ALTERNATIVE CORRIDOR EVALUATION REPORT

Florida Department of Transportation (FDOT)
District Five

F.A.P. No.: 7777-246A

FPID No.: 433693-1-22-01

ETDM No.: 13961

Poinciana Parkway Southport Connector

from Poinciana Parkway to Florida's Turnpike

Osceola County

Florida

The Florida Department of Transportation (FDOT), District Five, in cooperation with the Federal Highway Administration (FHWA), initiated an Alternative Corridor Evaluation (ACE) as part of ETDM No. 13961 for the Poinciana Parkway Southport Connector (Southport Connector) in June 2013. The ACE involves the analysis of a range of alternative corridors to provide for a connection between the Poinciana community and Florida's Turnpike.

Date: October 13, 2015

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Executive Summary

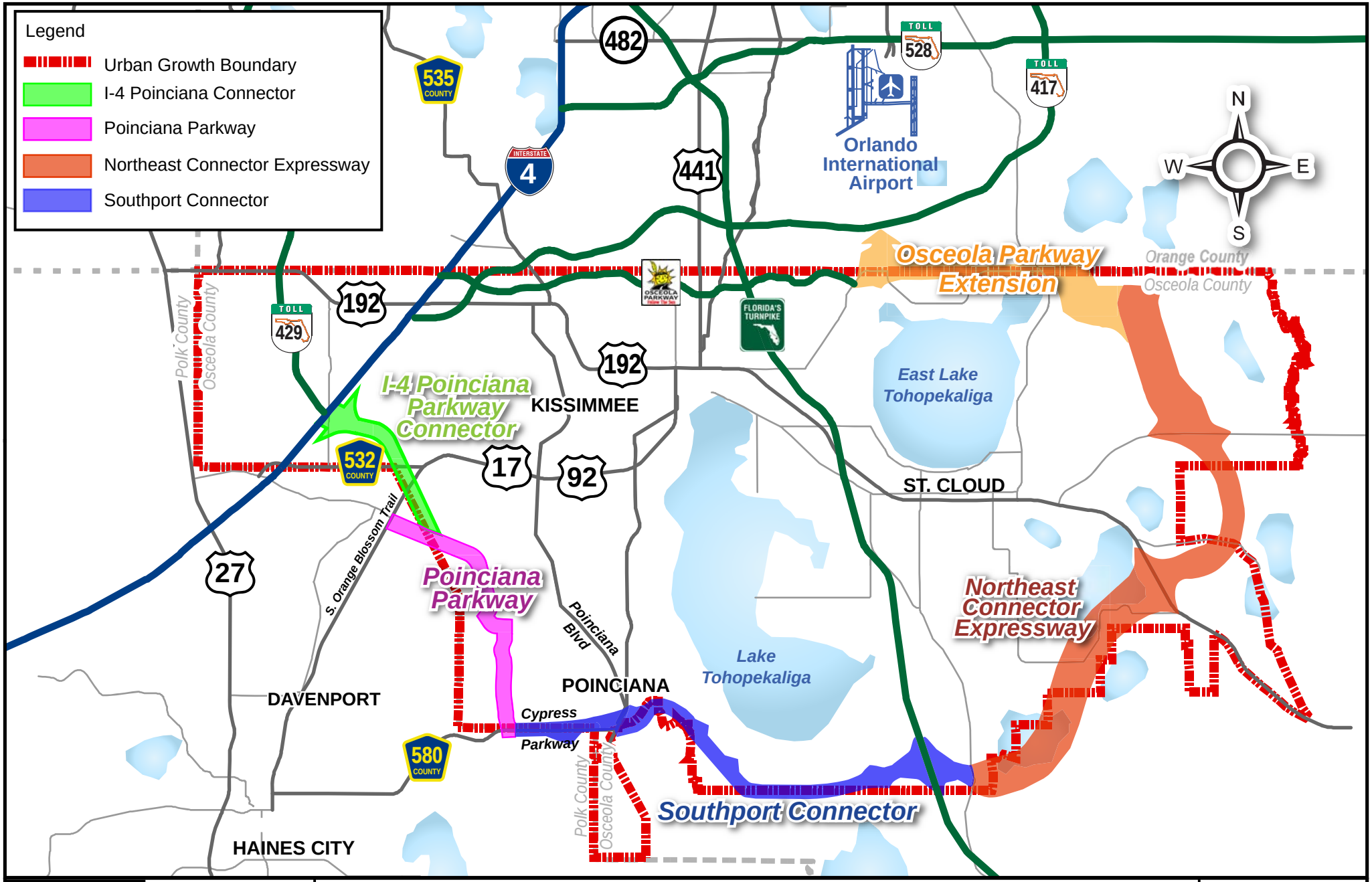
The Poinciana Parkway Southport Connector (Southport Connector) is a proposed limited access facility connecting the community of Poinciana to Florida's Turnpike. Poinciana is an unincorporated residential and commercial community located in Osceola and Polk counties located southwest of the City of Kissimmee and east of Haines City. Poinciana has a population of approximately 83,000 people and the majority of the Poinciana residents are employed in Orange County. The transportation connections to the community are limited and consist primarily of Pleasant Hill Road to the north and Cypress Parkway to the west. Poinciana Parkway from Cypress Parkway to US 17-92 is currently under construction and will provide additional connection to the north. A new connection to Florida's Turnpike will provide an alternative route to jobs and employment centers. The Southport Connector is identified in the Osceola County Expressway Authority (OCX) 2040 Master Plan (see Figure 1).

