

STATE ENVIRONMENTAL IMPACT REPORT

Project Development and Environment (PD&E) Study

Widen Florida's Turnpike (SR 91) from South of Kissimmee Park Road to US 192

Mile Post 238.5 - 242.5

Osceola County, Florida

Financial Project Identification Number: 441224-1-22-01

Efficient Transportation Decision Making Number: 14329



Prepared for:

**Florida Department of Transportation
Florida's Turnpike Enterprise**

Prepared by:

Dewberry Engineers Inc.

October 2020

STATE ENVIRONMENTAL IMPACT REPORT FORM

1. PROJECT DESCRIPTION AND PURPOSE AND NEED:

a. Project Information: Section 1.1 in Attachment 1

Project Name: Widen Florida's Turnpike (SR 91)

Project Limits: South of Kissimmee Park Road milepost ([MP] 238.5) to US 192 (MP 242.5)

County: Osceola

Efficient Transportation Decision Making (ETDM) Number: 14329

Financial Project Identification Number (FPID): 441224-1-22-01

Project Manager: Jazlyn Heywood, PE

b. Proposed Improvements: Section 1.2 in Attachment 1

c. Propose and Need: Section 1.3 in Attachment 1

d. Project Planning Consistency: The MetroPlan Orlando 2040 Long Range Transportation Plan (LRTP) (Blueprint 2040) Cost Feasible Plan (CFP) was amended to include improvements to the Kissimmee Park Road interchange and the widening of Florida's Turnpike (SR 91) mainline from approximately MP 240 to MP 242. The amendments were adopted on May 10, 2017. The LRTP will be updated to include the full project limits during the Project Development and Environment (PD&E) phase. This project is being completed without federal funding. See **Appendix A** for Planning Consistency documentation.

Currently Adopted CFP-LRTP	Comments				
Y/N	(If N, then provide detail on how implementation and fiscal constraint will be achieved)				
Phase	Currently Approved TIP	Currently Approved STIP	TIP/STIP \$	TIP/STIP FY	Comments
PE (Final Design)	Yes	Yes	572,000/ 571,677	FY2021-2024/ FY2021-2024	N/A
Right of Way (ROW)	Yes	Yes	10,078,000/ 10,077,100	FY2021-2022/ FY2021-2022	N/A
Design-Build	Yes	Yes	90,744,000/ 90,744,072	FY2021-2024/ FY2021-2024	N/A
Construction	Yes	Yes	11,000/ 11,440	FY2024-2025/ FY2024-2025	N/A

***Include pages from current TIP/STIP/LRTP (Located in Appendix A)**

2. ENVIRONMENTAL ANALYSIS

Issues/Resources	*Substantial Impacts?				**Supporting Information
	Yes	No	Enhance	NoInv	
A. SOCIAL and ECONOMIC					
1. Social	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.1.A
2. Economic	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.1.B
3. Land Use Changes	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.1.C
4. Mobility	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.1.D
5. Aesthetic Effects	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.1.E
6. Relocation Potential	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.1.F
B. CULTURAL					
1. Historic Sites/Districts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.2.A
2. Archaeological Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.2.B
3. Recreational Areas and Protected Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
C. NATURAL					
1. Wetlands and Other Surface Waters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.3.A
2. Aquatic Preserves and Outstanding FL Waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
3. Water Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.3.B
4. Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
5. Floodplains	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.3.C
6. Coastal Barrier Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
7. Protected Species and Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.3.D
8. Essential Fish Habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A
D. PHYSICAL					
1. Highway Traffic Noise	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.4.A
2. Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.4.B
3. Contamination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.4.C
4. Utilities and Railroads	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.4.D
5. Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.4.E
6. Bicycles and Pedestrians	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See Attachment 1, Section 2.4.F
7. Navigation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

* Substantial Impacts?: Yes = Substantial Impact; No = No Substantial Impact; Enhance = Enhancement; NoInv = Issue absent, no involvement.

** Supporting information is documented in the referenced attachment(s).

3. ANTICIPATED PERMITS

- ☐ Individual Dredge and Fill Permit – USACE
- ☐ Nationwide Permit – USACE
- ☐ Bridge Permit – USCG
- ☒ Environmental Resource Permit (ERP) – South Florida Water Management District (SFWMD)
- ☒ Standard Permit – United States Army Corps of Engineers (USACE)
- ☒ Florida Department of Environmental Protection (FDEP) Generic Permit for Stormwater Discharge from Large and Small Construction Activities
- ☒ Gopher Tortoise Relocation Permit – Florida Fish and Wildlife Conservation Commission (FWC)
- ☒ SFWMD Consumptive Use Permit (CUP) for dewatering activities (possibly needed; to be determined by contractor).

For guidance on ensuring sufficient information for permitting agencies is included see Section 10.2.1.4.1 of Part 1, Chapter 10 of the PD&E Manual

4. ENGINEERING ANALYSIS

The engineering analysis is documented in the “*Preliminary Engineering Report*”, dated September 2020.

5. COMMITMENTS

To minimize the impacts of this project to the social, cultural, natural, and physical environment, the Florida's Turnpike Enterprise (FTE) has identified the following commitments:

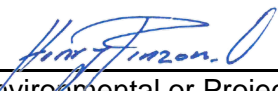
1. The United States Fish and Wildlife Service (USFWS) Standard Protection Measures for the Eastern Indigo Snake (*Drymarchon corais couperi*) will be implemented to assure that the Eastern Indigo Snake will not be adversely impacted by the project.
2. A gopher tortoise (*Gopherus polyphemus*) survey within 25-feet of construction limits (including roadway footprint, construction staging areas, and stormwater management ponds) will be performed prior to the start of the project construction, per FWC guidelines. FTE will secure any relocation permits needed and ensure that gopher tortoises are relocated prior to construction.
3. Impacts to suitable foraging habitat for the federally protected wood stork (*Mycteria americana*) will be mitigated through the purchase of credits from a USFWS approved mitigation bank pursuant to Section 373.4137, Florida Statute (F.S.) or as otherwise agreed to by the Florida Department of Transportation (FDOT) and the appropriate regulatory agencies. FTE will consult with USFWS through the USACE Permitting process and provide documentation that “impacts to wood stork foraging habitat are offset.”

4. FDOT will initiate technical assistance with USFWS to confirm species that have Consultation Areas (CA) inside the study boundary, to obtain concurrence on Degree of Effect (DOE) and confirm requirements for species-specific surveys. FDOT will provide one seasonal species-specific survey for Audubon's crested caracara (*Polyborus plancus audubonii*) and Florida scrub jay (*Aphelocoma coerulescens*) prior to project letting, to confirm absence.
5. FDOT will provide an updated review for potential occurrence of bald eagle (*Haliaeetus leucocephalus*) nests, which will be conducted at least three (3) months prior to project letting, to ensure no nest sites are adversely affected within 660-feet of the project limits.
6. During the design phase, a Level II Impact to Construction Assessment will be conducted for locations with risk rating of medium, if the identified contamination concerns have the potential to impact the proposed right-of-way (ROW) and/or the project.
7. A Cultural Resources Assessment Survey (CRAS) was completed for this project. Coordination with the Florida Department of Historic Resources (FDHR) will occur during pre-application meetings for application of the State Environmental Resource Permit (ERP) application, to ensure no further CRAS or field surveys are required for the project, during the design phase.
8. The FTE is committed to the construction of feasible and reasonable noise abatement measures at Teka Village, Betsy Ross Lane/Kettle Creek Drive, Neptune Elementary School and Neptune Middle School as identified in Noise Study Report, dated June 2020, contingent upon the following conditions during future Design phases:
 - Final recommendations on the construction of abatement measures is determined during the project's final design and through the public involvement process;
 - Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;
 - Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
 - Community input supporting types, heights, and locations of the noise barrier(s) is provided to the FTE; and
 - Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

6. FDOT SELECTED ALTERNATIVE

Based on engineering and environmental factors, as well as public input, FTE recommends Build Alternative 2, as described Section 1.2. Upon completion of the public review process and the public hearing, to be held on November 10, 2020, the recommended Build Alternative is anticipated to become the Selected Alternative in the Final State Environmental Impact Report (SEIR).

7. ☐ **APPROVED FOR PUBLIC AVAILABILITY (Before Public Hearing when a public hearing is required)**



Environmental or Project Development
Manager or Administrator

10/15/2020

Date

8. **PUBLIC INVOLVEMENT:**

1. ☐ A public hearing is not required.
2. ☒ A public hearing will be held on 11/10/2020. This draft document is publicly available, and comments can be submitted to FDOT until 11/30/2020.

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3. ☐ A public hearing was held (insert date) and the transcript is available.
4. ☐ An opportunity for a public hearing was afforded and was documented (insert dated).

9. **APPROVAL OF FINAL DOCUMENT**

This project has been developed without regard to race, color, national origin, age, sex, religion, disability, or family status.

The final SEIR reflects consideration of the PD&E Study and the public hearing.

District Secretary or Designee
Florida's Turnpike Enterprise

Date

10. **SUPPORTING INFORMATION**

See Attachment 1.

Attachment 1

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APPENDIX B: Landscape Opportunity Plan

APPENDIX C: Wetlands and Surface Water Map

APPENDIX D: Water Quality Impact Evaluation

APPENDIX E: Potential Build Alternatives

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1.0 PROJECT DESCRIPTION AND PURPOSE AND NEED

1.1 Project Information

Florida's Turnpike Enterprise (FTE) is conducting a Project Development and Environment (PD&E) Study to evaluate alternatives for the widening of Florida's Turnpike (SR 91) from south of Kissimmee Park Road to US 192 (E. Irlo Bronson Memorial Highway), henceforth US 192, in Osceola County, a distance of approximately 4 miles, from Mile Post (MP) 238.5 to MP 242.5. The project consists of widening Florida's Turnpike (SR 91), from four- to eight-lanes, along with evaluation of modifications to the existing Kissimmee Park Road and US 192 interchanges.

There is an existing partial diamond interchange between Florida's Turnpike (SR 91) and Kissimmee Park Road that serves the City of St. Cloud and Osceola County. This interchange currently provides a southbound off-ramp from Florida's Turnpike (SR 91) to Kissimmee Park Road and a northbound on-ramp from Kissimmee Park Road to Florida's Turnpike (SR 91). The missing interchange ramps serving movements to and from the south were previously planned, but not constructed. The existing interchange is experiencing operational issues due to heavy peak traffic volumes on the ramps to Kissimmee Park Road and a lack of adequate spacing between these ramps and the Old Canoe Creek Road intersection.

To the north, the existing interchange with US 192 currently provides only a northbound off-ramp from Florida's Turnpike (SR 91) to US 192. This lack of a southbound off-ramp directs additional traffic to the Kissimmee Park Road interchange. FTE currently has a project under design that will add a southbound off-ramp from Florida's Turnpike (SR 91) to US 192 and a northbound on-ramp from US 192 to Florida's Turnpike (SR 91). The FPID for this project is 436194-1.

This study's project limits include several area roadways including Kissimmee Park Road, Old Canoe Creek Road, Nolte Road and US 192. These roadways provide accommodations for pedestrians and bicyclists, as well as motorized vehicles. The project study area is shown in **Figure 1-1: Project Location Map**, located below.

1.2 Recommended Alternative

Five Build Alternatives (along with a No-Build Alternative) were considered at the beginning of the PD&E study which included interchange improvements along the corridor. These alternatives included the No-Build Alternative and Alternatives 1, 2, 3a, 3b, and 4. Alternatives 1, 2, and 3a were eliminated during preliminary stages of traffic analysis as they did not meet future traffic needs and the Florida Department of Transportation (FDOT) Design Manual criteria. Please refer to **Appendix E** for more details.

Alternatives 3b and 4 were carried forward to further analysis for consideration and are currently the primary alternatives. Throughout the remainder of this section, Alternative 3b is referred to as Alternative 1 and Alternative 4 is referred to as Alternative 2, respectively, including in referenced attached exhibits.

Alternative 1 - Alternative 1 will add capacity to Florida's Turnpike (SR 91) through the addition of travel lanes from south of Kissimmee Park Road to US 192. Florida's Turnpike (SR 91) will be widened from the existing 4-lane section (2 lanes in each direction) to an ultimate 8-lane section (4 lanes in each direction). This alternative includes modifications to the existing Kissimmee Park Road interchange and direct connections between Florida's Turnpike (SR 91) and Old Canoe Creek Road, located approximately $\frac{3}{4}$ of a mile south of Kissimmee Park Road. The existing Kissimmee Park Road interchange currently provides northbound on-ramp and southbound off-ramp connections with Florida's Turnpike (SR 91). The interchange improvements will add a southbound on-ramp and northbound off-ramp, as well as modifications to the existing ramps. Alternative 1 also includes a proposed southbound on-ramp from US 192 at the location of the existing US 192 partial interchange.

Alternative 2 - Alternative 2 will add capacity to Florida's Turnpike (SR 91) through the addition of travel lanes from south of Kissimmee Park Road to US 192. Florida's Turnpike (SR 91) will be widened from the existing 4-lane section (2 lanes in each direction) to an ultimate 8-lane section (4 lanes in each direction). This alternative includes a proposed new Florida's Turnpike (SR 91) interchange at an extension of Nolte Road, located approximately $\frac{1}{2}$ of a mile north of Kissimmee Park Road. This new interchange will provide full access to and from Florida's Turnpike (SR 91). The existing ramps at the Kissimmee Park Road interchange will be removed, however the overpass will remain for local access. The proposed interchange features a diverging diamond configuration, which offers improved capacity with a smaller footprint. Direct connections between Florida's Turnpike (SR 91) and Old Canoe Creek Road will be located approximately $\frac{1}{2}$ of a mile south of Kissimmee Park Road. Alternative 2 also includes a proposed southbound on-ramp from US 192 to Florida's Turnpike (SR 91) at the location of the existing US 192 partial interchange.

Pond Design alternatives within the study area include up to three (3) alternative sites per basin and are described and displayed in the June 2020 *Pond Siting Report*, available under separate cover. Drainage design options associated with each alternative, and the potential habitat and wetland impacts, is further described in the appropriate sections of the report below.

Both alternatives, Alternatives 1 and 2, improve lane capacity by widening to the inside median, shifting drainage to the outside edge of the right-of-way (ROW) boundary. No shift in alignment

alternatives were considered, as the adjacent northern Florida's Turnpike (SR 91) segment of 4-lane to 8-lane widening is in final design and currently funded for construction.

Therefore, final alignment and alternatives connecting directly to the Florida's Turnpike (SR 91) widening associated with the Kissimmee Park Road segment have been evaluated by the Federal Highway Administration (FHWA) representatives at the FDOT. This segment is in the final permitting stages with both state and federal regulatory agencies. The final Location and Design Concept Approval (LDCA) was accepted in 2017 for this roadway segment. With these considerations, the chosen alignment, from south of Kissimmee Park Road to US 192, has been designed to align cohesively with the typical section in the abutting northern segment. An alignment match with the northern segment also ensures FDOT Design Manual standards are met according to profile requirements, sight distance safety, and that previous commitments to avoid impacts to existing Florida Gas and Transmission utility lines are followed, to the greatest extent possible.

The recommended Build Alternative, Alternative 2, addresses the operational issues of the existing Kissimmee Park Road interchange and accommodates the future travel demand by creating a new interchange approximately ½ mile north of Kissimmee Park Road. When compared to Alternative 1, additional ROW will be required for Alternative 2; however, Alternative 2 has fewer relocations than required for Alternative 1. Additionally, Alternative 2 has less environmental impacts and offers enhanced traffic operation when compared to Alternative 1. A summary of these impacts is further described in the appropriate sections of the report below. The attendees at the Public Information Meeting held on August 6, 2019, who expressed a preference in a Build Alternative, overwhelmingly preferred Alternative 2 over Alternative 1 by a margin of 47 to 3.

The recommended Build Alternative, Alternative 2, includes the following features:

- Widening Florida's Turnpike (SR 91), to the median, from the existing 4-lane section (2 lanes in each direction) to an ultimate 8-lane section (4 lanes in each direction). The future horizontal alignment will match the existing horizontal alignment.
- New fully directional, diverging diamond interchange at Nolte Road.
- Extension of Nolte Road from east of Old Canoe Creek Road to west of Florida's Turnpike (SR 91), including intersection improvements at the Nolte Road / Old Canoe Creek intersection.
- The existing Kissimmee Park Road bridge over Florida's Turnpike (SR 91) will remain for local access, however the existing interchange ramps will be removed.
- Addition of a southbound off-ramp and northbound on-ramp to Florida's Turnpike (SR 91), with direct connections to Old Canoe Creek Road, located approximately ½ mile south of Kissimmee Park Road. The southbound off movement will require a flyover ramp bridge over Florida's Turnpike (SR 91) mainline.
- A southbound on-ramp from US 192 to Florida's Turnpike (SR 91) will be added at the existing US 192 partial interchange.

- The vertical profile of the Florida's Turnpike (SR 91) will be adjusted (raised) slightly to meet base clearance criteria over the seasonal high-water elevations. The bridges over the C-31 Canal will be replaced with one structure.

The No-Build Alternative is also being considered by FTE for this corridor; it assumes that no improvement to capacity, safety or intersections are proposed.

1.3 Purpose and Need

Capacity improvements to Florida's Turnpike (SR 91) mainline and interchange improvements along the corridor are being proposed to address existing and future traffic congestion and related safety issues. Traffic at the Florida's Turnpike (SR 91) southbound off-ramp terminal intersection with Kissimmee Park Road currently experiences long delays and queues during the evening commute. Queues extend along the entire length of the ramp and onto the Florida's Turnpike (SR 91) mainline. This is mainly due to the heavy southbound off-ramp left turn traffic demand, which exceeds the capacity of the existing single left turn lane. Also, eastbound right turn queues at the Kissimmee Park Road and Old Canoe Creek Road intersection, located near the interchange, extend upstream to the interchange ramp terminals. These conditions compound the backups on the southbound off-ramp and the Florida's Turnpike (SR 91) mainline. As travel demand increases in the future, traffic operations are expected to further deteriorate within the interchange area and along the Florida's Turnpike (SR 91) mainline.

Transportation Demand

Travel demand on Florida's Turnpike (SR 91) through much of Orange and Osceola Counties has increased significantly. Florida's Turnpike (SR 91) has continued to grow as a "commuter" facility serving trips between urban centers and has become an important component of local transportation systems. As demand for local access grows, continued increase in traffic volumes at existing interchanges will result in future congestion. If Florida's Turnpike (SR 91) is to efficiently fulfill this evolving role in the urban transportation system, it will require new or modified access points with major crossroads. It is within this context that interchange improvements are proposed to improve and enhance access between Florida's Turnpike and the surrounding transportation network.

System Linkage

There is a need to address and improve linkage to the existing local roadway network. Relocating the existing partial interchange to Nolte Road as a full interchange, along with the addition of a direct connection to Old Canoe Creek Road south of Kissimmee Park Road, will provide more efficient access points to better serve trips originating or ending in the City of St. Cloud. The addition of a southbound on-ramp at the US 192 interchange will also improve connectivity and enhance existing evacuation routes.

Consistency with Transportation Plans

The MetroPlan Orlando 2040 Long Range Transportation Plan (LRTP) (Blueprint 2040) Cost Feasible Plan was amended to include improvements to the Kissimmee Park Road interchange

and the widening of Florida's Turnpike (SR 91) mainline from approximately MP 240 to MP 242. These amendments were adopted on May 10, 2017. The LRTP will be updated to include the full project limits during the PD&E phase. This project is being completed without federal funding.

