

***Natural Resources Evaluation  
Technical Memorandum***

**US 98/SR 35/SR 700**

**From CR 54 to**

**US 301/SR 39**

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



**Florida Department of Transportation**

**District 7**

**Work Program Item Segment No. 443368-2**

**ETDM Project No. 14374**

**Pasco County, Florida**

**August 2022**

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

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Work Program Item Segment No. 443368-2  
ETDM Project No. 14374  
Pasco County, Florida

Prepared for:



Florida Department of Transportation  
District Seven

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August 2022

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## SECTION 1 Introduction

### 1.1 *Technical Memorandum Purpose*

The objective of this Project Development and Environment (PD&E) study is to assist the FDOT's Office of Environmental Management (OEM) in reaching a decision on the type, location, and conceptual design of the proposed improvements for the widening of US Highway 98 (US 98), including stormwater management facility (SMF) and floodplain compensation (FPC) sites. This study documents the need for the improvements as well as the procedures utilized to develop and evaluate various improvements, including elements such as proposed typical sections, preliminary horizontal alignments, and intersection enhancement alternatives.

A Natural Resources Evaluation (NRE) was prepared and submitted to relevant state and federal agencies on October 27, 2021 for comment and/or concurrence as necessary. The purpose of the NRE was to document the natural resources analysis performed to support decisions related to the evaluation of the project build alternative and to summarize potential impacts to wetlands, federal and state protected species, and Essential Fish Habitat. Measures considered to avoid, minimize, and mitigate for potential impacts resulting from the proposed project were also discussed. The NRE was conducted in accordance with the FDOT's PD&E Manual and State and Federal natural resources regulations. Responses were received from the Southwest Florida Water Management District (SWFWMD), Florida Fish and Wildlife Conservation Commission (FWC), and U.S. Fish and Wildlife Service (USFWS). The responses from these agencies are provided in **Appendix A**.

Since agency responses have been received, revisions have been made to the preferred alternative. The purpose of this NRE Technical Memorandum is to document how these alternative revisions impact the results and conclusions presented in the NRE to resource agencies. Sections 2, 3, 4, 5, and 6 of this document discuss how these changes impact the PD&E study's findings related to protected species, wetlands and other surface waters, essential fish habitat, and anticipated permits, coordination, and authorizations respectively.

## SECTION 2 Post Public Hearing Modifications

A Public Hearing was conducted for the US 98 / SR 35 / SR 700 PD&E Study on December 2, 2021 from 5:50 p.m. to 7:30 p.m. at the Pasco County Fairgrounds Clayton Auditorium (36722 State Road 52, Dade City, FL 33525). This public hearing was held to present information to and receive public input from interested persons regarding the proposed improvements to US 98. The public comment period ended on December 13, 2021 (comment receipt/postmark due date).

Based on comments received, the following modifications to the conceptual plans have been made:

1. Pond 200: Pond 200 is being relocated approximately 500' to the east to minimize impacts to wetlands and the agricultural operations of the property owner.
2. Old Lakeland Highway and US 98 Intersection: Minor adjustments to the right of way have been made to accommodate roadway design requirements.
3. Beckum Road Corner Clip: A slight decrease in the right of way impact has been made.
4. Jim Jordan Road Corner Clips: The corner clip to the NE quadrant has been eliminated to avoid utility impacts. As a result, a new right of way take is needed to the SE quadrant.
5. Townsend Road Roundabout: The US 98 and Townsend Road intersection has been modified to a roundabout with a slight shift to the SE. There is an increase in the right of way impact.
6. Old US 98 Roundabout: The US 98 and Old US 98 intersection has been modified to a roundabout. The right of way at the Old US 98 connection is slightly increased on both sides and along US 98 to the south to accommodate the roundabout and extension of the trail to the south.
7. Pond 800: Pond 800 is being relocated approximately 300' to the south and split to be on both the east and west sides of US 98 to allow a connection to the Old US 98 Roundabout from the east.
8. Roundabout at Sta. 1333: A roundabout has been added at Station 1333. No additional right of way is required.
9. Cindy Lane: The Cindy Lane connection to US 98 has been modified to connect to Clinton Avenue and access US 98 via the Clinton Avenue Roundabout.
10. Sta. 1361-1363: The right of way has been modified.
11. The remaining segment of Old US 98 between the new US 98 connection and US 301, approximately 1.0 miles in length, will be milled and resurfaced. All work in this area is limited to the existing 160-foot roadway right-of-way.

The revised project plan set is included in **Appendix B**.

## SECTION 3 Work Outside of Previously Documented Project Study Area

Of the design concept changes identified in Section 2, only the relocation of stormwater pond SMF 200-1 and the remaining segment of Old US 98 between the new connection and US 301 occur outside of the project study area evaluated in the prior NRE. These additional areas are shown in **Figure 3-1** and **Figure 3-2** respectively. The project study area presented in the prior NRE consisted of a 300-ft buffer of the project alternatives and the ROW that would be required for the stormwater management facilities (SMFs) and floodplain compensation sites (FPCs) considered for the project. Approximately 0.57 acre of the property which would be required for the new location of SMF 200-1 occurs outside of the previously presented study area. The following sections discuss the land use and soils found in this portion of SMF 200-1.

### 3.1 LAND USE

Consistent with what was presented in the prior NRE, the existing land use and vegetative cover types within the newly assessed portion of SMF 200-1 were classified using the Florida Land Use, Cover and Forms Classification System (FLUCFCS) data (SWFWMD 2017, FDOT 1999). The approximate land use boundaries were referenced onto true color aerial imagery using ArcGIS 10.8 software. The new portion of SMF 200-1 consists of 0.46 acre of Cropland and Pastureland (FLUCFCS 210), 0.07 acre of Streams and Waterways (FLUCFCS 510), and 0.04 acre of Reservoirs (FLUCFCS 530). The resulting land use and cover types are shown in **Figure 3-3** and the current conditions of the updated location of SMF 200-1 are shown in **Photo 1**. SMF 200-1's involvement with surface waters (FLUCFCS 510 and 530) is discussed further in Section 5.



**Photo 1: Current Conditions of Proposed SMF 200-1 Location**

Regarding the remaining segment of Old US 98 between the new connection and US 301, only the land use within the existing 160-ft wide ROW was mapped. While adjacent habitats in this area were assessed during the project field review conducted on July 22, 2022, to be consistent with the information that was presented in the NRE, all land use within this ROW was identified as Transportation. A representative photo of the general habitat present is provided in **Photo 2**. The land use map for this area is provided in **Figure 3-4**, and updated project-wide land uses are presented in **Table 3-1**.



**Photo 2: Representative Conditions of Old US 98 Portion to be Resurfaced.**



**Table 3-1: Updated Land Use and Cover for Study Area, Old US 98 ROW, and New SMF 200-1 Location**

Land Use or Cover Type	FLUCFCS Code <sup>1</sup>	Acres	Hectares	Percent of Study Area
<b>Uplands/Developed Lands</b>				
Residential Low Density	1100	121.72	49.26	11.68
Residential Medium Density	1200	7.50	3.04	0.72
Residential High Density	1300	8.78	3.55	0.84
Commercial and Services	1400	16.76	6.78	1.61
Industrial	1500	6.96	2.82	0.67
Open Land	1900	47.79	19.34	4.58
Cropland and Pastureland	2100	324.45	131.30	31.13
Nurseries and Vineyards	2400	4.04	1.63	0.39
Shrub and Brushland	3200	16.73	6.77	1.60
Upland Coniferous Forests	4100	4.22	1.71	0.40
Upland Hardwood – Coniferous Mixed	4340	47.93	19.40	4.60
Tree Plantation	4400	46.47	18.81	4.46
Transportation	8100	178.79	72.35	17.15
Communication	8200	1.46	0.59	0.14
<i>Uplands Sub-Total</i>		<i>833.60</i>	<i>337.35</i>	<i>79.97</i>
<b>Wetlands and Other Surface Waters</b>				
<i>Other Surface Waters</i>				
Streams and Waterways	5100	14.32	5.79	1.37
Reservoirs	5300	4.74	1.92	0.45
<i>Wetlands</i>				
Stream and Lake Swamps (Bottomland)	6150	158.25	64.04	15.18
Mixed Wetland Hardwoods	6170	4.05	1.64	0.39
Cypress	6210	9.79	3.96	0.94
Hydric Pine Flatwoods	6250	0.60	0.24	0.06
Wetland Forested Mixed	6300	7.63	3.09	0.73
Freshwater Marshes	6410	4.97	2.01	0.48
Wet Prairies	6430	4.44	1.79	0.43
<i>Wetlands and Other Surface Waters Sub-Total</i>		<i>208.79</i>	<i>84.52</i>	<i>20.03</i>
<b>Total</b>		<b>1,042.39</b>	<b>421.83</b>	<b>100</b>

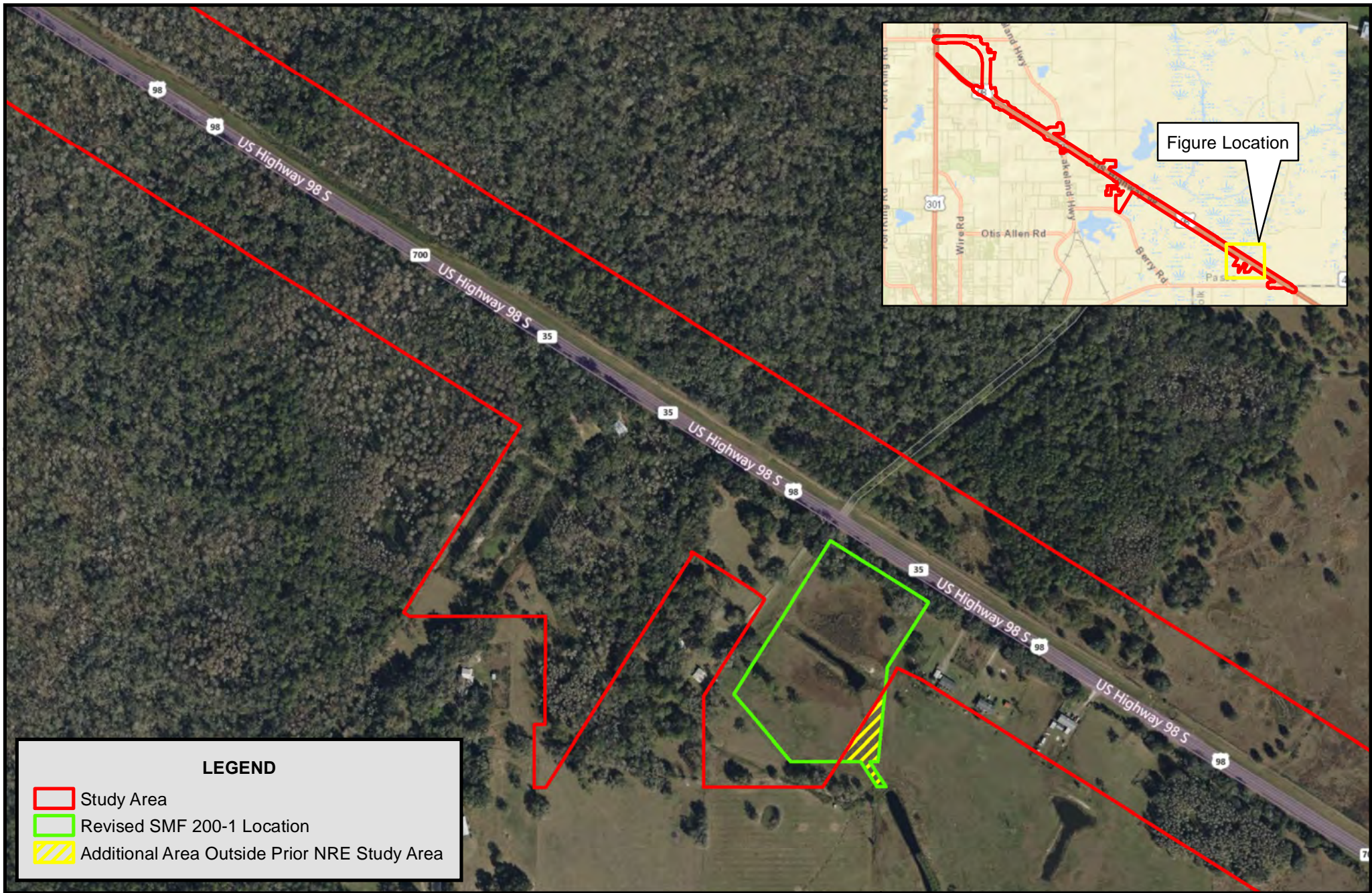
1. (FDOT 1999, SWFWMD 2017)

### 3.2 SOILS




The US Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for Florida (2021) was reviewed to identify local soil types within the study area for the NRE. Approximately 0.55 acre of the new portion of SMF 200-1 occurs over Pomona Fine Sand (a non-hydric soils series) and 0.02 acre occurs over Zephyr Muck (a hydric soils series). **Figure 3-5** depicts the soils series within the new portion of SMF 200-1. The soils within the Old US 98 ROW from the new connection to US 301 occur over Arredondo, Candler, Kendrick, Lake, and Tavares soils series, each of which are non-hydric soils series. **Figure 3-6** depicts the soils series within this ROW. An updated NRCS soils table for the entirety of the project is provided in **Table 3-2**.

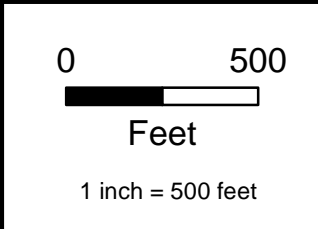
**Table 3-2: Project Soils Series**

Soil Series Name	Hydric Rating	Total Acres	Total Hectares	Percent of Study Area
Basinger Fine Sand, Depressional, 0 to 1 Percent Slopes	Hydric	1.44	0.58	0.14
Chobee Soils, Frequently Flooded	Hydric	83.98	33.98	8.06
Eaton Mucky Fine Sand, Depressional	Hydric	3.71	1.5	0.36
Sellers Mucky Loamy Fine Sand	Hydric	5.53	2.24	0.53
Zephyr Muck	Hydric	58.20	23.55	5.58
Adamsville Fine Sand, 0 to 2 Percent Slopes	Non-Hydric	2.48	1.00	0.24
Arredondo Fine Sand, 0 to 5 Percent Slopes	Non-Hydric	104.28	42.20	10.00
Candler Fine Sand, 0 to 5 Percent Slopes	Non-Hydric	114.03	46.15	10.94
Eaugallie Fine Sand	Non-Hydric	17.52	7.09	1.68
Kendrick Fine Sand, 0 to 5 Percent Slopes	Non-Hydric	12.94	5.24	1.24
Lake Fine Sand, 0 to 5 Percent Slopes	Non-Hydric	352.57	142.68	33.82
Myakka Fine Sands, 0 to 2 Percent Slopes	Non-Hydric	11.81	4.78	1.13
Orlando Fine Sand, 0 to 5 Percent Slopes	Non-Hydric	15.82	6.40	1.52
Pomona Fine Sand	Non-Hydric	148.11	59.93	14.21
Smyrna and Myakka Fine Sands	Non-Hydric	4.37	1.77	0.42
Sparr Fine Sand, 0 to 5 Percent Slopes	Non-Hydric	23.01	9.31	2.21
Tavares Sand, 0 to 5 Percent Slopes	Non-Hydric	79.35	32.11	7.61
Wabasso Fine Sand	Non-Hydric	1.65	0.67	0.16
Pits	Unranked	1.18	0.48	0.11
Water	Unranked	0.41	0.17	0.04
<i>Hydric Soils Sub-Total</i>		<i>152.86</i>	<i>61.85</i>	<i>14.67</i>
<i>Non-Hydric Soils Sub-Total</i>		<i>887.94</i>	<i>351.90</i>	<i>85.18</i>
<i>Unranked Soils Sub-Total</i>		<i>1.59</i>	<i>0.65</i>	<i>0.15</i>
<b>Total</b>		<b>1,042.39</b>	<b>421.83</b>	<b>100</b>



**LEGEND**

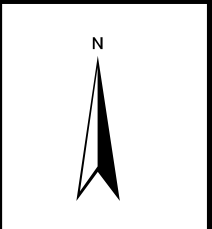
-  Study Area
-  Revised SMF 200-1 Location
-  Additional Area Outside Prior NRE Study Area

