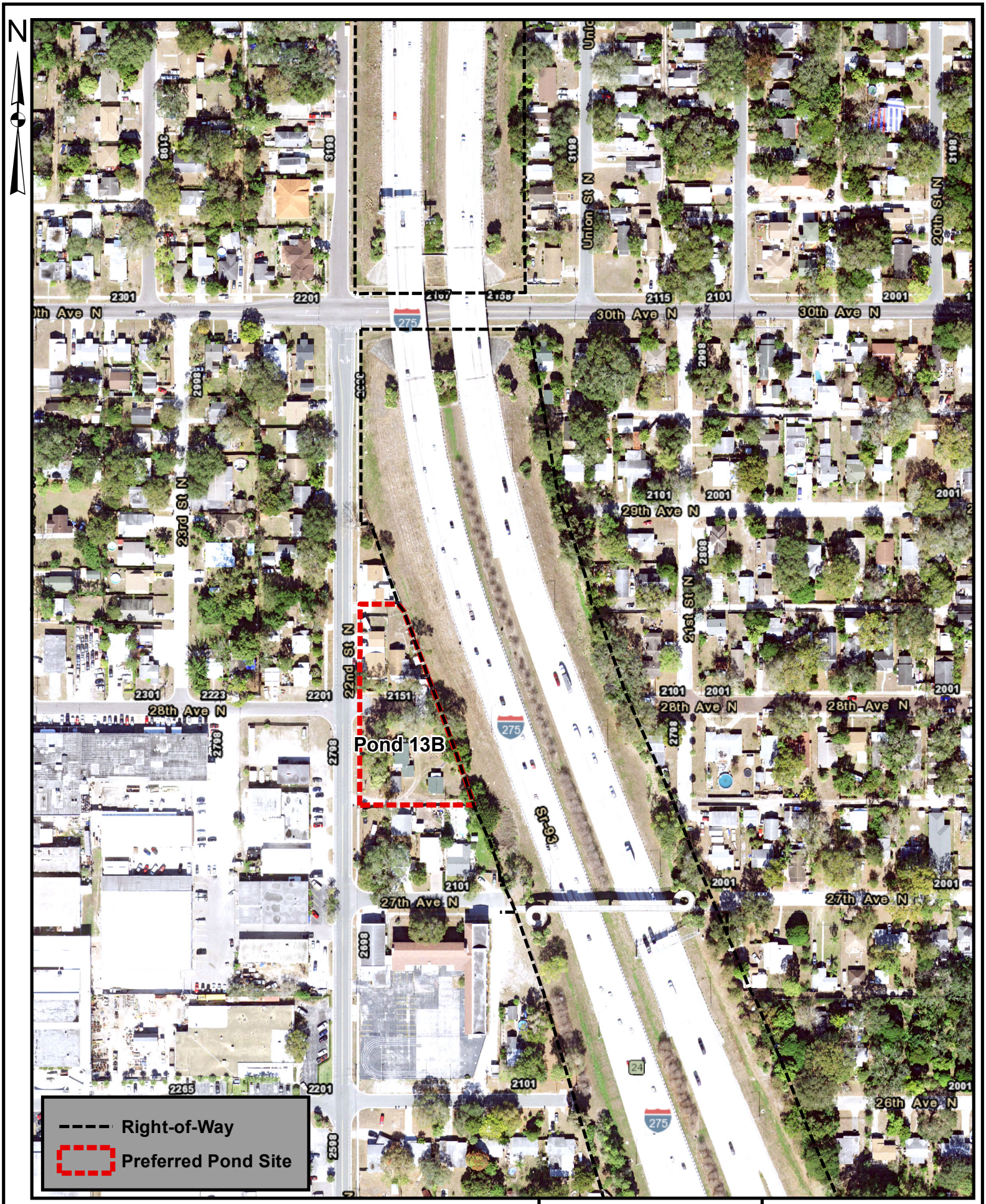

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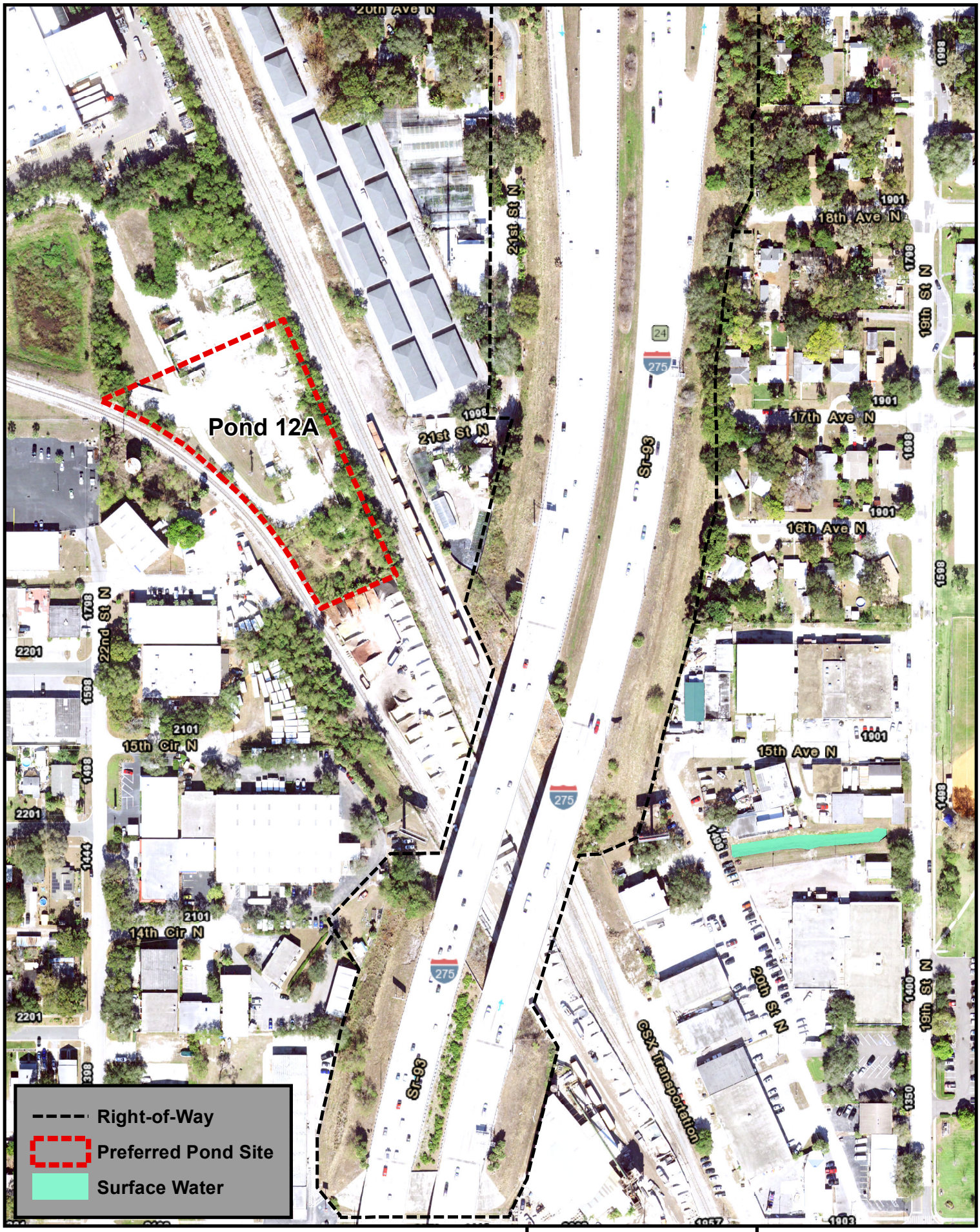

