FINAL
WETLAND EVALUATION REPORT
AND
BIOLOGICAL ASSESSMENT

PD&E Study
I-75 (S.R. 93) from South of S.R. 56 to North of S.R. 52
Pasco County

Work Program Item Segment No. 258736 1
Federal Aid Program No. NH-75-1(91)275

This project evaluates improvement alternatives for Interstate 75 (State Road 93) from south of State Road 56 to north of State Road 52 in Pasco County, Florida. The approximate length of the project is 19.15 kilometers (11.902 miles).

Prepared for:

Florida Department of Transportation
District Seven
11201 North McKinley Drive
Tampa, Florida 33612-6403

December 2000

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District Seven
11201 North McKinley Drive
Tampa, Florida 33612-6403

Prepared by:

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December 2000

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study for improvement alternatives along I-75 (S.R. 93) from south of S.R. 56 to north of S.R. 52 in Pasco County, Florida. The project location map (Figure 1-1) illustrates the location and limits of the study.

The objective of the PD&E Study is to provide documented environmental and engineering analyses to assist the FDOT in reaching a decision on the type, location and conceptual design of the necessary improvements, in order to accommodate future traffic demand in a safe and efficient manner. The PD&E Study also satisfies the requirements of the National Environmental Policy Act (NEPA) and the Federal Highway Administration (FHWA) in order to qualify the project for Federal-aid funding of future development phases of the project.

In accordance with the FDOT policy and the FHWA requirements, a survey of wetland areas and biological resources within the project area were evaluated. The results of this investigation have been summarized and are presented in this report. The report documents any potential impacts to jurisdictional wetlands and protected species from the proposed roadway improvements and the efforts to avoid, minimize, and possibly mitigate for these impacts.

For purposes of this evaluation, an area of 182.9 meters (m) [600 feet (ft)] in width (91.44 m [300 ft] each side of the I-75 centerline) was reviewed. A maximum of 3.66 m (12 ft) of additional ROW will be required for the outside lane expansion option with the exception of the S.R. 52 interchange. No additional ROW will be required for the inside lane expansion option with the exception of the S.R. 52 interchange.

Impacts to wetlands will generally be to the margins of wetland systems or upland-cut swales/ditches. Impacts at the bridge crossings will be minimized to the greatest extent

possible. Total wetland impacts for the Preferred Alternative (Alternative 5) are estimated to be 1.29 hectares (ha) [3.18 acres (ac)] for roadway impact. Wetland involvement at the proposed stormwater management facility sites will be assessed during the design phase.

Wildlife surveys pertinent to this project began in June 1997 and continued through February 1999. Preliminary results indicate potential involvement with the gopher tortoise *(Gopherus polyphemus)* (along the edge of the existing right-of-way (ROW) and at potential stormwater pond sites) and the eastern indigo snake (*Drymarchon corais couperi*) (potential habitat exists).

The project crosses Cypress Creek and associated wetlands - designated as an Outstanding Florida Water (OFW) by the Florida Department of Environmental Protection. This is the only stream crossing along the project. The OFW designation provides special protection for the water body due to its ecological and recreational significance. Dredge and fill activities in an OFW must be determined to be in the public interest in order to secure a permit. The OFW designation also requires that direct discharges cannot lower ambient water quality. Water quality in the OFW will be protected by the construction of ponds for stormwater treatment.

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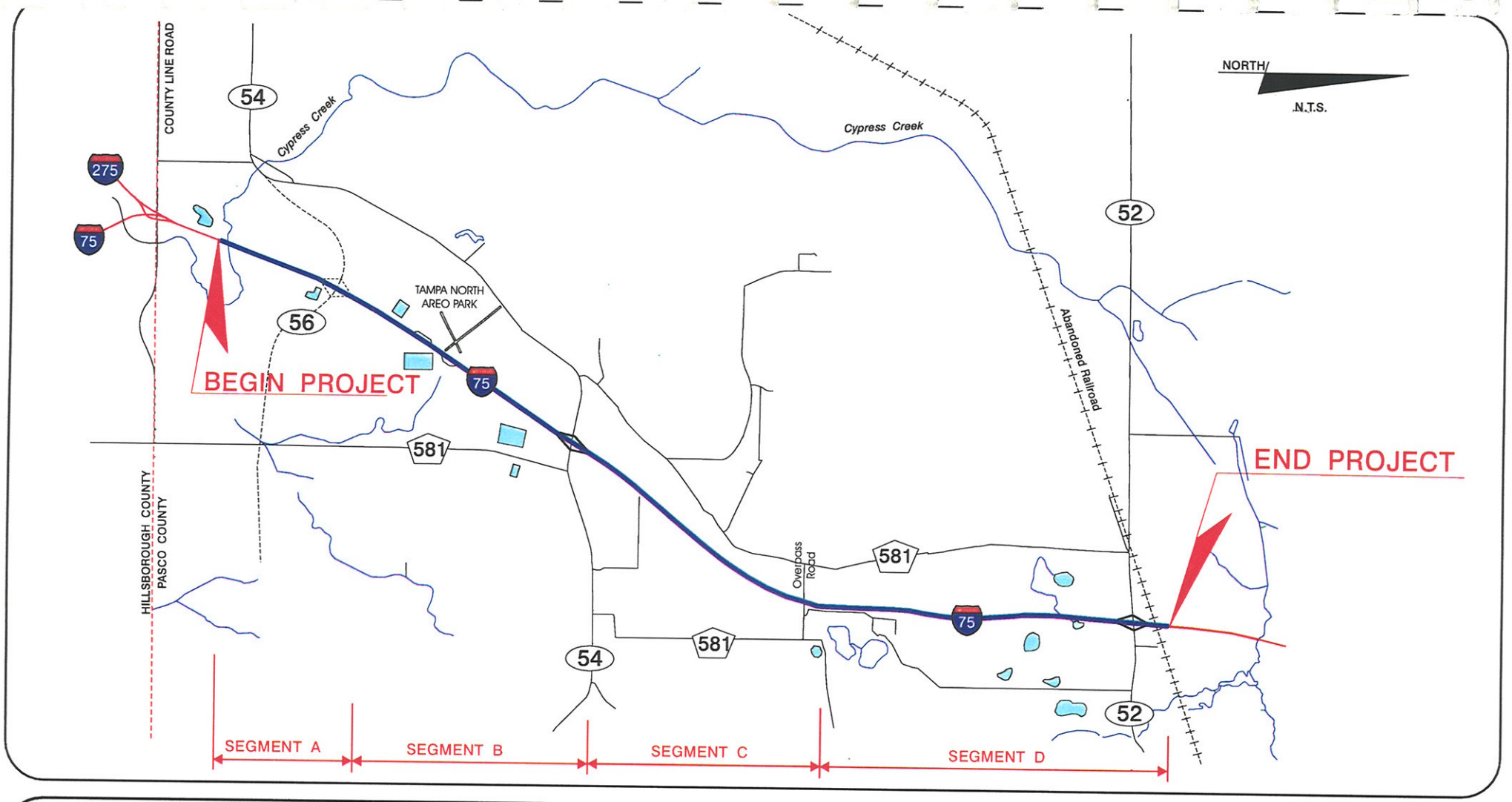
INTRODUCTION

The Florida Department of Transportation (FDOT) is conducting a Project Development and Environment (PD&E) Study for improvement alternatives along I-75 (S.R. 93) from south of S.R. 56 to north of S.R. 52 in Pasco County, Florida. The project location map (Figure 1-1) illustrates the location and limits of the study.

The objective of the PD&E Study is to provide documented environmental and engineering analyses to assist the FDOT in reaching a decision on the type, location, and conceptual design of the necessary improvements in order to accommodate future traffic demand in a safe and efficient manner. The PD&E Study also satisfies the requirements of the National Environmental Policy Act (NEPA) and the FHWA in order to qualify the project for Federal-aid funding of future development phases of the project.

This report documents the need for the improvements, and develops and evaluates improvement alternatives as they relate to the transportation facility. Information was collected relating to the engineering and environmental characteristics essential for the development of alternatives and for making analytical decisions. Once sufficient data were available, design criteria were established and "Build" alternatives were developed. The comparison of these alternatives to the "No Build" alternative was based on a variety of parameters with the goal being to identify the alternative having the least impact, while providing the necessary improvements. The design year for analysis is Year 2020.

In accordance with the FDOT policy and the FHWA requirements, a survey of wetland areas and biological resources within the project area was collected. The results of this investigation have been summarized and are presented in this report. The report documents any potential impacts to jurisdictional wetlands and protected species from the proposed roadway improvements and the efforts to avoid, minimize, and possibly mitigate for these impacts.



LEGEND

- Project Limits
- River / Water
- Railroad
- (54) State Road Numbers
- (581) County Road Numbers
- Proposed Roadway

FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 (S.R. 93)
PD&E STUDY
From South of S.R. 56 to North of S.R. 52
Pasco County, Florida

PROJECT LOCATION MAP

WPI Seg No. 258736 1
FAP No. NH-75-1(91)275

FIGURE 1-1

1.1 PROJECT NEED

The I-75 corridor from south of S.R. 56 to north of S.R. 52 is proposed to be improved from a four-lane to a six-lane freeway. The need for this improvement was established based on the evaluation of the following:

- The existing and expected future quality of traffic operations along the I-75 study corridor under the No-Project alternative;
- Traffic safety statistics for the period between 1991 and 1995;
- Local governments' long-range transportation plans designated need; and
- Social and economic demands.

According to the Pasco County Comprehensive Plan[1] and the Pasco County Metropolitan Planning Organizations Adopted 2015 Cost Affordable Transportation Plan[2], the existing I-75 corridor is functionally classified as a freeway and as a future six-lane facility from the Hillsborough County line to S.R. 54. The I-75 corridor is designated as a four-lane facility from S.R. 54 through the remainder of Pasco County to the Hernando County line. The improvements under consideration for the I-75 corridor are consistent with the anticipated approval of the Pasco County Metropolitan Planning Organizations 2020 Cost Affordable Transportation Plan[3].

1.2 EXISTING FACILITY

The I-75 corridor is primarily a north/south facility which, in its entirety, extends from a southern terminus at Miami, Florida, to a northern terminus at Sault Saint Marie, Michigan. The PD&E Study corridor encompasses the portion of I-75 from south of the proposed interchange with S.R. 56 to north of the existing interchange with S.R. 52, in Pasco County, Florida, a distance of approximately 19.15 km (11.902 mi). I-75's functional classification is "rural interstate." The facility is also a part of the Federal Aid Interstate System, the Florida Intrastate Highway System (FIHS), and State Highway System.

Please note, the new S.R. 56 interchange is currently under construction and has a scheduled opening year of August 2001. This interchange will therefore be considered an existing condition for the PD&E Study.

Within the study corridor, the existing I-75 mainline roadway primarily features two 3.658 m (12 ft) lanes each way, a 19.507 m (64 ft) depressed, grassed median, 3.658 m (12 ft) graded outside shoulders (of which 3.048 m [10 ft] is paved), 2.438 m (8 ft) graded inside shoulders (of which 1.219 m [4 ft] is paved), intermittent open roadside ditches on both sides, and a minimum limited access right of way (ROW) width of 91.44 m (300 ft). However, the northbound roadway currently features four lanes from south of Cypress Creek to just north of the creek, then tapers successively to three lanes and finally to two lanes near the location of the proposed S.R. 56 northbound exit ramp. The proposed S.R. 56 interchange project will widen only the northbound I-75 roadway in order to maintain the four lanes to the new exit ramp, and thereafter three lanes to the new entrance ramp terminal. In addition, the southbound I-75 roadway currently flares from two lanes to three lanes just north of the bridge over Cypress Creek.

1.3 PROPOSED IMPROVEMENTS

The preferred alternative mainline typical section features three 3.6 m (12 ft) lanes each way, 3.6 m (12 ft) outside shoulders (of which 3.0 m/10 ft is paved), while retaining the existing 19.507 m (64 ft) depressed median and 3.657 m (12 ft) inside shoulders (of which 3.048 m/10 ft is paved). A reduced border width of 21.567 m (70 ft) is proposed in order to avoid the need for additional ROW acquisition. Since the resultant border width is less than the required 25.0 m (82 ft), a design variation will be required to pursue this typical section.

