Florida Department of Transportation

Final
Wetlands Evaluation and Biological Assessment Report (WEBAR)

US 301 (SR 39)

From South of CR 54 (Eiland Boulevard) to US 98 Bypass (SR 533)
Pasco County, Florida

Work Program Item No: 408075-1
Federal Aid Project No: 3112-020-P

Prepared For:

Florida Department of Transportation
District Seven
11201 North Malcolm McKinley Drive
Tampa, Florida 33612

March 2010

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Prepared By:

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EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate improvements to US 301 (SR 39) in eastern Pasco County. The project limits are from south of CR 54 (Eiland Boulevard) to the US 98 Bypass (SR 533). The length of the study is 7.6 miles. The objective of the PD&E Study was to provide documented environmental and engineering analyses, which would help the FDOT and the Federal Highway Administration (FHWA) reach a decision on the type, conceptual design and location of the necessary improvements within the US 301 PD&E Study limits to accommodate future transportation needs in a safe and efficient manner. This Wetlands Evaluation and Biological Assessment Report (WEBAR) was prepared as part of the PD&E Study. The objective of the WEBAR was to evaluate existing environmental conditions located within, or in close proximity to, the US 301 mainline and the potential for effect from implementing the proposed project**.**

Originally, the PD&E Study evaluated the proposed widening of US 301 to a six-lane divided roadway from south of CR 54 to the US 98 Bypass for two Build Alternatives representing three separate typical sections: Build Alternative 1 - High Speed Urban typical section for Segments A through D; and Build Alternative 2 - Low Speed Urban typical section for Segments A and D and Rural typical section for Segments B and C. A summary of the impacts that could occur if either Build Alternative were to be implemented for each of the study segments was presented at the Alternatives Public Workshop held on June 3, 2009.

The purpose of the Alternatives Public Workshop was to solicit public input regarding the proposed Build Alternatives and the No-Build Alternative for the proposed project. On July 16, 2009 the FDOT determined a Recommended Build Alternative would be presented at the Study's Public Hearing in addition to the No Build Alternative. The Recommended Build Alternative determination was based on the results of the Build Alternative's impact evaluation, public feedback received during the public involvement process, and consistency with current transportation plans.

As a result of this determination, the Recommended Build Alternative presented at the Public Hearing on November 4, 2009 consisted of widening US 301 to a six-lane roadway facility in Segment A only (from south of CR 54 to north of Kossik Road) and maintaining the existing

four-lanes on US 301 in Segments B-D (from north of Kossik Road to the US 98 Bypass). The recommended typical section for the six-lane widening was a low-speed urban typical section. The section of US 301 between Kossik Road and Wire Road will be used to transition the proposed six-lanes into the existing four-lane roadway. To minimize traffic congestion and improve safety north of Kossik Road, Transportation System Management (TSM) improvements were also recommended. The TSM improvements could include, but not be limited to, median modifications on US 301 from north of Kossik Road to US 98 Bypass and turn lane improvements at four signalized intersections: Centennial Road, CR 52A, Morningside Drive, and US 98 Bypass.

The Recommended Build Alternative developed for the US 301 PD&E Study is required to be consistent with the Pasco County Metropolitan Planning Organization's (MPO) Cost Affordable Roadway Long Range Transportation Plan (LRTP). The Recommended Build Alternative presented at the Study's Public Hearing on November 4, 2009 was consistent with the Pasco MPO 2025 Cost Affordable LRTP. Subsequent to the Public Hearing, the Pasco County MPO adopted their 2035 LRTP on December 10, 2009. The adopted 2035 Cost Affordable Roadway Plan contains an additional roadway segment on US 301 between US 98 (SR 700) and CR 52A where six-lanes are proposed in addition to the six-lane roadway section on US 301 from south of CR 54 to Kossik Road.

Therefore, the Recommended Build Alternative consists of widening US 301 to a six-lane roadway facility in Segment A (from south of CR 54 to north of Kossik Road) and a portion of Segment C from south of US 98 (SR 700) to CR 52A. The section of US 301 between Kossik Road and Wire Road will be used to transition the proposed six-lanes in Segment A into the existing four-lane roadway. Within the portion of Segment C from south of US 98 (SR 700) to CR 52A, the section of US 301 from north of Musselman Road to US 98 will be used to transition the proposed six-lanes in Segment C into the existing four-lane roadway. Elsewhere within the study limits, the existing four-lanes on US 301 in Segments B-D (from north of Kossik Road to US 98 Bypass) will remain as is. The recommended typical section for the six-lane widening is a low-speed urban typical section within Segment A, and a rural typical section within the portion of Segment C from US 98 to CR 52A. To minimize traffic congestion and improve safety north of Kossik Road, TSM improvements will be provided at three signalized intersections: Centennial Road, Morningside Drive, and US 98 Bypass. The previously recommended TSM improvements at CR 52A would be constructed as part of the

widening in the portion of Segment C. A summary of the evaluation of wetland and biological impacts related to the Recommended Build Alternative is provided below.

The Wetland Evaluation and Biological Assessment Report was a supporting document for the PD&E Study that evaluated existing environmental conditions located within, or in close proximity to, the US 301 (Pasco County) mainline and the potential for effect from implementing the proposed project**.** This information was used to aid in the evaluation of project alternatives with the least overall environmental impact. Information collected and presented in this report was used to assess existing environmental conditions with regards to habitat types and the presence of, or the potential use of the project study area by state and/or federally listed species. Potential impacts to wetlands and protected species were also assessed.

This WEBAR was a supporting document for the PD&E Study. Potential wetland areas along the project were identified through a review of National Wetland Inventory (NWI) maps, U.S. Geological Survey (USGS) topographic maps, Southwest Florida Water Management District (SWFWMD) land cover and land use mapping, and current aerial photography. On March 6, 2009, environmental scientists conducted a field review of the project study area, with a focus on assessing wetlands within or immediately adjacent to the existing right-of-way (ROW). In addition, excavated semi-permanently flooded man-made swales and wet retention areas, in non-hydric soils, were also identified. During the field review, wetlands were visually inspected to verify community boundaries, dominant vegetation, functions, and the potential occurrence of threatened and endangered species.

A comprehensive literature review was conducted in order to identify potential state and federal protected species that could potentially be affected by the project. Habitat and soil mapping was used in combination with the aerial photographs in order to define the location of key site features likely to influence species presence, such as natural or manmade attributes and habitat and vegetation community distribution and disturbance. On February 25, 2009, habitats were qualitatively assessed by environmental scientists and described using visual indicators of vegetation cover type, plant species present, hydrology, soil and/or other habitat characteristics. These indicators were then used to assess potential habitat suitability for protected species. In addition, a Florida Natural Areas Inventory (FNAI) Report was generated.

Species assessed included the federally-endangered Florida grasshopper sparrow (*Ammodramus savannarum floridanus)*, the federally-endangered Red-cockaded woodpecker (*Picoides*

borealias), the federally-threatened Eastern indigo snake (*Drymarchon couperi)*, the federally-endangered Wood stork (*Mycteria Americana)*, and the delisted Bald eagle (*Haliaetus leucocephalus)*.

Although habitat in the vicinity of this project may support protected species, construction of this project predominantly within or adjacent to existing ROW is unlikely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1513 et. seq.). Future siting of necessary stormwater management facilities (SMF) may necessitate further review of project facilities.

Although the gopher tortoise and several state-protected commensal species (burrowing owl, gopher frog, Florida mouse, Florida pine snake, and short-tail snake) have a moderate potential for occurrence within the project corridor, this potential lies primarily within the more xeric no-build segments to the north**,** particularly within the associated Candler fine sand and Lake fine sand soils (Section 4-2 explains methodology for assessing species potential). The project will be constructed primarily within maintained existing ROW, and there is only moderate potential within the maintained ROW for the occurrence of gopher tortoise or burrowing owl burrows. Pre-construction surveys by certified biologists will be conducted in ROW, SMF and floodplain compensation (FPC) areas of desirable soil type and habitat type; permits will be acquired for gopher tortoise burrow excavation and tortoise/commensal species relocation as needed.

No potential wetland impacts were associated with the Recommended Build Alternative. No wetland impacts were expected to occur within the ROW or SMF sites. Permits required for this project would include the National Pollutant Discharge Elimination System Permit (NPDES) from Florida Department of Environmental Protection (FDEP) and an Environmental Resource Permit (ERP) from SWFWMD.

This report includes suggested locations for SMF sites. The locations were evaluated for impact identification purposes only. Accordingly, these locations do not necessarily represent the final location for such a proposed use. During the project's final design phase, alternative SMF locations would be evaluated in order to identify the preferred SMF site for each drainage basin within the design project limits. Future design siting of SMFs may necessitate further wetland and listed species assessment and survey.

Although habitat in the vicinity of this project may support protected species, construction of this project predominantly within or adjacent to existing ROW is unlikely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1513 et. seq.). However, additional ROW would be required for the provision of SMF and FPC sites. On December 1, 2009 the US Fish and Wildlife Service concurred with the FHWA's recommendation that the proposed project would not impact any federally listed species.

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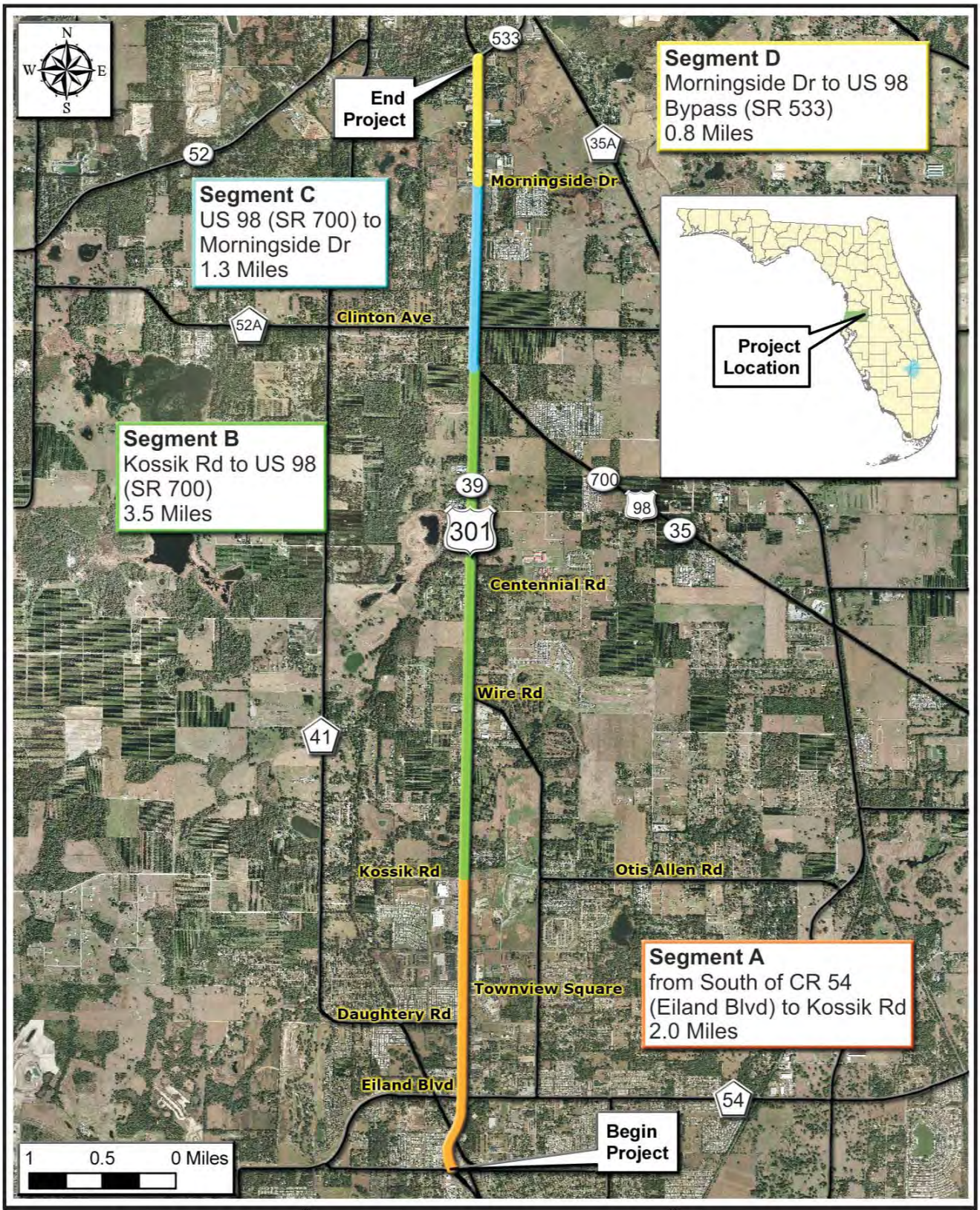
INTRODUCTION

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (PD&E) Study to evaluate improvements to US 301 (SR 39) in eastern Pasco County. The project location is illustrated on **Figure 1-1**. The limits of the study corridor are from south of CR 54 (Eiland Boulevard) to the US 98 Bypass (SR 533), a project length of 7.6 miles.

The objective of the PD&E Study was to provide documented environmental and engineering analyses, which would assist the FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the type, conceptual design and location of the necessary improvements within the US 301 PD&E study limits to accommodate future transportation needs in a safe and efficient manner. This Wetland Evaluation and Biological Assessment Report (WEBAR) was prepared as part of the PD&E Study.

The objectives of this WEBAR were to:

- Evaluate existing environmental conditions located within, or adjacent to, the US 301 mainline.
- Identify the potential for effect from implementing the proposed project**.**
- Assess existing environmental conditions with regards to habitat types and the presence of, or the potential use of the project study area by state and/or federally listed species.
- Assess potential impacts to wetlands and protected species.



US 301 (SR 39) PD&E Study from South of CR 54 (Eiland Boulevard) to US 98 Bypass (SR 533)	**LOCATION MAP**	**FIGURE 1-1**

This PD&E study evaluates the physical, social, cultural, environmental and economic impacts of providing alternative improvements to US 301 that include, but are not limited to: a No-Build alternative, Build alternatives that consider the widening of US 301 to six lanes from south of CR 54 to US 98 Bypass, Transportation System Management (TSM) improvements and median modifications to improve safety and mobility throughout the limits of the PD&E study.

SECTION 2

PROPOSED IMPROVEMENTS

2.1 PROJECT DESCRIPTION

US 301 is a four-lane divided north-south arterial that connects the cities of Zephyrhills and Dade City. The US 301 roadway provides an important connection to the regional and statewide transportation network linking the Tampa Bay region to the remainder of the state and nation. US 301 is identified as a regional roadway by the West Central Florida Metropolitan Planning Organization's (MPO's) Chairs Coordinating Committee (CCC) and is included in the Regional Roadway Network.

US 301 is designated as an emergency evacuation route and currently operates as an existing truck route. The 2035 Cost Affordable Roadway Plan of the Pasco County MPO Long Range Transportation Plan (LRTP) identifies the need to widen US 301 to six lanes from south of CR 54 to Kossik Road and from south of US 98 (SR 700) to CR 52A (Clinton Avenue). This PD&E study evaluated the physical, social, cultural, environmental and economic impacts of providing alternative improvements to US 301 that included, but were not limited to, a No-Build Alternative, Build Alternatives that considered the widening of US 301 to six lanes from south of CR 54 to US 98 Bypass, Transportation System Management (TSM) improvements and median modifications to improve safety and mobility throughout the limits of the PD&E study.

2.2 PURPOSE AND NEED

Motorists in Pasco County are faced with increased traffic congestion and delays as demand from the County's growth continues to place pressure on the existing transportation system. To assess the effects of continued growth along US 301, the FDOT initiated a PD&E Study that evaluates the impacts of providing alternative roadway capacity improvements to the facility. The purpose of this PD&E Study is to develop a plan to accommodate future growth in an organized manner and to maintain mobility along a regionally significant transportation corridor. The need for improvements along US 301 within the study limits was developed based on the evaluation of the following criteria:

- Existing and future quality of traffic operations along US 301 assuming the existing roadway conditions.
- traffic safety conditions for the time period between the years 2003 and 2007,

- consistency with local government plans, and
- projected future socioeconomic growth of Pasco County.

2.3 PROJECT SEGMENTATION

The project was divided in segments to effectively assess and compare the impacts of each alternative within the different geographical areas of the study corridor. After considering the existing right-of-way (ROW) along US 301, existing traffic volumes, land use patterns, and locations of cross streets, the project was divided into four study segments. These segments are illustrated on **Figure 1-1** and can be described as follows:

- Segment A: South of CR 54 to Kossik Road, a distance of 2.0 miles,
- Segment B: Kossik Road to US 98, a distance of 3.5 miles,
- Segment C: US 98 to Morningside Drive, a distance of 1.3 miles, and
- Segment D: Morningside Drive to US 98 Bypass, a distance of 0.8 miles.

2.4 BUILD ALTERNATIVE SELECTION

An Alternatives Public Workshop was held on June 3, 2009. The purpose of the workshop was to solicit public input regarding the proposed alternatives for the project. On July 16, 2009 the FDOT determined that the recommended alternative, a Build Alternative, would be presented at the Study's Public Hearing (in addition to the No Build Alternative). The recommended alternative selection was based on the results of the project's impact evaluation, public feedback received during the public involvement process, and a need to be consistent with area transportation plans.

The Recommended Build Alternative presented at the Public Hearing on November 3, 2009 consisted of the six-lane widening of US 301 in Segment A only (south of CR 54 to north of Kossik Road). The analysis indicated that the projected traffic volumes do not support the need to widen US 301 to six lanes in Segments B and C. In Segment D, the six-lane widening is not planned to be implemented for the following reasons: 1) Segment D is a relatively short segment (0.8 miles) with acute ROW constraints (only 100 feet of ROW) thus making the required ROW acquisition costs high; 2) the proposed six-lane widening is currently not identified in the 2035 Cost Affordable Roadway Plan of the Pasco County LRTP, 3) and there are capacity constrained routes at the northern terminus of the Study limits that are not planned for improvement in any

current transportation plans. Therefore, these routes would be unable to accommodate the additional lanes.

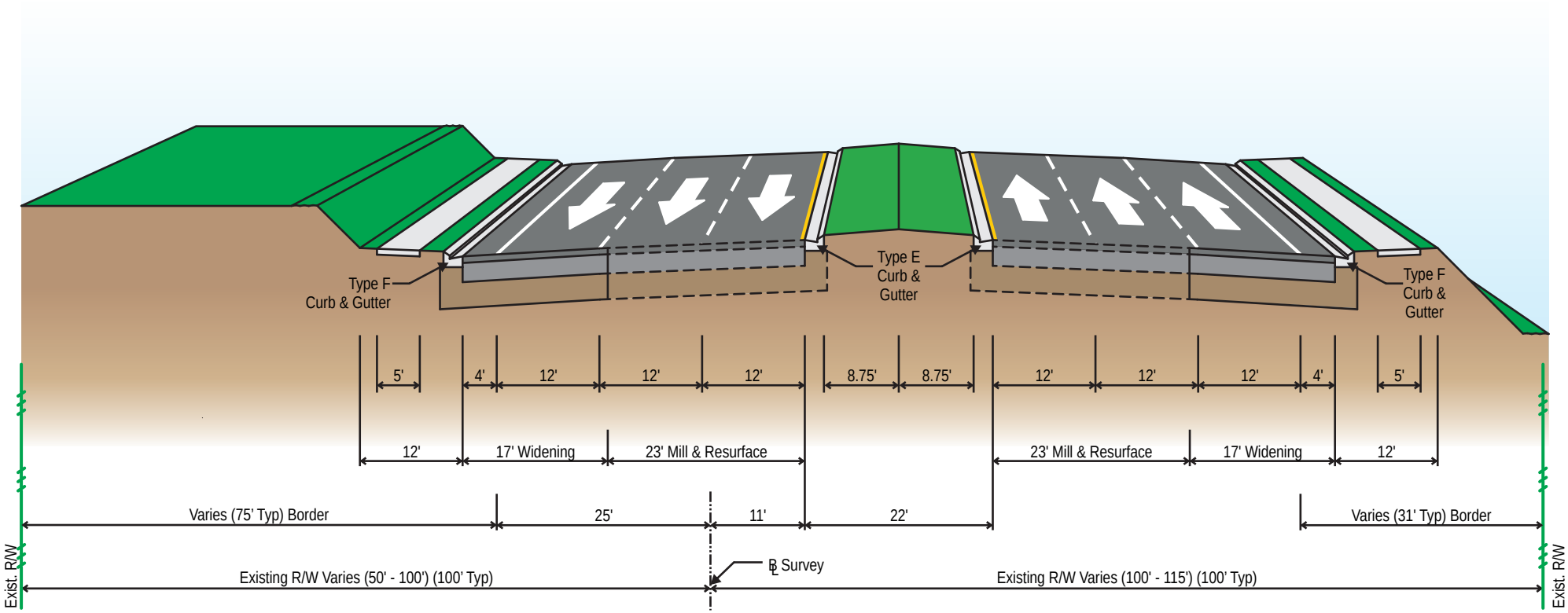
The typical section that was recommended for Segment A of the project corridor is described as a low speed urban typical section. This typical section was selected as the Recommended Build Alternative because it would minimize the overall ROW acquisition cost associated with implementing the project. The recommended typical section for Segment A is illustrated on **Figure 2-1**.

As stated above, the Recommended Build Alternative would widen US 301 to a six-lane roadway in Segment A (from south of CR 54 to north of Kossik Road) only and maintain the existing four-lanes on US 301 in Segments B through D (from north of Kossik Road to US 98 Bypass). Notably, the section of US 301 between Kossik Road and Wire Road will be used to transition the recommended six-lanes into the existing four-lane roadway. Further, to minimize traffic congestion and improve safety north of Kossik Road, TSM improvements were also recommended. The TSM improvements could include, but not be limited to, median modifications on US 301 from north of Kossik Road to US 98 Bypass and turn lane improvements at four signalized intersections: Centennial Road, CR 52A, Morningside Drive and US 98 Bypass.

The Recommended Build Alternative developed for the US 301 PD&E Study is required to be consistent with the Pasco County Metropolitan Planning Organization's (MPO) Cost Affordable Roadway Long Range Transportation Plan (LRTP). The Recommended Build Alternative presented at the Study's Public Hearing on November 4, 2009 was consistent with the Pasco MPO 2025 Cost Affordable LRTP. Subsequent to the Public Hearing, the Pasco County MPO adopted their 2035 LRTP on December 10, 2009. The adopted 2035 Cost Affordable Roadway Plan contains an additional roadway segment on US 301 between US 98 and CR 52A where six-lanes are proposed in addition to the six-lane roadway section on US 301 from south of CR 54 to Kossik Road.

Therefore, the Recommended Build Alternative consists of widening US 301 to a six-lane roadway facility in Segment A (from south of CR 54 to north of Kossik Road) and a portion of Segment C from south of US 98 to CR 52A. Elsewhere within the study limits, the existing four-lanes on US 301 in Segments B-D (from north of Kossik Road to US 98 Bypass) will remain as is. The recommended typical section for the six-lane widening is a

low-speed urban typical section within Segment A (shown in **Figure 2-1**), and a rural typical section within the portion of Segment C between US 98 to and CR 52A (shown in **Figure 2-2**). To minimize traffic congestion and improve safety north of Kossik Road, TSM improvements will be provided at three signalized intersections: Centennial Road, Morningside Drive, and US 98 Bypass. The previously recommended TSM improvements at CR 52A would be constructed as part of the widening in the portion of Segment C. A summary of the evaluation of noise impacts related to the revised Recommended Build Alternative is provided in the following sections.

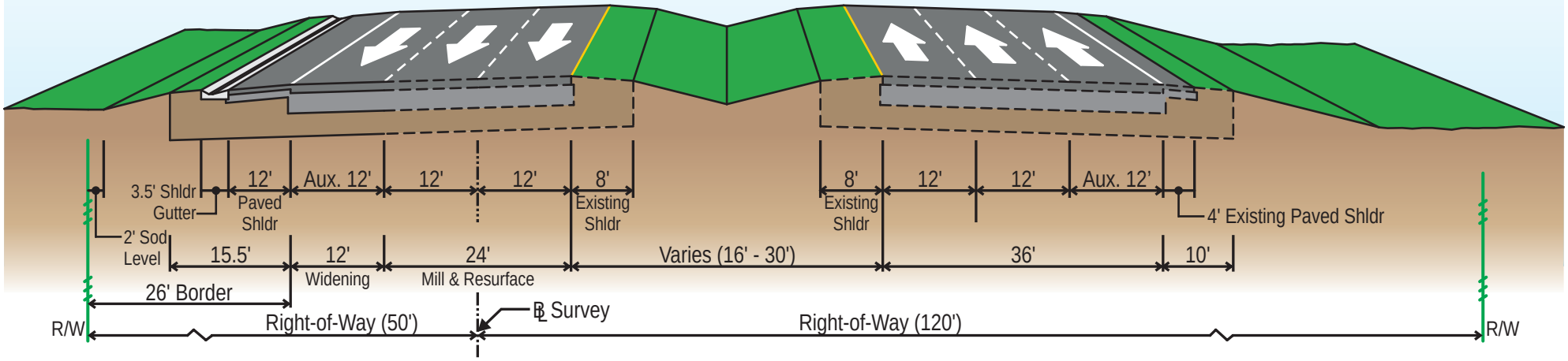


Design Speed = 45 mph

US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

ROADWAY TYPICAL SECTION
FROM SOUTH OF CR 54 (EILAND BOULEVARD) TO
NORTH OF KOSSIK ROAD
SEGMENT A - RECOMMENDED ALTERNATIVE

FIGURE 2-1



Design Speed = 55 mph

US 301 (SR 39) PD&E Study from South of CR 54 (Eiland Boulevard) to US 98 Bypass (SR 533)	**RECOMMENDED ROADWAY TYPICAL SECTION FROM US 98 (SR 700) TO CR 52A (CLINTON AVENUE)**	**FIGURE 2-2**

SECTION 3
EXISTING ENVIRONMENTAL CONDITIONS

During the March 2006 field review, upland and wetland community types were identified within the project study area using classifications found within the "Florida Land Use, Cover and Forms Classification System" (FLUCFCS) Third Edition (FDOT 1999). In addition, wetland community types are described using U.S. Fish and Wildlife Service (USFWS) Classifications of Wetlands and Deepwater Habitats of the United States (Cowardin, *et. al.* 1979).

More than 20 resource agencies interact with the FDOT as participants of the Environmental Technical Advisory Team (ETAT) for the Efficient Transportation Decision Making (ETDM) Process. ETAT reviews occur for wetlands, floodplains, wildlife and habitat, etc. by environmental resource agencies including the Southwest Florida Water Management District (SWFWMD), US Army Corps of Engineers (USACOE), Florida Department of Environmental Protection (FDEP), USFWS, and Florida Fish and Wildlife Conservation Commission (FFWCC).

3.1 EXISTING LAND USE

The SWFWMD Efficient Transportation Advisory Team (ETAT) review referenced the 2003 FFWCC habitat and land cover mapping, utilizing a 500' buffer, indicating approximately 87% of the project corridor is either developed/disturbed land or agricultural land (primarily citrus groves [FLUCFCS-221] and improved pastures [FLUCFCS-211]). The remaining corridor contains mixed hardwood pine forests (FLUCFCS-434), dry prairies (FLUCFCS-310), grasslands (FLUCFCS-300), and areas of shrub and brushland (FLUCFCS-320). Surface water management systems, canals (FLUCFCS-510), a 2.4-acre SMF, roadside ditches and swales are prominent features in the landscape. The upland habitat is primarily disturbed former agricultural land with a few remaining parcels of less-disturbed native habitat.

A field survey was conducted in March, 2006 to identify upland and wetland habitats and land uses within the ROW and 100' either side of existing ROW. Eighteen (18) upland land use/land cover categories (and Roads and Highways FLUCFCS 814) and four (4) wetland communities were identified and subsequently classified in accordance with the Florida Land Use, Cover and Forms Classification System (FLUCFCS- FDOT, 1999). **Appendix A (Sheets 1-13)** depicts SWFWMD 2007 Land Cover within the ROW and 100' either side of existing ROW (the corridor) and selectively updated by HDR using current imagery and field review data. Hydric

soils (Hydric Map Units of Hillsborough County, USDASCS) are also depicted on these map figures.