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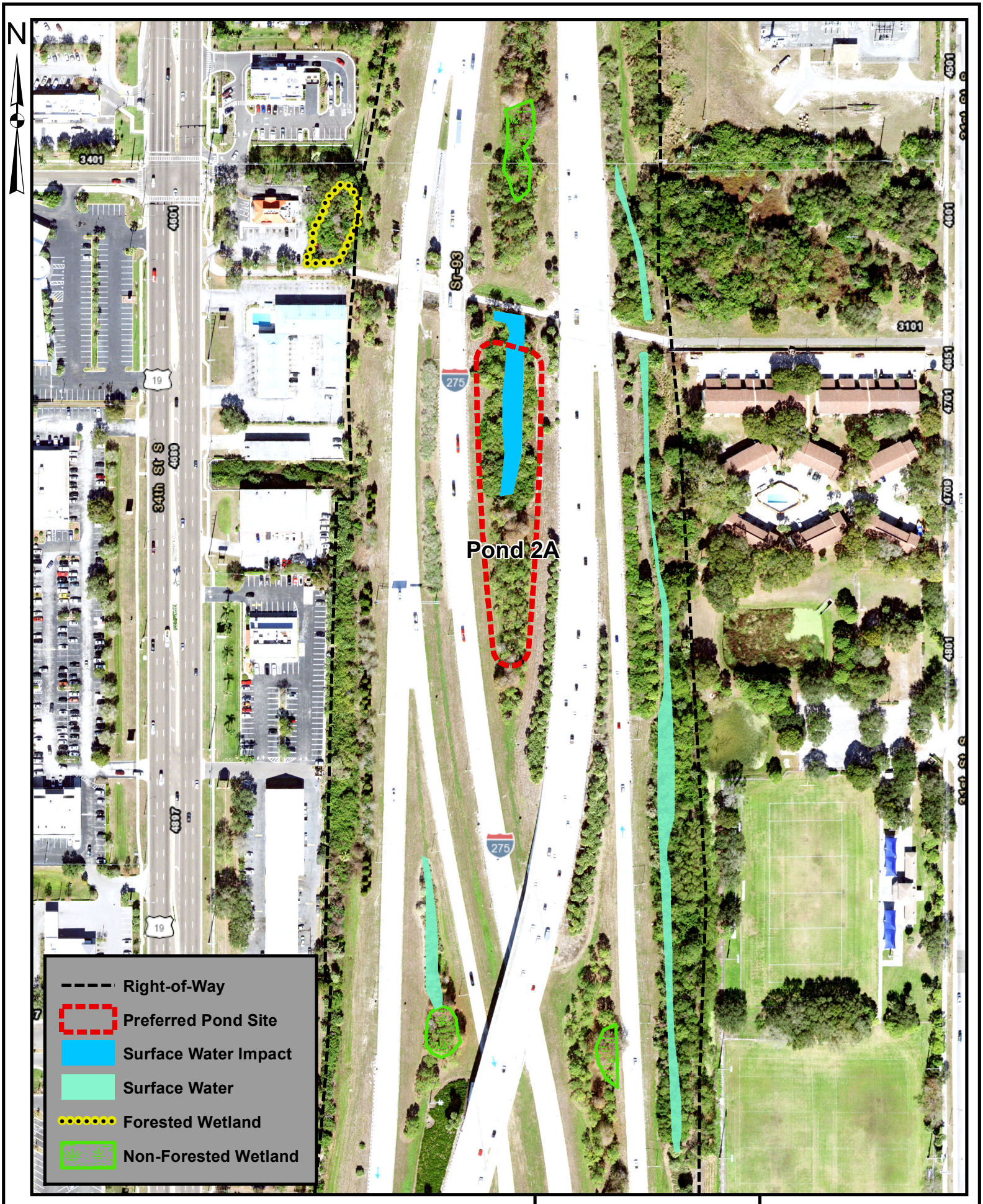

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Appendix B

SPECIES CONSTRUTION MANAGEMENT GUIDELINES

CONSTRUCTION SPECIAL PROVISIONS
GULF STURGEON PROTECTION GUIDELINES
(PURSUANT TO NMFS AND USFWS)

The Gulf sturgeon (*Acipenser oxyrinchus desotoi*) is listed under the Endangered Species Act as threatened. It is managed under the joint jurisdiction of the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS). Potential habitat for the Gulf sturgeon is located within the limits of this project.

The following special provisions will be incorporated into any construction contract where involvement with sturgeon may occur:

The FDOT has coordinated with the NMFS and USFWS early in the project development stage. The following provisions are intended to avoid/ protect known spawning habitats, nursery areas, feeding areas and thermal refuges.

1. The Florida Department of Transportation (FDOT) shall advise all FDOT project personnel and Contractor personnel on the project that there are civil and criminal penalties for harming, harassing or killing sturgeon. The FDOT and the Contractor will be held responsible for any sturgeon harmed, harassed, or killed as a result of the project activity.

2. The FDOT shall provide information to all FDOT and Contract personnel for identification of sturgeon.

3. Appropriate work shift personnel will be instructed in the appearance, habits, biology, migratory patterns, and preservation of sturgeon. At least one of these trained personnel will be on site during construction activities to maintain a constant surveillance for these species, assure the cessation of activities (such as dredging, excess turbidity, and construction barge activity), which may endanger these species, and assure that uninhibited passage for the animals is provided.

4. Post signs on site warning of the presence of sturgeon, of their endangered status and federal protection, and precautions needed.

5. Turbidity from construction activity will be adequately controlled to prevent degradation of the quality and transparency of the water. When sturgeon are present, turbidity curtains of appropriate dimension will be used to restrict the animals' access to the work area. Pollution booms or turbidity curtains should use tangle resistant or hemp rope when anchoring, or employ surface anchors' to prevent entangling sturgeon. Continuous surveillance will be maintained in order to free animals which may become trapped in silt or turbidity barriers.

6. No dredging of the river bottom will be conducted for barge access.

7. Drilled shaft pile construction will be used whenever prudent and feasible as determined by FDOT.

8. Care shall be taken in lowering equipment or material below the water surface and into the stream bed. These precautions will be taken to ensure no harm occurs to any sturgeon which may enter the construction area undetected.

9. Construction debris shall not be discarded into the water.

10. If the use of explosives is necessary, the following protection measures will be employed for projects in FDOT's District 3

    a. In riverine areas:
       - No blasting will occur in known spawning, staging, feeding, or nursery areas.
       - In-water explosive work should be avoided between the months of April to October.
       - If explosive work becomes necessary within the April to October time frame, a non-lethal "Fish Scare" charge will be detonated one minute prior to detonation of the underwater blast.

    b. In estuarine areas:
       - No blasting will occur in known spawning, staging, feeding, or nursery areas.
       - In-water explosive work should be avoided between the months of October to April.
       - If explosive work becomes necessary within the October to April time frame, a non-lethal "Fish Scare" charge will be detonated one minute prior to detonation of the underwater blast.

    c. In the event that a sturgeon is killed during blasting, the NMFS and the USFWS will be notified immediately.

       National Marine Fisheries Service
       by email at:
       takereport.nmfsser@noaa.gov

       US Fish and Wildlife Service
       1601 Balboa Ave.
       Panama City, Florida 32405
       Tel: (850) 769-0552

11. Any sturgeon carcass will be secured on site or held in a freezer until an agency representative arranges for its transport for analysis.