Social/Economic Demand

Population and employment projections referenced in MetroPlan Orlando's 2040 LRTP (Blueprint 2040) indicate that the population of Osceola County is expected to grow from 350,542 to 609,025 (74% growth) between 2015 and 2040. Employment is projected to grow from 96,460 jobs to 269,821 jobs (180% growth) between 2015 and 2040. The project area is expected to experience a portion of this growth directly, due to several planned developments in the vicinity of the project, including the Edgewater Development of Regional Impact (DRI), Toho Preserves subdivision, and the Tohoqua subdivision. The Edgewater DRI has a buildout date of 2027 and maximum buildout potential of 7,000 single and multi-family residential units, and 507,000 square feet of retail space in mixed-use community centers. Preliminary subdivision plans for Toho Preserves and Tohoqua were approved by Osceola County in 2015 and 2016, respectively. These subdivisions are located west of Florida's Turnpike (SR 91).

Traffic Safety

Crash data from the state's Crash Analysis Reporting System (CARS) database for the most recent five years showed that the number of crashes doubled from 2012 to 2016 within the study area. All of the crashes resulted in injury and property damage only. Within the PD&E study area, the Florida's Turnpike (SR 91) crashes were mostly off road and crashes along the ramps were mostly rear end. Most of the crashes at the PD&E study area intersections were rear end or angle in nature. Queue backups on the Florida's Turnpike (SR 91) mainline contribute to crashes at the Kissimmee Park Road interchange. The intersection of Kissimmee Park Road and Old Canoe Creek Road is also a high crash location.

2.0 ENVIRONMENTAL ANALYSIS

The following sections summarize the results of the social and economic, cultural, natural and physical studies conducted as part of the PD&E Study. The purpose of these studies was to determine the potential impacts with the proposed improvements. This analysis follows the guidelines under Part 2 of the PD&E Manual. An Alternatives Environmental Matrix (**Table 2-1: Alternatives Evaluation Matrix**) is provided below to summarize how the evaluation criteria compares with the primary alternatives analyzed.

Table 2-1: Alternatives Evaluation Matrix

Evaluation Criteria	No-Build Alternative	Build Alternative 1 <i>Modifications to Existing Kissimmee Park Road Interchange</i>	Build Alternative 2 <i>New Diverging Diamond Interchange with Extension of Nolte Road</i>
Relocations			
ROW requirements	0	38.3 acres	48.2 acres
Number of parcels impacted	0	34	27
Number of residential relocations	0	5	14
Number of business relocations	0	0	3
Natural, Environmental & Physical Impacts			
Threatened and endangered species impacted	0	20	20
Archaeological/historic site impacts	0	0	0
Potential contamination sites	0	5	5
Wetland and surface water impacts	0	73 acres	73 acres
Recreational impacts	0	0	0
Floodplain impacts	0	≤ 5 acres	≤ 5 acres
Social & neighborhood impacts	0	Low	Low
Noise impacts	0	Low	Low
Estimated Costs			
Design	No cost	\$10.4 M	\$11.1 M
Right-of-Way	No cost	\$10.6 M	\$22.9 M
Wetland mitigation	No cost	\$4.0 M	\$4.0 M
Construction	No cost	\$130.6 M	\$138.2 M
Utility relocations	No cost	\$6.7 M	\$4.7 M
Construction Engineering & Inspection	No cost	\$11.8 M	\$12.4 M
Total cost	No cost	\$174.1 M	\$193.3 M

In December 2017, FTE solicited agency comments using the Efficient Transportation Decision Making (ETDM) screening tool. Detailed agency comments can be viewed on FDOT's website at <https://etdmpub.fla-etat.org/est/> and searching under the ETDM Number 14329. A summary of Environmental Technical Advisory Team (ETAT) agency assigned Degree of Effect (DOE) is provided below in **Table 2-2: ETDM Summary - Degrees of Effect**. For this study area, the initial ETAT DOEs are based on agency comment prior to the commencement of PD&E field surveys. In some instances, the DOE is different from the final assessment once the PD&E study is completed, as initial agency comments are based higher than desktop review and historic data, lacking field data or survey results. The final findings of each Environmental DOE and their relation to the recommended Build Alternative, Alternative 2, is summarized in each sub-section below.

Table 2-2: ETDM Summary - Degrees of Effect

Issue	ETDM Summary Report – Degree of Effect (DOE)
Land Use Changes	Enhanced
Social	Minimal
Farmlands	Moderate
Economic	Enhanced
Historic and Archaeological Sites	Moderate
Recreation Areas	N/A / No Involvement
Wetlands and Surface Waters	Moderate
Water Quality and Quantity	Moderate
Floodplains	Moderate
Wildlife and Habitat	Moderate
Coastal and Marine	N/A / No Involvement
Air Quality	Minimal
Contamination	Minimal
Infrastructure	Minimal
Navigation	N/A / No Involvement
Special Designations	N/A / No Involvement

2.1 Social and Economic

2.1.A Social

Based on the *Sociocultural Effects Evaluation* (SCE) completed for this project, the proposed improvements will not result in substantial impacts. The widening of Florida's Turnpike (SR 91) from south of Kissimmee Park Road to US 192 in Osceola County will not subdivide neighborhoods or separate residences from key community facilities. The SCE included an analysis of whether the proposed improvements would affect community cohesion, access to community services and community features, environmental justice and civil rights, land use changes, mobility, right of way and relocations. Based on the SCE, the project will not have a disproportionately high and adverse effect on low-income, disadvantaged, minority or other special population.

This project has been developed in compliance with Title VI of the Civil Rights Act of 1964 and other Federal and State of Florida nondiscrimination authorities. Neither FDOT nor this project will deny the benefits of, exclude from participation in, or subject to discriminate anyone based on race, color, national origin, age, sex, religion, disability or family status.

a. Demographics

The American Community Survey 2017 Five-Year Projections data was used to formulate this SCE Technical Memorandum. The data includes population and income for the study area, housing characteristics, minority populations, and geographic distribution. The demographic analysis was completed using Census block groups that were located within the 500-foot buffer area for the study limits. These study limits are shown on Figures 2-1, 2-2 and 2-3.

Population and Income

Nearly 12,293 households were assessed for income across seven census block groups in the study area. The median household income within the study area for 12 consecutive months in 2017 was \$49,421 within the PD&E study area (American Community Survey [ACS] 2017 Five Year Projections). Of the households surveyed for income, 12% were found to be below the poverty level.

Minority

Minority populations comprise a significant percentage of residents within Census block groups located in the study area. For example, between 26.1-34% of the population residing in communities southeast of Florida's Turnpike (SR 91) and Kissimmee Park Road interchange identified themselves as racial minorities (see **Figure 2-1: Percent of Population Identified as Minority**).

Limited English Proficiency (LEP)

LEP households are concentrated in Census tracts overlapping Old Canoe Creek Road and the communities overlapping the Florida's Turnpike (SR 91) and US 192 interchange area (see **Figure 2-2: Percent Households with Limited English Proficiency**). Of the households surveyed and determined to be LEP households, the highest LEP percentages range from 28.1–34% for Spanish-speaking LEP households. The Public Involvement efforts will include provisions for LEP households.

Housing

There are 12,293 households within the study area. Owner-occupied housing units were most prevalent in communities southeast of the Kissimmee Park Road and Old Canoe Creek Road intersection (44%). Other tracts ranged from 2–22% owner-occupied. Renter-occupied units were predominant in the northwest Census tract bordering the Florida's Turnpike (SR 91) and US 192 interchange.

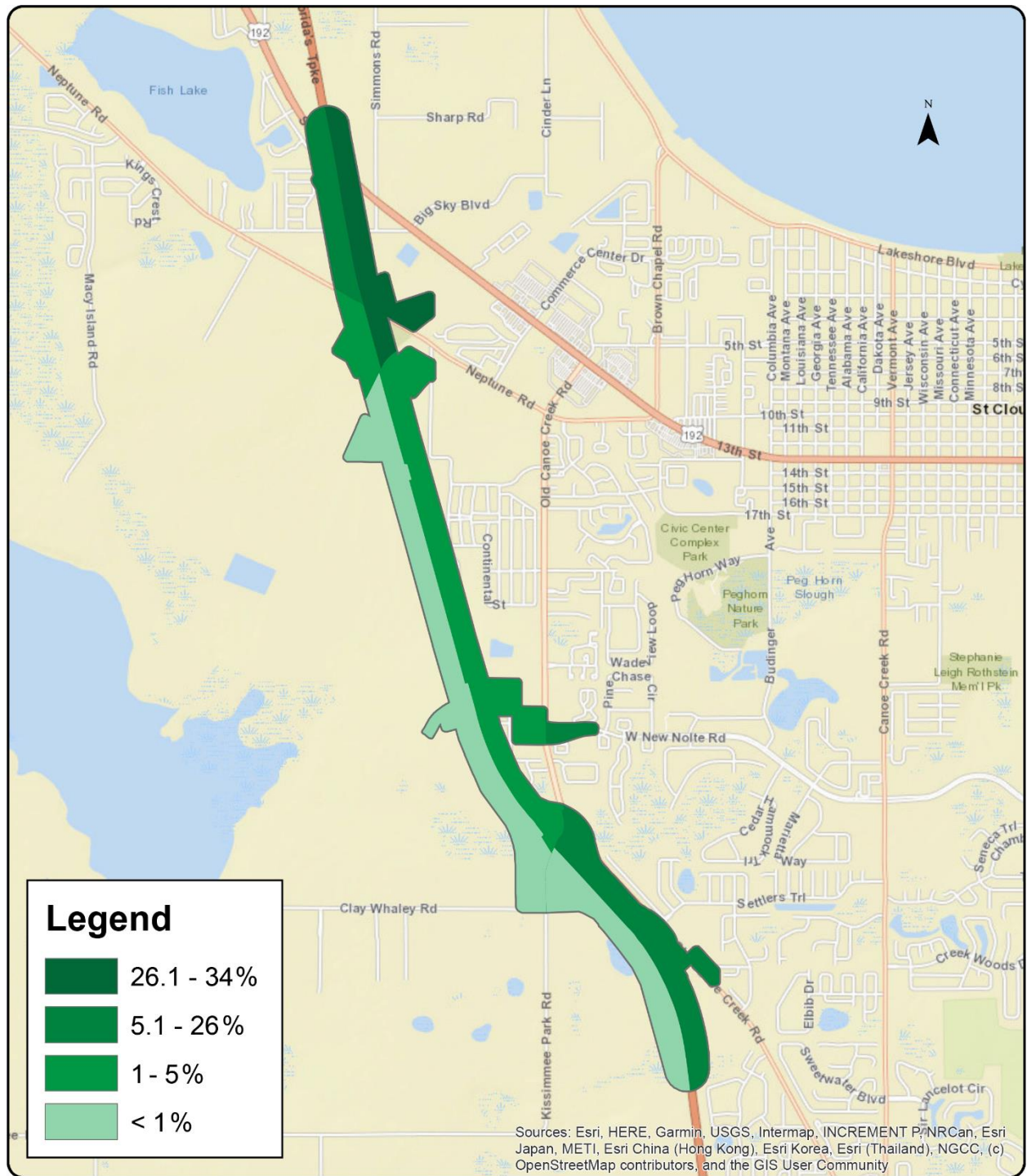


Figure 2-1: Percent of Population Identified as Minority

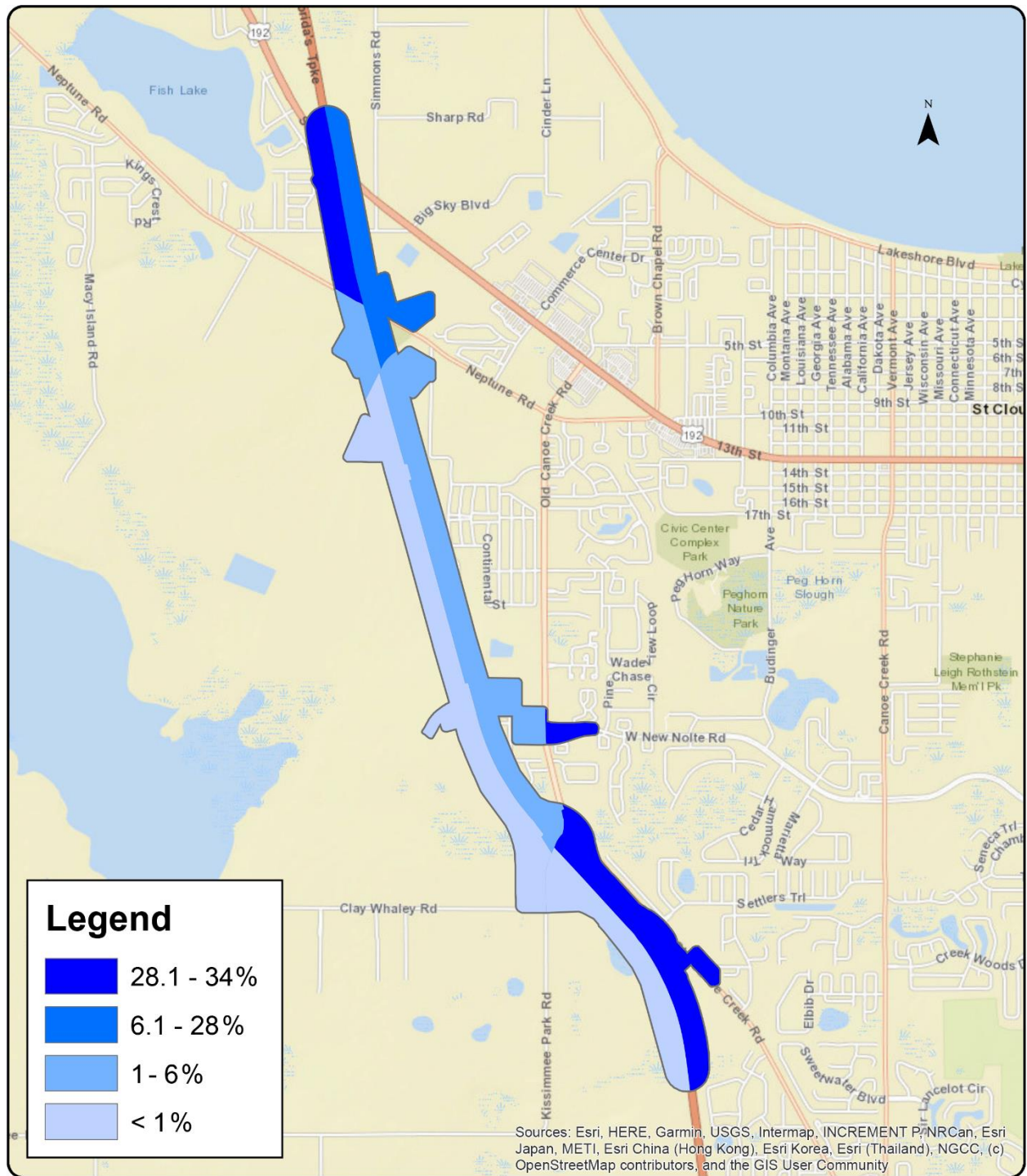


Figure 2-2: Percent Households with Limited English Proficiency

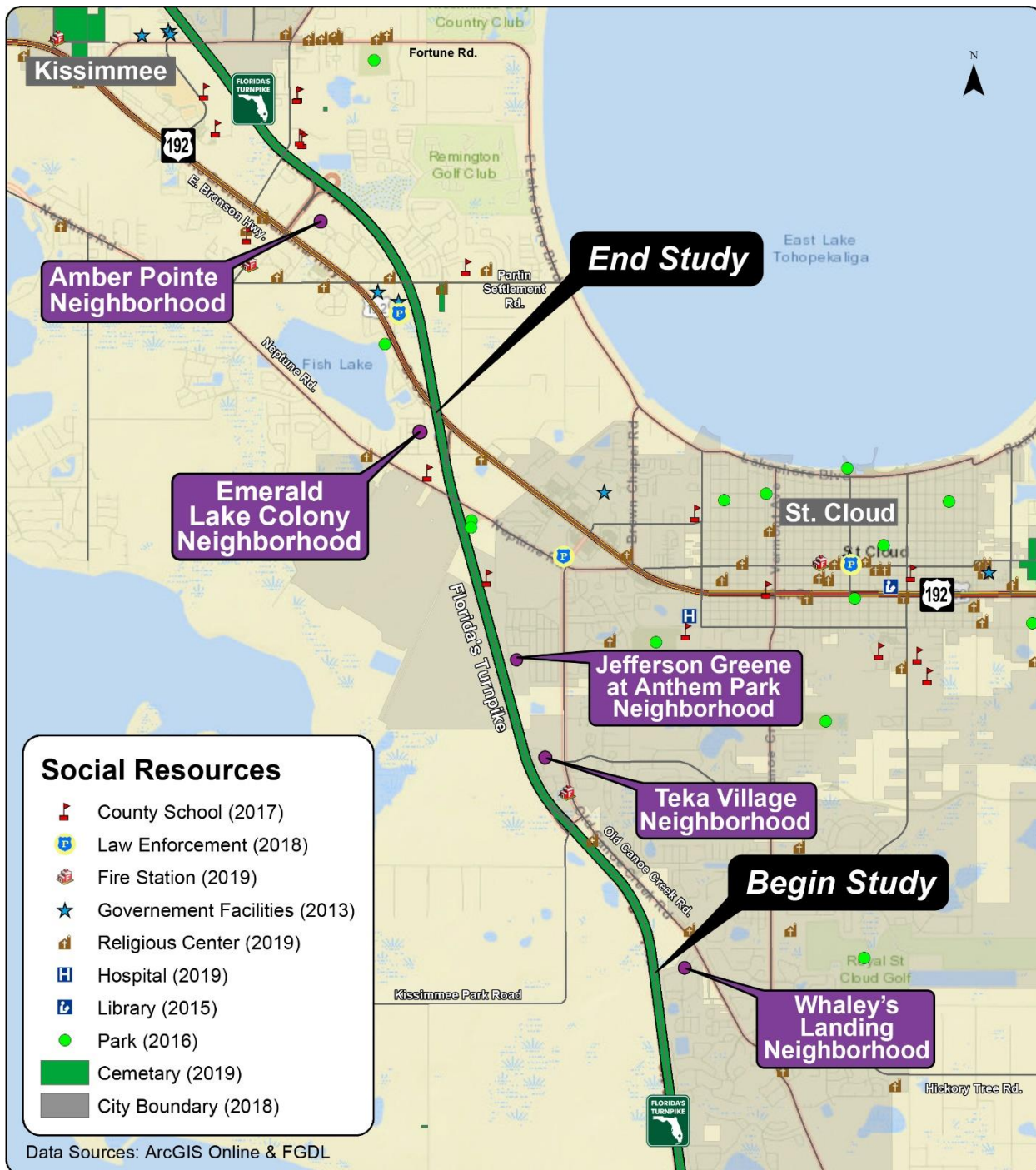


Figure 2-3: Social Resources and Community Neighborhoods

b. Community Cohesion

Community Neighborhoods

There are several residential neighborhoods within or adjacent to the 500-foot buffer. These neighborhoods are shown in **Figure 2-3: Social Resources and Community Neighborhoods** above and include:

- **Amber Pointe**, a single-family development located between the Florida's Turnpike (SR 91) and US 192
- **Emerald Lake Colony**, a single-family development in the northwest corner of the Florida's Turnpike (SR 91) and US 192 interchange
- **Jefferson Green at Anthem Park**, a single-family home development east of Florida's Turnpike (SR 91)
- **Teka Village**, an age-restricted (55+) manufactured-home community located in the northwest quadrant of the Kissimmee Park Road and Old Canoe Creek Road intersection
- **Whaley's Landing**, comprised of lots located southeast of the Florida's Turnpike (SR 91) and Kissimmee Park Road intersection

Special Community Designation

Within the 500-ft buffer study area, there are religious facilities, schools and institutional buildings, and government facilities. Parcel and lot owners within this buffer include various departments of Osceola County, and Osceola County Public Schools. Neptune Elementary, within the City of St. Cloud city limits, and Neptune Middle School, at the southwest corner of the Florida's Turnpike (SR 91) and US 192 interchange are located within the study area. The Osceola County Road and Bridge offices, Osceola County Animal Services offices and the offices for the South Florida Water Management District (SFWMD) branch office are located on adjacent parcels along Old Canoe Creek Road, near the Kissimmee Park Road interchange. The recommended Build Alternative, Alternative 2, will have no impacts to these facilities.

