



S.R. 50 PD&E Study
from U.S. 301/S.R. 35 to C.R. 33

Hernando, Lake, and Sumter Counties, Florida

FM Number: 435859-1-22-1

ETDM Number: 14269

State Environmental Impact Report

FDOT Office

District Five

719 South Woodland Boulevard

DeLand, Florida 32720

Publication Date

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Document Control Sheet

Document Title: S.R. 50 PD&E State Environmental Impact Report			
Document Creator/Originator: Travis Hills, PE			
Final (v2.0) Finalized On: 03/28/2019			
Stage	Reviewer	Date Reviewed:	File Format:
V2.1	Jack Freeman	03/04/2019	Word
V2.2	Jack Freeman	03/18/2019	Word
V2.3	Jack Freeman	03/28/2019	Word
Document Finalized On: 06/13/2019			

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1. Project Description and Purpose and Need

Initiated in December 2016, this Project Development and Environment (PD&E) Study was conducted to assess various widening alternatives for State Road (S.R.) 50 from U.S. 301 to County Road (C.R.) 33 in Hernando, Sumter and Lake Counties. This State Environmental Impact Report (SEIR) documents the social and economic, cultural, natural, and physical categories evaluated as part of the PD&E Study.

1.1 PROJECT INFORMATION

The following outlines the project information for the S.R. 50 PD&E Study:

- Project Name: S.R. 50 Project Development & Environment Study
- Project Limits: U.S. 301 to C.R. 33
- County: Hernando, Sumter, and Lake Counties
- ETDM Number: 14269
- Financial Management Number: 435859-1-22-1
- Project Manager: Lorena Cucek

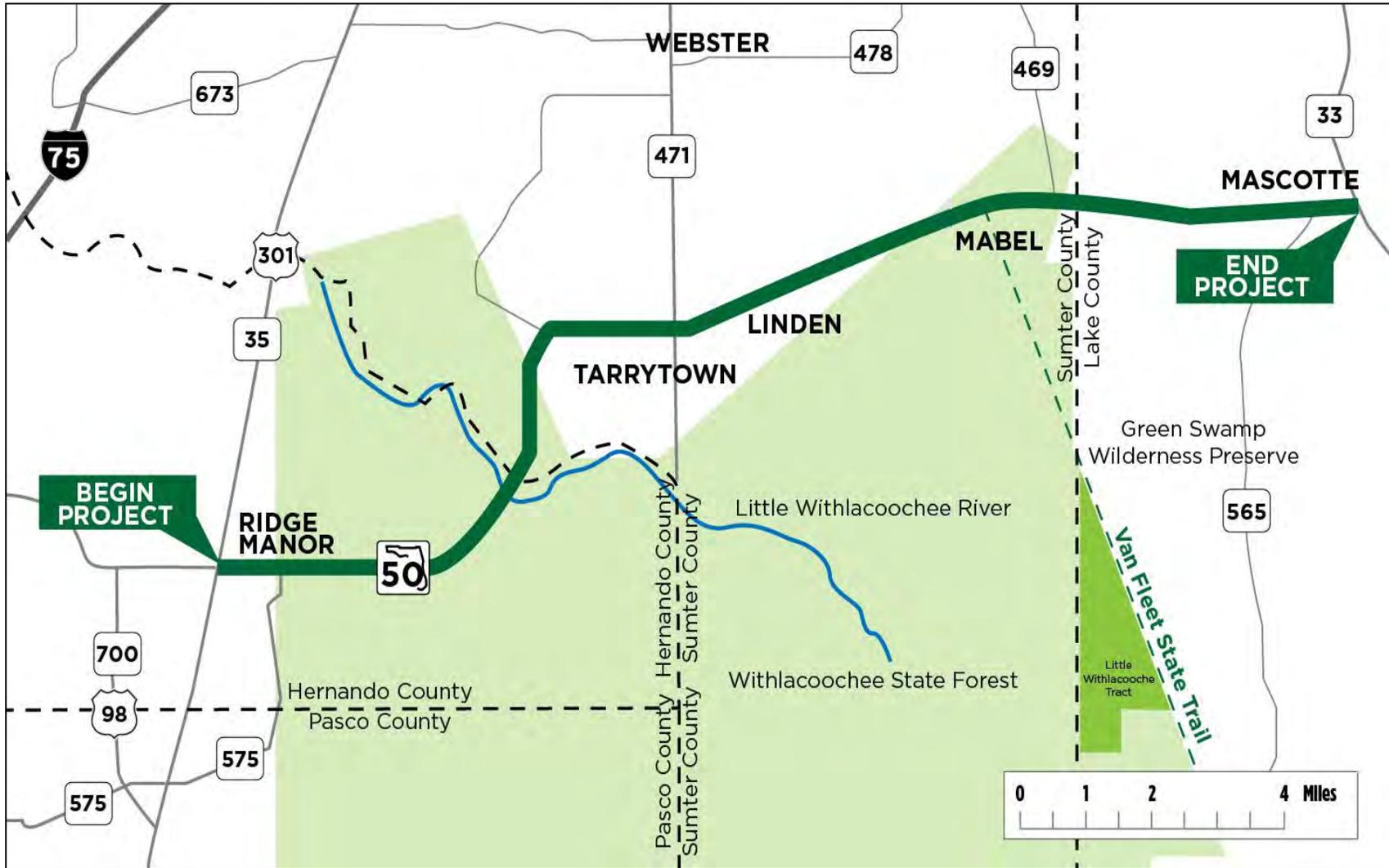
The S.R. 50 PD&E Study corridor is displayed in **Figure 1**.

1.2 PROPOSED IMPROVEMENTS

S.R. 50 is a principal arterial running east-west across the State of Florida, from S.R. 55 in Hernando County to U.S. 1 in Brevard County. Within the study area, S.R. 50 is primarily a two-lane undivided, rural principal arterial except for the eastern portion near the City of Mascotte, which is classified as an urban principal arterial. The transition from a rural principal arterial to an urban principal arterial occurs approximately 1.75 miles east of the Sumter-Lake County Line. The limits of the S.R. 50 PD&E Study span from U.S. 301 in Hernando County to C.R. 33 in Lake County, as displayed in **Figure 1**. S.R. 50 from I-75 to U.S. 27 is also designated as an Emerging Strategic Intermodal System (SIS) corridor. S.R. 50 is known as Cortez Boulevard in Hernando County and Myers Boulevard in the City of Mascotte.

The intent of this PD&E Study is to analyze potential environmental impacts resulting from widening S.R. 50 from two to four lanes. From U.S. 301 to Lee Road a rural typical section is proposed and from Lee Road to C.R. 33 an urban typical section is proposed. Roundabouts are proposed at the intersections of S.R. 50 with S.R. 471 and C.R. 469. **The project will also have a shared use path along its south side. At Lee Road as the corridor enters the Mascotte urban service area, the roadway's typical section transitions to be an urban roadway with 45 mph design speed.** From Barry Avenue to the east, 7' buffered bike lanes and 6' sidewalks serve bicyclists and pedestrians. The intersection of S.R. 50 and Tuscanooga Road is proposed as a roundabout. The intersection of S.R. 50 and C.R. 33 will be reconfigured and signalized to better accommodate projected traffic.

Figure 1: Study Corridor



1.3 PURPOSE AND NEED

The purpose of this proposed project is to increase capacity on the study segment of S.R. 50, as well as improve safety along the corridor. This project is part of a greater effort addressing existing and future congestion and delay, improving safety and traffic flow, and allowing the S.R. 50 corridor to operate at an improved level of service (LOS) for all users. The corridor’s context was also considered, and bicycle and pedestrian facilities were evaluated.

The project’s need is based on six primary factors: system linkage, roadway capacity, legislation/plan consistency, modal interrelationships, safety, and hurricane evacuation. The following summarizes the project’s need based on these primary factors.

- *System Linkage* – S.R. 50 is an east-west facility connecting Brooksville with Clermont and the Orlando Metro area. It is the only regional east-west connection serving Hernando County. It serves regional distribution centers for movement of goods by truck as well as aggregate mining operations located along the study corridor. S.R. 50 is a four/six-lane roadway from U.S. 19/S.R. 55/Commercial Way to U.S. 98/McKethan Road, with the two-lane portion from U.S. 98/McKethan Road to U.S. 301 programmed to be widened to four-lanes. S.R. 50 is also a four and six-lane roadway from C.R. 33 east to Titusville. The 20-mile S.R. 50 study limit is the only portion of S.R. 50 with no programmed construction funding for widening to four lanes.
- *Roadway Capacity* – This S.R. 50 segment is currently operating at an acceptable LOS (LOS C and D) with an Annual Average Daily Traffic (AADT) ranging between 7,200 and 15,500, as shown in **Table 1**. The target LOS is D within the urban area and LOS C outside the urban area. The projected future year 2045 LOS is expected to exceed the target LOS in both the corridor’s rural and urban segments. Within the project’s rural portions, the 2045 AADT ranges between 15,500 to 19,700 resulting in LOS E. The target LOS C service volume threshold of 8,400 daily vehicles is expected to be reached by approximately year 2025 for the project’s rural portions. For the urban areas, a projected 2045 volume of 30,500 AADT will result in a LOS E.

Table 1: S.R. 50 2017 and 2045 AADT and LOS

S.R. 50 Segment	No. of Lanes	2017 AADT	2017 LOS ¹	2045 AADT	2045 LOS ¹
U.S. 301 to C.R. 757	2	7,200	C	15,500	E
C.R. 757 to Tuscanooga Road	2	8,900	D	19,700	E
Tuscanooga Road to C.R. 33	2	15,500	D	30,500	E

¹ Displayed LOS is for worst peak hour (AM/PM) and peak direction (EB/WB).

- *Legislation/Plan Consistency* – FDOT District 7 has funded the Preliminary Engineering (FY 2018), Right-of-Way (ROW) (FY 2018), and Construction (FY 2019) phases for the two- to four-lane widening of S.R. 50 from U.S. 98/McKethan Road to U.S. 301. FDOT District 7 has also funded the Preliminary Engineering (FY 2018) phase for the two- to four-lane widening of S.R. 50 from U.S. 301 to the Hernando-Sumter County Line. The Hernando-Citrus Metropolitan Planning Organization (MPO) identifies a two- to four-lane widening of S.R. 50 from U.S. 301 to the Sumter County line as an unfunded need in their 2040 Long Range Transportation Plan (LRTP). The S.R. 50 widening project is the number 5 project in the Hernando-Citrus MPO Priority Project List. Improvements to S.R. 50 from the Hernando-Sumter County line to C.R. 33 is an unfunded need in the adopted Lake-Sumter MPO 2040 LRTP Needs Plan. The S.R. 50 widening project is the number 16 project in the Lake-Sumter MPO Priority Project List. FDOT District 5 funded the Preliminary Engineering phase in FY 2018 for the two- to four-lane widening of S.R. 50 from the Hernando-Sumter County Line to C.R. 33. FDOT District 5 has not identified ROW or construction funding for the two- to four-lane widening of S.R. 50 from U.S. 301 to C.R. 33.
- *Modal Interrelationships* –
 - Within the City of Mascotte, sidewalk is intermittently present. Due to the uninterrupted flow conditions west of C.R. 33, no marked pedestrian crossings are currently provided across S.R. 50 to serve the elementary school on the study corridor’s south side. Throughout the corridor, bicycles are served on the 4’ paved shoulder.
 - A 10’ shared-use path is planned within the Hernando County portion of the project, from U.S. 301 to the Hernando-Sumter County Line. The South Sumter Connector Trail portion of the Coast-to-Coast Trail, from S.R. 471 to the Van Fleet Trailhead, is planned to be in the S.R. 50 ROW with a 12’ shared-use path. At S.R. 471, the South Sumter Connector Trail may head north toward Webster out of the project area or may extend west along S.R. 50 from S.R. 471 to the Hernando-Sumter County Line. The study includes coordinated planning for S.R. 50 improvements to be compatible with implementation of the Coast-to-Coast Trail within the same corridor. The specific alignment is still to be determined by the South Sumter Connector Trail PD&E Study. Upon further discussions with FDOT, there is a possibility the Coast-to-Coast Trail may extend within S.R. 50 ROW east of the Van Fleet Trailhead into Mascotte and connect to the South Lake Trail.
- *Safety* –
 - A total of 189 crashes were reported during the period between 2011 and 2015, 98 resulted in injury and 11 resulted in at least one fatality (12 total fatalities). Due to the length of the corridor, crash types and trends varied by sub-segment, but fatal crashes were distributed throughout most of the corridor. By widening from a two-lane undivided roadway to a four-lane divided roadway, crashes may be reduced by up to 50 percent based on the Highway Safety Manual analysis performed for the study corridor. Many parts of S.R. 50 have high safety ratios for one or more years as compared to statewide and district wide averages for similar roadways.

- S.R. 50 from Tuscanooga Road to C.R. 33 was the only high crash segment along the study corridor, accounting for 21 of the 189 crashes (11 percent) with 10 crashes resulting in at least one injury.
- Three high crash intersections were identified along the study corridor. The intersection of S.R. 50 at U.S. 301 accounted for 25 of the 189 crashes (13 percent) along the study corridor, with 12 crashes resulting in at least one injury. S.R. 50 at S.R. 471 accounted for 11 of the 189 crashes (6 percent) along the study corridor, with six crashes resulting in at least one injury. S.R. 50 at Tuscanooga Road accounted for five of the 189 crashes (3 percent) along the study corridor, with one crash resulting in a fatality and two crashes resulting in at least one injury.
- *Emergency Evacuation* – S.R. 50 within the project limits is a designated evacuation route. A possible expansion and enhanced traffic flow of this S.R. 50 section will enhance the hurricane and emergency evacuation capabilities in Hernando, Sumter, and Lake Counties.

1.4 PROJECT PLANNING CONSISTENCY

As noted in the previous section, both FDOT Districts 7 and 5 have funded Preliminary Engineering phases for the S.R. 50 widening from U.S. 301 to C.R. 33. The project segment within District 7 spans from U.S. 301 to the Hernando-Sumter County Line and the District 5 portion spans from the Hernando-Sumter County Line to C.R. 33. Neither district has funded the right-of-way (ROW) or construction phases. **Table 2** and **Table 3** provide the planning consistency for District 7 and District 5.

Table 2: District 7 Project Planning Consistency

Currently Adopted CFP/LRTP?	Comments				
N	Currently listed as an unfunded need in the Hernando/Citrus MPO LRTP Recently moved to SIS network				
Phase	Currently Approved TIP	Currently Approved STIP	TIP/STIP \$	TIP/STIP FY	Comments
PE (Final Design)	Y	Y	\$3M/\$3M	2019-20 TIP/ 2018 STIP	Project shown in Hernando-Citrus MPO FY 2019-2023 TIP and FDOT STIP
ROW	N	N	\$0/\$0	N/A	
Construction	N	N	\$0/\$0	N/A	

Table 3: District 5 Project Planning Consistency

Currently Adopted CFP/LRTP?	Comments				
N	Currently listed as an unfunded need in the Lake-Sumter MPO LRTP Recently moved to SIS network				
Phase	Currently Approved TIP	Currently Approved STIP	TIP/STIP \$	TIP/STIP FY	Comments
PE (Final Design)	Y	Y	\$8.47M/ \$15.12M	2018-19 TIP/ 2018 STIP	Project shown in Lake-Sumter MPO FY 2018/19 to 2022/23 TIP and FDOT STIP
ROW	N	N	\$0/\$0	N/A	
Construction	N	N	\$0/\$0	N/A	

Pages from the current TIP, STIP, and LRTP supporting the tables above can be found in **Appendix A**.

2. Environmental Analysis

Table 4 and **Table 5** display the anticipated impacts along the S.R. 50 study corridor for the social and economic, cultural, natural, and physical environments. The remainder of this section details the supporting information for each of these resources.

Table 4: S.R. 50 Environmental Analysis

Issues/Resources	Substantial Impacts?				Supporting Information
	Yes	No	Enhance	No Involvement	
A. Social and Economic					
1. Social		X			See Section 10.1
2. Economic			X		See Section 10.2
3. Land Use Changes		X			See Section 10.3
4. Mobility			X		See Section 10.4
5. Aesthetic Effects		X			See Section 10.5
6. Relocation Potential		X			See Section 10.6
B. Cultural					
1. Historic Sites/Districts		X			See Section 10.7
2. Archaeological Sites		X			See Section 10.8
3. Recreation Areas		X			See Section 10.9
C. Natural					
1. Wetlands and Other Surface Waters		X			See Section 10.10
2. Aquatic Preserves and Outstanding FL Waters		X			See Section 10.11
3. Water Quality and Water Quantity			X		See Section 10.12
4. Wild and Scenic Rivers				X	
5. Floodplains		X			See Section 10.13
6. Coastal Barrier Resources				X	
7. Protected Species and Habitat		X			See Section 10.14
8. Essential Fish Habitat				X	

Table 5: S.R. 50 Environmental Analysis Cont.

Issues/Resources	Substantial Impacts?				Supporting Information
	Yes	No	Enhance	No Involvement	
D. Physical					
1. Highway Traffic Noise		X			See Section 10.15
2. Air Quality		X			See Section 10.16
3. Contamination		X			See Section 10.17
4. Utilities and Railroads		X			See Section 10.18
5. Construction		X			See Section 10.19
6. Bicycles and Pedestrians			X		See Section 10.20
7. Navigation				X	

3. Anticipated Permits

X Individual Dredge and Fill Permit – USACE

No Nationwide Permit – USACE

No Bridge Permit – USCG

X Environmental Resource Permit – SWFWMD and SJRWMD (FDEP or WMD)

X NPDES

X Gopher tortoise relocation permit - FWC

4. Engineering Analysis

The engineering analysis for this PD&E Study is contained within the *Preliminary Engineering Report* (PER) dated March 2019. The PER reviews the existing conditions, the alternatives analysis, and the preferred alternative.

5. Commitments

The FDOT has included the following commitments:

Commitments

- Conduct sand skink coverboard surveys in suitable sand skink habitat per USFWS protocol;
- Implement the Standard Protection Measures for the Eastern Indigo Snake during project construction;

- Continue to evaluate the inclusion of wildlife crossings and/or habitat connectivity enhancements during design.
- FDOT will adhere to the stipulations included in the 2019 F.S. 267 Agreement (in Appendix F) between FDOT and SHPO.

6. FDOT Selected Alternative

The preferred alternative will widen S.R. 50 from two to four lanes from U.S. 301 to C.R. 33. Two different, typical sections are present along the corridor:

- U.S. 301 to Lee Road (17.34 miles) –
 - Two-lane to four-lane rural widening alternative.
- Lee Road to C.R. 33 (2.54 miles) –
 - Two-lane to four-lane urban widening alternative.

The rural four-lane widening, from U.S. 301 to the Hernando-Sumter County Line, utilizes/resurfaces the existing S.R. 50 lanes as the new westbound lanes and constructs two new lanes for eastbound traffic. For the existing S.R. 50 lanes, the cross slope will remain the same and the inside travel lane will drain into the median. This is the predominate typical section between U.S. 301 and the Hernando-Sumter County Line and is shown as **Figure 2**. These are illustrations of the typical sections and varying details are best reviewed in the typical section package contained in Appendix A of the PER. During Value Engineering, a bridge over the CSX railroad tracks, 0.75 miles east of U.S. 301, was recommended for review. Based on engineering review and discussions with FDOT District 7, a bridge over the railroad tracks is proposed as part of the preferred widening concept. This bridge is shown in **Figure 3**, and will have the shared use path connected to the eastbound bridge's south side. The S.R. 50 section, shown as **Figure 4** from U.S. 301 to the railroad bridge has a maximum proposed 374' ROW width accounting for the railroad bridge approach embankment, a railroad access road and an offsite drainage conveyance ditch. Currently, the S.R. 50 section from the railroad bridge to the Sumter County Line has a 200' ROW width and no ROW acquisition is needed, except for the railroad approaches, the two proposed stormwater retention ponds and floodplain compensation areas. A 10' asphalt shared-use path on the roadway's south side will also be constructed, being a suggestion from the Alternatives Public Meeting.

The rural widening pavement match, from the Hernando-Sumter County Line to Lee Road, utilizes/resurfaces the existing S.R. 50 lanes and constructs two new lanes for approximately 4.6 miles of the 12.3-mile section. The remaining 7.7 miles consists of a full rebuild of S.R. 50 from a two-lane to a four-lane facility. These 7.7 miles include areas where the roadway profile should be raised because the groundwater/vertical base clearance requirements are not met, where the roadway needs to be reconstructed around curves or where the roadway needs new construction changes from eastbound lanes to westbound lanes to minimize ROW impacts. A 12' asphalt shared-use path will also be constructed on the roadway's south side, from the Hernando-Sumter County Line to Lee Road, to accommodate pedestrians and bicyclists. Within this section, the proposed ROW widths range from a minimum of 190' to a maximum of 241' where drainage conveyance ditches are provided on both sides. The typical sections for this 12.3-mile section vary considerably throughout and are best reviewed in the typical section package contained in Appendix A of the PER. Illustrative typical sections showing the minimum and maximum ROW and pavement match or full rebuild are shown in **Figure 5** and **Figure 6**. The 12' additional ROW shown in Figure 5 is needed to reuse existing pavement and meet roadside clearance requirements. The existing Withlacoochee River Bridge will remain in place and serve as the

new westbound travel lanes for S.R. 50. A new two-lane bridge across the Withlacoochee River will be constructed for the eastbound lanes. The 12' shared-use path will be included on the new eastbound bridge's south side. This bridge typical section is shown as **Figure 7**.

The urban widening from Lee Road to C.R. 33 includes a new four-lane roadway, adds curb and gutter, provides a raised median, and incorporates a 6' sidewalk on the north side. A 12' shared-use path will be constructed on the roadway's south side to approximately 500' west of Barry Avenue where it connects to the proposed South Lake Trail and departs the S.R. 50 corridor. East of Barry Avenue, a 6' sidewalk will be incorporated along the roadway's south side to C.R. 33. Seven-foot buffered bicycle lanes will also be provided in this section. This S.R. 50 section falls within the urban service boundary and a majority is within the City of Mascotte. The proposed ROW widths range from a minimum of 112' to a maximum of 174' within this section. **Figure 8** and **Figure 9** illustrate the typical sections requiring the minimum and maximum ROW with the shared use path. **Figure 10** illustrates the typical section with 6' sidewalks on both sides. The urban four-lane section will connect to the existing urban four-lane roadway near C.R. 33.

The topography surrounding the S.R. 50 project area is generally rolling terrain. Offsite drainage may flow to the S.R. 50 ROW and offsite drainage conveyance ditches are provided to convey this water to proper discharge locations. The maximum ROW shown above is to accommodate these ditches on one or both roadway sides.

The preferred build alignment has maximized the use of existing ROW and was shifted in some locations to minimize environmental impacts. The study considered different build alternatives and evaluated best fit options, including widening left/center/right for specific segments of the corridor to avoid or reduce wetland impacts, particularly within the Withlacoochee State Forest. Pond and floodplain compensations sites were selected to avoid direct impacts to wetlands and other surface waters when practicable. Additionally, coordination with the Florida Forest Service revealed several unique habitats within the Withlacoochee State Forest that may provide habitat(s) for protected species. The FDOT will make efforts to avoid these unique habitats during the design and pond selection process when practicable.

Roundabouts are preferred at the intersections of S.R. 471, C.R. 469, and Tuscanooga Road. The intersection concepts are shown within the PER as Figures 92, 93 and 94. The C.R. 33 intersection is recommended to remain signalized and be shifted approximately 0.10 miles to the west.

The concept plans for the preferred alternative are provided in the PER's Appendix B.

Figure 2: Typical Section – U.S. 301 to Hernando-Sumter County Line - Minimum ROW

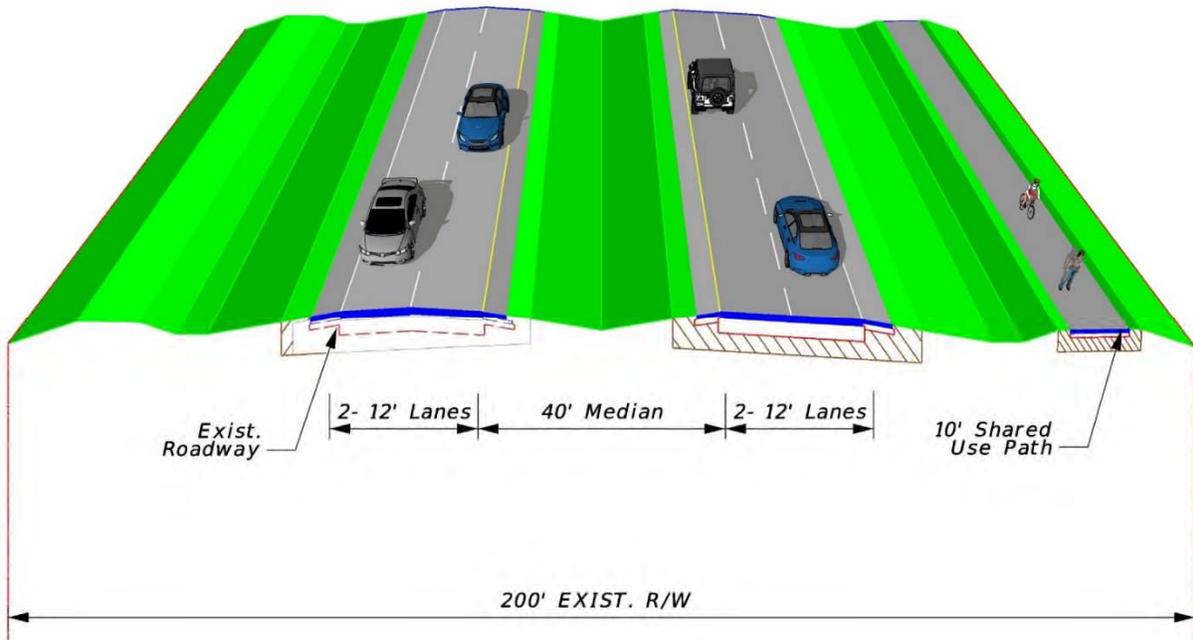


Figure 3: Typical Section – Railroad Overpass Bridges

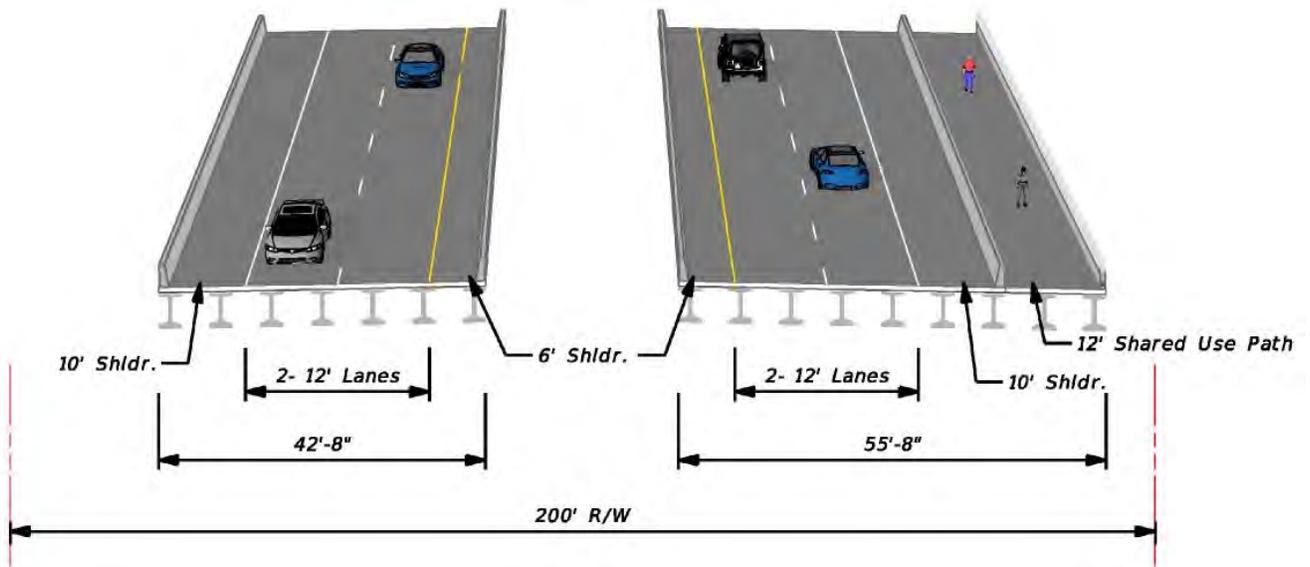


Figure 4: Typical Section – U.S. 301 to Hernando-Sumter County Line - Maximum ROW @Railroad Overpass Approach

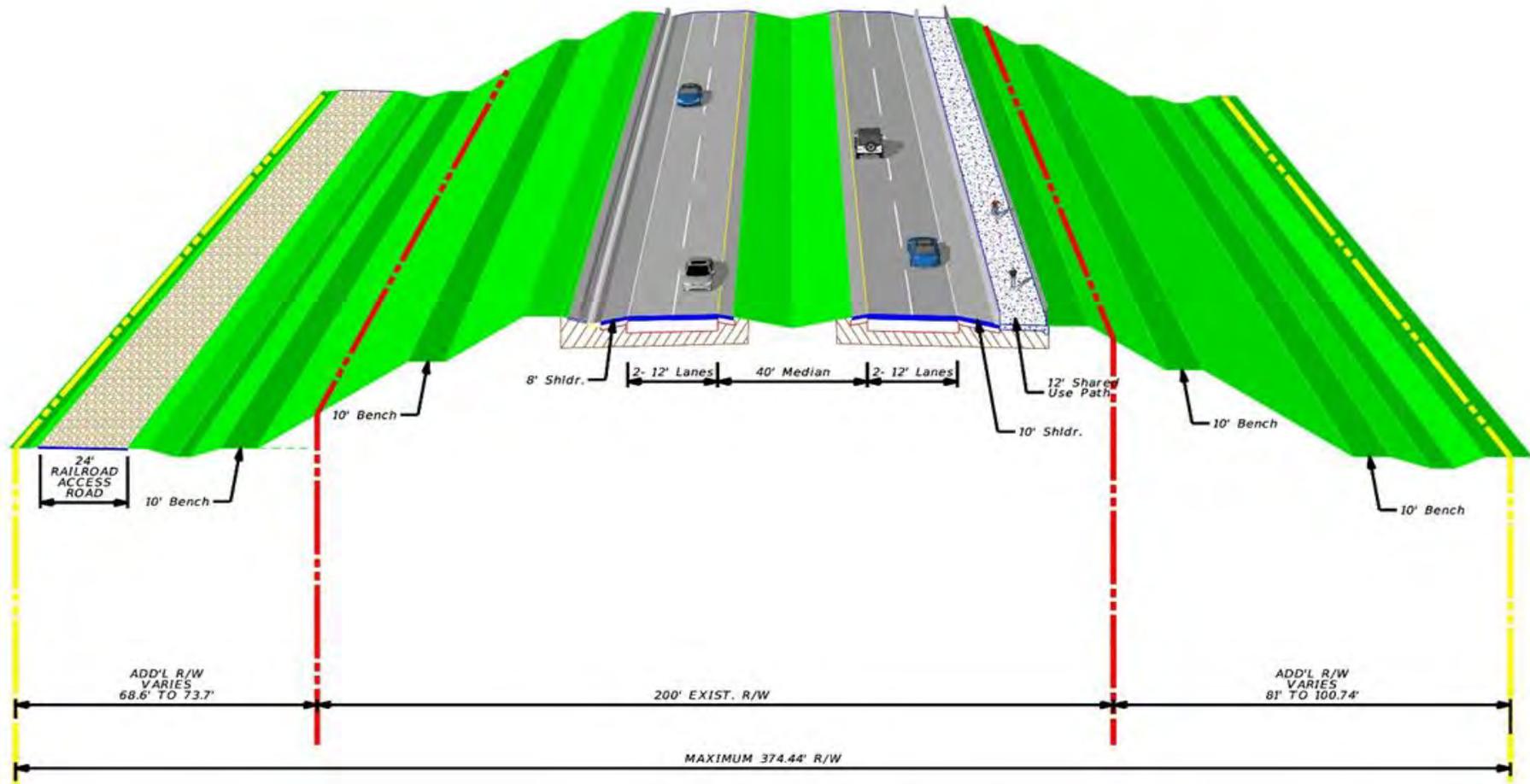


Figure 5: Typical Section – Hernando-Sumter County Line to Lee Road - Minimum ROW w/resurface existing roadway

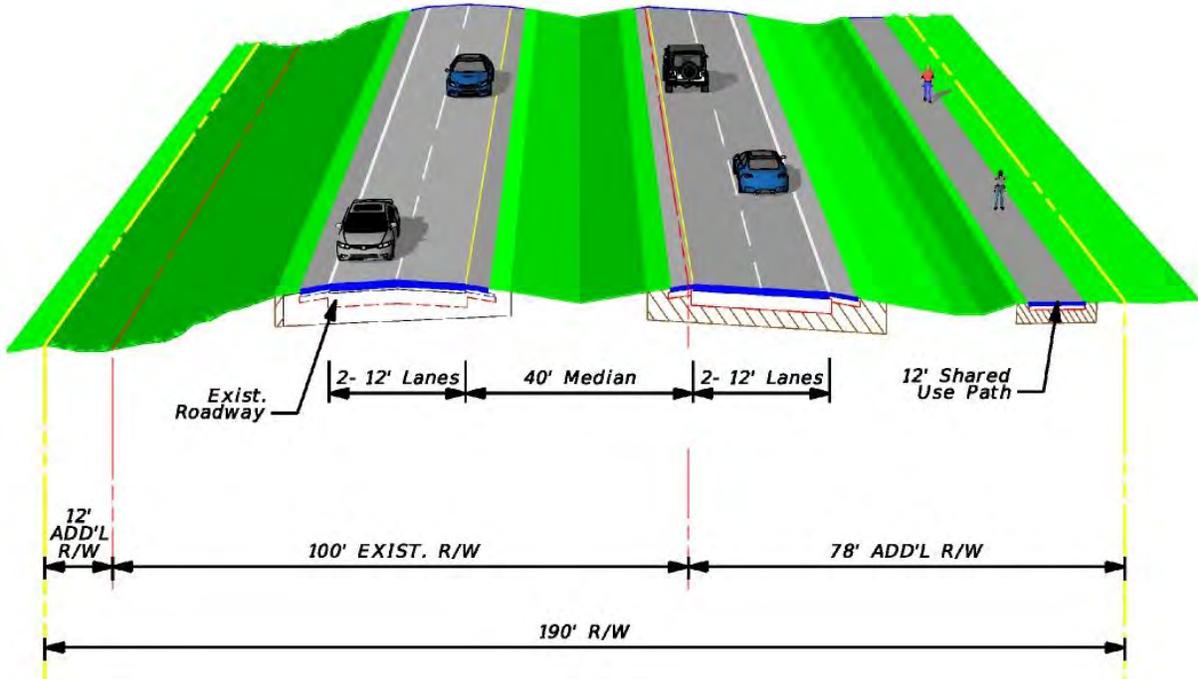


Figure 6: Typical Section - Hernando-Sumter County Line to Lee Road - Maximum ROW w/new construction w/drainage conveyance ditches

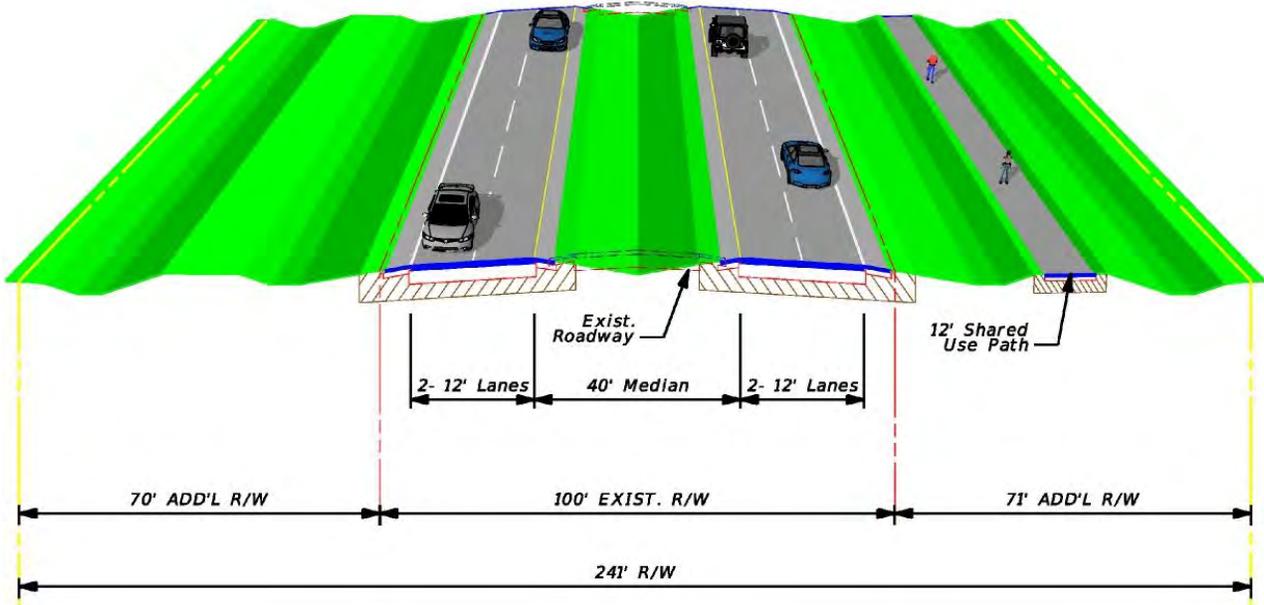


Figure 7: Typical Section - Hernando-Sumter County Line to Lee Road - Little Withlacoochee River Bridges

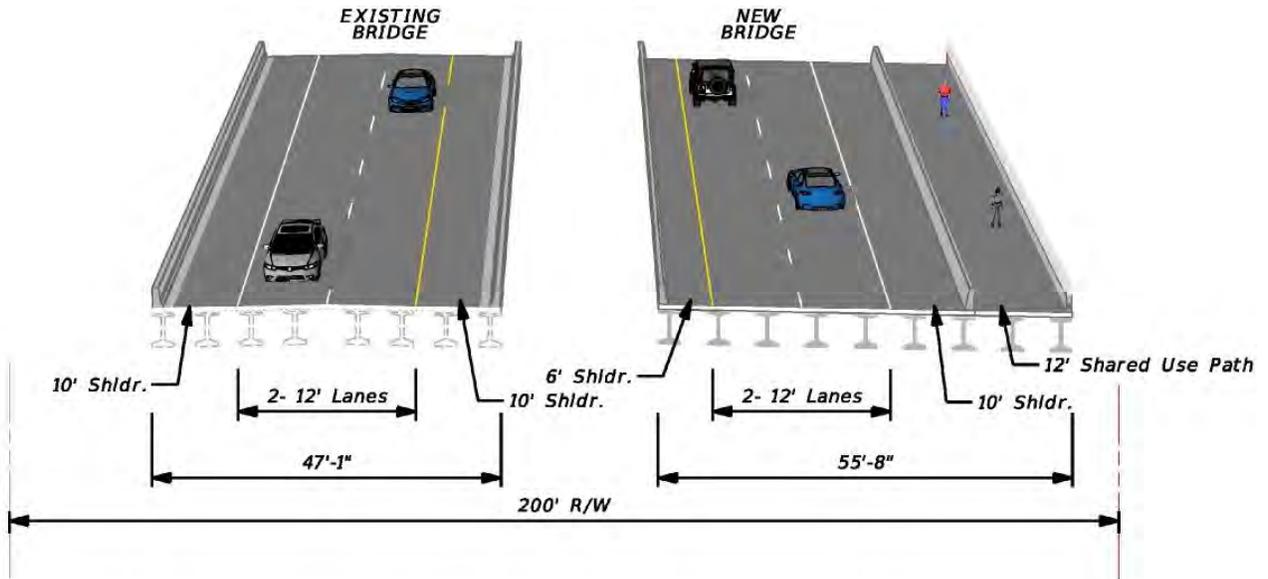


Figure 8: Typical - Lee Road to west of Barry Avenue - Minimum ROW

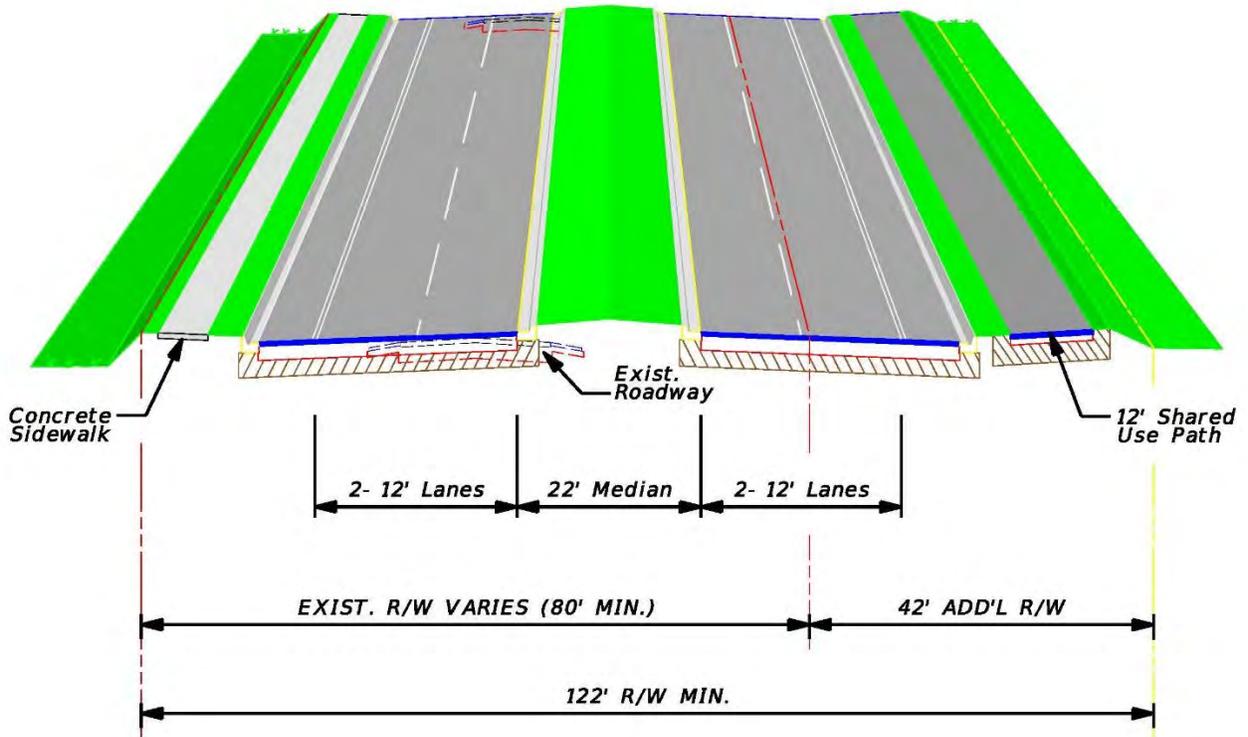


Figure 9: Typical Section - Lee Rd to west of Barry Ave - Maximum ROW w/drainage conveyance ditches

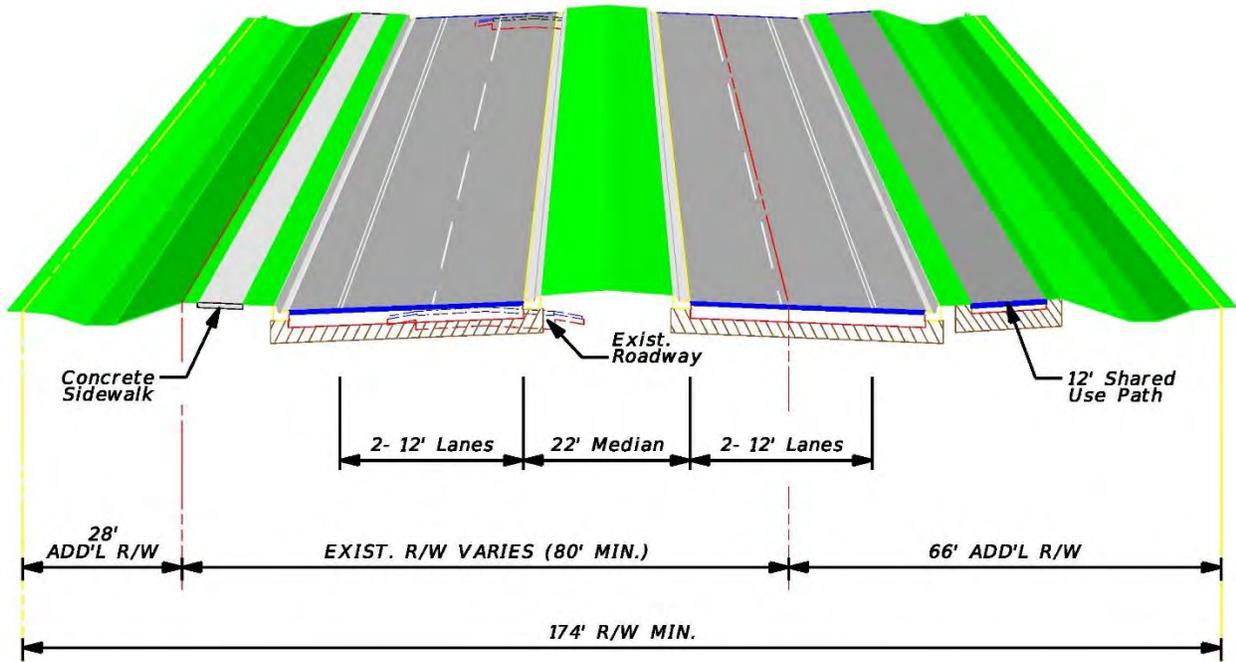
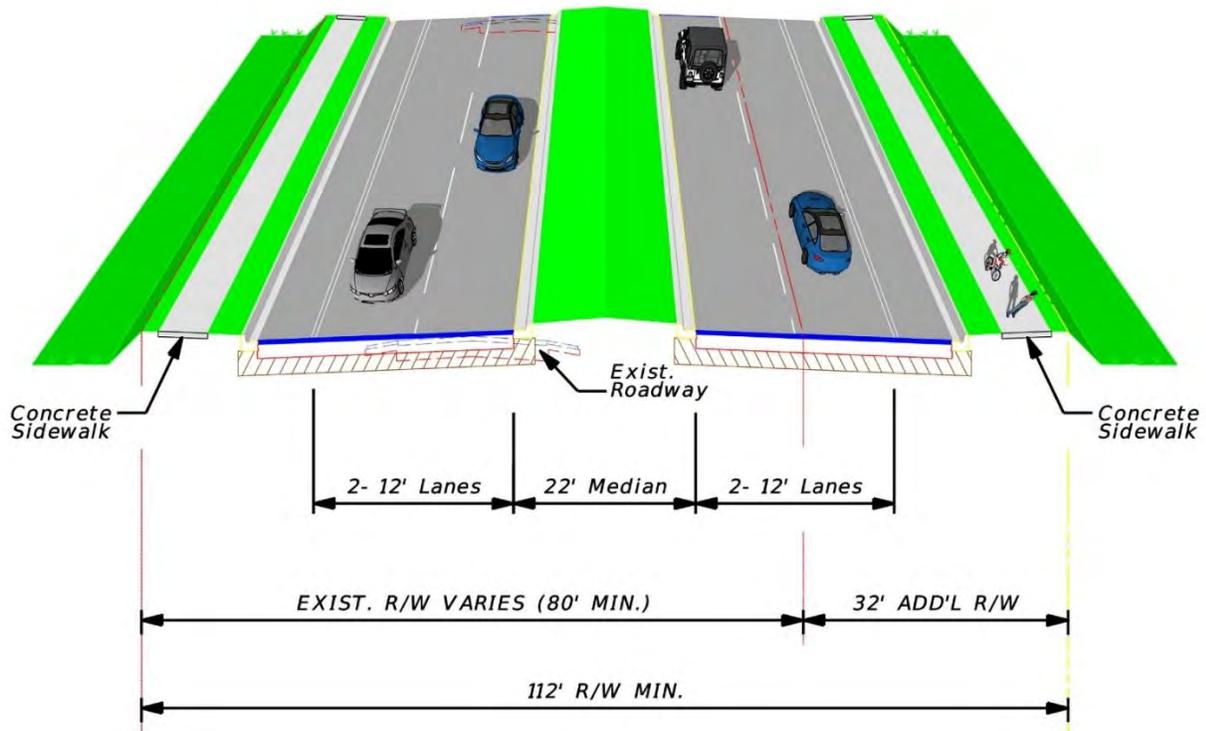


Figure 10: Typical Section - West of Barry Ave to C.R. 33



7. Approved for Public Availability

Before public hearing when a public hearing is required.



Environmental or Project Development
Manager or Administrator

11/1/18
Date

8. Public Involvement

1. A public hearing is not required.
2. Public hearings were held on November 27 and 29, 2018. This draft document was publicly available between November 5, 2018 and December 10, 2018. Comments were received by FDOT until December 10, 2018.

District Contact Information:

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Florida Department of Transportation; District 5
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Deland, FL, 32720
Phone: (386) 943-5392
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3. Public hearings were held on November 27 and 29, 2018 and the transcript is available.
4. An opportunity for a public hearing was afforded and was documented (insert date).

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

6/25/19
Date

10. Supporting Information

This section details the information supporting **Table 4** and **Table 5** in the Environmental Analysis Section.

10.1 SOCIAL

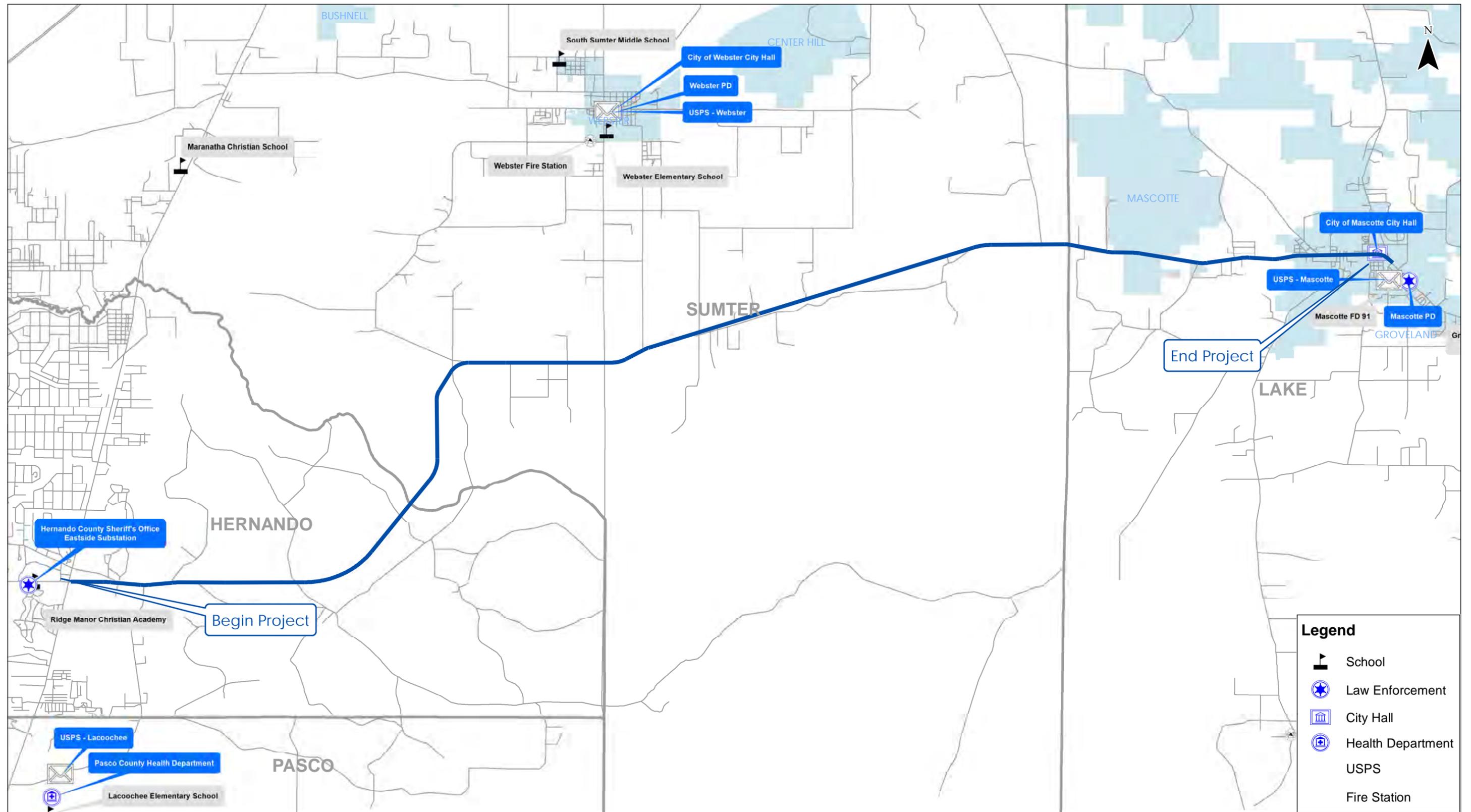
The ETDM Summary Report, provided in **Appendix B**, includes a “Minimal” Degree of Effect (DOE) for Social Resources along the S.R. 50 study corridor. **Figure 11** displays the schools, law enforcement, City Hall, health department, USPS, and fire stations near the study corridor. The City of Mascotte City Hall is the only facility immediately adjacent to the study segment (11070000) at MP 4.122 (Sta. 576); the other public agencies are located off the corridor within the city limits.

Figure 12 shows the cemeteries, community centers, religious facilities, and parks near the study corridor. No publicly-owned group care centers were found. Generally, these facilities are located in the surrounding area with the following facilities having direct connection to S.R. 50. The description of proposed impacts, if any, are described below:

- At MP 1.380 (Sta. 94) of S.R. 50 (18020000): Church of God of Linden – no impact
- At MP 1.440 (Sta. 95) of S.R. 50 (18020000): First Baptist Church of Linden – approximately 20-ft width of frontage is proposed to be purchased. No building impacts are anticipated.
- At MP 1.520 (Sta. 99) of S.R. 50 (18020000): Linden United Methodist Church – church owns parcel between S.R. 50 and C.R. 772 which is proposed to be purchased. No building impacts are anticipated.
- At MP 1.823 (Sta. 113) of S.R. 50 (18020000): Linden Cemetery – no impact
- At MP 0.160 (Sta. 365) of S.R. 50 (11070000): Rose of Sharon Worship Center - approximately 35-ft width of frontage is proposed to be purchased. No building impacts are anticipated.
- At MP 2.122 (Sta. 471) of S.R. 50 (11070000): Stuckey Memorial Cemetery – No impacts
- At MP 2.190 (Sta 473) of S.R. 50 (11070000): St. Paul’s A.M.E. Church – No impacts
- At MP 2.810 (Sta. 505) of S.R. 50 (11070000): Faithful and True Ministries– approximately 20-ft width of frontage is proposed to be purchased. No building impacts are anticipated.
- At MP 3.006 (Sta. 517) of S.R. 50 (11070000): La Primera Iglesia Bautisa De Mascotte– approximately 25-ft width of frontage is proposed to be purchased. No building impacts are anticipated.
- At MP 3.520 (Sta. 545) of S.R. 50 (11070000): Mascotte Cemetery – no impacts
- At MP 3.650 (Sta. 552) of S.R. 50 (11070000): The Mascotte Church – no impacts
- At MP 3.871 (Sta. 564) of S.R. 50 (11070000): First Missionary Baptist Church – no impacts

10.2 ECONOMIC

The ETDM Summary Report includes a “No Involvement” DOE for Economic Resources along the S.R. 50 study corridor. Historical sociocultural data was analyzed for the three counties and the City of Mascotte. The results are summarized in **Table 6**.

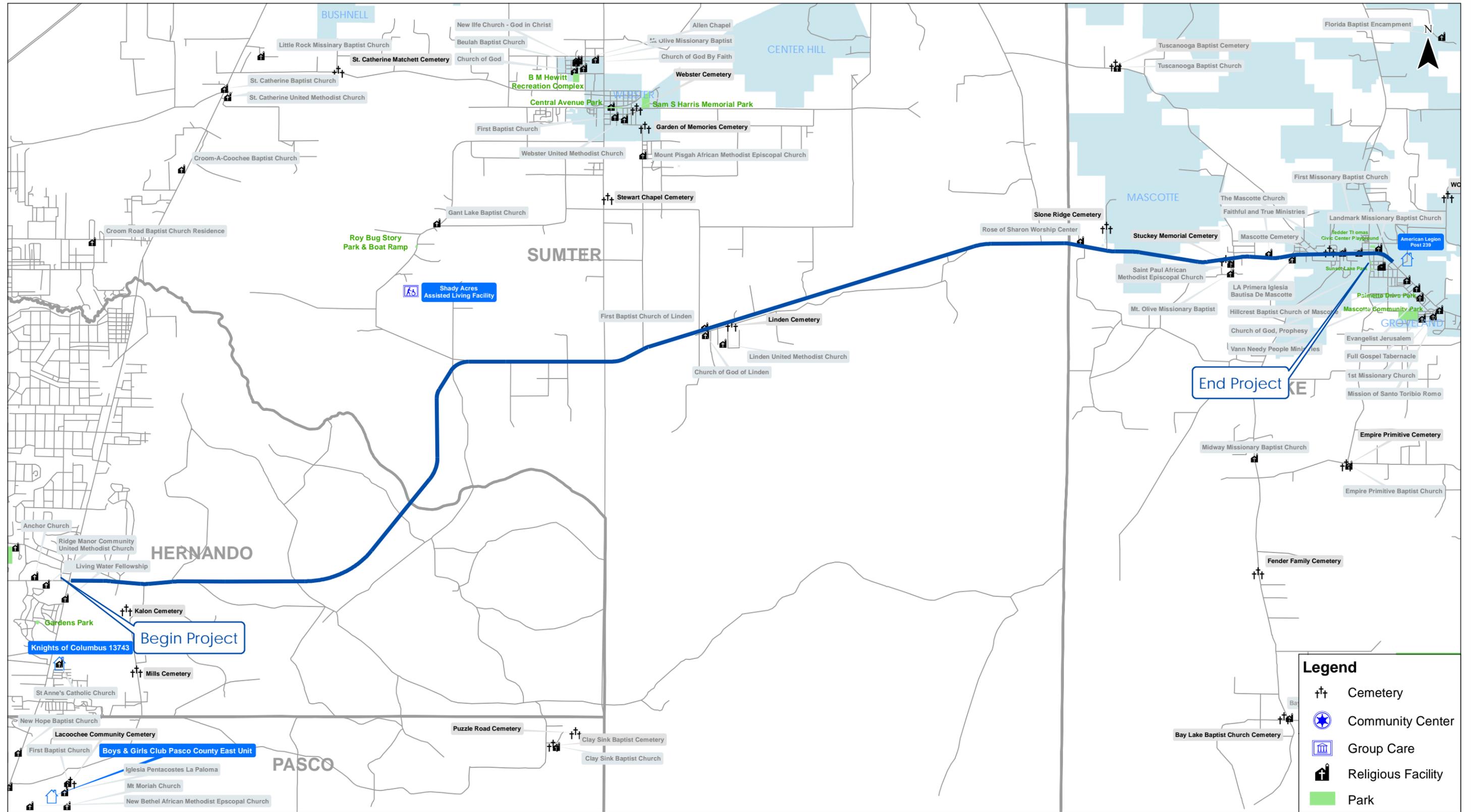


Social Resource Map A
S.R. 50 State Environmental Impact Report
Hernando, Sumter, and Lake Counties, Florida

Figure
11

Coordinate System: GCS WGS 1984
 Data Source: Delete if there isn't one.

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Social Resource Map B
S.R. 50 State Environmental Impact Report
Hernando, Sumter, and Lake Counties, Florida

Figure
12

These areas appear to have higher annual growth rates between 1990 and 2010 compared to post-2010 data. Sumter County has the highest historical growth rate among the analyzed areas. The data provided in the table was summarized from sociocultural ETDM reports for each of the Counties and the City of Mascotte.

Table 6: Historical Sociocultural Data

Area	General Population Trends					
	1990	2000	2010	2014	1990 – 2010 Annual Growth Rate (%)	2010 - 2014 Annual Growth Rate (%)
Hernando	101,115	130,802	170,337	173,792	3.4%	0.5%
Sumter	31,577	53,345	85,891	103,708	8.6%	5.2%
Lake	152,104	210,528	291,671	305,010	4.6%	1.1%
City of Mascotte	1,009	1,605	2,158	2,208	5.7%	0.6%

The University of Florida’s Bureau of Business and Economic Research (BEBR) population projections were obtained for Hernando, Lake, and Sumter Counties. The BEBR projections estimate 2015 and project 2020 to 2045 county populations. The low, medium, and high projections for 2045 and the corresponding annual population growth rates are summarized in **Table 7**. Overall, the three counties should not experience drastic growth in the next 30 years. Hernando County has the lowest annual population growth rate and Sumter County has the highest annual growth rate. This also aligns with the historical trends.

Table 7: BEBR Population Projection

2015 Estimate	Estimation	2045 Projection	Annual Growth	Annual Growth Rate (%)
Hernando County				
176,819	Low	202,900	869	0.49%
	Medium	260,800	2,799	1.58%
	High	321,400	4,819	2.73%
Sumter County				
115,657	Low	175,500	1,995	1.72%
	Medium	250,700	4,501	3.89%
	High	322,000	6,878	5.95%
Lake County				
316,569	Low	402,300	2,858	0.90%
	Medium	520,100	6,784	2.14%
	High	637,500	10,698	3.38%

Social economic data from the travel demand model were also utilized to estimate area-wide growth trends. The annual population and employment growth rates for the three counties’ traffic analysis

zones (TAZs) are displayed in **Table 8**. Sumter County should expect the greatest growth in population and employment compared to the other two counties. These projections align with the land use trends.

Table 8: Travel Demand Model Population and Employment Projection

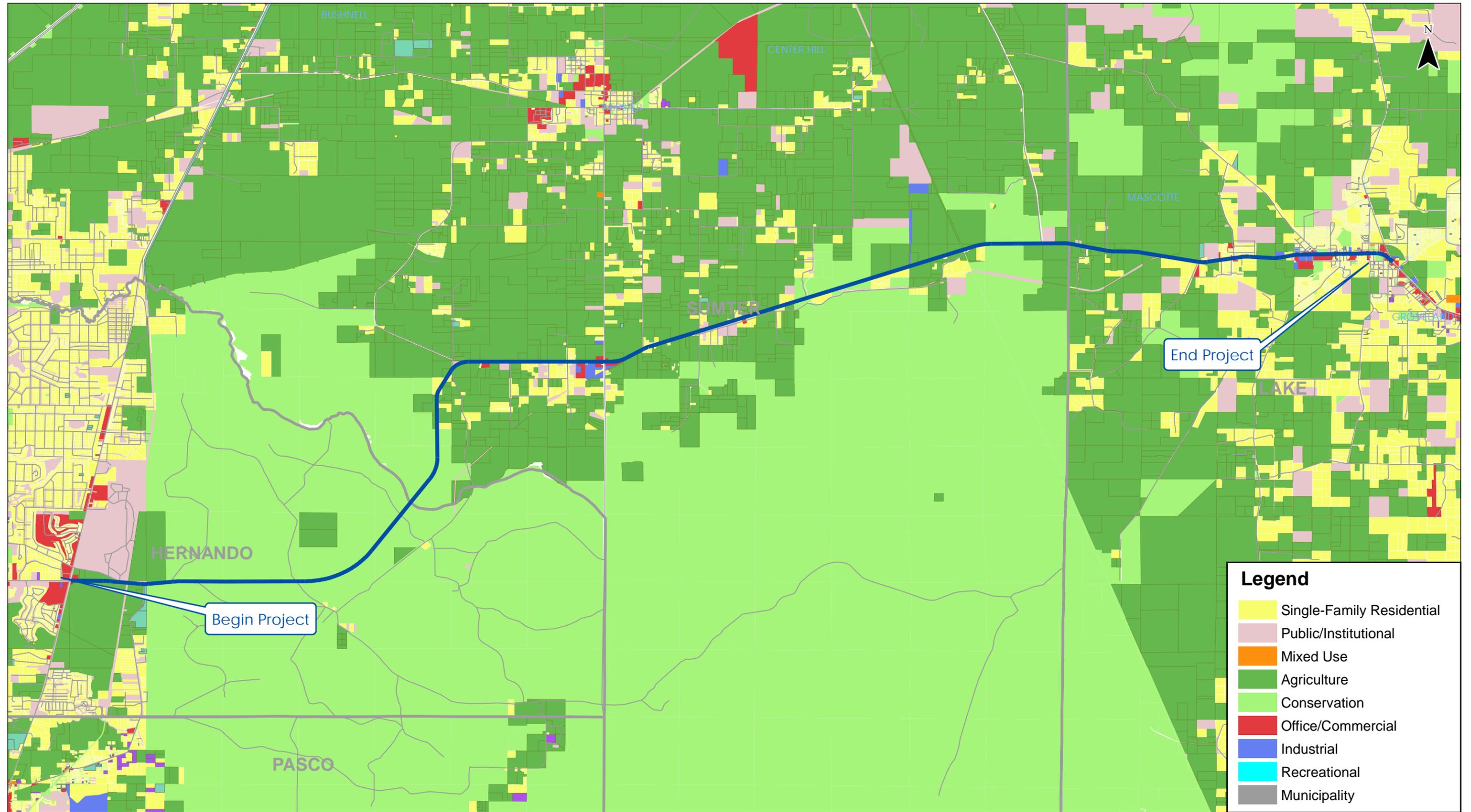
County	Resource	Population			Employment		
		2010	2040	Annual Growth Rate (%)	2010	2040	Annual Growth Rate (%)
Hernando	TBRPM v8.1	170,950	258,464	1.71%	94,464	55,700	2.32%
Sumter	CFRPM v6.1	96,503	241,201	5.27%	28,311	89,329	7.18%
Lake	CFRPM v6.1	305,724	547,506	2.64%	122,075	226,292	2.85%

Along the S.R. 50 corridor the only development expected to occur is in the U.S. Census designated community of Ridge Manor in the U.S. 301 vicinity and within the City of Mascotte. As discussed in this document’s next section much of the land between U.S. 301 and Mascotte’s western city limit is expected to remain either agriculture or conservation. By S.R. 50 becoming an emerging SIS facility, it will enhance the flow of commerce thru Central Florida. On this basis, this project will enhance the economic resources of the region.

10.3 LAND USE CHANGES

The ETDM Summary Report includes a “No Involvement” DOE for Land Use Changes along the S.R. 50 study corridor. **Figure 13** illustrates the existing land use along the study corridor at the individual parcel level. There are three distinct clusters of developed parcels at both ends and in the middle of the study corridor. The land use at the western terminus of the study corridor (Ridge Manor) consists primarily of public/institutional parcels and single-family residences. There are also office and commercial parcels adjacent to U.S. 301. The eastern terminus (City of Mascotte) has the same major land use elements but includes industrial and commercial elements as well. In the study corridor’s middle, the land use near Tarrytown at S.R. 471 contains residential, public, commercial, and industrial components. A majority of land uses south of the corridor are coded as conservation, while most of the land uses in the north are categorized as agriculture.

Figure 14 shows the generalized future land use in the vicinity of S.R. 50 corridor. Overall, the future land use along the corridor does not vary from the existing land use. However, the land uses in the southeast quadrant will be converted from agriculture to conservation. The parcels near the western terminus, specifically directly east of U.S. 301, are expected to change from public/institutional and agriculture to industrial use. The eastern parcels will emphasize mixed use. No planned developments are observed along the corridor. The trend of land use changes does not indicate urban sprawl in the area. No changes in land use are anticipated as a result of this project.



