

ENVIRONMENTAL TECHNICAL COMPENDIUM

**For
State Road (SR) 54
Project Development and Environment (PD&E) Study
from West of SR 589 (Suncoast Parkway)
To West of SR 45 (US 41)
WPI SEG. NO.: 421140-7
Pasco County**

June 2009

PREPARED FOR:

Pasco County



**In Cooperation With
Florida Department of Transportation – District 7**



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Section 1 PROJECT INTRODUCTION

1.1 PROJECT DESCRIPTION

1.1.1 EXISTING CONDITIONS

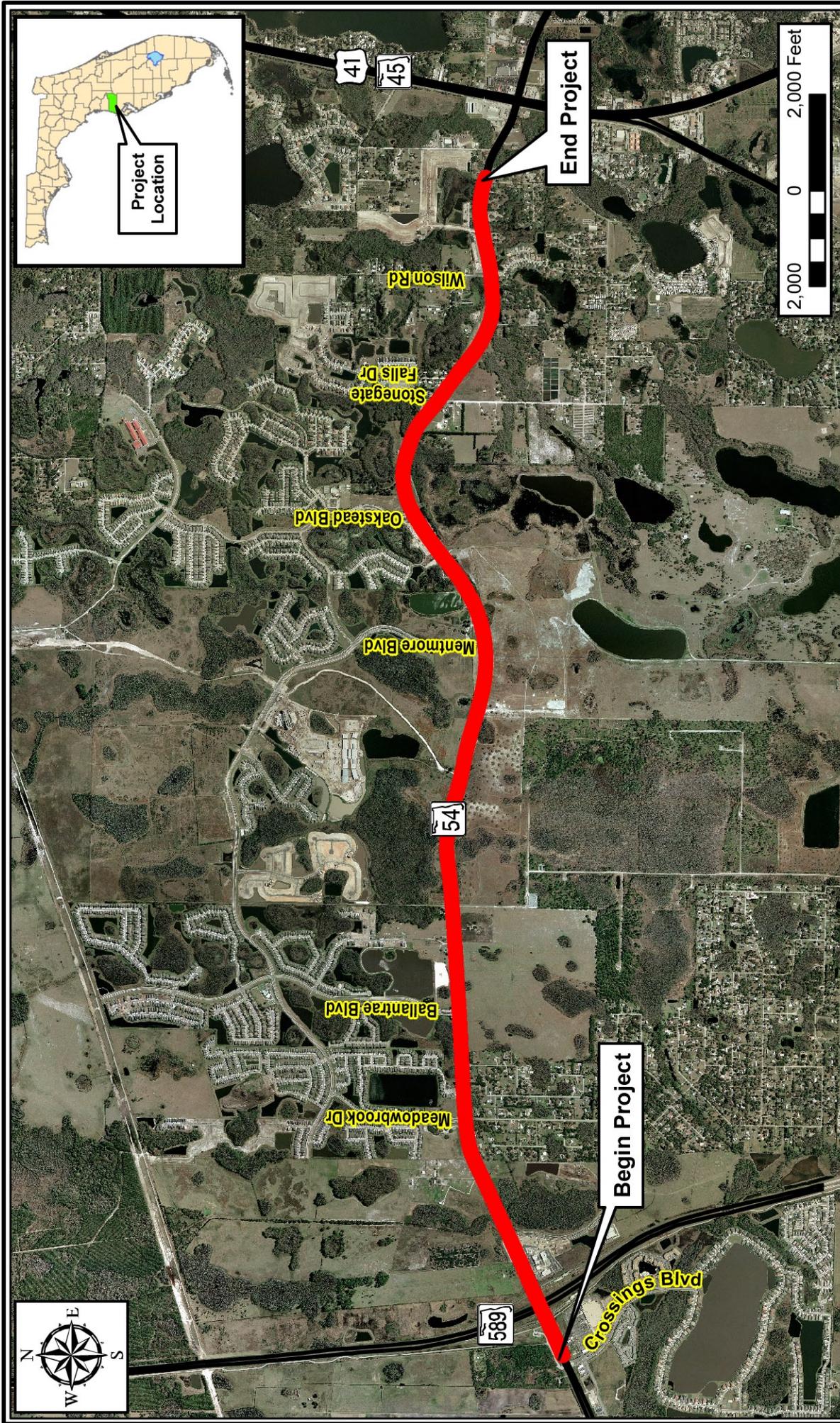
Pasco County, in cooperation with the Florida Department of Transportation (FDOT), conducted a Project Development and Environment (PD&E) Study to evaluate the widening of State Road (SR) 54 from west of SR 589 (Suncoast Parkway) to west of SR 45 (US 41) in Pasco County, Florida (**Figure 1**). The total project length is approximately 5.3 miles. The proposed project involves adding one through lane in each direction to the existing four-lane, divided roadway facility.

SR 54, within the study limits, is a four-lane divided rural roadway from west of the Suncoast Parkway to west of US 41. **Figure 2** shows the existing typical section, which consists of four 12-foot (ft) travel lanes (two lanes in each direction) with an inside paved shoulder width of two ft (8-ft total) and an outside paved shoulder width of five-ft (10-ft total). The typical section also includes a varying width grass median (approximately 58 ft to 72 ft) and large grass swales. At the east end of the proposed project (1,848 ft west of US 41), the typical section changes to a curb and gutter section.

1.1.2 PROPOSED IMPROVEMENTS

The Build Alternative involves increasing the capacity of SR 54 from four to six lanes. **Figures 3 and 4** show the two proposed typical sections. Other improvements include widening the inside and outside shoulders. The proposed roadway improvements will not require acquisition of additional right-of-way (ROW).