3.1.1 Upland Communities

During the field review, upland community types were visually inspected to verify community boundaries, dominant vegetation, and for the presence or potential for occurrence of threatened and endangered species. Upland habitat in the project area, as a whole, is generally disturbed and/or converted to urban/commercial or agricultural purposes. In addition to March, 2009 field reviews, 18 upland land use/land covers were evaluated using Geographic Information Systems (GIS) to examine SWFWMD's 2007 land use/land cover mapping. The percentages of upland land uses within the corridor are displayed in **Table 3-1**. No notable wildlife species or indicators were observed in the primarily disturbed upland communities during project field reviews.

Table 3-1
Upland Land Use/Land Cover within Existing ROW and
100-feet Beyond US 301 (SR 39) Existing ROW

FLUCFCS	Description	Percentage
110	Residential low density < 2 dwelling units per acres	5.5
120	Residential medium density 2->5 dwelling units per acre	2.6
130	Residential high density	0.7
132	Mobile home units medium density 6 or more dwelling units per acre	2.3
140	Commercial and Services	18.7
148	Cemeteries	0.4
150	Industrial	1.3
172	Religious	0.3
174	Medical and Health Care	0.8
190	Open Land	1.7
193	Urban Land In Transition	2.1
211	Improved Pastures	4.8
221	Citrus Groves	4.3
320	Shrub and Brushland	0.4
420	Upland Hardwood Forests	1.5
427	Live Oak	0.2
434	Hardwood Conifer Mixed	1.2
441	Coniferous Plantations	1.5
814	Roads and Highways	48.9

The following 18 upland communities were classified in accordance with the Florida Land Use, Cover and Forms Classification System (FLUCFCS- FDOT, 1999).

FLUCFCS 110-130 – Residential

Residential land uses range from high-density urban housing developments to low-density rural areas characterized by a relatively small number of homes per acre. Residential Low Density (FLUCFCS 110) is more prevalent along the US 301 corridor, versus Residential Medium (FLUCFCS 120) and High Density (FLUCFCS 130), defined as containing greater than two dwelling units per acre. The percentage of land use categorized as Residential land use within the corridor is 8.1 percent, with residential use spread sporadically throughout the entire corridor, but more densely defined at the southern terminus.

FLUCFCS 132 – Mobile Home Units (Six or More Dwelling Units Per Acre)

Residential land use also includes Mobile Home Units Six or More Dwelling Units Per Acre (FLUCFCS 132). Several mobile home parks are located in Segment A, including Spanish Trail Mobile Home Park within the central portion, Wood Dale Mobile Park, and Pinecrest Mobile Home Park at the southern terminus of Segment A. The percentage of land use categorized as Mobile Home land use within the corridor is 2.3 percent.

FLUCFCS 140 – Commercial and Services

Commercial areas are predominantly associated with the distribution of products and services. This category includes all secondary structures associated with an enterprise in addition to the main building and integral areas assigned to support the base unit. The dominant land use along the project corridor is Commercial and Services. The percentage of land use categorized as Commercial and Services land use within the corridor is 19.4 percent with 31 parcels located throughout the corridor, but intensified at the northern and southern termini and intersections in the southern portion (CR 54, Daughtery Road, Green Slope Drive/Pretty Pond Road, and Kossik Road) and northern portion (CR 52A, Michael Street, McDonald Street and Willingham Avenue).

FLUCFCS 148 – Cemeteries

Cemeteries are in the Commercial and Services category. The percentage of land use categorized as Cemetery land use within the corridor is 0.4 percent. Chapel Hill Garden Cemetery is located in Segment C on the west side of US 301.

FLUCFCS 150 – Industrial

The Industrial category embraces those land uses where manufacturing, assembly or processing of materials and products are accomplished. Industrial areas include a wide array of industry types ranging from light manufacturing and industrial parks to heavy manufacturing plants. The percentage of land use categorized as Industrial land use within the corridor is 1.4 percent, specifically a welding and recycling site located between Roberts Road and Wire Road on the east side of US 301 in Segment B of the corridor and one site south of Musselman Road in Segment B.

FLUCFCS 172 - Religious

Educational, religious, health and military facilities are typical components of the Institutional category. The percentage of land use categorized as Religious Institutional land use within the corridor is 0.3 percent, consisting of one church (FLUCFCS 172) west of Centennial Road on the west side of US 301 in Segment B of the corridor and a funeral home in Segment C.

FLUCFCS 174 – Medical and Health Care

This Institutional land use category includes all buildings and grounds that compose medical facilities. The percentage of land use categorized as Medical Health Care within the corridor is 0.8 percent. Several clinics and medical facilities are located at the southern terminus of the project in Segment A.

FLUCFCS 190 – Open Land

This category includes undeveloped land within urban areas and inactive land with street patterns but without structures. The percentage of land use categorized as Open Land within the corridor is 1.1 percent, including a parcel located north of Townsend Road on the east side of US 301 in the north-central portion of the corridor.

FLUCFCS 193 – Urban Land In Transition

This category includes undeveloped land within urban areas in transition without positive indicators of intended activity. One parcel exists within the corridor. The percentage of land use categorized as Urban Land In Transition within the corridor is 2.1 percent.

FLUCFCS 211-Improved Pastures

Cropland and Pastureland include agricultural land which is managed for the production of row or field crops and woodland pastures. This Improved Pastures category is composed of land which has been cleared, tilled, reseeded with specific grass types and periodically improved with brush control and fertilizer application. Within the project area, this generally refers to land used for livestock grazing. The percentage of land use categorized as Improved Pastures within the corridor 5.1 percent located throughout the northern and central portions of the corridor. Along US 301, these pastures are primarily hay fields and cow trails are evident.

FLUCFCS 221 – Citrus Groves

Orchards and groves generally occur in areas possessing a specific combination of soil qualities and climatology factors. The more well-drained soils of the corridor lend themselves to various citrus groves and abandoned groves in the xeric sandhill soils. The percentage of land use categorized as Citrus Groves within the corridor is 4.3 percent. These citrus groves are located from the south-central areas to the north-central portions of the corridor.

FLUCFCS 320 – Shrub and Brushland

This category includes saw palmettos (*Serenoa repens*), gallberry *(Ilex glabra*), wax myrtle (*Myrica cerifera*), and other shrubs and brush. Generally, saw palmetto is the most prevalent plant cover intermixed with a wide variety of other woody plant species as well as various types of short herbs and grasses. The percentage of land use categorized as Shrub and Brushland within the corridor is 0.4 percent. An area of Shrub and Brushland in the project area is located in the central portion on the east side in a disturbed area. Gallberry, wax myrtle, and various oak (*Quercus* spp.), and red maple (*Acer rubrum*) saplings dominated the disturbed setting.

FLUCFCS 420 – Upland Hardwood Forests

This classification of upland forest lands has a crown canopy with at least 66 percent dominance by hardwood tree species. This class is reserved for naturally generated stands. The percentage of land use categorized as Upland Hardwood Forests within the corridor is 1.5 percent. This land cover often exists in the corridor as a vestige of natural land cover adjacent to citrus groves, pine plantations, or improved pasture. Oak trees are the dominant tree species in this category.

FLUCFCS 427– Live Oak

Often referred to as upland temperate hammock, this forest community is one in which live oak is either pure or predominant. Within the project corridor this species is associated with swwtgum (*Liquidambar styraciflua*), southern magnolia (*Magnolia grandiflora*), and laurel oak (*Quercs virginiana*). The percentage of land use categorized as Live Oak Forest within the corridor is 0.2 percent. The area of live oak trees is just north of Raven Road in Segment B.

FLUCFCS 434 – Hardwood - Conifer Mixed

This class is reserved for those forested areas in which neither upland conifers nor hardwoods achieve 66% crown canopy dominance. These areas within the corridor are dominated by a mixed oak, pine and red maple canopy. The percentage of land use categorized as Hardwood-Conifer Mixed within the corridor is 1.2 percent. There are 4.7 acres of Hardwood-Conifer Mixed land use within 100' of the ROW, scattered throughout the north-and south-central portions of the corridor. The canopies are co-dominated by oaks, including laurel oak (*Quercus laurifolia*), live oak (Q. *virginiana)*, and water oak (Q. *nigra*); pines, including slash pine (*Pinus elliottii*) and longleaf pine (*P. palustris*); and red maple.

FLUCFCS 441 – Coniferous Plantations

These plantations are almost exclusively pine forests artificially generated by planting seedling stock or seeds. Planted pine plantations (primarily slash pine) or silviculture exist within the project corridor as densely planted, uniform rows of trees. The percentage of land use categorized as Coniferous Plantations within the corridor is 3.5 percent, located primarily throughout the central and southern portions of the corridor.

FLUCFCS 814 – Roads and Highways

Roads and Highways are a form of transportation facilities used for the movement of people and goods. This classification includes roads, sidewalks, ditches/swales, ROW buffers, and associated facilities. They are major influences on land and many land use boundaries are outlines by them. US 301 is a four-lane divided north-south arterial with radiating east-west local roadways providing a network of roadways in the region. The percentage of land use categorized as Medical Health Care within the corridor is 48.9 percent.

3.1.2 Wetland Communities and Water Features

Potential wetland areas along the project were identified through a review of National Wetland Inventory (NWI) maps, U.S. Geographical Service (USGS) topographic maps, SWFWMD land cover and land use mapping, soil mapping, and current aerial photography. On March 6, 2009, environmental scientists conducted a field review of the project study area, with a focus on assessing wetlands within or adjacent to the existing ROW (within 100 feet). In addition, excavated semi-permanently flooded man-made swales and wet retention areas, in non-hydric soils, were also identified. During the field review, wetlands were visually inspected to verify community boundaries, dominant vegetation, and for presence or the potential occurrence of threatened and endangered species. No listed species were observed at wetland sites during field reviews. Wetland locations are mapped on the Conceptual Plans, Wetland Impact Sheets (**Appendix B**). These wetland communities as well as upland communities, potential pond and floodplain compensation sites, and other natural features along the corridor were photographed (**Appendix C**).

The four (4) wetland community types within the corridor include Reservoirs (FLUCFCS 534)/Open Water, Willow and Elderberry Scrub-Shrubs (FLUCFCS 618), Wet Prairie (FLUCFCS 643), and Intermittent Pond (FLUCFCS 653). The quality of the disturbed wetlands shows little variation from moderately low to low. Wetland communities were classified using FLUCFCS and USFWS NWI classification system (Cowardin, *et.al.*, 1979). NWI classifications containing "x" denote excavated features. The percentage of wetland communities within 100' of US 301 existing ROW is 0.9 percent.

Reservoirs (FLUCFCS-534)

USFWS: POW, POWx (Palustrine, Open Water, Open Water excavated)

Reservoirs are artificial impoundments of water. This category of other surface water is non-vegetated, isolated, often inundated year-round, and functions within the project area as sinks for storing surface water runoff. These generally maintained features are primarily open water with sparse hydrophytic vegetation. The impoundments within the project study area are less than ten acres (FLUCFCS 534). The percentage of land use categorized as Reservoirs Less than 10 Acres within the corridor is 0.10 percent. A total of 0.5 acres of these excavated impoundments were identified within 100 feet of the existing ROW. These reservoirs are the SMFs located at the northern project terminus. The remaining grassy swale features along US 301 are part of an open conveyance system with minimal hydrophytic vegetative characteristics. Though no listed species

were observed during field reviews, obvious tracks and indicators of wading bird use were evident. Typically the reservoirs are open water features with maintained turf perimeters; soils are not indicative of wetland (some features are within hydric Placid Fine Sand; others are not).

Wetland Scrub – Willow and Elderberry (FLUCFCS-618)

USFWS: (PSS1) Palustrine, Scrub/Shrub, Broad-leaved, Deciduous

This Wetland Scrub community is associated with topographic depressions and poorly drained soil. The low scrub/shrub marshes within the corridor are dominated by elderberry (*Sambucus canadensis*) and willow (*Salix caroliniana*). This wetland type is the dominant wetland type within the project corridor and accounts for wetlands within and adjacent to the project ROW which are dominated by willow (*Salix caroliniana*) and elderberry (*Sambucus canadensis*) with cattails (*Typha* spp.), primrose willow (*Ludwigia* spp.) and other disturbance species. Though no listed species were observed during field reviews, obvious tracks and indicators of wading bird use were evident. Red-winged blackbirds (*Agelaius phoeniceus*) were common inhabitants of the scrub/shrub wetlands. These wetlands are disturbed in nature and primarily impounded in historically non-hydric soil types. The percentage of land use categorized as Willow and Elderberry Scrub/Shrub within the corridor is 0.5 percent. There are 1.8 acres of scrub/shrub wetlands within 100 feet of the existing ROW in the central portion of the corridor, including Wetland W 579 E, Segment B and a small remnant portion on the west side of US 301 in this vicinity as well. Another scrub/shrub wetland, W 692 W, in Segment C exists within 100’ of the existing ROW, on the west side of US 301, just east of proposed SMF 1000 and Floodplain Compensation Site 1.

Wet Prairie (FLUCFCS-643)

USFWS: (PEM, PEMx) Palustrine, Emergent; Emergent excavated

This classification is composed predominately of grassy vegetation on hydric soils and is usually distinguished from marshes by having less water and shorter herbage. Wet prairies are generally characterized as short-hydroperiod wetlands with less than 150 days of inundation per year. The wet prairie vegetation within the project ROW includes spike rushes (*Eleocharis* spp.) and beak rushes (*Rhyncospora* spp.), but is primarily within a bahiagrass pasture The percentage of land use categorized as Wet Prairie within the corridor is 0.10 percent There are 0.2 acres of remnant wet prairie wetlands within 100 feet of the existing ROW, including W 622 W on the west side of US 301, just south of Musselman Road. No wildlife species or wildlife indicators were observed

during field reviews. This isolated depression feature is not mapped in hydric soils, though the larger portion of the associated wetland to the west (beyond the 100' buffer) is within Placid Fine Sand.

Intermittent Ponds (FLUCFCS 653)

USFWS: (PEMx) Palustrine, Emergent, Excavated

This category of Intermittent Ponds is defined as a waterbody which exists for only a portion of the year, a seasonal waterbody. It relies upon water from rainfall or runoff. The percentage of land use categorized as Intermittent Ponds within the corridor is 0.20 percent. There are four small wetlands totaling 0.9 acres of intermittent ponds within 100 feet of the existing ROW. These ponds are excavated SMF features in the landscape, on the east side of US 301, just west of the Medical Center at the south end of the corridor in Segment A. No wildlife species or wildlife indicators were observed during field reviews. The ponds are mowed/maintained and are vegetated primarily in turf grasses with hydrophytic sedges and rushes as maintenance permits. Neither of these ponds is mapped within hydric soils.

SECTION 4
WETLAND IMPACTS

Based on this project development effort, the potential pond and floodplain compensation siting as well as roadway improvement has relevant wetland issues because although wetlands were avoided to the extent feasible during this PD&E study, all avoidance was not possible.

4.1 POTENTIAL IMPACTS

"Section 5 – Conclusions" and the following wetland impact analysis address potential impacts related to the proposed roadway and SMF/floodplain compensation siting improvements. Potential wetland impacts also vary by rural or high speed urban alternative and segment as well as temporary or permanent nature of impact.

As indicated in **Table 4-1**, a range of approximately 0.25 to 0.43 acres of wetland impacts could occur within the ROW or SMF-associated wetland impacts and an additional minimal (*di minimus*) temporary impact (0.05 ac) associated with access to SMF sites. Additional impacts to Other-Surface-Waters (OSW) may range from 0.13 acres to 0.31 acres depending on the Build alternative. Unavoidable wetland impacts are due to the construction of roadway widening and associated SMF improvements. Impact areas are mapped on the Conceptual Plans. Impacts will be primarily to the fringe of palustrine scrub shrub systems adjacent to or within existing ROW or identified SMF locations. These fringe wetlands vary in quality from moderately low to low. Wetland impacts are small slivers of disturbed wetland fringes adjacent to, or within, the existing US 301 maintained ROW and impacts have been minimized to the extent feasible.

Table 4-1
Wetland and Other Surface Water Potential Impacts

*Description	FLUCFCS	NWI	Segment A	Segment B	Segment C	Segment D	High Speed Urban Alt Ac.	Rural Alt Ac.
W 579 E – ROW	618	PSS		X			0.42	0.24
W 622 W - ROW	643	PEM		X			0.0	0.01
W 480 E – SMF 300	644	PAB		X			<0.01	<0.01
W 692 W – SMF 1000	618	PSS			X		**0.05	**0.05
W 708 E – ROW	530	OSW			X		***0.0	***0.03
W 712 E - ROW	530	OSW			X		***0.0	***0.24
W 714 E - ROW	530	OSW			X		***0.02	***0.0
W 716 E - ROW	530	OSW			X		***0.11	***0.04
Total Permanent Wetland Impacts (ac)							**0.43**	**0.25**
****Total Temporary Wetland Impacts (ac)**							**0.05**	**0.05**
*****Total Other Surface Water Impacts (ac)**							**0.13**	**0.31**

*Wetland (W) Identified by beginning roadway station number/side of road (East or West)/ROW or SMF or floodplain compensation
**Temporary impact due to SMF access
***OSW =Other Surface Water

UMAMS

The functional losses resulting from wetland impacts were determined through the Uniform Mitigation Assessment Method (UMAM) analysis (**Appendix D)**. This assessment was developed by the Water Management Districts and the FDEP to assist the regulatory evaluation of wetland sites. It provides accurate and consistent evaluation, by establishing a numerical ranking for location, hydrology, and community structure used to evaluate the current condition of the wetland. Scores for each variable are totaled and divided by the total of the maximum score for that variable. The functionality of the wetland potentially impacted by the project is scored to determine the quality and quantity of mitigation land necessary to offset the project's impacts. Wetland impact acreages were determined for each wetland by alternative (Alternative 1: High-speed Urban, Alternative 2: Low-speed Urban/Rural) and associated UMAM wetland functional loss assessed (**Table 4-2**).

Table 4-2
UMAM Wetland Functional Loss

Assessed Wetland Stationing	Total Impact Acreage	Total Functional Loss
W 579 E – ROW 618/PSS High Speed Urban	0.42 ac	0.21
W 579 E - ROW 618/PSS Rural	0.24 ac	0.12
W 622 W - ROW 643/PEM Rural	0.01 ac	*de minimis*
W 480 E – SMF 300 644/PAB Urban/Rural	<0.01 ac	*de minimis*
W 692 W – SMF 1000 618/PSS Urban/Rural	0.05 ac Temp Impact	*de minimis*

4.2 PERMITTING AND REVIEW AGENCIES

The USACE and SWFWMD regulate wetlands within the project limits. A Pre-Application permit coordination meeting was held at SWFWMD's Brooksville office on March 10, 2009 to discuss project issues including drainage, pond siting, and environmental concerns (**Appendix E**). Other agencies including USFWS, the U.S. Environmental Protection Agency (USEPA), and Florida Fish and Wildlife Conservation Commission (FFWCC) review and comment on wetland permitting and associated potential effect on protected species. Additional coordination will be conducted during final design. It is anticipated that the following permits will be required:

- SWFWMD — Environmental Resource Permit (General);
- USACE — Section 404 Dredge and Fill Permit (Nationwide); and
- FDEP — National Pollutant Discharge Elimination System Permit (NPDES).
- An Environmental Resource Permit will be required for this project. However, the actual permit type will be determined when project limits, SMF and floodplain compensation siting, and limits of construction are finalized. If wetland impacts exceed threshold limits, requiring an individual ERP permit, the FDOT may consider applying for an Incidental Site Activities Permit (40D- 40.302(6)(a) F.A.C), particularly if the project is a design-build or fast-tracked project.
- Coordination with FFWCC and USFWS will be required for listed species.

4.3 WETLAND MITIGATION

Impacts to wetlands will be avoided and minimized to the extent feasible. Minimal construction-related wetland impacts may occur within the proposed roadway and SMF improvements. The extent of wetland involvement will be determined at the time of permitting. Based on the above considerations, it was determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use. This project is connected with Executive Order 11990, “Protection of Wetlands.”

If the final design of the proposed improvements results in unavoidable wetland impacts, exceeding threshold limits, impacts will be mitigated through the FDOT Mitigation Program (Chapter 373.4137 F.S.). Mitigation should be in-kind and occur within the same watershed basin as the proposed impact. For ERP purposes of mitigating any adverse wetland impacts within the same watershed basin, the project is located within the East Zephyrhills Basin and the Tank Lake Outlet Basin to the north.

SECTION 5
THREATENED AND ENDANGERED SPECIES

A comprehensive literature review, project field survey, and GIS data analysis were implemented to identify potential state and federally protected species that could potentially be affected by this project.

5.1 METHODS

On February 25, 2009, habitats within the project study area were qualitatively assessed by environmental scientists and described using visual indicators of vegetative species present, hydrology, soil and/or other habitat characteristics. These indicators were then used to assess potential habitat suitability for protected species. Habitat and soil mapping was used in combination with aerial photographs to define the location of key site features likely to influence species presence.

The following list details the agency coordination and GIS data analysis carried out for the preparation of this report:

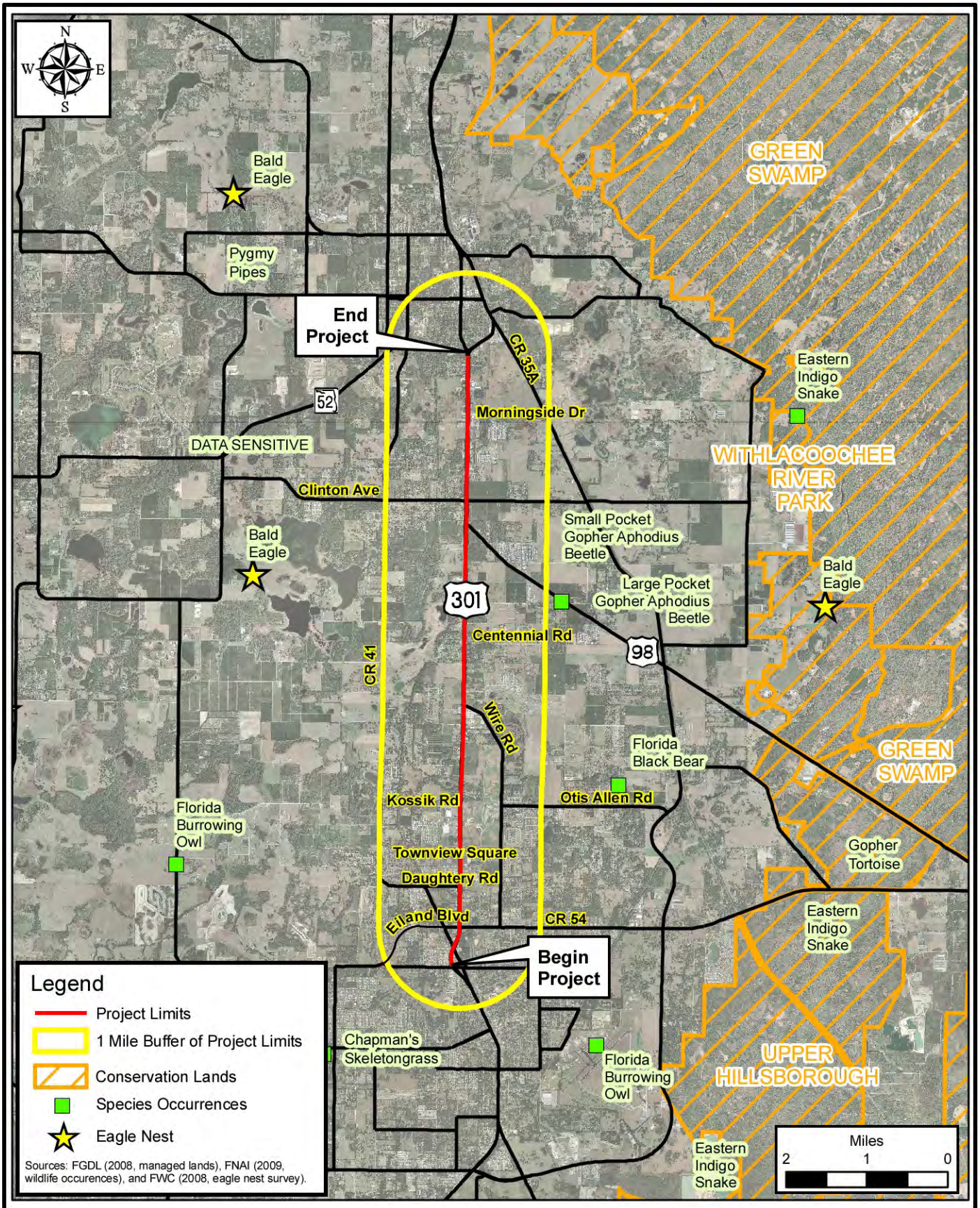
- Review of the following FNAI GIS layers: species element occurrences for Pasco County, conservation lands, functional wetlands, conservation priorities and natural communities (**Appendix F**).
- Correspondence with FFWCC for the most recent bald eagle nest survey results near the project area
- Review of the following FFWCC GIS layers: Archbold Biological Station's Florida Scrub Jay Habitat (1992-1993) for the State of Florida, Species Consultation Areas, Historic Florida Scrub Jay Observations, Florida Black Bear Road Kill, and Wildlife Observations
- Review of the following FDEP GIS layers: Special Outstanding Florida Waters, Outstanding Florida Waters, and conservation lands
- Efficient Transportation Decision Making (ETDM) Programming Screen Summary Report for the US 301 (SR 39) PD&E Study (from CR 54 to US 98), including reviews submitted by resource agencies interacting with FDOT as participants of the Environmental Technical Advisory Team (ETAT) including SWFWMD (for Floodplains, Infrastructure, Navigation, Special Designations, Water Quality and Quantity, Wetlands, and Wildlife and Habitat),

USACE (Navigation and Wetlands), FDEP (Wetlands), National Marine Fisheries Service (NMFS) (Wetlands), USFWS (Wetlands and Wildlife and Habitat), FFWCC (Wildlife and Habitat) – Initially published on 11/02/2006 (Applicable ETAT review pages in **Appendix F**)

5.2 RESULTS

The protected species list shown in **Table 5-1** was compiled from information obtained from the various sources referenced above, additional project specific information, and field reviews. This table lists the federal and state threatened and endangered species and state species of special concern, their federal and/or state status (federally protected species also have state protection), their potential for occurrence in the project limits and their habitat preferences. The probability of species occurrence is ranked low, moderate, or high based on the presence/absence of preferred habitat and documented occurrences. A low rating indicates that no preferred habitat for that species was found within the study area or that suitable habitat may exist, but no species have been historically documented within one mile of the project. A moderate rating indicates that suitable habitat exists and species have been historically documented within a mile of the project. A High rating indicates that suitable habitat exists and the species has been recently documented.

No species occurrences were reported within one mile of the project corridor by FNAI (2009), FWC (2005) or FWC 2008 Eagle Nest Locator (**Figure 5-1**). The project study area was assessed for Critical Habitat designated by Congress in 17 CFR 35.1532. No Critical Habitat for any federally listed species occurs within the project study area. Based on this information, it has been determined that the proposed project will not affect any existing or proposed Critical Habitat.