12. Following completion of the project, a report summarizing any involvement with sturgeon will be prepared for USFWS and NMFS.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.

b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.

c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.

e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.

f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006
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STANDARD PROTECTION MEASURES FOR THE EASTERN INDIGO SNAKE
U.S. Fish and Wildlife Service
August 12, 2013

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

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

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

POSTER INFORMATION

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

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

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

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

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

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

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

IF YOU SEE A <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.
- Immediately notify supervisor or the applicant's designated agent, **and** the appropriate USFWS office, with the location information and condition of the snake.
- If the snake is located in a vicinity where continuation of the clearing or construction activities will cause harm to the snake, the activities must halt until such time that a representative of the USFWS returns the call (within one day) with further guidance as to when activities may resume.

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

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

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

North Florida Field Office – (904) 731-3336
Panama City Field Office – (850) 769-0552
South Florida Field Office – (772) 562-3909

PRE-CONSTRUCTION ACTIVITIES

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

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

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

DURING CONSTRUCTION ACTIVITIES

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

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

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

POST CONSTRUCTION ACTIVITIES

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

STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.

b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.

d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.

e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or in Vero Beach (1-772-562-3909) for south Florida, and emailed to FWC at ImperiledSpecies@myFWC.com.

f. Temporary signs concerning manatees shall be posted prior to and during all in-water project activities. All signs are to be removed by the permittee upon completion of the project. Temporary signs that have already been approved for this use by the FWC must be used. One sign which reads *Caution: Boaters* must be posted. A second sign measuring at least 8½ " by 11" explaining the requirements for "Idle Speed/No Wake" and the shut down of in-water operations must be posted in a location prominently visible to all personnel engaged in water-related activities. These signs can be viewed at http://www.myfwc.com/WILDLIFEHABITATS/manatee_sign_vendors.htm. Questions concerning these signs can be forwarded to the email address listed above.

CAUTION: MANATEE HABITAT

All project vessels

IDLE SPEED / NO WAKE

When a manatee is within 50 feet of work
all in-water activities must

SHUT DOWN

Report any collision with or injury to a manatee:

Wildlife Alert:

1-888-404-FWCC(3922)

cell *FWC or #FWC

Appendix C

SPECIES EFFECT DETERMINATION KEYS

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

Purpose and Background

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

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

Scope of the key

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

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

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

Summary of General Wood Stork Nesting and Foraging Habitat Information

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

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

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

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

WOOD STORK KEY

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

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

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

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

Project impacts SFH[2]……go to C

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

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

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

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

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

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

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

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

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

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

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

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

Monitoring and Reporting Effects

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

Literature Cited

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

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

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

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

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

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.

THE CORPS OF ENGINEERS, JACKSONVILLE DISTRICT, AND THE STATE OF FLORIDA EFFECT DETERMINATION KEY FOR THE MANATEE IN FLORIDA
April 2013

Purpose and background of the key

The purpose of this document is to provide guidance to improve the review of permit applications by U.S. Army Corps of Engineers' (Corps) Project Managers in the Regulatory Division regarding the potential effects of proposed projects on the endangered West Indian manatee (*Trichechus manatus*) in Florida, and by the Florida Department of Environmental Protection or its authorized designee or Water Management District, for evaluating projects under the State Programmatic General Permit (SPGP) or any other Programmatic General Permits that the Corps may issue for administration by the above agencies. Such guidance is contained in the following dichotomous key. The key applies to permit applications for in-water activities such as, but not limited to: (1) dredging [new or maintenance dredging of not more than 50,000 cubic yards], placement of fill material for shoreline stabilization, and construction/placement of other in-water structures as well as (2) construction of docks, marinas, boat ramps and associated trailer parking spaces, boat slips, dry storage or any other watercraft access structures or facilities.

At a certain step in the key, the user is referred to graphics depicting important manatee areas or areas with inadequate protection. The maps can be downloaded from the Corps' web page at http://www.saj.usace.army.mil/Missions/Regulatory/SourceBook.aspx. We intend to utilize the most recent depiction of these areas, so should these areas be modified by statute, rule, ordinance and/or other legal mandate or authorization, we will modify the graphical depictions accordingly. These areas may be shaded or otherwise differentiated for identification on the maps.

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

Scope of the key

This key should only be used in the review of permit applications for effect determinations on manatees and should not be used for other listed species or for other aquatic resources such as Essential Fish Habitat (EFH). Corps Project Managers should ensure that consideration of the project's effects on any other listed species and/or on EFH is performed independently. This key may be used to evaluate applications for all types of State of Florida (State Programmatic General Permits, noticed general permits, standard general permits, submerged lands leases, conceptual and individual permits) and Department of the Army (standard permits, letters of permission, nationwide permits, and regional general permits) permits and authorizations. The final effect determination will be based on the project location and description; the potential effects to manatees, manatee habitat, and/or manatee critical habitat; and any measures (such as project components, standard construction precautions, or special conditions included in the authorization) to avoid or minimize effects to manatees or manatee critical habitat. 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 shall refer to the Manatee Programmatic Biological Opinion, dated March 21, 2011, for guidance on eliminating or minimizing potential adverse effects resulting from the proposed project. If unable to resolve the adverse effects, the Corps may refer the applicant to the U.S. Fish and Wildlife Service (Service) for further assistance in attempting to revise the proposed project to a “may affect, not likely to adversely affect” level. The Service will coordinate with the Florida Fish and Wildlife Conservation Commission (FWC) and the counties, as appropriate. Projects that provide new access for watercraft and key to “may affect, not likely to adversely affect” may or may not need to be reviewed individually by the Service.

MANATEE KEY
Florida[1]
April 2013

The key is not designed to be used by the Corps' Regulatory Division for making their effect determinations for dredging projects greater than 50,000 cubic yards, the Corps' Planning Division in making their effect determinations for civil works projects or by the Corps' Regulatory Division for making their effect determinations for projects of the same relative scope as civil works projects. These types of activities must be evaluated by the Corps independently of the key.

A. Project is not located in waters accessible to manatees and does not directly or indirectly affect manatees (see Glossary).....*No effect*

Project is located in waters accessible to manatees **or** directly or indirectly affects manatees ..... B

B. Project consists of one or more of the following activities, all of which are *May affect*:

1. blasting or other detonation activity for channel deepening and/or widening, geotechnical surveys or exploration, bridge removal, movies, military shows, special events, etc.;

2. installation of structures which could restrict or act as a barrier to manatees;

3. new or changes to existing warm or fresh water discharges from industrial sites, power plants, or natural springs or artesian wells (but only if the new or proposed change in discharge requires a Corps permit to accomplish the work);

4. installation of new culverts and/or maintenance or modification of existing culverts (where the culverts are 8 inches to 8 feet in diameter, ungrated and in waters accessible, or potentially accessible, to manatees)[2];

5. mechanical dredging from a floating platform, barge or structure[3] that restricts manatee access to less than half the width of the waterway;

6. creation of new slips or change in use of existing slips, even those located in a county with a State-approved Manatee Protection Plan (MPP) in place and the number of slips is less than the MPP threshold, to accommodate docking for repeat use vessels, (*e.g.*, water taxis, tour boats, gambling boats, etc; or slips or structures that are not civil works projects, but are frequently used to moor large vessels (>100') for shipping and/or freight purposes; does not include slips used for docking at boat sales or repair facilities or loading/unloading at dry stack storage facilities and boat ramps); [Note: For projects within Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the reviewer should proceed to Couplet C.]

7. any type of in-water activity in a Warm Water Aggregation Area (WWAA) or No Entry Area (see Glossary and accompanying Maps[4]); [Note: For residential docking facilities in a Warm Water Aggregation Area that is not a Federal manatee sanctuary or No Entry Area, the reviewer should proceed to couplet C.]

8. creation or expansion of canals, basins or other artificial shoreline and/or the connection of such features to navigable waters of the U.S.; [Note: For projects proposing a single residential dock, the reviewer should proceed to couplet C; otherwise, project is a *May Affect*.]