Community - Religious Facilities

There are two religious facilities located within the study area. These are Journey Bible Fellowship Church at 3220 Old Canoe Creek Road and City of Life at the Florida's Turnpike (SR 91) and US 192 interchange area. The recommended Build Alternative, Alternative 2, will have no impacts to any religious facilities.

Given the information above, the recommended Build Alternative, Alternative 2, impacts to community cohesion are "not substantial".

2.1.B Economic

This project is expected to have a beneficial effect on businesses within the study area by improving capacity and access. **Table 2-3: Large Commercial Parcels within the PD&E Study Area** (below) depicts the largest commercial parcels within the study area. St. Cloud Commons is a shopping center located at the Florida's Turnpike (SR 91) and US 192 interchange area and is one of the largest employers within the project area. Other employers include the WWRH Osceola 3, otherwise known as Florida Limited Liability, and U-Haul.

Table 2-3: Large Commercial Parcels within the PD&E Study Area

Owner Name	Location / Address	Parcel Area	Use Type
U-Haul Co of Florida	US 192	Approx. 3.3 acres	Commercial
WWRH Osceola 3, LLC	US 192	Approx. 3.8 acres	Commercial
St. Clouds Commons, LTD	US 192	Approx. 29.0 acres	Commercial

The proposed interchange at Florida's Turnpike (SR 91) and Nolte Road, as part of the recommended Build Alternative, Alternative 2, will improve access to the Edgewater Development of Regional Impact (DRI). This DRI is located on the west side of Florida's Turnpike (SR 91) and includes a planned commercial center and schools.

2.1.C Land Use Changes

Population and employment projections referenced in MetroPlan Orlando's 2040 LRTP (Blueprint 2040) indicate that the population of Osceola County is expected to grow from 350,542 to 609,025 (74% growth) between 2015 and 2040. Employment is projected to grow from 96,460 jobs to 269,821 jobs (180% growth) between 2015 and 2040.

A portion of this projected growth will affect the existing land uses in the project study area directly. There are several planned developments in the vicinity of the project, including the Edgewater DRI, Toho Preserves subdivision, and the Tohoqua subdivision.

The Edgewater DRI has a buildout date of 2027 and maximum buildout potential of 7,000 single and multi-family residential units, and 507,000 square feet of retail space in mixed-use community centers.

Preliminary subdivision plans for Toho Preserves and Tohoqua were approved by Osceola County in 2015 and 2016, respectively. These subdivisions are located west of Florida's Turnpike (SR 91) mainline and north of the Kissimmee Park Road Interchange. Tohoqua and Toho Preserves, combined, are approved for approximately 650 lots on 317 acres of land. See **Figure 2-4: Future Land Use** for the Osceola County 2040 Comprehensive Plan future land use, as well as, the City of St. Cloud and the City of Kissimmee future land use within the PD&E study area. The recommended Build Alternative, Alternative 2, offers improved mobility and access to better serve the planned growth and development within the study area, as outlined below in 2.1.D. Mobility. This results in the recommended Build Alternative, Alternative 2, impacts to land use changes being "enhanced".

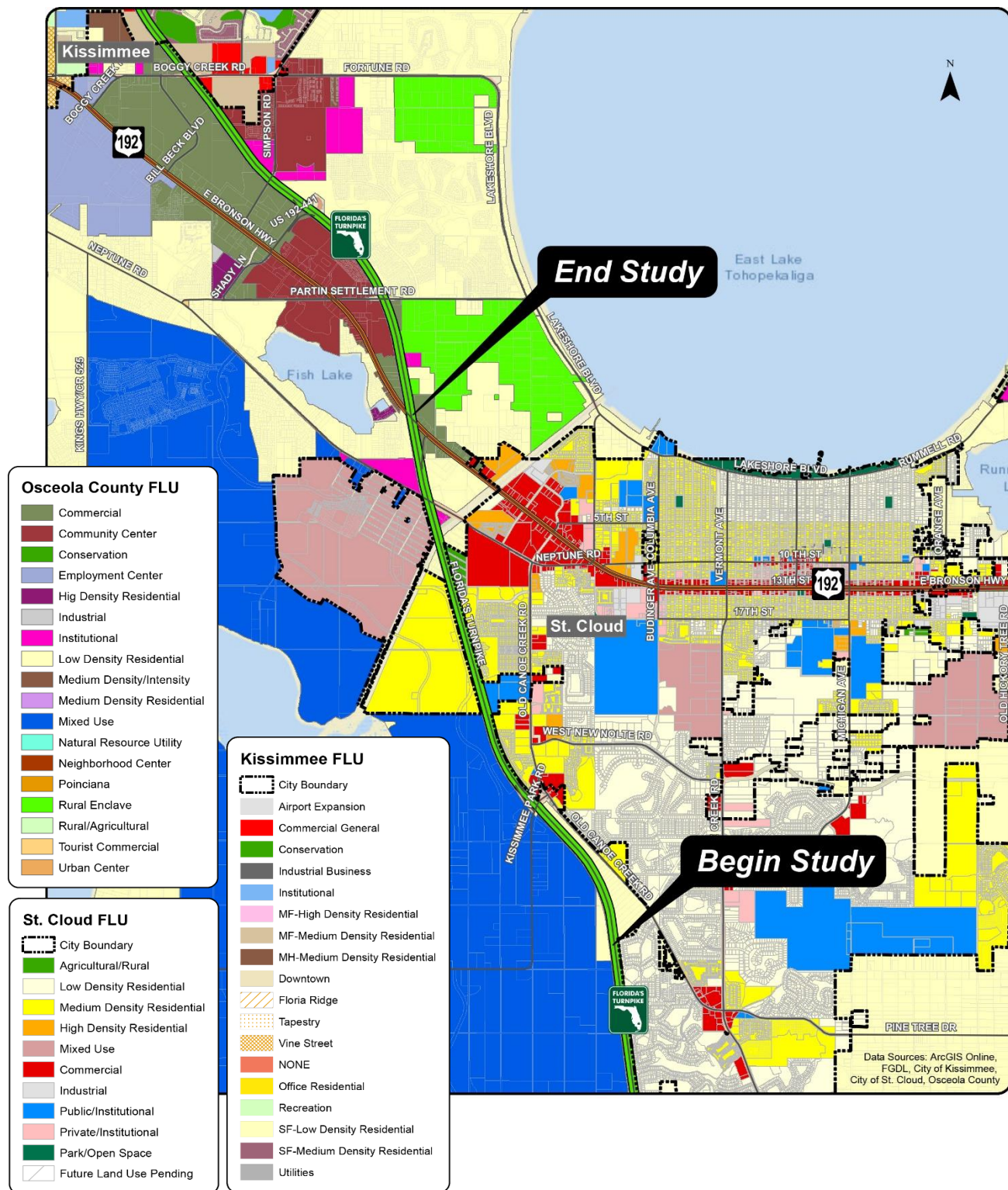


Figure 2-4: Future Land Use

2.1.D Mobility

The purpose of this project is to enhance mobility within Osceola County and to provide capacity for the anticipated growth in traffic associated with the developments in the study area. The recommended Build Alternative, Alternative 2, includes a new fully directional, diverging diamond interchange with an extension of Nolte Road to Florida's Turnpike (SR 91), north of the existing Kissimmee Park Road interchange. The proposed improvements better accommodate missing/deficient movements at the existing Kissimmee Park Road and US 192 interchanges and will enhance the connectivity to Florida's Turnpike (SR 91), a major link between Osceola County and the City of Orlando.

This new interchange will also provide enhanced mobility, including improved access and circulation for existing and future land uses within the study area. The proposed new interchange at Nolte Road provides better access to the Edgewater DRI and other planned large parcels on the west side of Florida's Turnpike (SR 91).

The new interchange has been endorsed by the City of St. Cloud and Osceola County as providing improved access on Nolte Road east of Old Canoe Creek Road. In addition, although the existing Kissimmee Park Road interchange would cease to have ramp movements on/off Florida's Turnpike (SR 91) from the north, the existing bridge would remain and allow for better circulation for local development in the study area. For these reasons the project is anticipated to "enhance" mobility.

2.1.E Aesthetics

Transportation projects can impact the aesthetic qualities of adjacent communities through the reduction, or addition, of landscaping as well as the addition of structural elements such as bridges or noise walls. Some considerations for this project are highlighted below.

Existing Landscape

Existing landscape conditions along Florida's Turnpike (SR 91) consist of uplands transitioning to wetlands within the ROW. Plant material in uplands and wetlands includes oaks (*Quercus* spp.), pine (*Pinus* spp.), red maple (*Acer rubrum*) Brazilian pepper (*Schinus terebinthifolia*), an invasive species, and maintained bahiagrass (*Paspalum notatum*). Enhanced landscaping occurs at the existing Kissimmee Park Road interchange. Landscape areas along the ramps consist primarily of slash pine (*Pinus elliotii*), cabbage palms (*Sabal palmetto*), firebush (*Hamelia patens*) and sand cordgrass (*Spartina bakeri*).

Landscape Opportunity

Widening Florida's Turnpike (SR 91) and constructing a new interchange creates opportunity for a bold vision landscape project. The conceptual opportunity plan provided (see **Appendix B**) highlights key opportunity areas that have the potential to fulfill design criteria consistent with FTE's branding guidelines.

The design configuration shown in the conceptual opportunity plan prioritizes preserving existing vegetation and its benefit to neighbor and user experiences on Florida's Turnpike (SR 91). Areas that will undergo significant functional use changes, such as the new interchange(s), were evaluated and assigned new programming. All programming in the conceptual opportunity plan was positioned in order to create an overall configuration that will contribute to FTE's unique landscape brand.

The existing southbound ramp to US 192 has established Level III canopy planting including cabbage palm, magnolia and bismarckia (*Bismarckia* spp.). The existing materials and design here will be carried over to the proposed southbound off ramp from US 192 to create a consistent palette at the interchange. Should construction impact these areas, individual trees would need to be field located for preservation or re-location based on condition. These conditions are noted and will be included in future submittals.

Noise Walls

Noise walls have been determined to be potentially feasible and reasonable at specific locations within the study limits. For further details, refer to Section 2.4.A Highway Traffic Noise below and the June 2020 *Project Development and Environment Noise Study Report*. Noise wall design will be finalized during the engineering design phase, with input from the adjacent communities.

Given the information above, the recommended Build Alternative, Alternative 2 will have "not substantial" impacts to aesthetics along the corridor.

2.1.F Relocation Potential

The proposed improvements will require ROW acquisition. ROW requirements and relocations have been minimized through the concept development. FDOT will implement a *Right-of-Way Acquisition and Relocation Program* in accordance with Florida Statute 339.09 and the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (Public Law 91-646 as amended by Public Law 100-17). In accordance with Chapter 4.3.3 of the FDOT PD&E Manual, a *Conceptual Stage Relocation Plan* (CSRP) dated June 2020, was developed as part of the overall study. Since the time of CSRP development, further ROW acquisitions have been reduced due to updated conceptual design. Proposed ROW acquisitions are summarized below.

The recommended Build Alternative, Alternative 2, includes a total of 48.2 acres of necessary ROW acquisition. A total of 27 parcels will be impacted. This includes three (3) business relocations and 14 residential relocations.

The remaining whole parcel impacts are to unoccupied property. As previously stated, no parcel impacts are proposed to religious facilities, government facilities or other community resources. Relocation assistance is available to all qualified business per the above-referenced Florida Statute (F.S.). Because of the urban setting of the study area, as well as multiple other available gas station and convenience stores within a two-mile radius of this existing business, the proposed relocation is anticipated to have no substantial impact on the local community.

Given the information listed above, with relocation assistance provided to a single affected business, the recommended Build Alternative, Alternative 2, is anticipated to have “not substantial” effects on the community’s social or economic resources.

2.2 Cultural

2.2.A Historic and Archaeological Sites

A Cultural Resources Assessment Survey (CRAS) was conducted within the study area to locate, identify, and aerially delimit any archaeological sites and historic resources (e.g., structures, buildings, bridges, cemeteries, linear resources, historic districts) within the project’s Area of Potential Effect (APE). As defined in 36 CFR Part 800.16(d), and recognized by Chapter 267, F.S., the APE is the “geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist.” The CRAS was prepared in accordance with Part 2, Chapter 8 of the FDOT PD&E Manual and the *Cultural Resource Management Standards and Operational Manual: Module 3* (Florida Division of Historical Resources [FDHR] 2003). Principal Investigators meet the *Secretary of the Interior’s Professional Qualification Standards* (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture. The CRAS documents resources significance in terms of eligibility criteria for listing in the National Register of Historic Places (NRHP). Surveys were completed in accordance with Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-655, as amended), as implemented by 36 CFR 800 (*Protection of Historic Properties*, effective August 2004), as well as Chapters 267 and 373, *Florida Statutes (F.S.)*, Chapter 1A-46, *Florida Administrative Code (FAC)*, and Florida’s Coastal Management Program. The results of the CRAS are summarized below.

Ten (10) new historic resources were identified, and two previously recorded historic resources were identified within the APE. These resources and the APE are depicted below on **Figures 2-5A, 2-5B, and 2-5C: CRAS Survey Resources**. The resources include nine buildings, one concrete bridge (FDOT Bridge No. 920044) and two linear resources. Of the twelve identified historic resources, one appears potentially eligible for listing in the National Register of Historic Places (NRHP).

The C-31 Canal (St. Cloud Canal), within the limits of the APE, appears to be eligible under Criteria A and Criteria C for early drainage efforts in the Kissimmee Basin. However, the recommended Build Alternative, Alternative 2, will expand two existing bridges (FDOT Bridge No. 920140 & FDOT Bridge No. 920074) that cross the canal by adding four 12-foot lanes (2-lanes in each direction). Therefore, the recommended Build Alternative, Alternative 2, will not result in the removal or destruction of any potential significant resources under the proposed bridges. In addition, the canal was not used for transportation navigability and the existing bridges do not detract from the canal’s significance.

Since the time of the CRAS completion, FDOT has provided survey results to the FDHR for review and approval, and FDHR has provided concurrence of the CRAS findings, dated June 30, 2020. Due to FDHR concurrence and reasons noted above, the recommended Build Alternative, Alternative 2, has “no impact” to cultural or historic resources. Additionally, there is “no adverse

effect” on any cultural or historic resources. Coordination with the FDHR will occur during pre-application meetings for application of the State Environmental Resource Permit (ERP) application, to ensure no further CRAS or field surveys are required for the project, during the design phase. Additional information regarding historical and cultural resources is in a separate report, titled *“Cultural Resource Assessment Survey for Florida’s Turnpike, from South of Kissimmee Park Road to US 192”* dated June 2020, under separate cover.

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Figure 2-5A: CRAS Survey Resources

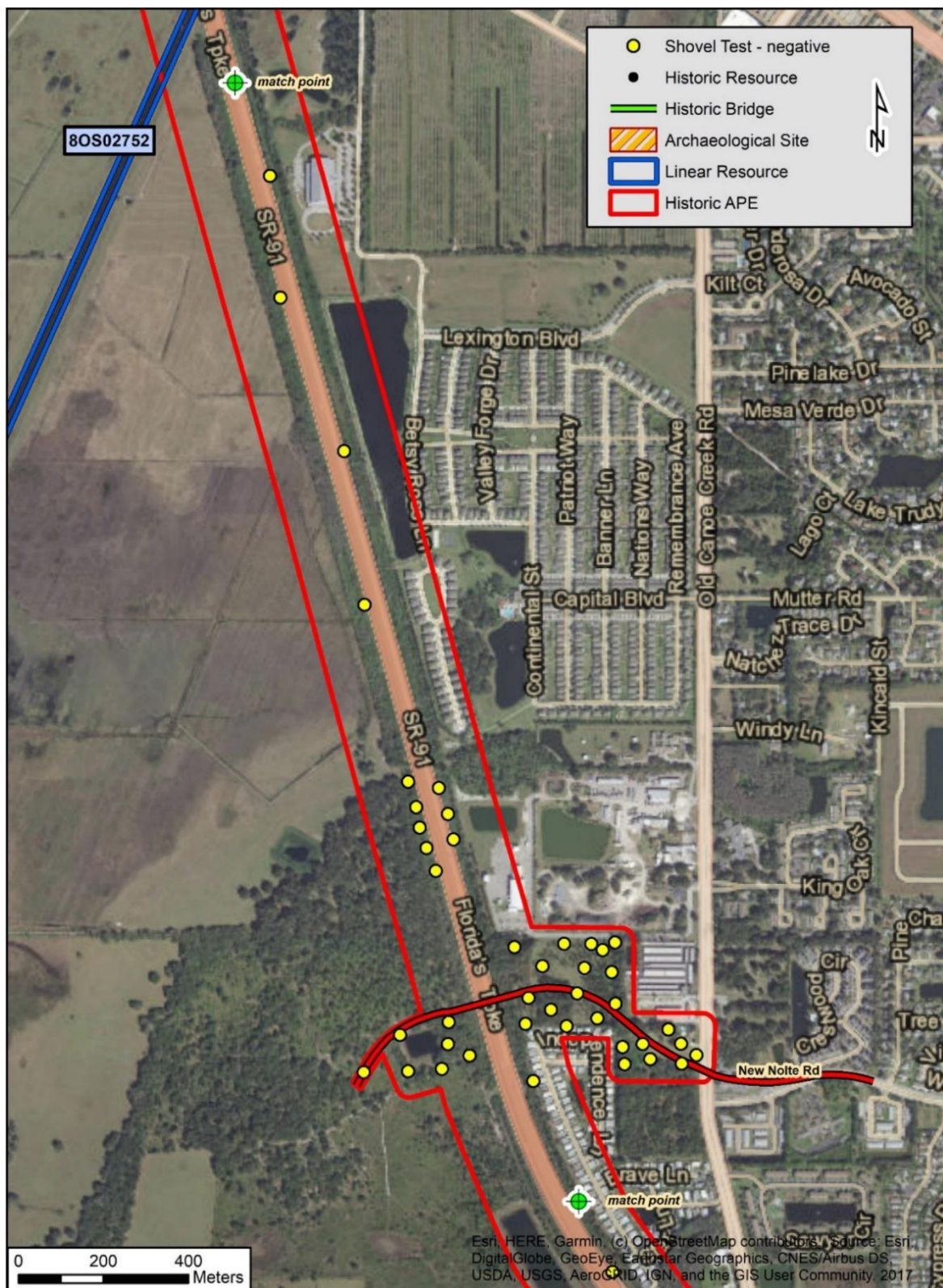


Figure 2-5B: CRAS Survey Resources



2.2.B Recreational Areas

Recreational areas within the project area include the Neptune Road Bike Path, which parallels Neptune Road and the C-31 Canal, which is used for small watercraft, including airboats. These resources are depicted on **Figure 2-6: Recreational Areas** below. Both resources will remain after the proposed improvements associated with this project. Therefore, “no substantial impacts” will occur to recreational areas due to the recommended Build Alternative, Alternative 2.



Figure 2-6: Recreational Areas

2.3 Natural

2.3.A Wetlands and Other Surface Waters

Jurisdictional waters, including wetlands, surface waters (SWs) and other surface waters (OSWs) were assessed within the PD&E Study in accordance with multiple state and federal regulatory parameters, including the Presidential Executive Order 11990 (“Protection of Wetlands”), U.S. Department of Transportation Order 5660.1A (“Preservation of the Nation’s Wetlands”), Federal Highway Administration Technical Advisory T6640.8A regarding the preparation of environmental documents, and Chapter 9, Wetlands and OSWs, of FDOT’s PD&E Manual. The boundary and functional value of these systems were assessed through literature reviews, agency database searches, and field reviews.