Legend

- Single-Family Residential
- Public/Institutional
- Mixed Use
- Agriculture
- Conservation
- Office/Commercial
- Industrial
- Recreational
- Municipality

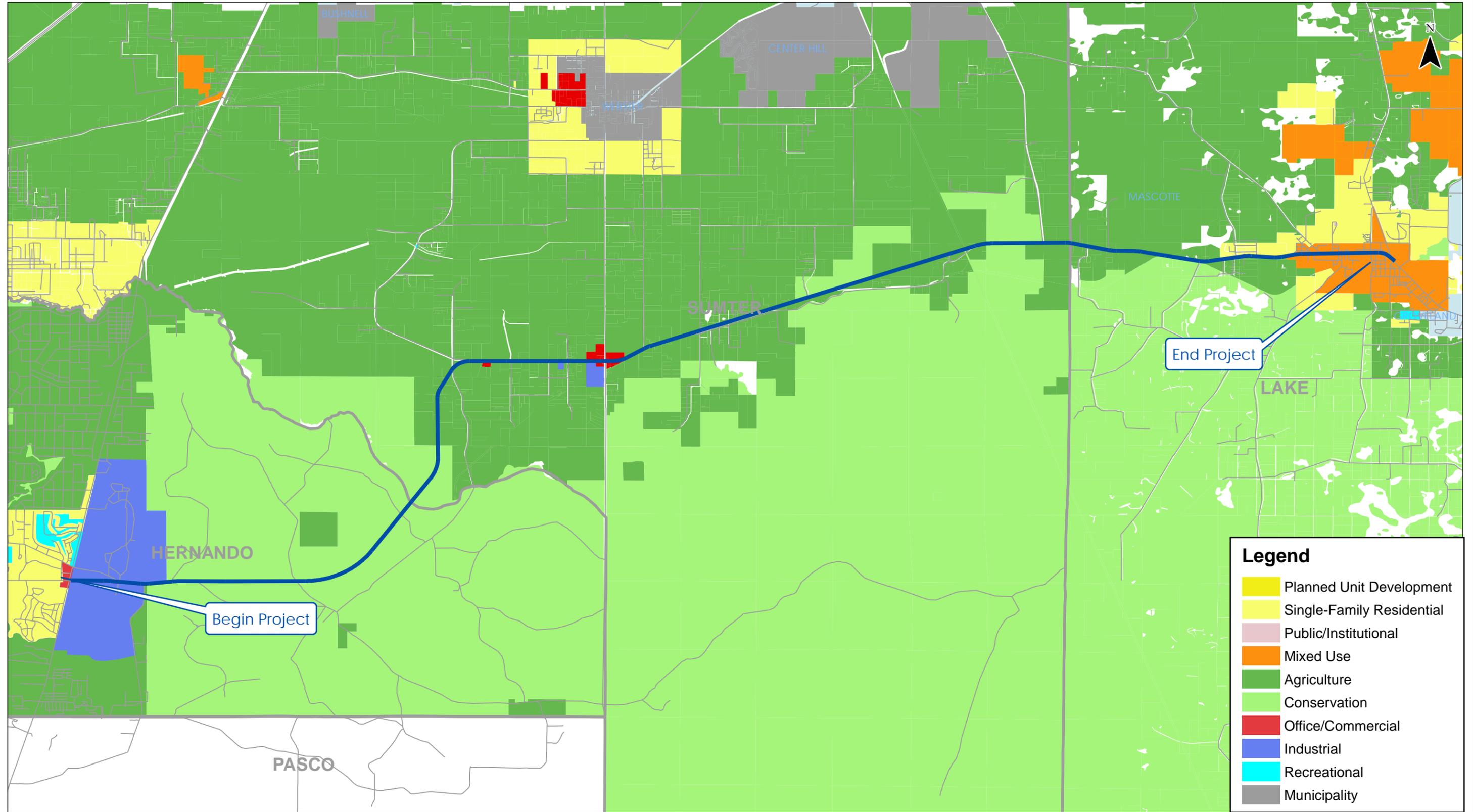


Existing Land Use Map
S.R. 50 State Environmental Impact Report
Hernando, Sumter, and Lake Counties, Florida

Figure
13

Coordinate System: GCS WGS 1984
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Future Land Use Map
S.R. 50 State Environmental Impact Report
Hernando, Sumter, and Lake Counties, Florida

Figure
14

Coordinate System: GCS WGS 1984
Data Source: Delete if there isn't one.

10.4 MOBILITY

The ETDM Summary Report includes an “Enhance” DOE for Mobility along the S.R. 50 study corridor. **Figure 15** illustrates the general mobility around the study corridor including existing trails, the LakeXpress Bus Route, and proposed Coast to Coast Trail alignments.

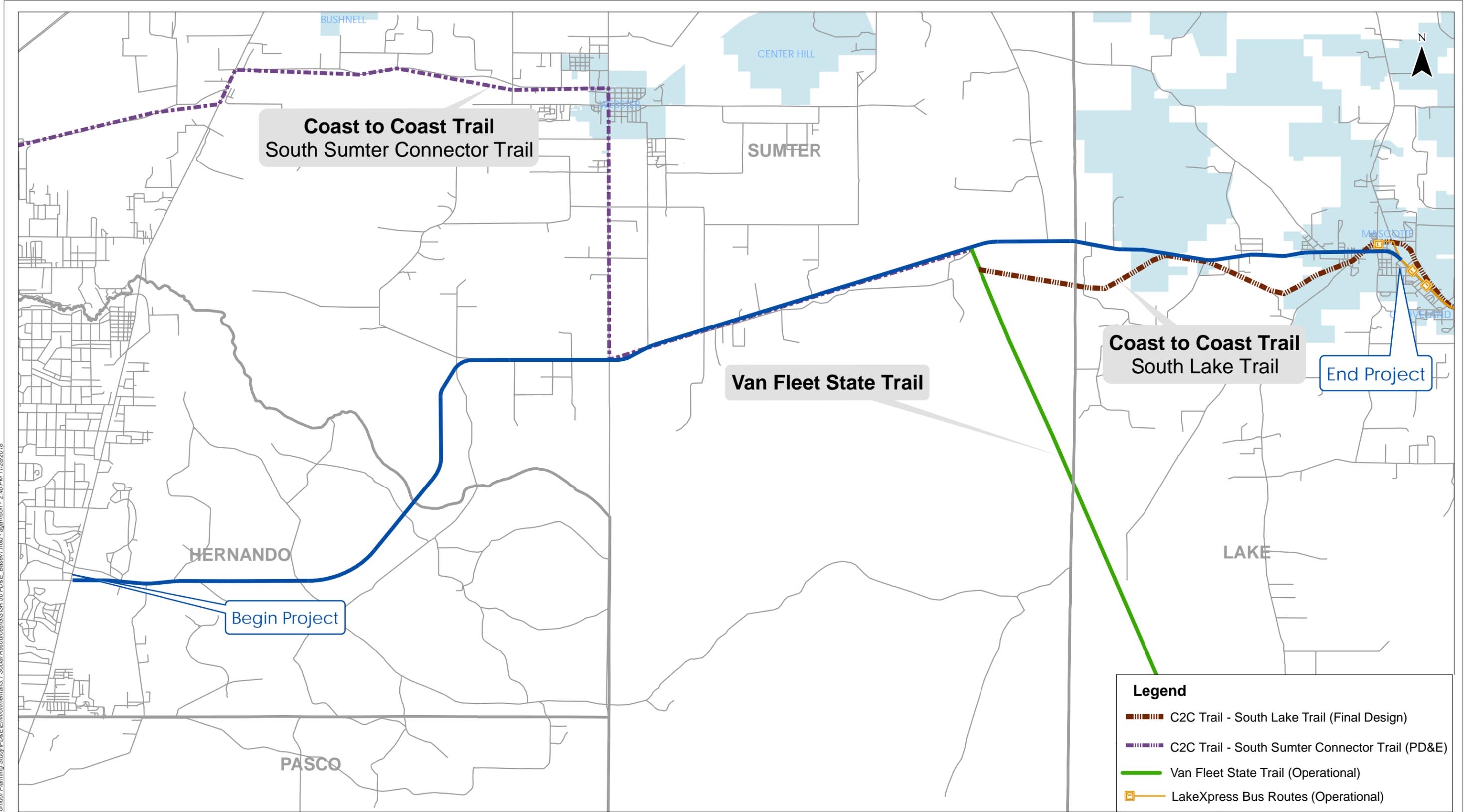
LakeXpress Route 50W connects the Mascotte Civic Center and City Hall Station to the Clermont Park and Ride Station. It serves 0.75 miles of the S.R. 50 corridor. The loop route takes an hour to complete and the operating headway is one hour. No transit route currently operates along S.R. 50 west of Sunset Avenue.

The Office of Greenways and Trails developed the Coast-to-Coast Connector, a multi-use trail linking communities between St. Petersburg and Titusville. As shown in Figure 15, there are two segment gaps in the vicinity of S.R. 50:

- South Sumter Connector Trail (FM 435471-1, Current Phase: PD&E): This proposed trail segment links the Withlacoochee State Trail to the west and Van Fleet State Trail to the east. This is the largest gap in the Coast-to-Coast Connector project. The proposed trail crosses U.S. 301 and heads east into the City of Webster. Exiting Webster’s city limits, the alignment heads south along S.R. 471 and then east along S.R. 50 before terminating into the Van Fleet State Trail and the South Lake Trail. The specific route will be determined during the PD&E phase.
- South Lake Trail (FM 435893-1, Current Phase: Design): This proposed trail segment links the Van Fleet State Trail to Silver Eagle Road in Clermont; it will align with S.R. 50 for approximately one mile just to the west of Lee Road. The specific route will be determined during the final design and ROW acquisition phases.

The Van Fleet State Trail is part of Florida’s Statewide System of Greenways and Trails. It is a rural, paved trail and traverses through the Green Swamp and Withlacoochee River, ending at S.R. 50 where it will connect with both the South Sumter Connector Trail and the South Lake Trail. Further, as part of the S.R. 50 proposed improvements a 10’ shared use path will be provided in the project’s Hernando County portion, a 12’ shared use path will be provided throughout Sumter County and in Lake County until South Lake Trail crosses to S.R. 50’s north side in the vicinity of Barry Avenue. Once the urban typical section starts at Lee Road, 7’ buffered bike lanes will also be provided in both directions plus a continuous 6’ sidewalk will be provided on the roadway’s north side to the project’s end. When the 12’ shared use path terminates in Mascotte, a 6’ sidewalk will be provided on the roadway’s south side to the project’s end. The S.R. 50 improvements will enhance both bicycle and pedestrian mobility throughout the corridor.

As discussed in the project’s *Design Traffic Technical Memorandum* (DTTM) the projected Design Year (2045) No-Build LOS is projected to be “E” and “F”. The projected Design Year (2045) Build LOS is projected to be “C” or better. Vehicular mobility will be enhanced.



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Mobility Map
S.R. 50 State Environmental Impact Report
Hernando, Sumter, and Lake Counties, Florida

Figure
15

Coordinate System: GCS WGS 1984
Data Source: Delete if there isn't one.

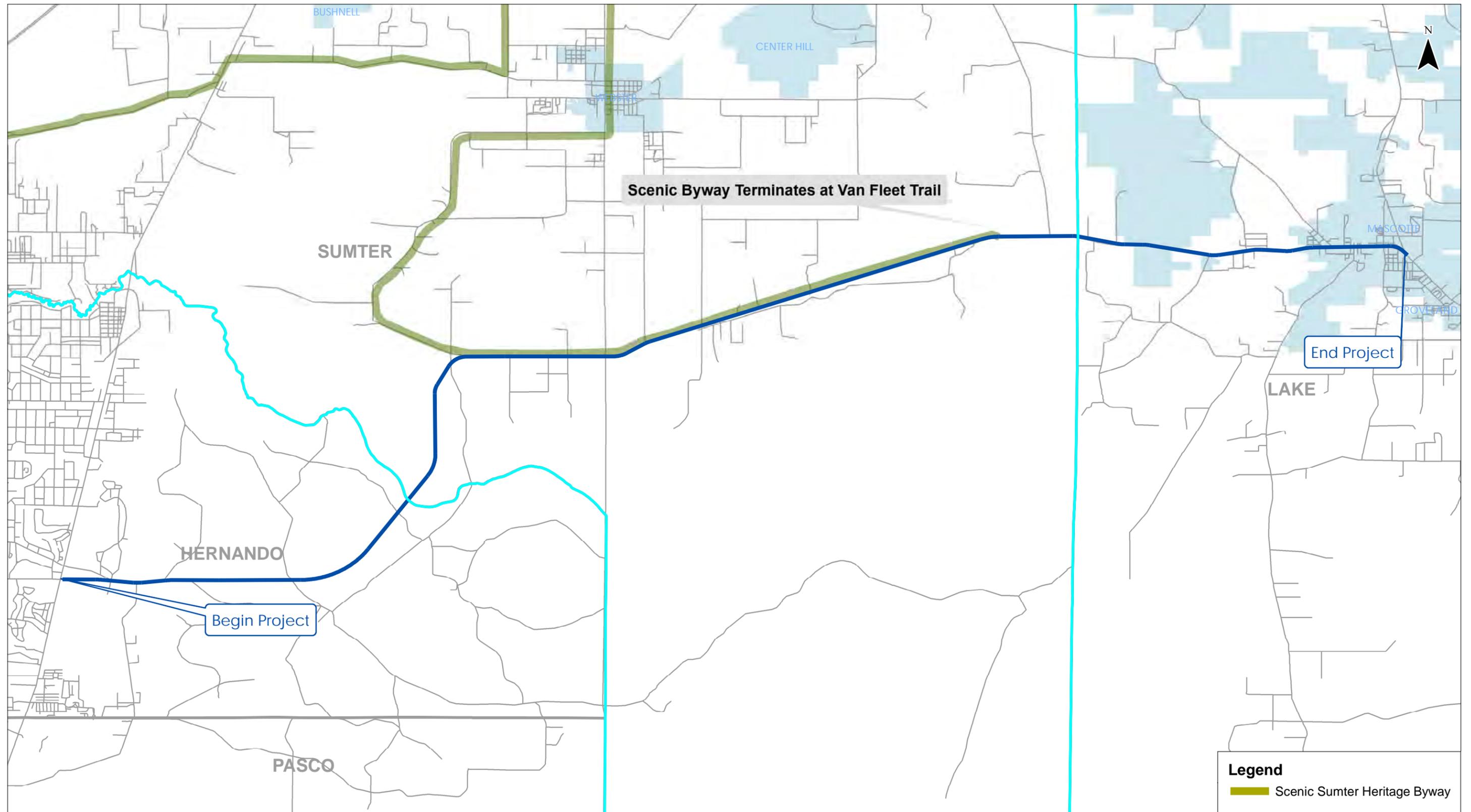
10.5 AESTHETIC EFFECTS

The ETDM Summary Report includes a “Minimal” DOE for Aesthetic Effects along the S.R. 50 study corridor. **Figure 16** displays the Scenic Sumter Heritage Byway, which is part of the Florida Scenic Highway Program, Central Region. The Byway traverses several small towns such as Sumterville, Bushnell, and Webster. It also passes through multiple attractions, ranches, and farms. The Byway connects to the S.R. 50 Corridor at C.R. 478A and ends at the Van Fleet State Trail.

There are two Scenic Sumter Heritage Byway resources along S.R. 50 within the project’s corridor. The first is the Richloam Wildlife Management Area (WMA) consisting of more than 58,000 acres providing hunting, fishing, wildlife viewing, camping and horseback riding. The second resource is the General James Van Fleet Trail State Park which is a part of Florida’s Statewide System of Greenways and Trails. It is an old railroad corridor converted to recreational use from Polk City in Polk County to Mabel at S.R. 50 in Sumter County. The provision of a shared use path along S.R. 50 will enhance multimodal access to both these resources.

It is anticipated the S.R. 50 segment of the Byway from C.R. 478A to the Van Fleet State Trail will continue to remain in the Florida Scenic Highway Program and meet the Byway Designation Criteria as described below:

1. Resource(s) should be visible from the roadway.
2. The corridor should tell a story that relates to the intrinsic qualities of its resources.
3. The roadway must be a public road that safely accommodates two-wheel drive motor vehicles.
4. The corridor should exhibit significant, exceptional, and distinctive features of the region it traverses.
5. The roadway should be more than one mile in length and, if appropriate, provide access to the resource(s).
6. A majority of the corridor should exhibit scenic or heritage qualifying resource(s).
7. A Byway Organization should be organized to support the scenic highway designation.
8. Community Commitment in support of the designation must be documented.
9. Strong local support must be demonstrated.
10. A Byway Management Plan (BMP) must be developed along with a Year-One Work Plan as a planning tool for the Byway Organization.



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Aesthetic Map
S.R. 50 State Environmental Impact Report
Hernando, Sumter, and Lake Counties, Florida

Figure
16

Coordinate System: GCS WGS 1984
Data Source: Delete if there isn't one.

10.6 RELOCATION POTENTIAL

The ETDM Summary Report includes a “Moderate” DOE for Relocation Potential along the S.R. 50 study corridor. The *Conceptual Stage Relocation Plan (CSRP)*, dated March 2019, has been prepared and is in the FDOT project files available for review. Various roadway widening alternatives were evaluated throughout this PD&E. For the CSRP, relocations were determined based on the preferred build alternative. It is estimated that the preferred build alternative requires 21 residential and 11 business relocations as shown in **Table 9**.

Table 9: Potential Business and Residential Relocations

Type	Hernando County	Sumter County	Lake County	Totals
Business	0	3	8	11
Residence	0	4	17	21

Many of the residential and business relocations are located along S.R. 50’s south side within the City of Mascotte. Between Elizabeth Avenue and Talbott Avenue, there will be 9 residential and 8 business relocations to accommodate the preferred build alternative. The widening to the south side is needed to avoid impacts to the Mascotte Cemetery, two churches and Mascotte City Hall. There are no community facilities impacted with widening to the south. Further, the north widening would relocate 4 residences and 4 businesses.

Based on US census data, it is anticipated that the residential households being displaced will represent the demographics summarized in **Table 10**. Relocation assistance is available to all displaced households without regard to race, color, national origin, age, sex, religion, disability, or family status.

Table 10: S.R. 50 Demographic Data

Demographic	Sumter County	Lake County
65 Years and Older	56.9%	26.5%
Minority	9.8%	16.3%
Below Poverty Line	10.5%	11.8%
Disability ¹	14.0%	14.0%

¹ Percentage based on the State of Florida and defined as sensory, physical, mental, or self-care.

Considering the rural context of the project area, relocating businesses may have some impact on the local economy and community as there are limited resources along the project corridor, including Mascotte. The types of businesses proposed for relocation include gas stations some with convenience shopping, automotive sales, a bar, a real estate office and a child development center. Residents in the community may have to travel greater distances to access such resources if these businesses are relocated away from the project area.

According to publicly available residential and commercial listings, the displaced residences and businesses have relocation options within both counties; see CSRP Table 6 and CSRP Appendix A for more details. Businesses may be eligible for reimbursement of any expenses they may incur while moving and reestablishing the business. Last resort housing may be needed for residents with disabilities requiring special features in replacement housing or in cases where residents do not have the financial means to pay the full expenses of replacement housing. Many community social services are available in Sumter and Lake counties for the displaced residences and businesses; see Table 8 in the CSRP for a list of resources.

One of the unavoidable consequences on a project such as this is the necessary relocation of families or businesses. To minimize these effects, all right-of way acquisition is conducted in accordance with Florida Statute 339.09 and the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, known as the Uniform Act, and the established guidelines by which these programs are administered.

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

10.7 HISTORIC SITES/DISTRICTS

The ETDM Summary Report includes a “Moderate” DOE for Historical Sites/Districts along the S.R. 50 study corridor. A Phase I *Cultural Resource Assessment Survey* (CRAS) dated August 2018 was conducted in support of improvements to S.R. 50. The Phase I CRAS included an approximate 20 mile long roadway corridor, 34 preferred pond site locations, and 30 Floodplain Compensation Areas (FPCAs). Following the Phase I CRAS, Phase II evaluative site testing was carried out at four archaeological sites. In regard to future federal involvement in the project, the steps undertaken thus far as part of the CRAS per Chapter 267, *Florida Statutes* are congruent with the Section 106 process promulgated by 36 CFR 800, including initiating consultation, identification of historic properties, assessment of adverse effects, and resolution of adverse effects. Should federal permits or funds become involved in the future phases of the project, these documents should be circulated to the appropriate agencies with transmittal letters clarifying the process and requesting eligibility and effects findings under Section 106 of the NHPA. The CRAS is available in the FDOT project files.

The architectural history survey identified nine historic resources (8HE00635, 8SM01056, 8SM01065, 8SM01066, 8SM01067, 8SM01068, 8LA04599, 8LA04600, and 8LA4604) within the project Area of Potential Effect (APE) that are eligible for the National Register of Historic Places (NRHP). This determination was made by the State Historic Preservation Officer (SHPO) in a letter dated September 21, 2018 (**Appendix C**). The location of these nine historic resources is shown in **Figure 17** through **Figure 20**.

The current project proposes to construct a grade separated crossing (bridge) over 8HE00635, the S-Line Richloam Railroad. The bridge will require no ROW from the railroad and will not impede or reroute rail traffic. No historic fabric associated with the railroad will be removed or altered by the proposed bridge. On February 21, 2019, the SHPO concurred that construction of the proposed bridge over the S-Line Richloam Railroad, will have no adverse effect on 8HE00635.

Figure 17: Location of NRHP Eligible Resources at CSX "S" Line



Figure 18: Location of NRHP Eligible Resources in Linden

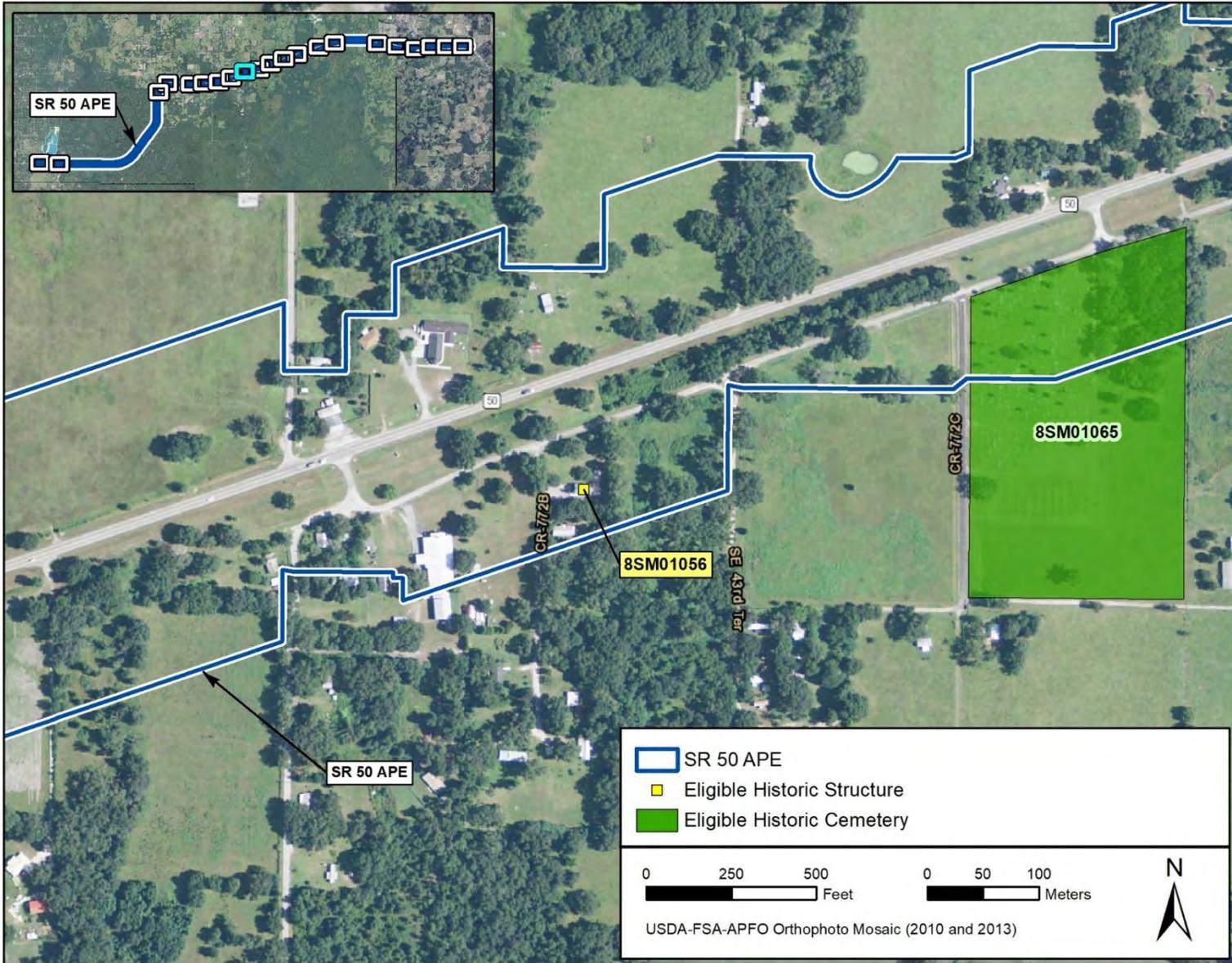


Figure 19: Location of NRHP Eligible Resources at Marian Gardens

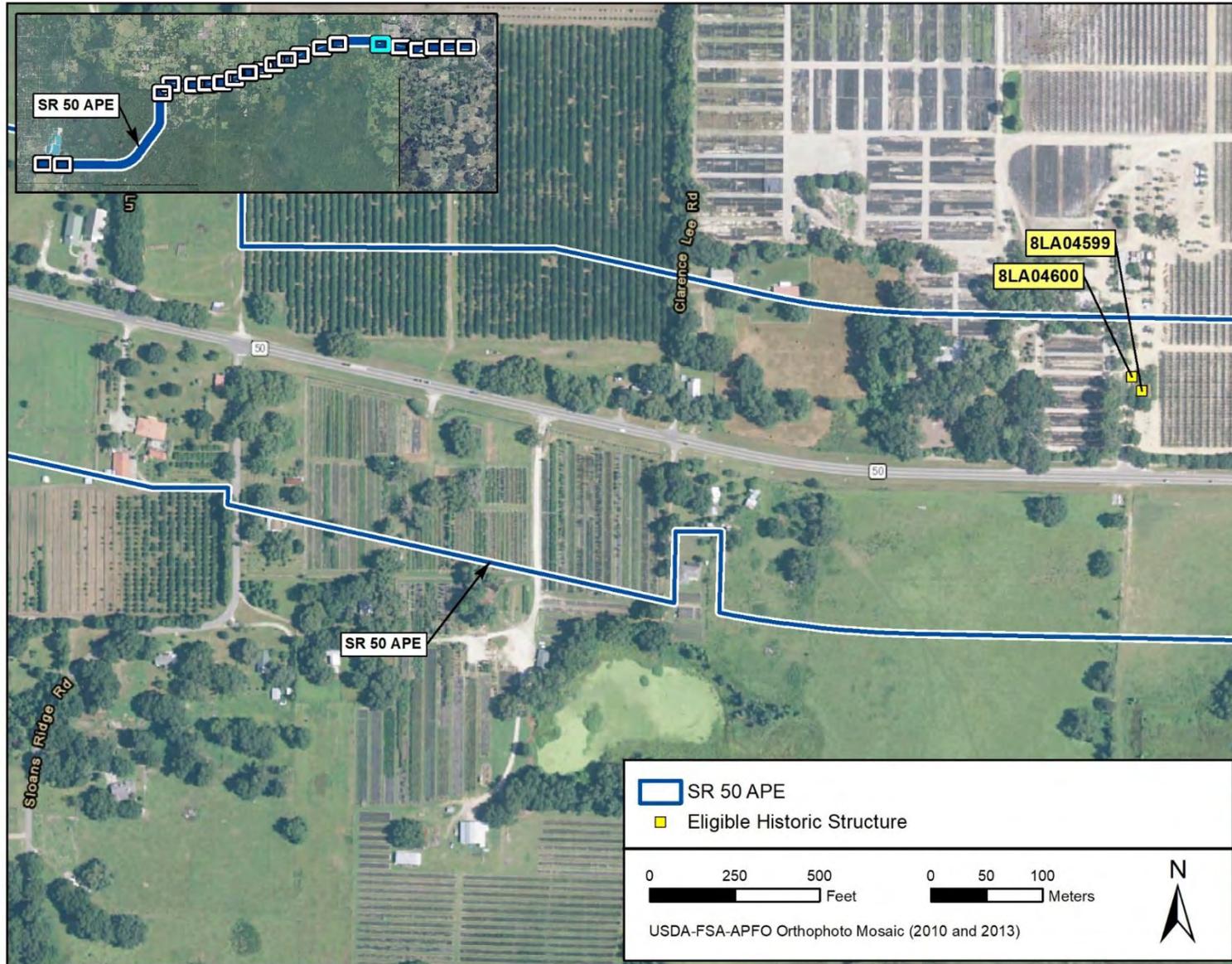


Figure 20: Location of NRHP Eligible Resources at Stuckey



SHPO also concurred that the project will have no effect on the Linden Cemetery (8SM01065) and its contributing buildings (8SM01066-8SM01068), nor the Linden United Methodist Church (8SM01056), as these resources are located on parcels that will not be encroached upon by the proposed right-of-way. While right-of-way will be acquired from the parcels containing the structure and well at 619 SR 50 (8LA04599 and 8LA04600) and the structure at 1745 SR 50 (8LA04604), the qualities that render these three resources individually eligible for the NRHP, namely their architecture, will not be compromised or diminished by the construction of the project. SHPO concurred that the project will have no adverse effect on 8LA04599, 8LA04600, and 8LA04604. Twelve of the residential structures shown for relocation are considered historical, being aged 50 years and older, however, none of the historical structures listed were recommended eligible and the State Historic Preservation Officer (SHPO) did not raise any concerns.

10.8 ARCHAEOLOGICAL SITES

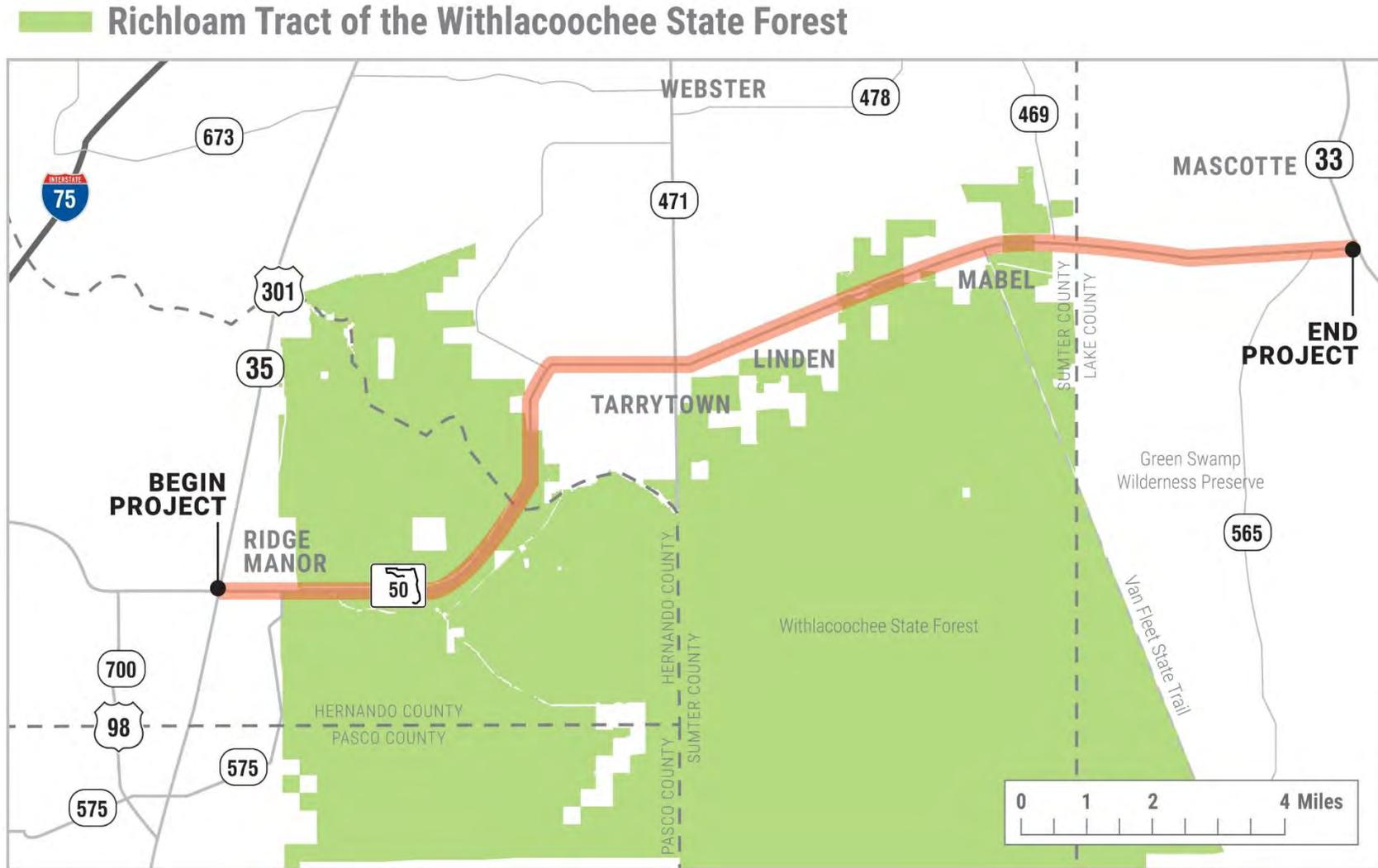
The ETDM Summary Report includes a “Moderate” DOE for Archaeological Sites along the S.R. 50 study corridor. The SHPO’s review of the S.R. 50 roadway CRAS concurred with the recommendation for Phase II evaluative site testing at four sites: 8HE00807, 8SM01013, 8SM01015, and 8SM01093 (see CRAS review letter dated September 21, 2018 in Appendix C). Following SHPO review of the Phase II site assessment report, two of the sites were determined eligible for NRHP listing: 8SM01015 and 8SM01093. Due to the presence of intact cultural deposits, diagnostic artifacts, and a high density of cultural material within relatively undisturbed contexts, sites 8SM01015 and 8SM01093 were determined eligible under Criterion D for their potential to produce important information regarding local and regional prehistoric cultures. As both sites span the S.R. 50 roadway within existing and proposed ROW, avoidance is not possible and the SHPO concurred that the project will have an adverse effect on both 8SM01015 and 8SM01093. Mitigation via Phase III archaeological data recovery is recommended. These site locations are not provided as archaeological site locations are exempt from Sunshine Law provisions because of the threat of being disturbed and removed by unauthorized persons. The F.S. 267 Agreement (in Appendix F) between FDOT and SHPO was executed on June 3, 2019 to formalize the commitment to conduct Phase III mitigative excavation prior to project construction.

10.9 RECREATION AREAS

The ETDM Summary Report includes a “Minimal” DOE for Recreational Areas along the S.R. 50 study corridor. S.R. 50 is just north of the northern trailhead of the General James Van Fleet Trail State Park. The Van Fleet Trail is a part of Florida’s Statewide System of Greenways and Trails. The South Lake Trail portion of proposed Coast-to-Coast Trail will connect to the Van Fleet Trail just south of S.R. 50. Becoming the South Sumter Connector Trail, it will then go along the roadway’s south side westerly to S.R. 471 where it will turn northerly eventually connecting to the Withlacoochee State Trail. This route was previously shown in **Figure 15**. The shared use path shown along S.R. 50 from U.S. 301 into the City of Mascotte will enhance the accessibility and use of this recreational resource.

The Richloam Tract, shown in **Figure 21**, is one of seven tracts making up the Withlacoochee State Forest. The state forest provides habitat for a variety of plants and animals, including rare and listed species. The Richloam Wildlife Management Area (WMA) encompasses the entirety of the Richloam

Figure 21: Richloom Tract of the Withlacoochee State Forest



Tract providing public use recreational opportunities and is one of the resources on the Scenic Sumter Heritage Byway. One major recreational use of the Richloam WMA is hunting.

S.R. 50 crosses the Richloam Tract of the Withlacoochee State Forest in three locations as is seen in **Figure 21**. Within Hernando County, the existing 200-ft ROW is sufficient to accommodate the widening and may only require additional ROW for floodplain compensation areas as discussed in the next paragraph. Once into Sumter County, the roadway ROW within the state forest narrows to 100-ft and the preferred build alternative will require state forest ROW. This first part of the Withlacoochee State Forest along S. R. 50 extends from the Hernando-Sumter County Line eastward about 1.18 miles into Sumter County. There are two additional locations within Sumter County where S.R. 50 crosses into the Withlacoochee State Forest. The first is east of Linden about 0.20 mile west of C.R. 711 at Station 160+30 extending to Station 217+00 (1.07 miles). The second location begins in the vicinity of Mable at SE 80th Street about 1500' east of the Van Fleet Trail (Station 300+80) to C.R. 469 (Station 340+50) (0.75 miles). The estimated state forest ROW requirements within Sumter County is 13.04 acres for the portion just east of the Hernando-Sumter County Line, 6.99 acres for the center portion and 3.50 acres for the eastern portion totaling 24.1 acres without floodplain compensation areas.

The roadway widening within the Withlacoochee State Forest will require stormwater treatment. The PD&E Study is proposing a combination of two regional stormwater treatment facilities outside the Withlacoochee State Forest and compensating stormwater treatment for the existing S.R. 50 lanes within the state forest. FDOT has coordinated with the Southwest Florida Water Management District (SWFWMD) regarding this approach and has received preliminary agreement to evaluate it further during final design. This approach would avoid any state forest land to be used for stormwater retention. More detailed discussion is provided in the *Pond Siting Report* (PSR) dated February 2019. The proposed widening will also place fill within the Withlacoochee River's floodplain. There are 9 proposed floodplain compensation areas (FPCAs) totaling 41.49 acres within the Withlacoochee State Forest. FDOT has conducted discussions with SWFWMD regarding the use of floodplain models to estimate the impact of the fill placed in the floodplain in lieu of providing the FPCAs. SWFWMD has stated the floodplain model should show no rise in the 100-year floodplain elevation. SWFWMD has also specified any rise less than 0.04' is considered a no rise situation. Further, a letter will be required from the Withlacoochee State Forest accepting the rises proposed within the 100-year floodplain in their property limits. These modeling activities will be conducted as part of the upcoming final design and the permitting phase. Meeting notes of these discussions are provided in **Appendix D** and further detail of this approach is discussed in the *Location Hydraulics Report* (LHR) dated February 2019. There are no proposed stormwater retention ponds nor FPCAs for the two locations S.R. 50 crosses the state forest in eastern portions of Sumter County. If the FPCA are required in the Withlacoochee State Forest, the preferred alternative will require 65.6 acres of public lands. Without the FPCAs, this reduces to 24.1 acres.

FDOT has conducted multiple meetings with the Florida Forest Service (FFS), Florida Fish and Wildlife Conservation Commission (FWC) and Florida Department of Environmental Protection (FDEP) during the PD&E Study. The details of these meetings are provided in **Appendix D**. FFS has noted the hunting leases within the Withlacoochee State Forest and dogs are used to run deer. FFS has requested the

study consider protected human crossings of S.R. 50 within the state forest for hikers and hunters. These can be done in association with the potential wildlife crossings discussed in Section 10.14 – Protected Species and Habitat and in the *Natural Resources Evaluation* (NRE) report dated January 2019. FDOT will continue coordination with the FWC, FFS and FDEP to minimize impacts to the state forest and WMA and determine appropriate mitigation for unavoidable impacts to the state forest/WMA.

The provision of a shared use path and accommodating the future Coast to Coast Trail within portions of the S.R. 50 widening is a positive recreational impact. The use of state forest land for the widening will reduce available land for recreational uses and the FDOT will work with the FWC, FFS and FDEP to minimize and mitigate these impacts. As part of final design, FDOT will work with the Acquisition and Restoration Council (ARC) under the Florida Division of State Lands regarding the mitigation for acquiring Withlacoochee State Forest land.

10.10 WETLANDS AND OTHER SURFACE WATERS

The ETDM Summary Report includes a “Substantial” DOE for Wetlands and Surface Waters from the U.S. Environmental Protection Agency (EPA), the U.S. Army Corps of Engineers (USACE), and the St. Johns River Water Management District (SJRWMD). The primary issues were the potential loss of wetlands function; loss of wildlife habitat; degradation of water quality in wetlands and surface waters; and reduction in flood storage and capacity. Other issues of concern included increased stormwater runoff and the increased pollutants into surface waters and wetlands because of the project and other point and nonpoint sources. Alternatively, the USFWS and SWFWMD indicated the project alternatives may create a “Moderate” DOE on wetlands and surface waters, while the NMFS assigned a “Minimal” DOE.

Field reviews conducted by project ecologists identified 76 wetlands and seven surface waters with the potential to be affected by the proposed project. Wetlands included both forested and non-forested systems. The surface waters consist of the Little Withlacoochee River, artificial impoundments, Lake Jackson, and Sunset Lake. These wetlands are principally located at the toe-of-slope of S.R. 50 within but not limited to the boundary of the Richloam Tract of the Withlacoochee State Forest. Wetland and surface water impacts associated with the preferred roadway alternative totaled 76.50 acres of forested wetlands, 13.22 acres of non-forested wetlands and 0.60 acres of surface water impacts. Preferred pond and FPC impacts include 23.83 acres of forested impacts, and 4.22 acres of non-forested wetlands. A formal wetland delineation was not performed as part of the NRE. Final wetland and surface water impacts will be evaluated during final design and coordinated with the USACE and the SJRWMD or SWFWMD. A wetland qualitative assessment, necessary to determine anticipated mitigation needs, was performed for wetlands and other surface waters in the study area. The wetland assessment was conducted in accordance with the Uniform Mitigation Assessment Method (UMAM), as described in Chapter 62-345, FAC. Wetland mitigation options will satisfy the requirements of 33 U.S.C. § 1344 and Part IV of Chapter 373, F.S. in order to provide reasonable assurances that direct,

indirect, or cumulative impacts will not contribute to violations of water quality standards or adverse impacts to functions of wetlands or other surface waters.

The FDOT will calculate the appropriate mitigation during the final design and permitting phase to satisfy the requirements of 33 U.S.C. § 1344 and Part IV of Chapter 373, FS. The S.R. 50 study area is located within the approved service areas of Boarshead Ranch, Hammock Lake, Lake Louisa, Green Swamp, and Withlacoochee Wetland Mitigation Banks. Permittee responsible on-or-off-site mitigation is also an option pursuant to Section 373.4137, FS. Details of the wetland impacts are contained in the NRE and are available in the FDOT project files.

10.11 AQUATIC PRESERVES AND OUTSTANDING FLORIDA WATERS

The ETDM Summary Report includes a “Substantial” DOE for Special Designation, including OFWs and public lands within the study area. The Withlacoochee River System traversing the proposed project and the Chassahowitzka Wildlife Refuge, which is hydrologically connected, are designated as Outstanding Florida Waters (OFW). Special protection is given to OFWs per Section 62-302.700, F.A.C. Activities or discharges within an OFW, or which significantly degrade an OFW, must meet a more stringent public interest test as outlined in Section 373.414 (1)(a), F.S. (2010). Protection of these OFWs is implemented for this project by applying the regulatory requirement of providing an additional 50 percent water quality treatment volume in the proposed stormwater management ponds.

10.12 WATER QUALITY AND QUANTITY

The ETDM Summary Report includes a “Moderate” DOE for Water Quality and Quantity along the S.R. 50 study corridor. The EPA and the Southwest Florida Water Management District (SWFWMD) assigned a DOE of “Moderate” while the SJRWMD assigned a DOE of “None”. The project traverses through two known OFWs which are the Withlacoochee River and the Chassahowitzka National Wildlife Refuge. In addition, seven waterbodies are within the corridor study limits: Withlacoochee River, Walled Sink Ditch, Jumper Creek Canal, Big Gant Canal, Little Withlacoochee, Giddon Lake Outlet and Long Lake Outlet. Only the Withlacoochee River (WBID 1329F – mercury) and Big Gant Canal (WBID 1378 – nutrients) were found to be impaired.

Widening S.R. 50 will increase the amount of runoff from its current conditions. Stormwater pond sites have been identified in the PSR prepared for the study providing the required water quality treatment and water quantity attenuation following rules and regulations from the SWFWMD, SJRWMD and FDOT. Most of the basins discharge to open systems with a few discharging to closed basins. The study estimates the total required water quality treatment and attenuation volume to be 86.61 acre-feet. The preferred pond sites provide a total of 99.37 acre-feet of water quality treatment and attenuation volume which includes the OFW requirements (an additional 50 percent water quality volume as appropriate). The proposed stormwater ponds will provide an enhancement in water quality by accepting runoff from all four proposed lanes of S. R. 50, whereas the existing two lanes of S.R. 50 are not currently treated. Water quality should see an enhancement by the attenuation function the stormwater ponds will provide. A nutrient loading analysis was not necessary for the basins within the

Big Gant Canal waterbody since the discharges from the project corridor are not a direct connection to the waterbody. A *Water Quality Impact Evaluation* (WQIE) dated October 2018 has been prepared for this project and is a part of FDOT's project files. Karst conditions have been identified for portions in Hernando and Sumter County of this project. Additional geotechnical information and design of the stormwater ponds during the design phase of the project should consider these Karst conditions.

10.13 FLOODPLAINS

The ETDM Summary Report includes a "Substantial" DOE for Floodplains along the S.R. 50 study corridor. The EPA assigned a degree of "Substantial" while SWFWMD assigned a degree of "Moderate" and SJRWMD a degree of "None" for DOE. Encroachments to the 100-year floodplain are anticipated to occur due to the project's improvements. According to the FEMA Maps, the project is within Zone AE floodplain in Hernando County. Floodplains within Sumter County are designated as Zone A while both Zones AE and A are encountered in Lake County. Zone AE indicates areas of the 100-year floodplain where a base flood elevation has been established while Zone A indicates no base flood elevation determined. Furthermore, SWFWMD has developed watershed models within Hernando and Sumter Counties: Eastern Hernando, Little Withlacoochee, Gant Lake, and Big Prairie models that may supplement the evaluation of the 100-year floodplains. As previously noted in Section 10.9, some of these models will be use for the floodplain compensation analysis within the Withlacoochee State Forest at the Little Withlacoochee River during final design.

The study estimates 105.47 acre-feet of floodplain encroachments. Floodplain Compensation (FPC) sites have been located for this study that provides 113.93 acre-feet of floodplain compensation. The impacts are minimal when compared to the overall extent of the floodplains. Minimal encroachments on a floodplain occur when there is floodplain involvement, but the impacts on human life, transportation facilities, and natural and beneficial floodplain values are not significant and can be resolved with minimal efforts. Normally, these minimal efforts to address the impacts will consist of applying the Department's drainage design standards and following the Water Management District's procedures to achieve results that will not increase or significantly change the flood elevation and/or limits. For this study, these efforts included evaluation of FPC sites, preliminary hydraulic analyses of cross drains and providing positive drainage of offsite areas through offsite conveyance systems to maintain existing drainage patterns. A LHR has been prepared for this project and is in the FDOT project files. The LHR concluded:

The proposed cross drains and floodplain compensation areas will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

10.14 PROTECTED SPECIES AND HABITAT

The study area is located within or partially within the USFWS Consultation Area (CA) of the Everglade snail kite, Florida scrub-jay, red-cockaded woodpecker, sand skink and blue-tailed mole skink, and Lake Wales Ridge plants. A consultation area is intended to identify the geographical landscape where each federally-listed species is most likely to occur. Portions of the study area also fall within three wood stork Core Foraging Areas (CFA), which include suitable foraging areas important to the reproductive success of known wood stork nesting colonies. The existing habitats in the study area may also support other federally-protected and Endangered Species Act (ESA) candidate species including the American alligator, bald eagle, eastern indigo snake, and gopher tortoise.

The project corridor was assessed to determine the presence of protected species and suitable habitat. Based on the results of the data review and field surveys, it was determined that a total of 71 species have the potential to occur within the corridor. These include 13 avian, 2 mammal, 7 reptile, and 49 plant species described in the NRE dated January 2019. Ecologists determined a species' potential occurrence in the study area based on its habitat preferences and distributions, existing site conditions, historical data, and multiple field surveys.

The ETDM Summary Report includes a "Substantial" DOE for Protected Species and Habitat along the S.R. 50 study corridor. A request was made by the Florida Forest Service (FFS) to consider the inclusion of wildlife crossing structures or other habitat connectivity enhancements within the state forest/WMA to reduce habitat fragmentation and facilitate wildlife movement within the S.R. 50 corridor. The potential for further habitat fragmentation within these areas could be associated with the widening of the existing roadway. ETAT comments associated with substantial DOEs primarily focus on the proximity to the State Forest and impacts to listed species and habitat, land management, and recreational use. FDOT will continue coordination with the FWC and FFS to minimize impacts to the state forest/WMA and determine appropriate mitigation for unavoidable impacts to the state forest/WMA.

Project ecologists conducted a preliminary evaluation of potential crossing locations based on the cross-drain analysis conducted as part of the study. A total of 21 potential crossing locations were reviewed. These locations consisted of seventeen existing cross drains, the Little Withlacoochee River bridge, one upland crossing identified by FFS, the Florida Trail crossing, and one additional upland crossing identified by project ecologists. Of the seventeen cross drains evaluated, eight were determined to be worthy of additional evaluation during the project's final design phase. The Little Withlacoochee River bridge is currently planned to include a wildlife shelf, but additional accommodations may be included during the final design phase to increase the permeability of the river corridor itself. The three additional locations, two upland crossings and the Florida Trail crossing, were also recommended for further evaluation. If implemented, these crossing structures, coupled with exclusionary fencing, will serve as an enhancement by increasing the permeability of the roadway corridor to wildlife and reduce vehicle collisions, thus improving safety along the roadway.

As discussed in the NRE, the S.R. 50 preferred build alternative “may affect” the sand skink, blue-tailed mole skink, and Cooley’s water willow. FDOT commits to conducting sand skink coverboard surveys in suitable habitat, as appropriate, during the design phase of the project and coordinating with USFWS to present the survey results. The NRE discusses the following federally listed species as “may affect, but are not likely to adversely affect”:

- Florida scrub jay
- Lake Wales Ridge plants
- Wood stork
- American alligator
- Eastern indigo snake
- Gopher tortoise

The NRE has found “no effect” for the following federally listed species.

- Everglade snail kite
- Red-cockaded woodpecker
- Bald eagle

The FDOT received concurrence from the USFWS regarding the effect determinations made for all federally-protected species on December 29, 2018 (FWS Log No. 2019-TA-0196). The concurrence from the USFWS fulfills the requirements of the Endangered Species Act of 1973, as amended. However, it is contingent on implementation of the commitments during subsequent phases of the project. A copy of the concurrence letter is included in Appendix H of the NRE report and Appendix E of this report.

The NRE has found “no adverse effect is anticipated” for the following state listed species.

- Florida burrowing owl
- Florida pine snake
- Florida sandhill crane
- Sherman’s fox squirrel
- Short-tailed snake
- Southeastern American kestrel
- Wading birds – little blue heron and tricolored heron
- Florida black bear

The NRE discusses six (6) state listed plant species to be documented within or near the study area, with some occurring immediately adjacent to the current ROW or within proposed pond sites, though project ecologists did not observe any of these species. These include the endangered auricled spleenwort, widespread polypody, plume polypody, swamp plume polypody and low peperomia; and the threatened southern tuberculed orchid. The proposed project has the “potential for adverse effect” on state listed plant species. Surveys for listed floral and faunal species throughout subsequent phases of the project including design and pre-construction with appropriate regulatory agency coordination

will be included. All applicable state and federal regulations pertaining to listed species or their habitat will be followed with any changes to species occurrence or habitat suitability documented and additional surveys completed, as needed. The NRE is available in the FDOT project files.

10.15 HIGHWAY TRAFFIC NOISE

The ETDM Summary Report includes a “Moderate” DOE for Highway Traffic Noise along the S.R. 50 study corridor. The project's Noise Study Report concluded that 67 noise-sensitive receptors would be impacted by the project. However, none of the analyzed noise barriers were able to meet both the FDOT feasibility and reasonableness requirements for abatement. Based on the noise analysis performed to date, there appears to be no apparent solution available to mitigate the noise impacts at the 67 impacted receptors. During the project’s final design phase, noise impacts and abatement measures will be re-assessed prior to Plans, Specifications, and Estimates (PS&E) approval following the guidelines set forth in Chapter 18 of the FDOT PD&E Manual. The *Noise Study Report* dated September 2018 has been conducted and is available in the FDOT project files.

10.16 AIR QUALITY

The ETDM Summary Report includes a “Minimal” DOE for Air Quality along the S.R. 50 study corridor. The project is located in an area which is designated attainment for all of the National Ambient Air Quality Standards (NAAQS) under the Clean Air Act criteria. Therefore, the Clean Air Act conformity requirements do not apply to the project. In accordance with Chapter 19 of the FDOT PD&E Manual, both the No-Build and the Build Alternative were analyzed for potential air quality impacts using FDOT’s most current air quality impact screening model, CO Florida 2012. Results from the screening test indicate that the highest project-related CO one-hour and CO eight-hour levels are not predicted to meet or exceed the NAAQS for this pollutant for the Build alternative. As such, the project passes the screening model and no further air quality impact analysis is required. *The Air Quality Technical Memorandum* dated September 2018 has been conducted and is available in the FDOT project files.

10.17 CONTAMINATION

The ETDM Summary Report includes a “Moderate” DOE for Contamination along the S.R. 50 study corridor. **Table 11** shows the number of potential contamination sites by risk level which are impacted by the preferred alternative’s roadway widening.

Table 11: Potential Contamination Sites

Level of Contamination	Number of Parcels	Total Parcel Take Area (Acres)
High	8	15.87
Medium	5	3.43
Low	6	3.90

The high contamination sites contain an area in the Withlacoochee State Forest used in World War II for a Chemical Warfare Test Site, an abandoned railroad line adjacent and perpendicular to S.R. 50,

lumber yard with wood treatment using chromated copper arsenate, auto salvage yard and several historic gas stations. The *Contamination Screening Evaluation Report* dated July 2018 has been conducted and is available in the FDOT project files.

A summary of the “high-risk” contamination sites is provided below.

- CSX Railroad “S” Line – Approximately 0.74 miles east of U.S. 301 – The preferred alternative will bridge this active railroad line. The proposed bridge will span the full railroad ROW and will not have any impact.
- Withlacoochee Chemical Use Area No. 2 – Approximately 1.2 miles of S.R. 50 within Hernando County is within this area. The roadway widening will not require any additional ROW within Hernando County unless FPCAs are required as discussed in Section 10.9. If FPCA’s are required, FPCAs 7 and 8 would be impacted.
- Robbins Manufacturing and Distribution Lumber Yard – Southwest quadrant of S.R. 471 and S.R. 50 intersection – Approximately 0.19 AC of roadway frontage will be impacted by the preferred alternative.
- South Sumter Grocery – Northeast quadrant of S.R. 471 and S.R. 50 intersection – The widening is on the north side to minimize impacts to two high risk contamination sites on the south side. The building on this site will be impacted by the widening. The total ROW needed is 0.14 AC of the total 0.88 AC parcel.
- Qwik Country Store – Northeast quadrant of C.R. 721 and S.R. 50 intersection – The widening is primarily on the existing roadway’s south side minimizing impacts to this site. The resulting impacts are about 0.10 AC of frontage.
- Running Gator Ranch - Current owner of abandoned Seaboard Coastal Railroad ROW – This property closely parallels S.R. 50 on the south side between S.R. 471 and C.R. 711 containing approximately 55’ wide of abandoned railroad ROW. This property has not been developed and totals 13.82 AC of ROW acquisition. Using this property avoids relocations to the Qwik County Store and approximately five single family residences plus and reduces impacts to the Withlacoochee State Forest.
- Bishop Fruit Company – South of Hibiscus Avenue and S.R. 50 intersection – The preferred alternative is holding the north ROW line to avoid impacts to two other high-risk contamination sites on the north side (RTC Auto Park and Lake Tractor Sales), better align for the relocation of the Tuscanooga Road intersection and to avoid impacts to the Mascotte Cemetery. Approximately 0.26 AC of the 2.55 AC site will be impacted by the preferred alternative.
- Fast Stop Grocery Deli/Mascotte Laundromat – Southeast corner of S. Sunset Avenue and S.R. 50 – The preferred build alternative will widen on the south side to avoid impacts to The Mascotte Church, First Missionary Baptist Church and Mascotte City Hall. This business would require relocation due to the impacts to this 0.62 AC parcel.

Five of the potential business relocations are located on sites with potential hazardous waste of varying levels; see Table 5 in the CSRP for details.

There are additional contamination sites impacted by the stormwater retention and floodplain compensation sites. Design Segment 2 has 1 medium risk rated stormwater retention area and 2 high risk rated plus 4 medium rated floodplain compensation areas. Design Segment 3 has 2 medium risk rated stormwater retention areas and 1 medium rated floodplain compensation area. Design Segment 4 has 10 medium risk rated stormwater retention areas and 5 medium risk rated floodplain compensation areas. Design Segment 5 has 2 high risk rated plus 6 medium risk rated stormwater retention areas and 1 high risk rated plus 2 medium risk rated floodplain compensation areas.

10.18 UTILITIES AND RAILROAD

The ETDM Summary Report includes a “Minimal” DOE for Utilities and Railroad along the S.R. 50 study corridor. Existing utilities within the project area have been identified and are described in **Table 12**. Exact locations of existing utilities and the extent of impacts will be determined during the final design phase of the project. Additional information regarding the existing utilities and anticipated impacts can be found in the *Utility Assessment Package (UAP)* dated October 2018.

Table 12: Existing Utility Information

Utility Company	Facility	Description
Charter Communications	CATV/BTV	<ul style="list-style-type: none"> Aerial facilities along the south side of S.R. 50 from C.R. 469 to S.R. 33. Buried service drops throughout aerial limits.
Hernando County Utilities	Water	<ul style="list-style-type: none"> Existing 2" water line along the north side of S.R. 50 and west side of U.S. 301 (Tremain Blvd.) Future facilities include a 16" water main along the south side of S.R. 50 and a 12" water main crossing S.R. 50 just east of U.S. 301 (Tremain Blvd.)
AT&T Distribution	FOC/Phone	<ul style="list-style-type: none"> FOC along north side of S.R. 50 from U.S. 301 to Elizabeth Ave. FOC along the south side of S.R. 50 from Elizabeth Ave to S.R. 33.
AT&T Corp	FOC	<ul style="list-style-type: none"> No Facilities
SECO	Electric	<ul style="list-style-type: none"> Aerial distribution electric along S.R. 50 from Porter Gap Road to Elizabeth Ave. in the City of Mascotte.
Century Link	FOC/Phone	<ul style="list-style-type: none"> Buried FOC and copper cable along the south side of S.R. 50 from U.S. 301 to C.R. 755. Buried FOC cable along the south side of S.R. 50 from C.R. 755 to C.R. 773. Buried copper cable along the north side of S.R. 50 from C.R. 755 to C.R. 773. Buried FOC along the south side of S.R. 50 and buried copper along the north side of S.R. 50 continue from C.R. 773 to S.R. 33.
Withlacoochee River Electric Cooperative	Electric	<ul style="list-style-type: none"> Distribution electric on the western portion of the project, primarily along U.S. 301. Aerial distribution electric on the south side of S.R. 50 from U.S. 301 to C.R. 575, aka Burwell Rd.
Verizon/MCI	FOC	<ul style="list-style-type: none"> Single buried fiber crossing S.R. 50 just east of C.R. 773. The FOC line is in an easement outside the limits of the S.R. 50 ROW.
Spectra Energy Sabal Trail	36" Trans. Gas Pipeline	<ul style="list-style-type: none"> 36" high pressure natural gas pipeline crossing S.R. 50 just east of C.R. 469 adjacent to the power company transmission line easement.
City of Mascotte	Water/Sewer	<ul style="list-style-type: none"> 2" water line on north side of S.R. 50 from Palmwood Ave. to Elizabeth Ave. 8-12" water main along south side of S.R. 50 from Palmwood Ave. to S.R. 33. Lift station at the southwest corner of S.R. 50 and Talbott Ave. 4" force main along south side of S.R. 50 from Talbott Ave. to S.R. 33.
Duke Energy-Dist.	Electric	<ul style="list-style-type: none"> Aerial distribution electric servicing the City of Mascotte. Facilities are primarily located along the south side of S.R. 50 from Elizabeth Ave. to S.R. 33.
Duke Energy-Trans.	Transmission Electric	<ul style="list-style-type: none"> 500kV transmission line located in a 190' easement crosses S.R. 50 just east of C.R. 469.
Duke Energy-Fiber	Fiber	<ul style="list-style-type: none"> No Facilities

Due to the extent of the roadway and drainage improvements evaluated, existing utilities located on the project corridor may be impacted. These utility impacts have been quantified and the estimated relocation costs can be found in the Final PER dated March 2019 located within the project files. Though most of the existing utilities will likely require some level of relocation, major utility facilities including the Spectra Energy-Sabal Trail’s 36-inch natural gas pipeline and Duke Energy-Transmission’s 500kV transmission electric lines will not be impacted by the proposed project improvements.

The project also includes a CSXT railroad grade crossing located on S.R. 50 approximately 570’ east of Ridge Manor Boulevard. Additional railroad crossing information can be found in the PER located in the project files. Since the project’s proposed improvements includes removal of the existing grade crossing and replacing it with a bridged railroad crossing, minor impacts to CSXT’s rail facilities are anticipated.

10.19 CONSTRUCTION

FDOT has divided S.R. 50 between U.S. 301 and C.R. 33 into four final design segments which are:

- Segment 2: U.S. 301 to the Hernando-Sumter County Line (4.78 miles);
- Segment 3: The Hernando-Sumter County Line to 0.13 miles west of C.R. 751 (2.78 miles);
- Segment 4: 0.13 miles west of C.R. 751 to 1,000’ east of Sloan’s Ridge Road (8.21 miles); and
- Segment 5: 1,000’ east of Sloan’s Ridge Road to C.R. 33 (3.98 miles).

While final design has commenced, further phases for ROW and construction have not been programmed. It is likely that due to the estimated cost of ROW and construction, the construction will be phased as funds become available.

displays the project cost estimates for the preferred build alternative’s design segments.

Table 13: Project Cost Estimates

Segment	Limits	Total Const. Cost	Utility Relocation Cost	ROW Cost	Total Project Cost
2	U.S. 301 to the Hernando/Sumter County Line	\$53,726,862	\$5,200,000	\$3,456,000	\$62,382,862
3	Hernando/Sumter County Line to 0.13 miles west of C.R. 751	\$19,446,860	\$3,100,000	\$4,311,000	\$26,857,860
4	0.13 miles west of C.R. 751 to 1,000’ east of Sloans Ridge Road	\$46,779,529	\$7,228,000	\$20,088,000	\$74,095,529
5	1,000’ east of Sloans Ridge Road to C.R. 33	\$27,018,876	\$8,047,000	\$31,539,500	\$66,605,376
Total		\$146,972,127	\$23,575,000	\$59,394,500	\$229,941,627

The conceptual maintenance of traffic plan is provided in the Final PER dated March 2019. Access to businesses and residences will be maintained during construction. The construction activities will cause temporary noise and vibration impacts to properties adjacent to S.R. 50. Construction activities causing these impacts should be conducted during daylight hours.

Water quality protection due to construction activities will be addressed by implementing erosion control measures such as inlet protection systems, silt barriers and soil tracking prevention devices. An erosion control plan identifying location of these erosion control measures will be required as part of the final design construction plans. These erosion control measures should follow guidelines set forth in the State of Florida *Erosion and Sediment Control Designer and Reviewer Manual* (latest edition). Furthermore, Stormwater Pollution Prevention Plan (SWPPP) sheets shall be included in the final construction plans to document the designer's evaluation and selection of control measures and other items to comply with the terms and conditions of the State of Florida Department of Environmental Protection (DEP) Generic Permit for Stormwater Discharges from Large and Small Construction Activities (DEP Generic Permit).

The FDOT has committed to implement the USFWS's *Standard Protection Measures for the Eastern Indigo Snake*. In addition, it is recommended that the FDOT coordinate with the Florida Native Plant Society, prior to the start of construction activities, to facilitate the relocation of rare and protected plants from the project footprint. FDOT will follow the *Contractor Requirements for Unexpected Interaction with Certain Protected Species During Work Activities* during construction.

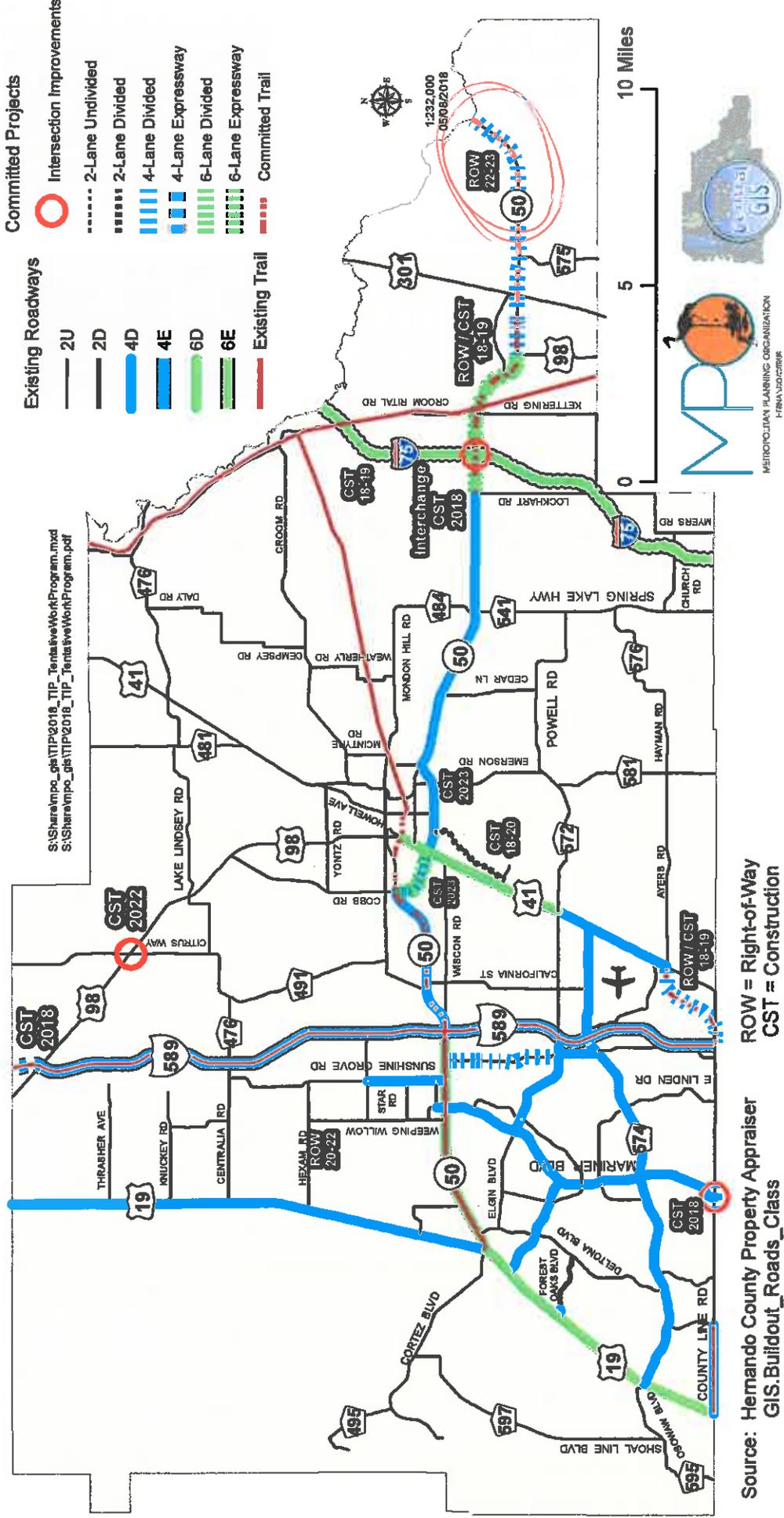
The construction will require the use of borrow material for embankment which will come from sources to be chosen by the contractor. The contractor may need to stockpile construction materials on the project site which are typically done within the roadway ROW. The disposal of construction materials will be done by the contractor guided by the construction documents. FDOT has standard construction practices which take into consideration many of the direct impacts of construction and provides measures to reduce or eliminate their effects.

10.20 BICYCLES AND PEDESTRIANS

The South Lake Trail and the South Sumter Connector Trail, as part of the Coast to Coast Trail, have been previously discussed in Section 10.4. These trails are currently planned to be within the FDOT ROW as previously shown in **Figure 15**. Additionally, FDOT plans to construct a shared use path throughout most of the S.R. 50 widening project. In Hernando County, this will be 10' wide. In Sumter and Lake Counties this will be 12' wide. The shared use path will extend continuously from US 301 into Mascotte where it will connect into the South Lake Trail's S.R. 50 overpass approximately 500' west of Barry Avenue.