The Florida Department of Transportation (FDOT), District Five, in cooperation with the Federal Highway Administration (FHWA), initiated an Alternative Corridor Evaluation (ACE) as part of ETDM No. 13961 for the Southport Connector in June 2013. The ACE documents the analysis of a range of alternative corridors to provide for a connection between the Poinciana community and Florida's Turnpike. A corridor is a broad geographical area connecting two locations in which a transportation improvement, regardless of mode, is being considered by the state, a county, or a municipality. The corridor width may be influenced by the environmental and physical features within the area. Once alternative corridors have been selected for further study, a more detailed analysis is conducted to identify a detailed alignment within that corridor for the transportation improvement.

Two western termini were originally considered for the Poinciana community: Pleasant Hill Road at Cypress Parkway and at Poinciana Parkway and Marigold Avenue. The eastern terminus of the proposed Southport Connector will be at Florida's Turnpike where several termini locations were considered. The proposed Southport Connector will be a new limited-access facility with transit options. Figure 2 provides a location map identifying the limits of the study area. Figure 3 shows the corridors that have been evaluated. There are several key elements driving the need for this new facility, which include improving roadway connectivity from the community of Poinciana to Florida's Turnpike (and the greater Orlando area), accommodating current and future travel demands in the Poinciana area, improving traffic congestion and operations, promoting regional linkages, supporting economic development, and enhancing emergency evacuation.

There were ten initial corridors included in the Efficient Transportation Decision Making (ETDM) screening. These corridors were evaluated and the results of the evaluation were presented at corridor workshops held on January 13 and 15, 2015. At that time, Corridors 6, 7, and 8 were recommended for further evaluation. However, based on input received from Florida's Turnpike Enterprise (FTE), Corridors 6 and 8 were determined to not be viable due to interchange spacing criteria. Corridors 11, 12, and 13 were added after the workshops were held due to additional input provided from the public. Also in response to comments received after the corridor workshops, Corridors 2 through 13 were extended to include a 2.6 mile segment of Cypress Parkway from just east of Rhododendron Avenue at the terminus of Poinciana Parkway to Pleasant Hill Road. This decision was made to provide a more equal comparison between Corridor 1 and Corridors 2 through 13. The limits of the Project Development and Environment (PD&E) study, which is the next phase of the project, remain unchanged and are from Pleasant Hill Road to Florida's Turnpike.

The Nature Conservancy (TNC), South Florida Water Management District (SFWMD), and Southport Mitigation Bank are landowners and land managers of conservation lands adjacent to or in the vicinity of the Southport Connector corridors. These entities practice prescribed burning of forest lands as a method of ecological land management.



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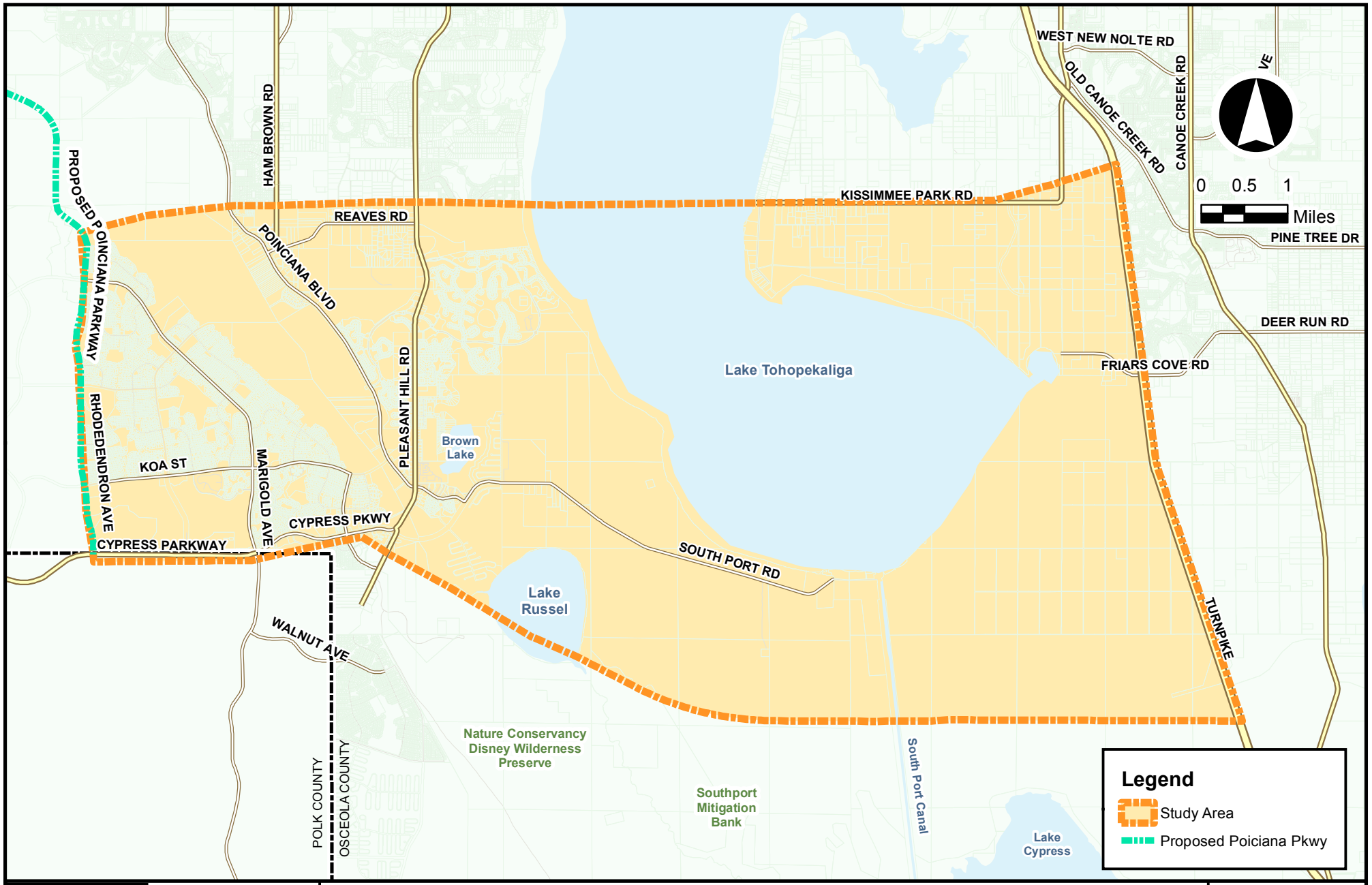
OSCEOLA COUNTY EXPRESSWAY AUTHORITY MASTER PLAN