US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

DOCUMENTED SPECIES OCCURRENCES

FIGURE 5-1

Table 5-1
State and Federal Protected Species with the Potential to Occur Within the Project Vicinity[1]

Common Name *Scientific Name*	Designated Status		Habitat Preference	Potential in the Project Limits[4]
	Federal Status[2]	State Status[3]		
Avian				
Florida grasshopper sparrow *Ammodramus savannarum floridanus*	E	E	Prairie and pasture of south central Florida	Low
Red-cockaded woodpecker *Picoides borealias*	E	T	Open, mature pine woodlands	Low
Wood Stork *Mycteria americana*	E	E	Woody vegetation over standing water, or island	High
Bald Eagle *Haliaetus leucocephalus*	BGEPA	N	Close to large water bodies, habitat can be variable	Low
Burrowing owl *Athene cunicularia floridana*	N	SSC	Dry prairie and sandhill and ruderal pastureland	Moderate
Florida Sandhill Crane *Grus canadensis pratensis*	N	T	Wet prairies, marshy lake bottoms	Moderate
Limpkin *Aramus guarauna*	N	SSC	Mangroves, freshwater marshes, swamps, and lake margins	Low
Little Blue Heron *Egretta caerulea*	N	S	Shallow brackish, freshwater and saltwater habitats	Moderate
Snowy Egret *Egretta thula*	N	S	Shallow freshwater and brackish marshes	Moderate
Southeastern kestrel *Falco sparverius paulus*	N	T	Open pine lands, prairies, pastures, and woodland edges	Moderate
Tricolored Heron *Egretta tricolor*	N	S	Shallow freshwater and brackish marshes	Moderate
White ibis *Eudocimus albus*	N	SSC	Shallow freshwater and brackish marshes	Moderate
Mammals				
Florida mouse *Podomys floridanus*	N	SSC	Scrub and sandhill	Moderate
Sherman's fox squirrel *Sciurus niger shermani*	N	SSC	Sandhills and pine flatwoods, pastures	Low
Florida black bear *Ursus americanus floridanus*	N	T	Diverse large expanses of upland and wetland habitats	Low
Reptiles and Amphibians				
Eastern Indigo Snake *Drymarchon couperi*	LT	T	Mesic flatwoods, upland pine forest, sandhill scrub	Moderate
Gopher Tortoise *Gopherus polyphemus*	N	T	Sandhill, scrubby, flatwoods, xeric hammock	Moderate

Common Name *Scientific Name*	Designated Status		Habitat Preference	Potential in the Project Limits[4]
	Federal Status[2]	State Status[3]		
Florida pine snake *Pituophis melanoleucus mugitus*	N	SSC	Open canopy and dry, sandy soil (gopher tortoise burrow)	Moderate
Short-tailed snake *Stilosoma extenuatum*	N	T	Sandhill, sand pine scrub, and xeric hammock	Moderate
Gopher frog *Rano capito*	N	SSC	Sandhill and scrub that include isolated wetlands or ponds	Moderate

Legend

[1]Based on ETDM comments and FNAI Tracking List (December 2008)

[2]As listed by the U.S. Fish and Wildlife Service in 50 CFR 17. NL = Not Listed.

[3]Animal species listed by the FFWCC pursuant to Rules 39-27.003, 39-27.004, and 39-27.005 FAC.

[4]The potential for occurrence was ranked from high to low using the following guidelines:

Low-Little or no suitable habitat
Moderate-Suitable habitat present within, or adjacent to, the project limits and historical species record of occurrence (based on FNAI report and literature review) within one mile of the project limits
High-Suitable habitat present within, or adjacent to, the project limits, species record of occurrence within one mile of the project limits and species recently observed/documented

N= No status listing
E = Endangered
T = Threatened
S = Species of Special Concern
BGEPA=Bald and Golden Eagle Protection Act
PDL = Species currently listed Threatened but has been proposed for delisting

Note: The discussion of the potential for impact associated with the US 301 widening project is provided without regard for alternative alignments because there is no significant difference in alternatives with respect to potential listed species impact.

5.2.1 Federally-Protected Species

The federally protected species potentially occurring within the vicinity of the project include: Eastern indigo snake (*Drymarchon corais couperi*) (T), wood stork (*Mycteria americana*) (E), Florida grasshopper sparrow (*Ammodramus savannarum floridanus*) (E), and red-cockaded woodpecker (*Picoides borealis*) (E), as well as the recently delisted bald eagle (*Haliaeetus leucocephalus*), protected by the BGEPA and U.S. Migratory Bird Treaty Act.

Florida Grasshopper Sparrow (*Ammodramus savannarum floridanus*)

The federal and state endangered **Florida grasshopper sparrow** is a small sparrow requiring large areas of fire-maintained dry prairie habitat, with patchy open areas for foraging. They are

year-round residents narrowly restricted to prairie and pasture of south central Florida including Polk, Osceola, Highlands, and Okeechobee counties. All known populations occur on state and federal managed lands, including Three Lakes Wildlife Management Area, Avon Park Air Force Range, and Kissimmee Prairie State Preserve. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent. Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. However, there is no known habitat within the project limits and no historical or project observations of the Florida grasshopper sparrow. Potential for this species to occur within the project limits: Low

Finding: The FDOT on behalf of the FHWA recommended a finding of "No Effect" on the Florida grasshopper sparrow.

Red-cockaded woodpecker (*Picoides borealis*)

This federal-endangered and state-threatened **Red-cockaded Woodpecker** is a small woodpecker inhabiting mature longleaf pine flatwoods in north and central Florida and mixed longleaf pine and slash pine in south-central Florida. These birds are non-migratory and forage in forested habitat types as well. They are cooperative breeders and are most often found in large concentrations on federally managed lands such as Eglin Air Force Base and Apalachicola National Forest. Their requirement for mature pine Flatwoods in a park-like setting nearly precludes the potential for their existence within the project corridor. USFWS ETAT review recommended assessment of the red-cockaded woodpecker due to proximity of the project to long-leaf pine habitat and presence of this species in Pasco County. There are 6.1 acres of longleaf pine /xeric oak within 200 feet of the existing ROW. However, the habitat is small parcels which have not been managed or maintained. These parcels are fire-exempted and no red-cockaded woodpeckers historical or project observations have been recorded in the vicinity. Potential for this species to occur within the project limits: Low

Finding: The FDOT on behalf of the FHWA recommended a finding of "No effect" on the red-cockaded woodpecker.

Wood Stork (*Mycteria americana*)

The federal and state-endangered **Wood Stork** is a large wading bird nesting colonially in inundated forested wetlands and foraging in shallow water. Potential foraging areas include

freshwater marshes, stock ponds, shallow roadside ditches, shallow tidal creeks, and pools, managed impoundments and depressions in cypress swamps. Storks feed primarily on fish. A major reason for wood stork decline has been loss and degradation of feeding habitat. A variety of nearby wetland habitats such as nearby roadside or agricultural ditches can provide adequate forage areas for wood storks that typically do the majority of their foraging in wetlands 5 to 40 miles from the colony. Two wood stork rookeries are located approximately 7 miles from the proposed project. Potential for foraging wood storks within the project limits: High

Finding: The FDOT on behalf of the FHWA recommended a finding of "May Affect, but is Not Likely to Adversely Affect" the wood stork.

Bald Eagle (*Haliaetus leucocephalus*)

The recently delisted **Bald Eagle** is still protected by the U. S. Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act (BGEPA), and state Wildlife Code. Specifically, construction activities are restricted within 660 ft. of an active nest during nesting season. Bald eagles will begin breeding activity in September, with egg-laying beginning in late October and peaking in December. Clutches of one or two, and sometimes three, are incubated for about 35 days to hatching. Fledging occurs in 10 to 12 weeks, and parents will continue to feed and care for young for up to six weeks after fledging. The Florida Bald Eagle Management Plan defines the nesting season from October 1 to May 15 (USFWS, 1989). Bald eagles typically hunt in aquatic habitats where their primary food source is fish, although they can opportunistically supplement their diet with turtles, birds and mammals. Because of this, they are generally found in coastal areas, bays, estuaries or near large freshwater lakes and rivers. Preferred nest sites for bald eagle are the tops of tall trees, often pines, usually overlooking or near a large waterbody. Typically, the same pair will return to a nest year after year. Bald eagle territories can contain both active nests, and alternate constructed nests that are not being actively used (FWC, 2008).

Though one active nest is documented within two miles of the proposed project, no active nests are documented within 660 ft. of the project corridor. Due to the distance of the nests from roadway limits of construction, a "no effect" finding on the bald eagle is appropriate. Potential for this species to occur within the project limits: Low

Finding: The FDOT on behalf of the FHWA recommended a finding of "No effect" on the bald eagle.

Eastern Indigo Snake (*Drymarchon couperi*)

The federal and state-threatened **Eastern Indigo Snake** generally requires large tracts of land to survive and utilizes a diverse range of habitats from xeric oak scrub to wet prairies; the indigo is often found in habitats utilized by the gopher tortoise and may utilize their burrows. Mating season occurs primarily in fall and winter months and the eastern indigo snake lays eggs (often in gopher burrows) in May-June. The hatchlings appear from late July through October (NatureServe, 2008). Habitat does potentially exist within all four segments of the project. The eastern indigo snake was not observed during project field reviews and has not been documented by FNAI as occurring in the vicinity of the project. Although suitable habitat exists in the vicinity, construction will occur primarily within or immediately adjacent to existing ROW. The project may have temporary impact on the eastern indigo snake if species displacement occurs from suitable foraging, burrowing, resting or wintering habitat during construction activities. However, it is not expected to result in significant long-term loss or contribute to any cumulative loss of habitat. Mortality is unlikely, but could occur due to impact with vehicles or equipment. Eastern indigo snakes are a mobile species and in most instances, they are capable of avoiding approaching vehicles and/or equipment by leaving the work area during active construction. The USFWS *Standard Protection Measures for the Eastern Indigo Snake* will be considered for inclusion in the construction plans and documents during final design if suitable habitat is identified within the construction limits of the Recommended Build Alternative. Potential for this species to occur within the project limits: Moderate

Finding: The FDOT recommended on behalf of the FHWA a finding of "May affect, but is not likely to adversely affect" the eastern indigo snake.

5.2.2 State-Protected Species

These state-protected species include thirteen state-protected species which were identified by ETAT reviewers as having the potential to be present in the immediate project area. These state-protected species include two SSC mammals: Sherman's fox squirrel (*Sciurus niger shermani)* and Florida mouse (*Podomys floridanus*); three reptiles: Florida pine snake (*Pituophis melanoleucus mugitus))* (SSC), short-tailed snake (*Stilosoma extenuatum*) (T), and gopher tortoise (*Gopherus polyphemus)* (T); eight birds, including SSC wading birds – limpkin (*Aramus guarauna*), little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), tricolored heron (*Egretta tricolor*), and white ibis (*Eudocimus albus*), the threatened southeastern kestrel (*Falco sparverius paulus*) and threatened Florida sandhill crane (*Grus canadensis pratensis*), and the burrowing owl (*Athene*

cunicularia floridana) (SSC). These thirteen species have the potential to occur within or adjacent to portions of the project area.

Burrowing Owl (*Athene cunicularia floridana*)

The **Florida Burrowing Owl** is a state-listed species of special concern. This owl is a small ground-dwelling owl with long legs and bold spots. Its natural habitat is high, dry prairie and sandhill, often inhabiting gopher tortoise burrows, but making extensive use of pastures, ball fields, school grounds, road right-of-ways, and other ruderal areas. Again, the higher, drier, more xeric areas exist in the northern reaches of the project. These birds are nonmigratory and maintain home ranges and territories while nesting. Though these types of ruderal habitats are located within the project vicinity and the project is within the Brooksville Ridge System, no burrowing owls were observed during project reviews; nor have they been reported by FNAI in the project area. Burrowing owls are known in this area of Pasco County; however the project will likely not affect this species. Potential for this species to occur within the project limits: Moderate

Florida Sandhill Crane (*Grus Canadensis pratensis*)

The **Florida Sandhill Crane** is a state-threatened species. This long-legged wading bird forages in prairies, freshwater marshes, and pasturelands as well as agricultural lands. They nest in shallow ponds dominated by pickerelweed (*Pontederia* spp.) and maidencane (*Panicum hemitomon*). These nonmigratory birds forage widely in peninsular Florida. An ETAT review by the Habitat Conservation Scientific Services Section of FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent; however, FFWCC did not designate priority wetlands within a 500-foot buffer of the proposed widening. Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. There is a potential for wading birds in the vicinity of the project in Tank Lake and the SMFs, including the swales, along the project corridor. Minimal quality wetland habitat is located within the project area. Potential for this species to occur within the project limits: Moderate

Limpkin (*Aramus guarauna*)

The **Limpkin** is a state listed species of special concern. This large, long-billed, long-legged wading bird frequents swamps and marshes foraging for apple snails. This species occurs on numerous public lands but has experienced recent declines due to deteriorating water quality,

pollution, hydrological disruptions, and increases in invasive plants which threaten the health of the apple snail population on which the limpkin depends. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent, however FFWCC did not designate priority wetlands within a 500-foot buffer of the proposed widening Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. There is minimal acreage of low-to-moderate quality wetland habitat located within the project area. There are likely no water resources within the vicinity providing an ample apple snail resource for the limpkin. Potential for this species to occur within the project limits: Low

Little Blue Heron (*Egretta caerulea*)

The **Little Blue Heron** is a state-listed species of special concern. It is a medium sized heron feeding in shallow fresh or brackish water, preferring foraging in freshwater lakes, marshes, and swamps. These herons nest in a variety of woody vegetation types including cypress, willow, maple, and cabbage palm. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent; however, FFWCC did not designate priority wetlands within a 500-foot buffer of the proposed widening. Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. There is a potential for wading birds in the vicinity of the project in Tank Lake and the SMFs, including the swales, along the project corridor. There is minimal acreage of low-to-moderate quality wetland habitat located within the project area. Potential for this species to occur within the project limits: Moderate

Snowy Egret (*Egretta thula)*

The **Snowy Egret** is a state listed species of special concern. This medium-sized wading bird has black bill, black legs and bright yellow feet. It nests primarily in woody shrubs over shallow water and feeds in permanently and seasonally flooded wetlands. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent, however FFWCC did not designate priority wetlands within a 500-foot buffer of the proposed widening. There is a potential for wading birds in the vicinity of the project in Tank Lake and the SMFs, including the swales, along the project corridor. There is minimal acreage of low-to-

moderate quality wetland habitat located within the project area. Potential for this species to occur within the project limits: Moderate

Southeastern Kestrel (*Falco sparverius paulus*)

The **Southeastern Kestrel** is a state-threatened bird and the smallest falcon in the U.S. It is found in open pine habitats, turkey oak, grasslands, prairies, sandhills and open sites within suburban and residential area and nests in tall dead trees or utility poles. Sandhill habitats are preferred. Cavity trees are excavated in large pine trees. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent. Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. Large blocks of natural open habitat for foraging and large pines for cavity trees are not available features within the project corridor; though lower quality open sites within urban and residential areas and existing utility poles could potentially provide habitat. The southeastern kestrel was not observed during project field reviews and has not been documented by FNAI as occurring in the vicinity of the project. Potential for this species to occur within the project limits: Moderate

Tricolored Heron (*Egretta tricolor*)

The **Tricolored Heron** is a state-listed species of special concern. It is a medium sized heron found in willow thickets in fresh water, feeding in a variety of flooded wetlands. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent, however FFWCC did not designate priority wetlands within a 500-foot buffer of the proposed widening Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. There is a potential for wading birds in the vicinity of the project in Tank Lake and the SMFs, including the swales, along the project corridor. There is minimal acreage of low-to-moderate quality wetland habitat located within the project area. Potential for this species to occur within the project limits: Moderate

White Ibis (*Eudocimus albus)*

The **White Ibis** is a state-listed species of special concern. It is a medium sized wading bird with a downward curved bill found in a variety of habitats including freshwater marshes and forested

wetlands, wet prairies and man-made ditches. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent, however FFWCC did not designate priority wetlands within a 500-foot buffer of the proposed widening Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. There is a potential for wading birds in the vicinity of the project in Tank Lake and the SMFs, including the swales, along the project corridor. There is minimal acreage of low-to-moderate quality wetland habitat located within the project area. Potential for this species to occur within the project limits: Moderate

Florida Mouse (*Podomys floridanus*)

The **Florida Mouse** is a state listed species of special concern. It is a large mouse found in xeric upland communities with sandy soils, including scrub and sandhill, and ruderal sites, including gopher tortoise burrows. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project for this species, focusing on the Brooksville Ridge System and the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent. Based on the known range and presence of potential habitat, including gopher tortoise burrows, this species was listed as having the potential to occur within and adjacent to the project area. The Florida mouse was not observed during project field reviews and has not been documented by FNAI as occurring in the vicinity of the project. Potential for this species to occur within the project limits: Moderate

Sherman's Fox Squirrel (*Sciurus niger shermani*)

Sherman's Fox Squirrel is a state-listed species of special concern found in sandhills, pine flatwoods, pastures and other ruderal open habitats with scattered pines and oaks. They are active year round in peninsular Florida, depending on longleaf pine and wiregrass habitats. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the Brooksville Ridge System and the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent. Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. Sherman's fox squirrel was not observed during project field reviews and has not been documented by FNAI as occurring in the vicinity of the project. Potential for this species to occur within the project limits: Low

Florida Black Bear (*Ursus americanus floridanus*)

The state-threatened **Florida black bear** requires extensive acreage with a diversity of habitats including a wide variety of upland and wetland forested communities to support the varied seasonal diet of black bears. Baygalls and bayheads are necessary for cover and dens as well as forested wetlands for diurnal cover. Generally, black bear populations are protected in large areas of public land, including populations in the Green Swamp and Chassahowitzka National Wildlife Refuge. Bears moving between these two systems could conceivably occur in the project vicinity. No bear roadkill data is identified in the project vicinity; an FNAI element occurrence identified a black bear occurrence approximately two miles east of US 301, midway between the roadway and the Green Swamp. Potential for this species to occur within the project limits: Low

Gopher Tortoise (*Gopherus polyphemus*)

The state-protected **Gopher Tortoise** was recently uplisted to threatened with new recovery and relocation guidelines. This Florida land turtle is typically found in xeric upland habitats, excavating deep burrows for refuge which also serve as protection and refuge for several other protected "commensal" species. It is commonly associated with a pine overstory and an open understory with a grass and forb (non-woody) groundcover and sunny areas for basking. Gopher tortoises can sometimes be found in more marginal habitat such as roadsides, ditch banks, utility and pipeline rights-of-way, pastures, and even marginal wetland habitat, especially if their preferred habitat has been lost (USFWS, 2007). Nesting occurs from late April to mid-July (mainly mid-May to mid-June). Its clutch size is usually 5 to 9, (USFWS, 2007). Incubation lasts between 80 and 110 days. Hatching occurs from August through September (NatureServe, 2007).

The gopher tortoise has moderate potential for occurrence within the project corridor, primarily within the more xeric portions of the project corridor to the north. An ETAT Review by FFWCC assessed the regional habitat resource of the area within a mile of the project focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent. Based on the known range and presence of potential habitat, this species was listed as having the potential to occur within and adjacent to the project area. Gopher tortoise burrows were not located during field reviews of this area. Because the project will be constructed within maintained existing ROW, there is little potential for the occurrence of gopher tortoise burrows. Pre-construction surveys by certified biologists will be conducted in ROW and pond areas of desirable soil type and habitat type. Potential for this species to occur within the project limits: Low

Florida Pine Snake (*Pituophis melanoleucus mugitus*)

The **Florida Pine Snake** is a state-listed species of special concern. The Florida pine snake is a large snake found in dry sandy soils in which it burrows, especially sandhills, oldfields, and pastures. It often coexists with pocket gophers (no pocket gopher burrows were observed in the project limits) and gopher tortoises, spending much of its time below ground. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project for this species, including the Brooksville Ridge System which the project is within and the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent. Based on the known range and presence of potential habitat, including gopher tortoise burrows, this species was listed as having the potential to occur within and adjacent to the project area. The Florida pine snake was not observed during project field reviews and has not been documented by FNAI as occurring in the vicinity of the project. Potential for this species to occur within the project limits: Moderate

Short-tailed Snake (*Stilosoma extenuatm*)

The **Short-tailed Snake** is a state-protected species and is listed as threatened in Florida. It is found in dry habitats including sandhill and sand pine scrub and is a secretive burrower, often using gopher tortoise burrows. An ETAT review by FFWCC assessed the regional habitat resource of the area within a mile of the project, focusing on the area east of the existing alignment (the western edge of the Green Swamp) as good to excellent as well as the Brooksville Ridge System. Based on the known range and presence of potential habitat, including gopher tortoise burrows, this species was listed as having the potential to occur within and adjacent to the project area. The short-tailed snake was not observed during project field reviews and has not been documented by FNAI as occurring in the vicinity of the project. Potential for this species to occur within the project limits: Moderate

Gopher Frog (*Rano capito*)

The **Gopher Frog** is a state-protected species of special concern. This species requires a unique habitat made up of sandy xeric uplands, sandhill and scrub, that include isolated wetlands or ponds for breeding within a mile of the xeric uplands. This species is a commensal of the gopher tortoise, spending the daytime in burrows. Based on the known range and presence of potential habitat, including gopher tortoise burrows, this species has the potential to occur within and adjacent to the project area. Gopher frog was not observed during project field reviews and has

not been documented by FNAI as occurring in the vicinity of the project. Potential for this species to occur within the project limits: Moderate

5.3 CRITICAL HABITAT

The project study area was assessed for Critical Habitat designated by Congress in 17 CFR 35.1532. No Critical Habitat for any federally listed species occurs within the project study area. Based on this information, it has been determined that the proposed project will not affect any existing or proposed Critical Habitat.

SECTION 6
CONCLUSIONS

The conclusions regarding the potential for impacts to wetlands or federal or state-protected species associated with the Recommended Build Alternative are discussed below.

6.1 WETLAND EVALUATION

No potential wetland impacts are associated with the Recommended Build Alternative. No wetland impacts are expected to occur within the ROW or ponds. The minimal wetland impact associated with Pond 300 can likely be avoided altogether during the design phase as the wetland limits appear at the outer edge of the parcel boundary, not the pond construction limits. No wetland impacts are expected. No impacts to OSW are associated with the Recommended Build Alternative.

6.2 BIOLOGICAL ASSESSMENT AND COMMITMENTS

6.2.1 Determinations

No protected species or Critical Habitat is expected to be affected by implementing the Recommended Build Alternative. Although habitat in the vicinity of US 301 may support protected species, construction of this project predominantly within or adjacent to existing ROW is unlikely to adversely affect resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1513 et. seq.). **See Table 6-1, Listed Species Impact Determinations**.

Table 6-1
Listed Species Impact Determinations

Common Name *Scientific Name*	Designated Status		Impact Determination
	Federal Status[2]	State Status[3]	
Federally-Listed Species			
Florida grasshopper sparrow *Ammodramus savannarum floridanus*	E	E	No Effect
Red-cockaded woodpecker *Picoides borealias*	E	T	No Effect
Wood Stork *Mycteria americana*	E	E	MANLATAA
Eastern Indigo Snake *Drymarchon couperi*	T	T	MANLATAA
Bald Eagle *Haliaeetus leucocephalus*	BGEPA	N	Likely Not Affect
State-Listed Species			
Burrowing owl *Athene cunicularia floridana*	N	SSC	Likely Not Affect
Florida Sandhill Crane *Grus canadensis pratensis*	N	T	Likely Not Affect
Limpkin *Aramus guarauna*	N	SSC	Likely Not Affect
Little Blue Heron *Egretta caerulea*	N	S	Likely Not Affect
Snowy Egret *Egretta thula*	N	S	Likely Not Affect
Southeastern kestrel *Falco sparverius paulus*	N	T	Likely Not Affect
Tricolored Heron *Egretta tricolor*	N	S	Likely Not Affect
White ibis *Eudocimus albus*	N	SSC	Likely Not Affect
Florida mouse *Podomys floridanus*	N	SSC	Likely Not Affect
Sherman's fox squirrel *Sciurus niger shermani*	N	SSC	Likely Not Affect
Florida black bear *Ursus americanus floridanus*	N	T	Likely Not Affect
Gopher Tortoise *Gopherus polyphemus*	N	T	Likely Not Affect
Florida pine snake *Pituophis melanoleucus mugitus*	N	SSC	Likely Not Affect

Common Name *Scientific Name*	Designated Status		Impact Determination
	Federal Status[2]	State Status[3]	
Short-tailed snake *Stilosoma extenuatum*	N	T	Likely Not Affect
Gopher frog *Rano capito*	N	SSC	Likely Not Affect

N= No status listing
E = Endangered
T = Threatened
MANLTAA= May Affect, Not Likely To Adversely Affect
S = Species of Special Concern
BGEPA=Bald and Golden Eagle Protection Act

6.2.2 Commitments

FDOT is committed to the following measures to address avoidance and minimization of impacts to wetlands or protected species:

- *Protection Measures for the Eastern Indigo Snake* will be considered for inclusion during the project's final design.
- The bald eagle nest database and field verification will be accomplished during final design to assure no involvement.
- Design phase siting of SMF and floodplain compensation areas may necessitate further review and/or species/wetland surveys.
- Pre-construction surveys by certified biologists will be conducted in ROW and SMF and floodplain compensation areas of desirable soil type and habitat type.

6.3 MITIGATION REQUIREMENTS

No potential wetland impacts are associated with the Recommended Build Alternative. No wetland impacts are expected to occur within the ROW or SMFs. The minimal wetland impact associated with SMF 300 can likely be avoided altogether during the design phase as the wetland limits appear at the outer edge of the parcel boundary, not the pond construction limits. No wetland impacts are expected. No impacts to OSW are associated with the Recommended Build Alternative.

If wetland impacts should be determined for this project, mitigation will occur pursuant o Section 373.4137 F.S. to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C. Section 1344. Under this program, mitigation of wetland impacts will be implemented by the SWFWMD. The SWFWMD has developed a regional wetland mitigation plan to address the estimated mitigation needs of FDOT. In-kind mitigation will be provided within the same watershed basin as the proposed impact. For ERP purposes of mitigating any adverse wetland impacts within the same watershed basin, the project is located within the East Zephyrhills Basin and the Tank Lake Outlet Basin to the north.

6.4 PERMITTING AND REVIEW AGENCIES

The U.S. Army Corps of Engineers (USACE) and SWFWMD regulate wetlands within the project limits. A Pre-Application permit coordination meeting was held at SWFWMD's Brooksville office on March 10, 2009 to discuss project issues including drainage, pond siting, and environmental concerns (**Appendix D**). Other agencies including USFWS, the U.S. Environmental Protection Agency (USEPA), and Florida Fish and Wildlife Conservation Commission (FFWCC) review and comment on wetland permitting and associated potential effect on protected species. Additional coordination will be conducted during final design. It is anticipated that the following permits may be required:

- SWFWMD — Environmental Resource Permit (General)
- USACE — Section 404 Dredge and Fill Permit (Nationwide)
- FDEP (Florida Department of Environmental Protection)— National Pollutant Discharge Elimination System Permit (NPDES) including the development of a Stormwater Pollution Prevention Plan (SWPPP).
- An Environmental Resource Permit will be required for this project. However, the actual permit type will be determined when project limits, SMF and floodplain compensation siting, and limits of construction are finalized. If wetland impacts exceed threshold limits, requiring an individual ERP permit, the FDOT may consider applying for an Incidental Site Activities Permit (40D-40.302(6)(a) F.A.C), particularly if the project is a design-build or fast-tracked project.
- Coordination with FFWCC and USFWS will be undertaken as necessary. Permits will be acquired for any gopher tortoise burrow excavation and tortoise/commensal species relocation if necessary.