Appendix A Relevant Information
from the TIP/STIP/LRTP

Hernando County FY 2019 - FY 2023: Transportation Improvement Program (TIP)





HERNANDO/ CITRUS MPO MAJOR IMPROVEMENT and CONGESTION MANAGEMENT PROGRAMS FY 2019/2020 LIST OF PRIORITY PROJECTS Adoption June 19, 2018

RANK	FPN	Agency	FACILITY	FROM	TO	ACTIVITY	PROJECT PHASE/ COST ESTIMATE
↓ FUNDED FOR CONSTRUCTION ↓							
	411011 2,3,4	FDOT	I-75 (SR 93)	Pasco County	Sumter County	Add 2 lanes (existing 4)	Design Build/ \$140,379,975
	405270 1	FTPE	Suncoast Parkway II (SR 589)	US 98	CR 486 / Norvell Bryant Highway	New 4 lane Toll Road	CONST/ \$ 41,335,232
	405270 3	"	"	Hernando/Citrus Co. Line	S. of W. Grover Cleveland Blvd.	"	CONST/ \$ 89,774,831
	405270 4	"	"	S. of W. Grover Cleveland Blvd.	SR 44 (W. Gulf to Lake Hwy.)	"	CONST/ \$ 59,975,115
	430051 2	FDOT	SR 50/US 98 (Cortez Blvd.)	Lockhart Road	E. of Remington Road	Add 2 lanes (existing 4)	CONST/ \$ 4,931,393
	416732 4	FDOT	SR 50/US 98 (Cortez Blvd.)	Windmere Rd.	US 98 (McKethan Rd.)	Add 2 lanes (existing 4)	CONST/ \$ 23,493,112
	416732 3	FDOT	SR 50 (Cortez Blvd.)	US 98 (McKethan Rd.)	US 301 (Trelman Blvd.)	Add 2 lanes (existing 2)	CONST/ \$ 22,462,315
	257298 5	FDOT	CR 578 (County Line Rd.)	Toll 589 (Suncoast Pkwy.)	US 41 (Broad St.)	Construct 4 lanes	CONST/ \$ 28,333,252
	257298 6	FDOT	CR 578 (County Line Rd.)	Springtime St.	E. of Mariner Blvd.	Construct 4 lanes	CONST/ \$10,785,542
	4058220 2	FDOT	US 19 (SR 55)/US 98	W. Green Acres St.	W. Jump Ct.	Add 2 lanes (existing 4)	CONST/ \$ 29,268,982
	4058220 3	FDOT	US 19 (SR 55)/US 98	W. Jump Ct.	W. Fort Island Trail	Add 2 lanes (existing 4)	CONST/ \$ 37,962,912
	4344981	Citrus Co.	CR 491 (N. Lecanto Hwy.) Phase 1	W. Laurel St.	S. of W. Audubon Park Path	Add 2 lanes (existing 2)	CONST/ \$17,866,368
	416733 2	FDOT	SR 50 Bypass	CR 485 (Cobb Rd.)	W. of Buck Hope Road	Add 2 lanes (existing 4)	CONST/ \$13,488,428
	416735 1	FDOT	SR 50 Bypass	W. of Buck Hope Road	Jefferson Street (50A)	Add 2 lanes (existing 4)	CONST/ \$34,053,371
↓ NOT FUNDED FOR CONSTRUCTION ↓							
1	257165 1	FDOT	US 41 (SR 45) (N. Florida Ave.)	SR 44 (E. Gulf to Lake Hwy.)	E. Arlington St.	Add 2 lanes (existing 2)	ROW/ \$ 4,127,000 (funded) CONST/
2	257165 2	FDOT	US 41 (SR 45) (N. Florida Ave.)	E. Arlington St.	SR 200 (N. Carl G Rose Hwy.)	Add 2 lanes (existing 2)	ROW/ CONST / \$1,470,788
3		Hernando Co.	SR 50 (Cortez Blvd.)	Weeping Willow Street	Sunshine Grove Road	Congestion Project	
4		Citrus Co.	US 41 (N. Florida Ave.) (SR 45)	N. Independence Hwy.	Intersection	Congestion Project	
5	435859 2	FDOT	SR 50 (Cortez Blvd.)	US 301/SR 35 (Trelman Blvd.)	Hernando/Sumter Co. Line	Add 2 lanes (existing 2)	PE/ \$ 3,000,000
6		FDOT	US 41/SR 50A One Way Pairs	W. of Mildred Ave.	US 41/SR 50A Intersection	Complete Streets	PE
7		Citrus Co.	Croft Ave.	SR 44 (E. Gulf to Lake Hwy.)	E. Hayes St.	Add 2 lanes (existing 2)	PE
8		FDOT	US 98 Realignment to (CR 495)	US 98 (Ponce de Leon Blvd.)	SR 50 (Cortez Blvd.)	Add 2 lanes (existing 2)	PD&E
9		Citrus Co.	CR 490A (W. Grover Cleveland Blvd.)	US 19 (SR 55)/US 98	CR 491 (S. Lecanto Hwy.)	Add 2 lanes (existing 2)	PE
10		Citrus Co.	CR 491 (N. Lecanto Hwy.)	W. Pine Bridge Blvd.	US 41/SR 45	Add 2 lanes (existing 2)	PE
11	438613 1	FDOT	US 41 (SR 45) (Broad St.)	Spring Hill Dr.	Powell Rd.	Add 2 lanes (existing 4)	PE
12		Citrus Co.	CR 490 (Homosassa Trail)	US 19 (SR 55)/US 98	SR 44 (W. Gulf to Lake Hwy.)	Add 2 lanes (existing 2)	PE
13		Citrus Co.	US 19 (SR 55)/US 98	Cardinal Street	(Green Acres	Add 2 lanes (existing 4)	PE

Terms Key

Blue - Hernando County
 Orange - Citrus County

CONST Construction
 PD&E Project Development and Environment
 PE Preliminary Engineering/Design
 ROW Right-of-Way

Phase	Fund Source	2018/19	2019/20	2020/21	2021/22	2022/23	Total
FM# 4314001 LAKE-SECTION 5303 LAKE-SUMTER MPO PLANNING STUDIES							
Type of Work: PTO STUDIES							
PLN	DU	56,968	58,677	64,545	0	0	180,190
PLN	DPTO	7,121	7,833	8,567	0	0	23,521
PLN	LF	7,121	7,833	8,567	0	0	23,521
	Total	71,210	74,343	81,679	0	0	227,232
	Prior Years Cost	274,398	Future Years Cost	0	Total Project Cost		501,630
FM# 4358591 WEST SR 50 FROM SUMTER /HERNANDO COUNTY LINE TO CR33 LAKE COUNTY							
Type of Work: CORRIDOR/SUBAREA PLANNING							
WEST SR50 FRM SUMTER /HERNANDO COUNTY LINE TO CR33 LAKE COUNTY							
PE	DIH	0	5,000	0	0	0	5,000
PE	DDR	0	2,500,000	0	0	0	2,500,000
	Total	0	2,505,000	0	0	0	2,505,000
	Prior Years Cost	2,268,259	Future Years Cost	0	Total Project Cost		4,773,259
FM# 4358593 SR 50 FROM HERNANDO/SUMTER COUNTY LINE TO WEST OF CR 757							
Type of Work: PRELIMINARY ENGINEERING							
ENV	DDR	0	2,550,000	0	0	0	2,550,000
	Total	0	2,550,000	0	0	0	2,550,000
	Prior Years Cost	2,020,000	Future Years Cost	0	Total Project Cost		4,570,000
FM# 4358594 SR 50 FROM EAST OF CR 757 TO THE SUMTER/LAKE COUNTY LINE							
Type of Work: PRELIMINARY ENGINEERING							
ENV	DDR	0	5,400,000	0	0	0	5,400,000
	Total	0	5,400,000	0	0	0	5,400,000
	Prior Years Cost	7,050,000	Future Years Cost	0	Total Project Cost		12,450,000

Phase	Fund Source	2018/19	2019/20	2020/21	2021/22	2022/23	Total
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FM# 4358595 SR 50 FROM SUMTER/LAKE COUNTY LINE TO CR 33							
Type of Work: PRELIMINARY ENGINEERING							
ENV	DDR	0	524,000	0	0	0	524,000
Total		0	524,000	0	0	0	524,000
		Prior Years Cost	5,380,000	Future Years Cost	0	Total Project Cost	5,904,000

FM# 4363651 ITS ARCHITECTURE STUDY COUNTYWIDE							
Type of Work: ITS COMMUNICATION SYSTEM							
PE	CIGP	100,000	0	0	0	0	100,000
PE	LF	100,000	0	0	0	0	100,000
Total		200,000	0	0	0	0	200,000
		Prior Years Cost	200,000	Future Years Cost	0	Total Project Cost	400,000

FM# 4393292 LAKE SUMTER URBAN AREA FY 2018/2019-2019/2020 UPWP							
Type of Work: TRANSPORTATION PLANNING							
PLN	PL	559,753	568,795	0	0	0	1,128,548
Total		559,753	568,795	0	0	0	1,128,548
		Prior Years Cost	0	Future Years Cost	0	Total Project Cost	1,128,548

FM# 4393293 LAKE SUMTER URBAN AREA FY 2020/2021-2021/2022 UPWP							
Type of Work: TRANSPORTATION PLANNING							
PLN	PL	0	0	568,795	568,795	0	1,137,590
Total		0	0	568,795	568,795	0	1,137,590
		Prior Years Cost	0	Future Years Cost	0	Total Project Cost	1,137,590

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 HIGHWAYS
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PHASE: CONSTRUCTION / RESPONSIBLE AGENCY: MANAGED BY HERNANDO COUNTY BOARD OF COUNTY
 ACTL 134,615 0 0 0 134,615
 TALL 201,146 0 0 0 201,146
 TALT 59,204 0 0 0 59,204
 TOTAL D717 017 B 37,561 0 0 0 432,526

FEDERAL PROJECT NUMBER: 1700 019 C

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT
 TALL 1,958 1,442 0 0 3,400

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY HERNANDO COUNTY BOARD OF COUNTY
 TALL 29 0 0 0 29
 TALT 57,128 0 0 0 57,128
 TOTAL 1700 019 C 59,115 1,442 0 0 60,557
 TOTAL 434499 1 454,080 39,003 0 0 493,083
 TOTAL Project: 454,080 39,003 0 0 493,083

 ITEM NUMBER: 435859 2 PROJECT DESCRIPTION: SR 50 FROM SR 35 (US 301) TO HERNANDO/SUMTER COUNTY LINE *NON-SIS*
 DISTRICT: 07 COUNTY: HERNANDO TYPE OF WORK: PRELIMINARY ENGINEERING
 PROJECT LENGTH: 4.968MI

FUND CODE	LESS THAN 2018	2018	2019	2020	2021	GREATER THAN 2021	ALL YEARS
DDR	0	3,000,000	0	0	0	0	3,000,000
TOTAL <N/A>	0	3,000,000	0	0	0	0	3,000,000
TOTAL 435859 2	0	3,000,000	0	0	0	0	3,000,000
TOTAL Project:	0	3,000,000	0	0	0	0	3,000,000

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT
 TALL 1,958 1,442 0 0 3,400

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HIGHWAYS
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ITEM NUMBER: 435859 3 PROJECT DESCRIPTION: SR 50 FROM HERNANDO/SUMTER COUNTY LINE TO WEST OF CR 757 *NON-SIS*
DISTRICT: 05 TYPE OF WORK: PRELIMINARY ENGINEERING

COUNTY: SUMTER
PROJECT LENGTH: 2.046MI

FUND CODE	LESS THAN 2018	2018	2019	2020	2021	GREATER THAN 2021	ALL YEARS
DDR	0	2,000,000	0	0	0	0	2,000,000
DIH	0	20,000	0	0	0	0	20,000
TOTAL <N/A>	0	2,020,000	0	0	0	0	2,020,000
TOTAL 435859 3	0	2,020,000	0	0	0	0	2,020,000

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT

ITEM NUMBER: 435859 4 PROJECT DESCRIPTION: SR 50 FROM WEST OF CR 757 TO THE SUMTER/LAKE COUNTY LINE *NON-SIS*
DISTRICT: 05 TYPE OF WORK: PRELIMINARY ENGINEERING

COUNTY: SUMTER
PROJECT LENGTH: 8.585MI

FUND CODE	LESS THAN 2018	2018	2019	2020	2021	GREATER THAN 2021	ALL YEARS
DDR	0	7,000,000	0	0	0	0	7,000,000
DIH	0	50,000	0	0	0	0	50,000
TOTAL <N/A>	0	7,050,000	0	0	0	0	7,050,000
TOTAL 435859 4	0	7,050,000	0	0	0	0	7,050,000
TOTAL Project:	0	9,070,000	0	0	0	0	9,070,000

FEDERAL PROJECT NUMBER: <N/A>

PHASE: PRELIMINARY ENGINEERING / RESPONSIBLE AGENCY: MANAGED BY FDOT

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HIGHWAYS
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ITEM NUMBER: 435541 2 PROJECT DESCRIPTION: CITRUS GROVE ROAD FROM US 27 TO GRASSY LAKE RD *NON-SIS*
DISTRICT: 05 COUNTY: LAKE TYPE OF WORK: ADD LANES & RECONSTRUCT
PROJECT LENGTH: 1.570MI

FUND CODE	LESS THAN 2018	2018	2019	2020	2021	GREATER THAN 2021	ALL YEARS
SED	1,000,000	0	0	0	0	0	1,000,000
PHASE: RIGHT OF WAY / RESPONSIBLE AGENCY: MANAGED BY LAKE COUNTY BOARD OF COUNTY COM							
EM18	0	10,000,000	0	0	0	0	10,000,000
<N/A>	1,000,000	10,000,000	0	0	0	0	11,000,000
TOTAL 435541 2	1,000,000	10,000,000	0	0	0	0	11,000,000
TOTAL Project:	1,000,000	10,000,000	0	0	0	0	11,000,000

ITEM NUMBER: 435859 5 PROJECT DESCRIPTION: SR 50 FROM SUMTER/LAKE COUNTY LINE TO CR 33 *NON-SIS*
DISTRICT: 05 COUNTY: LAKE TYPE OF WORK: PRELIMINARY ENGINEERING
PROJECT LENGTH: 4.293MI

FUND CODE	LESS THAN 2018	2018	2019	2020	2021	GREATER THAN 2021	ALL YEARS
DDR	0	4,000,000	0	0	0	0	4,000,000
DIH	0	30,000	0	0	0	0	30,000
<N/A>	0	4,030,000	0	0	0	0	4,030,000
TOTAL 435859 5	0	4,030,000	0	0	0	0	4,030,000
TOTAL Project:	0	4,030,000	0	0	0	0	4,030,000

On Street	From	To	SIS / SR / CR	2019 Lanes	2040 Needs Lanes	Project Miles	Design cost	ROW cost	Construction cost	CEI cost	Total Cost
COUNTY LINE RD	LINDEN DR	MARINER BLVD	CR	2U	4D	2.21	\$0	\$0	\$5,829,120	\$582,912	\$6,412,032
CORTEZ BLVD (US98/SR50)	I-75 (SR93) FRONTAGE (E)	MCKETHAN RD (US98/SR700)	SIS	4D	8D	2.86	\$7,952,392	\$18,073,618	\$36,147,233	\$0	\$62,173,243
SUNCOAST PKWY 2 (SR589)	PONCE DE LEON BLVD (US98/SR700)	CITRUS COUNTY LINE	SIS	00	4F	0.63	\$0	\$0	\$0	\$0	\$0
CORTEZ BLVD (US98/SR50)	BURWELL RD	SUMTER COUNTY LINE	SIS	2U	4D	3.73	\$6,766,001	\$15,377,272	\$30,754,543	\$0	\$52,897,816
BROAD ST (US41/SR45)	MONDON HILL	SNOW MEMORIAL HWY	SR	2U	4D	3.36	\$7,643,840	\$17,372,361	\$34,744,721	\$0	\$59,760,922
MCKETHAN RD (US98/SR700)	PASCO COUNTY LINE	CORTEZ BLVD (SR50)	SR	2U	4D	2.01	\$3,645,045	\$8,284,191	\$16,568,382	\$0	\$28,497,618
PONCE DE LEON BLVD (US98/SR700)	CITRUS WAY	LANDFILL RD	SR	2U	4D	2.58	4685968	10649925	21299850	0	36635743
PONCE DE LEON BLVD (US98/SR700)	COBB RD	CITRUS WAY	SR	2U	6D	3.57	8940520	20319364	40638724	0	69898608
PONCE DE LEON BLVD (US98/SR700)	YONTZ RD	COBB RD	SR	2U	4D	2.49	\$5,656,714	\$12,856,168	\$25,712,333	\$0	\$44,225,215
JEFFERSON ST (SR50A)	COBB RD (CR485)	PONCE DE LEON BLVD (US98/SR700)	SR	2U	2D	0.209	116553.448	264894.124	529788.248	0	911235.82
US19 (SR55)	CORTEZ BLVD (SR50)	RIDGE RD	SR	4D	6D	1.73	\$4,803,123	\$10,916,187	\$21,832,373	\$0	\$37,551,683
PONCE DE LEON BLVD (US98/SR700)	BROAD ST (US41/SR45)	JEFFERSON ST (SR50A)	SR	2D	4D	0.36	809401	1839548	3679096	0	6328045
CORTEZ BLVD BYPASS (SR50)	JEFFERSON ST (SR50)	JEFFERSON RD	SR	4D	6D	3.65	\$10,156,604	\$23,083,188	\$46,166,371	\$0	\$79,406,163

Table 2 - Other Arterial (State / Federal Funds)

Facility	From	To	County	Projects	Current Year Cost Estimator	Year of Expedient Cost Estimator	Phase/Plan	2021-2025	2026-2030	2031-2040	Unfunded Phase/Plan
US 301 & C-472	INTERSECTION	0	SUMMITER	SIGNAL/INTERSECTION IMPROVEMENTS	\$ 2.1	\$ 2.4	PD&E	PE/ROW/OST	-	-	-
SR 44	ORANGE AVENUE	US 441	LAKE	WIDEN ROAD (2 TO 4 LANES)	\$ 18.5	\$ 22.2	PD&E/PE/ROW	OST	-	-	-
SR 50/SR 33	CR 565 (VILLA CITY ROAD)	BROWN STREET	LAKE	NEW 4 LANE ROAD	\$ 33.8	\$ 41.1	PD&E/PE	ROW	OST	-	-
US 301/SR 35	SR 44	C-470 W	SUMMITER	WIDEN ROAD (2 TO 4 LANES)	\$ 51.1	\$ 87.3	PD&E/PE	ROW	-	OST	-
US 301 & CR 525E	INTERSECTION	0	SUMMITER	SIGNAL/INTERSECTION IMPROVEMENTS	\$ 1.9	\$ 2.2	PD&E/ROW	PE/OST	-	-	-
US 441	SR 44	SR 46	LAKE	WIDEN ROAD (4 TO 6 LANES)	\$ 14.6	\$ 20.7	PD&E/PE	ROW	OST	-	-
C-470	TURNPIKE WEST RAMPS	CR 527	SUMMITER	WIDEN ROAD (2 TO 4 LANES)	\$ 45.5	\$ 76.8	PD&E	PE/ROW/OST	-	OST	-
CR 470	TP WEST RAMPS	CR 33	LAKE	WIDEN ROAD (2 TO 4 LANES)	\$ 18.4	\$ 26.9	PD&E/ROW	ROW	OST	-	-
SR 44 & US 27	INTERSECTION	0	LAKE	UP GRADE INTERSECTION	\$ 2.1	\$ 2.5	PD&E/PE/ROW	OST	-	-	-
US 44/SR 500	PERKINS STREET	SR 44	LAKE	WIDEN ROAD (4 TO 6 LANES)	\$ 8.7	\$ 16.1	PD&E/PE/ROW	-	-	OST	-
CR 48	EAST OF US 27 (PALATKAHA BRIDGE)	CR 33	LAKE	WIDEN ROAD (2 TO 4 LANES)	\$ 6.3	\$ 11.5	PD&E/PE	-	ROW	-	OST
BUENA VISTA BLVD. EXTENSION	SR 44	CR 470	SUMMITER	NEW 4 LANE ROAD	\$ 70.0	\$ TBD	None	PD&E/PE	ROW/OST	-	Public Private Partnership
SR 19	CR 561	CR 48	LAKE	WIDEN ROAD (2 TO 4 LANES)	\$ 41.7	\$ -	PD&E/PE	-	-	-	ROW/OST
SR 50	HERMANDO CO	CR 33	SUMMITER	CORRIDOR IMPROVEMENT	\$ 33.7	\$ -	None	-	-	-	PD&E/PE/ROW/OST
LAKE ORANGE PARKWAY	US 27	ORANGE COUNTY LINE	LAKE	NEW 4 LANE ROAD	\$ 85.5	\$ -	None	-	-	-	PD&E/PE/ROW/OST
SR 44	SR 44 & ORANGE AVENUE	CR 46A	LAKE	WIDEN ROAD (2 TO 4 LANES)	\$ 8.1	\$ -	None	-	-	-	PD&E/PE/ROW/OST
SR 19	SR 50	CR 455	LAKE	WIDEN ROAD (2 TO 4 LANES)	\$ 62.5	\$ -	None	-	-	-	PD&E/PE/ROW/OST
Total					\$ 202.75	\$ 310.35					
Other Arterial Funds					\$ 303.50						
Balance (- / -)					\$ -	\$ (6.85)					

PROJECTS ABOVE RED LINE ARE COST FEASIBLE BY 2040

Appendix B ETDM Summary Report
14269



Florida Department of Transportation

**RICK SCOTT
GOVERNOR**

605 Suwannee Street
Tallahassee, FL 32399-0450

**JIM BOXOLD
SECRETARY**

ETDM Summary Report

Project #14269 - West SR 50 from US 301 to CR 33

Preliminary Programming Screen - Published on 12/01/2016

Generated by Kathaleen Linger (on behalf of FDOT District 5)

Printed on: 12/01/2016

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Introduction to Programming Screen Summary Report

The Programming Screen Summary Report shown below is a read-only version of information contained in the Programming Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Programming Screen review. The purpose of the Programming Screen Summary Report is to summarize the results of the ETAT Programming Screen review of the project; provide details concerning agency comments about potential effects to natural, cultural, and community resources; and provide additional documentation of activities related to the Programming Phase for the project. Available information for a Programming Screen Summary Report includes:

- Screening Summary Report chart
- Project Description information (including a summary description of the project, a summary of public comments on the project, and community-desired features identified during public involvement activities)
- Purpose and Need information (including the Purpose and Need Statement and the results of agency reviews of the project Purpose and Need)
- Alternative-specific information, consisting of descriptions of each alternative and associated road segments; an overview of ETAT Programming Screen reviews for each alternative; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources.
- Project Scope information, consisting of general project recommendations resulting from the ETAT Programming Screen review, permits, and technical studies required (if any)
- Class of Action determined for the project
- Dispute Resolution Activity Log (if any)

The legend for the Degree of Effect chart is provided in an appendix to the report.

For complete documentation of the project record, also see the GIS Analysis Results Report published on the same date as the Programming Screen Summary Report.

#14269 West SR 50 from US 301 to CR 33

District: District 5, District 7

County: Hernando, Lake, Sumter

Planning Organization: FDOT District 5

Plan ID: Not Available

Federal Involvement: Other Federal Permit

Phase: Programming Screen

From: US 301

To: CR 33

Financial Management No.: 435859-1-22-01

Contact Information: Lorena Cucek (386) 943-5392 Lorena.Cucek@dot.state.fl.us

Snapshot Data From: Programming Screen Summary Report Published on 12/01/2016 by Kathaleen Linger
Issues and Categories are reflective of what was in place at the time of the screening event.

	Social and Economic						Cultural			Natural					Physical						
	Land Use Changes	Social	Relocation Potential	Farmlands	Aesthetic Effects	Economic	Mobility	Section 4(f) Potential	Historic and Archaeological Sites	Recreation Areas	Wetlands and Surface Waters	Water Quality and Quantity	Floodplains	Wildlife and Habitat	Coastal and Marine	Noise	Air Quality	Contamination	Infrastructure	Navigation	Special Designations
Alternative #1 - SR 50 From: Sumter/Hernando CL To: CR 33 Published: 12/01/2016 Reviewed from 08/18/2016 to 10/02/2016	N/A	2	3	3	2	1	1	N/A	3	2	4	3	4	4	2	3	2	3	2	N/A	4

Purpose and Need

Purpose and Need

PURPOSE

The purpose of the PD&E Study is to evaluate both near term and long term improvements that evaluate the need for increased capacity and safety improvements. More specifically, this project will address future (year 2040 or beyond) congestion and delay, safety improvements, traffic operations and bicycle and pedestrian improvements.

NEED

This project is needed to resolve traffic operational issues and safety issues along SR 50, as well as to address inter-region volume growth. This project supports improvement to one of the few east-west corridors connecting Hernando County to the Orlando Metro area for both regional freight and passenger vehicle traffic. The project would also enhance the emergency evacuation capacity along SR 50. Within the City of Mascotte, on the east end of the corridor, this project will improve segment and intersection operations, as well as address the specific needs for bicycle and pedestrian safety and connectivity.

Roadway Capacity

This segment of SR 50 is currently operating at an acceptable level of service (LOS) (LOS C and D) with an Annual Average Daily Traffic (AADT) ranging between 6,000 and 14,000. The adopted LOS is "D" within the urban area and LOS "C" outside the urban area. The projected future year 2040 LOS is expected to exceed the adopted LOS in both the urban and rural portions of the corridor. For the urban areas, a projected 2040 volume of 22,000 to 28,000 AADT will result in a LOS E. Within the rural portions of the project, the 2040 AADT in the range of 12,000 to 14,000 will result in an LOS D. The adopted LOS C service volume threshold of 8,400 daily vehicles is expected to be reached by approximately year 2025 for the rural portions of the project.

The corridor is generally characterized by long stretches of uninterrupted flow. SR 471 intersects SR 50 in the middle of the study corridor, providing one of the primary locations for traffic to turn on or off the study corridor. The majority of existing and future traffic traveling along the study corridor are through vehicles traveling the entire length of the project between Hernando County and Lake County to points beyond. The long distance of generally uninterrupted flow results in large vehicle platoons forming behind slower moving vehicles. For rural two-lane highways, percent time spent following (in a platoon) directly impacts the level of service. The alternatives for widening or addition of passing lanes will reduce the vehicle platooning and improve corridor capacity.

Safety

A total of 210 crashes were reported during the period between 2009 and 2013, 105 of which resulted in injury (176 total injured persons) and 11 resulting in a fatality (13 total fatally injured persons). Due to the length of the corridor, crash types and trends vary by sub-segment. However, fatal crashes were distributed throughout the most of the corridor.

High travel speeds (vehicles traveling faster than posted speeds of 55 to 60 mph) result in higher potential for severe injury and fatalities when crashes occur. Long stretches of uninterrupted flow results in vehicle platooning, which in turn leads to vehicles making unsafe passing maneuvers. In addition, with a majority of vehicles making regional trips, vehicles turning on/off the highway are less expected and lead to pattern of severe rear-end crashes due to a lack of left- or right-turn lanes at most driveways and low-volume intersecting roads. Within the Withlacoochee State Forest, single-vehicle lane departure crashes are prevalent with limited recoverable area along the shoulders resulting in increased chances for serious injury.

In addition to the property damage and human impacts, crashes have operational impacts on the corridor. Due to the long distances between intersecting roadways and limited network alternatives, severe crashes on the two-lane highway can

result in delays or closures that impact regional goods and passenger movement.

System Linkage

SR 50 is an east-west facility that connects Brooksville with Clermont and the Orlando Metro area. It is the only regional east-west connection serving Hernando County. It serves regional distribution centers for movement of goods by truck as well as aggregate mining operations located along the study corridor.

Legislation/Plan Consistency

Improvements to SR 50 from the Hernando County line to CR 33 is identified as an unfunded need in the adopted Lake-Sumter Metropolitan Planning Organization (MPO) 2040 Long Range Transportation Plan (LRTP) Needs Plan. The Hernando /Citrus MPO identifies a two- to four-lane widening of SR 50 from US 301 to the Sumter County line as an unfunded need in their 2040 LRTP.

Modal Interrelationships

Within the City of Mascotte, sidewalk is intermittently present but not continuous. Due to the uninterrupted flow conditions west of CR 33, no pedestrian marked pedestrian crossing are currently provided across SR 50 to serve the Elementary School on the south side of the study corridor. Throughout the corridor, bicycles are served on the paved shoulder; however, most of the corridor has a four-foot paved shoulder which is insufficient for the high-speed roadway conditions.

Within the project area, the coast-to-coast trail is planned to connect to the Van Fleet Trailhead. Pending further study, there is potential for the trail to run adjacent to SR 50 for approximately 5 miles of the study segment from the Van Fleet Trailhead to SR 471. The study will further investigate and coordinate planning for improvements to SR 50 in order to be compatible with implementation of the Coast-to-Coast trail within the same corridor.

Hurricane Evacuation

The entirety of SR 50 is designated as an evacuation routes by the Florida Division of Emergency Management. A possible expansion and enhanced traffic flow of this section of SR 50 will enhance the hurricane and emergency evacuation capabilities in Hernando, Sumter, and Lake Counties.

Project Description

The limits for this project begin at US 301 in Hernando County and extend approximately 20 miles east to County Road (CR) 33 in the City of Mascotte in Lake County. This segment of SR 50 includes key features such as the Withlacoochee State Forest and other environmentally sensitive areas in the vicinity of the Green Swamp; additionally, a portion of the study corridor, from the Van Fleet Trail to CR 478A in Lake County, is also designated as part of the Scenic Sumter Heritage Byway.

Prior to the Project Development and Environment (PD&E) Study, a corridor planning study was conducted to identify existing conditions (natural, social, physical, and cultural), determine future capacity and safety improvements, develop and evaluate alternatives, and conduct public involvement and agency coordination. Initial alternatives considered included a range of improvements from realignment of local roadways, the implementation of passing lanes along SR 50, and the widening of SR 50 from two-to-four lanes.

The Alternatives Summary (attached) details the three alternatives evaluated. These include: spot improvements, which include signalization and roundabouts (immediate safety needs) at key intersections; passing lanes (intermediate or long-term needs); and the four-lane widening (long-term need). The planning study also identified the potential for realignment of two local roads as they tied into SR 50. The first option (Sheet 1 of the Alternatives Summary) includes closing the portion of CR 478A from CR 755 to the east where it meets SR 50 and also closing CR 755 between SR 50 and CR 478A. The proposed realigned new road for this option falls halfway between those two closures. The second option (Sheet 4 of the Alternatives Summary) will be to close Linden Road between CR 772 and SR 50 and to extend CR 719 north to join SR 50 where CR 721 begins. These improvements have the potential to be implemented as either near term or longer term improvements. These realignments were not included as alternatives in the EST's map as they were within 500 feet of the mapped project area of SR 50.

It should be noted that this segment being studied is the only portion of SR 50 that remains a two-lane facility. To the west of US 301 in Hernando County, final design for widening from two to four lanes is underway; to the east of CR 33 in Lake County, SR 50 is a four-lane divided roadway.

Summary of Public Comments

There were two Project Visioning Team meetings held on 2/10/15 and 6/19/15, a public meeting on 1/19/16, and stakeholder interviews on 2/5/2015 and 2/10/15 with the following agencies/businesses: Florida Audubon Society; FDOT D7; Scenic Sumter Byway; Eastside Business; Wal-Mart; Hernando MPO; Hernando County; Friends of the Withlacoochee State Trail; Department of Forestry; City of Mascotte; Lake-Sumter MPO; Sumter County; Mid Coast Aggregates; Florida Park Service; Lake County; Ridge Manor Property Owners Association; and Robbins Lumber.

The following is a summary of issues raised through the public involvement and agency coordination process:

- Large platoons create a perception of congestion and result in risky passing maneuvers
- Significant truck traffic and actual travel speeds exceeding posted speeds
- SR 50 perceived as unsafe; passing can be difficult and passing lanes are needed
- Environmental concerns:
 - Standing water on the roadway
 - Forestry management (i.e., smoke)
 - Wildlife crossings
 - Minimization of impacts to Withlacoochee State forest and other environmentally sensitive areas
- Lack of/need for separated bicycle and pedestrian facilities
- Hurricane evacuation needs

Planning Consistency Status

Potential Lead Agencies

- FL Department of Transportation

Exempted Agencies

Agency Name	Justification	Date
Federal Transit Administration	FTA has requested to be exempt from reviewing any non-transit projects.	03/08/2016
US Coast Guard	US Coast Guard has requested to be exempt from reviewing any projects that do not impact navigable waterways.	03/08/2016
Federal Highway Administration	Federal Highway has requested to be exempt from reviewing any projects that do not use the FHWA process.	03/08/2016

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

User Defined Communities Within 500 Feet

No user defined communities were found within a 500 ft. buffer distance for this project.

Census Places Within 500 Feet

- Mascotte
- Ridge Manor

Purpose and Need Reviews

FL Department of Agriculture and Consumer Services

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/30/2016	Steve Bohl (Steve.Bohl@freshfromflorida.com)	There are too many options being considered and the impacts on Withlacoochee State Forest. this includes the Florida Forest Service operations and management activities, and public using the state forest.

FL Department of Economic Opportunity

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/30/2016	Matt Preston (matt.preston@deo.myflorida.com)	No Purpose and Need comments found.

FL Department of State

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/13/2016	Ginny Jones (ginny.jones@dos.myflorida.com)	none

FL Fish and Wildlife Conservation Commission

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/30/2016	Jennifer Goff (jennifer.goff@MyFWC.com)	No Purpose and Need comments found.

National Marine Fisheries Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/07/2016	David Rydene (David.Rydene@noaa.gov)	No Purpose and Need comments found.

National Park Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/07/2016	Anita Barnett (anita_barnett@nps.gov)	No Purpose and Need comments found.

Natural Resources Conservation Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	08/22/2016	Rick Robbins (rick.a.robbins@fl.usda.gov)	

Saint Johns River Water Management District

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/23/2016	Ken Lewis (klewis@sjrwmd.com)	No Purpose and Need comments found.

Southwest Florida Water Management District

Acknowledgment	Date Reviewed	Reviewer	Comments
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Understood	09/30/2016	Monte Ritter (Monte.Ritter@swfwmd.state.fl.us)	No Purpose and Need comments found.
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US Army Corps of Engineers

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/20/2016	Randy Turner (Randy.L.Turner@usace.army.mil)	No Purpose and Need comments found.

US Environmental Protection Agency

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/29/2016	Amanetta Somerville (somerville.amanetta@epa.gov)	The proposed project is to study a 20-mile segment of State Road (SR) 50 from US 301 in Hernando County to County Road (CR) 33 in the City of Mascotte in Lake County. Three alternatives were evaluated. Spot improvements, which include signalization and roundabouts at key intersections; passing lanes; and the four-lane widening. EPA has identified that alternative 2B, the addition of passing lanes with roundabouts, as the preferred alternative as it provides the desired safety improvements and reduced environmental impacts.

US Fish and Wildlife Service

Acknowledgment	Date Reviewed	Reviewer	Comments
Understood	09/27/2016	Zakia Williams (zakia_williams@fws.gov)	No Purpose and Need comments found.

The following organizations were notified but did not submit a review of the Purpose and Need:

- FL Department of Environmental Protection
- Seminole Tribe of Florida
- US Forest Service

Alternative #1 - SR 50

Alternative Description

Name	From	To	Type	Status	Total Length	Cost	Modes	SIS
SR 50	Sumter/Hernando CL	CR 33	Widening	ETAT Review Complete	? mi.		Roadway	N

Segment Description(s)

Location and Length

Segment Record	Segment Name	Facility Name	Beginning Location	Ending Location	Length (mi.)	Roadway Id	BMP	EMP
S-003	Sumter County Segment 18030000 (MP 0 to 4.21)	Sumter County Segment 18030000 (MP 0 to 4.21)			4.209	18030000		
S-004	Hernando County Segment	Hernando County Segment			4.961	Digitized		
S-002	Sumter County Segment 18020000 (MP 0 to 6.421)	Sumter County Segment 18020000 (MP 0 to 6.421)			6.405	18020000		
S-001	Lake County Segment 11070000 (MP 0 to 4.293)	Lake County Segment 11070000 (MP 0 to 4.293)			4.294	11070000		

Jurisdiction and Class

Segment Record	Segment Name	Jurisdiction	Urban Service Area	Functional Class
S-003	Sumter County Segment 18030000 (MP 0 to 4.21)			RURAL: Principal Arterial - Other
S-004	Hernando County Segment			
S-002	Sumter County Segment 18020000 (MP 0 to 6.421)			RURAL: Principal Arterial - Other
S-001	Lake County Segment 11070000 (MP 0 to 4.293)			RURAL: Principal Arterial - Other

Base Conditions

Segment Record	Segment Name	Year	AADT	Lanes	Config
S-003	Sumter County Segment 18030000 (MP 0 to 4.21)		5300	2	
S-004	Hernando County Segment				
S-002	Sumter County Segment 18020000 (MP 0 to 6.421)		6100	2	
S-001	Lake County Segment 11070000 (MP 0 to 4.293)		7300	2	

Interim Plan

Segment Record	Segment Name	Year	AADT	Lanes	Config
S-003	Sumter County Segment 18030000 (MP 0 to 4.21)				

S-004	Hernando County Segment				
S-002	Sumter County Segment 18020000 (MP 0 to 6.421)				
S-001	Lake County Segment 11070000 (MP 0 to 4.293)				

Needs Plan

Segment Record	Segment Name	Year	AADT	Lanes	Config
S-003	Sumter County Segment 18030000 (MP 0 to 4.21)				
S-004	Hernando County Segment				
S-002	Sumter County Segment 18020000 (MP 0 to 6.421)				
S-001	Lake County Segment 11070000 (MP 0 to 4.293)				

Cost Feasible Plan

Segment Record	Segment Name	Year	AADT	Lanes	Config
S-003	Sumter County Segment 18030000 (MP 0 to 4.21)				
S-004	Hernando County Segment				
S-002	Sumter County Segment 18020000 (MP 0 to 6.421)				
S-001	Lake County Segment 11070000 (MP 0 to 4.293)				

Funding Sources

No funding sources found.

Project Effects Overview for Alternative #1 - SR 50

Issue	Degree of Effect	Organization	Date Reviewed
Social and Economic			
Land Use Changes	N/A N/A / No Involvement	FL Department of Economic Opportunity	09/30/2016
Social	2 Minimal	US Environmental Protection Agency	09/29/2016
Farmlands	3 Moderate	Natural Resources Conservation Service	08/22/2016
Economic	N/A N/A / No Involvement	FL Department of Economic Opportunity	09/30/2016
Cultural			
Historic and Archaeological Sites	2 Minimal	Southwest Florida Water Management District	09/30/2016
Historic and Archaeological Sites	3 Moderate	FL Department of State	09/14/2016
Recreation Areas	2 Minimal	Southwest Florida Water Management District	09/30/2016
Recreation Areas	N/A N/A / No Involvement	Saint Johns River Water Management District	09/23/2016
Recreation Areas	N/A N/A / No Involvement	National Park Service	09/07/2016
Natural			

Wetlands and Surface Waters	4	Substantial	US Environmental Protection Agency	09/30/2016
Wetlands and Surface Waters	3	Moderate	Southwest Florida Water Management District	09/30/2016
Wetlands and Surface Waters	3	Moderate	US Fish and Wildlife Service	09/29/2016
Wetlands and Surface Waters	4	Substantial	Saint Johns River Water Management District	09/23/2016
Wetlands and Surface Waters	4	Substantial	US Army Corps of Engineers	09/20/2016
Wetlands and Surface Waters	2	Minimal	National Marine Fisheries Service	09/07/2016
Water Quality and Quantity	3	Moderate	US Environmental Protection Agency	09/30/2016
Water Quality and Quantity	3	Moderate	Southwest Florida Water Management District	09/30/2016
Water Quality and Quantity	0	None	Saint Johns River Water Management District	09/23/2016
Floodplains	3	Moderate	Southwest Florida Water Management District	09/30/2016
Floodplains	4	Substantial	US Environmental Protection Agency	09/29/2016
Floodplains	0	None	Saint Johns River Water Management District	09/23/2016
Wildlife and Habitat	4	Substantial	FL Fish and Wildlife Conservation Commission	09/30/2016
Wildlife and Habitat	2	Minimal	Southwest Florida Water Management District	09/30/2016
Wildlife and Habitat	4	Substantial	FL Department of Agriculture and Consumer Services	09/30/2016
Wildlife and Habitat	3	Moderate	US Fish and Wildlife Service	09/29/2016
Coastal and Marine	2	Minimal	Southwest Florida Water Management District	09/30/2016
Coastal and Marine	N/A	N/A / No Involvement	Saint Johns River Water Management District	09/23/2016
Coastal and Marine	2	Minimal	National Marine Fisheries Service	09/07/2016
Physical				
Air Quality	2	Minimal	US Environmental Protection Agency	09/29/2016
Contamination	3	Moderate	Southwest Florida Water Management District	09/30/2016
Contamination	3	Moderate	US Environmental Protection Agency	09/29/2016
Contamination	N/A	N/A / No Involvement	Saint Johns River Water Management District	09/23/2016
Infrastructure	2	Minimal	Southwest Florida Water Management District	09/30/2016
Infrastructure	N/A	N/A / No Involvement	FDOT District 5	08/31/2016
Navigation	N/A	N/A / No Involvement	US Army Corps of Engineers	09/20/2016
Special Designations				
Special Designations	3	Moderate	Southwest Florida Water Management District	09/30/2016
Special Designations	4	Substantial	US Environmental Protection Agency	09/29/2016
Special Designations	N/A	N/A / No Involvement	Saint Johns River Water Management District	09/23/2016

ETAT Reviews and Coordinator Summary: Social and Economic Land Use Changes

Project Effects

Coordinator Summary Degree of Effect: N/A N/A / No Involvement assigned 12/01/2016 by FDOT District 5

Comments:

A review of available local and state land use data and agency comments from FL Department of Economic Opportunity revealed existing land uses appear generally consistent with future land uses. A Degree of Effect of No Involvement was issued by the Department of Economic Opportunity, and the FDOT concurs with this determination. During the PD&E process FDOT will coordinate with the City of Mascotte, Hernando, Sumter and Lake Counties (related to potential changes in land uses) in addition to the Florida Department of Environmental Protection to avoid and/or minimize impacts to resources such as the Richloam Wildlife Management Area, the Withlacoochee State Forest, the Van Fleet Trail/Trailhead and the Green Swamp.

Degree of Effect: N/A N/A / No Involvement assigned 09/30/2016 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

1. City of Mascotte - *City of Mascotte Comprehensive Plan*, adopted in June of 2007.
2. Lake County - *Lake County Florida Comprehensive Plan Planning Horizon 2030*, adopted on September 22, 2011.
3. Sumter County - *Unified Comprehensive Plan: Sumter County, City of Center Hill, City of Webster*, adopted in October of 2012.
4. Hernando County - *Hernando County Comprehensive Plan*, adopted on December 14, 2005.

Comments on Effects to Resources:

Compatibility with Community Development Goals and Comprehensive Plan:

The project is compatible with the City and County Comprehensive Plans. The Transportation Element of Mascotte's Plan references "improvements" to SR 50 without specifying what the specific improvements include. One-way alternate corridors are identified elsewhere as potential solutions to congestion.

Future Transportation Map:

The project is not included on the City of Mascotte's Future Transportation Map. DEO staff recommends the City update its map to reflect this project. This section of SR 50 is shown on the Lake/Sumter MPO Adopted Maximum Lane Constrained Corridors Map within the Lake County Comp Plan; Sumter County's Plan adopts the 2035 LRTP, but doesn't have its own map. For Hernando County, the 2035 Highway Network Map shows the pertinent segment of SR 50 being 4 lanes.

Land Uses:

The Future Land Uses surrounding the project include:

1. City of Mascotte - Downtown Mixed Use.
2. Lake County - Mt. Plymouth - Sorrento Receiving Area, Rural Transition, Rural, and Sending Area A-1-20.
3. Sumter County - Agriculture, Conservation, Commercial, and Industrial.
4. Hernando County - Conservation, Mining, Industrial, Commercial, and Rural.

Parks:

The project is located within a quarter mile of the following parks: Richloam Wildlife Management Area, eastern block of the Withlacoochee State Forest, and the Van Fleet Trail/Trailhead (Sumter County).

Area of Critical State Concern (ACSC), Coastal High Hazard Area (CHHA), and Military Bases:

The project is not located within an Area of Critical State Concern, or the CHHA; nor does it encroach on any military bases. It is, however, *adjacent* to the Green Swamp Area of Critical State Concern in Lake County.

Other Planning-Related Items:

None.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Economic Opportunity's Review (12/01/2016): Thank you for your review and focusing in on the key areas related to land use. FDOT's Public Involvement Program, conducted for the PD&E Study, will involve the Lake Sumter Metropolitan Planning Organization; City of Mascotte; Hernando, Sumter and Lake Counties; and, FDEP and other environmental agencies with an interest in areas such as the Richloam Wildlife Management Area, the Withlacoochee State Forest, the Van Fleet Trail/Trailhead and the Green Swamp. The State Environmental Impact Report (SEIR) / PD&E Study process will further evaluate potential effects on future land uses and work with the listed stakeholders to identify a balanced solution.

Social

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 12/01/2016 by FDOT District 5

Comments:

The FDOT utilized several state and federal data sources to evaluate the social features related to the SR 50 project and concurs with US Environmental Protection Agency's DOE of Minimal. In addition to the ETDM Screening, the Planning Study and supplementary analyses, such as field reviews and coordination with stakeholders, identified Limited English Proficiency, Environmental Justice and Transportation Disadvantaged populations, rural communities and community features. While the Degree of Effect is generally minimal, the FDOT will continue to identify ways to engage stakeholders, obtain stakeholder input and work together with local stakeholders to reduce impacts, enhance the social environment - all while meeting the transportation needs of the region.

Degree of Effect: 2 *Minimal* assigned 09/29/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources

Social impacts to residential populations, residential communities, schools, commercial businesses, and other cultural resources such as social, economic, mobility, land use, and aesthetics.

Level of importance

EPA is assigning a Minimal degree of effect to this issue.

Comments on Effects to Resources:

The proposed project is a study to evaluate a 20-mile segment of State Road (SR) 50 from US 301 in Hernando County to County Road (CR) 33 in the City of Mascotte in Lake County. Three alternatives were evaluated: spot improvements, which include signalization and roundabouts at key intersections; passing lanes; and the four-lane widening. EPA has identified that alternative 2B, the addition of passing lanes with roundabouts, as the preferred alternative as it provides the desired safety improvements and reduced environmental impacts with lower social impacts.

Alternative 2B, the addition of passing lanes with roundabouts to the roadway could result in direct social impacts such as property and business relocations, noise, vibration, construction detours and travel pattern disruptions, and increased traffic volumes. EPA is assigning a minimal degree of effect to this issue and recommends that the PD&E study include a Sociocultural Effects (SCE) Evaluation for the entire length of the project.

An SCE Evaluation is used to assess community impacts utilizing both quantitative and qualitative methods. The SCE Evaluation

should be based on the best available data and provide for adequate public involvement and outreach activities. Some of the issues to be considered when conducting an SCE Evaluation include: social consequences to surrounding or interconnected communities; demographics of affected community; displacement of population; increase/decrease of population as a result of the project; displacement of minority populations; and disproportionate effects on special populations. All of these issues are important for the proposed project and should be evaluated.

Additionally, involvement from the local and surrounding communities is recommended and public involvement activities should be a part of the PD&E phase of project development. Public involvement should continue throughout design and construction as well.

In accordance with Executive Order 12898, Federal actions must address environmental justice (EJ) in minority and low-income populations. Most federal agencies have made EJ part of their mission by identifying and addressing disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority and low-income populations. The PD&E study should include analysis of information relating to characteristics of potentially impacted populations for the proposed alternatives.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): Thank you for sharing the US EPA's EJSCREEN Tool. The FDOT has utilized this technology in combination with state and federal data sources to identify areas/populations related to Environmental Justice, Limited English Proficiency, rural communities, etc. This information will be included in the Public Involvement Program and ultimately in the State Environmental Impact Report.

Relocation Potential

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 12/01/2016 by FDOT District 5

Comments:

The ETAT did not submit reviews related to this issue; however, the Planning Study, GIS analysis and field reviews have allowed the FDOT to focus in on areas where right of way will be needed and where business displacements or residential relocations could occur as identified in the Preliminary Environmental Discussion. The FDOT will continue to minimize potential relocations during the development of roadway and drainage concepts.

None found

Farmlands

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 12/01/2016 by FDOT District 5

Comments:

The FDOT concurs with the Natural Resources Conservation Service assignment of a Degree of Effect of Moderate. Given the rural nature of the area, farmlands are present throughout the approximately 20-mile study area, which include some Unique Farmland soils. All reasonable measures will be taken to avoid impacts to agricultural uses, prime farmlands and related uses. The FDOT will continue to coordinate with the Natural Resources Conservation Service on ways to avoid and/or minimize and mitigate for impacts to farmlands.

Degree of Effect: 3 *Moderate* assigned 08/22/2016 by Rick Allen Robbins, Natural Resources Conservation Service

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

The GIS analysis data indicates that approximately 18.5 percent of the total project area (depending on buffer width) is classified as either Farmland of Unique Importance. In addition, about 22 percent of the project area is in some type of agricultural production (Cropland or Pastureland). Overall, 8.3 percent of the project area contains Unique Farmland soils that are currently in agricultural production.

The Farmland Protection Policy Act (FPPA) (PL 97-98; 7 U.S.C. 4201 et seq.) was enacted to protect the amount of open farmland which has substantially decreased as a result of land use changes. It states that Federal programs which contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses will be minimized. Agencies are also to consider alternative actions and ensure that their programs are compatible with state and local government programs.

Environmental assessments must be prepared for actions which may adversely affect such unique geographic characteristics as prime farmlands. The regulations apply to construction activities, development grants and loans, and certain Federal land management decisions that contribute either directly or indirectly to loss of farmland.

A Farmland Protection Policy Act (AD-1006) environmental assessment may be required for this project.

Direct Effects

Identified Resources and Level of Importance:

The USDA-NRCS considers soil map units with important soil properties for agricultural uses to be Prime Farmland. In addition, the USDA-NRCS considers any soils with important soil properties and have significant acreages that are used in the production of commodity crops (such as, cotton, citrus, row crops, specialty crops, nuts, etc.) to be considered as Farmlands of Unique Importance or Farmlands of Local Importance. Nationally, there has been a reduction in the overall amount of Prime and Unique Farmlands through conversion to non-farm uses. This trend has the possibility of impacting the nation's food supply and exporting capabilities.

Comments on Effects to Resources:

Conducting GIS analysis of Prime Farmland (using USDA-NRCS data) and Important Farmland Analysis (using 2011 SWFWMD data, 2009 SJRWMD, and 2015 SSURGO data) has resulted in the determination that there are soils designated as Farmland of Unique Importance at all buffer widths within the Project footprint. In addition, there are areas currently used for agricultural production at all buffer widths.

At the 100 foot buffer width, there are 92.47 acres of Important Farmlands. At the 200 foot buffer width, there are 184.02 acres of Important Farmland. At the 500 foot buffer width, there are 448.62 acres of Important Farmland.

Land in agricultural use (primarily cropland and pastureland) ranges from 109.25 acres at the 100 foot buffer width to 555.01 acres at the 500 foot buffer width.

More importantly, the acreages of Important Farmlands (Unique) that are currently in agricultural use ranges from 37.59 acres at the 100 foot buffer width to 205.74 acres at the 500 foot buffer width. The extensive use of Unique Important Farmland soils for agricultural cropping systems is responsible for the Moderate Rating for this Project.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

An important note concerning Prime Farmland, Unique Farmland, and Locally Important Farmland soils:

It is important to remember that when agricultural lands that support commodity and other types of crops intersect Farmlands of Prime, Unique, or Local Importance, there will be a net loss of an important agricultural and national resource.

Once these important farmland soils have been truncated, heavily modified, or filled upon, their inherent soil properties that made these soils productive (and worthy of these farmland designations) will be lost. Even with land use designation shifts from rural to urban, the future needs and requirements of society as a whole should always be considered. The change in land use designations are temporal when based on scales of human and geologic time

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Natural Resources Conservation Service's Review (12/01/2016): The FDOT appreciates the Natural Resources Conservation Service's concise and comprehensive description of the features in the area in addition to further describing the Farmland Protection Policy Act. The FDOT recognizes the significance of agriculture to the local, regional and national economies. If impacts to commodity crops occur, the FDOT will work with the Natural Resources Conservation Service to complete a Farmland Protection Policy Act (AD-1006).

Aesthetic Effects

Project Effects

Coordinator Summary Degree of Effect: **2** *Minimal* assigned 12/01/2016 by FDOT District 5

Comments:

The ETAT did not submit reviews related to this issue; however, the FDOT recognizes aesthetics as one of the socio-cultural effects (social, economic, land use, mobility, aesthetics and relocations) to be analyzed and considered in PD&E. The FDOT has included these six components in the scope of services and will work with local stakeholders to enhance aesthetics, where feasible.

None found

Economic

Project Effects

Coordinator Summary Degree of Effect: **1** *Enhanced* assigned 12/01/2016 by FDOT District 5

Comments:

While the Department of Economic Opportunity issued a Degree of Effect of No Involvement, the potential for economic enhancement is likely given the significance of State Road 50 as a regional corridor the efficient movement of people, goods and services. With this in mind, the FDOT has issued a Degree of Effect of Enhanced to this project.

Degree of Effect: **N/A** *N/A / No Involvement* assigned 09/30/2016 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

1. City of Mascotte - *City of Mascotte Comprehensive Plan*, adopted in June of 2007.
2. Lake County - *Lake County Florida Comprehensive Plan Planning Horizon 2030*, adopted on September 22, 2011.
3. Sumter County - *Unified Comprehensive Plan: Sumter County, City of Center Hill, City of Webster*, adopted in October of 2012.
4. Hernando County - *Hernando County Comprehensive Plan*, adopted on December 14, 2005.

Comments on Effects to Resources:

The project is not located within a Rural Area of Opportunity. The project has potential to attract new development if the road is widened. Potential employment opportunities could include short-term, construction-related work.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Department of Economic Opportunity's Review (12/01/2016): Thank you for reviewing the four comprehensive plans within the study area. As mentioned in the summary of this issue, the FDOT concurs with the potential employment opportunities but also the potential opportunities offered by the increased capacity of the remaining segment of an improved regional corridor.

Mobility

Project Effects

Coordinator Summary Degree of Effect: **1** *Enhanced* assigned 12/01/2016 by FDOT District 5

Comments:

No ETAT reviews were submitted for this issue; however, the project has the potential to enhance mobility by providing for increased roadway capacity and by providing bicycle and pedestrian facilities such as wide shoulders, bicycle lanes and sidewalks in addition to connection to existing and planned regional multi-use trail systems. The FDOT will assign a Degree of Effect of Enhanced to this issue.

None found

ETAT Reviews and Coordinator Summary: Cultural Section 4(f) Potential

Project Effects

Coordinator Summary Degree of Effect: **N/A** *N/A / No Involvement* assigned 12/01/2016 by FDOT District 5

Comments:

No ETAT reviews were submitted for this issue. The FDOT will be developing the project with state funding; therefore, the Section 4(f) process will not apply to this action.

None found

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: **3** *Moderate* assigned 12/01/2016 by FDOT District 5

Comments:

FL Department of State assigned a Degree of Effect of Moderate and Southwest Florida Water Management District assigned a Degree of Effect of Minimal. The FDOT concurs with the Department of State's Degree of Effect of Moderate given the length, the fact that the study area has not been comprehensively surveyed, the nature of communities in the study area (Mascotte, Tarrytown, Linden and Ridge Manor) and the potential for archaeological sites in and around areas such as the Little Withlacoochee River.

Degree of Effect: **2** *Minimal* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Pursuant to Subsection 10.2.3.6 of the Environmental Resource Permit Applicant's Handbook Volume I, work proposed in, on, or over wetlands and/or surface water will require communications from the Department of State, Division of Historical Resources (DHR) indicating there will be no impacts to significant historical or archaeological resources. "The applicant may be required to perform an archeological survey and to develop and implement a plan as necessary to demarcate and protect the significant historical or archeological resources, if such resources are reasonable expected to be impacted by the regulated activity." [Subsection 10.2.3.6 ERP AP Vol. I].

Direct Effects

Identified Resources and Level of Importance:

SWFWMD's responsibility in the ETDM review process is to identify only those historical and archeological sites located on District owned/controlled lands. From review of the SWFWMD's Geographic Information System (GIS), there are no District owned / controlled lands within one (1) mile of the proposed roadway widening.

It should be noted, however, that impacts to all historical and archaeological sites shall be considered in evaluation of the application for an environmental resource permit.

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): Thank you for your review. The FDOT recognizes that impacts to all historical and archaeological sites shall be considered in evaluation of the application for an environmental resource permit. The FDOT will be assigning a Degree of Effect of Moderate to this resource and will continue to work with the District during the PD&E Study.

Degree of Effect: 3 *Moderate* assigned 09/14/2016 by Ginny Leigh Jones, FL Department of State

Coordination Document: PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 12 and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment.

Direct Effects

Identified Resources and Level of Importance:

Historic aerials from the 1940s demonstrate that the project area was primarily rural with homesteads separated by great distances. The population centers in the 1940s consisted of the present-day towns of Mascotte, Tarrytown, and Linden. The project area remains remarkably similar with very little development beyond scattered homesteads and a few population centers still around Mascotte, Tarrytown, Linden and now Ridge Manor.

Consistent with the comments in the Preliminary Effects Discussion (PED), the project area has not been comprehensively surveyed, so there is the possibility that there are un-recorded cultural resources within and adjacent to the project corridor.

Comments on Effects to Resources:

The widening of this roadway has the potential to directly impact all types of resources. The addition of new ROW has the potential to have a direct impact on any historic properties that are located in the new ROW.

Generally, ground disturbance has the potential to impact archaeological sites. Above-ground resources can also be impacted by adjacent non-ground disturbing activity that increases vibration and noise, changes access, or changes to the original setting.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

This office will consult with the project sponsors to avoid, minimize, or mitigate any adverse effects to significant cultural resources.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Historic aerials from the 1940s demonstrate that the project area was primarily rural with homesteads separated by great distances. The population centers in the 1940s consisted of the present-day towns of Mascotte, Tarrytown, and Linden. The project area remains remarkably similar with very little development beyond scattered homesteads and a few population centers around Mascotte, Tarrytown, Linden and now Ridge Manor.

Consistent with the comments in the Preliminary Effects Discussion (PED), the project area has not been comprehensively surveyed, so there is the possibility that there are un-recorded cultural resources within and adjacent to the project corridor.

Comments on Effects to Resources:

Above-ground resources could be indirectly impacted by the addition of new traffic including access, setting, and vibration.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

This office will consult with the project sponsors to avoid, minimize, or mitigate any adverse effects to significant cultural resources.

FDOT District 5 Feedback to FL Department of State's Review (12/01/2016): Thank you for identifying the rural communities and noting that the area has not been comprehensively surveyed. The FDOT concurs with the Degree of Effect of Moderate and anticipates extensive coordination with your agency as the PD&E Study progresses. A Cultural Resources Assessment Survey will be conducted in accordance with Chapter 267, Florida Statutes and other state laws and regulations.

The following organization(s) were expected to but did not submit a review of the Historic and Archaeological Sites issue for this alternative: Seminole Tribe of Florida

Recreation Areas

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 12/01/2016 by FDOT District 5

Comments:

Southwest Florida Water Management District assigned a Degree of Effect of Minimal due to the potential use of Sovereign Submerged Lands. St. Johns River WMD and the National Park Service assigned a Degree of Effect of N/A / No Involvement. While no impacts are anticipated to the Withlacoochee State Trail, the main resource identified in the Preliminary Environmental Discussion, the FDOT recognizes the potential uses of Sovereign Submerged Lands, specifically Little Withlacoochee River, Lake Giddon, and Merrit Pond. The FDOT will work with the Water Management District, and within the parameters of Chapter 18-20, FAC, to avoid, minimize and/or mitigate for potential impacts to Sovereign Submerged Lands. The FDOT will issue a Degree of Effect of Minimal for this resource.

Degree of Effect: 2 *Minimal* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Please be advised, due to the potential use of Sovereign Submerged Lands (SSLs) related to the widening, SR 50 has potential to impact the Little Withlacoochee River, Lake Giddon, Merrit Pond, and other SSL waterbodies. Public Interest Criteria will need to be addressed as required through Chapter 18-21, Florida Administrative Code. During the review of Public Interest Criteria the "environmental, social and economic" (Chapter 18-20, FAC) benefits and "environmental, social, and economic" costs associated with the alteration of the bridge will be considered.

Direct Effects

Identified Resources and Level of Importance:

SWFWMD's responsibility in the ETDM review process is to identify only those recreation areas located on District owned/controlled lands. From the SWFWMD's Geographic Information System (GIS), there are no District owned / controlled lands within one (1) mile of the proposed roadway widening. It should be noted, however, that impacts to all recreation areas shall be considered in the evaluation of the application for an environmental resource permit.

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): Thank you for your review and for identifying the specific resources covered under Chapter 18-21 of the Florida Administrative Code. The FDOT looks forward to working with the Water Management District during the PD&E Study.

Degree of Effect: N/A N/A / *No Involvement* assigned 09/23/2016 by Lee A. Kissick, Saint Johns River Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): Thank you for your review.

Degree of Effect: N/A N/A / *No Involvement* assigned 09/07/2016 by Anita Barnett, National Park Service

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to National Park Service's Review (12/01/2016): Thank you for your review.

The following organization(s) were expected to but did not submit a review of the Recreation Areas issue for this alternative: FL Department of Environmental Protection

ETAT Reviews and Coordinator Summary: Natural Wetlands and Surface Waters

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 12/01/2016 by FDOT District 5

Comments:

The US Environmental Protection Agency, Saint Johns River Water Management District, and US Army Corps of Engineers assigned a Degree of Effect of Substantial; Southwest Florida Water Management District and US Fish and Wildlife Service assigned a Degree of Effect of Moderate; and National Marine Fisheries Service assigned a Degree of Effect of Minimal to this issue. Given the length and significance of wetlands and other surface waters in the study area, the FDOT has issued a Degree of Effect as Substantial for this issue. When developing both roadway and drainage concepts, the FDOT will work with agencies listed to avoid, minimize, and mitigate for impacts to wetlands, surface waters and groundwater sources through a variety of measures. This process will begin with a comprehensive evaluation of the existing conditions, which will identify the type and quality of wetlands and then develop roadway and drainage concepts that minimize and/or avoid impacts to these resources.

Degree of Effect: 4 *Substantial* assigned 09/30/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources

Wetlands, wetlands habitat, water quality

Level of importance

Wetlands are a high level of importance as they are a critical natural resource and serve several functions including filtration/treatment of surface water runoff, flood control, erosion control, groundwater recharge/discharge, wildlife and species habitat, and recreation and tourism opportunities.

Comments on Effects to Resources:

This study evaluates a 20-mile segment of State Road (SR) 50 from US 301 in Hernando County to County Road (CR) 33 in the City of Mascotte in Lake County. Three alternatives were evaluated: spot improvements, which include signalization and roundabouts at key intersections; passing lanes; and the four-lane widening. EPA has identified that alternative 2B, the addition of passing lanes with roundabouts, is the preferred alternative as it provides the desired safety improvements and reduced environmental impacts. A review of the EST revealed the presence of approximately 608.68 acres of palustrine wetlands within a 500 foot buffer; 156.51 acres of palustrine wetlands within a 200 foot buffer; and, 28.46 acre of palustrine wetlands within a 100 foot buffer.

The proposed project along SR 50 traverses the Withlacoochee State Forest. Specifically the proposed project is located near the Richloam Wildlife Management Area. The Richloam WMA is one of seven large tracts of land that make up the Withlacoochee State Forest. The Richloam Tract, consists of more than 58,000 acres and is located in Hernando, Pasco, Sumter, and Lake counties. Pine flatwoods with scattered oak hammocks, bottomland hardwoods, and cypress swamp are the main natural communities on this area. Additionally, the proposed project crosses the Little Withlacoochee River. The Little Withlacoochee River drains to the Withlacoochee River that, in turn, drains to the Gulf of Mexico near Yankeetown. The mouth of the Withlacoochee River and the Gulf of Mexico

contain estuarine habitats used by federally-managed fish species and their prey (e.g., salt marshes, seagrasses, mangroves).

Widening the roadway and potentially increasing the speed and volume of traffic could make it more difficult and dangerous for wildlife to cross the roadway. This could affect natural dispersal of animals and interrupt any type of migration patterns. Additionally, a recreational hiking trail crosses the project in 2 places. Widening the roadway and potentially increasing the speed and volume of traffic may make it more difficult and dangerous for hikers to cross the road. This could affect the use of the hiking trail and endanger users. EPA has identified that alternative 2B, the addition of passing lanes with roundabouts, is the preferred alternative as it provides the desired safety improvements and reduced environmental impacts.

Potential impacts include, but are not limited to, loss of wetlands function, loss of wildlife habitat, degradation of water quality in wetlands, degradation of water quality in surface waters, and reduction in flood storage and capacity. Other issues of concern include increased stormwater runoff and the increase of pollutants into surface waters and wetlands as a result of the project and other point and nonpoint sources. Every effort should be made to maximize the collection and treatment of stormwater. Stormwater collection and treatment mechanisms should be designed to protect the function of surrounding wetlands, floodplains, and surface water features.

The environmental phase should focus on identifying wetlands areas to be potentially impacted by the project. The wetlands study should include a delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

To the extent practicable, US EPA encourages avoidance, minimization, and mitigation of impacts on wetlands, surface waters and groundwater in the project vicinity. Stormwater runoff and its potential impact on water quality should be properly evaluated and addressed during PD&E. Appropriate stormwater treatment systems and best management practices must be employed during construction, and throughout the operational life of the facility, to protect surface waters and prevent impacts to groundwater. To this end, the US EPA also recommends evaluating Low-Impact Development (LID) stormwater management practices during PD&E.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): Thank you for your review of the project. FDOT concurs with the Degree of Effect of Substantial for this issue.

Degree of Effect: **3** *Moderate* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

The SWFWMD has assigned a Degree of Effect based on the potential need for increased coordination or effort associated with the SWFWMD's proprietary or regulatory interests and obligations. For this project, a DOE of "Moderate" was assigned to this issue due to the fact the wetlands will need to be delineated, quantified, and labeled on the construction plans as part of the permit review. However, the expected permitting effort by FDOT should be straight forward and a normal effort is expected on the part of SWFWMD's regulatory staff.

The District will require a delineation of the landward extent of wetland and surface water features by a qualified environmental scientist, pursuant to Chapter 62-340, F.A.C., as located within the defined project limits. The District recommends that the FDOT submit a Formal Wetland Determination Petition prior to the ERP application submittal.

The surface water impacts, not associated with OFWs, will have a de minimis impact on fish and wildlife habitat; therefore, wetland mitigation would not be required to offset the impacts. For the wetlands, an analysis utilizing the Uniform Mitigation Assessment Method (UMAM) to determine the wetland mitigation required to offset the wetland impacts will be required. This project is located within the Withlacoochee River Basin. Mitigation banks located within this basin may be used to offset wetland impacts. The project appears to be located within the service areas for the Green Swamp Mitigation Bank (ERP 43034641.000), Boarshead Mitigation Bank (ERP 43040444.001), and the Withlacoochee Wetland Mitigation Bank (ERP 43040545.000).

An Environmental Resource Permit is required for the proposed additional lanes. However, the final determination of the type of permit will depend upon the final design configuration.

For **ETDM #14269**, the District has assigned a pre-application file (**PA# 403674**) for the purpose of tracking its participation in the ETDM review of this project. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.

Direct Effects

Identified Resources and Level of Importance:

Review of the EST GIS Analysis (run August 8, 2016) and the SWFWMD ArcMap system indicates there are approximately 212.26-acres of wetlands located within the proposed 200 foot buffer for this programming screen. Please note that the SWFWMD Wetland 2011 layer in the GIS does not include areas classified as surface waters or reservoirs (FLUCCS codes 400-499) so there may be additional acreages not accounted for through this analysis. Majority of the systems identified within the proposed project area are forested wetlands associated with larger wetland systems, which extend outside of the project area. The EST GIS Analysis identifies the largest percentage of coverage for the 200 foot buffer as Streams and Lake Swamps (bottomlands) which correlates with the number of creeks, canals and other channelized waterways located within the project area buffer.

In addition to the forested wetlands, the Little Withlacoochee River flows under SR 50 in its current condition. There is an existing bridge situated over the river.

Comments on Effects to Resources:

The widening of SR 50 from US 301 to CR 33 has the potential to impact wetlands and surface waters located within the 200 foot buffer. There are several wetlands that extend into the ROW that are forested and herbaceous wetlands which would require wetland mitigation to offset wetland impacts. While it appears the majority of the wetlands are portions of larger systems, please note that wetland impacts leaving a remnant wetland less than 1/2 acre and isolated will require mitigation for the full wetland.

The Little Withlacoochee River and several tributaries extend into the ROW for SR 50 and the widening of the roadway will result in the extension of bridges, headwalls and existing culverts.