9. installation of temporary structures (docks, buoys, etc.) utilized for special events such as boat races, boat shows, military shows, etc., but only when consultation with the U.S. Coast Guard and FWS has not occurred; [Note: See programmatic consultation with the U.S. Coast Guard on manatees dated May 10, 2010.].

Project is other than the activities listed above C

C. Project is located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps[4]) ..... D

Project is not located in an Important Manatee Area (IMA) (see Glossary and accompanying Maps[4]) ..... G

D. Project includes dredging of less than 50,000 cubic yards ..... E

Project does not include dredging ..... G

E. Project is for dredging a residential dock facility or is a land-based dredging operation ..... N

Project not as above ..... F

F. Project proponent **does not elect** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... *May affect*

Project proponent **elects** to follow all dredging protocols described on the maps for the respective IMA in which the project is proposed ..... G

G. Project provides new[5] access for watercraft, *e.g.*, docks or piers, marinas, boat ramps and associated trailer parking spaces, new dredging, boat lifts, pilings, floats, floating docks, floating vessel platforms, boat slips, dry storage, mooring buoys, or other watercraft access (residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access) or improvements allowing increased watercraft usage ..... H

Project does not provide new[5] access for watercraft, *e.g.*, bulkheads, seawalls, riprap, maintenance dredging, boardwalks and/or the maintenance (repair or rehabilitation) of currently serviceable watercraft access structures provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements do not allow increased watercraft usage ..... N

H. Project is located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map[4]) ..... *May affect*

Project is not located in the Braden River Area of Inadequate Protection (Manatee County) (see Glossary and accompanying AIP Map[4]) I

I. Project is for a multi-slip facility (see Glossary) ..... J

Project is for a residential dock facility or is for dredging (see Glossary) ..... N

J. Project is located in a county that currently has a State-approved MPP in place (BREVARD, BROWARD, CITRUS, CLAY, COLLIER, DUVAL, INDIAN RIVER, LEE, MARTIN, MIAMI-DADE, PALM BEACH, ST. LUCIE, SARASOTA, VOLUSIA) or shares contiguous waters with a county having a State-approved MPP in place (LAKE, MARION, SEMINOLE)[6] ..... K

Project is located in a county not required to have a State-approved MPP L

K. Project has been developed or modified to be consistent with the county's State-approved MPP **and** has been verified by a FWC review (or FWS review if project is exempt from State permitting) **or** the number of slips is below the MPP threshold ..... N

Project has not been reviewed by the FWC or FWS **or** has been reviewed by the FWC or FWS **and** determined that the project is not consistent with the county's State-approved MPP ..... *May affect*

L. Project is located in one of the following counties: CHARLOTTE, DESOTO[7], FLAGLER, GLADES, HENDRY, HILLSBOROUGH, LEVY, MANATEE, MONROE[7], PASCO[7], PINELLAS ..... M

Project is located in one of the following counties: BAY, DIXIE, ESCAMBIA, FRANKLIN, GILCHRIST, GULF, HERNANDO, JEFFERSON, LAFAYETTE, MONROE (south of Craig Key), NASSAU, OKALOOSA, OKEECHOBEE, PUTNAM, SANTA ROSA, ST. JOHNS, SUWANNEE, TAYLOR, WAKULLA, WALTON ..... N

M. The number of slips does not exceed the residential dock density threshold (see Glossary) ..... N

The number of slips exceeds the residential dock density threshold (see Glossary) ..... *May affect*

N. Project impacts to submerged aquatic vegetation[8], emergent vegetation or mangrove will have ~~beneficial,~~ insignificant, discountable[9] or no effects on the manatee[10] ..... O

Project impacts to submerged aquatic vegetation[8], emergent vegetation or mangrove may adversely affect the manatee[10] ..... *May affect*

O. Project proponent **elects** to follow standard manatee conditions for in-water work[11] and requirements, as appropriate for the proposed activity, prescribed on the maps[4] ..... P

Project proponent **does not elect** to follow standard manatee conditions for in-water work[11] and appropriate requirements prescribed on the maps[4] ..... *May affect*

P. If project is for a new or expanding[5] multi-slip facility and is located in a county with a State-approved MPP in place **or** in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Putnam, St. Johns, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

If project is for a new or expanding[5] multi-slip facility and is located in Charlotte, Desoto, Flagler, Glades, Hendry, Hillsborough, Levy, Manatee, Monroe (north of Craig Key), Pasco, or Pinellas County, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations.

If project is for repair or rehabilitation of a multi-slip facility and is located in an Important Manatee Area, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations. If project is for repair or rehabilitation of a multi-slip facility and: (1) is not located in an Important Manatee Area; (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

If project is a residential dock facility, shoreline stabilization, or dredging, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary. Note: For residential dock facilities located in a Warm Water Aggregation Area or in a No Entry area, seasonal restrictions may apply. See footnote 4 below for maps showing restrictions.

If project is other than repair or rehabilitation of a multi-slip facility, a new[5] multi-slip facility, residential dock facility, shoreline stabilization, or dredging, and does not provide new[5] access for watercraft or

improve an existing access to allow increased watercraft usage, the determination of "*May affect, not likely to adversely affect*" is appropriate[12] and no further consultation with the Service is necessary.

[1] On the St. Mary's River, this key is only applicable to those areas that are within the geographical limits of the State of Florida.

[2] All culverts 8 inches to 8 feet in diameter must be grated to prevent manatee entrapment. To effectively prevent manatee access, grates must be permanently fixed, spaced a maximum of 8 inches apart (may be less for culverts smaller than 16 inches in diameter) and may be installed diagonally, horizontally or vertically. For new culverts, grates must be attached prior to installation of the culverts. Culverts less than 8 inches or greater than 8 feet in diameter are exempt from this requirement. If new culverts and/or the maintenance or modification of existing culverts are grated as described above, the determination of "*May affect, not likely to adversely affect*" is appropriate[11] and no further consultation with the Service is necessary.

[3] If the project proponent agrees to follow the standard manatee conditions for in-water work as well as any special conditions appropriate for the proposed activity, further consultation with the Service is necessary for "*May affect, not likely to adversely affect*" determinations. These special conditions may include, but are not limited to, the use of dedicated observers (see Glossary for definition of dedicated observers), dredging during specific months (warm weather months vs cold weather months), dredging during daylight hours only, adjusting the number of dredging days, does not preclude or discourage manatee egress/ingress with turbidity curtains or other barriers that span the width of the waterway, etc.

[4] Areas of Inadequate Protection (AIPs), Important Manatee Areas (IMAs), Warm Water Aggregation Areas (WWAAs) and No Entry Areas are identified on these maps and defined in the Glossary for the purposes of this key. These maps can be viewed on the Corps' web page. If projects are located in a No Entry Area, special permits may be required from FWC in order to access these areas (please refer to Chapter 68C-22 F.A.C. for boundaries; maps are also available at FWC's web page).

[5] New access for watercraft is the addition or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (maintenance dredging, residential boat lifts, pilings, floating docks, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, new dredging, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees. The repair or rehabilitation of any type of currently serviceable watercraft access structure is not considered new access provided all of the following are met: (1) the number of slips is not increased; (2) the number of existing slips is not in question; and (3) the improvements to the existing watercraft access structures do not result in increased watercraft usage.

[6] Projects proposed within the St. Johns River portion of Lake, Marion, and Seminole counties and contiguous with Volusia County shall be evaluated using the Volusia County MPP.

[7] For projects proposed within the following areas: the Peace River in DeSoto County; all areas north of Craig Key in Monroe County, and the Anclote and Pithlachascotee Rivers in Pasco County, proceed to Couplet M. For all other locations in DeSoto, Monroe (south of Craig Key) and Pasco Counties, proceed to couplet N.