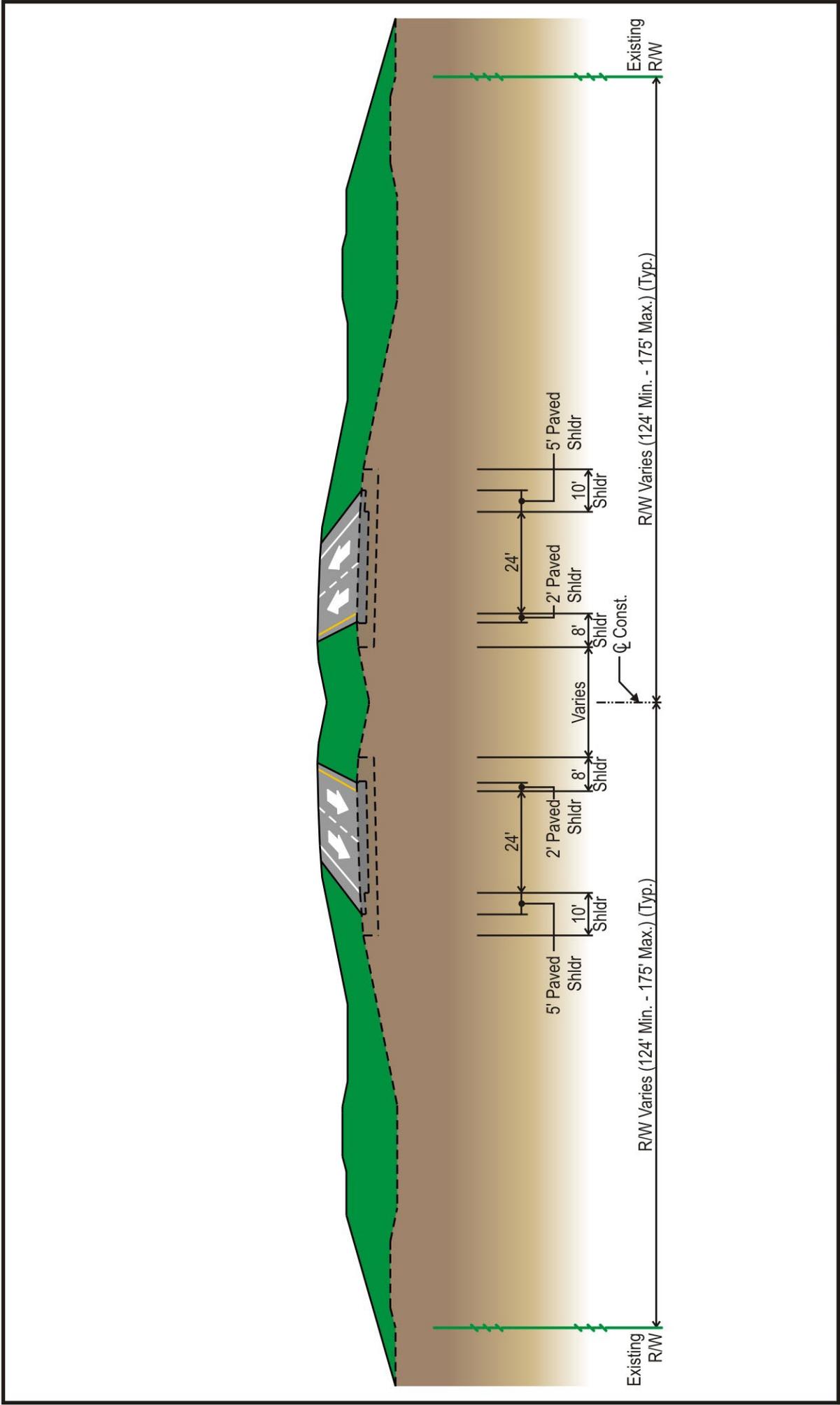
The stormwater management needs for the proposed project will be accommodated in the existing ponds in Basins A through E. Minor modifications to the median area, including median drains will be necessary with the inside widening. However, additional treatment and attenuation volumes will have to be accounted for due to the inclusion of additional left and right turn lanes, and a multi-use path. The additional volume will be provided by various methods. The primary method will be to revise the side slopes from 1:6 to 1:4 to increase the width of the ponds. While this is not a desirable side slope, it will often be necessary due to ROW constraints.



SR 54
 from West of SR 589
 (Suncoast Parkway) to
 West of SR 45 (US 41)

PROJECT LOCATION MAP

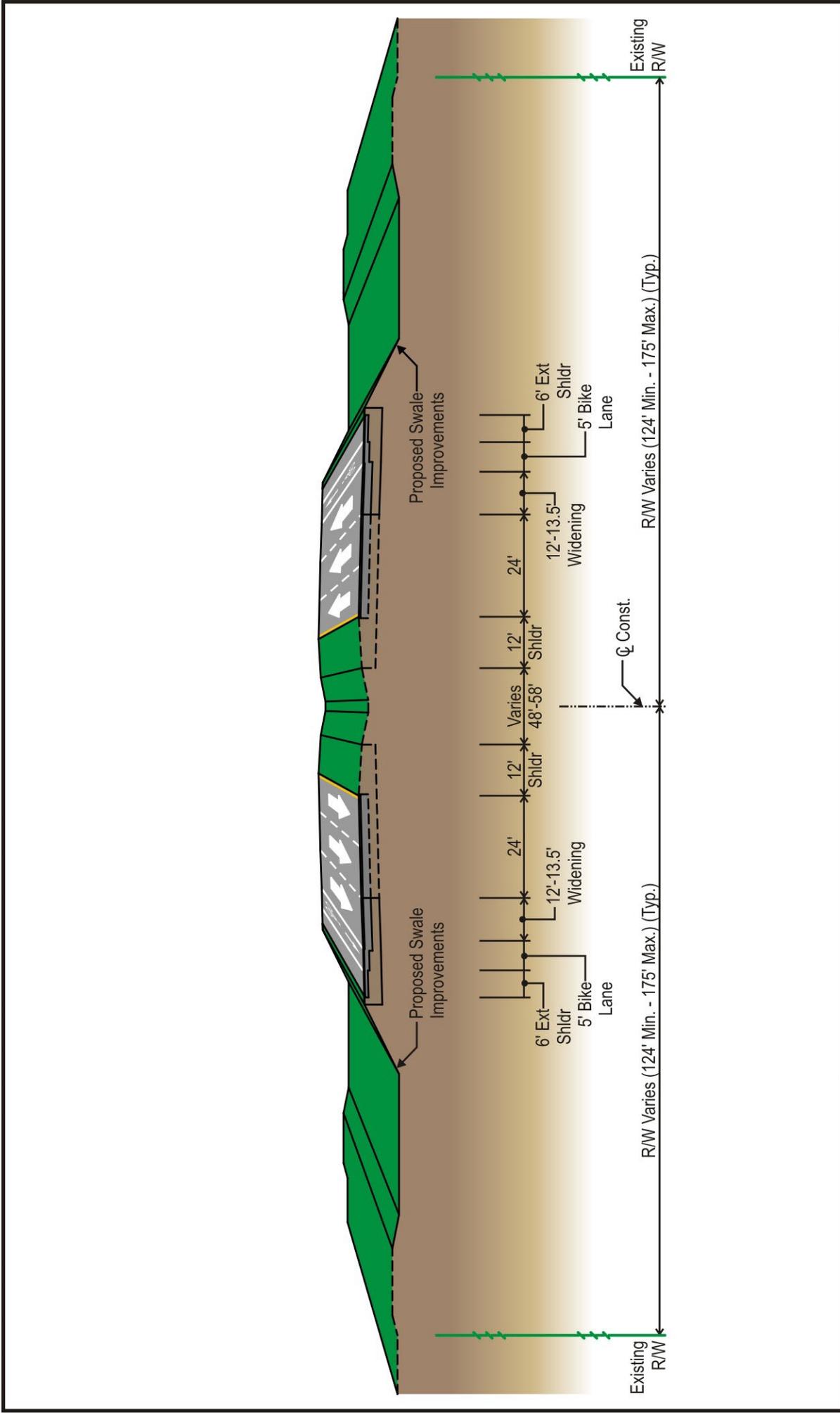
FIGURE 1



SR 54
 from West of SR 589
 (Suncoast Parkway) to
 West of SR 45 (US 41)