FIGURE 1



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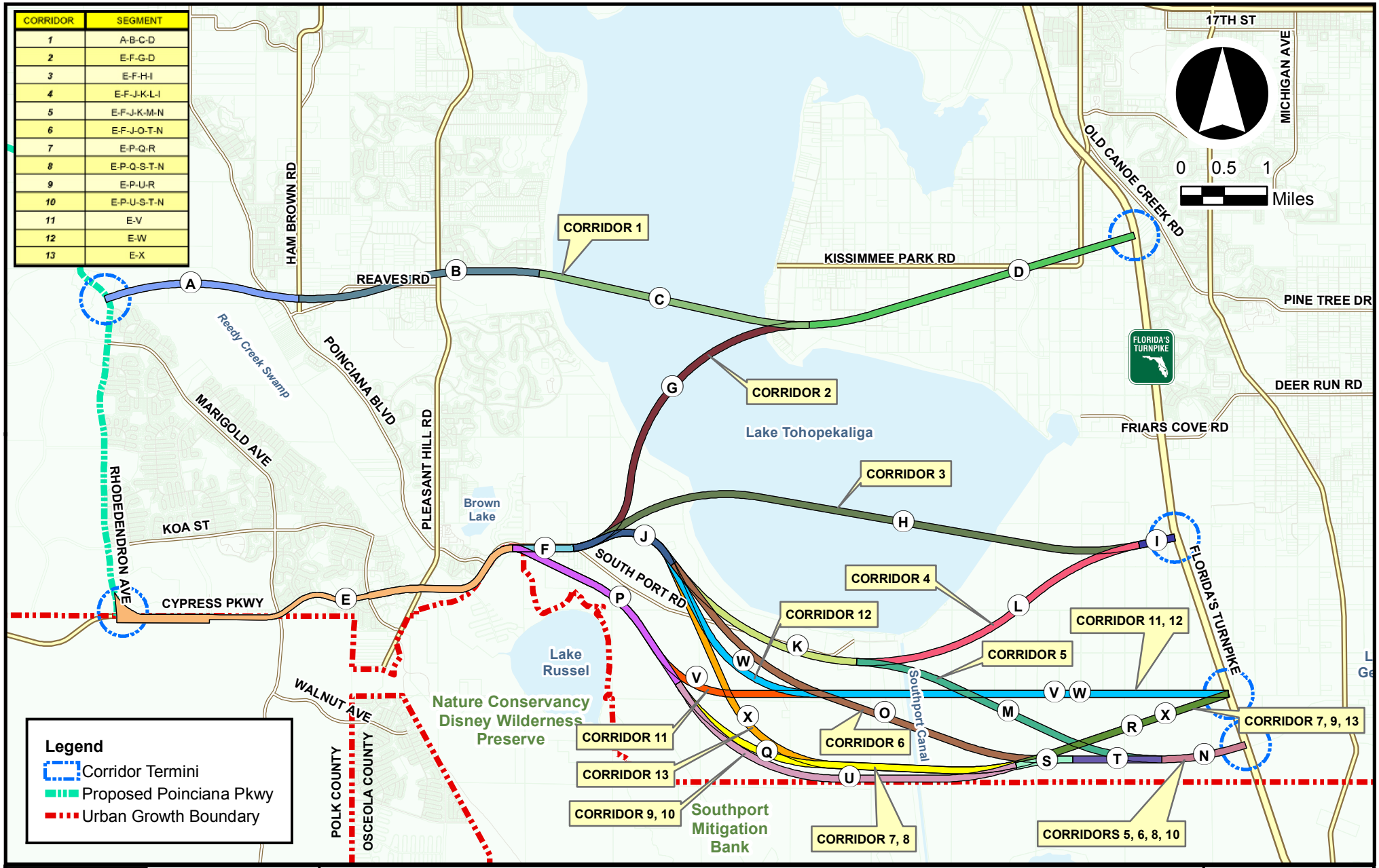
PROJECT STUDY AREA