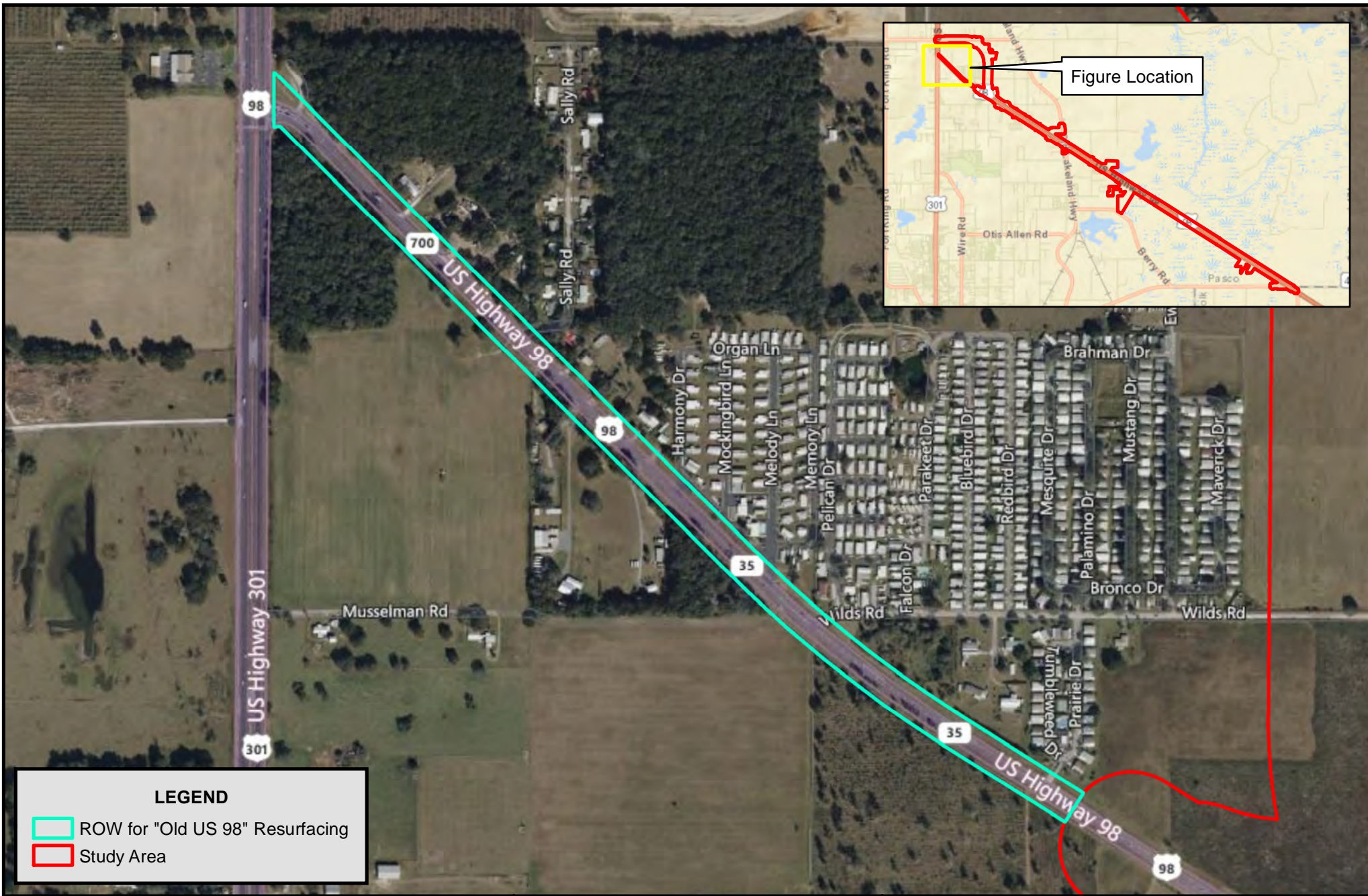


**Figure 3-1**  
**SMF 200-1 Revised Location**

**US 98 from CR 54 to US 301**  
**FPID: 443368-2**  
**Pasco County, Florida**

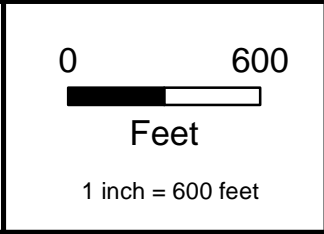
Sources: ESRI 2022





**LEGEND**

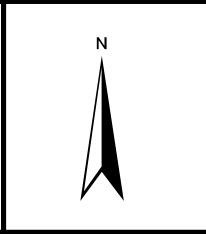
- ROW for "Old US 98" Resurfacing
- Study Area

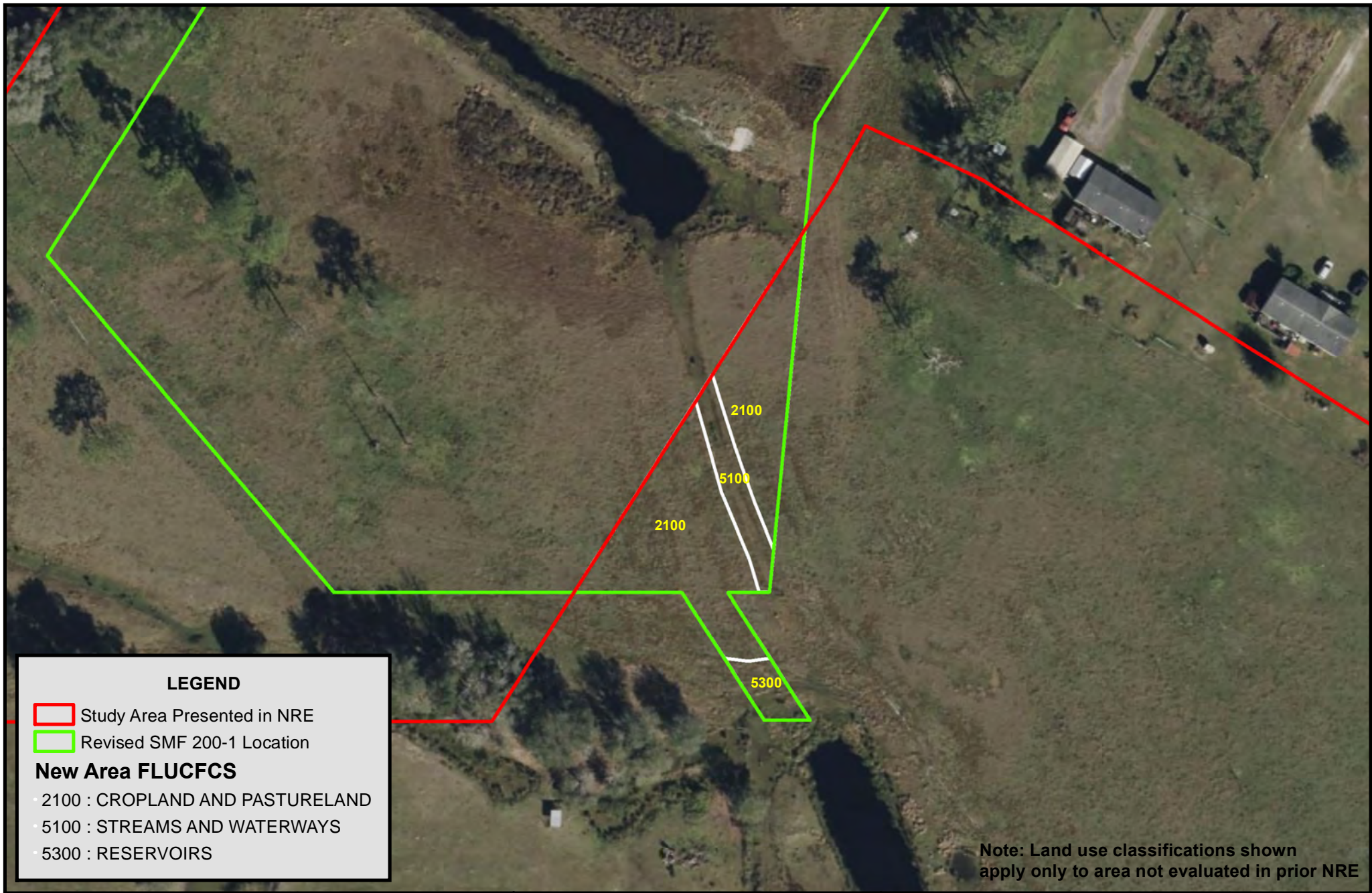


**Figure 3-2**  
**Old US 98**  
**Resurfacing Location**

**US 98 from CR 54 to US 301**  
**FPID: 443368-2**  
**Pasco County, Florida**

Sources: ESRI 2022





**LEGEND**

▭ Study Area Presented in NRE

▭ Revised SMF 200-1 Location

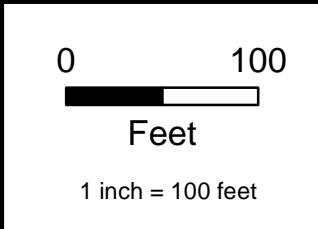
**New Area FLUCFCS**

2100 : CROPLAND AND PASTURELAND

5100 : STREAMS AND WATERWAYS

5300 : RESERVOIRS

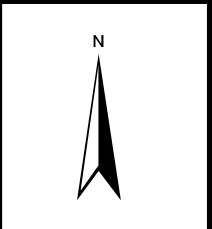
Note: Land use classifications shown apply only to area not evaluated in prior NRE

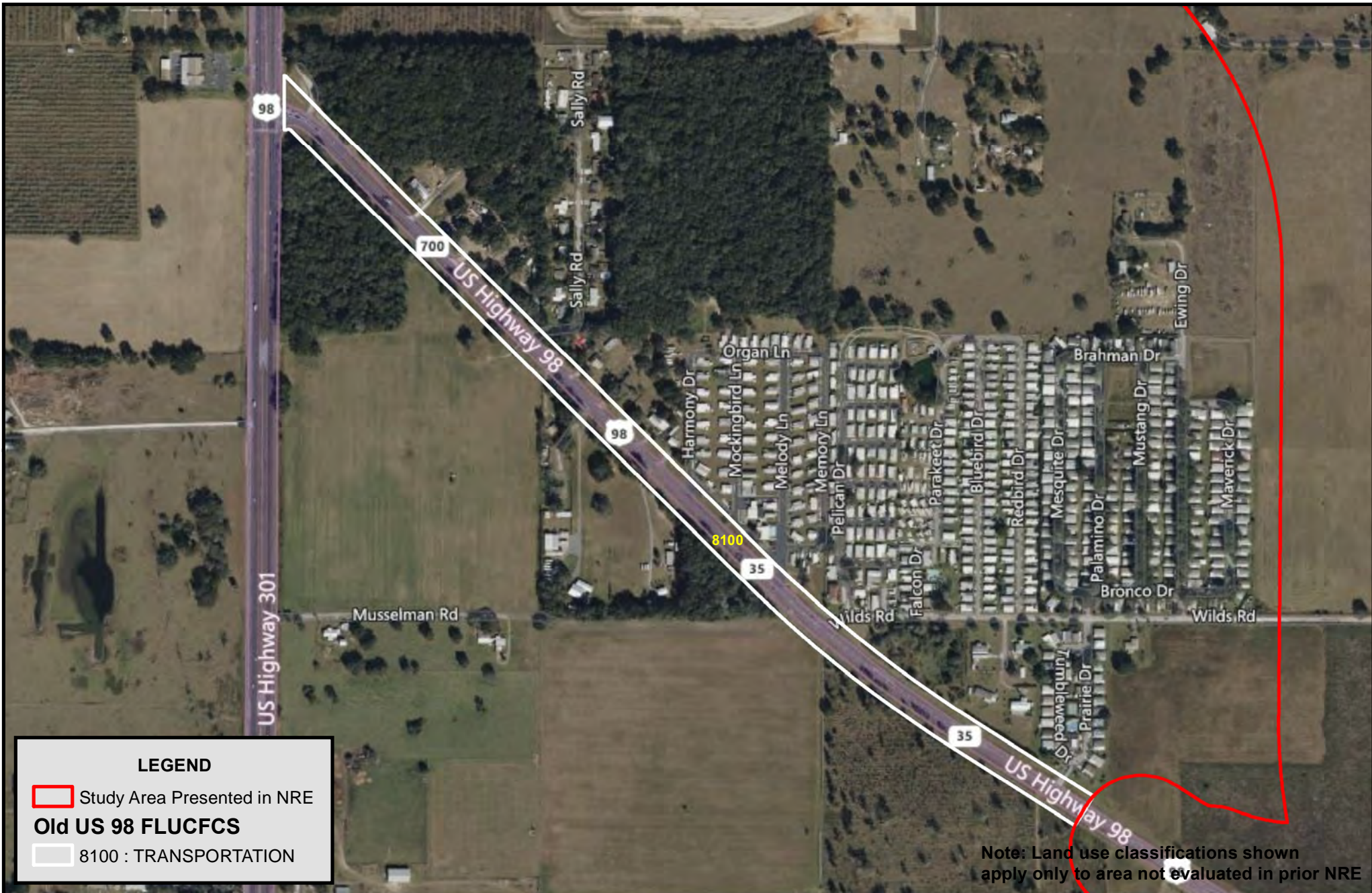


**Figure 3-3**  
**Land Uses**  
**within Portion of SMF 200-1**  
**outside of NRE Study Area**

**US 98 from CR 54 to US 301**  
**FPID: 443368-2**  
**Pasco County, Florida**

Sources: ESRI 2022, SWFWMD 2017

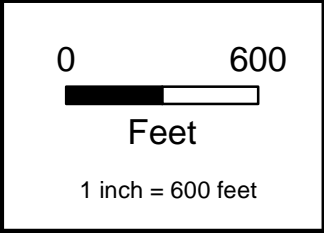




**LEGEND**

- Study Area Presented in NRE
- Old US 98 FLUCFCS**
- 8100 : TRANSPORTATION

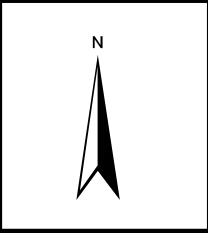
Note: Land use classifications shown apply only to area not evaluated in prior NRE