Providing a loop ramp in the northwest quadrant of the I-75/S.R. 52 interchange would eliminate the conflict of the westbound to southbound left-turn movement with the eastbound through movement. The loop ramp would also eliminate the conflict of the westbound to southbound left-turn movement with the eastbound to southbound right-turn movement, as these movements merge together on the southbound entrance ramp to I-75. The

implementation of the loop ramp would reduce the signal operation from the existing three-phase to a two-phase signal operation, thus increasing the capacity of the intersection on the west side of the interchange. The loop ramp would ensure that the interchange could accommodate heavier traffic volumes while maintaining an acceptable LOS. Significantly higher traffic volumes, especially for the westbound to southbound movement, could be accommodated at the interchange. This would reduce queuing on the west side of the interchange and prevent potential queues from extending into the east side of the interchange.

The Interchange Modification Report (IMR) was reviewed and preliminarily accepted by the FHWA. The recommended loop ramp alternative was selected as the most cost effective alternative which meets the objectives of the IMR. This alternative accommodates future travel demand, maintains an acceptable level of service, and by eliminating the need for an additional interstate access location, does not degrade the operations of the interstate mainline. Queuing on the northbound exit ramp will also be reduced, thus improving safety along the interstate mainline. This loop ramp alternative also provides for heavy vehicles safe and easy access to adjacent land uses and to the southbound interstate. The recommended loop ramp alternative requires the least amount of ROW, has the least potential of affecting the surrounding environment, and improves traffic operations for local cross streets and cross street intersections.

Increasing capacity at the S.R. 52 interchange is necessary because it will address the anticipated future development in the north and eastern areas of Pasco County. Future development in the remaining portions of Pasco county is limited due to the presence of wellfields throughout the remaining areas of Pasco County.

1.4 PROJECT SEGMENTATION

Project segmentation is used in this type of study in order to effectively assess and compare the impacts of each alternative in different geographical areas within the project. After considering the interchange locations and type and age of existing structures along I-75 the project was divided into four study segments as follows:

- Segment A: South of Cypress Creek to north of the proposed S.R. 56 interchange
- Segment B: North of the proposed S.R. 56 interchange to north of the S.R. 54 interchange
- Segment C: North of the S.R. 54 interchange to north of Overpass Road
- Segment D: North of Overpass Road to north of the S.R. 52 interchange

The I-75 corridor is primarily a north/south facility which, in its entirety, extends from a southern terminus at Miami, Florida, to a northern terminus at Sault Saint Marie, Michigan. The PD&E Study corridor encompasses the portion of I-75 from south of the proposed interchange with S.R. 56 to north of the existing interchange with S.R. 52, in Pasco County, Florida, a distance of approximately 19.15 km (11.902 mi). I-75's functional classification is "rural interstate." The facility is also a part of the Federal Aid Interstate System, the Florida Intrastate Highway System (FIHS) and State Highway System.

Please note, the new S.R. 56 interchange is currently under construction and has a scheduled opening year of August 2001. This interchange will therefore be considered an existing condition for the PD&E Study.

1.5 RECOMMENDATION OF PREFERRED ALTERNATIVE

The preferred alternative mainline typical section features three 3.6 m (12 ft) lanes each way, 3.6 m (12 ft) outside shoulders (of which 3.0 m/10 ft is paved), while retaining the existing 19.507 m (64 ft) depressed median and 3.657 m (12 ft) inside shoulders (of which 3.048

m/10 ft is paved). A reduced border width of 21.567 m (70 ft) is proposed in order to avoid the need for additional ROW acquisition. Since the resultant border width is less than the required 25.0 m (82 ft), a design variation will be required to pursue this typical section.

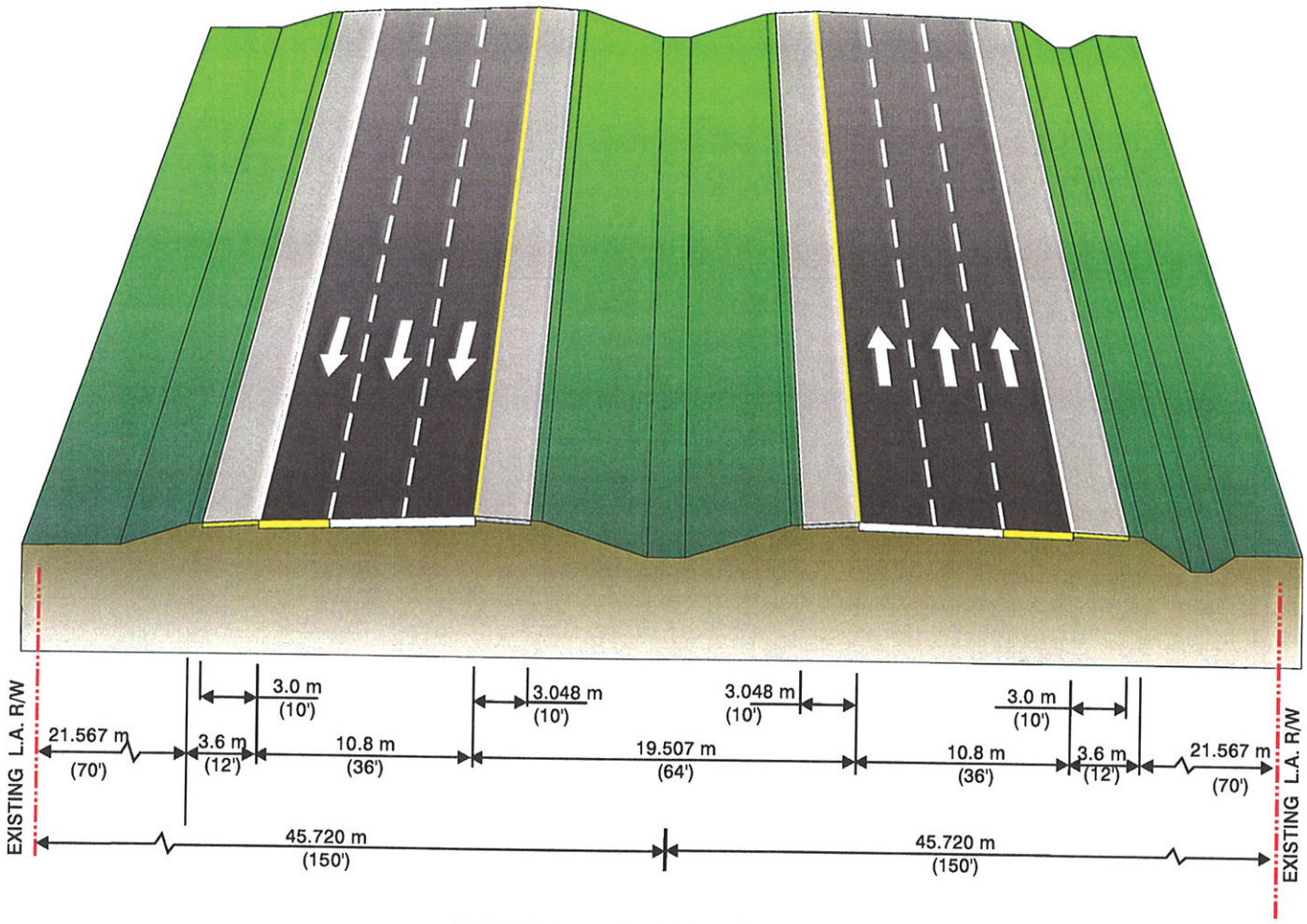
Providing a loop ramp in the northwest quadrant of the I-75/S.R. 52 interchange would eliminate the conflict of the westbound to southbound left-turn movement with the eastbound through movement. The loop ramp would also eliminate the conflict of the westbound to southbound left-turn movement with the eastbound to southbound right-turn movement, as these movements merge together on the southbound entrance ramp to I-75. The implementation of the loop ramp would reduce the signal operation from the existing three-phase to a two-phase signal operation, thus increasing the capacity of the intersection on the west side of the interchange. The loop ramp would ensure that the interchange could accommodate heavier traffic volumes while maintaining an acceptable LOS. Significantly higher traffic volumes, especially for the westbound to southbound movement, could be accommodated at the interchange. This would reduce queuing on the west side of the interchange and prevent potential queues from extending into the east side of the interchange.

The IMR was reviewed and preliminarily accepted by the FHWA. The recommended loop ramp alternative was selected as the most cost effective alternative which meets the objectives of the IMR. This alternative accommodates future travel demand, maintains an acceptable level of service, and by eliminating the need for an additional interstate access location, does not degrade the operations of the interstate mainline. Queuing on the northbound exit ramp will also be reduced, thus improving safety along the interstate mainline. This loop ramp alternative also provides for heavy vehicles safe and easy access to adjacent land uses and to the southbound interstate. The recommended loop ramp alternative requires the least amount of ROW, has the least potential of affecting the surrounding environment, and improves traffic operations for local cross streets and cross street intersections.

Increasing capacity at the S.R. 52 interchange is necessary because it will address the anticipated future development in the north and eastern areas of Pasco County. Future

development in the remaining portions of Pasco county is limited due to the presence of wellfields throughout the remaining areas of Pasco County.

Table 1-1 presents a summary of typical sections that are proposed by segment for each of the five alternatives. This report presents the typical section for the preferred alternative only (Figure 1-2). Figures for the other twelve typical sections are located in the Preliminary Engineering Report.



DESIGN SPEED: 110 km/h (70 mph)

LEGEND

Denotes Widening

FLORIDA DEPARTMENT OF TRANSPORTATION

I-75 (S.R. 93)
PD&E STUDY
From South of S.R. 56 to North of S.R. 52
Pasco County, Florida

PROPOSED TYPICAL SECTION

WPI Seg No. 258736 1
FAP No. NH-75-1(91)275

FIGURE 1-2

:\ COREL \ I-75PASCO \ REPORT \ NOISE \ FIG_3.CDR \ 11-4-97

Table 1-1

Alternatives Definition

Alternative Number	Typical Section Number by Project Segment			
	A	B	C	D
Alternative 1				
Roadway	1	1	1	1
Interchange	-	4	-	4
Other	6	-	8	-
Alternative 2				
Roadway	3	2	2	2
Interchange	-	5	-	5
Other	6	-	9	-
Alternative 3				
Roadway	3	3	3	3
Interchange	-	4	-	4
Other	6	-	8	-
Alternative 4				
Roadway	3	2	2	2
Interchange	-	5	-	11
Other	6	-	9	-
Alternative 5 (Preferred Alternative)				
Roadway	3	3	3	3
Interchange	-	4	-	10
Other	6	-	8	-

SECTION 2

PROJECT ENVIRONMENTAL SETTING

Interstate 75 is a major thoroughfare that serves the greater Tampa Bay area. The interstate systems in Hillsborough and Pasco Counties were constructed as rural freeways in the late 1960's. Population growth trends have shown a high growth rate over the past thirty years and continued development in both Pasco and northern Hillsborough Counties will result in increasing traffic volumes on the existing interstate system. Interstate's 75 and 275 are integral parts of the regional evacuation route for Hillsborough and Pinellas Counties.

The surrounding existing land-use is predominately active and abandoned agricultural mixed with small, but expanding areas of residential and commercial services near major interchanges. Interspersed are various rangeland and wetland habitats. The existing storm conveyance along the project limits primarily consists of open swales and roadside ditches. Existing ditches and swales within the limits of the project are limited.

Typically, roadway runoff drains directly into wetland areas adjacent to the ROW on the east and west sides of I-75 or is intercepted by cross drains. Median runoff is collected via ditch bottom inlets connected to existing cross drains under the interstate. South of S.R. 54, the roadway runoff generally flows toward Cypress Creek and Cabbage Swamp. Cypress Creek, a major tributary to the Hillsborough River, is located near the southern terminus of the project.

