

# Preliminary Engineering Report

Poinciana Parkway Extension (SR 538)  
Project Development and Environment Study  
From Poinciana Parkway to CR 532  
Osceola and Polk Counties, Florida

CFX Project Number: 599-224

Prepared for:

**CENTRAL  
FLORIDA  
EXPRESSWAY  
AUTHORITY**

AUGUST 2019

# DRAFT

Prepared by:

Kimley-Horn and Associates, Inc.

# PROFESSIONAL ENGINEER CERTIFICATION

## PRELIMINARY ENGINEERING REPORT

**Project:** Poinciana Parkway Extension  
**CFX Project Number:** 599-224

This preliminary engineering report contains engineering information that fulfills the purpose and need for the Poinciana Parkway Extension Project Development & Environment Study from the northern end of the existing bridge over the Reedy Creek Mitigation Bank to CR 532 in Osceola and Polk Counties, Florida. I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience. I hereby certify that I am a registered professional engineer in the State of Florida practicing with Kimley-Horn and Associates, Inc., and that I have prepared or approved the evaluation, findings, opinions, conclusions or technical advice for this project.

DRAFT

**S. Clifton Tate, P.E.**  
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## 1.0 PROJECT SUMMARY

In accordance with the Florida Department of Transportation (FDOT) Project Development and Environment (PD&E) Manual, this Preliminary Engineering Report was prepared for the proposed improvements for the Poinciana Parkway Extension. The Poinciana Parkway Extension is a proposed tolled expressway improvement project that includes extending Poinciana Parkway, from the northern end of the existing bridge over the Reedy Creek Mitigation Bank to CR 532 (Osceola Polk Line Road). Project regional and location maps are provided on **Exhibits 1-1** and **1-2**.

The purpose of this report is to document existing conditions, project design controls and criteria, the development and evaluation of alternatives, public involvement, and the identification of a preferred alternative.

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Exhibit 1-1: Regional Map

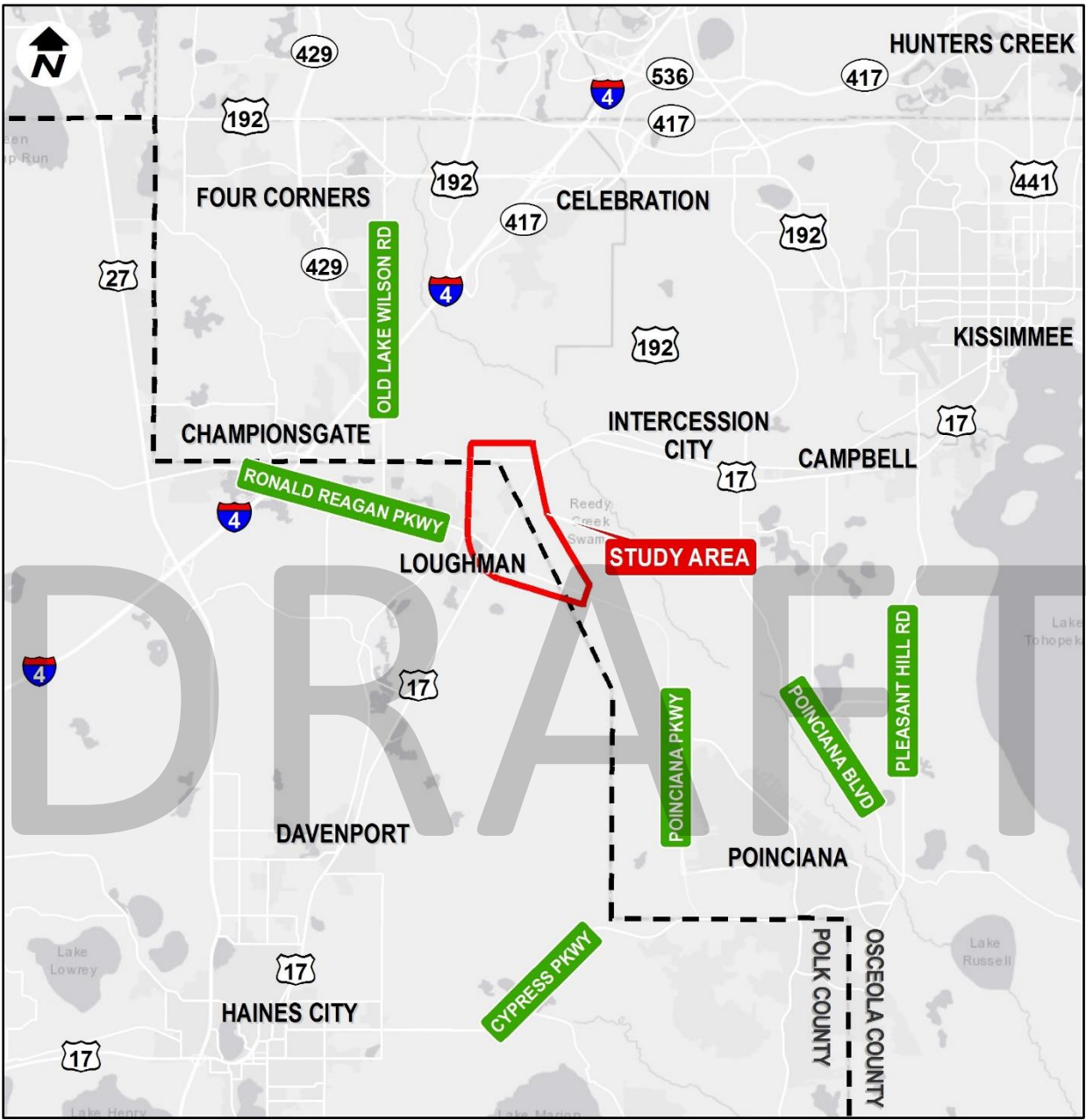
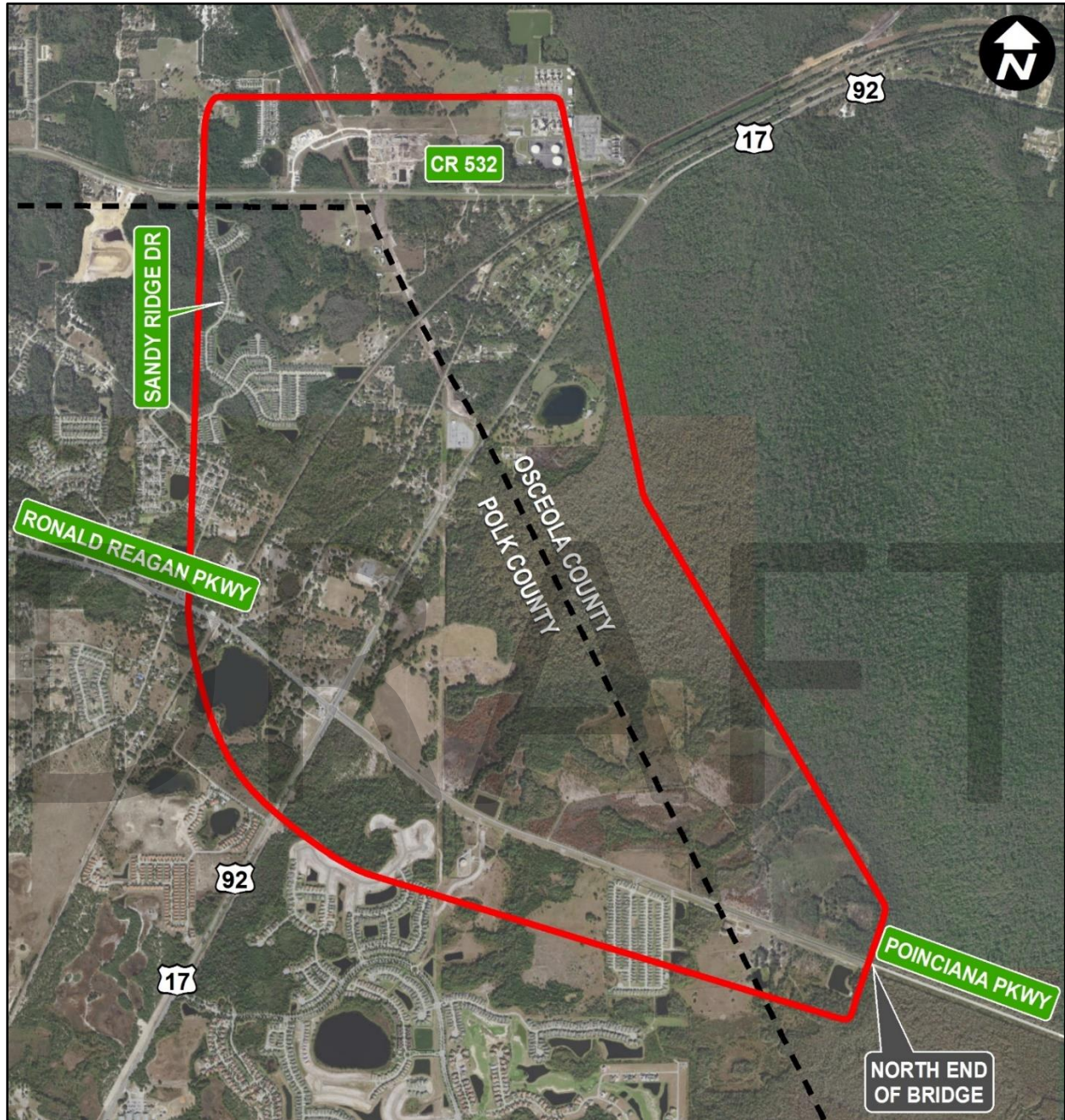




Exhibit 1-2: Study Area Map



## 1.1 PROJECT DESCRIPTION

Previous studies have been conducted by the former Osceola County Expressway Authority (OCX), FDOT, and by the Central Florida Expressway Authority (CFX). Most recently, CFX conducted a Concept, Feasibility & Mobility (CF&M) Study for the Poinciana Parkway Extension/I-4 Connector. From this study, the CFX Board determined that a phased implementation of an expressway from the Poinciana Parkway to CR 532 was preferred and authorized to move to the PD&E Study phase. Three corridors from the CF&M Study were advanced for further study as described in Section 4.0 of this report.

The Poinciana Parkway Extension PD&E Study includes an evaluation of alternatives to extend the existing Poinciana Parkway (SR 538) from the existing bridge over the Reedy Creek Mitigation Bank to CR 532. The project is a proposed tolled 4-lane expressway within approximately 330 feet of right-of-way (ROW). This ROW width provides for future expansion for additional lanes and/or other multimodal travel options if needed in the future. The project also includes interchanges with other county and state roads, bridges over wetlands in the Reedy Creek Mitigation Bank and South Florida Water Management District (SFWMD) owned/managed Upper Lakes Basin Watershed habitat, as well as bridges over local roads and railroads. Stormwater management facilities are also being considered.

## 1.2 PURPOSE AND NEED

As noted above, the CFX Board determined that a phased implementation of an expressway connection from the Poinciana Parkway to CR 532 was preferred and should be evaluated. As such, the purpose and need for this study retains the context of both a full expressway connection to I-4 as well as an initial phased expressway connection to CR 532.

### 1.2.1 PURPOSE

The primary purpose of the Poinciana Parkway Extension is to enhance mobility from I-4 to Cypress Parkway, improve overall traffic operations of the existing highway network within the project study area, and expand regional system linkage in Osceola and Polk Counties. The secondary objectives are to provide transportation infrastructure to support economic growth and provide consistency with local plans and policies.

### 1.2.2 NEED

The need for the project is to provide system linkage, provide regional connectivity and mobility, meet social and economic needs, provide increased transportation capacity, achieve consistency with transportation plans, and provide for multimodal opportunities.

#### 1.2.2.1 SYSTEM LINKAGE

System linkage is defined as linking two or more existing transportation facilities, types of modal facilities, geographic areas, or regional traffic generators. Poinciana Parkway currently links Marigold Avenue, KOA Street, and Cypress Parkway in Poinciana to US 17/92 in Polk County, near the Osceola County line. No direct limited-access connection exists between Poinciana Parkway and I-4. Therefore, no direct connection exists between the Poinciana residential area in Osceola and Polk Counties to major employment centers in the Orlando metropolitan area, or from the limited-access Poinciana Parkway to the regional freeway/expressway system. The Poinciana Parkway Extension to CR 532 will improve system linkage.

### 1.2.2.2 REGIONAL CONNECTIVITY AND MOBILITY

Mobility is the movement of people and goods and the ability to meet transportation demands. One of the regional goals is to provide a direct, limited-access connection from Poinciana Parkway to I-4 to decrease travel time associated with delays at signalized and unsignalized intersections on the existing local roadway network. Currently, traffic traveling between Poinciana Parkway and I-4 can use Ronald Reagan Parkway and Lake Wilson Road (or Old Lake Wilson Road or Champions Gate Boulevard) to the CR 532 interchange. An alternate route is to use US 17/92 to CR 532 to the CR 532 interchange. However, all routes experience congestion. In addition, the CR 532 interchange with I-4 experiences significant congestion during the morning and afternoon peak periods. While the Poinciana Parkway Extension as part of this study will not connect to I-4, it will be compatible with a future expressway connection to I-4.

In addition, the Poinciana Parkway Extension will improve the connection to I-4 via CR 532, which is planned to be widened. The existing CR 532 interchange is also planned to be improved as part of the I-4 Beyond the Ultimate project (the improvement to the interchange could be implemented prior to the I-4 Beyond the Ultimate project).

### 1.2.2.3 SOCIAL AND ECONOMIC NEEDS

Osceola County has identified opportunities for growth but, without increased connectivity and sufficient capacity, congestion within the study area will increase and result in a lack of economic opportunities for areas such as Poinciana and Osceola County's South Lake Toho Master Plan. As part of Osceola County's growth strategy to discourage urban sprawl by focusing on higher intensity and density development within their Urban Growth Boundary, they identified a system of expressways which generally follow their urban growth boundary. These expressways, which include the Poinciana Parkway Extension and the I-4 Connector, will provide connectivity and capacity to support the County's economic and social needs.

### 1.2.2.4 CAPACITY CONSTRAINTS

The construction of Poinciana Parkway, from Cypress Parkway to US 17/92, provided a new alternative route for Poinciana residents traveling to and from the north. However, a direct connection to I-4 is not provided and traffic currently uses various routes (i.e., US 17/92, CR 532, Ronald Reagan Parkway, or Lake Wilson Road) to access I-4 at the CR 532/I-4 interchange. Currently, Lake Wilson Road, from Ronald Reagan Parkway to CR 532, operates over capacity. During the morning peak hour, there is severe congestion on eastbound I-4 (from US 27 to just beyond CR 532), westbound CR 532, eastbound Champions Gate Boulevard, and northbound Lake Wilson Road. There is also congestion on Ronald Reagan Parkway, US 17/92, and northbound Old Lake Wilson Road. During the afternoon peak hour, there is severe congestion on westbound I-4 (from SR 417 to just beyond CR 532), southbound Old Lake Wilson Road, and southbound Lake Wilson Road. There is also congestion on CR 532, Champions Gate Boulevard, Ronald Reagan Parkway, and US 17/92. It is anticipated that the Poinciana Parkway Extension will offer another option for drivers and, therefore, provide congestion relief to local roads.

### 1.2.2.5 CONSISTENCY WITH TRANSPORTATION PLANS

Osceola County's Comprehensive Plan includes a transportation system developed to respond to planned growth in the County. The Plan incorporates a vision for an integrated, multimodal transportation network that will meet the needs of the County's growing population. The Poinciana



Parkway Extension is included in the County's Comprehensive Plan as well as the OCX Master Plan 2040 (OCX, 2013) as part of a planned limited-access, high-speed toll facility identified to serve Osceola County's urban growth area. The OCX Master Plan has been adopted into the CFX Master Plan. The MetroPlan Orlando (MPO) 2040 Long Range Transportation Plan (LRTP) includes the Poinciana Parkway Extension as a new 4-lane facility to be constructed by 2030.

#### 1.2.2.6 MULTIMODAL OPPORTUNITIES

CFX has established a multimodal policy to fund or partner on multimodal initiatives where revenue generated from the investment equals the project cost or where toll user benefits are equal to or exceed the project cost. In addition, Osceola County's Comprehensive Plan calls for an integrated, multimodal transportation network. Opportunities to provide for multimodal improvements were considered as part of the alternatives developed to address the need and purpose for this project.

### 1.3 COMMITMENTS

CFX commits to the following:

- Alternatives that impact the Reedy Creek Mitigation Bank (RCMB) and Upper Lakes Basin will include a bridge section.
- The *Standard Protection Measures for the Eastern Indigo Snake* will be implemented during project construction.
- Avoidance and minimization of wetland and listed species impacts will continue to be evaluated during the final design, permitting and construction phases of this project and all possible and practicable measures to avoid or minimize these impacts during design, construction and operation will be incorporated.
- Pre-construction surveys for the bald eagle, southeastern American kestrel, Florida sandhill crane, Florida burrowing owl, gopher tortoise, bald eagle, listed plants, and any other listed species will be performed as required.
- Best Management Practices (BMPs) to control erosion and sedimentation in accordance with Standard Specifications for Road and Bridge Construction will be implemented.
- To minimize water quality impacts, the stormwater management system design will include a site-specific pollutant loading analysis and an additional 50% water quality treatment volume.
- Surface water management system will be designed to maintain and support existing hydrologic flow patterns and regimes and avoid gradient drawdowns of the wetlands through a design that incorporates appropriate control elevations.
- Construction impacts will be minimized through implementation of BMPs.

### 1.4 ALTERNATIVES ANALYSIS SUMMARY

A CF&M Study for the Poinciana Parkway Extension/I-4 Connector was completed in May 2018. The Poinciana Parkway Extension/I-4 Connector is a tolled expressway improvement project that includes widening the existing Poinciana Parkway to 4-lanes and extending it to I-4 (from Cypress Parkway to I-4). The general objective of this CF&M Study was to provide information necessary for CFX to decide on the viability of the project. The project was determined to be financially feasible and viable; therefore, CFX authorized the Poinciana Parkway Extension PD&E.

Alternatives considered in the CF&M Study included:

- No-Build
- Transportation Systems Management and Operations (TSM&O) Alternatives
- Transit, Intermodal, Multimodal Alternatives
- TOLLED Limited-Access Alternatives

No TSM&O alternative can fulfill the purpose and need for the project; therefore, no TSM&O options were considered for this study. Based on a review of CFX's Multimodal Policy and potential multimodal improvements, there are currently no multimodal improvements recommended for consideration as part of the Poinciana Parkway Extension alternatives. However, adequate space has been provided in the median of the planned typical section to accommodate multimodal improvements in the future.

Three tolled limited-access alternatives from the CF&M study were considered as part of the PD&E Study – Alternatives 1, 4 and 5. These alternatives were further refined to Alternatives 1A, 4A and 5A. Alternative 5A Without Slip Ramps to Ronald Reagan Parkway was identified as the preferred build alternative. Advantages associated with this alternative include:

- Least potential residential impacts (52 parcels compared to 123 parcels for Alternative 1A)
- Least potential non-residential impacts (8 parcels compared to 24 parcels for Alternative 1A)
- Low socioeconomic impacts to special populations (compared to high for Alternative 1A)
- Medium community cohesion effects (compared to high for Alternative 1A)
- Lowest impact to proposed development (0 acres compared to 61 acres for Alternative 1A)
- Lowest impact to ponds/lakes (1 acre compared to 5 acres for Alternative 1A)
- Lowest impact to flood hazard areas (52 acres compared to 73 acres for Alternative 1A)
- No impact to Bald Eagle Nest (compared to one impact for Alternative 1A)
- Less impacts to Reedy Creek Mitigation Bank than Alternative 4A (49 acres compared to 69 acres)
- Less impacts to SFWMD Regulatory Conservation Lands (0 acres compared to 11 acres for Alternative 1A)
- Lowest cost (\$275 million compared to \$295 million for Alternative 1A)
- Highest 2045 Daily Traffic (25,200 trips compared to 18,000 trips for Alternative 1A)

There are some disadvantages to Alternative 5A Without Slip Ramps to Ronald Reagan Parkway which include:

- Higher impacts to wetlands (66 acres compared to 54 acres for Alternative 1A)
- Higher impacts to state listed species habitat (75 acres compared to 41 acres for Alternative 1A)
- Higher impacts to Reedy Creek Mitigation Bank than Alternative 1A (49 acres compared to 28 acres)
- Higher impact to Upper Lakes Basin Watershed (31 acres compared to 0 acres for Alternative 1A)

To minimize the above impacts, Alternative 5A Without Slip Ramps to Ronald Reagan Parkway includes constructing a bridge approximately 0.9 mile in length over wetlands in the Reedy Creek Mitigation Bank and the Upper Lakes Basin Watershed.

In addition, mitigation costs have been included in the cost estimate and will be paid as required for the project.

## 1.5 DESCRIPTION OF PREFERRED ALTERNATIVE

Alternative 5A Without Slip Ramps to Ronald Reagan Parkway travels northwest from the end of the existing Poinciana Parkway bridge, through the Reedy Creek Mitigation Bank along the county line (in Osceola County) before crossing (and interchanging with) US 17/92 approximately one mile north of its intersection with Ronald Reagan Parkway, crosses over Old Tampa Highway and over the CSX railroad while shifting west into Polk County and intersecting with CR 532 just west of the Sabal Trail Reunion Compressor Station. This alignment requires utility relocations (a Duke Energy transmission line, a Kinder Morgan gas pipeline, and a Florida Southeast Connection gas pipeline) into a new easement which will extend along the west side of the expressway, from north of CR 532 to Old Kissimmee Road.

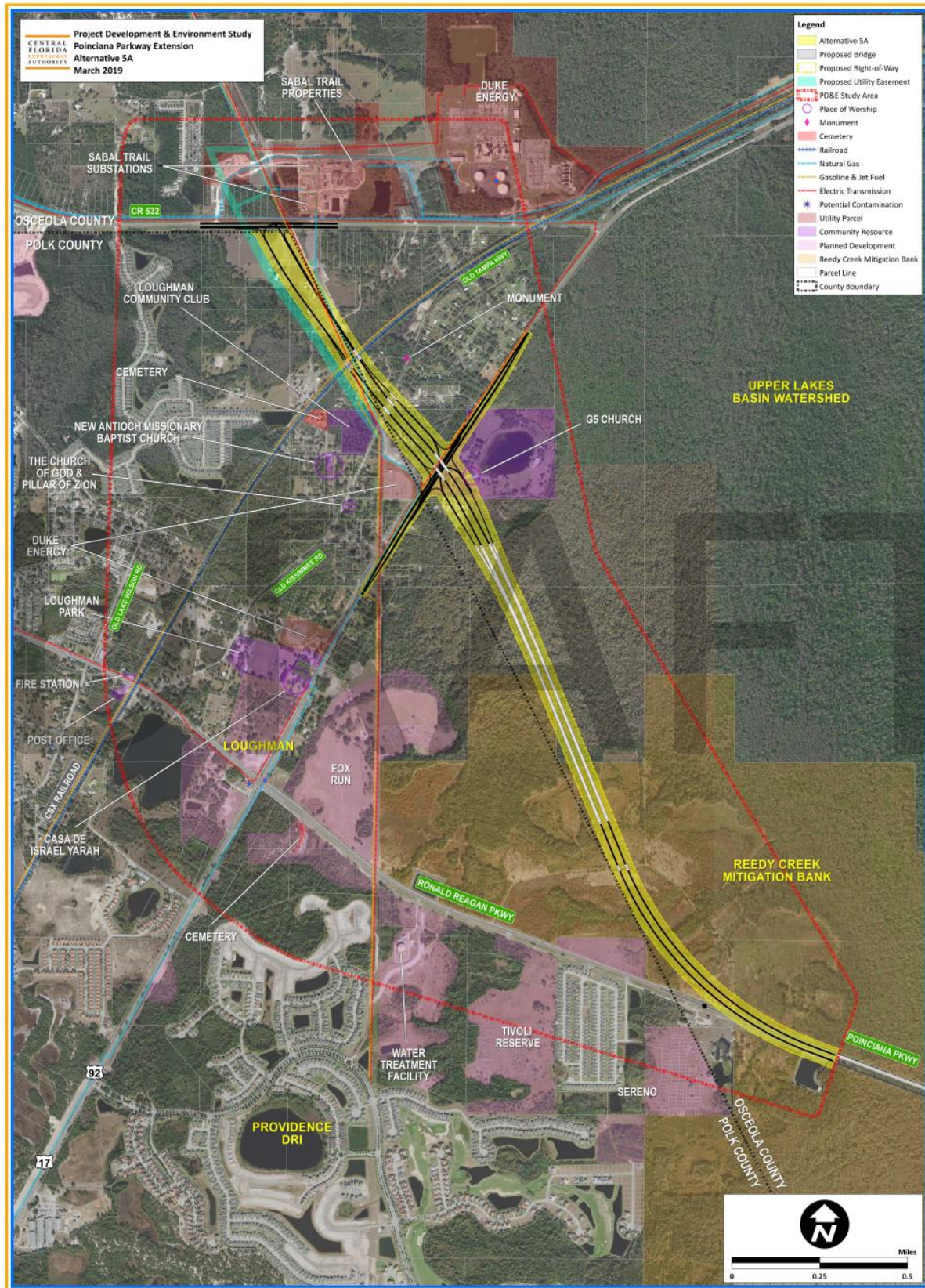
The interchange with US 17/92 is a single point urban interchange (SPUI) and the at-grade intersection with CR 532 will operate as a half SPUI (oriented to the east) and is set up to operate as a half SPUI interchange (oriented to the west) when the Poinciana Parkway Extension is connected to I-4. To minimize impacts, a bridge of approximately 0.9 mile in length is provided over wetlands in the Reedy Creek Mitigation Bank and the Upper Lakes Basin Watershed.

**Exhibit 1-3** illustrates Alternative 5A Without Slip Ramps to Ronald Reagan Parkway and identifies a proposed utility easement for relocating utilities.

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**Exhibit 1-3: Alternative 5A Without Slip Ramps to Ronald Reagan Parkway**



## 1.6 LIST OF TECHNICAL DOCUMENTS

Additional technical documents prepared as part of the PD&E include:

- Typical Section Package, July 2019, Kimley-Horn and Associates, Inc.
- Contamination Screening Evaluation Report, May 2019, Kimley-Horn and Associates, Inc.
- Pond Siting Report, June 2019, The Balmoral Group
- Location Hydraulics Report, May 2019, The Balmoral Group
- Bridge Analysis Report, July 2019, Kimley-Horn and Associates, Inc.
- Water Quality Impact Evaluation, May 2019, Kimley-Horn and Associates, Inc.
- Utility Assessment Report, July 2019, Inwood Consulting Engineers, Inc.
- Natural Resources Evaluation, July 2019, Kimley-Horn and Associates, Inc.
- Air Quality Screening Analysis Technical Memo, July 2019, Inwood Consulting Engineers, Inc.
- Noise Study Report, July 2019, Inwood Consulting Engineers, Inc.
- Project Environmental Impact Report, July 2019, Kimley-Horn and Associates, Inc.
- Cultural Resources Assessment Survey, August 2019, SEARCH
- Project Traffic Analysis Report, July 2019, CDM Smith

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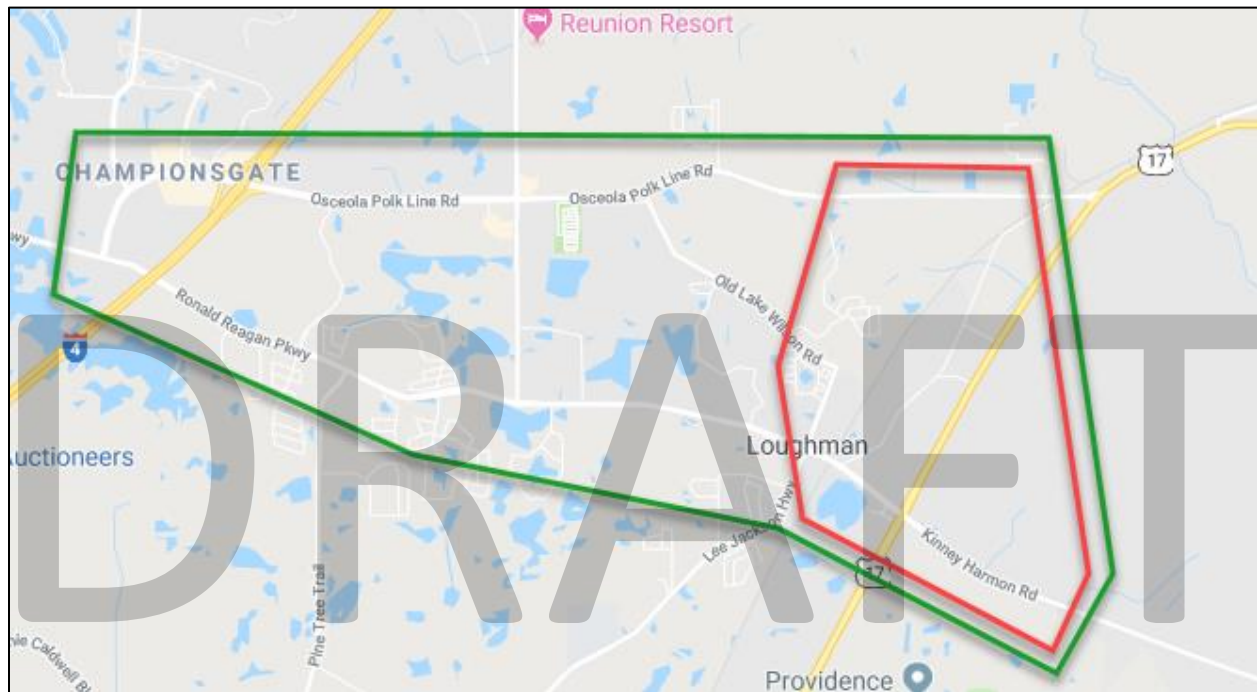


## 2.0 EXISTING CONDITIONS

The study area for the Poinciana Parkway Extension is illustrated on **Exhibit 2-1**. The study area extends from the north end of the existing Poinciana Parkway bridge through the Reedy Creek Mitigation Bank to CR 532.

A larger influence area is also identified. It is anticipated that construction of the Poinciana Parkway Extension will influence travel patterns within this area; therefore, existing conditions for roadways within the influence area have been identified.

**Exhibit 2-1: Study Area and Influence Area**



## 2.1 ROADWAY CONDITIONS

Poinciana Parkway Extension is a proposed new expressway which would extend from the northern end of the Poinciana Parkway bridge over the Reedy Creek Mitigation Bank to CR 532.

The typical sections of roadways in the study area are identified in **Table 2-1**. The existing Poinciana Parkway 2-lane undivided typical section will ultimately become the northbound lanes once the two southbound lanes are constructed, creating a 4-lane divided typical section.

**Table 2-1: Roadway Typical Sections**

Roadway		Number of Lanes
From	To	
Poinciana Parkway		
Cypress Parkway	Ronald Reagan Parkway	2-Lane Undivided
Ronald Reagan Parkway		
Champions Gate Boulevard	US 17/92	4-Lane Divided
US 17/92	Poinciana Parkway	2-Lane Undivided
CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard		
Ronald Reagan Parkway	I-4 WB Ramp	4-Lane Divided
I-4 WB Ramp	US 17/92	4-Lane Divided
US 17/92		
South of Ronald Reagan Parkway	0.6-mile N. of Ronald Reagan Parkway	2-Lane Undivided
0.6-mile N. of Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	2-Lane Undivided
Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	2-Lane Undivided
Old Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	2-Lane Undivided
I-4		
US 27 (Exit 55)	SR 429 (Exit 60)	6-Lane Divided

## 2.2 RIGHT-OF-WAY

The ROW width for the study area roadway segments is shown in **Table 2-2** and described below:

- **Poinciana Parkway** – From Ronald Reagan Parkway to the bridge over Reedy Creek, the ROW for Poinciana Parkway is approximately 200 feet wide. At the bridge over Reedy Creek, the ROW reduces to 176 feet. Between the Reedy Creek Bridge and Magnolia Avenue, the ROW varies from approximately 220 feet to 300 feet.
- **Ronald Reagan Parkway** – The ROW for Ronald Reagan Parkway, from Champions Gate Boulevard to US 17/92, is approximately 100 feet. The ROW for Ronald Reagan Parkway, from US 17/92 to Poinciana Parkway, varies from approximately 145 feet to approximately 170 feet.
- **CR 532 (Osceola Polk Line Road)** – The ROW for CR 532, from I-4 to US 17/92, is approximately 200 feet.
- **Champions Gate Boulevard** – The ROW for Champions Gate Boulevard, from Ronald Reagan Parkway to I-4, is approximately 100 feet.
- **US 17/92** – The ROW for US 17/92 through the study area is approximately 100 feet.
- **Lake Wilson Road** – The ROW for Lake Wilson Road, from Ronald Reagan Parkway to CR 532, varies from approximately 40 feet to approximately 120 feet.
- **Old Lake Wilson Road** – The ROW for Old Lake Wilson Road, from Ronald Reagan Parkway to CR 532, varies from approximately 30 feet to approximately 60 feet.
- **I-4** – From US 27 to CR 532, I-4 has a ROW width of approximately 430 feet. East of CR 532, the ROW is approximately 300 feet.

**Table 2-2: Roadway Existing ROW Width for Study Area Roadway Segments**

Roadway		ROW Width (ft)
From	To	
Poinciana Parkway		
Cypress Parkway	Marigold Avenue	150 - 210
Marigold Avenue	Ronald Reagan Parkway	176 - 300
Ronald Reagan Parkway		
Champions Gate Boulevard	US 17/92	100
US 17/92	Poinciana Parkway	145 - 170
CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard		
Ronald Reagan Parkway	I-4 WB Ramp	100
I-4 WB Ramp	I-4 EB Ramp	100
I-4 EB Ramp	Lake Wilson Road	200
Lake Wilson Road	US 17/92	200
US 17/92		
South of Ronald Reagan Parkway	0.6-mile N. of Ronald Reagan Parkway	100
0.6-mile N. of Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	100
Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	40 - 120
Old Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	30 - 60
I-4		
US 27 (Exit 55) <sup>1</sup>	CR 532 (Osceola Polk Line Road/Exit 58)	430
CR 532 (Osceola Polk Line Road/Exit 58) <sup>1</sup>	SR 429 (Exit 60)	300
SR 429		
Sinclair Road <sup>1</sup>	I-4 <sup>1</sup>	300

**Notes:**<sup>1</sup> - ROW increases at interchanges**2.3 ROADWAY CLASSIFICATION & CONTEXT CLASSIFICATION**

The functional classifications for key roadways within the limits of this study are shown in **Table 2-3**. The recently constructed Poinciana Parkway has not been functionally classified; however, it is anticipated that it will be classified as a Principal Arterial – Expressway, from Cypress Parkway to Ronald Reagan Parkway, and Ronald Reagan Parkway (from Poinciana Parkway to US 17/92) will be re-classified as a Principal Arterial – Other (currently it is a Major Collector). It is anticipated that the new facility, Poinciana Parkway Extension, will be classified as a Principal Arterial – Expressway from Poinciana Parkway to CR 532.

**Table 2-3: Roadway Functional Classification**

Roadway		Functional Classification
From	To	
Poinciana Parkway		
Cypress Parkway	Ronald Reagan Parkway	Not Classified
Ronald Reagan Parkway		
Champions Gate Boulevard	US 17/92	Urban Minor Arterial
US 17/92	Poinciana Parkway	Rural Major Collector
CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard		
Ronald Reagan Parkway	I-4 WB Ramp	Urban Major Collector
I-4 WB Ramp	US 17/92	Urban Minor Arterial
US 17/92		
South of Ronald Reagan Parkway	0.6-mile N. of Ronald Reagan Parkway	Rural Principal Arterial - Other
0.6-mile N. of Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	Urban Principal Arterial - Other
Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	Local Road
Old Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	Local Road
I-4		
US 27 (Exit 55)	SR 429 (Exit 60)	Urban Principal Arterial - Interstate

The context classification for US 17/92 has been identified by FDOT as C2.

## 2.4 ADJACENT LAND USE

Property line data was obtained from the Osceola County Property Appraiser and the Polk County Property Appraiser.

Geographic Information System (GIS) data was obtained from the SFWMD (2011) and the Southwest Florida Water Management District (SWFWMD) (2011) to assist in identifying land cover and natural communities. Land covers were classified according to the Florida Land Use, Cover, and Forms Classification System (FLUCFCS, FDOT, 1999). The general land cover within the study area consists of a mixture of developments (residential, commercial, community facilities), wetlands, agriculture (pastures, tree nurseries, citrus, etc.), and native uplands (pine flatwoods, xeric oak, live oak, and other hardwood forests). **Table 2-4** provides the FLUCFCS data and acreage within the study area. The FLUCFCS data are indicated on **Exhibits 2-2A, 2-2B, and 2-2C**.

**Table 2-4: Study Area FLUCFCS Summary and Acreage**

FLUCFCS Code	FLUCFCS Type	Description	Acres
112	Mobile Home Units	This category represents the mobile home neighborhoods located at the northeast part of the study area surrounding Old Kissimmee Road.	92
118	Rural Residential	The category represents the low density residential community of Loughman.	187
129	Medium Density Under Construction	This category represents the Providence DRI and other residential communities under construction near Poinciana Parkway.	142
131	Fixed Single Family Units (6+ units per acre)	This category represents the communities of Sereno and Sandy Ridge.	86
132	Mobile Home Units (6+ units per acre)	This category includes the 21 Palms RV Resort which contains both RV pads and mobile homes.	10
139	High Density Under Construction	This category includes the community of Tivoli Reserve which is under construction.	32
140	Commercial and Services	This land cover includes gas stations, future Publix site and other various commercial parcels throughout the study area.	4
172	Religious	This category includes Casa De Israel Yarah along US 17/92. There are two other religious facilities (G5 Church and New Antioch Missionary Baptist Church) within the study area; however, these land uses were also classified as woodland pastures and rural residential, respectively, due to the large size of the parcels and potential habitat for wildlife or listed species being present.	1
185	Parks and Zoos	This category includes Loughman Park.	12
190	Open Land	This category includes open land within the study area where the intended land use is not obvious.	11
211	Improved Pastures	These pastures are located in the northwest portion of the study area, adjacent to and south of Osceola Polk Line Road. This category includes pastures planted with Bahia grass ( <i>Paspalum notatum</i> ). Some of the pastures within the study area are currently being used as horse pastures.	62
213	Woodland Pastures	These pastures are located in the more northern portions of the study area, specifically north of Osceola Polk Line Road and also east of US 17/92. This category includes pastures planted with Bahia grass but also have hardwood species throughout, including live oak ( <i>Quercus virginiana</i> ).	80

**Table 2-4: Study Area FLUCFCS Summary and Acreage**

FLUCFCS Code	FLUCFCS Type	Description	Acres
310	Herbaceous (dry prairies)	This habitat type is found in the western portion of the study area, west of US 17/92 and both north and south of Ronald Reagan Parkway. The dominant vegetation is Bahia grass. Other vegetative species include dogfennel ( <i>Eupatorium capillifolium</i> ), bluestem ( <i>Andropogon virginicus</i> ), wiregrass ( <i>Aristida stricta</i> ), and gallberry ( <i>Ilex glabra</i> ).	45
320	Shrub and Brushland	This habitat type is found in the northern portions of the study area, specifically north and south of Osceola Polk Line Road and east of US 17/92. Vegetation consists of myrtle oak ( <i>Q. myrtifolia</i> ), winged sumac ( <i>Rhus copallinum</i> ), slash pine ( <i>Pinus elliotii</i> ), greenbrier ( <i>Smilax</i> spp.), muscadine ( <i>Vitis rotundifolia</i> ), prickly pear cactus ( <i>Opuntia</i> spp.), rusty staggerbush ( <i>Lyonia ferruginea</i> ), sand pine ( <i>P. clausa</i> ), rustweed ( <i>Polypremum procumbens</i> ), saw palmetto ( <i>Serenoa repens</i> ), and gallberry.	21
410	Upland Coniferous Forests	This habitat type is found adjacent to and just south of Osceola Polk Line Road. The canopy is composed of slash pine and cabbage palm ( <i>Sabal palmetto</i> ) with an understory of wax myrtle ( <i>Morella cerifera</i> ), saw palmetto, gallberry, staggerbush ( <i>Lyonia lucida</i> ), Caesar weed ( <i>Urena lobata</i> ), dogfennel, and muscadine vine. Scattered sand live oaks ( <i>Q. geminata</i> ) were also observed in these areas.	50
420	Upland Hardwood Forests	This habitat type is found south of Ronald Reagan Parkway and west of US 17/92. The most common tree species for this habitat include live oak, water oak ( <i>Q. nigra</i> ), and southern magnolia ( <i>Magnolia grandiflora</i> ). Understory species included muscadine, greenbrier, cabbage palm, and scattered saw palmetto.	5
421	Xeric Oak	This habitat type is found around Old Kissimmee Road and south of the Poinciana Parkway. The vegetation is dominated by mid-canopy species that include sand live oak, myrtle oak, and Chapman's oak ( <i>Q. chapmanii</i> ), with occasional sand pine. Subcanopy and groundcover species include immature oaks, saw palmetto, rusty staggerbush, wiregrass, gallberry, prickly pear cactus, netted pawpaw ( <i>Asimina reticulata</i> ), stinging nettle ( <i>Urtica</i> spp.), and shiny blueberry ( <i>Vaccinium myrsinites</i> ).	39
427	Live Oak	This habitat type is found just west of US 17/92 and just north of Ronald Reagan Parkway. The vegetation is predominantly live oak, with occasional slash pine and laurel oak. The understory is relatively open with species that include sapling oaks and saw palmetto. Groundcover species are scarce and include suppressed wiregrass and bracken fern ( <i>Pteridium aquilinum</i> ).	6

**Table 2-4: Study Area FLUCFCS Summary and Acreage**

FLUCFCS Code	FLUCFCS Type	Description	Acres
434	Hardwood-Conifer Mixed	This habitat type is found around Old Kissimmee Road in the central portion of the study area. The predominant canopy species included slash pine and live oak, but neither species displayed 66 percent dominance in the canopy. The sub-canopy/shrub layer included saw palmetto, gallberry, rusty staggerbush, and scattered sand live oaks. The ground-layer included wiregrass, bluestem, and greenbrier.	12
441	Pine Plantations	These areas are within the Reedy Creek Mitigation Bank and included planted slash pine for the canopy. The understory consists of bluestem and ruderal grasses. Note: this area has undergone several upland restoration plantings and permit modifications regarding the planted species.	306
523	Lakes Larger Than 10 Acres but Less Than 100 Acres	This surface water includes part of a small lake, including its wetland fringe. This lake is located south of Ronald Reagan Parkway and west of US 17/92.	36
534	Reservoirs Less than 10 Acres	This surface water classification includes open water, man-made ponds, which are scattered throughout the study area.	23
610	Wetland Hardwood Forests	This habitat type is found scattered throughout the study area. The canopy is primarily composed of wetland hardwoods such as blackgum ( <i>Nyssa biflora</i> ), red maple ( <i>Acer rubrum</i> ), sweetbay ( <i>Magnolia virginiana</i> ) and loblolly bay ( <i>Gordonia lasianthus</i> ). Midstory species include dahoon holly ( <i>Ilex cassine</i> ) and wax myrtle. The understory is primarily composed of species such as soft rush ( <i>Juncus effusus</i> ), primrose willow ( <i>Ludwigia peruviana</i> ), Carolina willow ( <i>Salix caroliniana</i> ), and cinnamon fern ( <i>Osmundastrum cinnamomerum</i> ).	479
611	Bay Swamps	This habitat type is found in the central portion of the study area, east of US 17/92 and south of Poinciana Parkway. The canopy of this community type is patchy and composed of sweet bay and loblolly bay. Mid-story species include dahoon holly and wax myrtle. Understory species include saw palmetto, gallberry, cinnamon fern and bluestem.	3
621	Cypress	This habitat type is found both north and south of Osceola Polk Line Road. This area exhibits a closed canopy of cypress ( <i>Taxodium</i> spp.). Understory species are sparse but include pickerel weed ( <i>Pontederia cordata</i> ), duck potato ( <i>Sagittaria lancifolia</i> ) and maidencane ( <i>Panicum hemitomon</i> ).	13
625	Hydric Pine Flatwoods	This habitat type is scattered throughout the study area. The canopy is primarily composed of slash pine and various bay trees. Mid-story species include dahoon holly and wax myrtle. The understory is composed of saw palmetto, bluestem, Virginia chain fern ( <i>Woodwardia virginica</i> ) and primrose willow.	61

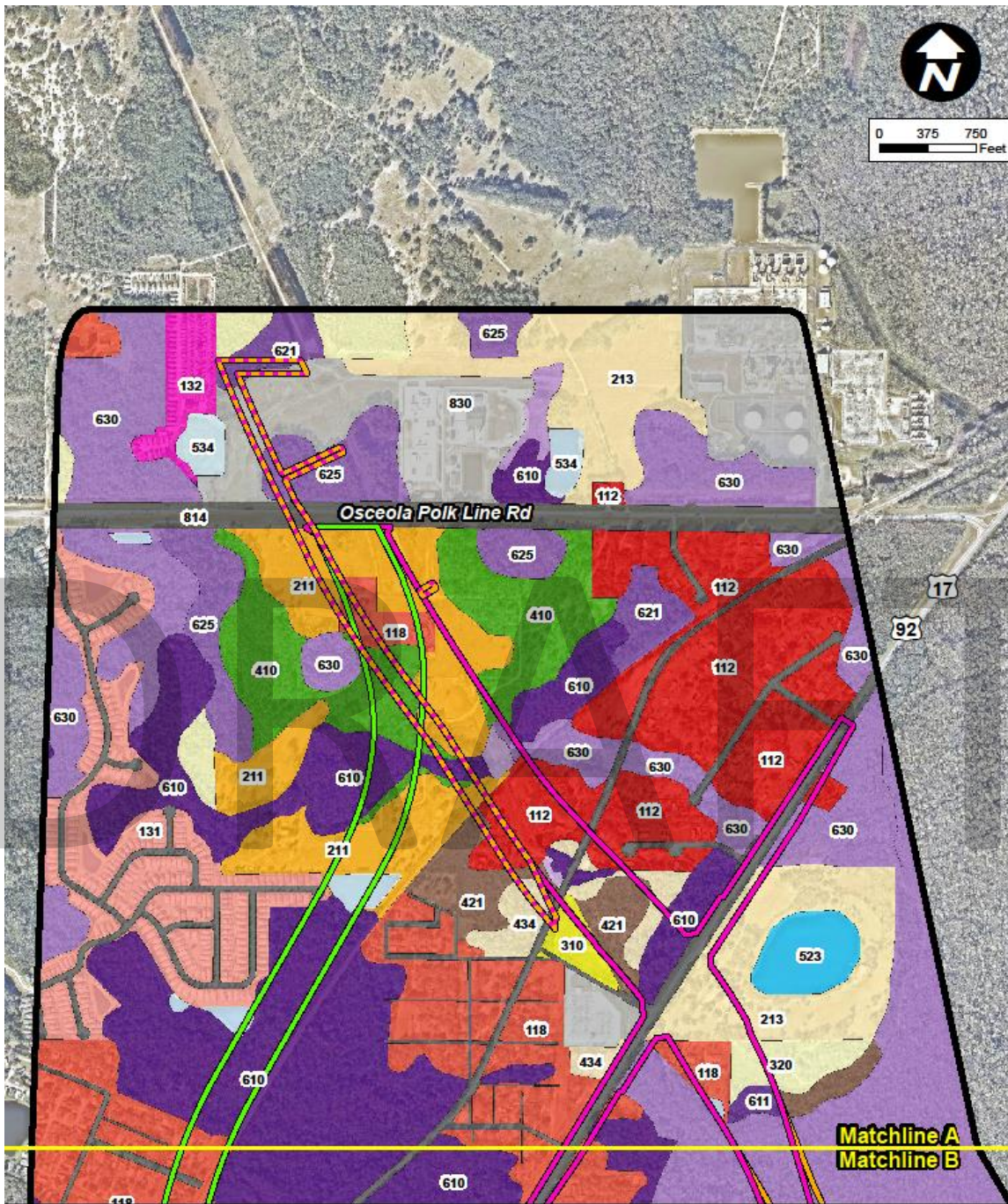


**Table 2-4: Study Area FLUCFCS Summary and Acreage**

FLUCFCS Code	FLUCFCS Type	Description	Acres
630	Wetland Forested Mixed	This habitat type is scattered throughout the landscape. The canopy is closed and composed of a mix of wetland hardwoods such as blackgum, cypress, red maple, sweet bay and loblolly bay. Mid-story species include dahoon holly and wax myrtle. Understory species include royal fern ( <i>Osmunda regalis</i> ), cinnamon fern and duck potato.	356
641	Freshwater Marshes	This habitat type is found north of Osceola Polk Line Road and south of Ronald Reagan Parkway. Vegetation included cattail ( <i>Typha</i> sp.), pickerelweed, and duck potato.	6
643	Wet prairies	This habitat type is found within the central portion of the study area, specifically north of Old Kissimmee Road. These areas are not native wet prairie habitat, but rather anthropogenically-altered areas that have been historically converted from forested wetlands. Species are all herbaceous and include primrose willow, coinwort ( <i>Centella erecta</i> ), soft rush and Virginia chain fern.	2
814	Roads and Highways	This includes CR 532, Ronald Reagan Parkway, Poinciana Parkway, US 17/92 and other smaller residential roads.	149
830	Utilities	This category includes the Sabal Trail Transmission facility, the Duke Energy Intercession Plant and other various utility plants within the study area.	85
Grand Total			2,417



Exhibit 2-2A: FLUCFCS Map



### Legend

- Study Area
- Alternatives 4A & 5A Utility Easement
- Alternative 1A
- Alternative 4A with slip ramps
- Alternative 5A

### FLUCFCS Code: Description

- 112: Mobile Home Units
- 118: Rural Residential
- 129: Medium Density Under Construction
- 131: Fixed Single Family Units
- 132: Mobile Home Units (6+ units per acre)

- 172: Religious
- 185: Parks and Zoos
- 190: Open Land
- 211: Improved Pastures
- 213: Woodland Pastures
- 310: Herbaceous (Dry Prairies)
- 320: Shrub and Brushland
- 410: Upland Coniferous Forests
- 421: Xeric Oak
- 427: Live Oak
- 434: Hardwood-Conifer Mixed

- 523: Lakes greater than 10 acres, less than 100 acres
- 534: Reservoirs less than 10 acres
- 610: Wetland Hardwood Forests
- 611: Bay Swamps
- 621: Cypress
- 625: Hydric Pine Flatwoods
- 630: Wetland Forested Mixed
- 641: Freshwater Marshes
- 643: Wet Prairies
- 814: Roads and Highways
- 830: Utilities



Exhibit 2-2B: FLUCFCS Map

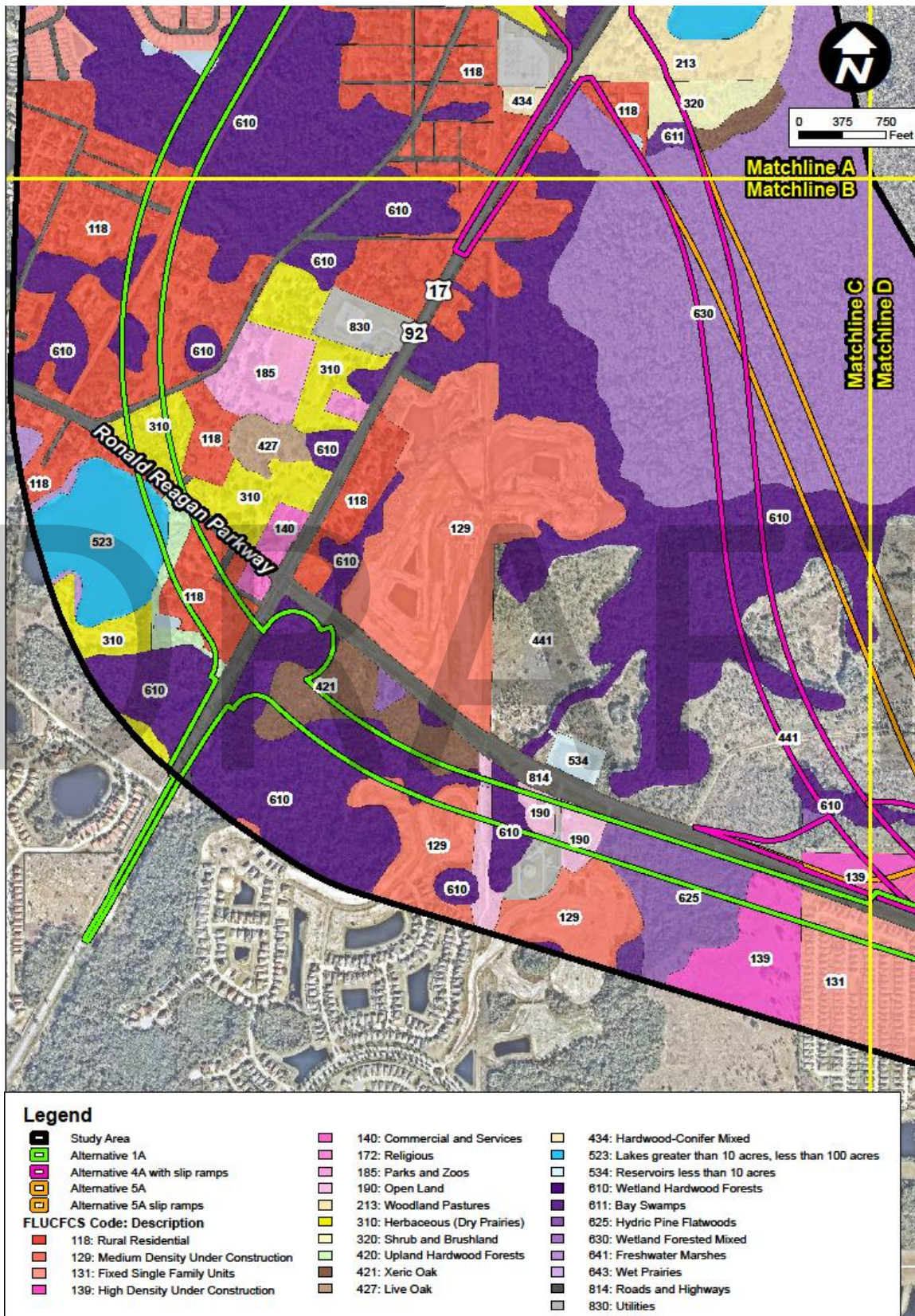
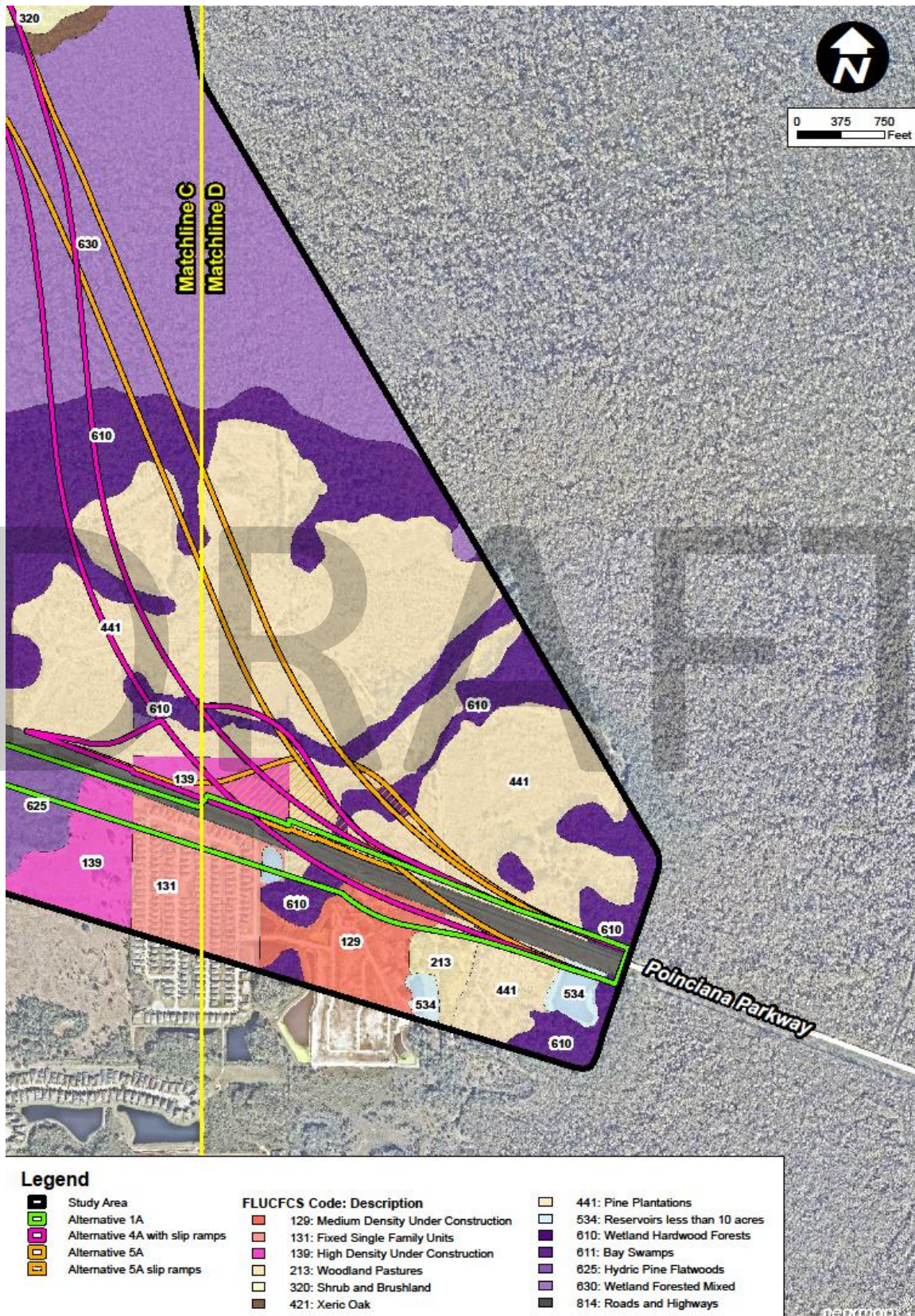




Exhibit 2-2C: FLUCFCS Map



## 2.5 ACCESS MAGEMENT CLASSIFICATION

Osceola County utilizes the same Access Management Classification system as FDOT. The Access Management Classification classes applicable to the roadways in the project area are described below:

- Access Class 1 (I-4, Poinciana Parkway) is limited-access, meaning direct property connections are not provided. Access is via interchanges which require justification. Interchange spacing is determined by the area type (i.e., rural, transitioning, or urbanized). The spacing is two miles in urbanized areas, three miles in transitioning areas, and six miles in rural areas.
- Access Class 3 (US 17/92) is controlled access, meaning direct access to abutting land will be controlled to maximize the operation of the through traffic movement. Spacing for full median openings is 2,640 feet, directional median opening is 1,320 feet, and connection is 660 feet (situations in which the speed limit is more than 45 mph) or 440 feet (situations in which the speed limit is 45 mph or less).
- Access Class 5 (CR 532) is controlled access, but not as restrictive as Class 3. Spacing for full median openings is 2,640 feet (situations in which the speed limit is more than 45 mph) or 1,320 feet (situations in which the speed limit is 45 mph or less), directional median opening is 660 feet, and connection is 440 feet (situations in which the speed limit is more than 45 mph) or 245 feet (situations in which the speed limit is 45 mph or less).

Polk County does not specify an access management classification. However, Ronald Reagan Parkway and Old Lake Wilson Road are similar to the FDOT Access Class 5. Old Lake Wilson Road is a 3-lane undivided roadway with no access management classification designated.

The access classification for roadways within the study area are summarized in **Table 2-5**.



**Table 2-5: Access Management Classification**

Roadway		Access Management Classification
From	To	
Poinciana Parkway		
Cypress Parkway	Ronald Reagan Parkway	1
Ronald Reagan Parkway		
Champions Gate Boulevard	US 17/92	N/A, similar to 5
US 17/92	Poinciana Parkway	N/A, similar to 5
CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard		
Ronald Reagan Parkway	I-4 WB Ramp	N/A, similar to 5
I-4 WB Ramp	US 17/92	5
US 17/92		
South of Ronald Reagan Parkway	0.6-mile N. of Ronald Reagan Parkway	3
0.6-mile N. of Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	3
Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	N/A, similar to 5
Old Lake Wilson Road		
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	N/A
I-4		
US 27 (Exit 55)	SR 429 (Exit 60)	1

## 2.6 DESIGN SPEED AND POSTED SPEED

The design speeds and posted speed limits for the major roadways in the study area are shown in **Table 2-6**.

**Table 2-6: Roadway Design Speeds and Posted Speed Limits for the Study Area**

Roadway	Design Speed	Posted Speed Limit
I-4	70 <sup>1</sup>	65
Poinciana Parkway	70	55
Ronald Reagan Parkway	50 <sup>1</sup>	45
Champions Gate Boulevard	40 <sup>1</sup>	35
CR 532 – through I-4 Interchange	40 <sup>1</sup>	35
CR 532 – from I-4 Interchange to Lake Wilson Road	50 <sup>1</sup>	45
CR 532 – from Lake Wilson Road to Old Lake Wilson Road	55 <sup>1</sup>	50
CR 532 – from Old Lake Wilson Road to US 17/92	60 <sup>1</sup>	55
Lake Wilson Road	50 <sup>1</sup>	45
Old Lake Wilson Road	45 <sup>1</sup>	40
US 17/92	60 <sup>1</sup>	55

**Notes:**

<sup>1</sup> - Design speed estimated as 5 mph above posted speed

## 2.7 HORIZONTAL AND VERTICAL ALIGNMENTS

**Tables 2-7 and 2-8** describe the existing mainline horizontal and vertical alignments of Poinciana Parkway Segment 3 which begins approximately 250 feet west of the Osceola County/Polk County line (Station 172+36.53) and ends just north of the interchange with Magnolia Avenue (Station 356+50.00).

**Table 2-7:** Existing Horizontal Alignment of Poinciana Pkwy: Osceola/Polk County line to Magnolia Ave

PI Station	Degree of Curve/Direction	Length of Curve (ft)	Superelevation
175+70.20	0° 30' 00" LT	530.60	NC
283+24.10	1° 59' 59" RT	3,510.75	0.070
342+82.91	1° 54' 35" RT	1,058.48	0.062

**Table 2-8:** Existing Vertical Alignment of Poinciana Pkwy: Osceola/Polk County line to Magnolia Ave

PVI Station	Crest or Sag	Approach Grade %	Departure Grade %	Algebraic Difference	Length of Curve (ft)	K Value
175+00.00	Sag	-0.920	+0.300	1.220	400	328
180+00.00	Crest	+0.300	-0.300	0.600	500	833
185+00.00	Sag	-0.300	+0.287	0.587	400	682
192+00.00	Crest	+0.300	-0.343	0.643	500	778
199+00.00	Sag	-0.343	+0.300	0.643	400	622
210+00.00	NA	+0.300	+0.500	0.800	NA	NA
230+00.00	Crest	+0.500	-0.500	1.000	500	500
250+00.00	NA	+0.500	-0.300	0.200	NA	NA
258+00.00	Crest	-0.300	-0.900	0.600	500	833
265+00.00	Sag	-0.900	-0.525	0.375	400	1067
268+00.00	NA	-0.525	-0.517	0.008	NA	NA
273+00.00	Sag	-0.517	+0.300	0.817	400	490
285+00.00	Crest	+0.300	-0.300	0.600	500	833
298+00.00	Sag	-0.300	+0.500	0.800	400	500
304+00.00	Crest	+0.500	+0.100	0.400	500	1250
320+00.00	Crest	+0.100	-0.300	0.400	500	1250
329+00.00	Sag	-0.300	+0.300	0.600	400	667
340+00.00	Crest	+0.300	-0.300	0.600	500	833
351+00.00	Sag	-0.300	+0.300	0.600	400	667

## 2.8 PEDESTRIAN ACCOMODATIONS

There are no sidewalks on either side of Poinciana Parkway. From Poinciana Parkway to US 17/92, Ronald Reagan Parkway has a 5-foot-wide sidewalk on the north side of the road. There are 6-foot-wide sidewalks on both sides of Ronald Reagan Parkway from US 17/92 to Champions Gate Boulevard.