EXISTING TYPICAL SECTION

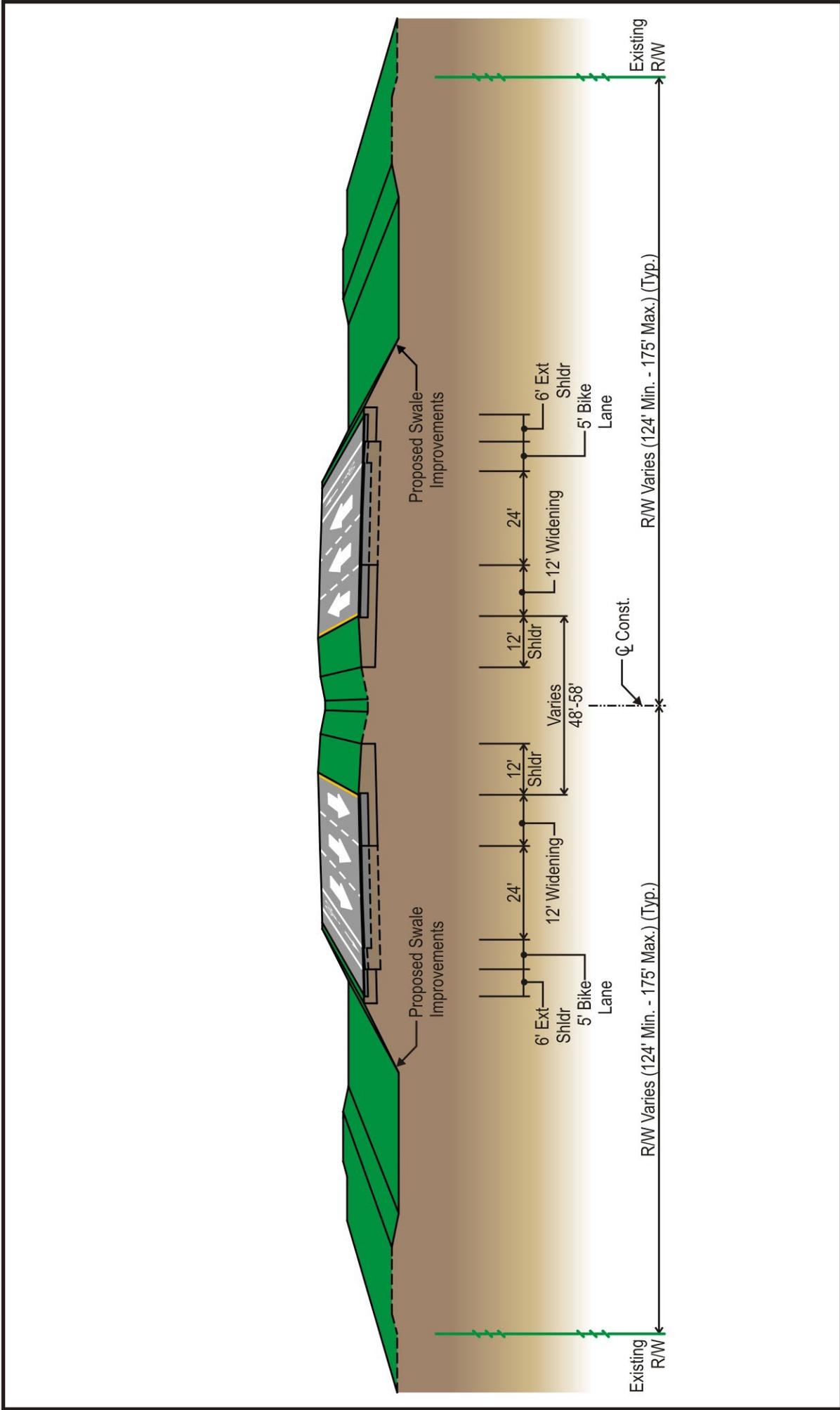
FIGURE 2



SR 54
 from West of SR 589
 (Suncoast Parkway) to
 West of SR 45 (US 41)

**RECOMMENDED TYPICAL SECTION
 FROM CROSSINGS BOULEVARD TO MEADOWBROOK DRIVE**

FIGURE 3



**RECOMMENDED TYPICAL SECTION
FROM MEADOWBROOK DRIVE TO SOFIA DRIVE**

SR 54
from West of SR 589
(Suncoast Parkway) to
West of SR 45 (US 41)

FIGURE 4

Section 2 EXISTING ENVIRONMENTAL CHARACTERISTICS

2.1 LAND USE

The proposed project is within a rapidly developing portion of Pasco County. Currently the predominant land use adjacent to the project's ROW is unimproved/improved pasture and undeveloped, open land. Large areas of crop, pastureland, shrub and brushland occur adjacent to segments of the roadway. Specialty farms and tree crops are also present. Significant tracts of open land are developing into residential use. Commercial services exist near the Suncoast Parkway interchange with SR 54.

Areas adjacent to the project ROW are dotted with native uplands, cypress domes, forested wetlands, wet prairies and freshwater marshes, as well as manmade lakes and reservoirs. In some locations, cypress domes and freshwater marshes encroach into the project ROW.

The proposed improvements to SR 54 are not anticipated to alter existing land use within the project area, as all improvements are planned to occur within the existing ROW. **Figure 5** depicts the existing land uses throughout the corridor.

2.1.1 CULTURAL RESOURCES

A Historic Structures Survey Technical Memorandum was prepared for the proposed project. The objective of this survey was to identify any cultural resources within the project's Area of Potential Effect (APE) and to assess their eligibility for listing in the National Register of Historic Places (NRHP). The Memorandum was prepared in accordance with the procedures contained in Florida Statute (FS) 267. No NRHP-eligible or NRHP-listed cultural resources were identified within the project's APE. The State Historic Preservation Officer (SHPO) concurred on December 5, 2008 with the conclusions contained in the Memorandum (Appendix A).

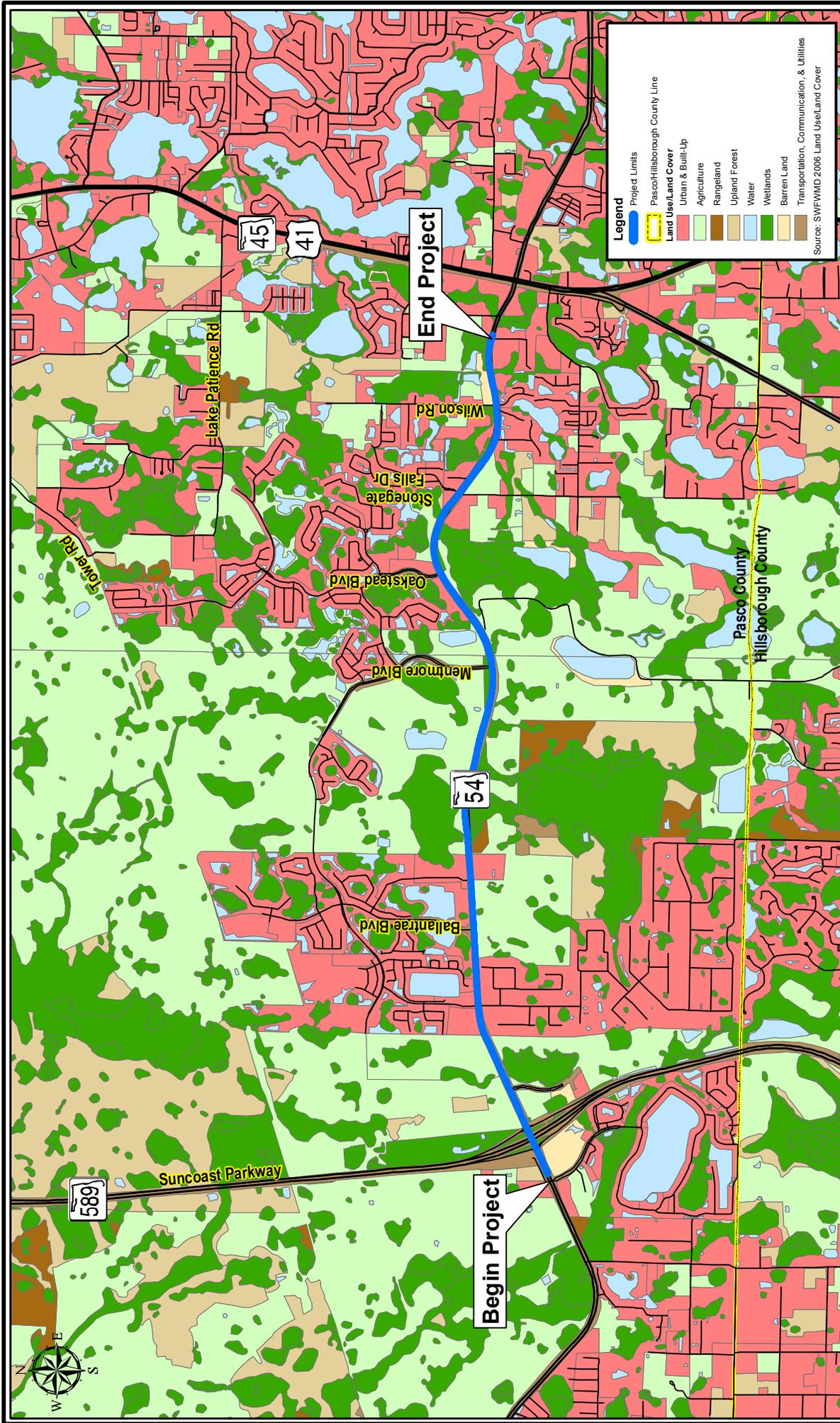
An archaeological survey was not prepared for the proposed project since it would be constructed within the existing SR 54 ROW. This ROW area was previously surveyed for any archaeological resources prior to the construction of the existing four lane section within the ROW.