[8] Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat, proceed to couplet O.

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, the applicant can elect to avoid/minimize impacts to that vegetation. In that instance, where impacts are unavoidable and the applicant elects to abide by or employ construction techniques that exceed the criteria in the following documents, the reviewer should conclude that the impacts to SAV, marsh or mangroves would not adversely affect the manatee or its critical habitat and proceed to couplet O.

- "Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat," prepared jointly by the U.S. Army Corps of Engineers and the National Marine Fisheries Service (August 2001) [refer to the Corps' web page], and

- "Key for Construction Conditions for Docks or Other Minor Structures Constructed in or over Johnson's seagrass (*Halophila johnsonii*)," prepared jointly by the National Marine Fisheries Service and U.S. Army Corps of Engineers (October 2002), for those projects within the known range of Johnson's seagrass occurrence (Sebastian Inlet to central Biscayne Bay in the lagoon systems on the east coast of Florida) [refer to the Corps' web page],

Where the presence of the referenced vegetation is confirmed within the area affected by docks and other piling-supported minor structures and the reviewer has concluded that the impacts to SAV, marsh or mangroves would adversely affect the manatee or its critical habitat, and the applicant does not elect to follow the above Guidelines, the Corps will need to request formal consultation on the manatee with the Service as *May affect*.

For activities other than docks and other piling-supported minor structures proposed in SAV, marsh, or mangroves (*e.g.*, new dredging, placement of riprap, bulkheads, etc.), if the reviewer determines the impacts to the SAV, marsh or mangroves will not adversely affect the manatee or its critical habitat, proceed to couplet O, otherwise the Corps will need to request formal consultation on the manatee with the Service as *May affect*.

[9] See Glossary, under "is not likely to adversely affect."

[10] Federal reviewers, when making your effects determination, consider effects to manatee designated critical habitat pursuant to section 7(a)(2) of the Endangered Species Act. State reviewers, when making your effects determination, consider effects to manatee habitat within the entire State of Florida, pursuant to Chapter 370.12(2)(b) Florida Statutes.

[11] See the Corps' web page for manatee construction conditions. At this time, manatee construction precautions c and f are not required in the following Florida counties: Bay, Escambia, Franklin, Gilchrist, Gulf, Jefferson, Lafayette, Okaloosa, Santa Rosa, Suwannee, and Walton.

[12] By letter dated April 25, 2013, the Corps received the Service's concurrence with "*May affect, not likely to adversely affect*" determinations made pursuant to this key for the following activities: (1) selected non-watercraft access projects; (2) watercraft-access projects that are residential dock facilities, excluding those located in the Braden River AIP; (3) launching facilities solely for kayaks and canoes, and (4) new or expanding multi-slip facilities located in Bay, Dixie, Escambia, Franklin, Gilchrist, Gulf, Hernando, Jefferson, Lafayette, Monroe (south of Craig Key), Nassau, Okaloosa, Okeechobee, Santa Rosa, Suwannee, Taylor, Wakulla or Walton County.

Additionally, in the same letter dated April 25, 2013, the Corps received the Service's concurrence for "*May affect, not likely to adversely affect*" determinations specifically made pursuant to Couplet G of the key for the repair or rehabilitation of currently serviceable multi-slip watercraft access structures provided all of the following are met: (1) the project is not located in an IMA, (2) the number of slips is not increased; (3) the number of existing slips is not in question; and (4) the improvements to the existing watercraft access structures do not allow increased watercraft usage. Upon receipt of such a programmatic concurrence, no further consultation with the Service for these projects is required.

GLOSSARY

Areas of inadequate protection (AIP) – Areas within counties as shown on the maps where the Service has determined that measures intended to protect manatees from the reasonable certainty of watercraft-related take are inadequate. Inadequate protection may be the result of the absence of manatee or other watercraft speed zones, insufficiency of existing speed zones, deficient speed zone signage, or the absence or insufficiency of speed zone enforcement.

Boat slip – A space on land or in or over the water, other than on residential land, that is intended and/or actively used to hold a stationary watercraft or its trailer, and for which intention and/or use is confirmed by legal authorization or other documentary evidence. Examples of boat slips include, but are not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

Critical habitat – For listed species, this consists of: (1) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the Endangered Species Act (ESA), on which are found those physical or biological features (constituent elements) (a) essential to the conservation of the species and (b) which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon a determination by the Secretary that such areas are essential for the conservation of the species. Designated critical habitats are described in 50 CFR 17 and 50 CFR 226.

Currently serviceable – Currently, serviceable means usable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects – The direct or immediate effects of the project on the species or its habitat.

Dredging – For the purposes of this key, the term dredging refers to all in-water work associated with dredging operations, including mobilization and demobilization activities that occur in water or require vessels.

Emergent vegetation – Rooted emergent vascular macrophytes such as, but not limited to, cordgrass (*Spartina alterniflora and S. patens*), needle rush (J*uncus roemerianus*), swamp sawgrass (*Cladium mariscoides*), saltwort (*Batis maritima*), saltgrass (*Distichlis spicata*), and glasswort (*Salicornia virginica*) found in coastal salt marsh-related habitats (tidal marsh, salt marsh, brackish marsh, coastal marsh, coastal wetlands, tidal wetlands).

Formal consultation – A process between the Services and a Federal agency or applicant that: (1) determines whether a proposed Federal action is likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat; (2) begins with a Federal agency's written request and submittal of a complete initiation package; and (3) concludes with the issuance of a biological opinion and incidental take statement by either of the Services. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed

action “is not likely to adversely affect” listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.14]

Important manatee areas (IMA) – Areas within certain counties where increased densities of manatees occur due to the proximity of warm water discharges, freshwater discharges, natural springs and other habitat features that are attractive to manatees. These areas are heavily utilized for feeding, transiting, mating, calving, nursing or resting as indicated by aerial survey data, mortality data and telemetry data. Some of these areas may be federally-designated sanctuaries or state-designated “seasonal no entry” zones. Maps depicting important manatee areas and any accompanying text may contain a reference to these areas and their special requirements. Projects proposed within these areas must address their special requirements.

Indirect effects – Those effects that are caused by or will result from the proposed action and are later in time, but are still reasonably certain to occur. Examples of indirect effects include, but are not limited to, changes in water flow, water temperature, water quality (*e.g.*, salinity, pH, turbidity, nutrients, chemistry), prop dredging of seagrasses, and manatee watercraft injury and mortality. Indirect effects also include watercraft access developments in waters not currently accessible to manatees, but watercraft access can, is, or may be planned to waters accessible to manatees by the addition of a boat lift or the removal of a dike or plug.

Informal consultation – A process that includes all discussions and correspondence between the Services and a Federal agency or designated non-Federal representative, prior to formal consultation, to determine whether a proposed Federal action may affect listed species or critical habitat. This process allows the Federal agency to utilize the Services’ expertise to evaluate the agency’s assessment of potential effects or to suggest possible modifications to the proposed action which could avoid potentially adverse effects. If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Services concur, in writing, that a proposed action “is not likely to adversely affect” listed species or designated critical habitat). [50 CFR 402.02, 50 CFR 402.13]

In-water activity – Any type of activity used to construct/repair/replace any type of in-water structure or fill; the act of dredging.

In-water structures – watercraft access structures – Docks or piers, marinas, boat ramps, boat slips, boat lifts, floats, floating docks, pilings (depending on use), boat davits, etc.

In-water structures – other than watercraft access structures – Bulkheads, seawalls, riprap, groins, boardwalks, pilings (depending on use), etc.