SECTION 3
THE WETLANDS EVALUATION

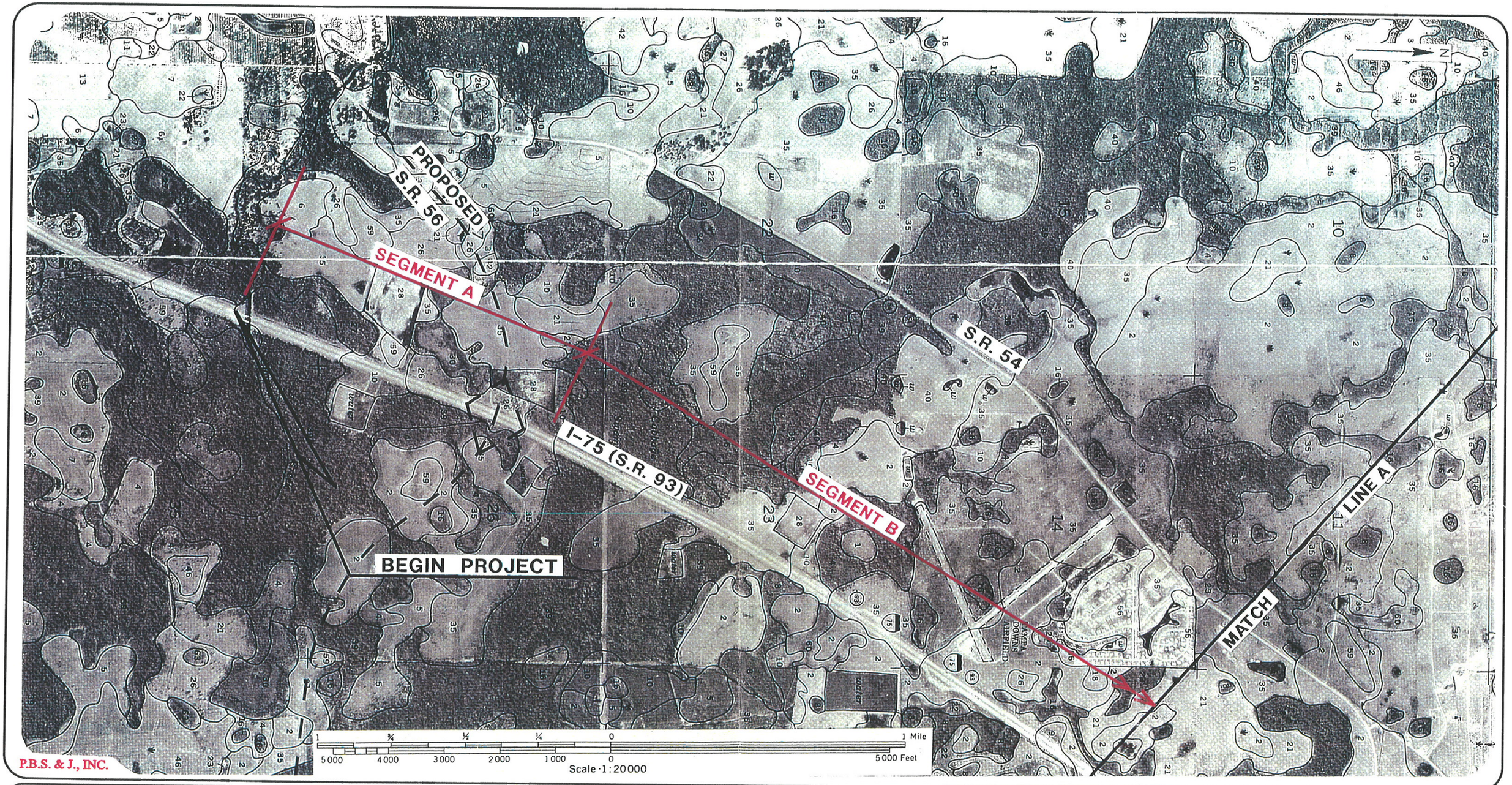
One objective of this report is to evaluate the functions and values of wetlands within the project corridor and how they may be affected by the proposed project. The permitting requirements and conceptual wetland mitigation options are also identified for the proposed project.

3.1 STUDY METHODOLOGY

Jurisdictional wetlands within the study area were located using federal criteria of the U.S. Army Corps of Engineers (USACOE), Federal Manual for Identifying and Delineating Jurisdictional Wetlands[4] (April 1987), and state criteria (Southwest Florida Water Management District (SWFWMD), Rule 62-340.300(1) and (2), F.A.C.). Areas in the vicinity of the project were investigated using the United States Department of Agriculture-Natural Resources Conservation Service Soil Survey for Pasco County (Figure 3-1), United States Geological Survey (USGS) Topographic Maps (Lutz, Wesley Chapel, and San Antonio Quadrangles), and recent aerial photography (dated February 1997, Scale 1:2000 - refer to Attachment A).

Mr. Charles Nation and Ms. Michele Eccleston with Post, Buckley, Schuh and Jernigan, Inc., conducted the evaluation and delineation of wetland areas from June 1997 through September 1997. Mr. Nation is a USACOE Certified Wetland Delineator.

The study area was evaluated and mapped using the Florida Land Use, Cover and Forms Classification System (FLUCFCS), developed by the FDOT (see Attachment A). The classification of wetlands within and adjacent to the ROW is in accordance with the U.S. Fish & Wildlife Service (USFWS) publication, The Classification of Wetlands and Deepwater Habitats of the United States[5] (Cowardin, et. al., 1979). Based on site specific evaluation, the USFWS classifications and wetland locations listed in the text may be slightly



Source: Soil Survey of Pasco County 1989 Sheets 56 & 66

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From South of S.R. 56 to North of S.R. 52
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SOILS SURVEY MAP

WPI Seg No. 258736 1
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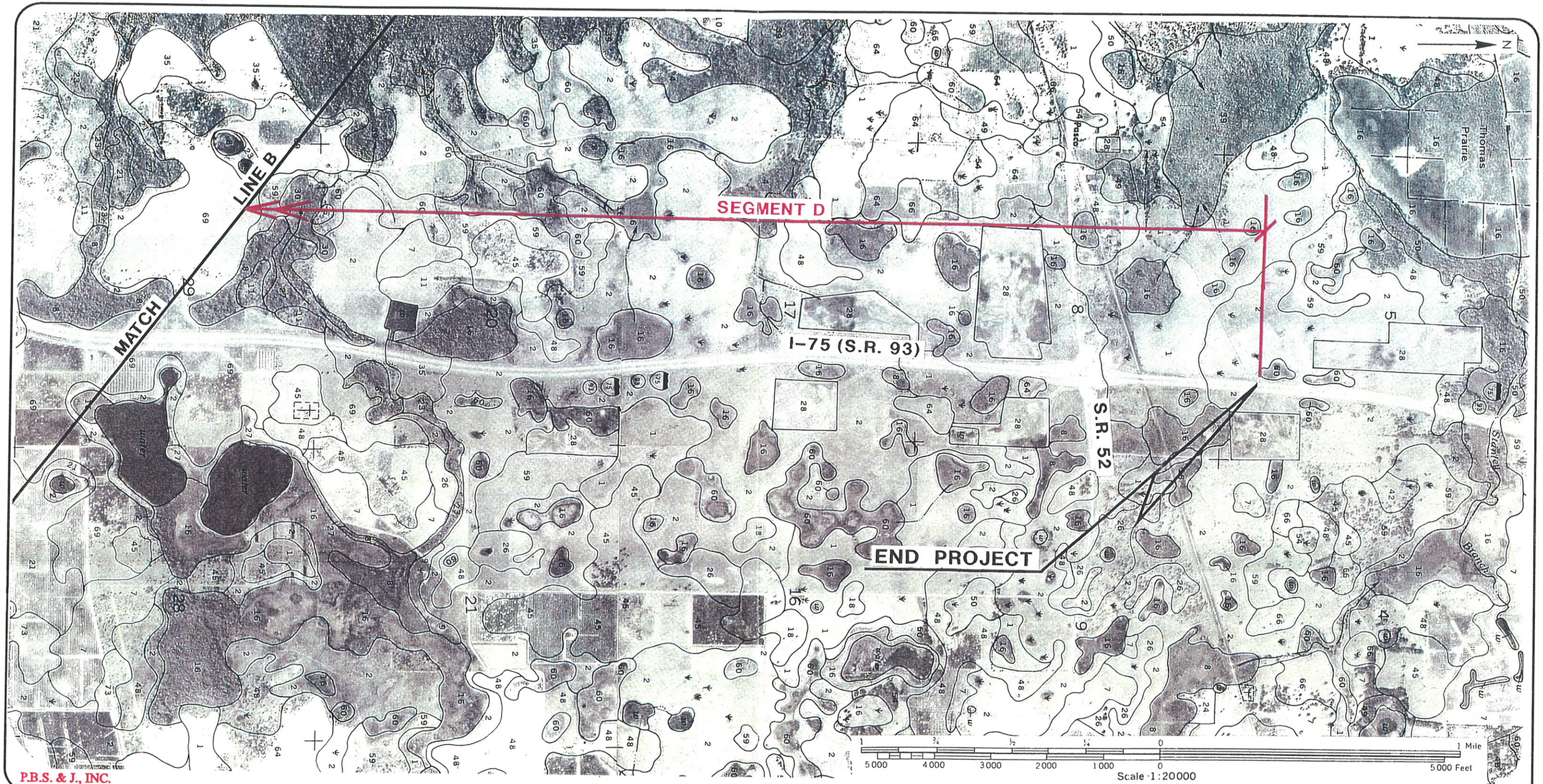
FIGURE 3-1A



P.B.S. & J., INC.

Source: Soil Survey of Pasco County 1989 Sheets 27 & 37

FLORIDA DEPARTMENT OF TRANSPORTATION

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SOILS SURVEY MAP

WPI Seg No. 258736 1
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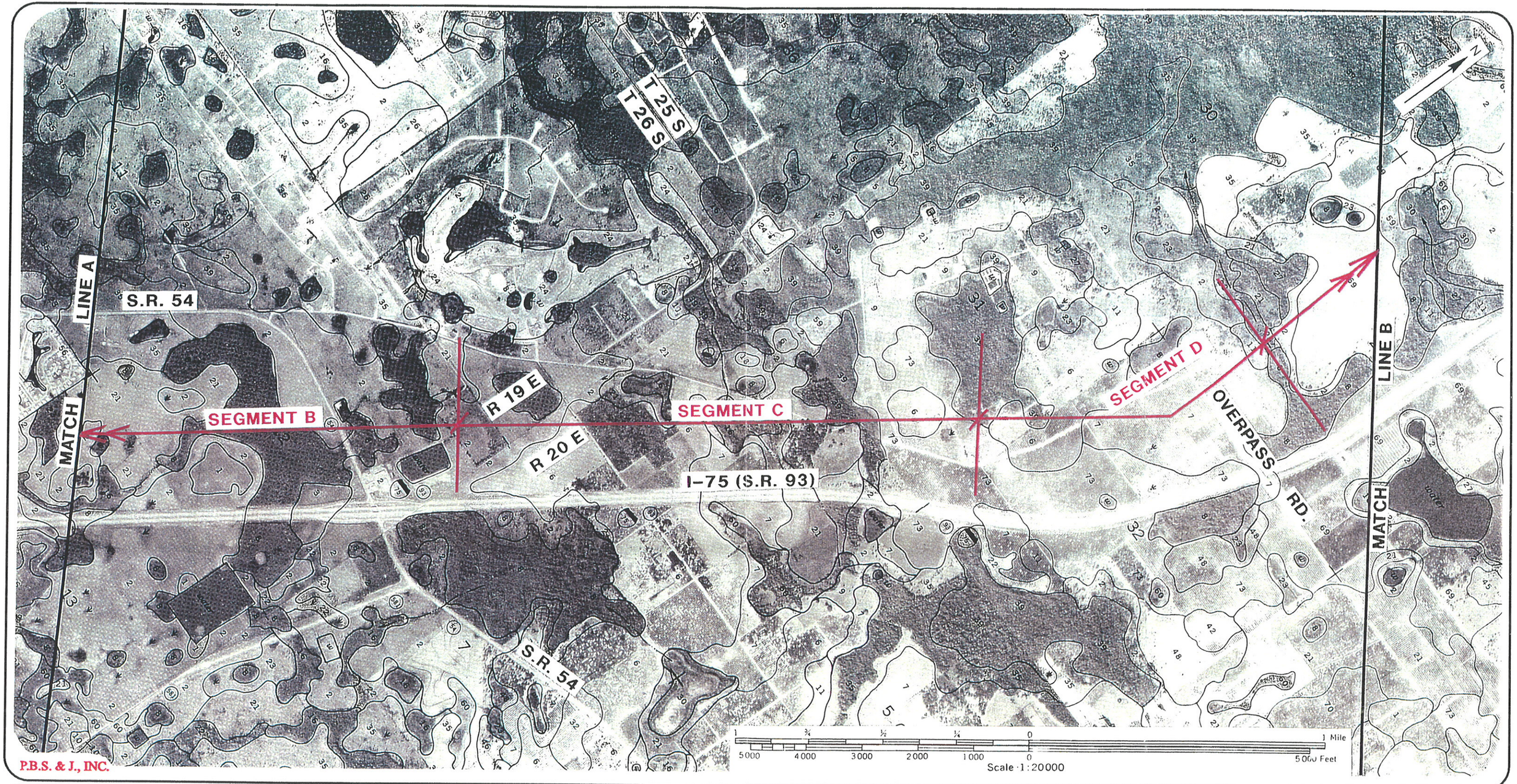
FIGURE 3-1C



Source: Soil Survey of Pasco County 1989 Sheets 36, 37, 46 & 47

FLORIDA DEPARTMENT OF TRANSPORTATION

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PD&E STUDY
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SOILS SURVEY MAP

WPI Seg No. 258736 1
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FIGURE 3–1B

different than the National Wetlands Inventory (NWI) designations. Please refer to Table 3-1 for a summary of the evaluated wetlands.