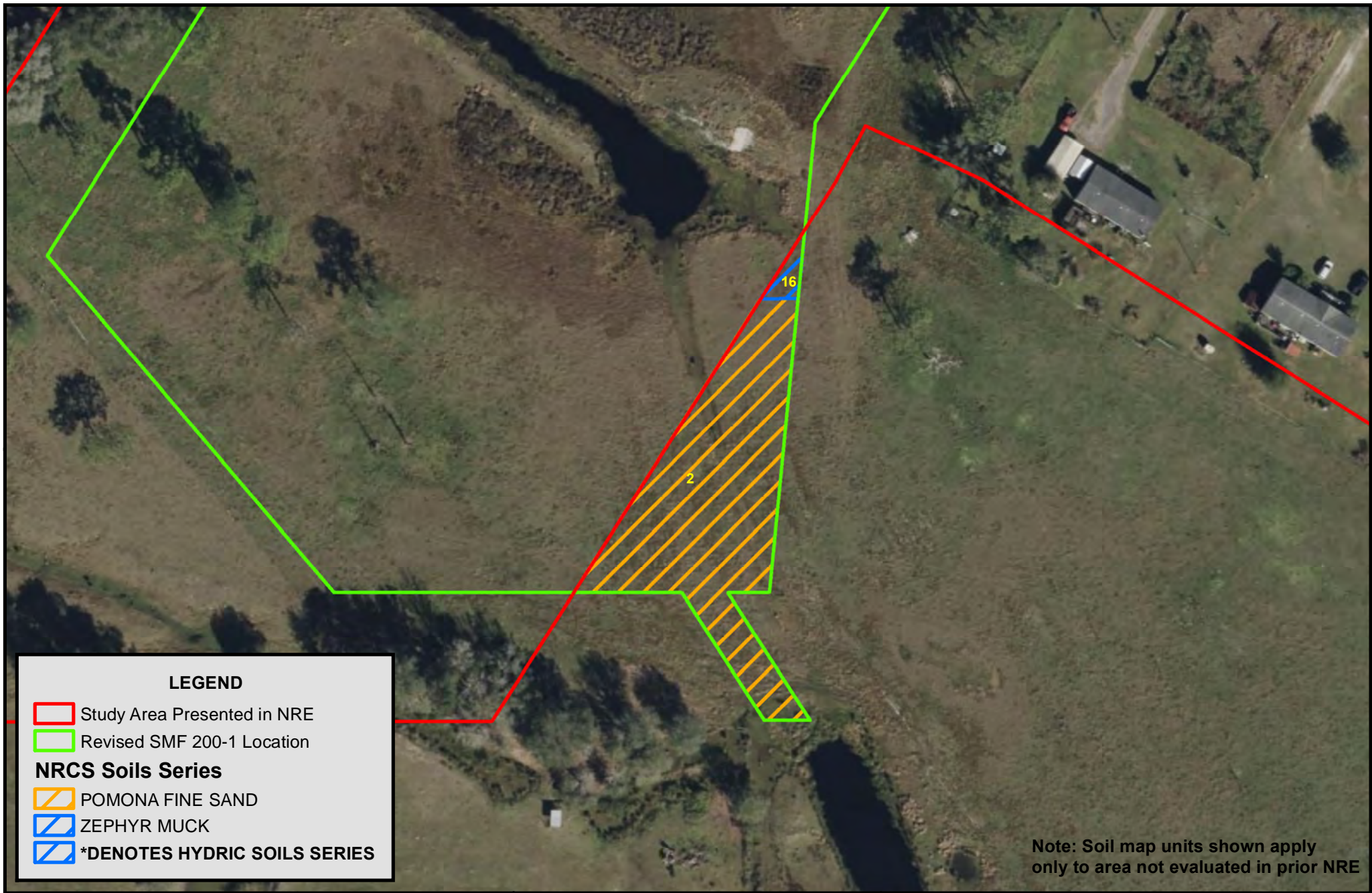


**Figure 3-4**  
**Land Uses**  
**within Old US 98 ROW**



**US 98 from CR 54 to US 301**  
**FPID: 443368-2**  
**Pasco County, Florida**

Sources: ESRI 2022, SWFWMD 2017








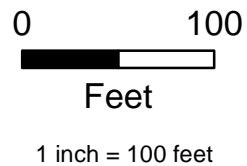
**LEGEND**

-  Study Area Presented in NRE
-  Revised SMF 200-1 Location

**NRCS Soils Series**

-  POMONA FINE SAND
-  ZEPHYR MUCK
-  \*DENOTES HYDRIC SOILS SERIES

Note: Soil map units shown apply only to area not evaluated in prior NRE

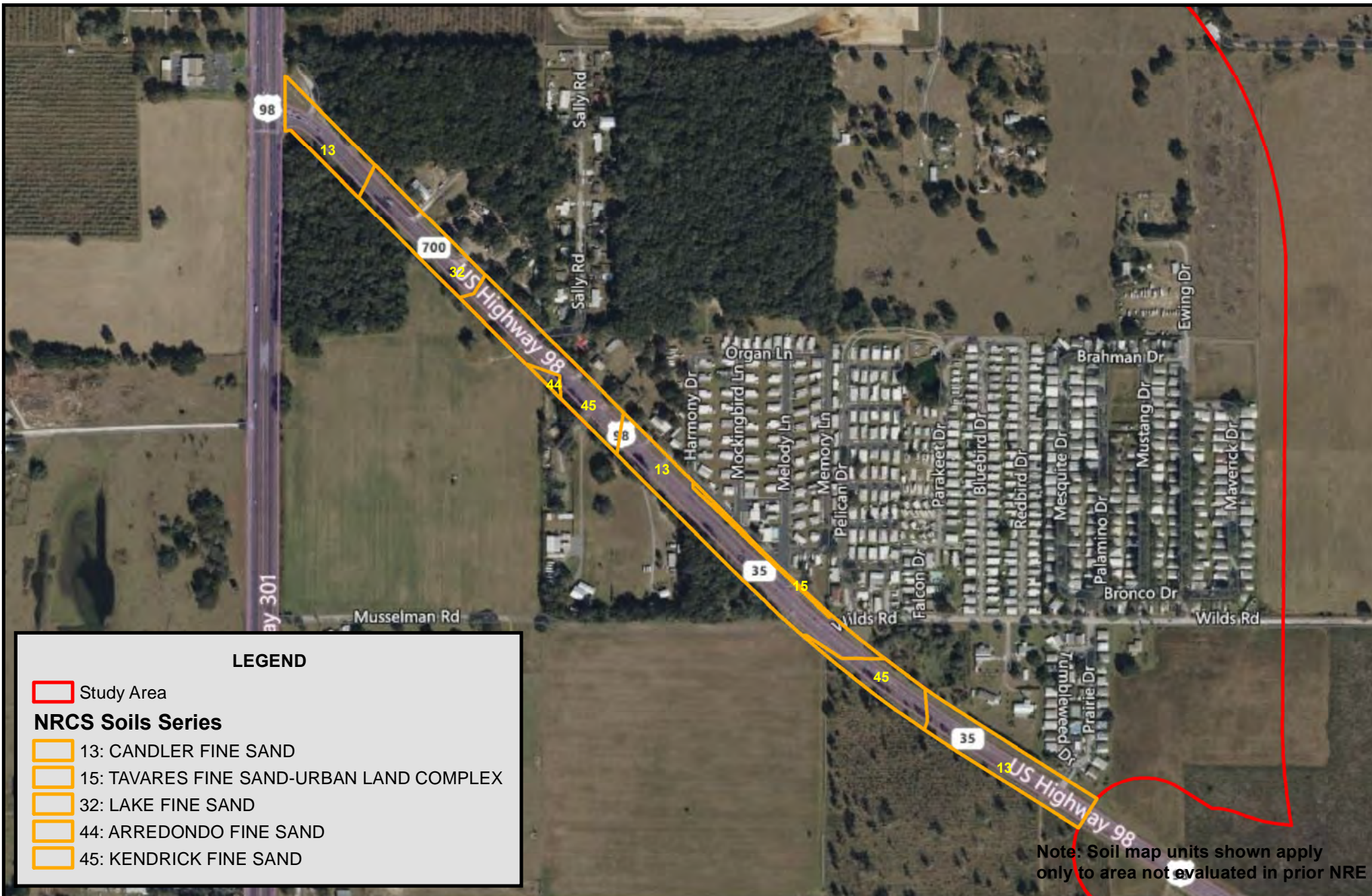


**Figure 3-5  
NRCS Soils Series  
within Portion of SMF 200-1  
outside of NRE Study Area**

**US 98 from CR 54 to US 301  
FPID: 443368-2  
Pasco County, Florida**

Sources: ESRI 2022, NRCS 2018 & 2022

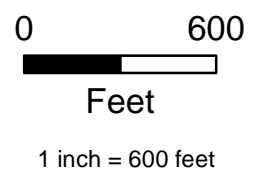




Note: Soil map units shown apply only to area not evaluated in prior NRE

**LEGEND**

- Study Area
- NRCS Soils Series**
- 13: CANDLER FINE SAND
- 15: TAVARES FINE SAND-URBAN LAND COMPLEX
- 32: LAKE FINE SAND
- 44: ARREDONDO FINE SAND
- 45: KENDRICK FINE SAND



**Figure 3-6  
NRCS Soils Series  
within Old US 98 ROW**

**US 98 from CR 54 to US 301  
FPID: 443368-2  
Pasco County, Florida**



Sources: ESRI 2022, NRCS 2018 & 2022



## SECTION 4 PROTECTED SPECIES AND HABITAT

The prior NRE presented a list of potentially occurring protected species. Each species was assigned a none, low, moderate, or high potential for occurrence within habitats found within the study area and assigned proposed effect determinations which the USFWS and FWC concurred with. Field reviews were performed on February 17 and July 22, 2022, to assess how the revised preferred alternative may affect the species effect determinations as presented in the prior NRE.

The prior NRE also determined that the previous alternative would not result in the destruction or adverse modification of any designated critical habitat as there is no designated critical habitat for any federal listed species occurs within or immediately adjacent to the project study area. None of the revisions to the preferred alternative alter this determination.

The updated field review found an additional 11 potentially occupied gopher tortoise burrows in the proposed footprint of SMF 900-1. Adding these newly located burrows to the burrows previously identified in the NRE, yields a total of 53 documented potentially occupied gopher tortoise burrows identified within the project study area. Despite these 11 additional burrows, because of the high population of gopher tortoise burrows previously identified, the gopher tortoise's potential for occurrence remains **high** and the effect determination remains ***no adverse effect anticipated*** (i.e., since the project will adhere to pre-construction survey, permitting and relocation in accordance with FWC requirements).

Two unidentified nests had been identified in cell towers and the bald eagle was assigned an effect determination of ***no adverse effect anticipated***. As the updated field review was performed during the eagle nesting season (generally October-May), the previously identified nests were inspected using binoculars for nesting activity. It was discovered that each nest was an active osprey nest. As the nests were confirmed to not be eagle nests, the eagle's potential for occurrence has been revised to **moderate** and its effect determination revised to ***no effect anticipated***. While the osprey was previously a state-listed species in Florida and recently only state-listed in Monroe County, the entire state population was removed from the Florida Threatened and Endangered Species List in 2018. Currently, it is principally provided protections under the federal Migratory Bird Treaty Act. The preferred alternative will not impact either known osprey nest within the project study area. Therefore, a Migratory Bird Treaty Act permit is not anticipated to be required at this time.

It was determined that no other species' potential for occurrence or effect determination would be affected by the updated preferred alternative. Definitions for potential occurrence are provided below. **Table 4-1** lists the federal and state protected wildlife and plant species as well as each species' potential for occurrence within the study area. The prescribed effect determinations area also provided for each species within this table. **Figure 4-1** is a map of documented species occurrences which has been updated to depict the 11 additional gopher tortoise burrows.

**None** – Species whose agency consultation area or range may include the project study area but have no potential for occurrence in the study area due to lack of suitable habitat.

**Low** – Species with a low potential for occurrence within the project ROW are defined as those species that are known to occur in Pasco County or the bio-region, but suitable habitat is limited within the study area, or the species is range-limited, rare, or no longer extant.

**Moderate** – Species with a moderate potential for occurrence are those species known to occur in Pasco County or nearby counties, and for which suitable habitat is present within the study area, but no observations or positive indications exist to verify the species’ presence.

**High** – Species with a high potential for occurrence are suspected within the study area based on known ranges and existence of sufficient suitable habitat; are known to occur adjacent to the study area; or have been previously observed or documented in the immediate project vicinity.

**Table 4-1: Potential for Occurrence and Proposed Effect Determinations for Federal and State Protected Species for the Project Study Area**

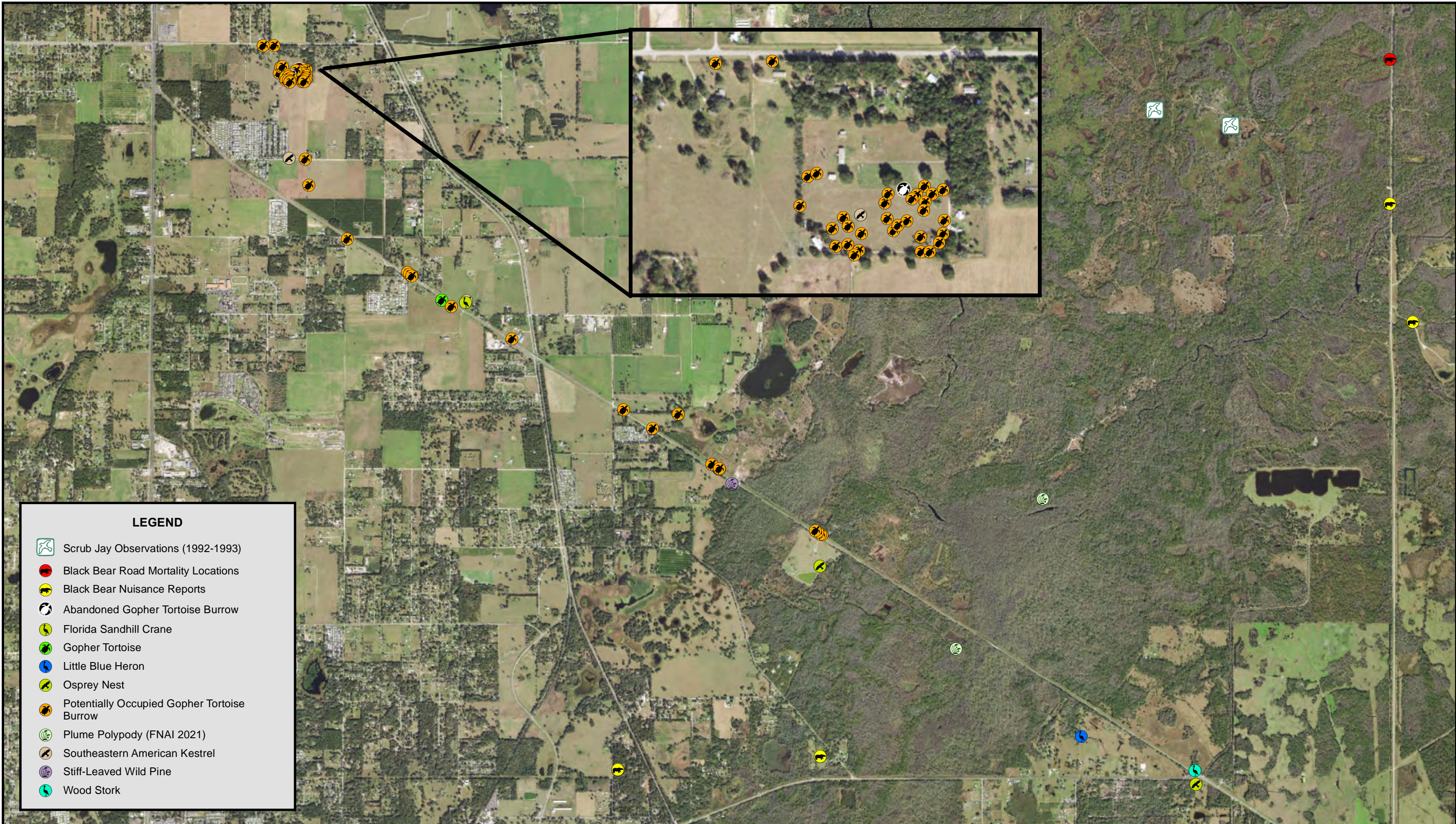
Species	Listing Status*	Potential for Occurrence	Proposed Effect Determinations
<b>Plants</b>			
Celestial Lily ( <i>Nemastylis floridana</i> )	FDACS - Endangered	Moderate	No effect anticipated
Craighead’s Nodding Caps ( <i>Triphora rickettii</i> )	FDACS - Endangered	Moderate	No effect anticipated
Florida Willow ( <i>Salix floridana</i> )	FDACS - Endangered	Moderate	No effect anticipated
Plume Polypody ( <i>Pecluma plumula</i> )	FDACS - Endangered	High	No adverse effect anticipated
Pondspice ( <i>Litsea aestivalis</i> )	FDACS - Endangered	Moderate	No effect anticipated
Pygmy Pipes ( <i>Monotropis reynoldsiae</i> )	FDACS - Endangered	Moderate	No effect anticipated
Sand Butterfly Pea ( <i>Centrosema arenicola</i> )	FDACS - Endangered	None	No effect anticipated
Stiff-leaved Wild Pine ( <i>Tillandsia fasciculata</i> )	FDACS - Endangered	High (observed)	No adverse effect anticipated
<b>Reptiles</b>			
Bluetail Mole Skink ( <i>Eumeces egregius lividus</i> )	USFWS – Threatened	None	No effect
Eastern Indigo Snake ( <i>Drymarchon corais couperi</i> )	USFWS – Threatened	Moderate	May affect, not likely to adversely affect
Florida Pine Snake ( <i>Pituophis melanoleucus mugitis</i> )	FWC – Threatened	Moderate	No adverse effect anticipated
Gopher Tortoise ( <i>Gopherus polyphemus</i> )	USFWS – Candidate Species FWC – Threatened	High (observed)	No adverse effect anticipated
Short-tailed Snake ( <i>Lampropeltis extenuata</i> )	FWC - Threatened	None	No effect anticipated
<b>Birds</b>			

Audubon's Crested Caracara ( <i>Polyborus plancus audubonii</i> = <i>Caracara cheriway</i> )	USFWS – Threatened	None	No effect
Eastern Black Rail ( <i>Lateralus jamaicensis jamaicensis</i> )	USFWS – Threatened	Moderate	May affect, not likely to adversely affect
Florida Scrub-Jay ( <i>Aphelocoma coerulescens</i> )	USFWS – Threatened	None	No effect
Piping Plover ( <i>Charadrius melodus</i> )	USFWS – Threatened	None	No effect
Red Cockaded Woodpecker ( <i>Picoides borealis</i> )	USFWS – Endangered	None	No effect
Wood Stork ( <i>Mycteria americana</i> )	USFWS – Threatened	High (observed)	May affect, not likely to adversely affect
Black Skimmer ( <i>Rhynchops nigers</i> )	FWC – Threatened	None	No effect anticipated
Florida Burrowing Owl ( <i>Athene cunicularia floridana</i> )	FWC – Threatened	Moderate	No adverse effect anticipated
Florida Sandhill Crane ( <i>Antigone canadensis pratensis</i> )	FWC – Threatened	High (observed)	No adverse effect anticipated
Least Tern ( <i>Sternula antillarum</i> )	FWC – Threatened	None	No effect anticipated
Little Blue Heron ( <i>Egretta caerulea</i> )	FWC – Threatened	High (observed)	No adverse effect anticipated
Reddish Egret ( <i>Egretta rufescens</i> )	FWC – Threatened	High	No adverse effect anticipated
Roseate Spoonbill ( <i>Platalea ajaja</i> )	FWC – Threatened	High	No adverse effect anticipated
Southeastern American Kestrel ( <i>Falco sparverius paulus</i> )	FWC – Threatened	High (observed)	No adverse effect anticipated
Tricolored Heron ( <i>Egretta tricolor</i> )	FWC – Threatened	High	No adverse effect anticipated
Bald Eagle ( <i>Haliaeetus leucocephalus</i> ) <sup>1</sup>	Not Listed	Moderate	No effect anticipated
Osprey ( <i>Pandion haliaetus</i> )	Not Listed	High (observed)	N/A
<b>Mammals</b>			
Florida Black Bear ( <i>Ursus americana floridana</i> ) <sup>3</sup>	Not Listed	Moderate	No adverse effect anticipated














\*FWC listing status was not included for species with the same federal listing status as due to the State's deferment to federal status under Chapter 68A-27, F.A.C.