Is likely to adversely affect – The appropriate finding in a biological assessment (or conclusion during informal consultation) if any adverse effect to listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions and the effect is not: discountable, insignificant, or beneficial (see definition of “is not likely to adversely affect”). An “is likely to adversely affect” determination requires the initiation of formal consultation under section 7 of the ESA.

Is not likely to adversely affect – The appropriate conclusion when effects on listed species are expected to be discountable, insignificant, or completely beneficial. **Discountable effects** are those extremely unlikely to occur. **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species. Based on best judgment, a person would not (1) be able to meaningfully measure, detect, or evaluate insignificant effects or (2) expect discountable effects to occur.

Manatee Protection Plan (MPP) – A manatee protection plan (MPP) is a comprehensive planning document that addresses the long-term protection of the Florida manatee through law enforcement, education, boat facility siting, and habitat protection initiatives. Although MPPs are primarily developed by the counties, the plans are the product of extensive coordination and cooperation between the local governments, the FWC, the Service, and other interested parties.

Manatee Protection Plan thresholds – The smallest size of a multi-slip facility addressed under the purview of a Manatee Protection Plan (MPP). For most MPPs, this threshold is five slips or more. For Brevard, Clay, Citrus, and Volusia County MPPs, this threshold is three slips or more.

Mangroves – Rooted emergent trees along a shoreline that, for the purposes of this key, include red mangrove (*Rhizophora mangle*), black mangrove (*Avicennia germinans*) and white mangrove (*Laguncularia racemosa*).

May affect – The appropriate conclusion when a proposed action may pose <u>any</u> effects on listed species or designated critical habitat. When the Federal agency proposing the action determines that a "may affect" situation exists, then they must either request the Services to initiate formal consultation or seek written concurrence from the Services that the action "is not likely to adversely affect" listed species. For the purpose of this key, all "may affect" determinations equate to "likely to adversely affect" and Corps Project Managers should request the Service to initiate formal consultation on the manatee or designated critical habitat. **No effect** – the appropriate conclusion when the action agency determines its proposed action will not affect a listed species or designated critical habitat.

Multi-slip facility – Multi-slip facilities include commercial marinas, private multi-family docks, boat ramps and associated trailer parking spaces, dry storage facilities and any other similar structures or activities that provide access to the water for multiple (five slips or more, except in Brevard, Clay, Citrus, and Volusia counties where it is three slips or more) watercraft. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

New access for watercraft – New dredging and the addition, expansion or improvement of structures such as, but not limited to, docks or piers, marinas, boat ramps and associated trailer parking spaces, boat lifts, pilings, floats, floating docks, floating vessel platforms, (residential boat lifts, pilings, floats, and floating vessel platforms installed in existing slips are not considered new access), boat slips, dry storage, mooring buoys, etc., that facilitates the addition of watercraft to, and/or increases watercraft usage in, waters accessible to manatees.

Observers – During dredging and other in-water operations within manatee accessible waters, the standard manatee construction conditions require all on-site project personnel to watch for manatees to ensure that those standard manatee construction conditions are met. Within important manatee areas (IMA) and under special circumstances, heightened observation is needed. **Dedicated Observers** are those having some prior experience in manatee observation, are dedicated only for this task, and must be someone other than the dredge and equipment operators/mechanics. **Approved Observers** are dedicated observers who also must be approved by the Service (if Federal permits are involved) and the FWC (if state permits are involved), prior to work commencement. Approved observers typically have significant and often project-specific observational experience. Documentation on prior experience must be submitted to these agencies for approval and must be submitted a minimum of 30 days prior to work commencement. When dedicated or approved observers are required, observers must be on site during all in-water activities, and be equipped with polarized sunglasses to aid in manatee observation. For prolonged in-water operations, multiple observers may be needed to perform observation in shifts to reduce fatigue (recommended shift length is no longer than six hours). Additional information concerning observer approval can be found at FWC's web page.

Residential boat lift – A boat lift installed on a residential dock facility.

Residential dock density ratio threshold – The residential dock density ratio threshold is used in the evaluation of multi-slip projects in some counties without a State-approved Manatee Protection Plan and is consistent with 1 boat slip per 100 linear feet of shoreline (1:100) owned by the applicant.

Residential dock facility – A residential dock facility means a private residential dock which is used for private, recreational or leisure purposes for single-family or multi-family residences designed to moor no more than four vessels (except in Brevard, Clay, Citrus, and Volusia counties which allow only two vessels). This also includes normal appurtenances such as residential boat lifts, boat shelters with open sides, stairways, walkways, mooring pilings, dolphins, etc. In some instances, the Corps and the Service may elect to review multiple residential dock facilities as a multi-slip facility.

Submerged aquatic vegetation (SAV) – Rooted, submerged, aquatic plants such as, but not limited to, shoal grass (*Halodule wrightii*), paddle grass (*Halophila decipiens*), star grass (*Halophila engelmanni*), Johnson's seagrass (*Halophila johnsonii*), sago pondweed (*Potamogeton pectinatus*), clasping-leaved pondweed (*Potamogeton perfoliatus*), widgeon grass (*Ruppia maritima*), manatee grass (*Syringodium filiforme*), turtle grass (*Thalassia testudinum*), tapegrass (*Vallisneria americana*), and horned pondweed (*Zannichellia palustris*).

Warm Water Aggregation Areas (WWAAs) and **No Entry Areas** – Areas within certain counties where increased densities of manatees occur due to the proximity of artificial or natural warm water discharges or springs and are considered necessary for survival. Some of these areas may be federally-designated manatee sanctuaries or state-designated seasonal "no entry" manatee protection zones. Projects proposed within these areas may require consultation in order to offset expected adverse impacts. In addition, special permits may be required from the FWC in order to access these areas.

Watercraft access structures – Docks or piers, marinas, boat ramps and associated trailer parking spaces, boat slips, boat lifts, floats, floating docks, pilings, boat davits, dry storage, etc.

Waters accessible to manatees – Although most waters of the State of Florida are accessible to the manatee, there are some areas such as landlocked lakes that are not. There are also some weirs, salinity control structures and locks that may preclude manatees from accessing water bodies. If there is any question about accessibility, contact the Service or the FWC.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
1339 20th Street
Vero Beach, Florida 32960

May 13, 2019

Andrew D. Kelly, Jr., Colonel
District Commander
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Dear Colonel Kelly:

The U.S. Fish and Wildlife Service (Service) and the U.S. Army Corps of Engineers (Corps) currently use a dichotomous key (Key) to assist in making effect determinations pursuant to the Endangered Species Act for in-water activities that may affect manatees. Recently, Corps and Service staff identified the need to make several revisions to the 2013 Key to address new issues and changed circumstances. Although a more complete revision is needed in the future, three issues need to be addressed as soon as possible: 1) requirements associated with clamshell dredge head operation; 2) locations and conditions related to impact hammer driven metal piles and/or sheet piles; and 3) incorporation of the current list of counties that have approved Manatee Protection Plans (MPPs).

For the purpose of continuing to use the Key on projects that involve clamshell dredging or impact driving of metal piles or sheet piles, the Service is issuing this letter as an addendum to the Key. The Service finds work that keys out as "not likely to adversely affect" the manatee or its critical habitat using the 2013 Key is still the appropriate determination provided there is adherence to the following additional conditions:

1) During clamshell dredging operations, the dredge operator shall gravity-release the clamshell bucket only at the water's surface, and only after confirmation that there are no manatees within the safety distance identified in the standard construction conditions (or a 75-foot buffer if dredging is authorized at night);

2) Installation of metal pilings or metal sheet piles by impact hammer – if not within Important Manatee Areas, Warm Water Aggregation Areas, or Federal manatee sanctuaries or state-designated No Entry Areas - may occur under the following conditions: a) Use of at least one dedicated manatee observer, with all work being stopped if a manatee is observed within 1000 feet; b) no work shall occur outside of daylight hours (defined as one-half hour after sunrise to one-half hour before sunset); and, c) no more than 5 piles/day may be installed. If within any of the above-described areas, an informal or formal project-specific consultation with the Service is required.