FIGURE 2



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EVALUATED CORRIDORS

FIGURE 3

The practice of prescribed burning is critical to maintaining the variety of plant communities, to approximating natural conditions, and to reducing the chances of devastating wildfires. Prescribed burning, as well as wildfires, can result in smoke intrusion that causes hazardous conditions on nearby roads, which would include the proposed Southport Connector. Because of concerns, responsibilities, and duties related to smoke intrusion from prescribed burning and/or wildfires adjacent to the proposed Southport Connector, meetings were held with the land managers to address these issues. As a result of these meetings, a portion of Corridor 7 that is located in the vicinity of and between Lake Russell and Southport Road was shifted slightly to the northeast to the extent possible to increase the distance of the roadway corridor from fire managed lands without impacting the primary zone of the nests of the federally-listed caracara. Corridors 12 and 13 were developed to provide further distance from the fire managed lands while retaining portions of the alignments for Corridors 7 and 11.

The evaluation criteria for each corridor included purpose and need satisfaction, environmental impacts, engineering factors, estimated costs, and agency/public input. A narrative assessment of each Southport Connector corridor was also provided to supplement the data provided in the evaluation matrices. The evaluation of each corridor led to the recommendation that Southport Connector Corridors 7, 12, and 13 should be carried forward for further evaluation. A summary of this evaluation is shown in Table 1.

Table 1: Southport Connector Corridor Evaluation Summary

Southport Connector Corridor	Segments	Purpose and Need Satisfaction	Evaluation Criteria			Recommended for Further Consideration
			Environmental Impacts[1]	Engineering Factors[2]	Estimated Cost	
1	A-B-C-D	Yes	High	High	$952,000,000	No
2	E-F-G-D	Yes	High	High	$1,065,000,000	No
3	E-F-H-I	Yes	High	High	$1,200,000,000	No
4	E-F-J-K-L-I	Yes	High	Med	$734,000,000	No
5	E-F-J-K-M-N	Yes	High	Med	$741,000,000	No
6	E-F-J-O-T-N	Yes	Med	Med	$743,000,000	No
7	**E-P-Q-R**	**Yes**	**Med**	**Med**	**$746,000,000**	**Yes**
8	E-P-Q-S-T-N	Yes	Med	Med	$745,000,000	No
9	E-P-U-R	Yes	Med	Med	$749,000,000	No
10	E-P-U-S-T-N	Yes	Med	Med	$747,000,000	No
11	E-V	Yes	Med	Med	$744,000,000	No
12	**E-W**	**Yes**	**Med**	**Med**	**$747,000,000**	**Yes**
13	**E-X**	**Yes**	**Med**	**Med**	**$752,000,000**	**Yes**

[1] A high rating for environmental impacts would reflect a relatively larger number of impacts or impacts for which it would be difficult to obtain environmental permits. A medium rating would reflect a lesser number of impacts or impacts for which it would be less difficult to obtain environmental permits.

[2] A high rating for engineering impacts would reflect a relatively higher impact to existing utilities and a higher difficulty in addressing engineering issues, such as drainage across Lake Tohopekaliga. A medium rating would reflect a lesser number of impacts or impacts for which it would be less difficult to address engineering issues.

Section 1.0 Introduction

1.1 Purpose of the Alternative Corridor Evaluation

The Florida Department of Transportation (FDOT), District Five, in cooperation with the Federal Highway Administration (FHWA), initiated an Alternative Corridor Evaluation (ACE) as part of ETDM No. 13961 for the Southport Connector in June 2013. The purpose of the ACE is to document and link planning activities for reference in a future National Environmental Policy Act (NEPA) environmental document in accordance with the Planning and Environment Linkages (PEL) described under 23 CFR 450 Appendix A and the Moving Ahead for Progress in the 21st Century (MAP-21). In order to conduct the ACE, a Methodology Memorandum (MM) was prepared that documented how each of the identified corridors would be evaluated (refer to Appendix 1 for a copy of the approved MM). The Alternative Corridor Evaluation Report (ACER) documents the application of the methodology, identifies corridor alternatives to carry into a detailed NEPA study, and identifies alternatives which should be eliminated due to not meeting established and approved MM criteria and thresholds. This ACER is intended for adoption as a planning product in the NEPA analysis for the PD&E Study.

1.2 Project Background

1.2.1 ETDM Programming Screen

The ETDM Programming Screen was initiated on September 6, 2013 (ETDM No. 13961 - Poinciana Parkway Southport Connector, https://etdmpub.fla-etat.org). Ten initial corridors were developed for the purpose of the ETDM Programming Screen. Prior to the screening, a webinar was held on August 21, 2013, to inform the Environmental Technical Advisory Team (ETAT) members of the purpose of and need for the project; initial corridors to be screened; and a high-level overview of the social, cultural, natural, and physical environments. The ETDM Programming Screen review period was extended to allow for additional agency review and was closed on November 20, 2013. An additional extension was granted for the FHWA. After input from agency representatives regarding the initial corridors, the review was completed in December 2013.

The ten initial corridors entered into the ETDM Programming Screen were developed using Land Suitability Mapping (LSM). The corridors were initially developed at a width of 400 feet and, therefore, the impacts were quantified in the GIS-based Environmental Screening Tool (EST) at a minimum of 1,400 feet (i.e., 400-foot-wide corridors with a 500-foot buffer distance on each side of the corridor). These initial corridors are the starting point for the ACE process. No additional corridors were identified in the ETDM Programming Screen. The naming of each corridor or alternative remained consistent throughout the ACE and will be carried through to the PD&E phase.