2.1.2 NATURAL AND BIOLOGICAL FEATURES

The natural environment within the proposed project's ROW consists of areas containing sod, drainage ditches/swales, stormwater retention facilities, and floodplain compensation areas. Descriptions of the existing natural and biological features found within the project study area are described below.

2.1.3 UPLANDS

The proposed project is located in a portion of Pasco County that is developed, cleared, or otherwise altered by agricultural land use.



SR 54
 from West of SR 589
 (Suncoast Parkway) to
 West of SR 45 (US 41)

EXISTING LAND USE

FIGURE 5

2.1.4 SOILS

According to the 2006 United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) website, the soils within the project study area consist of a mosaic of non-hydric and hydric soils. The Pasco County soil survey (1991), as developed by the Soil Conservation Service (SCS), defines specific soil characteristics along the project corridor. Soils listed below are referenced to individual map units defined in the SCS soil survey. Historic soil conditions could deviate from the existing conditions, as surrounding development and drainage features may have modified hydrologic patterns in the area.

Thirteen soil types have been mapped within the project's ROW limits. Predominant soils include Smyrna fine sand, Myakka fine sand and Sellers mucky loamy fine sand. Additional soil types include: Wauchula fine sand, Pomona fine sand, Tavares fine sand, Adamsville fine sand, Basinger fine sand, Narcoossee fine sand, EauGallie fine sand, Pomello fine sand, and Cassia fine sand.

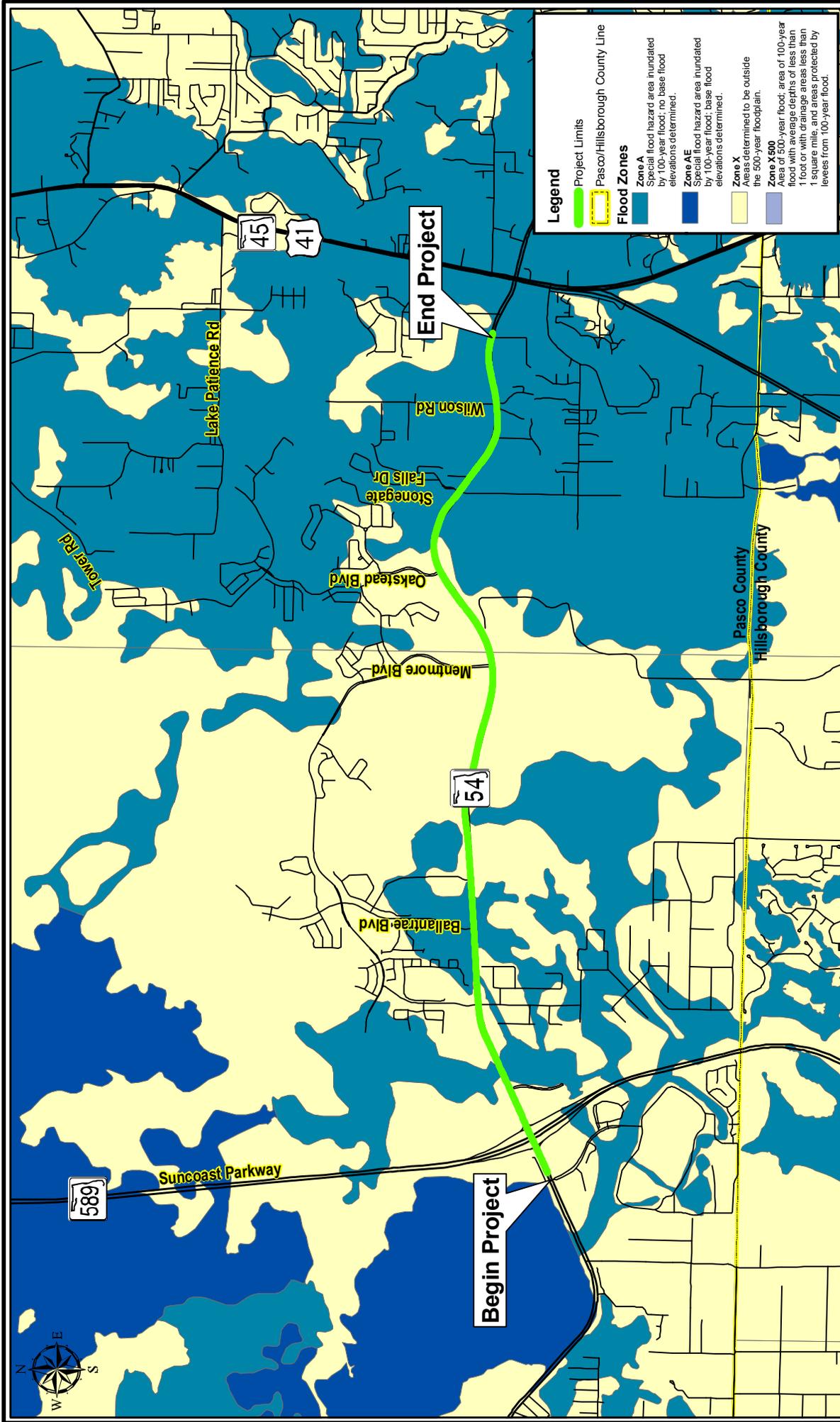
The majority of the soils are either poorly drained or very poorly drained. Exceptions include: Cassia fine sand and Adamsville fine sand (somewhat poorly drained), and Pomello fine sand and Tavares fine sand (moderately well drained). The remaining soils are associated with urban or extracted soils. In general, the soils within the project's ROW have been filled or excavated during the previous SR 54 widening project covered by Environmental Resource Permit (ERP) number 43016251.00.

2.1.5 FLOODPLAINS

The proposed project's floodplain involvement was assessed using automated information provided by the Federal Emergency Management Agency (FEMA). Negligible floodplain impacts are anticipated as a result of implementing the proposed project. Additionally, according to ERP number 43016251.00, a floodplain surplus of 5.29 acre-feet exists for the proposed project.

The proposed project is within FEMA designated Flood Zones A, AE, and X. Flood Zones A and AE denote areas subject to a one percent or greater chance of flooding annually. Flood zone X denotes areas of minimal flood hazard from the principle flood source in this area. Areas designated by X are determined to be outside the 0.2 percent chance area of flooding annually.

Figure 6 depicts areas adjacent to the proposed project that are within these flood zones. Areas that fall within Flood Zone A are contained within the designated 100 year flood zone; however, as mentioned previously, floodplain impacts were addressed as part of ERP number 4316251.00. Any additional impacts will be addressed in the proposed drainage system expansion. Areas that fall within Flood Zone X will not result in significant impacts to the FEMA designated 100-year floodplain.