In addition, the following change will allow projects in Charlotte County and Flagler County to be properly handled using the Key:

3) Charlotte County and Flagler County shall be added to the list of counties that have an approved Manatee Protection Plan (couplet J of the 2013 Key) and removed from the list of counties included in couplet L and the second category of couplet P of the 2013 Key.

With the above-described changes, the Service affirms that such work would not likely adversely affect the West Indian manatee and no further consultation is required provided all other conditions of the 2013 Key are met. The above changes, and possibly others, will ultimately be reflected in an updated version of the Key. We hope this letter provides the Corps with the ability to continue to work with the 2013 Key and in-water construction conditions until a revised and updated Key is approved.

Thank you for your continued support to facilitate recovery of the West Indian manatee and other species protected under the Endangered Species Act. If you have any questions, please contact Mr. Scott Calleson by e-mail at charles_calleson@fws.gov or by phone at (904) 731-3326.

Sincerely,

Larry Williams

Larry Williams
State Supervisor

cc:
Service, Jacksonville, Florida (Jay Herrington)
Service, Vero Beach, Florida (Bob Progulske, Roxanna Hinzman)

Appendix D

PRELIMINARY UNIFORM MITIGATION ASSESSMENT METHOD (UMAM) FORMS

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

Site/Project Name	Application Number	Assessment Area Name or Number
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.	TBD	Seagrass

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
9133 and 9166		Impact	0.004

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay/Anclote River Watershed	III	Outstanding Florida Water; Pinellas County Aquatic Preserve

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

Contiguous with Old Tampa Bay and Big Island Gap estuary

Assessment area description

Big Island Gap. Adjacent to a filled bridge/road causeway embankments and boat channel. Shoreline with bay bottom and discontinuous seagrass habitat.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Weedon Island Preserve, Interstate 275 and 4th St. N., Old Tampa Bay, Big Island Gap, and mangrove swamp.	Seagrass habitat is common in this area of Tampa Bay shoreline

Functions	Mitigation for previous permit/other historic use
Habitat for benthic species and fish; water quality improvement; sediment stabilization	No

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)
Red drum, shrimp, stone crab, invertebrates, and other benthic species	Wood stork (FT); wading bird foraging (roseate spoonbill, reddish egret, tricolored and little blue heron) (ST); shorebirds (rufa red knot, piping plover) (FT) (American oystercatcher, snowy plover, least tern, black skimmer) (ST); West Indian manatee (T) - transient; juvenile sea turtles; smalltooth sawfish (E); Gulf sturgeon (T).

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

Common oyster and barnacles

Additional relevant factors:

Seagrass habitat evaluated within Big Island Gap is frequently disturbed due to boat ramp access and traffic through cannel (wave action) and human use (wading fisherman and trash)

Assessment conducted by:	Assessment date(s):
S. Swanson	Nov. 2018

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
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.		Seagrass
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	S. Swanson	Nov. 2018

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	POST: 0 / PRE: 5	Systems are downslope of an active transportation corridor at the convergence of two major roads. The area provides refuge and forage value for fish and wildlife and aquatic species utilizing the surrounding estuary. Habitat benefits also provided for fish & wildlife utilizing Tampa Bay and Big Island Gap. Transportation use outside the assessment areas decrease fish and wildlife value. Seagrass along the HFB was not included in this assessment.
.500(6)(b)Water Environment (n/a for uplands)	POST: 0 / PRE: 6	Water levels and flows are tidal. These areas receive direct roadway runoff from an interstate highway. Contamination from boating possible (boat ramp at Big Island Gap) including oil and gas. Excessive levels of trash (including derelict fishing gear) and debris observed. Disturbance to bay bottom due to wading by fishermen. Water quality (clarity) variable with tides and stormwater runoff. Wave energy disturbance in Big Island Gap is moderate (no wake zone). Seagrass along the HFB was not included in this assessment.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	POST: 0 / PRE: 4	Seagrass was very sparse in Big Island Gap near the bridges. The majority of seagrass observed was shoal grass (Halodule wrightii), but manatee grass (Syringodium filiforme) was present. Seagrass along the HFB was not included in this assessment.

Score = sum of above scores/30 (if uplands, divide by 20)	
POST: 0.00	PRE: 0.5

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

For impact assessment areas
FL = delta x acres =
0.50 x 0.00 = 0.00

Delta = [with-current]
0.50

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.	TBD	Forested Saltwater Wetlands

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6120	E2FO3	Impact	0.4

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay/Anclote River Watershed	III	Outstanding Florida Water; Pinellas County Aquatic Preserve

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

Contiguous with Old Tampa Bay and Big Island Gap

Assessment area description

Big Island Gap. Adjacent to a filled bridge/road causeway embankments and boat channel. Mangrove habitat along tidal shoreline including red, black and white mangroves with landward edge intermixed with Brazilian pepper.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Weedon Island Preserve, Interstate 275 and 4th St. N., Old Tampa Bay, Big Island Gap, and mangrove swamp.	This system is not unique for the regional landscape.

Functions	Mitigation for previous permit/other historic use
Provides wildlife habitat, high primary productivity for food chain support, water quality improvement, foraging and roosting habitat for wading birds, and other fish and wildlife utilization (cover, refuge, nesting, nursery areas, etc.).	No

Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area)
Wading bird roosting and foraging, larval and juvenile fish, stone crab, invertebrates, and other benthic species, snakes, small mammals, spiders and insects.	Wood stork (FT); wading bird foraging (roseate spoonbill, reddish egret, tricolored and little blue heron) (ST); shorebirds (rufa red knot, piping plover) (FT) (American oystercatcher, snowy plover, least tern, black skimmer) (ST); West Indian manatee (T) - transient; juvenile sea turtles; smalltooth sawfish (E) shelter; Gulf sturgeon (T) transient.

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

Wading birds observed foraging nearby. Oysters and barnacles.

Additional relevant factors:

Fequently disturbed due to boat ramp access and boat traffic through cannel (wave action) and human use (excessive trash and derelict fishing debris)

Assessment conducted by:	Assessment date(s):
S. Swanson	Nov. 2018

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
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.		Forested Saltwater Wetlands
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	S. Swanson	Nov. 2018

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 water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	POST: 0 / PRE: 4	Systems abut an active transportation corridor and are at the convergence of two major roads. Support for wildlife is limited by man-made barriers, traffic noise, human presence and lighting. Access for avian species possible. Roosting and foraging possible along the interior vegetation edges. The areas provide benefit to fish and aquatic species utilizing the surrounding estuary. Habitat benefits provided to fish & wildlife utilizing Tampa Bay and Big Island Gap. Land use outside the assessment areas impact fish and wildlife value.
.500(6)(b)Water Environment (n/a for uplands)	POST: 0 / PRE: 5	Water levels and flows are tidally influenced. These areas receive direct roadway runoff from an interstate highway. Contamination from boating possible - boat ramp at Big Island Gap - oil/gas. Excessive levels of trash (including derelict fishing gear) and debris observed. Some zonation present, but unnatural and steep due to highway/bridge fill. Use by aquatic organisms possible during high tides. Water quality (clarity) variable with tides and stormwater runoff. Wave energy minimal (no wake zone).
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	POST: 0 / PRE: 5	Plant composition is disturbed. Red mangroves (red, black and white) and Brazilian pepper dominate canopy. Benthic species observed on prop roots (oysters and barnacles). Invasive exotics or other invasive plant species coverage approx. 40-50%. Topography unnatural due to causeway fill and debris.