The widening of the roadway has the potential to impact the existing roadside surface water ditches. These impacts are considered to be temporary impacts if the ditch is just shifted to accommodate the widened roadway. However, the piping of these surface waters are considered to be permanent impacts even though they may not require wetland mitigation pursuant to Subsection 10.2.2.2 or 10.2.2.1 of the Environmental Resource Permit Applicant's Handbook Volume I.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

For the wetland impacts and the impacts to the creeks an analysis utilizing the Uniform Mitigation Assessment Method (UMAM) to determine the wetland mitigation required to offset the wetland impacts will be required. This project is located within the Withlacoochee River Basin so mitigation banks located within this basin may be used to offset wetland impacts. This includes Green Swamp Mitigation Bank (ERP 43034641.000), Boarshead Mitigation Bank (ERP 43040444.001), and the Withlacoochee Wetland Mitigation Bank (ERP 43040545.000), at the time of this report. At the time of this report all three wetland mitigation banks had available freshwater forested and herbaceous wetland credits. Please coordinate with the mitigation banks to confirm the proper type and amount of mitigation credits are available to offset the wetland impact functional loss as assessed through UMAM.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

As mentioned above, the majority of the wetlands located within the 200 foot buffer assessed for this programming screen are part

of larger wetland systems that extend beyond the 5,280 foot buffer.

Comments on Effects to Resources:

Construction of the stormwater management system may require ponds to be constructed outside of the 200 foot buffer as utilized through this programming screen. The majority of the wetlands and surface waters associated with this roadway widening are part of larger systems that extend outside of the 200 foot buffer, as assess through this programming screen. Coordination with the District is recommended to eliminate wetland and/or surface water impacts during this phase.

The construction / alteration of stormwater facilities adjacent to wetlands, particularly forested wetlands, could intercept groundwater and surface water that has historically maintained wetland hydroperiods. Such wetlands may be dewatered and altered, with impacts to wetland vegetation communities, habitat, and wildlife populations.

The widening of SR 50 from US 301 to CR 33 has the potential to impact the 25 foot defined wetland buffer as they relate to the wetlands adjacent to and within the existing / proposed Right Of Way (ROW). The removal of the wetland buffer increases the possibility for secondary impacts to occur to the wetlands during and post-construction.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

During the pond siting stage, it is advised that the FDOT communicate with District environmental staff to clearly identify wetlands to avoid unnecessary wetland impacts.

Maintaining the 25 foot average wetland buffer can greatly reduce the secondary impacts to the wetlands located within the project area. If the minimum 15 foot wetland buffer cannot be maintained throughout the project, a buffer planting plan, including shrubbery and other transitional species, may be utilized to discourage these secondary impacts.

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): The FDOT concurs with the Water Management District's assessment; however, a Degree of Effect of Substantial will be issued after internal assessments and after reviewing comments from the other agencies participating in this review.

Degree of Effect: 3 *Moderate* assigned 09/29/2016 by Zakia Williams, US Fish and Wildlife Service

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Fish and Wildlife Habitat

Degree of Effect: Minimal to Moderate

Wood Stork (*Mycteria americana*)

The surrounding area is mainly undeveloped forested habitat and undisturbed wetlands, along with small areas of residential and commercial developments. The action area falls within a Core Foraging Area (CFA) of at least one nesting colony of the endangered wood stork. Direct impacts should be avoided.

Eastern Indigo Snakes (*Drymarchon corais couperi*)

Fragmented agricultural lands, undisturbed uplands and wetlands within the proposed corridor are suitable habitat for the threatened eastern indigo snake (EIS). It is very likely that this species may occur on undeveloped lands, agricultural lands and rural areas within the action area.

The potential for sand skinks (*Neoseps reynoldsi*) within this proposed corridor is very low. However, any areas that do meet the current soils and elevation criteria should be submitted to USFWS for further coordination and possible field review.

The potential for the Florida scrub jay (*Aphelocoma coerulescens*) within this proposed corridor is very low. The surrounding areas do not provide suitable habitat for the species.

Coordination with the Office of Migratory birds will be needed for an eagle nest located within 200 feet of corridor.

Surveys for all federally listed plants found in Hernando, Lake and Sumter county (the list can be found on our website northflorida.fws.gov) should be conducted by a trained botanist during the appropriate time of year.

Wetlands

Degree of Effect: Moderate

Wetlands provide important habitat for fish and wildlife. Data provided in the Environmental Screening Tool indicate that wetlands occur within the project area. Specifically, important wetlands and habitat for fish and wildlife occur immediately adjacent to the project footprint within public conservation lands in the Richloam WMA.

Comments on Effects to Resources:

Wood Stork (*Mycteria americana*)

The Service has determined that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork and other wetland dependent species, we recommend that impacts to suitable foraging habitat be avoided. If avoidance is not possible, minimization measure should be employed and best management practices to avoid further degradation of the site. Mitigation for wetland impacts should be discussed with USFWS and will require further coordination. Please refer to the North Florida Field Office website for WOST colony locations. <http://www.fws.gov/northflorida>

Eastern Indigo Snakes (*Drymarchon corais couperi*)

The addition of a new roads and the widening of roads will likely increase the risks to this species from direct mortality and indirectly from habitat fragmentation and noise disturbance. Individual snakes may have large home ranges of 200 to 250 acres. Direct impacts from vehicles, loss and fragmentation of habitat would contribute to the further decline of this species. Implementing the current standard construction conditions and protection measures for EIS will reduce the direct risks to snakes during the construction phase but not the long term impacts from habitat fragmentation and loss of individuals from interactions with vehicles for the life of the facility. Complete surveys for gopher tortoise burrows (currently a federal candidate species, which may be listed as Threatened before construction begins) should be conducted. Protection guidelines can be found on the North Florida Ecological Services website: <http://www.fws.gov/northflorida>. Surveys for gopher tortoise burrows will also facilitate the use of the EIS Effect determination key utilized by the Army COE.

Wetlands

Best Management Practices (BMPs) should be used to prevent degradation of wetland and other aquatic resources from erosion, siltation, and nutrient discharges associated with the project site. We recommend that the project be designed to avoid these valuable resources to the greatest extent practicable. If impacts to wetlands are unavoidable, we recommend that the FDOT provides mitigation that fully compensates for the loss of wetland resources.

Dependent upon the alternative(s) selected, the proposed project is expected to result in minimal to moderate involvement with wildlife and habitat resources. If it is determined the project will affect and federally listed species and/or their habitat, the Department will initiate consultation with FWS during the Project Development process.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Fish and Wildlife Service's Review (12/01/2016): The FDOT concurs with the Service's assessment; however, a Degree of Effect of Substantial will be issued after internal assessments and after reviewing comments from the other agencies participating in this review.

Degree of Effect: **4** *Substantial* assigned 09/23/2016 by Lee A. Kissick, Saint Johns River Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

An Individual Environmental Resource Permit is required for this project. SJRWMD would only review the Lake Co segment unless a special agreement is executed to delegate the project from one WMD to another. Alternatively, FDEP could be designated to review an ERP that crosses WMD boundaries; this is a "Special Case" that is described by the 2007 Operating Agreement between the agencies.

Direct Effects

Identified Resources and Level of Importance:

Parts of no fewer than four large (>25 acres) wetlands intersect the project. No wetland has any known special properties (Outstanding Florida Water, part of public conservation land, etc.) and are not known to be encumbered by any conservation

easement for regulatory purposes. Aerial photointerpretation suggested that wetland quality was generally moderately high to high. Hydroperiods appear to be adequate to sustain the habitats.

Comments on Effects to Resources:

Fill impacts will result in the total loss of wetland functions. Storm ponds controlled below SHWL could diminish adjacent wetland hydroperiods.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Impacts to project wetlands appear likely (and necessary) to expand the existing road. The additional lanes probably comply with the reduction/elimination criteria of 10.2.1, ERP A.H., Vol. I. Effort should be made to locate ponds in uplands and provide compensatory treatment where possible to avoid placing ponds in wetlands.

Mitigation would be required for direct impacts. The project occurs entirely in Mitigation Basin #12, Southern Ocklawaha River. To preclude adverse cumulative impacts, the mitigation should be located within Basin #12. Two mitigation banks occur within that basin, Hammock Lake Mitigation Bank and Lake Louisa and Green Swamp Mitigation Bank. Alternatively, mitigation could be provided by Section 373.4137 F.S., that charges the District with providing mitigation for the Florida Department of Transportation.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Parts of no fewer than four large (>25 acres) wetlands intersect the project. No wetland has any known special properties (Outstanding Florida Water, part of public conservation land, etc.) and are not known to be encumbered by any conservation easement for regulatory purposes. Aerial photointerpretation suggested that wetland quality was generally moderately high to high. Hydroperiods appear to be adequate to sustain the habitats.

Comments on Effects to Resources:

Secondary impacts like increased traffic will increase wildlife mortality. The expanded road and traffic capacity will result in increased noise and light that could disrupt social interactions of birds, anurans, etc. We doubt the Lake Co segment is an important travel corridor for black bear. No bald eagle nests are known within 1.0 mi of the road in this segment.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Impacts to project wetlands appear likely (and necessary) to expand the existing road. The additional lanes probably comply with the reduction/elimination criteria of 10.2.1, ERP A.H., Vol. I.

Mitigation would be required for secondary impacts. The project occurs entirely in Mitigation Basin #12, Southern Ocklawaha River. To preclude adverse cumulative impacts, the mitigation should be located within Basin #12. Two mitigation banks occur within that basin, Hammock Lake Mitigation Bank and Lake Louisa and Green Swamp Mitigation Bank. Alternatively, mitigation could be provided by Section 373.4137 F.S., that charges the District with providing mitigation for the Florida Department of Transportation.

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): Thank you for your review of the project. FDOT concurs with the Degree of Effect of Substantial for this issue.

Degree of Effect: 4 *Substantial* assigned 09/20/2016 by Randy Turner, US Army Corps of Engineers

Coordination Document: Permit Required

Coordination Document Comments:

The project as proposed, may qualify for the Department of the Army's Regional General Permit (RGP)-92 for impacts to the palustrine wetlands. The proposed project will have to be permitted using a Standard Individual Permit review if the wetland impacts exceed the parameters of the RGP-92.

Direct Effects

Identified Resources and Level of Importance:

A review of the EST revealed the presence of approximately 608.68 acres of palustrine wetlands within a 500 foot buffer; 156.51 acres of palustrine wetlands within a 200 foot buffer; and, 28.46 acre of palustrine wetlands within a 100 foot buffer. Any palustrine wetland impacts would most likely be palustrine forested (cypress, forested mixed, scrub-shrub) wetlands and a large quantity of palustrine emergent (freshwater marshes) wetlands. The level of importance would be substantial.

Comments on Effects to Resources:

Any palustrine wetlands in the project area deemed to be jurisdictional along the existing two-lane roadway already have been secondarily impacted so a functional assessment should reveal a lower quality of wetlands. Any new alignments along the proposed new corridor should contain higher quality wetlands. Given the jurisdictional wetland resources along the proposed project corridor, any impacts to these resources will be substantial.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The Corps recommends a continued emphasis on wetland avoidance and minimization opportunities throughout the planning process. A wetland survey should be conducted within the study area to identify the wetlands and a jurisdictional determination should be completed. A review of the Corps RIBITS indicates that the proposed project corridor would traverse the geographical service areas of the Boarshead Ranch Mitigation Bank (UMAM Credits) that currently has 0.12 palustrine emergent credits and 9.20 palustrine forested credits available; Green Swamp Mitigation Bank (UMAM Credits) currently has 6.80 palustrine forested credits available; Withlacoochee Wetland Mitigation Bank (UMAM Credits) currently has 0.22 palustrine emergent and 0.42 palustrine forested credits available; and Hammock Lake Mitigation Bank (Eastern portion of project corridor only) (UMAM Credits) that currently has 31.20 palustrine credits available; All banks are assessed in UMAM. Any unavoidable wetland impacts should be assessed using UMAM or WRAP dependent on the functional assessment of the bank or ILF that is proposed. Permittee responsible on-site or off-site mitigation options for unavoidable impacts should also be considered early on in the project planning phase, if required. The project as proposed, may qualify for the Department of the Army's Regional General Permit (RGP)-92 for impacts to the palustrine wetlands. The proposed project will have to be permitted using a Standard Individual Permit review if the wetland impacts exceed the parameters of the RGP-92.

Also the following conservation banks/preserve have Florida scrub-jay and skink credits available if required:

Collany Conservation Bank; Hatchineha Ranch Conservation Bank Phase 1 and 2; Lake Wales Ridge Conservation Bank; Morgan Lake Wales Preserve; Scrub Conservation Bank; Sebring Scrub Conservation Bank; and, Tiger Creek Conservation Bank (Eastern portion of project corridor) with Scrub-Jay and Skink credits.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

See direct effects.

Comments on Effects to Resources:

New, previously non-disturbed, adjacent wetlands would incur secondary effects along the expanded roadway or new alignment portions.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

See direct impacts.

FDOT District 5 Feedback to US Army Corps of Engineers's Review (12/01/2016): The Preliminary Environmental Discussion closely mirrors the Agency's findings and therefore FDOT concurs with the Degree of Effect of Substantial.

Degree of Effect: 2 *Minimal* assigned 09/07/2016 by David A. Rydene, National Marine Fisheries Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

The resources of concern are located at the mouth of the Withlacoochee River and in the Gulf of Mexico. These areas contain

estuarine habitats, including seagrasses, mangroves, and salt marsh, used by federally-managed fish species and their prey.

Comments on Effects to Resources:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 14269. The Florida Department of Transportation's District 7 and District 5 propose the evaluation of near-term and long-term improvements to increase safety and capacity on SR 50 from US 301 to CR 33 in Hernando County, Lake County, and Sumter County, Florida. Improvements under consideration include signalization and roundabouts at key intersections, the addition of passing lanes, and widening the road from 2 lanes to 4 lanes.

NMFS staff conducted a site inspection on September 6, 2016, to assess potential concerns related to aquatic resources at the mouth of the Withlacoochee River and in the Gulf of Mexico. Lands adjacent to the project are principally palustrine wetlands and agricultural lands, and some residential and commercial properties (mostly in towns). It does not appear that the project will directly impact any NMFS trust resources. However, the existing road crosses the Little Withlacoochee River. The Little Withlacoochee River drains to the Withlacoochee River that, in turn, drains to the Gulf of Mexico near Yankeetown. The mouth of the Withlacoochee River and the Gulf of Mexico contain estuarine habitats used by federally-managed fish species and their prey (e.g., salt marshes, seagrasses, mangroves). Therefore, NMFS recommends that stormwater treatment systems be upgraded to prevent degraded water from entering the Little Withlacoochee River, the Withlacoochee River, and the Gulf of Mexico system. In addition, best management practices should be employed during road construction to prevent sedimentation of downstream habitats.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to National Marine Fisheries Service's Review (12/01/2016): The FDOT concurs with the National Marine Fisheries Service's assessment; however, a Degree of Effect of Substantial will be issued after internal assessments and after reviewing comments from the other agencies participating in this review.

The following organization(s) were expected to but did not submit a review of the Wetlands and Surface Waters issue for this alternative: FL Department of Environmental Protection

Water Quality and Quantity

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 12/01/2016 by FDOT District 5

Comments:

The US Environmental Protection Agency and Southwest Florida Water Management District assigned a Degree of Effect of Moderate, and Saint Johns River Water Management District assigned a Degree of Effect of Degree of Effect of None. Given the resources in the study area, two impaired Florida Waters--Withlacoochee River (an Outstanding Florida Water), for Mercury and the Big Gant Canal, for various nutrients--the FDOT will assign a Degree of Effect as Moderate for this issue.

Degree of Effect: 3 *Moderate* assigned 09/30/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources

Water quality - surface water

Level of Importance

Water quality within the project area and within the State of Florida are of a high level of importance. EPA is assigning a Moderate degree of effect to this issue for the proposed project.

Comments on Effects to Resources:

The information provided in the ETDM Environmental Screening Tool (EST) to evaluate a 20-mile segment of State Road (SR) 50 from US 301 in Hernando County to County Road (CR) 33 in the City of Mascotte in Lake County identified eight waterbodies within 500 feet of the project. The eight waterbodies are: Giddon Lake Outlet, Big Gant Canal, Lake Elizabeth Outlet, Jumper Creek Canal, Little Withlacoochee, Long Lake Outlet, Walled Sink Ditch, and Withlacoochee River. Big Gant Canal (WBID 1378) and Withlacoochee River (WBID 1329F) are listed as impaired waters for failure to meet water quality standards. The Big Gant Canal is impaired for mercury in fish. The Withlacoochee River has an organic enrichment/ oxygen depletion impairment and is impaired for mercury in fish.

The eastern portion of the proposed project is located near the Green Swamp Wilderness preserve. The Green Swamp Wilderness Preserve is divided into five management units: Colt Creek State Park - 5,067 acres; East Tract - 51,149 acres; Hampton Tract - 11,052 acres; Little Withlacoochee Tract - 4,446 acres; and West Tract - 37,350 acres. Specifically, the eastern portion of the proposed project is located near the Withlacoochee Tract.

The Withlacoochee River is located within the 100 feet buffer area of the project and is an Outstanding Florida Water (OFW). OFWs are provided the highest level of protection under the Florida Administrative Code (F.A.C.). Degradation of water quality in an OFW is prohibited except under certain circumstances. Pollutant discharges must not lower existing ambient water quality. Any activity within an OFW requiring a Florida Department of Environmental Protection (FDEP) Environmental Resource Permit (ERP) must be deemed to be clearly in the public interest. Additional stormwater retention and treatment requirements may be required. FDOT will need to coordinate and consult with FDEP and the Water Management District regarding specific permitting requirements relating to this OFW.

EPA has identified that alternative 2B, the addition of passing lanes with roundabouts, as the preferred alternative as it provides the desired safety improvements and reduced environmental impacts. EPA is assigning a moderate degree of effect to the water quality issue for the increase in impervious surface area and the proximity to the OFW. With an increase in impervious surface area the project area is expected to experience an increase in stormwater runoff and the increase of pollutants into surface waters and wetlands as a result of the project and other point and nonpoint sources. Every effort should be made to maximize the collection and treatment of stormwater. Stormwater runoff should be diverted from streams and creeks. Best management practices should be implemented during construction, including the installation and regular maintenance of erosion control structures. Additionally, stormwater collection and treatment mechanisms should be designed to protect the function of surrounding wetlands, floodplains, and surface water feature that have already experienced secondary impacts from roadway runoff.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): The FDOT concurs with the findings in US Environmental Protection Agency's summary and will therefore assign a Degree of Effect as Moderate to this issue. The study phase will evaluate the project's overall potential to impact both surface water and groundwater quality and identify appropriate locations for stormwater management facilities. We will continue coordination with your agency.

Degree of Effect: 3 *Moderate* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

The SWFWMD has assigned a Degree of Effect based on the potential need for increased coordination or effort associated with the SWFWMD's proprietary or regulatory interests and obligations. For this roadway improvement project, a DOE of "Moderate" was assigned to this issue due to the present belief that future ERP permitting is expected to be non-routine for:

- Potential water quality impacts to Outstanding Florida Waters and Impaired Waters.
- Potential impacts to existing Zone A & AE floodplains within the proposed project area.

However, the expected permitting effort by FDOT should be straight forward and a normal effort is expected on the part of SWFWMD's regulatory staff.

Impacts to existing permitted stormwater management systems may decrease performance in terms of flood management and stormwater treatment. Information on Environmental Resource Permits (ERPs), Storm Water Permits, Dredge & Fill Permits and Works of the District Permits is now available in the EST under Water Quality & Quantity > Permits. Useful (but limited) information includes the permit number, a short description of the project, name of the permittee, project acreage and an approximate location of the project (shown graphically).

As of August, 2016, the FDOT's EST, supplemented with the SWFWMD's GIS, indicates eighteen (18) ERP's and one (1) Stormwater Management Permit have been applied for within 500 feet of this project. This information can be obtained from the SWFWMD's Permits Map Viewer and Environmental Resource Permit Search web sites as follows:

<http://www8.swfwmd.state.fl.us/ExternalPermitting/>

<http://www18.swfwmd.state.fl.us/erp/erp/search/ERPSearch.aspx>

Previous permits and applications that may be of interest to in the future PD&E and design phases of the bridge replacement project are as follows:

Environmental Resource Permits (12):

- 2506.000 - TARRYTOWN POLE PLANT
- 2506.006 - Robbins Manufacturing-Tarrytown, Florida Facility-ERP 2506 Modification
- 7284.000 - LITTLE FOOD TOWN-SR 50 & SR 471
- 9439.000 - SUNSHINE PEAT
- 9935.000 - DOT-S.R. 50 BRIDGE REPLACEMENT
- 17137.000 - ROBBINS FENCE SLAT PROCESSING FACILITY
- 18520.000 - Mobil Service Station
- 19888.000 - DOT-SR 50 FROM CR471 TO LAKE CO LINE
- 19888.001 - FDOT - State Road 50 at Mabel
- 21164.000 - DOT-SR 471 WITHLACOOCHEE RVR BRDG-SR 50
- 27348.000 - Citgo Station/Convenience Store-Tarrytown
- 35030.001 - FDOT-US 301 PASCO/HERN CL TO HERN/SUMTER

As shown in the EST, portions of this project are included in both the SWFWMD and SJRWMD jurisdictional boundaries. In accordance with Rule 62-330.061(3), F.A.C., the SWFWMD anticipates entering into an Interagency Agreement with the SJRWMD to establish regulatory responsibilities for this alternative. Note that the SWFWMD will most likely be the reviewing agency since the majority of the project is located within their jurisdictional boundaries.

The FDOT is reminded to mention this at the time of the pre-application meeting to allow adequate time for the water management districts to enter into the Interagency Agreement without impacting the permit application review time.

The SWFWMD's Applicant Handbook II document describes design approaches and criteria that will provide reasonable assurances that the proposed stormwater management systems will meet the conditions for issuance of an Environmental Resource Permit (ERP). Parameters frequently over or under estimated include: seasonal high water levels, seasonal high groundwater table elevations, soil vertical & horizontal hydraulic conductivity, depth to the soil confining units, historic basin storage, floodplain storage, conveyance way hydraulic capacity, peak discharge rates and timing, tailwater conditions in the receiving system, total discharged volume, and off-site hydrograph timing impacts. Site-specific design data is preferable to "book values."

The District recommends that the FDOT consider providing a pond siting report that addresses the above referenced design approaches and criteria. For those improvements that may affect existing cross drainage facilities, an updated bridge hydraulics report(s) should be prepared and submitted with the ERP application.

If this project will require the acquisition of new right-of-way areas, any issued permit may include special conditions prohibiting construction until the FDOT provides evidence of ownership and control.

For ETDM #14269, the District has assigned a pre-application file (**PA #403674**) for the purpose of tracking its participation in the ETDM review of this project. File **PA #403674** is maintained online as part of the Water Management Information System. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.

Direct Effects

Identified Resources and Level of Importance:

Water Quality:

The following information was obtained from the SWFWMD's Geographic Information System (GIS) and supplemented with information from the FDOT's Environmental Screening Tool (EST) and FDEP's TMDL Tracker, accessible at:

<http://webapps.dep.state.fl.us/DearTmdl/dashboardAction.do?method=dashboard#>

The project occupies eight (8) drainage basins within the 500-foot buffer: Lake Elizabeth Outlet (WBID 1390), Long Lake Outlet (WBID 1388), Withlacoochee River (WBID 1329F), Little Withlacoochee (WBID 1381), Big Gant Canal (WBID 1378), Giddon Lake Outlet (WBID 1383), Jumper Creek Canal (WBID 1360B), and Walled Sink Ditch (WBID 1359D). An approximate (graphical) location of these WBIDs can be viewed within the EST. The following waterbodies are classified as impaired for nutrient related pollutants by FDEP:

1. Big Gant Canal (WBID 1378), Group 4 (Withlacoochee), Upper Withlacoochee Planning Unit, FDEP Southwest Regulatory District: Selected Assessments for Cycle 2 (as of 11/02/10):

- Verified Impaired (Assessment Category 5) for Nutrients (Chlorophyll-a).

A TMDL document was not available on FDEP's TMDL Tracker website. Also, a Basin Management Action Plan (BMAP) was not available from the following FDEP web site: <http://www.dep.state.fl.us/water/watersheds/bmap.htm>

Water Quantity:

Floodplain issues for this roadway improvement project were addressed in a previous section of this document.

Comments on Effects to Resources:

Water Quality:

Untreated or under-treated runoff generated by this project could impact the water bodies identified in the previous section. As of August, 2016, seven (7) of these waterbodies are not currently classified as "Verified impaired" by the FDEP for nutrient related pollutants. However, this could change in the future as development activities increase within these respective WBIDs. The SWFWMD recommends that FDOT participate as a stakeholder in future TMDL and BMAP activities by the FDEP.

Water Quantity:

Potential impacts from this road improvement project will depend upon the required filling, encroachment or alteration of Historic Basin Storage areas or existing (or future) Zone A and AE Floodplains. Un-attenuated or under-attenuated runoff could cause flooding impacts to existing off-site stormwater management systems and drainage conveyance facilities.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

The SWFWMD will require that stormwater management systems that discharge directly into Outstanding Florida Waters (OFWs) provide treatment for a volume 50 percent more than required for this project's selected treatment systems (Reference: Section 4.1.f of the District's "Applicant's Handbook Volume II", available at <http://www.swfwmd.state.fl.us/permits/rules/>). As applicable, the SWFWMD will require that stormwater management systems that discharge directly or indirectly into waters not meeting standards, including impaired waters, provide a net improvement condition in the water body in terms of the pollutants that contribute to the water body's impairment. A higher level of treatment may be necessary (Reference: Section 4.1.g of the District's "Applicant's Handbook Volume II", available at <http://www.swfwmd.state.fl.us/permits/rules/>). If applicable, reductions in pollutant loading from stormwater runoff via stormwater treatment facilities or other BMPs will be required to implement future TMDLs and BMAPs should they be finalized and adopted.

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

- The alternate, contributing areas are hydrologically equivalent to the new and existing, directly-connected impervious watershed areas that would otherwise contribute to the treatment system;
- The pollution source and loading characteristics are reasonably equivalent, and
- The treatment benefits occur in the same receiving waters and in the same general locality as the existing point(s) of discharge from the new project area.

It is recommended that the FDOT consider stormwater quality treatment together with water quality impacts to wetlands and other surface waters when designing the stormwater water management, components of this project.

Water quantity concerns must be addressed for the project in accordance with Part III of the SWFWMD's Applicant Handbook II. This includes making provisions to allow runoff from up-gradient areas to be conveyed to down-gradient areas without adversely affecting the stage point or manner of discharge and without degrading water quality (refer to Section 3.8 of the SWFWMD's Applicant Handbook II, available at <http://www.swfwmd.state.fl.us/permits/rules/>).

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): The FDOT concurs with the findings in the Water Management District's summary and will therefore assign a Degree of Effect as Moderate to this issue. The study phase will evaluate the project's overall potential to impact both surface water and groundwater quality and identify appropriate locations for stormwater management facilities. We will continue coordination with your agency.

Degree of Effect: 0 None assigned 09/23/2016 by Ken Lewis, Saint Johns River Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Individual SWERP

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): Thank you for your review.

The following organization(s) were expected to but did not submit a review of the Water Quality and Quantity issue for this alternative: FL Department of Environmental Protection

Floodplains

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 12/01/2016 by FDOT District 5

Comments:

The US Environmental Protection Agency assigned a Degree of Effect of Substantial; Southwest Florida Water Management District assigned a Degree of Effect of Moderate; and Saint Johns River Water Management District assigned a Degree of Effect of None. As with wetlands and other surface waters and water quality and quantity, the FDOT recognizes the significance of this resource and will therefore issue a Degree of Effect of Substantial. The information provided by both the US EPA and the Water Management District, particularly studies and Watershed Management Models, will be reviewed and considered as roadway and drainage concepts are developed and evaluated. The FDOT will work closely with both agencies to develop concepts that avoid, minimize and/or mitigate for potential impacts to floodplains.

Degree of Effect: 3 *Moderate* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

The SWFWMD has assigned a Degree of Effect based on the potential need for increased coordination or effort associated with the SWFWMD's proprietary or regulatory interests and obligations. For this project, a DOE of "Moderate" was assigned to this issue due to the present belief that future Environmental Resource Permit (ERP) permitting is expected to be non-routine for expected impacts to future Zone A and AE floodplains and historic basin storage areas within the proposed areas of:

- Roadway widening.
- Alterations of existing surface water storage and conveyance facilities.
- New stormwater management ponds.

However, the expected permitting effort by FDOT should be straight forward and a normal effort is expected on the part of SWFWMD's regulatory staff.

SWFWMD supported Watershed Management Models are generally based on more recent land cover and topographic information. The SWFWMD recommends that the FDOT utilize data from these flood studies in preference to generalized information on flows and stages. FDOT should coordinate with District Engineering & Watershed Management Section staff in Brooksville regarding the status & data availability of these Watershed Management Models. SWFWMD studies encompassing the proposed roadway improvement project that may be helpful in the PD&E and design phase include the following:

Project Number: L175
Project Name: WMP - Hernando - Eastern Hernando Withlacoochee River
Area(s) of Responsibility: Flood Protection / Floodplain Management
Project Status: **Completed**
SWFWMD Contact: Ms. Jessica Hendrix

Project Number: L544
Project Name: WMP - Hernando - Little Withlacoochee River Watershed
Area(s) of Responsibility: Flood Protection / Floodplain Management
Project Status: **Completed**
SWFWMD Contact: Ms. Jessica Hendrix

Project Number: L787
Project Name: WMP - Sumter - Big Prairie & Gant Lake Watersheds
Area(s) of Responsibility: Flood Protection / Floodplain Management
Project Status: **Completed**
SWFWMD Contact: Ms. Jessica Hendrix

Project Number: N487
Project Name: WMP - Jumper Creek Watershed Mgmt Plan
Area(s) of Responsibility: Flood Protection / Floodplain Management
Project Status: **Ongoing**
SWFWMD Contact: Mr. Nam Nguyen

Floodplain information developed through these studies can be viewed through the SWFWMD's "Floodplain Map Viewer" at <http://www.swfwmd.state.fl.us/projects/wmp/>. Proposed stormwater management systems by FDOT may necessitate updates to the current or proposed Watershed Management Models.

Direct Effects

Identified Resources and Level of Importance:

The following information was obtained from the FDOT's Environmental Screening Tool (EST) and supplemented with information from the SWFWMD's Geographic Information System (GIS):

Digital Flood Insurance Rate Map (DFIRM) areas of interest include the following:

- Zone AE: representing approximately fourteen (14) % of the project length within the 500-foot buffer.
- Zone A: representing approximately twenty-three (23) % of the project length within the 500- foot buffer.
- Zone X: representing approximately sixty-two (62) % of the project length within the 500-foot buffer.

Approximate locations of these DFIRM Zones can be viewed within the EST under the "Floodplains" map and > *Water Resource > Flood Zones > DFIRM Flood Hazard Zones* layer. Of particular interest are the wetlands & water bodies within the Lake Elizabeth Outlet (WBID 1390), Long Lake Outlet (WBID 1388), Withlacoochee River (WBID 1329F), Little Withlacoochee (WBID 1381), Big Gant Canal (WBID 1378), Giddon Lake Outlet (WBID 1383), Jumper Creek Canal (WBID 1360B), and Walled Sink Ditch (WBID 1359D).

As of August, 2016, the following FIRM Panel Numbers for the proposed alignment (from west to east) can be obtained from the FEMA Map Service Center at:

<https://msc.fema.gov/portal>

Panel # 12053C0243D: Effective Date - 02/02/2012
Panel # 12053C0244D: Effective Date - 02/02/2012
Panel # 12053C0265D: Effective Date - 02/02/2012
Panel # 12119C0313D: Effective Date - 09/27/2013
Panel # 12119C0314D: Effective Date - 09/27/2013
Panel # 12119C0312D: Effective Date - 09/27/2013
Panel # 12119C0308D: Effective Date - 09/27/2013
Panel # 12119C0317D: Effective Date - 09/27/2013
Panel # 12119C0309D: Effective Date - 09/27/2013
Panel # 12119C0328D: Effective Date - 09/27/2013
Panel # 12119C0329D: Effective Date - 09/27/2013
Panel # 12069C0550E: Effective Date - 12/18/2012
Panel # 12069C0535E: Effective Date - 12/18/2012

Comments on Effects to Resources:

Potential impacts for the proposed project will depend upon the required filling, encroachment or alteration of existing (or future) Zone A and AE Floodplains, Historic Basin Storage areas and (if applicable) Floodways.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Encroachment within any floodplain, floodway or historic basin storage area may decrease stormwater storage which could increase flooding depth and duration. The SWFWMD may require compensation for fill (or other encroachments) into floodplains, floodways and historic basin storage areas up to the 100-year event if such encroachment(s) will adversely affect conveyance, storage, water quality or adjacent lands (Reference: Sections 3.3 and 3.7 of the District's "Applicant's Handbook Volume II", available at <http://www/.swfwmd.state.fl.us/permits/rules>).

The FDOT may reduce the degree of effect for flooding by:

- restricting the filling / encroachment into floodplain, floodway and historic basin storage areas to only those areas that are necessary;
- constructing stormwater treatment ponds outside floodplain, floodway and historic basin storage areas;
- providing equivalent compensation for lost floodplain, floodway and historic basin storage.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): The FDOT recognizes the importance of reviewing the previous studies conducted by the Water Management District and will utilize this information to the extent feasible during the PD&E Study. Other permit and data resources may be requested during the PD&E Study.

Degree of Effect: 4 *Substantial* assigned 09/29/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources

Floodplains

Level of Importance

Development within the 100-year floodplain is of a high level of importance. Construction of roadways within the floodplain should not impede, obstruct or divert the flow of water or debris in the floodplain which would alter the roadway's discharge capacity or otherwise adversely affect public health, safety and welfare, or cause damage to public or private property in the event of a flood. The environmental phase of the project should include an evaluation of floodplain impacts, and the project's potential to impact floodplains should be considered when selecting an alternative. FDOT should consider opportunities to avoid adverse effects and incompatible development in the floodplains.

Special Flood Hazard Area (SFHA) is defined as - A high-risk flood area that has special flood, mudflow, or flood-related erosion hazards. This area is shown on a Flood Hazard Boundary Map or a Flood Insurance Rate Map as Zone A, AO, A1-A30, AE, A99, AH, AR, AR/A, AR/AE, AR/AH, AR/AO, AR/A1-A30, V1-V30, VE, or V. Flood insurance is mandatory for properties in a SFHA.

Flood Zone Designations reflect the severity or type of flooding in an area. Your property may be located in a high risk zone or a low to moderate risk zone. The proposed project corridor includes acreage within high risk Zone A, as well as low to moderate risk Zone X.

High Risk Zones

A - High flood risk. Base flood elevations have not been determined. Flood insurance is mandatory and local floodplain development codes apply. These properties have a 1 percent annual chance of flooding and a 26 percent chance of flooding over the life of a 30-year mortgage.

Low to Moderate Risk Zones

X (shaded) - Area of moderate flood hazard. This flood risk is reduced, but not removed.

Flood insurance is not required in this zone, but is available and local floodplain development codes may apply.

X (unshaded) - These properties are outside the high-risk zones. This flood risk is reduced, but not removed. Flood insurance is not required in this zone, but is available and local floodplain development codes may apply.

Comments on Effects to Resources:

EPA reviewed the GIS analysis data in the EST and assessed the impact to floodplains utilizing the Digital Floodplain Insurance Rate Map (DFIRM) data. FEMA Special Flood Hazard Areas are identified on floodplain maps or Flood Insurance Rate Maps (FIRMs). FIRMs were traditionally used as the nationally accepted source of data for determining flood zones. Floodplain map modernization has led to the development of Digital Flood Insurance Rate Maps (DFIRMs) which have greatly improved the quality of floodplain mapping information and data. Land use agencies and planners, including FDOT, should utilize the best available floodplain data, including DFIRMs, when assessing a project's potential impact to flood hazard areas.

According to the DFIRM 100-Year Floodplain Data, there are approximately 544.22 acres (22.84% of total acres) of Zone A of 100-year floodplain within the Paxton Study Area. The remainder of the proposed project area, 345.22 acres, are within Zone AE.

This study is to evaluate a 20-mile segment of State Road (SR) 50 from US 301 in Hernando County to County Road (CR) 33 in the City of Mascotte in Lake County. Three alternatives were evaluated. Spot improvements, which include signalization and roundabouts at key intersections; passing lanes; and the four-lane widening. EPA is assigning a substantial degree of effect to the floodplain issue; however, the three potential alternatives may require additional right-of-way which may include acreage within the 100-year floodplain. The proposed road-way alterations may result in additional impervious surface area which will generate additional runoff into the offsite drainage system and associated floodplains of adjacent waterbodies.

General comments relating to floodplains include the fact that any development within the 100-year floodplain has the potential for placing citizens and property at risk of flooding and producing changes in floodplain elevations and plan view extent. Development (such as roadways, housing developments, strip malls and other commercial facilities) within floodplains increases the potential for flooding by limiting flood storage capacity and exposing people and property to flood hazards. Development also reduces vegetated buffers that protect water quality and destroys important habitats for fish and wildlife.

The environmental review phase (PD&E) of the project should include an evaluation of measures and alternatives to minimize negative impact to floodplains and compensation for loss of floodplain and basin storage capacity. Efforts should be made to avoid or minimize impacts to floodplain resources and functions. Engineering design features and hydrological drainage structures should be such that stormwater transport, flow, and discharge meet or exceed flood control requirements and stormwater runoff should be routed away from receiving surface waters.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): Thank you for your review. The FDOT will use the best available data, starting with the existing conditions analysis, to assess the potential impacts to flood hazard areas, floodplains, etc.

Degree of Effect: 0 None assigned 09/23/2016 by Ken Lewis, Saint Johns River Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Individual SWERP

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): Thank you for your review.

Wildlife and Habitat

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 12/01/2016 by FDOT District 5

Comments:

The FL Fish and Wildlife Conservation Commission and FL Department of Agriculture and Consumer Services gave a Degree of Effect of Substantial; US Fish and Wildlife Service gave a Degree of Effect of Moderate; and Southwest Florida Water Management District gave a DOE of Minimal. The FDOT will issue a Degree of Effect as substantial for this issue due to the presence of a range of listed species throughout all portions of the study area. The information provided by the agencies has been reviewed and used to scope various elements of the PD&E Study, such as roadway and drainage concepts in addition to measures that will be carried out in the Natural Resources Evaluation Report. Extensive coordination with these agencies will take place throughout the PD&E Study.

Degree of Effect: 4 *Substantial* assigned 09/30/2016 by Jennifer Goff, FL Fish and Wildlife Conservation Commission

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Florida Fish and Wildlife Conservation Commission (FWC) staff has reviewed ETDM #14269, Hernando, Sumter, and Lake Counties, and provides the following comments related to potential effects to fish and wildlife resources of this Programming Phase project.

The Project Description Summary states that this project involves widening and other improvements (signalization, roundabouts, etc.) to SR 50 between US 301 in Hernando County and CR 33 in Lake County, a distance of approximately 20 miles. Widening alternatives include the construction of passing lanes as a short or long term solution, as well as the conversion of the existing two-lane highway to a four-lane facility. The Project Description did not address the probable need for new Drainage Retention Areas (DRAs) to handle the additional stormwater runoff from the expanded roadway.

An assessment of the project area was performed on lands within 500 feet of the proposed alignment to determine potential impacts to habitat which supports listed species and other fish and wildlife resources. Our inventory included a review of aerial and ground-level photography, various wildlife observation and landcover data bases, along with coordination with FWC biologists and other State and Federal agencies. A GIS analysis was performed using the Florida Department of Transportation's (FDOT) Environmental Screening Tool to determine the potential quality and extent of upland and wetland habitat, and other wildlife and fisheries resource information. We have reviewed the Preliminary Environmental Discussion Comments Report provided by the FDOT, and offer the following comments and recommendations.

Our assessment reveals that land use in the assessment area is a mix of agriculture (mostly pasture) and rural (32.88%), urban (25.33%), and a wide variety of natural land cover. Upland vegetative communities include Mesic Flatwoods (7.95%, 192.93 acres), Mesic Hammock (5.08%, 123.2 acres), Mixed Hardwood-Coniferous (3.37%, 81.83 acres), Bare Soil (0.65%, 15.77 acres), Shrub and Brushland (0.59%, 14.24 acres), and Upland Hardwood Forest (0.09%, 2.27 acres). Wetland and aquatic landcover types include Hydric Hammock (5.92%, 143.71 acres), Isolated Freshwater Marsh (3.71%, 90.07 acres), Wet Prairies (3.32%, 80.59 acres), Freshwater Forested Wetlands (3.25%, 78.96 acres), Basin Swamp (3.13%, 75.93 acres), Marshes (2.58%, 62.5 acres), Floodplain Swamp (1.27%, 30.81 acres), Dome Swamp (0.30%, 7.36 acres), Man-Made Lakes (0.21%, 5.11 acres), Cypress (0.15%, 3.75 acres)

acres), Freshwater Non-Forested Wetlands (0.14%, 3.36 acres), and Natural Lakes (0.04%, 1.01 acres). Approximately 8.4 miles of the project alignment goes through the public conservation lands of the Withlacoochee State Forest, most of which is also within the FWC's Richloam Wildlife Management Area. The most valuable wildlife habitats in the project area are in the State Forest, especially the swamps and adjacent forests along the Little Withlacoochee River, which flows under the road via culverts in the western portion of the project. Mature forested wetlands along steam floodplains and basin swamps such as those in the project area provide wildlife escape cover, forage and mast production, and hollow trees used by mammals as dens, and by cavity nesters such as the wood duck, barred owl, and pileated woodpecker.

Based on range and preferred habitat type, the following species listed by the Federal Endangered Species Act and the State of Florida as Federally Endangered (FE), Federally Threatened (FT), State-Threatened (ST), or State Species of Special Concern (SSC) have the potential to occur in the project area: sand skink (FT), American alligator (FT based on similarity of appearance to American crocodile), Eastern indigo snake (FT), Florida scrub jay (FT), red-cockaded woodpecker (FE), wood stork (FE), gopher frog (SSC), Florida pine snake (SSC), short-tailed snake (ST), gopher tortoise (ST), Florida burrowing owl (SSC), Southeastern American kestrel (ST), Florida sandhill crane (ST), limpkin (SSC), snowy egret (SSC), little blue heron (SSC), tricolored heron (SSC), white ibis (SSC), Sherman's fox squirrel (SSC), Homosassa shrew (SSC), and Florida mouse (SSC). All of these species either likely or potentially utilize appropriate habitats in the vicinity of the project alignment.

The GIS analysis revealed several specific characteristics associated with lands along the project alignment that provide an indication of potential habitat quality or sensitivity that will require field studies to verify the presence or absence of listed wildlife species and the quality of wildlife habitat resources. In the FWC's Integrated Wildlife Habitat Ranking System, 34.53% of the assessment area is ranked High or Moderately High. FWC's Priority Wetlands Classification predicts 4 to 6 or 7 to 9 focal species in wetland areas and 1 to 3 focal species in upland areas. There are FWC Strategic Habitat Conservation Areas for black bears, swallow-tailed kites, and Cooper's hawks in the assessment area. In the Florida Natural Areas Inventory Critical Lands and Waters Identification Project (CLIP), 29.43% of the assessment area is ranked Priority 1 or 2 (high) for Biodiversity Resources. Also in CLIP, 5.95% of the assessment area is ranked high or moderately high for Rare Species Habitat Conservation Priorities. The Lake County portion of the project is within the U.S. Fish and Wildlife Service Sand Skink Consultation Area. The project is within the core foraging area of two wood stork colonies.

Comments on Effects to Resources:

Primary wildlife issues associated with this project include: potential loss of public conservation/recreation lands resulting from expansion of the existing right-of-way (ROW) through the Withlacoochee State Forest; potential loss of wildlife habitat from expanded roadway and DRA construction; potential adverse effects to a significant number of species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened or Species of Special Concern; potential water quality degradation as a result of additional stormwater runoff from the new roadway surface draining into nearby wetlands, creeks, and the Little Withlacoochee River; potential for increased wildlife roadkill; potential further restrictions on the ability of land managers at the Richloam Wildlife Management Area to utilize prescribed fire for habitat enhancement; and secondary and cumulative impacts of road construction that results in additional loss of wildlife habitat.

The West SR 50 Corridor Planning Study presented alternative scenarios to be further evaluated for this project. Alternative 1 includes spot intersection improvements including signals, roundabouts, and some intersection realignments. Alternative 2 included four iterations that have added passing lanes, with signals, roundabouts, and/or four-laning of the more urbanized road segments. Alternative 3 involves conversion of the entire project into a divided four-lane highway, with the rural portion requiring a 200-foot-wide ROW.

Because Alternative 3 would involve a significant loss of valuable wildlife habitat that is also public recreation land, we believe the direct and indirect effects of this alternative could be substantial. Based on the project information provided, we believe that direct and indirect effects of Alternatives 1 and 2 could be moderate, provided that roadway construction is confined to the existing cleared ROW to the maximum degree possible, any new DRAs are not constructed within areas of natural habitat, and degradation of adjacent or downstream water quality is avoided via inclusion of Best Management Practices in the project design.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

To minimize this encroachment onto public lands and loss of habitat, we encourage FDOT to utilize roadway design features such as reducing median and shoulder widths to the maximum degree possible should this option be selected. The proprietary aspects of this project will be reviewed under the Department of Environmental Protection Division of State Land's Linear Facilities Policy, and we recommend coordination with the FWC's Wildlife and Habitat Management Section (850-488-3831) early in the process.

We recommend that the Project Development and Environment Study address natural resources by including the following measures for conserving fish and wildlife and habitat resources that may occur within and adjacent to the project area.

1. The Preliminary Environmental Discussion Comments Report referenced FDOT's commitment to prepare a Natural Resources Evaluation. This should include plant community mapping and wildlife surveys for the occurrence of wildlife species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened or Species of Special Concern should be performed, both along the ROW and within sites proposed for RDAs. Basic guidance for conducting wildlife surveys may be found in the FWC's Florida Wildlife Conservation Guide at <http://myfwc.com/conservation/value/fwcg/>.
2. Based on the survey results, a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented. DRAs and equipment staging areas should be located in previously disturbed sites to avoid habitat destruction or degradation. The plan should address specific habitat needs which are biologically compatible with the recovery of the target species. For guidance in this effort, FWC's Species Action Plans should be consulted at <http://myfwc.com/wildlifehabitats/imperiled/species-action-plans/>.
3. Gopher tortoises have been documented in the project area. If gopher tortoises or nests of other ST or SSC species are present within any permanent or temporary construction area, a permit may be necessary from the FWC. For gopher tortoise survey methodology and permitting guidance, we recommend that FDOT refer to the FWC's Gopher Tortoise Permitting Guidelines (Revised February 2015) at: <http://myfwc.com/license/wildlife/gopher-tortoise-permits/>.
4. The marshes and wet prairies along SR 50 may provide potential nesting habitat for the Florida sandhill crane. FWC staff recommends that surveys for nesting sandhill cranes be conducted during the January through August breeding season prior to construction. If there is evidence of nesting during this period, we recommend that the nest site be buffered by 400 feet to avoid disturbance by human activities. If nesting is discovered after construction has begun or if maintaining the recommended buffer is not possible, we recommend that FDOT contact the FWC staff identified below to discuss potential permitting needs.
5. The site may contain suitable habitat for Southeastern American kestrels. FWC staff recommends that the applicant conduct kestrel surveys during their nesting season (April to August) within suitable habitat areas. Surveys from May to July are ideal to avoid confusion with the migratory subspecies of American kestrel. Survey guidelines, reporting criteria, and habitat needs for the Southeastern American kestrel can be found at the following website: http://fwcg.myfwc.com/docs/American_Kestrel_Technical_Report.pdf.
6. Sherman's fox squirrels may inhabit mixed hardwood-conifer forest, open areas with pines and oaks, and ecotones between these habitats and pasture. Pre-construction surveys should be conducted to determine whether they are present. Sherman's fox squirrels typically nest between October and February and from April to August. Fox squirrels are known to use more than one nest and that nest use can vary over time. For accuracy, surveys should be conducted within 60 days of clearing or construction. If fox squirrel nests are found onsite, a 125-foot buffer distance from the nest should be maintained. If it will be necessary to remove a nest tree or work within 125 feet of a nest tree, the applicant should then coordinate with FWC staff to discuss permitting alternatives.
7. We recommend the construction area be surveyed for burrowing owls prior to construction activities to ensure that no active burrowing owl burrows are present. The Florida burrowing owl breeding season is February to July. Burrowing owl families will often use a breeding burrow, as well as satellite burrows. If burrowing owls are observed onsite, please coordinate with the FWC staff identified at the close of this letter to discuss avoidance, minimization, and permitting options.
8. If expansion of the ROW to accommodate a divided four-lane highway through the Withlacoochee State Forest is the ultimately selected alternative, we recommend that the possibility of bridging the Little Withlacoochee River floodplain be explored. A bridge that includes upland pathways for wildlife and appropriate tie-back fencing could provide some habitat connectivity beneath the expanded roadway, reduce roadkills, and enhance public safety.
9. To further reduce roadkill of listed amphibians, reptiles, and small mammals such as the gopher frog, gopher tortoise, Florida pine snake, Eastern indigo snake, and Florida mouse, we recommend that use of a small-mesh herp guard along the bottom of ROW fencing be examined. The potential for wildlife home-range fragmentation due to fencing should be balanced against the probability of the highway becoming a population sink for these species.
10. A compensatory mitigation plan should include the replacement of any wetland, upland, or aquatic habitat functional values for listed species which are lost as a result of the project. Replacement habitat for mitigation should be type for type, as productive, and equal to or of higher functional value. Please notify us immediately if the design, extent, or footprint of the current project is modified, as we may choose to provide additional comments and/or recommendations.

We appreciate the opportunity to provide input on highway design and the conservation of fish and wildlife resources. Please contact Brian Barnett at (772) 579-9746 or email brian.barnett@MyFWC.com to initiate the process for further overall coordination on this

project.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FL Fish and Wildlife Conservation Commission's Review (12/01/2016): Thank you for your very specific comments related to potential minimization, mitigation and avoidance strategies. These have been utilized in the scoping of the project and the FDOT looks forward to working closely with your agency as the project continues.

Degree of Effect: 2 *Minimal* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

A Degree of Effect of "Minimal" was assigned to this issue due to the fact there may need to be some additional coordination with FFWCC.

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

For ETDM #14269, the District has assigned a pre-application file (**PA# 403674**) for the purpose of tracking its participation in the ETDM review of this project. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.

Direct Effects

Identified Resources and Level of Importance:

The widening of SR 50 from US 301 to CR 33 potentially will result in surface water and wetland impacts, which will result in additional noticing being sent to FWC for their comments.

Review of the EST GIS Analysis (run August 8, 2016) and the SWFWMD ArcMap GIS shows a mixture of land use within the area of the proposed roadway widening. The 2003 FFWCC Habitat and Landcover GRID indicates the largest coverage is High Impact Urban (31.34%) over the 20 mile stretch of existing roadway.

Portions of the 200 foot buffer is located within the sand skink, scrub jay, and woodstork core consultation area and there is a potential for gopher frog and black bear habitat in the upland areas.

Comments on Effects to Resources:

Coordination with FFWCC for potential gopher frog, black bear sites and other threatened or endangered species may also be required after a wildlife survey of the proposed site is completed at the time of design.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

There are no active eagle's nests located within 1 mile of the proposed roadway widening; however there are 3 nests located within the 5,280 foot buffer so additional communication with FFWCC during pond siting may be required.

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): Thank you for your review. The FDOT has documented the pre-application file information (PA# 403674) and will work closely with the Water Management District.

Degree of Effect: 4 *Substantial* assigned 09/30/2016 by Steve Bohl, FL Department of Agriculture and Consumer Services

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

The Florida Forest Service would like to assist with planning to minimize impacts to the state forest.

Direct Effects

Identified Resources and Level of Importance:

The resource that could be impacted by this project is the Withlacoochee State Forest. The forest is an important habitat for many species of plants and animals, some are rare and listed. It is also an important watershed that gives rise to the Withlacoochee River. There is also recreation that occurs on the property, hunting, hiking, fishing, bird watching, etc. There are also historic cultural sites on the property.

Specifically there is a hiking trail that crosses SR 50 in 2 places (Segment 4). Indian House Hammock (mesic and hydric hammock) which is home to 3 listed species of plant (*Asplenium erosum*, *Pecluma plumula*, *Trichomanes petersii*) is intersected by Segment 4. The Little Withlacoochee River passes under SR 50 in Segment 4. Animals could cross SR 50 to go from one part of the forest to another, including 2 documented listed species (gopher tortoise, eastern diamondback rattlesnake). A mesic hammock adjacent to segment 2 provides habitat for 5 listed species of plant (*Justicia cooleyi*, *Pecluma dispersa*, *Pecluma plumula*, *Pecluma ptillodon*, *Peperomia humilis*).

A burn program which sustains the flatwoods of the state forest adjacent to SR 50 must be maintained on both sides of Segments 2-4.

Swallow-tailed kites nest immediately north of Segment 4.

There are cultural historic sites on both sides of the Little Withlacoochee River at the current SR 50 crossing (Segment 4).

The Florida Forest Service operations, and the recreational and using state forest public.

Comments on Effects to Resources:

There are undisturbed hydric and mesic hammocks lining the current corridor of SR 50. These hammocks provide habitat for 7 listed plant species (*Asplenium erosum*, *Pecluma plumula*, *Trichomanes petersii*, *Justicia cooleyi*, *Pecluma dispersa*, *Pecluma ptillodon*, *Peperomia humilis*) with some of the plants occurring immediately adjacent to the current roadway. Widening the roadway will necessarily displace some of these plants and the habitat in which they occur.

A burn program exists to maintain the flatwoods plant community in the Richloam Tract. The SR 50 corridor already bisects this land and limits the conditions in which we can carry out prescribed burning. This project could change traffic characteristics to further limit the conditions in which prescribed burning could be carried out.

Changing the current road condition with this project could have detrimental effects to the swallow-tailed kite nesting location nearby.

An expanded bridge across the Little Withlacoochee River could impact the flow of the river and it could impact the documented archeological sites adjacent to the river.

Widening the roadway and potentially increasing the speed and volume of traffic could make it more difficult and dangerous for wildlife to cross the roadway. This could affect natural dispersal of animals and interrupt any type of migration patterns.

A recreational hiking trail crosses the project in 2 places. Widening the roadway and potentially increasing the speed and volume of traffic may make it more difficult and dangerous for hikers to cross the road. This could affect the use of the hiking trail and endanger users.

Dog hunting occurs in the Richloam Tract. Widening the roadway and potentially increasing the speed and volume of traffic may make it more difficult and dangerous for hunting dogs (and game and associated hunters) to cross the road.

Sod/soil placed in the median and the shoulders could contain invasive exotic species of plant and animals that could spread to conservation lands on both sides. Future mowing in the right of way could also spread invasive exotic species.

Access to and from the state forest should not be impacted for our operations and for the public using the state forest.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

It could be possible to create 4 lanes of traffic, or passing lanes in certain areas while leaving some areas as they are. The best place to protect from the effects of this project would be the curve in Segment 4 between Boggy Road and Porter Gap Road (Indian House Hammock), and the middle of section 2 west of Mabel.

The roadway could be engineered to make it safe in case smoke from a prescribed burn were to enter onto the roadway.

Safe animal and human crossings could be engineered into the project. Perhaps these could be associated with the river crossing.

Mitigation land that possesses some of the same characteristics and species could be purchased to make up for land loss to this project.

Soil and sod placed in this project should be free of invasive exotic species such as cogongrass, Praxelis, Japanese climbing fern, old world climbing fern, etc.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

The project intersects the north end of the Green Swamp, which is a giant conserved area managed by multiple agencies. It is large enough to sustain entire ecosystems and species with large range requirements. It is the headwaters to multiple river systems. There is a large variety of plants and animals that live in this area, many of them state or federally listed or tracked by Florida Natural Areas Inventory. The area is used by the public for recreation with the area being an important hunting resource. The flatwoods are an important resource for growing timber utilized for revenue for the state.

Indirect effects could relate to noise, water, air, solids, and biological contamination that could increase as a result of this project.

Ingress and egress from the state forest should not be impacted for the Florida Forest Service operations and for the public using the state forest.

Comments on Effects to Resources:

Negative effects could be decreased if we carefully plan how, and where the project is carried out. It is not clear which option will be used, if the project will stay in the existing right-of-way or it is expanding the right-of-way. If it is expanding the Board of Trustees Linear Facilities Policy will also need to be considered.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

It may be possible to decrease impacts by avoiding widening the roadway in certain areas. Using clean fill and sod would decrease impacts. Creating safe places for species, people, and Florida Forest Service operations to cross would be an opportunity to decrease impacts.

FDOT District 5 Feedback to FL Department of Agriculture and Consumer Services's Review (12/01/2016): Thank you for your comments on this important resource. FDOT will continue to coordinate with your agency and involve you in the study process in order to minimize impacts to the state forest.

Degree of Effect: 3 Moderate assigned 09/29/2016 by Zakia Williams, US Fish and Wildlife Service

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

Fish and Wildlife Habitat

Degree of Effect: Minimal to Moderate

Wood Stork (*Mycteria americana*)

The surrounding area is mainly undeveloped forested habitat and undisturbed wetlands, along with small areas of residential and commercial developments. The action area falls within a Core Foraging Area (CFA) of at least one nesting colony of the endangered

wood stork. Direct impacts should be avoided.

Eastern Indigo Snakes (*Drymarchon corais couperi*)

Fragmented agricultural lands, undisturbed uplands and wetlands within the proposed corridor are suitable habitat for the threatened eastern indigo snake (EIS). It is very likely that this species may occur on undeveloped lands, agricultural lands and rural areas within the action area.

The potential for sand skinks (*Neoseps reynoldsi*) within this proposed corridor is very low. However, any areas that do meet the current soils and elevation criteria should be submitted to USFWS for further coordination and possible field review.

The potential for the Florida scrub jay (*Aphelocoma coerulescens*) within this proposed corridor is very low. The surrounding areas do not provide suitable habitat for the species.

Coordination with the Office of Migratory birds will be needed for an eagle nest located within 200 feet of corridor.

Surveys for all federally listed plants found in Hernando, Lake and Sumter county (the list can be found on our website northflorida.fws.gov) should be conducted by a trained botanist during the appropriate time of year.

Wetlands

Degree of Effect: Moderate

Wetlands provide important habitat for fish and wildlife. Data provided in the Environmental Screening Tool indicate that wetlands occur within the project area. Specifically, important wetlands and habitat for fish and wildlife occur immediately adjacent to the project footprint within public conservation lands in the Richloam WMA.

Comments on Effects to Resources:

Wood Stork (*Mycteria americana*)

The Service has determined that the loss of wetlands within a CFA due to an action could result in the loss of foraging habitat for the wood stork. To minimize adverse effects to the wood stork and other wetland dependent species, we recommend that impacts to suitable foraging habitat be avoided. If avoidance is not possible, minimization measure should be employed and best management practices to avoid further degradation of the site. Mitigation for wetland impacts should be discussed with USFWS and will require further coordination. Please refer to the North Florida Field Office website for WOST colony locations. <http://www.fws.gov/northflorida>

Eastern Indigo Snakes (*Drymarchon corais couperi*)

The addition of a new roads and the widening of roads will likely increase the risks to this species from direct mortality and indirectly from habitat fragmentation and noise disturbance. Individual snakes may have large home ranges of 200 to 250 acres. Direct impacts from vehicles, loss and fragmentation of habitat would contribute to the further decline of this species. Implementing the current standard construction conditions and protection measures for EIS will reduce the direct risks to snakes during the construction phase but not the long term impacts from habitat fragmentation and loss of individuals from interactions with vehicles for the life of the facility. Complete surveys for gopher tortoise burrows (currently a federal candidate species, which may be listed as Threatened before construction begins) should be conducted. Protection guidelines can be found on the North Florida Ecological Services website: <http://www.fws.gov/northflorida>. Surveys for gopher tortoise burrows will also facilitate the use of the EIS Effect determination key utilized by the Army COE.

Wetlands

Best Management Practices (BMPs) should be used to prevent degradation of wetland and other aquatic resources from erosion, siltation, and nutrient discharges associated with the project site. We recommend that the project be designed to avoid these valuable resources to the greatest extent practicable. If impacts to wetlands are unavoidable, we recommend that the FDOT provides mitigation that fully compensates for the loss of wetland resources.

Dependent upon the alternative(s) selected, the proposed project is expected to result in minimal to moderate involvement with wildlife and habitat resources. If it is determined the project will affect and federally listed species and/or their habitat, the Department will initiate consultation with FWS during the Project Development process.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Fish and Wildlife Service's Review (12/01/2016): Thank you for your review, comments, and recommendations. We will conduct a wildlife and habitat assessment during the study phase to determine species surveys and coordinate those findings with the Service.

The following organization(s) were expected to but did not submit a review of the Wildlife and Habitat issue for this alternative: US Forest Service

Coastal and Marine

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 12/01/2016 by FDOT District 5

Comments:

The Southwest Florida Water Management District and National Marine Fisheries Service gave a Degree of Effect of Minimal and Saint Johns River Water Management District gave a Degree of Effect of N/A / No Involvement. The FDOT recognizes that Hernando County is listed as a coastal county and that the project falls within the Withlacoochee Coastal Assessment Framework. The FDOT also recognizes the importance of water treatment measures identified by National Marine Fisheries Service to avoid impacts to the Little Withlacoochee River, the Withlacoochee River, and the Gulf of Mexico system. A Degree of Effect of Minimal will be assigned to this issue.

Degree of Effect: 2 *Minimal* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

Impacts to wetlands and/or surface waters located within the project boundaries will require additional noticing to be sent to coordinating agencies, such as Florida Fish and Wildlife Conservation Commission, Army Corps, and Department of State, Division of Historic Resources. This noticing will be completed by the District at the initial receipt of the application. Should one of the coordinating agencies request additional information as part of the permitting process, this information will become a completeness item and may require final CZM noticing once the permit application is deemed complete by District staff.

Direct Effects

Identified Resources and Level of Importance:

Hernando County is listed as a coastal county through the Coastal Zone Management Act.

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): Thank you for your review and identifying Hernando County as a coastal county through the Coastal Zone Management Act. As mentioned in your comments, the FDOT will continue to coordinate with the Florida Fish and Wildlife Conservation Commission, Army Corps, and

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Degree of Effect: N/A N/A / *No Involvement* assigned 09/23/2016 by Lee A. Kissick, Saint Johns River Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): The FDOT appreciates your review.

Degree of Effect: 2 *Minimal* assigned 09/07/2016 by David A. Rydene, National Marine Fisheries Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

The resources of concern are located at the mouth of the Withlacoochee River and in the Gulf of Mexico. These areas contain estuarine habitats, including seagrasses, mangroves, and salt marsh, used by federally-managed fish species and their prey.

Comments on Effects to Resources:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the information contained in the Environmental Screening Tool for ETDM Project # 14269. The Florida Department of Transportation's District 7 and District 5 propose the evaluation of near-term and long-term improvements to increase safety and capacity on SR 50 from US 301 to CR 33 in Hernando County, Lake County, and Sumter County, Florida. Improvements under consideration include signalization and roundabouts at key intersections, the addition of passing lanes, and widening the road from 2 lanes to 4 lanes.

NMFS staff conducted a site inspection on September 6, 2016, to assess potential concerns related to aquatic resources at the mouth of the Withlacoochee River and in the Gulf of Mexico. Lands adjacent to the project are principally palustrine wetlands and agricultural lands, and some residential and commercial properties (mostly in towns). It does not appear that the project will directly impact any NMFS trust resources. However, the existing road crosses the Little Withlacoochee River. The Little Withlacoochee River drains to the Withlacoochee River that, in turn, drains to the Gulf of Mexico near Yankeetown. The mouth of the Withlacoochee River and the Gulf of Mexico contain estuarine habitats used by federally-managed fish species and their prey (e.g., salt marshes, seagrasses, mangroves). Therefore, NMFS recommends that stormwater treatment systems be upgraded to prevent degraded water from entering the Little Withlacoochee River, the Withlacoochee River, and the Gulf of Mexico system. In addition, best management practices should be employed during road construction to prevent sedimentation of downstream habitats.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to National Marine Fisheries Service's Review (12/01/2016): Thank you for your review. We will continue to coordinate with your agency on this issue throughout the study.

ETAT Reviews and Coordinator Summary: Physical Noise

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 12/01/2016 by FDOT District 5

Comments:

No ETAT reviews were submitted for this issue; however, a Noise Study will be conducted during the PD&E Study.
None found

Air Quality

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 12/01/2016 by FDOT District 5

Comments:

The US Environmental Protection Agency gave a Degree of Effect of Minimal. The FDOT concurs with this assessment and will issue a Degree of Effect as Minimal for this issue.

Degree of Effect: 2 *Minimal* assigned 09/29/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources: Air Quality

Comments on Effects to Resources:

The portions of Hernando, Lake, and Sumter Counties and the area surrounding the proposed project have not been designated non-attainment or maintenance for any the ozone, carbon monoxide (CO) or particulate matter (PM) National Ambient Air Quality Standards under the criteria provided in the Clean Air Act. Therefore, the proposed project alternatives are expected to have minimal impact on air quality.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): The FDOT appreciates your review.

Contamination

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 12/01/2016 by FDOT District 5

Comments:

The Southwest Florida Water Management District and US Environmental Protection Agency gave a Degree of Effect of Moderate and Saint Johns River Water Management District gave a Degree of Effect of N/A / No Involvement. During the Planning Study and the preparation of the Preliminary Environmental Discussion, the FDOT identified the contamination sites listed by both the Water Management District and the US Environmental Protection Agency. These sites will continue to be documented and all avoidance and minimization measures will be documented in a Contamination Screening Evaluation Report.

Degree of Effect: 3 *Moderate* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

The SWFWMD has assigned a Degree of Effect (DOE) based on the potential need for increased coordination or effort associated with the SWFWMD's proprietary or regulatory interests and obligations. For this alternative, a DOE of "moderate" was assigned to this issue due to the present belief that future ERP permitting is expected to be non-routine for:

- Potential pollution sources (particularly the hazardous waste sites, petroleum / storage tank contamination, solid waste facilities and Super Act Risk Sources).
- FAVA classification of "More Vulnerable" for the area occupied by the Surficial and Floridan aquifers.

However, the expected permitting effort by FDOT should be straight forward and a normal effort is expected on the part of SWFWMD's regulatory staff.

Direct Effects

Identified Resources and Level of Importance:

Information regarding proposed off-site stormwater management facilities is not available at this time. Therefore, the SWFWMD utilized the FDOT's Environmental Screening Tool (EST) (supplemented with information from the SWFWMD's Geographic Information System (GIS) for identifying potential contaminated sites that may affect subsequent Environmental Resource Permits (ERPs) for the FDOT. The facilities of concern within 500 feet of the proposed roadway improvement project include (but are not limited to) the following:

- Hazardous Waste Facilities: Seven (7) reported facilities.
- Onsite Sewage: Ninety-nine (99) reported sites.
- Petroleum Contamination Monitoring Sites: Eleven (11) reported sites.
- Solid Waste Facilities: Three (3) reported facilities.
- Sensitive Karst Areas: One (1) reported location.
- Storage Tank Contamination Monitoring: Fourteen (14) reported facilities.
- Super Act Risk Sources: Eight (8) reported facilities.
- Super Act Wells: Twenty-two (22) reported facilities.
- Other current / past commercial, industrial and agricultural activities near the proposed project.

Detailed information regarding known contaminated sites can be obtained from the appropriate GIS themes / layers in the EST. In view of the current / past land uses in the project area, there may be other (unknown) contaminated sites.

From the FDOT's EST, the project area is characterized by a two-aquifer system that includes the Surficial and Floridan aquifers.

Within a 500-foot buffer of the proposed roadway improvement project, the pollution potential of the Surficial Aquifer is high as indicated by DRASTIC weighted indexes between 164 and 185. The DRASTIC score for the Floridan Aquifer is also high with weighted indexes between 117 and 224.

FAVA Surficial Aquifer System:

Classified as "Vulnerable" for approximately 2% of the project length within a 500-foot buffer. Classified as "Unknown Description" for approximately 76% of the project length within a 500-foot buffer. Classified as "More Vulnerable" for approximately 22% of the project length within a 200-foot buffer. Graphical locations of the FAVA Surficial Aquifer can be viewed within the FDOT's EST under

the "Contamination" map > *Water Resource* > *Surficial Aquifer System Response* layer.

FAVA Floridan Aquifer System:

Classified as "More Vulnerable" for 100% of the project length within a 500-foot buffer. Graphical locations of the FAVA Floridan Aquifer can be viewed within the FDOT's EST under the "Contamination" map > *Water Resource* > *Floridan Aquifer System Response* layer.