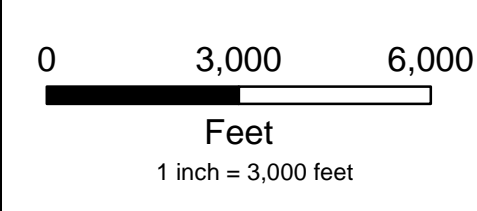
(1) Protected under the federal Bald and Golden Eagle Protection Act and Migratory Bird Treaty Act

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



**LEGEND**

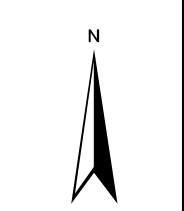
-  Scrub Jay Observations (1992-1993)
-  Black Bear Road Mortality Locations
-  Black Bear Nuisance Reports
-  Abandoned Gopher Tortoise Burrow
-  Florida Sandhill Crane
-  Gopher Tortoise
-  Little Blue Heron
-  Osprey Nest
-  Potentially Occupied Gopher Tortoise Burrow
-  Plume Polypody (FNAI 2021)
-  Southeastern American Kestrel
-  Stiff-Leaved Wild Pine
-  Wood Stork



**Figure 4-1**  
**Protected Species Occurrences**

**US 98/SR 35/SR 700**  
**from Polk County Line/CR 54 to US 301/SR 39/SR 41**  
**FPID: 443368-2**  
**Pasco County, Florida**

Sources: ESRI 2022, FNAI 2021, FWC 2010, 2021a, 2021b, RK&K 2021 & 2022



## SECTION 5 WETLANDS AND OTHER SURFACE WATERS

The locations, limits, types, nature, and functions of all surface waters, including wetlands within the project limits were assessed for the NRE as part of compliance with Presidential Executive Order (EO) 11990, "Protection of Wetlands" and USDOT Order 5660.1A, *Preservation of the Nation's Wetlands*. Per the updated alternative, only the new SMF 200-1 location resulted in changes to the project's involvement with surface waters.

It should be noted that no wetlands or other surface waters occur within the Old US 98 ROW from the new connection to US 301, so this revision is not discussed further in this section.

### 5.1 UPDATED SMF 200-1 SURFACE WATERS

One new surface water (P-5) not previously identified in the NRE occurs within the new location of SMF 200-1. P-6 is an excavated feature occurring within pasture. It is classified as a Reservoir (FLUCFCS 530) and L2UB4x (Cowardin et al 1979). Now a total of forty-nine (49) systems occur within the study area. Additionally, the previously identified WL-18, WL-19, WL-20, D-6, and P-1 occur within the updated location of SMF 200-1. These systems all occur within the Withlacoochee HUC8 watershed and the Hillsborough River Basin. **Figure 5-1** represents the location of SMF 200-1 relative to the identified wetlands and other surface waters.

### 5.2 UPDATED WETLAND IMPACT ANALYSIS

Per the design changes discussed in Section 2, the only change that results in wetland or surface water impacts is the relocation of stormwater pond SMF 200-1. The impacts from the US 98 mainline roadway remain the same as those presented in the prior NRE (9.29 acres of direct wetlands impacts and 10.94 acres of secondary wetland impacts, 20.23 total acres of wetland impacts). SMF 200-1's location as previously presented would have resulted in approximately 6.85 acres of direct impacts to wetlands and 1.35 acres of secondary impacts to wetlands (total 8.20 acres of impacts). However, the revised SMF 200-1 location significantly reduces impacts and now results in approximately 2.19 acres of direct impacts to wetlands and 0.02 acre of secondary impacts to wetlands (total of 2.21 acres of impacts). The updated SMF 200-1 location is also anticipated to impact 0.77 acre of man-made other surface waters. The impact acreages to these systems by the updated SMF 200-1 are presented in **Table 5-1**.

Applying these values to the impacts presented in the NRE, the project will impact a total of approximately 22.44 acres of wetlands (11.48 acres of direct impacts and 10.96 acres of secondary impacts) and 13.10 other surface waters. A map depicting the updated wetlands and other surface waters impacts from SMF 200-1 is shown in **Figure 5-2**.

**Table 5-1: Updated SMF 200-1 Location Wetland and Other Surface Water Impacts  
Summary**

System	FLUCFCS Classification	FLUCFCS Description	Acreage within Updated SMF 200-1 Location
D-6	510	Streams and Waterways	0.11
P-1	530	Reservoirs	0.62
P-5	530	Reservoirs	0.04
WL-18	641	Freshwater Marshes	1.71
WL-19	641	Freshwater Marshes	0.48
WL-20	643	Wet Prairies	0.002

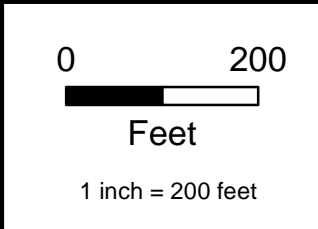


**LEGEND**

- Study Area Presented in NRE
- Revised SMF 200-1 Location

**Wetlands and Other Surface Waters**

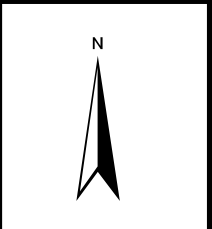
- Ditch
- Pond
- Wetland

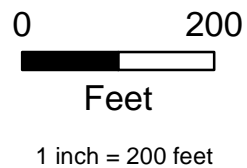


**Figure 5-1**  
**Revised SMF 200-1 Wetlands**  
**and Other Surface Waters**

**US 98 from CR 54 to US 301**  
**FPID: 443368-2**  
**Pasco County, Florida**

Sources: ESRI 2022, SWFWMD 2017, RK&K 2021 & 2022





**Figure 5-2**  
**Revised SMF 200-1 Updated**  
**Wetland and Other Surface**  
**Water Impacts**

**US 98 from CR 54 to US 301**  
**FPID: 443368-2**  
**Pasco County, Florida**

Sources: ESRI 2022, RK&K 2021 & 2022





Impacts to project wetlands were assessed using the Uniform Mitigation Assessment Method (UMAM) as part of the NRE. The UMAM (Chapter 62-345 F.A.C.) was developed by the State of Florida to assess the ecological functions provided by wetlands and the amount of mitigation necessary to offset the loss of functions by a proposed project. The UMAM analysis is based on assessing an area on three criteria: location and landscape support, water environment, and community structure. These criteria are scored with the whole increment values between “10” (indicating the highest quality system) and “0” (indicating no present value). The three criteria are summed and divided by 30 to yield a score for the assessment area between “0” and “1”. The difference between the “with project” and “current” condition is calculated to result in the “Delta”. The UMAM delta is multiplied by the area of wetland impact to quantify the loss of wetland functions (functional loss).

An updated UMAM assessment was performed for the revised wetland impacts associated with relocated SMF 200-1. UMAM data sheets used for this analysis are provided in **Appendix C**. A summary table of the functional loss by habitat from the revised SMF 200-1 location is included in **Table 5-2** (aside from SMF 200-1, there are no other changes to the impacts shown in Table 4-2 in the prior NRE). The impact acreage of other surface waters (FLUCFCS 510 and FLUCFCS 530) is provided in the assessment; however, wetland mitigation is not required for these systems.

The direct wetland impacts associated with relocated SMF 200-1 (2.192 acres) are now estimated to result in 1.531 units of functional loss and the secondary wetland impacts (0.02 acre) are estimated to result in 0.002 units of functional loss. The combined direct and secondary impacts which would result from SMF 200-1 total 1.21 acres of impacts resulting in 1.54 units of functional loss. These impacts are entirely to herbaceous systems within the Hillsborough River Basin. Adding these values to those presented in the prior NRE results in the following totals for the project:

- 11.48 acres of direct wetland impacts with a UMAM functional loss of 8.30
- 10.96 acres of secondary wetland impacts with a UMAM functional loss of 1.10
- 22.44 acres of total wetland impacts with a UMAM functional loss of 9.40
- 5.00 acres of impacts to forested wetland systems within the Withlacoochee River Basin with a UMAM functional loss of 1.60
- 14.49 acres of impacts to forested wetland systems within the Hillsborough River Basin with a UMAM functional loss of 6.03
- 2.95 acres of impacts to herbaceous wetland systems within the Hillsborough River Basin with a UMAM functional loss of 1.77

**Table 5-2: Project Wetland Impacts and UMAM Analysis Summary**

Project Feature	Impacted Systems	FLUCFCS Classification	Herbaceous/ Forested Systems	Direct Impact Area Per Basin (Acres)	Direct Impact Area Total (Acres)	Secondary Impact Area Per Basin (Acres)	Secondary Impact Area Total (Acres)	Total Impact Areas Per Basin (Acres)	Total Impact Area (Acres)	Delta (Prim/ Second)	Direct Functional Loss Per Basin	Total Direct Functional Loss	Secondary Functional Loss Per Basin	Total Secondary Functional Loss	Total Functional Loss Per Basin	Total Functional Loss	
SMF 200-1	D6	5100: Streams and Waterways	N/A	Hillsborough River 0.11 (0.11 in uplands soil)	0.11 (0.11 in uplands soil)	N/A	N/A	Hillsborough River 0.11 (0.11 in uplands soil)	0.11 (0.11 in uplands soil)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	P-1 and P-5	5300: Reservoirs	N/A	Hillsborough River 0.66 (0.11 in hydric soil and 0.55 in uplands soil)	0.66 (0.11 in hydric soil and 0.55 in uplands soil)	N/A	N/A	Hillsborough River 0.66 (0.11 in hydric soil and 0.55 in uplands soil)	0.66 (0.11 in hydric soil and 0.55 in uplands soil)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	Other Surface Waters Total		N/A	Hillsborough River: 0.77	0.77	N/A	N/A	Hillsborough River: 0.77	0.77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	WL-18 and WL-19	6410: Freshwater Marshes	Herbaceous	Hillsborough River: 2.19 (herbaceous)	2.19	Hillsborough River: 0.01 (herbaceous)	0.01	Hillsborough River: 2.20 (herbaceous)	2.20	-0.70 / -0.10	Hillsborough River: 1.53 (herbaceous)	1.53	Hillsborough River: 0.001 (herbaceous)	0.001	Hillsborough River: 1.531 (herbaceous)	1.531	
	WL-20	6430: Wet Prairies	Herbaceous	Hillsborough River: 0.002 (herbaceous)	0.002	Hillsborough River: 0.01 (herbaceous)	0.01	Hillsborough River: 0.012 (herbaceous)	0.012	-0.70 / -0.10	Hillsborough River: 0.001 (herbaceous)	0.001	Hillsborough River: 0.001 (herbaceous)	0.001	Hillsborough River: 0.002 (herbaceous)	0.002	
	Wetlands Total		Herbaceous	Hillsborough River: 2.192 (herbaceous)	2.192	Hillsborough River: 0.02 (herbaceous)	0.02	Hillsborough River: 2.212 (herbaceous)	2.212	N/A	Hillsborough River: 1.531 (herbaceous)	1.531	Hillsborough River: 0.002 (herbaceous)	0.002	Hillsborough River: 1.533 (herbaceous)	1.54	

### **5.3 UPDATED CONCEPTUAL MITIGATION PLAN**

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S. and 33 USC. §1344. In 2008, the USACE and the US Environmental Protection Agency (USEPA) issued regulations governing compensatory mitigation for activities authorized by the Department of the Army (Federal Register 2008). These regulations, as promulgated in 33 CFR Part 332, establish a hierarchy for determining the type and location of compensatory mitigation. Briefly summarized, the rule establishes a preference for the use of mitigation bank credits if a mitigation bank has the appropriate number of and resource type of credits available. If the permitted impacts are not in the service area of an approved mitigation bank or in-lieu fee program cannot be used to provide the required compensatory mitigation, the rule establishes a preference for permittee responsible mitigation under a watershed approach.

Total impacts from the project mainline and SMF 200-1 total approximately 22.44 acres of wetland impacts with a total estimated functional loss of 9.40 units. Of these impacts, 5.00 acres are within the Withlacoochee Basin with a total estimated functional loss of 1.6. The impacts within the Withlacoochee Basin will be exclusively to forested systems. The remaining 17.44 acres of impacts are within the Hillsborough River Basin. Of these 17.44 acres, 14.49 acres of impacts will be to forested systems with a functional loss of 6.03. Approximately 2.95 acres of impact would result to herbaceous systems within the Hillsborough River Basin with a functional loss of 1.77.

The project anticipates using commercially available mitigation credits from agency-approved banks with an appropriate geographic service area to provide compensatory mitigation sufficient to offset unavoidable project impacts to wetlands and wetland-dependent species habitat. The mitigation banks within the Hillsborough River Basin include the Hillsborough River Mitigation Bank (MB), the Hillsborough River Phase II MB, Wiggins Prairie MB, and the North Tampa MB. The mitigation banks within the Withlacoochee River Basin include the Green Swamp MB, the Withlacoochee MB, the Crooked River MB, and the Hilochee MB. The entire roadway project is located within the Boarshead Ranch MB. **Table 4-3** below details the type and amount of credits available at these banks. These values are based on review of the USACE Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) conducted on August 8, 2022. Although credit availability among these banks will likely change in the time between this PD&E study's conclusion and the project's future environmental permitting efforts, sufficient mitigation credits are available to offset the impacts from the proposed improvements. With compensatory mitigation completed within the same watershed where the impacts are incurred, the project will not result in cumulative impacts.

**Table 5-3: Compensatory Wetland Mitigation Options for US 98 as of August 2022**

Bank Name	Credit Classification	Assessment Method	Basin	Available Credits
Boarshead Ranch MB	Palustrine Emergent and Palustrine Forested	UMAM	Hillsborough River and Withlacoochee	20.03 emergent 8.58 forested
Hillsborough River Phase I and Phase II MB	Palustrine Emergent and Palustrine Forested	UMAM	Hillsborough River	4.308 emergent 11.32 forested
Wiggins Prairie MB	Palustrine Emergent and Palustrine Forested	UMAM	Hillsborough River	8.61 emergent 6.45 forested
North Tampa MB	Palustrine Forested	UMAM	Hillsborough River	1.82 forested
Green Swamp MB	Palustrine Forested	UMAM	Withlacoochee	19.49 forested
Withlacoochee MB	Palustrine Emergent and Palustrine Forested	UMAM	Withlacoochee	0.29 emergent 19.59 forested
Crooked River MB	Palustrine Emergent and Palustrine Forested	UMAM	Withlacoochee	4.65 emergent 3.46 forested
Hilochee MB	Palustrine Emergent and Palustrine Forested	UMAM	Withlacoochee	31.30 emergent 6.26 forested

The exact number of mitigation credits required to fully offset the lost value of functions resulting from the project’s wetland impacts will be determined during the design phase and in coordination with the state and federal environmental permitting agencies.

## **SECTION 6 ESSENTIAL FISH HABITAT ASSESSMENT**

Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern (HAPC) are designated by the National Oceanic and Atmospheric Administration (NOAA), NMFS and the regional fishery management councils for species managed under the Magnuson-Stevens Fishery Conservation and Management Act as amended (MSA). The MSA established eight Fishery Management Councils (FMC) across the country that are tasked with creating and amending Fishery Management Plans (FMP). The NRE presented that due to the inland geographic location of the project, there are no tidally-influenced surface waters within the project study area. Therefore, there is no EFH or HAPC within the project study area and consultation for EFH is not necessary. This conclusion remains sound even after the subject alternative revisions presented in this technical memorandum.

## **SECTION 7 ANTICIPATED PERMITS, COORDINATION, AND AUTHORIZATIONS**

Environmental permits, coordination, and authorizations from the following agencies will likely be required for construction of this project:

### **Anticipated Permits**

- SWFWMD – Individual Environmental Resource Permit (ERP)
- FDEP – Section 404 Standard Individual Permit, National Pollutant Discharge Elimination System (NPDES) Permit (to be obtained by contractor)
- FWC – Gopher Tortoise Conservation Permit

### **Anticipated Coordination**

- USFWS – ESA Section 7 consultation for federally-listed plant and animal species, coordination for migratory bird species.
- FWC – Coordination for state-listed animal species and the black bear.
- FDACS – Coordination for state-listed plant species.

## SECTION 8 CONCLUSION

### 8.1 PROTECTED SPECIES AND HABITAT

The study area was evaluated for the presence of federal and/or state protected species and their suitable habitat in accordance with Section 7 of the ESA and Part 2, Chapter 16 of the PD&E Manual. Based on this evaluation the proposed project **“may affect, but is not likely to adversely affect”** the Eastern indigo snake, Eastern black rail and wood stork. The project is anticipated to have **“no effect”** on the bluetail mole skink, Audubon’s crested caracara, Florida scrub jay, piping plover and red cockaded woodpecker. For state-listed species there is **“no adverse effect anticipated”** for the plume polypody, stiff-leaved wild pine, Florida pine snake, gopher tortoise, Florida burrowing owl, Florida sandhill crane, little blue heron, reddish egret, roseate spoonbill, southeastern American kestrel, tricolored heron, and the Florida black bear. There is **“no effect anticipated”** for the celestial lily, craighead’s nodding caps, Florida willow, pondspice, pygmy pipes, sand butterfly pea, short-tailed snake, least tern, black skimmer and bald eagle.