Prior to commencement of the PD&E study, agency comments were received from the SFWMD, Florida Department of Environmental Protection (FDEP), the United States Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA). Comments received included the need to assess wetlands, avoid and minimize impacts, and subsequently mitigate adverse impacts.

Based on agency comments and literature reviews, field assessments were conducted to verify the boundary of wetlands and surface waters and assess their value. No one design alternative has a significantly greater effect on wetlands or surface waters, and most wetland systems within the study area are low quality in nature. Therefore, the summary of wetland and surface water impacts is focused on the recommended Build Alternative, Alternative 2, and the associated pond sites.

A full description of the wetlands and surface waters within the study boundary is provided in the October 2020 *Natural Resources Evaluation Report* (NRE), under separate cover. The following summary provides the anticipated acreage of wetlands, surface waters (SWs), and other surface waters (OSWs), depending on their jurisdiction by state and federal agency, for the recommended Build Alternative, Alternative 2. Additionally, **Appendix C** provides the limits of all wetlands, SWs, and OSWs within the recommended alternative (Alternative 2). The recommended Build Alternative, Alternative 2, may incur up to 73 acres of direct impacts to wetlands, SWs, and OSWs. Of the 73 acres of direct impacts, approximately 59 acres are wetlands (primarily forested), 12 acres are historically wetland-cut SWs, and 2 acres are OSWs. It is estimated that approximately 18 acres of indirect impacts to wetlands and wetland-cut SWs may also occur as a result of the project. Therefore, the total direct and indirect wetland, SW, and OSW impact acreage is estimated at 91 acres.

Impacts shown on the provided exhibits are based on the most current (conceptual) design of the proposed interchange and mainline corridor. Because pond site alternatives are still under preliminary design, wetland impact acreage may diminish in some areas, or slightly increase from the current provided estimates. Per current state and federal requirements, all wetland and SW impacts will be reduced and avoided to the greatest extent feasible during final design.

The majority of impacts within the corridor are proposed to low-quality wetlands and surface waters, including borrow areas previously dredged during the original construction of Florida’s Turnpike (SR 91) over 50 years ago. These systems were assessed using the Uniform Mitigation Assessment

Method (UMAM), widely accepted in the State of Florida as a standard ecological evaluation to determine mitigation requirements. The average UMAM score for natural wetland systems and SWs for the project is 0.4 UMAM Functional Units. Using the estimated acreages provided above, approximately 31 UMAM credits from a state and federally approved mitigation bank will offset direct and indirect functional loss.

State Agency Jurisdiction, Permits and Mitigation

It is anticipated that SFWMD will assess the wetlands and wetland-cut SWs to have low ecological value. No mitigation is proposed for the upland-cut OSWs, as they convey stormwater within uplands, do not provide any significant habitat for wetland-dependent species (per criteria outlined in the Statewide ERP rules), and were not historically dredged from natural wetland systems. Therefore, SFWMD may require up to 31 UMAM credits to offset wetland and SW impacts. SFWMD is anticipated to issue an Individual ERP or Individual ERP Major Modification for the proposed project.

Federal Agency Jurisdiction, Permits and Mitigation

Given the updated Navigable Waters Protection Rule of the United States (known as WOTUS), published in June 2020, linear SWs and OSWs within the existing ROW are not likely to be considered jurisdictional with the USACE. However, the USACE will likely consider all wetland systems contiguous with Lake Tohopekaliga to be jurisdictional and will require mitigation for any unavoidable impacts to natural wetlands. Thus, the USACE may require less UMAM or M-WRAP credits to offset unavoidable wetland impacts. A Standard Permit (formerly termed Individual Permit) is anticipated, as the extent of wetland impact acreage may exceed SAJ-92 Regional General Permit (RGP) thresholds.

In summary, for reasons noted above, with avoidance where possible and mitigation (if appropriate), the recommended Build Alternative, Alternative 2, has “not substantial” effects to wetland or surface water resources.

2.3.B Water Quality and Water Quantity

Water quality criteria will be met with either dry detention systems within the ROW or wet detention facilities for an offsite pond site. Either option provides treatment of new impervious area as well as compensatory treatment for the existing impervious area not previously receiving treatment.

Each pond will be sized to meet SFWMD treatment volume criteria of 2.5-inches of runoff over the additional impervious area. The wet detention facilities will be designed to detain 100% of the treatment volume criteria, and dry detention systems will provide 75% of the treatment volume criteria (Section 4.2.1(a) - SFWMD ERP Applicant's Handbook Volume II). There are no direct discharges to an Outstanding Florida Water (OFW) or to a water body that has been identified as impaired by FDEP (refer to FDEP section below). Therefore, no additional treatment volume is required.

A Water Quality Impact Evaluation was completed for this project and is included in **Appendix D**.

Water quantity criteria will be met by providing storage for the additional post-development volume generated when compared to the pre-development volume generated. During design, routings will be performed to demonstrate that the post-development peak discharge rate is not greater than the pre-development discharge rate.

Per Section 3.3 of the 2016 SFWMD ERP Applicant's Handbook Volume II, unless otherwise specified by previous agency permits or criteria, a storm event of 3-day duration and 25-year return frequency shall be used in computing offsite discharge rates. Applicants are advised that local drainage districts or local governments may require more stringent design storm criteria. For this project, the local government criteria from Osceola County are assumed to govern. All project basins are open basins. The 10-year/72-hour storm event for Osceola County will be used to establish attenuation criteria for the proposed ponds, which is similar to the criteria used in the previous permits within the corridor.

A Pond Siting Report and Location Hydraulics Analysis were prepared (under separate cover) to demonstrate stormwater facilities are sized and sited to meet the above-mentioned water quality and water quantity criteria. Proposed facilities are in compliance with the following: Section 334.044(15), Florida Statutes, Chapter 14-86, Florida Administrative Code (for closed basins or areas subject to historical flooding), Section 373.4596, Florida Statutes; Chapter 62-25, Florida Administrative Code; and Chapter 62-40, Florida Administrative Code.

The United States Environmental Protection Agency (EPA) requires permits for stormwater discharge in association with the National Pollutant Discharge Elimination System (NPDES) and the EPA Clean Water Act. Because project impacts will be greater than one acre of disturbed land, application (through filing a Notice of Intent) will be necessary for use of the NPDES Generic permit.

2.3.C Floodplains

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Osceola County, community panel numbers 12097C0252G and 12097C0090G, dated June 18, 2013, indicates a portion of the project area is in the 100-year floodplain (see **Figure 2-7: FEMA Floodplains (FEMA Database, 2018)**). Therefore, there will be floodplain involvement with federally defined floodplains. There are no regulated floodways within the project limits. The project corridor crosses two FEMA floodplains: 1) Zone AE at the C-31 St. Cloud Canal, and 2) Zone A at CD-1, just north of the Kissimmee Park Road interchange.

No adverse impacts are anticipated to the floodplain, as required by the SFWMD permitting process. The SFWMD requires replacement of floodplain storage lost as a result of encroachments. In addition, the SFWMD and FDOT design criteria for conveyance systems (e.g. culverts) allow no substantial increase in flood stages.

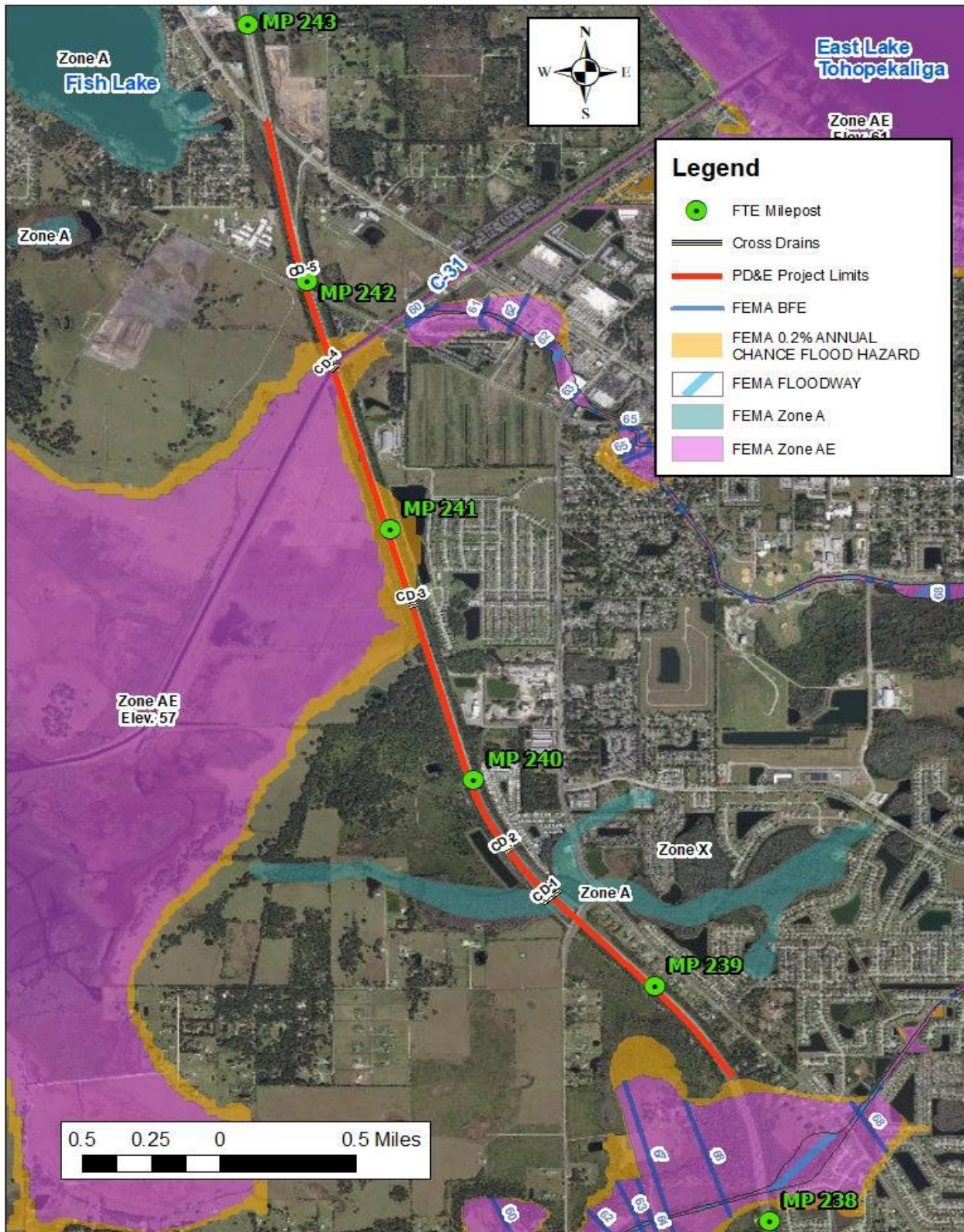


Figure 2-7: FEMA Floodplains (FEMA Database, 2018)

2.3.D Protected Species and Habitat

Within the PD&E study area, the potential presence of listed species and their habitat was assessed through literature reviews, agency database searches, and field reviews. Prior to commencement of the PD&E study, agency comments were received from the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FWC), through the ETDM Summary Report. Comments from these agencies focus on the need for species-specific surveys for multiple fauna species. A summary of protected species habitat, surveys needed based on agency comments, literature review, and results of initial field visits are provided below.

All design alternatives were studied and reviewed in accordance with Chapter 16 of the FDOT PD&E Manual, Protected Species and Habitat. All the design alternatives have the potential to impact similar protected species habitat; however, no one alternative has a significantly greater effect on listed species habitat. Additionally, the Degree of Effect (DOE) below is summarized for each species. A full description of the complete study area, and the potential to impact protected species and their habitat is provided in the October 2020 *Natural Resources Evaluation*, provided under separate cover.

Primary land use within the recommended alternative includes Upland Scrub, Pine and Hardwoods (FLUCCS# 436), Wetland Forested Mixed (FLUCCS# 630), Unimproved Pastures (FLUCCS# 212), Upland Hardwood Forests (FLUCCS# 420), Streams and Waterways (Canals within the existing ROW) (FLUCCS# 510) Upland-Cut Other Surface Waters (FLUCCS# 530D), Wetland-Cut Surface Waters (FLUCCS# 630D), and maintained Road and Highway ROW (FLUCCS# 814). Habitat types listed above are based on the 1999 *FDOT Land Use and Forms Classification System* (FLUCCS) handbook. Land use (habitat) and species occurrence is further described within the October 2020 *Natural Resources Evaluation*, provided under separate cover. While it is important to note that much of the maintained Road and Highway ROW limits is regularly maintained through mowing and landscape activities, it still provides some habitat for species such as the gopher tortoise and burrowing owl, and these areas will be surveyed during final design phase, to ensure all species are documented during environmental permitting. Because USFWS and FWC require surveys for some species beyond the construction limits, to confirm if the project will have indirect effects on a species, biologists also assessed adjacent habitats to determine the extent of potential surveys required. The extent of all proposed species-specific surveys is also further described in the October 2020 *Natural Resources Evaluation*. Following the DOE summary, estimated acreage for each habitat and corresponding species utilization provided in **Table 2-4**.

Federally Listed and Protected Species

The project study area was assessed to determine the potential presence of federally protected species and suitable habitat. Based on the results of the data review and field surveys, a total of seven (7) federally listed fauna species, Endangered Species Act (ESA), or otherwise protected by federal law, are potentially affected based on the recommended Build Alternative, Alternative 2. From the initial research, field visits were conducted September-October 2019, March of 2020, and July 2020 to confirm if potential habitat existed within Alternative 2, and associated pond sites. Based on the USFWS database, no federal listed species critical habitat is located within Alternative 2 or the study area.

The recommended Build Alternative, Alternative 2, is anticipated to “may affect, but not likely adversely affect (MANLAA)” the Eastern Indigo Snake (*Drymarchon corais couperi*), the wood stork (*Mycteria americana*), Audubon’s crested caracara (*Polyborus plancus audubonii*), the Florida scrub jay (*Aphelocoma coerulescens*), the Florida grasshopper sparrow (*Ammodramus savannarum floridanus*) and the Florida bonneted bat (*Eumops floridanus*). The MANLAA determination, per ESA regulations, is based on the project occurring within the Consultation Area (CA) for all above-listed species and anticipated species-specific surveys which will be conducted at the direction of USFWS during the project’s design phase.

Ongoing coordination with USFWS will continue throughout design. If species-specific surveys result in presence of listed species, FDOT will minimize and avoid impacts to habitat in design, where feasible, obtain a required Biological Opinion and provide mitigation approved by USFWS, to ensure no net loss of listed species habitat.

Although not protected under ESA, the bald eagle (*Haliaeetus leucocephalus*) is protected under multiple federal regulations. No bald eagle nests exist within the 660-foot protection zone of any proposed alternatives. One active nest site (FWC Nest ID# OS-194) was documented within 0.5 mile of the project study area during multiple site visits in May of 2019 and again in July of 2020. Ongoing monitoring of existing and new bald eagle nests within the project limits will continue through final design, to ensure there is no adverse impact to the breeding success of any active bald eagle pairs.

While the project lies within the USFWS Consultation Area for the red-cockaded woodpecker and limited Lake Wales Ridge plants, it is anticipated to have “no effect (NE)” on these species. The NE determination for these species is based on no suitable habitat for these species within the recommended Build Alternative, Alternative 2, no documented occurrence based on all available public records, and no observation of these species during field reviews.

State Listed and Protected Species

In addition to assessment for federally protected species, the project study area also was assessed to determine the potential presence of state-only protected species and suitable habitat. For purpose of this summary, those species that are both state and federally listed, and discussed above, are not repeated in this section, due to the fact that USFWS will take lead efforts in regulating those species. No listed or otherwise protected species critical habitat, based on FWC database results, is located within the recommended Build Alternative, Alternative 2, or the entire study area. Ongoing coordination with FWC will continue throughout design, as required through the State ERP permitting process, to ensure that the project has no adverse effect on all state-listed species.

Based on the results of the data review and field surveys, it was determined that a total of six (6) state-only listed species, per 68A-27, Florida Administrative Code, or otherwise protected by federal law, have the potential to occur within the corridor. The recommended Build Alternative, Alternative 2, is anticipated to have “no adverse effect” on the following

species: gopher tortoise (*Gopherus polyphemus*), Florida burrowing owl (*Athene cunicularia*), little blue heron (*Egretta caerulea*), tricolored heron (*Egretta tricolor*), sandhill crane (*Grus canadensis*) and roseate spoonbill (*Platalea ajaja*). Species specific surveys for the gopher tortoise and Florida burrowing owl will be conducted during design phase. Permitting through FWC and relocation of gopher tortoises to conservation property will occur for all work within 25 feet of impacted burrows. If burrowing owl burrows are discovered during surveys, efforts to avoid and minimize impacts will occur. An Incidental Take Permit will be obtained, and approved mitigation provided for any unavoidable impacts to burrowing owls. No nest sites or rookeries were observed for any state-only listed wading birds within the limits of the study area; therefore, no species-specific surveys are proposed during design phase.

For reasons listed above, with mitigation (if appropriate), the recommended Build Alternative, Alternative 2, effects on listed or protected species are “not substantial”. The following table provides a summary of each land use type, corresponding species that may occur or were observed during general wildlife surveys, approximate acreage of the land use within the recommended alternative, and the above-listed DOEs for each species.

Table 2-4: Approximate Habitat Acreage within Recommended Alternative

Species	Approximate Habitat Acreage in Alternative 2*	USFWS-FWC Survey Requirements	Commitment to Species-Specific Surveys or Mitigation for Habitat Impacts
Audubon's Crested Caracara	2.5 Acres	Yes	Yes
Burrowing Owl	82 Acres	Yes	Yes
Eastern Indigo Snake	82 Acres	No	Yes
Everglade Snail Kite**	No Suitable Habitat	No	Not Anticipated
Florida Bonneted Bat	120 Acres	Yes	Yes
Gopher Tortoise	82 Acres	Yes	Yes
Grasshopper Sparrow	2.5 Acres	Yes	Yes
Little Blue Heron**	0.2 Acres Foraging Habitat	No	Yes
Red-Cockaded Woodpecker	No Suitable Habitat	No	Not Anticipated
Roseate Spoonbill**	0.2 Acres Foraging Habitat	No	Yes
Sandhill Crane**	0.2 Acres Foraging Habitat	No	Yes
Scrub Jay	22.5 Acres	Yes	Yes
Tri-Colored Heron**	0.2 Acres Foraging Habitat	No	Yes
Wood Stork*	0.2 Acres Foraging Habitat	No	Yes

*Suitable habitat acreages overlap for multiple species

**There are no documented avian rookeries or nesting sites within Alternative 2; no rookeries or nesting sites were observed during wildlife surveys in Alternative 2 limits.

2.4 Physical

2.4.A Highway Traffic Noise

A traffic noise analysis was performed in accordance with Title 23, Code of Federal Regulations, Part 772 (23 CFR 772), *Procedures for Abatement of Highway Traffic Noise and Construction Noise* following methodology and procedures established by the FDOT in the *PD&E Manual*, Part 2, Chapter 18. The purpose of this noise study is to identify noise sensitive sites that would be impacted by the recommended Build Alternative, Alternative 2 (i.e., Nolte Road interchange), evaluate abatement measures at impacted noise sensitive sites, and determine where noise abatement (i.e., noise barriers) is recommended for further evaluation during the design phase..

The project's specific report dated June 2020, *Project Development and Environment Noise Study Report*, contains further details regarding traffic noise analysis. Noise levels are expressed in decibels (dB) using an "A" - scale [dB(A)] weighting, to approximate the response characteristics of the human ear. All predicted noise levels represent hourly equivalent levels (LAeq1h) consistent with the federal regulations regarding noise metrics. Traffic noise levels were predicted at noise sensitive sites of Alternative 2.