SECTION 7

REFERENCES

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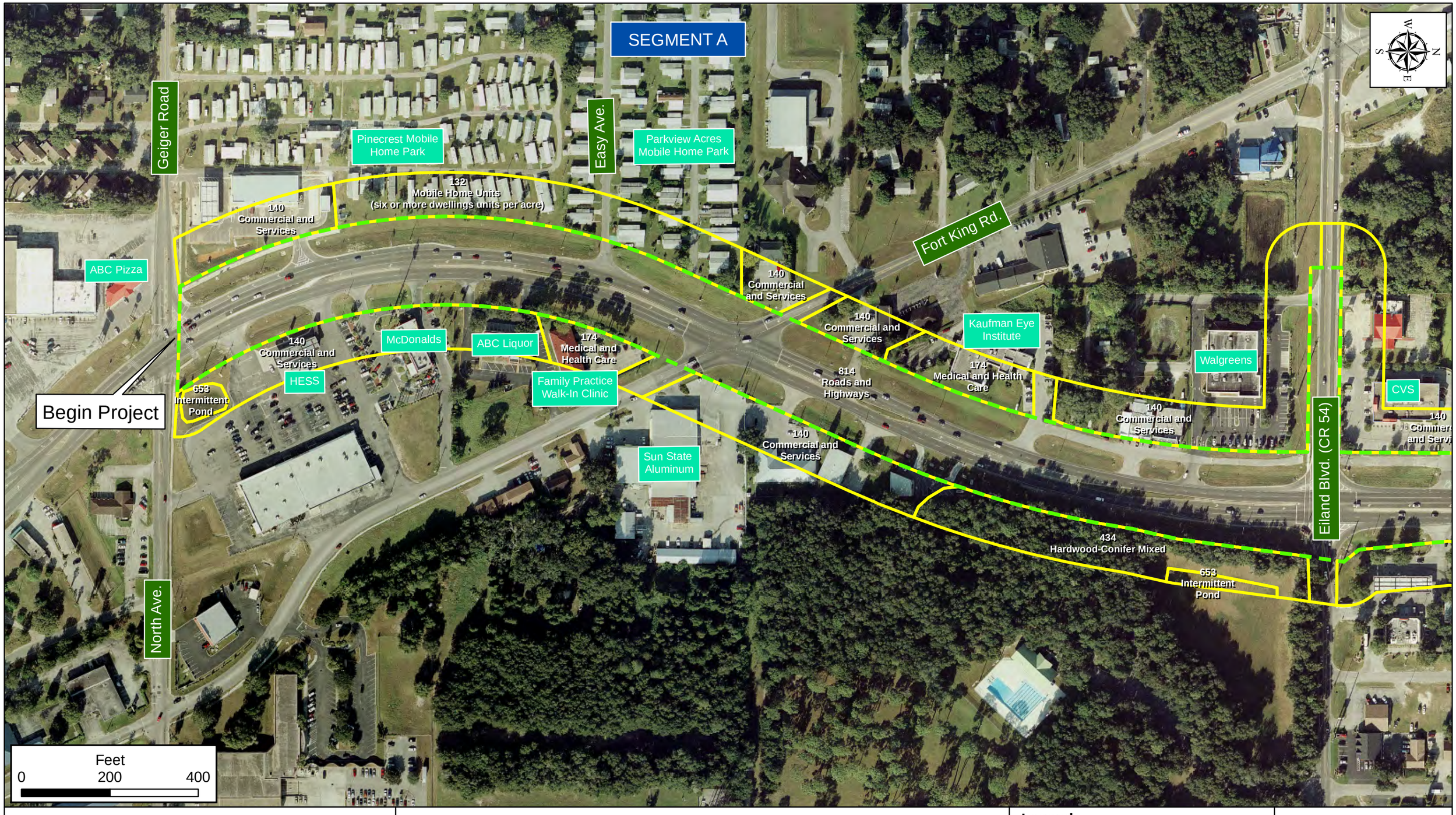
APPENDIX A

Land Cover With Hydric Soils

Sheets 1-13



US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Map 1 of 13

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308

SEGMENT A

Wood Dale Mobile Park

Daughtery Rd.

Spanish Trails Senior Village

140 Commercial and Services

190 Open Land

132 Mobile Home Units (six or more dwellings units per acre)

140 Commercial and Services

814 Roads and Highways

132 Mobile Home Units (six or more dwellings units per acre)

Florida Medical Clinic

140 Commercial and Services

Pin Chasers

140 Commercial and Services

Goodyear

174 Medical and Health Care

Feet
0 200 400

US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

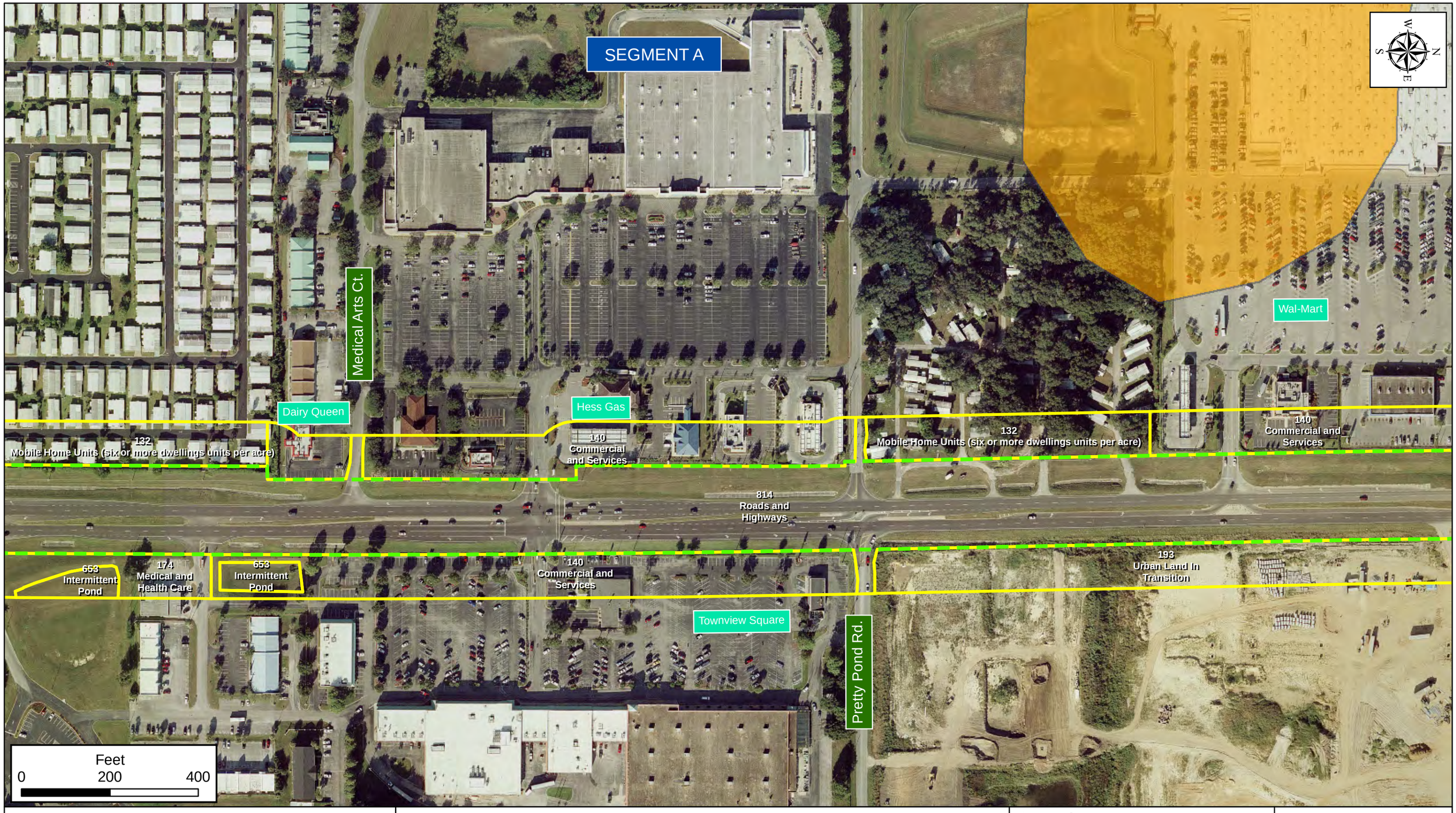
Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Map 2 of 13

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308



US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Map 3 of 13

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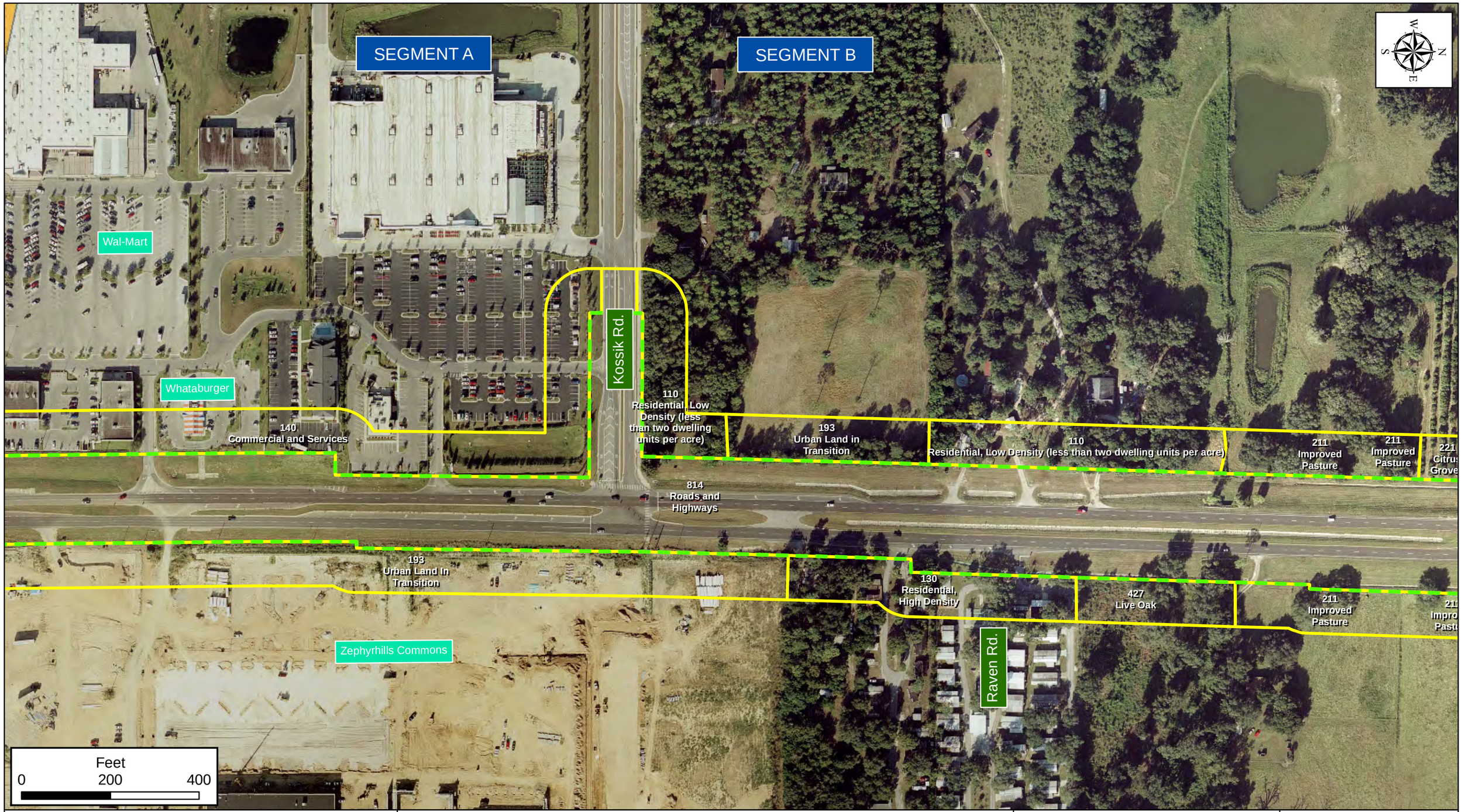

US 301 (SR 39)
PD&E Study
from South of CR 54
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LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

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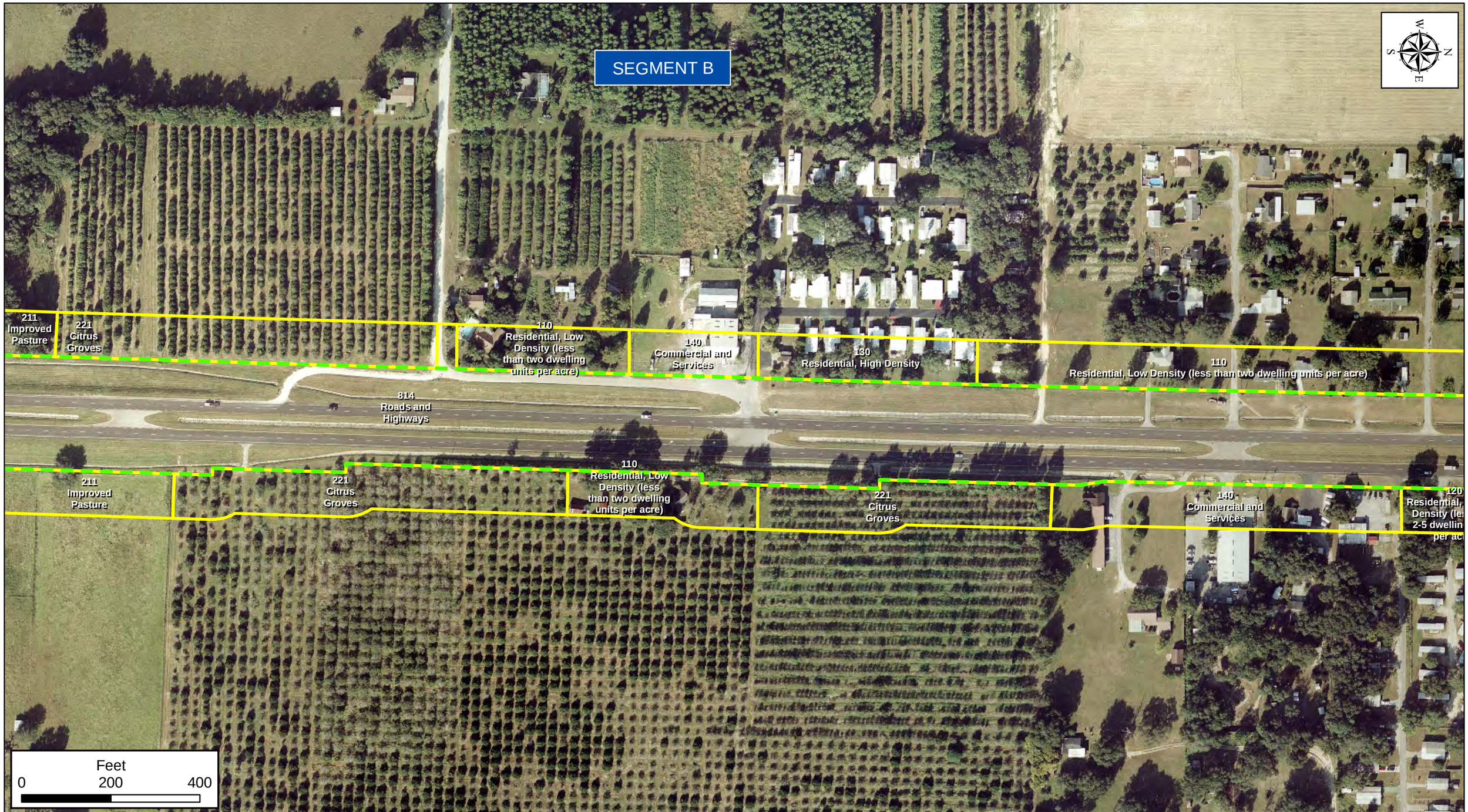


US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308

SEGMENT B

140
Commercial and Services

110
Residential, Low Density (less than two dwelling units per acre)

221
Citrus Groves

140
Commercial and Services

211
ImprovedPasture

221
Citrus Groves

221
Citrus Groves

120
Residential, Medium Density (less than 2-5 dwelling units per acre)

150
Industrial

814
Roads and Highways

320
Shrub and Brushland

190
Open Land

190
Open Land

221
Citrus Groves

110
Residential, Low Density (less than two dwelling units per acre)

Mike's Welding & Zephyrhills Recycling

Wire Rd.

Feet
0 200 400

US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

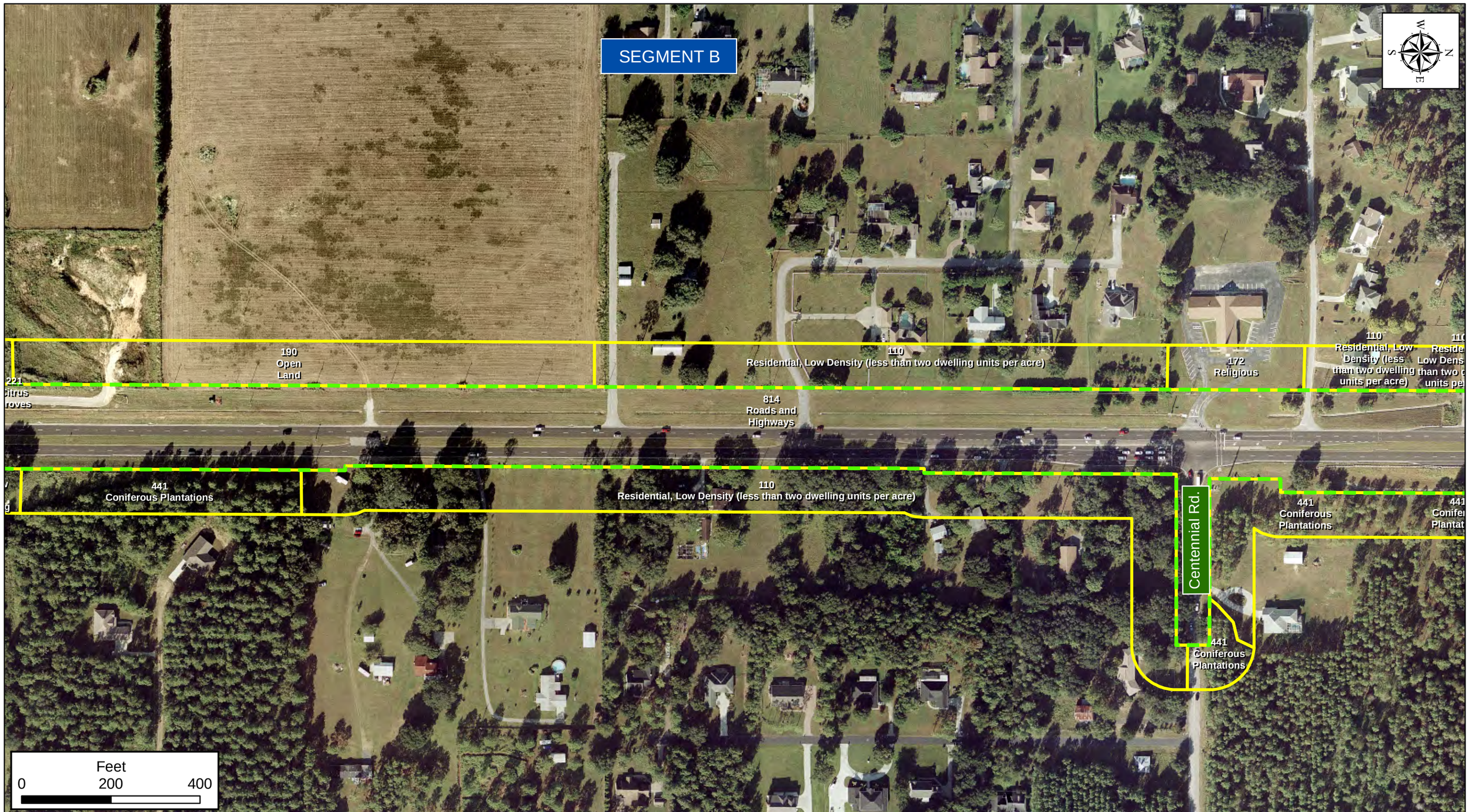
LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308



US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308

SEGMENT B

110
Residential, Low Density (less than two dwelling units per acre)

618
Willow and Elderberry

140
Commercial and Services

110
Residential, Low Density (less than two dwelling units per acre)

140
Commercial and Services

211
Improved Pasture

132
Mobile Home Units (six or more dwellings units per acre)

150
Industrial

814
Roads and Highways

441
Coniferous Plantations

618
Willow and Elderberry

110
Residential, Low Density (less than two dwelling units per acre)

434
Hardwood-Conifer Mixed

211
Improved Pasture

190
Open Land

140
Commercial and Services

Maltby Rd.

Feet
0 200 400

US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308

US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

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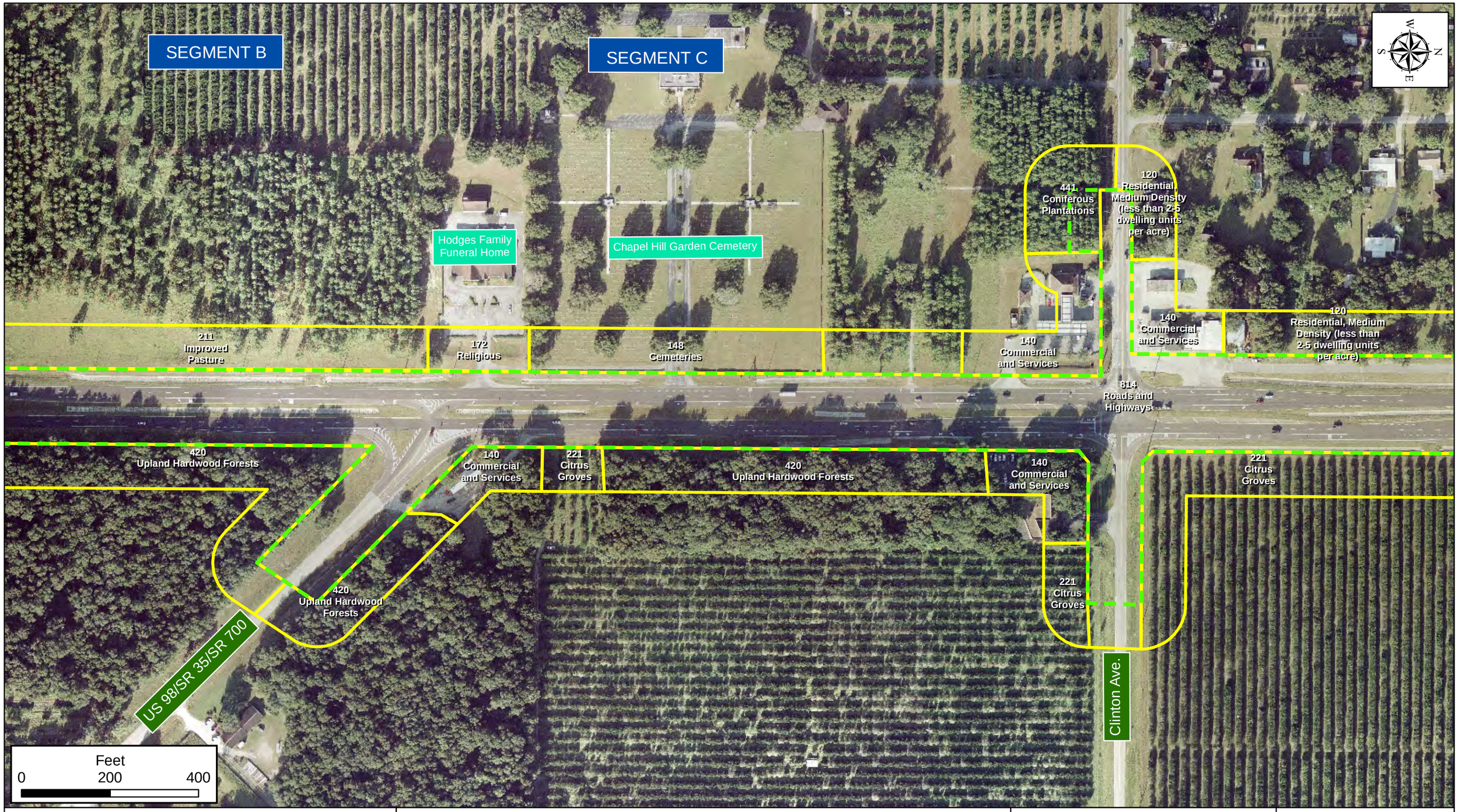


US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308

SEGMENT C

#70
PLACID
FINE SAND

120
Residential, Medium Density (less than 2-5 dwelling units per acre)

110
Residential,
Low Density (less
than two dwelling
units per acre)

618
Willow and
Elderberry

434
Hardwood-Conifer
Mixed

140
Commercial and
Services

814
Roads and
Highways

221
Citrus
Groves

140
Commercial and
Services

Southern Square

McDonald St.

Feet
0 200 400

STATE OF FLORIDA • DEPARTMENT OF TRANSPORTATION

US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

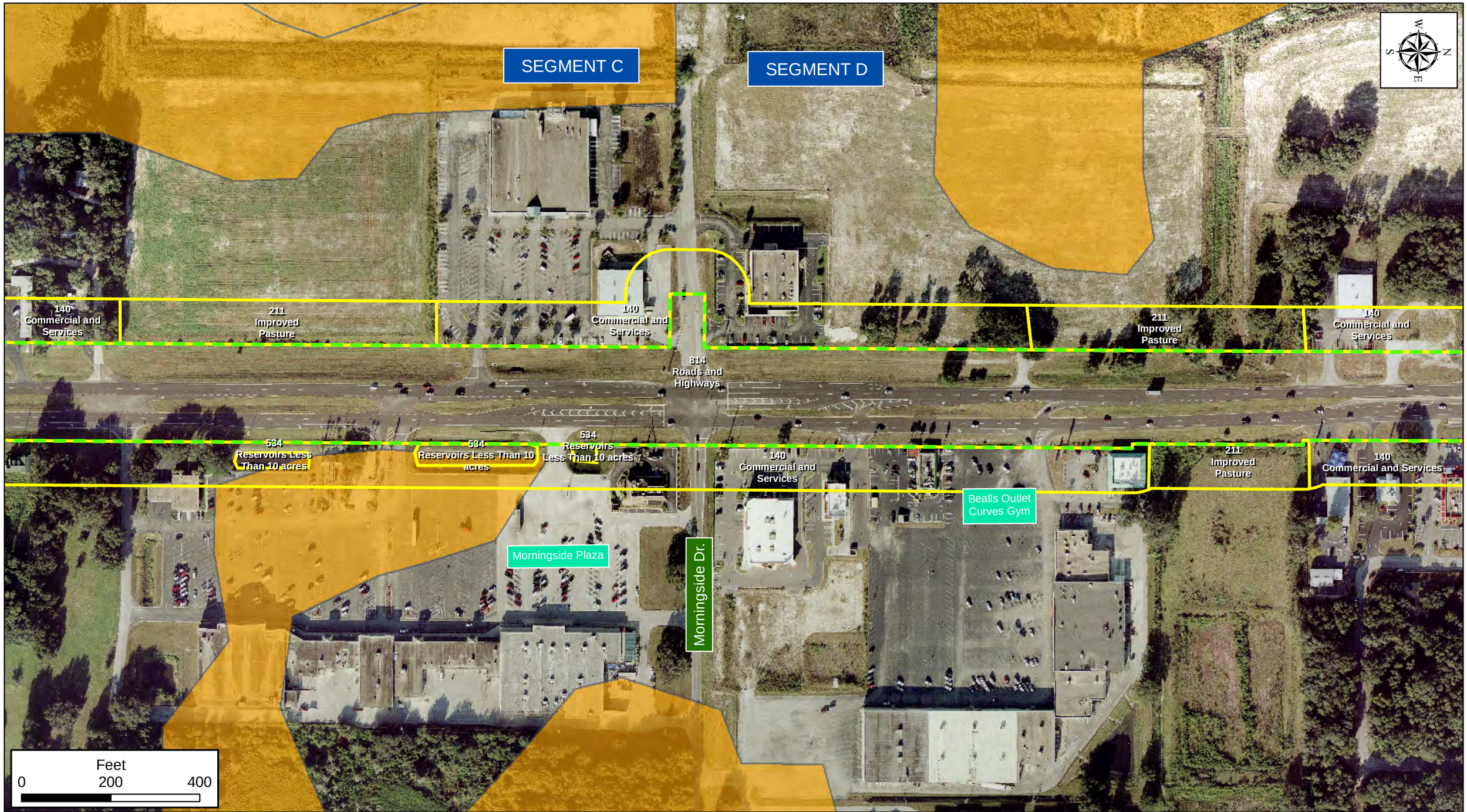
LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308



US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

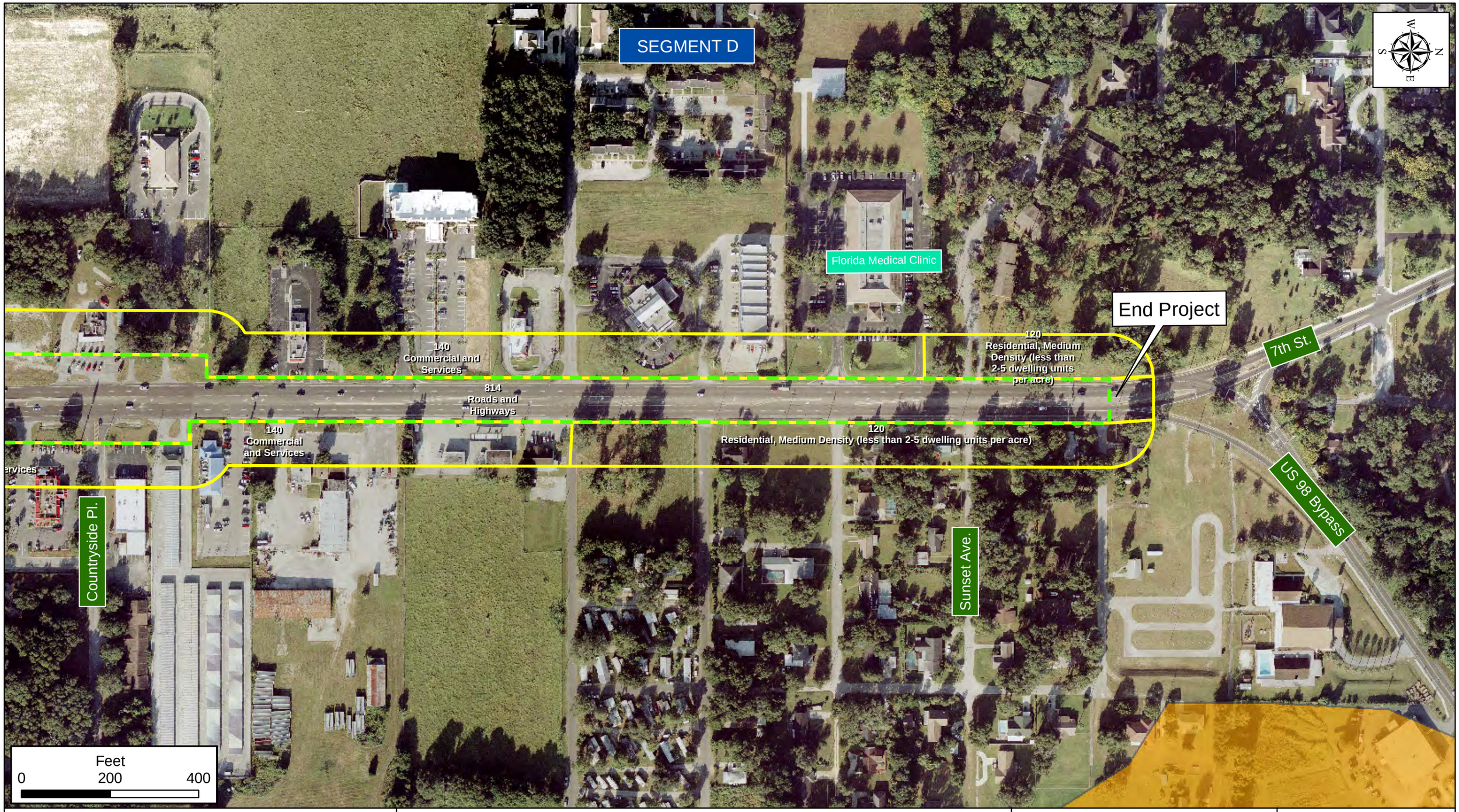
LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308



US 301 (SR 39)
PD&E Study
from South of CR 54
(Eiland Boulevard)
to US 98 Bypass (SR 533)

LAND USE/LAND COVER WITH HYDRIC SOILS

Legend

- Existing Right-of-Way (ROW)
- FLUCFCS Within 100' of ROW
- Hydric Soils

Sources: Florida Land Use and Forms Classification System (FLUCFCS), SWFWMD 2007 land use/land cover (updated by HDR), 2008 imagery from I.F. Rooks, and FGDL.