SR 54
 from West of SR 589
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**PASCO AND HILLSBOROUGH COUNTY
 FEMA MAP**

FIGURE 6

Section 3 WETLAND EVALUATION

3.1 INTRODUCTION

The wetland evaluation contains locations, descriptions, and classifications of the wetlands and surface waters impacted by the proposed project. The impacts to these features, methods of avoidance and minimization, and mitigation options are also addressed herein.

The entire project lies in the Pinellas-Anclote River Basin. The basin is approximately 120 square miles and ultimately discharges to the Gulf of Mexico. The major waterway within the vicinity of the project is the Anclote River. The river consists of several tributaries including Sandy Branch, which is bisected by the SR 54 corridor. Neither the Anclote River nor Sandy Branch is considered an Outstanding Florida Water (OFW).

3.2 METHODOLOGY

The methodology for identifying wetlands and surface waters within the project study limits included the following:

- Review of the USDA/NRCS Soil Survey of Pasco County, Florida (2006), to identify hydric soils within the proposed project area.
- Review of Hydric Soils of Florida Handbook (Florida Association of Environmental Soil Scientists, 2001).
- Interpretation of 1 inch = 200 feet scale aerial photographs (2006) to identify wetlands and other surface water features in the project area.
- Review of the National Wetlands Inventory (NWI) Maps, a GIS-based resource available online through the United States Fish and Wildlife Service (USFWS).
- Review of ERP number 43016251.00.
- Field reconnaissance to evaluate wetlands, roadside swales, dry retention areas, stormwater ponds and floodplain compensation sites.
- Review of the Florida Land Use, Cover and Forms Classification System (FLUCFCS).

3.3 SURFACE WATER DESCRIPTIONS

3.3.1 WETLANDS

Twenty-eight jurisdictional wetlands (Wetland 25 - Wetland 52) were identified within the proposed project's study limits based on a review of ERP number 43016251.00. The wetland

jurisdictional limits were approved by the Southwest Florida Water Management District (SWFWMD) and the United States Army Corps of Engineers (USACE) in July 1995.

Many of the previously permitted wetlands were entirely eliminated during the previous SR 54 two to four-lane widening project, although several wetland features still remain along the edge of the ROW. Other delineated wetlands fall entirely outside the ROW limits. Two of the remaining wetland systems are associated with the Sandy Branch waterway and three systems are associated with existing open water features. Only two of the previously delineated systems will be affected by the proposed project. Impacts anticipated in association with the proposed project are negligible. Total impacts are expected to be less than 0.085 acres. A brief description of the two wetlands anticipated to be affected is provided below.

Wetland 27

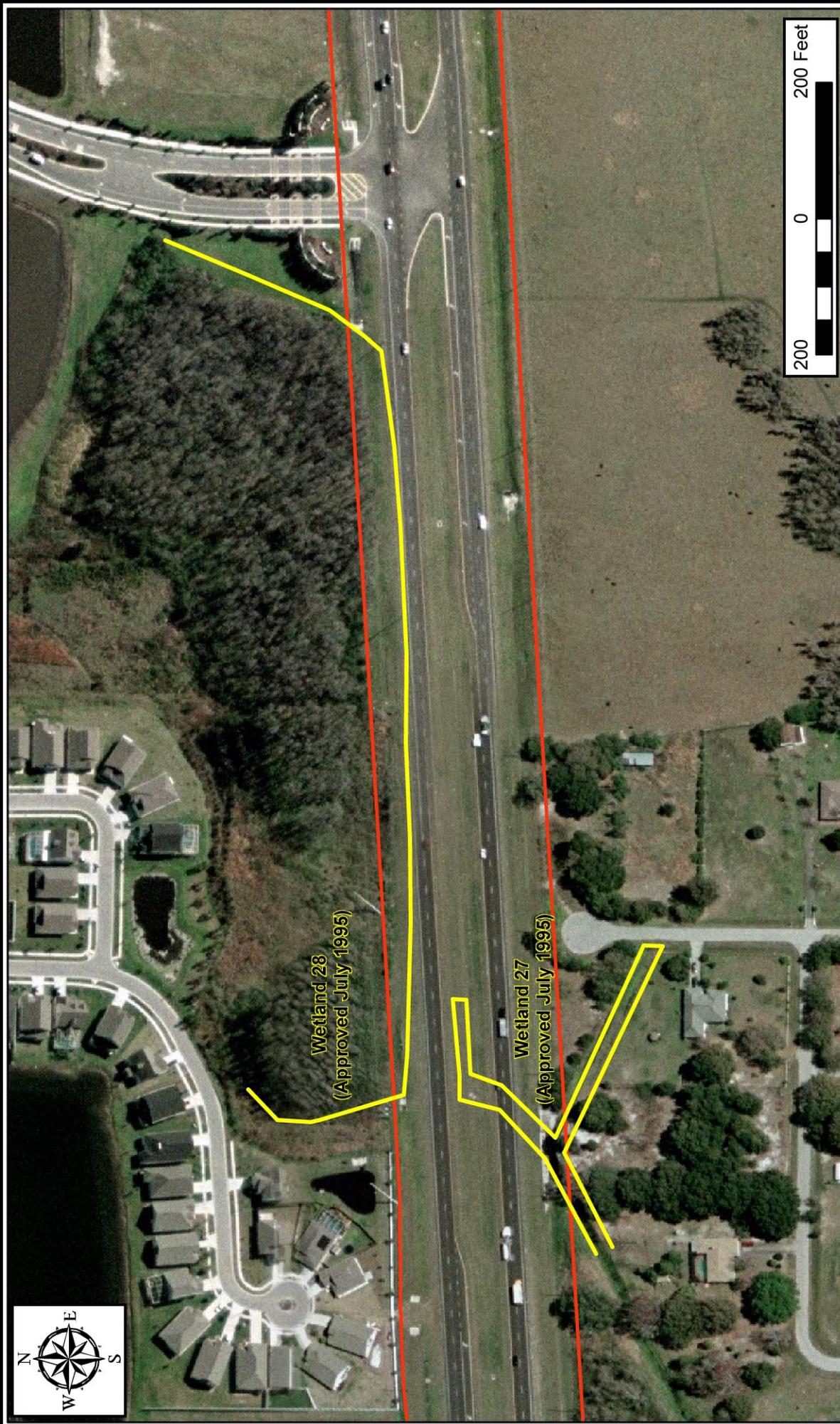


Wetland 27 appears to be an upland-cut, man-made drainage feature historically excavated to connect wetland 25 to wetland 28 (**Figure 7**, Other Surface Water Feature 27 and Wetland 28). For purposes of this discussion, this water feature will retain the original designation as Wetland 27; however, this feature historically functioned as an upland cut ditch. Currently, this feature is hardened with concrete and functions as a stormwater drainage area. The system extends beyond the project's ROW to the south as a herbaceous ditch and connects via culvert to wetland 28. The predominant soils include Myakka fine sand and Narcoossee fine sand. Both native soils are non-hydric. Bassinger fine sand (hydric) is also present. Additional impacts anticipated if the proposed project is constructed include approximately 0.005 acres to the edge of this water feature.

Wetland 28

Beyond the project's ROW, wetland 28 is a cypress swamp (**Figure 7**). A remnant, non-forested, wetland fringe remains along the outer ROW limits. The associated soils include Sellers mucky loamy fine sand and Basinger fine sand. Both native soils are hydric. Additional wetland impacts anticipated if the proposed project is constructed include approximately 0.08 acres along the narrow herbaceous edge of the remaining wetland feature. Due to the size, location, and minimal habitat value of the area, mitigation is not expected to be required.