The determination of wetland areas is generally based on the presence of the following three indicators: dominance of hydrophytic vegetation; underlain by hydric soils; and evidence of wetland hydrology. The wetlands within the study area met all three indicator criteria, although much of the hydrophytic vegetation along the existing toe-of-slope occurs on sideslope fill material. The approximate locations of the evaluated wetlands are shown on Attachment A.

There are forty-five (45) state and federal jurisdictional wetland systems depicted on the aerials that are within, or adjacent to, the mainline I-75 project boundary. One additional wetland system (Wetland 37) is potentially impacted by the proposed loop ramp at S.R. 52. Some of the evaluated wetlands appear to be historically connected or have been bisected by I-75. Wetland types along the project include riverine (510), palustrine emergent (641), and forested (617, 621 and 630) wetland systems.

Of the forty-six (46) wetlands within and adjacent to the project limits, five wetland types have been chosen for analysis utilizing the Wetland Evaluation Technique (WET 2.1) (see Section 3.3). The following section describes the representative wetland for each wetland type.

3.2 DESCRIPTIONS OF REPRESENTATIVE WETLANDS

Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded (PFO1C) Contiguous Systems - Wetland 36 was chosen for analysis by the FDOT's WET 2.1. This wetland type (contiguous and isolated) is the most common wetland type along the project. Wetlands of this type range from less than 0.4 ha (1.0 ac) to greater than 40 ha (100 ac). Vegetative composition and wetland hydrology appear similar regardless of size. Wetland 36 was chosen because of its moderate size, surrounding environment (almost

Table 3-1
Wetland Characteristics Summary Table
Interstate 75 - Pasco County

Wetland Site No.	System	Class	Subclass	Water Regime	Wetland Drainage Criteria	Dominant Species	Florida Land Use Cover and Forms Classification
1 (R2AB4Hx)	Riverine	Lower Perennial	Aquatic Bed	Permanently Flooded	Contiguous	Water hyacinth, Water mil-foil, Smartweed	510
1A (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Laurel oak, Sweetgum, Cabbage palm, Cypress, Slash pine	630
1B (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Cabbage palm, Cypress, Slash pine	630
2 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Sweetgum, Cabbage palm, Cypress, Laurel oak	630
2A (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Sweetgum, Red maple, Water oak, Laurel oak	630
3 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Cabbage palm, Cypress, Slash pine, Laurel oak	630
3A (PFO2C)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Contiguous	Cabbage palm, Cypress, Red maple, Sweet gum, Slash pine	630
4 (PFO2F)	Palustrine	Forested	Needle-leaved deciduous	Semi-permanently Flooded	Contiguous	Cypress, Red maple, Cabbage palm, Slash pine	621
5 (PEM1H)	Palustrine	Emergent	Persistent	Permanently Flooded	Isolated	Soft rush, smartweed, maidencane, duck potato, dog fennel	641
5A (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Cabbage palm, Cypress, Slash pine, Laurel oak	630

Table 3-1 (Cont.)
Wetland Characteristics Summary Table
Interstate 75 - Pasco County

Wetland Site No.	System	Class	Subclass	Water Regime	Wetland Drainage Criteria	Dominant Species	Florida Land Use Cover and Forms Classification
6 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Carolina willow, primrose willow, red maple	617
7 (PFO2C)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Contiguous	Cypress, Red maple, Cabbage palm, Slash pine, Laurel oak	621
8 (PFO2C)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Contiguous	Cypress, Red maple, Cabbage palm, Slash pine, Laurel oak	621
8A (PEM1C)	Palustrine	Emergent	Persistent	Seasonally Flooded	Isolated	Soft rush, smartweed, maidencane, duck potato	641
8B (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Cabbage palm, Cypress, Slash pine, Laurel oak	630
9 (PFO2C)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Contiguous	Cypress, Red maple, Cabbage palm, Slash pine, Laurel oak	621
9A (PFO2C)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Contiguous	Cypress, Red maple, Cabbage palm, Slash pine, Laurel oak	621
10 (PFO2C)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Contiguous	Cypress, Red maple, Water oak, Long-leaf pine, Sweetgum	621
10A (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Cabbage palm, Cypress, Slash pine, Laurel oak	630
11 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Laurel oak, Red maple, Bald cypress, Wax myrtle, Carolina willow	617

Table 3-1 (Cont.)
Wetland Characteristics Summary Table
Interstate 75 - Pasco County

Wetland Site No.	System	Class	Subclass	Water Regime	Wetland Drainage Criteria	Dominant Species	Florida Land Use Cover and Forms Classification
12 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Sweetgum, Laurel oak	630
13 (PEM1H)	Palustrine	Emergent	Persistent	Permanently Flooded	Isolated	Cattail, Spatterdock	641
14 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Sweetgum, Laurel oak, Cabbage palm, Cypress, Slash pine,	630
15 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Sweetgum, Cabbage palm, Cypress, Slash pine, Laurel oak	630
16 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Sweetgum, Cabbage palm, Cypress, Laurel oak	630
17 (PFO2F)	Palustrine	Forested	Needle-leaved deciduous	Semi-Permanently Flooded	Isolated	Bald Cypress, Red maple, Sweetgum, Cabbage palm, Laurel oak	621
18 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Sweetgum, Cabbage palm, Cypress, Slash pine, Laurel oak	630
19 (PEM1C)	Palustrine	Emergent	Persistent	Seasonally Flooded	Contiguous	Pickerel weed, maidencane, soft rush	641
20 (PEM1C)	Palustrine	Emergent	Persistent	Seasonally Flooded	Isolated	Maidencane, soft rush, smartweed, duck potato, sedges and rushes	641
21 (PFO1C)	Palustrine	Forested	Broad-leaved Deciduous	Seasonally Flooded	Isolated	Red maple, Sweetgum, Cabbage palm, Cypress, Slash pine, Laurel oak	630

Table 3-1 (Cont.)
Wetland Characteristics Summary Table
Interstate 75 - Pasco County

Wetland Site No.	System	Class	Subclass	Water Regime	Wetland Drainage Criteria	Dominant Species	Florida Land Use Cover and Forms Classification
22 (PFO2Cd)	Palustrine	Forested	Needle-leaved deciduous	Seasonally Flooded	Isolated	Bald cypress-area logged and drained	621
22A (PEM1)	Palustrine	Emergent	Persistent	Permanently Flooded	Unknown	Stormwater pond with little emergent vegetation	534
23 (PFO2F)	Palustrine	Forested	Needle-leaved deciduous	Semi-permanently Flooded	Isolated	Bald cypress, Red maple, Laurel oak, Cabbage palm,	630
24 (PFO1F)	Palustrine	Forested	Broad-leaved deciduous	Semi-permanently Flooded	Isolated	Red maple, Cypress, Slash pine, Laurel oak, Saw palmetto	630
25 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Laurel oak, Sweetgum, Cabbage palm, Cypress	630
26 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Laurel oak, Sweetgum, Cabbage palm, Cypress	630
27 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Laurel oak, Sweetgum, Cabbage palm, Cypress	630
28 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Laurel oak, Sweetgum, Cabbage palm, Cypress	630
29 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Carolina willow, Red maple, Laurel oak, Sweet gum, Cabbage palm	617
30 (PEM1H)	Palustrine	Emergent	Persistent	Permanently Flooded	Isolated	Pickerelweed, primrose willow, softrush, Carolina willow	641/ 617

Table 3-1 (Cont.)
Wetland Characteristics Summary Table
Interstate 75 - Pasco County

Wetland Site No.	System	Class	Subclass	Water Regime	Wetland Drainage Criteria	Dominant Species	Florida Land Use Cover and Forms Classification
31 (PFO2F)	Palustrine	Forested	Needle-leaved deciduous	Semi-Permanently Flooded	Isolated	Bald Cypress, Red maple, Laurel oak, Sweet gum, Cabbage palm	621
32 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Isolated	Red maple, Sweetgum, Water Oak, Laurel oak, Cabbage palm, Cypress	630
33 (PFO1F)	Palustrine	Forested	Broad-leaved Deciduous	Semi-Permanently Flooded	Contiguous	Red maple, Sweetgum, Water oak, Laurel oak, Cypress	630
34 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Laurel oak, Water oak, Sweet gum, Cabbage palm, Cypress	630
35 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Laurel oak, Sweetgum, Cabbage palm, Cypress	630
36 (PFO1C)	Palustrine	Forested	Broad-leaved deciduous	Seasonally Flooded	Contiguous	Red maple, Laurel oak, Water oak, Sweetgum, Cabbage palm, Cypress	630

NOTE: Descriptions of wetlands are in the potential impact zone and do not necessarily describe the entire wetland system.

all wetlands have been affected by agricultural activities), and ease of access. Most of these wetlands have a minor component of bald cypress (*Taxodium distichum*), suggesting that these areas may have been cypress strand before logging.

Wetland 36 is a relatively large system that includes forested and scrub-shrub components. In the potential impact zone (ROW), this wetland is a palustrine, forested, broad-leaved deciduous, seasonally flooded system (PFO1C). The forested section has dominant coverage of laurel oak (*Quercus laurifolia*), red maple (*Acer rubrum*), bald cypress, slash pine (*Pinus elliottii*), ironwood (*Carpinus caroliniana*), dahoon holly (*Ilex cassine*), cabbage palm (*Sabal palmetto*), and American elm (*Ulmus americana*). Subcanopy coverage consists of scattered wax myrtle (*Myrica cerifera*), Carolina willow (*Salix caroliniana*), salt-bush (*Baccharis halimifolia*), elderberry (*Sambucus canadensis*), cabbage palm (*Sabal palmetto*), and gallberry (*Ilex glabra*).

Dominant ground coverage in these systems is often provided by pickerel weed (*Pontedaria cordata*), maidencane (*Panicum hemitomon*), duck potato (*Sagittaria lanceolata*), cinnamon fern (*Osmunda cinnamomea*), royal fern (*Osmunda regalis*), Virginia chain fern (*Woodwardia virginica*), pepper-vine (*Ampelopsis arborea*), and shield fern (*Thelypterus* spp.), with minor coverage provided by ragweed (*Ambrosia artemisiifolia*), broomsedges (*Andropogon glomeratus* and *Andropogon virginicus*), beggar-ticks (*Bidens* spp.).

Overall quality of this system (and others of this type) is moderate to high. Some wading birds were observed foraging in this wetland. Beyond the ROW limits, the forested wetland transitions into a palustrine, forested, needle-leaved deciduous, permanently flooded system (PFO2H).

Palustrine, Forested, Broad-leaved Deciduous, Seasonally Flooded (PFO1C) Isolated Systems - Wetland 21 was chosen for analysis by WET 2.1. Wetlands of this type range from less than 0.4 ha (one ac) to greater than 40 ha (100 ac). Vegetative composition and wetland hydrology appear similar regardless of size. Wetland 21 was chosen because of its

intermediary size, surrounding environment, and its ease of access. Some of these wetlands have a minor component of bald cypress.