1.2.2 Intent of the Study

In order for a corridor planning study to be used in the NEPA process, certain conditions must be met. The ACE meets the intent of 23 CFR 450 (Planning assistance and standards, Appendix A) and MAP-21, Section 1310 (Integration of planning and environmental review). The PEL process is a specific product of implementing MAP-21 and seeks to develop transportation planning studies that can be directly incorporated into the NEPA process. The ACE meets the intent of the PEL process by providing the following:

- Project background and history – the project sponsor, study team, and long-range plan or the transportation improvement program years, existing transportation network, summary of planning-level activities chronology, and other related projects
- Project purpose and need statement – evaluation of how the alternatives meet the project purpose and need

- Description of affected environment – what information was used, how current or complete it is (i.e., the level of detail of resource review), and how reliable it is over time (i.e., what issues need to be considered during the PD&E Study)
- Description of the travel corridor typical section and range of alternatives – alternatives that do not meet the purpose and need will not be considered reasonable alternatives even if they reduce impacts to a particular resource
- Identification of environmental consequences and, if applicable, opportunities for mitigation
- Explanation of the analyses and conclusions of the ACE process – what was done, what was not done and why; the reasons for decisions, particularly when alternatives are eliminated; and other issues such as controversy, utility conflicts, access, right-of-way needs, easements, problematic land owners/groups, contact information for stakeholders, and special and unique resources
- Documentation of public and agency involvement – key coordination with federal, tribal, State and local environmental, regulatory, and resource agencies and transportation agencies; identification of decision-makers; public and stakeholder coordination; corridor vision; and next steps for PD&E scoping

Since the intent is to adopt the ACER as a planning product for the NEPA phase, it has been written with the use of terminology consistent with NEPA vocabulary (e.g., purpose and need, alternatives, affected environment, and environmental consequences).

1.2.3 Status Update/Key Milestones

The MM was submitted in the EST for a 30-day review and comments were provided by ETAT members. The comments were addressed and the MM was finalized with the republished Preliminary Programming Screen Report. The results of the ACE have been documented in this report and can be appended to or referenced in a future NEPA document. The results of the ACE led to the determination as to which corridors are considered unreasonable and should be eliminated.

Issue resolution with ETAT members is currently ongoing under the understanding that further analysis and coordination will take place as the project advances to the project development phase.

1.3 Project Description

The proposed Southport Connector, as envisioned in the Osceola County Expressway Authority (OCX) 2040 Master Plan, connects the Poinciana community with Florida's Turnpike.

The following goals and objectives are contained in the OCX Master Plan:

> *Goal 3. Promote a high quality of life for Osceola County residents.*
> *Objective 3.1. Reduce delay by providing limited access transportation options.*
> *Objective 3.2. Improve capacity with new lineage and transit options.*

Therefore, in conformance with the goals and objectives of the OCX Master Plan, the proposed Southport Connector will be a new limited-access facility with transit options.

1.3.1 Logical Termini/Independent Utility

It is important during the development of a project that the end points be evaluated and determined to be "logical termini." Logical termini is defined by FHWA as "rational end points for both a transportation improvement and a review of potential environmental impacts." The alternative corridors to be evaluated in this report must be shown to meet the requirement of this definition to be considered reasonable.

A project must also satisfy the requirements of "independent utility," which means it must function as a stand-alone project even if no additional transportation improvements are made in the project area and be a reasonable expenditure. Southport Connector meets these requirements based on the following:

- No additional improvements or additions to the adjacent roadway systems are necessary beyond those included in this project.
- It is included in MetroPlan Orlando's 2040 Long Range Transportation Plan (LRTP).

1.3.1.1 Traffic Information

Coordination efforts between FDOT District One, FDOT District Five, and FHWA regarding appropriate traffic modeling for the surrounding region has occurred and a Traffic Technical Memorandum forecasting travel demand has been completed. The traffic memorandum is included as Appendix 3. The year 2040 traffic projections were developed for Corridor 1 and Corridor 8. These two corridors are representative of the 13 corridors being evaluated. The year 2040 traffic projections for these two corridors are shown on Figure 4.