Source: map_a_p_lulc_mapbookrev2.mxd 10/1308

APPENDIX B

Conceptual Plans (Wetland Impact Sheets Segments B, C, and D Only**) of the Preliminary-Proposed Mainline Improvements for US 301 (SR 39)

**** There are no wetland impacts anticipated within Segment A nor within the portion of Segment C from south of US 98 to CR 52A (Clinton Avenue)**

SEGMENT B

618
ELDERBERRY/
WILLOW SCRUB/
SHRUB

618
ELDERBERRY/
WILLOW SCRUB/
SHRUB

MALTBY RD.

MATCHLINE STA. 579+00.00

MATCHLINE STA. 593+00.00

580 585 590

PC STA. 583+05

N

0 20 100
Feet

LEGEND

EOP	STREET ST.	STREET NAME	WETLAND
EXISTING R/W	PLACE	PLACE NAME	PAVEMENT REMOVAL
PROPOSED R/W		PROPERTY LINES	
CONC. SIDEWALK			

HDR Engineering, Inc.
5426 Bay Center Dr., Suite 400
Tampa, FL 33609-3444
CERTIFICATE OF AUTHORIZATION 4213

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39 (US 301)	PASCO	408075-1-22-01

ALTERNATIVE 1
HIGH SPEED URBAN
SEGMENT B

SHEET NO. 16

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SEGMENT B

618
ELDERBERRY/
WILLOW SCRUB/
SHRUB

N

MATCHLINE STA. 579+00.00

580

585

PC_SR_05

590

MATCHLINE STA. 593+00.00

MALTBY RD.

618
ELDERBERRY/
WILLOW SCRUB/
SHRUB

0 20 100
Feet

LEGEND

EOP	STREET ST.	STREET NAME	WETLAND
EXISTING R/W	PLACE	PLACE NAME	PAVEMENT REMOVAL
PROPOSED R/W		PROPERTY LINES	
CONC. SIDEWALK			

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Tampa, FL 33609-3444
CERTIFICATE OF AUTHORIZATION 4213

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39 (US 301)	PASCO	408075-1-22-01

RURAL ALTERNATIVE SEGMENT B

SHEET NO. 16

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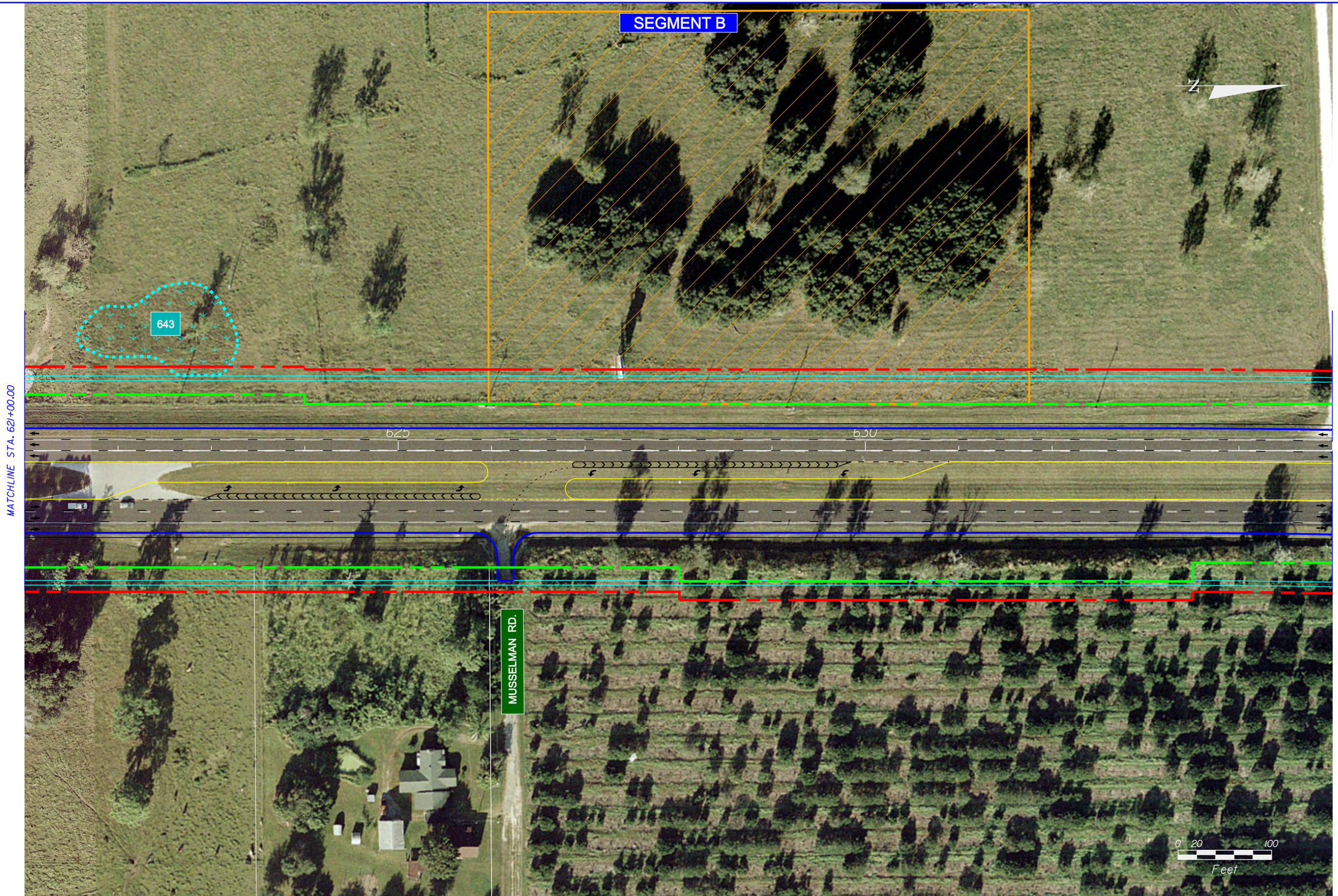

LEGEND

EOP	STREET ST.	STREET NAME	WETLAND
EXISTING R/W	PLACE	PLACE NAME	PAVEMENT REMOVAL
PROPOSED R/W		PROPERTY LINES	
CONC. SIDEWALK			

HDR Engineering, Inc.

HDR Engineering, Inc.
5426 Bay Center Dr., Suite 400
Tampa, FL 33609-3444
CERTIFICATE OF AUTHORIZATION 4213

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39 (US 301)	PASCO	408075-1-22-01

RURAL ALTERNATIVE SEGMENT B

SHEET NO. 19

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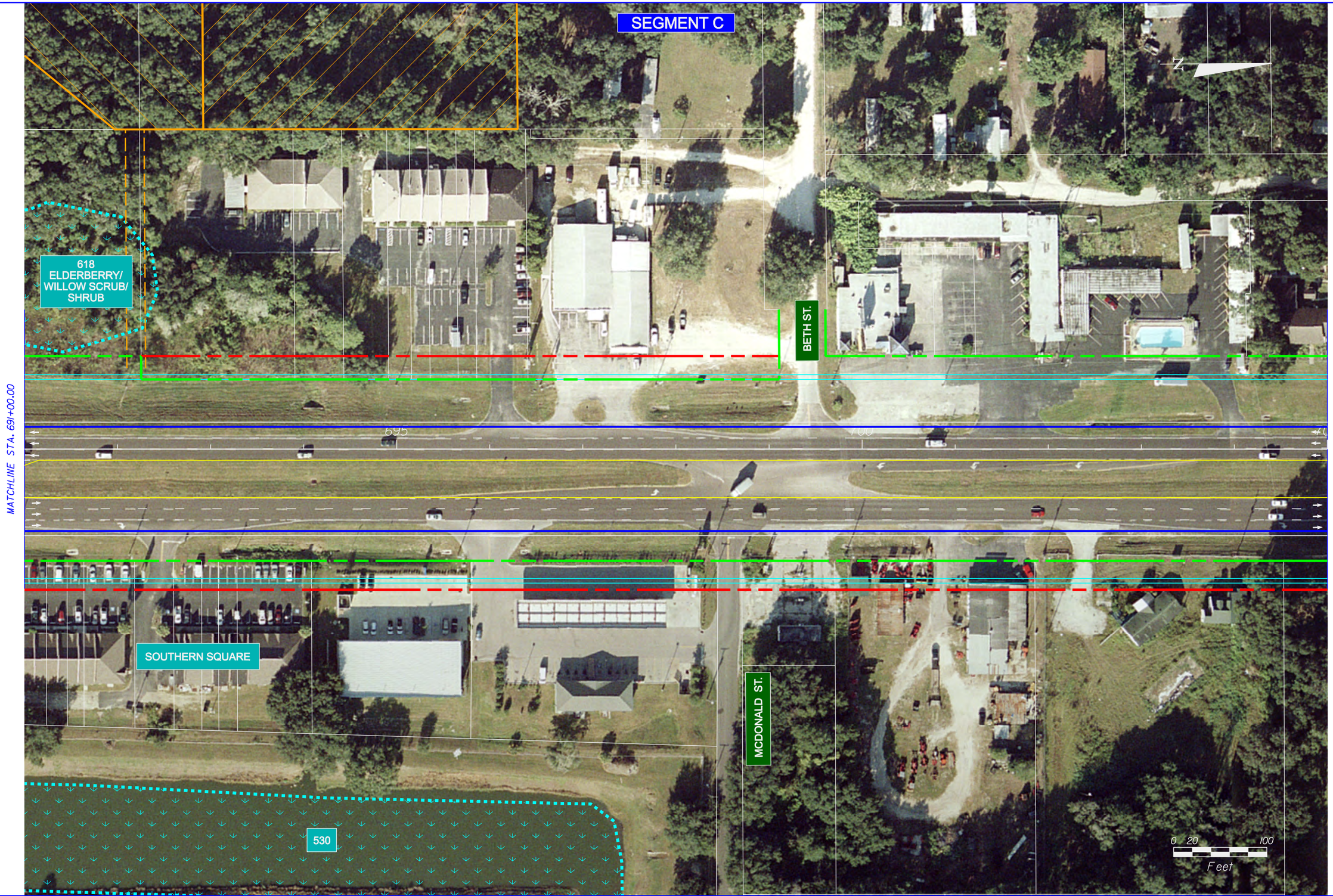

LEGEND

EOP	STREET ST.	STREET NAME
EXISTING R/W	PLACE	PLACE NAME
PROPOSED R/W		PROPERTY LINES
CONC. SIDEWALK		
WETLAND		
PAVEMENT REMOVAL		

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39	PASCO	408075-1-22-01

ALTERNATIVE 2
RURAL
SEGMENT C

SHEET NO. 24

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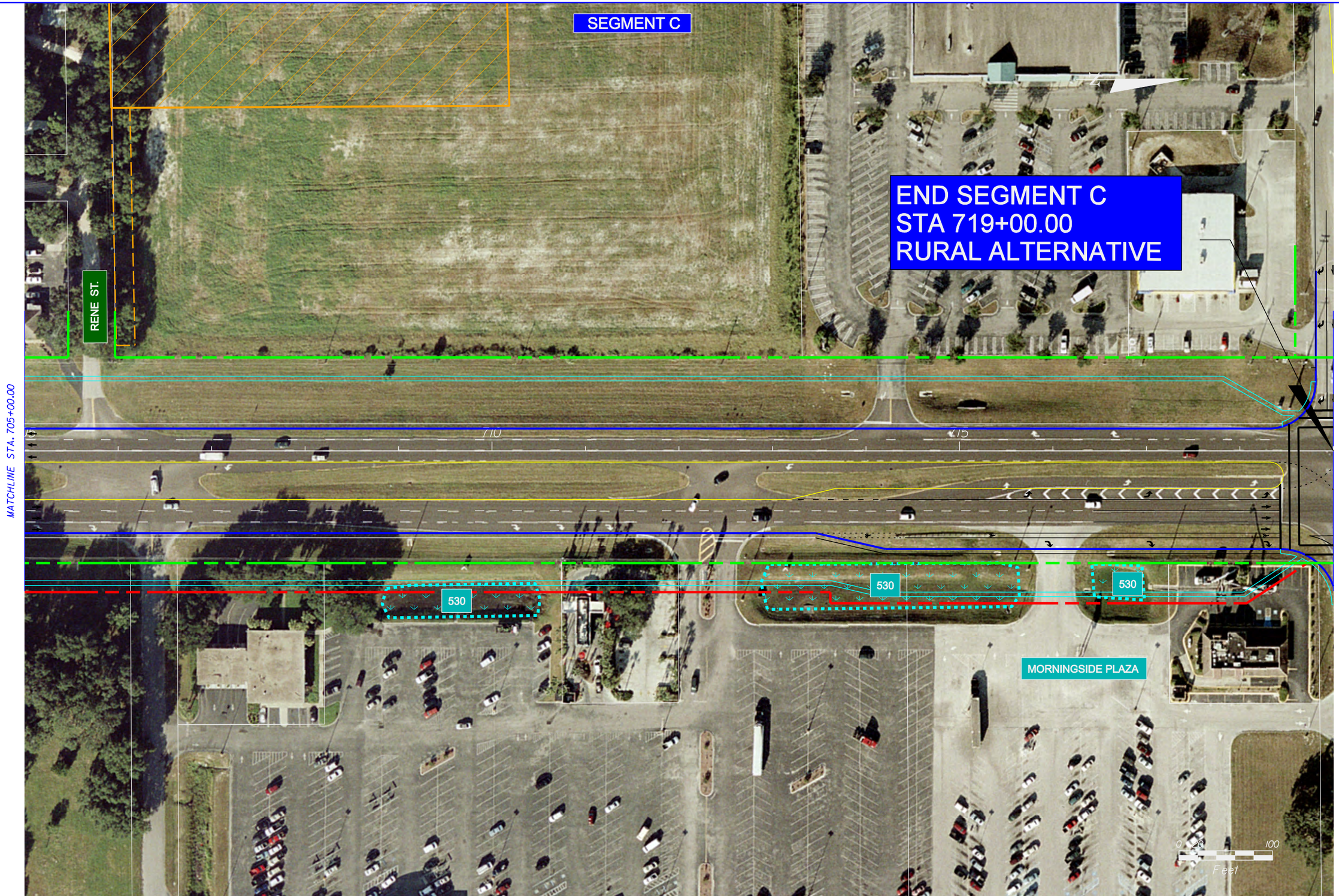

LEGEND

- EOP
- EXISTING R/W
- PROPOSED R/W
- CONC. SIDEWALK
- STREET ST. — STREET NAME
- PLACE — PLACE NAME
- PROPERTY LINES
- WETLAND
- PAVEMENT REMOVAL

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Tampa, FL 33609-3444
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39	PASCO	408075-1-22-01

ALTERNATIVE 2 RURAL SEGMENT C

SHEET NO. 25

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LEGEND

EOP	STREET ST.	STREET NAME
EXISTING R/W	PLACE	PLACE NAME
PROPOSED R/W		PROPERTY LINES
CONC. SIDEWALK		
WETLAND		
PAVEMENT REMOVAL		

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HDR Engineering, Inc.
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Tampa, FL 33609-3444
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39 (US 301)	PASCO	408075-1-22-01

HIGH SPEED URBAN & RURAL ALTERNATIVES SEGMENT B

SHEET NO. 29

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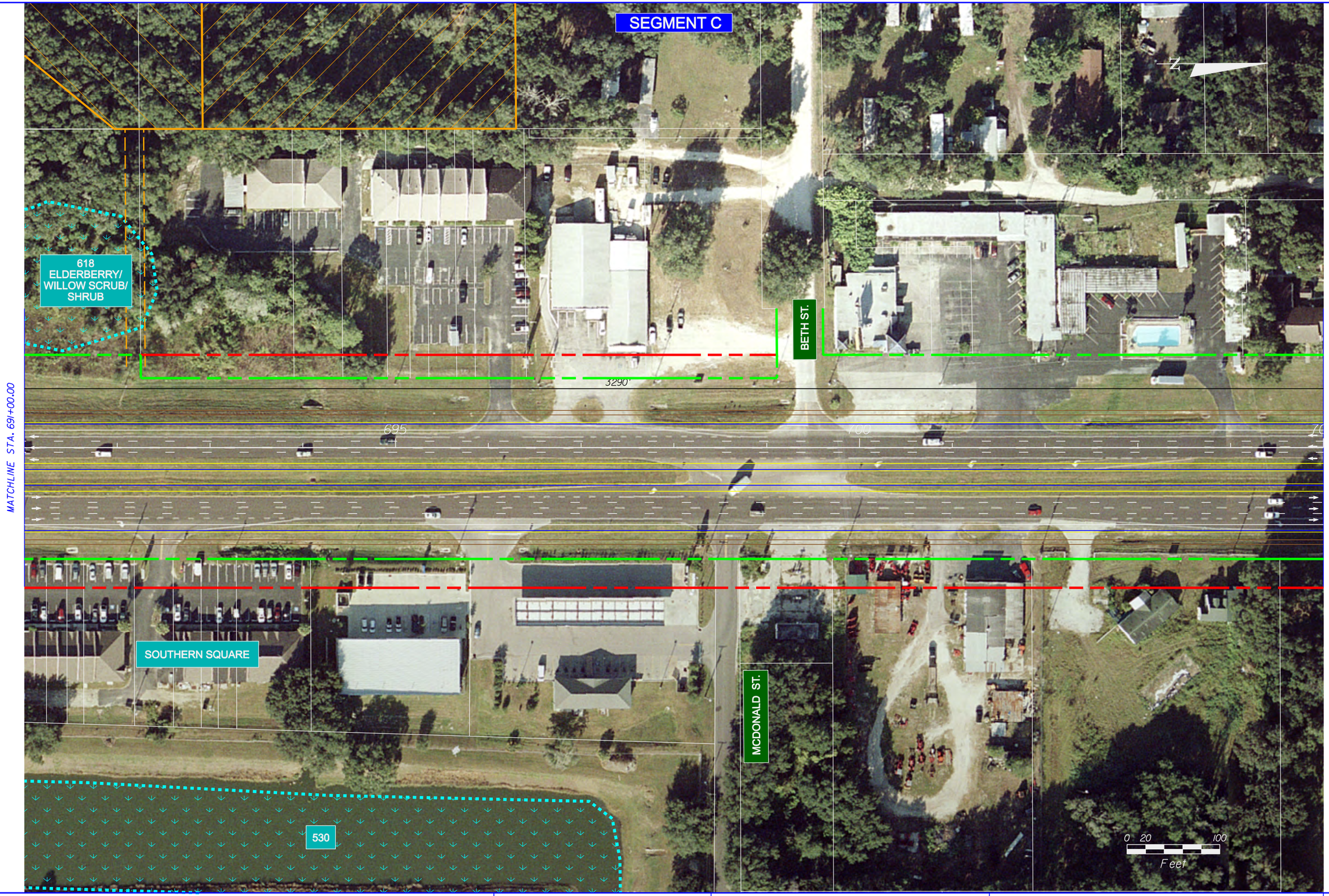

LEGEND

EOP	STREET ST.	STREET NAME	WETLAND
EXISTING R/W	PLACE	PLACE NAME	PAVEMENT REMOVAL
PROPOSED R/W		PROPERTY LINES	
CONC. SIDEWALK			

HDR Engineering, Inc.
HDR Engineering, Inc.
5426 Bay Center Dr., Suite 400
Tampa, FL 33609-3444
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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39 (US 301)	PASCO	408075-1-22-01

ALTERNATIVE 1
HIGH SPEED URBAN
SEGMENT C

FIGURE NO. 24

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SEGMENT C

RENE ST.

3290'

MATCHLINE STA. 705+00.00

MATCHLINE STA. 719+00.00

530

530

530

MORNINGSIDE PLAZA

0 20 100
Feet

LEGEND

EOP	STREET ST.	STREET NAME	WETLAND
EXISTING R/W	PLACE	PLACE NAME	PAVEMENT REMOVAL
PROPOSED R/W		PROPERTY LINES	
CONC. SIDEWALK			

HDR Engineering, Inc.
5426 Bay Center Dr., Suite 400
Tampa, FL 33609-3444
CERTIFICATE OF AUTHORIZATION 4213

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
39 (US 301)	PASCO	408075-1-22-01

ALTERNATIVE 1
HIGH SPEED URBAN
SEGMENT C

SHEET NO. 25

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APPENDIX C

Photo Documentation

Picture # 1: Looking East-Southeast in front of the Florida Eye Center. Located in Basin 100 of project.

Picture # 2: Looking East-Northeast in front of the Florida Eye Center. Located in Basin 100 of project.

Picture #3: Looking North off of Pretty Pond Road at construction site of Zephyr Commons. Located in Basin 200.

Picture #4: Looking Northeast off of Pretty Pond Road at site located behind Zephyr Commons. Located in Basin 200.

Picture #5: Looking East off of Pretty Pond Road at edge of Zephyr Commons construction site. Located in Basin 200. Potential Pond Site in background.

Picture #6: Looking East from U.S. 301 just north of Raven Road. Located in Basin 300. Potential pond site.

Picture #7: Looking Northeast from U.S. 301 just north of Raven Road.
Located in Basin 300.


Picture #8: Looking East-northeast off of U.S. 301 just north of Raven Road.
Located in Basin 300.

Picture #9: Looking East from U.S. 301 just north of Raven Road. Located in Basin 300.

Picture #10: Looking North-northwest at box culvert under U.S. 301 just north of Raven Road. Located in Basin 300.

Picture #11: Looking East from U.S. 301. Located in Basin 400.

Picture #12: Looking East-southeast from U.S. 301 (same parcel as shown in picture 11). Located in Basin 400. Potential Pond Site.

Picture #13: Looking East from U.S. 301 (same parcel as shown in pictures 11 &12). Located in Basin 400. Potential Pond Site.

Picture # 14: Looking North along U.S. 301 (Cross-street shown in background is Wire Road). Located in Basin 500.

Picture #15: Looking East from U.S. 301 in front of Mike's Welding.
Located in Basin 500.

Picture #16: Looking Southeast from Wire Road behind Mike's Welding.
Located in Basin 500.

Picture #17: Looking East-southeast along Wire Road. Located in Basin 500.


Picture #18: Looking Northeast across Wire Road. Located in Basin 500. Potential pond site.

Picture #19: Looking East across Wire Road. Located in Basin 500.

Picture #20: Looking Northeast from Wire Road. Located in Basin 500. Potential pond site.

Picture #21: Looking South along U.S. 301 from just south of Maltby Road.
Located in Basin 600.

Picture # 22: Looking North across Maltby Road with U.S. 301 on the left hand side.
Located in Basin 600.

Picture #23: Looking Northeast across Maltby Road. Located in Basin 600. Potential pond site.

Picture # 24: Looking East down Maltby Road from U.S. 301. Located in Basin 600.

Picture # 25: Looking Northeast from Maltby Road. Located in Basin 600.

Picture # 26: Looking East from U.S. 301 at parcel on corner of 301 and Maltby Road. Located in Basin 600.

Picture #27: Looking South-southeast from U.S. 301 just south of Townsend Road. Located in Basin 600.


Picture #28: Looking Southeast from intersection of Townsend Road and U.S. 301. (Same parcel as shown in picture 27) Located in Basin 600.

Picture #29: Looking East-southeast from intersection of U.S. 301 and Townsend Road. Located in Parcel 600.

Picture #30: Looking Northeast from U.S. 301 in front of Morningside Plaza. Located in Basin 1100.

Picture #31: Looking East from U.S. 301 along what is believed to be the Tank Lake Outlet. Located in Basin 1200.

Picture #32: Looking Northeast from U.S. 301 approximately half way between Countryside Place and Morningside Drive. Located in Basin 1200. Potential pond site.

Picture #33: Looking Southeast from U.S. 301 approximately half way between Countryside Place and Morningside Drive. Located in Basin 1200

Picture #34: Looking Southeast from pond located at U.S. 301 and U.S. 98 bypass. Located in Basin 1300.

Picture #35: Looking Southeast from pond located at U.S. 301 and U.S. 98 bypass. Located in Basin 1300.

Picture #36: Looking Southeast from pond located at U.S. 301 and U.S. 98 bypass. Located in Basin 1300.