Multiple protection measures are to be employed to negate and minimize any potential effects to these species. Some of the measures employed are anticipated to include more detailed field surveys and agency coordination during the project’s design phase, the use of Best Management Practices (BMPs), and species-specific standard protection measures/FDOT Special Provisions (e.g., eastern indigo snake, gopher tortoise, and black bear) during construction. The FDOT is proposing a wildlife feature be incorporated into the Hillsborough River bridge replacement. The wildlife feature is expected to include 10-foot shelves on each side of the river for wildlife use. Due to right of way, drainage and environmental lands constraints, the profile of the roadway and bridge is not expected to be raised above the existing condition. Therefore, the vertical clearance for the crossing is anticipated to be a minimum of 3 feet, similar to what exists today. During the design and permitting phases, the FDOT will reassess the project action area for potential involvement with federal and state-protected species and coordinate further with the USFWS, FWC and FDACS as necessary.

### 8.2 WETLANDS FINDING

In accordance with Executive Order 11990 and US DOT 5660.1A, and based on the documentation of existing wetland conditions as presented in the NRE, and in consideration of the Preferred Alternative and its effects on wetlands, it is hereby determined that:

- Measures have been taken to minimize harm to wetlands. Wetland impacts are primarily being avoided and minimized by keeping the proposed roadway improvements within the existing 160’ right of way through the sensitive Green Swamp Area. In order to do this, design variations for border width, median width, and/or side slopes are being sought. No right of way acquisition for roadway or pond sites is being proposed from the TIITF lands or the Boarshead Ranch Mitigation Bank.

- Through the implementation of compensatory mitigation, the proposed project will have no significant short-term or long-term adverse impacts to wetlands.
- There is no practicable alternative to construction in wetlands.

Wetland impacts which will result from the construction of this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S. and 33 USC. §1344.

### **8.3 ESSENTIAL FISH HABITAT**

As discussed in Section 6, wetlands and other surface waters present are entirely freshwater systems. No EFH is present within or in immediate proximity to the project limits.

### **8.4 COMMITMENTS AND IMPLEMENTATION MEASURES**

#### **Commitments**

- The FDOT will implement the most current version of the USFWS' *Standard Protection Measures for the Eastern Indigo Snake* (USFWS 2013a).
- The FDOT will complete a wood stork suitable foraging habitat assessment during the project's Design phase to ensure that the proper amount of mitigation is procured for impacts to suitable wood stork foraging habitat in accordance with *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*.
- The FDOT will re-survey the project footprint for the presence of burrowing owls, Florida sandhill cranes and Southeastern American kestrels during the nesting season and prior to construction commencement. If nesting activity is noted, coordination with the FWC will be completed as necessary.
- The FDOT will resurvey two known osprey nests in cell towers within the study area during the osprey nesting season and prior to construction to determine if these nests are still used by ospreys or other bird species.
- The FDOT will conduct surveys for the stiff-leaved wild pine, plume polypody and other state-listed plant species during the project's design/environmental permitting phase and prior to construction. If listed plants are observed, the FDOT will continue coordination with the FDACS and Florida Native Plant Society or similar organization to facilitate the relocation of protected plants within the project footprint.
- To facilitate wildlife movement between the state-owned lands on both sides of the road, a wildlife feature will be provided. This feature will consist of 10-foot-wide shelves constructed at the seasonal high-water elevation on both sides of the Hillsborough River beneath the US 98 bridge.



### **Implementation Measures**

- The FDOT will comply with the FWC's most current Gopher Tortoise Permitting Guidelines prior to project construction. This will include a gopher tortoise survey and gopher tortoise relocation as necessary.
- The FDOT will implement its Special Provision for the gopher tortoise (SP0070104-3) and Florida black bear (SP0070104-1) (FDOT 2021) during project construction.
- To protect water quality, the FDOT will implement erosion and sediment control BMPs, including a Stormwater Pollution Prevention Plan, during project construction.

The revisions to the preferred alternative result in a reduction of wetland impacts without changing the anticipated permit requirements and the previously agency-concurred species effect determinations remain the same or are reduced. Therefore, no additional agency coordination is required as part of the PD&E study.

## SECTION 9 REFERENCES

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<https://www.fdot.gov/programmanagement/implemented/workbooks/julworkbook2021/july-2021-workbook#ss>. Florida Department of Transportation. Tallahassee, Florida.
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USFWS. 2013a. Standard Protection Measures for the Eastern Indigo Snake. US Fish and Wildlife Service. Jacksonville, Florida.

## APPENDICES

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Appendix A Agency Responses to NRE

Appendix B Revised Project Plans

Appendix C UMAM Forms for Revised SMF 200-1 Location

# APPENDIX A

## Agency Responses to NRE



## *Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

11201 North McKinley Drive  
Tampa, FL 33612

KEVIN J. THIBAUT, P.E.  
SECRETARY

October 27, 2021

Ms. Zakia Williams  
U.S. Fish and Wildlife Service  
7915 Baymeadows Way  
Jacksonville, FL 32256  
[zakia\\_williams@fws.gov](mailto:zakia_williams@fws.gov)

**RE: Endangered Species Act Section 7 Coordination  
US 98/SR 35/SR 700 from CR 54 to US 301/SR 39  
Project Development & Environment Study  
Pasco County, Florida  
Work Program Item Segment No. 443368-2**

Dear Ms. Williams:

Please find enclosed the Natural Resource Evaluation (NRE) prepared for the above-referenced project. The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study to evaluate proposed improvements to US 98/SR 35/SR 700 from CR 54 to US 301/SR 39 in Pasco County. The Preferred Alternative study area incorporates the following:

- Widening of US 98/SR 35/SR 700 from two lanes to four lanes from the County Road (CR) 54 to US 301/SR 39;
- Realignment of US 98 between CR 35A to US 301, allowing US 98 to align with the Clinton Avenue (New SR 52) intersection at US 301; and
- Stormwater management facilities and floodplain compensation sites.

The study is approximately 8.6 miles in length and is in unincorporated Pasco County and Dade City (at the north end only) (Figure 1). The purpose of the PD&E Study is to provide documented information necessary for FDOT to reach a decision on the type, design, and location of improvements; as well as to assess the project's potential impacts to natural resources within the project study area. The proposed US 98 improvements are necessary to meet projected traffic demands, improve system linkage and improve safety for the travelling public.

The NRE assesses potential effects of the Preferred Alternative on wetlands and other surface waters, and federal and state protected species and their respective habitats. This NRE is being submitted to the federal and state resource agencies with jurisdiction over wetlands and protected species. The evaluation includes field inspections by qualified biologists, literature and database reviews, and coordination with natural resource agencies. Details on the study methodologies, results, conceptual mitigation alternatives and protection measures for avoidance and minimization of impacts to the resources are provided in the NRE.

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

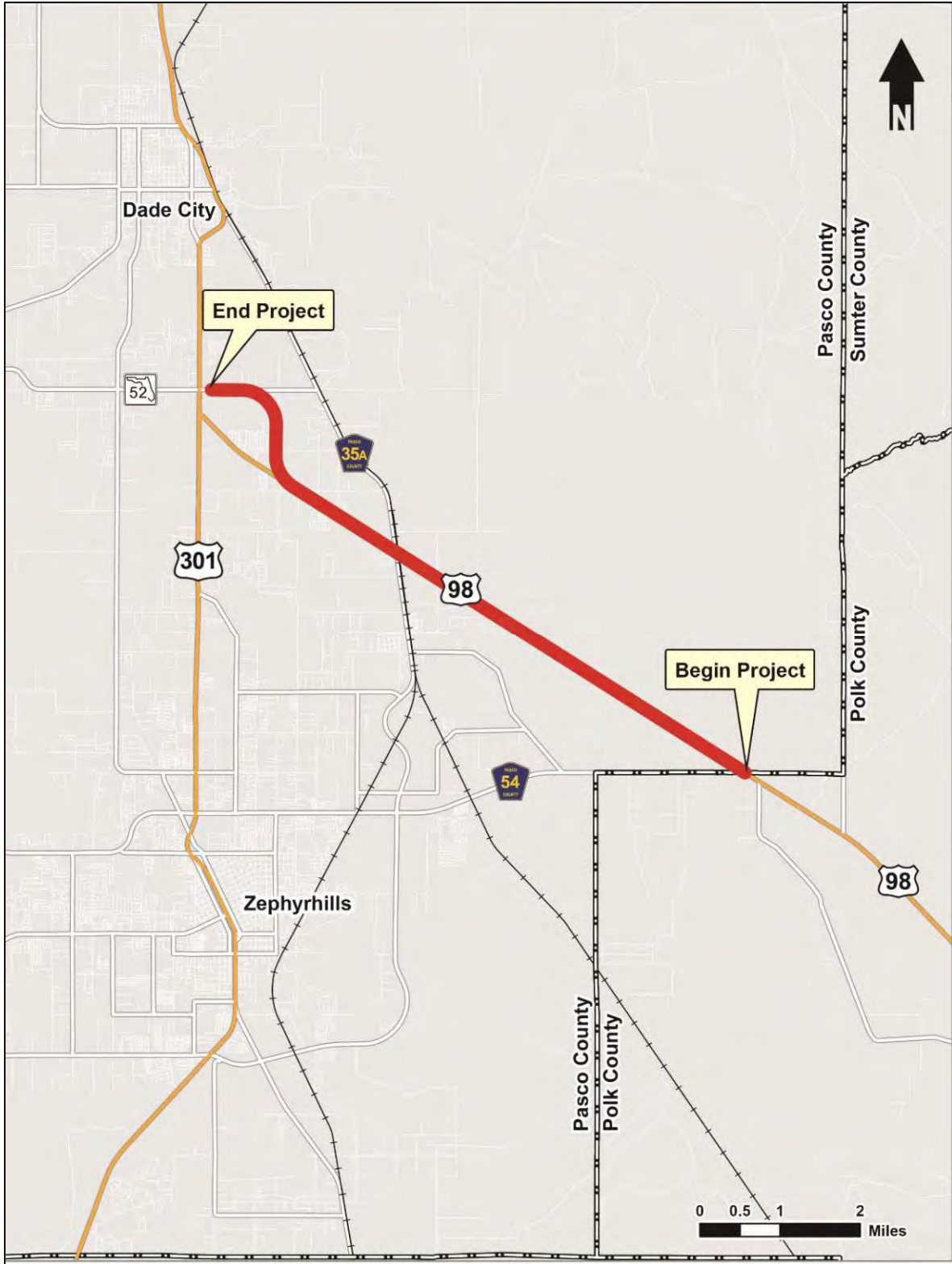


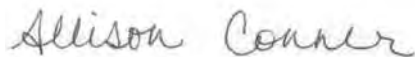
Figure 1: Project Location Map

Based on the evaluation completed, approximately 208.68 acres of wetlands and other surface waters occur within the study area. Of these 208.68 acres, approximately 20.23 acres of unavoidable wetland impacts will result from the construction of the Preferred Alternative. Additional direct and secondary impacts will occur from the construction of proposed Stormwater Management Feature (SMF) 200-1. SMF 200-1 is anticipated to impact approximately 8.20 acres of surface waters. Approximately 11.25 acres of impacts to man-made other surface waters will occur from the construction of the roadway improvements, with an additional 1.95 acres of man-made other surface water impacts resulting from stormwater pond and floodplain compensation facility construction.

The study area was evaluated for the presence of federal and/or state protected species and their suitable habitat in accordance with Section 7 of the ESA and Part 2, Chapter 16 of the PD&E Manual. Based on this evaluation the Preferred Alternative “*may affect, not likely to adversely affect*” the eastern indigo snake, eastern black rail, and wood stork. The project is anticipated to have “*no effect*” on the bluetail mole skink, Audubon’s crested caracara, Florida scrub jay, piping plover and red cockaded woodpecker. The Preferred Alternative will not adversely modify any federally designated critical habitat as none exists in the project vicinity. For state-protected species there is “*no adverse effect anticipated*” for the plume polypody, stiff-leaved wild pine, Florida pine snake, gopher tortoise, Florida burrowing owl, Florida sandhill crane, little blue heron, reddish egret, roseate spoonbill, southeastern American kestrel, tricolored heron, bald eagle, and the Florida black bear. There is “*no effect anticipated*” for the celestial lily, craighead’s nodding caps, Florida willow, pondspice, pygmy pipes, sand butterfly pea, short-tailed snake, least tern and black skimmer. The FDOT is proposing a wildlife feature be incorporated into the Hillsborough River bridge replacement. The wildlife feature is expected to include 10-foot shelves on each side of the river for wildlife use. During the design and permitting phases, the FDOT will reassess the project action area for potential involvement with federal and state-protected species and coordinate further with the various federal and state resource agencies as necessary.

The FDOT appreciates the USFWS’ involvement with this project. The FDOT respectfully requests your review comments or written letter of concurrence with the findings and effect determinations presented in the attached NRE within 30 days. If you have any questions or require additional information, please contact me at 813.975.6455 or [Allison.Conner@dot.state.fl.us](mailto:Allison.Conner@dot.state.fl.us).

Sincerely,



Allison Conner  
Environmental Specialist III  
Planning & Environmental Management Office (PLEMO)  
Florida Department of Transportation – District Seven

cc: Craig Fox, FDOT  
Kirk Bogen, FDOT-D7  
Robin Rhinesmith, FDOT-D7  
Brittany Bianco, FDOT-OEM  
Deena Woodward, FDOT-OEM  
Heather Mason, FDEP  
Monte Ritter, SWFWMD  
Chastity LaRiche, SWFWMD

Laura DiGruttolo, FWC  
Jason Hight, FWC  
Kristee Booth, FWC  
Terry Gilbert, FWC  
Sean Greene, FWC  
[ConservationPlanningServices@MyFWC.com](mailto:ConservationPlanningServices@MyFWC.com)  
Vincent Morris, FDACS





*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

11201 North McKinley Drive  
Tampa, FL 33612

KEVIN J. THIBAUT, P.E.  
SECRETARY

The U.S. Fish and Wildlife Service finds the attached project documentation complete and sufficient and \_\_\_\_\_ concurs/ \_\_\_\_\_ does not concur with the recommendations and findings provided herein.


**USFWS Comments:**


**ZAKIA WILLIAMS**

Digitally signed by ZAKIA WILLIAMS  
Date: 2021.11.24 21:59:46 -05'00'

Zakia Williams (or Designee)  
U.S. Fish and Wildlife Service  
North Florida Ecological Services Office

Date

	<b>Florida Ecological Services Field Office</b>
	FWS Log No <u>22-TA-0258</u>
The Service concurs with your effect determination(s) for resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act.	
<b>JOSE RIVERA</b>	Digitally signed by JOSE RIVERA Date: 2021.11.19 06:28:03 -05'00'
Environmental Review Supervisor	Date



**Florida Fish  
and Wildlife  
Conservation  
Commission**

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**Rodney Barreto**  
Chairman  
Coral Gables

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Executive Director

**Eric Sutton**  
Executive Director

**Thomas H. Eason, Ph.D.**  
Assistant Executive Director

**Jennifer Fitzwater**  
Chief of Staff

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850-921-5786 FAX

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---

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32399-1600  
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Hearing/speech-impaired:  
800-955-8771 (T)  
800 955-8770 (V)

MyFWC.com

November 18, 2021

Allison Conner  
Planning & Environmental Management Office  
Florida Department of Transportation District 7  
11201 North McKinley Drive  
Tampa, FL 33612  
[Allison.Conner@dot.state.fl.us](mailto:Allison.Conner@dot.state.fl.us)

Re: US 98 from CR 54 to US 301/US 98, Natural Resource Evaluation, Hillsborough County

Dear Ms. Conner:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the above-referenced Natural Resource Evaluation (NRE) in accordance with FWC's authorities under Chapter 379, Florida Statutes and Chapter 67A-27, Florida Administrative Code.

The Florida Department of Transportation (FDOT) District 7 is conducting a Project Development and Environmental Study for proposed improvements along an approximately 8.6-mile segment of US 98 from CR 54 to US 301/US 98 in Pasco County. The proposed work consists of widening US 98 from two to four lanes within the study area. US 98 will also be realigned between CR 35A and US 301 to allow alignment with the new Clinton Avenue Intersection at US 301.

Stormwater management and floodplain compensation areas will also be constructed and incorporated as part of the final project design. According to FDOT, the proposed US 98 improvements are needed to address projected traffic demands, improve system linkage, and increase public safety. FDOT has also proposed to construct 10-foot-wide concrete shelves under both sides of the Hillsborough River Bridge in the project area in order to facilitate future wildlife movement and habitat connectivity.

FWC staff finds the determinations of effect and project commitments are appropriate to avoid, minimize, and mitigate protected species impacts, and no additional comments regarding the subject NRE are necessary at this time. For specific technical questions regarding this information, please contact Terry Gilbert at (850) 728-1103 or [Terry.Gilbert@MyFWC.com](mailto:Terry.Gilbert@MyFWC.com). All other inquiries may be directed to [ConservationPlanningServices@MyFWC.com](mailto:ConservationPlanningServices@MyFWC.com).