Water use and well construction information is now available in the EST under Contamination > Permits > SWFWMD Well Construction Permits. Useful information includes the permit number, name of the permittee, well casing diameter(s), street address of the well(s), well driller name and the approximate location(s) by latitude / longitude. As of August, 2016, the EST indicated one hundred seventy-two (172) SWFWMD Well Construction Permits have been issued within 500 feet of the proposed roadway improvement project. Similar information can be obtained from the SWFWMD's Permits Map Viewer, Well Construction Permit Search and Water Use Permit Search web sites as follows:

- <http://www8.swfwmd.state.fl.us/ExternalPermitting/>
- <http://www18.swfwmd.state.fl.us/search/search/wcpsimple.aspx>
- <http://www18.swfwmd.state.fl.us/search/search/searchwupsimple.aspx>

The EST also indicates four (4) Limited Use Drinking Water Wells are located within 500 feet of the proposed road improvement project.

Comments on Effects to Resources:

If encountered and disturbed during construction along the proposed route, any contaminated site could result in surface and / or groundwater water pollution. While the proposed roadway improvement footprint may not directly impact contaminated sites, proposed stormwater management systems and other project construction activities should avoid these areas.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

To minimize groundwater and surface water pollution potential, the following actions should be considered by the FDOT:

- Conduct an Environmental Audit at the appropriate level to identify specific facilities of interest and to develop a plan for their proper removal or abandonment;
- Coordinate with FDEP & USEPA, and prepare an appropriate Contamination Assessment Report;
- Avoid known contaminated sites where possible in the selection of the project alignment. If discovered during the recommended soils investigation, contamination should be remediated properly so as to eliminate the potential for ground water contamination;
- If applicable, avoid / minimize all construction activity in proximity to known sinkholes along or near the project's alignment;
- Confirm the presence or absence of existing potable supply wells, both public and domestic (refer to the GIS well information below), and identify precisely all potential sources of contamination within the path of construction or in proximity of the proposed stormwater management systems;
- Thoroughly evaluate potential stormwater treatment pond sites for the presence of contamination and eliminate contaminated sites as potential pond sites;
- Design and construct stormwater management facilities to avoid breaching the upper confining unit;
- Temporary drainage & erosion control through areas of potential contamination may be important considerations for the FDOT and their construction contractor.

Contamination sources such as existing fuel storage tanks, fuel pumps, and septic tanks shall be removed or abandoned properly. In addition, existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor - Reference: Rule 40D-3.531, Florida Administrative Code, available at <http://www.swfwmd.state.fl.us/permits/rules/>.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): Thank you for your review. We will continue to coordinate with your agency on this issue throughout the study.

Degree of Effect: **3** *Moderate* assigned 09/29/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources

Soils, groundwater, surface water which have the potential to be negatively affected by contaminated site features such as underground petroleum storage tanks, industrial or commercial facilities with onsite storage of hazardous materials, solid waste facilities, hazardous waste facilities, USEPA RCRA facilities, etc.

Level of Importance

A moderate degree of effect is being assigned to this issue for the proposed project. EPA utilized the 500-foot buffer distance for location and identification of contaminated site features which could be impacted by the project.

Comments on Effects to Resources:

The planned project will study a 20-mile segment of State Road (SR) 50 from US 301 in Hernando County to County Road (CR) 33 in the City of Mascotte in Lake County. The following contaminated site features are listed in the GIS analysis data as being located within the 500-foot buffer distance:

- 7 Hazardous Waste Facility
- 11 Petroleum Contamination Monitoring Site
- 14 Storage Tank Contamination Monitoring Sites
- 3 Solid Waste Facilities
- 8 US EPA RCRA Regulated Facilities
- 2 Known contamination Facilities (The Cumberland Farms, Fac ID 8631423, is an active DEP cleanup site and is located at the intersection of SR 471 and SR 50, in the southwest quadrant and South Sumter Grocery, Fac ID 8516864, which is located also at the intersection of SR 471 and SR 50 in the northeastern quadrant, and its cleanup status is pending)

Underground and/or above ground storage tanks have the potential for environmental impacts to soils and/or groundwater from petroleum hydrocarbons. Petroleum hydrocarbons are the primary constituents in oil, gasoline, diesel, as well as solvents. Petroleum hydrocarbons are the primary focus of many site and risk assessments due to the concern for their impact on human health. Other contaminated site features, such as Hazardous Waste Sites, Solid Waste Sites, and USEPA RCRA Sites, involve other types of hazardous and solid wastes.

The environmental review (PD&E study) should include at least a Phase I and possibly a Phase II contamination site assessment. During the assessment, a survey of the area to identify any contaminated site features not listed in the GIS analysis data which may have been or are currently located in the project alternative buffer distances should be conducted, as well as an assessment of known sites and features. Additionally the Contamination Screening Evaluation should outline specific procedures that would be followed by the applicant in the event that drums, waste, tanks, or potentially contaminated soils are encountered during construction.

Potential issues relating to contaminated sites include leaking underground petroleum storage tanks, leaking above ground storage tanks, improper storage and/or disposal of hazardous materials, spills and/or leaks from transportation vehicles (trucks, trains, etc.). Direct and indirect impacts resulting from these issues include contamination of soils, groundwater, and surface water. If any petroleum storage tanks are to be impacted or removed during the construction phase of the project, sampling and analysis of soils and groundwater should be conducted to determine if petroleum and hydrocarbon pollutants are present above regulatory levels. If high levels of pollutants are identified, remediation of soils and/or groundwater may be required prior to commencement of construction of the project.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): Thank you for your review. We will continue to coordinate with your agency on this issue throughout the study.

Degree of Effect: N/A N/A / *No Involvement* assigned 09/23/2016 by Lee A. Kissick, Saint Johns River Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): Thank you for your review.

The following organization(s) were expected to but did not submit a review of the Contamination issue for this alternative: FL Department of Environmental Protection

Infrastructure

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 12/01/2016 by FDOT District 5

Comments:

The Southwest Florida Water Management District gave a Degree of Effect of Minimal. Following the preparation of the Planning Study and the Preliminary Environmental Discussion, field reviews and other data sources, the FDOT concurs will a Degree of Effect as minimal for this issue. The FDOT will coordinate with CSX and FAA during the PD&E Study.

Degree of Effect: 2 *Minimal* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

The SWFWMD has assigned a Degree of Effect (DOE) based on the potential need for increased coordination or effort associated with the SWFWMD's proprietary or regulatory interests and obligations. A DOE of "minimal" was assigned to these issues due to the fact that SWFWMD funded data collection sites are located within the 1320 foot and 2640 foot buffers of the proposed roadway improvement project.

The SWFWMD requests that FDOT avoid disturbing the data collection sites. Coordination with the District's Data Collection Bureau in Brooksville will be helpful in protecting these infrastructure components.

For ETDM #14269, the District has assigned a pre-application file (**PA #403674**) for the purpose of tracking its participation in the ETDM review of this project. File **PA #403674** is maintained online as part of the Water Management Information System. Please refer to this pre-application file whenever contacting District regulatory staff regarding this project.

Direct Effects

Identified Resources and Level of Importance:

The following information (regarding SWFWMD owned / controlled / cooperative data collection sites) was obtained from the SWFWMD's GIS system, and was analyzed for information within 2640 feet of this proposed roadway improvement project:

SITE_ID: 863335
SITE_NAME: SR 50 MARSH UPLAND SURF AQ MONITOR
SITE_PRIMARY_TYPE_DESC: Well
SITE_STATUS_DESC: Active
LATITUDE: 28 30 45.00
LONGITUDE: 82 08 34.90

SITE_ID: 769186
SITE_NAME: SR 50 MARSH
SITE_PRIMARY_TYPE_DESC: Wetland
SITE_STATUS_DESC: Active
LATITUDE: 28 30 43.78
LONGITUDE: 82 08 32.99

SITE_ID: 769185
SITE_NAME: SR 50 CYPRESS
SITE_PRIMARY_TYPE_DESC: Wetland
SITE_STATUS_DESC: Active
LATITUDE: 28 30 35.20
LONGITUDE: 82 08 20.46

SITE_ID: 868767
SITE_NAME: BOGGY ROAD UPLAND SURF AQ MONITOR
SITE_PRIMARY_TYPE_DESC: Well
SITE_STATUS_DESC: Active
LATITUDE: 28 31 39.88
LONGITUDE: 82 06 11.35

SITE_ID: 769187
SITE_NAME: BOGGY CYPRESS MARSH
SITE_PRIMARY_TYPE_DESC: Wetland
SITE_STATUS_DESC: Active
LATITUDE: 28 31 44.62
LONGITUDE: 82 06 10.47

Comments on Effects to Resources:

Construction activities related to the project and associated storm water management facilities have the potential to damage the District's data collection stations or to impair their collection functions.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

Communication with the District's Data Collection Bureau (Brooksville) during the design phase can greatly reduce the potential for impacts to these data collection sites.

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): The FDOT will work closely with the Water Management District to identify ways to minimize and/or avoid impacts to the District's data collection stations. As of the writing of this Summary Report, the right of way and construction phases of the project are not funded.

Degree of Effect: N/A N/A / No Involvement assigned 08/31/2016 by Jim Ganey, FDOT District 5

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

There is no railroad involvement within the District 5 corridor, but there is a railroad crossing in District 7.

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to FDOT District 5's Review (12/01/2016): The FDOT District 5 will engage the District 7 Railroad Coordinator as coordination with CSX is needed.

Navigation

Project Effects

Coordinator Summary Degree of Effect: N/A N/A / No Involvement assigned 12/01/2016 by FDOT District 5

Comments:

The US Army Corps of Engineers gave a DOE of N/A / No Involvement. The FDOT concurs with the assessment given that "no navigational resources exist within the proposed project area."

Degree of Effect: N/A N/A / No Involvement assigned 09/20/2016 by Randy Turner, US Army Corps of Engineers

Coordination Document: Permit Required

Coordination Document Comments:

The proposed project would require a Department of the Army (DA) authorization for impacts to any waters of the U.S. (wetlands) under Section 404 of the Clean Water Act. The proposed project would not require any DA authorization for structures or work under Section 10 of the Rivers and Harbors Act.

Direct Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

N/A

Recommended Avoidance, Minimization, and Mitigation Opportunities:

N/A

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

No navigational resources exist within the proposed project area.

Comments on Effects to Resources:

N/A

Recommended Avoidance, Minimization, and Mitigation Opportunities:

N/A

FDOT District 5 Feedback to US Army Corps of Engineers's Review (12/01/2016): Thank you for your review. FDOT will work closely with your agency on issues related to Waters of the U.S.

ETAT Reviews and Coordinator Summary: Special Designations

Special Designations

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 12/01/2016 by FDOT District 5

Comments:

The Southwest Florida Water Management District gave a DOE of Moderate, US Environmental Protection Agency gave a DOE of Substantial, and Saint Johns River Water Management District gave a DOE of N/A / No Involvement. After preparing the Preliminary Environmental Discussion and reviewing agency comments, the FDOT will assign a Degree of Effect of substantial for this issue. This is related to the significance of the Withlacoochee River System, the Green Swamp, various watersheds, sensitive karst area, and OFWs in the study area and the general environmental setting of the SR 50 corridor in the study area.

Degree of Effect: 3 *Moderate* assigned 09/30/2016 by Monte Ritter, Southwest Florida Water Management District

Coordination Document: Permit Required

Coordination Document Comments:

The SWFWMD has assigned a Degree of Effect (DOE) based on the potential need for increased coordination or effort associated with the SWFWMD's proprietary or regulatory interests and obligations. For this project, a DOE of "Moderate" was assigned to this issue due to the present belief that future ERP permitting is expected to be non-routine for temporary and permanent water quality discharges to Outstanding Florida Waters identified as the Withlacoochee River System and Chassahowitzka National Wildlife Refuge. However, the expected permitting effort by FDOT should be straight forward and a normal effort is expected on the part of SWFWMD's regulatory staff.

Direct Effects

Identified Resources and Level of Importance:

The Environmental Screening Tool (EST) indicates this project is within 500-feet of Outstanding Florida Waters identified as the Withlacoochee River System and Chassahowitzka National Wildlife Refuge.

The EST also indicates the proposed roadway improvement project lies within 500 feet of the following Florida Department of Environmental Protection (FDEP) watersheds (WBIDs):

- Lake Elizabeth Outlet (WBID 1390)
- Long Lake Outlet (WBID 1388)
- Withlacoochee River (WBID 1329F)
- Little Withlacoochee (WBID 1381)
- Big Gant Canal (WBID 1378)
- Giddon Lake Outlet (WBID 1383)
- Jumper Creek Canal (WBID 1360B)
- Walled Sink Ditch (WBID 1359D)

An approximate (graphical) location of these eight (8) WBIDs can be viewed within the EST. All of the listed WBIDs, except for WBID 1378, are not classified impaired for nutrient related pollutants by FDEP. Additional comments (by the SWFWMD) on impaired waters can be found in the Water Quality & Quantity section of the EST.

The bottomlands of the Little Withlacoochee River may be determined to be classified as sovereign submerged lands (SSL) and modifications to the existing bridge may require a Public Easement. Activities located below the mean high/ordinary high water elevation of the river within this area may require meeting the criteria addressed in Chapter 18-21, F.A.C. and may require a modification to the existing easement, if one is in effect in this location. An official title determination from the Florida Department of Environmental Protection BOT will be required to confirm this during the permitting process for SR 50.

Comments on Effects to Resources:

The proposed road improvement project has the potential to result in water quality impacts to Outstanding Florida Waters, due to undertreated or untreated stormwater runoff during and after construction.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

None

Comments on Effects to Resources:

None

Recommended Avoidance, Minimization, and Mitigation Opportunities:

None

FDOT District 5 Feedback to Southwest Florida Water Management District's Review (12/01/2016): The FDOT appreciates the review provided by the Water Management District and identifying the various watersheds and OFWs in the study area. A Degree of Effect of Substantial will be assigned to this issue.

Degree of Effect: 4 *Substantial* assigned 09/29/2016 by Amanetta Somerville, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Resources

Features identified as Special Designations - DFIRM 100-Year Floodplain and Sensitive Karst Areas.

Level of Importance

These special designation features are of a high level of importance in the State of Florida. A substantial degree of effect is being assigned to this issue for all potential alternatives.

Comments on Effects to Resources:

A review of b GIS analysis data at the programming screen phase of the project indicates that there are Outstanding Florida Waters, 100-Year Floodplain Areas and Sensitive Karst Areas within proximity of the proposed project.

The GIS analysis data indicates that there are 1,669 acres of property within the study area defined as sensitive karst area. Consultation with the Florida Geological Survey (or other agencies) may be required to determine impact to karst areas and/or areas with a potential for sinkhole activity.

Direct and indirect impact to areas or features identified as "Special Designations" such as the ones listed above should be avoided or minimized to the best extent practicable.

Outstanding Florida Waters - See Comments under Water Quality and Quantity issue.

Special Flood Hazard Areas - See Comments under Floodplains issue.

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to US Environmental Protection Agency's Review (12/01/2016): The FDOT concurs with the US Environmental Protection Agency's Degree of Effect as substantial, particularly in the context of the cumulative effects associated with wetlands and other surface waters, water quality, floodplains and special flood hazard areas.

Degree of Effect: N/A N/A / *No Involvement* assigned 09/23/2016 by Lee A. Kissick, Saint Johns River Water Management District

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

CLC Recommendations:

Indirect Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Recommended Avoidance, Minimization, and Mitigation Opportunities:

FDOT District 5 Feedback to Saint Johns River Water Management District's Review (12/01/2016): The FDOT appreciates the Water Management District's review.

Eliminated Alternatives

There are no eliminated alternatives for this project.

Project Scope

General Project Recommendations

There are no general project recommendations identified for this project in the EST.

Anticipated Permits

Permit	Type	Conditions	Assigned By	Date
Railroad Permits	Other		FDOT District 5	12/01/16
Section 404 Nationwide Permit	USACE		FDOT District 5	12/01/16
Section 404 Individual Permit	USACE		FDOT District 5	12/01/16
NPDES General Permit	FDEP		FDOT District 5	12/01/16
Environmental Resource Permit	FDEP		FDOT District 5	12/01/16
Dredge and Fill Permit	FDEP		FDOT District 5	12/01/16
Gopher Tortoise Permit	FFWCC		FDOT District 5	12/01/16
Right-Of-Way Permit	FDOT		FDOT District 5	12/01/16

Anticipated Technical Studies

Technical Study Name	Type	Conditions	Assigned By	Date
Final Preliminary Engineering Report (signed and sealed)	ENGINEERING		FDOT District 5	12/01/2016
Location Hydraulics Report	ENGINEERING		FDOT District 5	12/01/2016
Right of Way Plans (each phase submittal)	ENGINEERING		FDOT District 5	12/01/2016
Geotechnical Report	ENGINEERING		FDOT District 5	12/01/2016
Typical Section Package	ENGINEERING		FDOT District 5	12/01/2016
Value Engineering Information Report	ENGINEERING		FDOT District 5	12/01/2016
Public Involvement Plan	ENVIRONMENTAL		FDOT District 5	12/01/2016
Noise Study Report	ENVIRONMENTAL		FDOT District 5	12/01/2016
Contamination Screening Evaluation Report	ENVIRONMENTAL		FDOT District 5	12/01/2016
Conceptual Stage Relocation Plan	ENVIRONMENTAL		FDOT District 5	12/01/2016
Public Hearing Transcript	ENVIRONMENTAL		FDOT District 5	12/01/2016
USACE Section 404 Dredge and Fill Permit	Other		FDOT District 5	12/01/2016
Access Management Report	ENGINEERING		FDOT District 5	12/01/2016
Quality Control Plan	ENVIRONMENTAL		FDOT District 5	12/01/2016
Preliminary Drainage Report	ENGINEERING		FDOT District 5	12/01/2016
Sociocultural Effects Evaluation	Other		FDOT District 5	12/01/2016
Essential Fish Habitat Assessment	ENVIRONMENTAL		FDOT District 5	12/01/2016
Travel Demand Modeling Report	ENGINEERING		FDOT District 5	12/01/2016
Comments and Coordination Report	ENVIRONMENTAL		FDOT District 5	12/01/2016
Public Involvement Summary	ENVIRONMENTAL		FDOT District 5	12/01/2016
Preliminary Engineering Report	ENGINEERING		FDOT District 5	12/01/2016

Air Quality Technical Memorandum	ENVIRONMENTAL		FDOT District 5	12/01/2016
Water Quality Impact Evaluation (WQIE)	ENVIRONMENTAL		FDOT District 5	12/01/2016
Reconnaissance Survey	ENVIRONMENTAL		FDOT District 5	12/01/2016
Cultural Resource Assessment Survey	ENVIRONMENTAL		FDOT District 5	12/01/2016
Design Variations and Exceptions Package	ENGINEERING		FDOT District 5	12/01/2016
Utility Assessment Package	ENGINEERING		FDOT District 5	12/01/2016
QA/QC Plan	ENGINEERING		FDOT District 5	12/01/2016
Pond Siting Report	ENGINEERING		FDOT District 5	12/01/2016
Farmland Conversion Impact Rating Form	ENVIRONMENTAL		FDOT District 5	12/01/2016
Natural Resources Evaluation (NRE)	ENVIRONMENTAL		FDOT District 5	12/01/2016

Dispute Resolution Activity Log

There are no dispute actions identified for this project in the EST.

Appendices

Preliminary Environmental Discussion Comments

Social and Economic

Land Use Changes

Project Level

Comments:

The future land use along the corridor does not significantly vary from the existing land use. The majority of the land north of SR 50 remains agricultural, and south of SR 50 is primarily conservation land. The area around Ridge Manor remains single-family residential with expanded industrial use. The City of Mascotte is anticipating an increase in mixed use development. The Downtown Mascotte mixed land use, which is adjacent to SR 50, allows for light, medium, and high density residential, as well as commercial (offices/retail), light industrial and educational facilities.

It is important to note that the Green Swamp abuts SR 50 to the south for approximately a half-mile in Lake County. The Green Swamp is designated as an area of critical state concern, which may limit the feasibility of future widening on the south side of SR 50 if the need for additional right-of-way affects the boundary of the Green Swamp.

Social

Project Level

Comments:

Several factors related to the social environment will be investigated during the PD&E Study process; however, initial efforts for the ETDM Programming Screen included a review of US EPA's EJSCREEN Tool (<http://www2.epa.gov/ejscreen>) and a review of the Sociocultural Data Report from the EST. Items identified as part of this Preliminary Environmental Discussion include Limited English Proficiency (LEP) throughout the study area; however, a larger LEP population exists in the areas in and around the City of Mascotte, which according to census block data, involves significant minority populations and Spanish-only speakers. Environmental Justice will also be a concern in the City of Mascotte due to the physical constraints and the potential business and residential displacements and relocations. Enhancements, such as improved emergency response times and safety improvements, are also factors that will be comparatively evaluated against the no-build option. The FDOT will work closely with the communities, cities and counties to minimize impacts to the social environment. The EST data also reveals threecemeteries located within 100 feet of the project corridor. The MascotteCemetery in particularextendsinto the right-of-wayon the north side of SR 50.If widened, this portion of theroad alignment will need to be expanded to the south.

Relocation Potential

Project Level

Comments:

Residential relocations and business displacements will be further evaluated during the PD&E Study; however, the following sites that have the potential to be impacted include businesses

on the west end of the study limits at SR 50 and US 301 (a vacant restaurant, Shell Station, Cook Sheds and Ridge Manor Medical Clinic); a Circle K in the northwest quadrant of SR 50 and SR 471; Robbins Lumber in the southwest quadrant of SR 50 and SR 471 and a Citgo Station in the southeast quadrant of the SR 50 / 471 intersection. The middle section of the SR 50 corridor from SR 471 to just west of the Mascotte city limits has limited residential and commercial properties that could involve potential relocations/displacements. At the east of the study limits, there are also several businesses and residences along SR 50 in Mascotte and just west of the Mascotte city limits that could be impacted by the proposed improvements.

Farmlands

Project Level

Comments:

Within the 100 foot buffer, 78.84 acres (16.34%) of the General Land Use data is classified as Agricultural. Within the 200 foot buffer there are 254.33 acres (26.32% of the area) of agricultural land uses, and within the 500 foot buffer area of the project there are 840.93 acres (or 34.65%) of agricultural land uses. Under the Prime Farmland GIS Data layer, 92.47 acres (19.16% of the area) is identified as Farmlands of Unique Importance within the 100 foot buffer, 184.02 acres (19.04%) at the 200 foot buffer, and 448.62 acres (18.48%) within the 500 foot buffer area of the project. Under the Unique Farmland category there are 1.58 acres (.33%) at 100 ft. buffer, 3.97 acres (.41%) at a 200 ft. buffer, and 13 acres (.54%) at a 500 ft. buffer specifically shown as citrus groves.

Aesthetic Effects

Project Level

Comments:

In the existing condition and throughout the study limits, SR 50 is a principal arterial generally consisting of a rural typical section with open swale drainage features. The majority of the study area is rural in nature with the majority of land uses being agricultural, conservation and low density residential. Potential locations where impacts / enhancements to aesthetics are likely to be a factor include the City of Mascotte, in and around the Withlacoochee State Forest and in smaller Census Designated Places such as Mabel, Tarrytown, Linden, and Ridge Manor. Items such as noise walls, landscape buffers and landscaped medians will be further explored during the PD&E Study. It should also be noted that SR 50 from C-478 to the Sumter / Lake County line is part of the Sumter Scenic Heritage Byway, a part of the Florida Scenic Highway Program. Moreover, the PD&E Study will consider aesthetic effects and potential mitigation measures in regards to impacts to viewshed, aesthetic values and community features.

Economic

Project Level

Comments:

SR 50 is a principal arterial approximately 115 miles in length that extends from Weeki Wachee in Hernando County to the City of Titusville in Brevard County. Therefore, the context of economic impacts and enhancements should be considered throughout the study limits, but also along the corridor as a statewide route. It should be noted that this is a key emergency evacuation route and the economic engine for residents, businesses and local governments along or in close proximity to the SR 50 corridor. The potential improvements to SR 50 therefore have the potential to increase travel time reliability, access to goods and services and

provide for enhanced freight movement. The PD&E Study will evaluate the potential economic impacts to communities such as Mascotte, whose commercial core is located along SR 50 in addition to other businesses present in the study area such as gas stations, nurseries, agricultural and manufacturing facilities.

Mobility

Project Level

Comments:

Within the City of Mascotte, sidewalk is intermittently present but not continuous. Due to the uninterrupted flow conditions west of CR 33, no pedestrian marked pedestrian crossings are currently provided across SR 50 to serve the Elementary School on the south side of the study corridor. Throughout the corridor, bicycles are served on the paved shoulder; however, most of the corridor has a four-foot paved shoulder which is insufficient for the high-speed roadway conditions.

Within the project area, the coast-to-coast trail is planned to connect to the Van Fleet Trailhead. Pending further study, there is potential for the trail to run adjacent to SR 50 for approximately 5 miles of the study segment from the Van Fleet Trailhead to SR 471. The study will further investigate and coordinate planning for improvements to SR 50 in order to be compatible with implementation of the Coast-to-Coast trail within the same corridor.

Cultural

Section 4(f) Potential

Project Level

Comments:

The FDOT will be developing the project with state funding; therefore, the Section 4(f) process will not apply to this action.

Historic and Archaeological Sites

Project Level

Comments:

The EST's GIS data indicate that six archaeological sites, six historic structures, three resource groups, and one historic bridge have been recorded within the 500 foot buffer area of the project. Only one of the historic structures (8LA02872) has been determined potentially eligible for the NRHP by the SHPO. Two of the archaeological sites (8SM00162 and 8SM00166) have not been evaluated for NRHP eligibility by the SHPO, two (8LA02034 and 8SM00733) the SHPO hasnot foundsufficient information to make a determination, and the remaining resources have been determined to be ineligible by the SHPO. It should be noted that over 50% of the project area has not been subjected to a prior cultural resource survey, so a survey will be conducted during the PD&E Study to further evaluate resources.

Recreation Areas

Project Level

Comments:

There are many off-road trail facilities that serve recreational travel around the corridor. The Withlacoochee State Trail extends 46-miles from Dade City to Citrus Springs through the

Withlacoochee State Forest. It is the longest paved trail in Florida. The Van Fleet Trail runs for 29.2 miles from Polk City to Mabel. The trail head in Mabel is located on the study corridor.

Natural

Wetlands and Surface Waters

Project Level

Comments:

The study limits fall within both the Saint Johns River Water Management District and the Southwest Florida Water Management District; therefore, coordination regarding avoidance and minimization and mitigation will start early in the PD&E Study process. This will also involve the US Army Corp. of Engineers (USACOE). Given the length of the study corridor, and the natural features in the study area, wetland systems of various quality have been identified. Particularly sensitive systems exist in and around the Withlacoochee State Forest, the Withlacoochee River basin on the western portion of the study area. Wetland systems are present in the area east of C-469, but to a much less extent than in the western segment.

Water Quality and Quantity

Project Level

Comments:

A Water Quality Impact Evaluation (WQIE) will be conducted during the PD&E Study. Items related to Water Quality and Quantity identified for this Preliminary Environmental Discussion include two impaired Florida Waters: Withlacoochee River (an Outstanding Florida Water), for Mercury and the Big Gant Canal, for various nutrients. Because of the rural nature of the study area, septic tanks are present throughout the limits; however, direct impacts are unlikely/limited.

Floodplains

Project Level

Comments:

Within the 500ft buffer there are 899.45 acres of 100-year floodplain, which consist of 554.22 acres of flood hazard zone A and 345.22 acres of flood hazard zone AE. There are 8 waterbodies identified within the 500ft buffer including the Withlacoochee River.

Wildlife and Habitat

Project Level

Comments:

Habitat suitable for threatened and endangered species is present throughout the study limits. Species that have the potential to occur within the study limits include the gopher tortoise, eastern indigo snake, Florida scrub jay, sand skink, striped newt, bald eagle, wood stork, Sherman's fox squirrel, red cockaded woodpecker, and southeastern American kestrel. The PD&E Study will include a Natural Resources Evaluation, or NRE, to identify habitat and strategies for avoidance and minimization measures.

Coastal and Marine

Project Level

Comments:

This project falls within the Withlacoochee Coastal Assessment Framework.

Physical

Noise

Project Level

Comments:

Several noise sensitive sites / receptors are present throughout the study limits. This includes limited residential and commercial sites in and around Linden, Tarrytown and Mabel in addition to more dense residential and commercial land uses in and around the City of Mascotte. A noise study, assessing the potential impacts to noise sensitive sites and the associated reasonableness and feasibility, will be conducted during the PD&E Study.

Air Quality

Project Level

Comments:

The project is not located in an air quality maintenance area. An Air Quality Screening Analysis is not anticipated to be conducted for this project (located in an attainment area).

Contamination

Project Level

Comments:

Within the 500ft buffer there are 7 hazardous waste facilities, 4 limited use drinking wells, 99 on-site sewage sites, 11 petroleum contamination monitoring sites, 3 solid waste facilities, 14 storage tank contamination monitoring sites, 1,669.54 acres of sensitive karst areas, and 8 USEPS RCA Facilities. There are two known contamination sites along the project corridor. The Cumberland Farms, Fac ID 8631423, is an active DEP cleanup site and is located at the intersection of SR 471 and SR 50, in the southwest quadrant. The second DEP cleanup site is the South Sumter Grocery, Fac ID 8516864, which is located also at the intersection of SR 471 and SR 50 in the northeastern quadrant, and its cleanup status is pending.

Infrastructure

Project Level

Comments:

Within the 500ft buffer there is one Federal Aviation Administration (FAA) obstruction, one wireless antenna structure, three wastewater facilities and several roadway facilities including SR 50. Within the 100ft buffer there is 200.26ft of railroad mainline and a grade level railroad crossing.

Navigation

Project Level

Comments:

There are no navigable waterways that intersect with the project area. There is a public boat ramp under construction within the 1320ft buffer.

Special Designations

Special Designations: Outstanding Florida Waters

Project Level

Comments:

The EST's GIS data layers show that the Withlacoochee River System & Chassahowitzka National Wildlife Refuge are within a 100 foot buffer of the project.

Special Designations: Aquatic Preserves

Project Level

Comments:

According to the GIS data layers, there are no aquatic preserves within a mile of the project.

Special Designations: Scenic Highways

Project Level

Comments:

Although the GIS layer has not been updated in the EST to reflect it at the time of this screening, a portion of the study corridor, from the Van Fleet Trail to CR 478a, has been recently designated as part of the Scenic Sumter Heritage Byway.

<http://discoversumterfl.com/www-2014-v2/wp-content/uploads/2014/01/Scenic-Sumter-Byway.pdf>

Special Designations: Wild and Scenic Rivers

Project Level

Comments:

n/a

Advance Notification Comments

FL Department of State Comment --

no comments

--Ginny Leigh Jones, 9/28/2016

No response

US Army Corps of Engineers Comment --

The Corps has no issues with the Advance Notification Package and concurs with the initial assessment of Wetlands and Surface Water and Navigation issues. Further comments on project effects are provided in the Review Project tool.

--Randy Turner, 9/20/2016

No response

US Environmental Protection Agency Comment --

EPA does not have any additional comments.

--Amanetta Somerville, 9/29/2016

No response

GIS Analyses

Since there are so many GIS Analyses available for Project #14269 - West SR 50 from US 301 to CR 33, they have not been included in this ETDM Summary Report. GIS Analyses, however, are always available for this project on the Public ETDM Website. Please click on the link below (or copy this link into your Web Browser) in order to view detailed GIS tabular information for this project:

<http://etdmpub.fl-a-etat.org/est/index.jsp?tpID=14269&startPageName=GIS%20Analysis%20Results>

Special Note: Please be sure that when the GIS Analysis Results page loads, the **Programming Screen Summary Report Published on 12/01/2016 by Kathaleen Linger Milestone** is selected. GIS Analyses snapshots have been taken for Project #14269 at various points throughout the project's life-cycle, so it is important that you view the correct snapshot.

Project Attachments

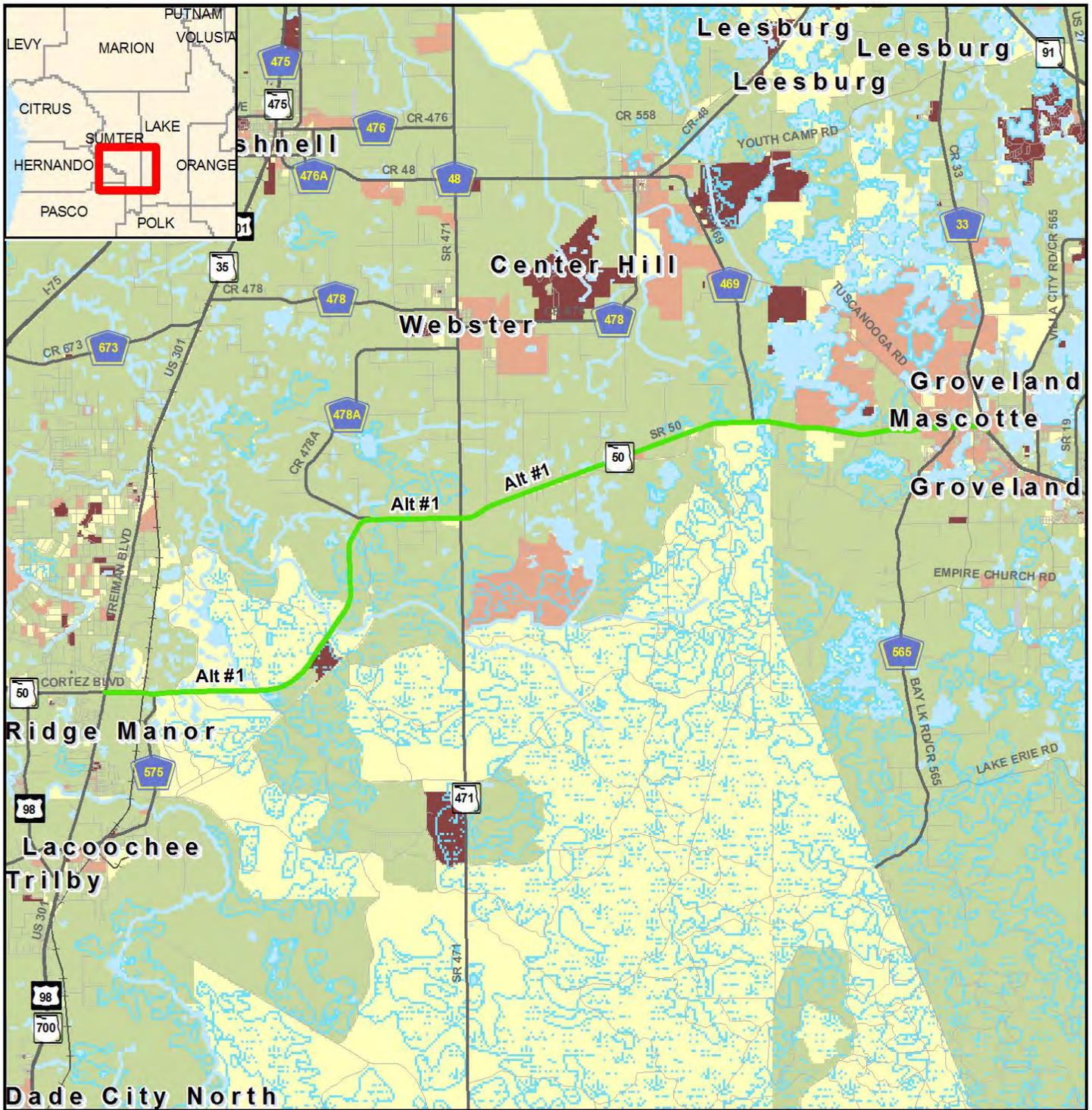
There are no attachments for this project.

Degree of Effect Legend

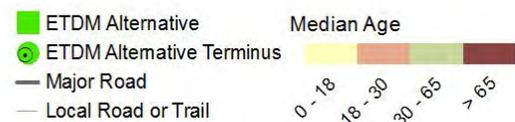
Color Code	Meaning	ETAT	Public Involvement
N/A	Not Applicable / No Involvement	There is no presence of the issue in relationship to the project, or the issue is irrelevant in relationship to the proposed transportation action.	
0	None (after 12/5/2005)	The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The <i>None</i> degree of effect is new as of 12/5/2005.	No community opposition to the planned project. No adverse effect on the community.
1	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
2	Minimal	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
2	Minimal to None (assigned prior to 12/5/2005)	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
3	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.
4	Substantial	The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.
5	Potential Dispute (Planning Screen)	Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
5	Dispute Resolution (Programming Screen)	Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary degree of effect.	

Project-Level Hardcopy Maps

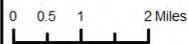
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Age Distribution Map



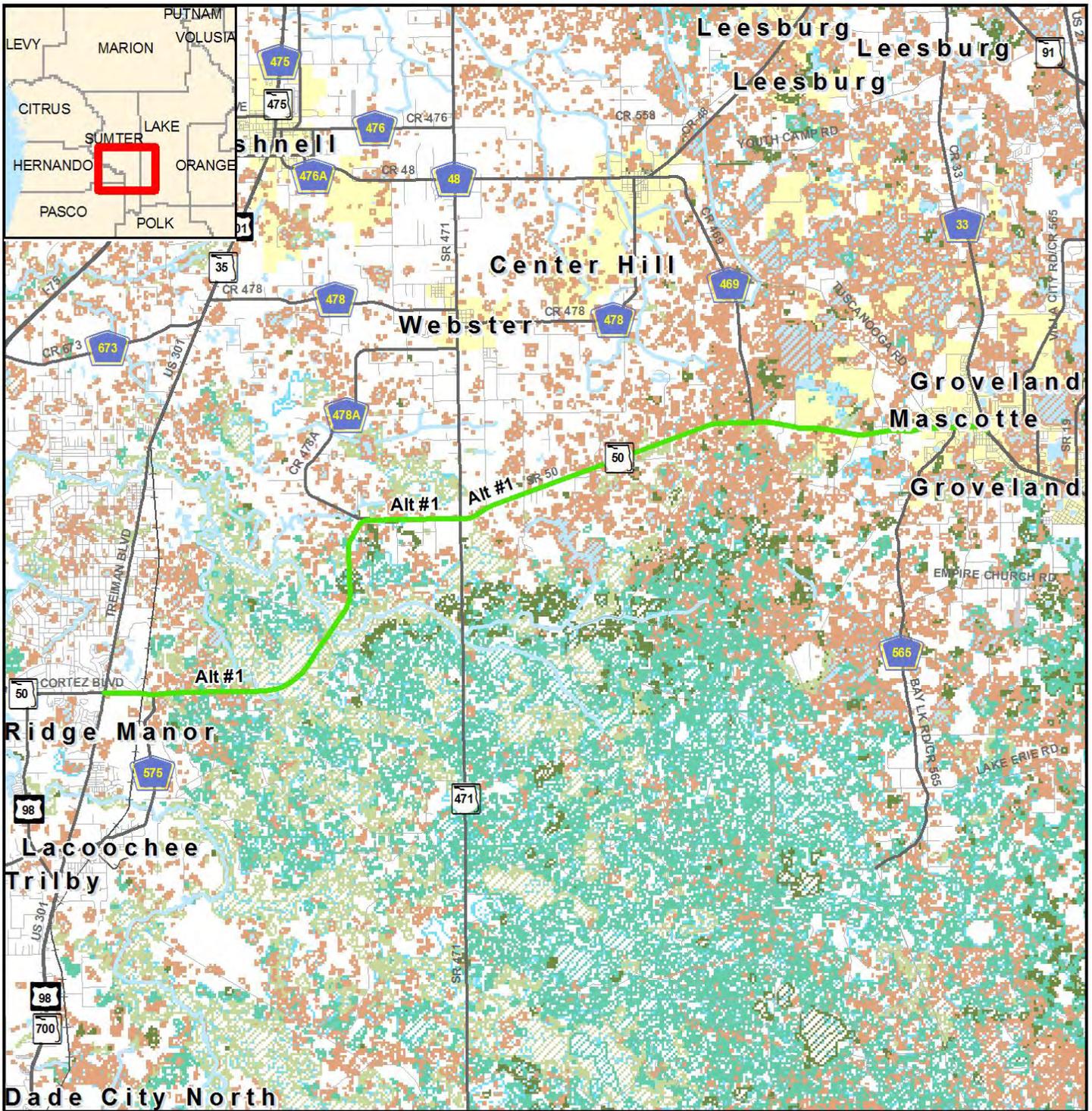
Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)



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14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Coastal and Marine Map

- | | | | |
|----------------------------------|--------------------------------------|-------------------------------|--------------------------------|
| ETDM Alternative | Swamp or Marsh | Coastal Barrier Resource Area | Non-vegetated Wetland |
| ETDM Alternative Terminus | Exposed Rocky Platform | Continuous Seagrass | Vegetated Non-forested Wetland |
| City Limits | Sand Beach | Discontinuous Seagrass | Wetland Forested Mixed |
| Navigable Water Way | Gravel Beach/Riprap | Aquatic Preserve | Wetland Coniferous Forest |
| Exposed Tidal Flat | Sheltered Tidal Flat | Wetland Hardwood Forest | |
| Sheltered Tidal Flat | Mixed Sand And Gravel Beach | | |
| Sheltered Rock/Seawall/Vegetated | Exposed Vertical Rocky Shore/Seawall | | |

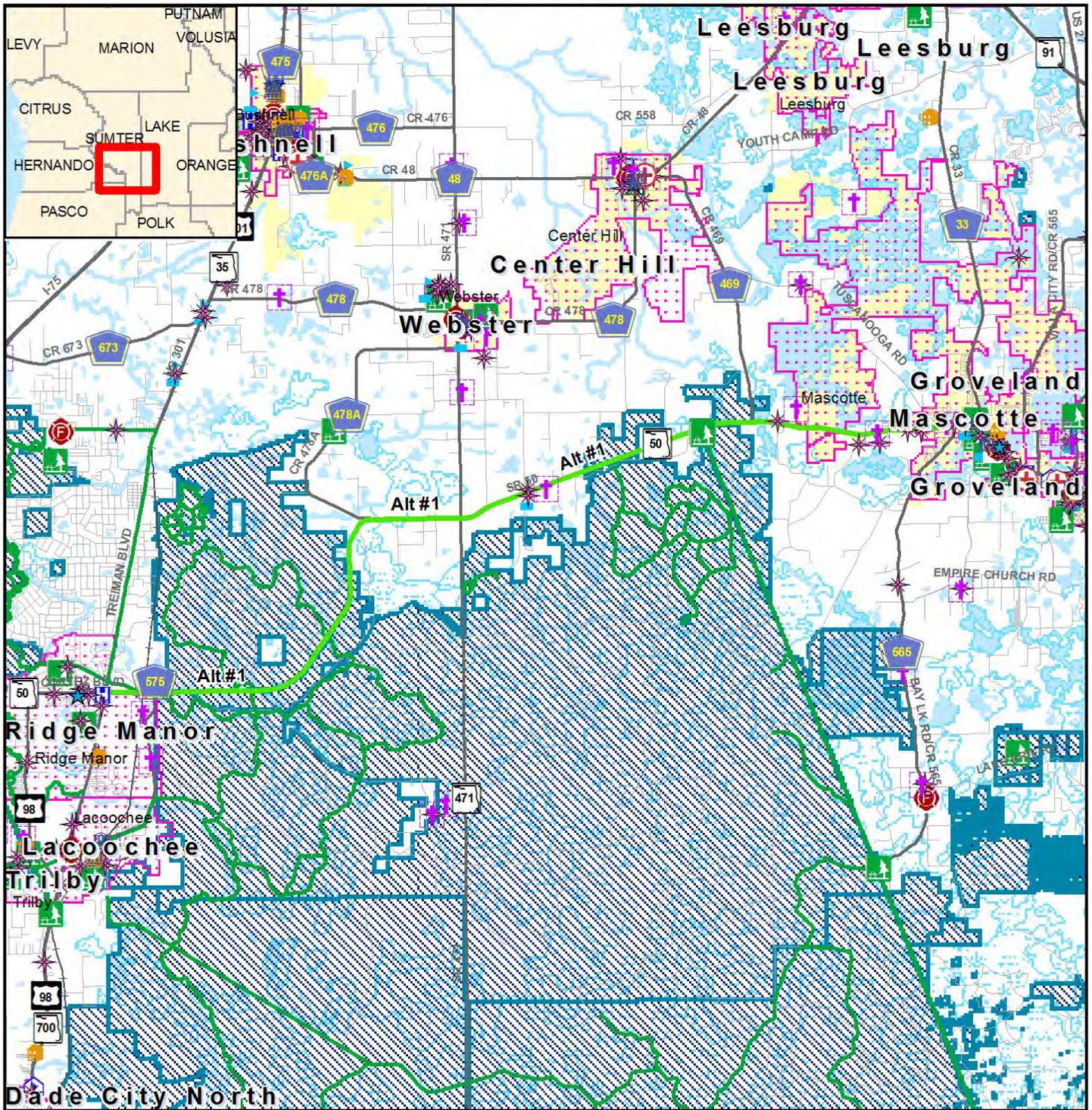
Data Sources: NAVTEQ; US Geological Survey; Florida Marine Research Institute; Florida Department of Transportation; Florida Department of Environmental Protection; National Oceanic and Atmospheric Association; Florida Water Management Districts



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Community Services Map

ETDM Alternative	Government	Law Enforcement	Health Care	Recreational Trail
ETDM Alternative Terminus	Civic Center	Place of Worship	School	Community Boundary
Major Road	Cemetery	Cultural Center	Park	Conservation or Recreation Area
Local Road or Trail	Social Service	Fire Station		
City Limits	Community Center			

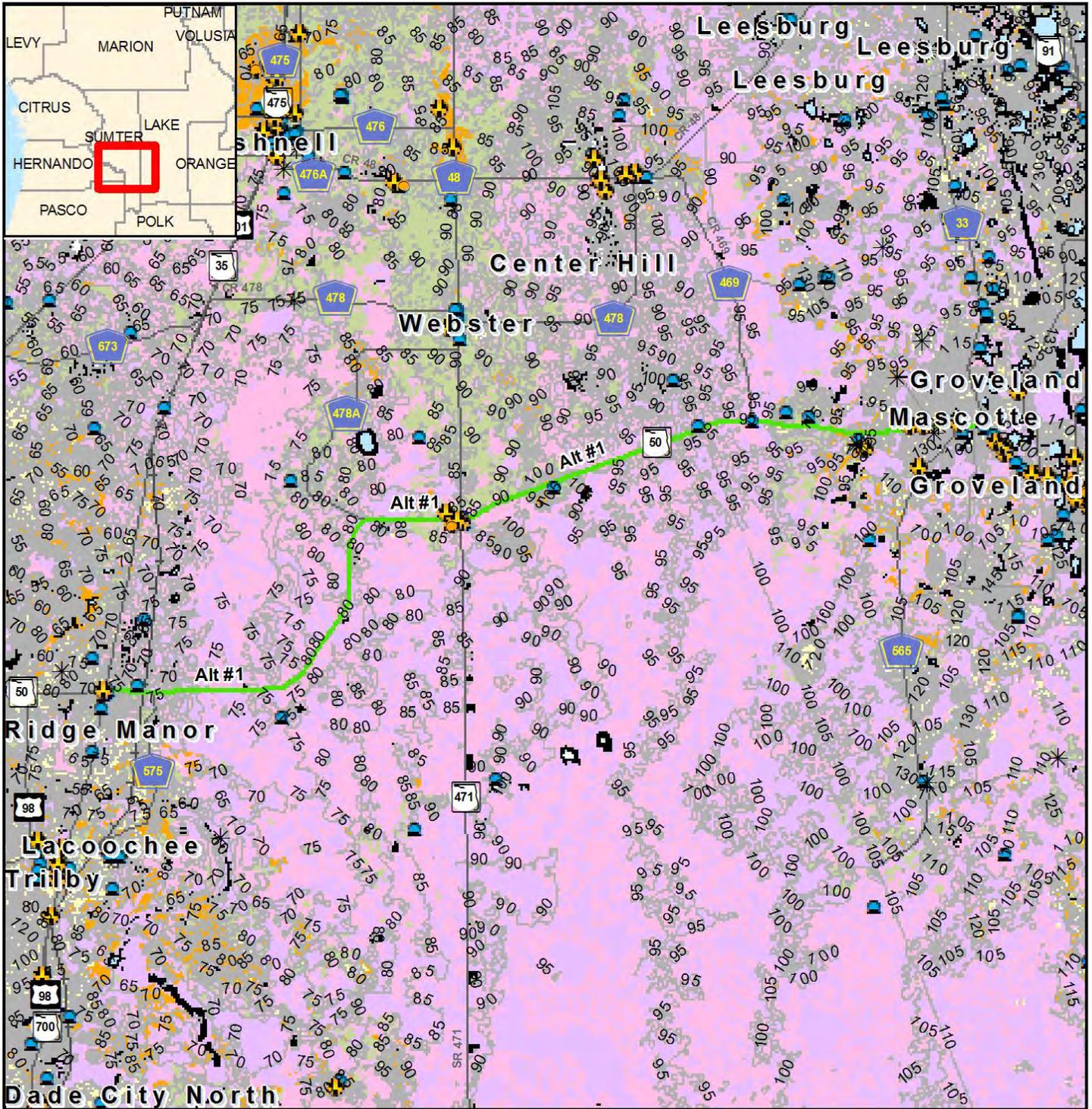
Data Sources:
US Geological Survey; FL Department of Transportation; NAVTEQ; FL Property Appraisers; FL Natural Areas Inventory

0 0.5 1 2 Miles

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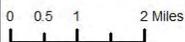
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Contamination Map

- | | | | | |
|---------------------------|-------------------------|----------------------|------------------------------|-------------------------|
| ETDM Alternative | Solid Waste Facility | FDEP Tanks | Soil Drainage | Somewhat Poorly Drained |
| ETDM Alternative Terminus | Hazardous Material Site | 5 FT Contour | Excessively Drained | Poorly Drained |
| Major Road | Power Plant | NPL Remediation Site | Well Drained | Very Poorly Drained |
| Local Road or Trail | Superfund Site | Brownfield Area | Somewhat Excessively Drained | Unclassified |
| Toxic Release Inventory | Nuclear Site | | Moderately Well Drained | |
| Dry Cleaning Facility | | | | |

Data Sources: NAVTEQ; US Geological Survey; FL Department of Transportation; FL Department of Environmental Protection; FL Water Management Districts; US Environmental Protection Agency; Natural Resource Conservation Service

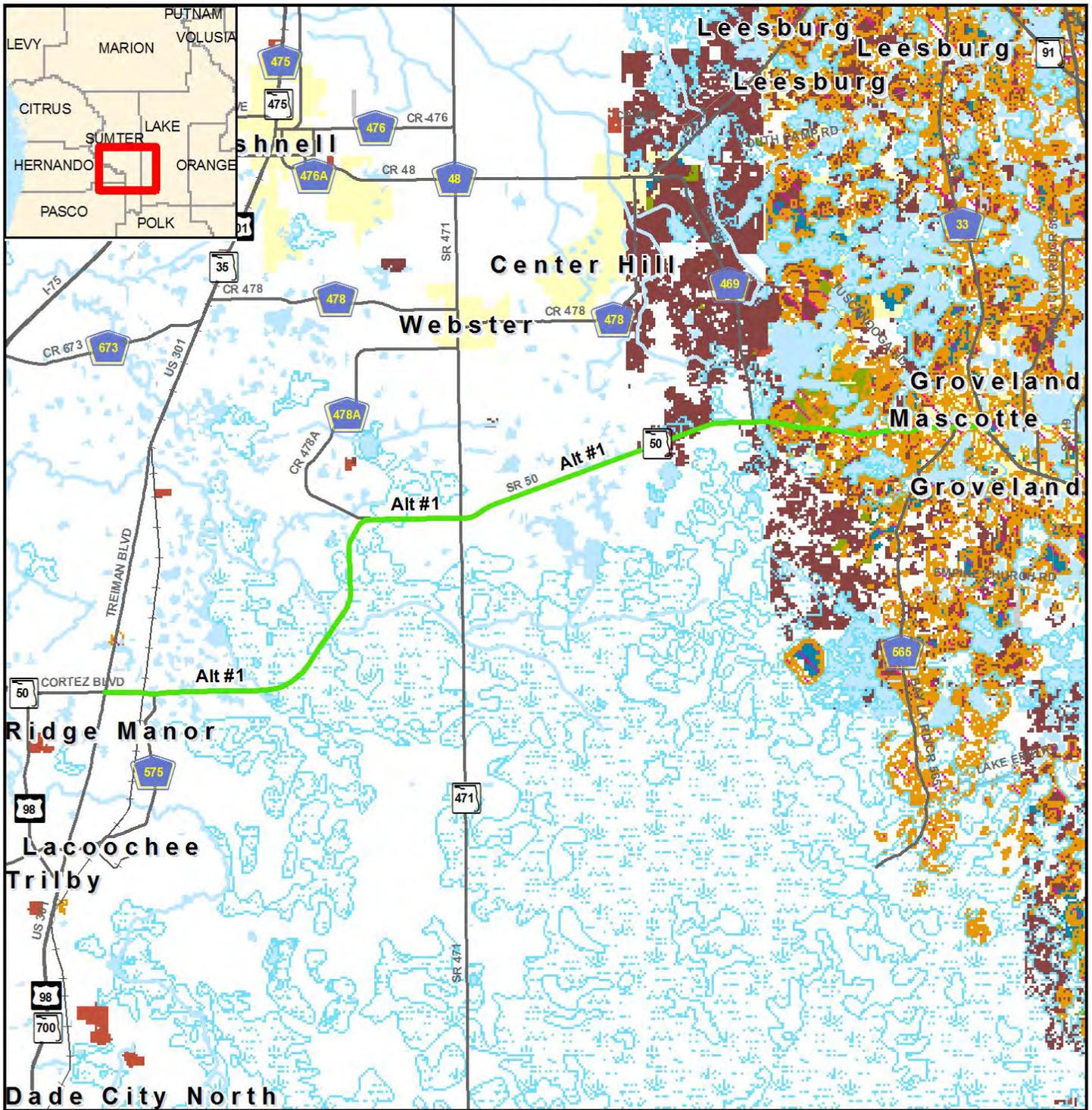


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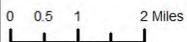
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Farmlands Map

- | | | |
|--|---|--|
| ■ ETDM Alternative | ■ Cropland/Pastureland | □ Prime Farmland Soils |
| ● ETDM Alternative Terminus | ■ Nurseries/Vineyards | |
| — Major Road | ■ Specialty Farms | |
| — Local Road or Trail | ■ Tree Crops | |
| ■ City Limits | ■ Rural Open Lands | |

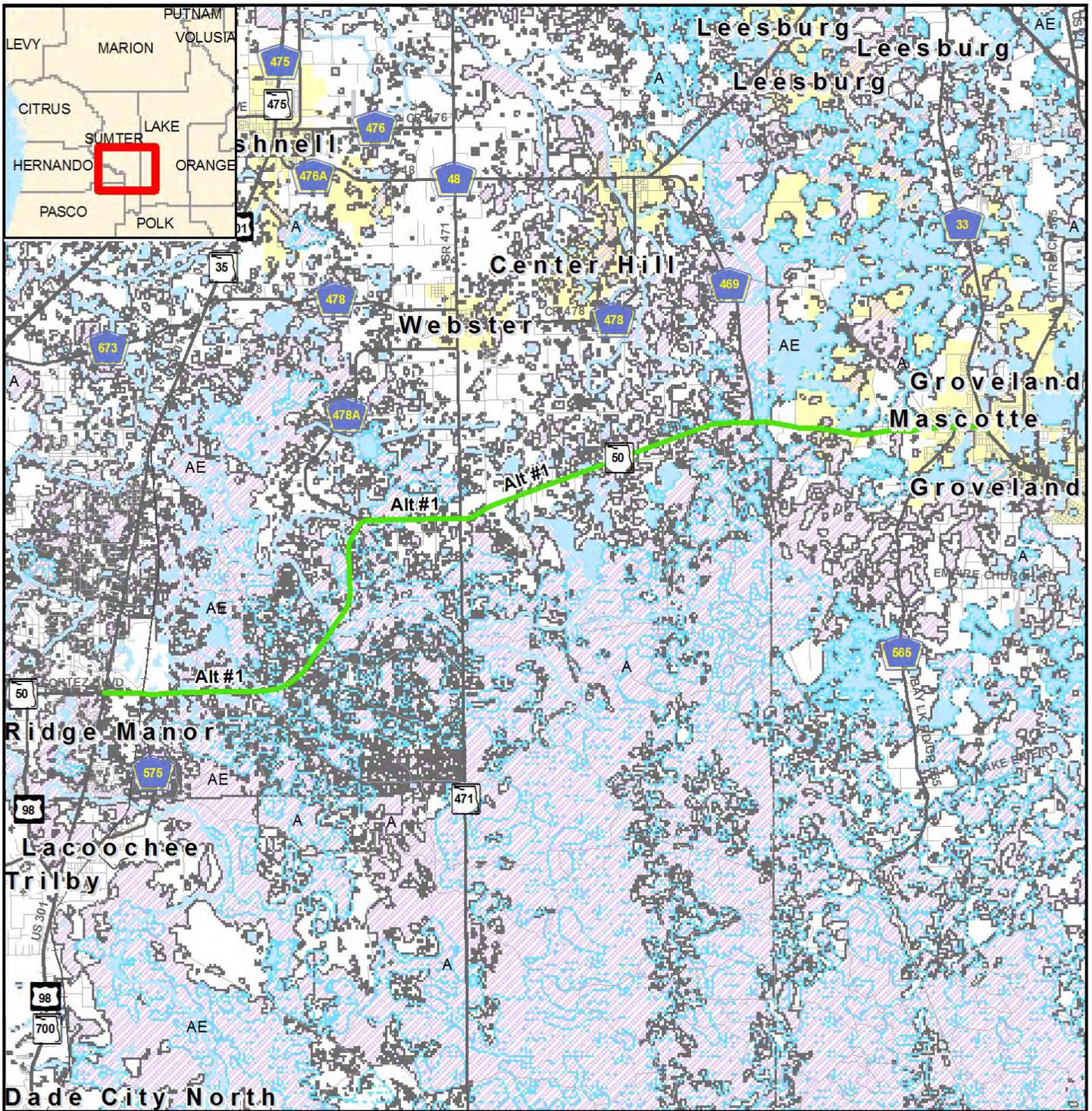
Data Sources:
 NAVTEQ
 Florida Water Management Districts
 US Geological Survey
 Natural Resources Conservation Services



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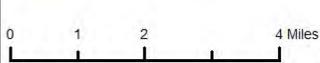
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Floodplains Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- Special Flood Hazard Area

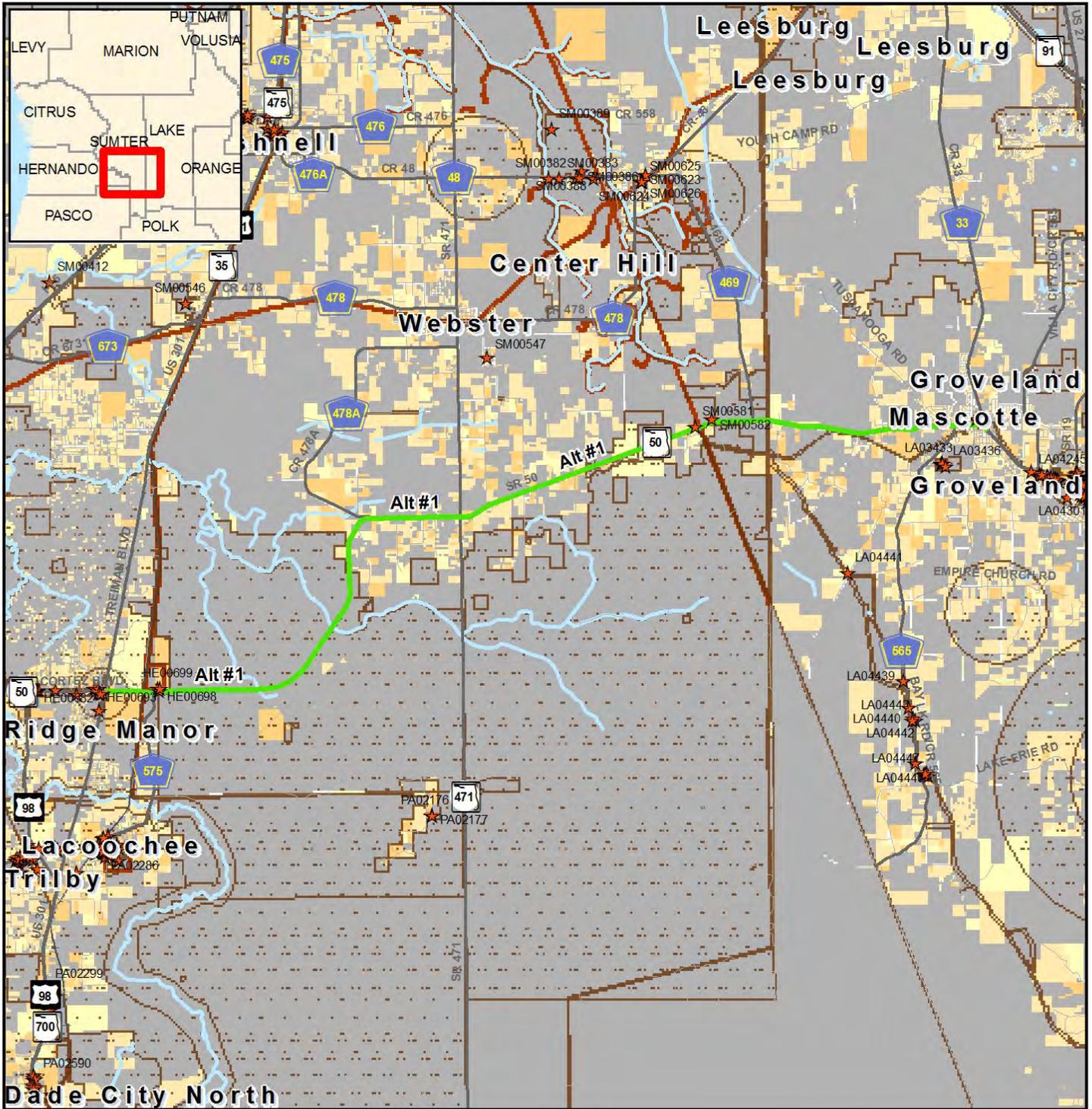
Data Sources:
 NAVTEQ
 US Geological Survey
 Federal Emergency Management Agency



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Historic Resource Map

- | | | |
|--|--|---------------------------------------|
| ■ ETDM Alternative | Year Built | ★ Historic Structure |
| ● ETDM Alternative Terminus | Pre 1970 | — Historic Bridge |
| — Major Road | Post 1980 | — State Historic Highway |
| — Local Road or Trail | 1970 - 1979 | ⊠ Historic Cemetery |
| | Parcels w/ no values | ⊠ Historic Resource Group |
| | | ⊠ Cultural Resource Field Survey Area |

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Department of State,
 Bureau of Archaeological Research

Note: Historic properties depicted on this map represent resources listed in the Florida Master Site File excluding archeological site locations, which, pursuant to Chapter 267.135, Florida Statutes, may be exempt from public record (Chapter 119.07, Florida Statutes). Absence of features on the map does not necessarily indicate an absence of resources in the project vicinity.