Regarding Alternative 2, traffic noise levels were predicted at 215 receptor points representing 324 residences and ten (10) special land uses:

1. Neptune Middle School (basketball court)
2. Villas of Emerald Lake Condo Association (basketball court)
3. Origin Hospitality/Assisted Living Facility (outdoor pavilion)
4. Journey Bible Fellowship Church (basketball court)
5. Teka Village (recreational shuffleboard court)
6. Anthem Park
7. Sunset Park
8. Neptune Elementary School (playground)
9. Partin Triangle Park
10. City of Life Christian School (baseball field, basketball courts, and a playground)

For Design Year (2045) conditions of Alternative 2, noise levels are predicted to approach, meet, or exceed the Noise Abatement Criteria (NAC) at 198 residences and eight (8) special land uses. These 198 impacted residences and eight (8) special land uses were further evaluated to determine the feasibility and reasonableness of providing noise barriers to reduce traffic noise.

The noise barrier evaluation identified that noise barriers are a reasonable and feasible form of abatement and could potentially provide at least a 5 dB(A) reduction at 125 of the 198 impacted residences (in Teka Village and along Betsy Ross Lane and Kettle Creek Drive), and at one (1) of the eight (8) impacted special land uses (Neptune Elementary School) at a cost below the reasonable limit.

A noise barrier at a second special land use, Neptune Middle School, was found to be potentially feasible but its reasonableness could not be conclusively determined at the time of analysis, due to impacts from COVID-19, which have resulted in a lack of field and basketball court usage with the current school closure.

A combination ROW (up to 22-feet) and shoulder (8-feet) noise barrier system was found to be potentially reasonable and feasible for Teka Village. A combination ROW (up to 22-feet) and shoulder (14-feet and 8-feet) noise barrier system was found to be potentially reasonable and feasible for residents along Betsy Ross Lane and Kettle Creek Drive. Barriers ranging between 10- and 22-feet were found to be potentially reasonable and feasible for Neptune Elementary School. Barriers ranging between 14- and 16-feet were presumed to be potentially reasonable and feasible at Neptune Middle School, pending a determination of site usage, which will be resolved during the design phase.

Therefore, a combination of ROW and shoulder noise barrier system was found to be potentially reasonable and feasible for Teka Village, residents along Betsy Ross Lane and Kettle Creek Drive, for Neptune Elementary School, and possibly for Neptune Middle School.

The FTE is committed to the construction of feasible and reasonable noise abatement measures at Teka Village, Betsy Ross Lane/Kettle Creek Drive, Neptune Elementary School and Neptune Middle School as identified in Noise Study Report, dated June 2020, contingent upon the following conditions during future Design phases:

- Final recommendations on the construction of abatement measures is determined during the project's final design and through the public involvement process;
- Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;
- Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;
- Community input supporting types, heights, and locations of the noise barrier(s) is provided to the FTE; and
- Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

Based on proposed noise abatement measures, where they are both reasonable and a feasible form of noise abatement, the recommended Build Alternative, Alternative 2, is anticipated to have "no substantial effect" on surrounding communities.

2.4.B Air Quality

The objective of the air quality screening is to determine if project-related motor vehicle emissions will cause, or contribute to, a violation of the National Ambient Air Quality Standards (NAAQS) for carbon monoxide, the most prevalent air pollutant emission from motor vehicles. The December 2019 Air Quality Technical Memorandum has been prepared per the requirements as outlined in the FDOT PD&E Manual, Part 2, Chapter 19.

This summary contains information regarding the air quality study conducted for the proposed improvements. The recommended Build Alternative, Alternative 2, was evaluated for potential air quality impacts.

The roadway segment chosen for the screening test is typically the one with the combination of highest traffic volumes, lowest vehicular speeds, and closest receptors. For this project, the proposed northbound on-ramp to Florida's Turnpike (SR 91) mainline from the extension of Nolte Road and the northbound off-ramp from the Florida's Turnpike (SR 91) mainline were selected as the worst-case roadway segments due to the projected traffic volumes, reduced speeds and proximity of the residences.

A receptor site is a place where people can reasonably be expected to spend a significant amount of time, such as the backyard of a residence. Two receptor sites (Receptor Site 1 [R1] and Receptor Site 2 [R2]) were selected as the closest reasonable air quality receptors to the roadway. The southbound (west) side of Florida's Turnpike (SR 91) is currently undeveloped, therefore the proposed receptor sites are on the northbound (east) side of Florida's Turnpike (SR 91).

R1 is located in the southeast area of the proposed interchange near Teka Village, and R2 is located near the intersection of the northbound on-ramp with the Nolte Road extension (see **Figure 2-8: Receptor Site Location Map**). For R1, the northbound general use lanes of Florida's Turnpike (SR 91) were used for the worst-case. For R2, the northbound on-ramp was used. The screening test for urban areas in Central Florida was used.

All the scenarios passed the screening and "No Exceedances of NAAQ Standards are Predicted" based on the recommended Build Alternative, Alternative 2.

This project is not expected to create adverse impacts on air quality because the project area is in attainment for all National Ambient Air Quality Standards (NAAQS) and because the project is expected to improve the Level of Service (LOS) and reduce delay and congestion on all facilities within the study area. Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction.

Based on the above information, the proposed improvements are "not substantial" and are not anticipated to have adverse impacts on air quality conditions.



Figure 2-8: Receptor Site Location Map

2.4.C Contamination

A November 2019 *Contamination Screening Evaluation Report* (CSER) was performed to identify contamination concerns within the project study area from South of Kissimmee Park Road to US 192. The purpose of this evaluation was to assess the risk of encountering petroleum or hazardous substance contamination of soil, groundwater, surface water, or sediment that could adversely affect this project.

This evaluation was performed in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual. The study area is defined by the following distances from the ROW:

- All sites within 500-feet
- Non-landfill solid waste sites within 1,000-feet
- Solid waste landfills, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), or National Priorities List (NPL) sites within ½ mile

Relevant information was reviewed from the FDEP, the United States Environmental Protection Agency (EPA), and local agencies in Osceola County to identify known or potential contamination sites within the study area. Historical aerial photographs and other published historical sources were reviewed as part of this CSER. A site reconnaissance was performed for the properties within the study area and regulatory individuals with knowledge of the study area's environmental status were interviewed.

Based on the results of the contamination screening activities, Contamination Risk Ratings (CRRs) were assigned to sites. The risk rating system was developed by FDOT and incorporates four levels of risk: No, Low, Medium and High, with High risk sites having the most concern.

As a result of this evaluation, CRRs were assigned to nineteen (19) sites. CRRs are summarized in **Table 2-5: Low Risk Sites** and **Table 2-6: Medium Risk Sites** below. There were fourteen (14) Low Risk sites and five (5) Medium Risk sites identified within the CSER. These sites were compared against the recommended Build Alternative, Alternative 2, to determine if Level II Impact to Construction Assessments (Level II Assessments) are required.

Table 2-5: Low Risk Contamination Sites

Site No.	Site Name	Site Address	Risk Potential
1	Saint Cloud Fire Rescue Station 32	3450 Old Canoe Creek Road/ 2614 Kissimmee Park Road	Low
2	7-Eleven Store #34164	3601 Old Canoe Creek Road	Low
4	South Florida Water Management District – St. Cloud Field Station	3800 Old Canoe Creek Road	Low
5	Osceola County – Environmental Services	2370 Old Canoe Creek Road/ Kissimmee Park Road	Low
6	Osceola County Road & Bridge	3850 Old Canoe Creek Road	Low
7	St. Cloud City – LS #80 Anthem Park	2122 Continental Street	Low
8	Cattle Pen	Pond 3-2-2	Low
9	Material Storage Area	South of Neptune Road	Low
10	SPILLS Incident 2018-7I-60867Z	2830 Neptune Road	Low
12	Neptune Middle School	2727 Neptune Road	Low
13	SPILLS Incident 2017-7I-58113Z	FL Turnpike (SR 91) MM 242 Northbound	Low
15	Super Mini Mart	2825 E. Irlo Bronson Memorial Highway	Low
16	SPILLS Incident 2012-7I-43710Z	2791 E. Irlo Bronson Memorial Highway	Low
17	Technical/Electric Service and Supply, Inc.	2802 E. Irlo Bronson Memorial Highway	Low

Table 2-6: Medium Risk Contamination Sites

Site No.	Site Name	Site Address	Risk Potential
3	Mickey's Mini Mart	3670 Old Canoe Creek Road	Medium
11	Cattle Pen	Pond 5-1	Medium
14	FDOT Right of Way South of US 192 – Kissimmee/St. Cloud	28°15'48.0924" N, 81°19'55.8732" W	Medium
18	Agricultural Land Use	East and West side of SR 91, south of Neptune Road and East of SR 91, north of W. Nolte Road	Medium
19	Kissimmee to St. Cloud Rail Line	Neptune Road	Medium

Also, a total of 29 stormwater ponds were considered within the CSER. Based on the recommended Build Alternative, Alternative 2, a Level II Impact to Construction Assessment (ICA) is required for the Site No. 3, Mickey's Mini Mart. None of the preferred pond sites appear to require Level II ICAs. Therefore, the recommended Build Alternative, Alternative 2, is anticipated to have "no substantial" effect on contaminated sites. In the event contamination is identified, mitigation will be addressed, as needed.

2.4.D Utilities

This section summarizes the results of the November 2019 *Utility Assessment Report*. The purpose of the Utility Assessment is to identify the type, location, and ownership of the existing utilities within the limits of the study area and to assess their impacts with the proposed improvements. All work was performed in accordance with the standards outlined in Part 2, Chapter 21 (“Utilities & Railroads”) of the FDOT PD&E Manual. The utility information provided below was obtained from field reviews, as-built plan information from previous projects in the area, as well as information provided by the utility companies. This section summarizes the results of the November 2019 *Utility Assessment Report*. Existing utilities confirmed within the study area are summarized below:

AT&T Corporation – Transmission

- Buried fiber optic cable network consisting of (2) 2-inch HDPE in a 10-foot easement. This easement is in the northbound median of Florida’s Turnpike (SR 91)

AT&T Florida’s – Distribution

- Buried fiber optic cable facilities are placed in the south ROW of US 192 and crosses Florida’s Turnpike (SR 91)

Bright House Networks / Charter – CATV

- Aerial cable facilities are placed along the west ROW of Old Canoe Creek Road
- Buried cable facilities are placed along the west ROW of Old Canoe Creek Road
- Buried cable facilities crossing at Old Canoe Creek Road south of Nolte Road
- Aerial cable facilities are placed along the south ROW of Nolte Road

CenturyLink National / Level 3-Communications

- Buried fiber optic cable facilities are placed in the west ROW of Old Canoe Creek Road
- Buried fiber optic cable facilities are placed in the south ROW of US 192 and crosses Florida’s Turnpike (SR 91)

CenturyLink Legacy - Local Telephone

- Buried fiber optic cable facilities are placed in the north ROW of Kissimmee Park Road and crosses Florida’s Turnpike (SR 91)
- Buried fiber optic cable facilities are placed in the west ROW of Old Canoe Creek Road
- Buried copper cable facilities are placed in the east and west ROW of Old Canoe Creek Road

- Buried copper cable crossings at 1,050-feet north of Kissimmee Park Road and at 1,450-feet north of Kissimmee Road to the north side of Teka Lane ROW
- Buried copper cable facilities at the southeast corner of Old Canoe Creek Road and Nolte Road
- Buried fiber optic cable facilities are placed in the west ROW of Old Canoe Creek Road
- Buried copper facilities are in the east ROW of Florida's Turnpike (SR 91)
- Buried fiber optic cable facilities are placed in the north ROW of Kissimmee Park Road
- Buried copper cable facilities in the south ROW of Nolte Road
- Buried copper cable crossing at 400-feet east of Old Canoe Creek Road
- Buried copper cable crossing at 1,100-feet east of Old Canoe Creek Road
- The fiber optic cable facilities are placed in the north ROW of US 192

City of St. Cloud – Public Utilities

- 12-inch HDPE water main placed in the north ROW of Neptune Road
- 12-inch HDPE reclaimed water placed in the north ROW of Neptune Road
- 8-inch HDPE force main placed in the north ROW of Neptune Road
- 24-inch DIP water main placed in the south ROW of Kissimmee Park Road
- 8-inch PVC force main in the south ROW of Kissimmee Park Road.
- 12-inch PVC water main placed in the west ROW of Old Canoe Creek Road, from the south limits of this PD&E study
- 12-inch PVC water main placed in the east ROW of Old Canoe Creek Road, from the north right-of-way of Settlers Trail to crossing
- 12-inch PVC water main placed in the east ROW of Old Canoe Creek Road, from the south ROW of Nolte Road
- 12-inch PVC reclaimed water placed in the east ROW of Old Canoe Creek Road, from the south limits of this PD&E study
- 12-inch PVC reclaimed water placed in the east ROW of Old Canoe Creek Road, from the east limits of this PD&E study
- 12-inch PVC reclaimed water placed in the east ROW of Old Canoe Creek Road, from the south ROW of Nolte Road
- 8-inch PVC force main placed in the east ROW of Old Canoe Creek Road, from the east limits of this PD&E study
- 16-inch PVC force main placed in the west ROW of Old Canoe Creek Road, from south of Nolte Road

- 8-inch PVC gravity main placed in the west ROW of Old Canoe Creek Road, from north ROW of Nolte Road to the north limits of this PD&E study
- 12-inch PVC water main placed in the south ROW of Nolte Road from the east ROW of Old Canoe Creek Road to the east limits of this PD&E study
- 12-inch PVC reclaimed water placed in the north ROW of Nolte Road from the east ROW of Old Canoe Creek Road to the east limits of this PD&E study
- 16-inch PVC force main placed in the north ROW of Nolte Road
- 8-inch PVC gravity main placed in the north ROW of Nolte Road

ComCast Communications – CATV

- Aerial cable facilities are placed along the west ROW of Old Canoe Creek Road, beginning from the south limits of this PD&E study
- Buried cable facilities are placed along the west ROW of Old Canoe Creek Road, beginning from the south ROW of Kissimmee Park Road
- Buried fiber optic cable facilities are placed in the south ROW of Kissimmee Park Road

Florida Gas Transmission – Natural Gas

- 30-inch natural gas transmission pipeline from the east limits of this PD&E study and proceeds west, crossing Florida's Turnpike (SR 91) 2,100 feet south of US 192 to the north limits of this study
- 20-inch natural gas transmission pipeline is placed in an easement along the south ROW of US 192, from the east limits of this PD&E study and proceeds west crossing Florida's Turnpike (SR 91)

Orlando Telephone Company / Summit Broadband

- This utility received a request to provide their facility information within the study limits and was provided project alignment plans, which included two alternative interchange involvements. This utility provided a response stating that they have no facilities within the limits of this PD&E study

Orlando Utilities Commission (OUC) Electric

- Aerial 3-Phase electric distribution line is attached to wood poles. These facilities are placed in the west ROW of Old Canoe Creek Road from the south limits of this PD&E study to the south of Kissimmee Park Road
- Buried 3-Phase electric distribution line from a wood power pole to the south of Kissimmee Park Road.
- Aerial 3-Phase electric distribution line from wood power pole in east ROW of Kissimmee Park Road, being 800-feet west/south of ROW of Florida's Turnpike (SR 91)

- Buried 3-Phase electric distribution line from a wood power pole in the east ROW of Kissimmee Park Road, being 725-feet from the southbound off-ramp of Florida's Turnpike (SR 91)
- Buried 3-Phase electric distribution in the north ROW of Kissimmee Park Road Then proceed north in the west ROW of the southbound off-ramp of Florida's Turnpike (SR 91)
- Buried single phase electric distribution line from the east limit of this PD&E study to 150-feet west of St. Cloud Commons in the north ROW of US 192

The recommended Build Alternative, Alternative 2, includes alignment changes of Nolte Road with new on- and off-ramps accessing Florida's Turnpike (SR 91). The potential impact at Florida's Turnpike (SR 91) will include communications facilities owned and maintained by AT&T Corporation. The greatest impact to utilities occurs at Old Canoe Creek Road, where the potential impact includes those facilities owned and maintained by the City of St. Cloud, CenturyLink Legacy, CenturyLink National, Bright House Networks, and Orlando Utilities Commission. No impacts to Florida Gas Transmission Lines are proposed.

Additionally, no FTE-owned utilities were identified on the Sunshine 811 design ticket for the entire PD&E study area. However, due to the existing toll plaza within the study area and interchange lighting, it is anticipated that fiber-optic and electrical utility lines are located within the existing FDOT ROW.

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. Relocation of other facilities within the existing ROW are anticipated, and estimated relocation reimbursements are provided in the Environmental Matrix (**Table 2-1: Alternatives Evaluation Matrix**) above. Based on these facts, the recommended Build Alternative, Alternative 2, is anticipated to have an impact on existing utilities within the study area. However, mitigation measures will occur during the design phase of the project to minimize impacts to the existing utilities; therefore, the impact is seen as "not substantial".

2.4.E Construction

Construction activities will have minimal, temporary air, noise, water quality, traffic flow and visual impacts for those residing and traveling within the immediate surroundings of the PD&E study area.

The impacts to air quality will be attributed to the emissions and dust from the operation of heavy equipment associated with the project construction. The air pollution from these particles will be controlled with watering or using calcium chloride. Vibration impacts that result from the use of heavy equipment and construction activities will use the control measures outlined in the latest edition of the FDOT's *Standard Specifications for Road and Bridge Construction*.

Potential water quality impacts resulting from erosion and sedimentation will be controlled in accordance with the latest edition of the FDOT's *Standard Specifications for Road and Bridge Construction*.

Traffic delays will be minimized through appropriate channelization on the project site and maintenance of traffic.

2.4.F Bicycles and Pedestrians

Chapters 222 and 223 of the 2020 *Florida Design Manual* provide updated guidelines on designing pedestrian and bicycle facilities, respectively. Specifically, these guidelines further implement a “Complete Streets” policy, designing multi-modal facilities that are safer and more accessible for all roadway users.

These guidelines were used in designing the new Nolte Road extension and interchange as part of Alternative 2. This includes 6-foot sidewalks, the latest FDOT standard, on both sides of Nolte Road, the four-lane section of Old Canoe Creek Road and along the south side of Kissimmee Park Road in the interchange vicinity. The proposed improvements will provide sidewalks for all four-lane urban reconstruction sections. A 12-foot multi-use path will be provided along the south side of the Nolte Road extension and through the interchange, for increased safety at the ramp crossings. Cross walks will be signed and striped and ped signals provided at the signalized intersections.

Dedicated bike lanes will be provided on both sides of Nolte Road and the four-lane section of Old Canoe Creek Road. Five-foot bike lanes will be provided for the widened sections of Old Canoe Creek Road. As such, the recommended Build Alternative, Alternative 2, is anticipated to have “no adverse impact” on existing and future bicycle and pedestrian facilities within the PD&E study area.