Picture #37: Looking North along U.S. 301 just south of the bypass junction. Located in Basin 1300.

Picture #38: Looking North-northwest from U.S. 301 just south of the bypass junction. Located in Basin 1300. Potential pond site.

Picture #39: Looking Northwest from U.S. 301 just south of the Tank Lake Outlet. Located in Basin 1200.

Picture #40: Looking West from U.S. 301 (same parcel as shown in picture 40). Located in Basin 1200. Potential pond site.

Picture #41: Looking North-northwest from U.S. 301 across from Southern Square. Located in Basin 1000. Potential pond site.

Picture #42: Looking Northwest from U.S. 301 across from Southern Square. Located in Basin 1000. Potential pond site.

Picture #43: Looking West from U.S. 301 just north of WDCF Drive. Located in Basin 1000.


Picture #44: Looking Northwest from U.S. 301 about a ¼ of a mile North of Musselman Road. Located in Basin 800. Potential pond site.

Picture #45: Looking Southwest from U.S. 301 about a ¼ mile north of Musselman Road. Located in Basin 800. Potential pond site.

Picture #46: Looking Northwest from U.S. 301 just south of Musselman Road. Located in Basin 800. Potential pond site.

Picture # 47: Looking Southwest from U.S. 301 just south of Musselman Road. Located in Basin 800. Potential pond site.

Picture #48: Looking West-northwest from U.S. 301 just south of Townsend Road. Located in Basin 700.

Picture #49: Looking West from U.S. 301 across from Townsend Road. Located in Basin700.

Picture #50: Looking Southeast from the Chili's Parking lot across U.S. 301. Located in Basin 200.

Picture #51: Looking East across U.S. 301 at the Zephyr Commons construction site. Located in Basin 200.

Picture #52: Looking East-northeast across U.S. 301 at the Zephyr Commons Construction site. Located in Basin 200.

Picture #53: Looking Northeast across U.S. 301 at the Zephyr Commons Construction Site. Located in Basin 200.

Picture #54: Looking East from U.S. 301 at Zephyr Commons Construction site and beyond. Located in Basin 200.

Picture #55: Looking West from U.S. 301 Frontage Road just north of CVS on corner of C.R. 54 and U.S. 301. Located in Basin 100. Potential pond site.

Wetland 579E

Wetland 579E

Wetland 579E

Wetland 579E

Wetland 622W

Wetland 692W

Wetland 692W


Wetland 730W

Wetland 730W

APPENDIX D

UMAM Data Sheets

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 39 (US 301) from CR 54 to SR 533	Pre-Ap # 5124	W 579R ROW

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
631	PSSx	Impact	0.42

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
East Zephryhills Basin		

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

Assessment area description

Excavated scrub shrub wetland freshwater marsh, historically impounded on both sides of US 301 (bridged by US 301).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Functions	Mitigation for previous permit/other historic use
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Utilized by wading birds, alligators

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

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Betsy Davis, Senior Environmental Scientist	30-Mar-09

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 39 (US 301) from CR 54 to SR 533	Pre-Ap # 5124	W 579R ROW
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Betsy Davis, Senior Environmental Scientist	30-Mar-09

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 4	with: 0	Minimal level of support of wetland function-excavated and impounded features-bisected bu US 301 and bridged
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 6	with: 0	Water impounded and excavated so that area is sufficiently hydrated; soils are not hydric
1. Vegetation and/or 2. Benthic Community	w/o pres or current: 5	with: 0	Vegetation is 85% willow and elderberry; very dense and disturbed scrub shrub; very little wildlife function

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.50	0

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

For impact assessment areas
FL = delta x acres =
0.50 x 0.42 = 0.21

Delta = [with-current]
0.50

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 39 (US 301) from CR 54 to SR 533	Pre-Ap # 5124	W 579R ROW

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
631	PSSx	Impact	0.24

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
East Zephryhills Basin		

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

Assessment area description

Excavated scrub shrub wetland freshwater marsh, historically impounded on both sides of US 301 (bridged by US 301).

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Functions	Mitigation for previous permit/other historic use
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found)	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) Utilized by wading birds, alligators

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

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Betsy Davis, Senior Environmental Scientist	30-Mar-09

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 39 (US 301) from CR 54 to SR 533	Pre-Ap # 5124	W 579R ROW
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Betsy Davis, Senior Environmental Scientist	30-Mar-09

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 4	with: 0	Minimal level of support of wetland function-excavated and impounded features-bisected bu US 301 and bridged
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 6	with: 0	Water impounded and excavated so that area is sufficiently hydrated; soils are not hydric
1. Vegetation and/or 2. Benthic Community	w/o pres or current: 5	with: 0	Vegetation is 85% willow and elderberry; very dense and disturbed scrub shrub; very little wildlife function

Score = sum of above scores/30 (if uplands, divide by 20)	
current or w/o pres: 0.50	with: 0

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

For impact assessment areas
FL = delta x acres =
0.50 x 0.24 = 0.12

Delta = [with-current]
0.50

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

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

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 39 (US 301) from CR 54 to SR 533	Pre-Ap # 5124	W 622L ROW

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
643	PEM	Impact	0.01

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
East Zephryhills Basin		

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

Segment B, rural alt

Assessment area description

Segment B wet prairie; a very small isolated depression in a pasture

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)

Functions	Mitigation for previous permit/other historic use
Very small with little function as it is in a managed cow pasture; an ephemeral depression	

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

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

Additional relevant factors:

Assessment conducted by:	Assessment date(s):
Betsy Davis, Senior Environmental Scientist	30-Mar-09

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

Site/Project Name	Application Number	Assessment Area Name or Number
SR 39 (US 301) from CR 54 to SR 533	Pre-Ap # 5124	W 622L ROW
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Impact	Betsy Davis, Senior Environmental Scientist	30-Mar-09

Scoring Guidance	**Optimal (10)**	**Moderate(7)**	**Minimal (4)**	**Not Present (0)**
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

.500(6)(a) Location and Landscape Support	w/o pres or current: 3	with: 0	Minimal level of support of wetland function-very small wet depression in wet prairie pasture; isolated
.500(6)(b)Water Environment (n/a for uplands)	w/o pres or current: 3	with: 0	Isolated condition; no connection; no support
1. Vegetation and/or 2. Benthic Community	w/o pres or current: 3	with: 0	Prairie pasture; Bahiagrass monoculture

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0.30	0

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

For impact assessment areas
FL = delta x acres =
0.30 x 0.01 = 0.00

Delta = [with-current]
0.30

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

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

APPENDIX E

Agency Coordination

THIS SPACE IS FORMATTED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING AND PROVIDE NOTE TAKING SPACE. A SUPPLEMENTAL "PROMPT LIST" OF DISCUSSION ITEMS IS ATTACHED, WHICH SHOULD BE EXAMINED BY THE APPLICANT PARTIES PRIOR TO THE MEETING TO IDENTIFY TOPICS FOR DISCUSSION.

Southwest Florida Water Management District
Resource Regulation Division

ERP Pre-Application Meeting NOTES

FILE No.

Date: 3/12/09
Time: 9:30
Project Name: US 301 PD&E STUDY
Attendees: BRAD COMER ABBEY WILSON
MATT WEY
BETSY DAVIS

County: POLK
Total Land acreage:

S/T/R: 2 : 3/26/21
Project acreage:

Prior Onsite/Offsite Permit activity:

Project Overview: 7 MILES OF ROAD EXPANSION (4 LANE TO 6 LANE) FROM CR 54 TO SR 533

Site Information Discussion: (Site Topography, SHW Levels, Flood plain Elevations, Conveyance and Storage, Tailwater Conditions, Adjacent Offsite Contributing Sources, Receiving Waterbody, Karst Formations, Existing Wells, Contaminated Sites / Coordination w/ FDEP, etc.)

- REFER TO DISTRICT'S WATERSHED STUDY'S FOR DATA TO ESTABLISH 100 YEAR FLOOD STAGES & DISCHARGES.

Environmental Discussion: (Wetlands Onsite, Wetlands On Adjacent Properties, Site Visit, Delineation, Permanent/Temporary Impacts, SHWL, Wetland Hydrology, Drawdown Issues, Alternatives Analysis, Elimination/Reduction, Secondary and Cumulative Impacts, T&E species, Conservation Easements, Buffers, Mitigation Options, Mitigation Costs, OFW, Aquatic Preserve, etc.)

- YES - A COUPLE OF SMALL AREAS - NOT SURE OF ANY IMPACTS
- WILL PROBABLY USE DOT MIT. BILL

Sovereign Lands Discussion: (Title Determination, Delegated Authority, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP, etc.)

- NONE

Water Quantity Discussion: (Basin Description, Design Storm Event, Pre/Post Volume, Pre/Post Discharge, Local Requirements, Other) CLOSED & OPEN BASIN - CLOSED BASIN (POLK COUNTY BASIN OF SPECIAL CONCERN)

- DISTRICT REQUIREMENT: RETAIN INCREASE IN RUNOFF FROM 100YR/24HR STORM (CLOSED BASIN) ATTENUATE PEAK DISCHARGE RATE FROM 25YR/24HR STORM (OPEN BASIN)

Water Quality Discussion: (Type of Stormwater Treatment, Technical Characteristics, Non-presumptive Alternatives, Construction Phase Water Management and Erosion Control, Contaminated Sites, Ground Water Protection, etc.)

- MAY NEED TO COMPLY WITH NEW STORMWATER RULE (DEPENDING ON WHEN APPLICATION IS SUBMITTED AND WHEN RULE IS IMPLEMENTED.

Operation And Maintenance, Legal Information: (Ownership or Perpetual Control, Eminent Domain, Work on District Property, Inspections During Const., O&M Entity, System O&M Instructions, Homeowner Association Documents, Coastal Zone Requirements, Public Safety, etc.)

- NOT DISCUSSED

Application Type And Fee Required: (40D-4.041Permits Required, 40D-1.607 Fee Schedule, etc.)

- I/

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

-

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

The following person was present and authored these ERP Pre-Application Meeting NOTES on behalf of the SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT:

LM Monte Mitch

District Staff Representative — Name and Title

Signed — 3/10/09 — Date

HDR | ONE COMPANY *Many Solutions*℠

Meeting Notes

Subject: U.S 301 PD&E Pre-Application Meeting	
Client: FDOT	
Project: U.S 301 PD&E	Project No: 088721
Meeting Date: 3/10/09	Meeting Location: SWFWMD Brooksville Office
Notes by: Abbie Wilson	

Attendees:
Monte Ritter, P.E., SWFWMD
Len Bartos, SWFWMD
Matt Wey, P.E., HDR Engineering, Inc.
Brad Carver, P.E., HDR Engineering, Inc.
Betsy Davis, HDR Engineering, Inc.
Abbie Wilson, E.I., HDR Engineering, Inc.

Topics Discussed:

Project Description: Approximately 7 miles of Road Expansion (4 lanes to 6 lanes) from CR 54 to SR 533.

The new potential stormwater rule has been shelved for now but will most likely go into affect before this project is up for design. This rule will require us to meet the 2007 TMDL Calculations and compare pre-developed (before the original road was ever constructed) versus the post-developed conditions. The Harvey Harper Report should be used.

Tank Lake Basin is a Closed Drainage Basin of Special Concern west of the old railroad tracks per Pasco County. This is outside of our project limits.

The East Zephyrhills Basin is also a Closed Drainage Basin of Special Concern per Pasco County and will need to retain the volume difference of runoff for the 100-year/10-day storm event. Monte has a map that shows the East Zephyrhills Basin. We compared this basin with the Zephyrhills Airport Run and the Non-Contributing Areas Basins as shown in the "dbasins" GIS file obtained from the SWFWMD web site. The Zephyrhills Airport Run and the Non-Contributing Areas Basins are a part of the East Zephyrhills Basin. If we can totally retain the runoff without a dicscharge, Monte Ritter stated that SWFWMD will have no requirements for recovery time, but pointed out that the FDOT Critical Duration Rules (Ch. 14-86 F.A.C.) has a specific recovery requirement.

History of Flooding:

- Tank Lake has an old abandoned railroad track running through it on the west side of US 301. The area just to the west of the railroad tracks is known for flooding.
- Lake Dorothea is also known for flooding. It spills over onto the old Gores Dairy Property. SWFWMD has previously found a 2-foot error with a bench mark near Lake Dorothea.
- The 1998 monochrome aerial image shows the extent of flooding north of Cypress Commons and Tank Lake. This image can be found on the Pasco County Property Appraiser's webpage.

There are no Outstanding Florida Waters within our project limits.

There are no impaired waters within our project limits.

5426 Bay Center Drive
Suite 400
Tampa, FL 33609-3444

Phone (813) 282-2300
Fax (813) 282-2430
www.hdrinc.com

If we do a total reconstruction of the roadway for any segment we will need to treat the entire roadway based on current water quality treatment rules. The 2007 TMDL calculations might allow some areas to go untreated if it is shown that the pollutant loading is reduced for each basin.

Floodplain Compensation Sites will have to be independent. They are too large to piggy back onto a pond site.

There are very minor environmental impacts for the proposed expansion. Total impacts should be less than one acre. The FDOT might use the “Senate Bill” for mitigation if required.

The permit type and fee were not discussed because a permit will be pursued later during the design phase of the project.

APPENDIX F

Threatened and Endangered Species Records/Data

- **FNAI Tracking Data**
- **Applicable ETAT Reviews**

PASCO COUNTY

111 Total Elements Found

Last Updated: December 2008

Key

Scientific Name is linked to the FNAI Online Field Guides when available.

- links to **NatureServe Explorer**, an online encyclopedia of more than 55,000 plants, animals, and natural communities in North America, compiled by the **NatureServe** network of natural heritage programs, of which the Florida Natural Areas Inventory is a member.

- links to a species distribution map (**Adobe SVG viewer** required). If your browser does not support Adobe SVG, try this **link**

New Search

SEARCH RESULTS

NOTE: This is not a comprehensive list of all species and natural communities occurring in the location searche
Only element occurrences documented in the FNAI database are included.

Plants and Lichens

EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta Sta
Asplenium erosum	Auricled Spleenwort	G5	S2	N	LE
Blechnum occidentale	Sinkhole Fern	G5	S1	N	LE
Centrosema arenicola	Sand Butterfly Pea	G2Q	S2	N	LE
Glandularia tampensis	Tampa Vervain	G2	S2	N	LE
Gymnopogon chapmanianus	Chapman's Skeletongrass	G3	S3	N	N
Litsea aestivalis	Pondspice	G3	S2	N	LE
	Pygmy Pipes	G1Q	S1	N	LE

Monotropsis reynoldsiae						
Nemastylis floridana	Celestial Lily	G2	S2	N	LE	
Nolina brittoniana	Britton's Beargrass	G3	S3	LE	LE	
Ophioglossum palmatum	Hand Fern	G4	S2	N	LE	

Bivalves (Clams and Mussels)

EXPLANAT

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Utterbackia peninsularis	Peninsular Floater	G3	S2	N	N

Spiders

EXPLANAT

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Phidippus workmani	Workman's Jumping Spider	G2	S2	N	N
Sphodros abboti	Blue Purse-web Spider	GNR	S4	N	N

Amphipods

EXPLANAT

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Crangonyx grandimanus	Florida Cave Amphipod	G2G3	S2S3	N	N
Crangonyx hobbsi	Hobbs' Cave Amphipod	G2G3	S2S3	N	N

Decapods (Crabs, Crayfishes, Shrimp)

EXPLANAT

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Procambarus leitheuseri	Coastal Lowland Cave Crayfish	G1G2	S1S2	N	N

Beetles

EXPLANAT

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Aphodius aegrotus	Small Pocket Gopher Aphodius Beetle	GNR	S3?	N	N

Aphodius laevigatus		Large Pocket Gopher Aphodius Beetle	G3?	S3?	N	N
Bolbocerosoma hamatum		Bicolored Burrowing Scarab Beetle	GNR	S3S4	N	N
Desmopachria cenchramis		Fig Seed Diving Beetle	G1	S1	N	N
Hypotrichia spissipes		Florida Hypotrichia Scarab Beetle	G3G4	S3S4	N	N
Onthophagus aciculatulus		Sandyland Onthophagus Beetle	G1G2	S1S2	N	N
Peltotrupes profundus		Florida Deepdigger Scarab Beetle	G3	S3	N	N
Phyllophaga elongata		Elongate June Beetle	G2G4	S2S4	N	N
Selonodon mandibularis		Large-Jawed Cebrionid Beetle	G2G3	S2S3	N	N
Typocerus fulvocinctus		Yellow-banded Typocerus Long-horned Beetle	G1G2	S1S2	N	N

Caddisflies

EXPLANAT

Scientific Name		Common Name	Global Rank	State Rank	Federal Status	Sta
Cernotina truncona		Florida Cernotinan Caddisfly	G4	S2	N	N
Oxyethira janella		Little-entrance Oxyethiran Microcaddisfly	G5	S3S4	N	N
Oxyethira pescadori		Pescador's Bottle-Cased Caddisfly	G1G3	S2	N	N

Butterflies and Moths

EXPLANAT

Scientific Name		Common Name	Global Rank	State Rank	Federal Status	Sta
Atrytone arogos		Arogos Skipper	G3	S2	N	N
Atrytonopsis loammi		Loammi Skipper	G1	S1	N	N
Euphyes dukesi calhouni		Calhoun's Skipper	G3T2T3	S1	N	N
Megathymus cofaqui		Cofaqui Skipper	G3G4	S2S4	N	N
Ministrymon azia		Gray Ministreak	G5	S2S3	N	N
Pholisora catullus		Common Sootywing	G5	S2	N	N

Fish

EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Enneacanthus chaetodon	Blackbanded Sunfish	G4	S3	N	N

Amphibians

EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Notophthalmus perstriatus	Striped Newt	G2G3	S2S3	N	N
Rana capito	Gopher Frog	G3	S3	N	LS

Reptiles

EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Alligator mississippiensis	American Alligator	G5	S4	SAT	LS
Caretta caretta	Loggerhead	G3	S3	LT	LT
Chelonia mydas	Green Turtle	G3	S2	LE	LE
Crotalus adamanteus	Eastern Diamondback Rattlesnake	G4	S3	N	N
Dermochelys coriacea	Leatherback	G2	S2	LE	LE
Drymarchon couperi	Eastern Indigo Snake	G3	S3	LT	LT
Gopherus polyphemus	Gopher Tortoise	G3	S3	N	LT
Lampropeltis getula	Common Kingsnake	G5	S2S3	N	N
Lepidochelys kempii	Kemp's Ridley	G1	S1	LE	LE
Pituophis melanoleucus mugitus	Florida Pine Snake	G4T3	S3	N	LS
Pseudemys concinna suwanniensis	Suwannee Cooter	G5T3	S3	N	LS
Stilosoma extenuatum	Short-tailed Snake	G3	S3	N	LT

Birds

EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Accipiter cooperii	Cooper's Hawk	G5	S3	N	N
Aimophila aestivalis	Bachman's Sparrow	G3	S3	N	N
Ammodramus maritimus peninsulae	Scott's Seaside Sparrow	G4T3Q	S3	N	LS
Aphelocoma coerulescens	Florida Scrub-jay	G2	S2	LT	LT
Aramus guarauna	Limpkin	G5	S3	N	LS
Ardea alba	Great Egret	G5	S4	N	N
Athene cunicularia floridana	Florida Burrowing Owl	G4T3	S3	N	LS
Buteo brachyurus	Short-tailed Hawk	G4G5	S1	N	N
Charadrius melodus	Piping Plover	G3	S2	LT	LT
Cistothorus palustris marianae	Marian's Marsh Wren	G5T3	S3	N	LS
Dendroica discolor paludicola	Florida Prairie Warbler	G5T3	S3	N	N
Egretta caerulea	Little Blue Heron	G5	S4	N	LS
Egretta thula	Snowy Egret	G5	S3	N	LS
Egretta tricolor	Tricolored Heron	G5	S4	N	LS
Elanoides forficatus	Swallow-tailed Kite	G5	S2	N	N
Eudocimus albus	White Ibis	G5	S4	N	LS
Falco columbarius	Merlin	G5	S2	N	N
Falco peregrinus	Peregrine Falcon	G4	S2	N	LE
Falco sparverius paulus	Southeastern American Kestrel	G5T4	S3	N	LT
Fregata magnificens	Magnificent Frigatebird	G5	S1	N	N
Grus canadensis pratensis	Florida Sandhill Crane	G5T2T3	S2S3	N	LT
	American Oystercatcher	G5	S2	N	LS

Haematopus palliatus					
Haliaeetus leucocephalus	Bald Eagle	G5	S3	N	N
Ixobrychus exilis	Least Bittern	G5	S4	N	N
Laterallus jamaicensis	Black Rail	G4	S2	N	N
Mycteria americana	Wood Stork	G4	S2	LE	LE
Nyctanassa violacea	Yellow-crowned Night-heron	G5	S3	N	N
Nycticorax nycticorax	Black-crowned Night-heron	G5	S3	N	N
Pandion haliaetus	Osprey	G5	S3S4	N	LS
Pelecanus occidentalis	Brown Pelican	G4	S3	N	LS
Picoides villosus	Hairy Woodpecker	G5	S3	N	N
Platalea ajaja	Roseate Spoonbill	G5	S2	N	LS
Plegadis falcinellus	Glossy Ibis	G5	S3	N	N
Rallus longirostris scottii	Florida Clapper Rail	G5T3?	S3?	N	N
Rynchops niger	Black Skimmer	G5	S3	N	LS
Sterna antillarum	Least Tern	G4	S3	N	LT
Sterna maxima	Royal Tern	G5	S3	N	N

Mammals

EXPLANAT

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Corynorhinus rafinesquii	Rafinesque's Big-eared Bat	G3G4	S2	N	N
Mustela frenata peninsulae	Florida Long-tailed Weasel	G5T3	S3	N	N
Neofiber alleni	Round-tailed Muskrat	G3	S3	N	N
Neovison vison halilimnetes	Gulf Salt Marsh Mink	G5T3	S3	N	N
Podomys floridanus	Florida Mouse	G3	S3	N	LS

Sciurus niger shermani	Sherman's Fox Squirrel	G5T3	S3	N	LS
Trichechus manatus	Manatee	G2	S2	LE	LE
Ursus americanus floridanus	Florida Black Bear	G5T2	S2	N	LT*

Natural Communities

DESCRIPTION EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Aquatic cave		G3	S3	N	N
Beach dune		G3	S2	N	N
Coastal interdunal swale		G3	S2	N	N
Estuarine composite substrate		G3	S3	N	N
Estuarine tidal marsh		G5	S4	N	N
Estuarine unconsolidated substrate		G5	S5	N	N
Floodplain swamp		G4	S4	N	N
Marine composite substrate		G3	S3	N	N
Marine consolidated substrate		G3	S3	N	N
Marine mollusk reef		G3	S3	N	N
Marine tidal marsh		G5	S4	N	N
Marine tidal swamp		G5	S4	N	N
Maritime hammock		G3	S2	N	N
Mesic flatwoods		G4	S4	N	N
Scrub		G2	S2	N	N

Other Elements

EXPLANAT:

Scientific Name	Common Name	Global Rank	State Rank	Federal Status	Sta
Bird Rookery		GNR	SNR	N	N

Florida's Conservation Lands

Pasco County 32 found

Conservation Land	Owner	County	Size (acres)	More Info	Zoom to Map
Al Bar Ranch	Pinellas County	Pasco	4092	More Info	Zoom to Map
Anclote Gulf Park	Pasco County	Pasco	22.96	More Info	Zoom to Map
Anclote Key Preserve State Park	Trustees of the Internal Improvement Trust Fund	Pasco, Pinellas	12177.1	More Info	Zoom to Map
Conner Preserve	Southwest Florida Water Management District	Pasco	2981	More Info	Zoom to Map
Crews Lake Wilderness Park	Pasco County	Pasco	140	More Info	Zoom to Map
Cross Bar Ranch Wellfield	Pinellas County	Pasco	7931	More Info	Zoom to Map
Cypress Creek Conservation Easement	Private Individual(s)	Pasco	789	More Info	Zoom to Map
Cypress Creek Flood Detention Area	Southwest Florida Water Management District	Pasco	7393	More Info	Zoom to Map
Eagle Point Park	Pasco County	Pasco	678.03	More Info	Zoom to Map
Green Swamp	Southwest Florida Water Management District	Lake, Pasco, Polk, Sumter	110575	More Info	Zoom to Map
Hidden Lake Project	Southwest Florida Water Management District	Pasco	588.91	More Info	Zoom to Map
Hillsborough River Corridor	Southwest Florida Water Management District	Pasco	356	More Info	Zoom to Map
James E. Grey Preserve	City of New Port Richey	Pasco	89.9	More Info	Zoom to Map
				..	Zoom

Key Vista Nature Park	Pasco County	Pasco	103.31	More Info	Zoom to Map
Lake Dan Preserve	Hillsborough County	Hillsborough, Pasco, Pinellas	1077	More Info	Zoom to Map
Little Gator Creek Wildlife and Environmental Area	Trustees of the Internal Improvement Trust Fund	Pasco	566	More Info	Zoom to Map
Myron Gibbons Sanctuary		Pasco			
Pasco I Conservation Easement	Private Individual(s)	Pasco	507	More Info	Zoom to Map
Percy Wilson Sanctuary	Florida Audubon Society, Inc.	Pasco	36.9	More Info	Zoom to Map
Pinellas County Aquatic Preserve		Hillsborough, Pasco, Pinellas			
Robert Crown Wilderness Area	Trustees of the Internal Improvement Trust Fund	Pasco	347.13	More Info	Zoom to Map
Robert K. Rees Memorial Park	Pasco County	Pasco	45	More Info	Zoom to Map
Starkey Wilderness Park	Southwest Florida Water Management District	Pasco	19485	More Info	Zoom to Map
SWFWMD Green Swamp Conservation Easements	Private Individual(s)	Lake, Pasco, Polk	8049.75	More Info	Zoom to Map
Upper Hillsborough	Southwest Florida Water Management District	Hillsborough, Pasco, Polk	17991	More Info	Zoom to Map
Upper Pithlachascotee River Preserve	Pasco County	Pasco	120	More Info	Zoom to Map
Weekiwachee Preserve	Southwest Florida Water Management District	Hernando, Pasco	11044	More Info	Zoom to Map
Werner-Boyce Salt Springs State Park	Trustees of the Internal Improvement Trust Fund	Pasco	3999.32	More Info	Zoom to Map
Westport Sanctuary		Pasco			
Withlacoochee River Park	Pasco County	Pasco	606	More Info	Zoom to Map
Withlacoochee State Forest	Trustees of the Internal Improvement Trust Fund	Citrus, Hernando, Pasco, Sumter	159542.19	More Info	Zoom to Map
Withlacoochee State Trail	Trustees of the Internal Improvement Trust Fund	Citrus, Hernando, Pasco	759.73	More Info	Zoom to Map

The FDOT did not receive any comments from the Federal Highway Administration (FHWA), the Florida Department of Environmental Protection (FDEP), and the US Environmental Protection Agency (USEPA) regarding Floodplains.

ETAT Reviews for Floodplains

3 **Southwest Florida Water Management District (6/16/2006)**
Floodplains Effect: Moderate

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
Within 500 feet of the project, areas designated as Special Flood Hazard Zone AH total 71.91 acres and are concentrated in two areas: (1) at Tank Lake inlet located at 0.55 mile south of the north terminus; (2) at a wetland area located 0.85 mile south of the north terminus; and (3) at a wetland area located 1.3 mile from north terminus.

The Tank Lake inlet is a ditch that conveys flow through a 6.0 box culvert from wetlands on the east side of US 301 to Tank Lake on the west side of US 301. The ditch is choked with Carolina willow and some herbaceous vegetation.

The wetland area south of the Tank Lake inlet is a degraded remnant area that formerly was connected to other wetlands to the east by means of an artificial channel. The wetland area has been significantly altered.