Sincerely

Jason Hight  
Land Use Planning Administrator  
Office of Conservation Planning Services

jh/tg  
US-98 -98 from CR-54 to US-301-US-98 NRE\_45926\_11182021

November 19, 2021

**Memorandum**

To: Monte Ritter, P.E., Chief Professional Engineer

From: Chaz LaRiche, Senior Environmental Scientist

RE: US98 (SR700) from CR54 to US301/US98– NRE

ETDM# 14374

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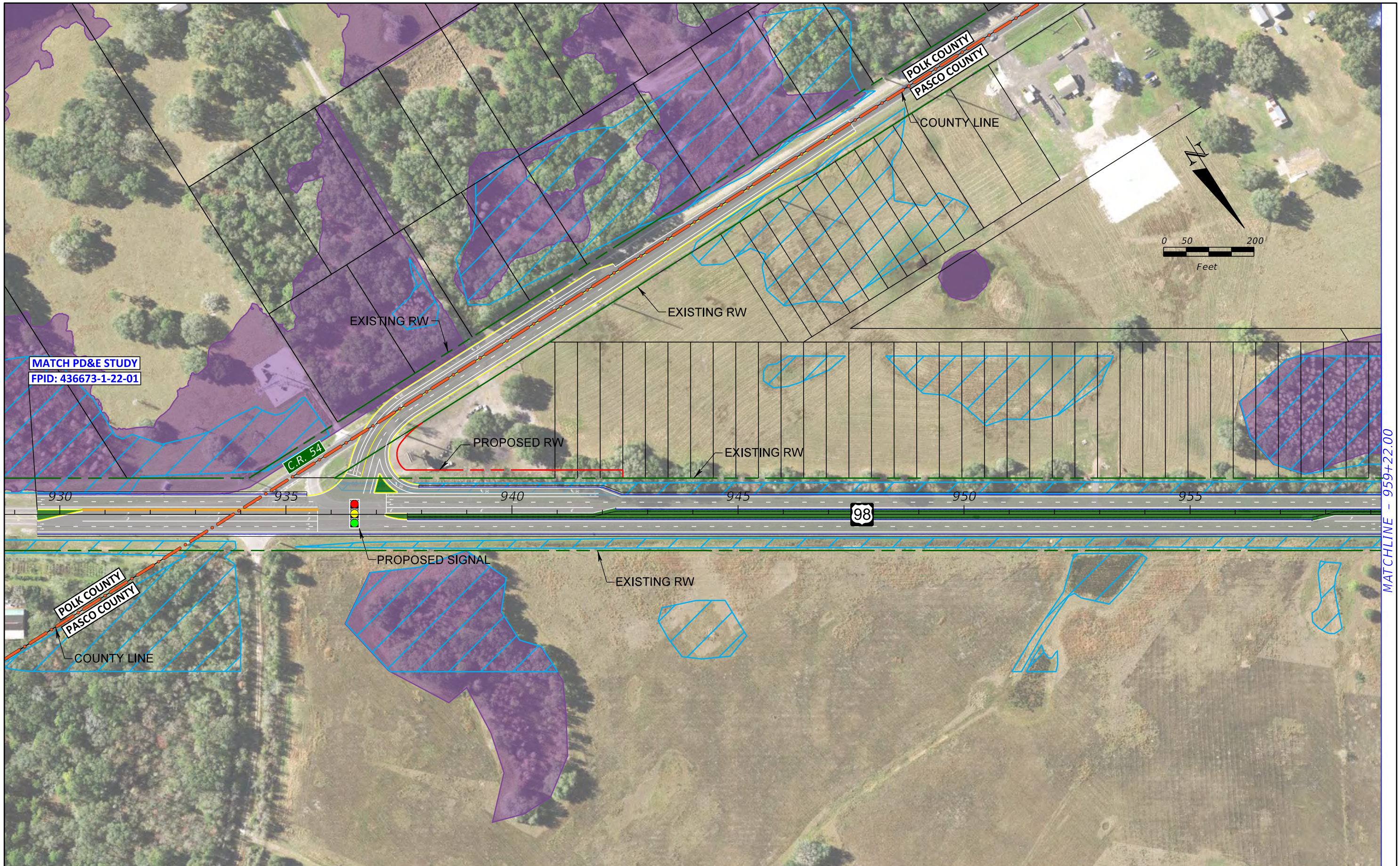
I have completed my review of the above referenced NRE Report received by the District October 2021. I have the following comments for the updated project as it relates to the proposed roadway improvements:

- Please note that as of December 22, 2020, the Florida Department of Environmental Protection (FDEP) was delegated the Federal 404 Permitting. The Environment Resource Permit (ERP) procedure has been modified to allow for joint site inspections with the FDEP to streamline the overall permitting process. As part of the 404 Assumption, the binding of wetland and surface water lines, associated with a project area, can only be accomplished through a Formal Wetland Delineation, as of the time of this report.
- The NRE report identified wetland systems located outside of the project limits but within the 300-foot buffer used for this stage of project review. Please note that Subsection 7.2.2(e)(2)(e) of the ERP Applicant’s Handbook Vol I, indicates regulated activities within 200 feet of the landward extent of a wetland will require field established flags pursuant to Chapter 62-340, F.A.C.
- The NRE report states that “dry ditches were not included in the streams and waterways cover type”. Please note that unless the system meets the definition of a swale, ditches may be classified as streams and waterways (FLUCCS 510) if they were constructed for the conveyance of water, and will need to be considered surface waters as part of the permit process.
- The NRE identifies 1.02 acres of secondary impacts to wetlands associated with Boarshead Ranch Mitigation Bank. The District recommends beginning the coordination with the mitigation bank prior to submitting the permit application since the impacts have the potential to require a modification to the mitigation bank permit.
- In addition, if impacts are proposed to SWFWMD owned or managed lands, please start communication with the District’s Land Bureau prior to the submittal of the permit application to the District since this can be a lengthy process.

- The NRE provided the UMAMs for the impacted wetlands. Please note that the UMAMs will only be reviewed during the permitting process with the District and FDEP and are not being agreed upon through this NRE review.
- The District has received several calls with regards to the location of SMF 200-1 on Mr. Ronald Mims property. District staff has stated that the permit application has not been received yet and that he will need to reach out to the Department for further/additional clarification on that pond location on his property.

# APPENDIX B

## Revised Project Plans



MATCH PD&E STUDY  
FPID: 436673-1-22-01

MATCHLINE - 959+22.00

LEGEND	Existing Right-of-Way	Milling & Resurfacing	Shared Use Path	Grass	<p><b>US 98 FROM CR 54 TO US 301</b>          PROJECT DEVELOPMENT AND ENVIRONMENT (PD&amp;E) STUDY          PASCO COUNTY, FLORIDA          FPID: 443368-2-22-01</p>	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<p><b>PREFERRED ALTERNATIVE CONCEPT PLAN SHEET</b></p>	SHEET NO.
	Parcels	Roadway Pavement	Wetlands	Permanent Easement		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		1
	Proposed Right-of-Way	Traffic Separator	Floodplains	Barrier Wall		SR35 / SR700	PASCO	443368-2-22-01		
CSX Railroad	Pavement Removal	Proposed FPC Site	MSE Wall	Contamination Sites						
Curb and Gutter	Concrete Sidewalk	Proposed Pond Site	Residential Relocation							



MATCHLINE - 959+22.00

MATCHLINE - 989+22.00

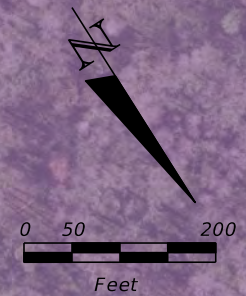
LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**2**



SWFWMD  
UPPER HILLSBOROUGH PRESERVE

EXISTING RW

HILLSBOROUGH RIVER

EXISTING RW

SWFWMD GREEN SWAMP WILDERNESS PRESERVE

MATCHLINE - 989+22.00

MATCHLINE - 1019+22.00

990 995 1000 1005 1010 1015



LEGEND	Existing Right-of-Way	Milling & Resurfacing	Shared Use Path	Grass
	Parcels	Roadway Pavement	Wetlands	Permanent Easement
	Proposed Right-of-Way	Traffic Separator	Floodplains	Barrier Wall
	CSX Railroad	Pavement Removal	Proposed FPC Site	MSE Wall
Curb and Gutter	Concrete Sidewalk	Proposed Pond Site	Contamination Sites	Residential Relocation
Bridge				

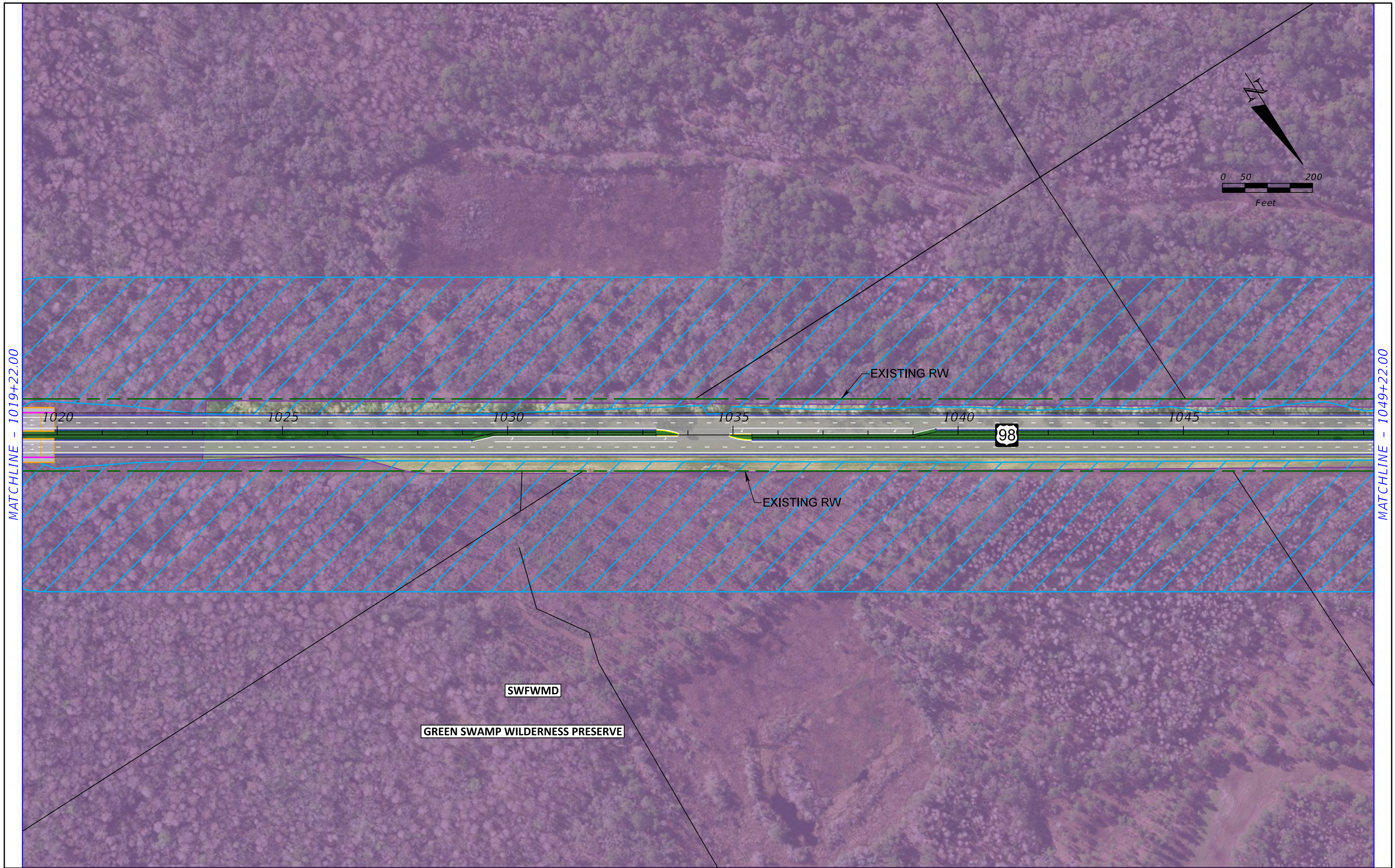
US 98 FROM CR 54  
TO US 301  
PROJECT DEVELOPMENT AND ENVIRONMENT  
(PD&E) STUDY  
PASCO COUNTY, FLORIDA  
FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

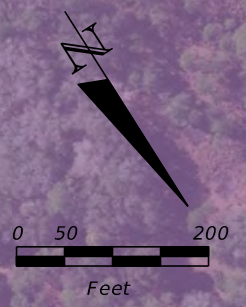
PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET

SHEET NO.  
3





<b>LEGEND</b>	--- Existing Right-of-Way	▨ Milling & Resurfacing	▬ Shared Use Path	▬ Grass	<b>US 98 FROM CR 54 TO US 301</b> PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY PASCO COUNTY, FLORIDA FPID: 443368-2-22-01	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<b>PREFERRED ALTERNATIVE CONCEPT PLAN SHEET</b>	SHEET NO.
	- - - Parcels	▬ Roadway Pavement	▨ Wetlands	▬ Permanent Easement		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		4
	- - - Proposed Right-of-Way	▬ Traffic Separator	▨ Floodplains	▬ Barrier Wall	SR35 / SR700	PASCO	443368-2-22-01			
	⊕ CSX Railroad	▬ Pavement Removal	▬ Proposed FPC Site	▬ MSE Wall						
	▬ Curb and Gutter	▬ Concrete Sidewalk	▬ Proposed Pond Site	▬ Contamination Sites						
	▬ Bridge			▬ Residential Relocation						