Wetland 21 is a relatively small system that is comprised of forested and scrub-shrub wetland. In the potential impact zone (ROW), this wetland is a palustrine, forested, broad-leaved deciduous, seasonally flooded system (PFO1C). The forested section has dominant coverage of laurel oak, red maple, bald cypress, slash pine, dahoon holly, cabbage palm, and American elm. Subcanopy coverage consists of scattered wax myrtle, Carolina willow, salt-bush, elderberry, cabbage palm, and gallberry.

Dominant ground coverage in these systems is often provided by pickerel weed, maidencane, duck potato, cinnamon fern, royal fern, and Virginia chain fern. The overall quality of this system (and others similarly classified) is moderate to high.

Palustrine, Forested, Needle-leaved Deciduous, Seasonally Flooded (PFO2C) - Wetland 9 was chosen for analysis by WET 2.1. This is a relatively large system that is comprised of forested and scrub-shrub components. In the potential impact zone (ROW), this wetland is a palustrine, forested, needle-leaved deciduous, seasonally flooded system (PFO2C). The forested section has dominant coverage of bald cypress, pond cypress, laurel oak, dahoon holly, and cabbage palm.

Subcanopy coverage consists of scattered wax myrtle, salt-bush, cabbage palm, and gallberry. Dominant ground coverage in the potential impact area is provided by maidencane, duck potato, cinnamon fern, royal fern, and Virginia chain fern, with minor coverage provided by ragweed and broomsedges. Overall quality of this system (and others similarly classified) is moderate to high.

Riverine, Lower Perennial, Aquatic Bed, Permanently Flooded, Channelized - Wetland 1, Cypress Creek, is the only stream crossing along the project, and consequently the only riverine wetland system. At the point of crossing, Cypress Creek has been channelized with

steep banks in the potential area of impact. The stream channel has a thick growth of water hyacinth (*Eichhornia crassipes*) throughout the summer with very limited littoral shelf due to channelization. The potential impact zone is characterized by steep slopes with transitional weedy species and few trees. Dominant coverage in the potential impact area is provided by water hyacinth, and torpedo grass (*Panicum repens*), with some pickerel weed, duck potato, and arrowhead (*Sagittaria latifolia*). Transitional coverage is provided by ragweed, broomsedges, and beggar-ticks (*Bidens* spp.).

Overall quality of this system at the road crossing is low to moderate. Some wading birds were observed foraging in this wetland. Beyond the ROW limits, the riverine wetland transitions into a palustrine, forested, broad-leaved evergreen, seasonally flooded system (PFO3C).

Palustrine, Emergent, Persistent, Seasonally Flooded (PEM1C) - Wetland 19 was chosen for analysis by WET 2.1. Wetland 19 is a palustrine, emergent, persistent, seasonally flooded wetland system (PEM1C). The area appears to be a remnant of a forested system to the west, but is currently surrounded by improved pasture. Dominant ground coverage in the potential impact area is provided by pickerel weed, maidencane, duck potato, soft rush (*Juncus effusus*), spikerush (*Eleocharis baldwinii*), beak-rushes (*Rhynchospora* spp.), sand cordgrass (*Spartina bakeri*), pennywort (*Hydrocotyle umbellata*), yellow-eyed grass (*Xyris* spp.), and various sedges (*Cyperus* spp. and *Carex* spp.). Overall quality of this system is low to moderate. Some wading birds were observed foraging in this wetland.

Other Surface Waters - There are several small areas designated as "Other Surface Waters" (OSW) on the FLUCFCS map (Attachment A) that appear to be upland-cut ditches/swales that have evidence of wetland hydrology and a predominance of hydrophytic vegetation. The majority of the roadway sideslopes adjacent to this segment of I-75 have no swales or ditches with a discernable bed and bank. Swales within the upland portions of the project are cut from well-drained soils and are almost exclusively covered with bahiagrass (*Panicum notatum*). The OSW that do have hydrophytic vegetation are dominated by Carolina willow,

primrose willow, elderberry, *Andropogon* spp., pennywort, coinwort (*Centella asiatica*), various sedges (*Cyperus* spp.), duck potato and beak-rushes (*Rhynchospora* spp.). Some of these OSW areas are periodically mowed or cleared by FDOT maintenance crews.

Hydroperiod fluctuations were determined predominantly by evaluating lichen lines, water stained trees, outer wetland grades (seasonal high water table [SHWT]) and moss collars or adventitious roots (normal pool [NP]) within the wetlands. Unless an adjacent property has flooding problems that can be minimized by FDOT, it is normal procedure to maintain existing control elevations for any cross-drains or culverts.

3.3 THE WETLAND EVALUATION TECHNIQUE (WET 2.1)

An analysis of the representative wetland systems affected by the proposed viable alternatives for road improvements to I-75 was performed using the Wetland Evaluation Technique (WET 2.1). Presented here are the results of the Level 1 and 2 evaluations of five (5) representative wetland types encountered along the proposed ROW. The evaluation summary sheets are included in Appendix C.

The WET 2.1 evaluates wetland functions and values in terms of social significance, effectiveness, and opportunity. The social significance evaluation has two levels of analysis. The effectiveness and opportunity evaluations consist of three levels of analysis. The WET 2.1 model interprets results by assigning a qualitative probability rating of HIGH, MODERATE, or LOW to certain wetland functions and values. These ratings are not direct estimates of magnitude, but rather an estimate of the probability that a function or value will exist in the wetland. Generally, a wetland will receive a MODERATE rating unless the conservative interpretation keys find enough predictors to rate a HIGH or LOW probability.

3.3.1 Combining Similar Wetlands for Analysis

There are 46 wetland systems that may be impacted by the proposed improvements to I-75. Wetlands which were similarly classified using the USFWS system were combined, with a representative wetland chosen to be evaluated by WET 2.1. Presented below is a list of the five (5) representative wetland types encountered and the corresponding number of each wetland within each group.

1. Palustrine, Forested (PFO1C - contiguous) - Wetlands 1A, 1B, 2, 2A, 3, 5A, 8B, 10A, 14, 16, 33, 34, 35, 36
2. Palustrine, Forested (PFO1C - isolated) - Wetlands 6, 11, 12, 15, 18, 21, 24, 25, 26, 27, 28, 29, 32
3. Palustrine, Forested (PFO2C - Cypress) - Wetlands 3A, 4, 7, 8, 9, 9A, 10, 17, 22, 23, 31, 37
4. Riverine system (R2AB4Hx) - Cypress Creek - Wetland 1
5. Emergent wetland (PEM1H/C) - Wetlands 5, 8A, 13, 19, 20, 30

3.3.2 Palustrine, Forested (PFO1C) Hardwoods - Contiguous Systems

The representative Wetland 36 rated LOW or HIGH in terms of functions and values for effectiveness. One MODERATE rating was received in terms of effectiveness for "Production Export." By definition, high production export is the flushing of relatively large amounts of plant material from the Assessment Area (AA) into downslope waters.

The "Ground Water Recharge/Discharge" evaluation for this wetland rated LOW for these functions in terms of effectiveness. The Level 1 evaluation examines general features such as soils, topography, land cover, climate, etc.

In terms of effectiveness, HIGH ratings were obtained for the "Sediment Stabilization," "Sediment/Toxicant Retention," "Nutrient Removal/Transformation," and "Floodflow Alteration" functions. There are many reasons why these wetlands rated HIGH with regard

to these functions, including, but not limited to: restrictive outlets, size, opportunity, vegetation conditions, long seasonal flooding, location within the watershed, and low flow velocity. It is presumed that all wetlands of this type would rate similarly and for the same reasons. It is not expected that the proposed construction will affect any of the high ratings for any of the affected wetlands of this type.

In terms of social significance, this wetland rated MODERATE for the "Wildlife Diversity/Abundance" and "Aquatic Diversity/Abundance" values. The presumed lack of rare or endangered fish species, the lack of commercial fishing, and the size and location of the AA moderated the value of these wetlands concerning wildlife values. This is presumed true for other affected forested systems.

3.3.3 Palustrine, Forested (PFO1C) Hardwoods - Isolated Systems

This wetland type is the most common of the systems identified along the project corridor. Proposed impacts to these systems are expected to be minor.

Wetland 21 is an isolated, forested system located immediately adjacent to the roadway. It is highly disturbed containing predominantly exotic species such as Brazilian pepper and is representative of a majority of the wetlands located along the project corridor. This wetland rated high for "Wildlife D/A Migration" and "Wildlife D/A Wintering."

Both of the evaluated wetlands above received LOW or MODERATE ratings in terms of functions, values and effectiveness, except for the High probability ratings for "Floodflow Alteration," "Sediment Stabilization," and "Nutrient Removal/Transformation." There are many reasons why this wetland rated HIGH with regard to these functions, including, but not limited to: restrictive outlets, size, opportunity, long seasonal flooding, location within the watershed, and low flow velocity. It is presumed that all wetlands of this type would rate similarly and for the same reasons.

Since the proposed impacts are marginal, no long-term effects to wildlife habitat, vegetation, or the ability of the wetland to perform the previously listed functions are expected.

3.3.4 Palustrine, Forested (PFO2C) Cypress Dominated Systems

The representative Wetland 9 rated LOW or HIGH in terms of functions and values for effectiveness. The "Ground Water Recharge/Discharge" evaluation for this wetland rated LOW for these functions in terms of effectiveness. The Level 1 evaluation examines general features such as soils, topography, land cover, climate, etc.

In terms of effectiveness, HIGH ratings were obtained for the "Sediment Stabilization," "Sediment/Toxicant Retention," "Nutrient Removal/Transformation," and "Floodflow Alteration" functions. There are several reasons why this wetland rated HIGH with regard to these functions, including, but not limited to: restrictive outlets, size, opportunity, erect vegetation, long seasonal flooding, location within the watershed, and low flow velocity. It is presumed that all wetlands of this type would rate similarly. It is not expected that the proposed construction will affect any of the high ratings for any of the affected wetlands of this type.

In terms of social significance, this wetland rated MODERATE for the "Wildlife Diversity/Abundance" and "Aquatic Diversity/Abundance" values. The presumed lack of rare or endangered fish species, the lack of commercial fishing, and the size and location of the AA moderated the value of these wetlands concerning wildlife values. This is presumed true for other affected cypress dominated systems.

3.3.5 Riverine System (R2AB4Hx) - Cypress Creek

Cypress Creek is the representative riverine system (Wetland 1) and rated LOW or MODERATE in terms of effectiveness for all functions or values except for the HIGH ratings in terms of "Sediment Stabilization." These probabilities for functions and values are expected for all riverine systems encountered.

Considering the recreational value of Cypress Creek, the WET 2.1 identified it HIGH in terms of social significance for "Wildlife Diversity/Abundance," "Aquatic Diversity/ Abundance," "Uniqueness/Heritage," and "Recreation." The nature of the improvements to this roadway may have little or no detrimental effect on vegetation, hydrology, wildlife habitat, or changes in water flow to the already disturbed crossing area when the new bridge(s) are constructed.

3.3.6 Palustrine, Emergent Wetlands (PEM1C)

The representative palustrine, emergent wetland was Wetland 19. This wetland type rated LOW to MODERATE in most categories. The exceptions being the functions of "Sediment Stabilization," "Sediment/Toxicant Retention," and "Nutrient Removal/ Transformation," where these wetlands achieved HIGH ratings. This is primarily because of an abundance of erect vegetation, strategic location in an agricultural setting, and gradient.

This system is somewhat disturbed and exhibits moderate water-quality function and wildlife value. There are no apparent public or consumptive uses and because of its size and disturbance, wetland impacts should not significantly affect habitat values or increase erosion or sedimentation in the area. The proposed impacts to these emergent wetland systems should not adversely affect hydrology, habitat value, or vegetation.

3.4 ESTIMATED WETLAND IMPACTS

The above wetland descriptions give overall and site specific qualitative assessments of the quality of wetlands associated with this project area. Overall, the proposed impact areas represent moderate to high quality wetlands in terms of function and effectiveness. Habitat limitations in the potential impact areas are due in part to the dominance of nuisance and/or exotic species in many wetlands. The estimated wetland impact acreage (Table 3-2) will be based on the proposed alternatives within the project area boundary.