Score = sum of above scores/30 (if uplands, divide by 20)	
POST	PRE
0.00	0.47

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

For impact assessment areas
FL = delta x acres =
0.47 x 0.40 = 0.19

Delta = [with-current]
0.47

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.	TBD	Herbaceous Saltwater Wetlands

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6422		Impact	0.21

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay/Anclote River Watershed	III	Outstanding Florida Water; Pinellas County Aquatic Preserve

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

Contiguous with Old Tampa Bay and Weedon Island Preserve

Assessment area description

High saltmarsh. Vegetation included saltgrass, black needlerush, seaside goldenrod, and bluestem with scattered mangroves and Brazilian pepper

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Weedon Island Preserve, Interstate 275 and 4th St. N., Old Tampa Bay, and mangrove swamp	This system is unique for the regional landscape, but the area was disturbed by human use, ORV, and road runoff.

Functions	Mitigation for previous permit/other historic use
Provides wildlife habitat, food chain support, water quality improvement, foraging and roosting habitat for wading birds, and other fish and wildlife utilization (cover, refuge, nesting, nursery areas, etc.).	No

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)
Urban wildlife, wading bird roosting and foraging, raptors, snakes, small mammals, crabs, and insects.	Wood stork (FT) and wading bird foraging in tidal pools (roseate spoonbill, reddish egret, tricolored and little blue heron) (ST); shorebird foraging (rufa red knot, piping plover) (FT) (American oystercatcher, snowy plover, least tern, black skimmer) (ST) and possible nesting (species dependent).

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

Wading birds observed foraging nearby. Hermit crabs.

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
S. Swanson	Nov. 2018

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
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.		Herbaceous Saltwater Wetlands
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	S. Swanson	Nov. 2018

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 water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	POST: 0 / PRE: 5	System abuts an active transportation corridor. Support for wildlife is limited by man-made barriers to the south and fencing to the north, but access to the Weedon Island Preserve and Tampa Bay is possible. Access and support for avian species expected. The areas provide some benefit to fish and aquatic species utilizing the surrounding estuary. Habitat benefits provided to wildlife utilizing Tampa Bay and Weedon Island Preserve habitats.
.500(6)(b)Water Environment (n/a for uplands)	POST: 0 / PRE: 5	Water levels and flows are tidally influenced (high marsh). These areas receive direct roadway runoff from a highway. Contamination and land disturbance from ORV and pedestrian use observed. Muddy washout areas, tire ruts and erosion diminish water quality. Trash and debris observed. Some zonation present, but area altered somewhat by ditching. Use by aquatic organisms supported by extreme high tides and wading bird foraging in intermittent "tidal" pools.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	POST: 0 / PRE: 6	Vegetation included saltgrass, black needlerush, seaside goldenrod, and bluestem with scattered mangroves and Brazilian pepper. Exotics or other invasive plant species coverage approx. 25%. Topography unnatural due to ORV use.

Score = sum of above scores/30 (if uplands, divide by 20)	
POST	PRE
0.00	0.53

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

For impact assessment areas
FL = delta x acres =
0.53 x 0.21 = 0.11

Delta = [with-current]
0.53

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.	TBD	Forested Freshwater Wetlands

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6170 and 6210	PFO	Impact	2.49

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay/Anclote River Watershed	III	None

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

Contiguous with Tampa Bay via a ditch ditch beneath I-275 at Sawgrass Lake Park that drains to Riviera Bay.

Assessment area description

These forested systems contain bald cypress, red maple, and swamp bay with Carolina willow and Brazilian pepper in the sub-canopy. Leather fern was observed in open areas.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
I-275, Sawgrass Lake Park, Sawgrass Lake, and Sawgrass Lake Elementary School Mitigation Area	This system is not unique for the regional landscape.

Functions	Mitigation for previous permit/other historic use
Provides wildlife habitat, food chain support, water quality improvement, foraging and roosting habitat for wading birds, and other wildlife utilization (cover, refuge, nesting, nursery areas, etc.).	No

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)
Urban wildlife, including wading bird roosting and foraging, raptors, snakes, small mammals, and insects.	Wood stork (T) foraging, wading birds (little blue heron, tricolored heron) (T) foraging and roosting, potentially Eastern indigo snake (T) shelter and foraging.

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

None observed.

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
S. Swanson	Nov. 2018

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
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.		Forested Freshwater Wetlands
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	S. Swanson	Nov. 2018

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support **POST** 0 **PRE** 4	Systems abut an active transportation corridor and are surrounded by dense urban land uses, some undeveloped uplands, and other forested wetlands. Support for wildlife movement is limited by man-made barriers and human use. Access for avian species possible including roosting and foraging along the interior areas away from the highway. Urban land use beyond the assessment areas decrease regional fish and wildlife value.	
.500(6)(b)Water Environment (n/a for uplands) **POST** 0 **PRE** 5	These areas receive untreated roadway runoff from an interstate highway. Some zonation present, but topography has been altered by highway fill, ditching and berms. Standing water was observed at the time of the review.	
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community **POST** 0 **PRE** 6	These forested systems contain bald cypress, red maple, and swamp bay in the canopy and Carolina willow and Brazilian pepper in the sub-canopy. Leather fern was observed in open areas. Topography unnatural due to land alteration.	

Score = sum of above scores/30 (if uplands, divide by 20)
POST 0.00 **PRE** 0.5

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

For impact assessment areas
FL = delta x acres =
0.50 x 2.49 = 1.25

Delta = [with-current]
0.50

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.	TBD	Non-Forested Freshwater Wetlands

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
6180	PSS	Impact	0.44

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Tampa Bay/Anclote River Watershed	III	None

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

Contiguous with roadside drainage ditches and ponds along I-275 and the Roosevelt Blvd. Interchange

Assessment area description

Carolina willow was predominant; Brazilian pepper and primrose willow were present

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
I-275 and Roosevelt Blvd.	This system is not unique for the regional landscape.

Functions	Mitigation for previous permit/other historic use
Provides water quality improvement through sediment and pollutant trapping; low wildlife value (due to location)	No

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)
Urban wildlife possible, but detrimental due to location within an Interstate interchange, including raptors, snakes, small mammals, spiders and insects.	Wood stork (T) foraging, wading birds (little blue heron, tricolored heron) (T) foraging and roosting (transient basis)

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

None observed.

Additional relevant factors:

None

Assessment conducted by:	Assessment date(s):
S. Swanson	Nov. 2018

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
Design Change Re-evaluation for PD&E Study of I-275 From South of 54th Ave. South to North of 4th St. N.		Non-Forested Freshwater Wetlands
Impact or Mitigation	Assessment conducted by:	Assessment date:
Impact	S. Swanson	Nov. 2018

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

Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface water functions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	POST: 0	PRE: 2	Systems abut an active transportation corridor of I-275 and Roosevelt Blvd. (all sides) and are surrounded by dense urban development beyond. Wildlife access extremely limited. Connection to other natural systems does not exist.
.500(6)(b)Water Environment (n/a for uplands)	POST: 0	PRE: 4	These areas receive untreated roadway runoff from an interstate highway. Topography has been altered by highway fill, ditching and berms. Standing water was observed at the time of the review.
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	POST: 0	PRE: 4	Carolina willow was predominant, but Brazilian pepper and primrose willow were present. Land management practices do not occur. Topography unnatural due to land alteration.

Score = sum of above scores/30 (if uplands, divide by 20)	POST	PRE
	0.00	0.33

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

For impact assessment areas
FL = delta x acres =
0.33 x 0.44 = 0.15

Delta = [with-current]
0.33

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

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