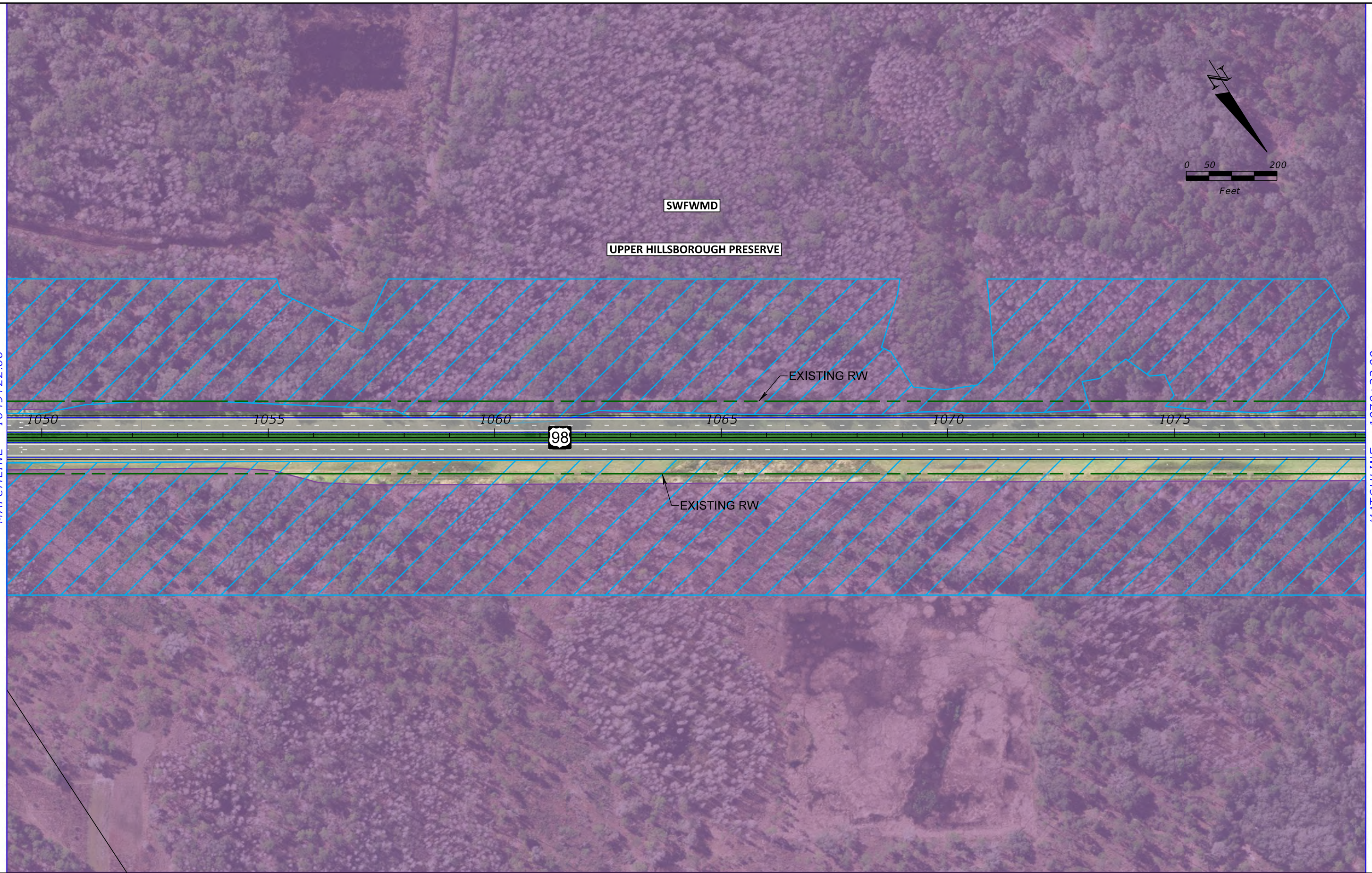


SWFWMD

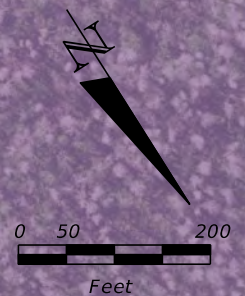
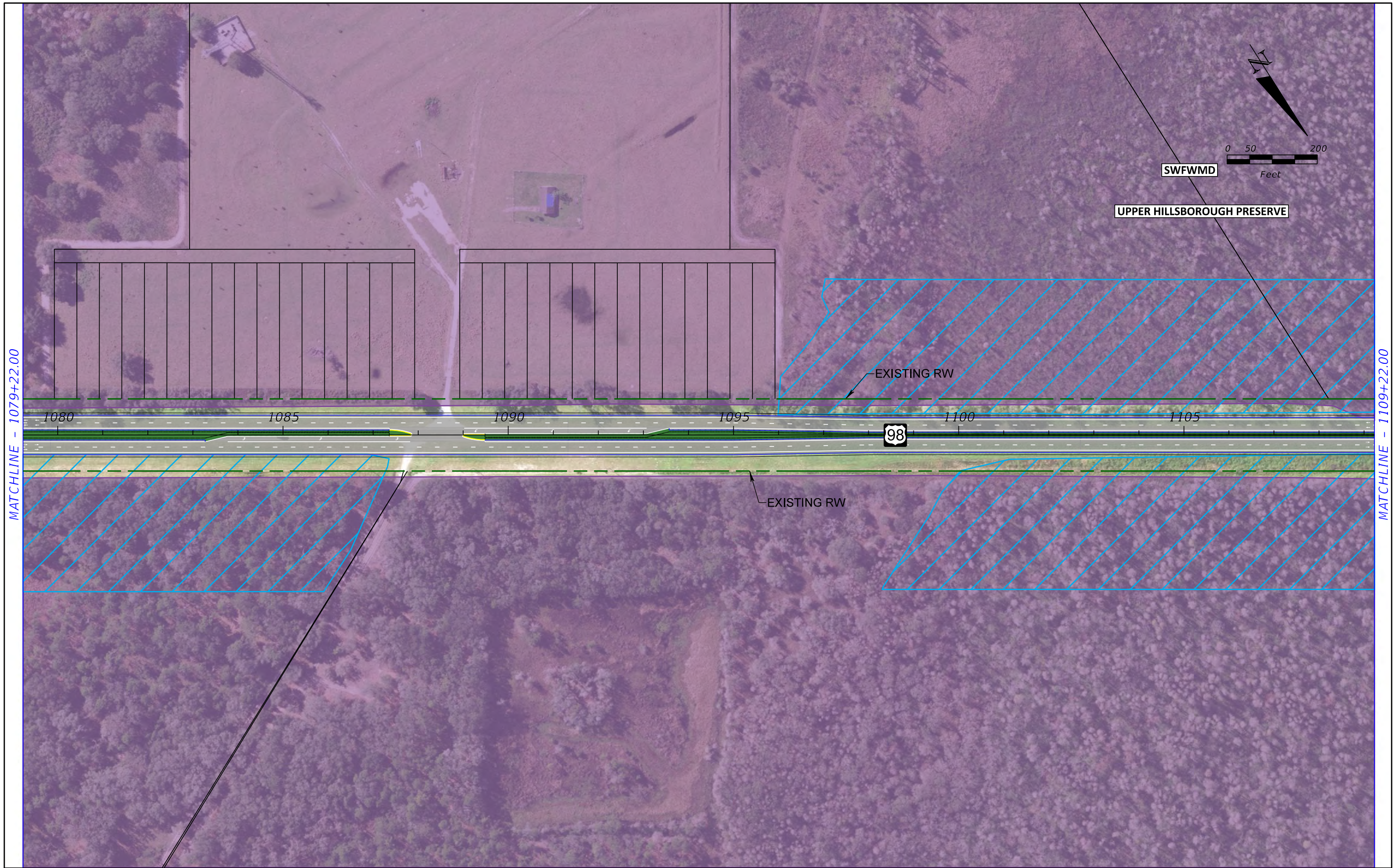
UPPER HILLSBOROUGH PRESERVE

MATCHLINE - 1049+22.00

MATCHLINE - 1079+22.00



<b>LEGEND</b>	--- Existing Right-of-Way	▨ Milling & Resurfacing	▬ Shared Use Path	■ Grass	<b>US 98 FROM CR 54 TO US 301</b> PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY PASCO COUNTY, FLORIDA FPID: 443368-2-22-01	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<b>PREFERRED ALTERNATIVE CONCEPT PLAN SHEET</b>	SHEET NO.
	- - - Parcels	▬ Roadway Pavement	▨ Wetlands	▬ Permanent Easement		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		5
- - - Proposed Right-of-Way	▬ Traffic Separator	▬ Floodplains	▬ Barrier Wall	▬ MSE Wall	SR35 / SR700	PASCO	443368-2-22-01			
⊕ CSX Railroad	▬ Pavement Removal	▬ Proposed FPC Site	▬ Contamination Sites	▬ Residential Relocation						
▬ Curb and Gutter	▬ Concrete Sidewalk	▬ Proposed Pond Site								
▬ Bridge										



MATCHLINE - 1079+22.00

MATCHLINE - 1109+22.00

LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

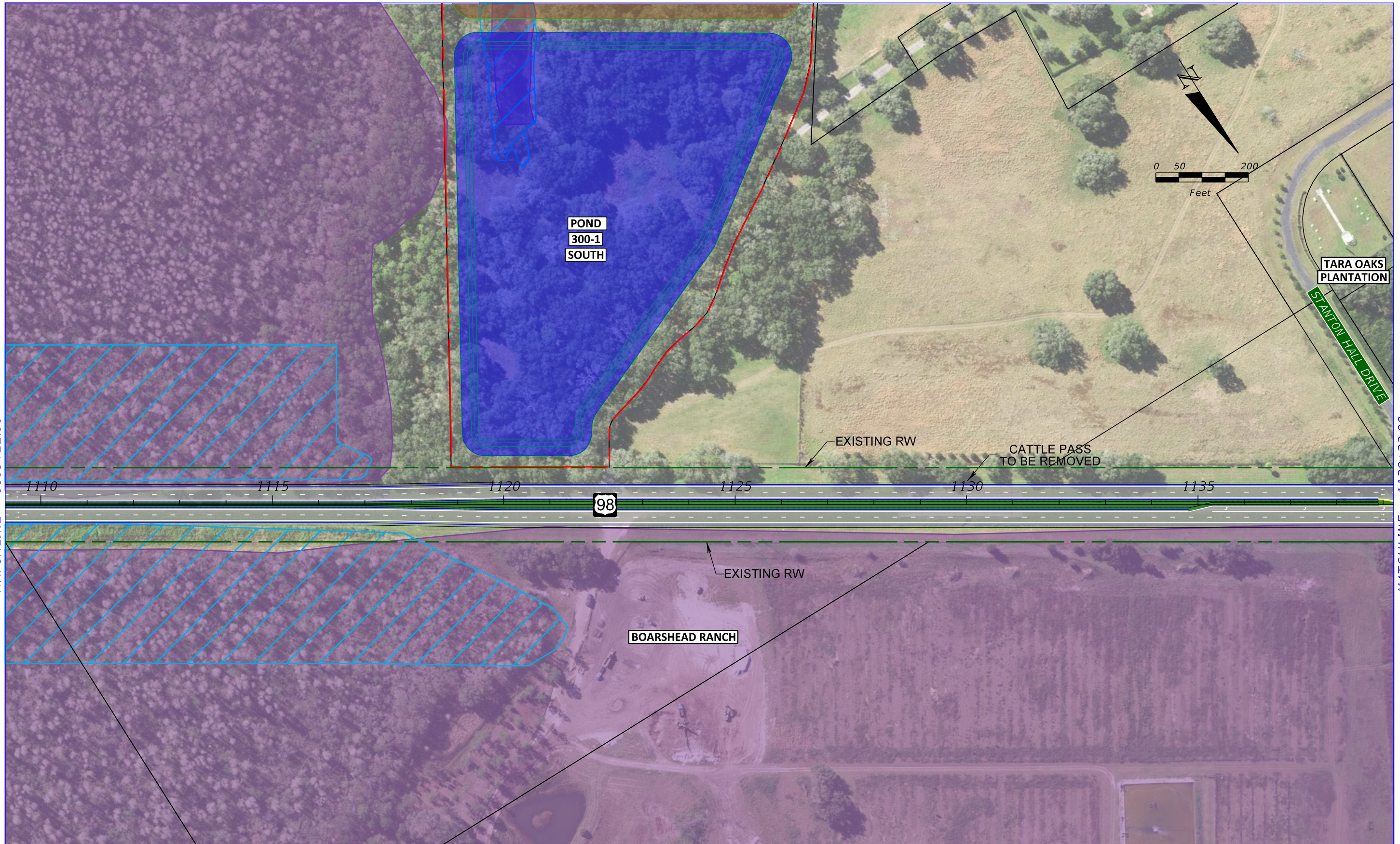
**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**6**

MATCHLINE - SHEET 7A



MATCHLINE - 1109+22.00

MATCHLINE - 1139+22.00

<b>LEGEND</b>	--- Existing Right-of-Way	▨ Milling & Resurfacing	▬ Shared Use Path	▬ Grass	<b>US 98 FROM CR 54 TO US 301</b> PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY PASCO COUNTY, FLORIDA FPID: 443368-2-22-01	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<b>PREFERRED ALTERNATIVE CONCEPT PLAN SHEET</b>	SHEET NO.
	- - - - - Parcels	▬ Roadway Pavement	▨ Wetlands	▬ Permanent Easement		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		7
	- - - - - Proposed Right-of-Way	▬ Traffic Separator	▨ Floodplains	▬ Barrier Wall		SR35 / SR700	PASCO	443368-2-22-01		
▬ CSX Railroad	▬ Pavement Removal	▬ Proposed FPC Site	▬ MSE Wall	▬ Contamination Sites						
▬ Curb and Gutter	▬ Concrete Sidewalk	▬ Proposed Pond Site	▬ Residential Relocation	▬ Residential Relocation						
▬ Bridge										



MATCHLINE - SHEET 7

<b>LEGEND</b>	Existing Right-of-Way	Milling & Resurfacing	Shared Use Path	Grass	<b>US 98 FROM CR 54 TO US 301</b> PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY PASCO COUNTY, FLORIDA FPID: 443368-2-22-01	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<b>PREFERRED ALTERNATIVE CONCEPT PLAN SHEET</b>	SHEET NO.
	Parcels	Roadway Pavement	Wetlands	Permanent Easement		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		7A
	Proposed Right-of-Way	Traffic Separator	Floodplains	Barrier Wall	SR35 / SR700	PASCO	443368-2-22-01			
	CSX Railroad	Pavement Removal	Proposed FPC Site	MSE Wall						
	Curb and Gutter	Concrete Sidewalk	Proposed Pond Site	Contamination Sites						
	Bridge			Residential Relocation						



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**8**



MATCHLINE - 1167+22.00

MATCHLINE - 1197+22.00

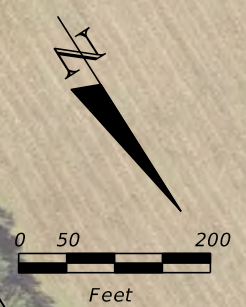
LEGEND	
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	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

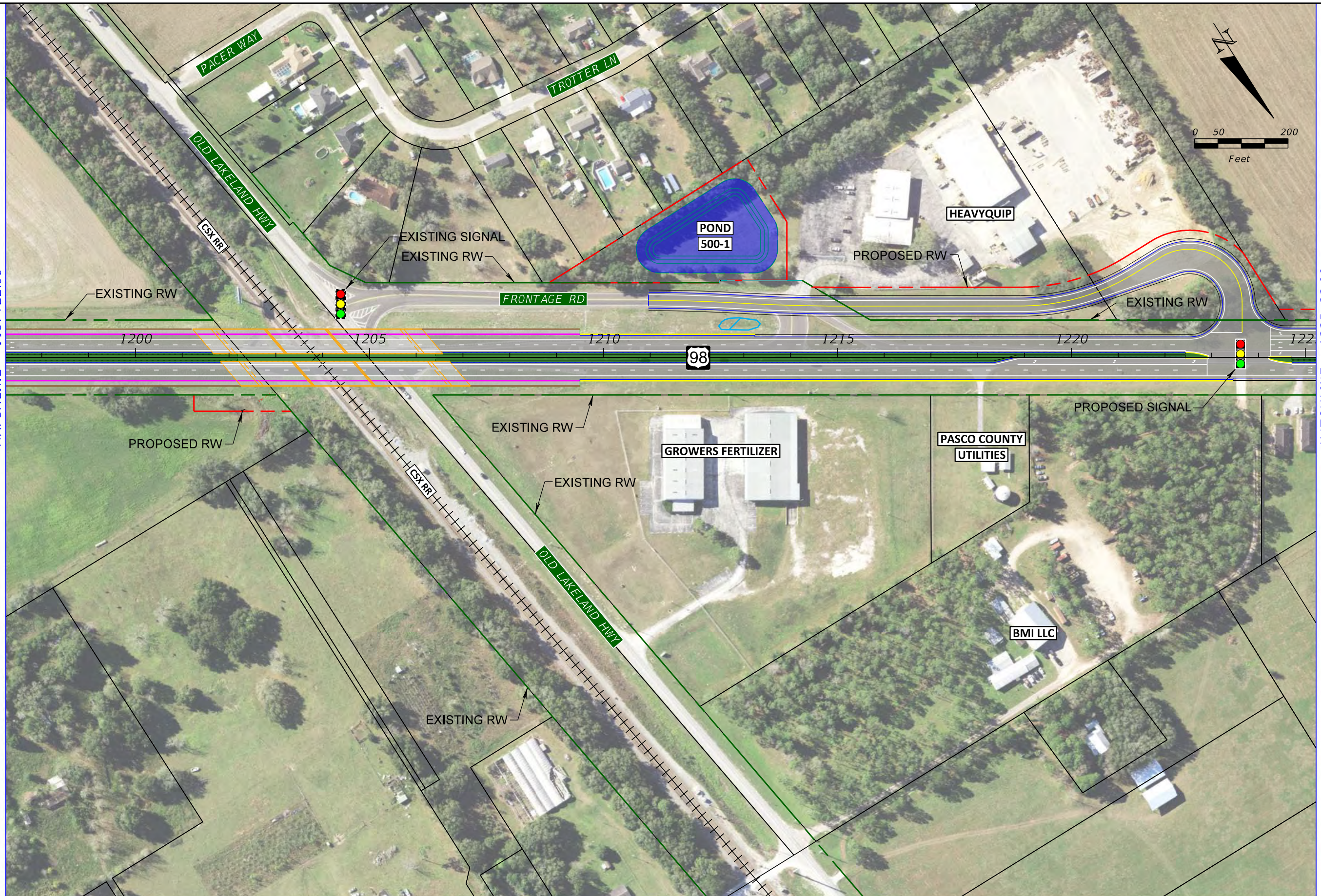
**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**9**



MATCHLINE - 1197+22.00

MATCHLINE - 1225+22.00



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET  
NO.  
**10**



MATCHLINE - 1225+22.00



MATCHLINE - 1251+22.00

LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

US 98 FROM CR 54  
TO US 301  
PROJECT DEVELOPMENT AND ENVIRONMENT  
(PD&E) STUDY  
PASCO COUNTY, FLORIDA  
FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**11**