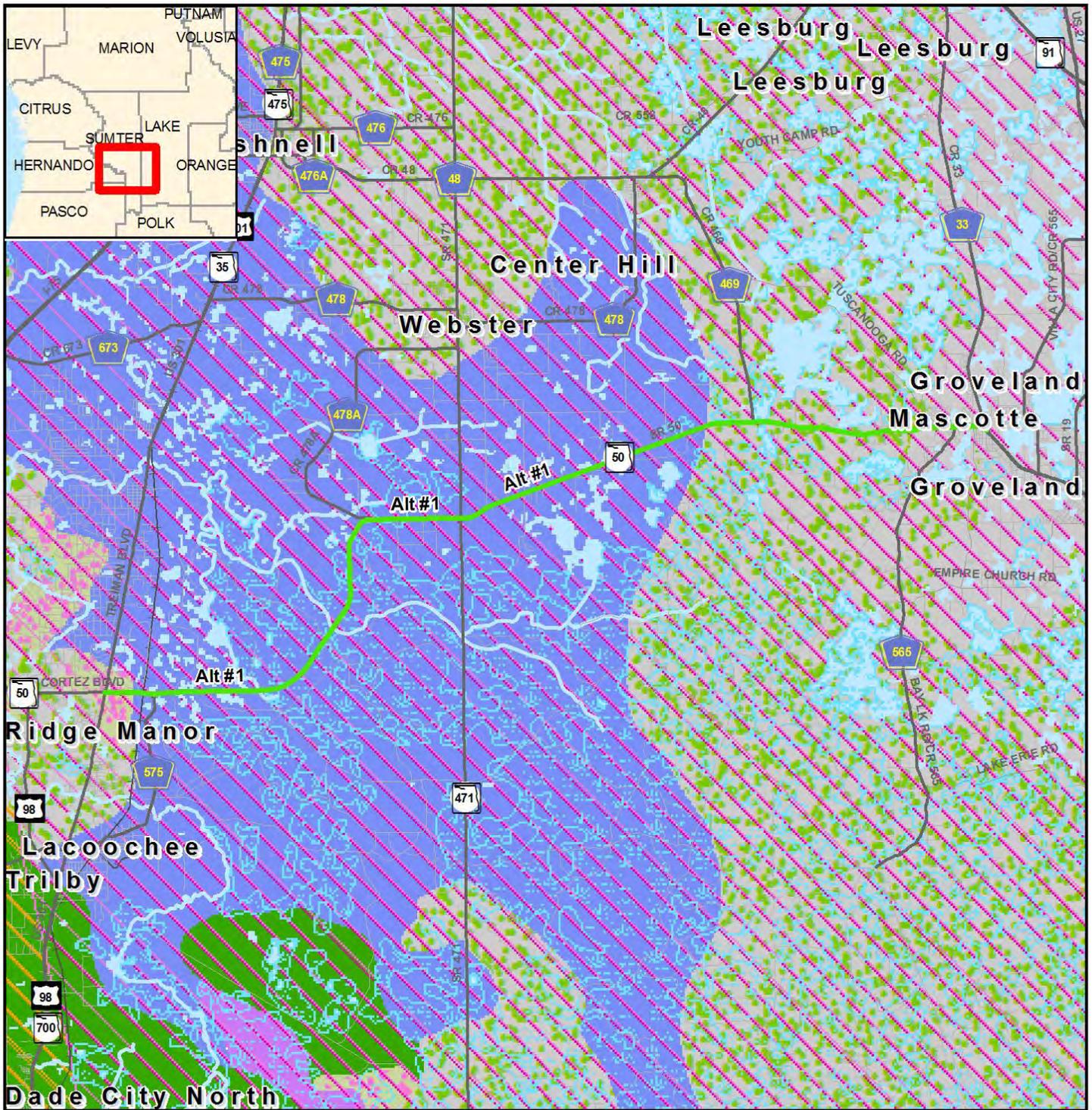
0 1 2 4 Miles



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14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Hydrogeology Map

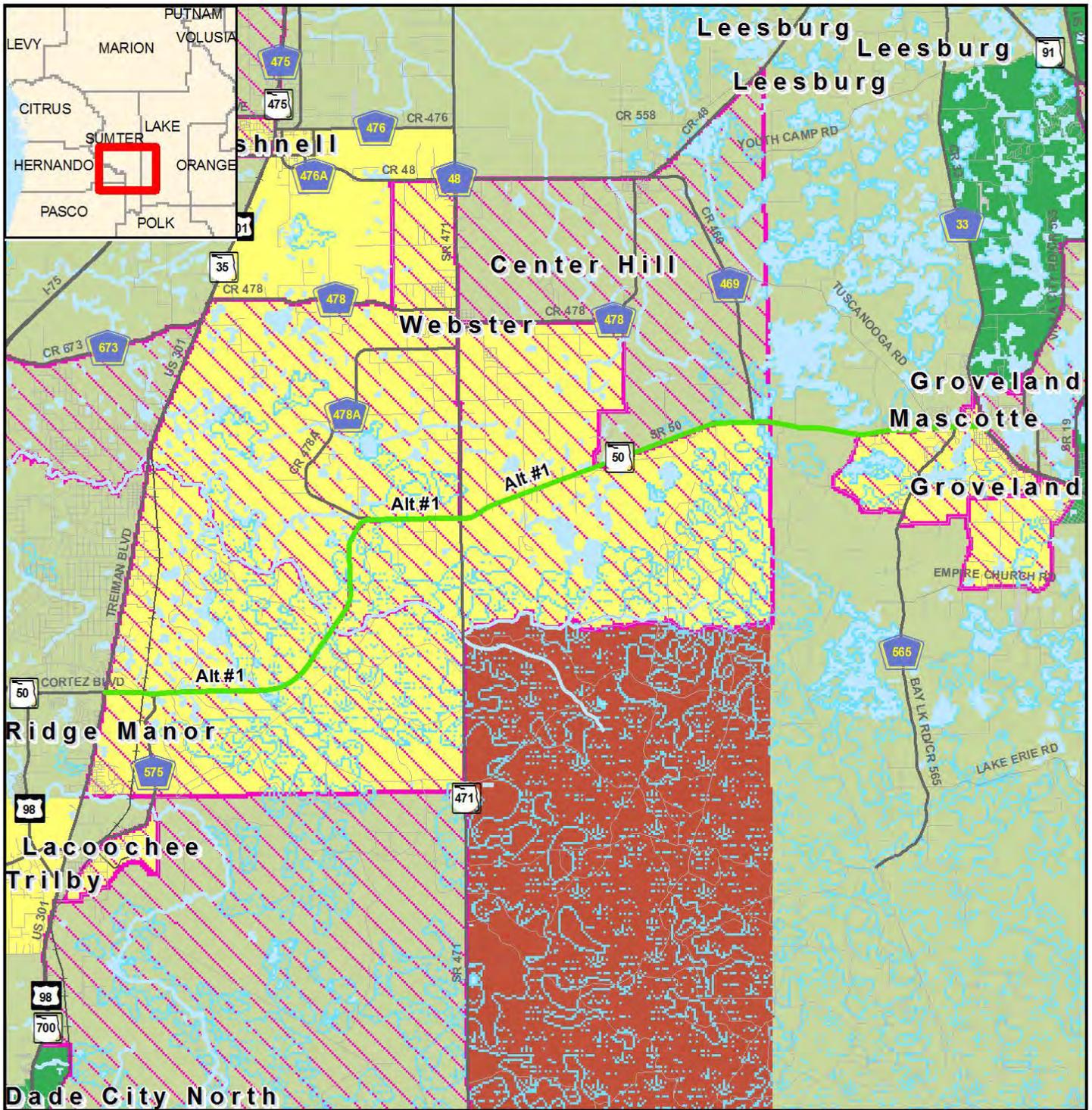
<ul style="list-style-type: none"> ■ ETDM Alternative ● ETDM Alternative Terminus — Major Road — Local Road or Trail ■ City Limits 	Recharge Areas of the Floridan Aquifer <ul style="list-style-type: none"> Discharge 1 to 5 Discharge > 5 Discharge < 1 Recharge 1 to 10 Recharge > 10 Recharge < 1 	Surface Geology <ul style="list-style-type: none"> ■ Eocene ■ Miocene ■ Miocene/Pliocene ■ Oligocene ■ Oligocene/Miocene ■ Pleistocene ■ Holocene 	<ul style="list-style-type: none"> ■ Pleistocene/Holocene ■ Pliocene ■ Pliocene/Pleistocene
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Data Sources: NAVTEQ; US Geological Survey
Florida Department of Transportation
South West Florida Water Management District
Florida Geological Survey

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Income Map

■ ETDM Alternative	Median Household Income	
● ETDM Alternative Terminus	 0 - 10,000	
— Major Road	 10,001 - 29,999	
— Local Road or Trail	 30,000 - 49,999	
 > 20% Below Poverty	 50,000 - 79,999	
	 80,000 - 125,000	
	 > 125,000	

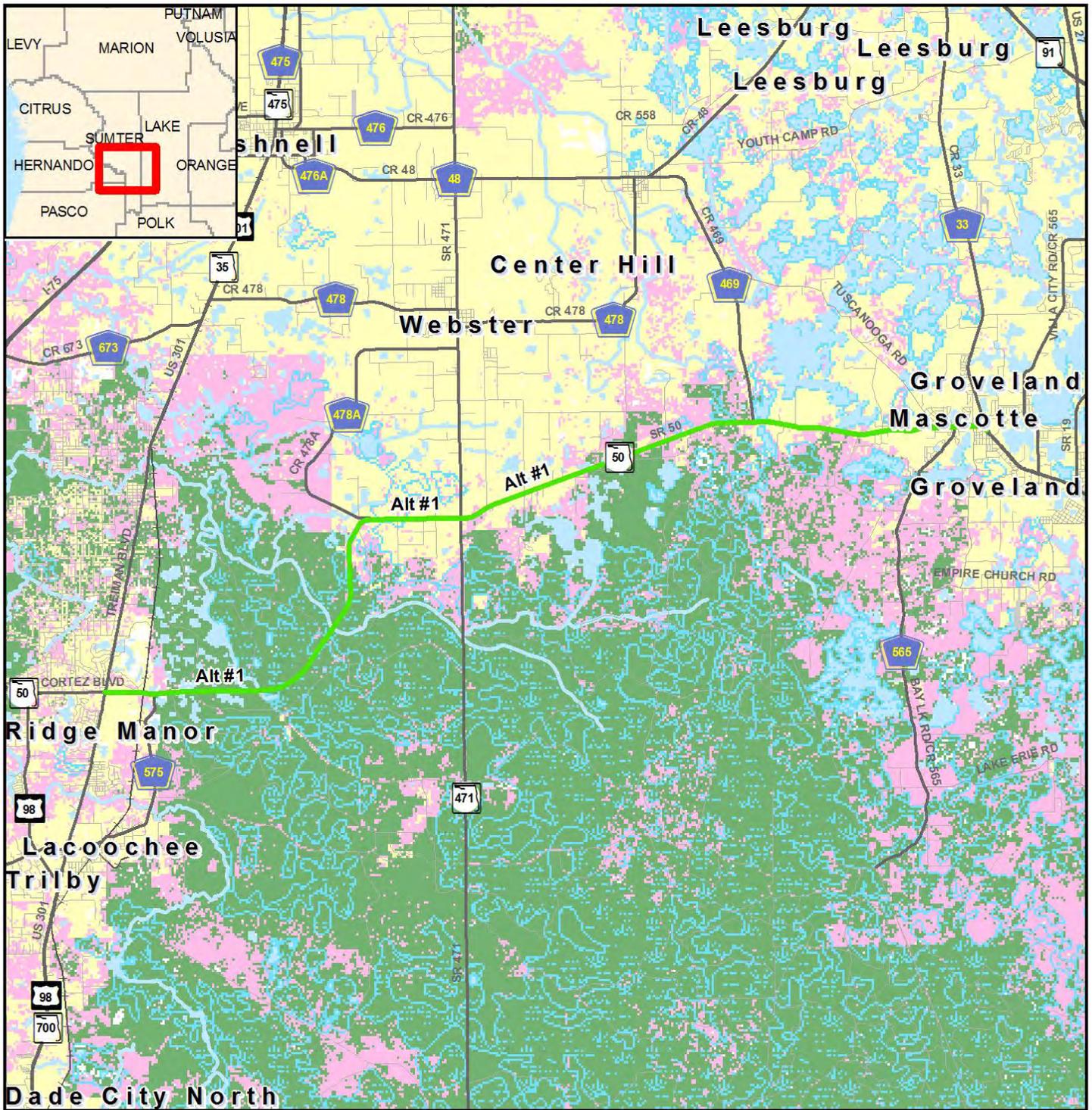
Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

0 1 2 4 Miles

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Integrated Wildlife Model Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- Low Habitat Quality
- Medium Habitat Quality
- High Habitat Quality

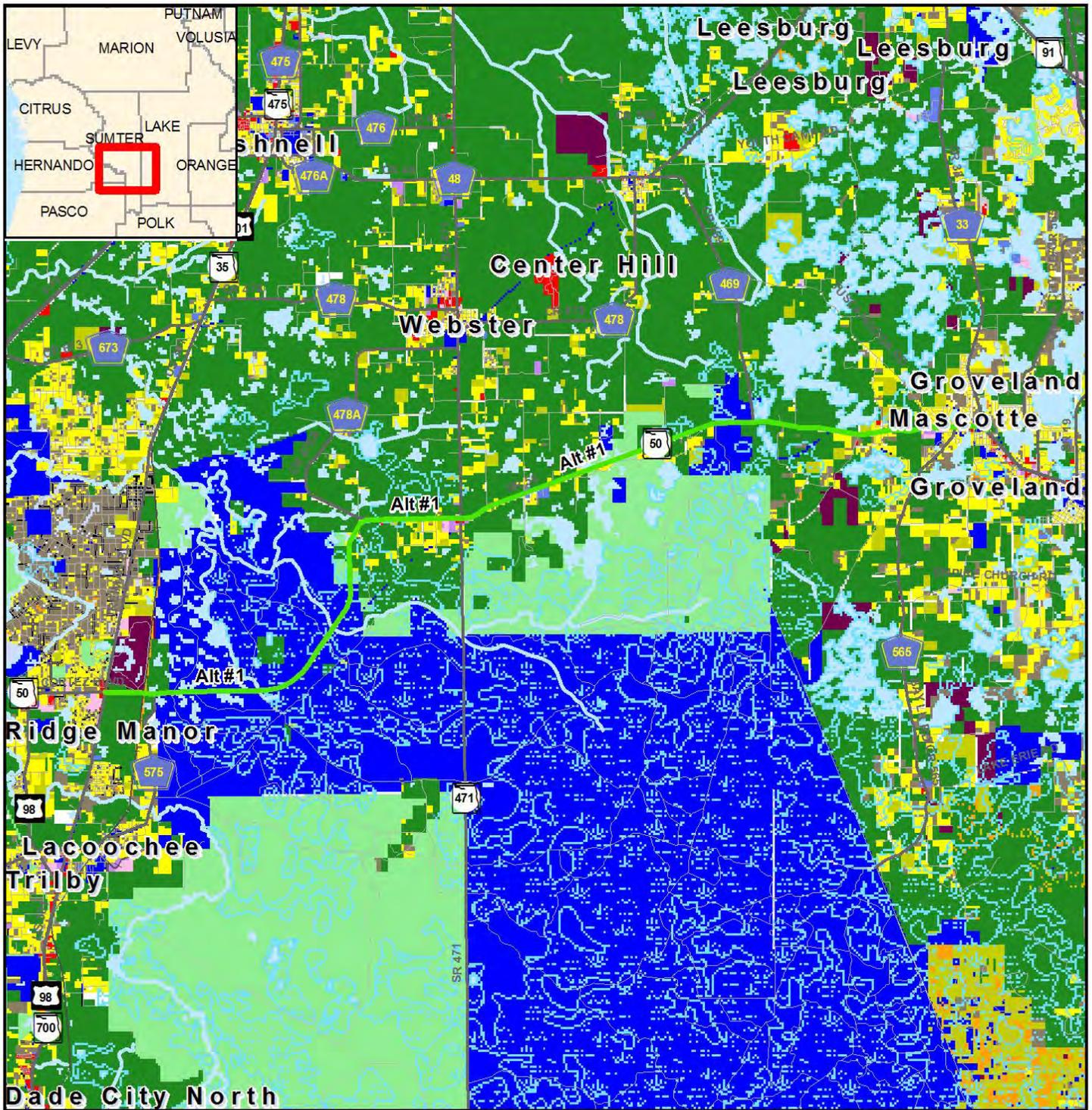
Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Fish & Wildlife Conservation Commission



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Land Use Map

■ ETDM Alternative	■ Agricultural	■ Other	■ Retail/Office
● ETDM Alternative Terminus	■ Industrial	■ Public	■ Vacant (Residential)
— Major Road	■ Institutional	■ Right-of-Way	■ Vacant (Nonresidential)
— Local Road or Trail	■ Mining	■ Recreational	■ Water
	■ Open (Not Agricultural)	■ Residential	□ No Data

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Revenue
 Florida Department of Transportation
 Florida County Property Appraiser Offices

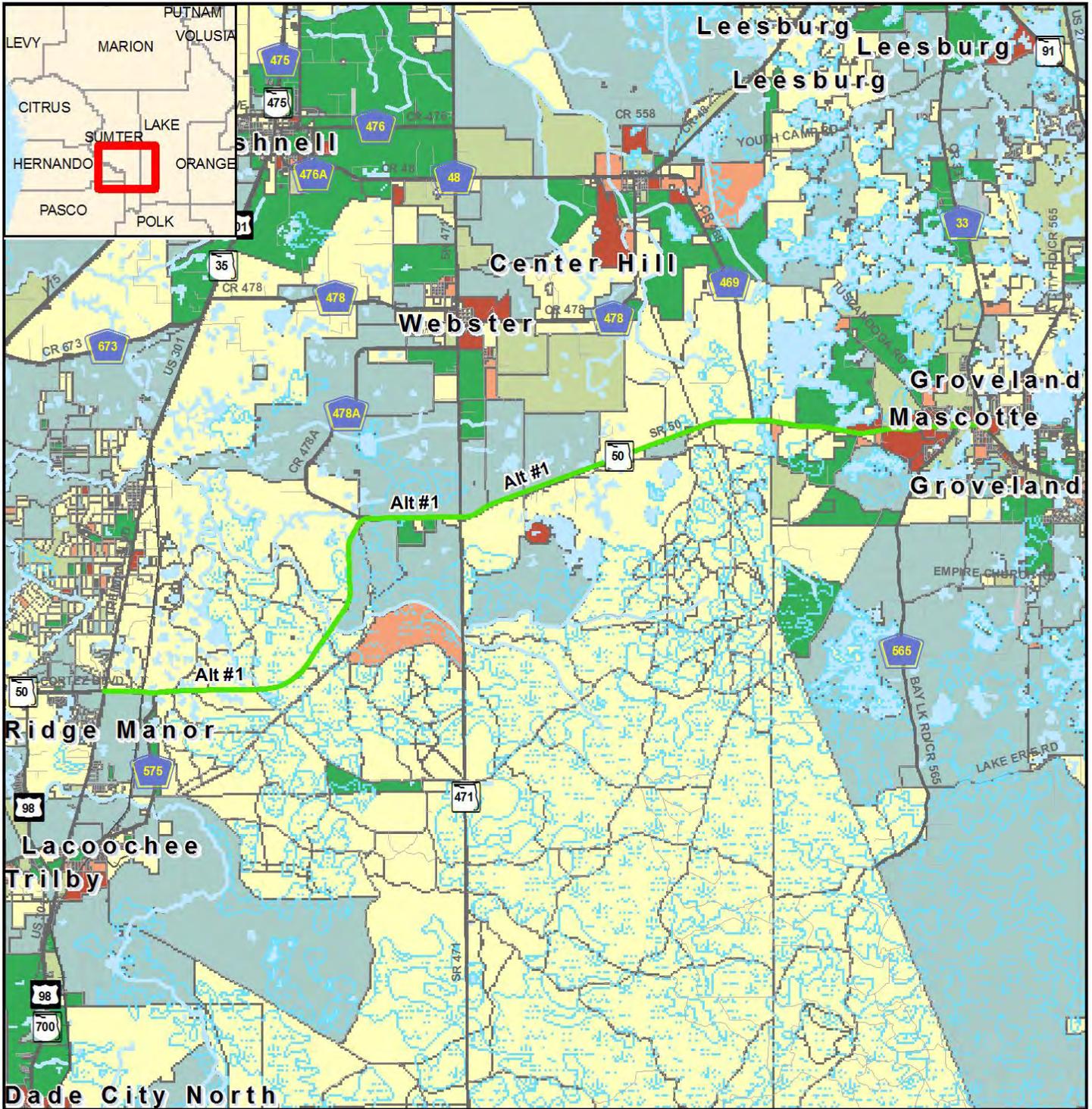
0 1 2 4 Miles

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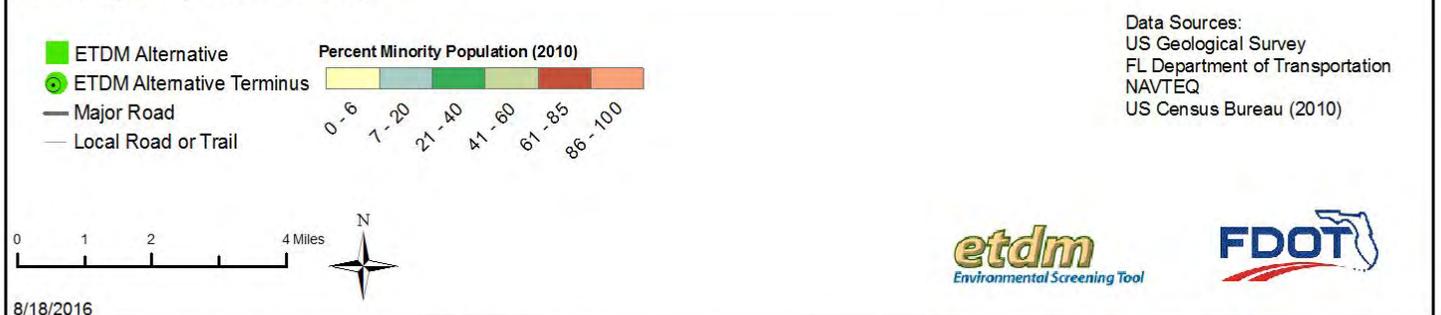
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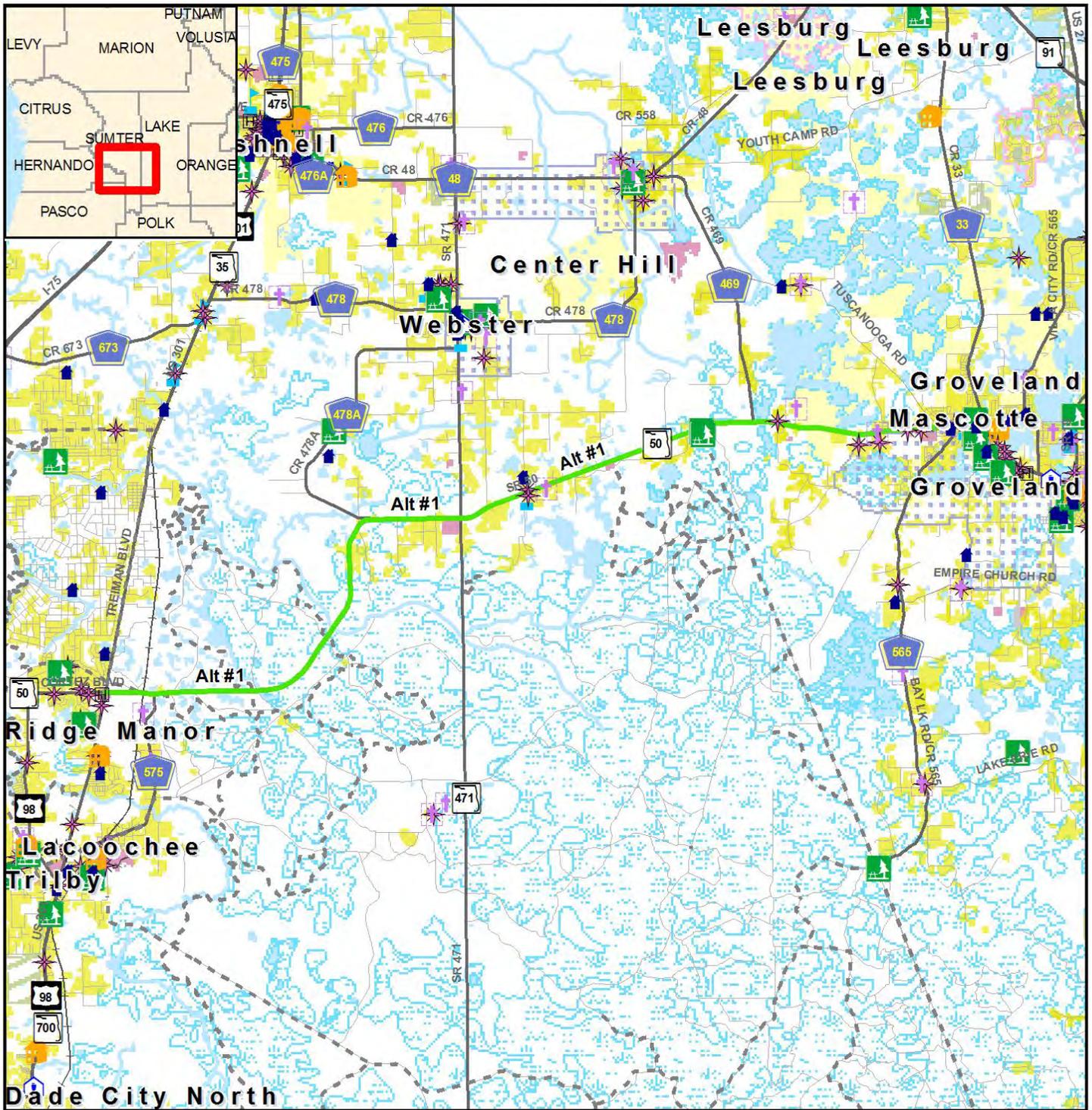


Minority Population Map



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Noise Map

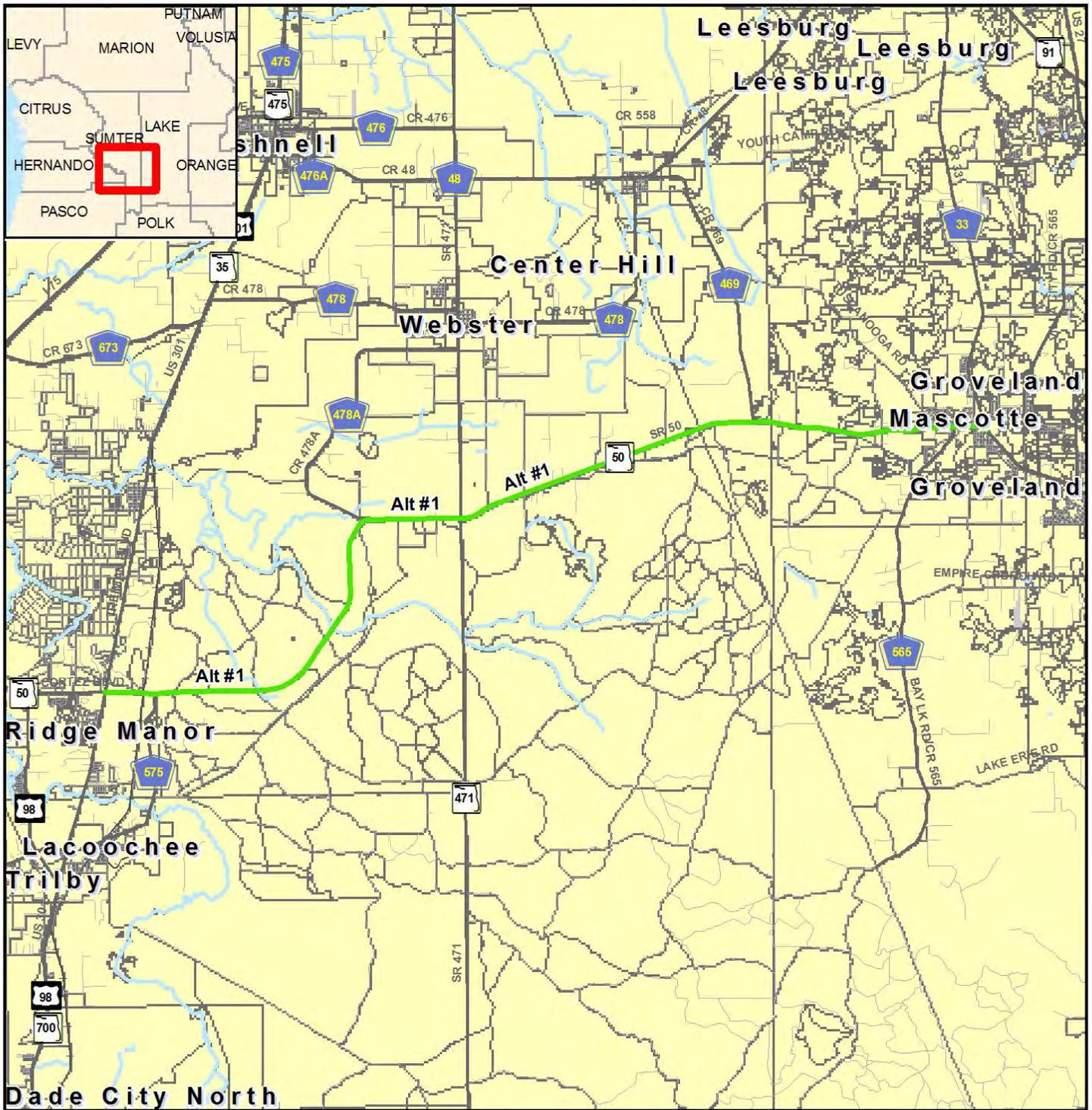
ETDM Alternative	Condo Owners Associations	Cultural Center	Historic Cemetery	ETAT.LU_NW_INDUSTRIAL_13
ETDM Alternative Terminus	Hospitals	Health Care	Planned Unit Developments	ETAT.LU_NW_RESIDENT_13
City Limits	Laser On-site	Park	Wildlife Refuges	HUD Renewal
Noise Barriers	Group Care Facilities	National Parks	National Park Projects	Nat'l Estuarine Reserves
Existing Trails	Cemetery	Marine Sanctuaries	Military Installations	Enterprise Zones
	Community Center	School		DRI

Data Sources:
 GeoPlan Center, US Geological Survey, US Census Bureau, HUD, Florida DOT, US Fish and Wildlife, National Park Service, NOAA, National Estuarine Research, Enterprise Florida

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14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Population Density Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail

Population Per Acre (2010)

0 - 4.9	5 - 29.9	30 - 99.9	100 - 349.9	350 - 800	> 800
---------	----------	-----------	-------------	-----------	-------

Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

0 1 2 4 Miles

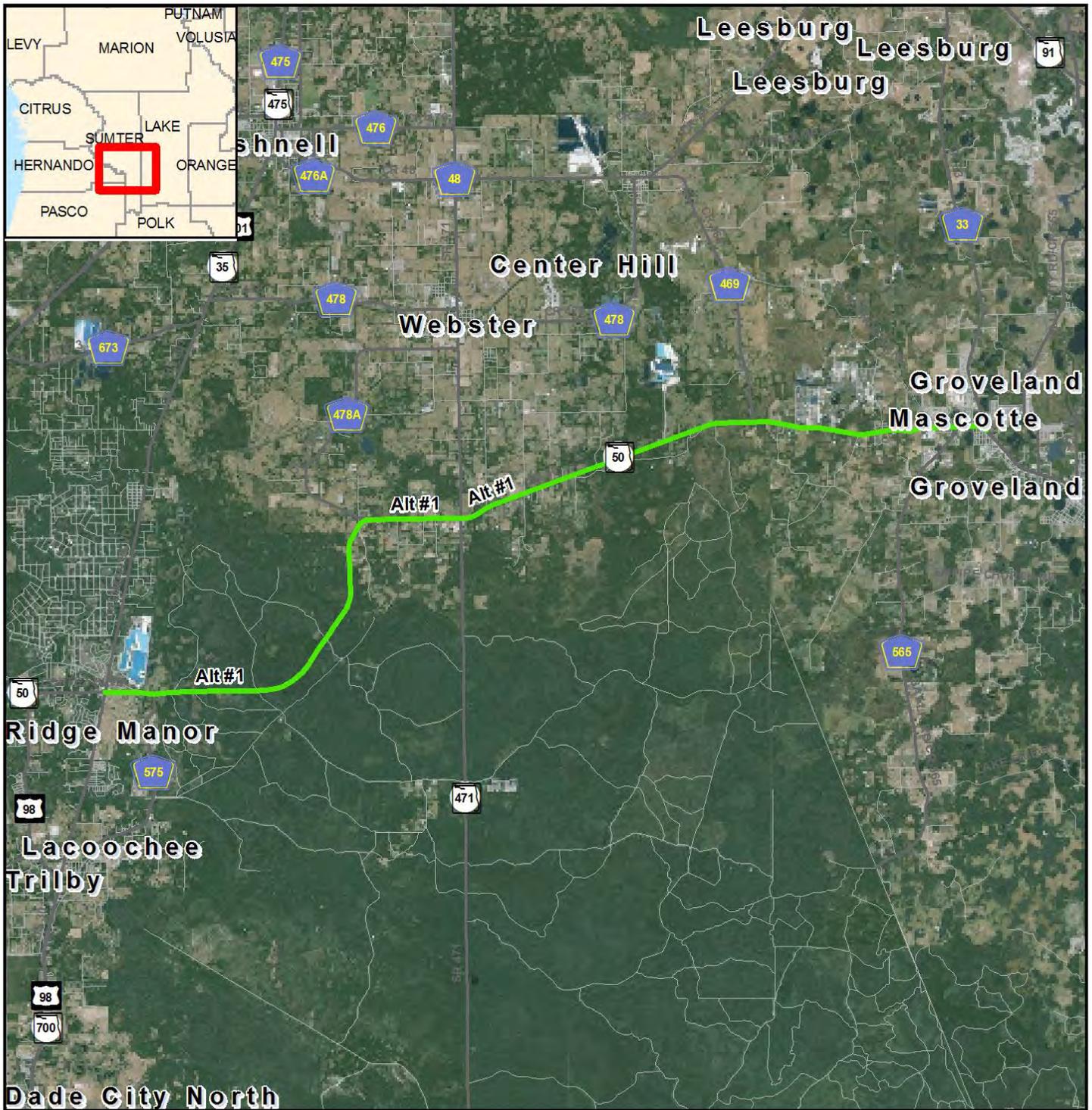
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etdm
Environmental Screening Tool

FDOT

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14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Project Aerial Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail

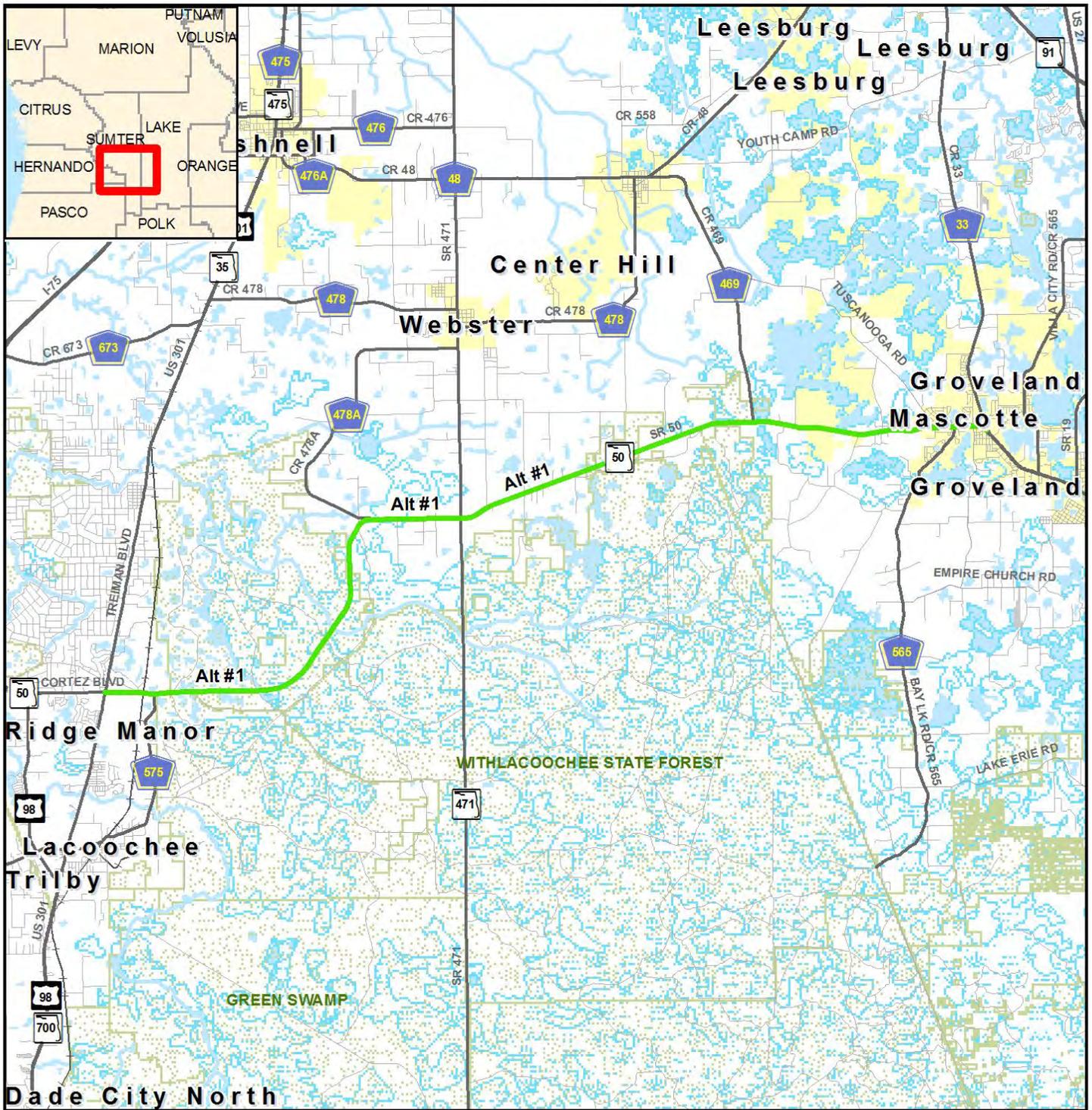
Data Sources:
Highways - NAVTEQ
Digital Orthophotograph - ArcGIS Online



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14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Project Base Map

- ETDM Alternative Terminus
- Local Road or Trail
- Major Road
- City Limits
- Managed Conservation Lands
- Alt #1

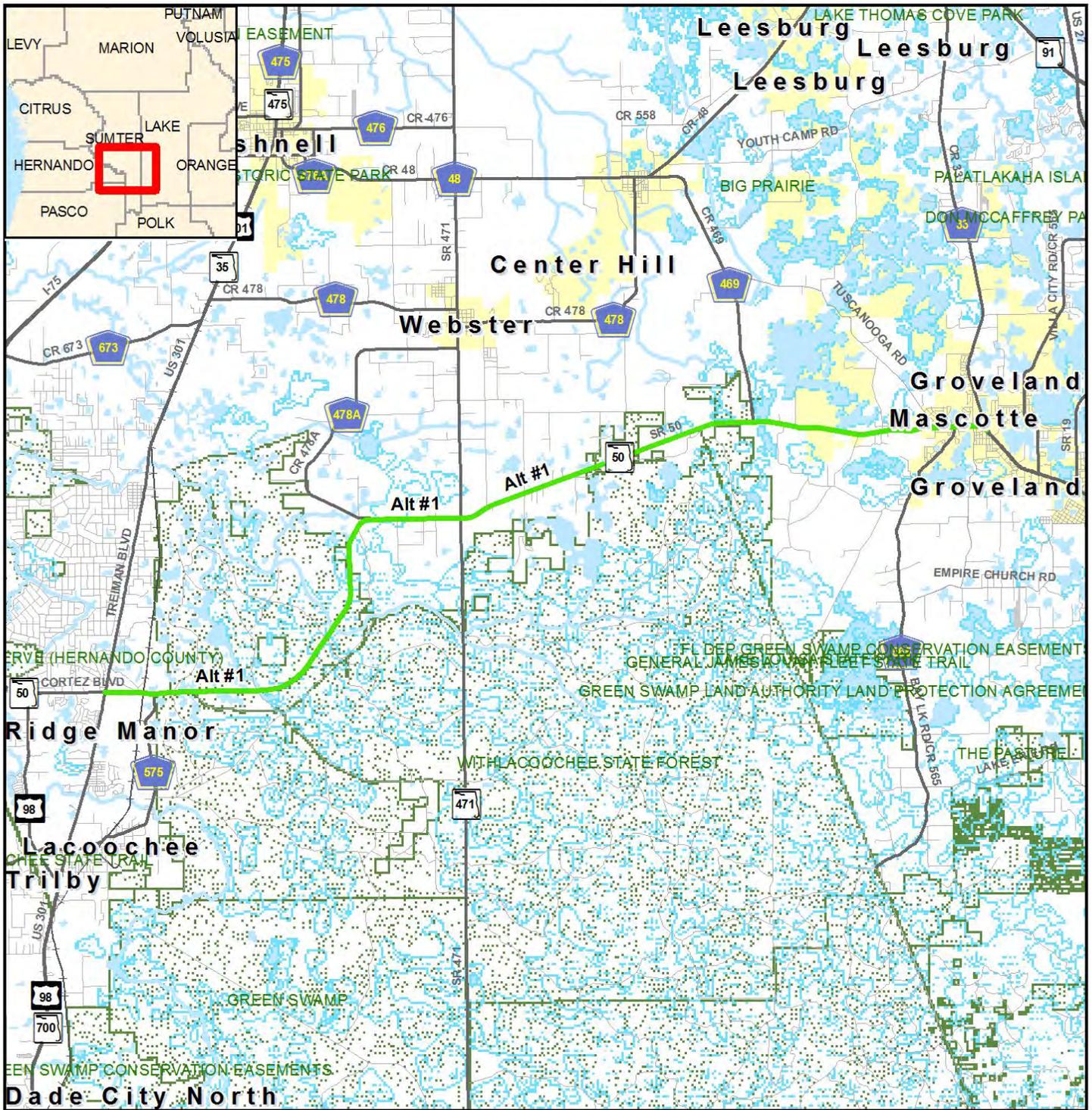
Data Sources:
 NAVTEQ
 US Geological Survey
 US Census Bureau
 County Property Appraisers
 Florida Natural Areas Inventory



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Recreational Areas Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- Conservation or Recreation Area

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Natural Areas Inventory

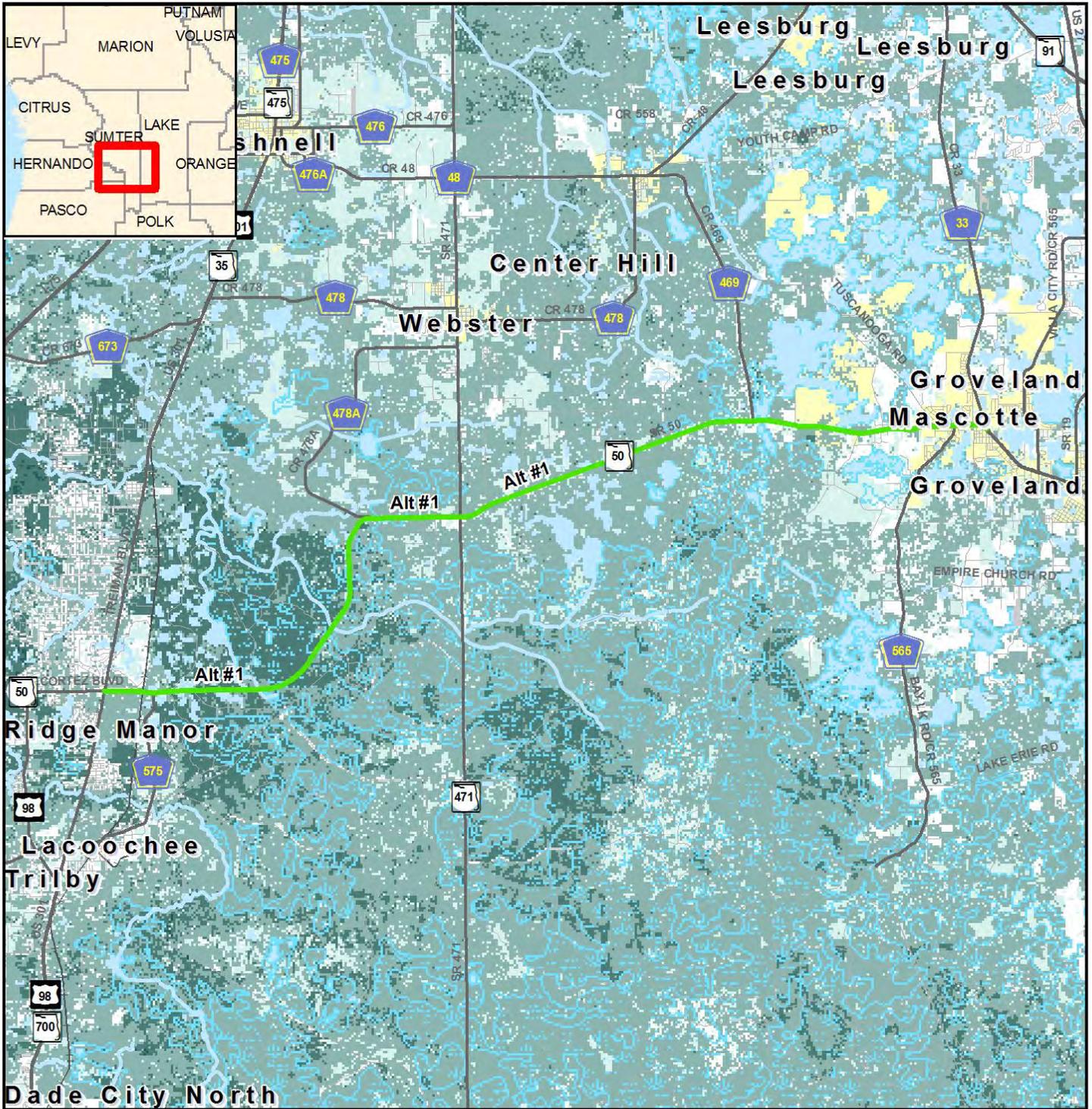


8/18/2016

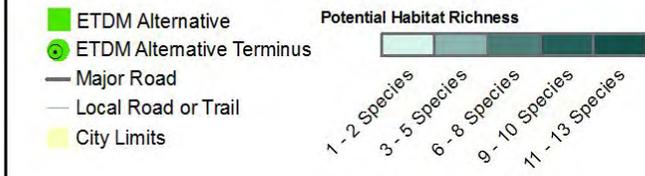
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B - 83

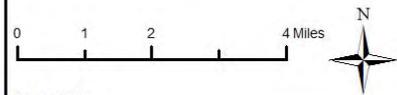
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Species Potential Map



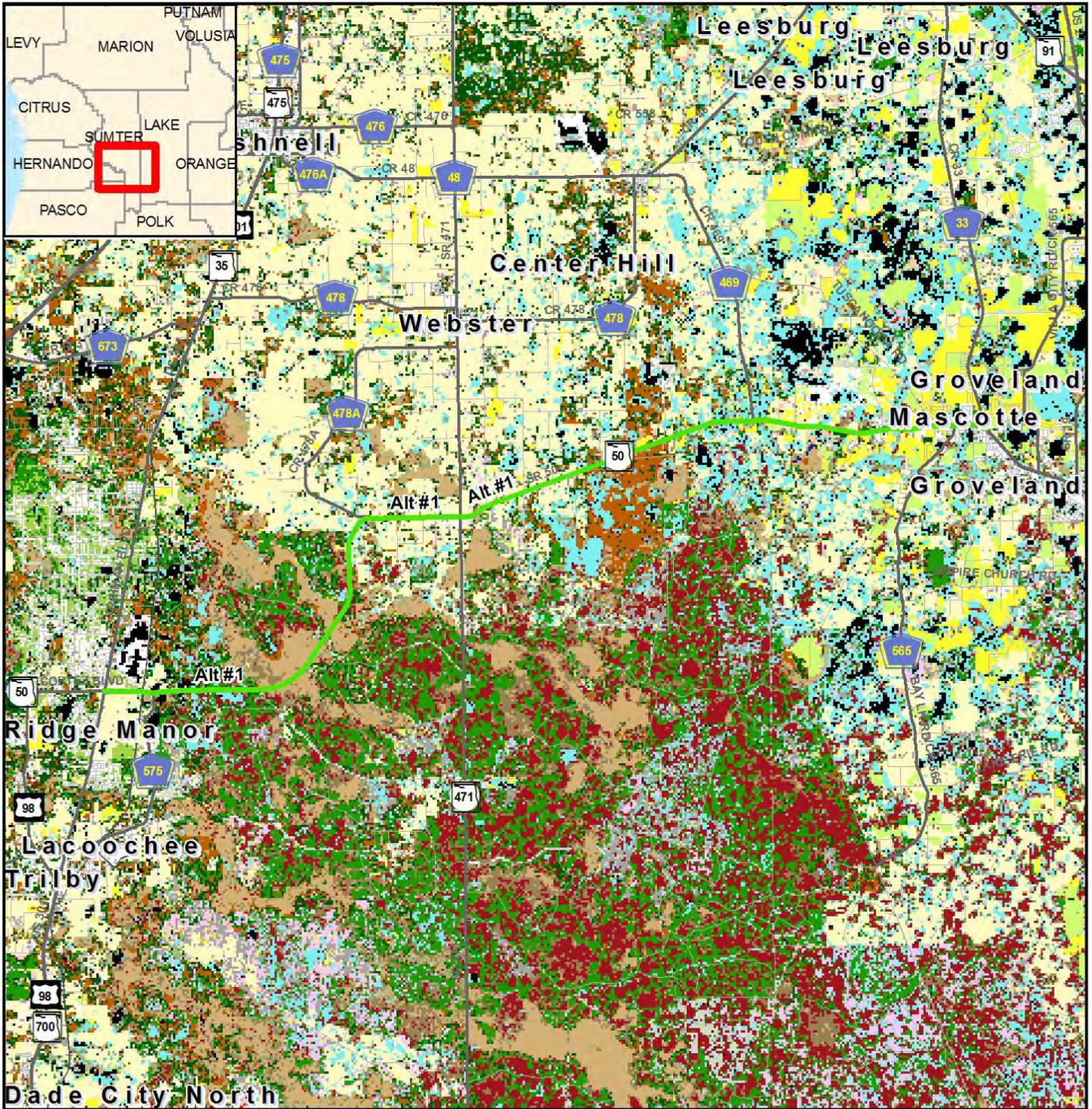
Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Fish & Wildlife Conservation Commission



8/18/2016

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 B - 84

14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



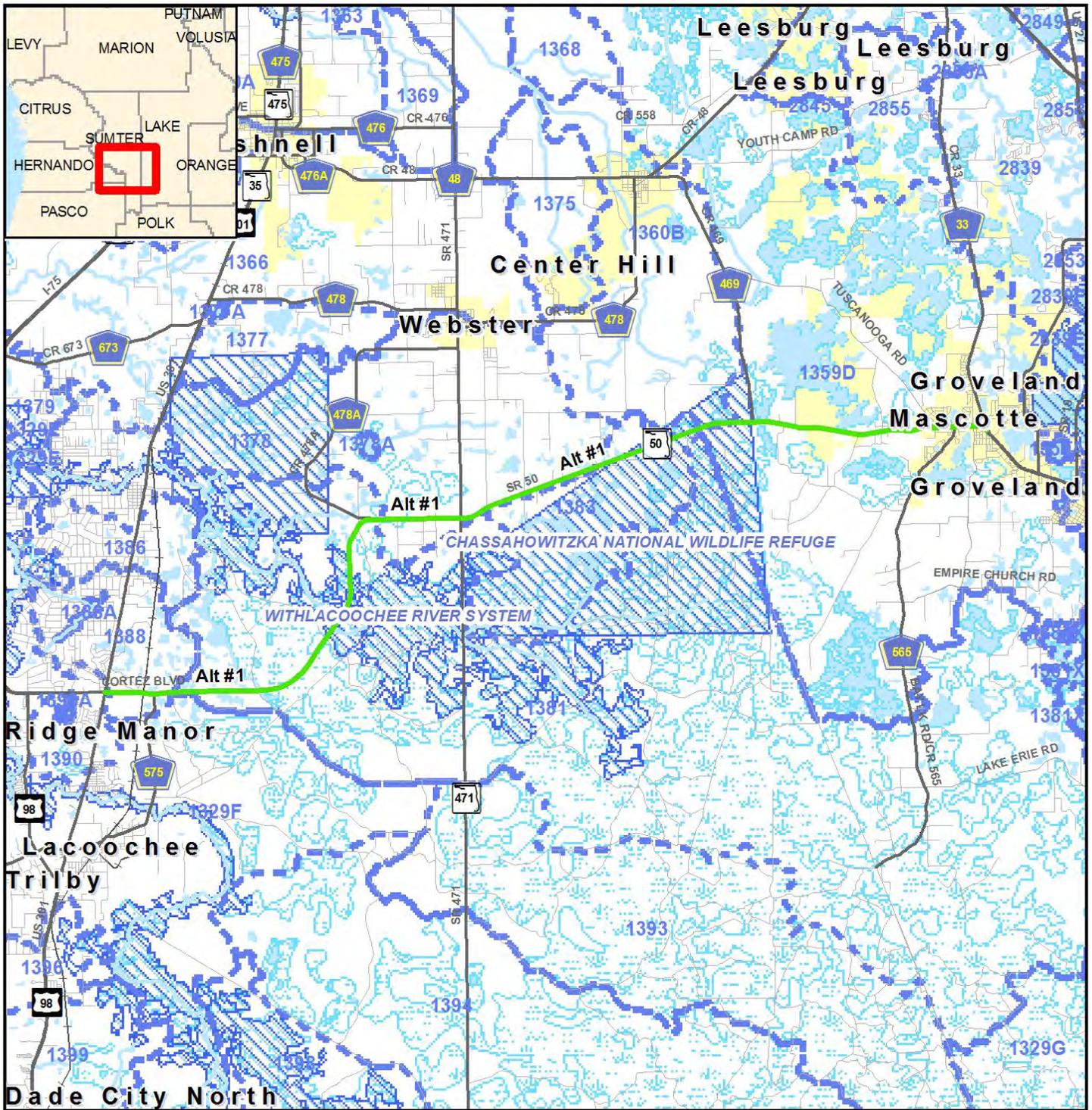
Vegetation Map



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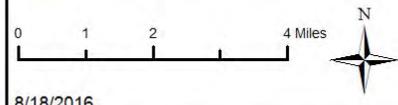
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Water Resource Map

- | | | | |
|---------------------------|------------------------|---------------------------|-------------|
| ETDM Alternative | 1st Magnitude Spring | Drainage Basin | Water Body |
| ETDM Alternative Terminus | River, Stream or Canal | Outstanding Florida Water | Swamp/Marsh |
| Major Road | Navigable Water Way | Surface Water Class I | |
| Local Road or Trail | SFWMD Canals | Surface Water Class II | |
| City Limits | | | |

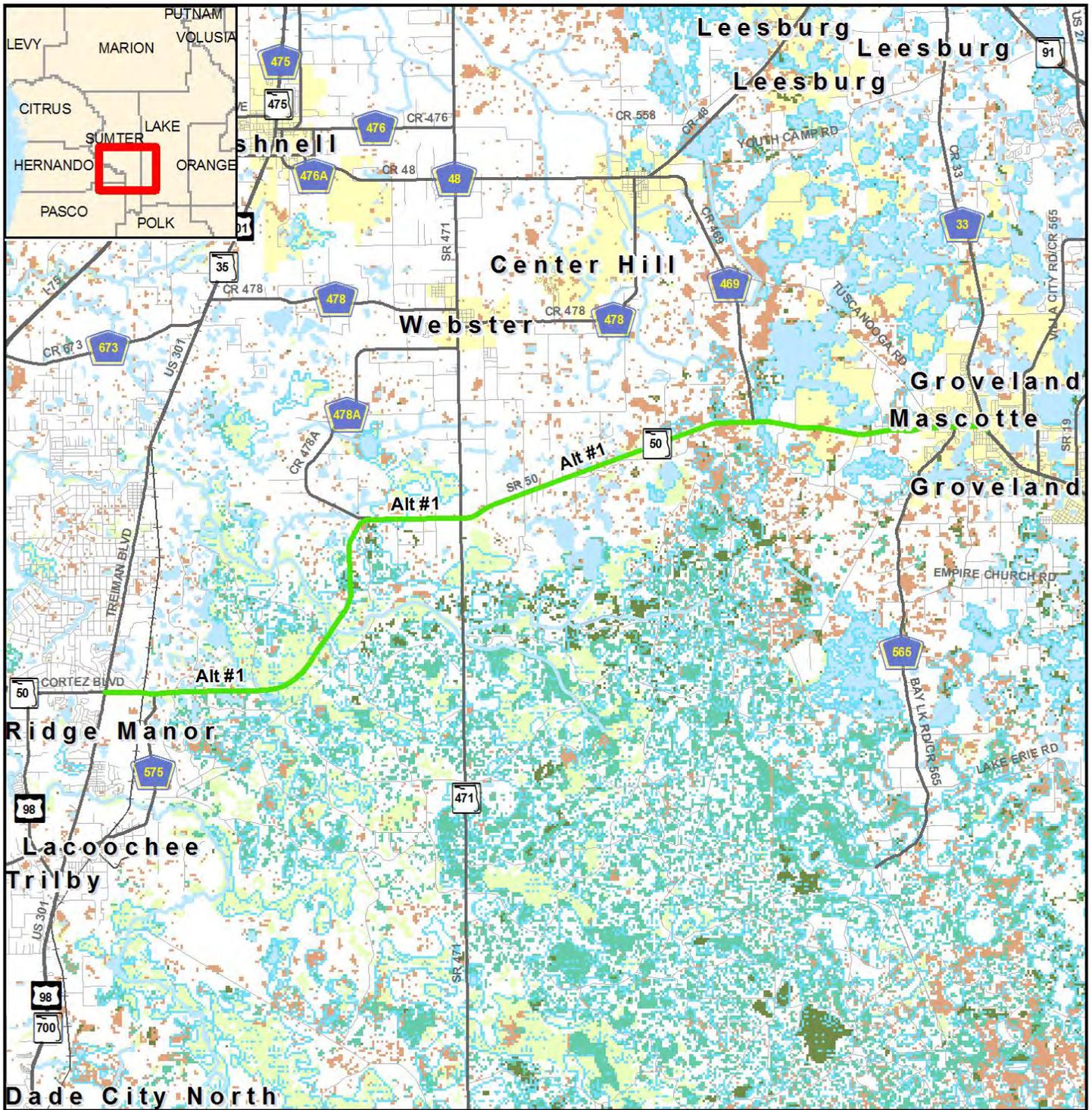
Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Department of Environmental Protection
 Florida Geological Survey
 US Bureau of Transportation Statistics



8/18/2016

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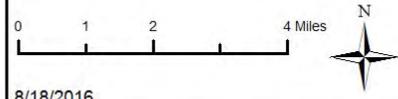
14269 West SR 50 from US 301 to CR 33 US 301 to CR 33



Wetlands and Surface Waters Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- River, Stream or Canal
- Water Body
- Swamp/Marsh
- Non-vegetated Wetland
- Vegetated Non-forested Wetland
- Wetland Forested Mixed
- Wetland Coniferous Forest
- Wetland Hardwood Forest

Data Sources:
 NAVTEQ
 Florida Water Management Districts
 US Geological Survey



8/18/2016

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 B - 87

Appendix C SHPO Letters



FLORIDA DEPARTMENT *of* STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

Mr. William G. Walsh
Environmental Manager
Florida Department of Transportation
719 South Woodland Boulevard
DeLand, Florida 32720

September 21, 2018

Attention: Ms. Catherine Owen, District Cultural Resource Coordinator

RE: DHR Project File No.: 2018-1573, Received by DHR: September 14, 2018
Project: *State Road (SR) 50 PD&E Study from US 301 to County Road 33*
FM No.: 435859-1-22-01
Counties: Hernando, Sumter, and Lake

Dear Mr. Walsh:

Our office reviewed the referenced project in accordance with Chapters 267.061 and 373.414, *Florida Statutes*, and implementing state regulations, for possible effects on historic properties listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*, or otherwise of historical, architectural or archaeological value.

This office reviewed the revised Cultural Resources Assessment Survey report submitted to this office in September 2018. This office concurs that the following archaeological sites are ineligible for the NRHP (as expressed in the current project APE): 8HE808, 8HE809, 8HE824, 8SM1014, 8SM1017, 8SM1090-8SM1092, 8SM1094-8SM1099, 8LA4654, and the 13 archaeological occurrences. This office concurs that sites 8HE807, 8SM1013, 8HE1015, 8SM1093 should have further testing in a Phase II survey. Finally, this office is delaying concurrence on eligibility for site 8SM1016 until the Phase II survey of similar sites (8SM1015, and 8SM1093) is completed. This office also notes that site 8SM733/8LA2034 was inaccessible due to landowner objections. Once access is granted, the area will need to be surveyed and a report submitted to this office.

This office concurs that the following historic resources are not eligible for the NRHP: 8HE697, 8HE698, 8HE810-8HE812, 8LA4497-8LA4498, 8LA4593-8LA4598, 8LA4601-8LA4603, 8LA4605-8LA4646/8SM1027, 8SM578, 8SM581-8SM582, 8SM1028-8SM1055, 8SM1057-8SM1064, 8SM1069-8SM1084. The following resources are determined eligible for the NRHP: 8HE635 (S-Line Richloam), 8LA4599-8LA4600 (619 SR 50 and associated stone well),

Division of Historical Resources
R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399
850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com

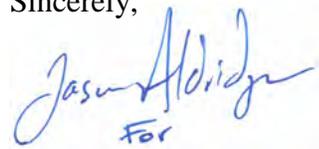


Ms. Catherine Owen
DHR Project File No.: 2018-1573
September 21, 2018
Page 2

8LA4604 (1745 SR 50 – Building 2), 8SM1056 (Linden United Methodist Church, 13301 CR 772B – Building 1), 8SM1065 (Linden Cemetery) and associated resources: 8SM1066-8SM1068.

This office looks forward to further consultation on this project including documentation on the Phase II efforts on four archaeological sites identified in this report (8HE807, 8SM1013, 8HE1015, 8SM1093), and a report on the survey of the proposed ponds and water compensation areas. If you have any questions, please contact Ginny Jones, Architectural Historian, Transportation Compliance Review Program, by email at Ginny.Jones@dos.myflorida.com, or by telephone at 850.245.6333 or 800.847.7278.

Sincerely,

A handwritten signature in blue ink that reads "Jason Aldridge" with the word "For" written below it.

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer



FLORIDA DEPARTMENT *of* STATE

RICK SCOTT
Governor

KEN DETZNER
Secretary of State

Mr. William G. Walsh
Environmental Manager
Florida Department of Transportation
719 South Woodland Boulevard
DeLand, Florida 32720

December 7, 2018

Attention: Ms. Catherine Owen, District Cultural Resource Coordinator

RE: DHR Project File No.: 2018-1573E, Received by DHR: December 4, 2018
Project: *State Road (SR) 50 PD&E Study from US 301 to County Road 33*
FM No.: 435859-1-22-01
Counties: Hernando, Sumter, and Lake

Dear Mr. Walsh:

Our office reviewed the referenced project in accordance with Chapters 267.061 and 373.414, *Florida Statutes*, and implementing state regulations, for possible effects on historic properties listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*, or otherwise of historical, architectural or archaeological value.

This office concurs that the following archaeological sites are ineligible for the NRHP (**as expressed in the current project APE**): 8HE807-809, 8HE824, 8SM1013, 8SM1014, 8SM1016, 8SM1017, 8SM1090-8SM1092, 8SM1094-8SM1099, and 8LA4654. However, we maintain that there is insufficient information to evaluate these sites as a whole, as the sites have not been fully delineated beyond the APE. We also concur that site 8SM1101 is not eligible.

This office also notes that site 8SM733/8LA2034 continues to be inaccessible due to landowner objections. Once access is granted, the area will need to be surveyed and a report submitted to this office.

We do not concur that 8SM1015 is ineligible. Based on its proximity to 8SM1093, as well as its high level of integrity, presence of features and radiocarbon dateable material, we recommend 8SM1093 eligible for its potential to provide additional information on lithic procurement strategies, mobility and settlement patterns, as well as chronological control for prehistoric lithic quarrying activities in the Withlacoochee River Basin. Given the close proximity of 8SM1015 to 8SM1093 along with the similarity of their components, it remains a possibility that these are two

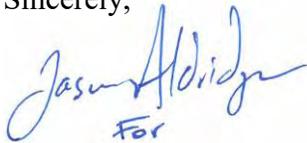
areas of one contiguous site. Many of the research questions recommended by the authors for SM1093 can be applied to 8SM1015 as well.

Additionally research questions could be drawn from comparison between the two sites. For example, why was one exploited more heavily over the other? Are there different activity areas between each? If a radiocarbon date can be obtained from the turtle shell fragments recovered from 8SM1015, is it comparable to the date range of the PPK from 8SM1093? Is there other evidence of subsistence activities on either site? Etc.

This office looks forward to further consultation on this project an assessment of effects for the eligible resources (as discussed in this letter and our letter of September 21), and addenda reports on final pond locations.

If you have any questions, please contact Dr. Adrienne Daggett, Archaeologist, Transportation Compliance Review Program, by email at adrienne.daggett@dos.myflorida.com, or by telephone at 850.245.6372 or 800.847.7278.

Sincerely,

A handwritten signature in blue ink that reads "Jason Aldridge" with the word "For" written below it.

Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
and State Historic Preservation Officer



Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

KEVIN J. THIBAUT, P.E.
SECRETARY

February 11, 2019

Timothy A. Parsons, Ph.D.,
Director and State Historic Preservation Officer
Florida Division of Historical Resources
Florida Department of State
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

RECEIVED
DIVISION OF
HISTORIC PRESERVATION
2019 FEB 15 P 12:40

Attn: Dr. Adrienne Daggett, Transportation Compliance Review Program

RE: *Technical Memorandum: Effects Evaluation for the State Road 50 Project Development and Environment Study from US 301 to County Road 33, Hernando, Sumter, and Lake Counties, Florida*
Financial Management No.: 435859-1-22-01

Dear Dr. Parsons,

Enclosed please find a technical memorandum providing an effects evaluation for the above-referenced Project Development and Environment (PD&E) Study, which includes an approximately 20-mile portion of State Road (SR) 50 between US 301 and County Road (CR) 33 in Hernando, Sumter, and Lake Counties, Florida. Within these limits, SR 50 extends through the communities of Tarrytown, Mabel, and Linden, the town of Mascotte, and portions of the Withlacoochee State Forest. While an east-west route, SR 50 travels in a north-south direction from Porter Gap Road in the Withlacoochee State Forest to CR 755 near Tarrytown. US 301 intersects the western terminus of the project corridor and CR 33 intersects the eastern terminus in the town of Mascotte. The purpose of the undertaking is to increase capacity of SR 50 in order to respond to future travel needs through the project area, improve safety, and provide multi-modal facilities for pedestrians and bicyclists.

The work was conducted in accordance with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's PD&E Manual (revised January 2019), FDOT's Cultural Resource Manual, and the standards stipulated in the Florida Division of Historical Resources (FDHR) *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The Principal Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42).

Dr. Parsons, SHPO
February 11, 2019
Page 2
FM# 435859-1

The FDOT, District 5, has submitted to your office three cultural resources documents prepared in support of the subject project. The final versions of these documents (Phase I roadway CRAS, Phase I ponds addendum, Phase II archaeological testing), submitted in September and October 2018, are entitled *Cultural Resource Assessment Survey of the State Road 50 Project Development and Environment Study from US 301 to County Road 33, Hernando, Sumter, and Lake Counties, Florida*; *Technical Memorandum: Cultural Resource Assessment Survey of Preferred Pond Locations for the State Road 50 Project Development and Environment Study from US 301 to County Road 33, Hernando, Sumter, and Lake Counties, Florida*; and *Phase II Archaeological Testing of 8HE00807, 8SM01013, 8SM01015, and 8SM01093 in Support of the State Road 50 Project Development and Environment Study from US 301 to County Road 33, Hernando, Sumter, and Lake Counties, Florida*.

On September 21, 2018, your office responded to the Phase I roadway CRAS, concurring with the eligibility recommendations, with the exception of 8LA04599, 8LA04600, 8LA04604, and 8SM01066-8SM01068 (your office determined these resources eligible for the National Register of Historic Places [NRHP] under Criterion C); and concurred with Phase II testing of archaeological sites 8HE00807, 8SM01013, 8SM01015, and 8SM01093 (FDHR Project File No. 2018-1573). On October 24, 2018, your office found the Phase I ponds addendum incomplete, requesting additional information regarding that aspect of the study; and provided comments on the Phase II archaeological testing submittal (FDHR Project File No. 2018-1573E). Following the FDOT's November 29, 2018 response with additional information, your office concurred on December 7, 2018 with the eligibility recommendations, with the exception of 8SM01015 (your office determined this resource eligible for the NRHP under Criterion D) (FDHR Project File No. 2018-1573E). Your office also requested survey and reporting on site 8SM00733/8LA02034 once landowner access is granted.

Based on the above documentation and consultation with SHPO, there are 11 historic properties (i.e., cultural resources listed or eligible for listing in the NRHP) located within the project's Area of Potential Effect (APE). These are: 8HE00635 (S-Line Richloam Railroad), 8SM01056 (Linden United Methodist Church), 8SM01065-8SM01068 (Linden Cemetery and associated buildings), 8LA04599 and 8LA04600 (619 SR 50 and associated stone well), 8LA04604 (1745 SR 50 Building 2), and archaeological sites 8SM01015 (Lonely Rock 1) and 8SM01093 (Lonely Rock 2).

Based on a review of the proposed plans for the recommended alternative, it is the opinion of FDOT that the project will have no effect on 8HE00635, 8SM01056, and 8SM01065-8SM01068. While the project will acquire small strips of right-of-way from the front yards of Resources 8LA04599, 8LA04600, and 8LA04604, the qualities that render these properties individually eligible for the NRHP, namely their architecture, will not be compromised or diminished by the construction of the project. It is thus the opinion of FDOT that the project will have no adverse effect on 8LA04599, 8LA04600, and 8LA04604.

Dr. Parsons, SHPO
February 11, 2019
Page 3
FM# 435859-1

Archaeological sites 8SM01015 and 8SM01093 were both identified in the existing/proposed right-of-way of SR 50. As it is not possible for the project to avoid these eligible sites, it is the opinion of FDOT that the SR 50 project will have an adverse effect on 8SM01015 and 8SM01093. FDOT intends to mitigate project-related effects via data recovery excavation. A draft Memorandum of Agreement (MOA) documenting this commitment to mitigate will be submitted to your office for review.

I respectfully request your concurrence with the findings and recommendations presented in this letter and the enclosed memorandum. If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5411.

Sincerely,

for

William G. Walsh
Environmental Manager
FDOT, District Five

Cc: Roy Jackson, FDOT OEM

The Florida State Historic Preservation Officer:

finds the attached report complete and sufficient and concurs/ does not concur with the findings and recommendations contained in this cover letter and the enclosed report.

does not find the attached report complete and sufficient and requires additional information in order to provide an opinion on the potential effects of the proposed project on historic resources.

/s/

For: Timothy A. Parsons, Ph.D.
Director, Division of Historical Resources
& State Historic Preservation Officer

Date

2/21/2019

2018-1573F

DHR No.

Appendix D Agency Meeting Notes

DATE: May 8, 2017

TO: Jack Freeman, P.E., PTOE

FROM: Jason Houck, GISP, PWS

RE: FPID 435859-2-22-01

SR 50 PD&E Study from US 301 to CR 33 in Hernando, Sumter, and Lake Counties

Coordination meeting with Florida Forest Service and Florida Department of Environmental Protection

CC: Attendees

A meeting was held between the Florida Department of Transportation (FDOT), the Florida Forest Service (FFS), and the Florida Department of Environmental Protection (FDEP) to discuss the on-going PD&E study along the SR 50 corridor from US 301 to CR 33. Attendees included Vince Morris and Colleen Werner (FFS); Cheryl McCall and Brad Richardson (FDEP, via phone); Lorena Cucek, Casey Lyon, Cathy Owen (via phone), and Heather Chasez (FDOT); Jack Freeman (Kittleson); and Jason Houck (Inwood). A copy of the sign-in sheet and agenda has been included as an attachment to this memorandum. The following provides a summary of the issues discussed at the meeting.

Jack began the meeting with introductions and a brief summary of the previous work completed and the on-going work to date. He walked through the feasibility study that was completed in 2016 that included the recommendation to move the project forward to the PD&E phase.

Jack stated that the project is approximately 20 miles long. FDOT District 7 is in the process of widening SR 50 west of 301 and that design is approximately 60% complete. The feasibility study indicated that two build alternatives should be further analyzed in the PD&E: a 3-lane alternative with passing lanes and a full 4-lane configuration through the entire corridor. The current schedule has the PD&E study beginning in January 2017 and being completed in October 2018. Currently, the project is in the data collection phase, which includes the development of build alternatives, identification of sensitive resources within the corridor, and stakeholder coordination. Jack provided several roll plots that depicted the build options and their respective footprints. He indicated that the 3-lane alternative would include a passing lane from US 301 eastbound for approximately one mile and westbound east of the Little Withlacoochee River through the curves. Except where the passing lanes are provided, the remainder of SR 50 between US 301 and SR 471 would remain 2-lanes for this alternative. The traffic model shows the need for 4 lanes from SR 471 east to the end of the project. Jack then expounded on the traffic projections and the Level of Service Criteria used to determine the location and amount of capacity improvement.

Vince stated that it sounded like FDOT had already made their decision regarding widening the road. He indicated that, at a previous meeting held in Mascotte, the FDOT had stated that they were not sure yet what improvements would happen, that improvements may be limited to intersection improvements, and that the no-build option was still being considered. Jack responded by stating that the no-build option would be carried through the study and would be included in the analysis.

Colleen requested that the team make sure they identified all resources within the corridor. Jason responded by saying that the identification of sensitive resources played a large part in the need for coordination with the FFS and FDEP early in the process.