If the proposed roadway improvements are constructed within the existing FDOT ROW, the quantity and quality of wetland impacts would be minimal. Wetland impacts are primarily confined to OSW and forested wetlands currently in the existing ROW. These OSW are regulated differently than other types of wetlands. Compensation for OSW impacts is generally provided by similar water quality facilities (i.e., swales, stormwater ponds, etc.). Small amounts of wetland habitat within the ROW (outer 3-6 m [10-20 ft]) could be impacted by widening to accommodate clear safety zones or widening stormwater treatment swales.

3.5 PERMIT REQUIREMENTS AND REGULATORY AGENCY REVIEW

As part of the coordination process, the USFWS, the Florida Game and Fresh Water Fish Commission (FGFWFC) (now known as the Florida Fish and Wildlife Conservation Commission), the Florida Natural Areas Inventory (FNAI), the FDEP, the USACOE, and the SWFWMD will be contacted regarding the proposed improvements to this section of I-75. Permits for any construction in jurisdictional wetlands will be required from the USACOE and SWFWMD.

Three agencies have regulatory jurisdiction authority over wetlands within the project area. These agencies include the SWFWMD, the USACOE, the FDEP. The isolated wetlands are listed under USACOE and SWFWMD jurisdiction and the "Waters of the State" fall under all three agencies' jurisdiction. The permitting process for the FDEP has been delegated to the SWFWMD with permitting requirements associated with the proposed roadway improvements being regulated under the Environmental Resource Permit (ERP effective October, 1995).

Table 3-2
Estimated Wetland Impacts (Hectare/Acres) by Project Segment

Wetland Site No.	FLUCFCS Designation	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	PREFERRED ALTERNATIVE (ALT 5)
1 (R2AB4Hx)	510	0.01/0.04	0.01/0.03	0.01/0.01	0.01/0.04	0.01/0.01
1A (PFO1C)	630	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
1B (PFO1C)	630	0.39/0.97	0.31/0.76	0.14/0.34	0.31/0.76	0.14/0.34
2 (PFO1C)	630	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
2A (PFO1C)	630	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
Segment A Total		**0.40/1.01**	**0.32/0.79**	**0.14/0.35**	**0.32/0.80**	**0.15/0.35**
3 (PFO1C)	630	0.00/0.01	0.01/0.01	0.00/0.00	0.01/0.01	0.00/0.00
3A (PFO2C)	630	0.05/0.13	0.05/0.13	0.00/.0.00	0.05/0.13	0.00/0.00
4 (PFO2F)	621	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
5 (PEM1H)	641	0.02/0.04	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
5A (PFO1C)	630	0.05/0.12	0.00/0.00	0.02/0.05	0.00/0.00	0.02/0.05

Table 3-2 (Cont.)
Estimated Wetland Impacts (Hectare/Acres) by Project Segment

Wetland Site No.	FLUCFCS Designation	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	PREFERRED ALTERNATIVE (ALT 5)
6 (PFO1C)	617	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
7 (PFO2C)	621	0.12/0.30	0.00/0.00	0.05/0.12	0.00/0.00	0.05/0.12
8 (PFO2C)	621	0.01/0.04	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
8A (PEM1C)	641	0.02/0.04	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
8B (PFO1C)	630	0.12/0.29	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
9 (PFO2C)	621	0.09/0.23	0.00/0.00	0.00/0.01	0.00/0.00	0.00/0.01
9A (PFO2C)	621	0.29/0.72	0.00/0.00	0.13/0.32	0.00/0.00	0.13/0.32
10 (PFO2C)	621	0.14/0.34	0.00/0.00	0.07/0.17	0.00/0.00	0.07/0.17
Segment B Total		**0.92/ 2.27**	**0.06/0.15**	**0.27 /0.67**	**0.06/0.15**	**0.27/0:67**
10A (PFO1C)	630	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
11 (PFO1C)	617	0.02/0.05	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00

Table 3-2 (Cont.)
Estimated Wetland Impacts (Hectare/Acres) by Project Segment

Wetland Site No.	FLUCFCS Designation	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	PREFERRED ALTERNATIVE (ALT 5)
12 (PFO1C)	630	0.03/0.08	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
13 (PEM1H)	641	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
14 (PFO1C)	630	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
15 (PFO1C)	630	0.01/0.01	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
36 (PFO1C)	630	0.01/0.04	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
Segment C Total		**0.07/0.18**	**0.00/0.00**	**0.00/0.00**	**0.00/0.00**	**0.00/0.00**
16 (PFO1C)	630	0.02/0.04	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
17 (PFO2F)	621	0.03/0.06	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
18 (PFO1C)	630	0.13/0.33	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
19 (PEM1C)	641	0.02/0.05	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
20 (PEM1C)	641	0.03/0.08	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
21 (PFO1C)	630	0.22/0.53	0.18/0.43	0.16/0.40	0.18/0.43	0.16/0.39

Table 3-2 (Cont.)
Estimated Wetland Impacts (Hectare/Acres) By Project Segment

Wetland Site No.	FLUCFCS Designation	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	PREFERRED ALTERNATIVE (ALT 5)
22 (PFO2Cd)	621	0.23/0.58	0.17/0.42	0.18/0.44	0.17/0.42	0.00/0.01
22A (PEM1)	534	0.12/0.31	0.08/0.20	0.08/0.21	0.08/0.20	0.04/0.10
23 (PFO2F)	630	0.07/0.17	0.03/0.08	0.02/0.06	0.03/0.08	0.03/0.08
24 (PFO1F)	630	0.01/0.04	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
25 (PFO1C)	630	0.01/0.02	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
26 (PFO1C)	630	0.01/0.01	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
27 (PFO1C)	630	0.05/0.11	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
28 (PFO1C)	630	0.02/0.06	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
29 (PFO1C)	617	0.21/0.52	0.12/0.29	0.18/0.43	0.12/0.29	0.60/1.48
30 (PEM1H)	641/ 617	0.16/0.40	0.13/0.33	0.14/0.35	0.13/0.33	0.03/0.07
31 (PFO2F)	621	0.15/0.37	0.11/0.28	0.01/0.03	0.11/0.28	0.01/0.03
32 (PFO1C)	630	0.02/0.05	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00

Table 3-2 (Cont.)
Estimated Wetland Impacts (Hectare/Acres) By Project Segment

Wetland Site No.	FLUCFCS Designation	ALTERNATIVE 1	ALTERNATIVE 2	ALTERNATIVE 3	ALTERNATIVE 4	PREFERRED ALTERNATIVE (ALT 5)
33 (PFO1F)	630	0.14/0.36	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
34 (PFO1C)	630	0.29/0.70	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
35 (PFO1C)	630	0.02/0.05	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00
Segment D Totals		**1.96/4.84**	**0.82/2.03**	**0.77/1.92**	**0.82/2.03**	**0.87/2.16**
GRAND TOTALS		**3.35/8.30**	**1.20/2.97**	**1.18/2.94**	**1.20/2.98**	**1.29/3.18**

The extent of wetland impacts will depend on the final alignment. It is anticipated that several environmental regulatory agencies will be involved in the permitting process for the proposed improvements to I-75. The project falls within the jurisdiction of federal, district, and state regulatory agencies. The final design of this project should include further input from all agencies involved. Environmental permitting requirements are anticipated to be as follows:

United States Army Corps of Engineers - Nationwide Dredge and Fill Permit - (Clean Water Act - Section 404), mitigation required.

Southwest Florida Water Management District - An Environmental Resource Permit will be necessary with compensatory wetland mitigation required.

3.6 JUSTIFICATION FOR PROPOSED IMPACTS

The FDOT will attempt to minimize wetland impacts to the greatest extent possible, however, federal highway safety requirements for maintaining sideslope grades and roadway geometry are critical elements that will affect the project design. It is noted that most of the proposed construction will be conducted within existing cleared, sideslope areas. This should ensure that the majority of the impacts to wetlands will be to the fringe currently maintained by FDOT.

Disturbed wetland areas along the existing roadway have experienced varying degrees of hydroperiod alteration (fill material or ditching), cleared vegetation and/or nuisance species invasion, sedimentation problems, and water quality degradation due to human activities. Based upon the above considerations, it is determined that there is no practicable alternative to the proposed construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

3.7 CONCEPTUAL MITIGATION FOR WETLAND IMPACTS

Pursuant to Executive Order 11990, dated May 23, 1977, guidelines have been established to avoid long-term and short-term adverse impacts to wetland resources and to avoid new construction in wetlands wherever there is a practicable alternative. First, it must be demonstrated that avoidance of wetland areas has been accomplished to a reasonable extent (viable alternative alignments under consideration or expansion to the inside or outside of the existing travel lanes). Second, minimization techniques must be employed before mitigation of wetland loss will be considered. Wetland impacts which will result from the construction of this project will be mitigated pursuant to S. 373.4137 F.S. to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.s. 1344. Compensatory mitigation may include a monetary contribution to the FDEP or, if that option is unavailable, actions such as wetland preservation, restoration, enhancement, and/or creation.

If, after careful consideration, it has been determined that the no-build and the avoidance alternatives are not practical minimization efforts, FHWA will support and fund reasonable levels of compensation to mitigate the portion of the impact which remains after minimization, as per the Federal Highway Environmental Policy Statement of April 20, 1990. All funding for environmental mitigation must be based on scientifically valid analysis and must show documented support of how the cost was derived to mitigate the adverse impact.

Federal participation, as described in 23 CFR 777.11, will be based on "professional judgement as to the appropriate extent of replacement, using the best available and appropriate scientific tools for wetland evaluation and impact assessment," including the WET 2.1, Wetland Rapid Assessment Procedure (WRAP), or the Hydro-geomorphic Model (HGM) functional evaluation methodologies and/or coordination meetings with regulatory agency personnel. Generally, the mitigation actions set out above - preservation, restoration, enhancement, and creation - then become applicable for consideration.

Recent legislation was passed regarding wetland mitigation for FDOT projects (FS 373.4137, as created by Senate Bill 1986). This legislation allows FDOT to pay a specific price per acre to the FDEP (SWFWMD) for each acre of wetland impact. This price is subject to change and takes into account the inflation rate. Current estimated value is approximately $80,000 per acre. The funds raised will be used for aquatic weed control and to fund project specific mitigation plans approved by the legislature. Implementation procedures are currently being finalized to merge the mitigation requirements from state and federal permitting programs under Senate Bill 1986.

It is estimated that the preferred alternative will impact less than 0.40 ha (one acre) of state and/or federal jurisdictional wetland. It is unclear at this time the amount of compensatory wetland credit that may be required to mitigate for the estimated wetland impacts from this project. According to SWFWMD's Environmental Resource Permitting Information Manual, mitigation ratio guidelines range from 2:1 to 5:1 (created/restored) for forested wetland systems and 1.5:1 to 4:1 for non-forested systems. Wetland enhancement credit usually ranges from 4:1 to 20:1 and credit for wetland preservation will range from 10:1 to 60:1 (preservation/impacted). A more accurate determination of actual impacts will be provided after the preferred alternative is selected.

SECTION 4
PROTECTED SPECIES

4.1 INTRODUCTION

Information reviewed includes, the FNAI matrix of protected species in Pasco County, coordination with state and federal wildlife agencies regarding the area in general, the "Florida Atlas of Breeding Sites for Herons and Their Allies," and historic and recent aerial photography.

The study area was surveyed for the presence of protected species and/or their preferred habitat. A literature review was conducted to determine the potential threatened, endangered, or species of special concern which may inhabit the project area. Information sources used to determine the potential involvement with state- and federally-protected species included the following:

U.S. Fish & Wildlife Service: Correspondence to be solicited for federally-listed species potentially in the project area of I-75. The official listing of the USFWS "List of Endangered and Threatened Wildlife and Plants, 50 CFR 17.11-12".

Florida Game & Fresh Water Fish Commission: Correspondence to be solicited for state-listed species potentially in the project area of I-75. Review of the up-to-date listing of the FGFWFC "Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida" (29 April 1996) and the "Florida Atlas of Breeding Sites of Herons and Their Allies", Update 1986-1989, Technical Report 10, September, 1991.

Florida Natural Areas Inventory: Correspondence to be solicited for state- and federally-listed species potentially in the project area of I-75. Protected species known to occur in the region, as listed in the "Matrix of Habitats and Distribution by County of Rare & Endangered Species in Florida", April 1990.