DRAFT

Appendix A: Planning Consistency Documents



metroplan orlando

A REGIONAL TRANSPORTATION PARTNERSHIP

2040 Long Range Transportation Plan

Technical Report 3: Plan Development & Cost Feasible Projects

Adopted - January 2016

Updated - December 2019



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SR 434	Edgemon Ave	US 17-92	Widen to 6 Lanes	P,D,R,C	2040
SR 46	Monroe Rd	Airport Blvd	Widen to 6 Lanes	P,D,R,C	2040
SR 46 **	SR 415	CR 426	Widen to 4 Lanes	D,R,C	2040
SR 436	Orange Co. Line	East of Lake Harriet Dr	Widen to 8 Lanes	P,D,R,C	2040
SR 436	Wethersfield Ave	Lynchfield Ave	Add EB Lane	P,D,R,C	2040
Slavia Rd	Red Bug Lake Rd	SR 426	Widen to 4 Lanes	P,D,R,C	2040
CR 419	CR 13/Snow Hill Rd	Lake Mills Rd	Widen to 4 Lanes	P,D,R,C	2040
Tuskawilla Rd	Red Bug Lake Rd	Eagle Blvd	Widen to 6 Lanes	P,D,R,C	2040
Tuskawilla Rd	Eagle Blvd	Lake Dr	Widen to 6 Lanes	P,D,R,C	2040
Note: For detailed information related to the estimated cost for each project phase, see page 15 of this Technical Report #3					
Seminole County - Unfunded Needs					
Rinehart Rd	CR 46A	SR 46	Widen to 6 Lanes	-	-
<p>* Transportation Improvement Program (TIP 2016-2020)</p> <p>** Refer to Prioritized Project List (PPL)</p> <p>*** Refer to FY14/15 - FY18/19 Transportation Improvement Program (TIP)</p> <p>P = Project Development & Engineering (PD&E), D = Design, R = Right of Way (ROW), C = Construction</p> <p>Note: For detailed information related to the estimated cost for each project phase, see page 15 of this Technical Report #3</p>					

TABLE 12: TOLL FACILITIES

Roadway	From	To	Improvement	Phase(s)	Funded by
Florida's Turnpike Enterprise - Funded Projects					
SR 91/ Florida's Turnpike	Osceola Pkwy (MP 249)	SR 528/Beachline Expwy (MP 254)	Widen to 8 Lanes	D,R,C	2020
SR 91/ Florida's Turnpike	US 192/US 441 (MP 242)	Osceola Parkway (MP 249)	Widen to 8 Lanes	D,R,C	2020
SR 91/ Florida's Turnpike	Kissimmee Park Road (MP 240)	US 192/US 441 (MP 242)	Widen to 8 Lanes	P	2020
SR 91/ Florida's Turnpike	At Kissimmee Park Road		Interchange Modification	P	2020
SR 91/ Florida's Turnpike	At Interstate 4		Direct Connect Ramps	D,R,C	2020
SR 91/ Florida's Turnpike	At SR 528/US 441		Ultimate System to System Interchange	P	2020
SR 504/Colonial Parkway	Woodbury Road	SR 520	New 4- Lane Facility	P,D,R,C	2020
SR 504/Colonial Parkway	SR 520	SR 528	New 4- Lane Facility	P	2020
SR 528/Beachline West Expwy	SR 91/ Florida's Turnpike (MP 4)	McCoy Road (MP 8)	Widen to 8 Lanes	D,C	2020
SR 528/Beachline East Expwy	SR 520	Industry Road	Widening TBD	P	2020
SR 91/ Florida's Turnpike	SR 408	SR 50	Widening/Interchange Modifications	P	2020
SR 91/ Florida's Turnpike	SR 50 (MP 272)	Orange/ Lake County Line (MP 274)	Widen to 8 Lanes	P,D,R,C	2025
SR 91/ Florida's Turnpike	At Sand Lake Road		New Interchange	P,D,R,C	2025
SR 91/ Florida's Turnpike	Sand Lake Road	SR 408	Widening TBD	P, D	2025
SR 91/ Florida's Turnpike	SR 528	Voltaire Drive	New Interchange	P, D	2025
SR 91/ Florida's Turnpike	Florida's Turnpike	Taft-Vineland Road	New Interchange	P, D	2025

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AS-OF DATE: 07/01/2020

FLORIDA DEPARTMENT OF TRANSPORTATION
OFFICE OF WORK PROGRAM
STIP REPORT
=====

DATE RUN: 07/07/2020
TIME RUN: 08.40.59
MBRSTIP-1

TURNPIKE
=====

PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYR	54	7,066,194	0	0	0	0	7,066,248
TOTAL <N/A>	326,666	7,066,194	0	0	0	0	7,392,860
TOTAL 440700 2	326,666	7,066,194	0	0	0	0	7,392,860
TOTAL Project:	2,834,676	24,833,403	0	0	0	0	27,668,079

ITEM NUMBER:440859 1 PROJECT DESCRIPTION:KISSIMMEE PARK ROAD INTERCHANGE ALL ELECTRONIC TOLL CONVERSION (MP240) *SIS*
DISTRICT:05 COUNTY:OSCEOLA TYPE OF WORK:TOLL PLAZA
PROJECT LENGTH: .400MI

FUND	LESS					GREATER	
CODE	THAN	2021	2022	2023	2024	THAN	ALL
	2021					2024	YEARS
----	-----	-----	-----	-----	-----	-----	-----

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	1,070,727	2,853	0	0	0	0	1,073,580
PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	18,036	0	0	0	0	2,000	20,036
TOTAL <N/A>	1,088,763	2,853	0	0	0	2,000	1,093,616
TOTAL 440859 1	1,088,763	2,853	0	0	0	2,000	1,093,616
TOTAL Project:	1,088,763	2,853	0	0	0	2,000	1,093,616

ITEM NUMBER:441224 1 PROJECT DESCRIPTION:PD&E FOR WIDEN TPK FROM KISSIMMEE PARK RD TO US 192 (MP 238.5-242.5) *SIS*
DISTRICT:05 COUNTY:OSCEOLA TYPE OF WORK:PD&E/EMO STUDY
PROJECT LENGTH: 4.000MI

FUND	LESS					GREATER	
CODE	THAN	2021	2022	2023	2024	THAN	ALL
	2021					2024	YEARS
-----	-----	-----	-----	-----	-----	-----	-----

FEDERAL PROJECT NUMBER: <N/A>

PHASE: P D & E / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	1,296,736	202,893	0	0	0	0	1,499,629
TOTAL <N/A>	1,296,736	202,893	0	0	0	0	1,499,629
TOTAL 441224 1	1,296,736	202,893	0	0	0	0	1,499,629

FLORIDA DEPARTMENT OF TRANSPORTATION
OFFICE OF WORK PROGRAM
STIP REPORT
=====

DATE RUN: 07/07/2020
TIME RUN: 08.40.59
MBRSTIP-1

TURNPIKE
=====

ITEM NUMBER:441224 2 PROJECT DESCRIPTION:KISSIMMEE PARK ROAD INTERCHANGE IMPROVEMENTS (MP 240) *SIS*
DISTRICT:05 COUNTY:OSCEOLA TYPE OF WORK:INTERCHANGE IMPROVEMENT
PROJECT LENGTH: .600MI

FUND	LESS					GREATER	
CODE	THAN					THAN	ALL
	2021	2021	2022	2023	2024	2024	YEARS

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	3,841,005	1,677	0	0	570,000	0	4,412,682

PHASE: RIGHT OF WAY / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	47,088	6,903,912	3,173,985	0	0	0	10,124,985

PHASE: ENVIRONMENTAL / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	0	400,000	0	0	0	0	400,000

PHASE: DESIGN BUILD / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	9,680	0	3,995	0	90,740,077	2,080,000	92,833,752

TOTAL <N/A>	3,897,773	7,305,589	3,177,980	0	91,310,077	2,080,000	107,771,419
TOTAL 441224 2	3,897,773	7,305,589	3,177,980	0	91,310,077	2,080,000	107,771,419

ITEM NUMBER:441224 3 PROJECT DESCRIPTION:WIDEN TPK - KISSIMMEE PARK RD TO US 192 (MP 238.5-242.5) (4TO8) *SIS*
DISTRICT:05 COUNTY:OSCEOLA TYPE OF WORK:ADD LANES & RECONSTRUCT
PROJECT LENGTH: 4.000MI

FUND	LESS					GREATER	
CODE	THAN					THAN	ALL
	2021	2021	2022	2023	2024	2024	YEARS

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	98,220	1,500	0	0	0	5,473,207	5,572,927

PHASE: RIGHT OF WAY / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	0	0	0	0	0	11,091,127	11,091,127

PHASE: RAILROAD & UTILITIES / RESPONSIBLE AGENCY: MANAGED BY FDOT							
PKYI	0	0	0	0	0	5,200,000	5,200,000

FLORIDA DEPARTMENT OF TRANSPORTATION
OFFICE OF WORK PROGRAM
STIP REPORT
=====

DATE RUN: 07/07/2020
TIME RUN: 08.40.59
MBRSTIP-1

TURNPIKE
=====

PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: MANAGED BY FDOT

PKBD	0	0	0	0	0	77,397,443	77,397,443
PKYI	0	0	0	0	0	11,440	11,440

PHASE: ENVIRONMENTAL / RESPONSIBLE AGENCY: MANAGED BY FDOT

PKYI	0	0	0	0	0	600,000	600,000
TOTAL <N/A>	98,220	1,500	0	0	0	99,773,217	99,872,937
TOTAL 441224 3	98,220	1,500	0	0	0	99,773,217	99,872,937

ITEM NUMBER:441224 4 PROJECT DESCRIPTION:NEW NOLTE RD INTERCHANGE (MP 240) *SIS*
DISTRICT:05 COUNTY:OSCEOLA TYPE OF WORK:INTERCHANGE (NEW)
PROJECT LENGTH: .802MI

FUND	LESS					GREATER	
CODE	THAN	2021	2022	2023	2024	THAN	ALL
	2021					2024	YEARS

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT

PKYI	0	1,500	0	0	0	0	1,500
TOTAL <N/A>	0	1,500	0	0	0	0	1,500
TOTAL 441224 4	0	1,500	0	0	0	0	1,500
TOTAL Project:	5,292,729	7,511,482	3,177,980	0	91,310,077	101,853,217	209,145,485

ITEM NUMBER:441718 1 PROJECT DESCRIPTION:RECONSTRUCT TPK MAINLINE OSCEOLA CNTY (MP 227.0 - 235.0) *SIS*
DISTRICT:05 COUNTY:OSCEOLA TYPE OF WORK:FLEXIBLE PAVEMENT RECONSTRUCT.
PROJECT LENGTH: 8.000MI

FUND	LESS					GREATER	
CODE	THAN	2021	2022	2023	2024	THAN	ALL
	2021					2024	YEARS

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT

PKYI	69,619	0	0	0	0	0	69,619
PKYR	1,777,963	2,874	0	0	0	0	1,780,837

PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: MANAGED BY FDOT

PKYI	64,767	0	0	0	0	0	64,767
PKYR	0	0	0	21,145,166	0	0	21,145,166

FY 2020/21 - 2024/25 Orlando Urban Area Transportation Improvement Program

Adopted June 29, 2020

Updated September 9, 2020



MetroPlan Orlando
Transportation Improvement Program
Toll Road Projects - Florida's Turnpike Enterprise
Osceola County

FDOT Financial Management Number	Project Name or Designation	Project Description				2040 LRTP Reference	Historic Cost Prior to 2020/21 (\$000's)	Project Status and Cost (\$000's)							Estimated Future Cost After 2024/25 (\$000's)	Total Project Cost (\$000's)	Responsible Agency
		From	To	Length (Miles)	Work Description			2020/21	2021/22	2022/23	2023/24	2024/25	Funding Sources	Project Phases			
4402891 <i>SIS Project</i>	SR 429/Western Beltway	Milepost 0.0	Milepost 5.3	4.53	Resurfacing	Overview page 7		1 0 15,923 1	0 0 15,923 0	0 0 0 0	0 0 0 0	0 0 0 0	PKYR PKYR Total	PE CST	0	18,246	FTE
4402892 <i>SIS Project</i>	SR 429/Western Beltway	Milepost 0.0	Milepost 5.3	4.53	Guardrail Improvements	Overview page 7		7 139 146	0 1,526 1,526	0 0 0	0 0 0	0 0 0	PKYR PKYR Total	PE CST	0	1,998	FTE
4407001 <i>SIS Project</i>	Florida's Turnpike	Milepost 190.5	Milepost 198.5	8.00	Resurfacing	Overview page 7		1 17,717 50 17,768	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	PKYR PKYR PKYI Total	PE CST ENV	0	20,276	FTE
4407002 <i>SIS Project</i>	Florida's Turnpike	Milepost 190.5	Milepost 198.5	8.00	Guardrail Improvements	Overview page 7		7,066 7,066	0 0	0 0	0 0	0 0	PKYR Total	CST	0	7,393	FTE
4408591 <i>SIS Project</i>	Florida's Turnpike	at Kissimmee Park Rd.		0.40	Convert Toll Plaza to All Electronic	Overview page 7		3 3	0 0	0 0	0 0	0 0	PKYI Total	PE	0	1,092	FTE
4412241 <i>SIS Project</i>	Florida's Turnpike	Kissimmee Park Rd.	US 192	4.00	Project Development & Environment Study	Tech. Rep. 3 page 40		203 203	0 0	0 0	0 0	0 0	PKYI Total	PD&E	0	1,500	FTE
4412242 <i>SIS Project</i>	Florida's Turnpike	at Kissimmee Park Rd.		0.60	Interchange Improvement	Tech. Rep. 3 page 40		2 6,904 400 0 3,898	0 3,174 0 4 7,306	0 0 0 0 3,178	570 0 0 90,740 91,310	0 0 0 0 0	PKYI PKYI PKYI PKYI Total	PE ROW ENV DSB	2,080	107,772	FTE
4412243 <i>SIS Project</i>	Florida's Turnpike	Kissimmee Park Rd.	US 192	4.00	Widen to 8 Lanes	Tech. Rep. 3 page 40		2 0 98	0 0 2	0 0 0	0 0 0	0 0 11 11	PKYI PKYI Total	PE CST	99,762	99,873	FTE
4412244 <i>SIS Project</i>	Florida's Turnpike	at Nolte Rd.		0.80	New Interchange	2040 LRTP to be amended		2 2	0 0	0 0	0 0	0 0	PKYI Total	PE	TBD	TBD	FTE
4417181 <i>SIS Project</i>	Florida's Turnpike	Milepost 227.0	Milepost 235.0	8.00	Flexible Pavement Reconstruction	Overview page 7		3 0 0 1,918	0 0 0 3	0 21,145 50 21,195	0 0 0 0	0 0 0 0	PKYR PKYR PKYI Total	PE CST ENV	0	23,116	FTE
4417182 <i>SIS Project</i>	Florida's Turnpike	Milepost 227.0	Milepost 235.0	8.00	Safety Project	Overview page 7		10 0 375	0 192 10	0 2,106 2,106	0 0 0	0 0 0	PKYI PKYR Total	PD&E CST	0	2,683	FTE
4417191 <i>SIS Project</i>	Florida's Turnpike	Milepost 198.5	Milepost 207.0	8.50	Resurfacing	Overview page 7		2,888 0 35	0 0 2,888	0 27,582 27,582	0 0 0	0 0 0	PKYR PKYR Total	PE CST	0	30,505	FTE
4417192 <i>SIS Project</i>	Florida's Turnpike	Milepost 198.5	Milepost 207.0	8.50	Safety Project	Tech. Rep. 3 page 40		10 0 317	0 221 221	0 2,424 2,424	0 0 0	0 0 0	PKYI PKYR Total	PD&E CST	0	2,972	FTE

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Appendix B: Landscape Opportunity Plan



SETBACK GUIDELINES FOR LANDSCAPE MATERIALS			
	CANOPY TREES	PALM AND NARROW TREES	SHRUBS AND GRASSES
LIMITED ACCESS RW	15' (P) - 10' (M)	15' (P) - 10' (M)	15' (P) - 10' (M)
OVERHEAD UTILITIES	35'	35'	NA
BACK OF GUARDRAIL	15' (P) - 10' (M)	10'	5'
GAS LINES	25'	25'	5'
FIBEROPTIC LINES	15' (P) - 10' (M)	15' (P) - 10' (M)	NA
DRAINAGE STRUCTURES	15' (P) - 10' (M)	15' (P) - 10' (M)	5'
MSE WALLS	15' (P) - 10' (M)	10'	5'
NOISEWALLS	15' (P) - 10' (M)	10'	5'
SIDEWALKS	10'	10'	5'
ITS POLES	30' (P) - 25' (M)	30' (P) - 25' (M)	10'
LIGHT POLES	30'	25'	10'
SIGN POLES	30'	30'	30'
LIGHTING/ITS CONDUIT	10'	10'	NA
FENCE LINES	15' (P) - 10' (M)	15' (P) - 10' (M)	15' (P) - 10' (M)

(P) = PREFERRED (M) = MINIMUM



LEGEND:

- Level III: High Impact Landscape - Highly visible, opportunity areas for signature trees, palms and flowering plants that require enhanced level landscape maintenance.
- Level II: Moderate Landscape - Landscape Opportunity Areas that contribute to the overall design scheme. Area for moderate/ minimal maintenance material contributing to the project profile and design standards.
 - Wildflower Area - Dry retention and open areas suitable for low-maintenance wildflowers.
- Level I: Visual Screening - landscape areas to screen or frame a view. Low-maintenance.
 - Slope Stabilization - 3:1 slopes or greater, dangerous mowing scenarios. Low maintenance.
 - Reforestation - Non-focal points, backdrops and screening. Generally low maintenance.
- Tree Preservation: Areas with mature, valuable tree canopy vulnerable to damage during construction.
- Stormwater/ Retention Planting: Areas consistently wet that require tolerant plant material.