The third Zone AH area is a shrub wetland area that occupies the west side of the roadway and is associated with a small pond that receives water by means of a swale parallel to the roadway on the west side. Water flows into this pond/wetland system from the east under US 301 by means of a 36 culvert that connects to a deep swale that conveys flow to the west from a large, U-shaped retention pond that serves a large RV park and environs; an underground pipe connects the retention pond to the swale.

A curb and gutter system is in place at the north terminus for a length of about 0.35 miles; at other segments of the project, surface water management is provided by grassy swales.

There are significant areas of relief located throughout the alignment that will most likely have additional floodplains or natural storage areas that are not identified by FEMA. Both open and closed basin conditions may be encountered. These areas will need to be evaluated under appropriate methodologies to ensure there is not loss of historic storage or impacts to offsite properties due to the proposed improvements.

Comments on Effects to Resources:
The construction of the new travel lanes and the surface water management systems serving the project will result in encroachment into the 100-year floodplain, chiefly at the Tank Lake inlet and at the two wetland areas south of the Tank Lake inlet. Within the 100 500 buffer areas, the total potential impact is almost 72 acres. In the larger buffer areas (>0.25 mile), the project intercepts more floodplain associated with the Tank Lake system to the west and the Duck Lake system to the east. The floodplains in the area provide for storage and conveyance of runoff that originates both onsite and offsite; therefore, any modification of the existing system may have an impact upstream or downstream.

Additional Comments (optional):
The degree of effect is considered Moderate, assuming that: (1) the new traffic lanes and paved bicycle trail will be constructed immediately adjacent to the existing lanes, (2) stormwater treatment ponds will not be constructed in floodplain areas, and (3) project segments and cross sections in floodplain areas will be minimized.

If the new lanes were constructed in the median of the existing facility, the Degree of Effect could be reduced. Compensation for lost floodplain storage must be provided. Equivalent replacement for any

subsequent loss of historic basin storage should be considered.

An Environmental Resource Permit will be required for this project. However, the final determination of the type of permit will depend upon the final design configuration. If wetland impacts exceed threshold limits, requiring an individual ERP permit, the FDOT may want to consider applying for an Incidental Site Activities Permit (F.A.C. 40D.302 (6)), particularly if the project is a design-build or fast-tracked project.

The project is located in three drainage basins; from north to south, they are: Tank Lake drainage basin, a non-contributing area basin ID 3151, and Zephyrhills Airport Run basin. It is strongly recommended that FDOT contact the District to obtain a copy of the Duck Lake Watershed Management Plan completed in 2005 to obtain all of the updated topographic and hydrologic/hydraulic information that has been produced on the Tank Lake drainage basins.

Portions of this project are located within Pasco Countys Basin of Special Concern known as East Zephyrhills. The Ordinance regulating this basin was adopted on 12 July 2005.

Provision must be made to replace or otherwise mitigate the loss of historic basin storage now provided by the project site.

The SWFWMD will require flood plain compensation for fill placed in the freshwater flood plain up to the 100-year event. No net encroachment into the flood plain, up to that encompassed by the 100-year event, which will adversely affect either conveyance, storage, or adjacent lands will be allowed. It should be noted that there exists the potential for there to be other portions of the project that may be located within flood plains not identified on any FEMA flood plain map. Any compensating storage for encroachment above the seasonal high water level (SHWL) shall be equivalently provided between the SHWL and the 100-year flood level to allow storage function during all lesser flood events. Compensating storage for encroachment below SHWL shall also be equivalently provided.

The SWFWMD recommends that the FDOT quantify and verify flood plain and floodway impacts resulting from the project based on existing or special basin hydrologic studies as needed. The FDOT may want to consider refining a flood plain or floodway designation by submitting one of the following documents to FEMA or the local flood plain manager: No Rise Certification, Physical Map revision, Letter of Map Revision, Conditional Letter of Map Revision, Conditional Letter of Map Revision Based on Fill, or Letter of Map Amendment may be necessary.

There are approximately 22 cross drains located along this alignment connecting many adjacent and offsite low areas. These cross drains range in size from 15 circular pipe to an 8 x 4 box culvert. Each cross drain should be reviewed based on the required modifications to ensure that the overall project will not adversely impact offsite areas and historic drainage patterns.
Recreation Areas
Degree of Effect: None Minimal X Moderate Substantial
Enhanced N/A No Involvement Potential Dispute
Identify Resources and level of importance:
The EST reports no recreational facilities within 500 feet of the project; however, Hibiscus Park, a passive enjoyment facility maintained by local garden clubs, is located immediately north of the north terminus. It is not a heavily used park with the exception of several special events held in Dade City during the year. There are no water resources-based recreational opportunities within 500 feet of the project.
Comment on effects to resources:
The project will impact the Hibiscus Park during construction as a result of noise and dust. As the Park is used for passive enjoyment, its value will be significantly diminished during the project construction phase. The degree of impact is judged Moderate but could be minimal, depending on the timing of the construction in the north segment of the project.
Additional Comments:
The degree of impact is judged Moderate due to the limited, but definite, impact on a passive use facility. Impact is related to the disturbance of the area just south of the park during project construction.

Impact can be reduced by timing construction so as to avoid periods of greatest use of the park during special events.

To meet permit criteria, a project must be not contrary to the public interest. Chapter 3.2.3 of the SWFWMD Basis of Review describes the items to be reviewed when determining what is and is not contrary to public

interest, and 3.2.3 specifically details impact to the conservation of fish and wildlife habitat, including endangered or threatened species, or their habitats, as well as impacts to public recreation. Such impacts could potentially be deemed contrary to the public interest.

Project design should be directed towards eliminating and reducing impacts to recreational facilities. FDOT must provide reasonable assurance that the surface water management system serving the project will not be contrary to the public interest in terms of its effects on fishing or recreational values.

Coordinator Feedback: None

- No review submitted from the FL Department of Environmental Protection
- No review submitted from the Federal Highway Administration
- No review submitted from the US Environmental Protection Agency

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Natural - Infrastructure

Coordinator Summary

N/A **Summary Degree of Effect**
Infrastructure Effect: N/A / No Involvement

Reviewed By:
FDOT District 7 (11/14/2006)

Comments:
The Florida Department of Transportation (FDOT) concurs with the comments from Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of N/A / No Involvement. A review of the GIS analysis indicated one tower located within the 500-ft project buffer area. The Florida Geographic Data Library does not identify any other infrastructure facilities in this corridor; the FDOT, however, will research any other facilities (i.e. utilities) that might be considered infrastructure in project development. The FDOT will take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources.

The FDOT did not receive any comments from the Federal Highway Administration (FHWA).

ETAT Reviews for Infrastructure

N/A **Southwest Florida Water Management District (6/16/2006)**
Infrastructure Effect: N/A / No Involvement

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
None found.

Comments on Effects to Resources:
None found.

Coordinator Feedback: None

- No review submitted from the Federal Highway Administration

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Natural - Navigation

Coordinator Summary

N/A **Summary Degree of Effect**
Navigation Effect: N/A / No Involvement

Reviewed By:
FDOT District 7 (11/14/2006)

Comments:
The Florida Department of Transportation (FDOT) concurs with the Southwest Florida Water Management District (SWFWMD) and the US Army Corps of Engineers (USACE) and recommends a Degree of Effect of N/A / No Involvement for Navigation. Based on recent GIS survey results, there are no navigational waterways, crossings, or structures within the proposed project area. The FDOT did not receive any comments from the Federal Highway Administration or the US Coast Guard.

ETAT Reviews for Navigation

N/A **US Army Corps of Engineers (6/12/2006)**
Navigation Effect: N/A / No Involvement

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
No navigable waterways, based on available information.

Comments on Effects to Resources:
N/A

Coordinator Feedback: None

N/A **Southwest Florida Water Management District (6/16/2006)**
Navigation Effect: N/A / No Involvement

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
None found.

Comments on Effects to Resources:
None found.

Coordinator Feedback: None

- No review submitted from the Federal Highway Administration
- No review submitted from the US Coast Guard

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Natural - Special Designations

Coordinator Summary

2 **Summary Degree of Effect**
Special Designations Effect: Minimal

Reviewed By:
FDOT District 7 (11/14/2006)

Comments:
The Florida Department of Transportation (FDOT) concurs with the comments from the Southwest Florida Water Management District (SWFWMD) and recommends a Degree of Effect of Minimal. As discussed in the Floodplains Degree of Effect, the project is located within the Special Flood Hazard Area and Pasco Countys Basin of Special Concern. The methods that FDOT will employ for floodplain avoidance, compensation, and mitigation are outlined in the Floodplain Degree of Effect. The FDOT will take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources.

The FDOT did not receive any comments from the Florida Department of Environmental Protection, the Federal Highway Administration, and the US Environmental Protection Agency.

ETAT Reviews for Special Designations

2 **Southwest Florida Water Management District (6/16/2006)**
Special Designations Effect: Minimal

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
There are no resources within 500 feet of the project that have any special designation such as Outstanding Florida Waters (OFW), Wild and Scenic, Sole source Aquifers, etc.

Portions of this project are located within Pasco Countys Basin of Special Concern known as East Zephyrhills. The Ordinance regulating this basin was adopted on 12 July 2005.

Comments on Effects to Resources:
The Countys designation as a Basin of Special Concern may require additional design consideration.

Additional Comments (optional):
None.

Coordinator Feedback: None

- No review submitted from the FL Department of Environmental Protection
- No review submitted from the Federal Highway Administration
- No review submitted from the US Environmental Protection Agency

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Natural - Water Quality and Quantity

Coordinator Summary

3 **Summary Degree of Effect**
Water Quality and Quantity Effect: Moderate

Reviewed By:
FDOT District 7 (11/14/2006)

Comments:
The Florida Department of Transportation (FDOT) acknowledges the comments from Southwest Florida Water Management District, but recommends a Degree of Effect of Moderate.

The proposed project transverses three watersheds and include 1.88 miles in the Tank Lake Outlet (WBID 1403), 4.23 miles into the Noncontributing Area watershed (WBID 1424), and 0.97 miles into the Zephyrhills Airport Run watershed (WBID 1448). Surface water features within 500 ft of the project include: Tank Lake, Tank Lake Channel, and a 2.4 acre U-shaped stormwater pond connected to a pond/wetland system adjacent to an RV park east of US 301. There are approximately twenty-two cross drains located along the alignment connecting many adjacent and offsite low areas. There are three impaired waterbodies located within five miles of the proposed project including New River (WBID 1442), Hillsborough River (WBID1443), and Withlacoochee River (WBID 1329), are all listed as Impaired Waters under the Impaired Waters Rule, Chapter 62-303, FAC. The constructed project will reduce stormwater runoff via stormwater treatment facilities and BMPs. In accordance with Chapters 3 and 5 of the Environmental Resource Permit Basis of Review, the FDOT will take measures to protect and treat in-stream water quality of stormwater discharge.

The FDOT acknowledges the SWFWMD recommendation about participation in the upcoming Basic Management Action Plan (BMAP) process which ensures that pollutant reductions will be addressed through stormwater controls. Furthermore, the FDOT will identify mitigation for any subsequent loss of historic basin storage, and utilize the information from the ongoing watershed management plans and aerial topographic mapping. The FDOTs recommendation is based on evaluation of the data available at this point in time. When complete, the updated maps that SWFWMD referenced will need to be submitted to the data library. These maps will be utilized in the programming screen and project development.

The FDOT acknowledges that the area has karst/limestone features and will factor this into the drainage design of the project to avoid groundwater contamination. The FDOT acknowledges that monitoring of the sensitive limerock is needed to prevent pollutants from entering the Florida Aquifer. Pasco County noted two wells located within 500 feet of the project and several irrigation wells as well as numerous domestic supply wells within 1.0 miles of the project limits. There is one water quality sampling station within one mile of the proposed project with eighteen others located within five miles. Furthermore, there is one Pasco County wellhead protection zone (5 and 10 year) located within 1000 feet. of the US 301/CR 54 intersection. The FDOT acknowledges that the project area is included in SWFWMD Northern Tampa Bay Water Resource Assessment Project (NTBWRAP). It is likely that a Pond Siting Report will be produced during project development. To offset wetland impacts, FDOT will acquire an Environmental Resource Permit that will be suitable to the type of project proposed. The FDOT will take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources.

The FDOT did not receive any comments from the Federal Highway Administration, the Florida Department of Environmental Protection, and the US Environmental Protection Agency.

ETAT Reviews for Water Quality and Quantity

4 **Southwest Florida Water Management District (6/16/2006)**
Water Quality and Quantity Effect: Substantial

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
Hydrologically, the project and surrounding lands out to the 500 foot buffer are located in three drainage basins; from north to south, they are: Tank Lake, non-contributing area basin ID 3151, and Zephyrhills Airport Run. Surface waters are designated as Class III, Recreation and propagation of Fish and Wildlife.

For assessment purposes, the major basins are divided into assessment polygons, or smaller drainage basins, designated by waterbody identification numbers (WBIDs). The State of Florida is currently assessing water quality in these drainage basins on a rotating basis as part of a 5-year cycle. The drainage basins containing the proposed project are part of the Group 2 (Hillsborough River tributaries to Tampa Bay) and Group 4 (Withlacoochee River) waterbodies.

The proposed project transverses three watersheds, and include 1.88 miles in the Tank Lake Outlet (WBID 1403), 4.23 miles into the Noncontributing Area watershed (WBID 1424) and 0.97 miles into the Zephyrhills Airport Run watershed (WBID 1448).
Surface water features within 500 feet of the project include: Tank Lake (59 acres), the channel of the Tank Lake inlet, and a 2.4-acre, U-shaped stormwater pond in an RV park east of US 301 that is connected to a pond/wetland system on the west side of the roadway by means of an underground pipe that connects to a deep swale that in turn conveys flow under US 301 and to the pond/wetland by means of 36 culvert.
The northern 1.8 miles of the project occupies the Tank lake drainage basin, which is a component of the Duck Lake system to the east. On May 07, 2006, water was absent from the 59-acre lake and the lake basin was covered in herbaceous wetland vegetation.
The central 4.81 miles of the project are located in the Non-contributing area drainage basin 3151, an area of rolling hills reaching elevations between 150 and 242 feet NGVD. Soils in these areas are the well drained Arredondo fine sand 0-5% slopes and the excessively well drained Lake fine sand 0-5% slopes that have been long-used for the cultivation of citrus in the region.

The southern 0.51 miles of the project occupies the Zephyrhills Airport Run drainage basin that ultimately contributes flow to the Hillsborough River watershed.
The Floridan Aquifer is the primary source of groundwater for potable and agricultural uses. According to DRASTIC analyses, on a relative scale, the Pollution Vulnerability Index (DPVI) of the Floridan Aquifer ranges from 110 to 164. The Upper Floridan Aquifer consists of a continuous series of four carbonate units. In the project area, the top of the limestone is approximate 75 to 85 NGVD. Above the Floridan, a 10- 20 thick layer composed of clay, silt, and sandy clay slows the movement of water between the overlying surficial aquifer and the Upper Floridan. The surficial aquifer in the project area is composed of unconsolidated sand, silt, and clayey sands having a thickness ranging from 11 to 50 feet, although this layer can be virtually absent in some areas. Its primary importance is as a source of recharge water for the Floridan Aquifer. Recharge rates to the Upper Floridan range from 1 10 inches per year in the project area.
Pasco County reports two wells located within 500 feet of the project and an additional well with 0.25 mile of the project. There likely are several other wells used for irrigation and domestic self-supply within 0.25 mile of the project.
The project area is included in the SWFWMDs Northern Tampa Bay Water Resource Assessment Project (NTBWRAP), and considerable information was generated on the WRAP area in several volumes published by the District in 1996. That project has evolved into a major data collection and analysis effort by the District, the Northern Tampa Bay Phase II (NTBII) project. Information relevant to this project is available from the Districts NTBII web site, http://www.swfwmd.state.fl.us/waterres/ntb/ntb.htm. Prior to beginning design, the FDOT may want to contact the Districts NTBII project manager.
Under the District Minimum Flows and Levels (MFL) Program, minimum flows and levels are scheduled for development for the Upper Withlacoochee River basin and the Middle Withlacoochee basin in 2009. Prior to beginning design, the FDOT may want to contact the Districts MFL project manager.
Very little water quality data are available for surface water resources within 500 feet of the project. Limited data may be obtained from the District MFL program. FDEP has collected data on the Dade City Canal located north of the Tank Lake drainage basin and on the Zephyrhills Airport Run. These data are available

in the Departments 305(b) reports. Extensive data are available for the Floridan Aquifer and can be obtained from the District NTB WRAP and NTBII projects.
Existing SWFWMD permits that may provide useful information for this project:
006604002 Pasco County - CR 52A-FROM W OF CR 41 TO E OF US 301
027147000 FDOT - DOT-301 FRONTAGE RD EILAND/DAUGHERTY
022722000 Pasco County - PASCO CO CR 41/FT KING HWY/DAUGHTERY RD

There are three impaired waterbodies located within five miles of the proposed project. These waterbodies are listed on Floridas 303(d) List of Impaired Waters and are scheduled for TMDL development. The impaired watersbodies are the New River (WBID 1442), Hillsborough River (WBID 1443) and Withlacoochee River (WBID 1329). FDOTs NPDES stormwater permit includes a responsibility for a portion of reductions in TMDLs for pollutants related to stormwater runoff. TMDLs for the water segments within the area of project affect are described below:

New River (WBID 1442) The New River watershed is located within five miles of the proposed project. A TMDL for coliforms was proposed in 2004. This TMDL requires a 35% reduction in fecal coliforms and a 43% reduction in total coliforms attributed to stormwater runoff sources. TMDLs for dissolved oxygen, coliforms and nutrients in this waterbody are scheduled for TMDL development in the 2007 cycle (Group 2).

Hillsborough River (WBID 1443A) The Hillsborough River watershed, which is on Floridas 303(d) Impaired Waters List, is located within five miles of the proposed project. TMDLs for dissolved oxygen, nutrients, and total suspended solids in this waterbody are scheduled for development in the 2008 cycle (Group 2). A TMDL for mercury, based on a fish consumption advisory, is scheduled for development in 2011. Total and fecal coliform TMDLs were developed for portions of the Hillsborough River in 2004 and have required reductions ranging from 26% to 62% in different reaches of the river. These reductions are allocated to stormwater sources.

Withlacoochee River (WBID 1329) The proposed project is located within five miles of the Withlacoochee River watershed. TMDLs for dissolved oxygen, coliforms, and nutrients are considered low priority for TMDL development and will not be addressed into 2010.

In order to address reductions required by TMDLs for these waterbodies, stormwater treatment should be addressed in this FDOT project. Such stormwater treatment should reduce pollutants in runoff to help meet water quality goals. In addition, erosion and sediment controls during the construction phase will assist in preventing further degradation of these waterbodies.

There is only one water quality sampling station within a one-mile radius of the proposed project. Eighteen additional water quality stations are located within five miles of the project. Data from these stations are contained within EPAs STORET database as well as FDEPs Impaired Waters Rule database. This data is used to assess water quality in individual waterbodies as well as to develop TMDLs for impaired waters.

Evaluation of the water quality dataset for these sampling stations could be valuable for determining the pre-development conditions of the water quality of waters of interest (especially the lakes, which are sensitive to changes in nutrient loading) within the area of potential project impact. These datasets could also be used as a baseline for existing impaired parameters from which to measure reductions to meet TMDLs. Specific parameters of concern associated with stormwater runoff from this project include dissolved oxygen, phosphorus, nitrogen, total suspended solids, and coliforms.

A portion of the proposed water quality and quantity systems for the project will be located mostly in hydrologic type A soils. These types of soils typically have a high infiltration rate and as such should be considered during the design of the stormwater system to fully utilize these hydrologic characteristics and maintain existing drainage patterns.

Comments on Effects to Resources:
The project has the potential to generate increased pollutant loads to Tank Lake, an already-degraded waterbody.

The project will require the alteration of the existing surface water management systems at the Tank Lake inlet crossing and the crossing at the wetland/pond/ditch system located 1.3 miles south of the north terminus. The project will result in a modification and/or extension of existing culverts at all three of the

unnamed ditches, and adverse impacts from flooding to adjacent properties and altered runoff volumes.

Ground water pollution is possible from construction activities and from the intrusion of stormwater ponds that breach the clay confining layer overlying the Upper Floridan Aquifer.

There is one Pasco County wellhead protection zone (5 and 10 year) located within 1000 feet of the US 301/CR 54 intersection.

Additional Comments (optional):
The degree of effect is judged Substantial due to: the potential to increase pollutant loading to Tank Lake, the potential for contamination of the Upper Floridan Aquifer, and the potential to intercept the Pasco County well head protection zone within 1000 feet of the US 301/CR 54 intersection.

An Environmental Resource Permit will be required for this project. However, the final determination of the type of permit will depend upon the final design configuration. If wetland impacts exceed threshold limits, the FDOT may want to consider applying for an Incidental Site Activities Permit (F.A.C. 40D.302 (6)); particularly if the project is a design-build or fast-tracked project. The Districts Brooksville office will handle the permit application.

Any existing wells within the project area should be located and identified prior to beginning construction. They must be properly plugged and abandoned as per Chapter 62-532, F.A.C., by licensed water well contractor who will acquire the appropriate well abandonment/construction permits.

FDOT must provide reasonable assurance that the project will not cause adverse water quantity impacts to receiving waters or adverse flooding to on-site or off-site property and that the project will not adversely affect the quality of receiving waters such that the water quality standards, including any anti-degradation provisions and any special standards for Outstanding Florida Waters and Outstanding National Resource Waters, will be violated (F.A.C. 40D-4.301(1) (e)). Surface water management systems shall not reduce or suppress the flow of a watercourse or the level of groundwater below a minimum flow or level that has been established pursuant to Section 373.042, F.S. (BOR, 4.6.1).

Activities such as construction connected with the ERP must not cause violations of State Water Quality Standards (B.O.R. 3.2.4). Best management practices shall be implemented to control erosion and turbidity during and after construction. Turbidity barriers shall be installed and maintained during construction. FDOT will be responsible for controlling turbidity from project area. Off-site discharge of water is limited to those amounts that will not cause off-site impacts (BOR 4.2). Equipment shall be operated and maintained to eliminate the discharge of oils, greases, fuels and lubricants to wetlands or other surface waters (BOR 3.2.4.1).

In-stream water quality protection and treatment of stormwater discharge will be needed for the project in accordance with Chapters 3 and 5 of the ERP Basis of Review. Treatment of stormwater runoff will be required, as additional traffic lanes are proposed; and in-stream water quality must not be adversely impacted by construction activities or subsequent road operations. Stormwater quality treatment will be required for runoff from the new pavement proposed to facilitate the additional traffic lanes for both bridges and roadways, plus the runoff from all other directly connected impervious areas (DCIAs) contributing to the treatment systems, both on and off-site.

Chapter 5.8.b of the Districts BOR establishes the contributing area(s) for on-line and off-line stormwater systems to be used in calculating the required treatment volume for alterations to existing public roadways. For widening activities, total pavement areas are considered in treatment volume calculations; unless drainage of existing pavement areas is maintained separate from proposed pavement areas. If the existing and proposed stormwater runoff is designed for conveyance, storage and treatment on-line, then treatment capacity will be required for the entire roadway and other DCIAs contributing to the treatment facilities. Alternatively, if the new system can be designed with off-line storage and treatment of the first-flush of runoff from new DCIAs, then the existing roadway contributing areas may be considered as isolated. The District recommends using off-line stormwater quality treatment facilities for runoff from both the new and existing contributing areas to the treatment facilities. Use of appropriate tailwater information will be necessary in all cases.

If equivalent stormwater quality treatment is to be considered, the FDOT must reasonably demonstrate the

following:
1. Alternate, contributing areas need to be hydrologically equivalent to the new and existing, watershed areas that would otherwise contribute to the treatment system and existing point of discharge;
2. Alternate pollution sources and loading characteristics need to be equivalent to those being substituted; and
3. Treatment benefits being substituted need to occur in the same receiving waters and in the same locality as the existing point of discharge from the new project area.

Existing stormwater treatment capacity that is being displaced by any roadway project will require additional compensating treatment volume for equivalent stormwater quality treatment replacement. For example, existing treatment capacity in roadside linear ponds/swales that is displaced by road widening will need to be replaced in a pond with suitable treatment volume from the existing contributing area and the road widening. Equivalent stormwater quality treatment, as described previously, should be avoided if possible.

In the event that TMDL limits are required for the project area, the FDOT must be prepared to implement appropriate TMDL remediation measures.

Portions of this project are located within Pasco Countys Basin of Special Concern known as East Zephyrhills. The Ordinance regulating this basin was adopted on 12 July 2005.

Portions of the alignment may be located within land-locked or closed basins and as such would be required to meet volumetric criteria of the SWFWMD. Water quantity concerns must be addressed for the project in accordance with Chapter 4 of the SWFWMD's Environmental Resource Permit (ERP) Basis of Review (BOR) This includes the following typical issues:

(a) Pre- and post-development peak discharge rate match for each sub-basin along the project corridor at each location runoff discharges from the right-of-way. Hydraulic routing through surface water storage areas and use of appropriate tailwater information will also be necessary.

(b) Making provisions to allow runoff from up-gradient areas to be conveyed to down-gradient areas without adversely affecting the stage point or manner of discharge and without degrading water quality. Refer to Section 4.8 of the ERP BOR.

(c) In addition for closed basins (internally drained or land-locked), the post-development volume of runoff from the project area must not exceed the pre-development volume of each specific, existing basin. This project appears to be located within basins that may be open, closed or semi-closed (i.e., closed for some storm events and open for others). The closed basin issue is of particular concern in the central 4.81 miles of the project.

Post-development peak discharge rates must not exceed pre-development rates at each of the existing stormwater discharge points from the roadway right-of-way for the storm event(s) required in the BOR. Hydrologic and hydraulic computations should be based on historic and local existing conditions, except for conditions caused b illegal activities and the effects of water withdrawals by pumping (B.O.R. Sections 1.7 and 4.6.2). Tailwater conditions should be thoroughly researched and based on the most current and defendable data determined by standard engineering methods. Off-site drainage areas and systems shall be conveyed to downstream areas without adversely affecting the stages, flow characteristics, or water quality. For widening activities, total pavement areas are considered in treatment volume calculations; unless drainage of existing pavement areas is maintained separate from proposed pavement areas. The localized or regional effects of water withdrawals shall not be considered as the ambient condition in the design of surface water management systems permitted under Chapters 40D-4, 40D-40, or 40D-400, F.A.C., except to the extent that the long-term success of wetlands mitigation would be affected adversely (BOR, Sections 3.2.2.4 e. & 4.6.2).

The Environmental Resource Permit Basis of Review document describes design approaches and criteria that will provide reasonable assurances that the proposed surface water management system will meet the conditions for issuance. Parameters that are frequently over- or under-estimated include: seasonal high water, seasonal high groundwater table, historic basin storage, floodplain storage, floodway hydraulic capacity, peak discharge rates and timing, total discharged volume, and off-site hydrograph timing impacts. Site-specific design data is preferable to book values. It is recommended that the FDOT consider providing a pond siting report that addresses these design approaches and criteria. For purposes of the ERP process, the northern segment of the project is located in the Withlacoochee River watershed and the southern region is

located in the Hillsborough River watershed (Basis of Review, Appendix 6).

Due to the high potential to encounter karstic conditions in sub-surface materials during stormwater pond construction, it is recommended that the stormwater ponds be designed as shallow as practical and geotechnical evaluation of specific pond sites be conducted to determine the potential for sinkhole development. Should the results of the geotechnical study indicate a potential for ground water contamination as a result of stormwater pond construction/operation, the District may require additional stormwater quality treatment for the project surface water management systems.

Provision must be made to replace or otherwise mitigate the loss of historic basin storage provided by the project site.

The FDOT must be prepared to implement appropriate TMDL remediation measures such as reducing stormwater runoff volumes and/or improving runoff quality by means of treatment facilities or BMPs. It is recommended that the Florida Department of Transportation (FDOT) participate as a stakeholder in the upcoming Basin Management Action Plan (BMAP) process to ensure that these reductions will be addressed through stormwater controls associated with the proposed project. This process will be initiated by Florida Department of Environmental Protection (FDEP) and driven by stakeholders.