There is a 5-foot-wide sidewalk on both sides of Champions Gate Boulevard from Ronald Reagan Parkway to the I-4 WB ramp. There is no sidewalk on CR 532 from the I-4 WB ramp to the I-4 EB ramp. There is a complete 10-foot-wide sidewalk on the north side of CR 532/Osceola Polk Line Road from the

I-4 EB ramp to Lake Wilson Road. There is no sidewalk on CR 532/Osceola Polk Line Road from Lake Wilson Road to US 17/92.

There are sidewalks on both sides of US 17/92 through its intersection with Ronald Reagan Parkway.

## **2.9 BICYCLE FACILITIES**

There are no bicycle facilities on either side of Poinciana Parkway. From Poinciana Parkway to US 17/92, Ronald Reagan Parkway has bicycle lanes in each direction. There are bicycle lanes on both sides of Ronald Reagan Parkway from US 17/92 to Champions Gate Boulevard.

There are bicycle lanes on both sides of US 17/92 through its intersection with Ronald Reagan Parkway.

The Florida Trail Association Reedy Creek Trail is an on-road bike path that starts at Four Corners (Champions Gate area) and runs east along CR 532 (Champions Gate Boulevard/Osceola Polk Line Road), then runs north through Intercession City along Old Tampa Highway and then south along Neptune Drive and Old Canoe Creek Road to Pine Tree Drive in St. Cloud. This trail is approximately 25 miles long in total.

## **2.10 TRANSIT FACILITIES**

No bus service is provided within the study area.

## **2.11 PAVEMENT CONDITION**

The pavement of the roadway sections of Poinciana Parkway (constructed in 2016) is comprised of 10" of limerock base, 2.5" of Type SP Structural Course (Traffic B) and 0.75" of Friction Course FC-5. This pavement is currently in good condition.

## 2.12 TRAFFIC VOLUMES AND OPERATIONAL CONDITIONS

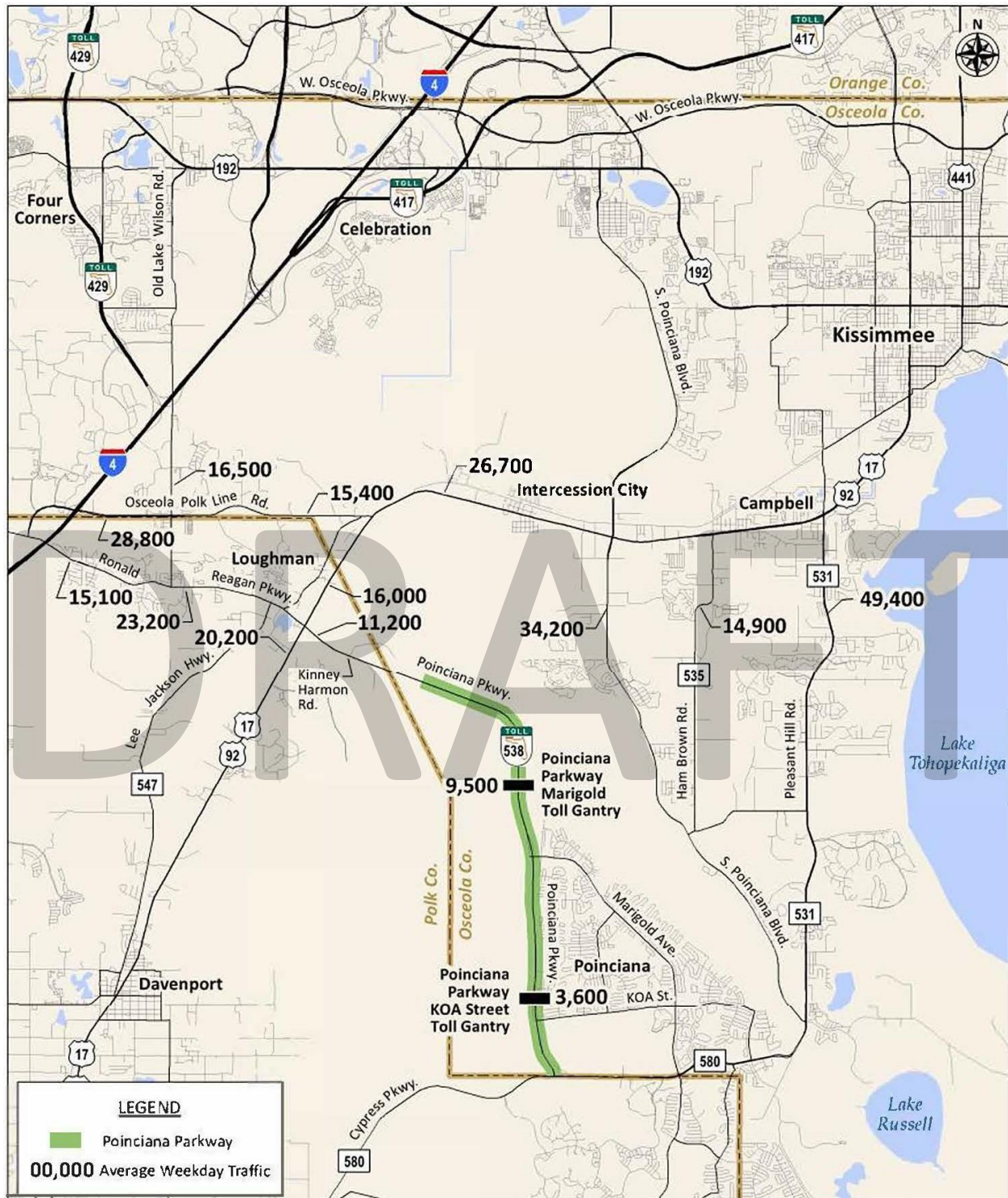
**Exhibit 2-3** identifies the existing average weekday traffic volumes for roadways within the study area and **Table 2-9** summarizes the current traffic volumes and roadway operating conditions. Most of the roadways currently operate with level of service (LOS) of D or better. However, portions of CR 532 and US 17/92 operate at LOS F, signifying over capacity conditions resulting in significant congestion.

**Table 2-9:** Existing Roadway Operational Conditions

Roadway / Location	No. of Lanes	Existing AADT	LOS
<b>Ronald Reagan Parkway</b>			
West of Lake Wilson Road	4	15,100	C
East of Lake Wilson Road	4	23,200	C
East of US 17/92	2	11,200	C
<b>CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard</b>			
West of Lake Wilson Road	4	28,800	C
East of Lake Wilson Road	4	19,250	F
<b>US 17/92</b>			
South of Ronald Reagan Parkway	2	20,200	D
North of Ronald Regan Parkway	2	16,000	C
North of CR 532	2	26,700	F
<b>Lake Wilson Road</b>			
North of CR 532	2	16,500	C
South of CR 532	2	12,000	C



**Exhibit 2-3: Existing Average Weekday Traffic Volumes**



## 2.13 INTERCHANGES, INTERSECTIONS, AND TRAFFIC CONTROL

The existing Poinciana Parkway includes two interchanges. Additionally, there is one other interchange on I-4 within the influence area. These interchanges are described below:

- Poinciana Parkway at KOA Street is a diamond interchange, located approximately 4,500 feet (0.8 mile) north of Cypress Parkway. Only the ramps to and from the north are constructed at this time.
- Poinciana Parkway at Marigold Avenue is a diamond interchange, located approximately 2.4 miles north of the KOA Street interchange. Only the ramps to and from the north are constructed at this time.
- I-4 at CR 532 is a diamond interchange, located approximately 2.0 miles west of the I-4/SR 429 interchange and approximately 3.0 miles east of the I-4/US 27 interchange.

An intersection and signalization inventory was conducted within the study area boundaries. There are no signalized intersections along I-4. **Table 2-10** summarizes major study area intersections and their type of control.

**Table 2-10: Intersection Summary**

Intersection	Type	Intersection Control Type	Turn Lanes	Crosswalks
Ronald Reagan Parkway and Champions Gate Boulevard	Plus	Signalized	NBR, SBL, SBR, EBL, EBR, WBL, WBR	All Approaches
Ronald Reagan Parkway and Pine Tree Trail	T	Signalized	NBL, NBR, WBL	NB & WB Approaches
Ronald Reagan Parkway and Lake Wilson Road	T	Signalized	SBL, SBR, EBL, WBR	SB & WB Approaches
Ronald Reagan Parkway and Old Lake Wilson Road	Plus	Unsignalized	EBL, WBL	No
Ronald Reagan Parkway and US 17/92	Plus	Signalized	NBL, NBR, SBL, SBR, EBL, WBL, WBR	All Approaches
Champions Gate Boulevard and I-4 WB Ramps	Plus	Signalized	EBR, WBL	No
CR 532 (Osceola Polk Line Road) and I-4 EB Ramps	Plus	Signalized	EBL, WBR	No
CR 532 (Osceola Polk Line Road) and Lake Wilson Road	Plus	Signalized	NBL, SBL, EBL, EBR, WBL, WBR	All Approaches
CR 532 (Osceola Polk Line Road) and Old Lake Wilson Road	T	Unsignalized	NBL, NBR, WBL	No
CR 532 (Osceola Polk Line Road) and US 17/92	T	Signalized	NBL, SBR, EBL, EBR	No

## 2.14 RAILROAD CROSSINGS

The CSX Railroad travels through the study area, generally running parallel to US 17/92. There are existing at-grade railroad crossings at the following locations:

- CR 532
- Ronald Reagan Parkway

## 2.15 CRASH DATA AND SAFETY ANALYSIS

Crash rates were calculated for all study area roadway segments. Crash rates are expressed in crashes per million vehicle-miles traveled, and can be used to better understand safety concerns of the roadway segment. Statewide average crash rates for various road classifications can be used to provide context for the crash rates experienced on study area roadway segments. **Table 2-11** displays the crash rate calculated for each segment. Highlighted cells in **Table 2-11** show roadway segments with higher crash rates than the statewide average for similar facilities.

**Table 2-11: Crash Analysis**

Roadway		5-Year Crashes	Length (miles)	5-Year Crash Rate	Statewide Average Rate
From	To				
Poinciana Parkway					
Cypress Parkway	Ronald Reagan Parkway	N/A	N/A	N/A	0.6985
Ronald Reagan Parkway					
Champions Gate Boulevard	Pine Tree Trail	13	1.36	0.3539	3.1393
Pine Tree Trail	Lake Wilson Road	12	0.90	0.4936	
Lake Wilson Road	US 17/92	43	2.06	0.7728	
US 17/92	Poinciana Parkway	N/A	N/A	N/A	N/A
CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard					
Ronald Reagan Parkway	I-4	121	0.80	4.6300	3.1393
I-4	Lake Wilson Road	76	1.25	1.6331	
Lake Wilson Road	US 17/92	95	2.95	0.8650	0.6985
US 17/92					
Ernie Caldwell Boulevard	Ronald Reagan Parkway	92	2.95	1.4007	0.6985
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	31	1.85	0.8745	0.6985
Lake Wilson Road					
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	59	1.00	1.6004	0.6985
Old Lake Wilson Road					
Ronald Reagan Parkway	CR 532 (Osceola Polk Line Road)	N/A	N/A	N/A	N/A
I-4					
US 27 (Exit 55)	CR 532 (Osceola Polk Line Road/Exit 58)	268	3.00	0.3885	0.8555
CR 532 (Osceola Polk Line Road/Exit 58)	SR 429 (Exit 60)	176	1.96	0.3765	

## 2.16 DRAINAGE SYSTEM

The project is located within the Reedy Creek Watershed, and more specifically within the Reedy Creek Above Lake Russell basin. Reedy Creek is not designated as an impaired water body, according to the Florida Department of Environmental Protection (FDEP) Comprehensive Verified List (8/2018). However, Reedy Creek is located within the Kissimmee River Total Maximum Daily Load (TMDL) Basin and the Lake Okeechobee Basin Management Action Plan (BMAP), which are impaired for nutrients. The existing basins are open basins, which discharge to interconnected wetlands that flow from west to east or south to north towards Reedy Creek and the Reedy Creek Mitigation Bank. The ultimate outfall of the project study area is the Kissimmee River, which flows to Lake Okeechobee. Additional information is provided in the Pond Siting Report developed for this project.

The project limits are within the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) Panel No's. 12097C0040G, 12097C0045G, 12097C0225G for Osceola County, Florida (effective date 6/2013), and Panel Nos. 12105C0125H, 12105C0230H, 12105C0235H for Polk County, Florida (effective date 12/2016). The major floodplain impacts are associated with Reedy Creek's surrounding wetlands. Flood zones Zone X, Zone AE, and Zone A are present along the corridor. Zone X is an area of minimal flood hazard and was not evaluated for floodplain impacts. Zone AE has an established Base Flood Elevation (BFE) that has been approved by FEMA and ranges from 90.4 to 66 ft NAVD within the study area. Zone A has an identified area of inundation resulting from the 100-year storm event, but no BFE has been established. Reedy Creek is a FEMA-designated regulatory floodway, but the corridors analyzed do not cross the floodway portion of the creek.

## 2.17 SOILS AND GEOTECHNICAL CLASSIFICATIONS

Based on a review of the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey for Osceola and Polk Counties, there are forty-two (42) major soil types within the study area. In general, the soils found within the study area are derived from sandy marine sediments and are gently sloping with a variety of drainage characteristics. **Tables 2-12A and 2-12B** include a summary of the soil types found in the study area by county (see NRCS Soils Map – **Exhibit 2-4**). Soils in the tables that are in bold denote hydric soils.

**Table 2-12A: NRCS Soils Identified in the Study Area in Osceola County**

Soil ID Number	Soil Name	% of Soil within Study Area	Parent Material	Drainage Class	Water Capacity	Hydraulic Conductivity	Depth to Restrictive Feature	Groundwater Depth
1	Adamsville sand, 0 to 2 percent slopes	0.81%	Sandy marine deposits	Somewhat poorly drained	Very low	Rapid	>80 inches	33 inches
5	<b>Basinger fine sand, 0 to 2 percent slopes</b>	<b>0.34%</b>	<b>Sandy marine deposits</b>	<b>Poorly drained</b>	<b>Very low</b>	<b>Very rapid</b>	<b>&gt;80 inches</b>	<b>6 inches</b>
12	<b>Floridana fine sand, depressional</b>	<b>1.12%</b>	<b>Sandy and loamy marine deposits</b>	<b>Very poorly drained</b>	<b>Low</b>	<b>Moderately slow</b>	<b>&gt;80 inches</b>	<b>0 inches</b>
14	<b>Holopaw fine sand</b>	<b>0.63%</b>	<b>Sandy and loamy marine deposits</b>	<b>Poorly drained</b>	<b>Low</b>	<b>Rapid</b>	<b>&gt;80 inches</b>	<b>6 inches</b>
15	<b>Hontoon muck</b>	<b>4.56%</b>	<b>Herbaceous organic material</b>	<b>Very poorly drained</b>	<b>Very high</b>	<b>Rapid</b>	<b>&gt;80 inches</b>	<b>0 inches</b>
16	Immokalee fine sand	16.78%	Sandy marine deposits	Poorly drained	Low	Moderately rapid	>80 inches	12 inches
17	<b>Kaliga muck</b>	<b>1.46%</b>	<b>Herbaceous organic material over stratified loamy marine deposits</b>	<b>Very poorly drained</b>	<b>High</b>	<b>Moderately slow</b>	<b>&gt;80 inches</b>	<b>0 inches</b>
22	Myakka fine sand	2.72%	Sandy marine deposits	Poorly drained	Very low	Moderately rapid	>80 inches	12 inches
25	<b>Nittaw muck</b>	<b>0.68%</b>	<b>Clayey marine deposits</b>	<b>Very poorly drained</b>	<b>High</b>	<b>Moderately slow</b>	<b>&gt;80 inches</b>	<b>0 inches</b>
27	Ona fine sand	2.14%	Sandy marine deposits	Poorly drained	Low	Moderately rapid	>80 inches	12 inches
29	<b>Parkwood loamy fine sand, occasionally flooded</b>	<b>1.79%</b>	<b>Sandy and loamy marine deposits</b>	<b>Poorly drained</b>	<b>Low</b>	<b>Rapid</b>	<b>&gt;80 inches</b>	<b>12 inches</b>

Bold denotes hydric soils.



**Table 2-12A: NRCS Soils Identified in the Study Area in Osceola County**

Soil ID Number	Soil Name	% of Soil within Study Area	Parent Material	Drainage Class	Water Capacity	Hydraulic Conductivity	Depth to Restrictive Feature	Groundwater Depth
31	Pits	0.21%	--	--	--	--	--	--
32	Placid fine sand, depressional	1.35%	Sandy marine deposits	Very poorly drained	Moderate	Rapid	>80 inches	0 inches
36	Pompano fine sand	0.95%	Sandy marine deposits	Poorly drained	Very low	Rapid	>80 inches	6 inches
37	Pompano fine sand, depressional	1.86%	Sandy marine deposits	Very poorly drained	Very low	Rapid	>80 inches	0 inches
38	Riviera fine sand	2.55%	Sandy and loamy marine deposits	Poorly drained	Moderate	Moderately slow	>80 inches	6 inches
39	Riviera fine sand, depressional	2.17%	Sandy and loamy marine deposits	Very poorly drained	Moderate	Moderately slow	>80 inches	0 inches
40	Samsula muck	1.24%	Herbaceous organic material over sandy marine deposits	Very poorly drained	Moderate	Rapid	>80 inches	0 inches
41	Satellite sand	3.26%	Sandy marine deposits	Somewhat poorly drained	Very low	Very rapid	>80 inches	27 inches
42	Smyrna fine sand	0.39%	Sandy marine deposits	Poorly drained	Low	Moderately rapid	>80 inches	12 inches

Bold denotes hydric soils.



**Table 2-12B: NRCS Soils Identified in the Study Area in Polk County**

Soil ID Number	Soil Name	% of Soil within Study Area	Parent Material	Drainage Class	Water Capacity	Hydraulic Conductivity	Depth to Restrictive Feature	Groundwater Depth
3	Candler sand, 0 to 5 percent slopes	2.79%	Sandy and loamy marine deposits	Excessively drained	Very low	Rapid	>80 inches	>80 inches
<b>13</b>	<b>Samsula muck</b>	<b>5.89%</b>	<b>Sandy marine deposits</b>	<b>Very poorly drained</b>	<b>High</b>	<b>Very rapid</b>	<b>&gt;80 inches</b>	<b>0 to 6 inches</b>
15	Tavares fine sand, 0 to 5 percent slopes	1.37%	Sandy marine deposits	Moderately well drained	Very low	Rapid to very rapid	>80 inches	42 to 72 inches
17	Smyrna and Myakka fine sands	4.74%	Sandy marine deposits	Poorly drained	Low	Moderately rapid	>80 inches	6-18 inches
<b>19</b>	<b>Floridana mucky fine sand, depressional</b>	<b>0.05%</b>	<b>Sandy and loamy marine deposits</b>	<b>Very poorly drained</b>	<b>Moderate</b>	<b>Moderately slow to moderately rapid</b>	<b>&gt;80 inches</b>	<b>0 to 6 inches</b>
21	Immokalee sand	7.58%	Sandy marine deposits	Poorly drained	Low	Moderately rapid to rapid	>80 inches	6 to 18 inches
22	Pomello fine sand	0.77%	Sandy marine deposits	Moderately well drained	Low	Rapid	>80 inches	24 to 42 inches
23	Ona fine sand	0.22%	Sandy marine deposits	Poorly drained	Low	Moderately rapid to rapid	>80 inches	6 to 18 inches
<b>25</b>	<b>Placid and Myakka fine sands, depressional</b>	<b>7.01%</b>	<b>Sandy marine deposits</b>	<b>Very poorly drained</b>	<b>Moderate</b>	<b>Rapid to very rapid</b>	<b>&gt;80 inches</b>	<b>0 inches</b>
<b>30</b>	<b>Pompano fine sand</b>	<b>6.81%</b>	<b>Sandy marine deposits</b>	<b>Poorly drained</b>	<b>Very low</b>	<b>Rapid to very rapid</b>	<b>&gt;80 inches</b>	<b>0 to 6 inches</b>
31	Adamsville fine sand	0.34%	Sandy marine deposits	Somewhat poorly drained	Very low	Rapid to very rapid	>80 inches	18 to 42 inches
<b>32</b>	<b>Kaliga muck</b>	<b>0.78%</b>	<b>Loamy marine deposits</b>	<b>Very poorly drained</b>	<b>Very high</b>	<b>Moderately low to moderately rapid</b>	<b>&gt;80 inches</b>	<b>0 to 6 inches</b>
<b>33</b>	<b>Holopaw fine sand, depressional</b>	<b>0.11%</b>	<b>Sandy and loamy marine deposits</b>	<b>Very poorly drained</b>	<b>Low</b>	<b>Rapid</b>	<b>&gt;80 inches</b>	<b>0 to 6 inches</b>

Bold denotes hydric soils.

**Table 2-12B: NRCS Soils Identified in the Study Area in Polk County**

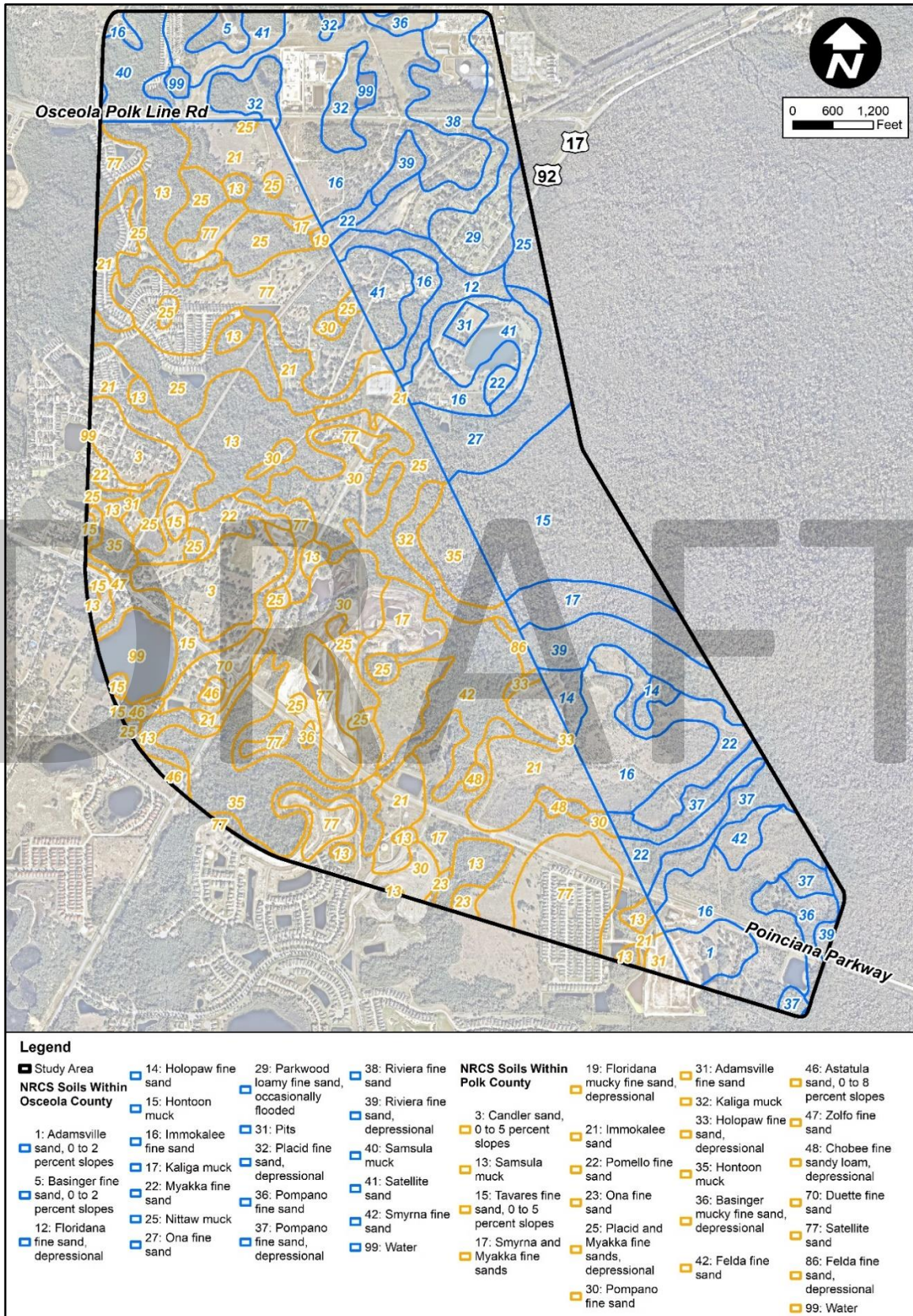
Soil ID Number	Soil Name	% of Soil within Study Area	Parent Material	Drainage Class	Water Capacity	Hydraulic Conductivity	Depth to Restrictive Feature	Groundwater Depth
35	Hontoon muck	4.32%	Herbaceous organic material	Very poorly drained	Very high	Rapid to very rapid	>80 inches	0 to 6 inches
36	Basinger mucky fine sand, depressional	0.05%	Sandy marine deposits	Very poorly drained	Low	Rapid to very rapid	>80 inches	0 inches
42	Felda fine sand	2.41%	Sandy and loamy marine deposits	Poorly drained	Low	Moderately rapid to rapid	>80 inches	0 to 12 inches
46	Astatula sand, 0 to 8 percent slopes	0.41%	Sandy marine deposits	Excessively drained	Very low	Very rapid	>80 inches	>80 inches
47	Zolfo fine sand	0.62%	Sandy marine deposits	Somewhat poorly drained	Low	Moderately rapid to rapid	>80 inches	18 to 42 inches
48	Chobee fine sandy loam, depressional	0.28%	Loamy marine deposits	Very poorly drained	High	Moderately low to moderately rapid	>80 inches	0 to 6 inches
70	Duette fine sand	0.76%	Sandy marine deposits	Moderately well drained	Very low	Rapid	>80 inches	48 to 72 inches
77	Satellite sand	8.78%	Sandy marine deposits	Somewhat poorly drained	Very low	Very rapid	>80 inches	18 to 42 inches
86	Felda fine sand, depressional	0.15%	Sandy and loamy marine deposits	Very poorly drained	Low	Moderately rapid to rapid	>80 inches	0 to 6 inches

Bold denotes hydric soils.

Data compiled by Kimley-Horn and Associates, Inc., 2019



Exhibit 2-4: Soils Map



## 2.18 UTILITIES

Twenty-nine Utility Agency/Owners (UAO) have been identified within the project study area through a Sunshine 811 Design Ticket and initial utility coordination efforts. These utilities are described in the following sections.

### 2.18.1 ELECTRICAL

Three electrical UAOs have been identified within the project study area, including transmission and distribution facilities. **Table 2-13** identifies these UAOs and provides a general description of their facilities located on the project.

**Table 2-13: Existing Electrical Utilities in the Study Area**

Utility Company	Facility	Description
Duke Energy-Transmission	Transmission Electric	<ul style="list-style-type: none"><li>Intercession City Power Plant on the north side of CR 532 just west of US 17/92.</li><li>Transmission substation located along the south side of Osceola Polk Line Road just west of Reunion Boulevard.</li><li>Transmission substation located along the west side of US 17/92 approximately 0.9 mile south of CR 532.</li><li>Transmission substation located along the west side of US 17/92 approximately 1.4 miles south of CR 532.</li><li>Transmission lines along the south side of I-4 in dedicated easements from SR 429 heading east.</li><li>Transmission lines in dedicated easements connecting Intercession City Power Plant and substations, heading north and south.</li></ul>
Duke Energy-Distribution	Distribution Electric	<ul style="list-style-type: none"><li>Electric distribution service throughout the project.</li></ul>
Tampa Electric Company	Electric	<ul style="list-style-type: none"><li>Distribution electric facilities for local businesses and residents in Polk County.</li></ul>

### 2.18.2 GASOLINE AND JET-FUEL

Kinder Morgan maintains gasoline and jet fuel facilities within the project study area. The two pipelines are a part of Kinder Morgan's Tampa to Taft pipeline system and are the sole petroleum pipeline supplying jet fuel to the Orlando International Airport. **Table 2-14** identifies these pipelines and provides a general description of their facilities located within the project study area.

**Table 2-14: Existing Gasoline and Jet Fuel Utilities in the Study Area**

Utility Company	Facility	Description
Kinder Morgan / CFP	Gasoline / Jet Fuel Pipeline	<ul style="list-style-type: none"><li>16-inch gasoline with batch ethanol pipeline along the south side of I-4 to SR 429, where the pipeline turns southeast along Reedy Creek Improvement District parcels and then an easement running adjacent to Duke Energy's transmission easement exiting the project study area to the south.</li><li>10-inch jet fuel pipeline along the north side of CSX's railroad for the limits of the project. The pipeline (Tampa to Taft) runs from Tampa to Orlando International Airport for aviation fueling.</li></ul>

### 2.18.3 NATURAL GAS

Six natural gas UAOs have been identified within the project study area, including transmission and distribution facilities. **Table 2-15** identifies these UAOs and provides a general description of their facilities located within the project study area.

**Table 2-15: Existing Natural Gas Utilities in the Study Area**

Utility Company	Facility	Description
Florida Southeast Connection	Gas	<ul style="list-style-type: none"><li>36-inch natural gas pipeline starting from the north side of Osceola Polk Line Road heading south in an easement adjacent to Duke Energy's transmission lines to Orange Blossom Trail.</li><li>36-inch natural gas pipeline continues south on Orange Blossom Trail, transitioning from the east and west side of the road, and exits the project study area in Polk County.</li></ul>
Spectra Energy-Sabal Trail	Natural Gas Pipeline	<ul style="list-style-type: none"><li>36-inch natural gas pipeline along the north side of Osceola Polk Line Road, from just west of Duke Energy's power plant to Orange Blossom Trail, where the pipeline continues east along the north side of CSX's ROW.</li></ul>
Gulfstream Natural Gas	Gas Pipeline	<ul style="list-style-type: none"><li>24-inch pipeline runs along the north side of Osceola Polk Line Road to serve Duke Energy Intercession City Power Plant.</li></ul>
Florida Public Utilities	Gas	<ul style="list-style-type: none"><li>Distribution gas services for Polk and Osceola Counties within the project study area.</li></ul>
Kissimmee Utility Authority (KUA)	Gas Pipeline	<ul style="list-style-type: none"><li>Natural gas pipeline along Osceola Polk Line Road to KUA Cane Island Power Plant.</li></ul>
TECO Peoples Gas	Gas	<ul style="list-style-type: none"><li>Gas distribution services for local business and residential areas throughout the project study area.</li></ul>

### 2.18.4 OTHER UTILITIES

Nineteen other UAOs have been identified within the project study area, including cable television (CATV), phone, fiber, water and sewer utilities. **Table 2-16** identifies these UAOs and provides a general description of their facilities located within the project study area.



**Table 2-16: Existing Other Utilities in the Study Area**

Utility Company	Facility	Description
Charter Communications	CATV/Phone/Fiber	<ul style="list-style-type: none"> <li>Aerial cable and phone attached to existing power company pole lines with buried service drops to customers.</li> </ul>
Spectrum	CATV/Phone/Fiber	<ul style="list-style-type: none"> <li>Cable/phone within the study corridor. Facilities are primarily aerial and attached to existing power company pole lines with buried service drops to customers.</li> </ul>
Duke Energy-Fiber	Fiber	<ul style="list-style-type: none"> <li>Aerial fiber attached to Duke distribution power poles.</li> </ul>
TOHO Water Authority	Water/Sewer	<ul style="list-style-type: none"> <li>Water and sewer facilities throughout the project study area for all of Osceola County and northern portions of Polk County.</li> </ul>
Frontier Communications	Cable/Fiber/Phone	<ul style="list-style-type: none"> <li>Cable, fiber, and phone facilities within the study corridor. Phone facilities are primarily aerial and attached to existing power company pole lines with buried cable/fiber throughout the study area.</li> </ul>
Wiltel Communications	Fiber	<ul style="list-style-type: none"> <li>Buried fiber throughout the study area.</li> </ul>
Level 3 Communications	Fiber	<ul style="list-style-type: none"> <li>Buried fiber throughout the study area.</li> </ul>
MCI	Fiber	<ul style="list-style-type: none"> <li>Buried fiber throughout the study area.</li> </ul>
Osceola Traffic	Fiber	<ul style="list-style-type: none"> <li>Traffic fiber at signalized County Roadways and County maintains signalized intersections.</li> </ul>
Orlando Telephone Company	Phone	<ul style="list-style-type: none"> <li>Phone facilities within the study area. Phone facilities are primarily aerial and attached to existing power company pole lines.</li> </ul>
Polk County Utilities	Water/Sewer	<ul style="list-style-type: none"> <li>Water and wastewater facilities throughout project study area in Polk County.</li> <li>WTP and storage tank located along the south side of Ronald Reagan Parkway just east of US 17/92.</li> </ul>
AT&T Distribution	Phone	<ul style="list-style-type: none"> <li>Phone facilities within the study area. Phone facilities are primarily aerial and attached to existing power company pole lines.</li> </ul>
Smart City Telecom	Phone/Fiber	<ul style="list-style-type: none"> <li>Phone facilities within the study area. Phone facilities are primarily aerial and attached to existing power company pole lines.</li> </ul>
Embarq	Fiber	<ul style="list-style-type: none"> <li>Buried fiber throughout the study area.</li> </ul>
Tower Cloud	Fiber	<ul style="list-style-type: none"> <li>Buried fiber throughout the study area.</li> </ul>
TECO Fiber	Fiber	<ul style="list-style-type: none"> <li>Fiber throughout the study area. Fiber facilities are primarily aerial and attached to existing TECO power pole lines.</li> </ul>
Comcast Communications	CATV	<ul style="list-style-type: none"> <li>Cable within the study corridor. Facilities are primarily aerial and attached to existing power company pole lines with buried service drops to customers.</li> </ul>
Sprint	Fiber	<ul style="list-style-type: none"> <li>Buried fiber throughout the study area.</li> </ul>
Century Link	Phone/Fiber	<ul style="list-style-type: none"> <li>Fiber and phone facilities within the study area. Phone facilities are primarily aerial and attached to existing power company pole lines with buried fiber throughout the study area.</li> </ul>



### **2.18.5 UTILITY MITIGATION AND COST**

Due to the nature of the existing conditions throughout the study area, alternatives may impact major utility facilities. Major utility facilities potentially impacted include natural gas pipelines owned and operated by KUA, Florida Southeast Connection, Gulfstream Natural Gas, and Sabal Trail. Kinder Morgan also maintains a large petroleum pipeline in the area. In addition, Duke Energy maintains their Intercession City Power Plant, a transmission substation, and various high voltage transmission lines throughout the project study area.

Measures will be taken during the study phase of the project to minimize impacts to the existing utilities. If impacts are anticipated, design alternatives will be reviewed to allow for relocation of impacted facilities in a manner that seeks to minimize cost to the UAO and disruption to their customers.

Since relocations of facilities located in easements and on private property would likely be eligible for reimbursement, measures will be taken to avoid impacting the existing utility facilities identified in easements or privately-owned parcels. Though relocation of other facilities within the existing ROW is anticipated, efforts will be made during the study to minimize impacts to existing pipelines, power plants, substations, compressor/metering stations, and transmission facilities.

### **2.19 LIGHTING**

Currently, there is no lighting along Poinciana Parkway or Ronald Reagan Parkway. Lighting is provided at the Poinciana Parkway ramp junctions with Marigold Avenue, KOA Street, and Cypress Parkway.

### **2.20 TRAFFIC SIGNS**

The Poinciana Parkway Extension is a new facility; therefore, there are currently no overhead signs on Poinciana Parkway Extension.

### **2.21 AESTHETIC FEATURES**

The topography of the project study area is relatively flat consisting primarily of single- and multi-family residential use, along with single-story commercial buildings. Views within the area are restricted by vegetation and/or other structures. There have been landscaping improvements at the interchange of I-4 at CR 532. Landscaping has also been installed along CR 532, from I-4 to Old Lake Wilson Road.

### **2.22 BRIDGES AND STRUCTURES**

The Poinciana Parkway Extension is a new facility; therefore, there are currently no existing bridges or structures on Poinciana Parkway Extension.

## 3.0 DESIGN CONTROLS AND CRITERIA

### 3.1 ROADWAY DESIGN CRITERIA

The design criteria described in **Table 3-1** was used in the development of alternatives.

**Table 3-1: Roadway Design Standards**

Design Element	Design Standard	Source
Design Year		
	2045	- Scope of Services
Design Vehicle		
	WB-62FL/WB-67	- AASHTO 2004, Pg. 18 - FDOT PPM Vol. I, Pg. 1-19
Design Speed		
Rural Freeway	70 mph	- FDOT PPM Vol. I, Tbl. 1.9.1, 1.9.2
Urban Freeway	60 mph	
Urban Arterial	45 mph	
Rural Arterial	55 mph	
Other		
Frontage Road	45 mph	
Service Road	50 mph	
Access Road	As appropriate	
Ramp		
Directional	50 mph	
Loop	30 mph	
Lane Widths		
Freeway	12-ft	- FDOT PPM Vol. I, Tbl. 2.1.1, 2.1.2, 2.1.3 & 2.14.1
Ramp		
1-lane	15-ft	
2-lane	24-ft	
Turning Roadway	Case dependent	
Arterial	12-ft	
Collector/Service Road	12-ft	
Bicycle		
Rural/Urban	5-ft/4-ft (designated or undesignated)	
Cross Slope (lanes 1-way)		
Roadway		- FDOT PPM Vol. I, Fig. 2.1.1 - PPM Vol. I, Sect. 2.1.5
2-lane (2)	-0.02 ft / ft (2)	
3-lane (3)	-0.02 ft / ft (2), -0.03 ft /ft (1)	
4-lane (4)	+0.02 ft /ft (1), -0.02 ft / ft (2), -0.03 (2)	
Bridge Section	-0.02 (typical, uniform, no slope break)	
Max. Lane "Roll-over"		
	4.0%	- FDOT PPM Vol. I, Fig. 2.1.1 - PPM Vol. I, Tbl. 2.1.4
DS 35 mph	5.0% (between through lane and aux. lane)	
DS 35 mph	6.0% (between through lane and aux. lane)	

**Table 3-1: Roadway Design Standards (continued)**

Design Element	Design Standard				Source
Median Width					
Freeway					- FDOT PPM Vol. I, Tbl. 2.2.1
DS 60 mph	60 to (64-ft – 88-ft when future lanes planned)				
DS 60 mph	40-ft				
All	26-ft (with barrier)				
Arterial & Collector					
DS 45 mph	22-ft				
DS 45 mph	40-ft				
Offset Left Turn Lanes					
Median width 30-ft	Parallel offset lane				- FDOT PPM Vol. I, Sect. 2.13.3 & Fig. 2.13.2 - AASHTO Exh. 9-98
Median width 30-ft	Taper offset lane				
	Total (ft)		Paved (ft)		
	Outside	Left	Outside	Left	
Shoulder Width (lanes 1-way)					
Freeway					- FDOT PPM Vol. I, Tbl. 2.3.1 to 2.3.4, Fig. 2.3.1 - Design Standards Index No. 510
3-lane or more	12	12	10	10	
2-lane	12	8	10	4	
Ramp					
1-lane	6	6	4	2	
2-lane	10	8	8	4	
Aux. Lane	12	N/A	10	N/A	
Arterial & Collector (Norm. volume)					
2-lane divided	10	8	5	0	
1-lane undivided	10	N/A	5	N/A	
Service Road, 2-Lane, 2-Way, Undivided	10	10	5	5	
Shoulder Cross Slope					
	0.06	0.05	-	-	
Max. Shoulder "Roll-over"					
	7.0%	7.0%	-	-	
Bridge section (lanes 1-way)					
2-lane	10	6	-	-	- FDOT PPM Vol. I, Fig. 2.01, 2.02, 2.04
3-lane or more	10	10	-	-	
1-lane ramp	6	6	-	-	
2-lane ramp	10	6	-	-	
Service Road, 2-Lane, 2-Way, Undivided	10	10	-	-	
Border Width					
Freeway	94-ft, (94-ft desirable)				- FDOT PPM Vol. I, Tbl. 2.5.1, 2.5.2 - (CFX Policy)3
Ramp	94-ft, (L.O.C. plus 10-ft as minimum)				
Arterial/Collector					
DS 45 mph	40-ft				

**Table 3-1: Roadway Design Standards (continued)**

Design Element	Design Standard		Source
DS 45 mph	33-ft		
Arterial/Collector (Curb & Gutter)			
DS = 45 mph	14-ft (12-ft with bike lane)		
DS 40 mph	12-ft (10-ft with bike lane)		
Roadside Slopes			
	Fill Height (ft)	Rate	- FDOT PPM Vol. I, Tbl. 2.4.1 - (CFX Policy) 3 - Use 1:3 slopes, avoid 1:2 slopes except where as necessary
Front slope	0.0-5	1:6	
	5-10	1:6 to CZ & 1:4	
	10-20	1:6 to CZ & 1:3	
	> 20	1:2 with guardrail	
		(Use 10-ft bench at half the height of fill)	
Front slope (curb & gutter)	All	1:2 not flatter than 1:6	
Back slope	All	1:4 or 1:3 w/ standard width trap, ditch & 1:6 front slope	
Back slope (curb& gutter)	All	1:2 not flatter than 1:6	
Max. Grade/Max. Change in Grade			
	Max Grade	Max Change in Grade	
Freeway (Rural/Urban)	3.0%	0.20% / 0.40%	- FDOT PPM Vol. I., Tbl. 2.6.1, 2.6.2
Ramp			
Directional	5.0%	0.60%	
Loop	7.0%	1.00%	
Arterial			
Rural	3.5%	0.50%	
Urban	6.0%	0.70%	
Collector	6.5% to 9.0%	-	
Frontage Road/Service Road	8.0%	0.70%	
Min. Grade Curb & Gutter			
	0.3%	-	- FDOT PPM Vol. I, Tbl. 2.6.4
Minimum Stopping Sight Distance (Grades 2.0%)			
	Design Speed (mph)	Distance (ft)	- FDOT PPM Vol. I, Tbl. 2.7.1
	70	730	
	60	570	
	55	495	
	50	425	
	45	360	
	30	200	
Decision Sight Distance (Per avoidance maneuver)			
	Design Speed (mph)	Distance (ft)	- AASHTO Exh. 3-3
	70	780-1445	
	60	610-1280	

**Table 3-1: Roadway Design Standards (continued)**

Design Element	Design Standard		Source
	Design Speed (mph)	Distance (ft)	
	55	535-1135	
	50	465-1030	
	45	395-930	
	30	220-620	
Horizontal Curve Length (V = Design Speed)			
Freeway	30V (15V min.)		- FDOT PPM Vol. I, Tbl. 2.8.2a
Others	15V (400-ft min.)		
Max. Curvature (Degree of Curve)			
Freeway			- FDOT PPM Vol. I, Tbl. 2.8.3
DS = 70 mph Rural	3 30' 00"		
DS = 60 mph Urban	5 15' 00"		
Arterial			
DS = 55 mph Rural	6 30' 00"		
DS = 45 mph Urban	8 15' 00"		
Collector			
DS = 45 mph Frontage Road	8 15' 00"		
DS = 50 mph Service Road	8 15' 00"		
Ramp			
DS = 50 mph Directional	8 15' 00"		
DS = 30 mph Loop	24 45' 00"		
Superelevation Transition			
Tangent	80% (50% min)		- FDOT PPM Vol. I, Sect. 2.9
Curve	20% (50% min)		- (CFX Policy)3
Spirals	(Curves <1°30'00" do not use spirals)		
Superelevation Rates			
	e <sub>max</sub>	SE Trans. Rate	- FDOT PPM Vol. I, Tbl. 2.9.1, 2.9.2, 2.9.3, 2.9.4 - Design Standards Ind. No. 510, 511 - AASHTO Exh. 3-28
Freeway			
DS = 70 mph Rural	0.10	1:200	
DS = 60 mph Urban	0.10	1:225	
Arterial			
DS = 55 mph Rural	0.10	1:225	
DS = 45 mph Urban	0.05	1:150	
Collector			
DS = 45 mph Frontage Road	0.05	1:150	
DS = 50 mph Service Road	0.10	1:200	
Ramp			
DS = 50 mph Directional	0.10	1:200	
DS = 30 mph Loop	0.10	1:150	

**Table 3-1: Roadway Design Standards (continued)**

Design Element	Design Standard			Source
Vertical Curves (Length, L = KA)				
	Design Speed	K-value		- FDOT PPM Vol. I, Tbl. 2.8.5, 2.8.6 - AASHTO Exh. 3-72 (crest), 3-75 (sag) - CFX Policy3 - Note: FDOT K-values for "ALL OTHER FACILITIES" are desirable
	(mph)	Crest	Sag	
	70	401	181	
	60	245	136	
	55	185	115	
	50	136	96	
	45	98	79	
	30	31	37	
Minimum Lengths				
	Crest	Sag		
Freeway				
DS = 70 mph Rural	500-ft	400-ft		
DS = 60 mph Urban	400-ft	300-ft		
Arterial				
DS = 55 mph Rural	350-ft	250-ft		
DS = 45 mph Urban	135-ft	135-ft		
Collector				
DS = 45 mph Frontage Road	135-ft	135-ft		
DS = 50 mph Service Road	300-ft	200-ft		
Ramp				
DS = 50 mph Directional	300-ft	200-ft		
DS = 30 mph Loop	90-ft	90-ft		
Ramps				
	Entrance	Exit		
Ramp Terminals	"Parallel-Type"	"Taper-Type"	- Design Standards Ind. No. 525 - AASHTO Pg. 850-856	
Length	900 to 1200-ft	550-ft		
Taper	300-ft (25:1)	(2° to 5°, 3° desirable)		
Minimum Spacing				- AASHTO Exh. 10-68, Pg. 844
Entrance to Exit	1,600 to 2,000-ft			
Exit to Entrance to	500-ft			
Entrance Exit to Exit	1,000 ft			
Turning Roadways	1,000 ft			
	600 to 800-ft			
Lane Drop Taper				
	L = WS (DS = 45 mph)			- Design Standards Ind. No. 525, 526 - AASHTO Pg. 818
	L = WS <sup>2</sup> /60 (DS ≤ 40 mph)			
	50:1 min, 70:1 desirable (freeways)			
Clear Zone				
Freeway				- FDOT PPM Vol. I, Tbl. 2.11.11
DS = 70 mph Rural	36-ft			



**Table 3-1: Roadway Design Standards (continued)**

Design Element	Design Standard	Source
DS = 60 mph Urban	30-ft	
Arterial		
DS = 55 mph Rural	4-ft (Curb & Gutter)	
DS = 45 mph Urban	As appropriate	
Collector		
DS = 45 mph Frontage Road	4-ft (Curb & Gutter)	
DS = 50 mph Service Road	24-ft	
Ramp		
DS = 50 mph Directional	14-ft to 24-ft	
1 to 2-lane		
DS = 30 mph Loop	10-ft to 18-ft	
1 to 2-lane		
Vertical Clearance		
Over Roadway	16'-6"	- FDOT PPM Vol. I, Tbl. 2.10.1 to 2.10.4, Sect. 2.10.1
Over Railroad	23'-6"	
Sign over Roadway	17"-6"	
Over Water	20'-0" min.	
Limited-Access Limits		
Rural	300-ft min.	- FDOT PPM Vol I, Sect. 2.14.1
Urban	100-ft min.	
Crossroad overpass/no interchange	200-ft	
Ramp Operations		
a. Two thousand (2,000) ft. between entrance and exit terminals - full freeways.		
b. Six hundred (600) ft. between exit and entrance terminals.		
c. Entrance Ramp Taper of 900 ft. (1° - convergence).		
d. Exit Ramp Taper of 550 ft. (3° - divergence).		
Right-of-Way		
e. Ten (10) ft. from back of walls or limit of construction.		
f. Two (2) ft. from back of sidewalk on frontage roads.		
g. Drainage and construction easements as required.		
h. Ninety-four (94) ft. from ramp or mainline traveled way desirable for limited-access ROW.		
i. Limited-access ROW limits per Index 450.		

## 3.2 DRAINAGE CRITERIA

The Poinciana Parkway Extension PD&E basins are open basins with the majority located within Osceola County and some within Polk County, and all are within the Upper Kissimmee River watershed that is a part of the Lake Okeechobee Basin Management Action Plan (BMAP). None of the basins discharge to Outstanding Florida Waters (OFW); however, the Reedy Creek Mitigation Bank is considered a sensitive waterbody according to previous permits. Water Body Identification Numbers (WBIDs) that fall within the Poinciana Parkway Extension PD&E basins are Class 3F and are as follows: 3170C (Reedy Creek above Lake Russell), and 3170F7 (Reedy Creek in Reedy Creek Improvement District-lower). None are impaired for nutrients.

The criteria used for design is set by CFX, SFWMD, SWFWMD, FDEP, FDOT, Polk County, and Osceola County. The most stringent criteria govern.

Resources are listed below:

- Environmental Resource Permit (ERP) Applicant's Handbook Volume 2, SFWMD, May 22, 2016
- ERP Applicant's Handbook, Volume II, SWFWMD, October 1, 2013
- Osceola County Land Development Code, Ch 4 – Site Design and Development Standards, July 17, 2017
- FDOT Drainage Manual, January 2019
- FDOT Drainage Design Guide, January 2019
- FDOT Design Manual, January 2019
- NRCS Urban Hydrology for Small Watersheds – TR-55, June 1986

### 3.2.1 POND DESIGN

The ponds are sized for at least the 6-lane condition and assume a fully paved median width, resulting in a total impervious width of 164 feet for the mainline. All ponds are assumed to be wet detention.

- Peak Runoff Rates
  - Calculated using Soil Conservation Service (SCS) Runoff Curve Number Method
- Attenuation Criteria
  - SFWMD: The post-developed peak rate of discharge must not exceed the pre-developed peak rate of discharge for the 25 year/72-hour storm.
    - The precipitation for the 25 year/72-hour storm is 10.5 inches based on Isohyetal Maps in Appendix C of the ERP Applicant's Handbook Volume 2, Figure C-8
  - SWFWMD: The post-developed peak rate of discharge must not exceed the pre-developed peak rate of discharge for the 25 year/24-hour storm.
    - The precipitation for the 25 year/24-hour storm is 7 inches based on Isohyetal Maps in Appendix A of the ERP Applicant's Handbook Volume 2, Figure D-5
  - Osceola County: The post-developed peak rate of discharge must not exceed the pre-developed peak rate of discharge for the 10 year/72-hour storm.
    - The precipitation for the 10 year/72-hour storm is 7.5 inches based on Isohyetal Maps in Appendix C of the ERP Applicant's Handbook Volume 2, Figure C-7

- Treatment Volume Criteria
  - SFWMD Water Quality:
    - Provide wet detention volume for the greater of:
      - First inch of runoff from the project area
      - 2.5 inches times the percentage of impervious
  - SFWMD Water Quality:
    - Provide treatment for one inch of runoff from the contributing area
    - Treatment volume depth shall not be greater than 18-inches
  - Special Basin:
    - Reedy Creek Mitigation Bank requires an additional 50 percent of treatment volume (per SFWMD Permit App. 141010-12 for the Poinciana Parkway).
- Nutrient Reduction Criteria
  - BMAP – Lake Okeechobee (impaired for Phosphorus)
    - Limit post-development discharge loading rates to meet pre-development rates.
    - Pre-application meeting with SFWMD confirmed phosphorous loading calculations are not required if the only basis is because the project is within the Lake Okeechobee BMAP.
- Control Devices/Bleed-down
  - Devices greater than 6 square inches cross-sectional area, 2" minimum dimension
  - SFWMD – Maximum discharge of ½" of the detention volume in 24 hours
  - SFWMD –
    - Wet detention system's treatment volume shall be discharged in no less than 120 hours (5 days) with no more than half the total volume being discharged within the first 60 hours (2.5 days).
    - Only the volume that drains below the overflow elevation within 36 hours may be counted as part of the volume required for water quantity storage.
- Pond Configuration
  - 0.5 acre minimum
  - Minimize short circuiting
  - Minimum width of 100 feet for linear areas in excess of 200 feet
  - Maximum side slope 1V:4H from top of bank to three feet below the control elevation per Osceola County
  - 20-foot-wide maintenance easement provided beyond control elevation and connect to a public road
  - One foot of freeboard between design high water level and the minimum berm elevation
  - Permanent Pool Volume provides a minimum 6-foot depth

### 3.2.2 FLOODPLAIN IMPACTS

FEMA has developed Flood Insurance Rate Maps (FIRM) for Osceola County and Polk County. The following maps cover the project limits: effective June 18, 2013- 12097C0045G, effective December 22, 2016- 12105C0125H and 12105C0235H. All have established the 100-year floodplain limits of Zone A and Zone AE in the vicinity of the project limits.

- SFWMD: No net encroachment into the floodplain, between the average wet season water table and that encompassed by the 100-year event.
  - Compensating storage will be provided for the impacts using cup for cup method.
- SWFWMD: No net encroachment into the floodplain, up to that encompassed by the 100-year event, which will adversely affect conveyance, storage, water quality or adjacent lands will be allowed. Any required compensating storage shall be equivalently provided between the seasonal high-water level and the 100-year flood level to allow storage function during all lesser flood events.

### 3.2.3 CROSS DRAINS

The maximum allowable headwater for design flood frequency is at or below the edge of shoulder.

- Peak Runoff Rates
  - Basins 0 to 600 Acres: Rational Method
    - Intensity-Duration-Frequency (IDF) Curves Zone 7 (Osceola) and 8 (Polk)
  - Basins 600+ Acres: For calculation purposes, there are no basins larger than 600 acres.
- Design Frequency
  - High Use or Essential Highway: 50-Year Storm
  - FEMA regulated Floodways: 100-Year Storm
    - No regulated floodways within project corridor

### 3.2.4 CANAL CRITERIA

There are no regulated canals within the study area.

## 4.0 ALTERNATIVES ANALYSIS

### 4.1 CONCEPT, FEASIBILITY AND MOBILITY STUDY

A CF&M Study for the Poinciana Parkway Extension/I-4 Connector was completed in May 2018. The Poinciana Parkway Extension/I-4 Connector is a tolled expressway improvement project that includes widening the existing Poinciana Parkway to 4-lanes and extending it to I-4 (from Cypress Parkway to I-4). The general objective of that CF&M Study was to provide information necessary for CFX to decide on the viability of the project. The project was determined to be financially feasible and viable; therefore, CFX authorized the Poinciana Parkway Extension PD&E.

#### 4.1.1 ALTERNATIVES CONSIDERED

Alternatives considered in the CF&M Study included:

- No-Build
- TSM&O Alternatives
- Transit, Intermodal, Multimodal Alternatives
- Tolled Limited-Access Alternatives

These alternatives are described below.

##### 4.1.1.1 NO-BUILD

The No-Build Alternative assumed that the Poinciana Parkway Extension/I-4 Connector is not constructed. Only those other projects included in the MPO Cost Feasible 2040 LRTP were assumed to be provided to meet the transportation need. The results of the No-Build Alternative analysis formed the basis of the comparative analysis for the Build Alternatives.

##### 4.1.1.2 TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS ALTERNATIVE

The TSM&O alternative considered safety and minor operational improvements to existing facilities that included construction of additional turn lanes, intersection and traffic signal improvements, improvements to signing and pavement markings and/or intelligent transportation systems (ITS) technology implementation. However, no TSM&O alternative can fulfill the need and purpose for the project. Therefore, no TSM&O options were identified for the study.

##### 4.1.1.3 TRANSIT, INTERMODAL, MULTIMODAL ALTERNATIVES

The consideration of alternative mobility programs, such as mass transit technology and intermodal facilities, began with a review of the CFX Multimodal Policy and the MPO LRTP. Based on this review, there were no multimodal improvements recommended for consideration as part of the Mobility Program Alternatives.

##### 4.1.1.4 TOLLED LIMITED-ACCESS ALTERNATIVES

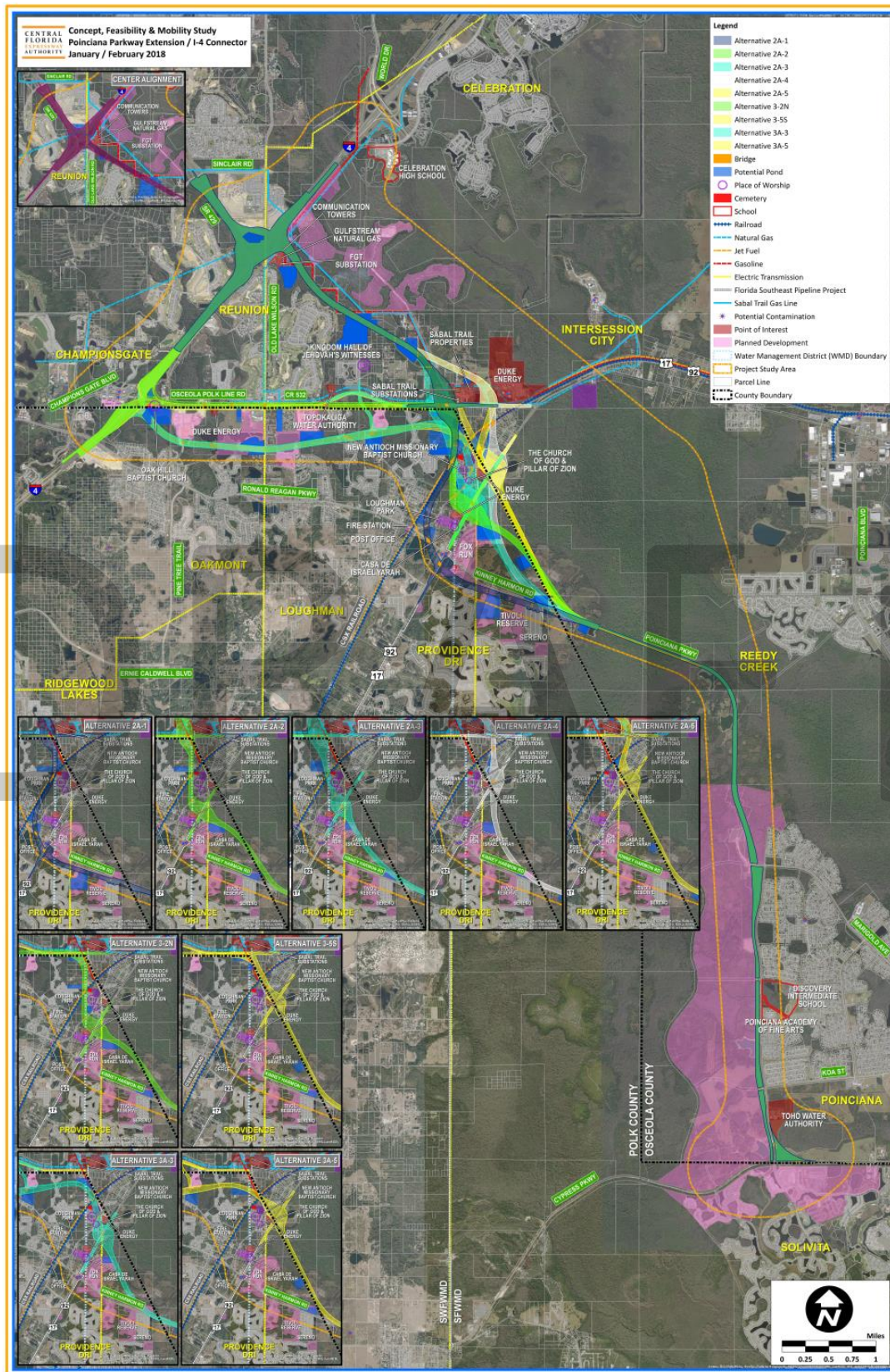
Constructing a tolled limited-access expressway was identified as a potentially viable response to the project need and purpose. The corridor development process began with a re-evaluation of previous corridor studies and included the development of new alignments.



**Exhibit 4-1** and **Exhibit 4-2** illustrate the build alternatives considered in the CF&M Study. **Exhibit 4-1** includes the physical, cultural and social elements while **Exhibit 4-2** includes the natural elements.

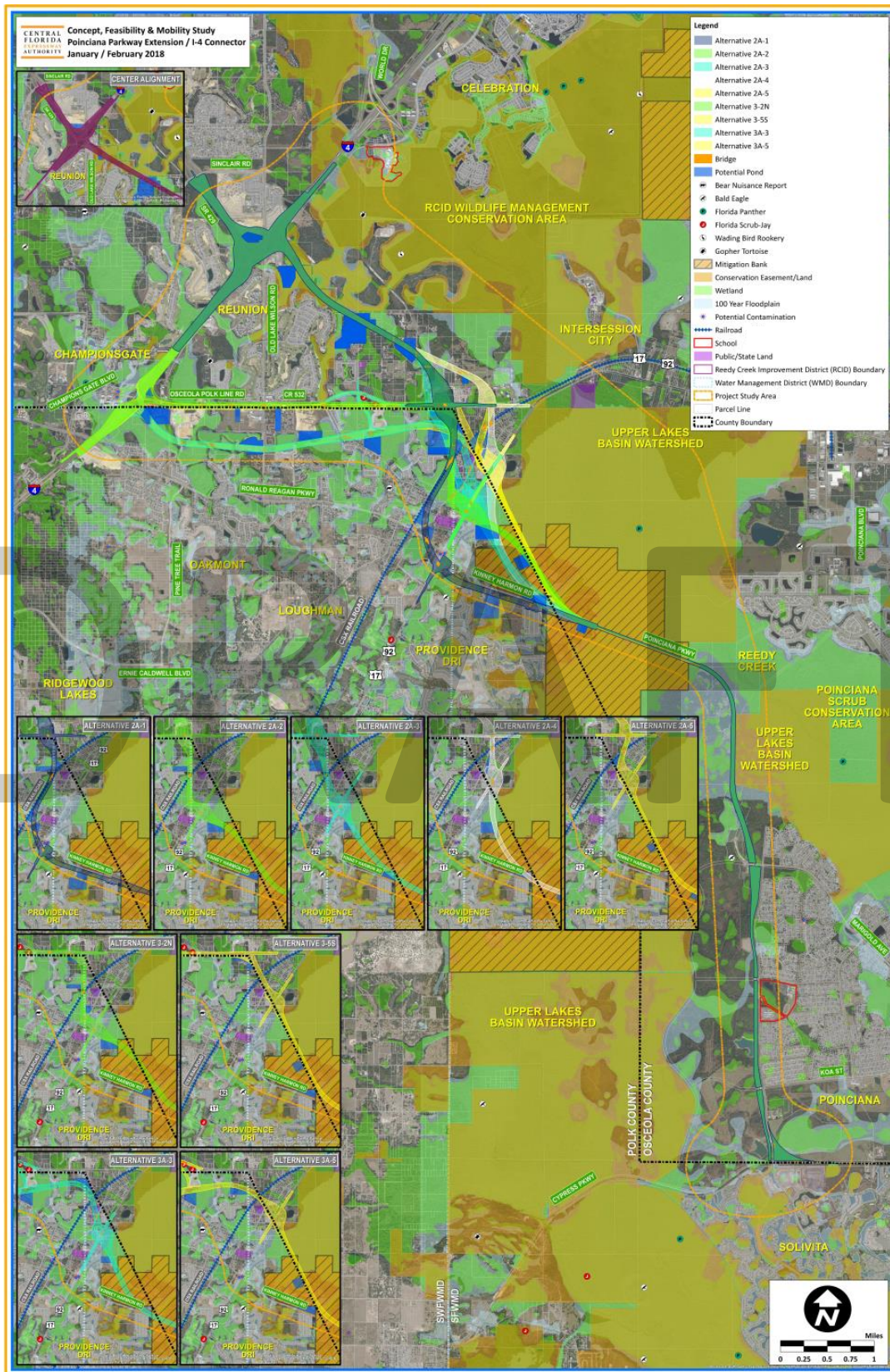
DRAFT

**Exhibit 4-1: CF&M Study Alternatives with Physical, Cultural and Social Elements**





## Exhibit 4-2: CF&M Study Alternatives with Environmental Elements



The Poinciana Parkway Extension PD&E Study is evaluating extending the expressway from the north end of the Poinciana Parkway bridge over the Reedy Creek Mitigation Bank to CR 532. The CF&M Study evaluated five alignments for this segment (see **Exhibit 4-3**).