Jack stated that he would post the roll plots on Kittleson's FTP site. He further explained the differences between the 3 and 4 lane build alternatives adding that the FDOT currently has 200 feet of existing right-of-way (ROW) within the corridor's Hernando County portion bisecting the Richloam Tract of the Withlacoochee SF and the

existing roadway is not centered in that right-of-way. The current configuration of SR 50 is approximately 68 feet south of the northern right-of-way limit.

Jack stated that the 3-lane option could fit on the south side of SR 50 within the existing right-of-way, but there would be some questions regarding how to accommodate drainage. The 4-lane option could also be accommodated within the existing right-of-way. In Sumter County, the right-of-way drops to 100 feet. The plan would be to build a new bridge over the Little Withlacoochee River on the south side of SR 50. It is approximately 2,000 feet from the bridge to the first big curve, so the team would evaluate left, right, and center widening options in that area.

Colleen mentioned that she has GIS data available for several sensitive environmental resources in the area. Her staff regularly updates the Florida Natural Areas Inventory (FNAI) databases, especially those related to rare plants. Heather stated that it would be very helpful if Colleen could provide that information.

Heather then mentioned that the FDOT was also looking at the South Sumter Trail. Vince stated that he did not currently know where the trail was going to go. Lorena responded saying that the trail study was behind the SR 50 PD&E, but that she thought it would parallel SR 50 from SR 471 to Mascotte. Heather asked if Vince had a preference regarding which side of the road the trail should be located. Vince stated that when it connects to the Van Fleet Trail, he did not have a preference. Heather added that we should continue to talk about the trail since it may end up affecting the same resources as the roadway.

Jack explained that he would be developing two typical sections (3-lanes with passing lane and 4 lanes within existing ROW) for the portion of SR 50 from US 301 to the Hernando County line. Those would be followed by left, right, center alternatives past the Hernando/Sumter County Line to SR 471. East of SR 471, typical section alternatives include 4-lane high speed urban and rural typicals section with left, right and center alternatives. The number of variations could lead to as many as 160 build alternatives through the study corridor.

Vince stated that the public seemed very receptive to the proposed improvements.

Colleen added that there is a long-standing dog hunting culture in the area with a large user group hunting on both sides of SR 50. The hunt is managed by the FWC. Widening the road could lead to increased deer/vehicle collisions.

Vince stated that the roadway typical sections were provided and one option included 3 lanes. Colleen added that two lanes east of the bridge could be very helpful. Jack responded saying that is an ideal location for a passing lane and then transition out before the curve. Colleen responded by saying that they recommended a no-build option east of the bridge. Jack stated that, east of the river, he was concerned about the number of driveway connections in the 3-lane section and the westbound two lanes if the passing lane is provided closer to SR 471.

Vince asked if the existing bridge would be altered. Jack responded by saying that geotechnical investigations are underway but the bridge may not be affected. Jason added that the area around the bridge is very wet and that, if the geotechnical report showed a normal high water elevation at or above the ground level, he would likely go out and set nails using biological indicators for seasonal high water levels. Jack stated that the bridge was currently in good shape.

Vince asked why the recommendations includes four lanes east of SR 471. Jack responded by saying that new developments in the area were affecting the anticipated traffic volumes. Colleen mentioned that there were sensitive environmental areas on both sides of SR 50 in that area. Vince stated that he mentioned those resources in the comments he provided to the ETAT.

Jason referred to the FFS/DEP segment of the agenda and asked if the management plan available on the FFS website was current. Vince confirmed that it was. Jason asked since the listed species data was updated routinely by FFS, if he could contact Colleen directly. Vince stated that was no problem but added that a Special Use Permit would be needed prior to any field reviews. Colleen added that she could help with getting the Special Use Permit approved adding that Brian Camposano would ultimately be the person approving it. Cheryl added that SEARCH was familiar with the process and would know what to do.

Colleen asked about the potential for wildlife crossings. Jason responded by saying that we would look at improvements that could be made for habitat connectivity within the confines of the final recommended improvements. Jason mentioned a similar process was used on SR 40 through Silver Springs SP and Ocala NF. Colleen mentioned potentially bringing in Dr. Dan Smith to discuss the crossings. Jason and Heather mentioned that they worked with Dr. Smith on SR 40. Casey stated that if the FFS chose to bring Dr. Smith in as a consultant then it needed to be understood that Dr. Smith only represented the FFS, not the FDOT. Colleen stated that there are swamps, hammocks, and flatwoods within the corridor and each had endemic species that could be affected.

Vince asked about human crossings within the corridor and if it would be possible to retrofit the bridge to make it easier for wildlife passage. Jason responded by saying that it would depend on the recommended improvements. Adding connectivity enhancements, especially for upland species, would require raising the profile of the road and would likely increase impacts. However, FDOT would look into it if additional work in the area of the bridge was proposed, or if the final recommendation included a build section through the forest. Colleen also wanted the FDOT to consider human crossings due to the aforementioned dog hunting popularity.

Jason added that, on SR 40, the FDOT had worked with DEP, OGT, and the USFS to incorporate alternatives to traditional stormwater ponds. These included BAM, which is an activated media, used to reduce nutrients in areas where attenuation is not a concern. He added that the Richloam Tract was very similar to SR 40 in that it is a large, publicly-owned tract where flooding would not be a concern. This method was successful in reducing wetland impacts on SR 40 and was supported by the St. Johns River Water Management District, the FDEP, the OGT, and the USFS. The FFS was agreeable to this idea, as they did not like the idea of ponds being placed on FFS land.

Brad stated that impacts to state lands would also need to be considered in addition to wetlands. Vince asked who ultimately agreed on the mitigation to be provided. Brad responded by reminding everyone not to confuse mitigation with "net positive benefit" stating that, "ARC puts everyone through the ringer". Net positive benefits discussed were the potential for land acquisition, increased habitat connectivity, exotic control, staff hours, and translocation of rare plants that may be impacted.

Colleen identified another sensitive area on the east side of the project and provided maps to the team. She stated that this project could also affect the current burn plan for the forest. Hammocks in the area contain several sensitive plants. She mentioned secondary impacts adding that time spent by FFS staff assisting consultants could be considered a secondary impact.

Casey asked what the FDOT could do to help. Vince responded that variable message signs would be a good idea. Casey asked that, if the FDOT impacted uplands supporting gopher tortoises, if the any tortoises being impacted could be relocated onto FFS lands. Vince responded saying that he is working on creating a recipient site in Croom.

Jason mentioned that portions of the study corridor in Lake County met the USFWS criteria for supporting sand skinks and asked if FFS was aware of any skinks on their lands. Vince stated that he did not know of any.

Colleen stated that there is significant Duke's skipper habitat along the corridor including two known host plants. Jason responded that they would look into that and asked for any documentation Colleen could provide.

Vince added some final thoughts. The trail crosses SR 50 in two places. Indian House Hammock contains several listed species. There is some concern about habitat impacts to the Little Withlacoochee River. He would like to see some accommodations made to assist small animals that are trying to cross the road. The FFS burn interval in flatwoods is every 2-4 years. They have documented swallow-tailed kite nesting near the project corridor. There are some cultural resource areas near the river. Increased speed and volume of traffic could cause additional problems to the forest not the least of which is the increase in exotic/nuisance plants that are introduced.

Next steps in the project include obtaining the required Special Use Permit and identifying sensitive areas within the forest where staging of equipment during construction would be restricted.

Note: The above reflects the writer's understanding of the content of the discussions that took place at the meeting. If any misrepresentations, inaccuracies or omissions are identified, please contact Jason Houck at (407) 971-8850 (JHOUCK@INWOODINC.COM) as soon as possible for resolution and revision, if necessary.



SR 50 PD&E Study FL Forest Service Coordination Meeting

FPID: 435859-2-22-01

April 28, 2017

Name	Organization	Address	E-mail
Jason Hauke	Inwood	7000 Diverse Drive Suite 200 Orlando, FL 32765	jhouck@inwoodinc.com
Casey Lyon	FDOT	719 S. Woodland Blvd, Deland, FL	Casey.Lyon@dot.state.fl.us
Jack Freeman	Kittelson	225 E. Robinson St Suite 450 Orlando, FL 32801	Jfreeman@kittelson.com
Heather Chasez	FDOT	719 S. Woodland Blvd. Deland FL	heather.chasez@dot.state.fl.us
Lorena Cuello	FDOT	719 S. Woodland Blvd, FL DeLand	Lorena.Cuello@dot.state.fl.us
Vincent Morris	FFS	15019 Broad Street Brooksville, FL 34601	Vincent.morris@freshfromflorida.com
Colleen Werner	FFS	" " " "	Colleen.Werner@freshfromflorida.com

DATE: July 26, 2017

TO: Jack Freeman, P.E., PTOE

FROM: Jason Houck, GISP, PWS

RE: FPID 435859-2-22-01

SR 50 PD&E Study from US 301 to CR 33 in Hernando, Sumter, and Lake Counties

Coordination meeting with Florida Forest Service and Florida Department of Environmental Protection

CC: Attendees

A meeting was held between the Florida Department of Transportation (FDOT), the Florida Forest Service (FFS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Department of Environmental Protection (FDEP) to discuss the on-going PD&E study along the SR 50 corridor from US 301 to CR 33. Attendees included Vince Morris, Colleen Werner, and Keith Mousel (FFS); Rick Spratt (FWC); Brad Richardson (FDEP, via phone); Lorena Cucek, Casey Lyon (via phone), Cathy Owen, Bill Walsh, Heather Chasez, Su Hao (via phone), Jesse Blouin (via phone), and Todd Helton (via phone) (FDOT); Jack Freeman (Kittleson); Steven RabbySmith (via phone)(SEARCH); and Jason Houck and Renato Chuw (via phone) (Inwood). A copy of the sign-in sheet and agenda has been included as an attachment to this memorandum. The following provides a summary of the issues discussed at the meeting.

Jack began the meeting with introductions, a brief summary of the previous work completed, and the on-going work to date. He discussed the recent public workshop where the 3 and 4-lane roadway alternatives, stormwater management site alternatives, and floodplain compensation (FPC) sites were presented to the public. He stated the project team was getting close to completing the project's data collection phase including most of the engineering and environmental data collection. It was also discussed the week-long Value Engineering Study will be conducted on September 11-15.

Jack discussed how the project had been broken into four segments:

Segment A: US 301 to the Hernando/Sumter C/L (Little Withlacoochee River bridge) – includes 3 and 4-lane options

Segment B: Hernando/Sumter C/L to SR 471 – includes 3 and 4-lane options

Segment C: SR 471 to Lee Road – includes 4-lane rural and 4-lane high speed urban options

Segment D: Lee Road to CR 33 – includes 4-lane urban (45 mph) option

Jack added the evaluation of the 3 and 4-lane options was ongoing and the No-Build option would continue to be evaluated through the course of the study.

Renato stated there is a total of 37 basins in the project and three stormwater management ponds were being evaluated per basin. Vince asked if basins were the same thing as watersheds. Jason added they were similar, but to a smaller extent. Keith added they were based on local topography.

Casey asked about the Environmental Look Around process. Renato responded by stating it was ongoing. Keith responded by asking how many ponds were located within the Forest (Withlacoochee State Forest). Renato responded by saying the Forest included Basins 3-12 but Basin 12 has some pond alternatives located outside of the Forest boundary.

Colleen requested a digital file for the pond and FPC sites. Jason responded saying Inwood would provide an ArcGIS shapefile with the information requested.

Vince asked how the ponds and FPC sites were sized. Jack responded saying they were sized for the 4-lane option showing the “worst case” scenario. Vince responded by asking which were the preferred ponds and what was the philosophy behind the sizing and selection of the locations. Keith added the pond locations have the potential to restrict fire management, especially from the road. Casey responded by saying the Environmental Look Around will include this.

Jason stated there may be options to reduce or eliminate ponds within the Forest. Two options to consider were (1) activated media and (2) compensatory treatment.

Activated Media – This consists of a substrate (usually ground tires) that has been inoculated with a bacterial culture that can remove nutrients, primarily nitrogen and phosphorus, from stormwater. It can be installed in swales or on roadway side slopes where the water can sheet flow over. It is advantageous to use in environmentally sensitive areas where there is less concern with attenuation and you want to eliminate the increase footprint caused by a traditional stormwater pond. The FDOT has permitted the use of activated media on SR 40 in Marion County where the roadway is adjacent to Silver River State Park, the Marjory Harris Greenway, and the Ocala National Forest.

Compensatory Treatment – This consists of “over treating” a portion of the roadway outside of an environmentally-sensitive area and not treating the area within the environmentally-sensitive area in order to eliminate the increased footprint associated with the construction of stormwater ponds resulting in no net water quality impacts. For example, if the 4-lane section was adopted, the FDOT would be required to treat the “new” impervious area, which would be two new lanes within the corridor. If compensatory treatment was utilized, FDOT would treat both the existing and new lanes in areas where a larger pond would constitute less of an environmental impact and eliminate ponds in the areas where the pond footprint would be problematic.

It was mentioned that a meeting will be held with SWFWMD on July 27 to discuss the drainage for this project and specifically any other alternatives in lieu of having offsite ponds.

Brad asked if any of the basins in the project were closed. Renato responded by stating that ultimately everything discharges to the Little Withlacoochee River and we did not have any closed basins.

Keith asked how many FPC sites there were. Renato responded by stating that there are a total of 45 acres of FPC sites within the Forest. Casey added that FPC sites are generally located within the ROW, but can be placed elsewhere with a drainage easement. Keith responded that portions of the project outside of the existing DOT ROW may have been originally purchased under the Land Resettlement Act in the 1930’s. This agreement has a reverter clause saying if the land is not used for conservation it reverts back to the federal government. Using this land for stormwater ponds of FPC sites may require federal approval. He suggested reaching out to FDOT District 7 regarding a similar situation on the I-75 widening. Lorena responded saying that she would contact District 7 for details. Keith noted the Forest land east of SR 471 is CARL land, which would go to ARC.

Jason gave an update on the environmental work completed to date. Vince asked about using an existing borrow pit within the Forest. Jason responded saying the water management district is generally not favorable in doing this as borrow pits are deep and can have more impact on the aquifer. Jason also noted the borrow pit will become a natural wetland over time. Casey asked about an MOU that would allow for gopher tortoises relocated as part of the project remain on FFS lands. Vince stated that they did not have many gopher tortoises along the corridor, but there were some, and he would be interested in that.

Colleen said she would send FDOT an updated GIS file of rare plants in the Forest.

Cathy asked Steve to give an overview of the archeological survey that was conducted. Steve stated that a total of eight lithic sites had been identified thus far, six of which were thought to be new sites. He noted that analysis was ongoing regarding the significance of these resources. Cathy told Colleen that she could provide a copy of the CRAS to FFS.

Keith stated the Forest was used as a bombing range during World War II. FFS has some documentation from the US Army Corps of Engineers regarding work they have done. A CD of this work plan was provided.

Jack provided a handout summarizing the written comments received at the two Alternatives Public Workshops. There were approximately 60 persons attending the July 11th meeting in Mascotte and 70 persons attending the July 13th meeting in Ridge Manor. We received 32 written comments providing 42 different comments. Twenty-two of the comments provided a typical section preference. About 5% said no-build and 5% said the 3-lane improvement. The remainder 90% expressed support of the 4-lane widening. The handout (copy attached) provided greater detail regarding the typical section comments received.

Jack discussed the project's Purpose and Need stating the two fundamental reasons for the study is to improve traffic service and safety. Using the Alternative Public Workshop graphic, he explained by the 2045 design year the existing roadway would be operating at level of service (LOS) E and F throughout the corridor. With adding the passing lanes between US 301 and SR 471, LOS C can be attained in 2045 but the passing lanes were sized to meet the LOS C minimum requirement. The target LOS for the rural areas is LOS C. For the 4 lanes, LOS A can be achieved between US 301 and SR 471. Regarding safety, there have been 5 fatalities in using the 2011 to 2015 crash data. This can be expanded for the roadway improvement's 20 year life cycle to be 20 fatalities. From Highway Safety Manual analysis, it is forecasted the 3 lane roadway will have a 15 to 25% reduction in crashes where the 4-lane roadway will have a 50 to 60% reduction. If we build 3 lanes, this will reduce to 15 to 17 deaths. If we build 4 lanes, this will reduce the deaths to less than 10 over the 20 years. Jack also noted hurricane evacuation and system connectivity with existing 4 lanes both east and west of the project's study area and Purpose and Need considerations.

Keith asked when the project would get started (construction). Lorena responded by giving a timeline of the process, adding that there is currently no funding for anything past design but, assuming a perfect scenario, construction could take place in 2024-2027. Keith asked what was FDOT's preference for the alternatives. Lorena responded by stating that the analysis is on-going and a preferred alternative had not been selected yet.

Vince discussed the need to accommodate the SR 50 crossing of the two existing hiking trails. We discussed the potential of combining the hiking and wildlife crossings together. Both Vince and Rick said there are currently few bears in the Forest and the wildlife crossings are primarily need to accommodate snakes and alligators. FWC would negotiate the wildlife crossings. There is the potential to add a shelf above design high water for animals to cross. We also discussed having an overpass for humans to cross. A similar example on SR 200 was noted. The need for ADA compliance was noted and the expense of these crossings. The potential to reroute one trail to have the crossing associated with the Withlacoochee River bridge was discussed.

Jack continued the discussion of ROW needs stating that it was likely that no ROW would be needed for the roadway widening in Hernando County. In Sumter County, the Segment B 3-lane option needs 22 feet on each side for the north and south widening and 16 on each side for the centered widening. The Segment B 4-lane option needs 88 feet on each side for the north and south widening or 44 feet for the centered widening. He added that the MPO has requested that a multi-use trail be included between US 301 and SR 471 along the SR 50 corridor. This request is currently being evaluated.

Regarding mitigation, Vince has developed a list of desired mitigation options developed by local FFS staff and agreed to provide it. Casey asked if he had or would be willing to identify potential parcels for acquisition to offset any ROW takes. Vince said he could.

Note: The above reflects the writer's understanding of the content of the discussions that took place at the meeting. If any misrepresentations, inaccuracies or omissions are identified, please contact Jason Houck at (407) 971-8850 (JHOUCK@INWOODINC.COM) as soon as possible for resolution and revision, if necessary.



**SR 50 PD&E Study
FL Forest Service/FDEP Coordination Meeting**

FPID: 435859-2-22-01

July 25, 2017

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Bill Walske	FDOT	"	william.walske@dot.state.fl.us
Lorena Cucok	FDOT	"	Lorena.cucok@dot.state.fl.us
Cathy Owen	FDOT	"	Catherine.owen@dot.state.fl.us
Jack Freeman	Kittelson	225 E. Robinson St Suite 450 Orlando, FL	JackFreeman@Kittelson.com

From the 32 completed comment forms, the public provided 42 different comments. Twenty of the 42 were unrelated to a preferred typical section – those are provided at the end of this summary.

For comments pertaining to preferred typical sections, people indicated if they wanted the no-build, 3-lane, or 4-lane options (and which direction they wanted it widened). No one specified between rural or high speed east of S.R. 471.

U.S. 301 to S.R. 471

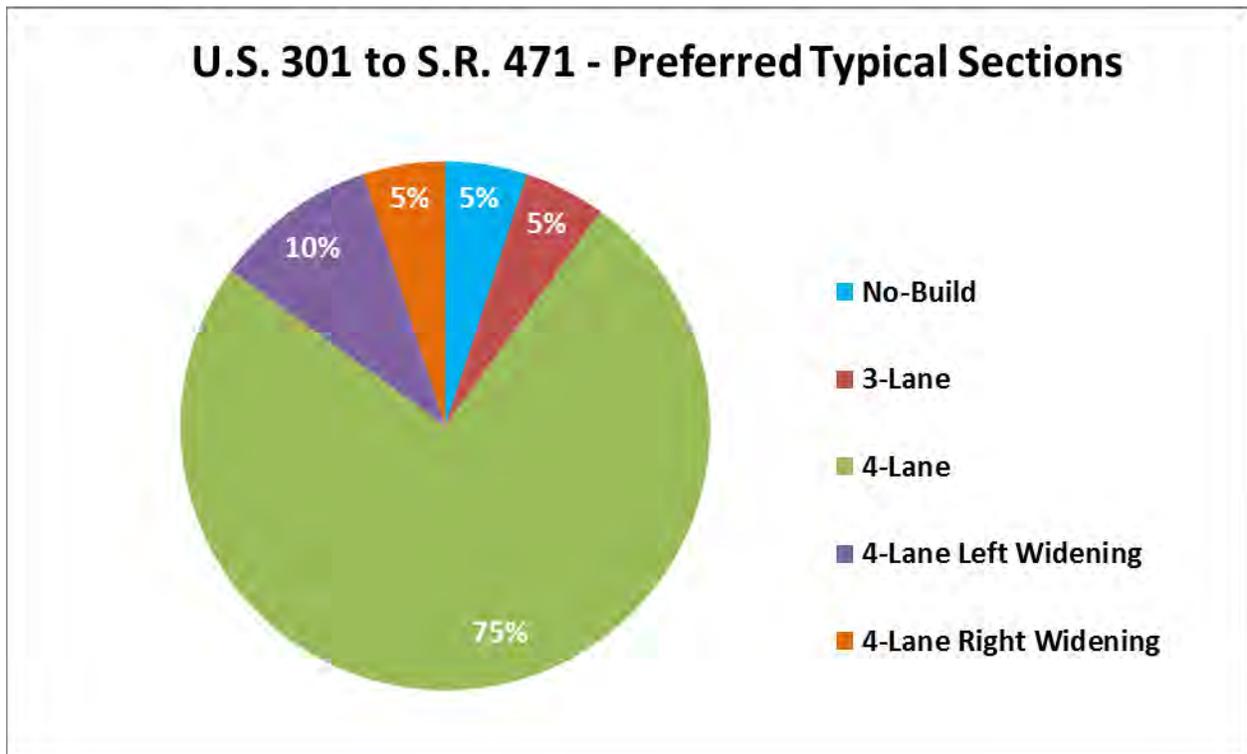
- 1 comment for no-build through the forest
- 1 comment for 3-lanes
- 7 comment for 4-lanes
- 2 comment for 4-lanes widened to the north

S.R. 471 to Lee Road

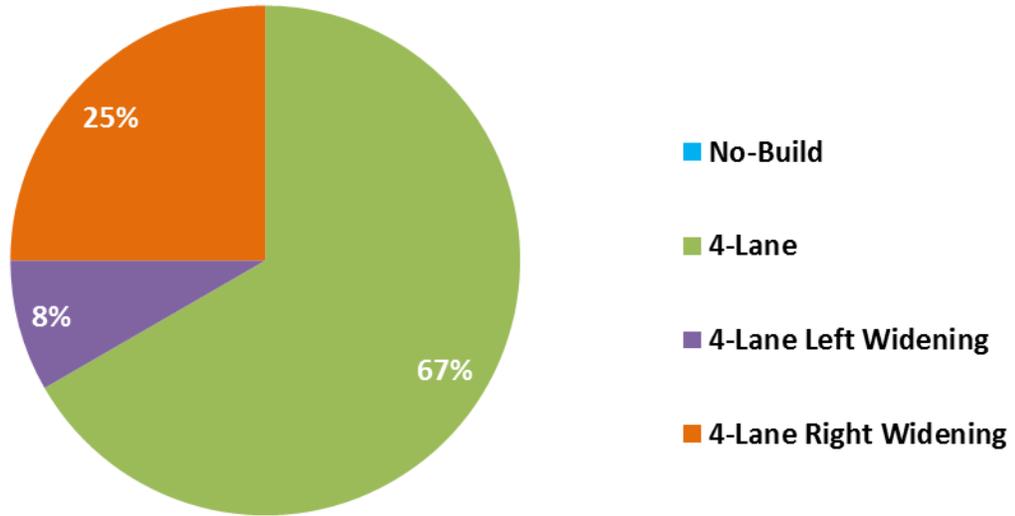
- 1 comment for 4-lanes widened to the north
- 2 comment for 4-lanes widened to the south

Entire Corridor

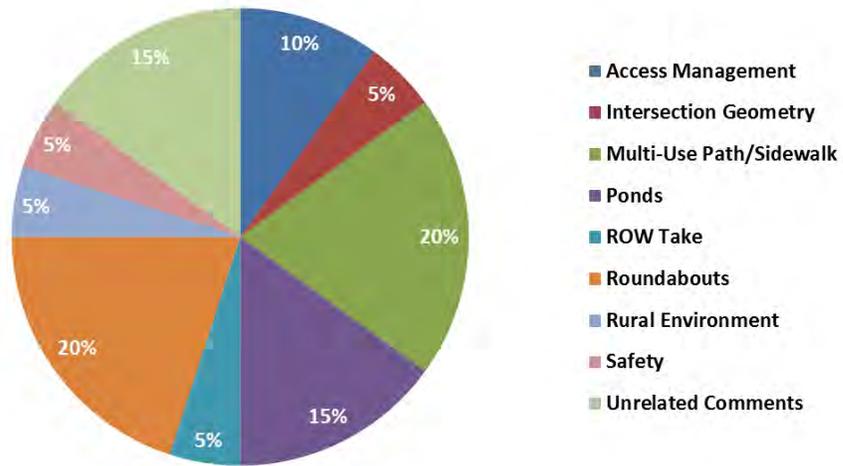
- 8 comments for 4-lanes
- 1 comment for 4-lanes widened to the south



S.R. 471 to Lee Road - Preferred Typical Sections



Other Comment Topics



Comments on Preferred Typical Sections:

1. No-build
 - a. No widening through segment A due to state forest/rare plants & animals (implies no widening in segment B)
2. 3-Lane
 - a. Prefer A-1, B-1, B-2, and B-3 to minimize impacts to environment but help safety and traffic
3. 4-Lane
 - a. 4-lanes all the way widened to the south side
 - b. 4-lanes widened to north side west of Lee Road
 - c. 4-lanes widened to south side west of Lee Road
 - d. 4-lanes for storm evacuation traffic
 - e. A-1, **A-2**, B-1, B-2, and B-3 are unacceptable (implies 4-lanes preferred)
 - f. 4-lane to the north side near SR 471
 - g. 3-lanes are dangerous (implies 4-lanes preferred)
 - h. 4-lanes all the way
 - i. Prefer A-2, B-4, C-3, C-6
 - j. 4-lane, no 3-lane
 - k. 4-lane, no 3-lane
 - l. 4-lane all the way
 - m. 4-lane, no 3-lane
 - n. 4-lane all the way
 - o. 4-lane all the way
 - p. 4-lane all the way
 - q. 4-lane, no 3-lane
 - r. 4-lane all the way, no 3-lane
 - s. 4-lane to SR 471, no 3-lane
 - t. "Think ahead about purchasing land for a 6-lane widening – just in case – because it is probably more cost effective to do that now versus purchasing land for 4-lanes later when S.R. 50 is widened."

Comments Unrelated to Preferred Typical Sections:

1. "We like to see Tuscanooga Roundabout and Bay Lake Roundabout installed."
2. "Why do we need sidewalk in the county?"
3. "There is a proposed retention pone over our house? Pond 32C"
4. "Need more median crossing spots from Tuscanooga to Lee."
5. "All 3 retention ponds proposed on Marian Gardens property are a problem."
6. "Concerning ROW take to my property, I'd like to understand and negotiate prices before anything is final"
7. "Concerned about access management to my business near SR 471."
8. "Turn lanes for Tuscanooga, Lee, and Sloan Ridge."
9. "I have existing problems from a DOT project concerning flooding – please call."
10. "How safe can you get without dampening the rural atmosphere through Sumter – avoid commercial development along improved roadway."
11. "Choose alternative that maximizes safety of motoring public."
12. Bicycle traffic on 5-foot paved shoulder is completely unacceptable – take the long term solution even if it costs more money."
13. "Roundabouts at major intersections will save lives."
14. "Why does east Hernando always get the shaft; Springhill gets everything; we pay taxes and want our share of the pie."
15. "Roundabouts are accident prone – make this safer, not more dangerous."
16. "Consider separated multi-use path where sidewalk is proposed."
17. "Consider building sub-base under medians for future lanes and to prevent more widening."
18. "Interested in looking at currents plans for S.R. 50 from I-75 into Brooksville – should be in construction plans stage."
19. "I like the proposed roundabouts – traffic calming and safer."
20. "Prefer a multi-use path along 50 instead of the paved shoulder option."

Mitigation Desires for State Road Widening DRAFT

Vincent Morris Resource Administrator, Withlacoochee State Forest

This is list of mitigation elements that could provide a net positive to the forest and make the project more acceptable to the Florida Forest Service. These mitigation measures have not been vetted with state office staff and are provided as a starting point for negotiations.

- 1- There should be a land acquisition that protect some of the appropriate species affected by the project. The most obvious choices would be the out parcel at Indian House Hammock, Pineola Hammock (Istachatta), or property associated with Jumper Creek. Exact property to be discussed later.
- 2- There should be a good human/wildlife crossing near the western hiking trail crossing (Segment A)
- 3- There should be additional small wildlife crossing(s) west of 471, possibly culverts (Segment A).
- 4- There should be an additional human crossing of some sort for the eastern hiking trail crossing possibly associated with the Little Withlacoochee River bridge.
- 5- There should be some minor animal crossing (culvert perhaps) in the eastern portion of the road (Segment C).
- 6- A SR 50 road option that is narrower (3 lanes) should be selected in the sweeping Indian House Hammock turn to narrow the footprint in this most valuable conservation area.
- 7- Rock that is removed from the project should be moved to places where it can serve as habitat (particularly rocks that already have flora growing on them).
- 8- Retention ponds should be designed to keep water flow patterns the same, and not damage mesic hammock/existing wetlands.
- 9- There should be permanent smoke signs that can be illuminated to warn motorists about prescribed burning/wildfire.
- 10- Equipment and road materials should not be stored where adverse impacts could occur to rare of sensitive species.
- 11- DOT should provide invasive weed control on disturbed road edges, retention ponds, floodplain compensation storage ponds.

DATE: August 1st, 2017

TO: **Lorena Cucek**

FROM: Sean Carrigan, PE

RE: FPID 435859-2-22-01 | West SR 50 PD&E Study from US 301 to CR 33 | SWFWMD Pre-App Meeting - Brooksville

CC: All attendees, Jesse Blouin, Ferrell Hickson, Karen Snyder, Jason Houck

A Pre-application meeting was held at the Southwest Florida Water Management District (SWFWMD) office in Brooksville, Florida on July 27th, 2017 to discuss the drainage approach for the subject project. Meeting attendees were:

- Monte Ritter (SWFWMD)
- Kim Dymond (SWFWMD)
- Jack Freeman (Kittelson)
- Renato Chuw (Inwood)
- Sean Carrigan (Inwood)
- Jada Barhorst (Inwood)
- Casey Lyon (FDOT) – via teleconference
- Lorena Cucek (FDOT) – via teleconference

Jack Freeman began the meeting by providing a brief overview of the project location and the scope of work. The project consists of widening approximately 19 miles of SR 50 between US 301 in Hernando County and CR 33 in Lake County, FL. Several typical sections are currently being evaluated through four (4) project segments.

- Segment A – From US 301 to Hernando/Sumter County Line
 - Two (2) lanes with passing lanes – Rural section with three (3) 12-foot lanes and 5-foot paved shoulders.
 - Four lanes – Rural divided highway with four (4) 12-foot travel lanes, a 40-foot median, and paved inside and outside shoulders.
- Segment B – From Hernando/Sumter County Line to SR 471
 - Two (2) lanes with passing lanes – Left, Center, and Right widening options. Rural section with three (3) 12-foot lanes and 5-foot paved shoulders.
 - Four Lanes – Left, Center, and Right widening options. Rural divided highway with four (4) 12-foot travel lanes, a 40-foot median, and paved inside and outside shoulders.
- Segment C – From SR 471 to Lee Road
 - Four Lanes – Left, Center, and Right widening options. Rural divided highway with four (4) 12-foot travel lanes, a 40-foot median, and paved inside and outside shoulders and a concrete sidewalk on the south side of the roadway.
 - Four lanes – Left, Center, and Right widening options. High speed urban divided highway with four (4) 12-foot travel lanes, a 30-foot median, paved inside and outside shoulders, and a concrete sidewalk on both sides of the roadway.
- Segment D – From Lee Road to CR 33
 - Four Lanes – Left, Center, and Right widening options. Urban section with four (4) 12-foot travel lanes, a 22-foot median, 7-foot buffered bike lanes, and a concrete sidewalk on both sides of the roadway.

- The PD&E Study is anticipated to be completed by October 2018 in which the design phase will begin.
- SWFWMD asked if the study was going to be designed as a single project and if it is, an inter-agency agreement will have to be pursued with SJRWMD for a single water management district to take as the leading permitting agency. However, Inwood and Kittelson indicated the design will be separated into individual segments and one segment is from the Sumter/Lake County line to CR 33 which is also the jurisdictional line between SWFWMD and SJRWMD, therefore, the inter-agency agreement may not be necessary.

The study is evaluating stormwater management alternatives along with floodplain impacts / compensation and documenting them in the Pond Siting Report and Location Hydraulics Report.

Existing Drainage Conditions

- The project is located within the Green Swamp Basin and traverses several Waterbody ID's (WBIDs). WBID 1378 – Big Gant Canal is the only WBID impaired for nutrients (Chlorophyll-a). WBID 1329F – Withlacoochee River is impaired for mercury. All others are not impaired.
- SWFWMD indicated there are smaller sub-basins that were delineated based on watershed studies the WMD has completed or are in the process of being completed. Monte suggested we contact Jessica Hendrix for information about these sub-basins and the watershed reports.
- Two (2) Outstanding Florida Waterbodies (OFW) exist along the project limits: Withlacoochee River System and Chassahowitzka National Wildlife Refuge.
- Stormwater runoff from the existing roadway is collected in roadside swales and conveyed to several existing cross drains along the corridor. There are 46 cross drain, one (1) bridge over the Withlacoochee River and one (1) bridge culvert along the project limits.
- The FEMA 100-yr floodplain is located extensively throughout the project limits. Zone AE within Hernando County, Zone A throughout Sumter County, areas of Zone A and Zone AE within Lake County.
- Inwood indicated the Zone AE floodplain elevations within Hernando County are based on FEMA maps and more than likely, these were approved by FEMA from the SWFWMD Withlacoochee River watershed model.
- Majority of the project within Hernando and Sumter Counties are in Karst Areas.
- Discussions about existing permits indicated that a permit was issued to FDOT District 7 for the widening of SR 50 just west of the intersection with US 301 but it also included improvements associated with tying down to the existing two lanes east of US 301. Inwood indicated that since our study begins at the intersection with US 301, a basin (Basin 1) was identified but the stormwater management is already accommodated in the permitted SR 50 project and no ponds are being evaluated for this basin as part of the study. The permitted SR 50 widening identified a stormwater pond to accommodate the four-lanes of SR 50 to a certain extent east of the intersection.

SWFWMD Water Quality/Quantity and Permitting Criteria.

- 1" over Directly Connected Impervious areas (DCIA) for wet detention and 0.5" over DCIA for dry retention for public highway transportation projects.
- Must provide treatment for all DCIA draining to the treatment facility, therefore, treatment can be provided for the net new impervious area if the runoff is separated from the existing impervious area runoff. Compensating treatment is allowed if it provides benefit to the same outfall.
- 50% additional water quality volume for ponds discharging to OFW. Monte confirmed this rule only applies to ponds that discharge directly into the OFW.
- Must demonstrate nutrient loading reductions for direct discharges to impaired waterbodies. Confirmed by Monte.
- Karst areas – Do not excavate through the confining layer as it would allow polluted water to drain into the Florida aquifer. If no confining layer is present, do not excavate to within two (2) feet of the underlying limestone layer. Geotechnical analysis will be required for the ponds which should look for sinkhole indicators (i.e. 100% loss of circulation).

- Water Quantity:
 - Open Basins – 25yr/24hr storm event for peak rate attenuation.
 - Closed Basins – 100yr/24hr storm event for volume attenuation.

Proposed Stormwater Management

- Three (3) stormwater pond alternatives are being evaluated for each basin
 - 37 total basins along the corridor
 - 27 basins within SWFWMD
 - 10 basins within SJRWMD
 - SWFWMD mentioned if any contamination is found within a pond site, that we will need to coordinate with DEP. SWFWMD will not issue a permit unless the pond is cleared of any contamination issues.

Floodplain Impacts & Compensation

- Approximately 122 ac-ft of impacts throughout the corridor based on the 4-lane widening alternative and a conservative approximation of the proposed roadway fill in cross sections.
- Monte confirmed that floodplain models are available and the results are considered the most recent flood elevations by the WMD. If a model is not available for areas designated as Zone A, or if depressional areas exist and are not zoned as floodplains, the consultant must provide a model which establishes the 100-year flood elevation of this area.
- Renato stated the FDOT's position is to not create floodplain models for these areas, but to use the FEMA adopted floodplain information and in areas of Zone A, compare the FEMA 100-year floodplain boundaries to the topographic information available to establish 100-year flood elevations. Renato indicated that FDOT will want written documentation of this request by the Water Management District. Monte concurred.

Compensation approach for the PD&E project is to provide offsite compensation ponds on a cup-for-cup basis. Monte stated that the floodplain compensation sites must be located within the same basin in which the impacts occur and should not impact stormwater conveyance.

Withlacoochee State Forest

- Basins 3 through 12 of the PD&E Study are located within the Withlacoochee State Forest.
- As part of this study and to conservatively estimate right of way needs, several stormwater management facilities have been sited within the State Forest property.
- A meeting with State Forest staff indicated that they prefer to not have stormwater or floodplain compensation ponds within their property as these would impact their maintenance operations.
 - Renato asked if SWFWMD had any specific criteria for dry detention linear treatment swales. One concept Inwood will evaluate is the option to provide stormwater management within the right-of-way. Monte explained that SWFWMD does not have criteria regarding dry detention swales, however, if the consultant can demonstrate they provide the same or greater pollutant removal efficiency as a wet detention pond, then they would be acceptable.
 - Another option Monte suggested is the detention with filtration (underdrains) that is acceptable by SWFWMD.
 - Renato also asked if Bio-activated Media (BAM) is acceptable by SWFWMD, which is currently being utilized on the SR 40 project within the Ocala National Forest in Marion County. Monte reiterated that the consultant must demonstrate that the BAM can provide the same or greater pollutant removal efficiency as a wet detention pond and it will be acceptable if this is demonstrated.

- Another option Monte suggested is providing treatment within isolated wetlands by placing a control structure within a wetland which is also acceptable by SWFWMD. However, this would be considered an impact by the Army Corps of Engineers and would require mitigation. A pre-treatment sump can be provided prior to discharging to the wetland to try and offset the impacts. SWFWMD indicated they will not require long term monitoring.
- Several floodplain compensation sites are also located within the State Forest property.
 - Monte suggested that coordination with the State Forest will be needed to verify if they would accept the displaced floodplain volume within their property in lieu of compensation sites. Monte also stated this would require a floodplain analysis to verify the increase in runoff would not impact adjacent properties.
 - SWFWMD will require documentation from the State Forest regarding whether they will accept the displaced floodplain volume in lieu of floodplain compensation sites.

Environmental Look Arouns / Regional Stormwater Opportunities

- Inwood mentioned that the FDOT is considering regional stormwater opportunities or Environmental Look Arouns (ELA) in an effort to provide the most benefit to the environment.
- Monte and Kim were not aware of any regional stormwater opportunities along the project corridor.
- Monte suggested contacting David Kramer, the SWFWMD Environmental Resource Permit (ERP) Manager for regional stormwater discussions.

Environmental Discussions

- Wetland impacts have been estimated for the roadway widening alternatives but not the alternatives stormwater ponds. Inwood indicated the pond sites have been located to avoid impacting wetlands as much as possible and where feasible.
- State Forest staff also expressed concerns regarding the placement of pond sites in uplands within the Forest as these areas support concentrations of listed species.
- Monte inquired about mitigation. Casey stated no credits have been set aside for this project. This project could potentially be a candidate for Senate Bill, Permittee-Responsible Mitigation, or other innovative mitigation options. Kim suggested contacting Philip Rhinesmith. Mr. Rhinesmith reviews Senate Bill projects in the project area.
- Kim inquired about the status of the Sovereign Submerged Lands (SSL) designation over the Withlacoochee River. If there is an existing SSL easement, it will potentially need to be amended. If there is not an existing SSL easement, one will need to be obtained.



West SR 50 PD&E Study from US 301 to CR 33
Hernando, Sumter and Lake County
FPID 435859-2-22-01
SWFWMD Pre App Meeting

July 27th, 2017, 3:00 PM
SWFWMD Brooksville Office

Sign-in Sheet

Name	Representing	Phone	E-mail
Lorena Cucek – via phone	FDOT	386-943-5392	Lorena.cucek@dot.state.fl.us
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**West SR 50 PD&E Study from US 301 to CR 33
Hernando, Sumter and Lake County, FL
FPID 435859-2-22-01
FDOT ETDM 14269
Thursday, July 27th, 2017
SWFWMD Pre App Meeting – Brooksville**

AGENDA

- **Introductions**
- **Project Overview**
 - Project limits from US 301 to CR 33 (Hernando, Sumter and Lake Co.)
 - Approximately 19.5-mile corridor
 - Evaluate widening alternatives of SR 50
 - Four project segments
 - A – US 301 to Hernando/Sumter Co. Line
 - B – Hernando/Sumter Co. Line to SR 471
 - C – SR 471 to Lee Road
 - D – Lee Road to CR 33
 - Typical sections evaluated (passing lanes, 4-lane rural divided, 4-lane urban divided)
 - Evaluate stormwater management alternatives and floodplain impacts and compensation
 - Document in the Pond Siting Report
 - Document in the Location Hydraulic Report
- **Existing Drainage**
 - Green Swamp Basin
 - SWFWMD jurisdiction west of Sumter/Lake Co Line
 - SJRWMD jurisdiction east of Sumter/Lake Co Line
 - Roadside swales, side drains and cross drains
 - 46 cross drains, bridge over Withlacoochee River and a bridge culvert
 - Floodplains (Zone AE – west of the river, Zone A east of the river)
 - Established model? FEMA or SWFWMD?
 - OFW – Withlacoochee River System and Chassahowitzka National Wildlife Refuge
 - WBID impairments
 - 1329F – Withlacoochee River – mercury only
 - 1378 – Big Gant Canal – nutrients (Chlorophyll-a)
 - Others – not impaired
 - Karst areas
 - Existing permits
- **SWFWMD water quality/quantity and permitting criteria**
 - Public transportation projects

- 1" over DCIA
 - Net new vs. total impervious, reconstruction vs. overbuild
 - 50% additional treatment for OFW
 - Direct or indirect discharges?
 - Nutrient loading reductions in impaired waterbodies
 - BMPTRAINS
 - Direct or indirect connections?
 - Karst areas criteria
 - Pond depth
 - Quantity
 - Open and closed basins
 - Over-attenuation in some areas
- **Proposed Stormwater Management**
 - Evaluating 3 stormwater ponds per basin
 - 37 total basins for entire corridor
 - 27 basins within SWFWMD
 - 10 basins within SJRWMD
- **Floodplain impacts/compensation**
 - Approximately 122 ac-ft of impacts (total corridor)
 - Conservative estimate – based on 4-lane widening alternative
 - Zone AE elevations from US 301 to Hernando/Sumter Co Line
 - Mostly Zone A east of Hernando/Sumter Co Line
 - Compensation approach – cup for cup, dedicated offsite floodplain comp. sites
- **Withlacoochee State Forest**
 - Basins 3 through 12
 - Stormwater management alternatives other than offsite ponds
 - Linear swales within R/W – dry detention acceptable?
 - BAM
 - Compensating treatment
 - Other?
 - Floodplain compensation alternatives
- **Environmental Look Arouds / Regional Stormwater Opportunities**
- **Environmental Discussions**

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL "PROMPT LIST" OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.



**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES**

**FILE
NUMBER:

PA 404764**

Date:	7/27/2017		
Time:	3:00		
Project Name:	FDOT West SR50 PD&E Study		
District Engineer:	Monte Ritter		
District ES:	Kim Dymond		
Attendees:	Renato Chuw, Jack Freeman, Jada Barhorst,, Sean Carrigan, Casey Lyon (via telephone), Lorena Cucek (via telephone)		
County:	Hernando/Sumter/Lake	Sec/Twp/Rge:	12/23/21;3-4,7-9/23/22;22-24,27,34
Total Land Acreage:		Project Acreage:	12/22/22;12-16,19-21/22/23;14-18/22/24 acres

Prior On-Site/Off-Site Permit Activity:

- ETDM 14269; ERP 4773.006

Project Overview:

- PD&E study evaluating widening alternatives for SR 50 from US 301 to CR 33. Four phases of construction: (1) Us 301 to Hernando/Sumter county line; (2) Hernando/Sumter county line to SR 471; (3) SR 471 to Sumter/Lake county line; (4) Sumter/Lake county line to CR 33. Discussion focused on water quality and quantity requirements. For portions of the project discharging to the Withlacoochee State Forest, alternative treatment and attenuation methods, other than typical off-site stormwater ponds, were discussed. Acceptable treatment alternatives can include the use of isolated wetlands treatment within the forest (which would require an easement or other legal evidence of control by FDOT) with pre-treatment swales being provided in the R/W or providing full treatment in roadside swales. Water quantity attenuation or floodplain compensation may not be required for discharges to the forest if concurrence documentation is provided from the State and increased flooding does not occur on other privately owned lands.
- Project lies within SWFWMD and SJRWMD jurisdictions. If entire project is to be permitted by the SWFWMD, an Interagency Agreement with SJRWMD will be required.

Environmental Discussion: (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)

- Provide the limits of jurisdictional wetlands.
- Project will entail unknown acres of wetland impacts, depending on which design alternative is used.
- Provide appropriate mitigation using UMAM for impacts, if applicable.
- Will need to address elimination/reduction criteria in detail since project occurs within OFW and preserved lands.
- Maintain minimum 15 foot, average 25 foot wetland conservation area setback or address secondary impacts.
- Maintain wildlife corridors.
- Outstanding Florida Water rules apply. Project area is within the Withlacoochee River System and Chassahowitzka National Wildlife Refuge.
- The project may propose to attenuate/treat in wetlands. Need to demonstrate that adverse impacts to the wetland hydroperiods will not occur by providing hydrographs of the 2.33 year mean annual storm. The graph should start and end at the pop-off elevation with Existing Condition and Proposed Condition hydrographs superimposed for comparison. Need to provide a supporting narrative for the hydrographs explaining any variations that are shown. The invert of the agricultural ditches may be the existing 'pop-off' elevation, or SHWL of the wetland and may need to be considered when designing the storm water management system.
- [Federal Supplemental Application Form](#) - to be used with the Joint Application form under SWERP 2 (SWERP 2 has not been approved yet). This form will not be incorporated into rule but will be added to the

electronic application. The Corps has requested that we begin using this form now to help them gather the information they need to process their permits. This should be provided during any pre-application meeting that proposed work in, on or over wetlands or surface waters.

Site Information Discussion: (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)

- Watersheds (within SWFWMD boundaries) – Eastern Hernando, Little Withlacoochee, Gant Lake, Jumper Creek, and Big Prairie. To date, 100-year flood elevations have been determined in each watershed, except for Jumper Creek.
- The project lies within WBIDs 1390, 1388, 1329F, 1381, 1378, 1383, 1360B, and 1359D. All of the listed WBIDs, except for WBID 1378 (Big Gant Canal) are not currently listed as impaired. Big Gant Canal is currently listed as impaired for nutrient related pollutants. WBIDs need to be independently verified by the consultant
- Open and closed basins
- Document/justify SHWE's at pond locations, wetlands, and OSWs.
- Determine normal pool elevations of wetlands (if isolated wetlands treatment is proposed.).
- Determine 'pop-off' locations and elevations of wetlands.
- Provide documentation to support tailwater conditions for quality and quantity design. Can use data from listed watershed studies.
- Proposed control structures in wetlands should be consistent with existing 'pop-off' elevations of wetlands; demonstrate no adverse impacts to wetland hydroperiod for up to 2.33yr mean annual storm.
- OFW's – Withlacoochee River System and Chassahowitzka National Wildlife Refuge.
- Contamination issues need to be resolved with the FDEP. Check FDEP MapDirect layer for possible contamination points within the project area. [FDEP MapDirect Link](#)
- Any wells on site should be identified and their future use/abandonment must be designated.
- District data collection site may be impacted by proposed construction. Contact Granville Kinsman at Ext 4284 or granville.kinsman@watermatters.org to coordinate relocation of District data collection site.

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that post development peak discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event.
- For projects or portions of projects that discharge to a closed basin, limit the post-development 100-year discharge volume to the pre-development 100-year, 24-hour volume.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour floodplain impacts if applicable. Providing cup-for-cup storage in dedicated areas of excavation is the preferred method of compensation, if no impacts to flood conveyance are proposed and storage impacts and compensation occur within the same basin. In this case, tabulations should be provided at 0.5-foot increments to demonstrate encroachment and compensation occur at the same levels. Otherwise, storage modeling will be required to demonstrate no increase in flood stages will occur on off-site properties, using the mean annual, 10-year, 25-year, and 100-year storm events for the pre- and post-development conditions.

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Presumptive Water Quality Treatment for Alterations to Existing Public Roadway Projects:
 - Refer to Section 4.5 A.H.V.II for Alterations to Existing Public Roadway Projects.
 - Refer to Sections 4.8, 4.8.1 and 4.8.2 A.H.V.II for Compensating Stormwater Treatment, Overtreatment, and Offsite Compensation.
 - All co-mingled existing & new impervious that is proposed to be connected to a treatment pond will require treatment for an area equal to the co-mingled existing & new impervious (times ½" for dry treatment or 1" for wet treatment). This applies whether or not equivalent treatment concepts are used.
 - However, if equivalent treatment concepts are used it is possible to strategically locate the pond(s) so that the minimum treatment requirement may be for an area equivalent to the new impervious area only. That is, co-mingled existing & new impervious that is not connected to a treatment pond may bypass treatment (as per Section 4.5(2), A.H.V.II); if the 'total impervious area' that is connected to the treatment pond(s) is at least equivalent to the area of new impervious only. The 'total impervious area' that is connected to the pond(s) may be composed of co-mingled existing & new impervious.
 - Offsite impervious not required to be treated; but may be useful to be treated when using equivalent treatment concepts.

-Existing treatment capacity displaced by any road project will require additional compensating volume. Refer to Subsection 4.5(c), A.H.V.II.

- Will acknowledge compensatory treatment to offset pollutant loads associated with portions of the project area that cannot be physically treated.
- Provide additional 50% treatment for any direct discharges to OFW. Refer to ERP Applicant's Handbook Vol. II Subsection 4.1(f).
- Please be advised that although use of isolated wetlands for ERP treatment purposes is permissible as per Section 4.1(a)(3), A.H.V.II, use of isolated wetlands for treatment purposes may not necessarily meet US Army Corps criteria.
- Net improvement
 - Refer to rule 62-330.301(2), F.A.C.
 - Please verify accuracy of WBID boundaries and status of impairment.
 - The application must demonstrate a net improvement for nutrients within WBID 1378. Applicant may demonstrate a net improvement for the parameters of concern by performing a pre/post pollutant loading analysis based on existing land use and the proposed land use. Refer to ERP Applicant's Handbook Vol. II Subsection 4.1(g).
 - Effluent filtration is known to be ineffective for treating nutrient related impairments, unless special nutrient adsorption media provided. However, please note special nutrient adsorption media has extremely low conductivity values compared to typical sand type effluent filtration filter media. Note: if treatment volume required for net improvement is less than the treatment volume required for 'presumptive' treatment, then use of effluent filtration is ok.

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- The project may be located within state owned sovereign submerged lands (SSSL) (i.e. Little Withlacoochee River). Be advised that a title determination will be required from FDEP to verify the presence and/or location of SSSL.
- If use of SSSL is proposed, authorization will be required in the form of modifying the existing Public Easement or recording a new Public Easement. Refer to Chapter 18-21, F.A.C. and Chapter 18-20, F.A.C. for guidance on projects that impact SSSL and Aquatic Preserves.

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to entity that owns or controls the property.
- Provide evidence of ownership or control by deed, easement, contract for purchase, etc.

Application Type and Fee Required:

- SWERP Individual – Sections A, C, and E of the ERP Application. Fee will be based on project size and wetland impacts.
- Consult the [fee schedule](#) for different thresholds.

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

- An application for an individual permit to construct or alter a dam, impoundment, reservoir, or appurtenant work, requires that a notice of receipt of the application must be published in a newspaper within the affected area. Provide documentation that such noticing has been accomplished. Note that the published notices of receipt for an ERP can be in accordance with the language provided in Rule 40D-1.603(10), F.A.C.
- The plans and drainage report submitted electronically must include the appropriate information required under Rule 61G15-23.005(3)(d), F.A.C. The following text is acceptable to the Florida Board of Professional Engineers (FBPE) to meet this requirement and must appear where the signature would normally appear:

*[Licensee] State of Florida, Professional Engineer, License No. X
This item has been electronically signed and sealed by [Licensee, PE] on [DATE] using a SHA-1 authentication code. Printed copies of this document are not considered signed and sealed and the SHA-1 authentication code must be verified on any electronic copies*

- Provide soil erosion and sediment control measures for use during construction. Refer to ERP Applicant's Handbook Vol. 1 Part IV Erosion and Sediment Control.
- Demonstrate that excavation of any stormwater ponds does not breach an aquitard (see Subsection 2.1.1, A.H.V.II) such that it would allow for lesser quality water to pass, either way, between the two systems. In

those geographical areas of the District where there is not an aquitard present, the depth of the pond(s) shall not be excavated to within two (2) feet of the underlying limestone which is part of a drinking water aquifer. [Refer to Subsection 5.4.1(b), A.H.V.II]

- If lowering of SHWE is proposed, then burden is on Applicant to demonstrate no adverse onsite or offsite impacts as per Subsection 3.6, A.H.V.II. Groundwater drawdown 'radius of influence' computations may be required to demonstrate no adverse onsite or offsite impacts. Please note that new roadside swales or deepening of existing roadside swales may result in lowering of SHWE. Proposed ponds with control elevation less than SHWE may result in adverse lowering of onsite or offsite groundwater.

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

MEETING NOTES

Date: December 18, 2017

Project #: 17923.02

To: See Distribution

From: Jack Freeman

Project: SR 50 PD&E Study - 435859

Subject: FDOT District 5 – SWFWMD and FFS Coordination Meeting; December 14, 2017

On Thursday, December 14, 2017, FDOT District 5 conducted a project coordination meeting with Southwest Florida Water Management District (SWFWMD) and Florida Forest Service (FFS) at the SWFWMD office in Brooksville, FL. The attendees were:

Present

Monte Ritter – SWFWMD

Al Gagne – SWFWMD

Vince Morris - FFS

Ferrell Hickson – FDOT

Casey Lyon – FDOT

Lorena Cucek - FDOT

Karen Snyder – FDOT

Su Hao – FDOT

Heather Chasez – FDOT

By Phone/Go To Meeting

John Browne– FFS

Brian Camposano – FFS

Nona Schaffner– FDOT Central Office

Amy Sirmans – FDOT

Jesse Blouin – FDOT

Todd Helton – FDOT

Brandon Kelley - Kittelson

The meeting was opened with discussing changes since meeting with FFS and SWFWMD in July 2017 prior to Alternatives Public Meetings. The addition of a shared use path in Hernando County and across the Withlacoochee River bridge and then wider 7 ft paved shoulders in Sumter County was discussed. Vince Morris questioned the additional shared use path's need with the Coast to Coast trail to the north. We discussed the legislation for Coast to Coast does not allow FDOT eminent domain to obtain ROW and this may be the alternative should there be ROW acquisition issues along the proposed Coast to Coast alignment. We are also doing this east of the Van Fleet Trail. He asked about additional floodplain impacts and we acknowledged this will require additional fill into the floodplain. FDOT suggested the

Kittelson team provide an estimate of additional encroachment anticipated in the 100-year floodplain for the shared use path.

We discussed the impact of keeping the existing lanes on drainage retention requirements. Ferrell Hickson mention HB 599 allows the comingling of water but we do not need to treat all runoff. Monte Ritter said thru equivalent compensatory treatment FDOT will get credit for the areas of pavement that cannot be treated. He also said the area for the shared use path is considered exempt from stormwater treatment and does not need to be treated if 14 feet or less in width.

Ferrell Hickson said FDOT has been using "A line easement" where water flows across this easement into state land. This gives FFS/FDEP more flexibility to manage their property and he feels it is better than a "flowage easement". The SWFWMD staff had not used this type of easement but seemed willing to consider.

Vince Morris said the most important area to minimize or eliminate stormwater ponds and floodplain compensating storage areas is between Porter Gap Road and the Withlacoochee River. This is where FFS has noted the most environmental resources/protected species. We discussed the potential to do extra treatment in other areas to compensate for less treatment in this area. Vince noted ponds and floodplain compensating areas west of Old 50 or the hiking trail would have less impact on protected species. He also noted the bluffs area to be of significance. He also said there are recorded archaeological sites throughout the state forest.

Monte Ritter said we need to note the floodplain impacts due to the increased fill. To avoid having floodplain compensating storage areas, FDOT will need to demonstrate all increases in flood levels are contained within the state forest. He noted this generally needs modeling to demonstrate. It was noted the SWFWMD Applicants Handbook Volume II is considered adopted by rule. Ferrell Hickson noted the expense to model this large area, particularly if not model exists. We discussed there is a model available for Hernando County but nothing in Sumter County. Ferrell asked if the Zone AE limits were the best information available in Sumter County. Monte said FDOT needs to show "reasonable assurance" the increased flood stage would be self-contained within the state forest and if a conservative method could be used to demonstrate floodplain impacts would be contained within the forest without modeling, the WMD could accept it. Ferrell noted the Location Hydraulics Report done for this PD&E study is showing a conservative estimate providing cup for cup compensation for the estimated 100-year floodplain encroachment.

Monte asked if we are going to raise SR 50 through the state forest. While this is still under evaluation, likely we will not raise SR 50. Vince Morris noted he does not know of a time when flood waters have overtopped SR 50 in the state forest. Monte said if we raise SR 50, this could be a conveyance issue.

We discussed the existing bridge will remain as the new westbound lanes and will not be widened. The eastbound lanes will have a new bridge and will also accommodate the shared use path. Vince discussed whether we can accommodate the hiking trail under the bridge (also made this comment in the July 2017 meeting). Jack Freeman noted we have considered cutting back the rip-rap wall and adding a concrete sidewalk for passage under the bridge. Jack also noted the hiking trail approaches to the sidewalk will likely flood before the sidewalk.

Vince? recommended we consider the use of Bio-Absorption Activated Media (BAM) in the state forest to reduce the need for stormwater retention ponds.

Casey Lyon suggested we create something similar to an Environmental Advisory Group but smaller with just Forestry and SWFWMD and have regular meetings during the project. The agencies liked this idea since final design is right on the heels of PD&E. They noted they would like for these meetings to be tied to upcoming project events rather than be regularly scheduled.

Karen Snyder requested the Kittelson Team provide a drainage map showing drainage basin boundaries for future meetings.

Vince Morris noted a potential mitigation area within the state forest north of SR 50 near the northern end of the Withlacoochee State Forest. This is a shovel ready project but has not received Army Corps approval and is not funded. It is basically a restoration project. Brian Camposano said FFS does not like to manage mitigation areas for state forest impacts. Vince was to provide Brian more information. In addition, Casey requested FDOT receive a preferred parcel list of potential land acquisitions from FFS.

We discussed the next meeting in being in mid-to late January after the preferred alternative is selected.

Copies to: All Attendees

DATE: March 6, 2018

TO: Jack Freeman, P.E., PTOE

FROM: Jason Houck, GISP, PWS

RE: FPID 435859-2-22-01

SR 50 PD&E Study from US 301 to CR 33 in Hernando, Sumter, and Lake Counties

Wildlife Crossings/Habitat Connectivity Coordination meeting with Florida Forest Service and Florida

CC: Attendees

A meeting was held on March 1, 2018 between the Florida Department of Transportation (FDOT), the Florida Forest Service (FFS), the Florida Fish and Wildlife Conservation Commission (FWC), and the Florida Department of Environmental Protection (FDEP) to discuss the on-going PD&E study along the SR 50 corridor from US 301 to CR 33 and the request from FFS to include wildlife crossings/habitat connectivity enhancements into the PD&E study and subsequent design projects. Attendees included Vince Morris and Brian Camposano (via phone) (FFS); Rick Spratt, Brian Barnett (via phone), Terry Gilbert (via phone) (FWC); Lorena Cucek, Alex Holtcamp, Casey Lyon (via phone), Heather Chases, Su Hao (via phone), Lilliam Escalera, and Virginia Creighton, and Todd Helton (via phone) (FDOT); Jason Houck and Ben Shepherd (Inwood); Carolyn Malphurs (DRMP). A copy of the sign-in sheet, agenda, and meeting materials have been included as attachments to this memorandum. The following provides a summary of the issues discussed at the meeting.

Lorena Cucek began the meeting with introductions from attendees both in person and those attending via phone. She then turned the meeting over to Jason Houck who started with a brief overview of the PD&E study and its status. Jason discussed the 4-lane option as being the preferred roadway alternative throughout the corridor. Specific to environmental issues, he added that the draft Natural Resources Evaluation (NRE) report was submitted to FDOT for internal review on February 16, 2018 but lacked any wildlife crossing or habitat connectivity (crossings) discussion. Heather Chases added that FDOT had received a request from FFS to evaluate crossings within the corridor and that this meeting was the first step in conducting that evaluation. Jason stated that the crossings evaluation had just begun following the selection of the design teams and that the evaluation would need to move quickly in order to maintain the PD&E schedule. He added that the evaluation would center around increasing the permeability of the corridor for wildlife in the 4-lane, post-construction condition.

Jason provided a map identifying existing cross drains within the Forest that would likely need to be replaced where the road to be widened. The need for replacements was primarily due to the age of the existing structures. He added that an updated hydraulic analysis would be completed to assess the size of new pipes being included in the design. While these structures are intended to maintain hydraulic connectivity, Jason stated that their locations could be ideal for the inclusion of complementary structures, generally set above the normal high-water level with dirt bottoms, that could facilitate wildlife movement. He added that, in order to replace the existing cross drain, the road would need to be reconstructed anyway, and that the inclusion of a complementary structure for wildlife would be more cost feasible in those areas.

Jason referred to the preliminary crossing evaluation matrix, stating that Inwood had performed a preliminary analysis of the existing cross drain locations to determine their potential applicability for the inclusion of complementary structures. The preliminary evaluation recommended further analysis at CD-7, CD-9, CD-12, CD-13, and CD-14. Jason stated that the primary reason for the recommendations was the location of the structure in relation to adjacent habitat, noting that structures in close proximity to upland, riparian, or ecotonal habitats tended to capture more utilization by wildlife. In addition, the size of the existing pipe was a good indication of the size of the complementary structure that could be included.

Jason added that the FDOT was aware that a request to include crossing accommodations at the Withlacoochee River bridge. He added that additional engineering resources would be required to complete that analysis and the FDOT was not prepared to address those needs at this time. However, the FDOT and PD&E team were working on addressing those concerns.

Jason asked about additional areas that should be considered. Vince Morris stated that FFS would like to have additional crossings sited in uplands. In areas west of the river, those uplands tend to be where roads are located. Jason responded by stating that the recommendations would need to be included in the NRE by May in order to maintain the PD&E schedule. Vince responded by saying that there are three ridges west of the river and maybe two others where upland crossings can be located. He added that it would be beneficial for crossings in the areas of CD-5 and CD-6 could also accommodate trail users, stating that FFS has trail crossings on SR 50 in those locations as well as at the river. Jason responded stating that, when accommodating trail users, additional engineering constraints, complexity, costs, and environmental impacts will need to be considered. Lorena mentioned that there may be some options at the river with the bridge. Vince asked to consider a trail crossing at the bridge to accommodate human and wildlife use.

Jason stated that the next step in the evaluation process would be to conduct a field review with the FDOT/PD&E team, FFS, and FWC staff to visit the proposal crossing locations and discuss the pros and cons of each location to help solidify the recommendations. The idea would be to gain a group consensus at each location and, if a location was determined at that point to be nonviable, it would be removed from the list of recommended sites.

Vince asked if the project could support a major crossing somewhere in the corridor. Jason responded by saying he didn't know and that he would need additional input from the PD&E team and FDOT. Lorena added that it would require input from engineering and that FDOT would need to consider costs.

Casey Lyon asked that the team keep in mind the floodplain impacts already identified in the project and that siting a crossing in a floodplain area, similar to Wekiva Parkway Segment 4A/4B, would be a way to reduce some of those impacts. Jason added that the overall regulatory benefits versus costs of the crossings would need to be identified early stating that the PD&E team can't recommend something to the FDOT that would be overly difficult to permit.

Vince recommended that, during the field review, the group visit the upland ridge locations with FWC to discuss local resources that would be affected. He recommended bringing engineers to evaluate that area as well and discuss the inclusion of the complementary structures. Jason responded by asking Vince how he feels about fencing and gates, especially in the upland areas where there are existing roads.

Casey added that the -4 design segment has FFS impacts as well and asked if they are being considered. Vince responded by saying that FFS would like to maintain permeability in those areas as well, but they are not as critical. He added that there are more listed species in those areas but no hiking trails. Jason stated that Inwood would conduct a similar preliminary analysis for those areas and update the table provided.

Jason stated that the existing hydraulics would need to be maintained adding that the existing road acted as a large weir. Vince asked if a large crossing could affect upstream and downstream conditions. Jason responded by saying it was possible due to the fact that the road has been in place for many years that the systems on either side have equalized and that the current hydrology of the system was much different than before the road.

Rick Spratt asked if the FLUCFCS maps have been field verified. Jason responded that Inwood had updated them based on their field assessments during the PD&E out to 1,000 feet from the existing roadway.

The discussion turned back to target species. Jason stated that they were primarily looking to accommodate small/meso mammals and herps. In uplands, this would include gopher tortoises and numerous areas could also support indigo snakes. He added that the target species tend to drive the direction of the structure sizes stating that SR 40 in Marion County included elliptical pipes to accommodate similar species. Rick asked about the inclusion of shelves in pipes. Jason responded by saying that the literature seems to conclude that they are less effective than complementary structures. Heather added that she also did not see as much utilization in shelves as in complementary structures. In addition, shelves can increase the difficulty for maintenance and that aquatic species can still utilize pipes installed for hydraulics.

Jason turned to the fencing detail sheets provided asking for thoughts from FFS and FWC because it can influence on management of adjacent areas. He also stated that there were concerns from citizens on SR 40 that the inclusion of such fencing would result in the corridor appearing to a motorist as if they are “driving past a maximum-security prison”. Vince responded that he would not anticipate similar comments on this corridor. Jason pointed out that the fencing was designed to be effective against bears but also identified the herp mesh, adding that the herp mesh was included on SR 40 because it was a commitment in the PD&E study. Casey added that the FDOT has anecdotal evidence suggesting that the herp mesh is effective on Wekiva Parkway 4A/4B in upland areas, but not on I-4 and I-95 where it has been installed in wet areas. She stated that FDOT Central Office was steering away from the inclusion of herp mesh on future projects due to the maintenance costs and the “Buy America” issue as it cannot be obtained from a US-based manufacturer.

Jason referred to the gate detail sheet stating that we do not want to restrict access to areas outside of the roadway, but if the gates are continually left open, the fencing is considerably less effective for crossings. He asked for feedback from FFS and FWC regarding the design and locations of gates and fencing adding that all included specs are “fire friendly”. Vince responded by stating that gating Porter Gap or Porterland would not be an option and that FFS objects to most gates.

The meeting ended with several action items

- FFS will supply list of potential acquisition parcels for FDOT to be considered for mitigation by April 2, 2018.
- Casey will send the mitigation plan proposed by one of the design teams to FFS for review.
- FFS and FWC will provide contact info for staff that should attend the preliminary wildlife crossings evaluation field review and dates available
- Conduct a meeting following the field review to discuss the potential crossing location and gain consensus.
- Prepare the recommendations for submittal to FDOT EMO and incorporate into the NRE and PER as appropriate.
- Inwood will conduct a preliminary crossing analysis in the remaining areas of the Forest.

Note: The above reflects the writer’s understanding of the content of the discussions that took place at the meeting. If any misrepresentations, inaccuracies or omissions are identified, please contact Jason Houck at (407) 971-8850 (JHOUCK@INWOODINC.COM) as soon as possible for resolution and revision, if necessary.