SR 54
 from West of SR 589
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**WETLAND 27 (OTHER WATER FEATURE)
 AND WETLAND 28**

FIGURE 7

3.3.2 OTHER WATER FEATURES

Additional impacts to surface waters and ditches will involve re-contouring existing side slopes to accommodate additional drainage volumes. Minimal impacts to these water features will occur.

3.4 CONCEPTUAL MITIGATION PLAN

The proposed project avoids and minimizes wetland impacts to the greatest extent possible. The project is proposed to occur entirely within the existing ROW. Only two minor wetland impacts are anticipated, totaling approximately 0.13 acres. Impacts should be considered inconsequential, so additional wetland mitigation is not likely to be required. Minor adjustments to the existing, stormwater management features are also proposed to accommodate additional drainage and floodplain mitigation needs.

3.5 COORDINATION AND PERMITS REQUIRED

Coordination between the SWFWMD, the FDOT and the USACE will continue during the project design. The following permits may be required:

- SWFWMD Standard General Environmental Resource Permit
- USACE Federal Dredge and Fill Nationwide Permit 14
- Florida Department of Environmental Protection (FDEP) National Pollutant Discharge Elimination System (NPDES) Permit
- Florida Fish and Wildlife Conservation Commission (FWC) Gopher Tortoise Permit

A pre-application meeting occurred with SWFWMD staff Mr. Voytek Mroz and Mr. Lenard Bartos on July 25, 2007. In addition, SWFWMD microfiche files were reviewed to gather information on previously delineated wetlands associated with ERP number 43016251.00. The wetland jurisdictional limits were approved by the SWFWMD and the USACE in July 1995. The SWFWMD agreed to accept the originally delineated lines.

Section 4 ENDANGERED SPECIES BIOLOGICAL ASSESSMENT

4.1 INTRODUCTION

This section of the Environmental Technical Compendium discusses the potential occurrence of federal or state-listed species within or adjacent to the proposed project ROW.

4.2 METHODOLOGY

4.2.1 DATA COLLECTION

Information on the potential presence of federal and state listed species within the project's study limits was collected through a review of past permits and the USFWS and FWC databases. In addition, habitat within and adjacent to the proposed project was evaluated by referencing aerial photography and subsequently field verified on December 19, 2007 and January 16, 2008. No federal or state listed species or any critical habitat (within the project's ROW) was observed during the surveys.

The Florida Natural Areas Inventory (FNAI) was also referenced for the proposed project. The FNAI reported species occurrences on or near the project area including wading birds and the American bald eagle (*Haliaeetus leucocephalus*). Additional species were identified as having the likelihood to occur within the project corridor, namely the wood stork (*Mycteria americana*), and the Florida sandhill crane (*Grus canadensis pratensis*). The FNAI report is included as Appendix B.

4.2.2 LISTED SPECIES

Based on the literature review, compilation of Geographical Information System (GIS) data available from state and federal regulatory agencies, and field reconnaissance, the state and federally-listed species that may occur in the project area are listed in **Table 1**. No federally designated critical habitat exists within the project study limits.

Table 1: Protected Species Potentially Found in Proposed Project Area

Common Name	Scientific Name	Federal Status	State Status
REPTILES AND AMPHIBIANS			
Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	T
Gopher frog	<i>Rana capito</i>	NL	SSC
Gopher tortoise	<i>Gopherus polyphemus</i>	NL	T
BIRDS			
Bald eagle	<i>Haliaeetus leucocephalus</i>	NL	T
Florida burrowing owl	<i>Athene cunicularia floridana</i>	NL	SSC
Florida scrub-jay	<i>Aphelocoma coerulescens</i>	T	T
Great egret	<i>Ardea alba</i>	NL	SSC
Little blue heron	<i>Egretta caerulea</i>	NL	SSC
Sandhill crane	<i>Grus canadensis pratensis</i>	NL	T
Snail kite	<i>Rostrhamus sociabilis plumbeus</i>	E	E
Snowy egret	<i>Egretta thula</i>	NL	SSC
Tri-colored heron	<i>Egretta tricolor</i>	NL	SSC
White ibis	<i>Eudocimus albus</i>	NL	SSC
Wood stork	<i>Mycteria americana</i>	E	E
Limpkin	<i>Aramus guarauna</i>	NL	SSC
MAMMALS			
Florida black bear	<i>Ursus americanus floridanus</i>	NL	T
Florida mouse	<i>Podomys floridanus</i>	NL	SSC
Sherman's fox squirrel	<i>Sciurus niger shermani</i>	NL	SSC
Short-tailed snake	<i>Stilosoma extenuatum</i>	NL	T
PLANTS			
Ashe's savory	<i>Calamintha ashei</i>	N	T
Britton's beargrass	<i>Nolina brittoniana</i>	E	E
Carter's warea	<i>Warea carteri</i>	E	E
Celestial lily	<i>Nemastylis floridana</i>	NL	E
Chapman's sedge	<i>Carex chapmanii</i>	NL	E
Cutthroat grass	<i>Panicum abscissum</i>	NL	E
Florida beargrass	<i>Nolina atopocarpa</i>	NL	T
Florida bonamia	<i>Bonamia grandiflora</i>	LT	E
Florida spiny-pod	<i>Matelea floridana</i>	NL	E
Florida willow	<i>Salix floridana</i>	NL	E
Giant orchid	<i>Pteroglossaspis ecristata</i>	NL	T
Many-flowered grass-pink	<i>Calopogon multiflorus</i>	NL	E
Nodding pinweed	<i>Lechea cernua</i>	NL	T
Piedmont jointgrass	<i>Coelorachis tuberculosa</i>	NL	T
Pine-woods bluestem	<i>Andropogon arctatus</i>	NL	T
Pondspice	<i>Litsea aestivalis</i>	NL	E

Common Name	Scientific Name	Federal Status	State Status
PLANTS (Continued)			
Pygmy pipes	<i>Monotropis reynoldsiae</i>	NL	E
Sand butterfly pea	<i>Centrosema arenicola</i>	NL	E
Scrub buckwheat	<i>Eriogonum longifolium</i> var. <i>gnaphalifolium</i>	T	E
Short-leaved rosemary	<i>Conradina brevifolia</i>	E	E
Yellow fringeless orchid	<i>Platanthera integra</i>	NL	E

Federal Status: E = Endangered: species in danger of extinction throughout all or a significant portion of its range.
T = Threatened: likely to become Endangered within foreseeable future throughout all or a significant portion of range
E(S/A) or T (S/A) Endangered/Threatened due to similarity of appearance to a species which is federally listed, such that enforcement personnel have difficulty in attempting to differentiate between the listed and unlisted species.
NL = Not Listed

State Status: E = Endangered: species, subspecies, isolated population so few/depleted/restricted and in imminent danger of extinction.
T = Threatened: species, subspecies, or isolated population that is facing a very high risk of extinction in the future.
SSC= Species of Special Concern: species, subspecies, or isolated population that is facing a moderate risk of extinction

4.3 PROJECT IMPACTS

4.3.1 HABITAT IMPACTS

No impacts to protected species or protected habitat are anticipated as a result of implementing the proposed project. Existing habitat along the proposed project corridor is limited to man-made swales, retention areas, maintained sod, and disturbed wetlands. Cleared and developed land, forested wetlands, and man-made ponds are located within and adjacent to the project's ROW. In general, habitat quality within the ROW is low and the area beyond the ROW is developed, developing, or actively managed as agricultural lands. Species with the greatest likelihood to occur within the project ROW are wading birds that commonly forage in road side swales.