**Alignment 1** travels south of Ronald Reagan Parkway and avoids the Reedy Creek Mitigation Bank, crosses US 17/92 south of its intersection with Ronald Reagan Parkway, travels parallel to and east of the CSX railroad before crossing it to head north, just west of the Loughman Community Cemetery.

**Alignment 2** travels northwest along the county line through the Reedy Creek Mitigation Bank before crossing US 17/92 just north of the Fox Run development, approximately 0.5 mile north of its intersection with Ronald Reagan Parkway. It then travels north on the west side of the Loughman Community Cemetery.

**Alignment 3** travels through the Reedy Creek Mitigation Bank in Polk County and through a portion of the Fox Run development before crossing US 17/92 approximately 0.7 mile north of its intersection with Ronald Reagan Parkway. There are two options for this alignment, one traveling west of the Loughman Community Cemetery and the other one to the east of the cemetery.

**Alignment 4** travels through the Reedy Creek Mitigation Bank in Polk County and through a portion of the Fox Run development before crossing US 17/92 approximately one mile north of its intersection with Ronald Reagan Parkway. This alignment crosses CR 532 between the Duke Energy and Sabal Trail properties.

**Alignment 5** travels through the Reedy Creek Mitigation Bank along the county line (in Osceola County) before crossing US 17/92 approximately one mile north of its intersection with Ronald Reagan Parkway. This alignment crosses CR 532 between the Duke Energy and Sabal Trail properties.

These five alignments (segments of the longer CF&M Study alternatives) became the initial five Alternatives for the Poinciana Parkway Extension PD&E.







#### 4.1.2 ALTERNATIVES ELIMINATED

Based on the results of the CF&M Study, a matrix was developed that summarized the physical, cultural, natural, and social impacts for each of the alternatives between the Poinciana Parkway bridge over the Reedy Creek Mitigation Bank and CR 532 (see **Table 4-1**). Alternatives 1, 4 and 5 have high impacts for either natural or social environments while Alternatives 2 and 3 have high impacts for both natural and social environments. Based on this information, Alternatives 2 and 3 were eliminated from further consideration as part of the Poinciana Parkway Extension PD&E Study.

**Table 4-1:** Poinciana Parkway Extension Anticipated Impacts

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Physical Impacts	Medium	Medium	Medium	Medium	Medium
Cultural Impacts	Medium	Medium	Medium	Medium	Medium
Natural Impacts	Medium	High	High	High	High
Social Impacts	High	High	High	Medium	Medium

#### 4.2 NO-BUILD ALTERNATIVE

The No-Build Alternative assumes that the Poinciana Parkway Extension is not constructed. Only those other projects included in the MPO Cost Feasible 2040 LRTP are assumed to be provided to meet the transportation need. The results of the No-Build Alternative analysis form the basis of the comparative analysis for the Build Alternatives presented later in this section.

**Table 4-2** summarizes the projected AADT and LOS for roadways in the study area for years 2025 and 2045 for the no-build alternative. In 2025, CR 532, east of Lake Wilson Road, and Ronald Reagan Parkway, east of US 17/92, will operate at LOS F. In 2045, CR 532, east of Lake Wilson Road will improve to LOS C if it is widened to 4-lanes. However, Ronald Reagan Parkway, east of US 17/92 will continue to operate at LOS F, and US 17/92, south of Ronald Reagan Parkway, will drop to LOS E. Additional details are provided in the Project Traffic Analysis Report.

**Table 4-2: 2025 and 2045 AADT and LOS with No-Build Alternative**

Roadway / Location	2025			2045		
	No. of Lanes	No-Build AADT	LOS	No. of Lanes	No-Build AADT	LOS
<b>Ronald Reagan Parkway</b>						
West of Lake Wilson Road	4	19,500	C	4	22,600	C
East of Lake Wilson Road	4	30,000	C	4	34,700	C
East of US 17/92	2	20,600	F	2	22,700	F
<b>CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard</b>						
West of Lake Wilson Road	4	30,900	C	6	43,700	C
East of Lake Wilson Road	2	28,100	F	4	31,500	C
<b>US 17/92</b>						
South of Ronald Reagan Parkway	2	22,700	D	2	26,700	E
North of Ronald Reagan Parkway	4	18,600	C	4	31,100	C
North of CR 532	4	27,300	C	4	30,800	C
<b>Lake Wilson Road</b>						
North of CR 532	4	24,200	C	4	32,900	C
South of CR 532	4	17,600	C	4	23,900	C
<b>Poinciana Parkway Extension</b>						
Southeast of US 17/92	4	22,600	B	4	28,000	B
North of US 17/92	4	12,500	B	4	18,000	B

### 4.3 TRANSPORTATION SYSTEM MANAGEMENT AND OPERATIONS ALTERNATIVE

The TSM&O alternative considers safety and minor operational improvements to existing facilities that may include construction of additional turn lanes, intersection and traffic signal improvements, improvements to signing and pavement markings and/or ITS technology implementation. However, no TSM&O alternative can fulfill the purpose and need for the project. Therefore, no TSM&O options were identified for the study.

### 4.4 MULTIMODAL ALTERNATIVES

The development of alternative mobility programs included an assessment of mass transit technology and intermodal facilities. This assessment began with a review of the CFX Multimodal Policy. Potential multimodal improvements were identified and reviewed for consistency with the CFX Multimodal Policy.

#### 4.4.1 CFX MULTIMODAL POLICY

On March 9, 2017, the OCX Board amended the 2040 Master Plan to include the following policy statement pertaining to multimodal projects:

*Fund or partner on multimodal initiatives where revenue generated from the investment equals the project cost or where toll user benefits are equal to or exceed the project cost. Candidate projects must comply with CFX's Master Bond Resolution and CFX's enabling legislation.*

This policy recognized two types of multimodal initiatives:

1. Projects with direct benefits to CFX toll users – “Cost Equals User Benefits.”
2. Projects meeting financial or revenue tests but not of direct benefit to CFX toll users – “Costs Equals Revenue.”

#### 4.4.2 POTENTIAL MULTIMODAL IMPROVEMENTS

The Center for Urban Transportation Research (CUTR) conducted a multimodal investment assessment for CFX and identified the following types of multimodal improvements as candidate projects (any potential projects would also need to meet CFX financial and/or revenue requirements):

- Rapid transit, trams, or fixed guideways located within the CFX ROW.
- Projects within Osceola County (service in Polk County will require an invitation from Polk County).
- Project consistent with the MPO LRTP.
- Intermodal facility/facilities within CFX ROW, or multimodal corridor/corridors within CFX ROW, which improve the level of service on the expressway system. Connections to the CFX system can also be constructed up to one mile from the system.

As defined by CFX (in the 2040 Master Plan), the term “intermodal” usually means facilities, such as when transportation modes and services are brought together to promote the seamless transfer of travel between two or more modes. This can include, but is not limited to, vehicles and parking facilities (including park-and-ride lots); transit (e.g., buses, local rail, and intercity rail); taxis; rental cars; and shuttle vans. Furthermore, the term “multimodal” typically refers to a corridor serving a combination of cars and trucks, buses, fixed guideways, trams, and bicycles.

The CUTR assessment identified seven potential projects for further consideration through a multimodal project development and evaluation program. The list below illustrates the types of projects recommended for consideration.

- SR 408: Bus Rapid Transit/Express Bus Treatment/Higher Education Connectivity
  - Supported by MPO LRTP and would support new downtown University of Central Florida (UCF) Campus.
- I-Drive/Florida Mall to Orlando International Airport via SR 528: High Capacity Transit Evaluation
  - Supported by MPO LRTP and CFX 2040 Master Plan (improvement to SR 528).
- SR 417: Express Bus Accommodation
  - Included in MPO LRTP and CFX 2040 Master Plan (improvement to SR 417).
- Area Wide: Parking Structure Funding Feasibility
  - Alleviate expressway congestion and potential revenue generation.

- Area Wide: Integrated Regional Fare/Toll Services
  - Facilitate regional mobility and potential revenue benefit or neutrality.
- Area Wide: Variable Pricing Study/Future Funding Options
  - Congestion mitigation measure and potential multimodal funding stream.
- Area Wide: Transit Joint Development Opportunities
  - Contribution to regional mobility and potential revenue generation.

Based on this information, the following types of multimodal improvements are candidates for inclusion in the Poinciana Parkway Extension alternatives:

- Multimodal improvements in the MPO LRTP
- New multimodal improvements in CFX ROW
- New multimodal improvements within one mile of CFX ROW

#### 4.4.2.1 POTENTIAL MPO LRTP MULTIMODAL IMPROVEMENTS

The MPO 2040 LRTP includes three transit projects wholly or partially in Osceola County. These include the US 192 Bus Rapid Transit (BRT) (from US 27 in Lake County to downtown Kissimmee); the Kissimmee Circulator (within Kissimmee) and SunRail (from near US 17/92 at Poinciana Boulevard, north into Orange, Seminole, and Volusia Counties). These projects are not within one mile of the Poinciana Parkway Extension; therefore, they are outside the limits established by the Master Bond Resolution. The SunRail Poinciana Station is the closest, and it is approximately four miles from the Poinciana Parkway Extension. Based on this review, there are no multimodal transportation improvement candidate projects within the MPO LRTP to include in the Poinciana Parkway Extension Alternatives.

#### 4.4.2.2 POTENTIAL NEW MULTIMODAL IMPROVEMENTS

While no multimodal improvements are in the MPO LRTP, it is possible for new multimodal improvements to be developed by CFX within the ROW of a planned expressway; however, the multimodal improvement would need to meet CFX financial and/or revenue requirements. Currently, LYNX and SunRail require financial assistance (i.e., state, federal, and local funding) to cover expenses. Therefore, it is unlikely that new rapid transit, trams, or fixed guideways would meet CFX's financial and revenue requirements. Based on this review, there are no multimodal transportation improvement candidate projects to include in the planned ROW for the Poinciana Parkway Extension.

#### 4.4.2.3 POTENTIAL NEW MULTIMODAL IMPROVEMENTS WITHIN ONE MILE OF CFX ROW

Potential multimodal improvements within one mile of the CFX ROW need to benefit CFX system users. However, no multimodal improvements are viable within the Poinciana Parkway Extension ROW. If rapid transit within Poinciana Parkway Extension ROW was viable, additional transit, bicycle, and pedestrian improvements which improve connections to the rapid transit stations could be considered. Park-and-ride lots are one potential intermodal improvement; however, these would only meet the CFX Multimodal Policy financial requirements if the expressway segment demand is exceeding capacity to the point that removing a toll-paying vehicle from the expressway benefits other users (i.e., decreasing the level of congestion, increasing travel speeds, and increasing level of service). Initial travel demand modeling projects that no segments will experience congestion to the point that a park-and-ride lot would provide appropriate relief to meet the CFX Multimodal Policy requirement. Based on this review, there are no multimodal transportation improvement candidate projects to include within one mile of the Poinciana Parkway Extension.

#### 4.4.3 RECOMMENDED MULTIMODAL CONSIDERATIONS

Based on this review, there are currently no multimodal improvements recommended for consideration as part of the Poinciana Parkway Extension alternatives. As described in the CUTR Multimodal Investment Assessment, CFX is in the beginning stages of the multimodal financier partnership model. Characteristics supportive of this model include densely developed areas with limited ability to provide additional highway capacity. Thus, while portions of the CFX service area are supportive of this model, the expansion of expressways into Osceola County is not. There will likely come a time when multimodal considerations will be appropriate for this area; however, it is premature to consider them now. Furthermore, while the Osceola County Expressway Master Plan includes a 400-foot typical section which includes additional space for multimodal capacity, the technological advancements being made in transportation (i.e., automated vehicles) make it likely that CFX's current typical section for expressways will be able to accommodate additional modes in the future.

#### 4.5 BUILD ALTERNATIVES

The build alternatives were refined and evolved over the course of the PD&E Study. **Exhibit 4-4** illustrates the initial build alternatives from the CF&M Study. The revised build alternatives are illustrated on **Exhibit 4-5**, and the following sections describe the refinements implemented which resulted in these alternatives.

The proposed typical section, as illustrated on **Exhibit 4-6**, is 330 feet wide consisting of two 12-foot lanes in each direction with a 92-foot median (that can accommodate additional lanes and/or a potential multimodal corridor) and 95-foot borders on each side.

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## Exhibit 4-4: Initial Build Alternatives

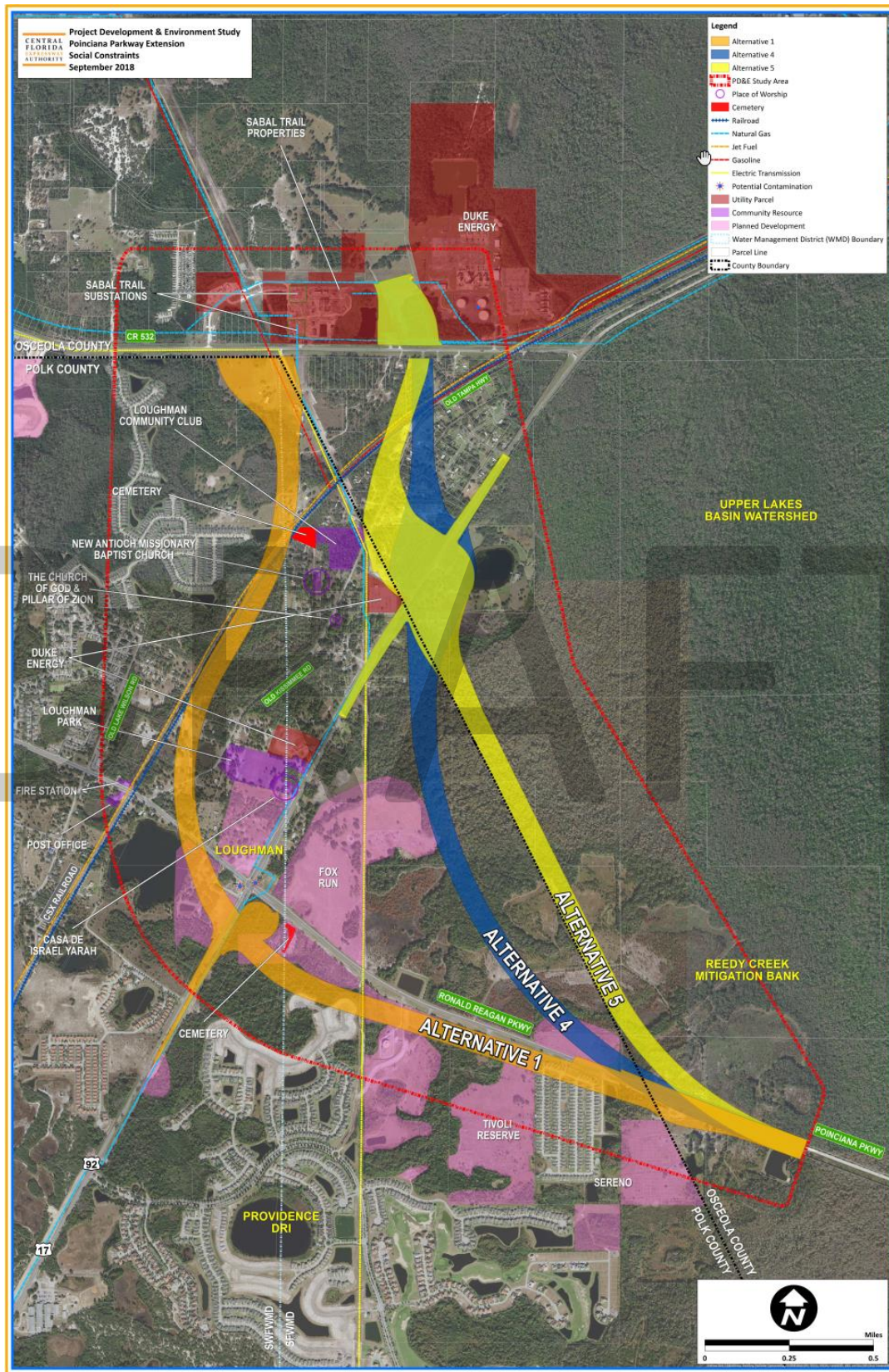
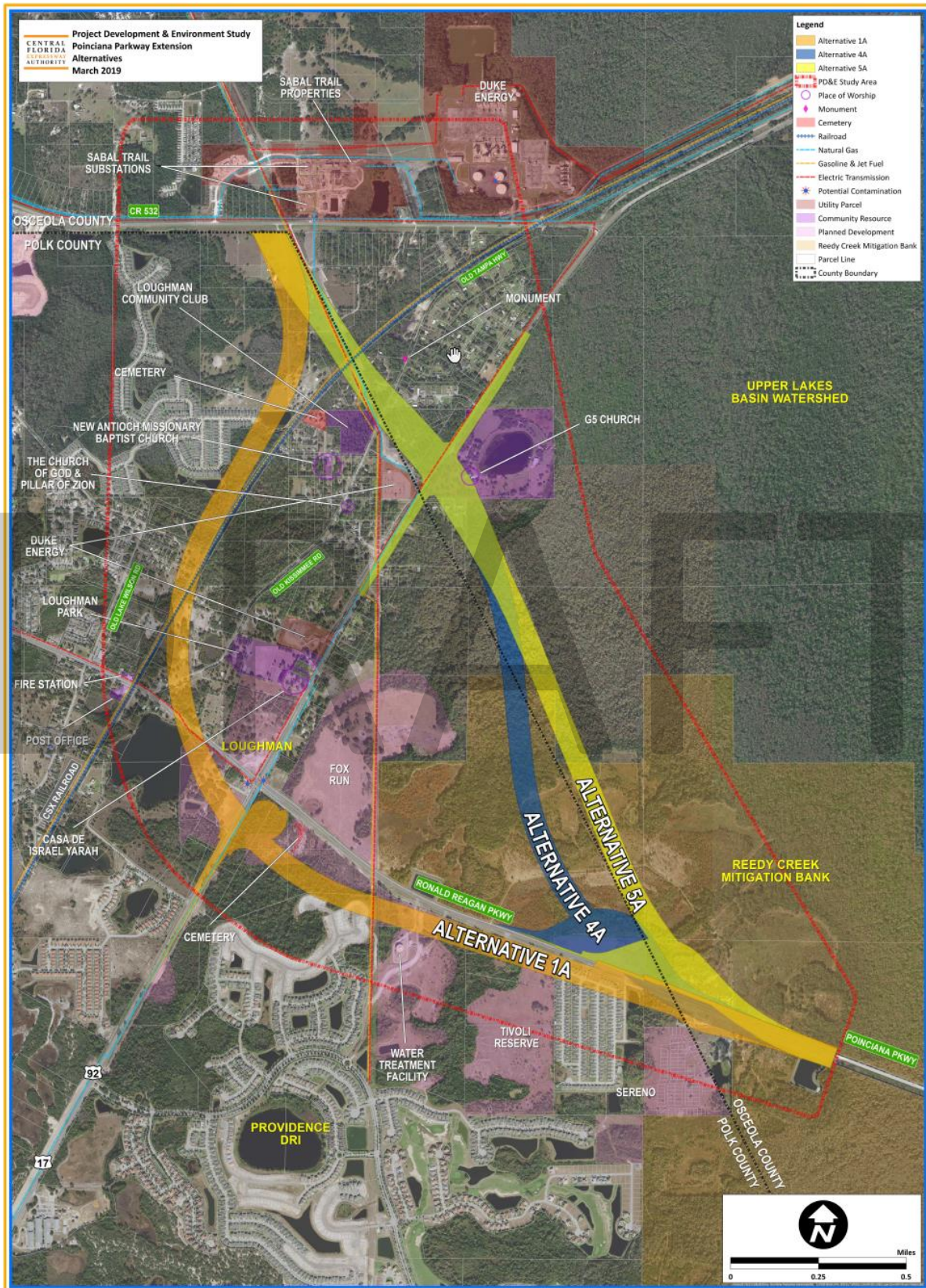


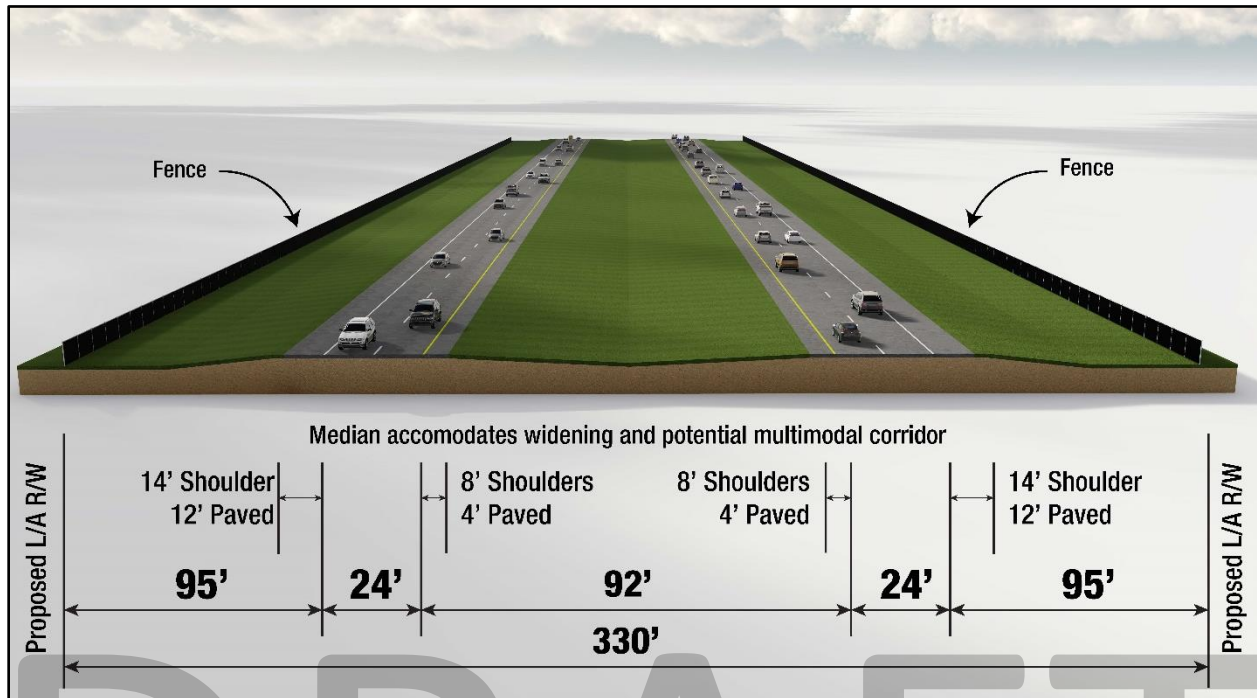


Exhibit 4-5: Final Build Alternatives





**Exhibit 4-6: Typical Section**



#### 4.5.1 ALTERNATIVE 1A

The original Alternative 1 travels south of Ronald Reagan Parkway and minimizes impacts to the Reedy Creek Mitigation Bank, crosses over US 17/92 south of its intersection with Ronald Reagan Parkway, crosses over Old Kissimmee Road, travels parallel to and east of the CSX railroad before crossing it to head north, just west of the Loughman Community Cemetery.

A partial interchange is provided with US 17/92 and slip ramps are provided to and from Ronald Reagan Parkway just west of the existing bridge over the Reedy Creek Mitigation Bank.

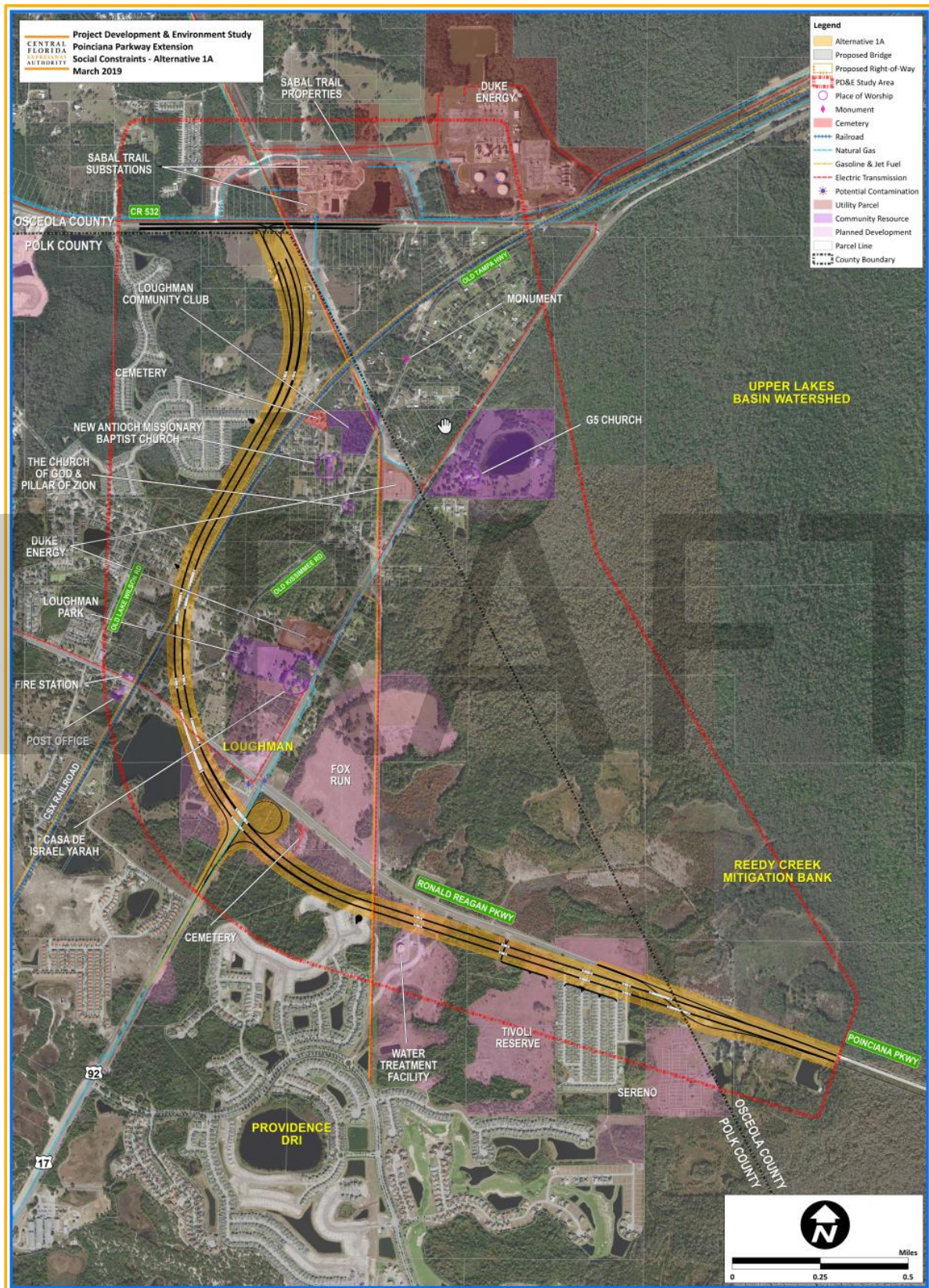
During the August 15, 2018 Project Advisory Group meeting, shifting Alternative 1 to the west of the railroad tracks in an effort to reduce the impacts to the historic Loughman Community was recommended for consideration. As a result, a screening analysis comparing Alternative 1 to Alternative 1A (which travels along the west side of the railroad tracks) was conducted. A summary of this screening analysis is included in **Appendix A**. After coordinating with Polk County to obtain their input, Alternative 1A was selected to replace Alternative 1 and to proceed through the PD&E Study.

Additional refinements to Alternative 1A included utilizing a single point urban interchange (SPUI) layout at CR 532 to eliminate impacts to utilities which run along the Osceola/Polk County line (an at grade intersection with CR 532 is provided for this phase).

**Exhibit 4-7** illustrates Alternative 1A.



Exhibit 4-7: Alternative 1A



#### 4.5.2 ALTERNATIVE 4A

The original Alternative 4 travels through the Reedy Creek Mitigation Bank in Polk County and through a portion of the Fox Run development before crossing over (and interchanging with) US 17/92 approximately one mile north of its intersection with Ronald Reagan Parkway, crosses over Old Tampa Highway and over the CSX railroad. This alignment crossed CR 532 between the Duke Energy and Sabal Trail properties. The intent of Alternative 4 was to minimize the impacts to the Reedy Creek Mitigation Bank as compared to Alternative 5.

By crossing CR 532 between the Duke Energy and Sabal Trail properties, ramps to and from the south accessing CR 532 are not physically possible due to the need to cross over the railroad tracks and then get down to CR 532. Alignment 4 in the CF&M Study only had ramps to and from the north accessing CR 532. With the phased approach (i.e., stopping Poinciana Parkway Extension at CR 532), the initial concept for connecting to CR 532 was via loop ramps on the north side of CR 532. However, through coordination with Sabal Trail Transmission, it was determined that loop ramps were not viable due to a 36" natural gas pipeline in this area and the needed buffer from their blowdown silencers. Blowdown silencers suppress the noise associated with venting the high-pressure gas.

Since loop ramps on the north side of CR 532 are not viable, the expressway was shifted west of the Sabal Trail Transmission compressor station to provide sufficient distance for the expressway to pass over the railroad tracks and then get down to CR 532. This will require relocation of utilities which run along the Osceola/Polk county line. For this alignment (Alternative 4A), three options were developed between US 17/92 and CR 532. These include:

- Diamond interchange at US 17/92
- SPUI at US 17/92
- Frontage road between US 17/92 and CR 532

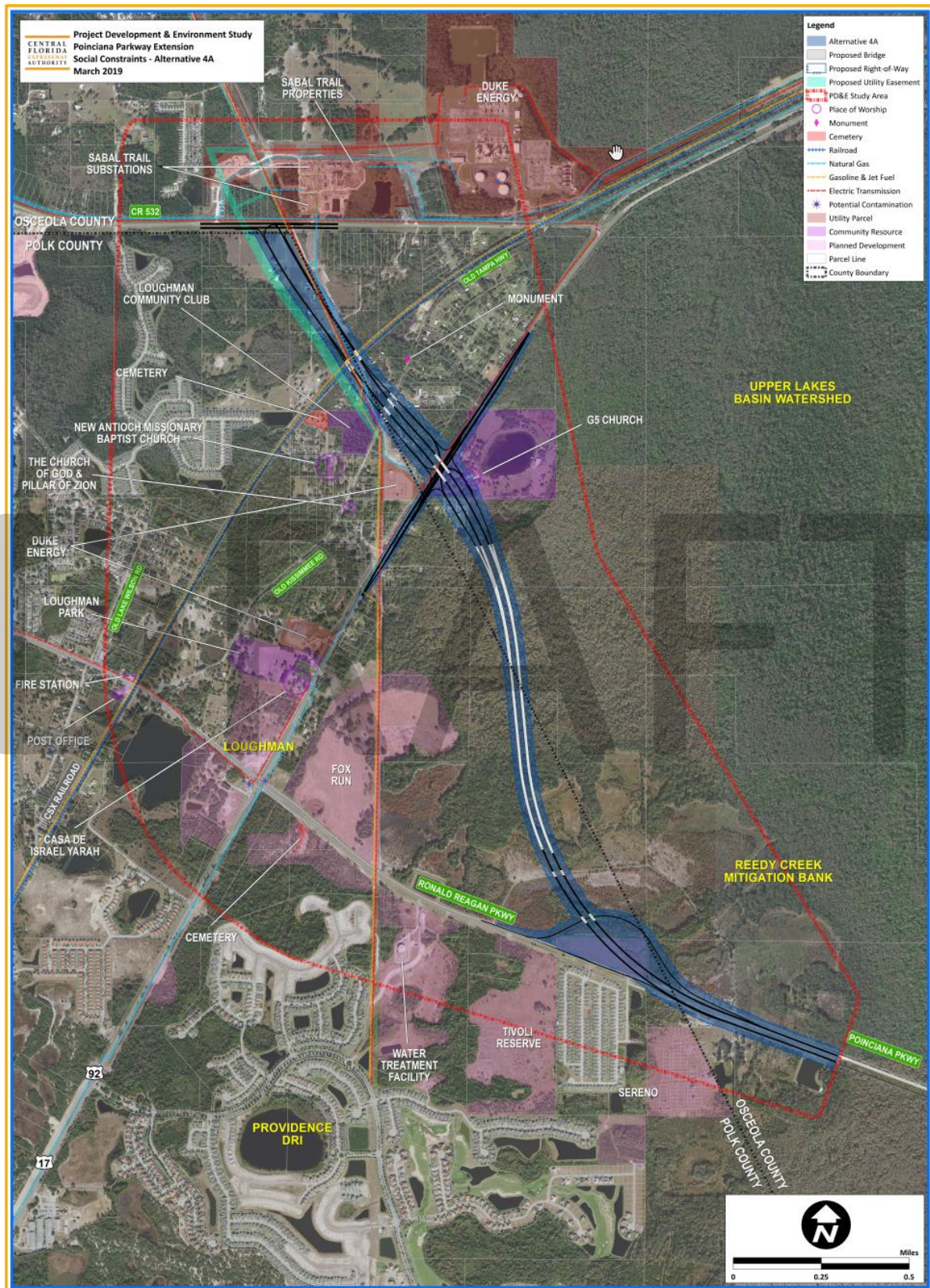
All options include an at-grade intersection with CR 532 for Phase 1 and are set up to accommodate a half SPUI to the north for Phase 2. A full SPUI at CR 532 is not possible due to the closeness to the US 17/92 interchange. A screening analysis comparing the three options was conducted and a summary of this screening analysis is included in **Appendix B**. Based on the screening analysis, the option with the SPUI at US 17/92 was selected to proceed through the PD&E Study.

During meetings with Polk County staff, it was communicated that Alternatives 4 and 5 did not maintain a connection to/from Ronald Reagan Parkway, which was important to the County. In response, the study team agreed to evaluate maintaining the connection for all alternatives. Thus, another refinement to Alternative 4A included adding slip ramps to and from Ronald Reagan Parkway just west of the existing bridge over the Reedy Creek Mitigation Bank.

**Exhibit 4-8** illustrates Alternative 4A and identifies a proposed utility easement for relocating utilities.



Exhibit 4-8: Alternative 4A



#### 4.5.3 ALTERNATIVE 5A WITHOUT SLIP RAMPS TO RONALD REAGAN PARKWAY

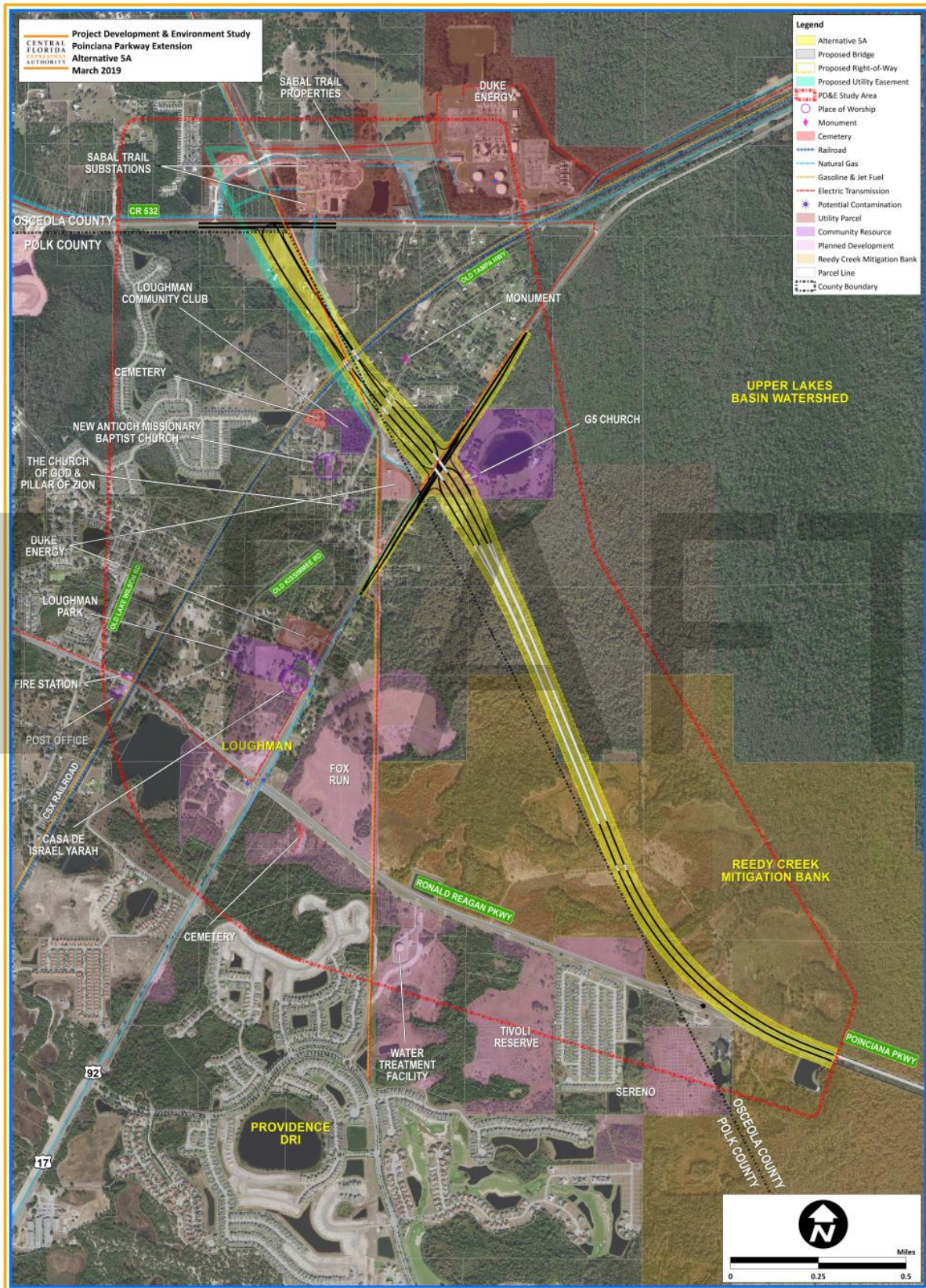
The original Alternative 5 travels through the Reedy Creek Mitigation Bank along the county line (in Osceola County) before crossing (and interchanging with) US 17/92 approximately one mile north of its intersection with Ronald Reagan Parkway, crosses over Old Tampa Highway and over the CSX railroad. This alignment crossed CR 532 between the Duke Energy and Sabal Trail properties. This alignment faced the same constraints as Alternative 4 and was adjusted following the same sequence as described above for Alternative 4, including the application of a SPUI at US 17/92. For this alternative, the slip ramps to and from Ronald Reagan Parkway were not included.

**Exhibit 4-9** illustrates Alternative 5A Without Slip Ramps to Ronald Reagan Parkway and identifies a proposed utility easement for relocating utilities.

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**Exhibit 4-9: Alternative 5A Without Slip Ramps to Ronald Reagan Parkway**



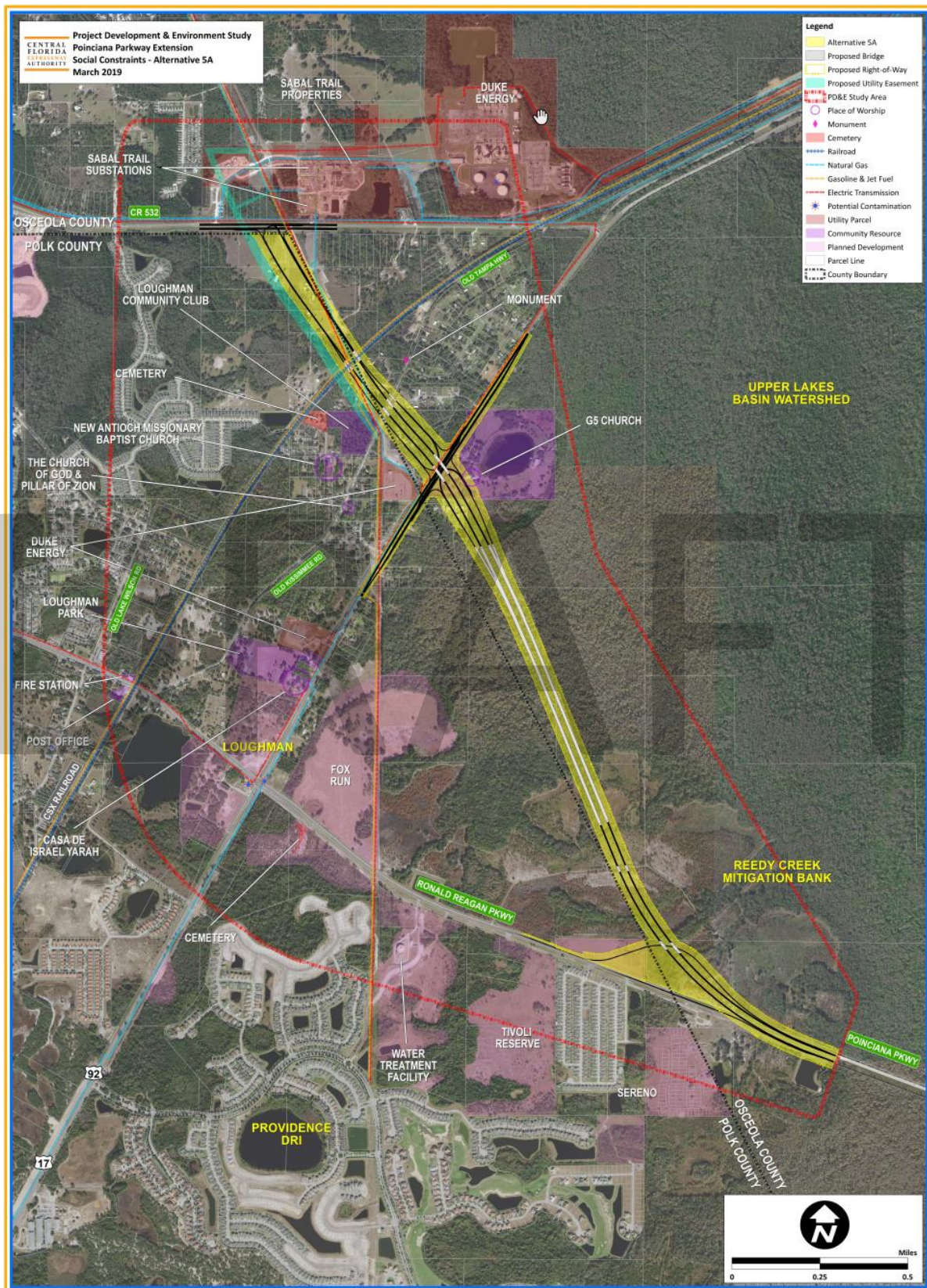
#### 4.5.4 ALTERNATIVE 5A WITH SLIP RAMPS TO RONALD REAGAN PARKWAY

Alternative 5A was also evaluated with slip ramps to and from Ronald Reagan Parkway just west of the existing bridge in the Reedy Creek Mitigation Bank. **Exhibit 4-10** illustrates Alternative 5A with the Ronald Reagan Parkway Slip Ramps.

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**Exhibit 4-10: Alternative 5A With Slip Ramps to Ronald Reagan Parkway**





## 4.6 COMPARATIVE ALTERNATIVES EVALUATION

**Exhibit 4-11** is an alternatives evaluation matrix which summarizes the evaluation criteria considered in comparing the alternatives. The various evaluation criteria are discussed below.

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**Exhibit 4-11: Alternatives Evaluation Matrix**

Evaluation Criteria	Unit of Measure	No-Build	1A	4A	5A without RRP <sup>1</sup> Slip Ramps	5A with RRP <sup>1</sup> Slip Ramps
<b>Design</b>						
Alternative Length (approximate)	Miles	0	3.6	3.0	2.9	2.9
Proposed Right-of-Way Width (general and varies at interchanges)	feet	0	330	330	330	330
Proposed Bridges	Structures	0	20	15	13	15
(total structures per alternative / total length of all structures)	feet	0	4,317	10,815	10,036	10,234
Proposed Interchanges	Number	0	1	2	1	2
Proposed At-Grade Intersections	Number	0	1	1	1	1
<b>Physical Environment Effects</b>						
Major Utility Conflicts - Existing	No. of Conflicts	0	5 <sup>2</sup>	5	5	5
Major Utility Conflicts - Planned	No. of Conflicts	0	0	0	0	0
Contamination Sites & Facilities	No. of Conflicts	0	3	2	2	2
Railroad Involvement	No. of Conflicts	0	1 <sup>3</sup>	1	1	1
<b>Cultural Environment Effects</b>						
Potential Historic Resources	No. of Conflicts	0	0	1	1	1
Potential Historic Linear Resources (Highways / Railroads)	No. of Resources	0	2	2	2	2
Potential Archaeological Resources	No. of Resources	0	2	4	4	4
<b>Natural Environment Effects</b>						
<b>Water Features</b>						
Ponds / Lakes	acres	0	5	1	1	1
Canals / Regulated Floodways	No. of Conflicts	0	0	0	0	0
Flood Hazard Areas - 100 Year Floodplain	acres	0	73	64	52	57
Wetlands (non-forested and forested)	acres	0	54	68	66	68
Habitat - Federal Listed Species	acres	0	6	7	7	7
Habitat - State Listed Species	acres	0	41	77	75	83
Bald Eagle Nest	Y/N	0	Y	N	N	N
Species Impacts (composite rating)	Rating	NONE	HIGH	HIGH	HIGH	HIGH
<b>Mitigation Banks</b>						
Reedy Creek Mitigation Bank	acres	0	28	69	49	59
<b>Conservation Easements</b>						
Upper Lakes Basin Watershed	acres	0	0	22	31	31
SFWMD Regulatory Conservation Lands	acres	0	11	0	0	0
<b>Social Environment Effects</b>						
Right-of-Way Area	acres	0	194	172	159	176
Potential Residential Impacts <sup>4</sup>	Total Parcels	0	123	88	52	87
Existing	Parcels	0	52	18	18	18
Future	Parcels	0	71	70	34	69
Potential Non-Residential Impacts <sup>4</sup>	Total Parcels	0	24	15	8	13
Existing	Parcels	0	11	9	6	7
Future	Parcels	0	13	6	2	6
Community Facilities	No. of Conflicts	0	1	1	1	1
Parks and Recreational Facilities (public & private)	No. of Conflicts	0	0	0	0	0
Trails	No. of Conflicts	0	1	1	1	1
Community Cohesion Effects	Ranking	NONE	HIGH	MEDIUM	MEDIUM	MEDIUM
Socioeconomic Impacts to Special Populations	Ranking	NONE	HIGH	LOW	LOW	LOW
Proposed Development	acres	0	61	12	0	7
<b>Estimated Cost</b>						
Roadway Construction	2019 \$	\$0	\$103,600,000	\$67,300,000	\$65,900,000	\$65,900,000
Bridges Construction	2019 \$	\$0	\$57,900,000	\$102,000,000	\$99,000,000	\$99,000,000
Interchanges Construction	2019 \$	\$0	\$21,000,000	\$42,500,000	\$27,000,000	\$40,300,000
Toll Collection Equipment	2019 \$	\$0	\$1,700,000	\$2,100,000	\$2,100,000	\$2,100,000
Utility Relocation	2019 \$	\$0	\$28,300,000	\$46,600,000	\$46,600,000	\$46,600,000
Right-of-Way Areas	2019 \$	\$0	\$69,300,000	\$44,250,000	\$18,375,000	\$39,575,000
CR 532 (West)	2019 \$	\$0	\$8,600,000	\$8,600,000	\$8,600,000	\$8,600,000
Mitigation, Wetlands, & Wildlife	2019 \$	\$0	\$6,200,000	\$12,500,000	\$12,500,000	\$12,500,000
<b>Total Estimated Alternative Costs</b>	2019 \$	<b>\$0</b>	<b>\$296,600,000</b>	<b>\$325,850,000</b>	<b>\$280,075,000</b>	<b>\$314,575,000</b>
<b>Projected Annual Average Daily Traffic Volume (2045)</b>		<b>0</b>	<b>18,000</b>	<b>15,200</b>	<b>25,200</b>	<b>15,200</b>

Notes:

- 1 - Ronald Reagan Parkway
- 2 - Less major utility relocations required
- 3 - Railroad crossing at skew
- 4 - Includes partially impacted parcels

## 4.6.1 DESIGN ELEMENTS

### 4.6.1.1 ALTERNATIVE LENGTH

Alternative lengths range from 2.9 miles for Alternative 5A to 3.6 miles for Alternative 1A.

### 4.6.1.2 PROPOSED RIGHT-OF-WAY WIDTH

All alternatives propose a 330-foot ROW width.

### 4.6.1.3 PROPOSED BRIDGES

Alternative 1A has 20 bridges for a total length of 4,317 feet. Alternatives 4A and 5A have fewer bridges (from 13 to 15) but longer total length due to the bridges over the wetlands in the Reedy Creek Mitigation Bank and Upper Lakes Basin Watershed. Alternative 4A has the longest total length of bridges at 10,815 feet.

### 4.6.1.5 PROPOSED INTERCHANGES

Alternative 1A has one interchange with US 17/92. Due to restrictions at its crossing of US 17/92 (just south of Ronald Reagan Parkway) some connections to US 17/92 are provided by slip ramps to Ronald Reagan Parkway. Alternatives 4A and 5A With Slip Ramps to Ronald Reagan Parkway have two interchanges (one with US 17/92 and one with Ronald Reagan Parkway). Alternative 5A Without Slip Ramps to Ronald Reagan Parkway has one interchange with US 17/92.

### 4.6.1.6 PROPOSED AT-GRADE INTERSECTIONS

All build alternatives connect to CR 532 via an at-grade intersection.

## 4.6.2 PHYSICAL ENVIRONMENT EFFECTS

### 4.6.2.1 MAJOR UTILITY CONFLICTS

All build alternatives conflict with five existing major utilities requiring some relocations.

Alternative 1A conflicts with a Duke Energy transmission line and a 16-inch Kinder Morgan fuel pipeline that run north-south, crossing Ronald Reagan Parkway approximately 2,000 feet east of US 17/92. Other conflicts include a 36-inch Florida Southeast Connection gas pipeline that runs along the east side of US 17/92, a Duke Energy transmission line running along Ronald Reagan Parkway, and a 10-inch Kinder Morgan fuel pipeline running along the CSX railroad.

Alternatives 4A, 5A Without Slip Ramps to Ronald Reagan Parkway, and 5A With Slip Ramps to Ronald Reagan Parkway have similar utility conflicts, including a Duke Energy transmission line running along US 17/92 and a 10-inch Kinder Morgan fuel pipeline running along the CSX railroad. The following utilities which run along the Osceola/Polk County Line will need to be relocated west of the expressway: a Duke Energy transmission line, a 16-inch Kinder Morgan fuel pipeline, and a 36-inch Florida Southeast Connection gas pipeline.

#### 4.6.2.2 CONTAMINATION SITES AND FACILITIES

Potential contamination sites for Alternative 1A include the Polk County water plant on the south side of Ronald Reagan Parkway, the gas station located at the corner of US 17/92 and Ronald Reagan Parkway, and the Sabal Trail facility located on the north side of CR 532.

Similar potential contamination sites were identified for Alternatives 4A, 5A Without Slip Ramps to Ronald Reagan Parkway, and 5A With Slip Ramps to Ronald Reagan Parkway, including: The Sabal Trail facility located on the north side of CR 532 and Rambo & Sons Trucking, Inc. located on US 17/92.

#### 4.6.2.3 RAILROAD INVOLVEMENT

All build alternatives include bridging over the CSX railroad. Construction of bridges over the railroad tracks will require coordination with CSX.

### 4.6.3 CULTURAL ENVIRONMENT EFFECTS

#### 4.6.3.1 POTENTIAL HISTORIC RESOURCES

Similar potential historic resource impacts were identified for Alternatives 4A, 5A Without Slip Ramps to Ronald Reagan Parkway, and 5A With Slip Ramps to Ronald Reagan Parkway, including a historic structure on US 17/92 which has been determined ineligible for the National Register of Historic Places (NRHP) by the State Historic Preservation Officer (SHPO).

#### 4.6.3.2 POTENTIAL HISTORIC LINEAR RESOURCES

All build alternatives bridge over two potential historic linear resources, including the South Florida Railroad and Old Kissimmee Road/Old Tampa Highway.

#### 4.6.3.3 POTENTIAL ARCHAEOLOGICAL RESOURCES

Alternative 1A impacts two potential archaeological resources while the other three alternatives impact four potential archaeological resources.

### 4.6.4 NATURAL ENVIRONMENT EFFECTS

#### 4.6.4.1 WATER FEATURES

Alternative 1A will impact five acres of ponds/lakes while the other build alternatives will impact one acre of ponds/lakes.

#### 4.6.4.2 FLOOD HAZARD AREAS

Alternative 1A impacts the most areas within the 100-year floodplain at 73 acres. Alternative 5A Without Slip Ramps to Ronald Reagan Parkway impacts the lowest area within the 100-year floodplain at 52 Acres. Alternative 4A impacts 64 acres and Alternative 5A With Slip Ramps to Ronald Reagan Parkway impacts 57 acres within the 100-year floodplain.

#### 4.6.4.3 WETLANDS

Alternatives 4A and 5A With Slip Ramps to Ronald Reagan Parkway impact 68 acres of wetlands. Alternative 1A impacts 54 acres of wetlands while Alternative 5A Without Slip Ramps to Ronald Reagan Parkway impacts 66 acres.

#### 4.6.4.4 HABITAT

Alternative 1A impacts six acres of habitat for federally listed species while the other alternatives impact seven acres. Alternative 1A impacts 41 acres of habitat for state listed species while Alternative 5A With Slip Ramps to Ronald Reagan Parkway impacts 83 acres. Alternative 5A Without Slip Ramps to Ronald Reagan Parkway impacts 75 acres of habitat for state listed species and Alternative 4A impacts 77 acres.

#### 4.6.4.5 BALD EAGLE NEST

Alternative 1A impacts one Bald Eagle nest while the other alternatives do not impact any Bald Eagle nests.

#### 4.6.4.6 SPECIES IMPACTS

Overall, all build alternatives are considered to have high impacts to species.

#### 4.6.4.7 MITIGATION BANKS

Alternative 1A impacts 28 acres of the Reedy Creek Mitigation Bank while alternative 4A impacts 69 acres. Alternative 5A Without Slip Ramps to Ronald Reagan Parkway impacts 49 acres of the Reedy Creek Mitigation Bank while adding the slip ramps increases the impact to 59 acres.

#### 4.6.4.8 CONSERVATION EASEMENTS

Alternative 1A impacts 11 acres of conservation easements while Alternative 4A impacts 22 acres. Both 5A alternatives impact 31 acres of conservation easements.

### 4.6.5 SOCIAL ENVIRONMENT EFFECTS

#### 4.6.5.1 RIGHT-OF-WAY

Alternative 5A Without Slip Ramps to Ronald Reagan Parkway requires the least ROW at 159 acres. Alternative 1A needs 194 acres of ROW. Alternatives 4A and 5A With Slip Ramps to Ronald Reagan Parkway require 172 acres and 176 acres, respectively. These ROW acreages include the ROW needed for ponds.

#### 4.6.5.2 POTENTIAL RESIDENTIAL IMPACTS

Potential residential impacts are based on the number of residential parcels impacted. Parcels with existing development may require relocation. Alternative 1A impacts the largest number of residential parcels at 123 (52 existing residences). Alternative 5A Without Slip Ramps to Ronald Reagan Parkway impacts the fewest residential parcels at 52 (18 existing residences). Alternative 5A With Slip Ramps to Ronald Reagan Parkway impacts 87 residential parcels (18 existing residences) while Alternative 4A impacts 88 residential parcels (18 existing). It should be noted that both Alternative 5A With Slip Ramps to Ronald Reagan Parkway and Alternative 4A impact future parcels which are currently being



developed; therefore, the number of “existing” residences is expected to increase from the numbers included herein (as of February 2019).

#### 4.6.5.3 POTENTIAL NON-RESIDENTIAL IMPACTS

Potential non-residential impacts are based on the number of non-residential parcels impacted. Parcels with existing development may require relocation. Alternative 1A impacts the largest number of non-residential parcels at 24 (11 existing). Alternative 5A Without Slip Ramps to Ronald Reagan Parkway impacts the fewest non-residential parcels at 8 (6 existing). Alternative 5A With Slip Ramps to Ronald Reagan Parkway impacts 13 non-residential parcels (7 existing) while Alternative 4A impacts 15 non-residential parcels (9 existing). It should be noted that both Alternative 5A With Slip Ramps to Ronald Reagan Parkway and Alternative 4A impact future non-residential parcels which are currently being developed; therefore, the number of “existing” uses is expected to increase from the numbers included herein (as of February 2019).

#### 4.6.5.4 COMMUNITY FACILITIES

Each of the build alternatives will impact one community facility. Alternative 1A impacts a parcel for a planned Polk County fire station while the other alternatives impact the G-5 Ranch/Church.

#### 4.6.5.5 PARKS AND RECREATIONAL FACILITIES

None of the build alternatives impact parks or recreational facilities.

#### 4.6.5.6 TRAILS

Each of the build alternatives impact the Bill Johnston Memorial Pathway to Ronald Reagan Parkway Connector trail.

#### 4.6.5.7 COMMUNITY COHESION EFFECTS

Alternative 1A has a high impact on community cohesion while the other build alternatives have a medium impact.

#### 4.6.5.8 SOCIOECONOMIC IMPACTS TO SPECIAL POPULATIONS

Alternative 1A has a high socioeconomic impact to special populations (the historic Loughman community) while the other build alternatives have a low impact.

#### 4.6.5.9 PROPOSED DEVELOPMENT

Alternative 1A has the greatest impact to proposed development at 61 acres while Alternative 5A Without Slip Ramps to Ronald Reagan Parkway does not impact any planned developments. Alternatives 4A and 5A With Slip Ramps to Ronald Reagan Parkway impact 12 acres and seven acres of planned developments, respectively.

### 4.6.6 ESTIMATED COST

Cost estimates were developed for alternatives. Alternative 5A Without Slip Ramps to Ronald Reagan Parkway has the lowest estimated total cost at \$280 million. Alternative 1A has the next lowest estimated total cost at \$297 million, followed by Alternative 5A With Slip Ramps to Ronald Reagan Parkway, estimated at \$315 million. Alternative 4A has the highest estimated total cost at \$326 million.

Alternative 1A has the highest roadway construction cost due to its longer length. Alternative 4A and the two 5A alternatives have higher bridge costs due to the long bridges over wetlands in the Reedy Creek Mitigation Bank and Upper Lakes Basin Watershed. Alternative 4A and the two 5A alternatives have high utility relocation costs. Alternative 5A Without Slip Ramps to Ronald Reagan Parkway has the lowest ROW costs due to fewer acres of ROW needed and fewer impacts to existing and planned developments. All alternatives include an estimated cost for widening CR 532 for one-mile west of the expressway connection to CR 532. Alternatives 4A and the two 5A alternatives have higher mitigation costs.

#### 4.6.7 PROJECTED ANNUAL AVERAGE DAILY TRAFFIC (2045)

Alternative 5A Without Slip Ramps to Ronald Reagan Parkway has the highest projected 2045 annual average daily traffic (AADT) 25,200. Alternative 1A has the next highest 2045 AADT at 18,000. Both Alternative 4A and Alternative 5A With Slip Ramps to Ronald Reagan Parkway have a 2045 AADT of 15,200.

#### 4.7 SELECTION OF THE PREFERRED ALTERNATIVE

Alternative 5A Without Slip Ramps to Ronald Reagan Parkway was selected as the preferred build alternative. Advantages associated with this alternative include:

- Least potential residential impacts (52 parcels compared to 123 for Alternative 1A)
- Least potential non-residential impacts (8 parcels compared to 24 for Alternative 1A)
- Low socioeconomic impacts to special populations (compared to high for Alternative 1A)
- Medium community cohesion effects (compared to high for Alternative 1A)
- Lowest impact to proposed development (0 acres compared to 61 for Alternative 1A)
- Lowest impact to ponds/lakes (1 acre compared to 5 for Alternative 1A)
- Lowest impact to flood hazard areas (52 acres compared to 73 for Alternative 1A)
- No impact to Bald Eagle Nest (compared to one for Alternative 1A)
- Less impacts to Reedy Creek Mitigation Bank (49 acres compared to 69 for Alternative 4A)
- Less impacts to SFWMD Regulatory Conservation Lands (0 acres compared to 11 for Alternative 1A)
- Lowest cost (\$280 million compared to \$297 million for Alternative 1A)
- Highest 2045 Daily Traffic (25,200 compared to 18,000 for Alternative 1A)

There are some disadvantages to Alternative 5A Without Slip Ramps to Ronald Reagan Parkway which include:

- Higher impacts to wetlands (66 acres compared to 54 for Alternative 1A)
- Higher impacts to state listed species habitat (75 acres compared to 41 for Alternative 1A)
- Higher impacts to Reedy Creek Mitigation Bank (49 acres compared to 28 for Alternative 1A)
- Higher impact to Upper Lakes Basin Watershed (31 acres compared to 0 for Alternative 1A)

To minimize the above impacts, Alternative 5A Without Slip Ramps to Ronald Reagan Parkway includes constructing a bridge approximately 0.9 mile in length over wetlands in the Reedy Creek Mitigation Bank and the Upper Lakes Basin Watershed.

In addition, mitigation costs have been included in the cost estimate and will be paid as required for the project.

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## 5.0 STAKEHOLDER INVOLVEMENT

### 5.1 INTRODUCTION

Stakeholder and public involvement was an integral part of the PD&E Study. Multiple opportunities for participation were provided, including:

- Environmental Advisory Group (EAG) meetings
- Project Advisory Group (PAG) meetings
- Meetings with local governments
- Meetings with various stakeholders (e.g., property owners, utility providers, community groups, and transportation agencies)
- Public Meetings

A summary of stakeholder involvement is provided below.

### 5.2 STAKEHOLDER COORDINATION AND MEETINGS

#### 5.2.1 ENVIRONMENTAL ADVISORY GROUP

An EAG was formed to provide input to the PD&E Study. The first EAG meeting was held on August 15, 2018. Invitation letters were mailed to 111 members of the EAG. A GoToMeeting invitation was sent to members who needed to join remotely. Eight people attended the meeting (plus 10 study staff members) and eight participated by GoToMeeting, including representatives from the following:

- East Central Florida Regional Planning Council
- Florida's Turnpike Enterprise
- Florida Department of Transportation District Five
- Osceola County Transportation
  - Reedy Creek Improvement District (RCID)
  - Sierra Club
  - South Florida Water Management District
  - Callan Law Firm

The purpose of the first EAG meeting was to review the study history and background, discuss the advisory group roles, discuss the project purpose and need, describe the study methodology, present reasons for eliminating some alternatives from the PD&E study, and receive comments from the group. Comments and suggestions from the EAG included:

- Coordinate with the Reedy Creek Mitigation Bank.
- Consider bridging the expressway within the mitigation bank.
- Consider Improving CR 532 as part of the project.
- Consider social impacts, especially to the traditionally underserved community of Loughman.
- Consider wildlife crossings.

The second EAG meeting was held on February 19, 2019. Invitation letters were mailed to 90 members of the EAG. A GoToMeeting invitation was sent to members who needed to join remotely. Eight people



attended the meeting (plus seven study staff members) and four participated by GoToMeeting, including representatives from the following:

- East Central Florida Regional Planning Council
- Florida's Turnpike Enterprise
- Osceola County Transportation
- Osceola County Expressway Authority
- Florida Fish and Wildlife Conservation Commission
- Reedy Creek Improvement District (RCID)
- RLF, Inc.