DATE: March 26th, 2018

TO: See Distribution

FROM: Renato Chuw, PE

RE: FPID 435859-2-22-01 | West SR 50 PD&E Study from US 301 to CR 33 | Alternative Approach to Stormwater Management within the Withlacoochee State Forest – meeting with SWFWMD

CC: All attendees, Jason Houck

A meeting was held at the Southwest Florida Water Management District (SWFWMD) in the Tampa office on March 26th, 2018 to discuss alternative approaches to stormwater management and floodplain compensation through the Withlacoochee State Forest (WSF). Meeting attendees were:

- Monte Ritter (SWFWMD)
- Al Gagne (SWFWMD)
- Lorena Cucek (FDOT D5)
- Karen Snyder (FDOT D5)
- Casey Lyon (FDOT D5)
- Lilliam Escalera (FDOT D7)
- Anita Wang (FDOT D7)
- Ed Cronyn (Atkins – D7)
- Jack Freeman (Kittelson)
- Renato Chuw (Inwood)
- Sean Carrigan (Inwood)
- Ferrell Hickson (FDOT D5) – via teleconference
- Heather Chases (FDOT D5) – via teleconference
- Ed Northey (FDOT D5) – via teleconference
- Ken Kniel (DRMP) – via teleconference

The purpose of this meeting was to present the stormwater management alternative and floodplain compensation approach through the Withlacoochee State Forest (WSF) and obtain concurrence from SWFWMD. The alternatives were initially presented and discussed with the Department in a meeting that occurred on March 8th, 2018.

Compensating Treatment Pond approach discussion

Inwood began the meeting by discussing the compensating treatment approach through the Withlacoochee State Forest (WSF) explaining that this approach would eliminate the need for stormwater management facilities within the Forest property (Basins 4 through 11). Compensatory Pond 3R is approximately 12.5 acres in size located at station 1897+00 LT and outside of the WSF. The intent would be for Pond 3R to collect all the roadway runoff (existing and proposed lanes) within Basins 3, 4, and 5. The area of existing impervious within Basins 4 and 5 is equal to the area of proposed impervious area within Basin 6. This would allow all of Basin 6 to be discharged directly to its outfall while still providing an equivalent amount of water quality treatment. Pond 3R would discharge via a pipe outfall within FDOT's R/W to cross drain CD-4 at Station 1926+00.

Similarly, Compensatory Pond 12R is approximately 11.5 acres in size located at Station 116+00 RT and outside of the WSF. The intent would be for Pond 12R to collect all the roadway runoff (existing and proposed lanes) within Basins 11, 12, 13 and a portion of Basin 10. The area of existing impervious within these basins is equal to the area

of proposed impervious area within Basins 7, 8, 9, and the remainder of 10. This would allow all of Basins 7, 8, 9, and the remainder of 10 to be discharged directly to their outfalls while still providing an equivalent amount of water quality treatment. Pond 12R would outfall via a pipe outfall within FDOT's R/W to cross drain CD-15 at Station 104+00.

SWFWMD indicated that this approach is acceptable since water quality treatment is required only for the new additional lanes of SR 50 and collecting the existing lanes can compensate for any new lanes proposed to be untreated as long as the compensation is within the same watershed. The roadway drainage basins in which the compensating treatment is proposed are all within the Little Withlacoochee Basin. Furthermore, the outfalls for each of the roadway drainage basins are to wetland systems that are interconnected and ultimately leading to the Little Withlacoochee River.

Options for a regional stormwater pond were discussed. Inwood mentioned that FDOT had suggested looking into potential regional stormwater options along US 301 north of SR 50. Inwood discussed that the first few miles (2 to 4 miles) north of the intersection with SR 50, the topography surrounding US 301 is characterized by land-locked depressional areas that are not part of the Little Withlacoochee Basin. After these first few miles, portions of US 301 then drain towards the Little Withlacoochee River. SWFWMD indicated that this would be too long of a stretch to provide a regional stormwater site as compared to the compensating treatment approach for Basins 4 through 11 which has a more direct benefit to the watershed.

Floodplain Compensation Approach discussion

Inwood provided exhibits and presented an approach to floodplain compensation within the WSF to have an alternative to eliminate offsite floodplain compensation ponds within the WSF. The alternative presented consisted of evaluating the various floodplain encroachments within the WSF, estimating the floodplain boundary area, the volume of encroachment and a corresponding "rise" of the 100-year elevation. The goal of this approach was to show that the encroachment volumes causes a minimal rise in the 100-year floodplain boundary that would avoid the need for offsite floodplain compensation ponds. The FEMA adopted floodplains within the WSF are based from the Little Withlacoochee watershed model. The model was done in ICPR format.

SWFWMD provided the following items of consideration regarding this approach:

- In areas where the floodplain rise occurs outside of the WSF and within private property (i.e. towards the beginning of the project at CR 575), SWFWMD suggested that floodplain compensation should still be provided even if the rise is minimal. At this location, the rise Inwood had estimated was approximately 0.02 ft.
- The guideline that anything less than 0.04' rise in the 100-year floodplain is considered a no-rise situation is not a set criteria and it depends on a case by case basis and the project.
- A letter will be required from the WSF accepting the rises proposed within the 100-year floodplain in their property limits. This will be required as part of the design and permitting phases.
- The estimation of the 100-year floodplain rise approach provided by Inwood is based on a volumetrically and area comparison of the floodplain boundaries. Because these floodplains are flowing systems, SWFWMD asked if the rises are contained within the WSF or if they go outside into private properties. Inwood stated that the rise estimate was done on a volumetric level just to show at this time, the magnitude of the encroachments compared to the large floodplain boundaries. SWFWMD indicated that they would want assurance that the rises do not go outside the WSF which can be demonstrated through a model.
- The existing cross drains along the project will need to be lengthened for the roadway widening. SWFWMD indicated that the typical analysis used for evaluation for the cross drain extensions can be used as well to determine floodplain elevations within Zone A.

- The bridge hydraulic analysis model for the Little Withlacoochee River can also be used as an alternative to evaluate any rises within the 100-year floodplains to avoid offsite FPC sites.
- The treatment ponds can also be used to provide floodplain compensation, but a model will be required to demonstrate connectivity to the floodplains
- In Zone AE floodplain locations, cup for cup compensation is a valid approach, as long as compensation is provided within the same basin in which the encroachment occurs and there are no floodplain conveyance impacts.

THIS FORM IS INTENDED TO FACILITATE AND GUIDE THE DIALOGUE DURING A PRE-APPLICATION MEETING BY PROVIDING A PARTIAL "PROMPT LIST" OF DISCUSSION SUBJECTS. IT IS NOT A LIST OF REQUIREMENTS FOR SUBMITTAL BY THE APPLICANT.



**SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
RESOURCE REGULATION DIVISION
PRE-APPLICATION MEETING NOTES**

**FILE
NUMBER:
PA 405481**

Date:	3/26/2018
Time:	11:00
Project Name:	FDOT ETDM 14269 - West SR50 PD&E US301 - Mascotte
District Engineer:	Monte Ritter
District ES:	Al Gagne
Attendees:	Renato Chuw rchow@inwoodinc.com , Jack Freeman, Karen Snyder, Casey Lyon, Sean Carrigan, Lorena Cucek, Lilliam Escalera, Ed Cronyn, Anita Wang, Ferrel Hickson, Heather Chasez, Ed Northey, Ken Kniel

County:	Hernando/Sumter	Sec/Twp/Rge:	12/23/21-22/22/22
Total Land Acreage:		Project Acreage:	acres

Prior On-Site/Off-Site Permit Activity:
•

- Project Overview:**
- Proposed road widening project for SR 50 from US 301 to Mascotte. Meeting focused on compensatory treatment and floodplain compensation methodologies to avoid pond construction within Withlacoochee State Forest (Forest).
 - Compensatory treatment will be provided in Pond 3R (located west of the Forest) for existing and proposed pavement within Basins 4 and 5 to offset untreated proposed impervious in Basin 6. Compensatory treatment will be provided in Pond 12R (located east of the Forest) for existing and proposed pavement within a portion of Basin 10 and all of Basins 11, 12, and 13 to offset untreated proposed impervious in Basins 7, 8, 9, and a portion of 10.
 - No floodplain compensation will be required for impacts adjacent to the Forest, and long as flood stages are not increased on private properties located outside of the Forest. Modeling will likely be required to demonstrate this. Written documentation from Florida Forestry Service (FFS) will be required accepting increases in flood stages within the Forest.

- Environmental Discussion:** (Wetlands On-Site, Wetlands on Adjacent Properties, Delineation, T&E species, Easements, Drawdown Issues, Setbacks, Justification, Elimination/Reduction, Permanent/Temporary Impacts, Secondary and Cumulative Impacts, Mitigation Options, SHWL, Upland Habitats, Site Visit, etc.)
- Provide the limits of jurisdictional wetlands.
 - Provide appropriate mitigation using UMAM for impacts, if applicable.
 - Demonstrate elimination and reduction of wetland impacts.
 - Maintain minimum 15 foot, average 25 foot wetland conservation area setback or address secondary impacts.
 - As of October 1, 2017, the District will no longer send a copy of an application that does not qualify for a State Programmatic General Permit (SPGP) to the U.S. Army Corps of Engineers. If a project does not qualify for a SPGP, you will need to apply separately to the Corps using the appropriate federal application form for activities under federal jurisdiction. Please see the Corps' Jacksonville District Regulatory Division Sourcebook for more information about federal permitting. Please call your local Corps office if you have questions about federal permitting. Link: <http://www.saj.usace.army.mil/Missions/Regulatory/Source-Book/>

- Site Information Discussion:** (SHW Levels, Floodplain, Tailwater Conditions, Adjacent Off-Site Contributing Sources, Receiving Waterbody, etc.)
- Watersheds (within limits of Withlacoochee State Forest) – Eastern Hernando and Little Withlacoochee.
 - WBIDs (within limits of Withlacoochee State Forest) - WBIDs 1388, 1329F and 1381. All of the listed WBIDs are not currently listed as impaired. Big Gant Canal is currently listed as impaired for nutrient related pollutants. WBIDs need to be independently verified by the consultant
 - Open and closed basins
 - Document/justify SHWE's at pond locations, wetlands, and OSWs.
 - Provide documentation to support tailwater conditions for quality and quantity design. Can use data from listed watershed studies.

- OFW's – Withlacoochee River System and Chassahowitzka National Wildlife Refuge.
- Contamination issues need to be resolved with the FDEP. Check FDEP MapDirect layer for possible contamination points within the project area. [FDEP MapDirect Link](#)
- Any wells on site should be identified and their future use/abandonment must be designated.
- District data collection Site I.D. 23619 may be impacted by proposed construction. Contact Granville Kinsman at Ext 4284 or granville.kinsman@watermatters.org to coordinate relocation of District data collection site.

Water Quantity Discussions: (Basin Description, Storm Event, Pre/Post Volume, Pre/Post Discharge, etc.)

- Demonstrate that post development peak discharges from proposed project area will not cause an adverse impact for a 25-year, 24-hour storm event.
- For projects or portions of projects that discharge to a closed basin, limit the post-development 100-year discharge volume to the pre-development 100-year, 24-hour volume.
- Demonstrate that site will not impede the conveyance of contributing off-site flows.
- Demonstrate that the project will not increase flood stages up- or down-stream of the project area(s).
- Provide equivalent compensating storage for all 100-year, 24-hour floodplain impacts if applicable. Providing cup-for-cup storage in dedicated areas of excavation is the preferred method of compensation, if no impacts to flood conveyance are proposed and storage impacts and compensation occur within the same basin. In this case, tabulations should be provided at 0.5-foot increments to demonstrate encroachment and compensation occur at the same levels. Otherwise, storage modeling will be required to demonstrate no increase in flood stages will occur on off-site properties, using the mean annual, 10-year, 25-year, and 100-year storm events for the pre- and post-development conditions.

Water Quality Discussions: (Type of Treatment, Technical Characteristics, Non-presumptive Alternatives, etc.)

- Presumptive Water Quality Treatment for Alterations to Existing Public Roadway Projects:
 - Refer to Section 4.5 A.H.V.II for Alterations to Existing Public Roadway Projects.
 - Refer to Sections 4.8, 4.8.1 and 4.8.2 A.H.V.II for Compensating Stormwater Treatment, Overtreatment, and Offsite Compensation.
 - All co-mingled existing & new impervious that is proposed to be connected to a treatment pond will require treatment for an area equal to the co-mingled existing & new impervious (times ½" for dry treatment or 1" for wet treatment). This applies whether or not equivalent treatment concepts are used.
 - However, if equivalent treatment concepts are used it is possible to strategically locate the pond(s) so that the minimum treatment requirement may be for an area equivalent to the new impervious area only. That is, co-mingled existing & new impervious that is not connected to a treatment pond may bypass treatment (as per Section 4.5(2), A.H.V.II); if the 'total impervious area' that is connected to the treatment pond(s) is at least equivalent to the area of new impervious only. The 'total impervious area' that is connected to the pond(s) may be composed of co-mingled existing & new impervious.
 - Offsite impervious not required to be treated; but may be useful to be treated when using equivalent treatment concepts.
 - Existing treatment capacity displaced by any road project will require additional compensating volume. Refer to Subsection 4.5(c), A.H.V.II.
- Will acknowledge compensatory treatment to offset pollutant loads associated with portions of the project area that cannot be physically treated.
- Provide additional 50% treatment for any direct discharges to OFW. Refer to ERP Applicant's Handbook Vol. II Subsection 4.1(f).

Sovereign Lands Discussion: (Determining Location, Correct Form of Authorization, Content of Application, Assessment of Fees, Coordination with FDEP)

- The project may be located within state owned sovereign submerged lands (SSSL) (i.e. Little Withlacoochee River). Be advised that a title determination will be required from FDEP to verify the presence and/or location of SSSL.
- If use of SSSL is proposed, authorization will be required in the form of modifying the existing Public Easement or recording a new Public Easement. Refer to Chapter 18-21, F.A.C. and Chapter 18-20, F.A.C. for guidance on projects that impact SSSL and Aquatic Preserves.

Operation and Maintenance/Legal Information: (Ownership or Perpetual Control, O&M Entity, O&M Instructions, Homeowner Association Documents, Coastal Zone requirements, etc.)

- The permit must be issued to entity that owns or controls the property.
- Provide evidence of ownership or control by deed, easement, contract for purchase, etc.

Application Type and Fee Required:

- SWERP Individual – Sections A, C, and E of the ERP Application. Fee will be based on project size and wetland impacts.
- Consult the [fee schedule](#) for different thresholds.

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

- An application for an individual permit to construct or alter a dam, impoundment, reservoir, or appurtenant work, requires that a notice of receipt of the application must be published in a newspaper within the affected area. Provide documentation that such noticing has been accomplished. Note that the published notices of receipt for an ERP can be in accordance with the language provided in Rule 40D-1.603(10), F.A.C.
- The plans and drainage report submitted electronically must include the appropriate information required under Rules 61G15-23.005 and 61G15-23.004, F.A.C. The following text is acceptable to the Florida Board of Professional Engineers (FBPE) to meet this requirement and must appear where the signature would normally appear:

*ELECTRONIC (Manifest): [Licensee] State of Florida, Professional Engineer, License No. X
This item has been electronically signed and sealed by [Licensee, PE] on [DATE] using a SHA
authentication code. Printed copies of this document are not considered signed and sealed and
the SHA authentication code must be verified on any electronic copies*

*DIGITAL: [Licensee] State of Florida, Professional Engineer, License No. X; This item has been
digitally signed and sealed by [Licensee, PE] on [DATE] using a Digital Signature; Printed copies
of this document are not considered signed and sealed and the signature must be verified on
any electronic copies.*

- Provide soil erosion and sediment control measures for use during construction. Refer to ERP Applicant's Handbook Vol. 1 Part IV Erosion and Sediment Control.
- Demonstrate that excavation of any stormwater ponds does not breach an aquitard (see Subsection 2.1.1, A.H.V.II) such that it would allow for lesser quality water to pass, either way, between the two systems. In those geographical areas of the District where there is not an aquitard present, the depth of the pond(s) shall not be excavated to within two (2) feet of the underlying limestone which is part of a drinking water aquifer. [Refer to Subsection 5.4.1(b), A.H.V.II]
- If lowering of SHWE is proposed, then burden is on Applicant to demonstrate no adverse onsite or offsite impacts as per Subsection 3.6, A.H.V.II. Groundwater drawdown 'radius of influence' computations may be required to demonstrate no adverse onsite or offsite impacts. Please note that new roadside swales or deepening of existing roadside swales may result in lowering of SHWE. Proposed ponds with control elevation less than SHWE may result in adverse lowering of onsite or offsite groundwater.

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

DATE: May 8, 2018

TO: Jack Freeman, P.E., PTOE

FROM: Jason Houck, GISP, PWS

RE: FPID 435859-2-22-01

SR 50 PD&E Study from US 301 to CR 33 in Hernando, Sumter, and Lake Counties

Wildlife Crossings/Habitat Connectivity Coordination Field Review with Florida Forest Service, Florida Fish and Wildlife Conservation Commission, and Florida Department of Transportation Districts 5 & 7

CC: Attendees

A field review was held on April 16, 2018 between the Florida Department of Transportation (FDOT) Districts 5 and 7, the Florida Forest Service (FFS), and the Florida Fish and Wildlife Conservation Commission (FWC) to evaluate potential wildlife crossing/habitat connectivity enhancement locations along the SR 50 PD&E corridor from US 301 to CR 33 in Hernando, Sumter, and Lake counties. Attendees included Lorena Cucek, Heather Chazez, and Casey Lyon (FDOT D-5); Lilliam Escalera, Nicole Selly, and Ed Cronyn (FDOT D-7); Vince Morris (FFS); Terry Gilbert, Rick Spratt, and Sean Greene (FWC); Carolyn Malphurs (DRMP); Jason Houck and Ben Shepherd (Inwood).

A total of 21 potential crossing locations were reviewed consisting of 17 existing cross drains, the Withlacoochee River bridge, one upland crossing identified by FFS, the Florida Trail crossing, and one additional upland crossing identified by Inwood. The crossing locations evaluated are included in the attached matrix along with maps depicting their approximate locations. The goal of the field review was to gain consensus from the attending agency representatives on several key factors related to each location:

- Suitability of the location
- Exclusionary fencing limits/restrictions
- Target species/anticipated utilization
- Engineering constraints

Prior to the field review, the group was provided with a matrix containing the preliminary crossing evaluation conducted by Inwood following the March 1, 2018 meeting with FFS and FWC in which the desire to include wildlife crossings/habitat connectivity enhancements was expressed by FFS. The preliminary evaluation was based on the cross drain analysis conducted by Inwood drainage staff as part of the PD&E study. Existing cross drains within the Withlacoochee State Forest (WSF) were analyzed and recommended to be replaced if SR 50 was to be widened. As much of the corridor is wetland, the cross drains are located in areas unlikely to be traversed by large species such as bear or deer, which tend to move along riparian areas and ecological gradients. As such, recommendations for crossing structures in the immediate areas of existing cross drains will likely target small to medium-sized mammals and herps such as raccoons, snakes, and turtles. These crossings are anticipated to consist of complementary structures with invert elevations set higher (approx. 1 ft.) than the associated cross drains. This will allow the wildlife crossing to stay dry during normal rainfall events and facilitate movement of upland/terrestrial species during the wet season. Aquatic species such as alligators, otters, and amphibians will be able to use either the cross drain itself or the complementary structure.

Of the 17 cross drains evaluated, eight were determined to be worthy of additional evaluation. The Withlacoochee River bridge is currently planned to include a wildlife shelf, but additional accommodations may be made during the design phase of the project to increase the permeability of the river corridor itself. In addition, the three added locations, shown on the attached figures as WC-1, WC-2, and WC-3 were also recommended for further evaluation.

A specific request was made by Vince for the crossing at the WC-2 location which corresponds with the existing SR 50 crossing for the Florida Trail. He requested a large animal crossing, mostly likely a minimum size of 8'x8', to accommodate bears and also trail users. There was discussion amongst the group that introducing a potential human/bear conflict could be an issue or that the utilization by humans may decrease or discourage utilization by bears. Further discussion included implications associated with road height, tie-downs, and potential increased impacts. The consensus was that structures can be designed to accommodate both and that bears would learn to avoid the area when humans are around and would likely utilize the crossing when trail usage was low such as during nighttime hours.

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Vince expressed concerns regarding potential safety issues associated with at-grade crossing for the Florida Trail once the road was widened. He recommended a grade-separated crossing as part of the proposed improvements to further enhance safety for trail users in the 4-lane condition. Further discussion revolved around whether a grade-separated crossing would consist of the above-mentioned dual purpose crossing or a separate facility.

Vince also requested an accommodation for the eastern hiking trail crossing in the area of CD-11 immediately west of the Little Withlacoochee River bridge. Factors discussed that would influence the decision regarding the structure included engineering constraints, acquisition of mitigation parcels, and permitting.

Terry expressed support for the potential modification of the Little Withlacoochee River Bridge landing areas (east and west) to increase passage by wildlife. He added that he would more strongly support the modification of the existing bridge using the new design released by the FDOT OEM (attached) for enhanced habitat connectivity under bridges.

Jason advised the group that the recommendations made during the PD&E study regarding wildlife crossing/habitat connectivity enhancements would be incorporated into the final Natural Resources Evaluation (NRE) report and would likely remain recommendations and not commitments. He added that additional engineering considerations would be required to finalize structure type and size, fencing limits, roadway profiles, environmental impacts, and permitting considerations. These steps would not be completed during the PD&E study and, if incorporated into the project, would be done so during the design and permitting phase.

Note: The above reflects the writer's understanding of the content of the discussions that took place at the meeting. If any misrepresentations, inaccuracies or omissions are identified, please contact Jason Houck at (407) 971-8850 (JHOUCK@INWOODINC.COM) as soon as possible for resolution and revision, if necessary.

Wildlife Crossings/Habitat Connectivity Preliminary Evaluation Matrix

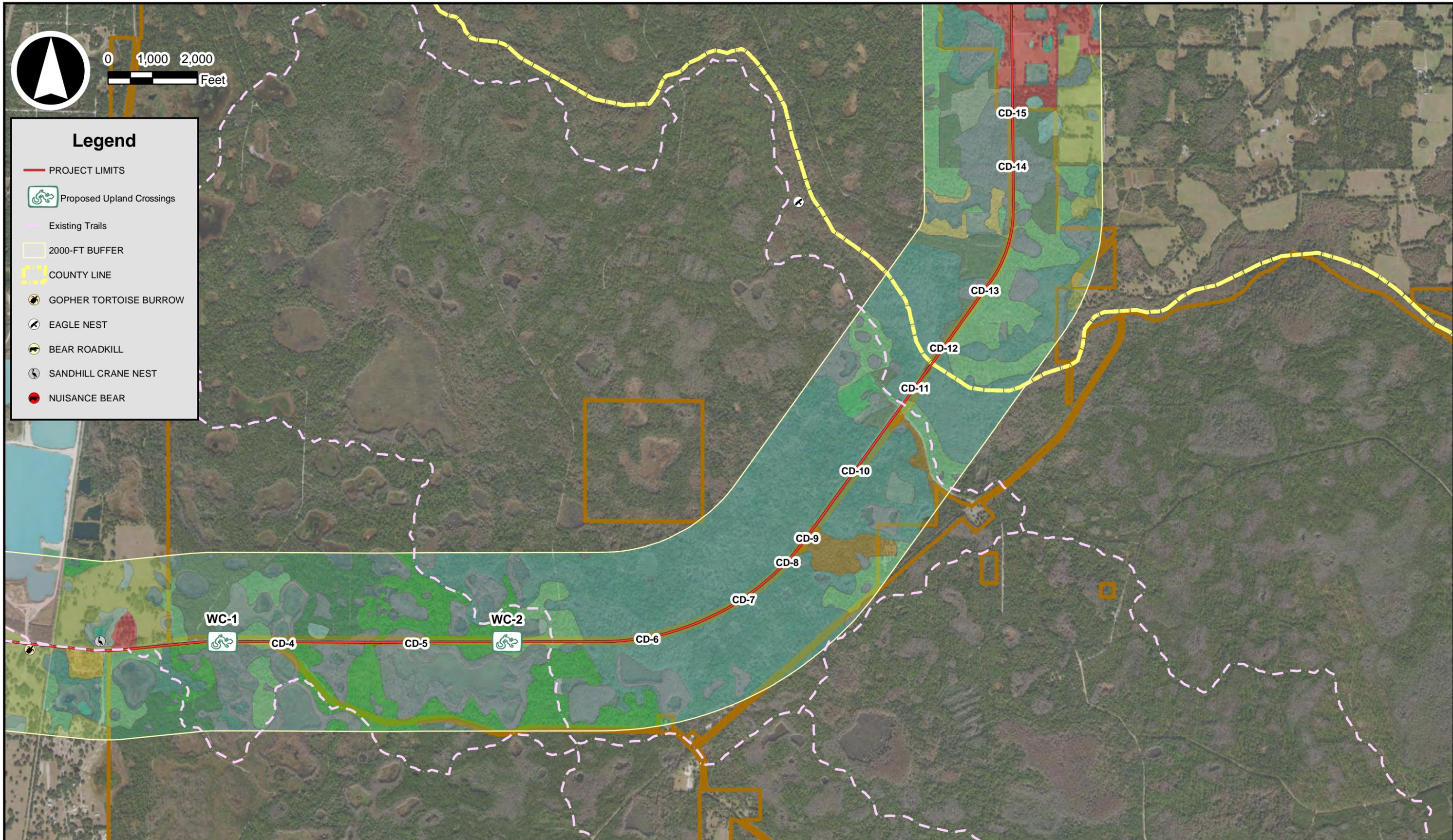
Structure	Milepost	Station	Description	South Side FLUCFCS	North Side FLUCFCS	Remarks	Further Evaluation
CD-4	2.813	1925+79	Single 30" RCP	Freshwater Marsh (641)	Cypress (621)	Adjacent to intersection	N
CD-5	3.382	1955+73	Double 30" RCP	Cypress (621)	Cypress (621)	Deepwater cypress system	N
CD-6	4.37	2007+79	Double 36" RCP	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	Deepwater cypress system	N
CD-7	4.811	2031+63	Quadruple 48" RCP	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	Large existing crossdrain - fencing feasible	Y
CD-8	5.055	2044+55	Single 30" RCP	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	Deepwater cypress system	N
CD-9	5.207	2051+62	Single 30" RCP	Shrub and Brushland (320)	Stream and Lake Swamps (615)	Uplands on south side - riparian habitat connection	Y
CD-10	5.539	2070+22	Double 42" RCP	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	Deepwater cypress system	Y
CD-11	5.977	2093+10	Single 48" RCP	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	Deepwater cypress system	N
WITHLACOOCHEE RIVER BRIDGE	0.000-0.047	2098+00	250' Bridge	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	LRE estimate \$40 million additional - Does not seem viable - look for enhancement for shorter bridge	Pending
CD-12	0.137	46+46	Single 48" RCP	Hardwood-Conifer Mixed Forest (434)	Wet Prairie (643)	Uplands on south side - riparian habitat connection	Y
CD-13	0.437	62+32	Double 8'x3' CBC	Hardwood-Conifer Mixed Forest (434)	Cypress (621)	Uplands on south side - riparian habitat connection	Y
CD-14	0.993	91+94	Single 8'x5' CBC	Cypress (621)	Cypress (621)	Large existing crossdrain - fencing feasible	Y
CD-15	1.225	103+92	Single 48" RCP	Tree Plantation (440)	Cypress (621)	Too close to FFS boundary - fencing not feasible on both sides	N
CD-30	2.752	164+77	Single 36" RCP	Freshwater Marsh (641)	Freshwater Marsh (641)	~500 feet from western FFS boundary - connects freshwater marsh system surrounded by forested uplands, fencing feasible	Y
CD-31	3.031	179+58	Single 24" RCP	Hardwood-Conifer Mixed Forest (434)	Wet Prairie (643)	South side of location is outside FFS lands	N
CD-32	3.451	201+63	Single 24" RCP	Stream and Lake Swamps (615)	Freshwater Marsh (641)	Connects march/shrub system surrounded by forested uplands, fencing feasible	Y
CD-33	3.708	215+22	Single 24" RCP	Stream and Lake Swamps (615)	Stream and Lake Swamps (615)	~100 feet from eastern FFS boundary, fencing not feasible	N
CD-38	5.952	333+21	Single 36" RCP	Wet Prairie (643)	Hardwood-Conifer Mixed Forest (434)	South side of location is outside FFS lands	N
WC-1	TBD	TBD	Upland Area	Pine Flatwoods (411), Hardwood-Conifer Mixed Forest (434), Cypress (621)	Pine Flatwoods (411), Hardwood-Conifer Mixed Forest (434), Freshwater Marsh (641)	Mosaic area near weatern WSF boundary just east of McKinney Sink Road. Most likely small structure for small/meso herps and mammals	Y
WC-2	TBD	TBD	Florida Trail	Pine Flatwoods (411)	Pine Flatwoods (411)	Florida Trail crossing. FFS requested large aniaml (bear) crossing that could potentiall accommodate trail users as well. The crossing would be located somewhere between CD-5 to the west and Porter Gap Rd. to the east.	Y
WC-3	TBD	TBD	Upland/Wetland Mosaic	Mixed Rangeland (330), Wet Prairie (643)	Coniferous Plantation (441), Mixed Wetland Forest (630)	Upland/wetland mosaic area within eastern section of WSF.	Y



0 1,000 2,000 Feet

Legend

- PROJECT LIMITS
- Proposed Upland Crossings
- - - Existing Trails
- 2000-FT BUFFER
- COUNTY LINE
- GOPHER TORTOISE BURROW
- EAGLE NEST
- BEAR ROADKILL
- SANDHILL CRANE NEST
- NUISANCE BEAR



Florida Department of Transportation
District 5

WEST S.R. 50 PD&E STUDY
From U.S. 301 to C.R. 33
Hernando, Sumter, and Lake Counties, Florida
Financial Project ID: 435859-1-22-01

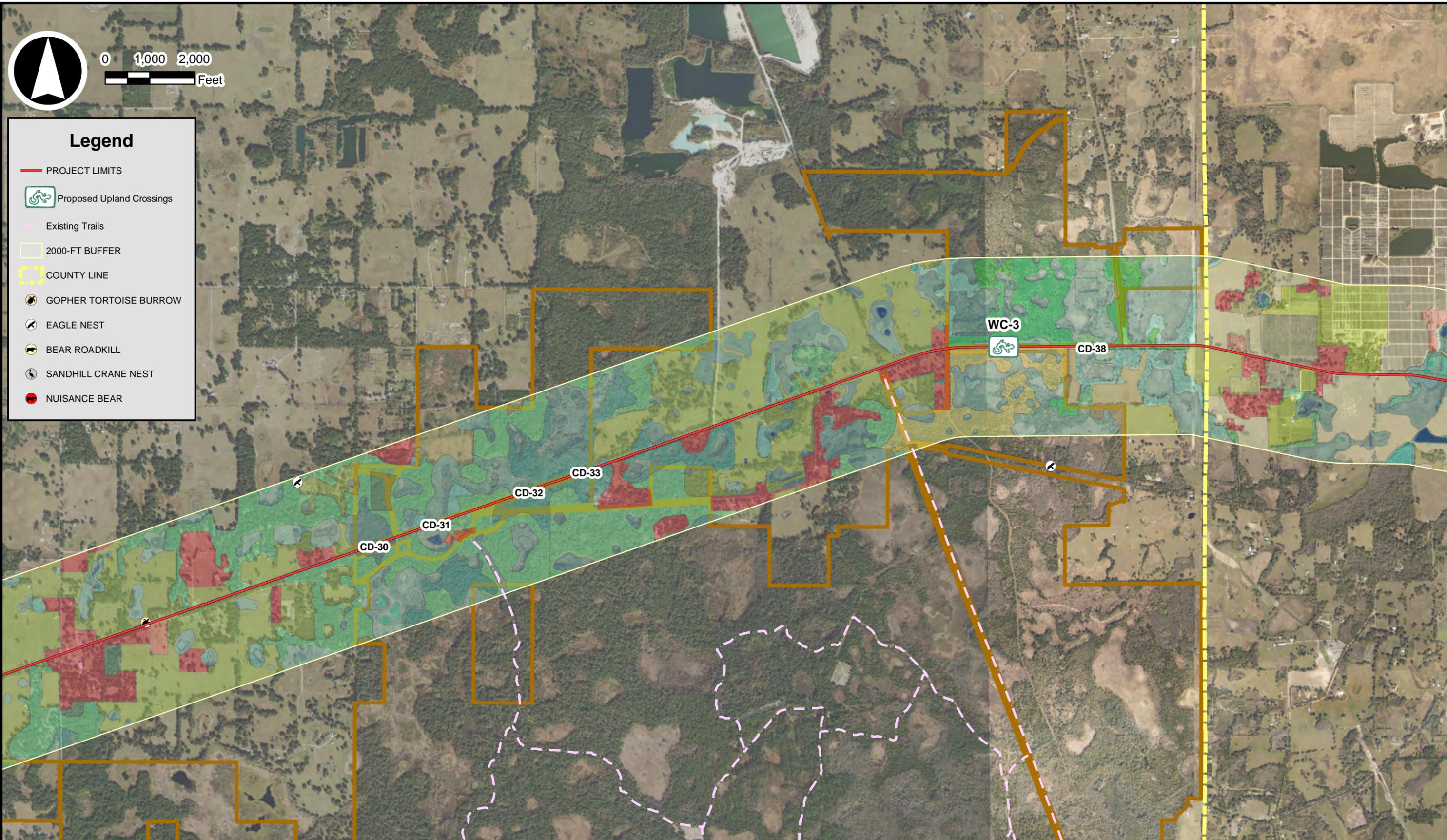
WILDLIFE CROSSING/HABITAT CONNECTIVITY EVALUATION MAP - WESTERN WSF

Figure
1



Legend

- PROJECT LIMITS
- Proposed Upland Crossings
- Existing Trails
- 2000-FT BUFFER
- COUNTY LINE
- GOPHER TORTOISE BURROW
- EAGLE NEST
- BEAR ROADKILL
- SANDHILL CRANE NEST
- NUISANCE BEAR

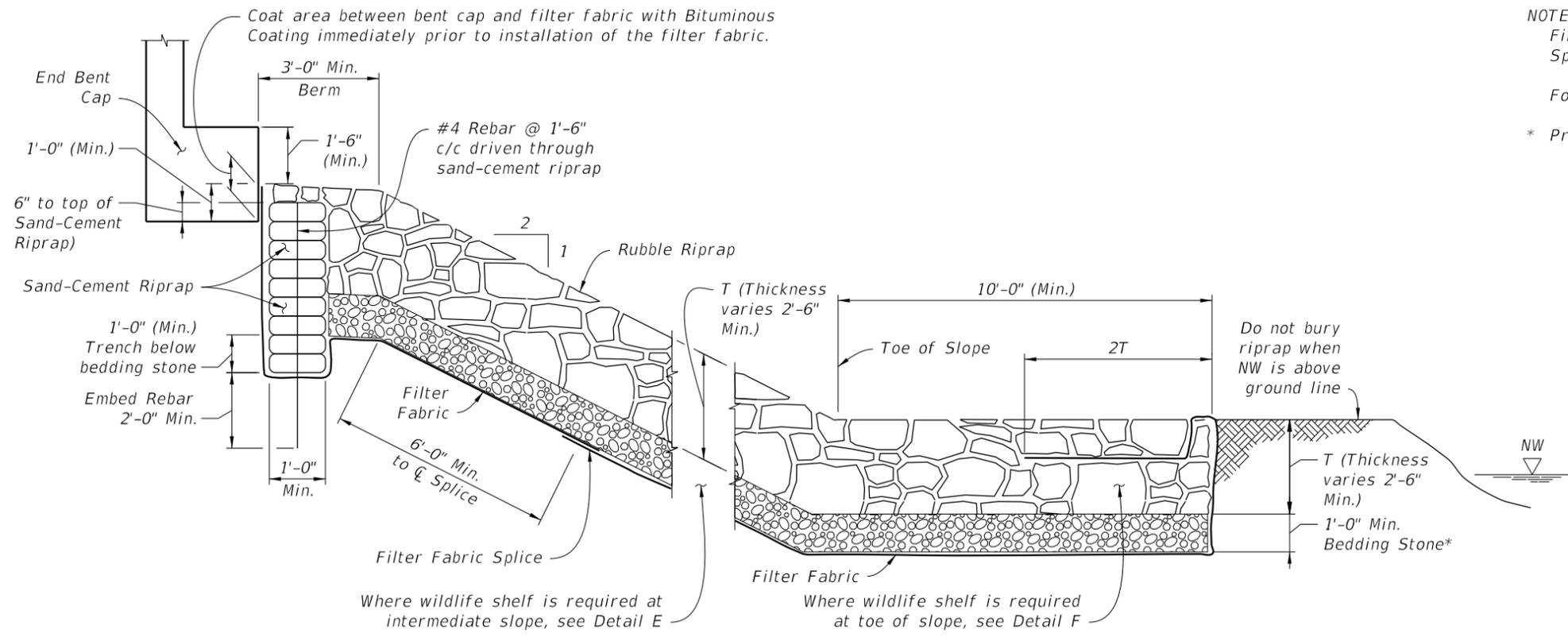


Florida Department
of Transportation
District 5

WEST S.R. 50 PD&E STUDY
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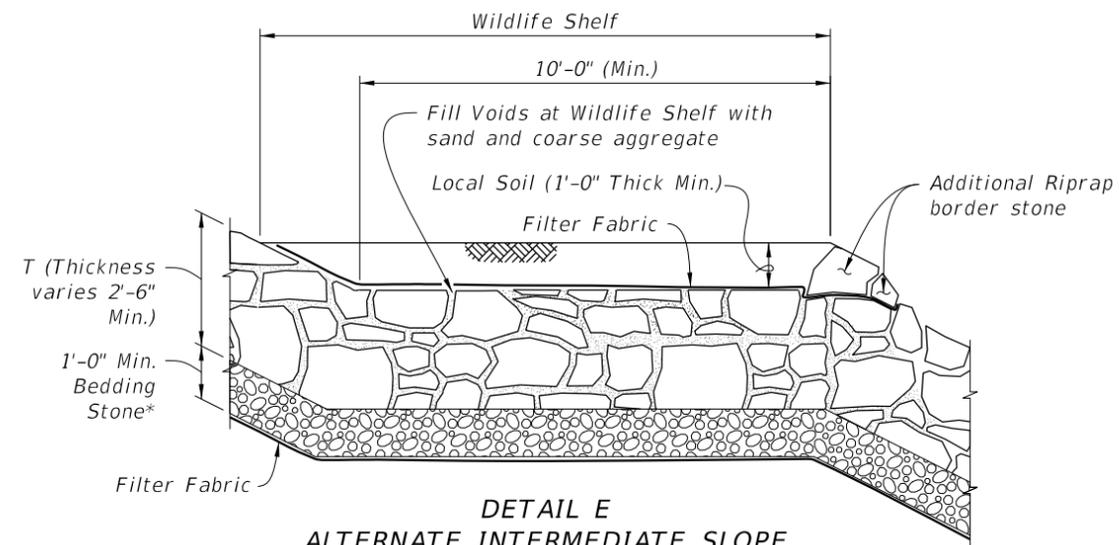
**WILDLIFE CROSSING/HABITAT CONNECTIVITY
EVALUATION MAP - EASTERN WSF**

Figure
2

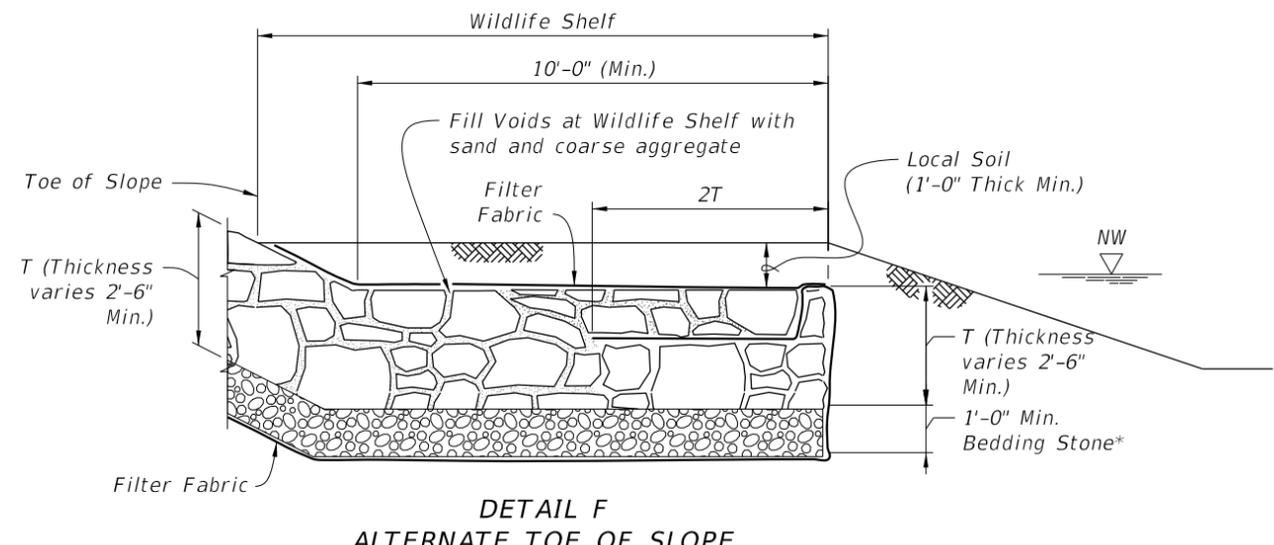


NOTE:
 Filter Fabric shall be Type D-2, in accordance with Specifications Section 985.
 Splice length shall be in accordance with Specifications Section 514.
 For location of Section A-A see Sheet 1 of 3.
 * Provide Bedding Stone unless otherwise recommended by hydraulics engineer.

SECTION A-A



DETAIL E
 ALTERNATE INTERMEDIATE SLOPE
 WHERE WILDLIFE SHELF IS REQUIRED
 (AT SECTION A-A SHOWN, OTHER LOCATIONS SIMILAR)



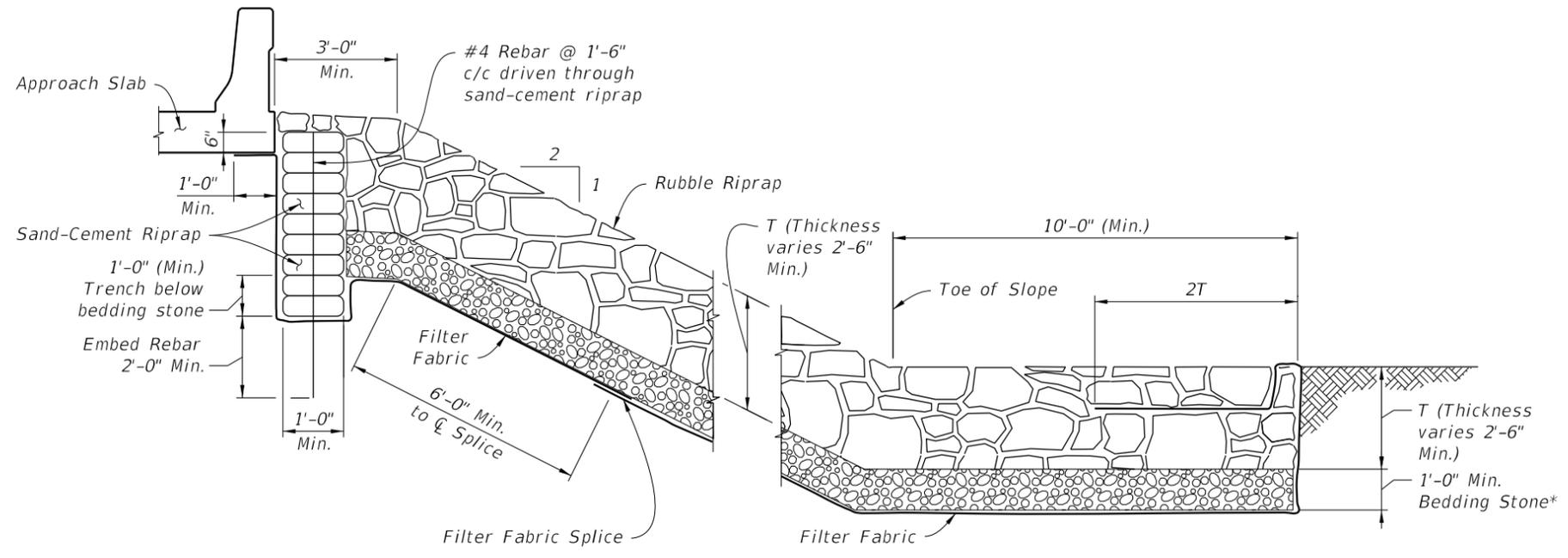
DETAIL F
 ALTERNATE TOE OF SLOPE
 WHERE WILDLIFE SHELF IS REQUIRED
 (AT SECTION A-A SHOWN, OTHER LOCATIONS SIMILAR)

REVISIONS						DRAWN BY:	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE: RUBBLE RIPRAP SLOPE PROTECTION DETAILS (SHEET 2 OF 3)	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
										PROJECT NAME: EXAMPLE	SHEET NO.

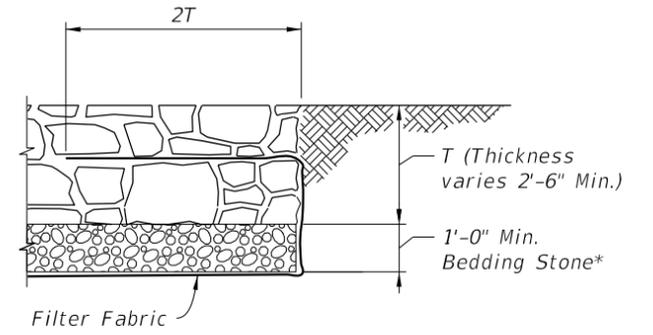
NOTE:
 Filter Fabric shall be Type D-2, in accordance with Specifications Section 985.
 Splice length shall be in accordance with Specifications Section 514.

For location of Sections B-B, C-C & D-D see Sheet 1 of 3.

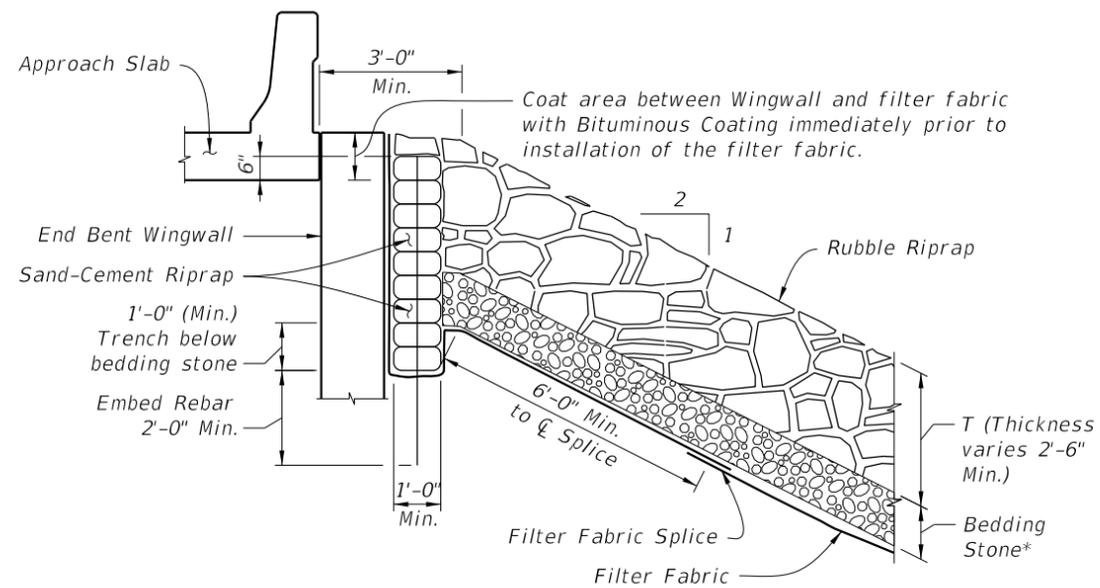
* Provide Bedding Stone unless otherwise recommended by hydraulics engineer.



SECTION B-B



SECTION C-C



SECTION D-D

REVISIONS						DRAWN BY	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET TITLE RUBBLE RIPRAP SLOPE PROTECTION DETAILS (SHEET 3 OF 3)	REF. DWG. NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
										PROJECT NAME EXAMPLE	SHEET NO.

Miranda Barrus

From: Jack Freeman
Sent: Thursday, August 23, 2018 10:07 AM
To: Miranda Barrus
Subject: FW: Withlacoochee River Bridge - SR-50

An updated email with FFWCC. Please use this for the C&C package.

John R. Freeman, Jr., P.E., PTOE

Senior Principal

[Kittelson & Associates, Inc.](#)

Transportation Engineering / Planning
225 East Robinson Street, Suite 355
Orlando, Florida 32801
407.540.0555
407.373.1103 (direct)
407.701.0185 (cell)

See pages 48-53 of the Draft
Natural Resources Evaluation
Report for information on
Wildlife Crossings

[Streetwise](#) [Twitter](#) [Facebook](#)

From: Jason Houck <jhouck@inwoodinc.com>
Sent: Thursday, August 23, 2018 1:02 PM
To: Cucek, Lorena <Lorena.Cucek@dot.state.fl.us>; Chasez, Heather <Heather.Chasez@dot.state.fl.us>; Creighton, Virginia <Virginia.Creighton@dot.state.fl.us>; Lilliam Escalera <lilliam.escalera@dot.state.fl.us>; Selly, Nicole <Nicole.Selly@dot.state.fl.us>
Cc: Jack Freeman <jfreeman@kittelson.com>; Cronyn, Edward <Edward.Cronyn@dot.state.fl.us>
Subject: FW: Withlacoochee River Bridge - SR-50

All,

Good afternoon. I just wanted to close the loop on the correspondence with Terry. Please see the email string below.

Thanks,

Jason

Jason Houck, GISP, PWS
ASSOCIATE PRINCIPAL - ECOLOGICAL SERVICES MANAGER
FWC Authorized Gopher Tortoise Agent

INWOOD CONSULTING ENGINEERS

3000 Dovera Dr., Suite 200, Oviedo, FL 32765

O: 407-971-8850

D: 407-542-0129

F: 407-971-8955

C: 321-202-3907

www.inwoodinc.com

 Please consider the environment before printing this e-mail

From: Jason Houck
Sent: Thursday, August 23, 2018 1:00 PM
To: 'Gilbert, Terry' <Terry.Gilbert@MyFWC.com>
Subject: RE: Withlacoochee River Bridge - SR-50

No problem, Terry. I'm happy to help!

Jason Houck, GISP, PWS
ASSOCIATE PRINCIPAL - ECOLOGICAL SERVICES MANAGER
FWC Authorized Gopher Tortoise Agent

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3000 Dovera Dr., Suite 200, Oviedo, FL 32765
O: 407-971-8850
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www.inwoodinc.com

 Please consider the environment before printing this e-mail

From: Gilbert, Terry <Terry.Gilbert@MyFWC.com>
Sent: Thursday, August 23, 2018 12:59 PM
To: Jason Houck <jhouck@inwoodinc.com>
Subject: RE: Withlacoochee River Bridge - SR-50

Jason: The information you provided in terms of Figures and text is great. I completely understand. I can draft a brief "potential plan" in terms of the overall structure designs and locations that are being considered along with possible locations along the project area; discuss our onsite field trips with your firm, DOF, and FDOT D-7, and our willingness to work in the future with FDOT District 7 and FDOT's consultants to finalize the plan. Thank you - I appreciate your help very much.

From: Jason Houck <jhouck@inwoodinc.com>
Sent: Thursday, August 23, 2018 7:21 AM
To: Gilbert, Terry <Terry.Gilbert@MyFWC.com>
Cc: Jack Freeman <jfreeman@kittelsohn.com>
Subject: RE: Withlacoochee River Bridge - SR-50

Hi Terry,

Good to hear from you! The short answer to your question is that there is currently not a final list of structures that will be constructed. Because the habitat connectivity issue came somewhat late in the game in terms of the PD&E study, what we have been able to complete was the identification of locations, including the Withlacoochee River bridge, that we feel have potential to support crossing structures from an ecological standpoint, meet the FDOT wildlife crossing guidelines, and make sense from an engineering perspective. The bridge is a special case in that it will require additional costs and design considerations if it were to be lengthened/raised to accommodate wildlife movement, especially large, upland/terrestrial species. However, the benefits, aside from increased wildlife movement, include decreased wetland/floodplain impacts and reduced impacts to local hydrology. The argument I tend to make in terms of

advocating for wildlife crossings is that they are not simply there to reduce roadkill but to enhance gene flow and prevent genetic isolation caused by the fragmentation of habitat due to roadway construction/widening.

I've attached the habitat connectivity section from the DRAFT Natural Environment Report that includes the culmination of that assessment. The FDOT has committed to continue to evaluate the inclusion of wildlife crossings and/or habitat connectivity enhancement during the design phase of the project, which is just now getting underway. In addition, we included a recommendation to include an appropriate trail/large animal crossing in the vicinity of the existing Florida Trail crossings, which is just west of the bridge.

Basically, it will be up to FDOT during the design phase to make the final determination as to whether crossings are included in the design.

I hope this helps! Hope you're doing well and please don't hesitate to give me a call if you would like to discuss.

Thanks,

Jason

Jason Houck, GISP, PWS
ASSOCIATE PRINCIPAL - ECOLOGICAL SERVICES MANAGER
FWC Authorized Gopher Tortoise Agent

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O: 407-971-8850

D: 407-542-0129

F: 407-971-8955

C: 321-202-3907

www.inwoodinc.com

 Please consider the environment before printing this e-mail

From: Gilbert, Terry <Terry.Gilbert@MyFWC.com>

Sent: Wednesday, August 22, 2018 9:14 PM

To: Jason Houck <jhouck@inwoodinc.com>

Subject: Withlacoochee River Bridge - SR-50

Jason: I am drafting the agency letter for the SWFWMD wetland permit for the Withlacoochee River Bridge in Sumter and Hernando Counties. I have gone through all the pages and pages of notes and discussions that we had on the field trips down there, and also all the many pages of materials associated with the current ERP Application. I can't find any mention of connectivity structures. Do you have a "final" list of the number, location, and design of habitat connectivity structures which will be actually constructed? I know I'm asking a lot. I appreciate any information you can provide. Hope you're doing good.

Terry Gilbert
Wildlife Biologist
Florida Fish and Wildlife Conservation Commission
27 West Point Drive
Crawfordville, FL 32327

Cell: (850) 728-1103
terry.gilbert@MyFWC.com

Appendix E USFWS Concurrence Letter



Florida Department of Transportation

RICK SCOTT
GOVERNOR

719 South
DeL

FWS Log No 2019-TA-0196



The Service concurs with your effect determination(s) for resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act.

Zakia Williams
Fish and Wildlife Biologist
North Florida Ecological Services Office
US Fish and Wildlife Service
7915 Baymeadows Way, Suite 200
Jacksonville, Florida 32256

Annie Dziugowska
Jay B. Herrington
Field Supervisor

12-19-18
Date

**SUBJECT: Natural Resources Evaluation Report
SR 50 Project Development and Environment Study
SR 50 from US 301 to CR 33 in Hernando, Sumter, and Lake Counties
FM No. 435859-1-22-01
ETDM No. 14269**

Dear Ms. Williams,

The Florida Department of Transportation (FDOT), District 5, is conducting a Project Development and Environment (PD&E) Study to evaluate the widening of SR 50 from US 301 in Hernando County to CR 33 in Lake County. The proposed improvements include two-to-four lane widening of SR 50 including new stormwater treatment facilities and floodplain compensation sites. A portion of the project corridor traverses the Richloam Tract of the Withlacoochee State Forest. The project has been evaluated for impacts to Threatened and Endangered species in compliance with Section 7(c) of the Endangered Species Act, as amended (16 U.S.C. 1531 et seq.) and a *Natural Resources Evaluation Report* (NRE) has been prepared. A copy of the NRE is enclosed for your review.

Agency coordination to obtain species and habitat related information has occurred through the Efficient Transportation Decision Making (ETDM) Program Screening and the Advance Notification (AN) process. The AN for this project was published on August 18, 2016 and the final ETDM Summary Report was published on December 1, 2016. A summary of the wildlife-related comments received from the resource agencies charged with commenting on project-specific effects to the natural resources and wildlife is provided in the NRE. The project's class of action is a State Environmental Impact Report (SEIR) and the project is only State funded.

In accordance with Section 7(c) of the Endangered Species Act of 1973, as amended, and Chapter 68A-27, Florida Administrative Code (FAC), Rules Pertaining to Endangered and Threatened

Species, the various “Build” alternatives were evaluated for potential occurrences of federally and state-listed plant and animal species.

The study area is located within or partially within the USFWS Consultation Area (CA) of the Everglade snail kite (*Rostrhamus sociabilis plumbeus*), Florida scrub-jay (*Aphelocoma coerulescens*), red-cockaded woodpecker (*Leuconotopicus borealis*), sand skink (*Neoseps reynoldsi*) and blue-tailed mole skink (*Eumeces egregious lividus*) (skink), and Lake Wales Ridge plants. Other federally-listed or otherwise protected species included in the evaluation are the American alligator (*Alligator mississippiensis*), eastern indigo snake (*drymarchon corais couperi*), wood stork (*Mycteria americana*), and gopher tortoise (*Gopherus polyphemus*).

The proposed improvements have been found to have no effect or to not adversely affect all the above-mentioned species except for the sand skink/blue tailed mole skink and the Cooley’s water willow. Project ecologists observed habitat within the project corridor that met the criteria for suitable skink habitat according to the Sand and Blue-tailed Mole Skink Species Conservation and Consultation Guide for Peninsular Florida. The FDOT will conduct coverboard surveys, as appropriate, during the design and permitting phase of the project. If occupied skink habitat is identified within the project footprint, the FDOT will initiate formal consultation with the USFWS to determine the appropriate conservation measures, such as the purchase of credits from an approved conservation bank. The Cooley’s water willow has been documented within the Richloam Tract, near the SR 50 right-of-way. Impacts to this species will be evaluated and coordination with the USFWS will occur during the design and permitting phase of the project.

Table 1 below summarizes the effect determination for federally-listed species within the project area.

Table 1

Federally-Listed Species Determination of Effect		
Species Name	Listing Status*	Determination of Effect**
Reptiles		
Sand/Blue-Tailed Mole Skink	T	May Affect
Eastern Indigo Snake	T	MANLAA
American Alligator	T(S/A)	MANLAA
Gopher Tortoise	C	MANLAA
Birds		
Everglade Snail Kite	E	No Effect
Florida Scrub-Jay	T	MANLAA
Red-cockaded woodpecker	T	No Effect
Bald Eagle	BGEPA	No Effect
Wood Stork	T	MANLAA
Plants		
Lake Wales Ridge Plants	Varies	MANLAA
Cooley’s Water Willow	T	PA

*E – Endangered, T –Threatened, T(S/A) –Threatened due to Similarity of Appearance, C -Candidate Species, BGEPA – Bald and Golden Eagle Protection Act; PA – Potential for Adverse Affect, **MANLAA – May Affect, Not Likely to Adversely Affect

The FDOT respectfully requests that the USFWS review, comment and/or concur with the effects determinations made for the above-mentioned listed species and their habitat. If you have questions, please feel free to contact me via email at william.walsh@dot.state.fl.us or by phone at 386-943-5411. Thank you for your continued assistance with FDOT projects.

Sincerely,



William G. Walsh
Environmental Manager
Florida Department of Transportation, District 5

Attachments: Natural Resources Evaluation Report

cc: Heather Chasez, FDOT
Lorena Cucek, FDOT
Casey Lyon, FDOT
Jack Freeman, PE, Kittelson and Associates
Jason Houck, GISP, PWS, Inwood Consulting Engineers

Appendix F F.S. 267 Agreement Document

**CHAPTER 267, F.S. AGREEMENT
BETWEEN THE FLORIDA DEPARTMENT OF TRANSPORTATION AND
THE FLORIDA DIVISION OF HISTORICAL RESOURCES
REGARDING THE STATE ROAD 50 PROJECT DEVELOPMENT AND
ENVIRONMENT STUDY IN HERNANDO, LAKE, AND SUMTER COUNTIES,
FLORIDA**

WHEREAS, the Florida Department of Transportation (FDOT) proposes to widen State Road (S.R.) 50 from US 301 to County Road (C.R.) 33 in Hernando, Lake, and Sumter Counties, Florida (Financial Project No. 435859-1-22-01) (**Project**); and

WHEREAS, FDOT has defined the **Project's** area of potential effects (APE) as a composite of the proposed alternatives incorporating the maximum existing and proposed right-of-way with a buffer that extended to the back or side property lines of parcels adjacent to the existing or proposed right-of-way, or a distance of no more than 100 meters (330 feet) from the maximum right-of-way line) (see Attachment 1); and

WHEREAS, FDOT has consulted with the Director of the Florida Division of Historical Resources (FDHR) pursuant to the requirements of Chapter 267.061(2), Florida Statutes, and has determined that the **Project** will have an adverse effect on the Lonely Rock site (8SM01015) and the Lonely Rock 2 site (8SM01093), two archaeological properties that are eligible for listing in the National Register of Historic Places (NRHP); and

WHEREAS, FDOT has consulted with the Miccosukee Tribe of Indians of Florida, the Muscogee (Creek) Nation, the Poarch Band of Creek Indians, the Seminole Tribe of Florida, and the Seminole Nation of Oklahoma regarding the effects of the **Project** on historic properties; and

WHEREAS, FDOT has provided opportunities for public review and comment regarding the effects of the **Project** on historic properties, as appropriate; and

NOW, THEREFORE, FDOT and FDHR agree that the **Project** shall be implemented in accordance with the following stipulations in order to take into account the effects of the **Project** on historic properties.

STIPULATIONS

The FDOT shall ensure that the following measures are carried out:

I. INTERIM PROTECTION PLAN

Following acquisition of the **Project's** right-of-way and prior to Phase III Excavation, FDOT shall implement an interim site protection plan to avoid and, where avoidance is not possible, minimize ground disturbing activities within and adjacent to the boundaries of 8SM01015 and 8SM01093 to the maximum extent practical. FDOT shall ensure that 8SM01015 and 8SM01093 are secured and protected against damage until the measures agreed upon in Stipulations II-III

are implemented. To achieve such security and protection within and adjacent to the boundaries of 8SM01015 and 8SM01093, FDOT shall:

- A. Prohibit staging, storage, and parking, without disclosing the presence of the archaeological sites.
- B. Require work be conducted in dry conditions and by vehicles with rubber tires only.
- C. Require the FDOT District 5 Cultural Resources Coordinator to be contacted a minimum of two weeks prior to any work being conducted.

II. ARCHAEOLOGICAL DATA RECOVERY PLAN

- A. In consultation with FDHR and appropriate consulting parties, FDOT shall develop a Phase III Data Recovery Plan for the portion of sites 8SM01015 and 8SM01093 being impacted by the ground disturbing activities associated with the **Project**.
- B. This Data Recovery Plan shall be developed in accordance with Rule Chapter 1A-46, Florida Administrative Code (FAC), the FDHR Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals, and FDOT's Cultural Resources Management Handbook.
- C. This Data Recovery Plan shall include a provision for the contents and completion of a Site Management Plan to be implemented following the completion of the Phase III Excavation of Sites 8SM01015 and 8SM01093.
- D. FDOT shall provide the proposed Data Recovery Plan to FDHR and appropriate consulting parties for their review and comment in accordance with Stipulation XI.

III. ARCHAEOLOGICAL DATA RECOVERY

- A. Following review and comment in accordance with Stipulation XI, FDOT shall hire an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology and Historic Preservation set forth at 36 CFR § 61, Appendix A, to perform Archaeological Data Recovery at sites 8SM01015 and 8SM01093 in accordance with the approved Data Recovery Plan.
- B. Within sixty (60) days following the completion of the Phase III Excavation at 8SM01015 and 8SM01093, FDOT shall prepare a Site Management Plan which shall include:
 - 1. The initial assessment of the Data Recovery Effort at the sites; the confirmed boundaries of the sites in relation to the **Project**; and a preliminary evaluation of the data collected at the sites.
 - 2. The additional research efforts and considerations needed to complete the analysis to answer the research questions set forth in the Data Recovery Plan.

3. Appropriate measures to be implemented for the avoidance and, where avoidance is not possible, the minimization of harm to sites 8SM01015 and 8SM01093, during the construction of the **Project**.
4. The proposed time frame for completing any additional research including artifact analysis and the Phase III Excavation Report.
5. Identify any areas in the **Project** vicinity where the staging and storage of equipment and vehicles shall be avoided, as determined appropriate by FDHR and the federally-recognized tribes.

C. The Site Management Plan shall be submitted to FDHR and appropriate consulting parties for review and comment in accordance with Stipulation XI.

D. Ninety (90) days following the completion of additional research identified in the Site Management Plan, FDOT shall prepare a draft Phase III Excavation Report for sites 8SM01015 and 8SM01093. FDOT shall provide the Phase III Excavation Report to FDHR and appropriate consulting parties for review and comment in accordance with Stipulation XI.

IV. DISPOSITION OF ARCHAEOLOGICAL COLLECTIONS

In consultation with FDHR, the Florida Bureau of Archaeological Research (BAR), and appropriate consulting parties, FDOT will ensure that all materials and records resulting from data recovery excavations at sites 8SM01015 and 8SM01093 are curated by the FDOT in consultation with FDHR and the Florida BAR.

V. INITIATION OF CONSTRUCTION

Following the review and comment of the Site Management Plan in accordance with Stipulation XI, FDOT may initiate construction activities within and adjacent to the boundaries of sites 8SM01015 and 8SM01093 for the **Project** consistent with the conditions contained in the Site Management Plan.

VI. ARCHAEOLOGICAL MONITORING

FDOT shall ensure that a qualified archaeological monitor be on site during ground-disturbing construction activities within the boundaries of sites 8SM01015 and 8SM01093. Such activities include, but are not limited to, clearing and grubbing within the site boundaries, soil stabilization, and installation of drainage structures. FDOT will submit a monitoring report to FDHR and other appropriate consulting parties within 90 days of completion of the monitoring effort.

VII. PUBLIC OUTREACH

Following submittal of the Phase III Excavation Report, FDOT shall develop a public outreach plan, the nature and content of which will be developed in consultation with FDHR. The goal of

the public outreach effort will be to provide information to the public, as appropriate, regarding the prehistoric and/or historic development and use of the Linden/Mabel area.

The public outreach plan shall be submitted to FDHR within thirty (30) days of submittal of the Phase III Excavation Report for review and comment in accordance with Stipulation XI. The public outreach plan shall be implemented within two (2) years of initiation of project construction.

VIII. POST-REVIEW DISCOVERIES

A. If properties are discovered that may be historically significant, or if unanticipated effects on historic properties are found, FDOT shall implement the Post Review Discovery Plan established in Stipulation X of the March 15, 2016 Programmatic Agreement among the ACHP, SHPO, and FDOT, as amended on June 4, 2017.

B. In the event that human skeletal remains or associated burial artifacts are uncovered within the project area during construction, all work in that area must stop. The individual in charge of the activity that leads to the discovery must notify the Project Engineer and the FDOT District 5 Cultural Resources Coordinator. The discovery must be reported to local law enforcement and the appropriate medical examiner. The medical examiner will determine whether the State Archaeologist should be contacted per the requirements of Section 872.05, Florida Statutes, and Rule Chapter 1A-44.004, FAC.

IX. PROFESSIONAL STANDARDS

All archaeological and historic preservation work carried out pursuant to this agreement shall be conducted by, or under the direct supervision of, a person or persons meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology and Historic Preservation set forth at 36 CFR § 61, Appendix A.

X. DURATION

This AGREEMENT will expire if its terms are not carried out within ten (10) years from the date of execution. Prior to expiration, the parties may agree to extend the timeframe for fulfillment of the terms by letter agreement.

XI. REVIEW STIPULATION

FDOT shall provide FDHR and appropriate consulting parties, including the federally-recognized tribes affiliated with Florida, a thirty (30)-day period for review and comment following the receipt of delivery of the documents described above. If no comments are received by FDOT at the end of these thirty (30) days, FDOT will presume there are no comments and move to the next phase, as appropriate. If FDOT timely receives comments within the thirty (30)-day period, FDOT shall consult with the commenting party to resolve the comment.

XII. AMENDMENTS

This agreement may be amended when such an amendment is agreed to in writing by all signatories. All signatories must signify their acceptance of the proposed changes to the agreement in writing within thirty (30) days of their receipt.

XIII. TERMINATION

If any signatory to this Agreement determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories in an effort to amend the Agreement per Stipulation XII, above. If within thirty (30) days (or another time agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the Agreement upon written notification to the other signatories.

SIGNATORIES:

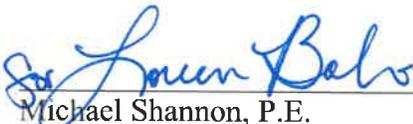
FLORIDA DIVISION OF HISTORICAL RESOURCES



Timothy A. Parsons
Director, Division of Historical Resources

Date: 6/3/19

FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT FIVE



Michael Shannon, P.E.
District Secretary or Designee

Date: 5/14/19



5-14-19
LEGAL REVIEW