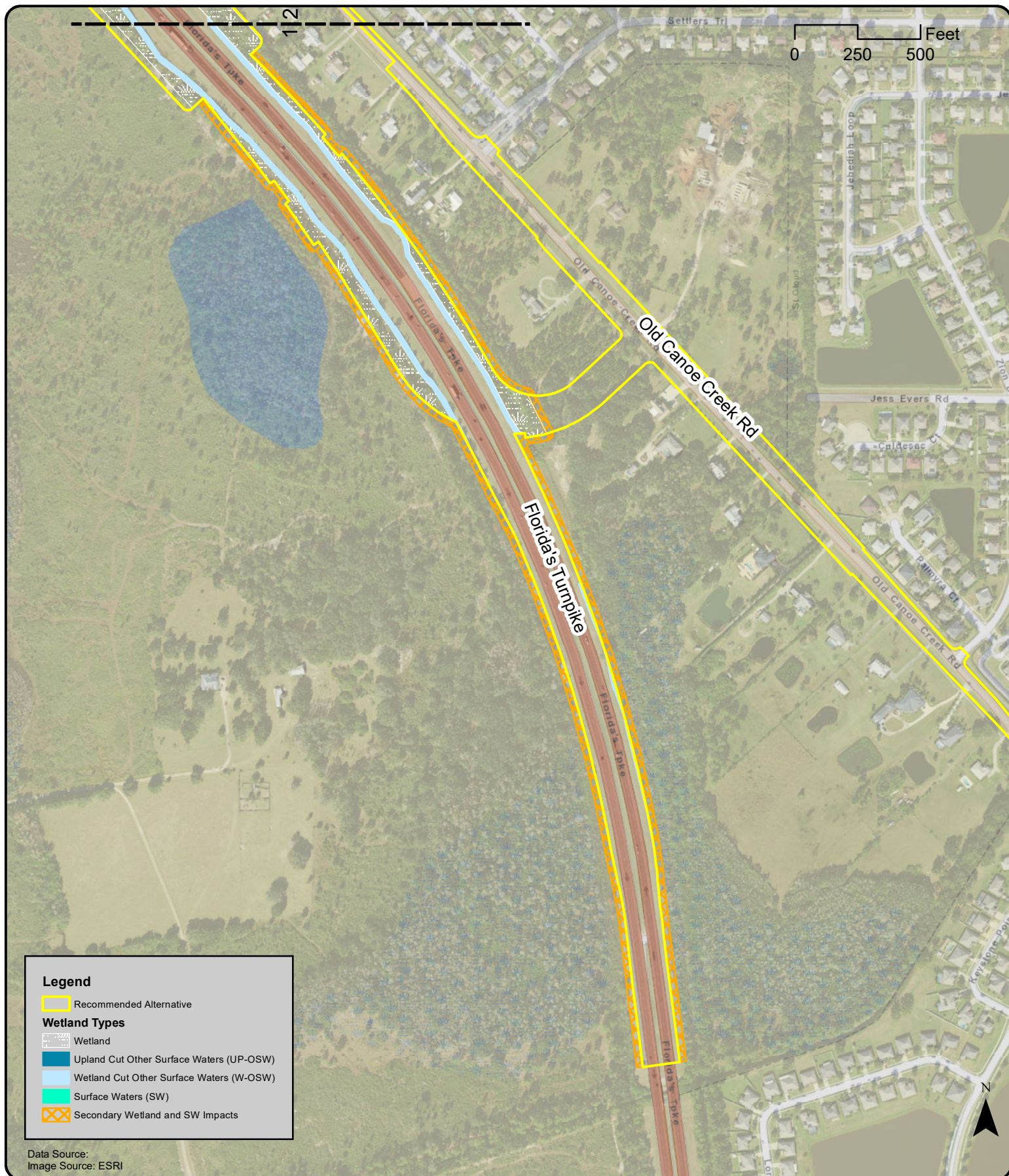
CLEAR ZONE REQUIREMENTS		
ROAD/RAMP	DESIGN SPEED	CLEAR ZONE
Florida Turnpike (Toll Road)	70	36'
Ramp D (OCCR)	30-50	12-24'
Ramp C (OCCR)	50-35	14'
Ramp A (Nolte)	50	14'
Ramp B (Nolte)	50	14'
Ramp C (Nolte)	50	24'
Ramp D (Nolte)	50	24'
Ramp A (US 192)	50	14'



August 2020

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Appendix C: Wetlands and Surface Water Maps



Legend

Recommended Alternative

Wetland Types

Wetland

Upland Cut Other Surface Waters (UP-OSW)

Wetland Cut Other Surface Waters (W-OSW)

Surface Waters (SW)

Secondary Wetland and SW Impacts

Data Source:
Image Source: ESRI



Wetland and Surface Water Map- Sheet 1

Project Development and Environment (PD&E) Study

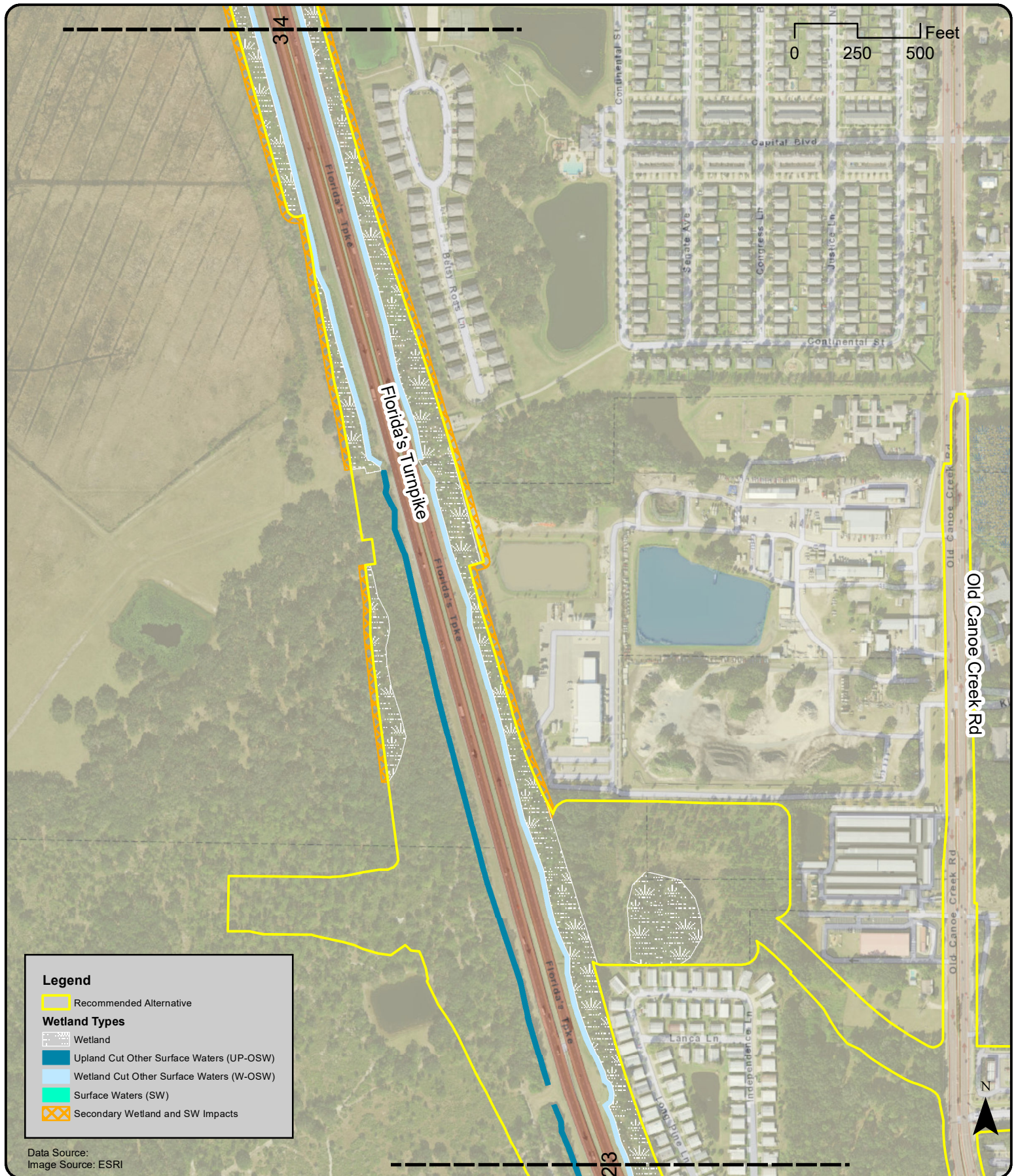
Widening Florida's Turnpike (SR 91)

from South of Kissimmee Park Road to US 192 in Osceola County

Financial Project ID No.: 441224-1-22-01







Wetland and Surface Water Map- Sheet 3

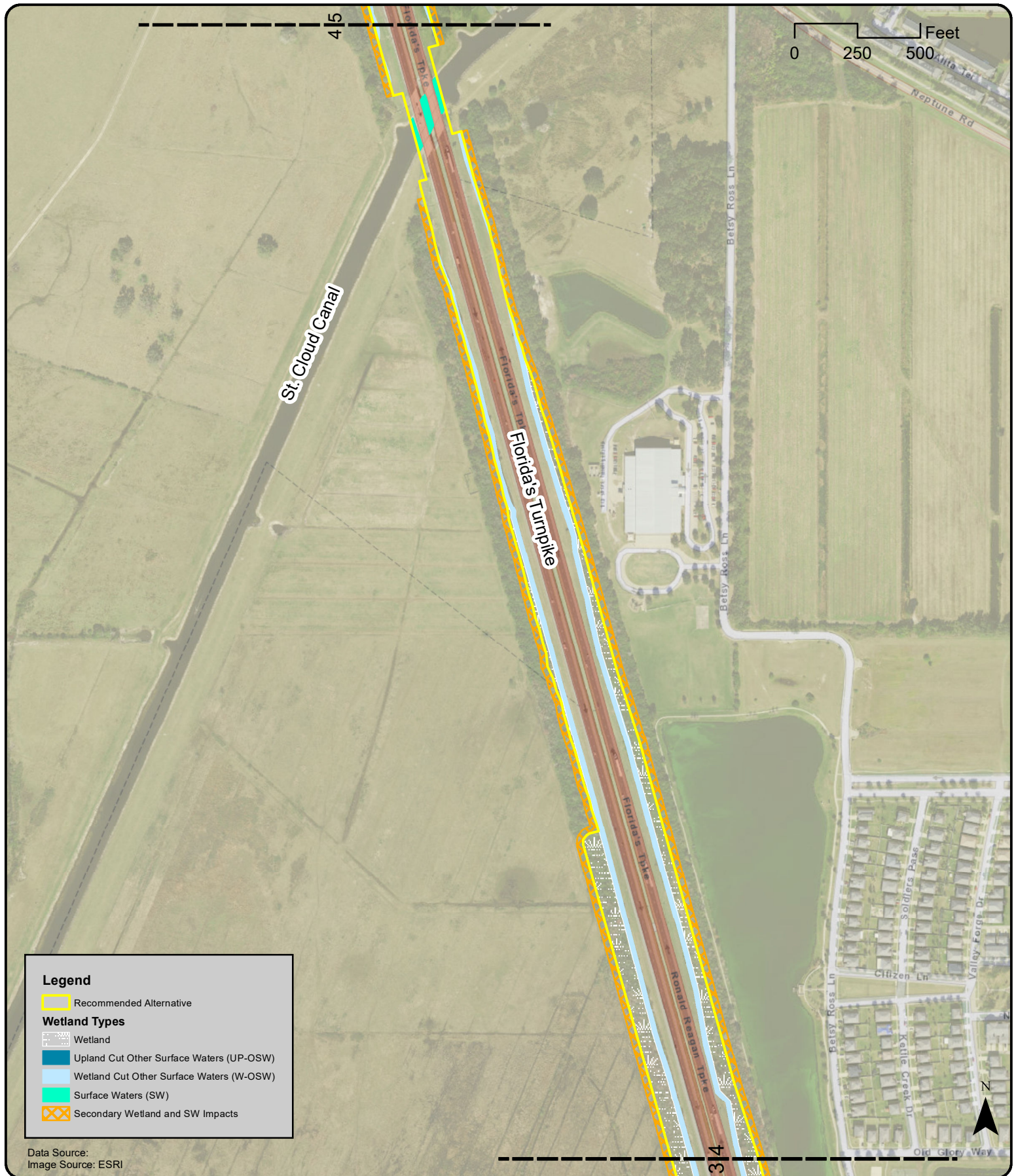
Project Development and Environment (PD&E) Study

Widening Florida's Turnpike (SR 91)

from South of Kissimmee Park Road to US 192 in Osceola County

Financial Project ID No.: 441224-1-22-01





Wetland and Surface Water Map- Sheet 4

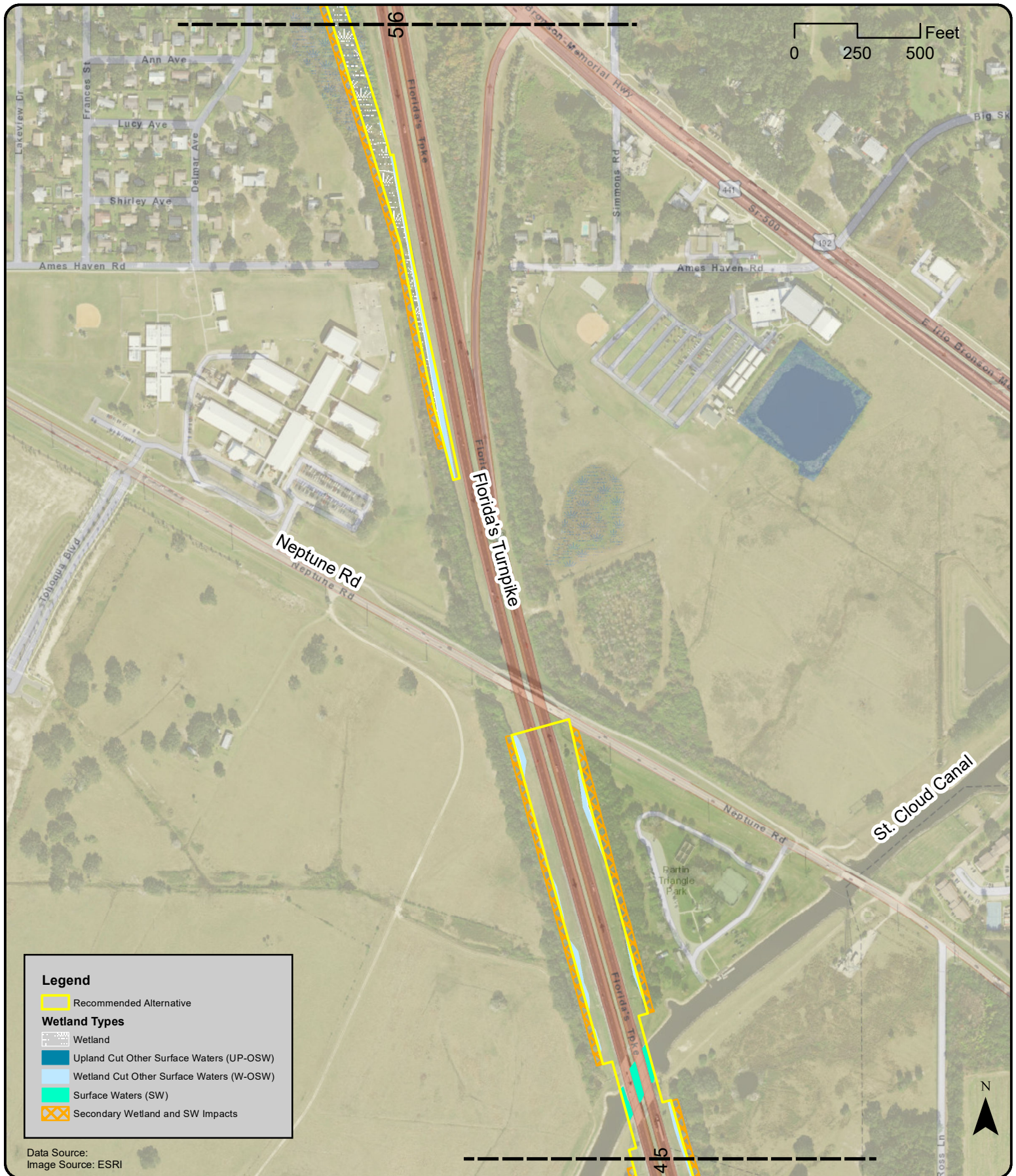
Project Development and Environment (PD&E) Study

Widening Florida's Turnpike (SR 91)

from South of Kissimmee Park Road to US 192 in Osceola County

Financial Project ID No.: 441224-1-22-01





Wetland and Surface Water Map- Sheet 5

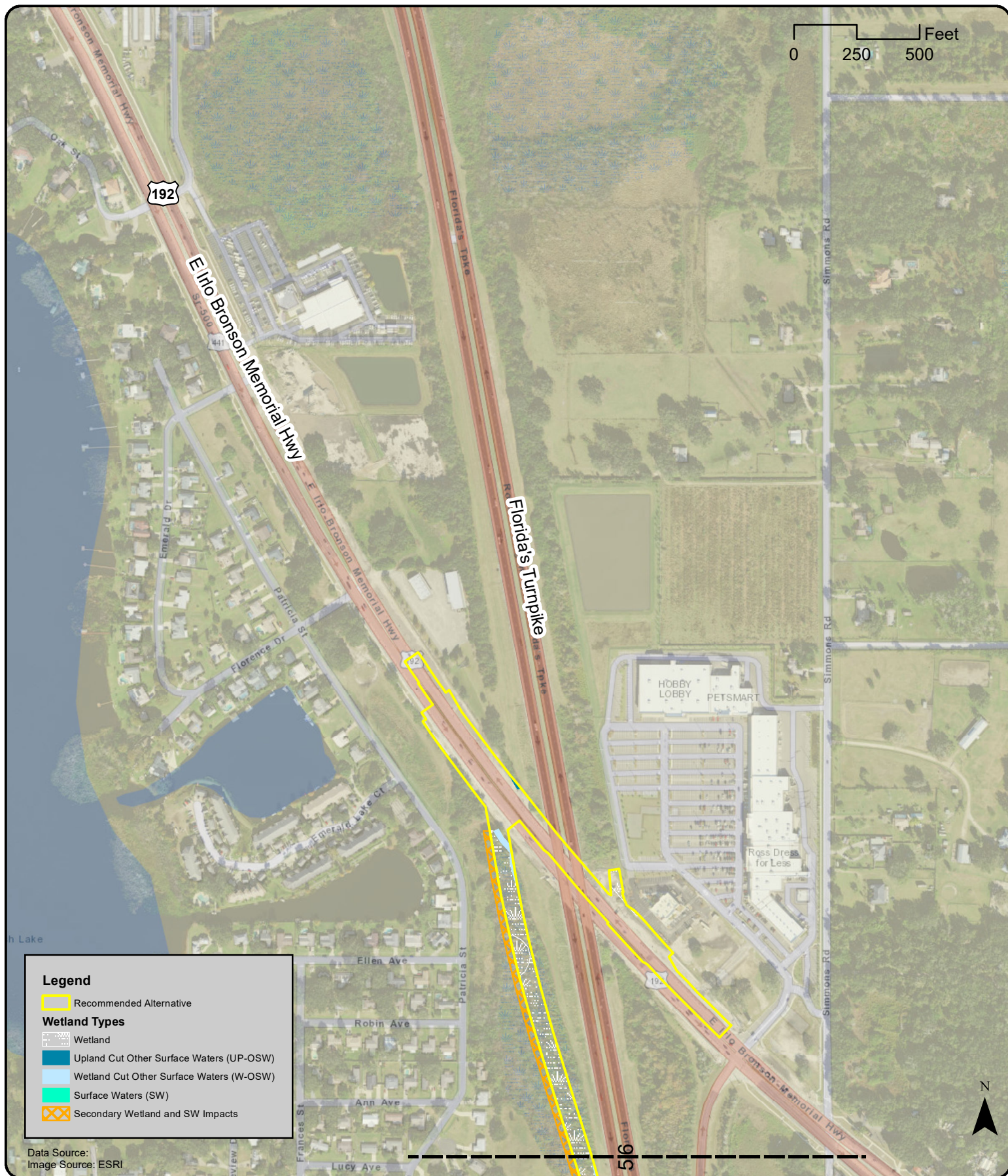
Project Development and Environment (PD&E) Study

Widening Florida's Turnpike (SR 91)

from South of Kissimmee Park Road to US 192 in Osceola County

Financial Project ID No.: 441224-1-22-01





Wetland and Surface Water Map- Sheet 6

Project Development and Environment (PD&E) Study

Widening Florida's Turnpike (SR 91)

from South of Kissimmee Park Road to US 192 in Osceola County

Financial Project ID No.: 441224-1-22-01





Appendix D: Water Quality Impact Evaluation

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
WATER QUALITY IMPACT EVALUATION CHECKLIST

650-050-37
ENVIRONMENTAL
MANAGEMENT
10/17

PART 1: PROJECT INFORMATION

Project Name:	Florida's Turnpike (SR 91) from South of Kissimmee Park Road to US 192
County:	Osceola
FM Number:	441224-1-22-01
Federal Aid Project No:	N/A
Brief Project Description:	Widening Existing Roadway

PART 2: DETERMINATION OF WQIE SCOPE

Does project discharge to surface or ground water? ☐ Yes ☒ No

Does project alter the drainage system? ☐ Yes ☒ No

Is the project located within a permitted MS4? ☐ Yes ☒ No

Name: N/A

If the answers to the questions above are no, complete the applicable sections of Part 3 and 4, and then check Box A in Part 5.

PART 3: PROJECT BASIN AND RECEIVING WATER CHARACTERISTICS

Surface Water

Receiving water(s) names: C-31 Canal (St.Cloud Canal)

Water Management District: SFWMD

Environmental Look Around meeting date: N/A Desktop report was done.
Attach meeting minutes/notes to the checklist.

Water Control District Name (list all that apply): N/A

Groundwater

Sole Source Aquifer (SSA)? ☒ Yes ☐ No

Name Biscayne Aquifer

If yes, complete Part 5, D and complete SSA Checklist shown in Part 2, Chapter 11 of the PD&E Manual

Other Aquifer? ☐ Yes ☒ No

Name N/A

Springs vents? ☐ Yes ☒ No

Name N/A

Well head protection area? ☐ Yes ☒ No

Name N/A
Groundwater recharge? ☐ Yes ☒ No
Name N/A

Notify District Drainage Engineer if karst conditions are expected or if a higher level of treatment may be needed due to a project being located within a WBID verified as Impaired in accordance with Chapter 62-303, F.A.C.