The purpose of the second EAG meeting was to review changes made to the alternatives in response to EAG and PAG input, changes made to the alternatives due to geometric constraints and coordination with major utilities affected by the alternatives. The results of the evaluation of the alternatives was also presented. General issues raised by the group included:

- Consider phasing the Poinciana Parkway Extension to CR 532.
- Consider an urban expressway (i.e., reduced ROW) for Alternative 1A.
- Osceola County looks forward to working with CFX on improving CR 532.
- The use of bridges over wetlands helps minimize impacts and the group was in favor of minimizing impacts.

The third EAG meeting was held on May 21, 2019. Invitation letters were mailed to 89 members of the EAG. A GoToMeeting invitation was sent to members who needed to join remotely. Five people attended the meeting (plus 10 study staff members) and three participated by GoToMeeting, including representatives from the following:

- Florida Fish and Wildlife Conservation Commission
- Osceola County
- Florida's Turnpike Enterprise
- Poinciana Residents for Smart Change
- Audubon Society – Central Florida
- South Florida Water Management District
- US Fish and Wildlife Service

The purpose of the third EAG meeting was to present the study team's recommended Preferred Alternative – Alternative 5A Without Slip Ramps to Ronald Reagan Parkway. Reasons for this decision were presented and comments were solicited from the group. General comments from the group included:

- Consider extending the western end of the bridge over the Reedy Creek Mitigation Bank and Upper Lakes Basin Watershed further west (beyond the wetlands) to provide a dry area for wildlife to use.
- As part of the mitigation for impacting the Upper Lakes Basin Watershed, purchase wetlands on the west side of the expressway and transfer the ownership to the SFWMD (this was supported by SFWMD).

- It was noted that Poinciana residents would prefer if the slip ramps to Ronald Reagan were included in the preferred alternative as they provide a better connection (and non-tolled) for access to Posner Park in Polk County.

### 5.2.2 PROJECT ADVISORY GROUP

A PAG was formed to provide input to the PD&E Study. The first PAG meeting was held on August 15, 2018. Invitation letters were mailed to 85 members of the PAG. A GoToMeeting invitation was sent to members who needed to join remotely. Twenty people attended the meeting (plus 10 study staff members) and three participated by GoToMeeting, including representatives from the following:

- Gulfstream Natural Gas
- Loughman Community Association
- Osceola County
- Kissimmee Utility Authority
- Central Florida Regional Planning Council
- Florida Department of Transportation District 5
- Reunion Resort & Golf Club
- Sabal Trail Transmission
- Walt Disney World
- Harris Harris Bauerle Ziegler Lopez

The purpose of the first PAG meeting was to review the study history and background, discuss the advisory group roles, discuss the project purpose and need, describe the study methodology, present reasons for eliminating some alternatives from the PD&E study, and to receive comments from the group. Comments and suggestions from the PAG included:

- Concern about the social impacts of Alternative 1.
- Consider shifting Alternative 1 to the west side of the railroad tracks to reduce social impacts in the Loughman area.
- The project is needed as soon as possible, including a direct connection to I-4.

The second PAG meeting was held on February 19, 2019. Invitation letters were mailed to 71 members of the PAG. A GoToMeeting invitation was sent to members who needed to join remotely; however, none utilized the GoToMeeting option. Eight people attended the meeting (plus six study staff members), including representatives from the following:

- Gulfstream Natural Gas
- East Central Florida Regional Planning Council
- Osceola County
- Polk County
- RIDA & Associates (Champions Gate)
- Sabal Trail Transmission
- Reunion

The purpose of the second PAG meeting was to review changes made to the alternatives in response to EAG and PAG input, changes made to the alternatives due to geometric constraints and coordination

with major utilities affected by the alternatives. The results of the evaluation of the alternatives was also presented. General issues raised by the group included:

- The changes reduced the impacts to some utilities.
- Osceola County looks forward to working with CFX on improving CR 532.
- Alternative 1A impacts property that Polk County is looking at for a fire station.

The third PAG meeting was held on May 21, 2019. Invitation letters were mailed to 70 members of the EAG. A GoToMeeting invitation was sent to members who needed to join remotely. Four people attended the meeting (plus eight study staff members) and three participated by GoToMeeting, including representatives from the following:

- ChampionsGate Community Development District
- East Central Florida Regional Planning Council
- Gulfstream Natural Gas
- Osceola County
- Polk County
- Central Florida Regional Planning Council

The purpose of the third PAG meeting was to present the study team's recommended Preferred Alternative – Alternative 5A Without Slip Ramps to Ronald Reagan Parkway. Reasons for this decision were presented and comments were solicited from the group. General comments from the group included:

- There was concern about congestion on CR 532 without a direct expressway connection to I-4.
- There was support for the Alternative 5A Without Slip Ramps to Ronald Reagan Parkway as the preferred alternative.
- It was recommended to coordinate with FDOT in an effort to widen US 17/92 between the existing widening (as part of the Poinciana Parkway improvement) and the widening associated with the interchange with Alternative 5A without slip ramps.

### 5.2.3 LOCAL GOVERNMENT ENTITIES

The study team met with the following local government entities:

- Polk County
- Osceola County

On November 1, 2018, the study team met with Polk County staff to discuss the Poinciana Parkway Extension PD&E and planned developments in Polk County. Alternatives 1 and 1A were reviewed. Alternative 1 is on the east side of the CSX railroad tracks and Alternative 1A is on the west side of the railroad tracks. Both alternatives impact a proposed Fire and Rescue Station on Ronald Reagan Parkway. County staff was concerned about possible impacts to the water system facility on the south side of Ronald Reagan Parkway. Planned developments in the area include a new Publix and new apartments. After reviewing Alternatives 1 and 1A, the County did not support either alternative and encouraged the study team to focus on Alternatives 4 and 5 due to the reduced social impacts, and attempt to minimize the natural environment impact associated with these alternatives. The agreement between Polk

County, Osceola County and the Osceola County Expressway was discussed and County staff opined that slip ramps to and from Ronald Reagan Parkway would meet the intent of the agreement.

On March 28, 2019, the study team met with Polk County senior administrative staff to present the study team's recommended preferred alternative – Alternative 5A Without Slip Ramps to Ronald Reagan Parkway. Alternatives considered and results of evaluations were presented, along with reasons for identifying the recommended preferred alternative. Based on the information presented, the senior administrative staff recommended that these findings be presented to the Polk County Board of County Commissioners at their next Agenda Workshop on April 12, 2019.

On April 12, 2019, the study team presented to the Polk County Board of County Commissioners at their Agenda Workshop. The presentation included background information, study methodology, coordination with Polk County and alternatives evaluated. The study team's recommended preferred alternative, Alternative 5A Without Slip Ramps to Ronald Reagan Parkway, was presented. Following the presentation, the County decided to place the Poinciana Parkway Extension PD&E on the agenda for their April 16, 2019 meeting.

On April 16, 2019, the study team attended a Polk County Board of County Commissioners meeting. County staff presented information on the study team's recommended preferred alternative and the board passed a resolution:

1. Endorsing Alternative 5A without slip ramps for the Poinciana Parkway Extension.
2. Directing staff to draft a revised agreement on Poinciana Parkway that removes the requirement for the Poinciana Parkway Extension to include direct access to Ronald Reagan Parkway.
3. Requesting CFX to provide technical assistance as needed to evaluate future regional connections to Poinciana Parkway.

On June 3, 2019, the study team presented to the Osceola County Board of County Commissioners. The presentation included background information, study methodology, coordination with Osceola County, and alternatives evaluated. The study team's recommended preferred alternative, Alternative 5A Without Slip Ramps to Ronald Reagan Parkway, was presented. Comments included support for the project, County efforts to obtain federal funds for Poinciana Parkway Extension, including its connection to I-4 as well as federal funds for I-4 Beyond the Ultimate, and confirmation that the study team is publicizing meeting notices in Spanish.

## 5.2.4 STAKEHOLDER MEETINGS

The study team met with the following stakeholders:

- FDOT District 5
- Polk Transportation Planning Organization (TPO) Technical Advisory Committee (TAC)
- Polk TPO Board
- Cassidy Homes
- Sabal Trail
- Duke Energy
- Kinder Morgan
- Kissimmee Utility Authority



- Gulfstream Natural Gas
- Transtate Industrial Pipeline Systems
- Duke Transmission
- Reedy Creek Mitigation Bank
- FDOT District 1
- United States Fish and Wildlife Services (USFWS)
- Lake Wilson Preserve Homeowners Association (HOA)
- United States Army Corps of Engineers (USACE)
- G5 Church and Harris Harris Bauerle Ziegler Lopez

On July 17, 2018, the study team met with and presented project information to FDOT District 5 staff and their consultants. Background information about the study was presented, as well as previous coordination with FDOT. Although the current PD&E does not extend to I-4, information regarding the need for the I-4 Beyond the Ultimate improvement to accommodate a connection to the Poinciana Parkway Extension was presented (this had been previously presented to other staff at FDOT). It was noted that based on previous communications with FDOT, it is CFX's understanding that FDOT will be the lead agency for the PD&E for the connection from I-4 to the Poinciana Parkway Extension at CR 532. CFX is willing to partner with the Department in that PD&E, including participating in the funding for the PD&E. FDOT staff concluded that they would need to have internal discussions on how to move forward regarding the PD&E for connecting I-4 to the Poinciana Parkway Extension.

On July 26, 2018, the study team met with the Polk TPO TAC to provide an update on the Poinciana Parkway Extension PD&E. Background information, including the results from the previous CF&M Study, was presented. The initial Alternatives 1, 4 and 5 were identified as being evaluated as part of the PD&E. Polk County noted that maintaining connections to Ronald Reagan Parkway was desirable and the study team stated that they would evaluate maintaining the connection.

On August 9, 2018, the study team presented to the Polk TPO Board and provided a summary of the previous Poinciana Parkway Extension CF&M Study, which led up to the current PD&E Study. The results of the CF&M Study were described and the reasons for the PD&E addressing the extension to CR 532 were explained. Impacts associated with Alternatives 1 through 5 were summarized, and the reasons to evaluate Alternatives 1, 4 and 5 in the PD&E were described. The agreement between Polk County, Osceola County and the Osceola County Expressway Authority regarding the extension of Poinciana Parkway was summarized and it was noted that CFX will work closely with Polk County in the evaluation of the connections from roads in Polk County to the Poinciana Parkway and its extension.

On August 10, 2018, the study team met with representatives from Cassidy Homes and BCC Engineering. The study team provided a summary of the previous Poinciana Parkway Extension CF&M Study and the reasons for the PD&E addressing the extension to CR 532 were explained. Impacts associated with Alternatives 1 through 5 were summarized, and the reasons to evaluate Alternatives 1, 4 and 5 in the PD&E were described. Improvements in the Polk TPO Cost-Feasible plan and the Central Polk Parkway were also discussed. It was noted that a connection from Central Polk Parkway to the Poinciana Parkway could possibly occur in the vicinity of US 17/92 (for Alternative 1), or possibly near Cypress Parkway (for Alternatives 4 and 5).

On September 13, 2018, the study team met with various utilities within the study area, including Sabal Trail Transmission, Gulfstream Natural Gas, and Duke Energy. The utilities provided information on their facilities, operations, clearance requirements, crossing requirements.

On October 18, 2018, the study team had a virtual meeting (conference call with computer video of presentation slides) with the Reedy Creek Mitigation Bank Attorneys. The purpose of the call was to discuss the alternatives being evaluated and to obtain feedback from the Reedy Creek Mitigation Bank. The Reedy Creek Mitigation Bank attorneys explained that there are numerous flora and fauna species on the bank property and they have extensive data regarding these resources that they can make available to the project team. A Reedy Creek Mitigation Bank attorney expressed that the alternatives will result in significant damage to the bank property and that their preference is for alternatives that do not impact the bank. The attorneys indicated they would be preparing formal comments on the project.

On October 19, 2018, the study team met with FDOT District 1 and Polk TPO TAC to coordinate with the Northeast (NE) Polk US 27 Mobility Study. The study team described the previous CF&M Study and the current Poinciana Parkway Extension PD&E study. Representatives from RS&H described the status of the NE Polk US 27 Mobility Study. TPO staff noted their current LRTP assumed that Central Polk Parkway (CPP) was viable; however, now that it is on hold, there will be changes to their LRTP which are expected to include improvements to US 17/92. As a follow up to this meeting, FDOT will request a coordination meeting between the traffic staff for the US 27 Mobility Study and the Poinciana Parkway Extension.

On December 11, 2018, the study team had a virtual meeting (conference call with computer video of presentation slides) with the Sharma Eminent Domain Lawyers who are now representing the Reedy Creek Mitigation Bank. The purpose of the call was to discuss the alternatives being evaluated and to coordinate with the mitigation bank. Steps for obtaining access to the bank were discussed. It was noted that comments can be submitted throughout the duration of the PD&E study.

On December 13, 2018, the study team met with USFWS to discuss the proposed survey methodologies for the project. A brief overview of the history, study area and alternatives were provided. The methodology for surveying federal species was discussed and agreed to.

On December 13, 2018, the study team met with various utilities within the study area, including Sabal Trail Transmission, Kinder Morgan, Florida Southeast Connection, Gulfstream Natural Gas, and Duke Energy. Draft Alternatives 1A, 4A and 5A were presented and needed utility relocations were identified. It is anticipated that some existing utility easements will be replaced with new easements. As a follow up to the meeting, the study team provided the impacted utility owners with KMZ files of the draft alternatives (which are subject to change).

On January 9, 2019, the study team met with the Lake Wilson Preserve HOA to provide an update on the Poinciana Parkway Extension PD&E. Background information, including the results from the previous CF&M Study, was presented. The initial Alternatives 1, 4 and 5 were identified as being evaluated as part of the PD&E. The study team answered questions and received comments from the HOA.

On January 29, 2019, the study team attended an FDOT meeting regarding Segment 5 of the I-4 Beyond the Ultimate planned improvements. Section 5 extends from west of US 27 to west of CR 532. Representatives from FDOT District 5 led the meeting and representatives from FDOT District 1 participated in the meeting.

On January 31, 2019, the study team attended an FDOT District 5 coordination meeting regarding the I-4 Beyond the Ultimate improvements in the vicinity of a possible connection of the Poinciana Parkway Extension / I-4 Connector with I-4 at SR 429. Draft interchange concepts developed as part of CF&M Study were presented and discussed.

On February 28, 2019, the study team met with the USACE to discuss the status of the PD&E study and to obtain feedback on the alternatives presented during the EAG and PAG meetings held on February 19, 2019. USACE is supportive of bridging the wetlands in the bank if Alternative 4A or 5A move forward. But fire management may be an issue that needs to be documented in the study. It was suggested that reductions in the typical section may need to be considered for those sections through the mitigation bank to demonstrate minimization.

On June 5, 2019, the study team met with G5 Church representatives and their attorneys, Harris Harris Bauerle Ziegler Lopez to discuss the status of the PD&E study and to obtain feedback on the alternatives considered and the recommended preferred alternative, which affects the G5 Church property. No comments were received during the meeting.

### 5.2.5 PUBLIC INVOLVEMENT AND MEETINGS

A coordinated effort to obtain public input regarding the Poinciana Parkway Extension PD&E Study was conducted by holding three public meetings. The Kick-Off Public Meeting was held on September 25, 2018, and the Alternatives Workshop was held on March 14, 2019. The study's Public Hearing is scheduled for August 29, 2019. Each meeting provides attendees with the most up-to-date information, fosters discussion with the public, and encourages meeting attendees to provide their input.

The Kick-Off Public Meeting, held in the cafeteria at Poinciana High School, 2300 S. Poinciana Boulevard, Kissimmee, FL 34758, was advertised in advance with legal ads in the Lakeland Ledger on Sunday, September 9, 2018 and Sunday, September 23, 2018; in the Osceola News Gazette on Thursday, September 6, 2018 and Thursday, September 20, 2018; in the Spanish-language El Sentinel on Sunday, September 9, 2018 and Sunday, September 23, 2018; and the Orlando Sentinel's Orange and Osceola editions on Sunday, September 9, 2018 and Sunday, September 23, 2018. An ad was posted in the Florida Administrative Register (FAR) on Friday, September 7, 2018, and a news release was distributed to major media outlets on Monday, September 24, 2018.

Public meeting invitation letters were sent on Wednesday, September 5, 2018, by email to 38 elected officials and their aides, as well as to 97 local, regional, state, and federal agency contacts. An additional 5,013 meeting invitation letters were mailed to property owners and tenants within the corridor on Wednesday, September 5, 2018. Meeting information was also posted on the study website and Facebook page.

116 attendees signed in at the Kick-Off Public Meeting. A total of 24 written comments were received: 17 at the meeting, and seven emailed within 10 business days of the public meeting.

The second public meeting, the Alternatives Workshop, was also held in the cafeteria at Poinciana High School on March 14, 2019. Newspaper legal advertisements were run in the Orange and Osceola editions of the Orlando Sentinel, in the Spanish-language El Sentinel and in the Lakeland Ledger on Sunday, February 24, 2019 and Sunday, March 10, 2019. The ad also ran in the Osceola News Gazette on

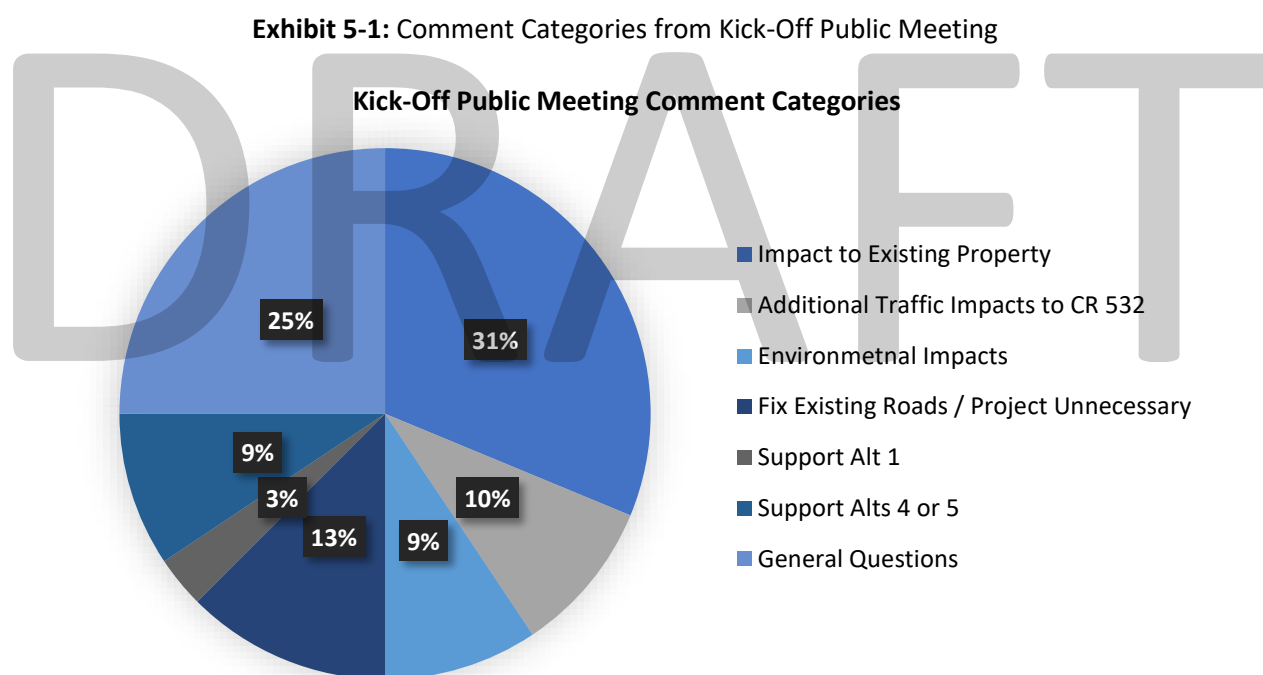
Thursday, February 28, 2019 and Thursday, March 7, 2019. A news release was distributed to major media outlets on Wednesday, February 27, 2019. An ad was also placed in the FAR.

Public meeting invitation letters were sent on Thursday, February 21, 2019, by email to 38 elected officials and their aides, as well as to 97 local, regional, state, and federal agency contacts. An additional 5,013 meeting invitation letters were mailed to property owners and tenants within the corridor on Thursday, February 21, 2019. Meeting information was also posted on the study webpage and Facebook page.

150 people signed in at the Alternatives Workshop. A total of 40 written and emailed comments were received as of March 28, 2019, the end of the public meeting comment period.

### 5.2.6 SUMMARY OF PUBLIC COMMENTS

A total of 24 written comments were received for the Kick-Off Public Meeting: 17 were submitted at the meeting and seven were emailed within 10 business days of the meeting. **Exhibit 5-1** reflects the general nature of the comments received. Many comment forms touched on multiple topics, so referenced numbers may exceed the total number of comment forms received.



Comment categories and related statements from the Kick-Off Public Meeting are listed below (numbers in parentheses indicate how many times, if greater than one, a comment or statement was made).

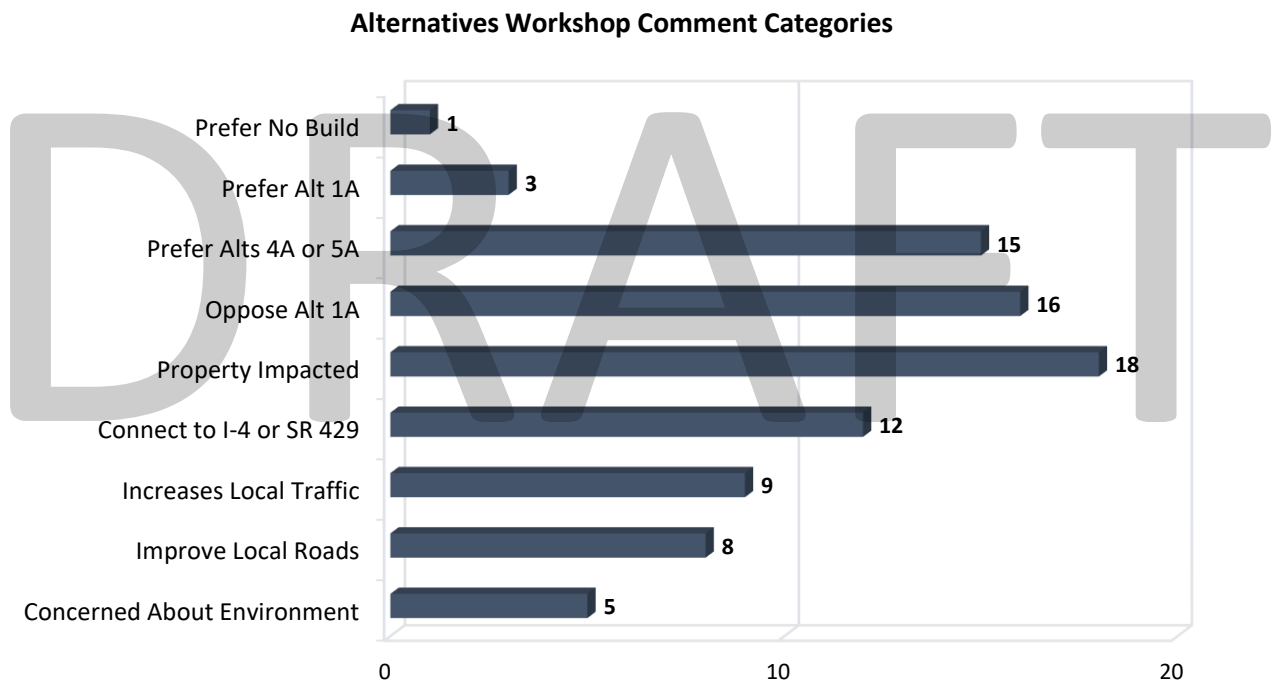
- Concerns about the impact on CR 532 and Old Lake Wilson Road.
- Questions regarding the decision to extend only to CR 532 in this first phase and not to I-4.
- Alternative 1 seems to impact a lot of homes and wetlands. Does it impact the historical Polk County marker?



- Consider Alternatives 4 or 5 so as not to impact 21 Palms RV Resort that provides homes to 150 families. (2)
- Use Alternative 4 or 5. We need relief here because of growth. Also, we want a decision made soon so we'll know if we need to move or not. Unfortunately, somebody is going to be impacted by this, but we understand it's needed. (2)
- Choose Alternative 4 or 5. That's best for Polk County.
- Alternative 1 would be perfect because it affects fewer families. (4)
- Choose the alternative that has the least impact to wetlands and nature.

As of March 28, 2019, a total of 40 written and emailed comments were received following the Alternatives Workshop held on March 14, 2019. The information below reflects the general nature of the comments received. Many comment forms touched on multiple topics, so referenced numbers may exceed the total number of comment forms received.

**Exhibit 5-2: Comment Categories from Alternatives Workshop**



Comment categories and related statements from the Alternatives Meeting are listed below (numbers in parentheses indicate how many times, if greater than one, a comment or statement was made).

- Plan 1A must not move forward! The largest impact on homeowners in Polk County, this must be heavily considered. (16)
- Plans 4A and 5A are shorter and mostly impacting swamp land.
- This plan [1A] also affects the Bald Eagle's nests which I thought was against the law.
- As far as the question would I use the toll road? – my answer is only when the road connects to I-4 and not until then. (12)
- We don't have any problems with the choice of the Alternative 1A as long as a fair price for our property is offered. (3)

- Alternative 5A is the best. Shortest distance to be constructed. Least amount of time to commute. (15)
- I say expand CR 532 and Lake Wilson Road and include an on/off ramp onto I-4. The backup traffic off Lake Wilson Road backs up way before the I-4 bridge now, and more homes being built that will include more cars in the area of ChampionsGate and CR 532. (8)
- Expansion of the Poinciana Parkway should be done in a manner that minimizes environmental impact. (5)
- We are glad that you are not going through our neighborhood. We are glad that you are not taking over our property.

### 5.3 PROJECT WEBSITE

Study information was housed for easy public access on the study's website:

<https://www.cfxway.com/agency-information/plans-studies/project-studies/poinciana-parkway-extension-pde/>

The website was updated with the latest alternatives exhibits, schedules, fact sheets, presentations, meeting notices and summaries, photos, and news releases. Information from the EAG and PAG meetings were also posted on the website. Between July 2018 and July 2019, the study website had 1,754 visits. An electronic comment form was available on the website, as well as a request form to receive email updates.

Additionally, a study Facebook page provided meeting notices and summaries, community meeting recaps, exhibits, photos, links to information available on the website, and more.

### 5.4 MEDIA COVERAGE

The Public Involvement Program included the strategy of utilizing the media to help share information and meeting notices about this study. News releases regarding the date, time, location, and purpose of the study's three public meetings were distributed to the local media outlets listed below.

- Orlando Sentinel
- Osceola News Gazette
- El Osceola Star
- Lakeland Ledger
- Positively Osceola
- Orlando Business Journal
- WESH-TV, Ch. 2
- WKMG-TV, Ch. 6
- WFTV-TV, Ch. 9
- Spectrum News 13
- Telemundo, Ch. 31
- WOFL-TV, Ch. 35
- WMFE FM, 90.7
- WDBO FM, 96.5

The news release regarding the Kick-Off Public Meeting was sent on September 24, 2018, and the news release regarding the Alternatives Workshop was sent on February 27, 2019. **Table 5-1** provides detail on the media coverage of this study.

**Table 5-1: Media Coverage**

Date	Media Outlet	Medium	Headline	Summary and Link
9/25/18	Positively Osceola	Social Media	None	Report about the CFX Kick-Off Public Meeting for the Poinciana Parkway Extension PD&E Study. Provided the study website for people to learn more. <a href="https://www.facebook.com/PositivelyOsceola/posts/985895394946262?_xts__[0]=68.ARDrt5Gaez-H8IYK_QoF4hm8PR63WPVb2yG7DtpGDWj5Ha8iZQGtaw_4VHVKucfbw2KJqbD8QMue6MnH8JUK4orUIbpIG6dv5-P5c97bCs1LrJDjOXT2z2DgFCy93M3VtVtaajByr9WCNq6YrRX5Vpnn9sXQuZwuHDPXYOJbOggH2dFRd4gfbyCKuWJwYGYHtlPJ8XGn2J-ZCgi2Cz1Dy4vPENgQvMluzoQPNckaCxBCv-rASayVr_a11nkcwcnfGBUo4BmPKdR6R9eGKUJIPDxylTboT MehWAGbTq_zj_e06vS7JG86nFhHjtWnQX-3bwGdk3zHVX4QXekOL8b4WwshgjfYlyJH0c8KSu4PkjslkYs0-4tmiOfgReXi-SxXrqMQ-uPBelFCgQ1raKvszTc3QCWjz7WXHigt2nsfKRfuk7F2ltp9Z5WcgJWdrhuw4sMAkazU2y9vIEqwHFqLpTlSnrvQ9YWnhra2Z4avZDm_jEAeA06TGj-d9uq5BIJZEufRcdyTf6QrZOXVu5iTG5NQyMKva4SN7yVcCbEslvAaBqIvIofNzDO9IGvzEPJ47CPVvykP4Q&amp;_tn_=C-R">https://www.facebook.com/PositivelyOsceola/posts/985895394946262?_xts__[0]=68.ARDrt5Gaez-H8IYK_QoF4hm8PR63WPVb2yG7DtpGDWj5Ha8iZQGtaw_4VHVKucfbw2KJqbD8QMue6MnH8JUK4orUIbpIG6dv5-P5c97bCs1LrJDjOXT2z2DgFCy93M3VtVtaajByr9WCNq6YrRX5Vpnn9sXQuZwuHDPXYOJbOggH2dFRd4gfbyCKuWJwYGYHtlPJ8XGn2J-ZCgi2Cz1Dy4vPENgQvMluzoQPNckaCxBCv-rASayVr_a11nkcwcnfGBUo4BmPKdR6R9eGKUJIPDxylTboT MehWAGbTq_zj_e06vS7JG86nFhHjtWnQX-3bwGdk3zHVX4QXekOL8b4WwshgjfYlyJH0c8KSu4PkjslkYs0-4tmiOfgReXi-SxXrqMQ-uPBelFCgQ1raKvszTc3QCWjz7WXHigt2nsfKRfuk7F2ltp9Z5WcgJWdrhuw4sMAkazU2y9vIEqwHFqLpTlSnrvQ9YWnhra2Z4avZDm_jEAeA06TGj-d9uq5BIJZEufRcdyTf6QrZOXVu5iTG5NQyMKva4SN7yVcCbEslvAaBqIvIofNzDO9IGvzEPJ47CPVvykP4Q&amp;_tn_=C-R</a>
4/12/19	Lakeland Ledger	Print/Online	Poinciana Parkway Extension to open in five years	Report that Polk County Commissioners were expected to support plans for the extension of the Poinciana Parkway that would open in five years. A correction was printed that construction of the project could possibly begin within five years. <a href="https://www.theledger.com/news/20190412/poinciana-parkway-extension-to-open-in-5-years">https://www.theledger.com/news/20190412/poinciana-parkway-extension-to-open-in-5-years</a>
6/6/19	Growth Spotter	Online	CFX narrows choice for \$275M Poinciana Parkway toll road extension	Report that CFX identifies a preferred alternative (5A) and previews the August 29, 2019 public hearing. <a href="https://www.growthspotter.com/news/osceola-county-developments/gs-news-poinciana-parkway-extension-20190604-5mzf32lidzfcfpzvkiib5gce4-story.html">https://www.growthspotter.com/news/osceola-county-developments/gs-news-poinciana-parkway-extension-20190604-5mzf32lidzfcfpzvkiib5gce4-story.html</a>

## 6.0 DESIGN FEATURES OF THE PREFERRED ALTERNATIVE

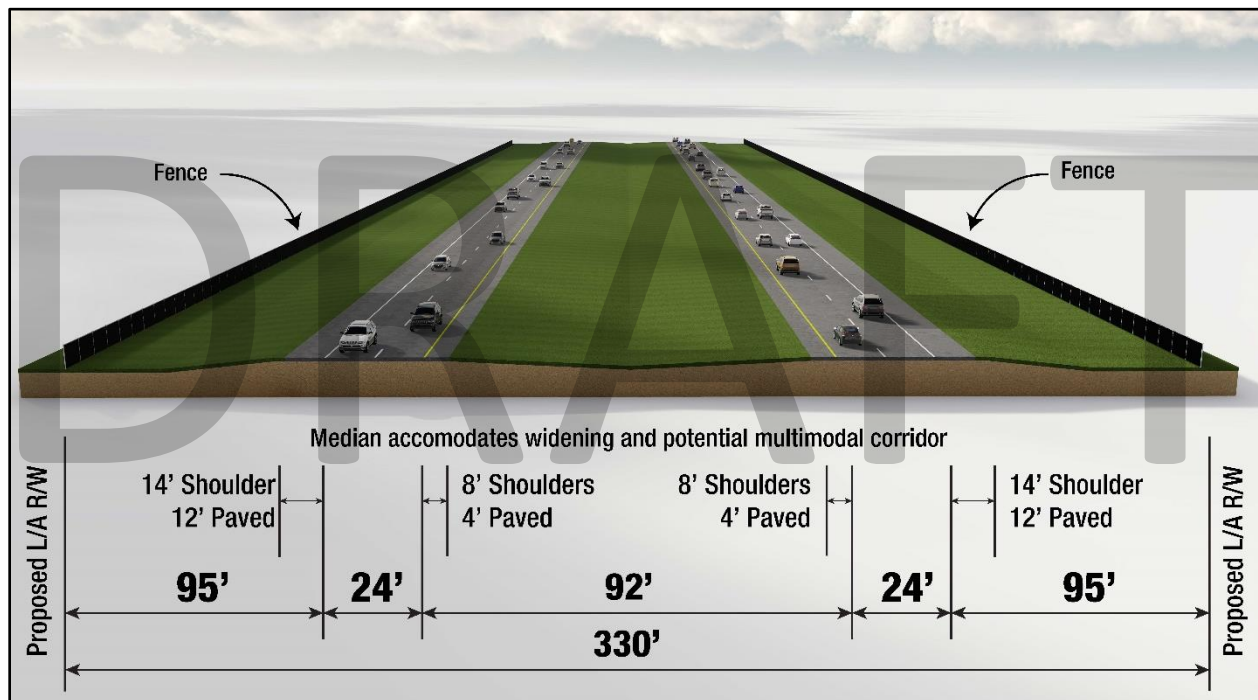
After considering the alternatives analysis described in Section 4 and the Stakeholder Involvement in Section 5, the preferred alternative was identified as Alternative 5A Without Slip Ramps to Ronald Reagan Parkway. This alternative is illustrated on **Exhibit 4-9**. Concept Plans for this alternative are included in **Appendix C**.

### 6.1 ENGINEERING DETAILS OF THE PREFERRED ALTERNATIVE

#### 6.1.1 TYPICAL SECTION

The proposed typical section, as illustrated on **Exhibit 6-1**, is 330 feet wide consisting of two 12-foot lanes in each direction with a 92-foot median (that can accommodate additional lanes and/or a potential multimodal corridor) and 95-foot borders on each side.

**Exhibit 6-1:** Typical Section



#### 6.1.2 BRIDGES AND STRUCTURES

The project extends from the terminus of the existing Poinciana Parkway bridge over the Reedy Creek Mitigation Bank to CR 532 and a total of 13 bridges are proposed. Of the 13 proposed bridges, two of the bridges have long spans and are recommended to be composed of steel plate girder superstructures. The remaining 11 bridges have short or medium spans and are recommended to be composed of prestressed Florida-I or AASHTO Type II concrete beam superstructures. All but two of the bridges are single span. The two bridges that are multi-span traverse a wetland, so the recommended substructure is intermediate bents founded on driven pile.



**Exhibit 6-2** illustrates a Bridge Key Map for the preferred alternative. Each bridge proposed for this project is numbered sequentially from west to east. **Table 6-1** summarizes information about the bridges, including a cost estimate for each bridge. Additional information about the bridges is available under separate cover in the Bridge Analysis Report.

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Exhibit 6-2: Bridge Key Map

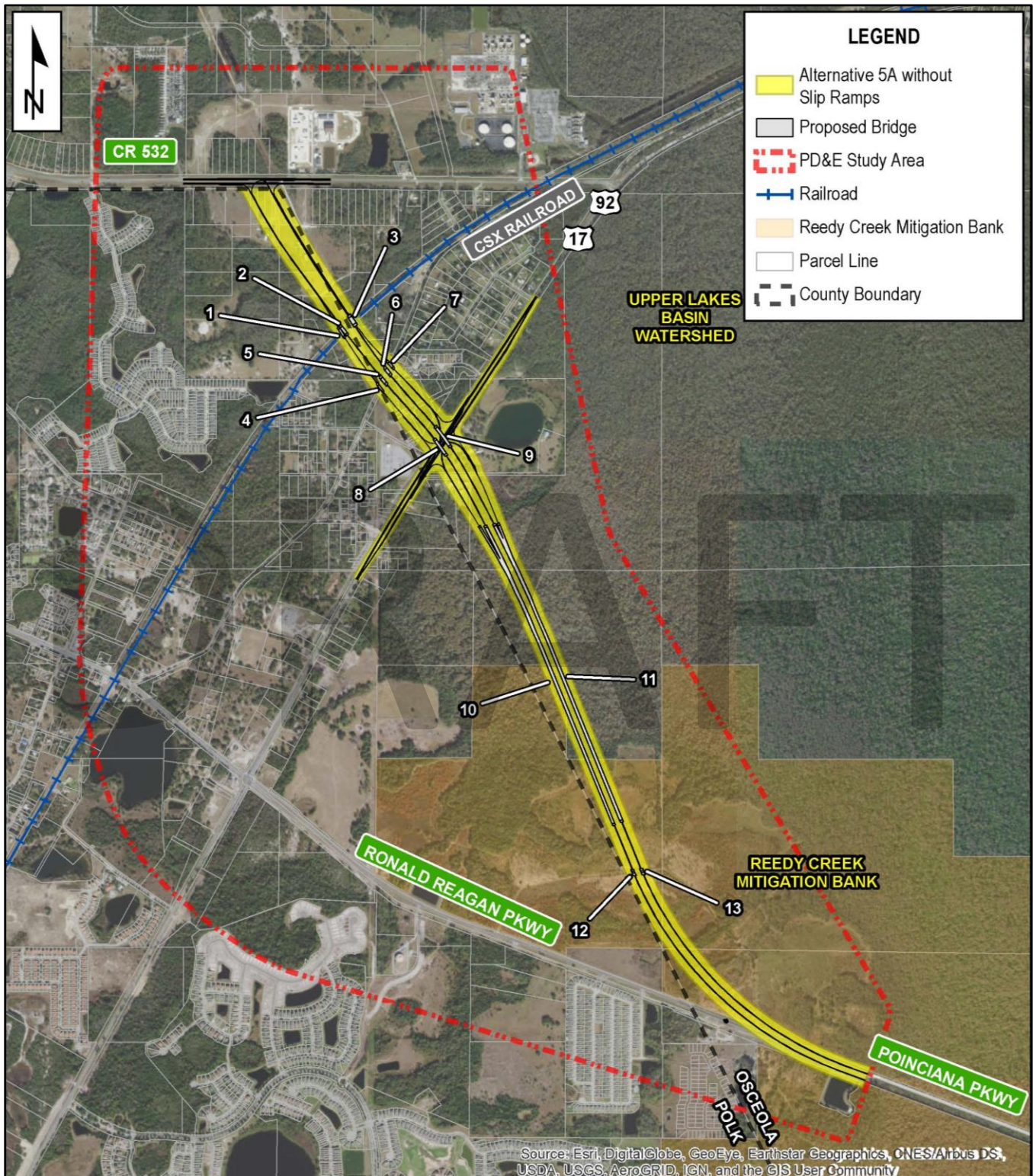


Table 6-1: Bridge Structures Cost Estimates

Bridge No.	Bridge Location/Description	Possible Superstructure				Substructure Anticipated Type	No. of Spans	Bridge Length (ft)	Average Bridge Width (ft)	Deck Area (SF)	\$/SF	Estimated Cost
		Anticipated Type	Min. CL Radius (ft)	Max. Span Length (ft)	Approximate Depth (ft)							
1	Poinciana Parkway EB off-ramp over CSX Railroad	Prestressed Concrete Florida-I Beams	N/A	116	3.75	Pile Bents	1	116	29.67	3,442	138	\$ 474,996.00
2	Poinciana Parkway EB over CSX Railroad	Prestressed Concrete Florida-I Beams	N/A	115	3.75	Pile Bents	1	115	44.67	5,137	138	\$ 708,906.00
3	Poinciana Parkway WB over CSX Railroad	Prestressed Concrete Florida-I Beams	N/A	117	3.75	Pile Bents	1	117	59.57	6,970	138	\$ 961,860.00
4	Poinciana Parkway EB off-ramp over Old Tampa Highway	Prestressed Concrete Florida-I Beams	N/A	89	3.00	Pile Bents	1	89	29.67	2,641	138	\$ 364,458.00
5	Poinciana Parkway EB over Old Tampa Highway	Prestressed Concrete Florida-I Beams	N/A	88	3.00	Pile Bents	1	88	44.67	3,931	138	\$ 542,478.00
6	Poinciana Parkway WB over Old Tampa Highway	Prestressed Concrete Florida-I Beams	N/A	89	3.00	Pile Bents	1	89	44.67	3,976	138	\$ 548,688.00
7	Poinciana Parkway WB on-ramp over Old Tampa Highway	Prestressed Concrete Florida-I Beams	N/A	86	3.00	Pile Bents	1	86	29.67	2,552	138	\$ 352,176.00
8	Poinciana Parkway EB over US 17/92	Steel Plate Girders	4,523	235	7.75	Pile Bents	1	235	44.67	10,497	153	\$ 1,606,041.00
9	Poinciana Parkway WB over US 17/92	Steel Plate Girders	4,645	312	10.33	Pile Bents	1	312	44.67	13,937	153	\$ 2,132,361.00
10	Poinciana Parkway EB over Reedy Creek Mitigation Bank and Upper Lakes Basin Watershed	Prestressed Concrete Florida-I Beams	N/A	127	4.50	Pile Bents	36	4,500	51.67	232,515	118	\$ 27,436,770.00
11	Poinciana Parkway WB over Reedy Creek Mitigation Bank and Upper Lakes Basin Watershed	Prestressed Concrete Florida-I Beams	N/A	127	4.50	Pile Bents	36	4,534	48.44	219,645	118	\$ 25,918,110.00
12	Poinciana Parkway EB over Reedy Creek Mitigation Bank Access Road (Delmar Lane)	AASHTO Prestressed Concrete Beams	N/A	52	3.00	Pile Bents	1	52	44.67	2,323	118	\$ 274,114.00
13	Poinciana Parkway WB over Reedy Creek Mitigation Bank Access Road (Delmar Lane)	AASHTO Prestressed Concrete Beams	N/A	52	3.00	Pile Bents	1	52	44.67	2,323	118	\$ 274,114.00

Note: Bridge lengths have been rounded up for estimation purposes and may not match the Plan Sheets and Typical Sections.

Total Estimated Bridge Cost = \$ 61,595,072.00  
Total Bridge Area (SF) = 509,889  
Average Cost/SF = \$ 120.80



### 6.1.3 RIGHT-OF-WAY AND PARCELS

The preferred alternative will require 131 acres for the roadway which will impact (including partially impacted parcels) 52 residential parcels and eight non-residential parcels.

Another 28 acres will be needed for ponds, which will impact no additional residential parcels and no additional non-residential parcels.

Another 17 acres will be needed for utility easements, which will impact an additional 13 residential parcels (three with existing development on them) and no additional non-residential parcels.

### 6.1.4 HORIZONTAL AND VERTICAL GEOMETRY

The horizontal curves are described in **Table 6-2**.

**Table 6-2:** Proposed Horizontal Curves

Curve Name	P.C. Station	P.I. Station	P.T. Station	Delta	D	Tangent (ft)	Length (ft)	Radius (ft)	Design Speed
538 1	30+00.00	57+96.44	85+29.41	21° 7' 15"	0° 22' 55"	2,796.44	5,529.41	15,000.00	70
538 2	85+29.41	90+86.73	96+38.61	13° 51' 50"	1° 15' 00"	557.32	1,109.20	4,584.00	70
538 3	96+38.61	109+53.03	122+64.57	6° 33' 54"	0° 15' 00"	1,314.42	2,625.96	22,918.00	70
538 4	155+92.10	177+77.97	197+13.47	47° 13' 38"	1° 08' 45"	2,185.87	4,121.36	5,000.00	70
538 WB 1	481+52.27	488+57.13	495+60.94	5° 25' 24"	0° 23' 06"	704.86	1,408.67	14,882.00	70
538 WB 2	505+41.58	511+46.56	517+49.37	8° 23' 54"	0° 41' 43"	604.98	1,207.78	8,239.79	70
538 EB 1	354+99.25	359+56.35	364+12.16	7° 28' 20"	0° 49' 07"	457.10	912.91	7,000.00	70

Preliminary vertical curves were evaluated where the horizontal distances were anticipated to constrain vertical alignments. For example, preliminary vertical curves were evaluated for the expressway to travel over the CSX railroad and get down to grade at CR 532. The alignment for the preferred alternative can be constructed within the CFX vertical geometry design criteria.

### 6.1.5 BICYCLE AND PEDESTRIAN ACCOMMODATIONS

The Poinciana Parkway Extension is proposed as a limited-access facility; therefore, no bicycle or pedestrian facilities will be provided along the expressway. Buffered bicycle lanes and sidewalks have been included along the improved sections of CR 532 and US 17/92.

### 6.1.6 MULTIMODAL ACCOMMODATIONS

Based on a review of planned multimodal projects within the project study area and CFX's Multimodal Policy, there are currently no multimodal improvements recommended for consideration as part of the Poinciana Parkway Extension. However, the median within the typical section can accommodate additional lanes and/or a potential multimodal corridor in the future.



### 6.1.7 ACCESS MANAGEMENT

The Poinciana Parkway Extension is proposed as a limited-access facility with the only access provided at the at-grade intersection with CR 532 and the interchange with US 17/92.

### 6.1.8 INTERSECTION AND INTERCHANGE CONCEPTS

Poinciana Parkway Extension at CR 532 will be at a signalized at-grade intersection which will operate like a half Single Point Urban Interchange (SPUI). This will accommodate the future extension of Poinciana Parkway north (west) with a SPUI interchange. Poinciana Parkway Extension at US 17/92 will be a SPUI. Concept Plans are included in **Appendix C**.

### 6.1.9 INTELLIGENT TRANSPORTATION SYSTEM (ITS)

The Poinciana Parkway Extension will include ITS elements consistent with CFX's overall ITS strategy.

**Dynamic Message Sign (DMS) and Arterial Dynamic Message Sign (ADMS):** DMS will provide motorists with travel information, such as travel time, amber alerts, traffic incident, and others. The signs will be strategically placed in advance of off-ramps to allow the motorist to decide to remain on the expressway or find an alternative route. The ADMS will be placed at each interchange to alert motorists of travel time and incidents prior to entering the tolling facilities.

**Closed-Circuit Television (CCTV) Cameras:** The purpose of the CCTV cameras is to provide 100% comprehensive video coverage along the Poinciana Parkway Extension. The cameras will also cover mainline and ramp toll plazas, side streets, and views of the DMS to verify that the correct information is being displayed. The cameras will be placed using approximately one-mile spacing.

**Traffic Monitoring Station (TMS):** The TMSs will provide volume, lane occupancy, and speed information in multiple detection zones. Each vehicle detection device will collect and process the data on a lane-by-lane basis. The vehicle detectors will automatically identify and detect speed fluctuations along the road and send an alert to the operator(s) at the Regional Traffic Management Center (RTMC). TMS sensors will be installed at every on/off ramp and in between the interchanges.

**Data Collection Sensor (DCS):** DCSs are used in travel time analysis by detecting transponders. The DCS sites will be installed at every on/off ramp and will collect accurate travel time information to be disseminated to the traveling public via DMS signs.

**Underground Power Distribution System:** An underground power distribution system with Uninterrupted Power Supply (UPS) backup will be included as part of the analysis for the Poinciana Parkway Extension. For the purpose of this study, one power service per HUB location will be considered. The future design firm shall be responsible for verifying the proposed locations, determining available power sources and voltages, and coordinating with Utility Companies. The electrical design will consist of commercially available power sources. Disconnects and service meters are to be installed at all locations.

**Wrong Way signs:** The Wrong Way signs are equipped with flashing beacons to help prevent wrong way drivers from entering CFX's expressway system. The devices also send out alerts to the RTMC where operators can post wrong way driving alerts on overhead Dynamic Message Signs when these events are detected. The Wrong Way signs are included in the cost estimate for every on-ramp within the extension.

### 6.1.10 UTILITIES

Due to the nature of the existing conditions throughout the project corridor, it is anticipated that the Poinciana Parkway Extension will impact a number of the existing major utility facilities on the project. Major utility facilities potentially impacted include natural gas pipelines owned and operated by Florida Southeast Connection, Gulfstream Natural Gas, and Sabal Trail. Kinder Morgan also maintains a petroleum and jet fuel pipelines in the area. In addition, Duke Energy maintains their Intercession City Power plant, three transmission substations, and various high voltage transmission lines throughout the project study area.

The project's extents, anticipated ROW acquisition, and related improvements are shown on the preferred alternative conceptual plans included in **Appendix C**. Relocations into new easements have been identified for a section of Duke Energy transmission lines, a section of Kinder Morgan pipeline and a section of Florida Southeast Connection pipeline.

Mitigation measures should be taken during the design phase of the project to minimize impacts to the existing utilities to the fullest extent possible. If impacts are unavoidable, design alternatives should be reviewed to allow for relocation of impacted facilities in a manner that minimizes cost to the Utility Agency/Owners and disruption to their customers.

Since relocations of facilities located in easements and on private property would likely be eligible for reimbursement, all measures will be taken to avoid impacting the existing utility facilities identified in easements or privately-owned parcels. Though relocation of other facilities within the existing ROW are anticipated, all efforts will be made during the design phase to minimize impacts to existing pipelines, power plants, substations, and transmission facilities, to the greatest extent possible.

### 6.1.11 DRAINAGE AND STORMWATER MANAGEMENT FACILITIES

The Pond Siting Report (PSR) prepared for this project identified five drainage basins and identified recommended pond sites for each basin. Required pond sizes for each basin were determined by evaluating runoff volume using the NRCS CN method, calculating treatment volume requirements, and including floodplain impacts (as applicable). These volumes were summed and combined with landscaping, pond geometry, side slopes, freeboard, and maintenance berm assumptions to produce an estimated total required pond size. Since this is a preliminary analysis for pond sizing capacity, recovery calculations for orifice sizing and permanent pool calculations are not included in the pond sizing considerations. It should be noted that the recommendations were based on pond sizes determined from preliminary data, reasonable engineering judgment, and assumptions. Pond size requirements may change during final design as more detailed information on Seasonal High Water Table (SHWT), wetland hydrologic information, and final roadway profile become available.

Design considerations for each pond site location included a desktop review of the best available data, which included hydraulic data, hydrology (land use cover, soil types, SHWT, etc.), contamination sites, wetland limits, wildlife sitings, archaeological or historical sites, and conservation areas. Recommended ponds are identified in **Table 6-3** and illustrated on **Exhibit 6-3**.

**Table 6-3: Pond Summary for Preferred Alternative**

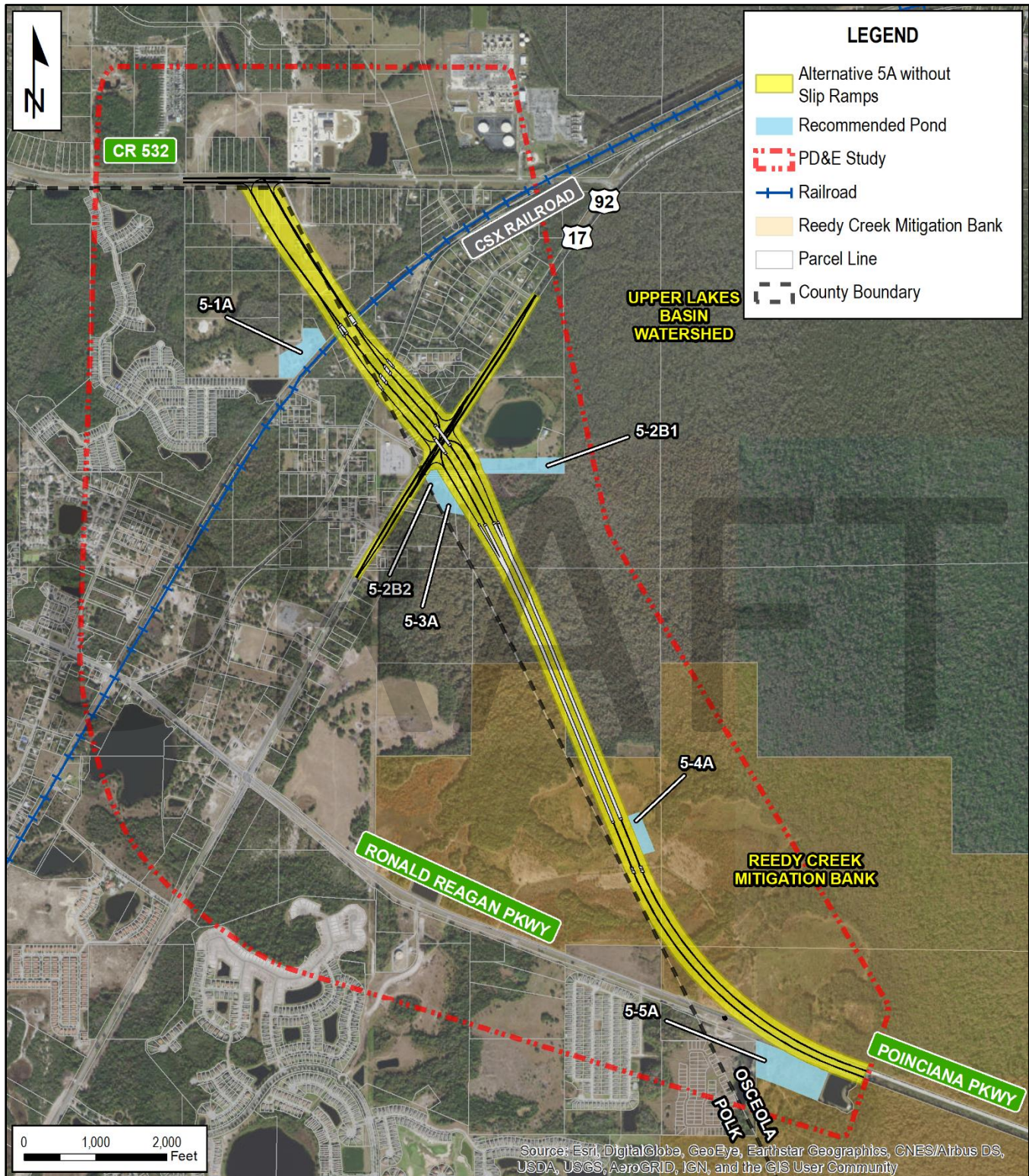
Pond Site	Wetland Impacts (ac)	Wildlife Habitat Impacts <sup>1</sup>	Contamination Risk <sup>1</sup>	Floodplain Impact	Cultural or Archaeological Resources Impact	Access Issues	Utilities	# of Property Owners	Pond ROW Area (ac)
Pond 5-1A	None	Medium	None	None	High	None	N/A	1	5.5
Pond 5-2B1	0.80	Medium	None	None	Low	None	N/A	1	5.8
Pond 5-2B2	0.33	Medium	Low	None	Low	None	N/A	4	1.1
Pond 5-3A	1.61	Medium	Low	0.01	Low	None	N/A	2	2.4
Pond 5-4A	None	High	None	None	Medium	None	N/A	1	2.2
Pond 5-5A	None	High	Low	None	High	None	N/A	1	10.6

<sup>1</sup> Refer to PSR for assumptions on low, medium, and high.

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**Exhibit 6-3: Recommended Ponds Map**





### 6.1.12 FLOODPLAIN ANALYSIS

The project is located within the Kissimmee River Watershed in SFWMD, and more specifically within the Reedy Creek Above Lake Russell basin. The major floodplain impacts are associated with Reedy Creek's surrounding wetlands. The Location Hydraulic Report (LHR) prepared for this project identified six cross drains for the preferred alternative. **Table 6-4** identifies the proposed pipe size and the flow direction of these cross drains.

**Table 6-4:** Proposed Cross Drains

Cross Drain	Pipe Size	Flow Direction
CD-5-01	(6) 38"x60"	East
CD-5-02	10'x3' & 48"	Southeast
CD-5-03	(3) 8'x4'	Southeast
CD-5-04	Bridge	Northeast
CD-5-05B	(6) 36"	Northeast
CD-5B-05B	(2) 38"x60"	Northeast

Floodplain impacts are not expected to occur within the contributing areas for cross drain CD-5-02. There is some encroachment of the proposed roadway on the existing 100-year floodplain for cross drains CD-5-01, CD-5-05A, CD-5-05B, CD-5-06, and CD-5B-05B. There are proposed bridges at CD-5-04, which are anticipated to avoid floodplain impacts. As noted in the Pond Siting Report, these impacts will be mitigated by routing this volume to the project's proposed stormwater management facilities.

The proposed cross drains within the project limits were analyzed hydraulically using Federal Highway Administration's (FHWA) HY-8 (Version 7.50). Flow rates were calculated using the Rational Method for cross drains unless otherwise noted. Cross Drains CD-5-05A, CD-5-05B, CD-5-06, and CD-5B-05B also included additional upstream contribution flow from available plan or upstream cross drain. Cross drains CD-5-01, CD-5-02, and CD-5-03 use existing flow rates from a permitted Flood Study as input flows for HY-8. Generally, the proposed cross drain inverts are estimated from LiDAR and overtopping elevations are assumed 5-ft above the culvert crown. It is assumed that the design team will perform a detailed analysis for the proposed cross drain design.

### 6.1.13 TRANSPORTATION MANAGEMENT PLAN

Poinciana Parkway Extension is a new facility on new alignment, so the transportation management plan (TMP) will primarily involve the intersection with and widening of CR 532, the interchange with and widening of US 17/92, and construction of bridges over existing roadways and the CSX railroad. The widening of CR 532 and US 17/92 involve reconstruction with new lanes constructed parallel to existing travel lanes; therefore, the TMP will include phased construction with new travel lanes constructed, traffic shifted to the new lanes while existing roadway is reconstructed, concluding with the opening of traffic on the improved roadway. Construction of bridges over existing roadways will likely involve temporary rerouting of traffic. Construction of bridges over the railroad tracks will require coordination with CSX.

#### 6.1.14 SPECIAL FEATURES

To reduce impacts, the major wetlands within the Reedy Creek Mitigation Bank and Upper Lakes Basin Watershed have been bridged.

#### 6.1.15 DESIGN VARIATIONS AND DESIGN EXCEPTIONS

No design variations or design exceptions are proposed.

#### 6.1.16 COST ESTIMATES

The cost estimate for this project is summarized in **Table 6-5**. Additional details are provided in **Appendix D**.

**Table 6-5: Project Cost Estimates**

Cost Element	Cost
Roadway Construction	\$65,900,000
Bridges Construction	\$99,000,000
Interchanges Construction	\$27,000,000
Toll Collection Equipment	\$2,100,000
Utility Relocation	\$46,600,000
ROW Areas	\$18,375,000
CR 532 (West)	\$8,600,000
Mitigation, Wetlands, & Wildlife	\$12,500,000
<b>TOTAL COST</b>	<b>\$280,075,000</b>

#### 6.1.17 TRAFFIC VOLUMES AND OPERATIONAL CONDITIONS

**Table 6-6** summarizes the projected AADT and LOS for roadways in the study area for years 2025 and 2045 with the construction of the preferred alternative. In 2025, all roadways evaluated will operate at LOS D, or better. In 2045, CR 532, east of Lake Wilson Road, is projected to slip to LOS F and US 17/92, south of Ronald Reagan Parkway, will drop to LOS E. Additional details are provided in the Project Traffic Analysis Report.

**Table 6-6: 2025 and 2045 AADT and LOS with Preferred Alternative**

Roadway / Location	2025			2045		
	No. of Lanes	Build AADT	LOS	No. of Lanes	Build AADT	LOS
<b>Ronald Reagan Parkway</b>						
West of Lake Wilson Road	4	18,600	C	4	20,900	C
East of Lake Wilson Road	4	25,100	C	4	28,600	C
East of US 17/92	2	3,400	C	2	4,000	C
<b>CR 532 (Osceola Polk Line Road) / Champions Gate Boulevard</b>						
West of Lake Wilson Road	4	30,900	C	6	44,900	C
East of Lake Wilson Road	4	33,600	C	4	40,100	F
East of Poinciana Parkway Extension	4	16,100	C	4	23,300	C
<b>US 17/92</b>						
South of Ronald Reagan Parkway	2	22,900	D	2	27,200	E
North of Ronald Reagan Parkway	4	24,100	C	4	26,400	C
North of CR 532	4	26,100	C	4	30,300	C
North of Poinciana Parkway Extension	4	22,000	C	4	30,000	C
<b>Lake Wilson Road</b>						
North of CR 532	4	24,200	C	4	32,800	C
South of CR 532	4	12,400	C	4	19,000	C
<b>Poinciana Parkway Extension</b>						
Southeast of US 17/92	4	22,600	B	4	28,000	B
North of US 17/92	4	12,500	B	4	18,000	B

## 6.2 SUMMARY OF ENVIRONMENTAL IMPACTS OF THE PREFERRED ALTERNATIVE

### 6.2.1 FUTURE LAND USE

Future land use was determined based on a review of Polk and Osceola Counties' Future Land Use (FLU) GIS data (**Exhibits 6-4 and 6-5**, respectively). As this is a new alignment, ROW acquisition will be required resulting in changes to the existing and future land use. The most abundant future land uses within the proposed alternatives include low density residential and preservation. Therefore, there may be a decrease in the amount of open land within the study area. However, the study area is a high growth area with several Developments of Regional Impact (DRIs), Planned Developments (PDs) and other developments being proposed or permitted throughout the course of this study (e.g., Providence DRI and Tivoli Reserve). This limited-access facility will provide important transportation infrastructure to the immediate area and to the commuting public who utilize this area and the region.