Florida Dept. of Transportation: USFWS and FGFWFC species list for Hillsborough and Pasco County from the SPECIES computer program.

Based on the above, several species classified by USFWS and FGFWFC as threatened or endangered may be potentially affected by the proposed project. Species accounts were reviewed and field studies were conducted to determine the available habitat types within the project area. Due to the habitat specificity of most species, and limitations of their range within Pasco County, few of these species would be expected to occur in the project area.

4.2 SURVEY METHODOLOGY

Vehicular and pedestrian surveys were conducted in June, 1997 through September, 1997 and again in March-April 1998 to determine the ecological characteristics (jurisdictional wetlands, plant communities, present condition, unique features, etc.) and the possible existence of any state- or federally-listed species within the proposed pond site locations along the referenced project. A full coverage survey of the existing and proposed alignment ROW was accomplished with random pedestrian transects. The survey concentrated on the federally-listed species in Table 4-1 and other state-listed species with potential occurrence.

Survey methods included pedestrian surveys along the entire project with perpendicular and/or random transects in areas of suitable habitat. There is a lack of suitable or undisturbed upland areas along the project corridor which support many federally-listed species (i.e., mature pine forests, scrub-shrub flatwoods, sandhills, etc.). Because these upland community types are absent near the existing roadway, it was determined that wetland-dependent species have a greater potential to be impacted by the project than most upland species. No critical or unusual upland or wetland habitats were found within the project. Since the S.R. 56 interchange area is in the permitting process, protected species surveys were limited in this area. Any protected species involvement will be addressed during the permitting phase of that project.

Table 4-1
State- and Federally-listed Species Potentially Occurring in the Vicinity of I-75
Pasco County, Florida

Scientific Name	Common Name	FGFWFC	USFWS
Amphibians and Reptiles:			
Alligator mississippiensis	American alligator	SSC	T(S/A)
Drymarchon corais couperi	Eastern indigo snake	T	T
Gopherus polyphemus	Gopher tortoise	SSC	-
Pituophis melanoleucus mugitus	Florida pine snake	SSC	-
Rana capito aesopus	Gopher frog	T	-
Stilosoma extenuatum	Short-tailed snake	SSC	-
Avian Species:			
Athene cunclaria	Florida burrowing owl	SSC	-
Egretta caerulea	Little blue heron	SSC	-
Egretta thula	Snowy egret	SSC	-
Egretta tricolor	Tricolored heron	SSC	-
Eudocimus albus	White ibis	SSC	-
Grus canadensis pratensis	Florida sandhill crane	T	-
Haliaeetus leucocephalus	Bald eagle	T	T
Mycteria americana	Wood stork	E	E
Mammals:			
Podomys floridanus	Florida mouse	SSC	-
Scirus niger shermani	Sherman's fox squirrel	SSC	-
Flora*			
Asclepias curtissii	Curtiss milkweed	E	-
Asplenium auritum	Auricled spleenwort	E	-
Asplenium plenum	Double spleenwort	T	-

E - Endangered
T - Threatened
T(S/A) - Threatened Due to Similarity of Appearance
SSC - Species of Special Concern

* The plant species are protected under the Florida Dept. of Agriculture on the state level.

Pedestrian surveys were conducted at all the upland and wetland habitat areas along the corridor, with particular attention to the areas within 30.48 m (100.00 ft) of the ROW. Additional surveys will be conducted at all the potential pond sites as the stormwater design parameters are further evaluated. These surveys included observations for wildlife, listed plants, tree cavities/nests, ground burrows, animal tracks, scat, etc.. Surveys were conducted by Charles Nation and Michele Eccleston in August through October 1997 primarily during morning sessions (8:00 AM - 11:00 AM). Weather conditions were generally warm (75-85 degrees) under partly cloudy to clear skies. Particular attention was given to evaluating areas for wading birds in wetlands. The following discussion includes available habitats and listed species potentially in the area.

4.3 HABITAT

Prior to the initiation of surveying for protected species, habitat and vegetative mapping was conducted in the study area. By mapping the available habitats, the potential presence of listed species can be more accurately assessed compared to random evaluation. Habitats were mapped based on the FLUCFCS. A listing of habitat types for cross-referencing with the aerials is depicted on the cover sheet of Attachment A. All significant natural plant communities along the project were delineated on the aerials.

The following discussion summarizes the more substantial non-wetland habitat areas in terms of vegetative cover. These conditions are typical characteristics of each habitat. The residential, commercial, and agricultural areas (FLUCFCS Nos. 110, 211, 212, 221, and 140) are not described due to the lack of habitat value associated with listed species.

#414 - Pine-Mesic Oak - This is a relatively high quality upland habitat remaining sporadically along the study area. This habitat has a dominant canopy coverage of laurel oak, live oak (*Quercus virginiana*), longleaf pine (*Pinus palustris*), and loblolly pine (*Pinus taeda*). Also in this unit are scattered Southern magnolia (*Magnolia grandiflora*) and sweetgum (*Liquidambar styraciflua*). Subcanopy coverage is provided by saplings of the above listed species as well as wax myrtle. The shrub stratum is represented by American beautyberry (*Callicarpa americana*), sparkleberry (*Vaccinium arboreum*), gallberry and saw

palmetto often with extensive coverage of vines (*Smilax* spp. and *Vitis* spp.). Groundcover ranges from sparse to thick undergrowth of vines and palmetto. Soils are moderately well-drained to somewhat poorly drained with a groundwater seasonal high water table 0.03 to 0.91 m (1.0 to 3.0 ft) below grade.

#427 - Live Oak - This habitat was delineated in areas where there is a dominant canopy mix of live oak and laurel oak. The subcanopy is predominantly the same tree species with scattered cabbage palm and wax myrtle. The ground coverage is dominated by scattered saw palmetto and vine species (*Smilax* spp. and *Vitis* sp.). Much of this map unit is used as forested pasture with an extremely sparse groundcover as a result of cattle grazing.

#421 - Xeric oak - This habitat area is similar to the 427 designation, but generally higher in the landscape. The dominant tree cover includes live oak and sand pine (*Pinus clausa*) with sand live oak (*Quercus virginiana geminata*), hickory (*Carya glabra*), cabbage palm, sparkleberry, and wax myrtle. Ground cover consists of scattered wiregrass (*Aristida stricta*), prickly pear, *Smilax* spp., and blackberry (*Rubus* spp.).

#320 - Rangeland - Predominant coverage is provided by saw palmetto, scattered pine, bahiagrass, broomsedge (*Andropogon virginicus*), beggar's-tick, dog fennel (*Eupatorium capillifolium*), blackberry, winged sumac (*Rhus copallinum*), *Solidago* spp., and wax myrtle. These areas are fragmented and the disturbed nature of these sites limit the potential occurrence of listed species.

4.4 OBSERVED SPECIES

No protected fish or invertebrates are known to occur in the study area. Any protected plants in the existing ROW would be routinely mowed due to maintenance along the ROW of I-75. Very little suitable habitat for protected plants was observed during this survey. Survey of the project area and general area of potential pond sites did not indicate the presence of any listed flora. However, the auricled spleenwort (*Asplenium auritum*) is known to occur within upland hardwood hammocks similar to areas associated with this segment.

The only federally-protected species listed in Table 4-1 that was observed during these surveys was the wood stork (*Mycteria americana*) (ten individuals). This species was observed either foraging in wet pasture or flying overhead. The observed species is transient and appear to only use the available habitats as foraging or resting areas. State-listed animal species observed during field surveys were the Florida sandhill crane *(Grus canadensis pratensis*) (eight individuals), snowy egret (*Egretta thula*) (two individuals), little blue heron (*E. caerulea*) (one individual), tricolor heron (*E. tricolor*) (one individual), and white ibis (*Eudocimus ibis*) (35+ individuals).

Faunal components of the area observed directly or indirectly (tracks, burrows, scat, rooting) during the field surveys include common mammals such as the whitetail deer *(Odocoileus virginianus*), feral hog (*Sus scrofa)*, raccoon (*Procyon lotor*), opossum (*Didelphis virginianus*), armadillo (*Dasypus novemcinctus*), pocket gopher (*Geomys pinetus*), and various rodent species. Herptiles are represented by commonly occurring Florida species such as black racer (*Coluber constrictor*), rat snakes (*Elaphe spp*), cottonmouth (*Agkistrodon piscivorus*), and various amphibians.

Common bird species observed include the cattle egret (*Bubulcus ibis*), turkey vulture (*Cathartes aura*), black vulture (*Coragyps atratus*), mourning dove (*Zenaida macroura*), great blue heron (*Ardea herodias*), cardinal (*Cardinalis cardinalis*), tufted titmouse (*Parus bicolor*), mockingbird (*Mimus polyglottos*), common grackle (*Quiscalus quiscula*), blue jay (*Cyanocitta cristata*), killdeer (*Charadrius vociferus*), great egret (*Casmerodius albus*), and red-winged blackbird (*Agelaius phoeniceus*).

4.5 AMPHIBIANS AND REPTILES

Eastern Indigo Snake (*Drymarchon corais couperi*)

The eastern indigo snake inhabits both dry scrub and sandhill areas, as well as moister hardwood hammocks. In xeric habitats, this species is often found in association with gopher tortoise burrows. There are few potential areas of occurrence within the project. No eastern

indigo snakes were observed along the project corridor and due to the linear nature of the project, minimal impact to eastern indigo snake habitat is expected.

It is unlikely this project will impact any indigo snakes. However, to minimize impacts to individual eastern indigo snakes encountered during construction, a special provision will be included in the construction contract to advise the contractor of the potential presence of this species and its protected status:

- If an Eastern indigo snake is sighted during construction, the contractor will be required to cease all operation(s) which may cause harm to the snake.

- If the snake does not move away from the construction area, the contractor will contact a state or federal biologist to capture and relocate the snake to suitable habitat, either adjacent to the project corridor or off-site to an acceptable donor site.

- If an Eastern indigo snake is killed or found dead within the construction area, the snake should be frozen and the U.S. Fish and Wildlife Service, Jacksonville Field Office (904) 232-2580 via the FDOT Project Development & Environment Department will be notified immediately at (813) 975-6457.

- In addition, educational signs with pictures shall be posted throughout the project prior to initiation of construction.

Gopher Tortoise (*Gopherus polyphemus*)

The gopher tortoise can occupy a variety of habitats but generally prefer sandy soil conditions where the surficial water table does not reach close to the ground surface grade. Vegetative conditions require enough ground cover to provide a food source. These vegetative conditions are met in some of the upland habitat areas within the study area. Pedestrian surveys were conducted within and along the project area. Several gopher tortoise burrows

(three active, one inactive) were observed within the project area. The highest concentration of active burrows was observed in the S.R. 56 interchange area. This project is currently undergoing agency review and any impacts to the gopher tortoise will be resolved during the permitting process.

Cursory review of the potential pond sites will be conducted as pond sites are further evaluated. The dense canopy and subcanopy coverage of the majority of upland habitat areas along the study area has limited ground foraging material for the gopher tortoise. The upland habitat has also been fragmented by development which has also limited the potential for gopher tortoises. The presence of burrows will be a factor in determining the pond sites and configuration in the final design.

Efforts will be made to limit impacts to gopher tortoise burrows and any tortoise habitat. Any unavoidable impacts to gopher tortoise burrows will require a Gopher Tortoise Take Permit from the Florida Fish and Wildlife Conservation Commission (formerly the known as FGFWFC). Special conditions requiring the construction contractor to protect preserved burrows and to not harm any tortoises that enter the construction area will be placed in the construction plans.

Gopher Frog (*Rana capito*)

The gopher frog occupies xeric vegetative communities and is often associated with gopher tortoise burrows. The limited gopher tortoise burrows may limit the potential presence of gopher frogs. No gopher frogs were observed and no adverse impacts are anticipated.

4.6 AVIAN SPECIES

Wading Birds

The open water, wet prairie, and herbaceous marsh near the project present suitable foraging habitat for wading birds. Wading birds were observed outside the proposed ROW in

moderate numbers during the study. These wetlands offer adequate opportunity to forage, but no breeding or nesting activities were observed.