Date of notification: [Click here to enter a date.](#)

PART 4: WATER QUALITY CRITERIA

List all WBIDs and all parameters for which a WBID has been verified impaired, or has a TMDL in [Table 1](#). This information should be updated during each re-evaluation as required.

Note: If BMAP or RAP has been identified in [Table 1](#), [Table 2](#) must also be completed. Attach notes or minutes from all coordination meetings identified in [Table 2](#).

EST recommendations confirmed with agencies? ☒ Yes ☐ No

BMAP Stakeholders contacted: ☐ Yes ☒ No

TMDL program contacted: N/A ☐ Yes ☐ No

RAP Stakeholders contacted: ☐ Yes ☒ No

Regional water quality projects identified in the ELA ☐ Yes ☒ No

If yes, describe:

Potential direct effects associated with project construction and/or operation identified? ☐ Yes ☒ No

If yes, describe:

N/A

Discuss any other relevant information related to water quality including Regulatory Agency Water Quality Requirements.

N/A

PART 5: WQIE DOCUMENTATION

- ☐ A. No involvement with water quality
- ☐ B. No water quality regulatory requirements apply.
- ☒ C. Water quality regulatory requirements apply to this project (provide Evaluator's information below). Water quality and stormwater issues will be mitigated through compliance with the design requirements of authorized regulatory agencies.
- ☐ D. EPA Ground/Drinking Water Branch review required. ☐ Yes ☒ No
Concurrence received? ☐ Yes ☒ No
If Yes, Date of EPA Concurrence: [Click here to enter a date..](#)
Attach the concurrence letter

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by FDOT pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated December 14, 2016 and executed by FHWA and FDOT.

Evaluator Name (print):

Title:

Signature:

Date: [Click here to enter a date.](#)

Table 1: Water Quality Criteria

Receiving Waterbody Name (list all that apply)	FDEP Group Number / Name	WBID(s) Numbers	Classification (I,II,III,IIIL,IV,V)	Special Designations*	NNC limits**	Verified Impaired (Y/N)	TMDL (Y/N)	Pollutants of concern	BMAP, RA Plan or SSAC
C-31 Canal	Kissimmee River	3173B	3F	N/A		No	No		BMAP

* ONRW, OFW, Aquatic Preserve, Wild and Scenic River, Special Water, SWIM Area, Local Comp Plan, MS4 Area, Other

** Lakes, Spring vents, Streams, Estuaries

Note: If BMAP or RAP has been identified in [Table 1](#), [Table 2](#) must also be completed.

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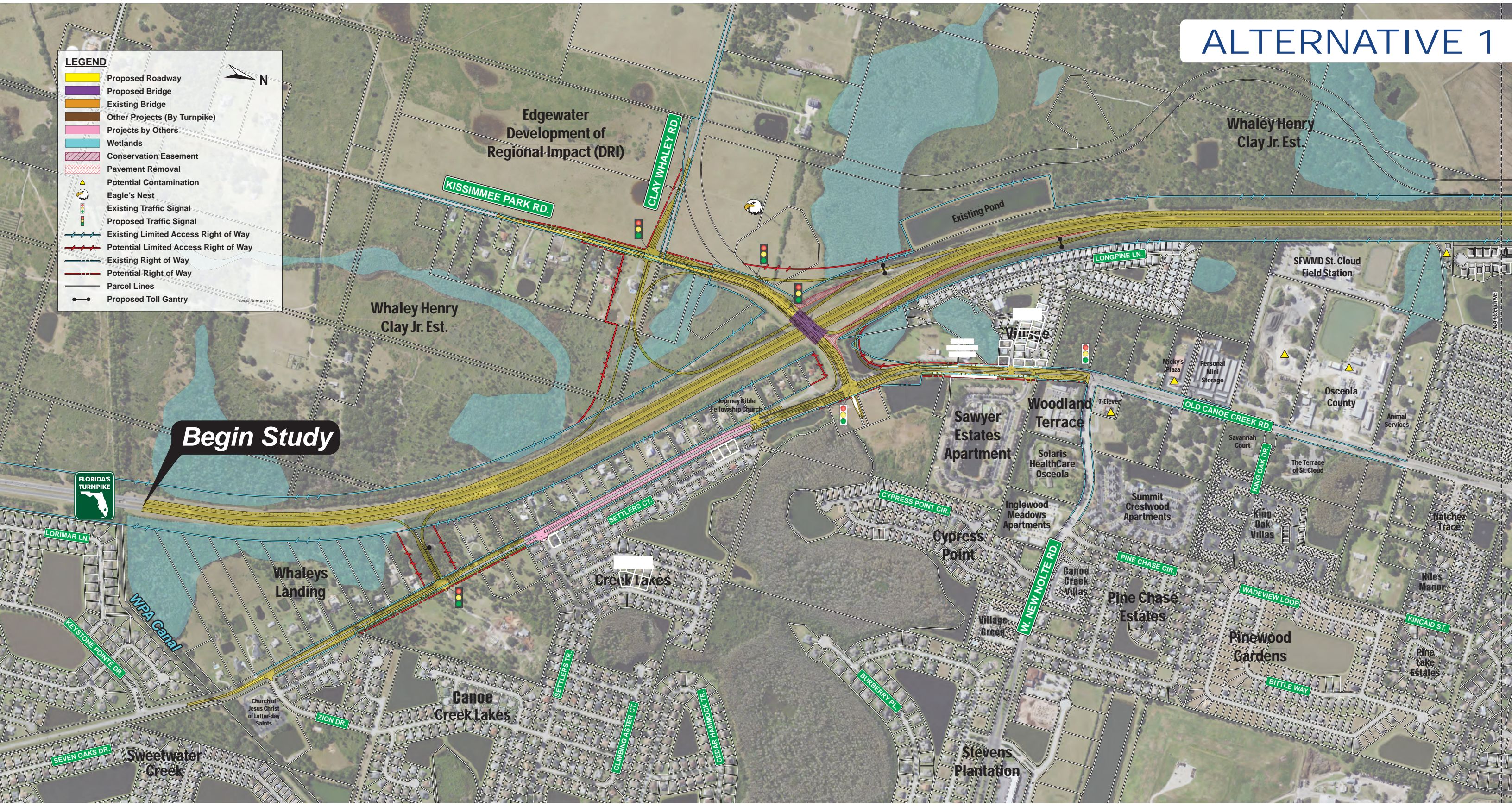
Appendix E: Potential Build Alternatives

ALTERNATIVE 1

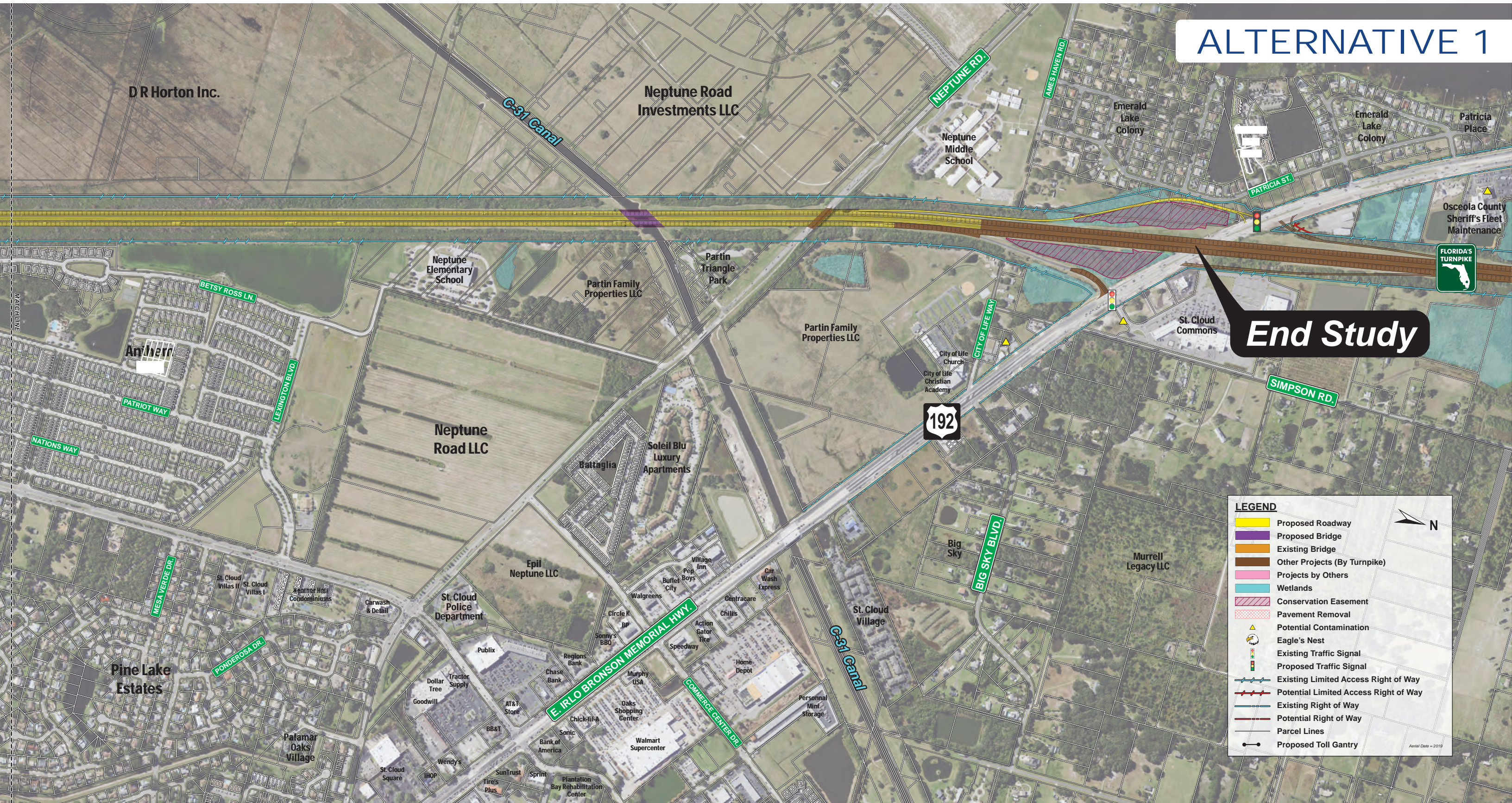
LEGEND

- Proposed Roadway
- Proposed Bridge
- Existing Bridge
- Other Projects (By Turnpike)
- Projects by Others
- Wetlands
- Conservation Easement
- Pavement Removal
- Potential Contamination
- Eagle's Nest
- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Limited Access Right of Way
- Potential Limited Access Right of Way
- Existing Right of Way
- Potential Right of Way
- Parcel Lines
- Proposed Toll Gantry

Aerial Date = 2019



ALTERNATIVE 1



End Study

LEGEND

Proposed Roadway

Proposed Bridge

Existing Bridge

Other Projects (By Turnpike)

Projects by Others

Wetlands

Conservation Easement

Pavement Removal

Potential Contamination

Eagle's Nest

Existing Traffic Signal

Proposed Traffic Signal

Existing Limited Access Right of Way

Potential Limited Access Right of Way

Existing Right of Way

Potential Right of Way

Parcel Lines

Proposed Toll Gantry

N

Aerial Date = 2019

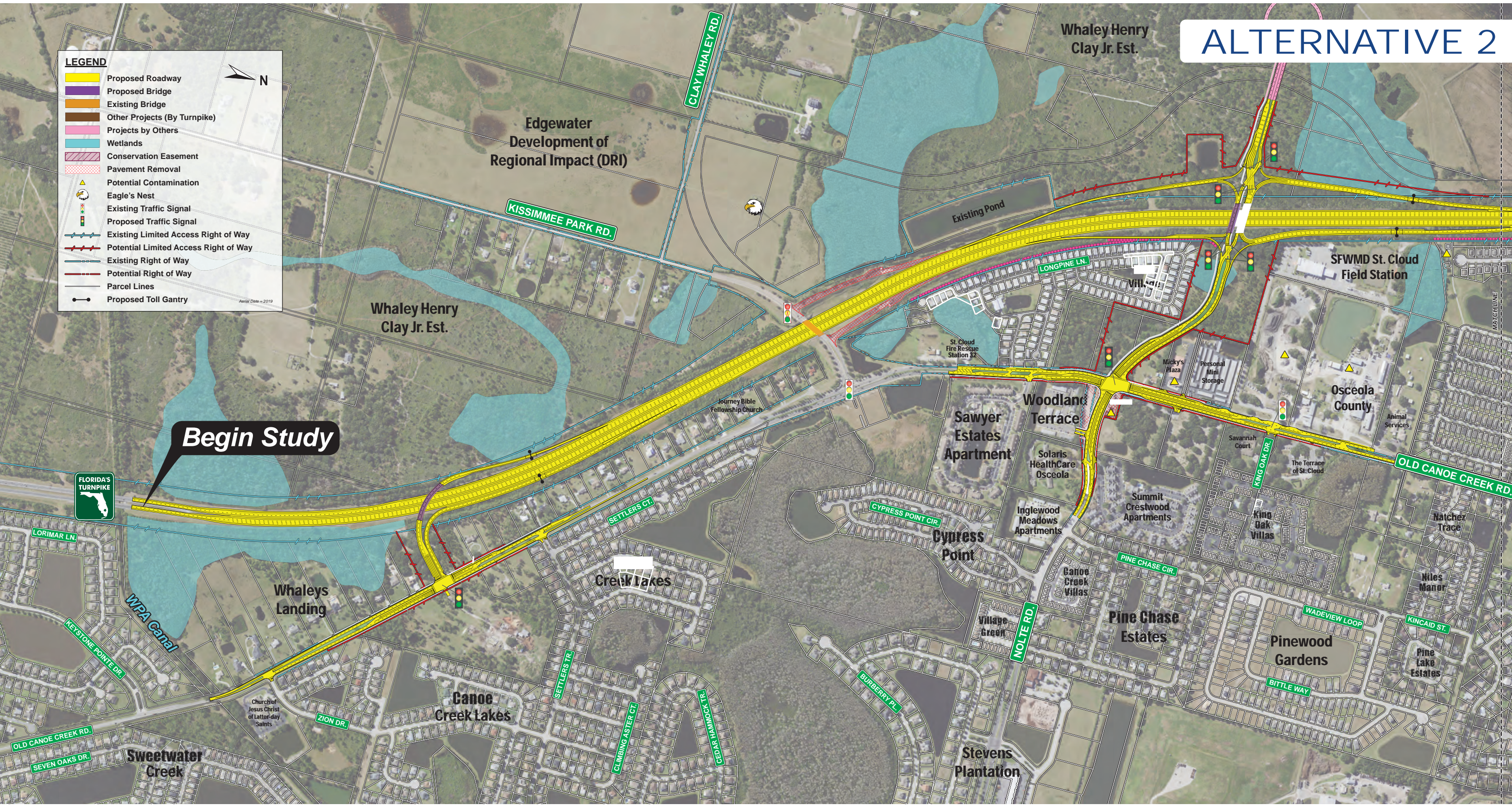
ALTERNATIVE 2

LEGEND

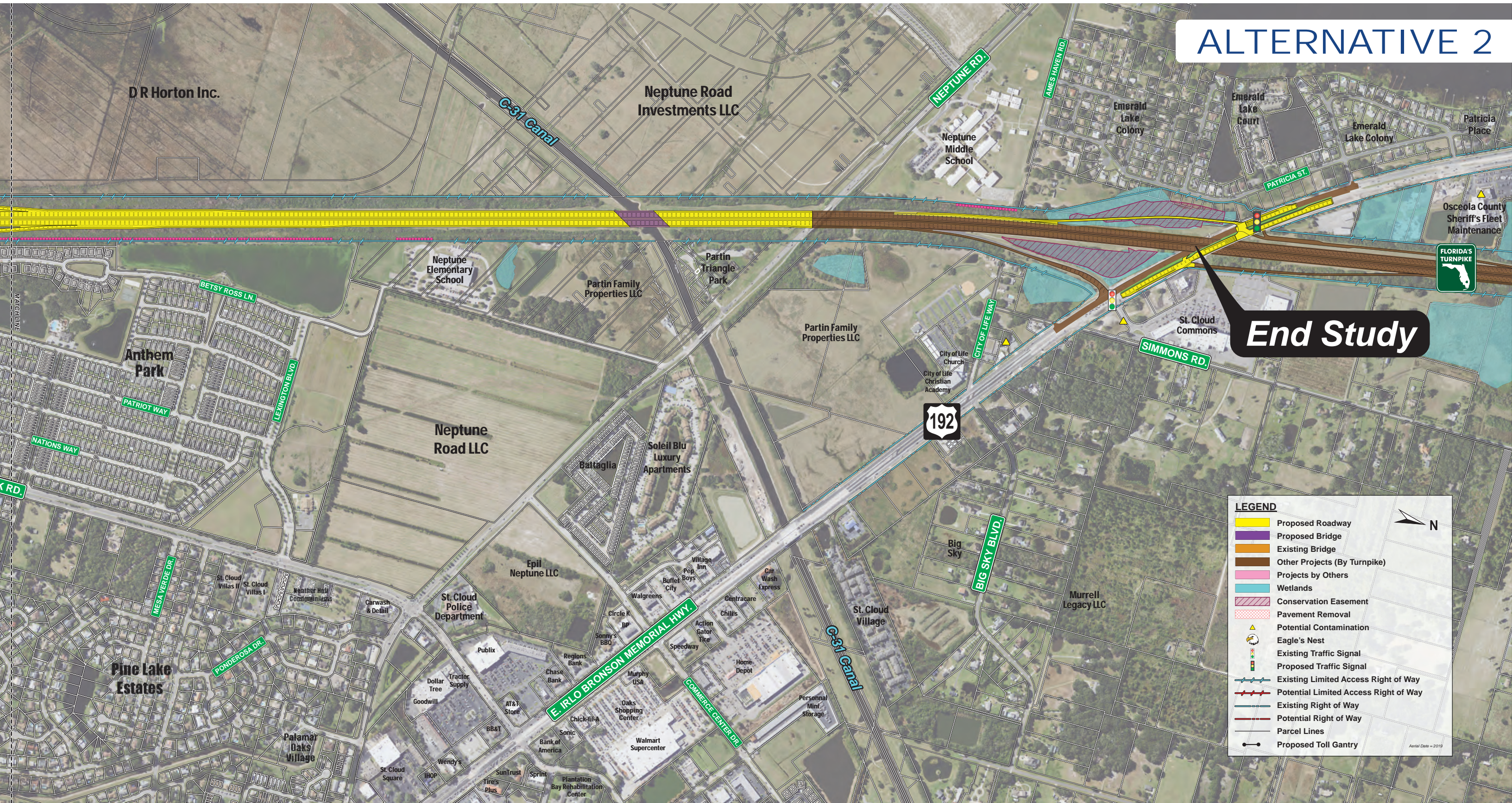
- Proposed Roadway
- Proposed Bridge
- Existing Bridge
- Other Projects (By Turnpike)
- Projects by Others
- Wetlands
- Conservation Easement
- Pavement Removal
- Potential Contamination
- Eagle's Nest
- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Limited Access Right of Way
- Potential Limited Access Right of Way
- Existing Right of Way
- Potential Right of Way
- Parcel Lines
- Proposed Toll Gantry

N

Aerial Date = 2019



ALTERNATIVE 2



End Study

LEGEND

Proposed Roadway

Proposed Bridge

Existing Bridge

Other Projects (By Turnpike)

Projects by Others

Wetlands

Conservation Easement

Pavement Removal

Potential Contamination

Eagle's Nest

Existing Traffic Signal

Proposed Traffic Signal

Existing Limited Access Right of Way

Potential Limited Access Right of Way

Existing Right of Way

Potential Right of Way

Parcel Lines

Proposed Toll Gantry

N

Aerial Date = 2015