Exhibit 6-4: Polk County FLU Map

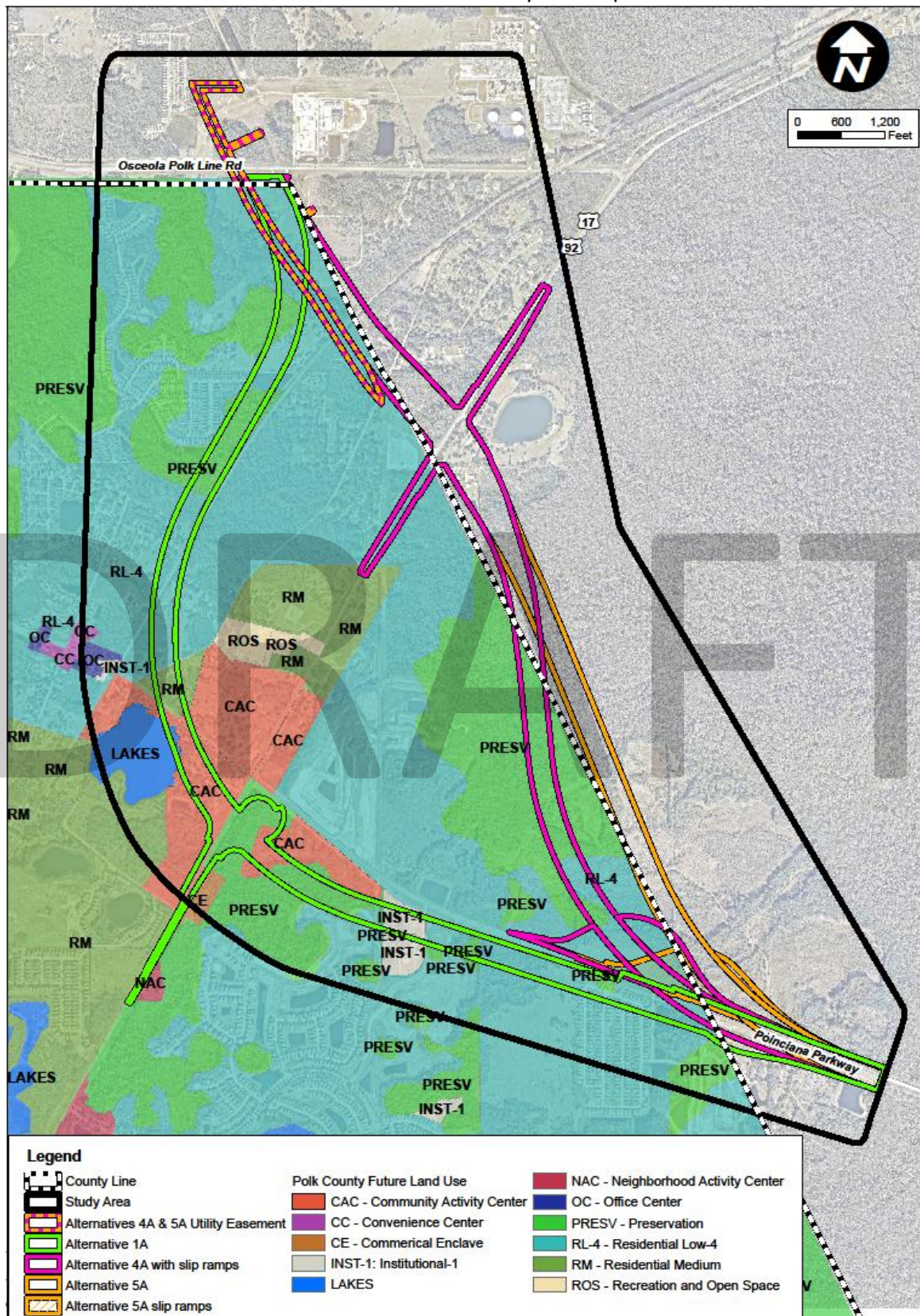
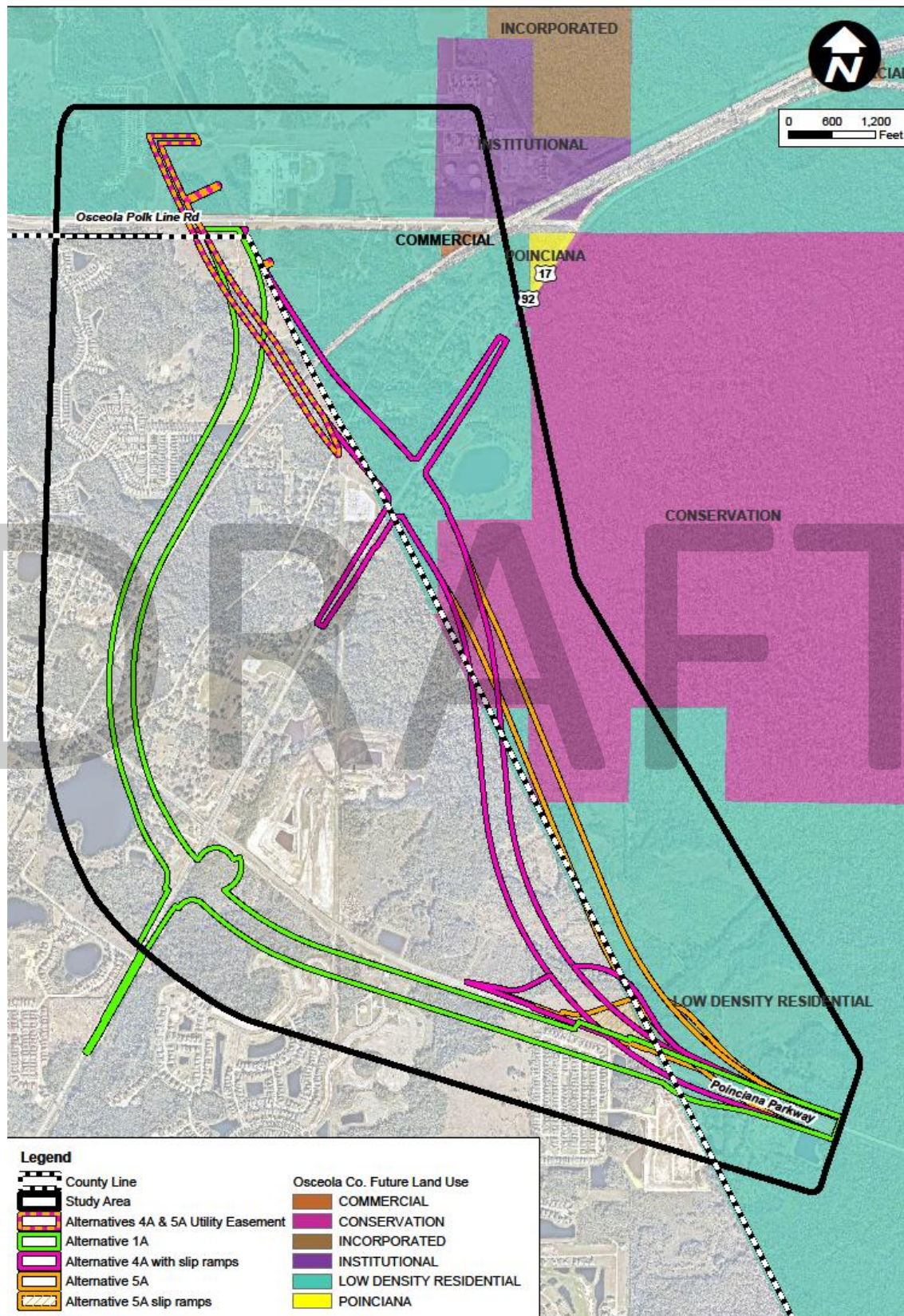




Exhibit 6-5: Osceola County FLU Map



## 6.2.2 SECTION 4(F)

Not applicable.

## 6.2.3 CULTURAL RESOURCES

A Phase I Cultural Resource Assessment Survey (CRAS) was conducted by SEARCH, Inc. for the preferred alternative. The Area of Potential Effects (APE) was defined to include the existing and proposed Poinciana Parkway right-of-way. For the new roadway, the APE was extended 328 feet (100 meters) from the construction footprint. For the portions of the project located along existing roadway, the APE was extended to the back or side property lines of parcels adjacent to proposed new right-of-way, or no more than 328 feet (100 meters) from the maximum right-of-way line. For the utility easement, the APE was defined as the construction footprint, as these improvements will be at-grade and cause no new viewshed concerns. The archaeological survey was conducted within the existing and proposed rights-of-way, as well as the utility easement. The historic structure survey was conducted within the entire Poinciana Parkway Extension APE.

The archaeological field survey included visual reconnaissance and intensive systematic subsurface examination of the project right-of-way and utility easement. Because of the archaeological survey, two newly documented prehistoric archaeological sites, PPLS#1 (8OS02940) and PPLS#2 (8OS02941), were identified. No features, midden, or other clearly discernable intact deposits were documented during the archaeological investigation. Both of the newly recorded archaeological sites (8OS02940 and 8OS02941) exhibited a low density of cultural materials and a lack of diagnostic artifacts. These sites do not appear to contain archaeological deposits that have the potential to yield further information important in the prehistory or history of the region. In the opinion of SEARCH, 8OS02940 and 8OS02941 are ineligible for the National Register of Historic Places (NRHP).

Currently, archaeological testing was restricted in three areas. In the northern portion of the right-of-way, an area south of Osceola-Polk Line Road (CR 532) was inaccessible due to a landowner with dogs denying access to 12 parcels. In the middle portion of the right-of-way, four small rectangular parcels had high chain-link fencing and “no trespassing” signs. In the southern portion, the Reedy Creek Mitigation Bank area also was not tested due to no access arrangement between the client and Reedy Creek Mitigation Bank.

In addition to the two newly recorded sites, six previously recorded archaeological sites are within or intersect the Poinciana Parkway Extension APE, including 8OS00150, 8OS00151, 8OS01722, 8OS02765, 8PO03968, and 8PO07756. Three of these sites (8OS00151, 8PO03968, and 8PO07756) are at least partially within the existing or proposed right-of-way and therefore within the current archaeological APE. As these sites within the right-of-way were entirely bounded by previous survey(s) or any additional delineation would require testing outside the current project limits, the sites were not retested as part of this study. Additionally, shovel tests excavated adjacent to the previous site boundaries identified no additional cultural material. The remaining three sites (8OS00150, 8OS01722, and 8OS02765) are not located within the existing or proposed right-of-way and therefore were not investigated during the current archaeological survey. The State Historic Preservation Officer (SHPO) has determined all of the previously recorded archaeological sites ineligible for listing in the NRHP. No further archaeological work is recommended.



The architectural survey resulted in the identification and evaluation of 10 historic resources in the Poinciana Parkway Extension APE, including four previously recorded resources and six newly recorded resources. The previously recorded resources include two linear resources (8PO07154/8OS02567 and 8PO07219/8OS02540) and two structures (8PO07156 and 8PO07157). The newly recorded historic resources include six structures (8OS02937, 8PO08109, and 8PO08197–8PO08200). In addition, during the field review, one previously recorded resource (8PO07155) was confirmed to have been previously demolished. On January 30, 2009, SHPO stated that there was insufficient information to determine eligibility for either Old Kissimmee Road (8PO07154/8OS02567) or the South Florida Railroad (8PO07219/8OS02540) within Section 6 of Township 26 South, Range 28 East (Janus Research 2008). Both 8PO07156 and 8PO07157 were determined ineligible by SHPO on January 30, 2009 (Janus Research 2008).

Based on the results of the current survey, SEARCH recommends that the South Florida Railroad (8PO07219/8OS02540) is eligible for the NRHP under Criteria A and C. The remaining nine historic resources are recommended ineligible for the NRHP due to a lack of historic associations, architectural significance, and/or historic integrity. The Poinciana Parkway Extension project, as it relates to the South Florida Railroad (8PO07219/8OS02540), proposes to intersect the railroad by bridging the resource rather than by an at-grade crossing. No historic fabric associated with the resource will be compromised by the project. Furthermore, railroad traffic will not be impeded by the project. Although the introduction of the Poinciana Parkway Extension and associated bridging will alter the setting to a degree, the character-defining features of the railroad bed and its continued use as a transportation corridor are more significant for its ability to convey its historic associations than its viewshed. Therefore, it is the opinion of SEARCH that the proposed project will pose no adverse effect to the South Florida Railroad (8PO07219/8OS02540).

Given the results of the CRAS, it is the opinion of SEARCH that the proposed Poinciana Parkway Extension will pose no adverse effect to cultural resources listed or eligible for listing in the NRHP within the areas surveyed by the present CRAS. In consultation with Kimley-Horn, Inc. and CFX, the areas left to be tested due to access issues will be addressed with supplemental testing following land acquisition of the parcels if the project moves forward to the design and right-of-way acquisition phases.

#### 6.2.4 WETLANDS

A wetlands evaluation was conducted, and the results are summarized in the *Natural Resource Evaluation* dated June 2016. Per the Wetlands Evaluation, two types of surface waters and seven types of wetlands were identified within the study area. The following two tables summarize the direct and secondary impacts to surface waters and wetlands for each of the three alternatives. The total direct impacts to surface waters and wetlands is 56.37 acres for Alternative 1A, 54.05 acres for Alternative 4A, 53.28 acres for Alternative 5A With Slip Ramps to Ronald Reagan Parkway, and 51.62 acres for Alternative 5A Without Slip Ramps to Ronald Reagan Parkway.

The total functional loss due to primary impacts is 26.93 units for Alternative 1A, 32.89 units for 4A, 32.28 units for 5A With Slip Ramps to Ronald Reagan Parkway, and 31.18 units for 5A Without Slip Ramps to Ronald Reagan Parkway. A summary of the wetland impacts, and functional loss are shown in **Table 6-7**. Secondary impacts to wetlands are shown in **Table 6-8**.

**Table 6-7: Summary of Wetland Impacts and Functional Loss**

SW/WL Number	Alt 1A	Alt 4A	Alt 5A w/ Slip Ramps	Alt 5A w/o Slip Ramps		Functional Loss Alt 1A	Functional Loss Alt 4A	Functional Loss Alt 5A W/ Slip Ramps	Functional Loss Alt 5A W/O Slip Ramps
SW 1	1.75	-	-	-		-	-	-	-
SW 2	0.18	-	-	-		-	-	-	-
SW 3	-	0.36	0.36	0.36		-	-	-	-
SW 4	0.73	-	-	-		-	-	-	-
<b>Total Surface Water Impacts</b>	<b>2.66</b>	<b>0.36</b>	<b>0.36</b>	<b>0.36</b>		-	-	-	-
WL1	3.17	-	-	-		2.11	-	-	-
WL 2, 6, 8, 9, 30	-	7.55	7.55	7.55		-	7.23	7.23	7.23
WL 3, 7	-	1.72	1.72	1.72		-	0.29	0.29	0.29
WL 4	-	0.65	0.65	0.65		-	0.20	0.20	0.20
WL 5	15.24	-	-	-		10.16	-	-	-
WL 10, 11, 13, 14, 15, 26	19.93	-	-	-		9.26	-	-	-
WL 12	1.53	-	-	-		0.87	-	-	-
WL 16	0.14	-	-	-		0.03	-	-	-
WL 17, 27	12.27	-	-	-		4.50	-	-	-
WL 18, 21, 21A, 22	-	15.19	13.46	11.80		-	10.13	8.97	7.87
WL 20	-	0.11	-	-		-	0.07	-	-
WL 23	-	24.88	26.27	26.27		-	13.27	14.01	14.01
WL 24	-	1.97	1.97	1.97		-	1.58	1.58	1.58
WL 26	1.43	0.32	-	-		-	0.12	-	-
WL 29	-	1.30	1.30	1.30		-	-	-	-
<b>Total Wetland Impacts</b>	<b>53.71</b>	<b>53.69</b>	<b>52.92</b>	<b>51.26</b>					
<b>Grand Total Surface Water and Wetland Impacts</b>	<b>56.37</b>	<b>54.05</b>	<b>53.28</b>	<b>51.62</b>	<b>Total Functional Loss</b>	<b>26.93</b>	<b>32.89</b>	<b>32.28</b>	<b>31.18</b>



**Table 6-8: Secondary Impacts to Wetlands**

SW/WL Number	Alt 1A	Alt 4A	Alt 5A w/ Slip Ramps	Alt 5A w/o Slip Ramps
WL 1	0.96	-	-	-
WL 2	-	0.41	0.41	0.41
WL 4	-	1.52	1.52	1.52
WL 5	4.59	-	-	-
WL 9	-	1.03	1.03	1.03
WL 10	0.52	-	-	-
WL 11	0.37	-	-	-
WL 12	0.86	-	-	-
WL 13	1.14	-	-	-
WL 14	1.79	-	-	-
WL 15		-	-	-
Portion in Regulatory Easement	0.58	-	-	-
Portion not in Easement	0.46	-	-	-
WL 17	0.70	-	-	-
WL 18				
In RCMB	0.98	0.92	1.66	1.32
WL 20	-	0.26	-	-
WL 21	-			
In RCMB	-	3.07	-	-
Portion not in Easement or RCMB	-	0.22	0.22	0.22
WL 21A	-			
In RCMB	-	1.14	0.41	0.41
WL 22	-			
In RCMB	-	-	0.85	0.85
In ULBW	-	-	0.98	0.98
WL 23	-			
In RCMB	-	2.03	1.11	1.11
In ULBW	-	4.13	5.98	5.98
Portion not in RCMB or ULBW	-	1.41	0.94	0.94
WL 24	-			
In ULBW	-	0.03	-	-
WL 26	0.53	0.37	-	
Easement	0.39	-	-	-
Wetland	0.97	-	-	-
WL 29	-	1.03	1.03	1.03
WL 30	-	1.98	1.98	1.98
<b>Total Secondary Wetland Impacts</b>	<b>14.84</b>	<b>19.55</b>	<b>18.12</b>	<b>17.78</b>

RCMB- Reedy Creek Mitigation Bank; ULBW-Upper Lakes Basin Watershed.

## 6.2.5 PROTECTED SPECIES AND HABITAT

A Protected Species and Habitat Assessment was conducted, and the results were summarized in the Natural Resource Evaluation, dated June 2019. Per the assessment, 25 federally-listed species and 25 state-listed species may occur within the study area. Surveys for gopher tortoise burrows and listed plant species and a pedestrian survey for sand and blue-tailed mole skink were conducted on September 13, 2018 and October 2, 2018. Sand and/or blue-tailed mole skink tracts were observed around and within Alternative 1A. A formal coverboard survey will be initiated during design and permitting within the chosen alternative to determine presence of skinks. Audubon's crested caracara surveys were conducted January through April 2019, which documented that crested caracaras are not nesting within the alignments of the alternatives. Florida scrub-jay surveys were conducted March 11-15, 2019, which documented that there is no occupied scrub-jay habitat within the alignments of the alternatives. Effects determinations made for the federally listed species evaluated are shown in **Table 6-9**.

DRAFT

**Table 6-9: Federally Listed Species Effects Determinations**

Federally Listed Species	Effect Determination
Red-cockaded woodpecker	No effect
Everglades snail kite	No effect
Florida grasshopper sparrow	No effect
Audubon's crested caracara	No effect
Florida scrub-jay	No effect
Wood stork	May affect, not likely to adversely affect
Eastern indigo snake	May affect
Florida sand skink	May affect, not likely to adversely affect
Blue-tailed mole skink	May affect, not likely to adversely affect
Short-leaved rosemary	May affect, not likely to adversely affect
Lewton's polygala	No effect
Small's jointweed/Sandlace	May affect, not likely to adversely affect
Pygmy fringe-tree	May affect, not likely to adversely affect
Perforate reindeer lichen	May affect, not likely to adversely affect
Avon park rabbit-bells	May affect, not likely to adversely affect
Garrett's scrub balm	May affect, not likely to adversely affect
Highlands scrub hypericum	May affect, not likely to adversely affect
Florida blazing star	May affect, not likely to adversely affect
Scrub lupine	May affect, not likely to adversely affect
Britton's beargrass	May affect, not likely to adversely affect
Florida jointweed	May affect, not likely to adversely affect
Scrub plum	May affect, not likely to adversely affect
Clasping warea	May affect, not likely to adversely affect
Carter's mustard	May affect, not likely to adversely affect
Scrub buckwheat	May affect, not likely to adversely affect
Florida bonamia	May affect, not likely to adversely affect
Scrub pigeon-wing	May affect, not likely to adversely affect
Paper-like whitlow-wort	May affect, not likely to adversely affect

Twenty-five Florida Fish and Wildlife Conservation Commission (FWC) state-listed species were evaluated in this study. Six potentially occupied gopher tortoise burrows were observed within the study area. A 100% gopher tortoise survey will be conducted during design and permitting, and any gopher tortoises observed within 25 feet from construction, will be relocated. No adverse effects are anticipated to state listed species.

Mitigation will be provided for direct and secondary impacts to wetlands and listed species through a purchase of credits from the RCMB or other mitigation bank in the service area. Mitigation will also be provided for impacts to the loss of credits in RCMB and for impacts to the loss of state lands within Upper Lakes Basin if the Alternative 4A or 5A with or without ramp alternatives are selected as the final preferred alternative.

### 6.2.6 ESSENTIAL FISH HABITAT

Not applicable.

### 6.2.7 HIGHWAY TRAFFIC NOISE

The Noise Study Report (NSR) prepared for this project identified a total of 57 receptor points representing 74 noise sensitive sites located adjacent to the Poinciana Parkway Extension. These were evaluated for traffic noise related impacts associated the Poinciana Parkway Extension. It is anticipated that 12 of these 74 existing noise sensitive locations will fall within the planned ROW and will be relocated, leaving 62 noise sensitive locations to be analyzed in the future build condition. The results of the analysis indicate that existing (2019) exterior traffic noise levels are predicted to range from 43.94 dB(A) to 66.9 dB(A) at the 62 evaluated noise sensitive sites adjacent to Poinciana Parkway Extension. Future year (2045) no-build alternative exterior traffic noise levels are predicted to range from 44.5 dB(A) to 69 dB(A). With the proposed extension of Poinciana Parkway, the exterior traffic noise levels at the remaining noise sensitive sites for the future year (2045) build alternative are predicted to range from 47.7 dB(A) to 62.5 dB(A).

Noise levels are not predicted to approach or exceed the noise abatement criteria established by the Federal Highway Administration (FHWA) for the Build condition for any locations that will remain after the completion of construction.

Based on the noise analyses performed to date, there appear to be no impacted areas within the project that require abatement consideration.

### 6.2.8 CONTAMINATION

The Contamination Screening Evaluation Report (CSER) prepared for this project identified and evaluated known or potential contamination sites, identified recommendations concerning these sites, and described possible impacts to the proposed project.

There were no Medium or High-risk sites identified within the proposed project ROW for any alternative considered in the study. The No-Build Alternative will have no contamination concerns. Alternatives 4A and 5A do not directly impact any of the potential contamination sites documented in this study. Medium Risk Sites 01A (EZ Food Store #1) and 06A (Loughman Service Center) lie approximately 200 to 400 feet from Alternative 1A.

No Level II Contamination Assessments are anticipated to be needed. If dewatering will be necessary during construction, a Water Use Permit will be required. The contractor will be held responsible for ensuring compliance with any necessary dewatering permit(s). Any dewatering operations near potentially contaminated areas shall be limited to low-flow and short-term. A dewatering plan may be necessary to avoid potential contamination plume exacerbation. All permits must be obtained in accordance with Federal, State, and local laws and regulations.



## **APPENDIX A**

### **Alternatives 1 and 1A Screening Analysis**

# Alternatives 1 and 1A Screening Analysis

## Poinciana Parkway Extension Project Development and Environment Study From Poinciana Parkway to CR 532

CFX Project Number: 599-224

Prepared for:

**CENTRAL  
FLORIDA  
EXPRESSWAY  
AUTHORITY**

DECEMBER 2018

Prepared by:

Kimley-Horn and Associates, Inc.

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## 1.0 PROJECT BACKGROUND AND PURPOSE OF REPORT

### 1.1 PROJECT DESCRIPTION

An extension of Poinciana Parkway to Interstate 4 (I-4) in Osceola County has been identified as a need in several local, long-range, and master plans. As part of an interlocal agreement, the Osceola County Expressway Authority (OCX) requested that the Central Florida Expressway Authority (CFX) incorporate the parkway extension and remaining portions of the OCX 2040 Master Plan into the CFX 2040 Master Plan.

In March 2018, CFX completed a Concept, Feasibility and Mobility (CF&M) study for the Poinciana Parkway Extension that concluded the project may be viable under CFX criteria. The CFX Board approved that study's findings and is moving forward with a Project Development and Environment (PD&E) study to determine a refined, preferred alternative.

The PD&E study will refine and evaluate the alternatives from the CF&M study in greater detail, consistent with the Florida Department of Transportation (FDOT) PD&E Manual. Due to additional studies and required approvals by FDOT and the Federal Highway Administration for the specific connection of the Poinciana Parkway Extension to I-4, the project is being split into phases for further evaluation, with the CFX PD&E study focusing on the extension to CR 532. A later phase, to be coordinated through the FDOT, will provide a connection to I-4, either at SR 429 or at CR 532.

As **Exhibit 1** illustrates, three Alternatives from the CF&M study are being evaluated by the PD&E study. During the August 15, 2018 Project Advisory Group (PAG) meeting, a variation in Alternative 1 was suggested which travels on the west side of the railroad tracks (i.e., Alternative 1A). This screening analysis is being conducted to evaluate Alternative 1 and Alternative 1A to determine which should proceed in the PD&E study. **Exhibit 2** illustrates Alternatives 1 and 1A.



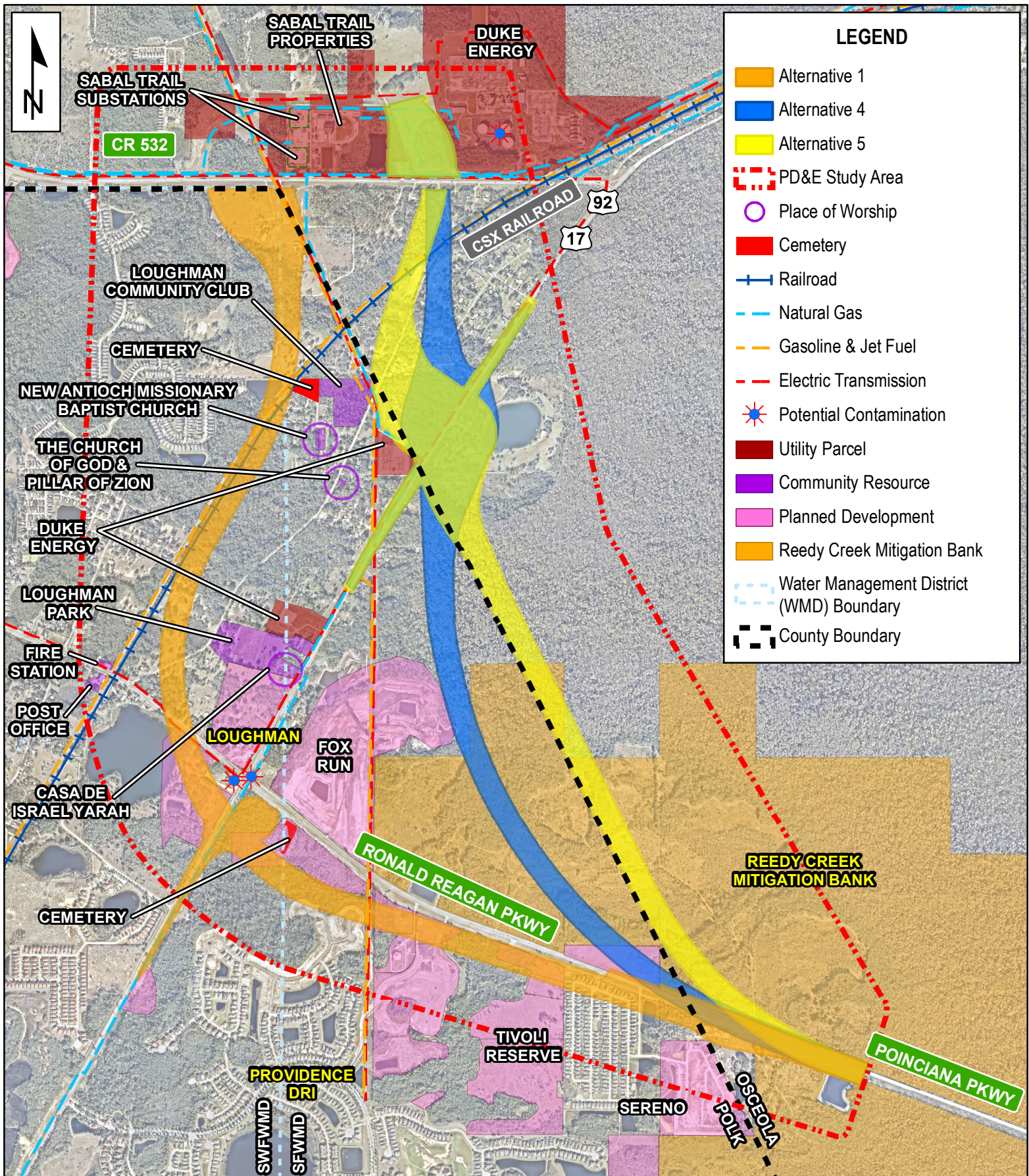


Exhibit 1 - PD&E Study Alternatives

## Poinciana Parkway Extension PD&E Study | Alternatives 1 & 1A Screening Analysis



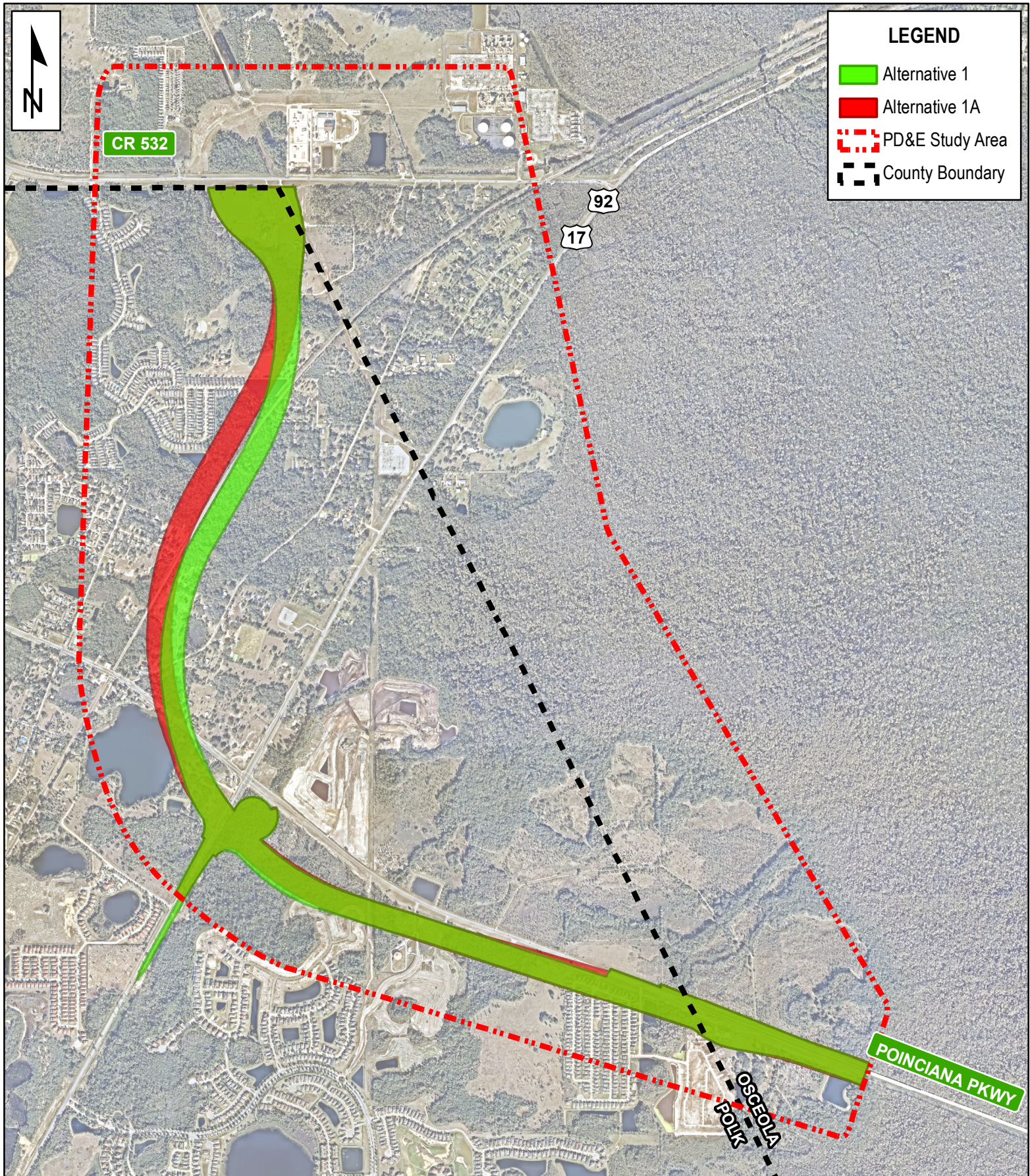


Exhibit 2 - Alternatives 1 and 1A

## Poinciana Parkway Extension PD&E Study | Alternatives 1 & 1A Screening Analysis

**Kimley»Horn**

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Phone: (407) 898-1511

CFX Project Number: 599-224  
Date: December 2018

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## 2.0 EVALUATION METHODOLOGY

While Alternatives 1 and 1A are similar to each other, there are key differences between them. These differences consist of: impacts to the social, cultural, natural, and physical environment; engineering factors; and costs. A narrative assessment of the impacts to the social, cultural, natural, and physical environment for each alternative is provided in the following section. To the extent possible, social, cultural, natural, and physical impacts are quantified, and the results of the analysis are then shown in an evaluation matrix. In other cases, a comparative ranking of the factors is provided in the matrix (i.e., Low, Medium, or High). The engineering factors and costs are also similarly discussed below.

The data used to evaluate each corridor segment's social, cultural, natural, and physical environmental impacts were derived from various GIS datasets within the Florida Geographical Data Library (FGDL), the South Florida Water Management District (SFWMD), the St. Johns River Water Management District (SJRWMD), the Florida Department of Environmental Protection (FDEP), the Florida Natural Area Inventory (FNAI), the Federal Emergency Management Agency (FEMA), and the Florida Fish and Wildlife Conservation Commission (FWC). In addition, field visits identified some information, such as the presence of a Bald Eagle nest.

## 3.0 ALTERNATIVES EVALUATION

Each alternative has been evaluated based on the potential direct effect on the environment, engineering factors, and costs. The results of the evaluation are summarized below.

### 3.1 POTENTIAL PHYSICAL, CULTURAL, NATURAL, AND SOCIAL ENVIRONMENTAL IMPACTS

**Table 1** summarizes the anticipated effects on the physical, cultural, natural, and social environments for each alternative.

**Table 1:** Alternative Physical, Cultural, Natural, and Social Comparison Matrix

Evaluation Criteria	Unit of Measure	Alternative 1	Alternative 1A
<b>Physical</b>			
Major Utility Conflicts - Existing	No. of Conflicts	8	8
Major Utility Conflicts - Planned	No. of Conflicts	0	0
Contamination Sites and Facilities	No. of Conflicts	2	2
Railroad Involvement	No. of Conflicts	1	1
<b>Cultural</b>			
Public Lands	Acres	0	0
Section 4(f) Coordination Required (Public Recreation Lands, Wildlife Refuges, etc.)	Y/N	N	N
Potential Historic Resources	No. of Conflicts	1	1
Potential Historic Linear Resources (Canals/Highways/Railroads)	No. of Resources	2	2
Potential Archaeological Resources	No. of Resources	2	2
<b>Natural</b>			
Water Features	---	---	---
Ponds/Lakes	Acres	4	5
Canals/Regulated Floodways	No. of Conflicts	0	0
Flood Hazard Areas - 100 Year Floodplain	Acres	74	74
Wetlands (non-forested and forested)	Acres	57	57
Potential Habitat - Federal Listed Species	Acres	109	108
Potential Habitat - State Listed Species	Acres	83	83
Potential Bald Eagle Nest	Y/N	Y	Y
Potential Species Impacts (composite rating)	Rating	HIGH	HIGH
Mitigation Banks	---	---	---
Reedy Creek Mitigation Bank	Acres	7	7
Conservation Easements	---	---	---
Upper Lakes Basin Watershed	Acres	0	0
SFWMD Conservation Lands	Acres	11	11



**Table 1:** Alternative Physical, Cultural, Natural, and Social Comparison Matrix (continued)

Evaluation Criteria	Unit of Measure	Alternative 1	Alternative 1A
<b>Social</b>			
Right-of-Way Area (NOT including ponds)	Acres	174	173
Potential Residential Impacts (includes partially impacted parcels)	Total Parcels	102	96
<i>Existing</i>	<i>Parcels</i>	<i>48</i>	<i>44</i>
<i>Planned</i>	<i>Parcels</i>	<i>54</i>	<i>52</i>
Potential Non-Residential Impacts (includes partially impacted parcels)	Total Parcels	21	23
<i>Existing</i>	<i>Parcels</i>	<i>9</i>	<i>11</i>
<i>Planned</i>	<i>Parcels</i>	<i>12</i>	<i>12</i>
Community Facilities	No. of Conflicts	0	0
Parks and Recreational Facilities (public and private)	No. of Conflicts	0	0
Trails	No. of Conflicts	1	1
Community Cohesion Effects	Ranking	HIGH	HIGH
Socioeconomic Impacts to Special Populations	Ranking	HIGH	HIGH
Proposed Development (PD)/Development of Regional Impact (DRI)	Acres	49	45

### 3.1.1 PHYSICAL ENVIRONMENT

Both alternatives have the same physical impacts, including the number of major conflicts with existing and planned utilities, the number of contamination sites impacted, and railroad crossings. **Exhibit 3** identifies the potential physical impacts.

### 3.1.2 CULTURAL ENVIRONMENT

Both alternatives have the same cultural impacts, including the number of potential historic resources and potential archaeological resources. **Exhibit 4** illustrates the potential cultural impacts.

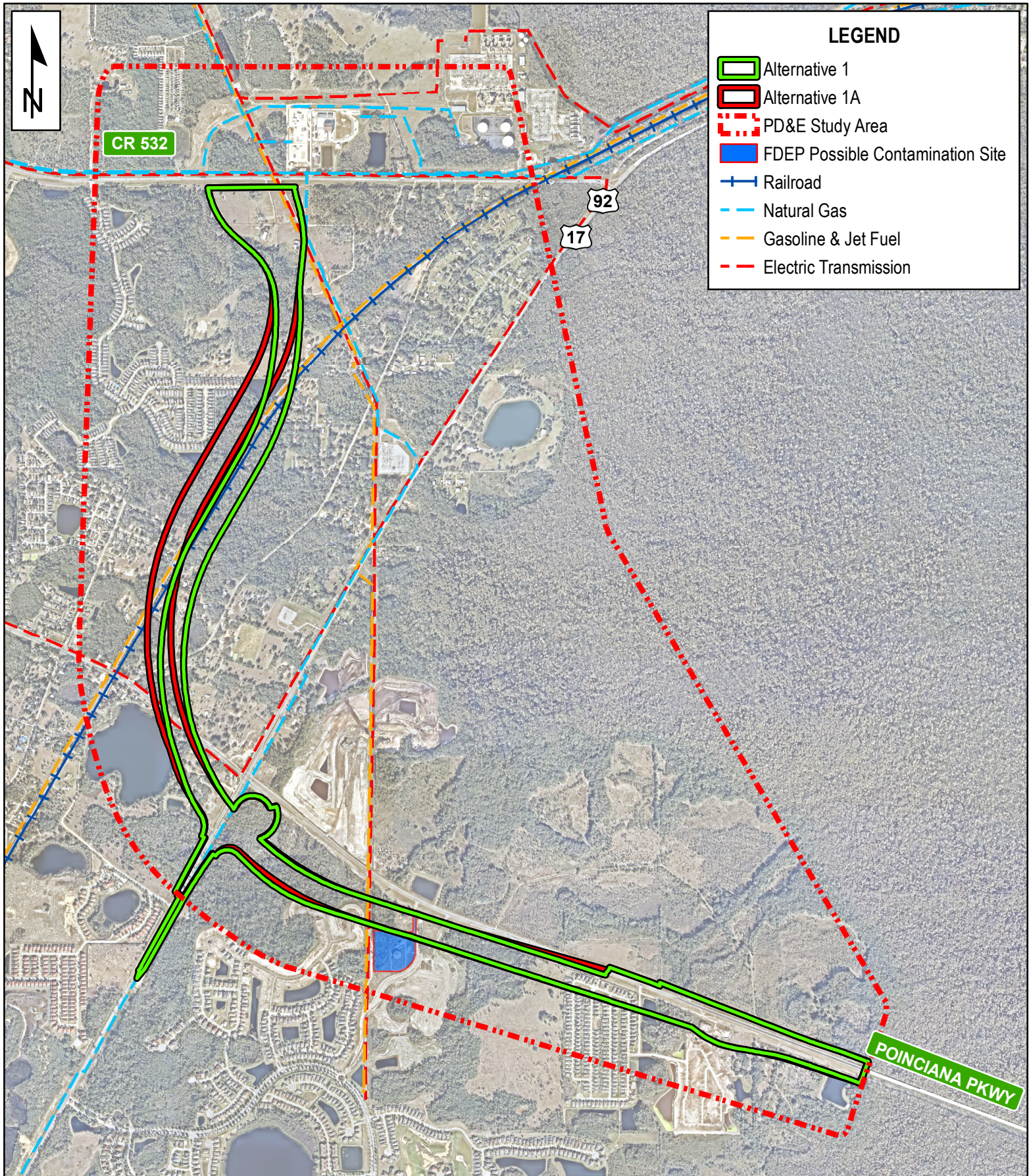
### 3.1.3 SOCIAL ENVIRONMENT

Both alternatives have similar social environment impacts, with Alternative 1 impacting six more residential parcels than Alternative 1A, and Alternative 1A impacting two more non-residential parcels than Alternative 1. Both alternatives have high social environment impacts for community cohesion effects and socioeconomic impacts to special populations; however, when quantified in terms of general proximity, Alternative 1A has lower impacts to the historic Loughman community which is located on the east side of the railroad tracks. **Exhibit 4** illustrates the potential social impacts.

### 3.1.4 NATURAL ENVIRONMENT

Both alternatives have similar natural environment impacts, with Alternative 1A impacting one acre more of ponds/lakes than Alternative 1, and Alternative 1 impacting one acre more of potential habitat for federal listed species than Alternative 1A. Both alternatives have the same natural environmental impacts to the 100-year floodplain, wetlands, potential habitat for state listed species, and impacts to the Reedy Creek Mitigation Bank and South Florida Water Management District conservation lands. Both alternatives impact an existing Bald Eagle nest. **Exhibits 5 and 6** illustrate the potential natural impacts.

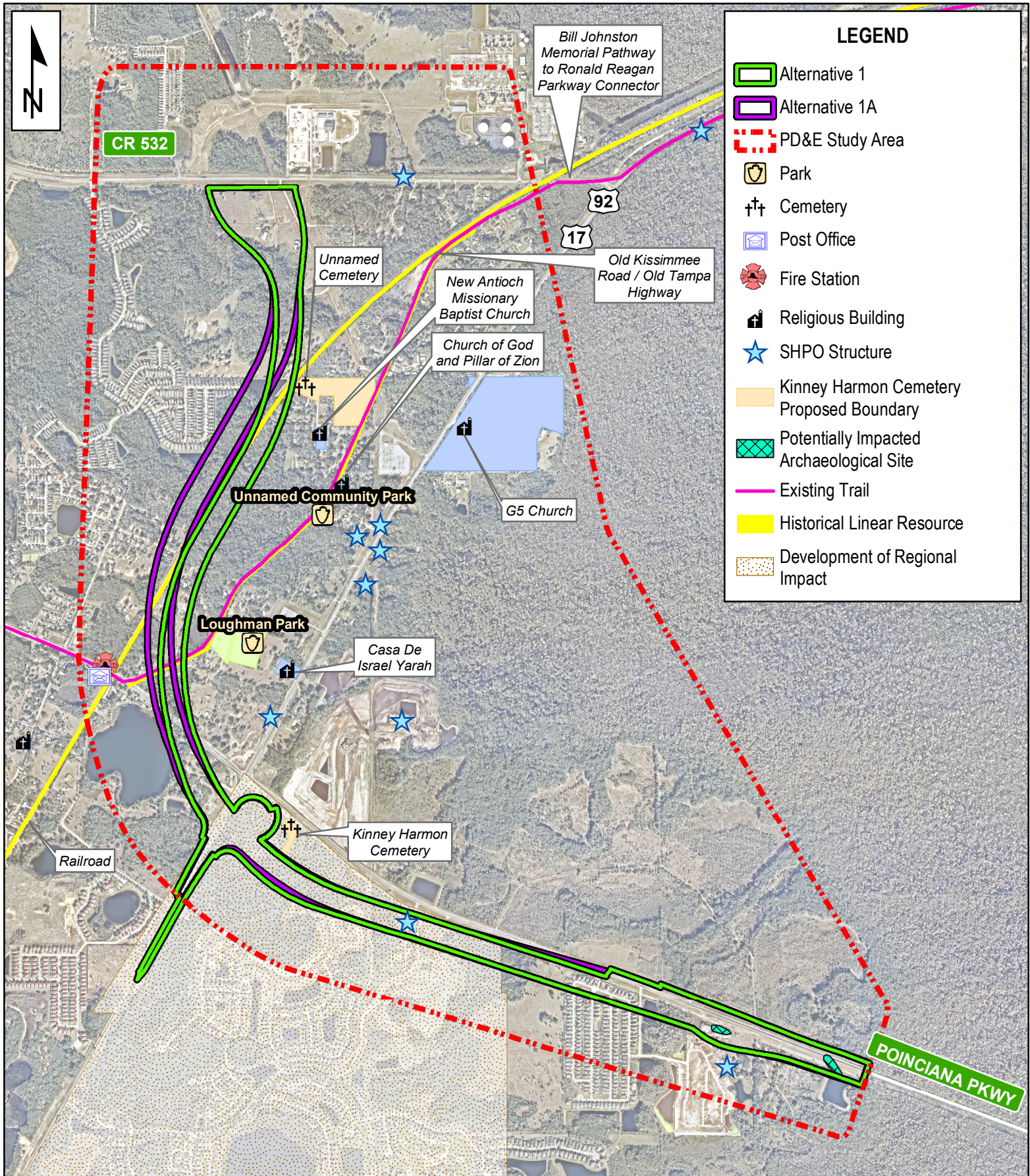




**Exhibit 3 - Potential Physical Impacts Map**

**Poinciana Parkway Extension PD&E Study | Alternatives 1 & 1A Screening Analysis**





**Exhibit 4 - Potential Sociocultural Impacts Map**

## Poinciana Parkway Extension PD&E Study | Alternatives 1 & 1A Screening Analysis



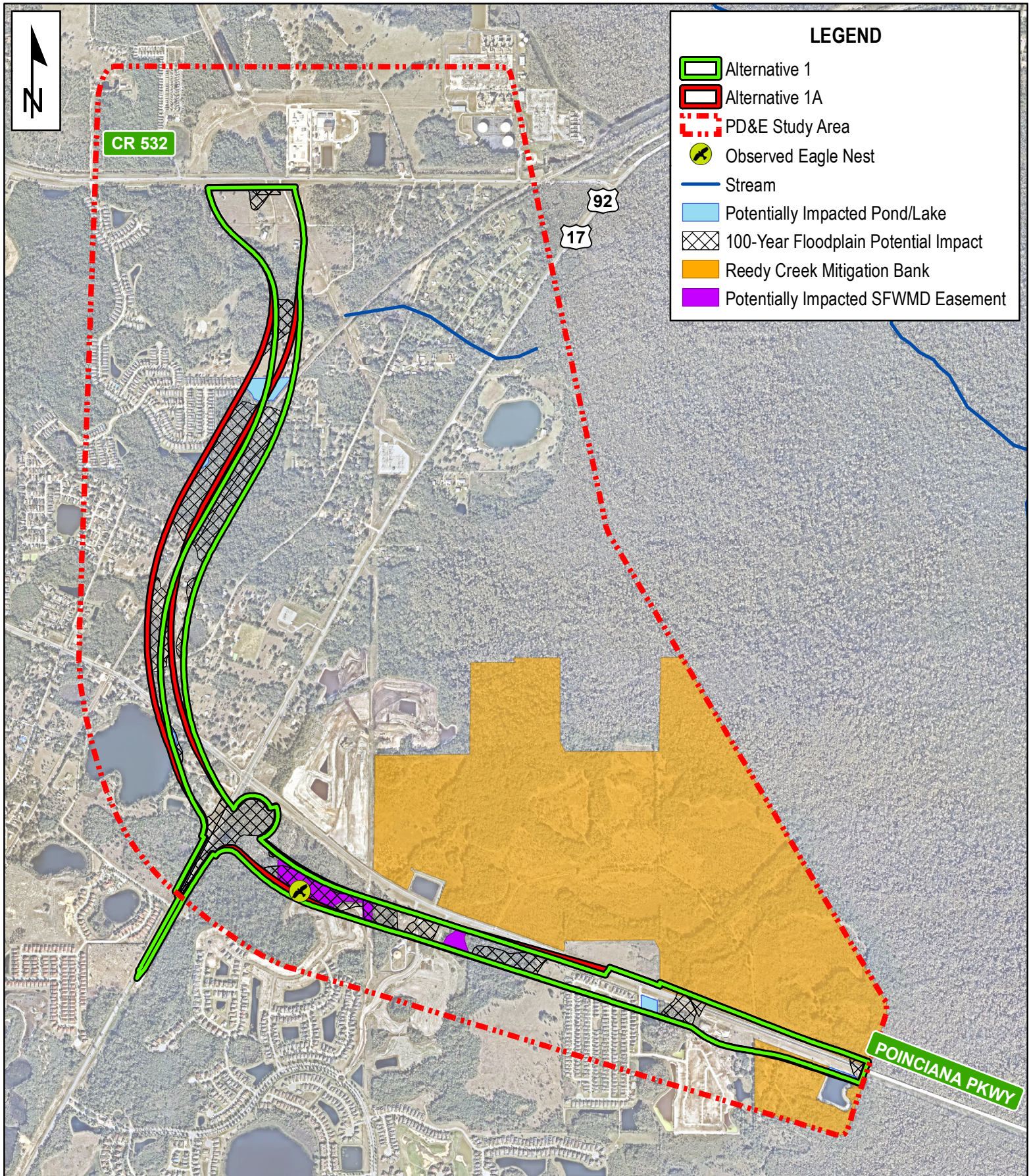


Exhibit 5 - Potential Natural Impacts Map (1 of 2)

## Poinciana Parkway Extension PD&E Study | Alternatives 1 & 1A Screening Analysis



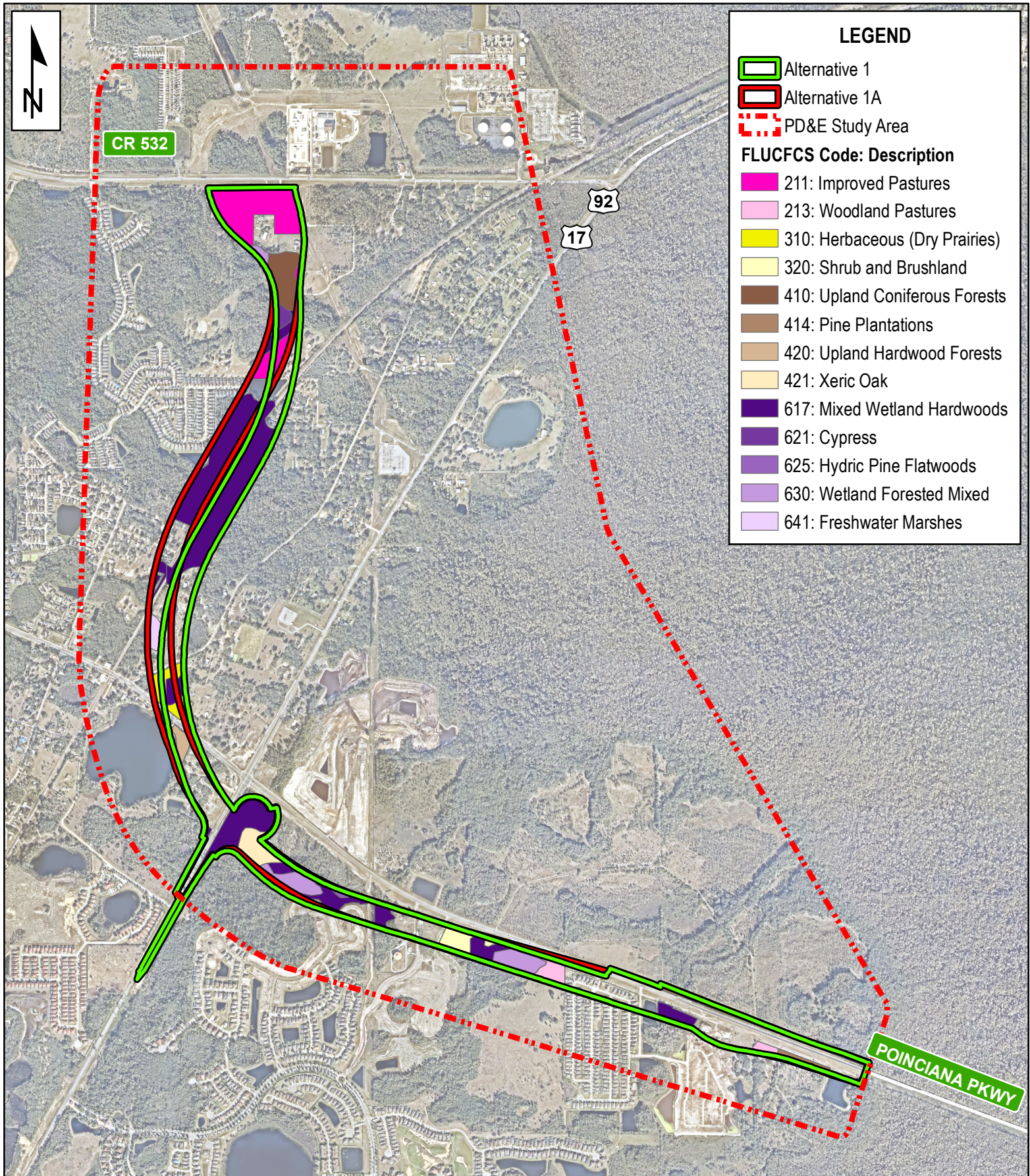


Exhibit 6 - Potential Natural Impacts Map (2 of 2)

## Poinciana Parkway Extension PD&E Study | Alternatives 1 & 1A Screening Analysis



### 3.2 ENGINEERING AND COST CONSIDERATIONS

**Table 2** summarizes the engineering elements and cost difference for each alternative.

**Table 2:** Alternative Engineering Comparison Matrix

Evaluation Criteria	Unit of Measure	Alternative 1	Alternative 1A
<b>Engineering</b>			
Alternative Length (approximate)	Miles	3.6	3.6
Proposed Right-of-Way Width (general and varies at interchanges)	Feet	330	330
Proposed Bridges	Structures Feet	20 3,841	20 4,317
Bridge Construction Cost Difference	2018\$	0	+ \$5,300,000
Proposed Interchanges	Number	2	2

Both alternatives have the same approximate length, right-of-way width, and proposed interchanges. They have the same number of bridges; however, Alternative 1A has longer bridges due to the greater skews crossing Lake Locke and the railroad tracks. The increased bridge length results in Alternative 1A having a higher construction cost than Alternative 1, by \$5.3 million.

### 3.3 INPUT FROM POLK COUNTY

Recognizing that both Alternatives 1 and 1A are primarily located within Polk County, the above information was presented to Polk County staff for their input on which alternative to proceed with in the PD&E study (along with Alternatives 4 and 5). After reviewing the information, Polk County staff expressed concern with the potential impacts of both Alternatives 1 and 1A due to the high number of residential and non-residential parcels identified as being impacted under either alternative. Also, both Alternatives 1 and 1A potentially impact a major water production facility that serves northeast Polk County. Staff encouraged the study team to focus on Alternatives 4 and 5 due to the reduced social impacts and attempt to minimize the natural environment impact associated with these alternatives. The study team stated to Polk County that their concerns with Alternatives 1 and 1A would be noted; however, the study will need to analyze either Alternative 1 or 1A as they provide a minimization option to impacts to the Reedy Creek Mitigation Bank. Polk County understood the study process and had no objection to either Alternative 1 or 1A being retained for further analysis.

## 4.0 RECOMMENDATIONS

Based on the information presented in this screening analysis, it is recommended that Alternative 1 be eliminated from further consideration and that Alternative 1A proceed for further consideration as part of the Poinciana Parkway Extension PD&E Study. This recommendation is based on the higher number of residential impacts associated with Alternative 1 and its impact to the historic Loughman area.

It is noted that Polk County staff is concerned about the potential impacts associated with Alternative 1A and that they recommended the study team focus on Alternatives 4 and 5 for the preferred alternative. However, Polk County had no objection to either Alternative 1 or 1A being retained for further analysis.

## **APPENDIX B**

### Interchange Screening Analysis



# Interchange Screening Analysis

## Poinciana Parkway Extension Project Development and Environment Study From Poinciana Parkway to CR 532

CFX Project Number: 599-224

Prepared for:

**CENTRAL  
FLORIDA  
EXPRESSWAY  
AUTHORITY**

DECEMBER 2018

Prepared by:

Kimley-Horn and Associates, Inc.

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# 1.0 PROJECT BACKGROUND AND PURPOSE OF REPORT

## 1.1 PROJECT DESCRIPTION

An extension of Poinciana Parkway to Interstate 4 (I-4) in Osceola County has been identified as a need in several local, long-range, and master plans. As part of an interlocal agreement, the Osceola County Expressway Authority (OCX) requested that the Central Florida Expressway Authority (CFX) incorporate the parkway extension and remaining portions of the OCX 2040 Master Plan into the CFX 2040 Master Plan.

In March 2018, CFX completed a Concept, Feasibility and Mobility (CF&M) study for the Poinciana Parkway Extension that concluded the project may be viable under CFX criteria. The CFX Board approved that study's findings and is moving forward with a Project Development and Environment (PD&E) study to determine a refined, preferred alternative.

The PD&E study will refine and evaluate the alternatives from the CF&M study in greater detail. The project is being split into phases for further evaluation, with the CFX PD&E study focusing on the extension to CR 532. A later phase, to be coordinated through the Florida Department of Transportation (FDOT), will provide a connection to I-4, either at SR 429 or at CR 532.

As **Exhibit 1** illustrates, three Alternatives from the CF&M study are being evaluated by the PD&E study. For the CF&M study, Alternatives 4 and 5 had a half diamond interchange with CR 532 which provided access to and from the north (not to and from the south). With the first phase of construction connecting to CR 532, access to and from the south needs to be provided. However, the short distance between CR 532 and the railroad tracks does not provide enough distance for the expressway to cross over the railroad tracks and get down to CR 532. The original concept was to provide loop ramps on the north side of CR 532 to the expressway; however, existing utilities in the area needed for the loop ramps led the study team to evaluate alternative concepts. Ultimately, this resulted in alignments that intersect CR 532 at the same location as assumed for Alternative 1. This alignment between US 17/92 and CR 532 will be utilized for both Alternatives 4 and 5. Once the alignment between US 17/92 and CR 532 was identified, multiple interchange concepts were developed; including, a diamond interchange at US 17/92 (see **Exhibit 2**), a single point urban interchange (SPUI) at US 17/92 (see **Exhibit 3**), and a frontage road system between US 17/92 and CR 532 (see **Exhibit 4**).

This screening analysis is being conducted to evaluate the three options (i.e., diamond interchange, SPUI, or frontage roads) to determine which should proceed in the PD&E study. The preferred option will be used for both Alternatives 4 and 5. It should be noted that the limits of the screening analysis for each option is from the Reedy Creek Mitigation Bank north to CR 532.