Review of the "Florida Atlas of Breeding Sites of Herons and Their Allies", Update 1986-1989 (FGFWFC Technical Report 10, September, 1991) indicated there is one breeding site documented approximately one mile east of the project area (T25S, R25E, S8NW). The colony (number 611148) was last documented in 4/24/89 and observed species included the great egret, great blue heron, wood stork, and anhinga in a class size of C (101-250 individuals).

The wood stork will usually nest in cypress or mangrove swamps and feed in freshwater marshes and flooded ditches and pasture. Negative impacts to the wood stork (and other wetland birds) are not expected because of the extensive available habitat in the project area that will not be affected. As with the other wading birds, any impact to foraging areas will be compensated with the construction of wet detention stormwater facilities.

Many of the wetland areas have dense cattail, primrose willow, and Carolina willow stands which limit wading bird movement. Also, the proximity of I-75 to these wetlands results in traffic noise disturbance. Given the above factors, the loss of wading bird habitat associated with the project is expected to be minimal.

Bald Eagle (*Haliaeetus leucocephalus*)

The FGFWFC has been consulted to determine if any confirmed active bald eagle nesting sites are located within the "impact zone" of the project or potential stormwater facilities. No active nesting sites were confirmed within 457.2 m (1,500 ft) of the referenced project.

There are three documented active eagles nests located within a six mile radius of the project corridor. The closest documented nest HL-11 is located approximately 3 km (2 mi) east from the southern terminus of the project (Section 02 NW, Township 27S, Range 19E).

The exact location of nest HL-14 (Section 03SW, Township 27S, Range 18E) is unknown but was last documented in 1994 and is approximately 9 km (6 mi) west of the project. Lastly, nest PS-05 (Section 05SE, Township 25S, Range 19E) is located approximately 9.00 km (6 mi) from the northern terminus of the project and was last documented in 1993. This nesting territory may be active but the original nest tree has been reported as down or not usable.

4.7 MAMMALS

Florida Mouse (*Podomys floridanus*)

The Florida mouse is narrowly restricted to fire-maintained, xeric vegetation occurring on well-drained sandy soils. The two major habitats of the Florida mouse are scrub (including sand pine scrub and scrubby flatwoods) and sandhill. The mouse appears to be an exclusively burrow dwelling species, frequently using gopher tortoise burrows. With the limited gopher tortoise burrows within the project corridor, there appears to be little potential impact to this species.

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

The preferred habitat for the Sherman's fox squirrel is the fire-maintained longleaf pine-turkey oak sandhills and flatwoods. Longleaf pine seeds and turkey oak acorns are the preferred diet of Sherman's fox squirrel. When these seeds are not available, live oak acorns appear to be a major component of the diet. Nests are generally made with leaves and/or Spanish moss and often in live oaks. Surveys for fox squirrels were conducted within oaks adjacent to the ROW. Particular attention was given to locating a nest or freshly chewed pine cones. Several non-listed gray squirrels (*Sciurus carolinensis*) were observed in the study area, but no evidence of Sherman's fox squirrels. Additional surveys will be conducted as pond site alternatives are evaluated.

4.8 PROTECTED SPECIES SUMMARY

The project area was surveyed for state and federally listed species in August, September, and October 1997. Observation of habitat adjacent to I-75 indicates that the listed species with the greatest potential of occurrence are wading birds, due to the large amount of suitable foraging and nesting habitat in the project area. Habitat impacts from the proposed improvements to I-75 are expected to be minimal. Disturbed vegetative conditions associated with the potential habitat areas limit the use and/or presence of listed species.

Moreover, the growing concentration of residential areas within the upland portions of the study area and the fragmentation of available upland habitat by agricultural activities limit the potential occurrence of protected wildlife. Consequently, only minimal adverse impacts to listed upland species is expected, limited primarily to the gopher tortoise.

Information gathered from a literature review and field survey indicate no listed species inhabiting the potentially affected wetland areas or uplands adjacent to the proposed pond sites (considering preferred habitat types and known geographical ranges). Based on the results of past and present surveys, no effect to state- or federally-listed threatened or endangered species is expected from construction activities along the existing or proposed new alignment ROW. The proposed project is not located in an area designated as "Critical Habitat" by the U.S. Department of the Interior Fish and Wildlife Service. Through Best Management Practices and the special provisions discussed in this report, the Department has determined that the proposed improvements will have "No Effect" on any federally-listed threatened or endangered species. A letter of concurrence from the USFWS was received on April 20, 1999 (Appendix B).

SECTION 5
POND SITE ALTERNATIVE ANALYSIS

The analysis of potential locations of the stormwater ponds is underway. All potential pond sites are located within the existing ROW, with the proposed ponds located within existing cleared, sideslope areas. A windshield survey of all potential pond sites was conducted as part of this investigation. This preliminary survey indicates that any potential wetland impacts would be to the margins of the adjacent wetland system and/or upland-cut swales and ditches within the ROW. Information gathered from a literature review and field survey indicate no listed species inhabiting the potentially affected wetland areas or uplands adjacent to the proposed pond sites (considering preferred habitat types and known geographical ranges). Based on the results of past and present surveys, no effect to state- or federally-listed threatened or endangered species is expected as a result of ponds constructed along the existing ROW.

Subsequent to the identification of a preferred alternative and preferred pond locations a more detailed investigation of each pond site will be conducted.

SECTION 6
REFERENCES

6.1 REFERENCES CITED

1. Pasco County Comprehensive Plan; Pasco County Planning Department; Pasco, Florida; December 1995.

2. Pasco County Metropolitan Planning Organization Adopted 2015 Cost Affordable Transportation Plan; Pasco County Metropolitan Planning Organization; New Port Richey, Florida; December 18, 1995.

3. Pasco County Metropolitan Planning Organization Adopted 2020 Cost Affordable Transportation Plan; Pasco County Metropolitan Planning Organization; New Port Richey, Florida.

4. Federal Manual for Identifying and Delineating Jurisdictional Wetlands; U.S. Army Corps of Engineers, April 1987.

5. Classification of Wetlands and Deepwater Habitats of the United States; By Lewis Cowardin, et al. U.S. Department of Interior, Fish & Wildlife Service, Washington D.C., 1979.

6.2 OTHER REFERENCES

Auffenberg, W. and Franz, R. 1982, "Status and Distribution of the Gopher Tortoise (*Gopherus polyphemus*)",U.S. Fish & Wildlife Service.

Bull, John and Farrand, John Jr., "The Audubon Society Field Guide to North American Birds", Alfred A. Knopf Publ., New York.

Dressler, Robert L. et al 1987, "Identification Manual for Wetland Plant Species of Florida", Inst. Food & Agricultural Sciences, Univ. of Florida, Gainesville, FL.

Florida Game & Fresh Water Fish Commission, "Survey Requirements for Red-Cockaded Woodpecker Consultations", Tallahassee, FL.

Godfrey, R.K., and Wooten, J.W., "Aquatic and Wetland Plants of Southeastern United States: Monocotyledons", Univ. of Georgia Press, Athens, GA, 1979.

Godfrey, R.K., and Wooten, J.W., "Aquatic and Wetland Plants of Southeastern United States: Dicotyledons", Univ. of Georgia Press, Athens, GA, 1981.

Humphry, Steven R. "Rare and Endangered Biota of Florida, Volume I Mammals", University of Florida Press, 1992.

Layne, J.N. "The Natural History of the Fox Squirrel *Sciurus niger shermani*", Bull. Amer. Mus. Nat. Hist. 113, 1-71: 1957.

Moler, P.E.. "Rare and Endangered Biota of Florida, Volume III Amphibians and Reptiles", University of Florida Press, 1992.

Myers, Ronald L., "Ecosystems of Florida", UCF Press, 1991.

Soil Survey of Pasco County, USDA Soil Conservation Service, Washington D.C., Issued 1985.

APPENDICES

APPENDIX A	**Photographs of Representative Wetlands**
APPENDIX B	**Agency Correspondence**
APPENDIX C	**WET 2.1 Summary Data Sheets**
APPENDIX D	**Conceptual Plans: Preferred Alternative**

APPENDIX A
Photographs of Representative Wetlands

Palustrine, Forested, Broad-Leaved Deciduous System (PFO1C, Contiguous) - Wetland 36

Palustrine, Forested, Broad-Leaved Deciduous System (PFO1C, Contiguous) - Wetland 36

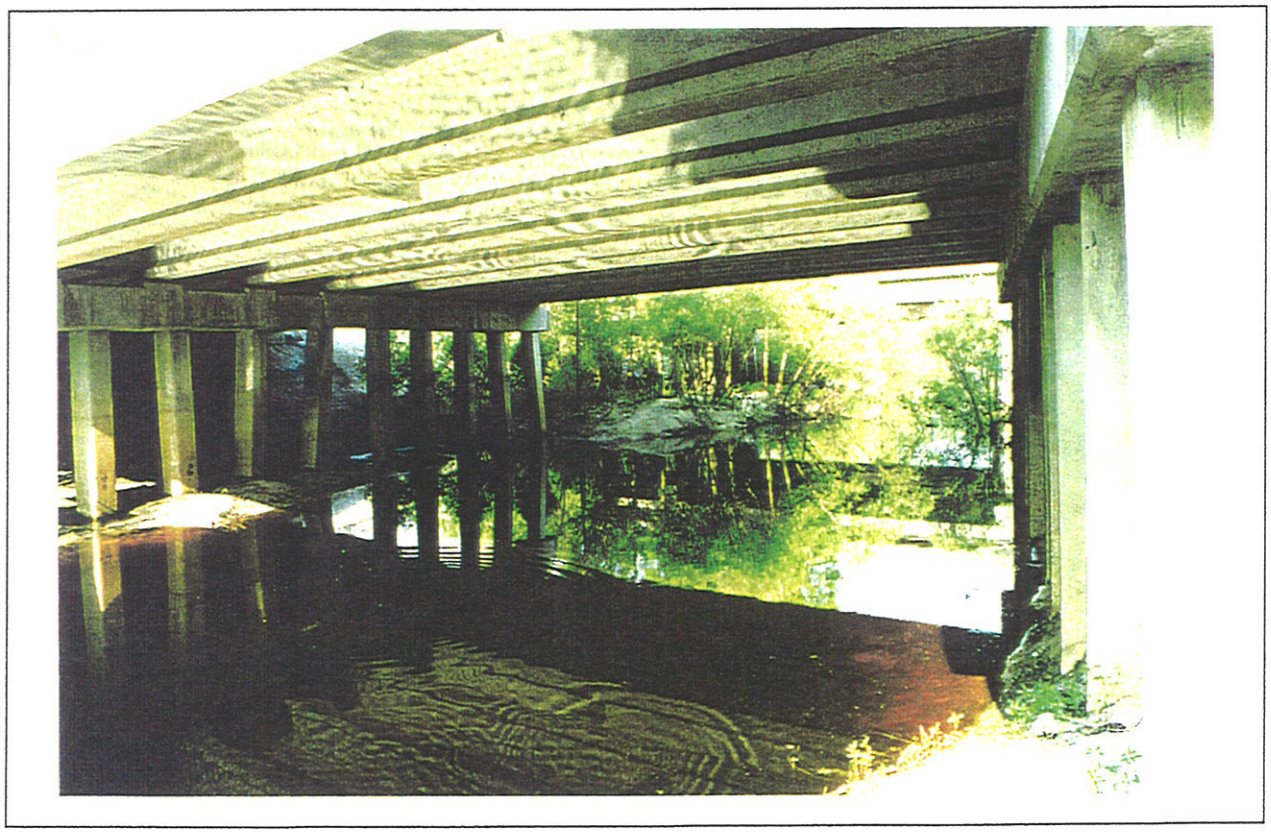
Palustrine, Forested, Broad-Leaved Deciduous System (PFO1C, Isolated) - Wetland 21

Palustrine, Forested, Broad-Leaved Deciduous System (PFO1C, Isolated) - Wetland 21

Palustrine, Forested, Needle-Leaved Deciduous System (PFO2C) - Wetland 9

Palustrine, Forested, Needle-Leaved Deciduous System (PFO1C) - Wetland 9

Riverine Wetland System - Cypress Creek - Wetland 1



Riverine Wetland System - Cypress Creek - Wetland 1

Palustrine Emergent Wetland (PEM1C) - Wetland 19

Palustrine Emergent Wetland (PEM1C) - Wetland 19

APPENDIX B
Agency Correspondence