The names and addresses of individuals or entities, whose property will be taken for the roadway improvements, will need to be submitted. Since the FDOT has powers of eminent domain, this information will be needed to facilitate noticing such individuals, pursuant to Rule 40D-1.607(7), F.A.C.

The District has assigned a pre-application file (PA# 5124) for the purpose of tracking its participation in the ETDM review of this project. The pre-application file is maintained at the Brooksville Service Office of the SWFWMD. Please refer to the pre-application file when contacting District regulatory staff regarding this project.

Coordinator Feedback: None

- No review submitted from the FL Department of Environmental Protection
- No review submitted from the Federal Highway Administration
- No review submitted from the US Environmental Protection Agency

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Natural - Wetlands

Coordinator Summary

2 **Summary Degree of Effect**
Wetlands Effect: Minimal

Reviewed By:
FDOT District 7 (11/14/2006)

Comments:
The Florida Department of Transportation (FDOT) concurs with the comments from the Florida Department of Environmental Protection (FDEP), Southwest Florida Water Management District (SWFWMD), US Fish and Wildlife Service (USFWS), and US Army Corps of Engineers (USACE) and recommends a Degree of Effect of Minimal. The FDOT acknowledges the comments from The National Marine Fisheries Service (NMFS).

Within the 200-ft. project buffer area, Florida Fish and Wildlife Conservation Commission (FFWCC) Priority Wetland Habitats (7 or more focal species in wetland areas) indicates approximately 4 acres (1.16% of project corridor). Within the 200-ft project buffer area, the National Wetlands Inventory (NWI) indicates 3.40 acres of palustrine wetlands (0.98% of project corridor). Within the 500-ft. project buffer area NWI indicates 11.62 acres of

palustrine wetlands (1.32% of project corridor) and 1.85 acres of lacustrine wetlands (0.21% of project corridor). These wetlands consist of emergent aquatic vegetation, freshwater marshes, intermittent ponds, and wet prairies. FFWCC reports that no Priority Wetlands are within the 500-ft buffer of the proposed widening, however, they do report that 104 acres of Priority Wetlands with the potential to support 4-6 focal species occur within one mile of the project corridor.

Where impacts to wetlands and surface waters associated with the project are unavoidable, the FDOT will coordinate with the appropriate agencies to provide adequate and appropriate wetland mitigation.

The FDOT will take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources. The FDOT is likely to prepare a Wetland Evaluation Report and an Endangered Species Biological Assessment during project development. The FDOT will coordinate the review of the Reports with USFWS and FFWCC.

The FDOT did not receive any comments from the US Environmental Protection Agency and Federal Highway Administration.

ETAT Reviews for Wetlands

2 **US Army Corps of Engineers (6/12/2006)**
Wetlands Effect: Minimal

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
There are some wetland/surface water areas within the alignment, but not many. It is likely that any wetlands or surface waters in the area have been previously disturbed.

Comments on Effects to Resources:
FDOT should design the project to minimize wetland impacts to the greatest extent practicable, even if the wetlands/surface waters have been previously disturbed.

Additional Comments (optional):
FDOT should determine if the affected wetlands and surface waters, if any, would be considered waters of the United States, using the regulations, the 1987 Wetland Delineaton Manual, and subsequent guidance (such as the SWANCC decision).

Coordinator Feedback: None

N/A **National Marine Fisheries Service (6/01/2006)**
Wetlands Effect: N/A / No Involvement

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
None.

Comments on Effects to Resources:
NOAA's National Marine Fisheries Service (NMFS), has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 6011. The Florida Department of Transportation proposes widening US 301 (SR 39) from CR 54 to the US 98 Bypass in Pasco County, Florida. The project would widen

US 301 either by adding two-lane reverse frontage roads to carry local traffic or widening the existing 4-lane divided rural roadway to a 6-lane roadway.

NMFS staff conducted a site inspection of the project area on May 26, 2006 to assess potential concerns to living marine resources. The resources affected are not ones for which NMFS, is responsible and therefore, we have no comment to provide regarding the projects impacts.

Coordinator Feedback: None

2 **FL Department of Environmental Protection (6/14/2006)**
Wetlands Effect: Minimal

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
The National Wetland Inventory GIS report indicates that there are 1.85 acres of lacustrine wetlands and 11.62 acres of palustrine wetlands within the 500-ft. project buffer zone. The Wetlands 2000 GIS report lists emergent aquatic vegetation, freshwater marshes, intermittent ponds, and wet prairies as wetland habitats found within the 500-ft. project buffer.

Comments on Effects to Resources:
The proposed project will require an environmental resource permit (ERP) from the Southwest Florida Water Management District. The ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of roadway widening to the greatest extent practicable:
- Minimization should emphasize avoidance-oriented corridor alignments, wetland fill reductions via pile bridging and steep/vertically retained side slopes, and median width reductions within safety limits.
- Wetlands should not be displaced by the installation of stormwater conveyance and treatment swales; compensatory treatment in adjacent uplands is the preferred alternative.
- After avoidance and minimization have been exhausted, mitigation must be proposed to offset the adverse impacts of the project to existing wetland functions and values. Significant attention is given to forested wetland systems, which are difficult to mitigate.
- The cumulative impacts of concurrent and future road improvement projects in the vicinity of the subject project should also be addressed.

CLC Commitments and Recommendations:

Coordinator Feedback: None

2 **Southwest Florida Water Management District (6/16/2006)**
Wetlands Effect: Minimal

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
NWI indicates approximately 11.6 acres of Palustrine and 1.8 acres of Lacustrine wetland systems within a 500 foot buffer of the proposed widening (1.3% and 0.2% of project corridor, respectively), while FLUCFCS indicates approximately 8 acres of wetlands and surface waters with a 500 foot buffer of the proposed widening (0.9% of project corridor). FFWCC reports no Priority Wetlands within a 500 foot buffer of the proposed widening; however, they do report that approximately 104 acres of Priority Wetlands, with potential to support 4-6 focal species, occur within a one mile buffer of the proposed widening (0.9% of project corridor).

Wetlands present within the 100 buffer include a total of 0.22 acres of herbaceous wetland (freshwater marsh, FLUCFCS 641). Within the 200 buffer, more acreage would be involved, 1.11 acres, divided into 0.22 acres of forested wetland and 0.89 acres of herbaceous wetland. All of the acreage within the 100 200 buffer areas likely will be adversely affected by the project unless the new lanes are constructed in the median of the existing roadway. Within the 500 buffer, the wetland impacts increase to 9.82 acres and are divided into 0.44 acres of forested wetland, 6.92 acres of herbaceous wetland, and 2.46 acres of shrub wetland impact. And, 8.5 acres of open water would be adversely affected.

Low quality habitat is provided by the wetlands in the immediate project area (100 500) because they are highly disturbed remnants of wetlands that have been drained and eliminated from the landscape.

Field reconnaissance found two small wetland areas within the project corridor. The southern wetland area is bridged and of low quality, consisting of 85% Carolina willow and Florida elderberry. The northern wetland area contains vegetation similar to the southern wetland as well as cattail and alligator weed.

Comments on Effects to Resources:
This project occurs within a largely urbanized corridor with limited natural resources. Assuming that project and stormwater pond construction remains within the 500 buffer area, the project has the potential to eliminate and/or adversely affect between 0.22 and 9.8 acres of wetlands and up to 8.5 acres of open water having wetland plant development. Impacts to wetlands include: elimination of remaining wetland systems and the loss of all wetland function relating to wildlife habitat, water quality improvement, and flood storage/attenuation; the further disturbance of wetlands that have already been disturbed from past activities in the project area.

Additional Comments (optional):
The degree of effect is considered minimal due to the limited potential for wetland impacts, due to the small size and isolated nature of the existing wetland system, and the low quality of most of the wetlands in the project area. It is anticipated that these issues will be resolved during ERP permitting.

Wetland impacts can be reduced by restricting the project cross section to the degree possible and preventing impact to wetlands outside of the 200 buffer. There are opportunities for wetland restoration and enhancement within 500 feet of the project, which may be a possible component of a mitigation plan.

An Environmental Resource Permit will be required for this project. However, the final determination of the type of permit will depend upon the final design configuration. If wetland impacts exceed threshold limits, requiring an individual ERP permit, the FDOT may want to consider applying for an Incidental Site Activities Permit (F.A.C. 40D.302(6)), particularly if the project is a design-build or fast-tracked project.

SWFWMDs programmatic goal is to achieve no net loss of wetlands (ERP Basic of Review, 3.1.0). FDOT must provide reasonable assurance that the projects design will not adversely impact the value of functions provided to fish, wildlife, and listed species, including aquatic and wetland- dependent species by wetlands and other surface waters. A wetland location map, formal delineation, and acreage calculations will be required together with a UMAM assessment for all wetlands affected by the project, pursuant to Ch. 62-345, F.A.C. The District will require the wetland and surface water features located within the project area to be field verified by District staff, pursuant to Ch. 62-340, F.A.C. Secondary wetland impacts (e.g., water quantity, water quality, wetland buffer setbacks, wildlife habitat and utilization, etc.) will need to be evaluated pursuant to subsection 3.2.7 of the B.O.R. Wetlands within and adjacent to the ROW provide low quality habitat for both Listed Species and non-Listed Species.

The District will require the applicant to address elimination and reduction of wetland impacts (ERP BOR, 3.2.1), where applicable, including design alternatives where feasible. Therefore, SWFMWD may require practicable design modifications to reduce or eliminate impacts to wetlands, for example, minimizing the roadway cross section through the wetland area.

Coordination with FFWCC and USFWS may be required for wetland-dependent Listed Species. It is recommended that the FDOT prepare a Wetland Evaluation Technical Memorandum and an Endangered Species Technical Memorandum for further analysis. Existing data should be collected and specific surveys should be conducted to detect the occurrence and abundance of Listed Species that are very likely to utilize the wetlands and other surface waters within and adjacent to the ROW. The potential impact of the roadway

project on these, and non-listed native animals, should be assessed.

Adequate and appropriate wetland mitigation activities may be required for unavoidable wetland and surface water impacts associated with the project. The FDOT Mitigation Program (Chapter 373.4137, F.S.) requires the FDOT to submit anticipated wetland and surface water impact information to the SWFWMD. This information is utilized to evaluate mitigation options, followed by nomination and multi-agency approval of the preferred options. These mitigation options typically include enhancement of wetland and upland habitats within existing public lands, public land acquisition followed by habitat improvements, and the purchase of private mitigation bank credits. The SWFWMD may choose to exclude an FDOT project in whole or in part if the SWFWMD is unable to identify mitigation that would offset wetland and surface water impacts of the project. Under this scenario, the SWFWMD will coordinate with FDOT on which impacts can be appropriately mitigated through the program as opposed to separate mitigation conducted by FDOT. Through the FDOT mitigation program, the SWFWMD may have previously purchased mitigation credits from a mitigation bank appropriate to the project area for unavoidable roadway wetland impacts. Depending on the quantity and quality of the proposed wetland impacts and associated mitigation activities at such a mitigation bank, the SWFWMD may propose purchasing additional credits from the mitigation bank and/or pursue and propose alternative locations for mitigation. For ERP purposes of mitigating any adverse wetland impacts within the same drainage basin, the project and potential wetland impacts are known to be located within the Withlacoochee River basin. The SWFWMD requests that FDOT continue to collaborate on the potential wetland impacts as this segment proceeds into future phases, and include the associated impacts on FDOTs annual inventory due in July 2006.

The names and addresses of individuals or entities, whose property will be taken for the roadway improvements, will need to be submitted. Since the FDOT has powers of eminent domain, this information will be needed to facilitate noticing such individuals, pursuant to Rule 40D-1.607(7), F.A.C.

The District has assigned pre-application file (PA# 5124) for the purpose of tracking its participation in the ETDM review of this project. The pre-application file is maintained at the Brooksville Service Office of the SWFWMD. Please refer to the pre-application file when contacting District regulatory staff regarding this project.

Coordinator Feedback: None

2 **US Fish and Wildlife Service (6/06/2006)**
Wetlands Effect: Minimal

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
Federally listed plant and animal species, migratory birds, the habitats that support them and wetlands. High level of importance.

Comments on Effects to Resources:
A review of the GIS database associated with the Environmental Screening Tool shows high quality wetlands within 500 feet of of 11.6 acres palustrine and a smaller amount of freshwater marshes and wet prairies existing along the 500 feet of the project corridor.
The Service would recommend that wetlands in the project area be delineated and evaluated using an evaluation technique such as the Wetland Rapid Assessment Procedure (WRAP) or the Universal Mitigation Assessment Module (UMAM). If impacts to wetlands are unavoidable, the Service would recommend minimizing the impacts to the greatest extent practicable and that all impacts to wetlands are mitigated for. Mitigation should be in-kind and within the same watershed basin as the proposed project. The wetlands created with the proposed project should be similar to, or better than, the impacted wetlands and the wetlands preserved and created on-site have similar hydrology to the wetlands impacted.

Coordinator Feedback: None

- No review submitted from the Federal Highway Administration
- No review submitted from the US Environmental Protection Agency

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Natural - Wildlife and Habitat

Coordinator Summary

2 **Summary Degree of Effect**
Wildlife and Habitat Effect: Minimal

Reviewed By:
FDOT District 7 (11/14/2006)

Comments:
The Florida Department of Transportation (FDOT) concurs with the US Fish and Wildlife Service (USFWS) and recommends a Degree of Effect of Minimal. The FDOT acknowledges the comments from the Florida Fish and Wildlife Conservation Commission (FFWCC) and the Southwest Florida Water Management District (SWFWMD).

Wetland resources are described in the Wetlands Degree of Effect. The project corridor is split between the Greater Tampa Bay Ecosystem Management Area and the Withlacoochee River Ecosystem Management Area. Furthermore, the western edge of the species sensitive boundary of the Green Swamp Wildlife Management Area is located within one mile of the project limits. FFWCC outlined in their comments the species which may occur in and adjacent to the project area based on the potential habitat and range and SWFWMD noted the species they observed in the mitigation areas and surface water management systems in Tank Lake, as well as stormwater ponds and swales along the project corridor.

Avoidance, compensation, and mitigation of wetlands are outlined in the Wetlands Degree of Effect. In addressing FFWCC concerns with protection of water quality within area lakes from stormwater runoff and sedimentation, the FDOT will construct the project using methods to reduce stormwater runoff via stormwater treatment facilities and BMPs. In accordance with Chapters 3 and 5 of the Environmental Resource Permit Basis of Review, the FDOT will protect and treat in-stream water quality of stormwater discharge.

The FDOT also acknowledges USFWS recommendation to conduct surveys to determine the presence or absence of wood storks, bald eagles and use of the Services Standard Protection Measures for Eastern Indigo snake prior to design and construction phases.

The FDOT will take all measures to develop avoidance alternatives and/or measures to minimize harm to these resources. The FDOT is likely to prepare a Wetland Evaluation Report and an Endangered Species Biological Assessment during project development. The FDOT will coordinate the review of the Reports with USFWS and FFWCC.

The FDOT did not receive any comments from the Federal Highway Administration, the Florida Department of Agriculture, and the US Forest Service.

ETAT Reviews for Wildlife and Habitat

2 **US Fish and Wildlife Service (6/06/2006)**
Wildlife and Habitat Effect: Minimal

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
Federally listed plant and animal species, migratory birds, the habitats that support them and wetlands. High level of importance.

Comments on Effects to Resources:
The Service has reviewed our Geographic Information Systems (GIS) database and the GIS database on the Environmental Screening Tool for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The Services GIS database is a compilation of data received from several sources.

Land use adjacent to the existing alignment is primarily commercial and residential. However, palustrine, long leaf pine, freshwater marshes, exists within a 200 foot buffer of the proposed project.
Comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.).
Due to the proximity of the proposed project to long leaf pine habitat and the presence of red cockaded woodpeckers in Pasco County, the Service recommends an inspection of the long leaf pine habitat.
This survey should be sent to the Service's Jacksonville Field Office to review and comment.
Due to two wood stork (Mycteria americana) rookery approximately 7 miles from the proposed project in Pasco County, the Service would recommend that any wetlands in the project area be delineated and assessed using an evaluation technique such as the Wetland Assessment Procedure (WRAP) or the Uniform Mitigation Assessment Method (UMAM). A major reason for the wood stork decline has been the loss and degradation of feeding habitat. A variety of nearby wetland habitats such as roadside or agricultural ditches can provide good forage areas for storks and storks typically do most of their feeding in wetlands between 5 and 40 miles from the colony. The Service would recommend assessing any possible impacted wetlands for the potential of wood stork usage, such as wetlands that are seasonally flooded and drawn down with littoral shelf areas, which may fall within 18.6 miles (30 km) of an active wood stork colony. More information may be gained at the Services Jacksonville Ecological Service Field Office website at:
http://northflorida.fws.gov/WoodStorks/wood-storks.htm.
There is a known bald eagle (Haliaeetus leucocephalus) nest within 2 miles from the proposed project. The Service recommends this nest and any new bald eagle nests within the project area be recorded and reported to the Service. More information may be gained at the Services Jacksonville Ecological Service Field Office website at: http://www.fws.gov/northflorida/BaldEagles/Bald-Eagle-Monitoring-Guidelines-092905.htm
The Eastern indigo snake (Drymarchon corais couperi) may occupy a broad range of habitats from scrub and sandhill communities, to wet prairies and mangrove swamps, near the proposed project site. The Eastern indigo is most strongly associated with high, dry, well-drained sandy soils, and closely parallels habitat preferred by the gopher tortoise (Gopherus polyphemus), a state of Florida listed species. The Service would recommend that FDOT implement the Services Standard Protection Measures for the Eastern Indigo Snake and survey for the Eastern indigo prior to the design and construction phase.

Coordinator Feedback: None

3 **Southwest Florida Water Management District (6/16/2006)**
Wildlife and Habitat Effect: Moderate

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
According to the 2003 FFWCC habitat and land cover GRID, approximately 87% of the project corridor (0.1 mi buffer) is either developed/disturbed land or agricultural land (citrus groves and improved pasture. Of the remaining 13%, the project corridor contains mixed hardwood pine forests, dry prairies, grasslands, and areas of shrub and brushland. Habitat for wetland-dependent wildlife is provided by surface water management systems, canals, 2.4-acre stormwater pond, ditches, and wet swales. Upland habitat is

disturbed former agricultural land or a few parcels of somewhat less disturbed native habitat.

Listed Species not reported but potentially present in the immediate project area are: eastern indigo snake (T), tricolored heron (SSC), snowy egret (SSC), Wood stork (E), Florida Sandhill Crane (T), Gopher tortoise (SSC), and burrowing owl (SSC). The presence of wading birds is dependent upon having water in Tank Lake, the stormwater ponds and the swales along the project corridor. On May 7, 2006, when the project was viewed, there was no water in Tank Lake, and other areas were virtually dry. Only the 2.4-acre stormwater pond associated with the RV Park held substantial water; therefore, habitat availability was low, likely accounting for the absence of wildlife observations that day.

Minimal low to moderate quality wetland and upland habitat is located throughout the project area. There are approximately 5 acres (0.6% of project corridor) of FFWCC Biodiversity Hotspots supporting seven or more Focal Species within a 500-foot buffer. FFWCC reports no Priority uplands and wetlands occur within a 500-foot buffer of the proposed widening. FFWCC listed species occurrence data and FNAI occurrence data do not show documented occurrence of listed species within 1.0 mi of the project.

The project area is located within the Greater Tampa Bay Ecosystem management Area (southern segment of the project) and the Withlacoochee River Ecosystem Management Area (northern segment of the project).

Comments on Effects to Resources:
The citrus groves scattered throughout and within 100 feet of the project corridor is the habitat type most likely to support listed species including the gopher tortoise. However, no tortoises were observed during field visits. If tortoises are present within the construction zone, permits and a management plan including details on relocation and mitigation may be required. Other possible impacts on wildlife and habitat include: the elimination of wetland and upland habitat potentially utilized by listed species; the disruption of foraging of listed species, the disturbance of wetland edges, reducing their habitat quality; and the degradation of water quality in wetlands and streams by construction activities and untreated or under-treated stormwater runoff.

Animals crossing the roadway will be at additional risk upon completion of the project. This project impact is of particular concern in the case of turtles and certain bird species, for example the Florida sandhill crane which is known to be locally abundant in Pasco County. Further, the project may cause additional isolation of faunal species populations on either side of the roadway, as the roadway widening will lower the ability of wildlife to move across the facility to the remaining habitats on either side of the highway.

Additional Comments (optional):
The degree of effect is considered Moderate due to the apparently depauperate animal populations in the area.

An Environmental Resource Permit will be required for this project. However, the final determination of the type of permit will depend upon the final design configuration.

FDOT must provide reasonable assurance that the design, construction and operation of the project will not impact the values of wetland, other surface waters and other water related resources of the District so as to cause adverse impacts to the (a) abundance of fish, wildlife, and listed species and (b) habitat of fish, wildlife, and listed species (ERP Basis of Review 3.2.2). Because of the little recent wildlife occurrence data, it is recommended that FDOT conduct a specific wildlife survey of the new alignment and within 500 of the proposed roadway for the purposes of (a) quantifying the diversity of species using the habitats, (b) identifying the Listed Species using the habitats, (c) determining the nature of the utilization by Listed Species (foraging, cover, protection, breeding), and (d) the abundance of wildlife utilizing the habitats. The survey should result in specific recommendations for eliminating and/or reducing adverse impacts.

The new areas of pavement increase the likelihood of animal fatalities on the roadway. Birds, amphibians, and reptiles moving across the widened roadway will be at additional risk upon completion of the project. A survey to determine the actual amount of animal traffic across the roadway itself and through the cross culverts should be conducted. The data collected should be analyzed for the purpose of determining the value of wildlife crossings and other accommodations. Coordination with FFWCC, USFWS and Bureau of Imperiled Species Management will be required for wetland-dependent listed species. It is recommended that the FDOT prepare a Wetland Evaluation Report (WER) and an Endangered Species Biological

Assessment (ESBA) for further analysis.

For a project to meet permit criteria, it must be not contrary to the public interest. Chapter 3.2.3 of the SWFWMD Basis of Review describes the items to be reviewed when determining what is and is not contrary to public interest, and 3.2.3 specifically details impact to the conservation of fish and wildlife habitat, including endangered or threatened species, or their habitats, as well as impacts to public recreation. Such impacts could potentially be deemed contrary to the public interest.

FDOT must provide reasonable assurance that the design, construction and operation of the project will not impact the values of wetland, other surface waters and other water related resources of the District so as to cause adverse impacts to the (a) abundance of fish, wildlife, and listed species and (b) habitat of fish, wildlife, and listed species (ERP Basis of Review 3.2.2).

The project has the potential for both temporary and permanent impacts to wetland-dependent wildlife and habitat. Temporary impacts during construction include: noise, dust, habitat damage outside of ROW, and turbidity in the ditches crossing the project area. Turbidity will be addressed in the ERP and can be eliminated by the use and maintenance of effective control measures that are appropriate to the terrain involved.

Specific surveys should be conducted to detect the occurrence and abundance of wildlife, both listed and non-listed, in order to assess the impact of the project on animals and plants and to determine the need for wildlife accommodations at particularly important locations along the project. The FFWCC data on the site should be updated to the present time and applied to this project. The information generated during this work should be used in project design to reduce wildlife impacts. The additional lanes increase the likelihood of animal fatalities on the roadway, particularly in the segment traversing the wetlands. A survey to determine the actual amount of animal traffic across the roadway itself and through the cross culverts should be conducted. The data collected should be analyzed for the purpose of determining the value of wildlife crossings. Coordination with FFWCC, USFWS and Bureau of Imperiled Species Management will be required for wetland-dependent listed species.

Coordinator Feedback: None

3 **FL Fish and Wildlife Conservation Commission (6/12/2006)**
Wildlife and Habitat Effect: Moderate

Coordination Document: *The "Coordination Document" option was not available at the time of the review.*

Dispute Information: N/A

Identified Resources and Level of Importance:
The Habitat Conservation Scientific Services Section of the Florida Fish and Wildlife Conservation Commission (FWC) has coordinated agency review of ETDM #6011 in Pasco County, and provides the following comments related to potential impacts to fish and wildlife resources on this Programming Phase project.

US 301 is a four-lane divided highway that connects the cities of Zephyrhills and Dade City. The proposed work would result in adding two-lane reverse frontage roads to carry local traffic, or widen the existing highway to six lanes within a 6.4-mile project area.

The project area is located within a disturbed corridor that is presently experiencing development expansion. A GIS wildlife and habitat resource analysis was completed for lands within 500 feet of the existing Right-of-way (ROW). Approximately 592 acres, or 67 percent, of this area is currently in high and low impact urban land uses and citrus groves. Wetlands, which total 18.3 acres or 1.3 percent of the area, are represented by small disjointed areas of cypress swamp, freshwater marsh and wet prairie, hardwood swamp, shrub swamp and open water. Uplands total about 112 acres, and consist of dry prairie, upland hardwood hammocks, mixed hardwood-pine forest, and pinelands. A sizable amount of pastureland and grassland also occurs along the ROW. Regional habitat resources in this area within a mile of the project area are good to excellent, especially east of the existing alignment, which is the western edge of the Green Swamp. This vast wetlands and upland habitat complex serves as the headwaters for the Withlacoochee and Hillsborough Rivers, and is

part of the Withlacoochee State Forest and the Green Swamp Wildlife Management Area.

Based on known range and the presence of potential habitat, the following wildlife species listed by our agency may occur within and adjacent to the project area: gopher tortoise (SSC), eastern indigo snake (T), Florida pine snake (T), short-tailed snake (T), Shermans fox squirrel (SSC), Florida mouse (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), wood stork (E), bald eagle (T), southeastern kestrel (T), limpkin (SSC), Florida sandhill crane (T), and Florida grasshopper sparrow (E).

Comments on Effects to Resources:
Direct loss of habitat would occur during construction from ROW expansion, and from construction of the numerous off-site Drainage Retention Areas (DRAs) that will be required along the over 6-mile-long project area.

Additional Comments (optional):
We recommend the following measures be considered during the PD&E Study to avoid, minimize, and mitigate project impacts to listed species and habitat resources.

1. A vegetative cover map and accounting by acreage for each plant community type should be made for the affected project area. Compensatory mitigation for all upland and wetlands habitat loss should be required. If wetlands are mitigated under the provisions of Chapter 373.4137 F.S., the proposed mitigation sites should be located within the immediate or same regional area; be functionally equivalent; equal to or of higher functional value; and as or more productive as the wetlands impacted by the project.

2. Surveys for listed species should be performed within and adjacent to the ROW and proposed sites for Drainage Retention Areas (DRAs) during the Project Development and Environment (PD&E) Study. The methodology for these surveys should be coordinated with FWC, and follow appropriate survey techniques or guidelines to determine presence, absence or probability of occurrence of various species, and to assess habitat quality. These study methods should be designed considering the potential listed species discussed above.

3. Based on the survey results, a plan should also be developed to address direct, secondary, and cumulative impacts of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures, including compensatory replacement for both upland and wetlands habitat loss, should also be addressed. Land acquisition and restoration of appropriate tracts adjacent to existing public lands, or tracts placed under conservation easement located adjacent to large areas of jurisdictional wetlands that currently serve as regional core habitat areas, would be biologically appropriate and supported by our agency.

4. Habitat impacts in both uplands and wetlands may be avoided where possible by interchangeably designing the road expansion along those ROW areas where less habitat resources occur. In addition, using the median and roadside swales for treating roadside runoff would reduce the need for some off-site DRAs, and assist in reducing habitat loss.

5. Construction equipment staging areas; storage of oils, greases, and fuel; fill and roadbed material; and vehicle maintenance activities should be sited in previously disturbed areas far removed from streams, wetlands, or surface water bodies. Staging areas, along with borrow areas, should also be surveyed for listed species.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Dr. Joe Walsh (772) 778-5094) in our Vero Beach Office, for further coordination on this project.

Coordinator Feedback: None

- No review submitted from the FL Department of Agriculture and Consumer Services
- No review submitted from the Federal Highway Administration
- No review submitted from the US Forest Service