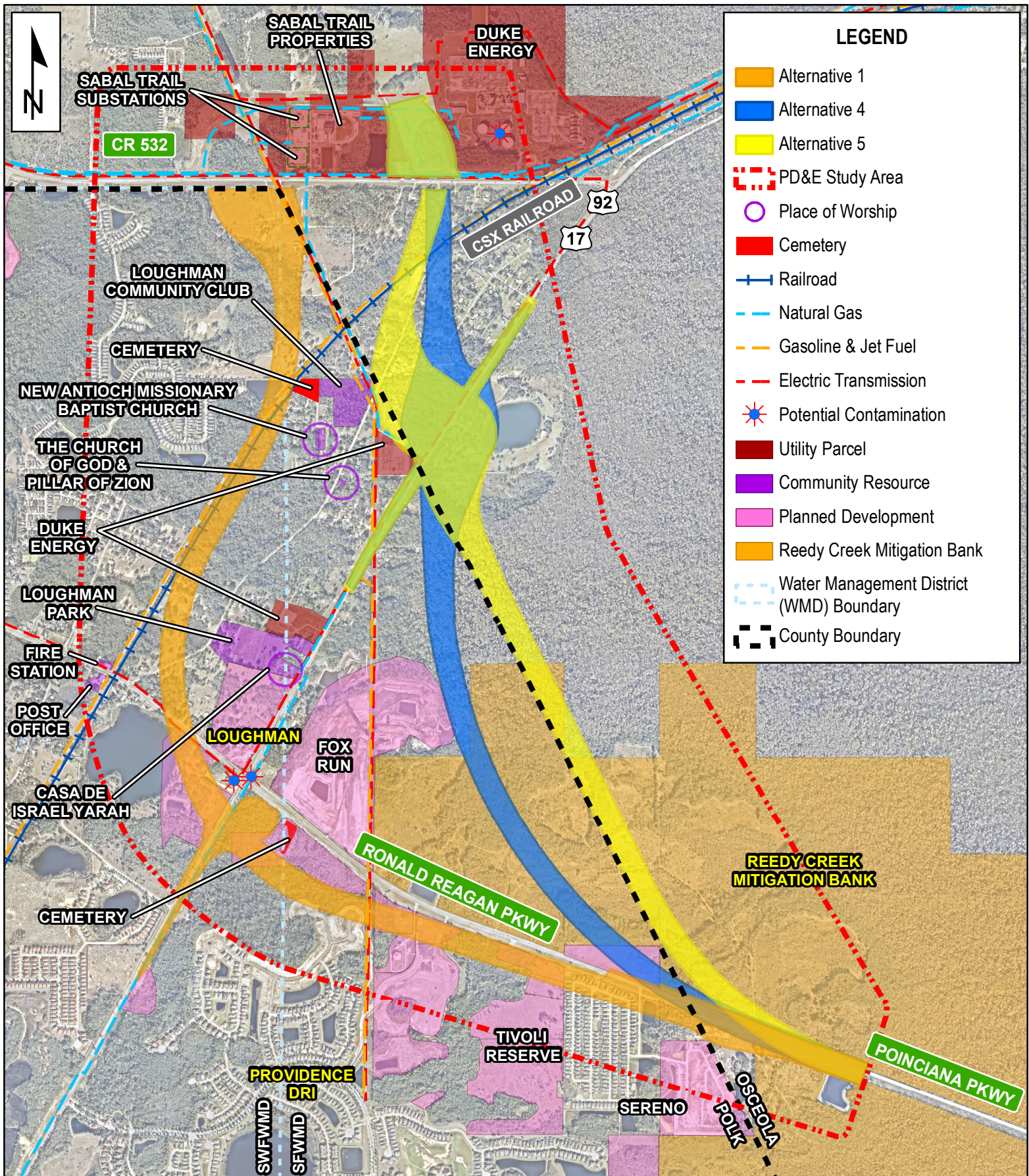


Exhibit 1 - PD&E Study Alternatives

## Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

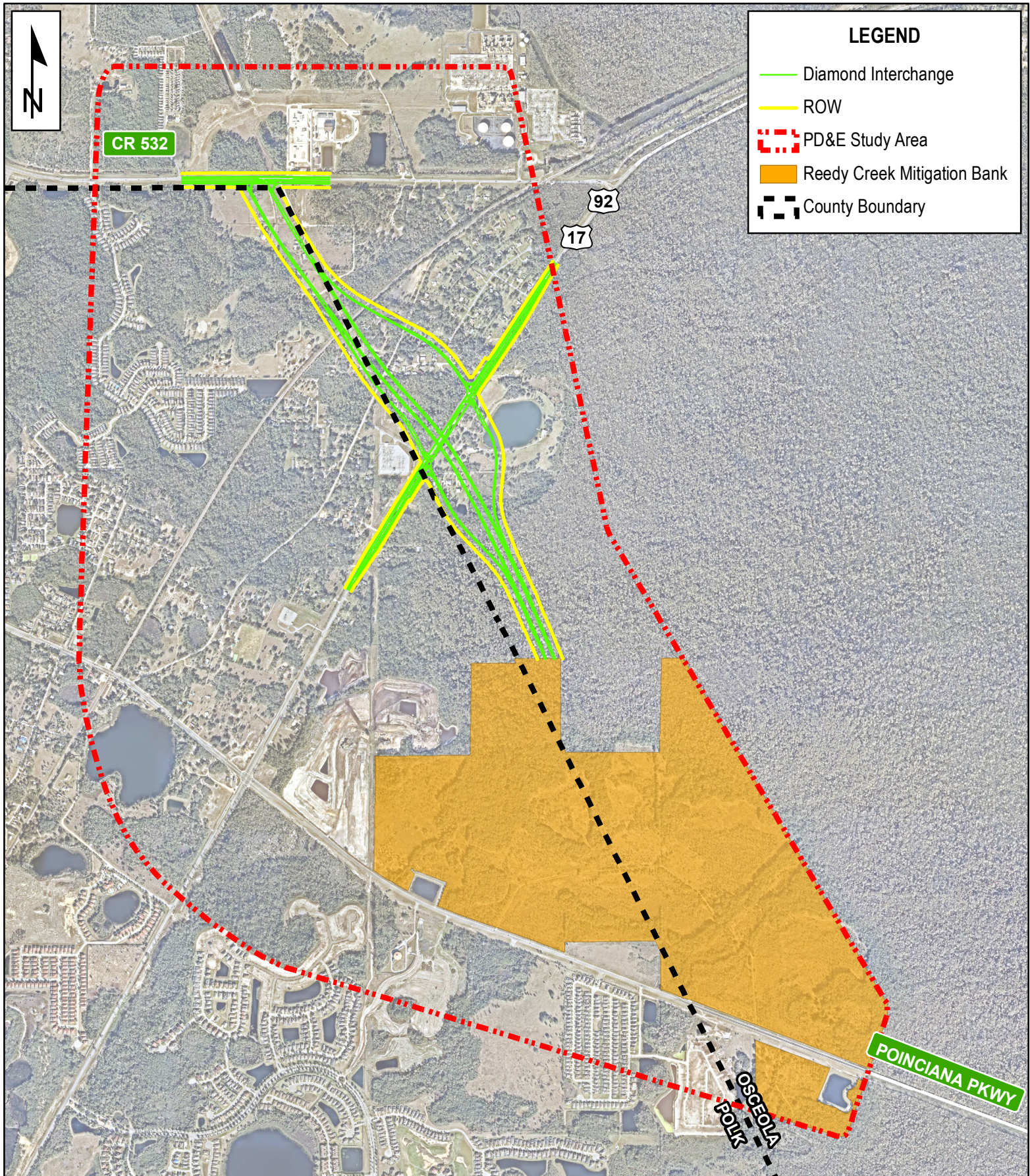
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## Exhibit 2 - Diamond Interchange Option

# Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

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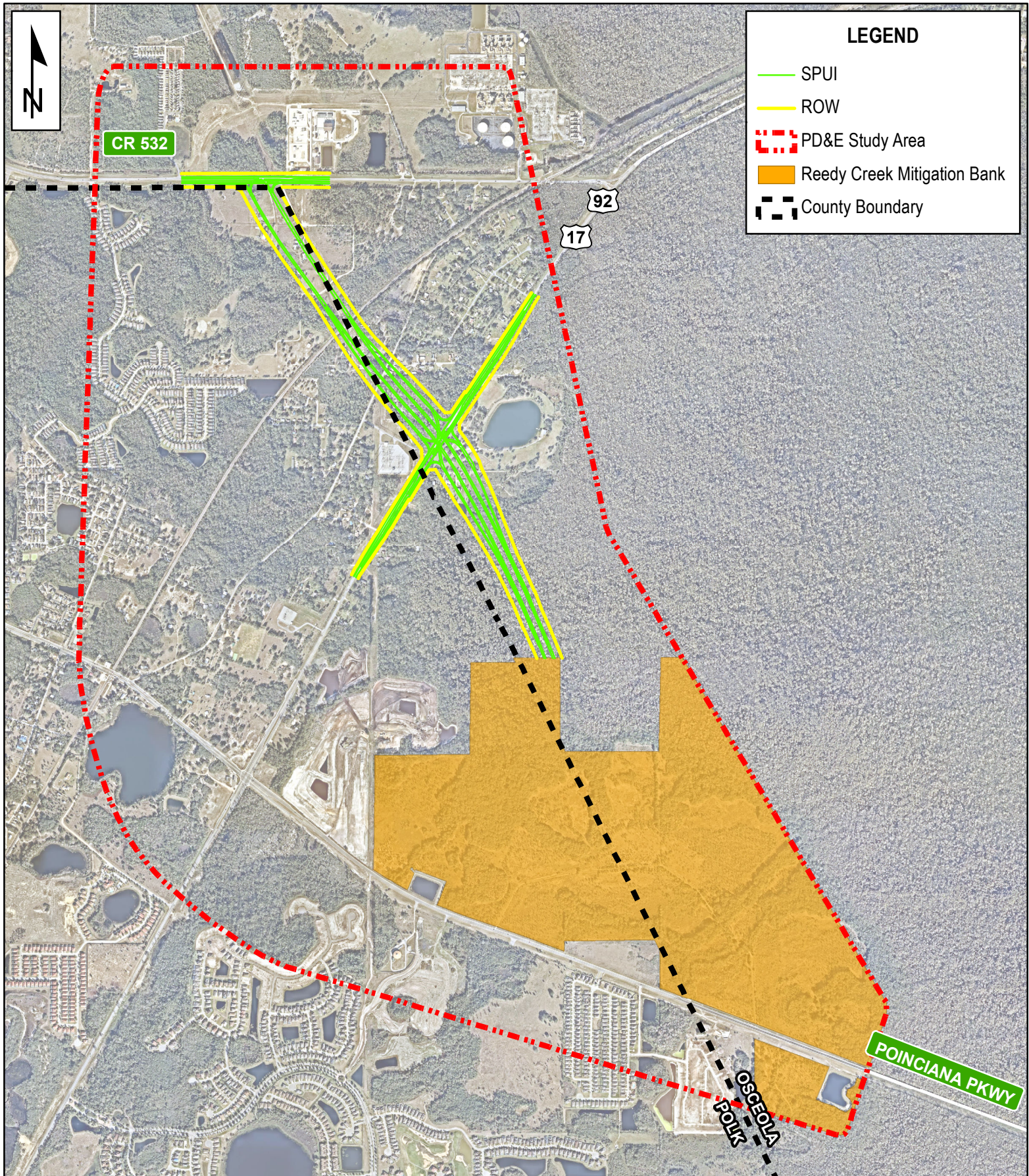


Exhibit 3 - SPUI Option

## Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

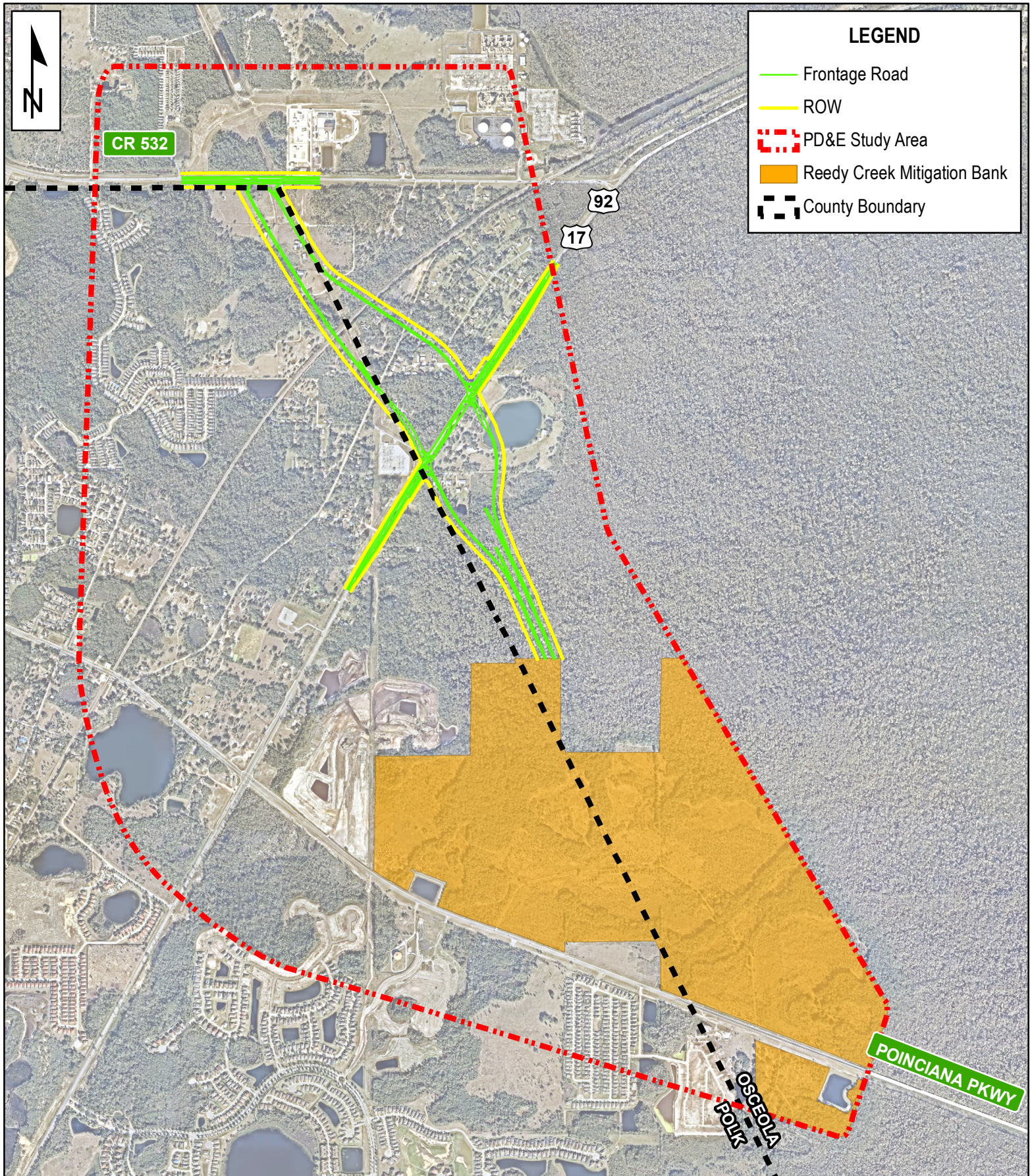
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## Exhibit 4 - Frontage Roads Option

# Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

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Date: December 2018

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## 2.0 EVALUATION METHODOLOGY

While the three options are similar to each other, there are key differences between them. These differences consist of: impacts to the social, cultural, natural, and physical environment; engineering factors; and costs. A narrative assessment of the impacts to the social, cultural, natural, and physical environment for each option is provided in the following section. To the extent possible, social, cultural, natural, and physical impacts are quantified, and the results of the analysis are then shown in an evaluation matrix. In other cases, a comparative ranking of the factors is provided in the matrix (i.e., Low, Medium, or High). The engineering factors and costs are also similarly discussed below.

The data used to evaluate each option's social, cultural, natural, and physical environmental impacts were derived from various GIS datasets within the Florida Geographical Data Library (FGDL), the South Florida Water Management District (SFWMD), the St. Johns River Water Management District (SJRWMD), the Florida Department of Environmental Protection (FDEP), the Florida Natural Area Inventory (FNAI), the Federal Emergency Management Agency (FEMA), and the Florida Fish and Wildlife Conservation Commission (FWC). In addition, field visits identified some information.

### 3.0 OPTIONS EVALUATION

Each option has been evaluated based on the potential of direct effect on the environment, engineering factors, and costs. The results of the evaluation are summarized below.

#### 3.1 POTENTIAL PHYSICAL, CULTURAL, NATURAL, AND SOCIAL ENVIRONMENTAL IMPACTS

**Table 1** summarizes the anticipated effects on the physical, cultural, natural, and social environments for each option.

**Table 1:** Physical, Cultural, Natural, and Social Comparison Matrix

Evaluation Criteria	Unit of Measure	Diamond	SPUI	Frontage Roads
<b>Physical</b>				
Major Utility Conflicts - Existing	No. of Conflicts	5	5	5
Major Utility Conflicts - Planned	No. of Conflicts	0	0	0
Contamination Sites and Facilities	No. of Conflicts	1	1	1
Railroad Involvement	No. of Conflicts	1	1	1
<b>Cultural</b>				
Public Lands	Acres	26	23	26
Section 4(f) Coordination Required (Public Recreation Lands, Wildlife Refuges, etc.)	Y/N	Y	Y	Y
Potential Historic Resources	No. of Conflicts	0	0	0
Potential Historic Linear Resources (Canals/Highways/Railroads)	No. of Resources	2	2	2
Potential Archaeological Resources	No. of Resources	0	0	0
<b>Natural</b>				
Water Features	---	---	---	---
Ponds/Lakes	Acres	3	1	3
Canals/Regulated Floodways	No. of Conflicts	0	0	0
Flood Hazard Areas - 100 Year Floodplain	Acres	30	26	30
Wetlands (non-forested and forested)	Acres	41	28	43
Potential Habitat - Federal Listed Species	Acres	93	69	101
Potential Habitat - State Listed Species	Acres	60	43	63
Potential Bald Eagle Nest	Y/N	N	N	N
Potential Species Impacts (composite rating)	Rating	MEDIUM	MEDIUM	MEDIUM
Mitigation Banks	---	---	---	---
Reedy Creek Mitigation Bank	Acres	0	0	0
Conservation Easements	---	---	---	---
Upper Lakes Basin Watershed	Acres	26	23	26
SFWMD Conservation Lands	Acres	0	0	0



**Table 1:** Physical, Cultural, Natural, and Social Comparison Matrix (continued)

Evaluation Criteria	Unit of Measure	Diamond	SPUI	Frontage Roads
<b>Social</b>				
Right-of-Way Area (NOT including ponds)	Acres	121	82	129
Potential Residential Impacts (includes partially impacted parcels)	Total Parcels	77	51	77
<i>Existing</i>	<i>Parcels</i>	<i>34</i>	<i>17</i>	<i>34</i>
<i>Planned</i>	<i>Parcels</i>	<i>43</i>	<i>34</i>	<i>43</i>
Potential Non-Residential Impacts (includes partially impacted parcels)	Total Parcels	9	5	10
<i>Existing</i>	<i>Parcels</i>	<i>5</i>	<i>3</i>	<i>5</i>
<i>Planned</i>	<i>Parcels</i>	<i>4</i>	<i>2</i>	<i>5</i>
Community Facilities	No. of Conflicts	2	2	2
Parks and Recreational Facilities (public and private)	No. of Conflicts	0	0	0
Trails	No. of Conflicts	1	1	1
Community Cohesion Effects	Ranking	MEDIUM	MEDIUM	MEDIUM
Socioeconomic Impacts to Special Populations	Ranking	LOW	LOW	LOW
Proposed Development (PD)/Development of Regional Impact (DRI)	Acres	0	0	0

### 3.1.1 PHYSICAL ENVIRONMENT

All options have the same physical impacts, including the number of major conflicts with existing and planned utilities, the number of contamination sites impacted, and railroad crossings. **Exhibit 5** identifies the potential physical impacts.

### 3.1.2 CULTURAL ENVIRONMENT

The SPUI interchange option impacts three less acres of public lands than the diamond interchange and frontage roads options. All options have the same impacts for other cultural elements, including the number of potential historic resources and potential archaeological resources. **Exhibit 6** illustrates the potential cultural impacts.

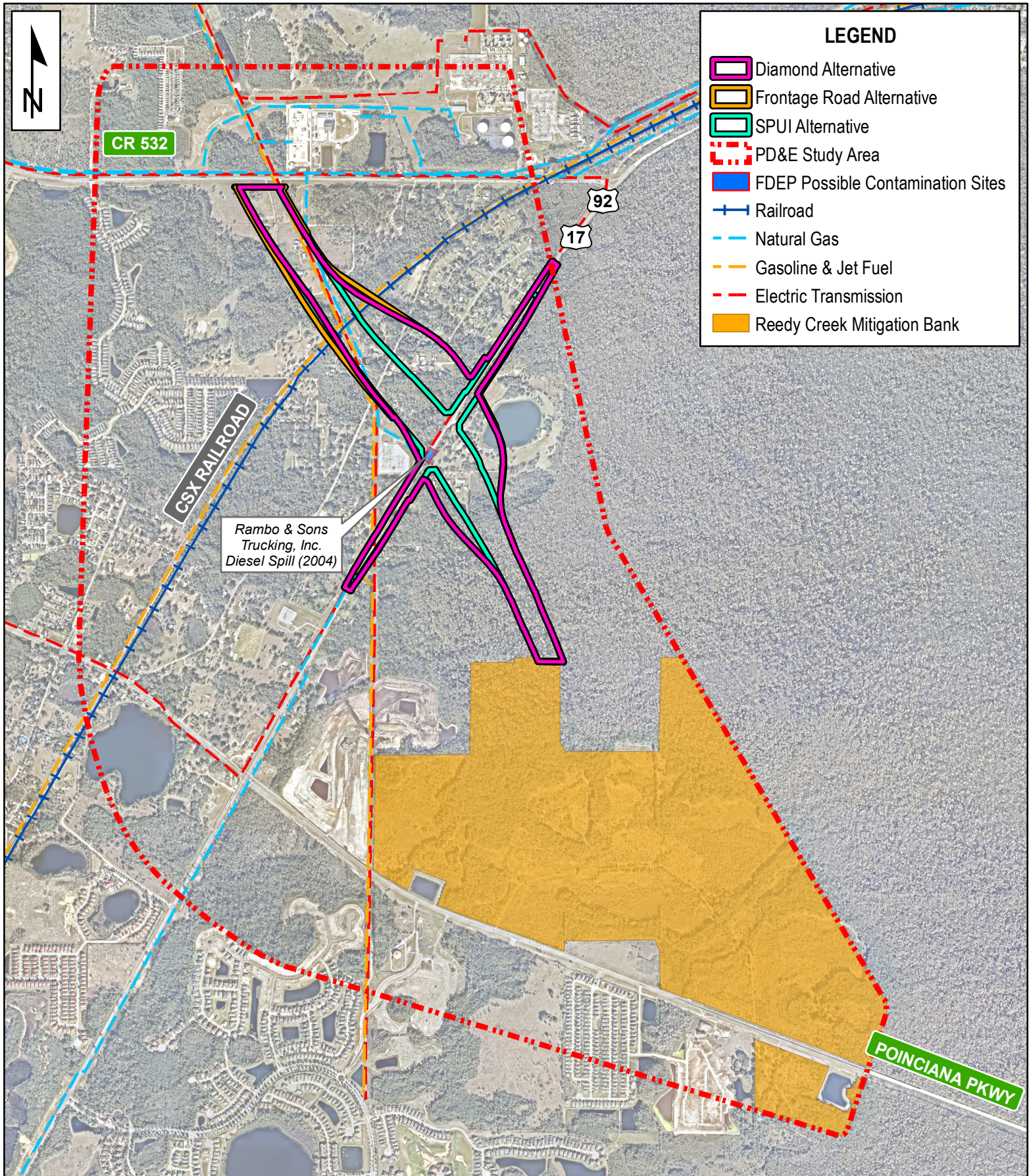
### 3.1.3 SOCIAL ENVIRONMENT

The SPUI interchange option requires less right-of-way, and impacts less residential and non-residential parcels than the diamond interchange and frontage roads options. All options have medium social environment impacts for community cohesion effects and low socioeconomic impacts to special populations. **Exhibit 6** illustrates the potential social impacts.

### 3.1.4 NATURAL ENVIRONMENT

The SPUI interchange option impacts less acres of ponds/lakes, flood hazard areas, wetlands, potential habitat for listed species, and the Upper Lakes Basin Watershed than the diamond interchange and frontage roads options. All options have medium impact to potential species. **Exhibits 7 and 8** illustrate the potential natural impacts.





**Exhibit 5 - Potential Physical Impacts Map**

## Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

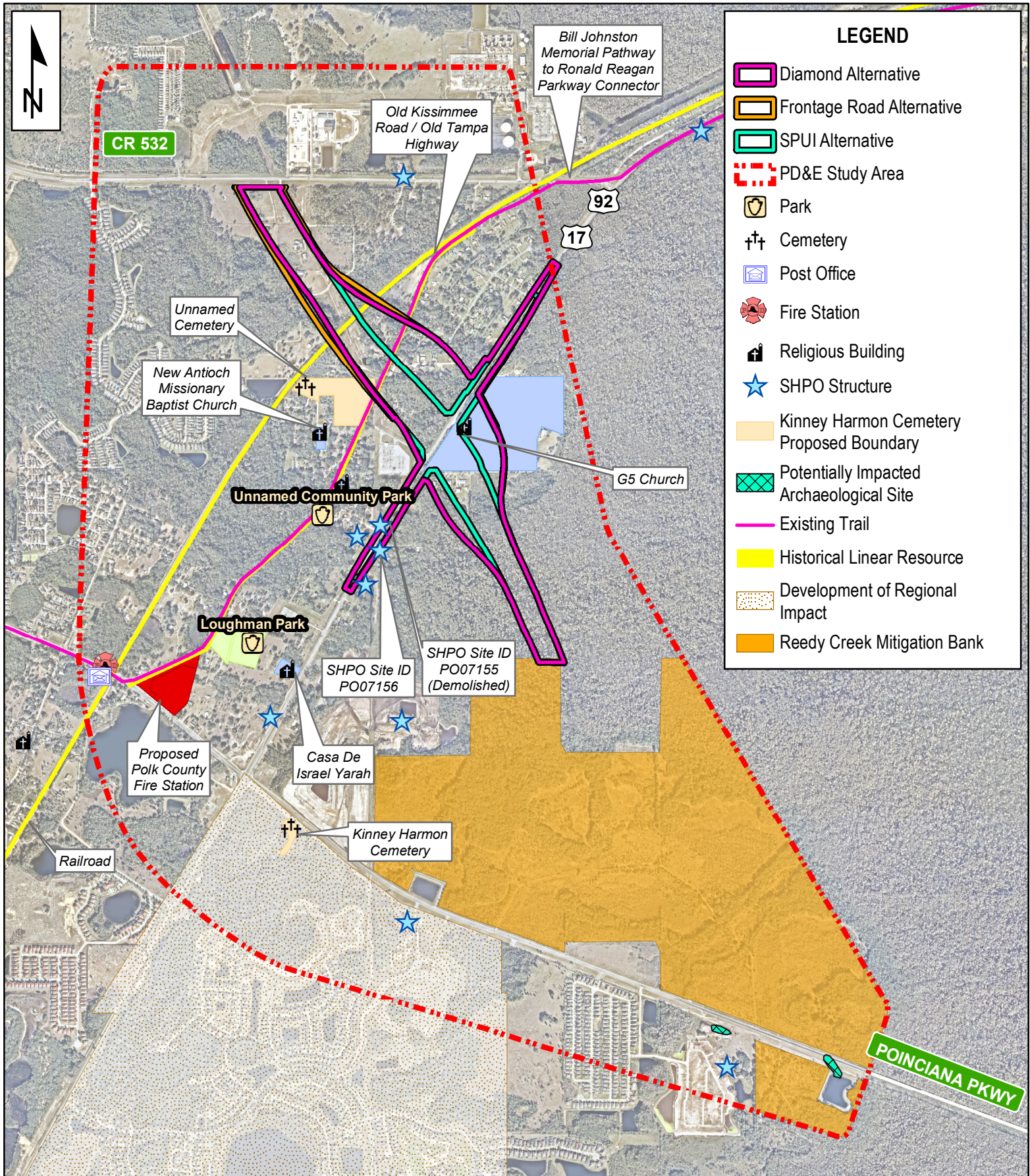
**Kimley»Horn**

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189 S Orange Ave, Suite 1000, Orlando FL 32801  
Phone: (407) 898-1511

CFX Project Number: 599-224  
Date: December 2018

0 1,000 2,000  
Feet





**Exhibit 6 - Potential Sociocultural Impacts Map**

## Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

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CFX Project Number: 599-224  
Date: December 2018

0 1,000 2,000  
Feet



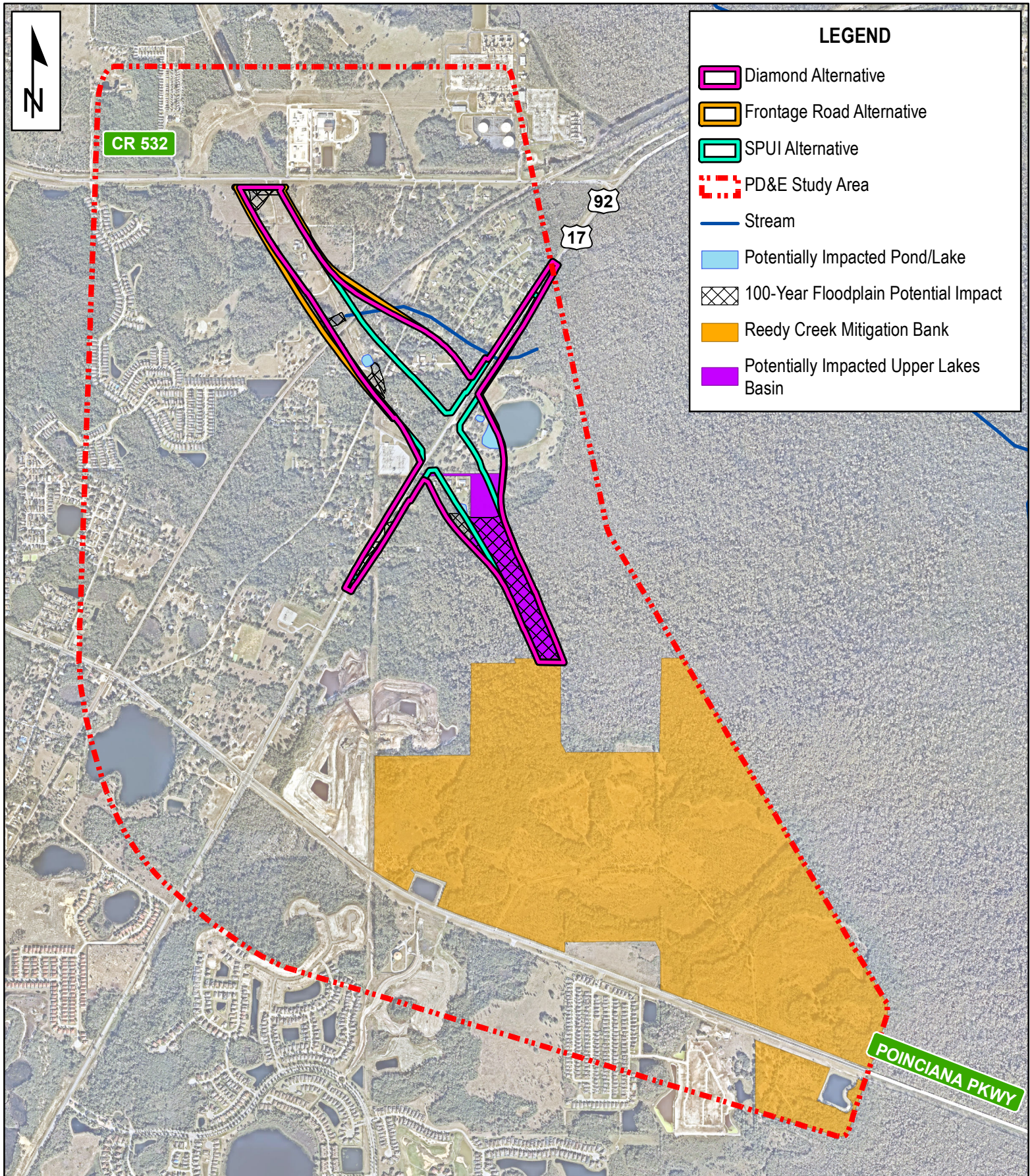


Exhibit 7 - Potential Natural Impacts Map (1 of 2)

## Poinciana Parkway Extension PD&E Study | Interchange Screening Analysis

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CFX Project Number: 599-224  
Date: December 2018

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Feet



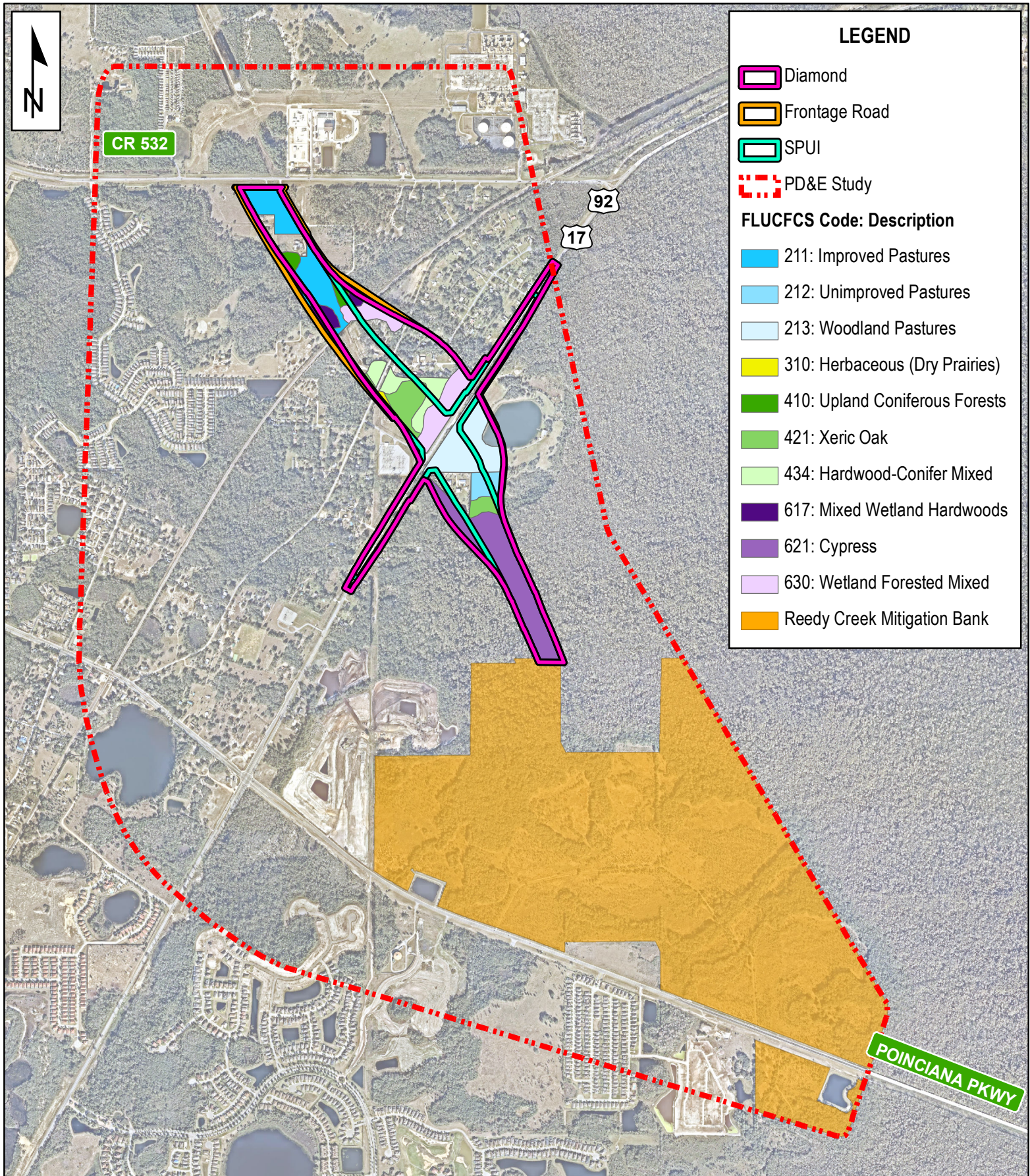


Exhibit 8 - Potential Natural Impacts Map (2 of 2)

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CFX Project Number: 599-224  
Date: December 2018

0 1,000 2,000  
Feet



### 3.2 ENGINEERING AND COST CONSIDERATIONS

**Table 2** summarizes the engineering elements and cost estimate for each option.

**Table 2:** Alternative Engineering Comparison Matrix

Evaluation Criteria	Unit of Measure	Diamond	SPUI	Frontage Roads
<b>Engineering</b>				
Alternative Length (approximate)	Miles	1.5	1.5	1.5
Proposed Right-of-Way Width (general and varies at interchanges)	Feet	330	330	545
Proposed Bridges	Structures	10	8	4
	Feet	1,122	1,117	395
Proposed Interchanges	Number	1	1	0
<b>Estimated Cost</b>				
Roadway Construction	2018\$	\$50,800,000	\$47,000,000	\$67,500,000
Bridges Construction	2018\$	\$16,700,000	\$20,300,000	\$9,500,000
Interchange Construction	2018\$	\$32,600,000	\$24,100,000	\$0
Toll Collection Equipment	2018\$	N/A	N/A	N/A
Major Utility Relocations	2018\$	\$37,700,000	\$36,000,000	\$32,900,000
Right-of-Way Areas	2018\$	N/A	N/A	N/A
Mitigation, Wetlands, and Wildlife	2018\$	N/A	N/A	N/A
Total Estimated Cost (not including N/A elements)	2018\$	\$137,800,000	\$127,400,000	\$109,900,000
<b>Projected Revenue Traffic</b>				
2045 Conditions with Slip Ramps to Ronald Reagan Pkwy.	AADT Miles Tolled	45,000	45,000	31,400

All options have the same approximate length. The frontage road option requires wider right-of-way than the other options and it does not include an interchange (i.e., at grade intersections are provided at US 17/92). The SPUI and diamond interchange options require more bridges for their ramps accessing US 17/92 (over Old Tampa Hwy. and the railroad tracks).

The frontage road option has the lowest total construction cost; primarily due to the expressway mainline not being constructed from south of US 17/92 to the railroad tracks (both the SPUI and diamond interchange options include constructing this portion of the expressway mainline). It should be noted that all three options include significant costs associated with relocating utilities, ranging from \$32.9 million to \$37.3 million.

The diamond and SPUI options have the greatest annual average daily traffic (AADT) miles tolled (calculated as the AADT x length of expressway tolled). The frontage road option has lower revenue traffic because the frontage roads are not tolled.



## 4.0 RECOMMENDATIONS

Based on the information presented in this screening analysis, it is recommended that the SPUI option be used for Alternatives 4 and 5 and that these alternatives proceed for further consideration as part of the Poinciana Parkway Extension PD&E Study. This recommendation is based on the SPUI option having lower cultural, social, and natural impacts, and higher revenue traffic. While its construction cost is more than the frontage road option, the future extension of the expressway to I-4 (phase 2) will be higher than the extension of the SPUI option, offsetting the phase 1 cost savings.

## **APPENDIX C**

### Preferred Alternative Concept Plans

CONTRACT PLANS COMPONENTS

ROADWAY PLANS

CENTRAL FLORIDA EXPRESSWAY AUTHORITY

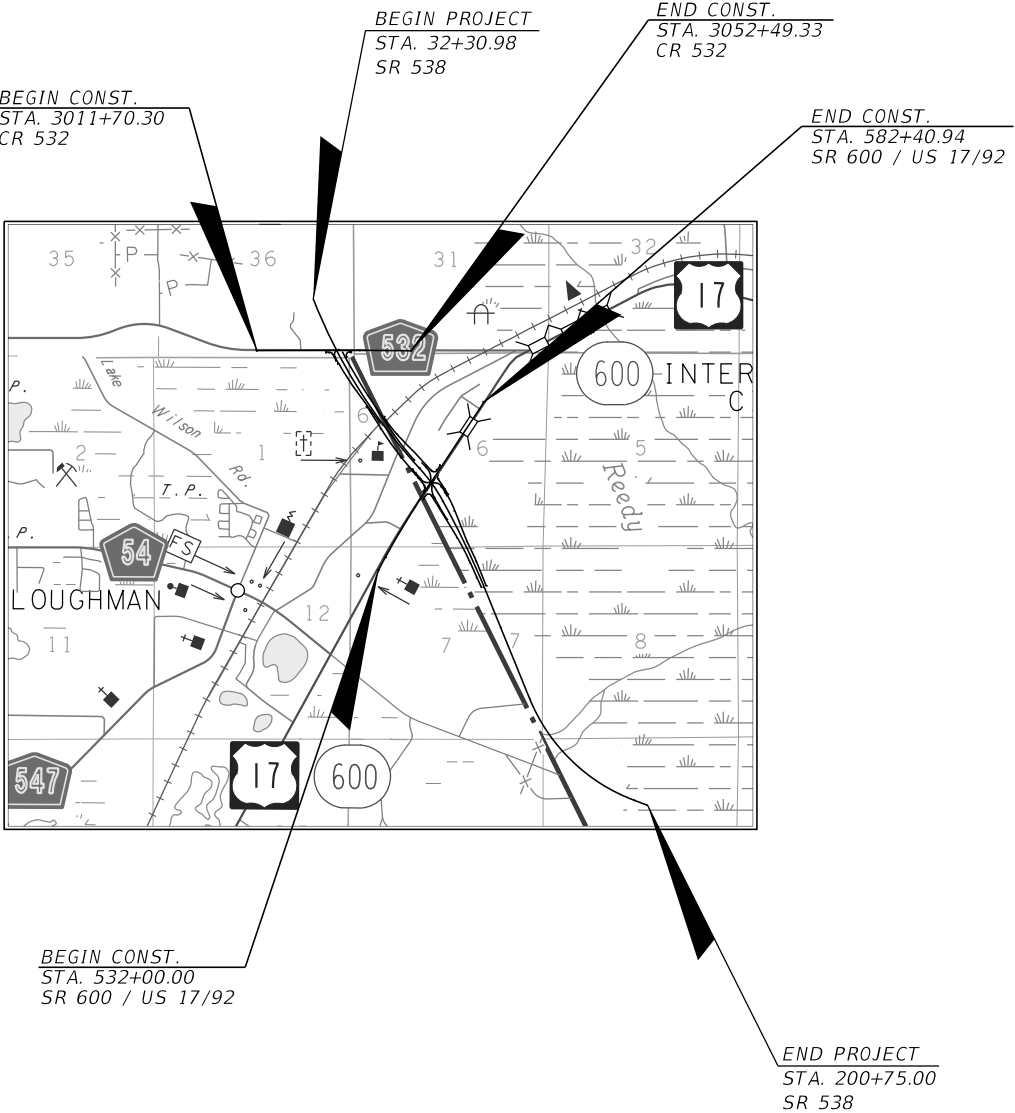
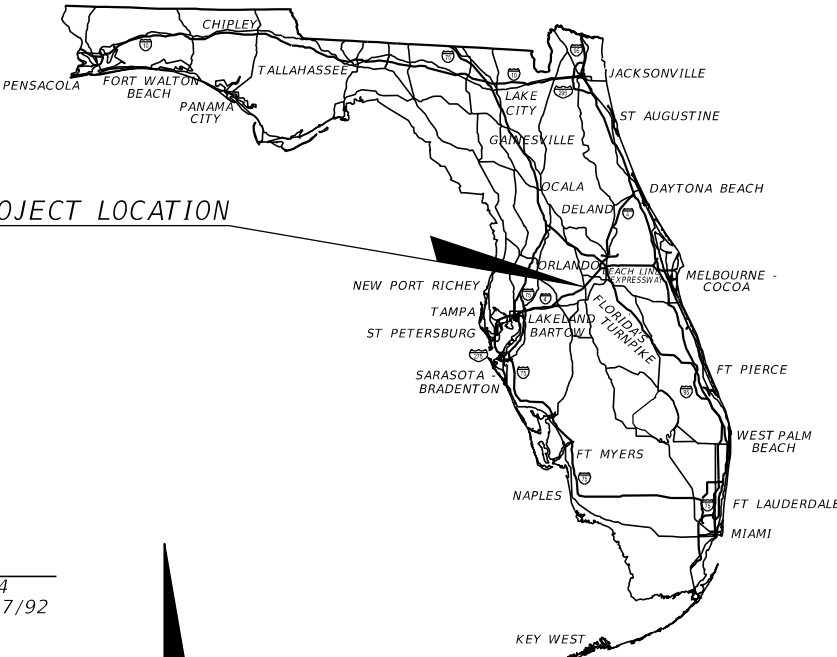
CONCEPT PLANS

SR 538 POINCIANA PARKWAY EXTENSION

OSCEOLA AND POLK COUNTIES

STATE ROAD NO. 538  
CFX PROJECT NO. 599-224A

PROJECT LOCATION



INDEX OF ROADWAY PLANS	
SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2-11	TYPICAL SECTIONS
12-13	PROJECT LAYOUT
14	CURVE DATA
15-35	PLAN SHEETS

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2019-20 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, July 2019 Standard Specifications for Road and Bridge Construction at the following website: <http://www.fdot.gov/programmanagement/Implemented/SpecBooks>

ROADWAY PLANS

ENGINEER OF RECORD:

L. FREDERICK BURKETT, P.E. 45825  
KIMLEY-HORN AND ASSOCIATES, INC.  
189 SOUTH ORANGE AVENUE, SUITE 1000  
ORLANDO, FLORIDA 32801  
TEL. (407) 427-1615

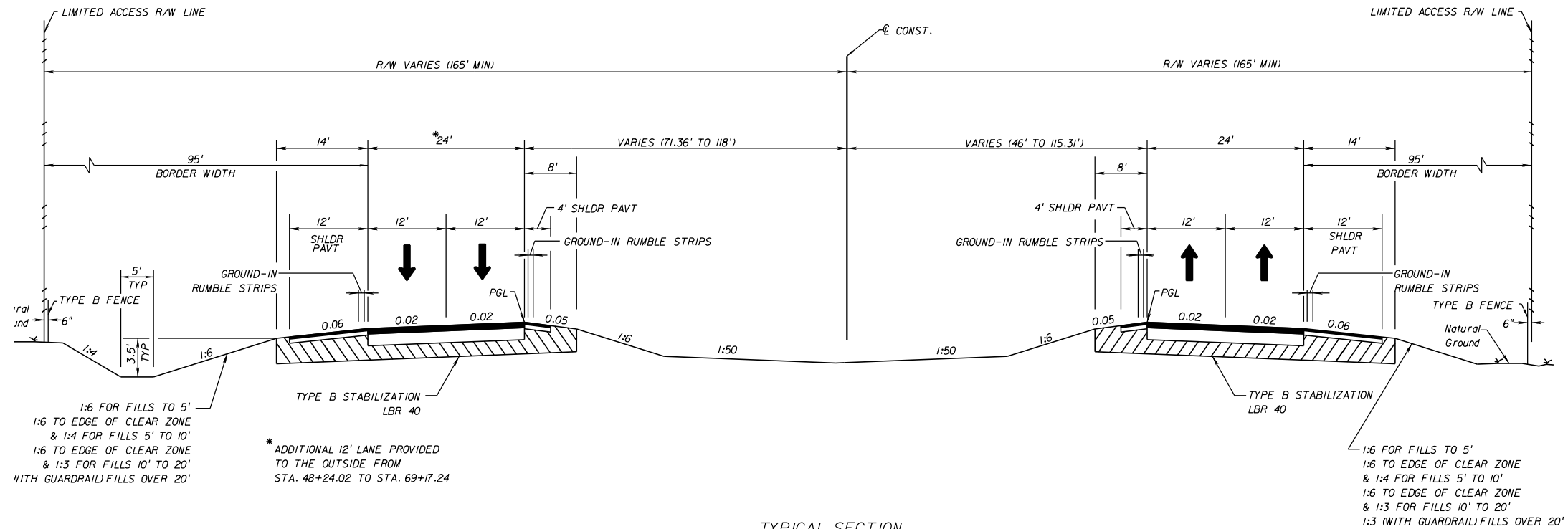
VENDOR NO. F560885615-001  
CERTIFICATE OF AUTHORIZATION NO. 696

CFX PROJECT MANAGER:

JONATHAN WILLIAMSON, AICP

FISCAL YEAR	SHEET NO.
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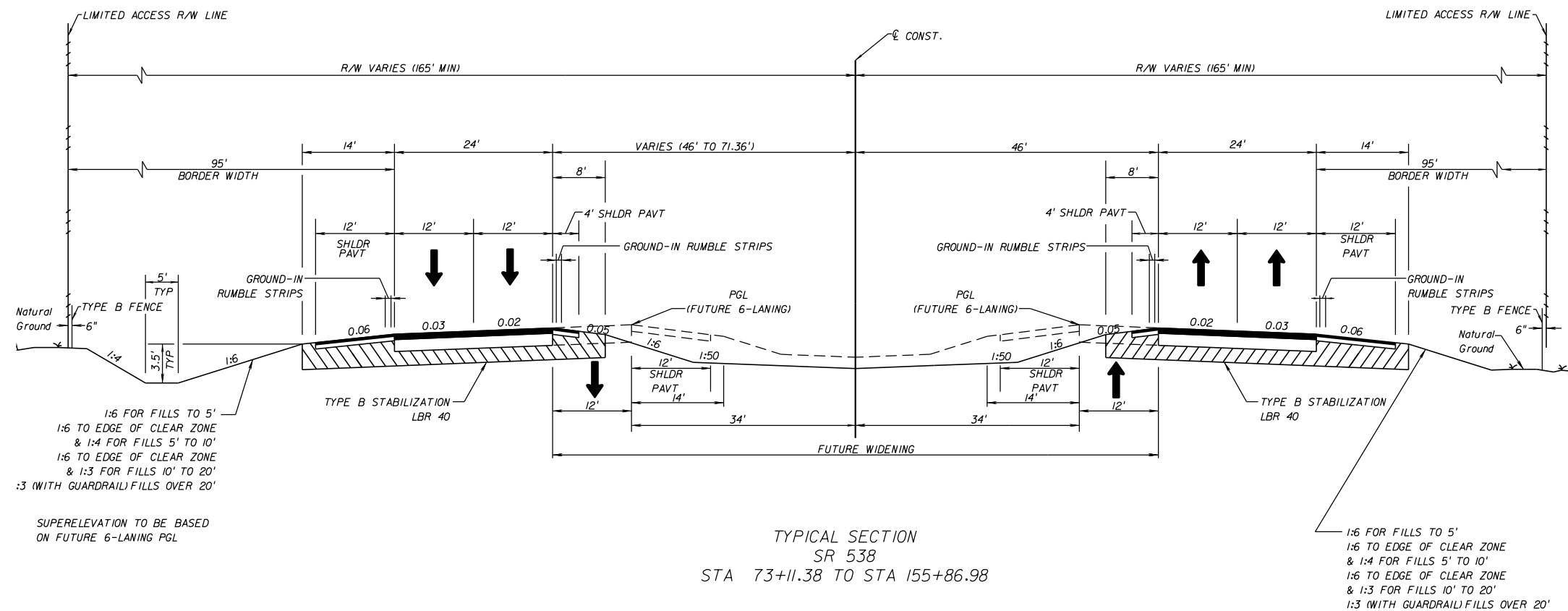




TYPICAL SECTION  
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STA 46+65.53 TO STA 73+11.38

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ESTIMATED OPENING YEAR = 2025 AADT = 22,600  
ESTIMATED DESIGN YEAR = 2045 AADT = 28,000  
K = 11% D = 60% T (24 HOUR) = 6%  
DESIGN SPEED = 70 MPH  
POSTED SPEED = 65 MPH

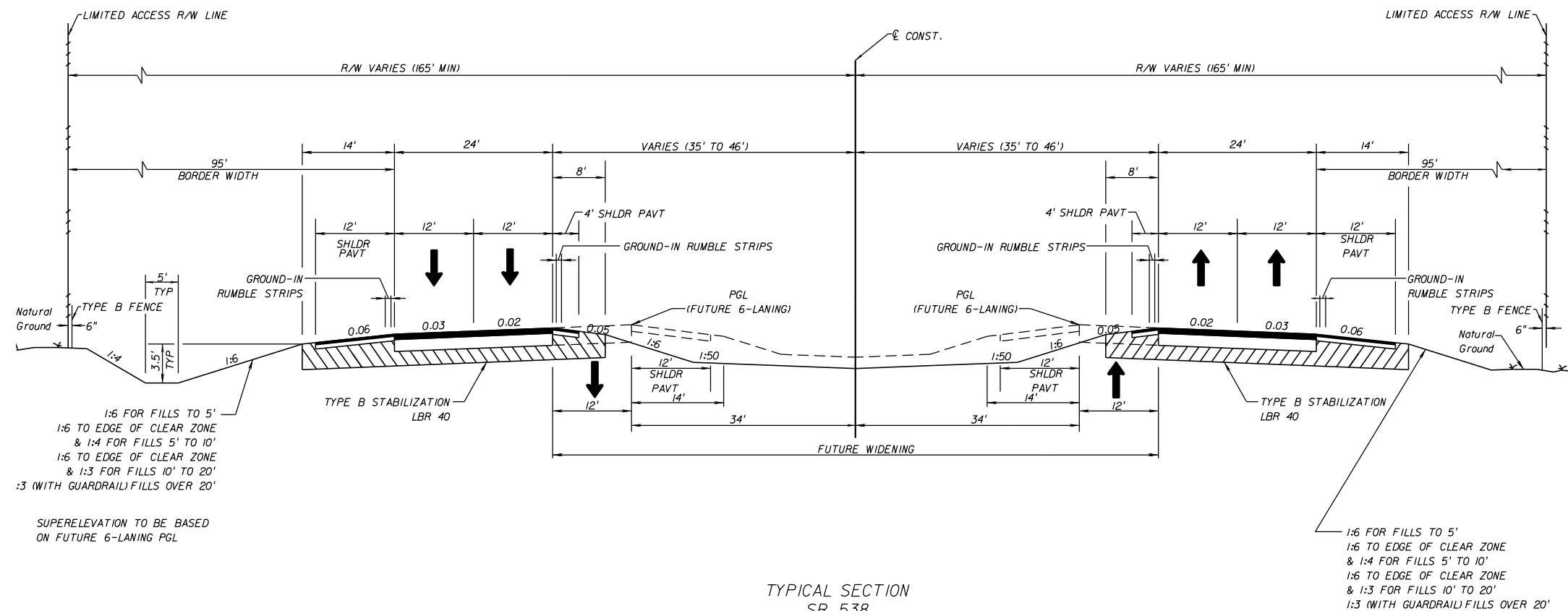
REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			TYPICAL SECTION	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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 DESIGN SPEED = 70 MPH  
 POSTED SPEED = 65 MPH

REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			<div>TYPICAL SECTION</div>	SHEET NO.
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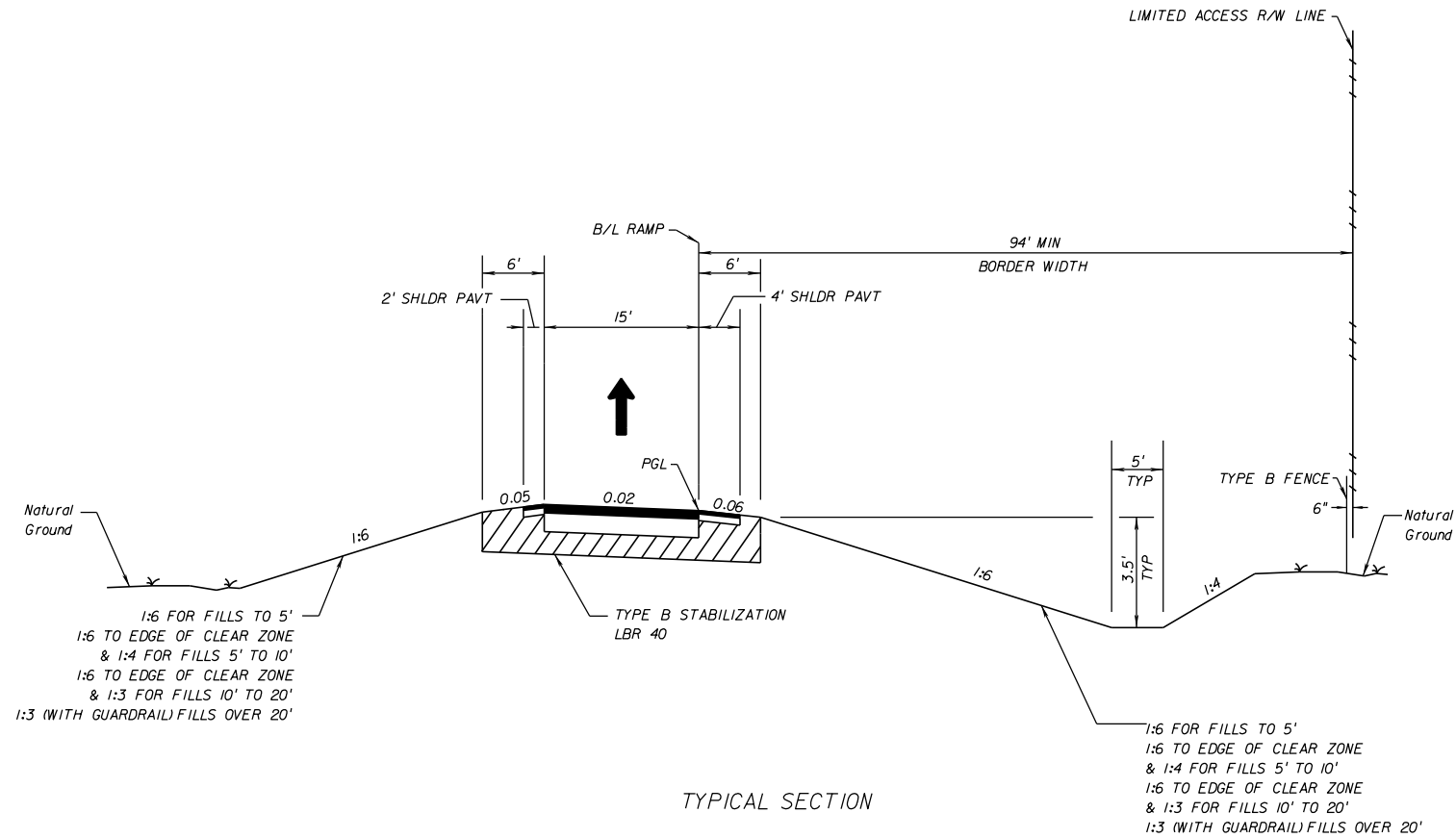


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DESIGN SPEED = 70 MPH  
POSTED SPEED = 65 MPH

REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			TYPICAL SECTION	SHEET NO.
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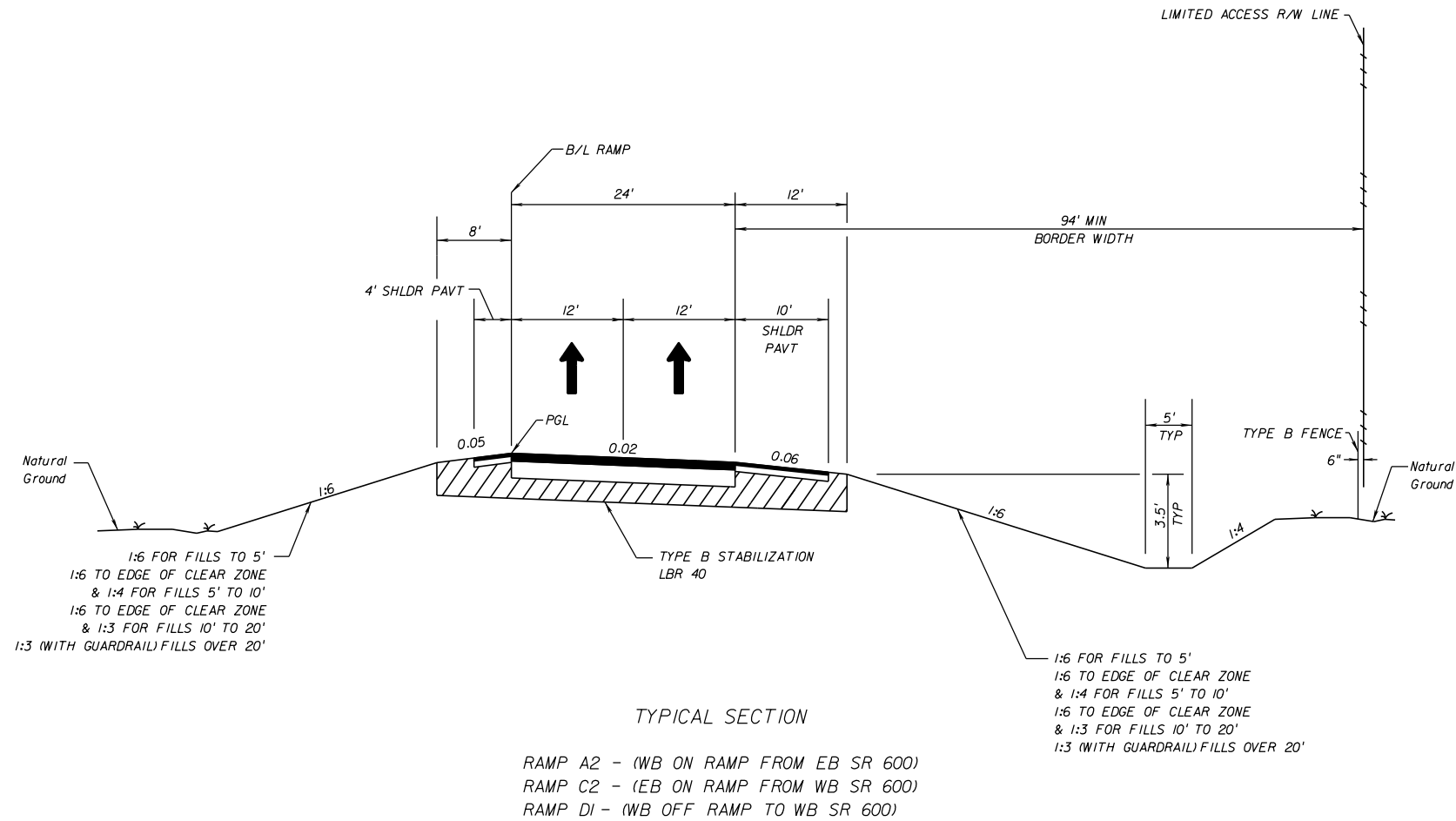
TYPICAL SECTION

- RAMP A1 - (WB OFF RAMP TO EB CR 432)
- RAMP A2A - (WB ON RAMP FROM WB SR 600)
- RAMP B1 - (EB OFF RAMP TO SR 600)
- RAMP C1 - (EB ON RAMP FROM EB SR 600)
- RAMP D1A - (WB OFF RAMP TO EB SR 600)
- RAMP D2 - (WB OFF RAMP TO SR 600)
- RAMP E1 - (EB ON RAMP FROM EB CR 532)
- RAMP E2 - (EB ON RAMP FROM WB CR 532)

TRAFFIC DATA

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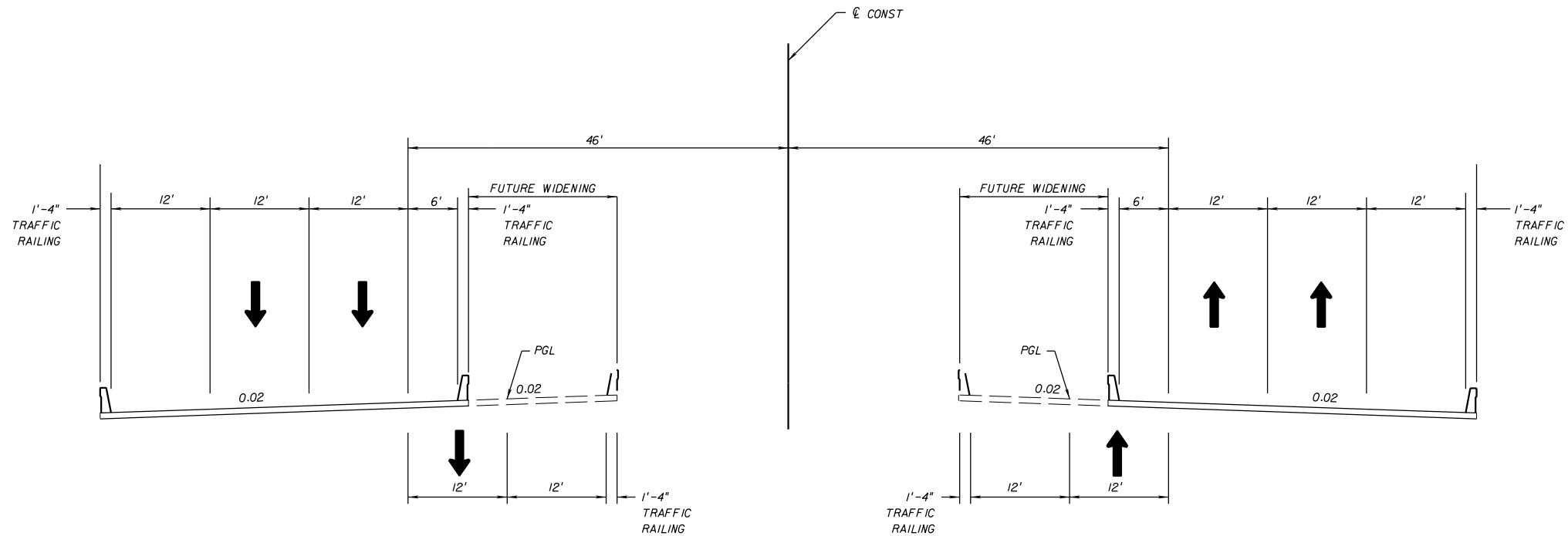
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
					SR 538	OSCEOLA POLK	599-224A		5



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 POSTED SPEED = 50 MPH

REVISIONS				<div>Kimley»Horn</div> <div>           Certificate Of Authorization No. 696            L. Frederick Burkett, P.E.            P.E. License No. 45825            189 South Orange Avenue, Suite 1000            Orlando, Florida 32801         </div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			<div>TYPICAL SECTION</div> <div>6</div>
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					SR 538	OSCEOLA POLK	599-224A	



BRIDGE TYPICAL SECTION  
 BRIDGE NO. 6 - (WB OVER OLD TAMPA HWY)  
 BRIDGE NO. 9 - (WB OVER SR 600)  
 BRIDGE NO. 11 - (WB OVER MITIGATION BANK)

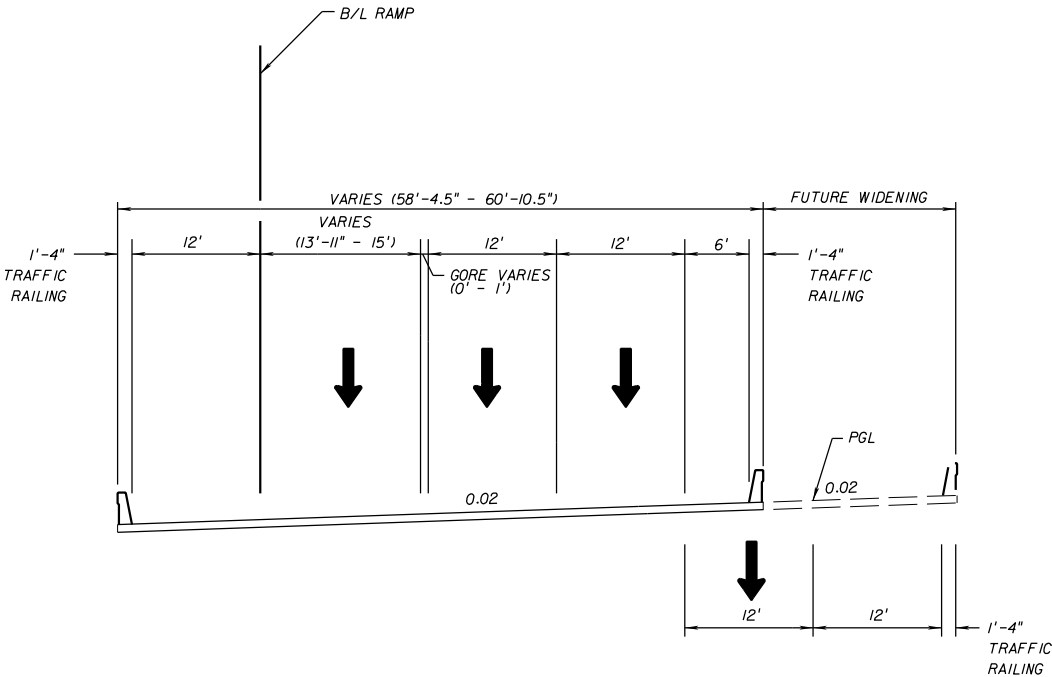
BRIDGE TYPICAL SECTION  
 BRIDGE NO. 2 - (EB OVER CSX RR)  
 BRIDGE NO. 5 - (EB OVER OLD TAMPA HWY)  
 BRIDGE NO. 8 - (EB OVER SR 600)  
 BRIDGE NO. 10 - (EB OVER MITIGATION BANK)

### TRAFFIC DATA

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 ESTIMATED DESIGN YEAR = 2045 AADT = 28,000  
 K = 11% D = 60% T (24 HOUR) = 6%  
 DESIGN SPEED = 70 MPH  
 POSTED SPEED = 65 MPH

REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			TYPICAL SECTION	SHEET NO.
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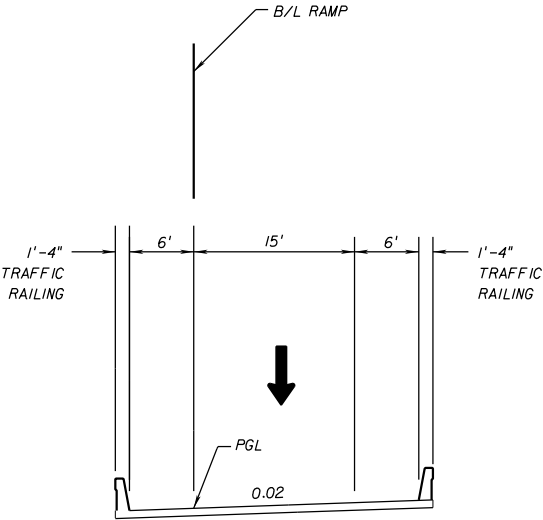


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DESIGN SPEED = 70 MPH  
POSTED SPEED = 65 MPH

REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			TYPICAL SECTION	SHEET NO.
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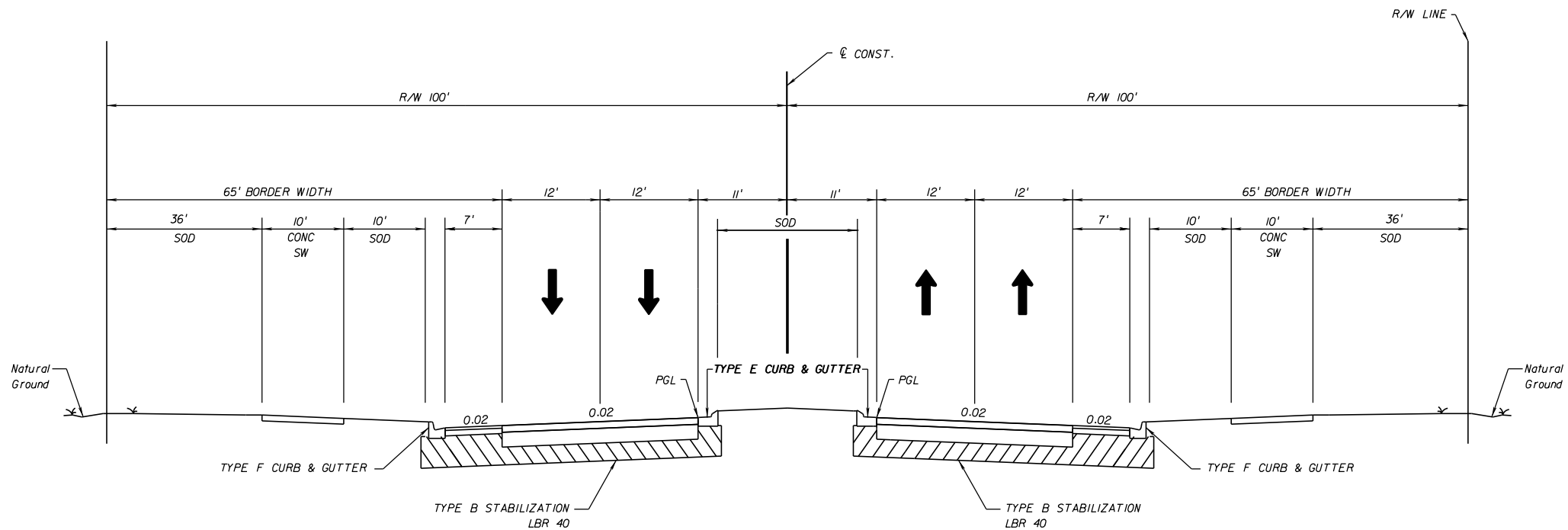
BRIDGE TYPICAL SECTION

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BRIDGE NO. 4 - (EB ON RAMP OVER OLD TAMPA HWY)  
BRIDGE NO. 7 - (WB ON RAMP OVER OLD TAMPA HWY)

TRAFFIC DATA

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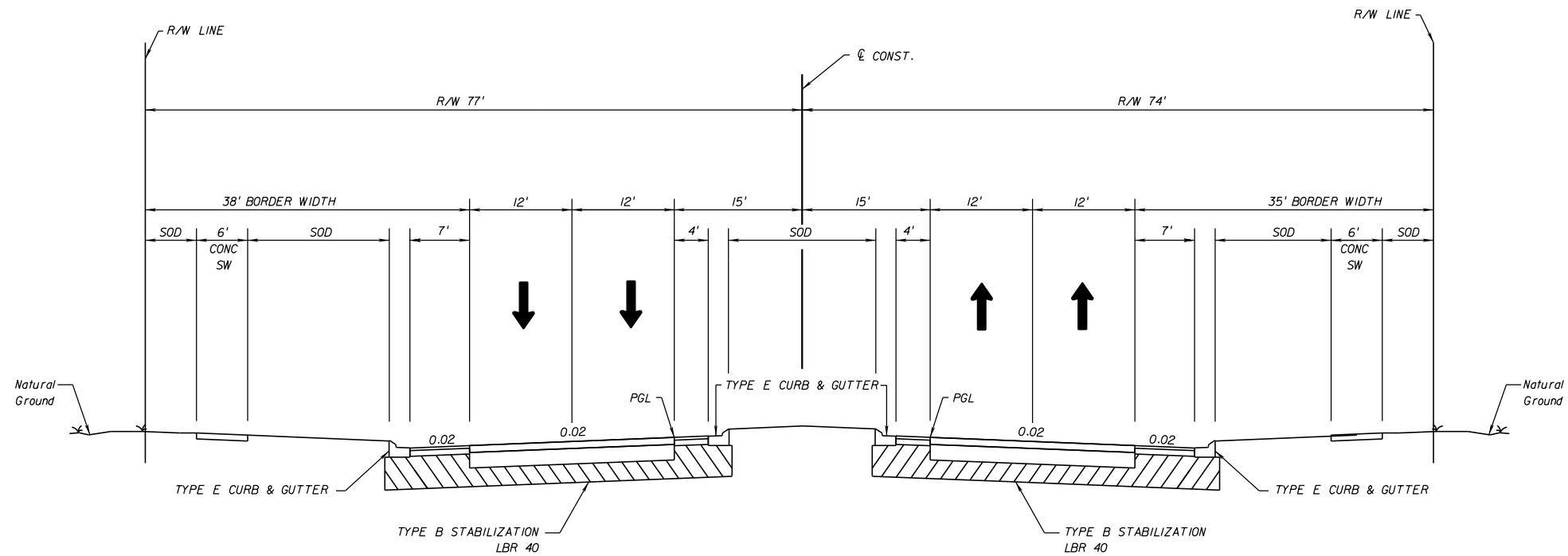
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REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			TYPICAL SECTION	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		10
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TYPICAL SECTION  
SR 600 (US 17/92)

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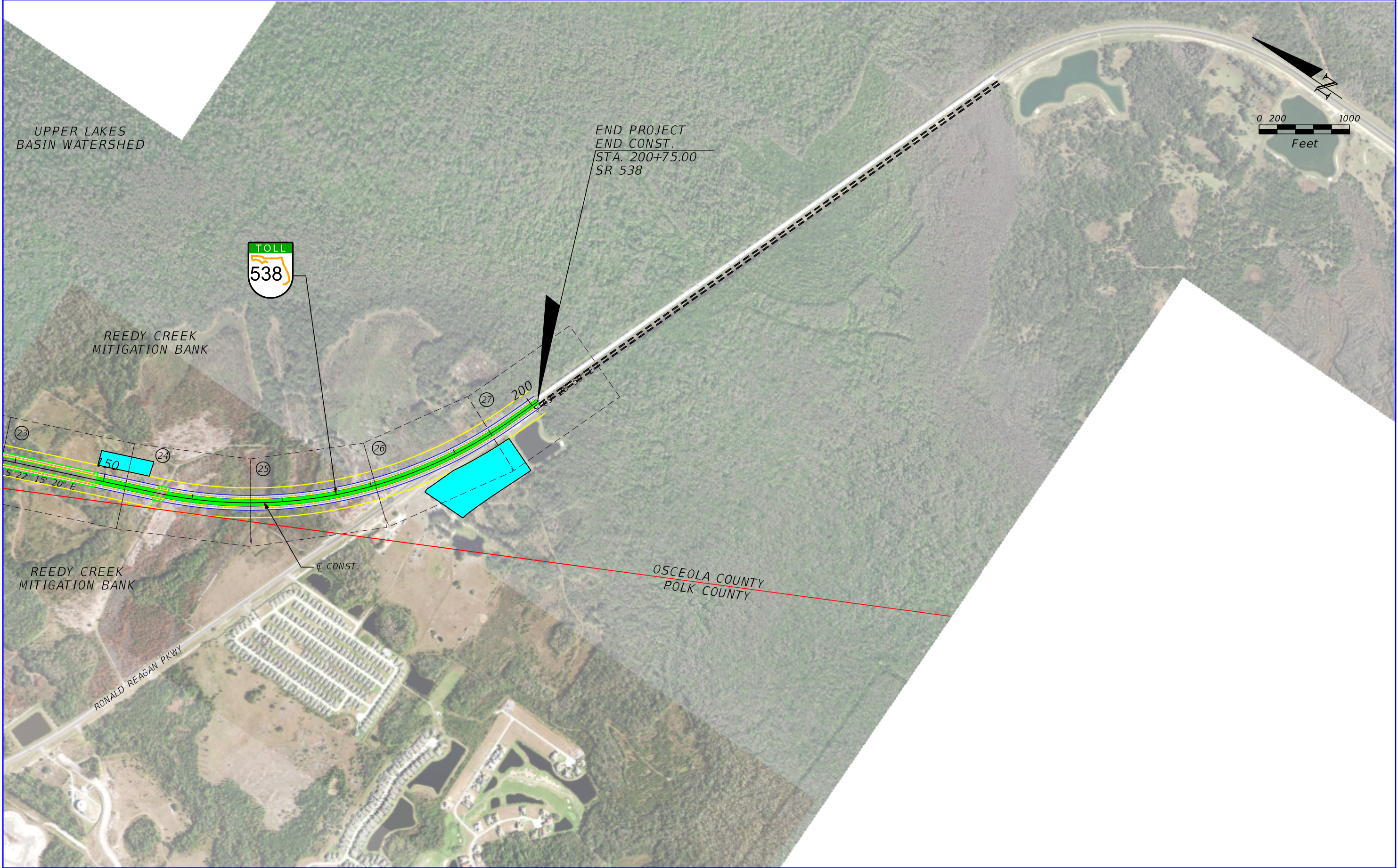
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POSTED SPEED = 55 MPH

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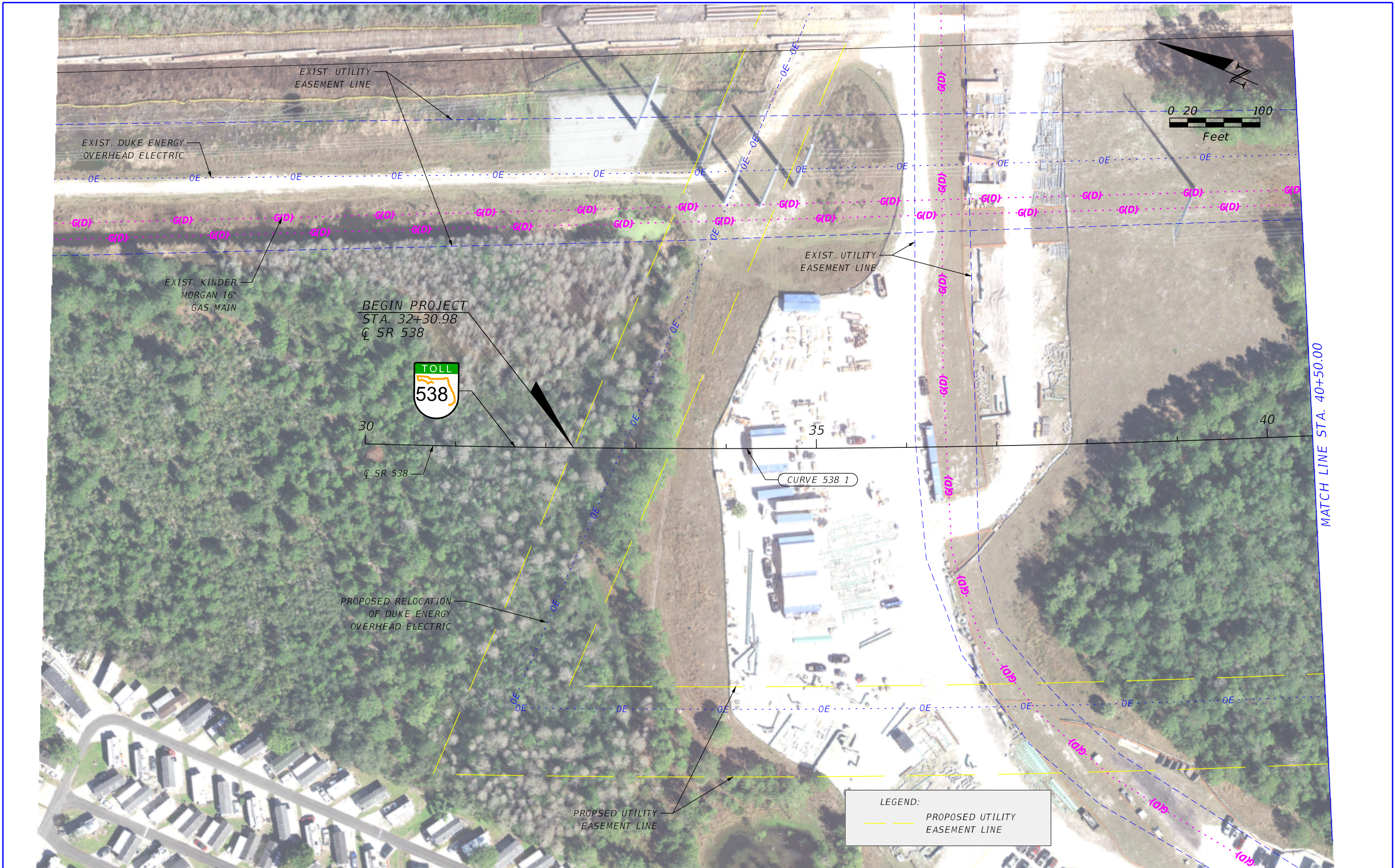


REVISIONS				<div>Kimley»Horn</div> <div>Certificate Of Authorization No. 696 L. Frederick Burkett, P.E. P.E. License No. 45825 189 South Orange Avenue, Suite 1000 Orlando, Florida 32801</div>	CENTRAL FLORIDA EXPRESSWAY AUTHORITY			PROJECT LAYOUT	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		13
					SR 538	OSCEOLA POLK	599-224A		



CURVE DATA									
CURVE NAME	P.C. STATION	P.I. STATION	P.T. STATION	Δ	D	T	L	R	DESIGN SPEED
538 1	30+00.00	57+96.44	85+29.41	21° 7' 15"	0° 22' 55"	2796.44	5529.41	15000.00	70
538 2	85+29.41	90+86.73	96+38.61	13° 51' 50"	1° 15' 00"	557.32	1109.20	4584.00	70
538 3	96+38.61	109+53.03	122+64.57	6° 33' 54"	0° 15' 00"	1314.42	2625.96	22918.00	70
538 4	155+92.10	177+77.97	197+13.47	47° 13' 38"	1° 08' 45"	2185.87	4121.36	5000.00	70
538 WB 1	481+52.27	488+57.13	495+60.94	5° 25' 24"	0° 23' 06"	704.86	1408.67	14882.00	70
538 WB 2	505+41.58	511+46.56	517+49.37	8° 23' 54"	0° 41' 43"	604.98	1207.78	8239.79	70
538 EB 1	354+99.25	359+56.35	364+12.16	7° 28' 20"	0° 49' 07"	457.10	912.91	7000.00	70
532 1	3031+91.35	3035+15.58	3038+39.81	0° 56' 43"	0° 08' 45"	324.24	648.46	39300.00	45
600 1	534+07.31	544+97.75	555+87.08	4° 27' 08"	0° 12' 15"	1090.44	2179.78	28052.00	55
A1 1	427+39.39	429+09.00	429+47.01	118° 57' 10"	57° 17' 45"	169.61	207.61	100.00	35
A1A 1	480+00.00	480+87.83	481+57.76	62° 42' 30"	39° 44' 57"	87.83	157.76	144.14	35
A1A 2	481+57.76	482+50.14	483+42.51	0° 42' 45"	0° 23' 08"	92.38	184.75	14858.00	50
A2 1	551+70.67	555+12.23	557+49.78	76° 16' 41"	13° 10' 17"	341.56	579.12	435.00	35
A2A 1	521+00.04	523+50.97	526+00.71	9° 36' 37"	1° 55' 10"	250.92	500.67	2984.93	50
A2A 2	539+70.73	540+98.08	541+51.75	103° 43' 19"	57° 17' 45"	127.36	181.03	100.00	35
B1 1	670+19.37	677+32.94	684+43.54	9° 03' 05"	0° 38' 08"	713.57	1424.17	9015.00	50
B2 1	684+43.54	685+12.97	685+82.41	0° 52' 54"	0° 38' 06"	69.43	138.87	9024.00	35
B2 2	685+82.41	686+03.01	686+23.61	0° 32' 16"	1° 18' 19"	20.60	41.20	4390.00	35
B2 3	687+23.61	688+57.16	689+90.64	3° 29' 15"	1° 18' 22"	133.55	267.03	4387.00	35
B2 4	689+90.64	690+78.19	691+42.54	71° 17' 53"	46° 56' 12"	87.55	151.90	122.07	35
B2A 1	710+00.00	710+69.25	711+38.50	0° 52' 54"	0° 38' 12"	69.25	138.50	9000.00	35
B2A 2	711+38.50	711+59.76	711+81.02	0° 33' 07"	1° 17' 53"	21.26	42.52	4414.00	35
B2A 3	712+81.22	713+24.74	713+68.26	1° 07' 45"	0° 17' 50"	43.52	87.04	4417.00	35
B2A 4	713+68.26	716+81.26	717+99.32	107° 22' 49"	24° 54' 40"	312.99	431.05	230.00	35
C1 1	754+22.92	755+82.82	756+25.30	115° 57' 27"	57° 17' 45"	159.90	202.38	100.00	35
C1 2	769+72.23	773+20.56	776+68.12	6° 39' 43"	0° 57' 26"	348.34	695.89	5985.00	50
C1 3	777+68.54	779+82.43	781+96.31	1° 04' 24"	0° 15' 03"	213.89	427.78	22836.00	50
C2 1	710+00.00	713+14.73	715+61.80	64° 22' 39"	11° 27' 33"	314.73	561.80	500.00	35
D1 1	860+92.76	864+20.11	865+18.32	113° 24' 23"	26° 38' 57"	327.35	425.55	215.00	35
D1 2	865+18.32	866+22.70	867+27.05	2° 30' 56"	1° 12' 19"	104.38	208.73	4754.00	35
D1 3	867+27.05	867+66.47	868+05.89	1° 17' 27"	1° 38' 13"	39.42	78.84	3500.00	35
D1A 1	810+00.00	810+68.91	811+20.68	69° 08' 33"	57° 17' 45"	68.91	120.68	100.00	35
D1A 2	811+20.68	812+81.38	814+41.97	3° 50' 27"	1° 11' 43"	160.71	321.29	4793.00	35
D2 1	816+23.71	818+61.16	820+97.90	7° 43' 46"	1° 37' 48"	237.45	474.19	3515.00	50
D2 2	829+99.37	832+99.71	836+00.02	1° 29' 47"	0° 14' 57"	300.34	600.65	23000.00	50
E1 1	320+98.63	321+58.60	322+06.68	61° 54' 28"	57° 17' 45"	59.98	108.05	100.00	35
E2 1	350+00.00	352+42.61	352+99.25	118° 17' 08"	39° 31' 39"	242.61	299.25	144.95	35





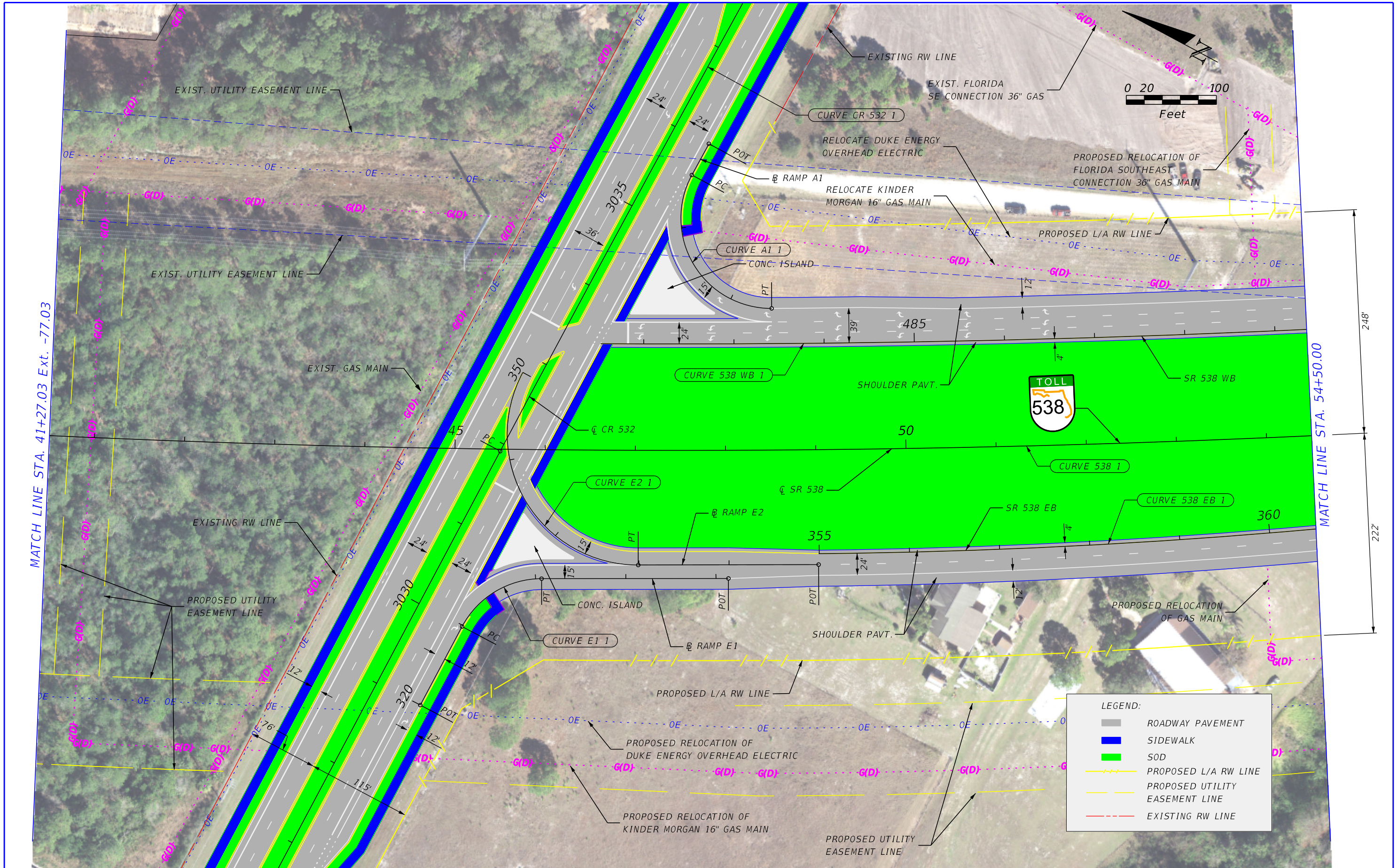
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 538	OSCEOLA POLK	599-224A

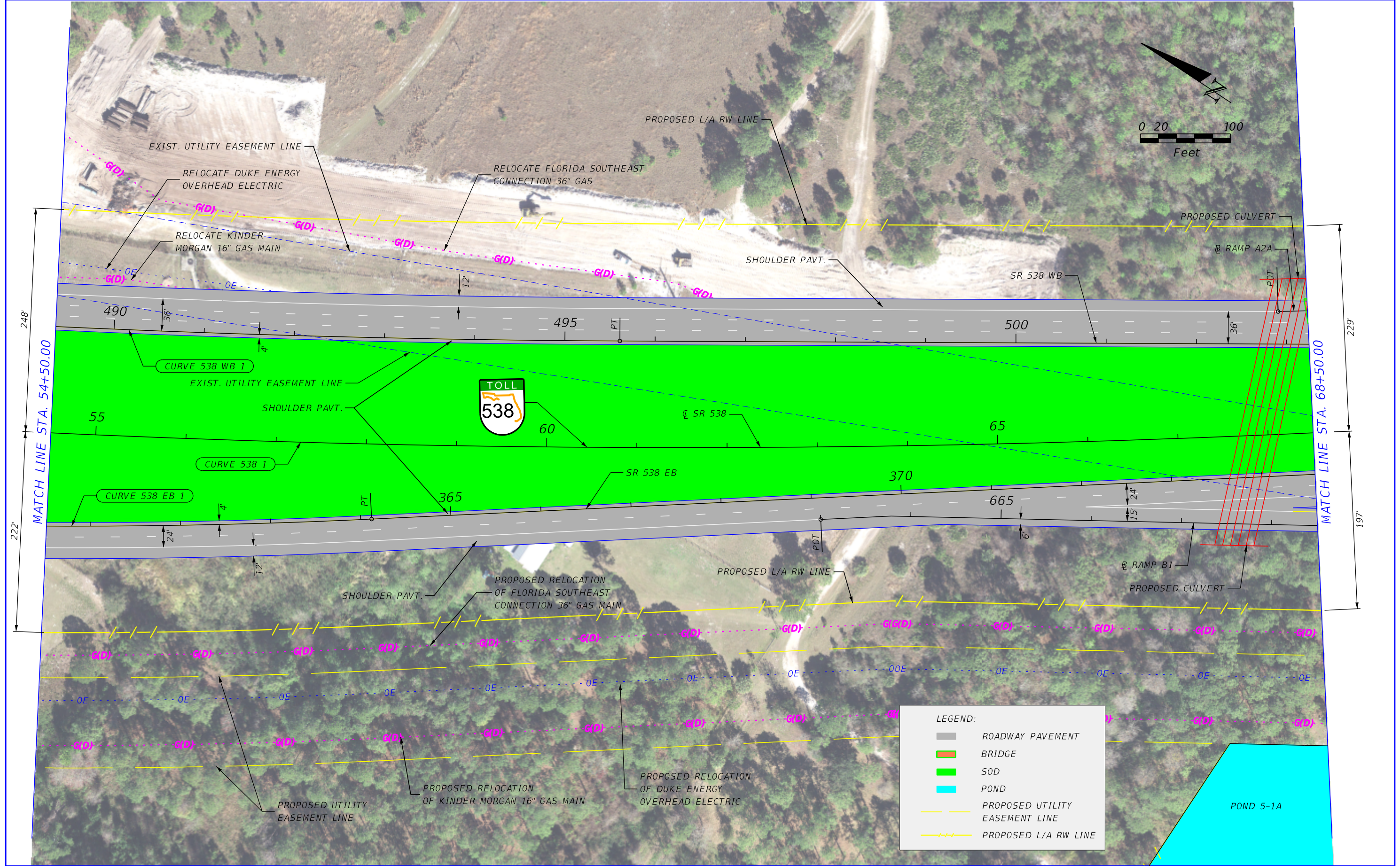
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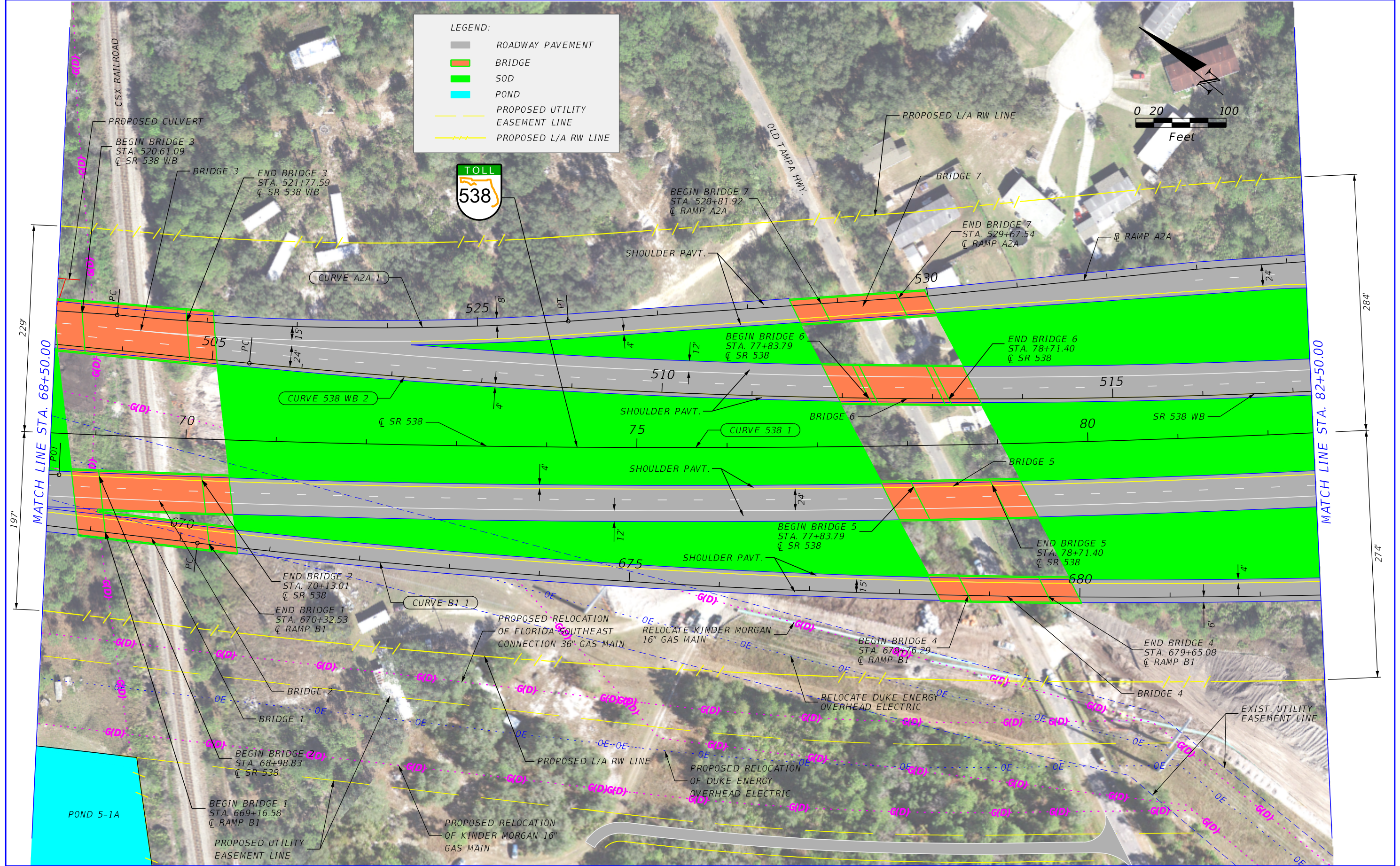
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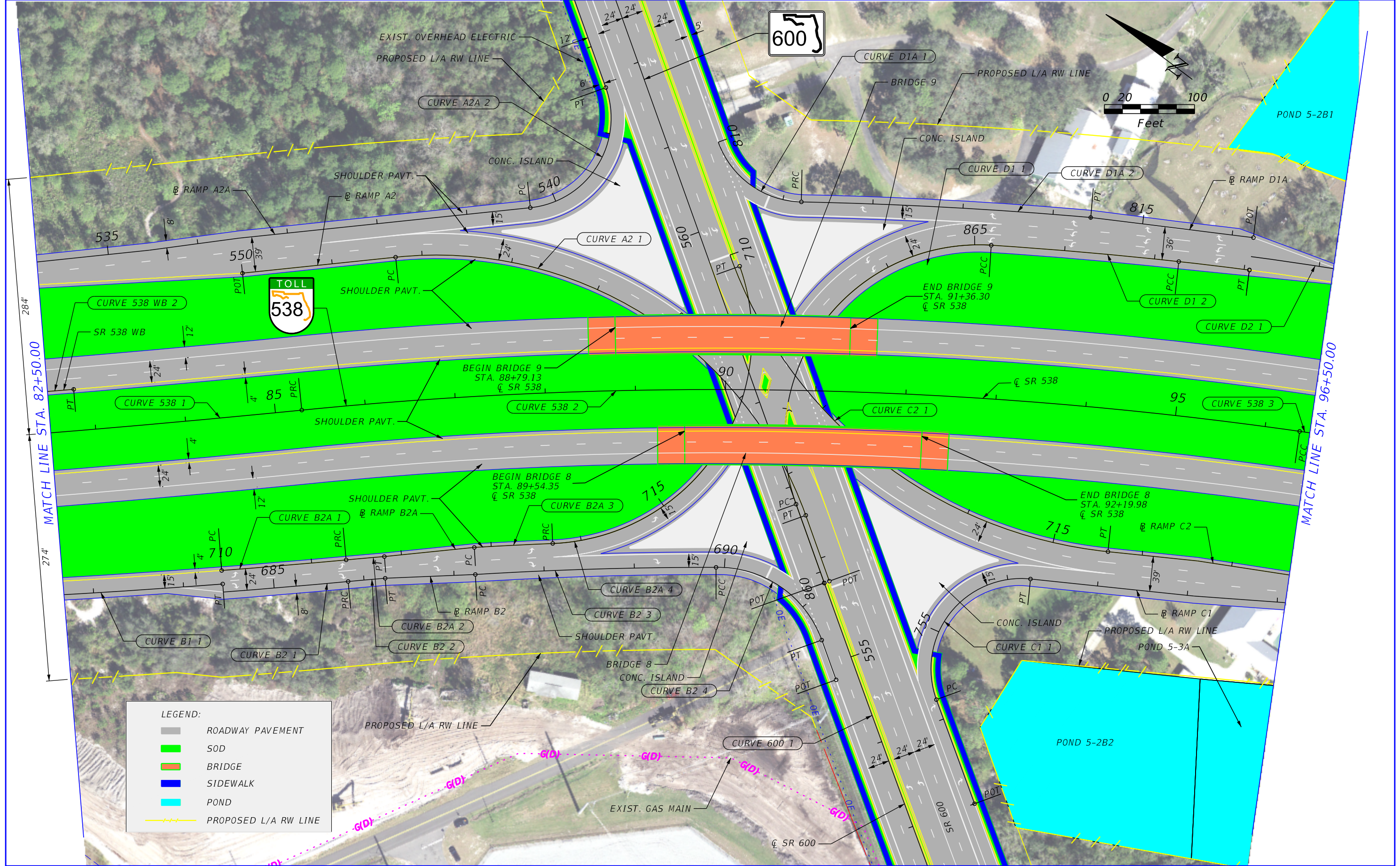
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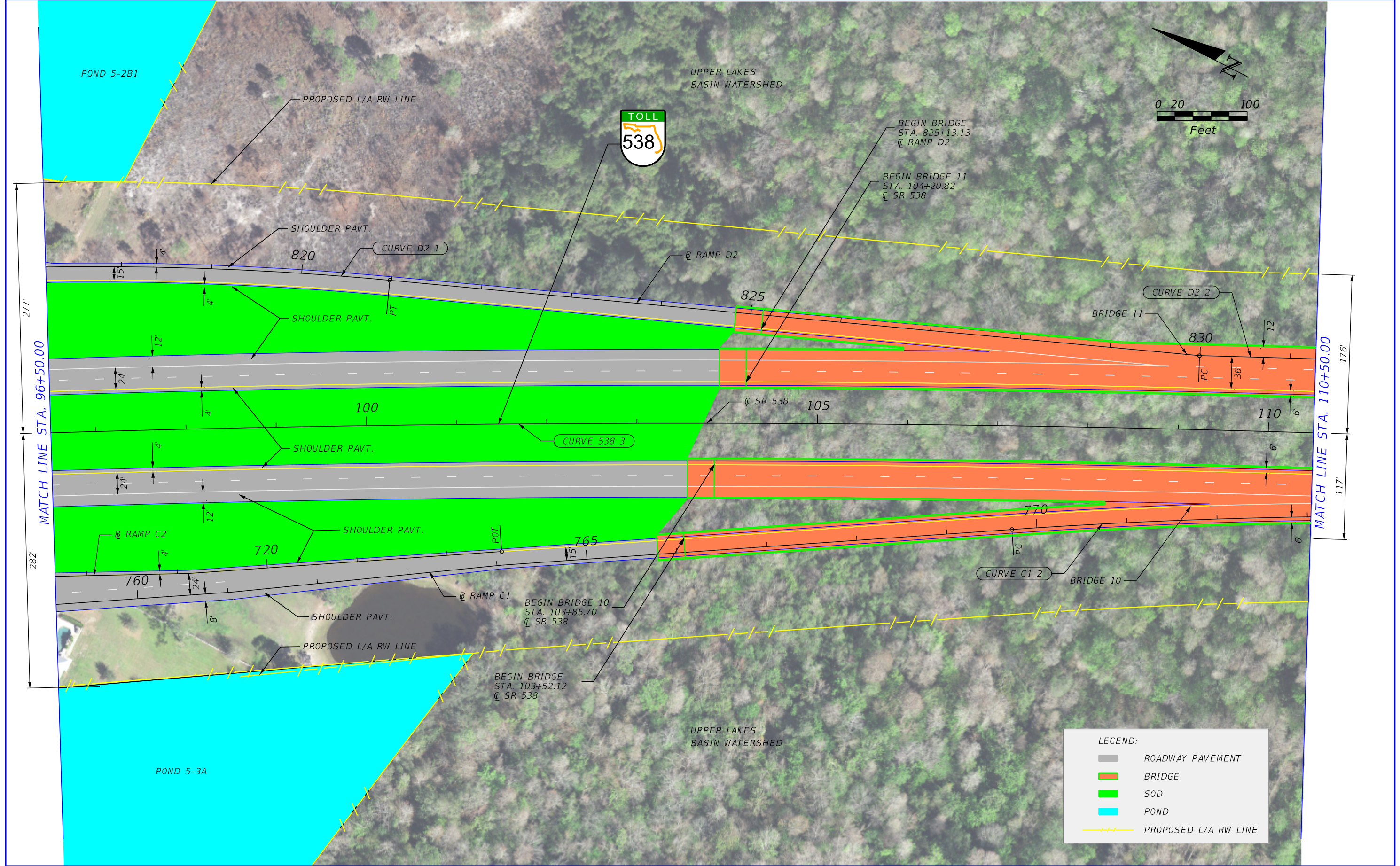
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ROADWAY PLAN

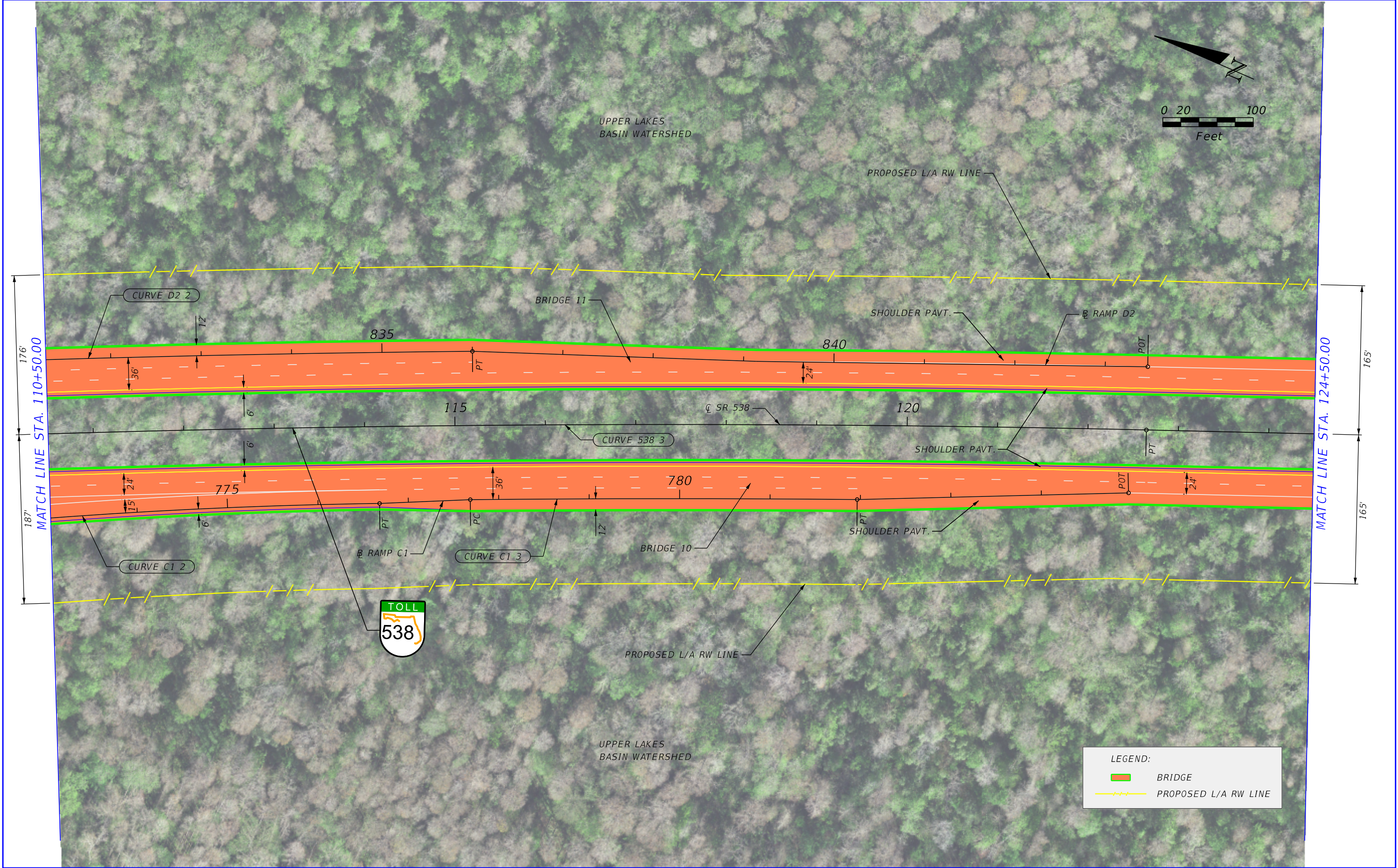
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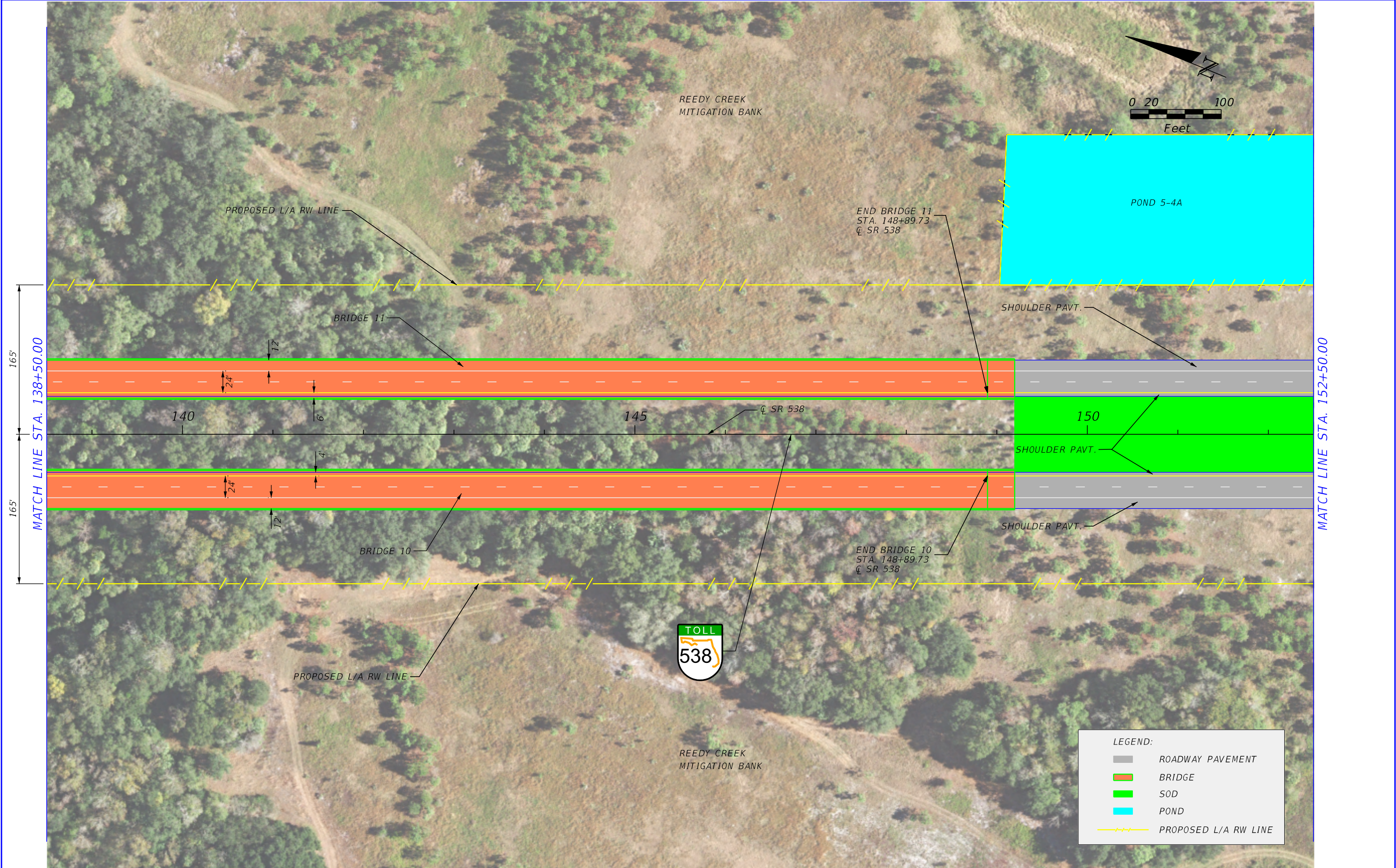
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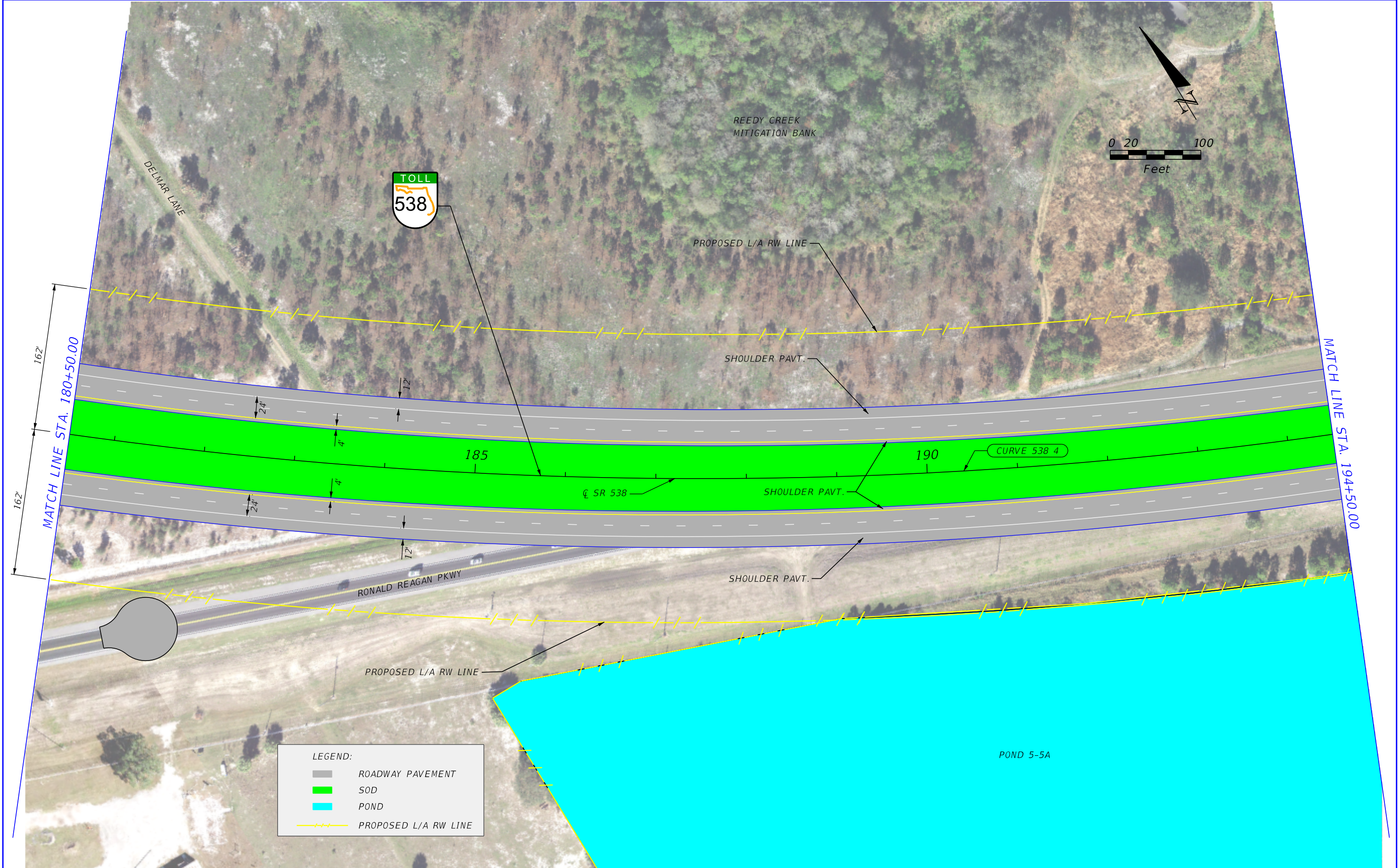






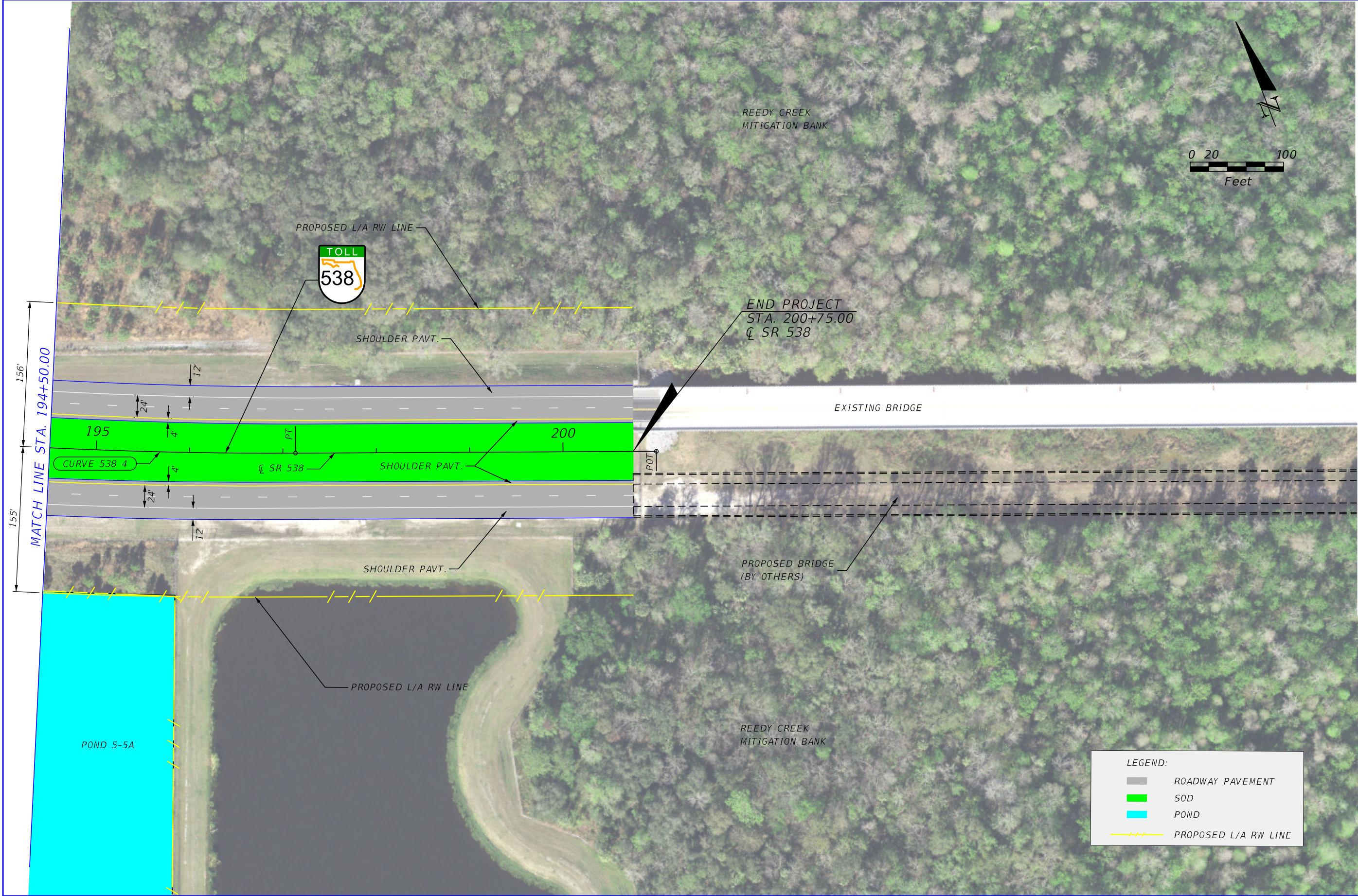
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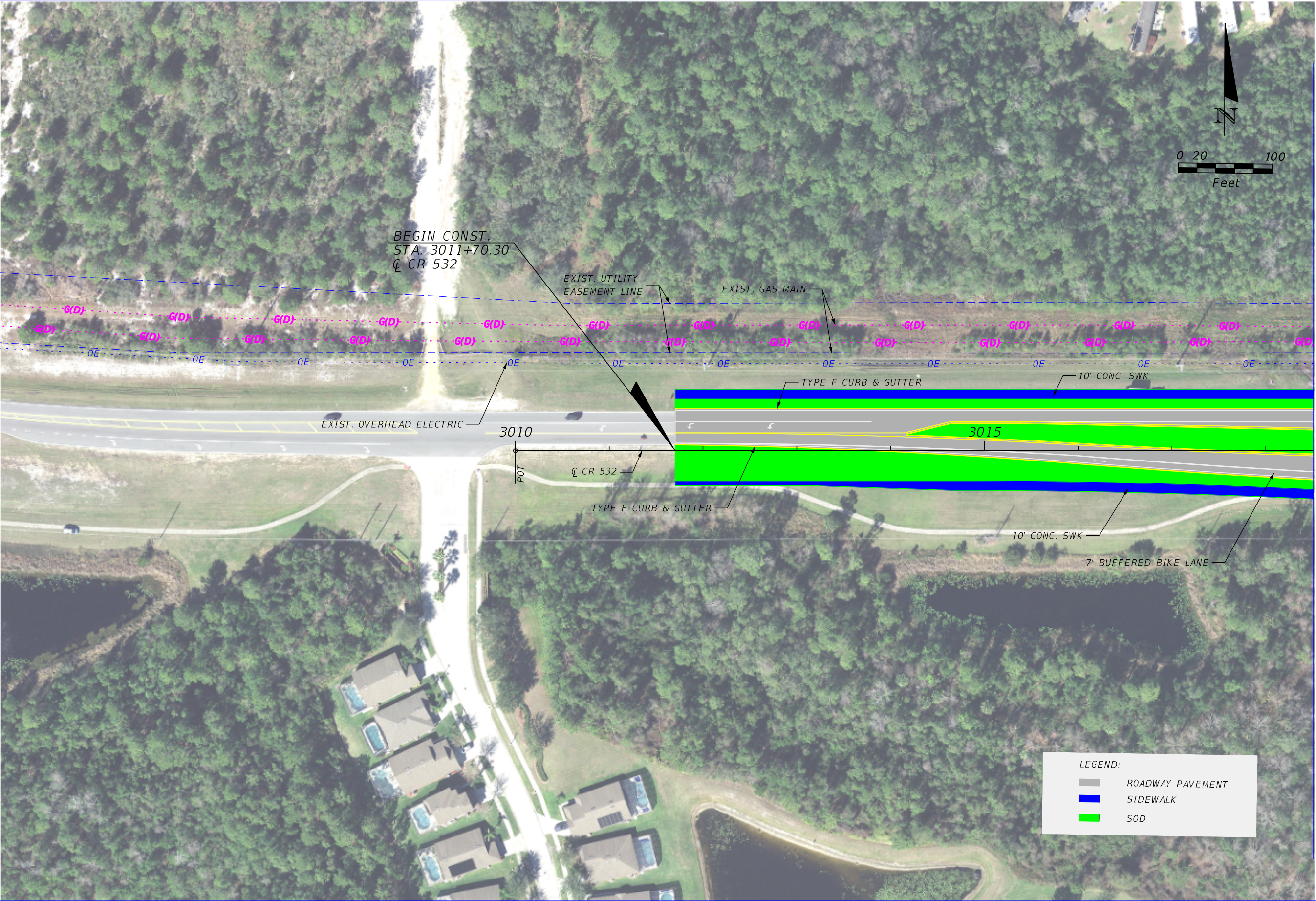
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
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DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		27
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MATCH LINE STA. 3018+51.00

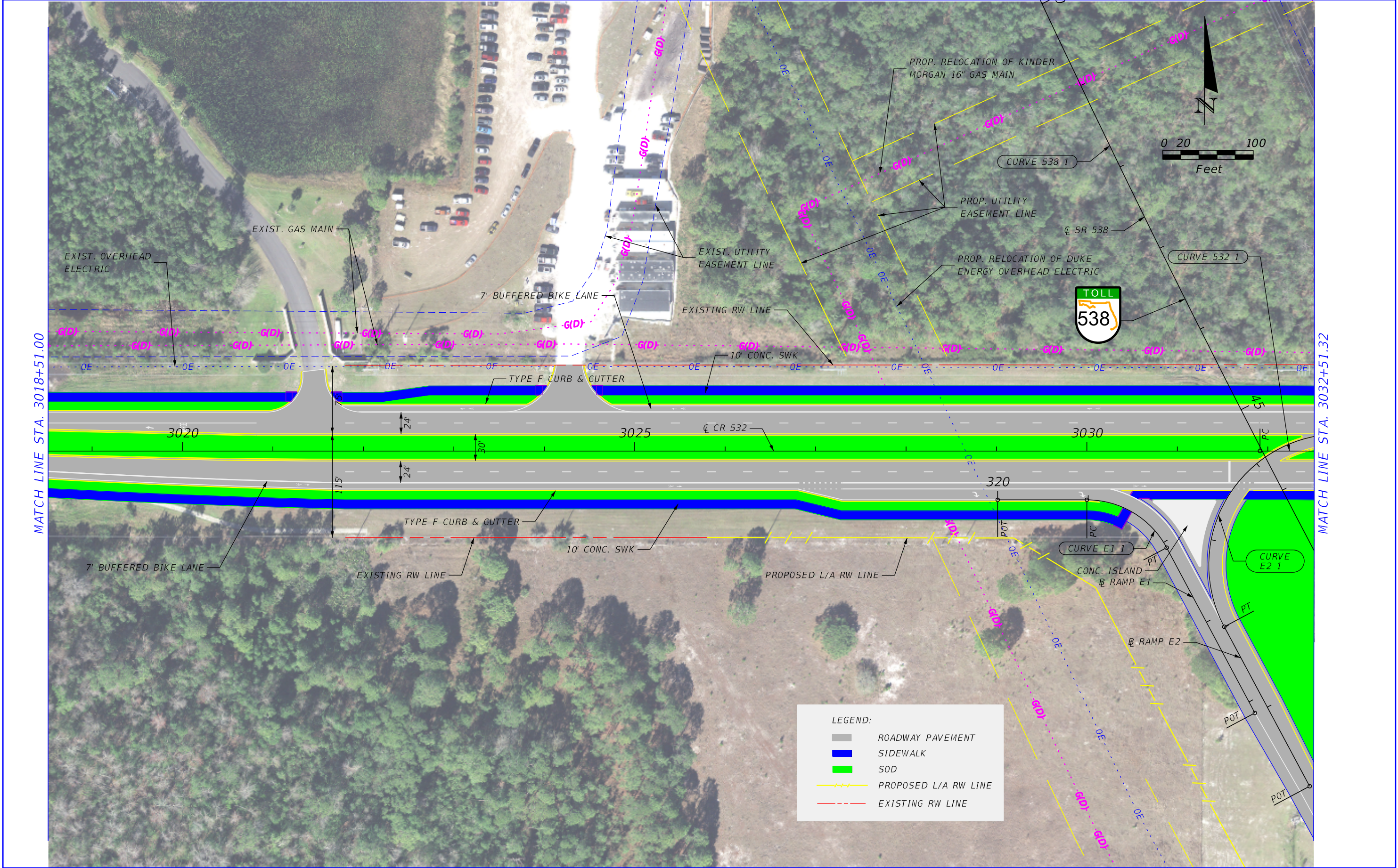
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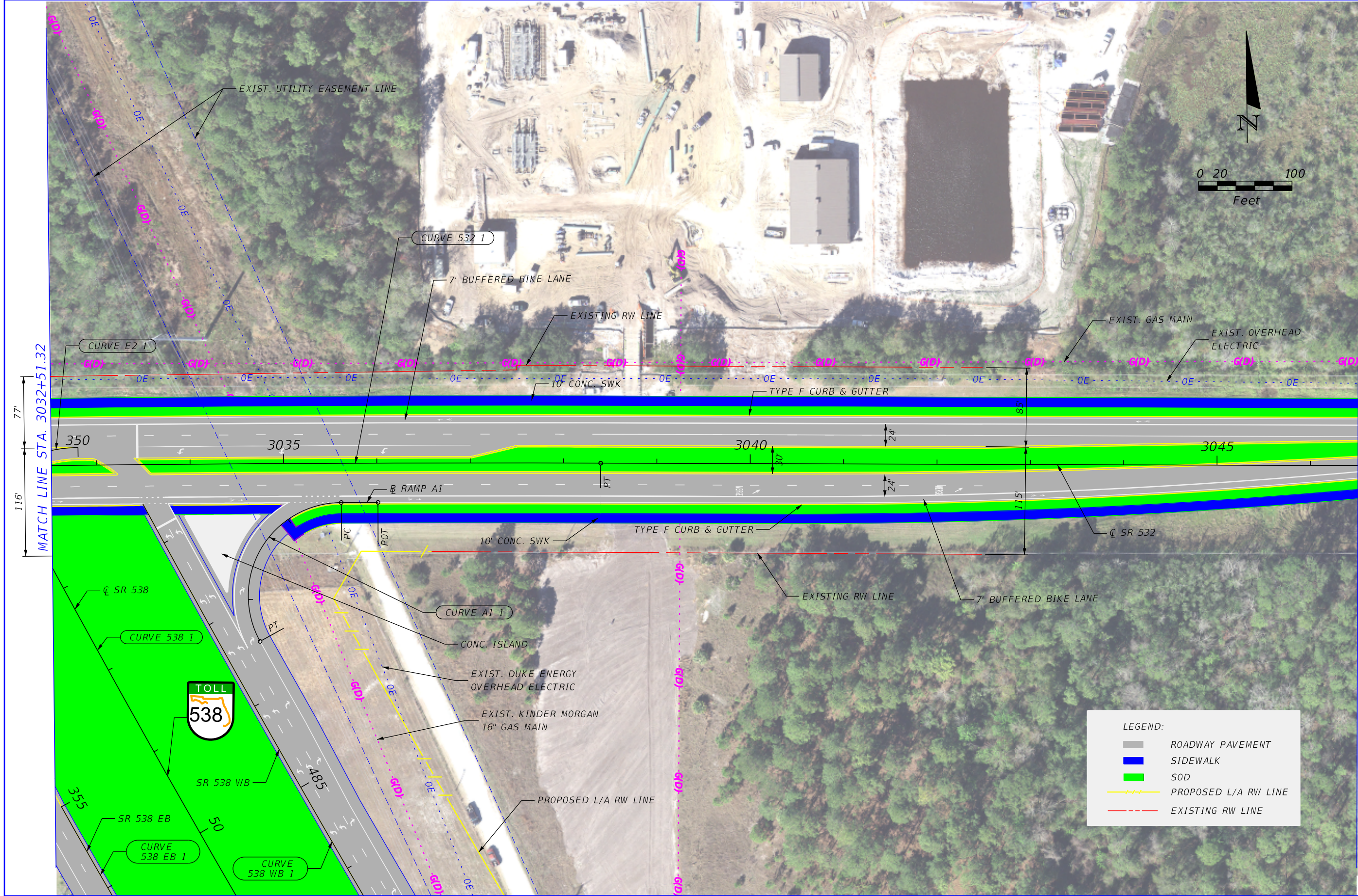
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LEGEND:

- ROADWAY PAVEMENT
- SIDEWALK
- SOD
- PROPOSED L/A RW LINE
- EXISTING RW LINE

REVISIONS			
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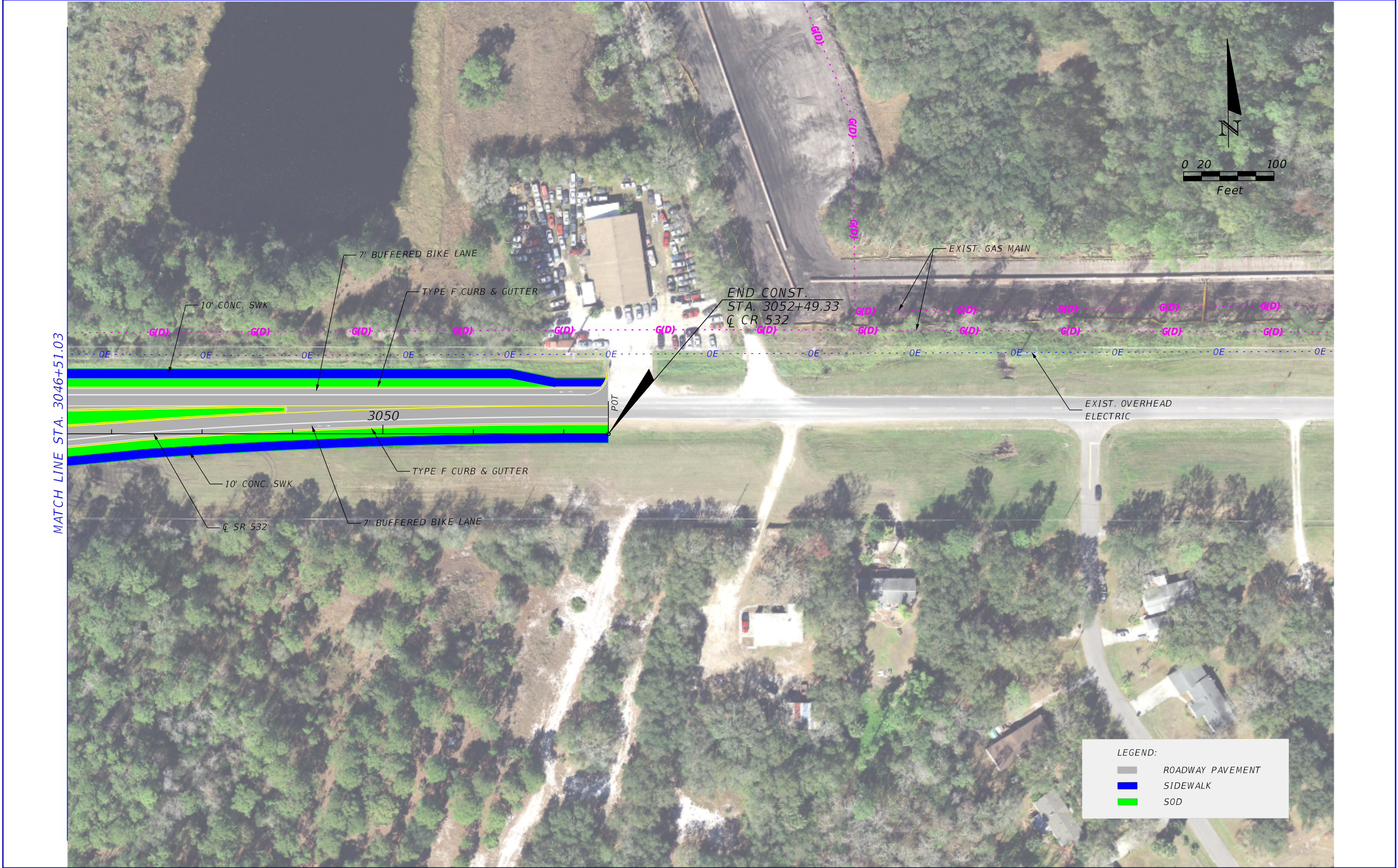
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SR 538	OSCEOLA POLK	599-224A

ROADWAY PLAN

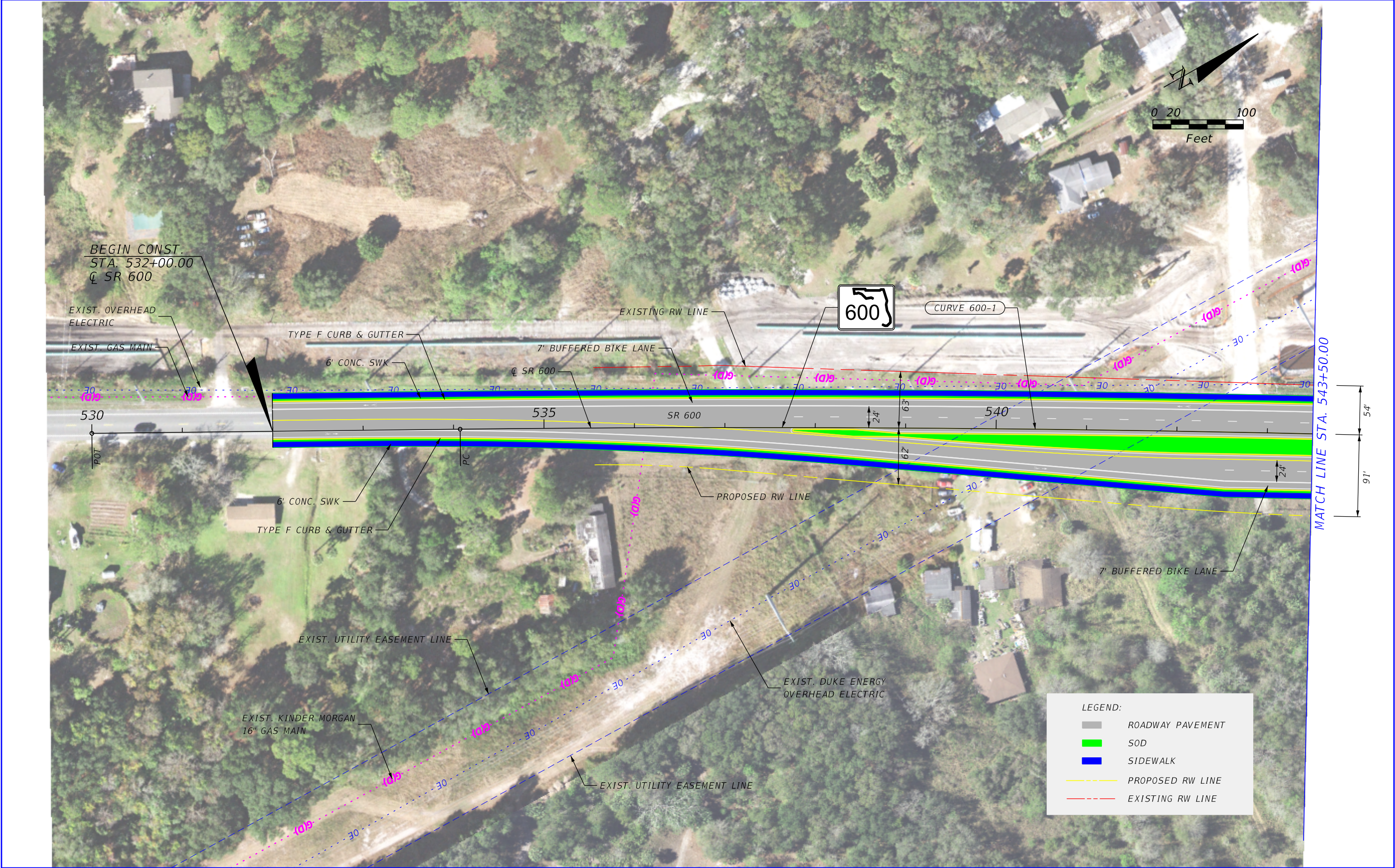
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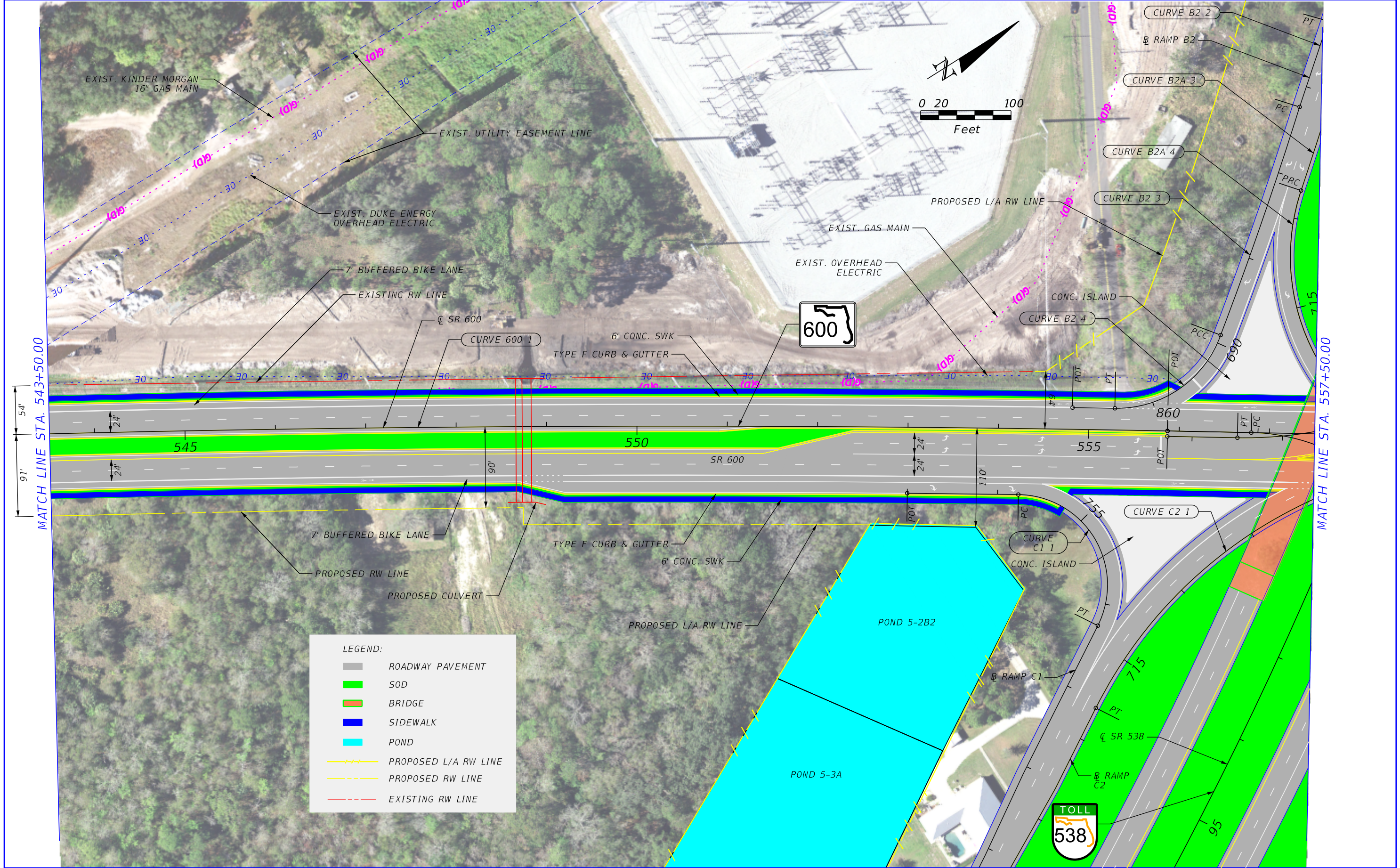
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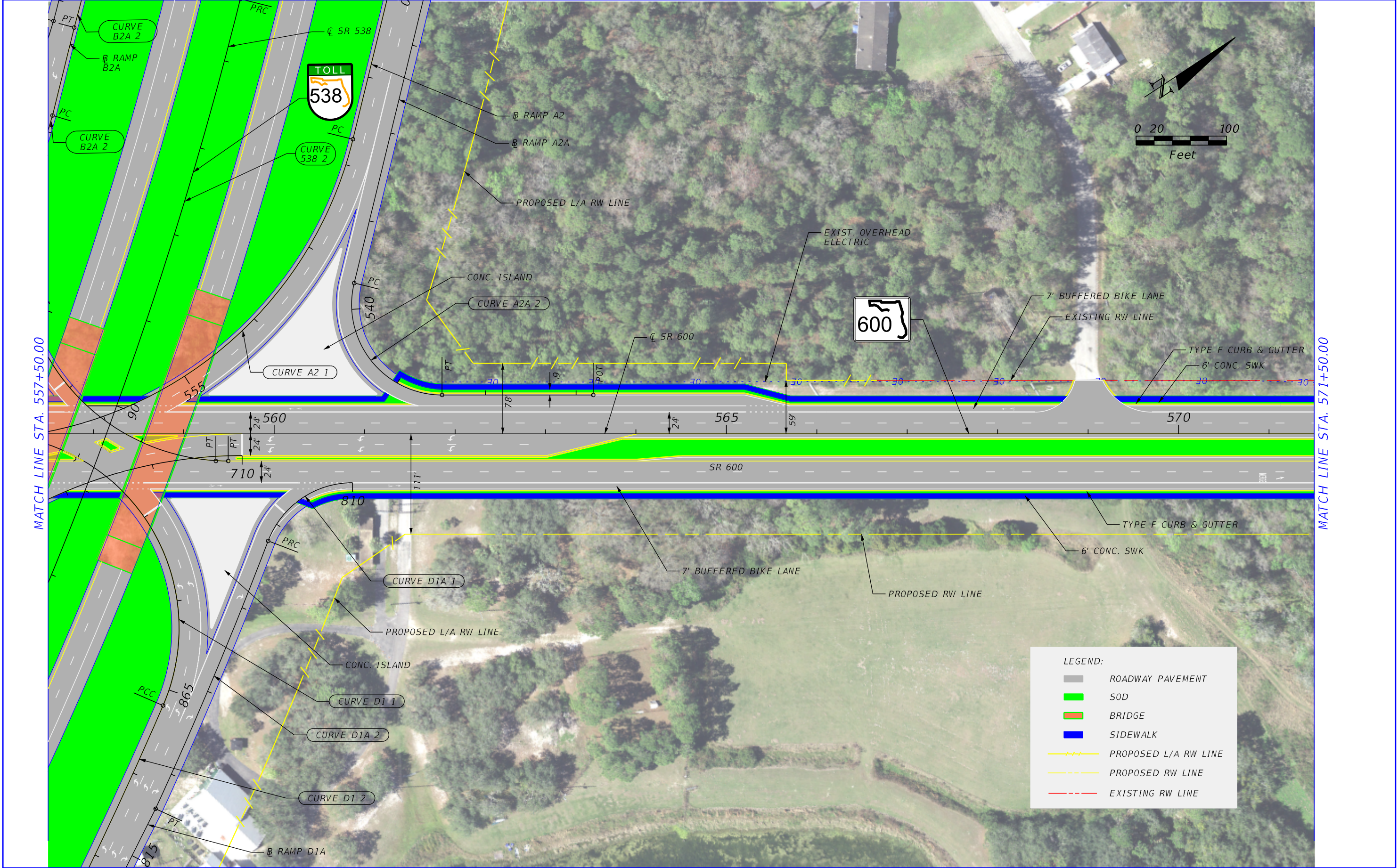
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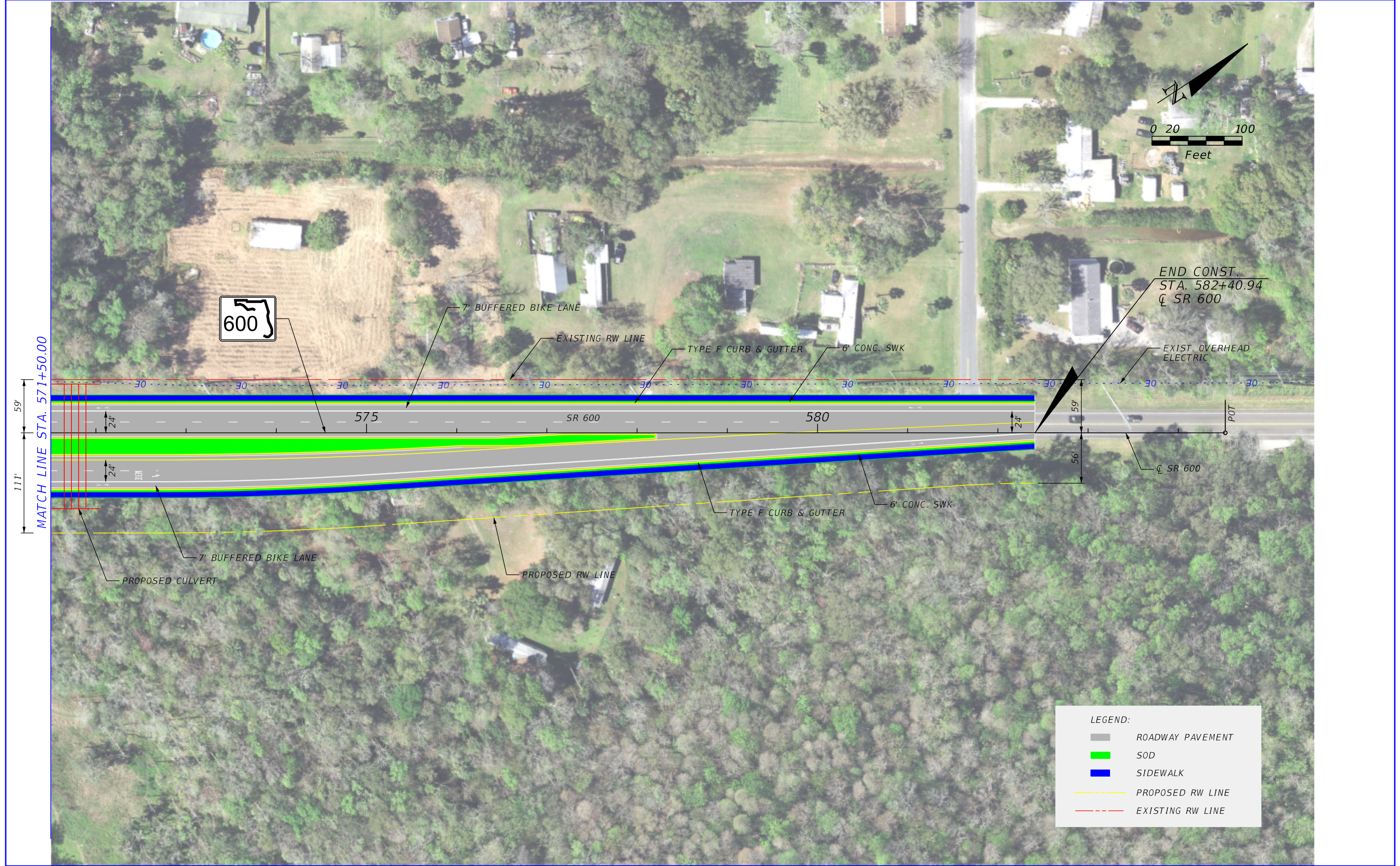
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ROADWAY PLAN

SHEET NO.  
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## **APPENDIX D**

### Cost Estimates



## SUMMARY

# ESTIMATED PROBABLE PROJECT COST Poinciana Parkway Expressway PD&E Study

### Alternative 1A

PREPARED BY INWOOD CONSULTING ENGINEERS

12/05/18

PROJECT CENTERLINE MILES: 3.558

NUMBER OF BRIDGES: 20

Mainline Roadway	\$128,966,165
US 17-92 INTERCHANGE	\$6,001,714
RONALD REAGAN PARKWAY (SLIP RAMPS)	\$10,569,195
Utilities	\$22,780,000
<b>TOTAL (2019 CONSTRUCTION COST)</b>	<b>\$168,317,073</b>
ENGINEERING / ADMINISTRATION / LEGAL (24%)	\$40,396,098
RIGHT - OF - WAY	See Matrix
MITIGATION (WETLAND & SPECIES)	See Matrix
TOLL COLLECTION EQUIPMENT	8 LANES @ \$ 210,000 \$1,680,000
<b>GRAND TOTAL PROJECT COST</b>	<b>\$210,393,171</b>

Values for Matrix	
ROUNDED	
Estimated Costs	
Roadway Construction	\$103,400,000
Bridges Construction	\$56,600,000
Interchanges Construction	\$20,600,000
Toll Collection Equipment	\$1,700,000
Right-of-Way Areas (including proposed ponds)	see matrix
Mitigation, Wetlands, & Wildlife	see matrix
Utilities	\$28,300,000
<b>Total Estimated Alternative Costs</b>	<b>\$210,600,000</b>



# ESTIMATED PROBABLE CONSTRUCTION COST

## Mainline Roadway

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** EXPRESSWAYS **</b>				
MAINLINE ROADWAY TYPICAL 4 - LANE DIVIDED	3.202	MI	\$5,533,245	\$17,717,651
<b>**OVERPASS BRIDGES **</b>				
<b>BRIDGES OVER DRIVEWAY/HOME ACCESS (SITE 1)</b>				
WB BRIDGE	3,328	SF	\$118	\$391,040
EB BRIDGE	4,171	SF	\$118	\$490,101
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	5,851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	5,851	SF	\$39	\$228,189
<b>BRIDGES OVER RAILROAD (SITE 2)</b>				
WB BRIDGE	23,445	SF	\$153	\$3,575,413
EB BRIDGE	18,325	SF	\$153	\$2,794,613
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	4,503	SF	\$39	\$175,633
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	4,503	SF	\$39	\$175,633
<b>BRIDGES OVER ROADWAY (SITE 3)</b>				
WB BRIDGE	4,207	SF	\$118	\$494,315
EB BRIDGE	4,207	SF	\$118	\$494,315
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$602,565	\$602,565
RETAINED EARTH WALL (BEGIN BRIDGE)	5,851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	5,851	SF	\$39	\$228,189
<b>BRIDGES OVER LAKE &amp; FLOODPLAIN (SITE 4)</b>				
WB BRIDGE	14,955	SF	\$153	\$2,280,587
EB BRIDGE	43,822	SF	\$153	\$6,682,809
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	4,503	SF	\$39	\$175,633
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$602,565	\$602,565
RETAINED EARTH WALL (END BRIDGE)	4,503	SF	\$39	\$175,633
<b>BRIDGES OVER FUTURE DEVELOPMENT &amp; INDUSTRIAL SITE ACCESS (SITE 5)</b>				
WB BRIDGE	3,255	SF	\$118	\$382,517
EB BRIDGE	3,255	SF	\$118	\$382,517
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	5,851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	5,851	SF	\$39	\$228,189
<b>BRIDGES OVER FUTURE DEVELOPMENT (SITE 6)</b>				
WB BRIDGE	3,115	SF	\$118	\$365,973
EB BRIDGE	3,115	SF	\$118	\$365,973
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	4,503	SF	\$39	\$175,633
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	4,503	SF	\$39	\$175,633
<b>BRIDGES OVER FUTURE DEVELOPMENT (SITE 7)</b>				
WB BRIDGE	4,651	SF	\$118	\$546,453
EB BRIDGE	4,651	SF	\$118	\$546,453
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$640,026	\$640,026
RETAINED EARTH WALL (BEGIN BRIDGE)	4,503	SF	\$39	\$175,633
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	4,503	SF	\$39	\$175,633
<b>BRIDGES OVER COMMUNITY ENTRANCE (SITE 8)</b>				
WB BRIDGE	3,273	SF	\$118	\$384,523
EB BRIDGE	3,273	SF	\$118	\$384,523

EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$576,868	\$576,868
RETAINED EARTH WALL (BEGIN BRIDGE)	5.851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$453,313	\$453,313
RETAINED EARTH WALL (END BRIDGE)	5.851	SF	\$39	\$228,189
<b>**INTERCHANGE BRIDGES **</b>				
<b>BRIDGES OVER US 17/92 INCLUDING RAMP (SITE 9)</b>				
WB BRIDGE	12.010	SF	\$153	\$1,831,566
EB BRIDGE	9.143	SF	\$153	\$1,394,380
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$1,122,199	\$1,122,199
RETAINED EARTH WALL (BEGIN BRIDGE)	5.851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$1,122,199	\$1,122,199
RETAINED EARTH WALL (END BRIDGE)	5.851	SF	\$39	\$228,189
<b>**ADDITIONAL ROADWAY IMPROVEMENTS **</b>				
<b>CUL DE SAC THOURGH RESIDENTIAL NEIGHBORHOODS</b>				
TYPICAL 40' RAD. CUL-DE-SAC	3	EA	\$29,874	\$89,623
EXISTING CUL-DE-SAC DEMO	0.189	MI	\$192,334	\$36,427
<b>ROADWAY RE-ALIGNMENT (SERENO NEIGHBORHOOD)</b>				
CLOSED DRAINAGE 2 LANE UNDIVIDED	0.170	MI	\$2,212,699	\$377,165
TYPICAL 2-LANE DRIVEWAY TURNOUT ON URBAN ROADWAY	2	EA	\$13,465	\$26,930
2 LANE ROADWAY DEMOLITION - CLOSED DRAINAGE	0.265	MI	\$192,334	\$50,998
<b>ROADWAY RE-ALIGNMENT (PLANNED NEIGHBORHOOD - TIVOLI)</b>				
CLOSED DRAINAGE 2 LANE UNDIVIDED	0.218	MI	\$2,212,699	\$481,933
TYPICAL 2-LANE DRIVEWAY TURNOUT ON URBAN ROADWAY	1	EA	\$13,465	\$13,465
2 LANE ROADWAY DEMOLITION - CLOSED DRAINAGE	0.161	MI	\$192,334	\$30,963
<b>POINCIANA PARKWAY - ON/OFF RAMPS TO CR 532</b>				
<b>WB OFF RAMP</b>				
DECELERATION LANE	0.162	MI	\$435,328	\$70,493
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - LANES REMAIN SAME	1	EA	\$129,358	\$129,358
1 LANE RAMP	0.227	MI	\$1,259,834	\$285,371
TWO LANE RAMPS	0.176	MI	\$1,712,621	\$301,655
<b>EB ON RAMP</b>				
TWO LANE RAMPS	0.225	MI	\$1,712,621	\$384,691
1 LANE RAMP	0.174	MI	\$1,259,834	\$219,517
ACCELERATION LANE	0.177	MI	\$435,328	\$77,172
TYPICAL 1 LANE ON-RAMP TAPER W/GORE - LANES REMAIN SAME	1	EA	\$219,329	\$219,329
<b>CR 532 IMPROVEMENTS</b>				
CLOSED DRAINAGE 4 LANE DIVIDED	0.246	MI	\$5,248,056	\$1,292,135
ADDITIONAL LANE (RIGHT TURN TO SB ON-RAMP)	0.123	MI	\$405,136	\$49,875
ADDITIONAL LANES (LEFT TURN TO SB ON-RAMP)	0.085	MI	\$405,136	\$34,529
2 LANE TRANSITION TO 4 LANES - OPEN DRAINAGE - 1200'	2	EA	\$652,309	\$1,304,618
OVERHEAD CANTILEVER SIGNS	2	EA	\$80,000	\$160,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
SIGNALIZATION PER INTERCHANGE	2	EA	\$142,064	\$284,128
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD TRUSS SIGNS	2	EA	\$250,000	\$500,000
OVERHEAD CANTILEVER SIGNS	2	EA	\$80,000	\$160,000
MULTIPOST SIGNS	6	EA	\$5,500	\$33,000
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	3.558	MI	\$350,000	\$1,245,175
DYNAMIC MESSAGE SIGNS	1	EA	\$250,000	\$250,000
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	24.15	AC	\$177,813	\$4,293,878
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	1,568,650	CY	\$14	\$21,333,644
NOISE WALLS	3,900	LF	\$520	\$2,028,000
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	\$1,750,000	\$1,750,000
SUB-TOTAL				\$96,713,081
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$483,565
MAINTENANCE OF TRAFFIC (1%)				\$967,131
MOBILIZATION (9.5%)				\$9,187,743
SUB-TOTAL ROADWAY				\$65,892,159



ROADWAY CONTINGENCY (20%)	\$13,178,432
SUB-TOTAL BRIDGES	\$41,459,361
BRIDGE CONTINGENCY (10%)	\$4,145,936
SUB-TOTAL	\$124,675,888
AESTHETICS CONTINGENCY (3%)	\$3,740,277
RELOCATE UTILITIES	See Matrix
ALLOWANCE FOR DISPUTES REVIEW BOARD	\$50,000
WORK ORDER ALLOWANCE	\$500,000
<b>TOTAL (2019 CONSTRUCTION COST)</b>	<b>\$128,966,165</b>

**ESTIMATED PROBABLE CONSTRUCTION COST**  
**RONALD REAGAN PARKWAY (SLIP RAMPS)**

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** EXPRESSWAYS **</b>				
ADJUSTMENT FOR MAINLINE LENGTH FROM 1A (REMOVAL DUE TO BRIDGES)	-0.058	MI	\$5,533,245	-\$322,668
<b>**OVERPASS BRIDGES **</b>				
<u>BRIDGES OVER ROADWAY (RONALD REAGAN PARKWAY SLIP RAMP) (SITE 10)</u>				
WB BRIDGE	13,039	SF	\$153	\$1,988,437
EB BRIDGE	13,235	SF	\$153	\$2,018,368
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	4,503	SF	\$39	\$175,633
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$576,868	\$576,868
RETAINED EARTH WALL (END BRIDGE)	4,503	SF	\$39	\$175,633
<b>**INTERCHANGE BRIDGES **</b>				
<b>**ADDITIONAL ROADWAY IMPROVEMENTS **</b>				
<u>RONALD REAGAN PARKWAY (SLIP RAMPS)</u>				
EB ON-RAMP (1 LANE)	0.412	MI	\$1,259,834	\$519,204
TYPICAL 1 LANE ON-RAMP TAPER W/GORE - LANES REMAIN SAME	1.000	EA	\$219,329	\$219,329
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - LANES REMAIN SAME	1.000	EA	\$129,358	\$129,358
ACCELERATION LANE	0.152	MI	\$435,328	\$65,959
WB OFF-RAMP (1 LANE)	0.348	MI	\$1,259,834	\$437,840
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - LANES REMAIN SAME	1.000	EA	\$129,358	\$129,358
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	0.879	MI	\$277,400	\$243,828
OPEN DRAINAGE 2 LANE UNDIVIDED	0.119	MI	\$1,597,790	\$190,645
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD CANTILEVER SIGNS	3	EA	\$80,000	\$240,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	\$330,000	\$330,000
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	0.25	AC	\$177,813	\$45,068
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	-	CY	\$14	\$0
SUB-TOTAL				\$7,990,734
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$39,954
MAINTENANCE OF TRAFFIC (3%)				\$239,722
MOBILIZATION (9.5%)				\$759,120
SUB-TOTAL ROADWAY				\$3,288,717
ROADWAY CONTINGENCY (20%)				\$657,743
SUB-TOTAL BRIDGES				\$5,740,812
BRIDGE CONTINGENCY (10%)				\$574,081
SUB-TOTAL				\$10,261,354
AESTHETICS CONTINGENCY (3%)				\$307,841
RELOCATE UTILITIES				See Matrix
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$10,569,195</b>



**ESTIMATED PROBABLE CONSTRUCTION COST**

**US 17-92 INTERCHANGE**

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** RAMPS **</b>				
ADDITIONAL IN-FIELD CLEARING & GRUBBING	4.803	AC	\$17,000	\$81,651
<u>WB ON-RAMP</u>				
ONE LANE RAMPS (OPEN DRAINAGE)	0.359	MI	\$1,259,834	\$451,679
TYPICAL 1 LANE ON-RAMP TAPER W/GORE - MAINLINE UNCHANGED	1	EA	\$219,329	\$219,329
ACCELERATION LANE	0.247	MI	\$435,328	\$107,595
<u>WB OFF-RAMP</u>				
N/A				
<u>EB ON-RAMP</u>				
ACCELERATION LANE	0.250	MI	\$435,328	\$108,832
ONE LANE RAMPS (OPEN DRAINAGE)	0.096	MI	\$1,259,834	\$120,495
TWO LANE RAMPS (OPEN DRAINAGE)	0.157	MI	\$1,712,621	\$268,570
TYPICAL 1 LANE ON-RAMP TAPER W/GORE - MAINLINE UNCHANGED	1	EA	\$219,329	\$219,329
<u>EB OFF-RAMP</u>				
ONE LANE RAMPS (OPEN DRAINAGE)	0.215	MI	\$1,259,834	\$270,578
<b>** ARTERIAL ROADS **</b>				
<u>US 17-92 IMPROVEMENTS</u>				
2 LANE ROADWAY (UNDIVIDED) - TO ON RAMPS	0.157	MI	\$1,597,790	\$251,168
ADDITIONAL EB LANE & SHOULDER - TO ON RAMPS	0.309	MI	\$798,895	\$246,629
ADDITIONAL WB LANE FROM SB OFF RAMP	0.234	MI	\$798,895	\$186,560
<b>** INTERSECTION SIGNALIZATION **</b>				
SIGNALIZATION PER INTERCHANGE	0	EA	\$142,064	\$0
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	1.323	MI	\$277,400	\$366,977
OVERHEAD LIGHTING (INCLUDES WIRING) (2 SIDES, 200' SPACING)	0.379	MI	\$554,800	\$210,152
OVERHEAD TRUSS SIGNS	0	EA	\$250,000	\$0
OVERHEAD CANTILEVER SIGNS	4	EA	\$80,000	\$320,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	\$330,000	\$330,000
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	-	CY	\$11	\$0
RAMP TOLL GANTRY (2 RAMPS @ 1 LANE EA, 1 TRUSS AND EQUIP. BLDG) (SB ON RAMP ONLY)	1	EA	\$1,250,000	\$625,000
SUB-TOTAL				\$4,406,545
EROSION CONTROL / TEMPORARY DRAINAGE (1%)				\$44,065
MAINTENANCE OF TRAFFIC (3%)				\$132,196
MOBILIZATION (9.5%)				\$418,622
SUB-TOTAL				\$5,001,428
ROADWAY CONTINGENCY (20%)				\$1,000,286
RELOCATE UTILITIES				See Matrix
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$6,001,714</b>

## SUMMARY

# ESTIMATED PROBABLE PROJECT COST Poinciana Parkway Expressway PD&E Study

### Alternative 4A

PREPARED BY INWOOD CONSULTING ENGINEERS

12/05/18

PROJECT CENTERLINE MILES: 3.036

NUMBER OF BRIDGES: 13

Mainline Roadway	\$132,992,865
US 17-92 INTERCHANGE	\$21,749,811
Utilities	\$37,580,000
<b>TOTAL (2019 CONSTRUCTION COST)</b>	<b>\$192,322,676</b>
ENGINEERING / ADMINISTRATION / LEGAL (24%)	\$46,157,442
RIGHT - OF - WAY	See Matrix
MITIGATION (WETLAND & SPECIES)	See Matrix
TOLL COLLECTION EQUIPMENT	10 LANES @ \$ 210,000 \$2,100,000
<b>GRAND TOTAL PROJECT COST</b>	<b>\$240,580,118</b>



Values for Matrix	
ROUNDED	
Estimated Costs	
Roadway Construction	\$66,800,000
Bridges Construction	\$98,200,000
Interchanges Construction	\$27,000,000
Toll Collection Equipment	\$2,100,000
Right-of-Way Areas (including proposed ponds)	see matrix
Mitigation, Wetlands, & Wildlife	see matrix
Utilities	\$46,600,000
<b>Total Estimated Alternative Costs</b>	<b>\$240,700,000</b>

# ESTIMATED PROBABLE CONSTRUCTION COST

## Mainline Roadway

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** EXPRESSWAYS **</b>				
MAINLINE ROADWAY TYPICAL 4 - LANE DIVIDED	2.042	MI	\$5,533,245	\$11,296,283
<b>**OVERPASS BRIDGES **</b>				
<b>BRIDGES OVER CSX RAIL ROAD (SITE 1)</b>				
WB BRIDGE	6,580	SF	\$138	\$904,750
EB BRIDGE	4,901	SF	\$138	\$673,846
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$1,182,099	\$1,182,099
RETAINED EARTH WALL (BEGIN BRIDGE)	10,487	SF	\$39	\$408,978
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$1,536,528	\$1,536,528
RETAINED EARTH WALL (END BRIDGE)	10,487	SF	\$39	\$408,978
<b>BRIDGES OVER ROADWAY (OLD KISSIMMEE RD/OLD TAMPA HWY.) (SITE 2)</b>				
WB BRIDGE	3,767	SF	\$138	\$517,910
EB BRIDGE	3,735	SF	\$138	\$513,510
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$849,519	\$849,519
RETAINED EARTH WALL (BEGIN BRIDGE)	6,483	SF	\$39	\$252,821
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$864,820	\$864,820
RETAINED EARTH WALL (END BRIDGE)	6,483	SF	\$39	\$252,821
<b>BRIDGES OVER WETLAND (SITE 3)</b>				
WB BRIDGE	214,902	SF	\$123	\$26,325,479
EB BRIDGE	225,271	SF	\$123	\$27,595,657
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$516,391	\$516,391
RETAINED EARTH WALL (BEGIN BRIDGE)	4,127	SF	\$39	\$160,970
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$552,497	\$552,497
RETAINED EARTH WALL (END BRIDGE)	4,127	SF	\$39	\$160,970
<b>BRIDGES OVER ROADWAY (ACCESS ROAD) (SITE 4)</b>				
WB BRIDGE	1,071	SF	\$118	\$125,836
EB BRIDGE	1,071	SF	\$118	\$125,836
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$824,109	\$824,109
RETAINED EARTH WALL (BEGIN BRIDGE)	6,115	SF	\$39	\$238,481
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$584,431	\$584,431
RETAINED EARTH WALL (END BRIDGE)	6,115	SF	\$39	\$238,481
<b>**INTERCHANGE BRIDGES **</b>				
<b>MAINLINE BRIDGES OVER US 17/92 (SITE 5)</b>				
WB BRIDGE	12,479	SF	\$153	\$1,903,071
EB BRIDGE	10,293	SF	\$153	\$1,569,735
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$1,122,199	\$1,122,199
RETAINED EARTH WALL (BEGIN BRIDGE)	5,851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$1,122,199	\$1,122,199
RETAINED EARTH WALL (END BRIDGE)	5,851	SF	\$39	\$228,189
<b>**ADDITIONAL ROADWAY IMPROVEMENTS **</b>				
<b>CUL DE SAC (LABOR CAMP ROAD)</b>				
TYPICAL 40' RAD. CUL-DE-SAC	1	EA	\$29,874	\$29,874
<b>CR 532 IMPROVEMENTS</b>				
CLOSED DRAINAGE 4 LANE DIVIDED	0.246	MI	\$5,248,056	\$1,292,135
ADDITIONAL LANE (RIGHT TURN TO SB ON-RAMP)	0.123	MI	\$405,136	\$49,875
ADDITIONAL LANES (LEFT TURN TO SB ON-RAMP)	0.085	MI	\$405,136	\$34,529
2 LANE TRANSITION TO 4 LANES - OPEN DRAINAGE - 1200'	2	EA	\$652,309	\$1,304,618
OVERHEAD CANTILEVER SIGNS	2	EA	\$80,000	\$160,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
SIGNALIZATION PER INTERCHANGE	2	EA	\$142,064	\$284,128
<b>DEMO EXISTING PPE</b>				
2 LANE ROADWAY DEMOLITION - CLOSED DRAINAGE	0.398	MI	\$192,334	\$76,496
<b>** ADDITIONAL ITEMS **</b>				



OVERHEAD TRUSS SIGNS	2	EA	\$250,000	\$500,000
OVERHEAD CANTILEVER SIGNS	2	EA	\$80,000	\$160,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	3.036	MI	\$350,000	\$1,062,589
DYNAMIC MESSAGE SIGNS	1	EA	\$250,000	\$250,000
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	21.61	AC	\$177,813	\$3,842,953
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	574,510	CY	\$14	\$7,813,340
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	\$1,750,000	\$1,750,000
SUB-TOTAL				\$101,940,117
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$509,701
MAINTENANCE OF TRAFFIC (1%)				\$1,019,401
MOBILIZATION (9.5%)				\$9,684,311
SUB-TOTAL ROADWAY				\$41,164,234
ROADWAY CONTINGENCY (20%)				\$8,232,847
SUB-TOTAL BRIDGES				\$71,989,296
BRIDGE CONTINGENCY (10%)				\$7,198,930
SUB-TOTAL				\$128,585,306
AESTHETICS CONTINGENCY (3%)				\$3,857,559
RELOCATE UTILITIES				See Matrix
ALLOWANCE FOR DISPUTES REVIEW BOARD				\$50,000
WORK ORDER ALLOWANCE				\$500,000
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$132,992,865</b>

## ESTIMATED PROBABLE CONSTRUCTION COST

## US 17-92 INTERCHANGE

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** RAMPS **</b>				
ADDITIONAL IN-FIELD CLEARING & GRUBBING	11.320	AC	\$17,000	\$192,440
<u>WB ON-RAMP</u>				
ACCELERATION LANE	0.408	MI	\$435,328	\$177,676
ONE LANE RAMPS (OPEN DRAINAGE)	0.203	MI	\$1,259,834	\$255,784
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$418,493	\$418,493
RETAINED EARTH WALL (BEGIN BRIDGE)	2159	SF	\$39	\$84,214
LEVEL 2 BRIDGE (BRIDGE OVER OLD KISSIMMEE RD/OLD TAMPA HWY.) (SITE 6)	2539	SF	\$138	\$349,181
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$362,953	\$362,953
RETAINED EARTH WALL (END BRIDGE)	2159	SF	\$39	\$84,214
TWO LANE RAMPS (OPEN DRAINAGE)	0.193	MI	\$1,712,621	\$330,199
<u>WB OFF-RAMP</u>				
DECELERATION LANE	0.173	MI	\$435,328	\$75,358
ONE LANE RAMPS (OPEN DRAINAGE)	0.242	MI	\$1,259,834	\$304,460
THREE LANE RAMPS (OPEN DRAINAGE)	0.180	MI	\$2,270,992	\$408,606
<u>EB ON-RAMP</u>				
ACCELERATION LANE	0.159	MI	\$435,328	\$69,257
ONE LANE RAMPS (OPEN DRAINAGE)	0.239	MI	\$1,259,834	\$301,119
TWO LANE RAMPS (OPEN DRAINAGE)	0.234	MI	\$1,712,621	\$399,936
<u>EB OFF-RAMP</u>				
ONE LANE RAMPS (OPEN DRAINAGE)	0.343	MI	\$1,259,834	\$431,875
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$483,053	\$483,053
RETAINED EARTH WALL (BEGIN BRIDGE)	3329	SF	\$39	\$129,834
LEVEL 2 BRIDGE (BRIDGE OVER CSX RAIL ROAD) (SITE 7)	3432	SF	\$138	\$471,960
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$631,380	\$631,380
RETAINED EARTH WALL (END BRIDGE)	3329	SF	\$39	\$129,834
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$410,247	\$410,247
RETAINED EARTH WALL (BEGIN BRIDGE)	2089	SF	\$39	\$81,479
LEVEL 2 BRIDGE (BRIDGE OVER OLD KISSIMMEE RD/OLD TAMPA HWY.) (SITE 6)	2640	SF	\$138	\$363,046
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$356,064	\$356,064
RETAINED EARTH WALL (END BRIDGE)	2089	SF	\$39	\$81,479
TWO LANE RAMPS (OPEN DRAINAGE)	0.177	MI	\$1,712,621	\$302,304
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - MAINLINE UNCHANGED	1	EA	\$129,358	\$129,358
<b>** ARTERIAL ROADS **</b>				
<u>US 17-92 IMPROVEMENTS</u>				
OPEN DRAINAGE 4 LANE DIVIDED	0.513	MI	\$3,077,301	\$1,579,448
ADDITIONAL LANE (RIGHT TURN TO EB ON-RAMP)	0.067	MI	\$405,136	\$27,086
ADDITIONAL LANES (TWO LEFT TURN TO EB ON-RAMP)	0.100	MI	\$810,272	\$81,334
ADDITIONAL LANES (RIGHT TURN TO WB ON-RAMP)	0.076	MI	\$405,136	\$30,692
ADDITIONAL LANES (TWO LEFT TURNS TO WB ON-RAMP)	0.095	MI	\$810,272	\$76,730
2 LANE TRANSITION TO 4 LANES - OPEN DRAINAGE - 1200'	2.000	EA	\$668,801	\$1,337,603
<b>** INTERSECTION SIGNALIZATION **</b>				
SIGNALIZATION PER INTERCHANGE	2	EA	\$142,064	\$284,128
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	1.809	MI	\$277,400	\$501,894
OVERHEAD LIGHTING (INCLUDES WIRING) (2 SIDES, 200' SPACING)	1.231	MI	\$554,800	\$682,992
OVERHEAD TRUSS SIGNS	0	EA	\$250,000	\$0
OVERHEAD CANTILEVER SIGNS	7	EA	\$80,000	\$560,000



MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	\$330,000	\$330,000
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	-	CY	\$11	\$0
RAMP TOLL GANTRY (2 RAMPS @ 1 LANE EA, 1 TRUSS AND EQUIP. BLDG)	2	EA	\$1,250,000	\$2,500,000
SUB-TOTAL				\$15,829,709
EROSION CONTROL / TEMPORARY DRAINAGE (1%)				\$158,297
MAINTENANCE OF TRAFFIC (3%)				\$474,891
MOBILIZATION (9.5%)				\$1,503,822
SUB-TOTAL				\$17,966,720
ROADWAY CONTINGENCY (20%)				\$2,705,858
BRIDGE CONTINGENCY (10%)				\$443,743
AESTHETICS CONTINGENCY (BRIDGES AND WALLS) (3%)				\$633,490
RELOCATE UTILITIES				See Matrix
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$21,749,811</b>

**SUMMARY**

**ESTIMATED PROBABLE PROJECT COST  
Poinciana Parkway Expressway  
PD&E Study**

**Alternative 5A Without Slip Ramps to Ronald Reagan Parkway**

PREPARED BY *INWOOD CONSULTING ENGINEERS*

12/05/18

PROJECT CENTERLINE MILES: 2.931

NUMBER OF BRIDGES: 13

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Mainline Roadway	\$128,995,216
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US 17-92 INTERCHANGE	\$21,749,811
Utilities	\$37,580,000
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<b>TOTAL (2019 CONSTRUCTION COST)</b>	<b>\$188,325,027</b>
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ENGINEERING / ADMINISTRATION / LEGAL (24%)	\$45,198,006
RIGHT - OF - WAY	See Matrix
MITIGATION (WETLAND & SPECIES)	See Matrix
TOLL COLLECTION EQUIPMENT	10 LANES @ \$ 210,000 \$2,100,000
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<b>GRAND TOTAL PROJECT COST</b>	<b>\$235,623,033</b>
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Values for Matrix	
ROUNDED	
Estimated Costs	
Roadway Construction	\$65,400,000
Bridges Construction	\$94,600,000
Interchanges Construction	\$27,000,000
Toll Collection Equipment	\$2,100,000
Right-of-Way Areas (including proposed ponds)	see matrix
Mitigation, Wetlands, & Wildlife	see matrix
Utilities	\$46,600,000
<b>Total Estimated Alternative Costs</b>	<b>\$235,700,000</b>

# ESTIMATED PROBABLE CONSTRUCTION COST

## Mainline Roadway

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** EXPRESSWAYS **</b>				
MAINLINE ROADWAY TYPICAL 4 - LANE DIVIDED	2.003	MI	\$5,533,245	\$11,083,649
<b>**OVERPASS BRIDGES **</b>				
<b>BRIDGES OVER CSX RAIL ROAD (SITE 1)</b>				
WB BRIDGE	6,580	SF	\$138	\$904,750
EB BRIDGE	4,901	SF	\$138	\$673,846
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$1,321,613	\$1,321,613
RETAINED EARTH WALL (BEGIN BRIDGE)	12,587	SF	\$39	\$490,882
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$1,734,718	\$1,734,718
RETAINED EARTH WALL (END BRIDGE)	12,587	SF	\$39	\$490,882
<b>BRIDGES OVER ROADWAY (OLD KISSIMMEE RD/OLD TAMPA HWY.) (SITE 2)</b>				
WB BRIDGE	3,767	SF	\$138	\$517,910
EB BRIDGE	3,735	SF	\$138	\$513,510
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$849,519	\$849,519
RETAINED EARTH WALL (BEGIN BRIDGE)	6,483	SF	\$39	\$252,821
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$864,820	\$864,820
RETAINED EARTH WALL (END BRIDGE)	6,483	SF	\$39	\$252,821
<b>BRIDGES OVER WETLAND (SITE 3)</b>				
WB BRIDGE	207,615	SF	\$118	\$24,394,792
EB BRIDGE	221,800	SF	\$118	\$26,061,490
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$658,780	\$658,780
RETAINED EARTH WALL (BEGIN BRIDGE)	4,127	SF	\$39	\$160,970
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$552,497	\$552,497
RETAINED EARTH WALL (END BRIDGE)	4,127	SF	\$39	\$160,970
<b>BRIDGES OVER ROADWAY (ACCESS ROAD) (SITE 4)</b>				
WB BRIDGE	1,071	SF	\$118	\$125,836
EB BRIDGE	1,075	SF	\$118	\$126,337
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$824,109	\$824,109
RETAINED EARTH WALL (BEGIN BRIDGE)	6,115	SF	\$39	\$238,481
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$730,914	\$730,914
RETAINED EARTH WALL (END BRIDGE)	6,115	SF	\$39	\$238,481
<b>**INTERCHANGE BRIDGES **</b>				
<b>MAINLINE BRIDGES OVER US 17/92 (SITE 5)</b>				
WB BRIDGE	13,013	SF	\$153	\$1,984,535
EB BRIDGE	9,813	SF	\$153	\$1,496,535
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$1,122,199	\$1,122,199
RETAINED EARTH WALL (BEGIN BRIDGE)	5,851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$1,122,199	\$1,122,199
RETAINED EARTH WALL (END BRIDGE)	5,851	SF	\$39	\$228,189
<b>**ADDITIONAL ROADWAY IMPROVEMENTS **</b>				
<b>CUL DE SAC (LABOR CAMP ROAD)</b>				
TYPICAL 40' RAD. CUL-DE-SAC	1	EA	\$29,874	\$29,874
<b>CR 532 IMPROVEMENTS</b>				
CLOSED DRAINAGE 4 LANE DIVIDED	0.246	MI	\$5,248,056	\$1,292,135
ADDITIONAL LANE (RIGHT TURN TO EB ON-RAMP)	0.123	MI	\$405,136	\$49,875
ADDITIONAL LANES (LEFT TURN TO EB ON-RAMP)	0.085	MI	\$405,136	\$34,529
2 LANE TRANSITION TO 4 LANES - OPEN DRAINAGE - 1200'	2	EA	\$652,309	\$1,304,618
OVERHEAD CANTILEVER SIGNS	2	EA	\$80,000	\$160,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
SIGNALIZATION PER INTERCHANGE	2	EA	\$142,064	\$284,128
<b>DEMO EXISTING PPE</b>				
2 LANE ROADWAY DEMOLITION - CLOSED DRAINAGE	0.379	MI	\$192,334	\$72,854



** ADDITIONAL ITEMS **				
OVERHEAD TRUSS SIGNS	2	EA	\$250,000	\$500,000
OVERHEAD CANTILEVER SIGNS	2	EA	\$80,000	\$160,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
FIBER OPTIC NETWORK (FON) (CONDUIT, 72 WIRE, PULL BOXES, SPLICE, ETC.)	2.931	MI	\$350,000	\$1,025,731
DYNAMIC MESSAGE SIGNS	1	EA	\$250,000	\$250,000
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	21.00	AC	\$177,813	\$3,733,413
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	568,218	CY	\$14	\$7,727,769
MAINLINE TOLL GANTRY (2 LANE, 2 TRUSSES AND EQUIP. BLDG)	1	EA	\$1,750,000	\$1,750,000
SUB-TOTAL				\$98,826,166
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$494,131
MAINTENANCE OF TRAFFIC (1%)				\$988,262
MOBILIZATION (9.5%)				\$9,388,486
SUB-TOTAL ROADWAY				\$40,373,452
ROADWAY CONTINGENCY (20%)				\$8,074,690
SUB-TOTAL BRIDGES				\$69,323,592
BRIDGE CONTINGENCY (10%)				\$6,932,359
SUB-TOTAL				\$124,704,094
AESTHETICS CONTINGENCY (3%)				\$3,741,123
RELOCATE UTILITIES				See Matrix
ALLOWANCE FOR DISPUTES REVIEW BOARD				\$50,000
WORK ORDER ALLOWANCE				\$500,000
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$128,995,216</b>

## ESTIMATED PROBABLE CONSTRUCTION COST

## US 17-92 INTERCHANGE

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** RAMPS **</b>				
ADDITIONAL IN-FIELD CLEARING & GRUBBING	11.320	AC	\$17,000	\$192,440
<u>WB ON-RAMP</u>				
ACCELERATION LANE	0.408	MI	\$435,328	\$177,676
ONE LANE RAMPS (OPEN DRAINAGE)	0.203	MI	\$1,259,834	\$255,784
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$418,493	\$418,493
RETAINED EARTH WALL (BEGIN BRIDGE)	2159	SF	\$39	\$84,214
LEVEL 2 BRIDGE (BRIDGE OVER OLD KISSIMMEE RD/OLD TAMPA HWY.) (SITE 6)	2539	SF	\$138	\$349,181
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$362,953	\$362,953
RETAINED EARTH WALL (END BRIDGE)	2159	SF	\$39	\$84,214
TWO LANE RAMPS (OPEN DRAINAGE)	0.193	MI	\$1,712,621	\$330,199
<u>WB OFF-RAMP</u>				
DECELERATION LANE	0.173	MI	\$435,328	\$75,358
ONE LANE RAMPS (OPEN DRAINAGE)	0.242	MI	\$1,259,834	\$304,460
THREE LANE RAMPS (OPEN DRAINAGE)	0.180	MI	\$2,270,992	\$408,606
<u>EB ON-RAMP</u>				
ACCELERATION LANE	0.159	MI	\$435,328	\$69,257
ONE LANE RAMPS (OPEN DRAINAGE)	0.239	MI	\$1,259,834	\$301,119
TWO LANE RAMPS (OPEN DRAINAGE)	0.234	MI	\$1,712,621	\$399,936
<u>EB OFF-RAMP</u>				
ONE LANE RAMPS (OPEN DRAINAGE)	0.343	MI	\$1,259,834	\$431,875
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$483,053	\$483,053
RETAINED EARTH WALL (BEGIN BRIDGE)	3329	SF	\$39	\$129,834
LEVEL 2 BRIDGE (BRIDGE OVER CSX RAIL ROAD) (SITE 7)	3432	SF	\$138	\$471,960
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$631,380	\$631,380
RETAINED EARTH WALL (END BRIDGE)	3329	SF	\$39	\$129,834
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1.000	EA	\$410,247	\$410,247
RETAINED EARTH WALL (BEGIN BRIDGE)	2089	SF	\$39	\$81,479
LEVEL 2 BRIDGE (BRIDGE OVER OLD KISSIMMEE RD/OLD TAMPA HWY.) (SITE 6)	2640	SF	\$138	\$363,046
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1.000	EA	\$356,064	\$356,064
RETAINED EARTH WALL (END BRIDGE)	2089	SF	\$39	\$81,479
TWO LANE RAMPS (OPEN DRAINAGE)	0.177	MI	\$1,712,621	\$302,304
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - MAINLINE UNCHANGED	1	EA	\$129,358	\$129,358
<b>** ARTERIAL ROADS **</b>				
<u>US 17-92 IMPROVEMENTS</u>				
OPEN DRAINAGE 4 LANE DIVIDED	0.513	MI	\$3,077,301	\$1,579,448
ADDITIONAL LANE (RIGHT TURN TO EB ON-RAMP)	0.067	MI	\$405,136	\$27,086
ADDITIONAL LANES (TWO LEFT TURN TO EB ON-RAMP)	0.100	MI	\$810,272	\$81,334
ADDITIONAL LANES (RIGHT TURN TO WB ON-RAMP)	0.076	MI	\$405,136	\$30,692
ADDITIONAL LANES (TWO LEFT TURNS TO WB ON-RAMP)	0.095	MI	\$810,272	\$76,730
2 LANE TRANSITION TO 4 LANES - OPEN DRAINAGE - 1200'	2.000	EA	\$668,801	\$1,337,603
<b>** INTERSECTION SIGNALIZATION **</b>				
SIGNALIZATION PER INTERCHANGE	2	EA	\$142,064	\$284,128
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	1.809	MI	\$277,400	\$501,894
OVERHEAD LIGHTING (INCLUDES WIRING) (2 SIDES, 200' SPACING)	1.231	MI	\$554,800	\$682,992
OVERHEAD TRUSS SIGNS	0	EA	\$250,000	\$0
OVERHEAD CANTILEVER SIGNS	7	EA	\$80,000	\$560,000



MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	\$330,000	\$330,000
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	-	CY	\$11	\$0
RAMP TOLL GANTRY (2 RAMPS @ 1 LANE EA, 1 TRUSS AND EQUIP. BLDG)	2	EA	\$1,250,000	\$2,500,000
SUB-TOTAL				\$15,829,709
EROSION CONTROL / TEMPORARY DRAINAGE (1%)				\$158,297
MAINTENANCE OF TRAFFIC (3%)				\$474,891
MOBILIZATION (9.5%)				\$1,503,822
SUB-TOTAL				\$17,966,720
ROADWAY CONTINGENCY (20%)				\$2,705,858
BRIDGE CONTINGENCY (10%)				\$443,743
AESTHETICS CONTINGENCY (BRIDGES AND WALLS) (3%)				\$633,490
RELOCATE UTILITIES				See Matrix
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$21,749,811</b>

## SUMMARY

# ESTIMATED PROBABLE PROJECT COST Poinciana Parkway Expressway PD&E Study

## Alternative 5A - RRP (With Slip Ramps to Ronald Reagan Parkway)

PREPARED BY INWOOD CONSULTING ENGINEERS

12/05/18

PROJECT CENTERLINE MILES: 2.931

NUMBER OF BRIDGES: 15

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5A - RONALD REAGAN PARKWAY (SLIP RAMPS)	\$10,598,708
ALTERNATIVE 5A	\$150,745,027
Utilities	\$37,580,000
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<b>TOTAL (2019 CONSTRUCTION COST)</b>	<b>\$198,923,735</b>
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ENGINEERING / ADMINISTRATION / LEGAL (24%)	\$47,741,696
RIGHT - OF - WAY	See Matrix
MITIGATION (WETLAND & SPECIES)	See Matrix
TOLL COLLECTION EQUIPMENT	10 LANES @ \$ 210,000 \$2,100,000
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<b>GRAND TOTAL PROJECT COST</b>	<b>\$248,765,431</b>
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Values for Matrix	
ROUNDED	
Estimated Costs	
Roadway Construction	\$65,400,000
Bridges Construction	\$94,600,000
Interchanges Construction	\$40,200,000
Toll Collection Equipment	\$2,100,000
Right-of-Way Areas (including proposed ponds)	see matrix
Mitigation, Wetlands, & Wildlife	see matrix
Utilities	\$46,600,000
<b>Total Estimated Alternative Costs</b>	<b>\$248,900,000</b>

**ESTIMATED PROBABLE CONSTRUCTION COST**  
**5A - RONALD REAGAN PARKWAY (SLIP RAMPS)**

PREPARED BY INWOOD CONSULTING ENGINEERS

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
<b>** EXPRESSWAYS **</b>				
ADJUSTMENT FOR MAINLINE LENGTH FROM 4A (REMOVAL DUE TO BRIDGES)	-0.019	MI	\$5,533,245	-\$103,743
<b>**OVERPASS BRIDGES **</b>				
<u>BRIDGES OVER ROADWAY (RONALD REAGAN PARKWAY SLIP RAMP) (SITE 1)</u>				
WB BRIDGE	5,061	SF	\$138	\$695,905
EB BRIDGE	3,386	SF	\$138	\$465,638
EXTRA MATERIAL - ELEVATED ROADWAY (BEGIN BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (BEGIN BRIDGE)	5,851	SF	\$39	\$228,189
EXTRA MATERIAL - ELEVATED ROADWAY (END BRIDGE)	1,000	EA	\$805,873	\$805,873
RETAINED EARTH WALL (END BRIDGE)	5,851	SF	\$39	\$228,189
<b>**INTERCHANGE BRIDGES **</b>				
<b>**ADDITIONAL ROADWAY IMPROVEMENTS **</b>				
<u>RONALD REAGAN PARKWAY (SLIP RAMPS)</u>				
ADDITIONAL IN-FIELD CLEARING & GRUBBING	1.445	AC	\$17,000	\$24,565
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - MAINLINE UNCHANGED	1.000	EA	\$129,358	\$129,358
ONE LANE RAMP (WB OFF)	0.830	MI	\$1,259,834	\$1,045,805
ACCELERATION LANE (WB OFF)	0.152	MI	\$435,328	\$65,959
ONE LANE RAMP (EB ON)	0.351	MI	\$1,259,834	\$441,896
ACCELERATION LANE (EB ON)	0.206	MI	\$435,328	\$89,869
TYPICAL 1 LANE OFF-RAMP TAPER W/GORE - LANES REMAIN SAME	1.000	EA	\$219,329	\$219,329
OVERHEAD LIGHTING (INCLUDES WIRING) (1 SIDE, 200' SPACING)	1.181	MI	\$277,400	\$327,574
<b>** ADDITIONAL ITEMS **</b>				
OVERHEAD CANTILEVER SIGNS	3	EA	\$80,000	\$240,000
MULTIPOST SIGNS	4	EA	\$5,500	\$22,000
ITS EQUIPMENT / DEVICES PER INTERCHANGE (CCTV, TMS, ETC.)	1	INT	\$330,000	\$330,000
RETENTION POND CONSTRUCTION (ASSUME 15% OF TOTAL ACERAGE)	6.11	AC	\$177,813	\$1,086,408
REMOVE & REPLACE A-8 MATERIAL (ASSUME 5 CY PER SY OF WETLANDS)	49,852	CY	\$14	\$677,990
SUB-TOTAL				\$7,826,677
EROSION CONTROL / TEMPORARY DRAINAGE (0.5%)				\$39,133
MAINTENANCE OF TRAFFIC (3%)				\$234,800
MOBILIZATION (9.5%)				\$743,534
SUB-TOTAL ROADWAY				\$5,614,478
ROADWAY CONTINGENCY (20%)				\$1,122,896
SUB-TOTAL BRIDGES				\$3,229,667
BRIDGE CONTINGENCY (10%)				\$322,967
SUB-TOTAL				\$10,290,007
AESTHETICS CONTINGENCY (3%)				\$308,700
RELOCATE UTILITIES				\$0
<b>TOTAL (2019 CONSTRUCTION COST)</b>				<b>\$10,598,708</b>