4.3.2 LISTED SPECIES IMPACTS

The following sections discuss listed wildlife that may occur within the project corridor and address the potential impacts to each species resulting from project implementation.

4.3.2.1 Federally Listed Species

Eastern Indigo Snake (*Drymarchon corais couperi*)

The eastern indigo snake is designated as a threatened species by the USFWS and the FWC. The indigo snake utilizes habitat found in the vicinity of the project. In addition, the snake is a commensal species with the gopher tortoise, and is often found utilizing tortoise burrows. As neither tortoise burrows nor the indigo snake are documented within the project's ROW, it is anticipated that the project would have "no effect" on the Eastern indigo snake.

Florida Scrub-jay (*Aphelocoma coerulescens*)

The Florida scrub-jay is designated as threatened by both the USFWS and the FWC. Optimal scrub-jay habitat, consisting of low growing scrub oaks with bare sandy patches including scrubby flatwoods and xeric scrub, is not present within the project's ROW or within the immediate vicinity of the project. Although suitable scrub habitat is not present within or near the project study limits, the project does fall within the USFWS Florida scrub-jay consultation area. Scrub-jays are not documented in this area; therefore the project is anticipated to have "**no effect**" on the Florida scrub-jay.

Wood Stork (*Mycteria americana*)

Minor impacts associated with implementing the project should not affect critical wood stork core foraging habitat, as the impact areas are maintained and vegetated with sod. In addition, mitigation occurred previously for wetland impacts associated with ERP number 43016251.00. Although impacts to roadside swales are anticipated as a result of the proposed project, foraging habitat is expected to remain and no adverse impacts to wood storks are anticipated. Based on observations of marginal habitat within the project study limits and the insignificant nature of the additional project impacts, it is anticipated that the project “*may affect, but is not likely to adversely affect*” the federally endangered wood stork.

4.3.2.2 State Listed Species

American Bald Eagle (*Haliaeetus leucocephalus*)

Effective August 8, 2007 the American bald eagle is no longer listed on the USFWS Federal List of Endangered and Threatened Wildlife; however, the eagle continues to receive protection under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The bald eagle is still considered threatened by the FWC. The 2006 FWC eagle database documents active eagle nests in the area. The nearest nest occurs approximately two miles south of the project. Based on observations along the project corridor it is anticipated that the project will likely have “*no affect*” on the bald eagle.

Florida Black Bear (*Ursus americanus floridanus*)

The Florida black bear is designated as threatened by the FWC, but is not federally listed. Black bears utilize forested habitats. Marginal black bear habitat is present in the area, and telemetry data documents bear activity nearby, outside the project ROW. The nearest sightings are documented over ten miles to the northwest of the project limits. Although suitable habitat exists, the majority of the project is proposed within the existing ROW; an area not likely utilized by this species. It is anticipated that impacts occurring as part of this project will have “*no effect*” on the Florida black bear.

Florida Sandhill Crane (*Grus Canadensis pratensis*)

The Florida sandhill crane is listed as threatened by the FWC, but is not federally listed. The sandhill crane prefers wet prairies, marshy lake margins, improved pastures, and sparsely vegetated marshes where maidencane, pickerelweed, arrowhead or other herbaceous species are present. Suitable foraging and nesting habitat is found within the vicinity of the project, but is not present within the project’s ROW. Should construction be initiated during or prior to the sandhill crane breeding season (December through June), a survey may be conducted to ensure the species is not nesting near the area. Due to the lack of suitable habitat within the ROW, it is anticipated that the proposed project will “*not affect*” the Florida sandhill crane.

Gopher Tortoise (*Gopherus polyphemus*)

The gopher tortoise is listed as threatened by the FWC, but not federally listed. The gopher tortoise occupies a variety of plant communities, preferably habitats with well-drained sandy soils and suitable herbaceous forage. Appropriate habitat for the gopher tortoise is infrequent within the project ROW; therefore, the gopher tortoise is not believed to occupy the area. If the gopher tortoise or tortoise burrows are identified during construction, the FWC will be notified. According to new guidelines (September 2007), this will require coordination for a relocation permit. Due to the lack of suitable habitat, absence of burrows, and new protection requirements, it is anticipated that the project will “*not affect*” the gopher tortoise.

Sherman’s fox squirrel (*Sciurus niger shermani*)

The Sherman’s fox squirrel is listed by the FWC as a species of special concern, but is not listed by the USFWS. Ideal habitat consists of fire managed, longleaf pine flatwoods and turkey oak hammocks. The species also utilizes coniferous and hardwood forests, woodland pastures, and golf courses. The nearest fox squirrel sighting occurred west of the Suncoast Parkway on managed agricultural lands. Suitable habitat is not present within the project’s ROW. Due to the lack of optimal habitat to support this species, it is anticipated that the project will “*not affect*” the Sherman’s Fox Squirrel.

Wading Birds

Wading birds such as the limpkin (*Aramus guarauna*), white ibis (*Eudocimus albus*), little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*), and the tricolored heron (*Egretta tricolor*) are listed by the FWC as species of special concern, but are not federally listed. These species utilize a wide range of wetlands including ditches, marshes, and forests. Minor wetland impacts associated with the project should not affect critical wading bird habitat, as the project ROW is largely filled and vegetated with sod. No nesting areas for these species were observed within the proposed project ROW. Although impacts to roadside swales will result from implementing the proposed project, sufficient foraging habitat will remain, and no adverse impacts to wading bird species are anticipated. It is anticipated that the project will “*not affect*” any of these wading bird species.

4.3.3 LISTED PLANT SPECIES

Much of the land surrounding the proposed project is commercial, residential, or agricultural. Some natural wetlands are also present throughout the corridor. In general, the land within the SR 54 ROW is vegetated with sod and frequently maintained; however, in some locations, cypress domes and freshwater marshes encroach into the ROW. In other areas, the ROW has been converted to drainage swales and retention areas. Wetland vegetation is present in these depressional areas. Due to the disturbed nature of the project’s ROW, opportunities for encountering any endangered or threatened plant species are limited.

Data from the FNAI, and the USFWS Threatened and Endangered Species System, was used to compile a list of relevant listed plant species that may be present in Pasco County. Twenty-one

plant species, protected by Florida Department of Agricultural and Consumer Services (FDACS), potentially occur within the study area. Based on the information reviewed and the type of habitat within the project area, impacts to state and/or federally listed plant species are not anticipated.

4.3.3.1 Federally Listed Plant Species

Three federally protected plant species are listed in the FNAI report as having potential to occur within the vicinity of the proposed project: Britton's beargrass, Carter's warea, and Short-leaved rosemary. Each of these species are classified as endangered by both federal and state standards. Two species Florida bonamia and Scrub buckwheat are classified as threatened by federal standards and endangered by the state. Field surveys within the project ROW did not locate any of these species. Due to the absence of appropriate habitat, it is not likely that these species will occur within the proposed project ROW. Table 1 lists each species with its associated protection status. No adverse impacts to federally-listed plant species are anticipated.

4.3.3.2 State Listed Plant Species

The remaining sixteen species listed in Table 1 were included in the FNAI list of rare species documented and reported in Pasco County. These species receive only state protection status and are listed as either threatened or endangered. Field surveys within the project's ROW did not locate any of these species. Due to the absence of appropriate habitat, it is not likely that these species will occur within the proposed project ROW. No adverse impacts to state-listed plant species are anticipated if the proposed project is implemented.