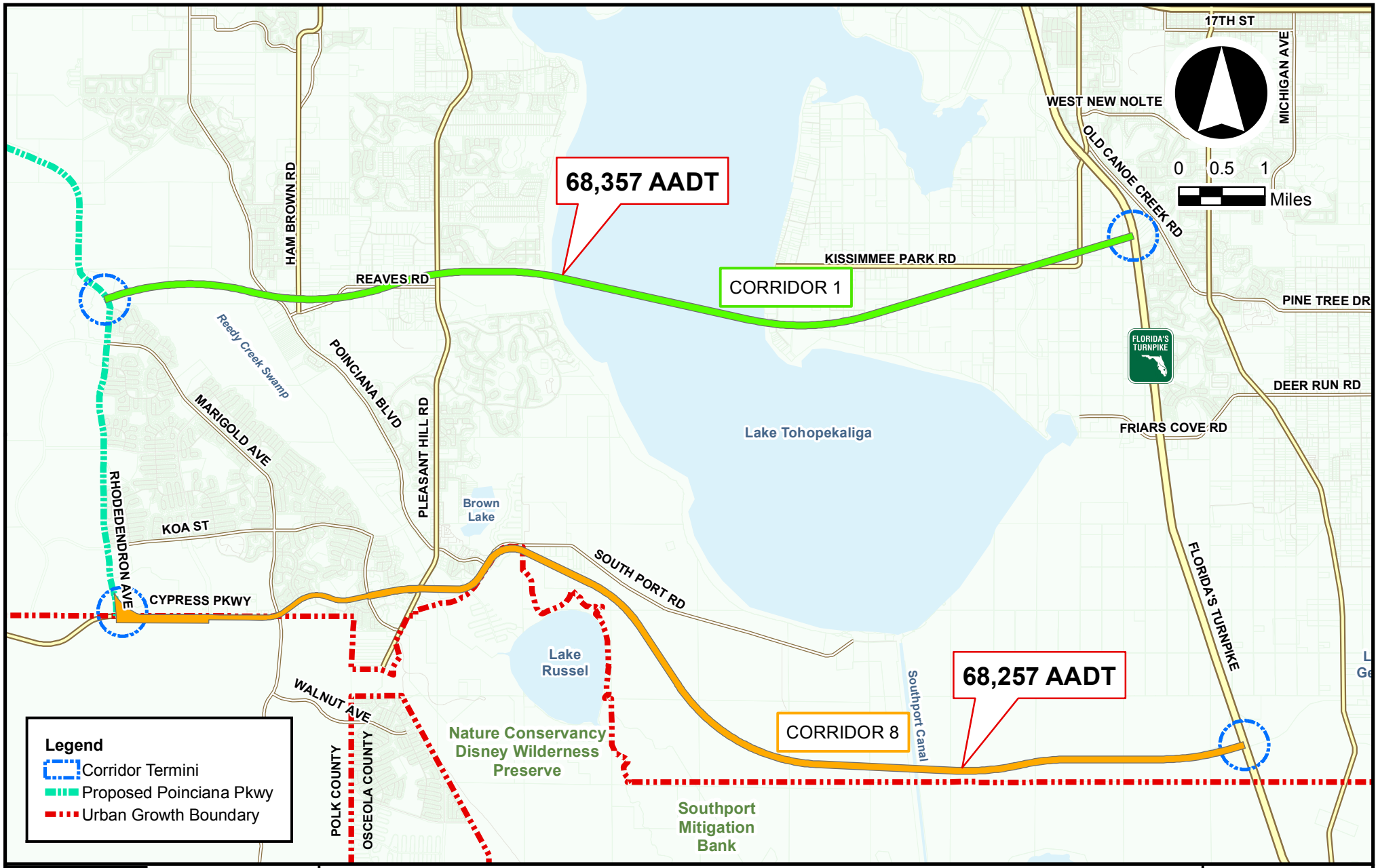
This memorandum also presents the results of a select link model analysis for the Southport Connector. The purpose of the select link analysis is to use the travel demand model to gain an understanding of where vehicles are coming from and going to relative to a defined point in the roadway network. The select link analysis was conducted to evaluate the travel patterns served by the corridors in an effort to better quantify the differences between the corridors and their effectiveness of achieving the purpose and need for the project.

The following network scenarios were used in the model analysis of Corridors 1 and 8:

- Scenario A: The base network consists of the modeling assumptions used in the I-4 Beyond the Ultimate, Poinciana Parkway from US 17-92 and Kinney Harmon Road to Cypress Parkway, the Osceola Parkway Extension Expressway, and the network updates for South Lake Toho Master Plan. This scenario represents the No-Build scenario commonly used for comparison purposes in traffic evaluations.
- Scenario B: This roadway network scenario consists of the existing roadway network plus the MetroPlan Orlando LRTP network and includes the complete OCX Master Plan, including Poinciana Parkway from I-4 to US 17-92, Poinciana Parkway, Southport Connector, Northeast Connector, and Osceola Parkway Extension. The network updates for the South Lake Toho Master Plan are also included. This scenario represents the Build scenario commonly used for comparison purposes in traffic evaluations.
- Scenario C: This roadway network scenario consists of the existing roadway network plus the MetroPlan Orlando LRTP network but does not include the following OCX Master Plan segments: Poinciana Parkway from I-4 to US 17-92 and the Northeast Connector. In addition, Poinciana Parkway from Poinciana Parkway at Cypress Parkway to Pleasant Hill Road is not included in the network for Corridor 1. The network updates for the South Lake Toho Master Plan are included. This scenario was added to verify whether or not the Southport Connector would be viable independent of the other OCX Master Plan Segments.

Based on the analysis conducted for this study, the following conclusions were made:

- Both Scenario B and Scenario C provide improved connectivity from the Poinciana area to Florida's Turnpike. For both scenarios, Corridor 1 attracts more traffic from the northern portion of the Poinciana area while Corridor 8 attracts more traffic from the southern portion of the Poinciana area. This can be attributed to the travel distance/modeled travel time for vehicles to access the proposed corridor.