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET  
NO.  
**12**



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

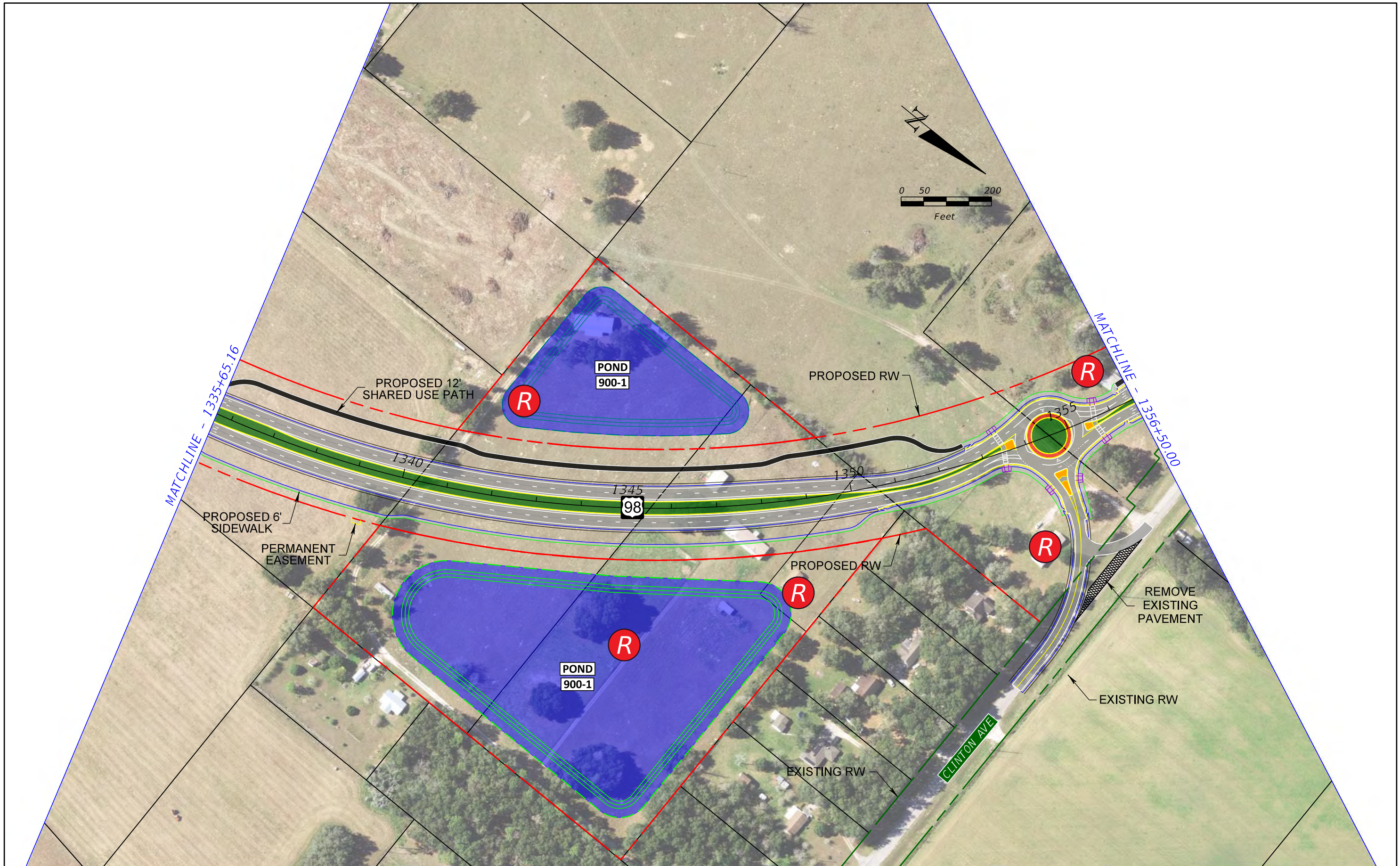
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET  
NO.  
**13**



<b>LEGEND</b> --- Existing Right-of-Way --- Parcels --- Proposed Right-of-Way --- CSX Railroad --- Curb and Gutter --- Bridge --- Milling & Resurfacing --- Roadway Pavement --- Traffic Separator --- Pavement Removal --- Concrete Sidewalk --- Shared Use Path --- Wetlands --- Floodplains --- Proposed FPC Site --- Proposed Pond Site --- Grass --- Permanent Easement --- Barrier Wall --- MSE Wall --- Contamination Sites --- Residential Relocation	<b>US 98 FROM CR 54 TO US 301</b> PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY PASCO COUNTY, FLORIDA FPID: 443368-2-22-01			STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			<b>PREFERRED ALTERNATIVE          CONCEPT PLAN SHEET</b>	SHEET NO. <b>14</b>
	ROAD NO. SR35 / SR700	COUNTY PASCO	FINANCIAL PROJECT ID 443368-2-22-01					



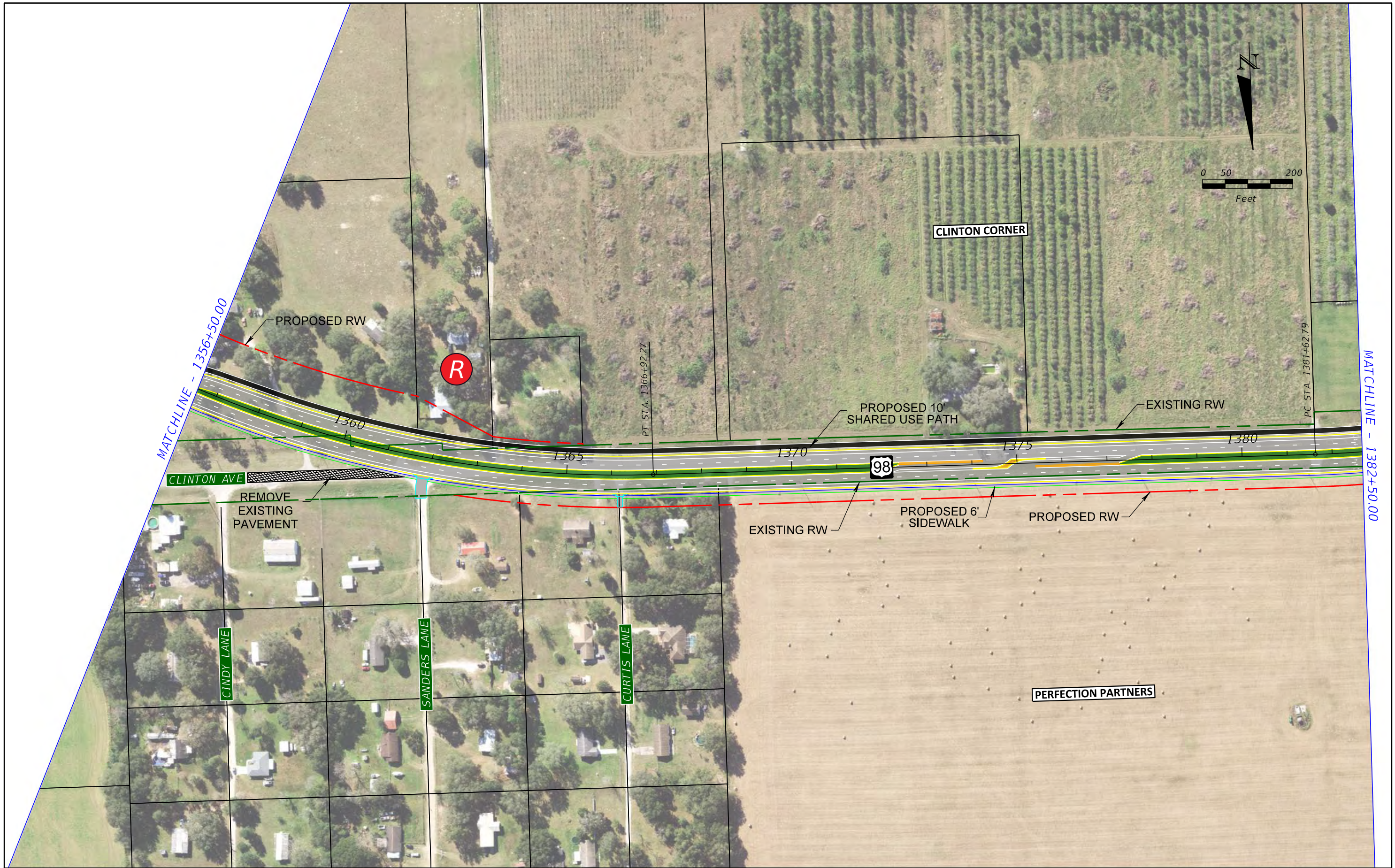
LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**15**



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**16**



MATCHLINE - 1382+50.00

LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

US 98 FROM CR 54  
TO US 301  
PROJECT DEVELOPMENT AND ENVIRONMENT  
(PD&E) STUDY  
PASCO COUNTY, FLORIDA  
FPID: 443368-2-22-01

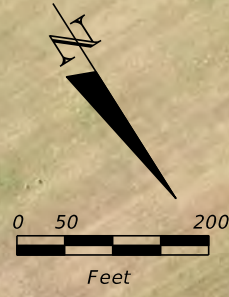
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET NO.  
**17**

MATCHLINE - 1311+22.00

MATCHLINE - 1341+53.00



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

US 98 FROM CR 54  
TO US 301  
PROJECT DEVELOPMENT AND ENVIRONMENT  
(PD&E) STUDY  
PASCO COUNTY, FLORIDA  
FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET

SHEET NO.  
18



MATCHLINE - 1341+53.00



LEGEND	
	Existing Right-of-Way
	Parcels
	Proposed Right-of-Way
	CSX Railroad
	Curb and Gutter
	Bridge
	Milling & Resurfacing
	Roadway Pavement
	Traffic Separator
	Pavement Removal
	Concrete Sidewalk
	Shared Use Path
	Wetlands
	Floodplains
	Proposed FPC Site
	Proposed Pond Site
	Grass
	Permanent Easement
	Barrier Wall
	MSE Wall
	Contamination Sites
	Residential Relocation

**US 98 FROM CR 54  
TO US 301**  
 PROJECT DEVELOPMENT AND ENVIRONMENT  
 (PD&E) STUDY  
 PASCO COUNTY, FLORIDA  
 FPID: 443368-2-22-01

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR35 / SR700	PASCO	443368-2-22-01

**PREFERRED ALTERNATIVE  
CONCEPT PLAN SHEET**

SHEET  
NO.  
**20**

# APPENDIX C

## UMAM Forms for Revised SMF 200-1 Location

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

Site/Project Name US 98 from Polk County Line to US 301		Application Number	Assessment Area Name or Number WL-18 and WL-19
FLUCCs code 6410: Freshwater Marshes	Further classification (optional) PEM1	Impact or Mitigation Site? Impact	Assessment Area Size 2.20 acres
Basin/Watershed Name/Number Withlacoochee, HUC8 No.: 0.3100208	Affected Waterbody(Class) Class III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands These sites are non-forested systems that are hydrologically contiguous with the upper Hillsborough River. Adjacent uplands contain rural housing, livestock operations, and US 98.			
Assessment area description Emergent wetlands adjacent within rural pastures that contain species such as blue maidencane, soft rush, bushy bluestem, and pickerelweed.			
Significant nearby features US 98, CR 54, and livestock pastures		Uniqueness (considering the relative rarity in relation to the regional landscape.) Common for the area	
Functions Offers habitat and foraging for multiple species, enhances water quality, and serves as a fire buffer.		Mitigation for previous permit/other historic use N/A	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) These areas are anticipated to provide habitat and foraging for: small mammals, wading birds, amphibians, reptiles, and fish		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern Indigo Snake – FT, possible foraging habitat Wood Stork – FT, possible foraging and roosting habitat Little Blue Heron, Roseate Spoonbill, and Tricolored Heron – ST, possible foraging and roosting habitat	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Wood stork were observed flying over the site and a little blue heron was observed foraging nearby.			
Additional relevant factors:			
Assessment conducted by: Brett Berube		Assessment date(s): 03/07/2022	

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

Site/Project Name US 98 from Polk County Line to US 301	Application Number	Assessment Area Name or Number WL-18 and WL-19
Impact or Mitigation Impact	Assessment conducted by: Brett Berube	Assessment date: 03/07/2022

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

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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current      with</p> <p>6                              0</p>	<p>These systems are able to provide optimal support for most wildlife species, but this support is limited due the fragmentation by the upland land uses such as the livestock pastures and residential areas. Due to the location of these systems, support to downstream systems is likely limited during the dry season.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current      with</p> <p>8                              0</p>	<p>Most hydrologic indicators were consistent with the expectations for this system type. However, natural hydrology has been disrupted by US 98, CR 54, upland land uses, and associated stormwater management features.</p>
<p>.500(6)(c)Communitystructure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>7                              0</p>	<p>These systems have a majority of suitable species, but these areas are grazed by cattle and mowed during the dry season, both of which limit the natural growth and recruitment of hydrophytic species.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.70                              0

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

For impact assessment areas
FL = delta x acres = -0.70 x 2.19 = -1.53

Delta = [with-current]
-0.70

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

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

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

Site/Project Name US 98 from Polk County Line to US 301	Application Number	Assessment Area Name or Number WL-18 and WL-19
Impact or Mitigation Impact	Assessment conducted by: Brett Berube	Assessment date: 03/07/2022

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

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

.500(6)(a) Location and Landscape Support	These systems are able to provide optimal support for most wildlife species, but this support is limited due the fragmentation by the upland land uses such as the livestock pastures and residential areas. Due to the location of these systems, support to downstream systems is likely limited during the dry season.		
	w/o pres or current	with	
6	5		

.500(6)(b)Water Environment (n/a for uplands)	Most hydrologic indicators were consistent with the expectations for this system type. However, natural hydrology has been disrupted by US 98, CR 54, upland land uses, and associated stormwater management features.		
	w/o pres or current	with	
8	7		

.500(6)(c)Communitystructure  1. Vegetation and/or 2. Benthic Community	These systems have a majority of suitable species, but these areas are grazed by cattle and mowed during the dry season, both of which limit the natural growth and recruitment of hydrophytic species.		
	w/o pres or current	with	
7	6		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0.60

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

For impact assessment areas
FL = delta x acres = -0.10 x 0.01= -0.001

Delta = [with-current]
-0.10

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

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

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

Site/Project Name US 98 from Polk County Line to US 301		Application Number	Assessment Area Name or Number WL-20
FLUCCs code 6430: Wet Prairies	Further classification (optional) PEM1		Assessment Area Size 0.012 acre
Impact or Mitigation Site? Impact			
Basin/Watershed Name/Number Withlacoochee, HUC8 No.: 0.3100208	Affected Waterbody(Class) Class III	Special Classification (i.e. OFW, AP, other local/state/federal designation of importance) None	
Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands This site is a non-forested system that is hydrologically contiguous with the Upper Hillsborough River. Adjacent uplands contain rural housing, livestock operations, and US 98.			
Assessment area description Emergent wetlands adjacent within rural pastures that contain species such as blue maidencane, bushy bluestem, and torpedograss.			
Significant nearby features US 98, CR 54, and livestock pastures		Uniqueness (considering the relative rarity in relation to the regional landscape.) Common for the area	
Functions Offers habitat and foraging for multiple species, enhances water quality, and serves as a fire buffer.		Mitigation for previous permit/other historic use N/A	
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) These areas are anticipated to provide habitat and foraging for small mammals, wading birds, amphibians, reptiles, and fish		Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Eastern Indigo Snake – FT, possible foraging habitat Wood Stork – FT, possible foraging and roosting habitat Little Blue Heron, Roseate Spoonbill, and Tricolored Heron – ST, possible foraging and roosting habitat	
Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.): Wood stork were observed flying over the site and a little blue heron was observed foraging nearby.			
Additional relevant factors:			
Assessment conducted by: Brett Berube		Assessment date(s): 03/07/2022	

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

Site/Project Name US 98 from Polk County Line to US 301	Application Number	Assessment Area Name or Number WL-20
Impact or Mitigation Impact	Assessment conducted by: Brett Berube	Assessment date: 03/07/2022

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

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

.500(6)(a) Location and Landscape Support	This system is able to provide optimal support for most wildlife species, but this support is limited due the fragmentation by the upland land uses such as the livestock pastures and residential areas. Due to the location of this system, support to downstream systems is likely limited during the dry season.		
	w/o pres or current	with	
6	0		

.500(6)(b)Water Environment (n/a for uplands)	Most hydrologic indicators were consistent with the expectations for this system type. However, natural hydrology has been disrupted by US 98, CR 54, upland land uses, and associated stormwater management features.		
	w/o pres or current	with	
8	0		

.500(6)(c)Communitystructure  1. Vegetation and/or 2. Benthic Community	This system has a majority of suitable species, but the area is grazed by cattle and mowed during the dry season, both of which limit the natural growth and recruitment of hydrophytic species.		
	w/o pres or current	with	
7	0		

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres	with
0.70	0

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

For impact assessment areas
FL = delta x acres = -0.70 x 0.002 = -0.001

Delta = [with-current]
-0.70

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

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

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

Site/Project Name US 98 from Polk County Line to US 301	Application Number	Assessment Area Name or Number WL-20
Impact or Mitigation Impact	Assessment conducted by: Brett Berube	Assessment date: 03/07/2022

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

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

<p>.500(6)(a) Location and Landscape Support</p> <p>w/o pres or current      with</p> <p>6                              5</p>	<p>This system is able to provide optimal support for most wildlife species, but this support is limited due the fragmentation by the upland land uses such as the livestock pastures and residential areas. Due to the location of this system, support to downstream systems is likely limited during the dry season.</p>
<p>.500(6)(b)Water Environment (n/a for uplands)</p> <p>w/o pres or current      with</p> <p>8                              7</p>	<p>Most hydrologic indicators were consistent with the expectations for this system type. However, natural hydrology has been disrupted by US 98, CR 54, upland land uses, and associated stormwater management features.</p>
<p>.500(6)(c)Communitystructure</p> <p>1. Vegetation and/or 2. Benthic Community</p> <p>w/o pres or current      with</p> <p>7                              6</p>	<p>This system has a majority of suitable species, but the area is grazed by cattle and mowed during the dry season, both of which limit the natural growth and recruitment of hydrophytic species.</p>

Score = sum of above scores/30 (if uplands, divide by 20)
current or w/o pres      with
0.70                              0

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

For impact assessment areas
FL = delta x acres = -0.10 x 0.01 = -0.001

Delta = [with-current]
-0.10

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

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