4.4 POTENTIAL MINIMIZATION MEASURES

Measures to avoid or minimize impacts to native habitat are planned to be included in the proposed project's design. The primary measure of minimization is to design all roadway improvements within the existing ROW. Only minor impacts to fringe wetlands and other surface waters are proposed. In addition, minor expansions of existing stormwater drainage features are proposed to accommodate additional drainage needs associated with the project. The proposed modifications to artificial foraging habitat (drainage features) should result in a net increase in wading bird foraging area. The anticipated affects to these areas are localized.

4.5 PROPOSED MITIGATION MEASURES

The results of this Endangered Species Biological Assessment suggest that adverse impacts to protected species are not anticipated as a result of implementing the proposed project. Therefore, mitigation measures are not proposed.

Section 5 CONTAMINATION SCREENING EVALUATION

5.1 Contamination Screening Evaluation

A contamination screening evaluation of the proposed project was conducted. The following methodology was used for this evaluation:

The files available through Pasco County Environmental Protection Commission (EPC), the US Environmental Protection Agency (EPA), and the FDEP were searched. The EPA Envirofacts system supplies online information concerning hazardous waste and National Priority List (NPL, Superfund) sites. The FDEP provides online viewing of site-specific contamination files (OCULUS database) and files at their Tampa office.

A review of information generated by Environmental Data Management, which includes a search of the following state and federal databases: National Priority List (NPL); Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS); Resource Conservation and Recovery Act (RCRA), Treatment Storage and Disposal facility (RCRA TSD); RCRA generator list (RCRA GEN); Information System (RCRIS); Emergency Response Notification System (ERNS); State Landfill (SWF/LF); Delisted NPL Sites; Facility Index System/Facility Identification Initiative Program Summary Report (FINDS); Underground Storage Tanks (UST); Petroleum Contamination Detail Report (PCT01); Stationary Tank Inventory Facility/Owner/Tank Report (STI02); Leaking Underground Storage Tank Incident Reports (LUST); and Dry Cleaners.

Visual reconnaissance was performed in June of 2008 to identify sites or areas with indications of past or present contaminant storage, use, generation, or disposal. Potential sites were visually examined to the extent of available access for evidence of possible contaminant presence. The contamination potential was assessed for each property within the proposed limits.

One potential contamination site was identified within the proposed project's study limits. It has been assigned a risk evaluation rating of Low. This site is the Shell-Suncoast station located at 16138 SR 54. If construction activities are to occur in an area with contamination concerns, then a site assessment would be performed to the degree necessary during final design to determine levels of contamination and evaluate clean-up options and associated costs. Excavation and/or dewatering for installation of underground structures or utilities in the vicinity of contaminated sites could potentially encounter or exacerbate contamination conditions. Investigations should not be limited to areas of roadway expansion but should also include the drainage areas located adjacent to the roadway.

Resolution of problems regarding contamination will be coordinated by Pasco County with the appropriate regulatory agencies and action will be taken where applicable. Further coordination with the regulatory agencies, and possibly field surveys involving monitoring wells, soil borings and other site-specific methods, can identify potential contamination issues so that avoidance, minimization, and remediation measures can be taken. Procedures specifying the contractor's responsibilities in regard to encountering petroleum-contaminated soil and/or groundwater are set forth in FDOT's Standard Specifications for Road and Bridge Construction.

Section 6 LITERATURE CITED AND OTHER SOURCES

Aerials Express. 2006. AEView Aerial Mapping Software. Tampa Bay.

Florida Land Use, Cover and Forms Classification System Handbook. 1999. Florida Department of Transportation (FDOT).

Florida Fish & Wildlife Conservation Commission (FWC). 1999 statewide waterbird survey GIS.

Florida Natural Areas Inventory (FNAI). June 2007 Florida Element Occurrence GIS for Pasco and Hillsborough Counties.

Ogden, J.C. 2001. Habitat Management Guidelines for Wood Stork in the Southeast Region. Prepared for the United States Fish and Wildlife Service (USFWS), Atlanta, Georgia.

Southwest Florida Water Management District (SFWMD). 1999 Land Use/Land Cover GIS.

Soil Survey of Pasco County, Florida. 1989. United States Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS)

Hydric Soils of Florida Handbook. 2001. Florida Association of Environmental Soil Scientists.

Appendix A
CRAS Correspondence



FLORIDA DEPARTMENT OF STATE
Kurt S. Browning
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Rebecca Spain Schwarz
PBS&J
5300 W. Cypress Street, Suite 200
Tampa, FL 33607

December 5, 2008

RE: DHR Project File Number: 2008-6032 (B)
WPI Segment No.: 421140-7
Project: *Draft Historic Structures Survey Technical Memorandum: SR 54 PD&E Study
from West of SR 589 (Suncoast Parkway) to West of SR 45 (US 41)*
County: Pasco

Dear Ms. Schwarz:

Our office reviewed the project in accordance with Chapter 267, Florida Statutes, and applicable local ordinances. It is the responsibility of the State Historic Preservation Officer to advise and assist, as appropriate, State agencies and local governments in carrying out their historic preservation responsibilities; to cooperate with State agencies to ensure that historic properties are taken into consideration at all levels of planning and development; and to consult with agencies on undertakings that may affect historic properties and the content and sufficiency of any plans developed to protect, manage, or to reduce or mitigate harm to such properties.

As a result of background research, one historic railroad segment (8PA2419) and five historic structures (8PA303, 8PA304, 8PA1401, 8PA1489, and 8PA2549) were identified as having been previously recorded within the project's area of potential effect. Four of these resources (8PA303, 8PA304, 8PA1401, and 8PA2549) were previously evaluated as not eligible for listing in the National Register of Historic Places and the remaining two (8PA1489 and 8PA2419) were not previously evaluated.

Three of the previously recorded structures (8PA303, 8PA304, and 8PA1401) were confirmed demolished. Two of the extant structures (8PA1489 and 8PA2549) were recently recorded. There were no significant changes to these structures. The historic railroad segment was updated with a Florida Master Site File Resource Group Form and no previously unrecorded historic structures were identified during the survey. As such, it is the opinion of the Florida Department of Transportation, District Seven, that there will be *no historic properties affected* as a result of the proposed project.

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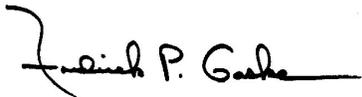
☐ Historic Preservation
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Ms. Rebecca Spain Schwarz
December 5, 2008
Page 2

Based on the information provided, our office agrees with the determinations of eligibility on all the identified historic structures with the exception of the Tampa Northern Railroad (8PA2419). Our office disagrees with the determination that this segment of the Tampa Northern Railroad (8PA2419) is not eligible for NRHP-listing. There is still insufficient information to establish historical significance. Furthermore, it is unclear whether the assessed condition of the railroad is sufficient to render a potential NRHP-eligible railroad as ineligible due to loss of integrity. However, due to the nature of the proposed project, our office agrees with a *finding of no adverse effect* [as per 36 C.F.R. Part 800, §800.5(b)] to any significant historic properties as a result of the proposed project.

If you have any questions concerning our comments, please contact Brian Yates, Compliance Review Archaeologist, by electronic mail byates@dos.state.fl.us, or at 850-245-6372.

Sincerely,

A handwritten signature in black ink that reads "Frederick P. Gaske". The signature is written in a cursive style with a long horizontal line extending to the right.

Frederick P. Gaske, Director, and
State Historic Preservation Officer

XC: Michael Cote, Southwest Florida Water Management District, Brooksville

Appendix B
Florida Natural Areas Inventory Report