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PRELIMINARY 2040 TRAFFIC PROJECTIONS (AADT)

FIGURE 4

- Scenario B/Corridor 8 provides the highest level of regional connectivity of the corridors evaluated. This is shown by the increased annual average daily traffic (AADT) on the Northeast Connector and the consistency with the OCX Master Plan and MetroPlan Orlando LRTP.
- Scenario B/Corridor 8 eliminates the need to utilize the portion of Florida's Turnpike between the Northeast Connector and the Southport Connector required in Scenario B/Corridor 1 to travel between the Poinciana area and areas served by the Northeast Connector. Scenario B/Corridor 8 also eliminates the need for an interchange at both Florida's Turnpike/Northeast Connector and Florida's Turnpike/Southport Connector (i.e., only one interchange at Florida's Turnpike with the Southport Connector/Northeast Connector is needed). The elimination of this movement and the elimination of the interchange associated with Scenario B/Corridor 8 results in improved conditions on Florida's Turnpike as compared to Scenario B/Corridor 1.
- The Poinciana Parkway and the Northeast Connector both contribute to relieve traffic on existing facilities from/towards Poinciana. These facilities include Pleasant Hill Road, US 17-92, and Florida's Turnpike.
- The Southport Connector corridors carry a similar amount of traffic under Scenario B/Corridor 1, Scenario B/Corridor 8, and Scenario C/Corridor 1.

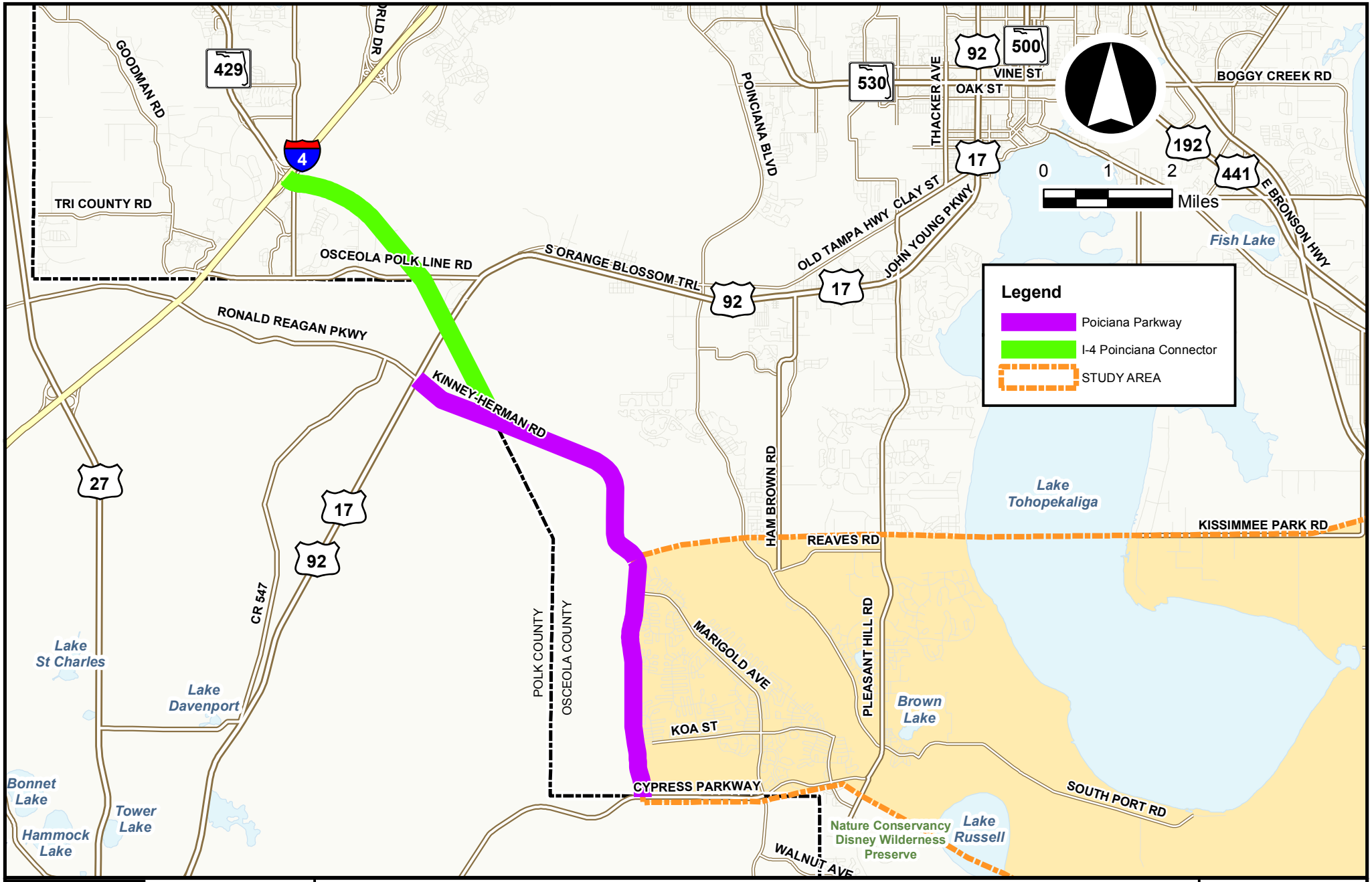
Therefore, all corridors being considered meet the purpose and need of the project from a traffic perspective.

1.4 Other Related Studies

Figure 5 identifies the location of related transportation projects in the vicinity of the Southport Connector study area. These ongoing projects are discussed below.

Poinciana Parkway: Poinciana Parkway is a two-lane tolled facility (expandable to four lanes) extending from the intersection of US 17-92 and Kinney Harmon Road to Cypress Parkway and is currently under construction. This project is part of the OCX 2040 Master Plan. Poinciana Parkway is a stand-alone project that does not involve the use of federal funds. The two-lane Poinciana Parkway construction began in January 2014 and will be completed in 2016.

I-4 Poinciana Parkway Connector PD&E Study (FPID 433693-2-22-01): In 2013, FDOT initiated a PD&E study (separate action) to provide an enhanced connection between I-4, or the proposed Central Polk Parkway, and the greater Poinciana area in Polk and Osceola counties. The PD&E Study is anticipated to be completed in 2019. This project is part of the OCX 2040 Master Plan.



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OTHER RELATED TRANSPORTATION STUDIES

FIGURE 5

Section 2.0 Purpose and Need

The purpose and need for a project helps establish the foundation for which the proposed alternatives will be evaluated. The purpose for a project addresses why the undertaking is being proposed and articulates the intended positive outcomes. The need for a project identifies the transportation problem to be addressed and defines the causes of existing problems using factual, quantifiable data.

The purpose and need of the project was screened in the ETDM Programming Screen and accepted by FHWA on December 12, 2013. The purpose and need are summarized below.

2.1 Purpose

Below are the primary purposes for this project:

- **Improve roadway connectivity from the community of Poinciana to Florida's Turnpike:** The majority of the Poinciana area's residents are employed in Orange County. Therefore, a new connection to Florida's Turnpike will provide an alternative route to jobs and employment centers.
- **Enhance mobility:** Due to the anticipated population and employment growth in the study area, the proposed facility will play a critical role in accommodating travel demands and improving the movement of goods and people.
- **Improve overall traffic operations:** The proposed facility would relieve congestion on local roads by separating local and regional traffic.
- **Promote regional system linkage:** The proposed facility is identified in MetroPlan Orlando's LRTP. The proposed Connector is part of a planned limited access, high-speed toll facility identified in the OCX Master Plan to serve Osceola County's urban growth area.

Secondary purposes for the project include:

- **Supporting economic development:** The project is part of a planned limited access, high-speed toll facility identified in the OCX Master Plan to serve Osceola County's urban growth area.
- **Enhancing emergency evacuation:** The new connection to Florida's Turnpike will enhance the linkage to an emergency evacuation route.

2.2 Need

Below are the issues and problems justifying the need for this project:

- **System Linkage** – Is the proposed project a "connecting link"? How does the project fit in the transportation system?
    - Poinciana is a residential community of approximately 83,000 people and is located 25 miles south of the city of Orlando. According to a *National Business Journal* study discussed in an article by G. Scott Thomas entitled "On Numbers," dated January 3, 2012 (updated on January 9, 2012), Poinciana is ranked 226 out of 226 small towns in Florida for the longest commute. The commute time for 48% of the Poinciana residents is 45 minutes or more and the commute time for another 27% is between 30 and 44 minutes. It is anticipated that these commute times will worsen by the design year of the proposed project if no improvements are made. A major element of the congested commute is both local and regional traffic. There are only two roads out of Poinciana: Pleasant Hill Road and Poinciana Boulevard. Regional traffic has no alternate route through this area. The long commute time can also be attributed to a lower supply of jobs in Poinciana versus a much higher supply of jobs in the Greater Orlando area. The need exists for an alternate route to connect residents of Poinciana with the Greater Orlando area and other regional destinations.

- **Capacity** – Is the capacity of the present facility inadequate for the present traffic? What about the projected traffic? What capacity is needed? What is the level of service for the existing and proposed facility?
    - The purpose of the Southport Connector is to improve roadway connectivity from the community of Poinciana to Florida's Turnpike, enhance mobility, improve overall traffic operations, and promote regional system linkage. A planning level analysis of Pleasant Hill Road and Cypress Parkway within the Poinciana area was conducted using available traffic data, the 2012 FDOT Quality/Level of Service Handbook tables, and future model forecasts for the three scenarios described above in Section 1.3.1.1 Traffic Information. The results of the analysis are shown in Table 2. This table indicates that segments of Pleasant Hill Road and Cypress Parkway are currently at a Level of Service (LOS) F. The table also indicates that different segments of Pleasant Hill Road will be at an LOS F in the year 2040 depending on the alternative scenario considered. A description of the 2040 model results can be found in the Southport Connector Traffic Development Comparison of Future Year Model Results memo (Appendix 3). It is noted that a detailed traffic assessment, including traffic data collection and highway capacity analysis, will be conducted during the PD&E phase of the study.

Table 2: Pleasant Hill Road Existing Level of Service

Roadway/Segment		2012		2040[3]									
				Alt A		Alt B-Corridor 1		Alt B- Corridor 8		Alt C- Corridor 1		Alt C- Corridor 8	
		ADT[1]	LOS[2]	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS
Pleasant Hill Road	Cypress Pkwy to Poinciana Blvd	49,270	C	62,801	F	52,474	C	60,882	F	58,929	D	71,501	F
	Poinciana Blvd to Grasmere View Pkwy	35,847	C	37,863	C	40,055	F	29,351	C	41,912	F	33,723	C
	Grasmere View Pkwy to US 17-92	47,834	F	36,926	C	29,653	C	29,869	C	32,727	C	32,625	C
Cypress Parkway	Marigold Ave to Dover Plum Ave	42,365	F[4]	39,344	C[4]	46,090	B[5]	82,013	C[5]	45,351	B[5]	81,519	C[5]
	Dover Plum Ave to Pleasant Hill Rd	Not Reported		62,801	C[4]	72,612	C[5]	109,095	D[5]	75,244	C[5]	114,669	D[5]

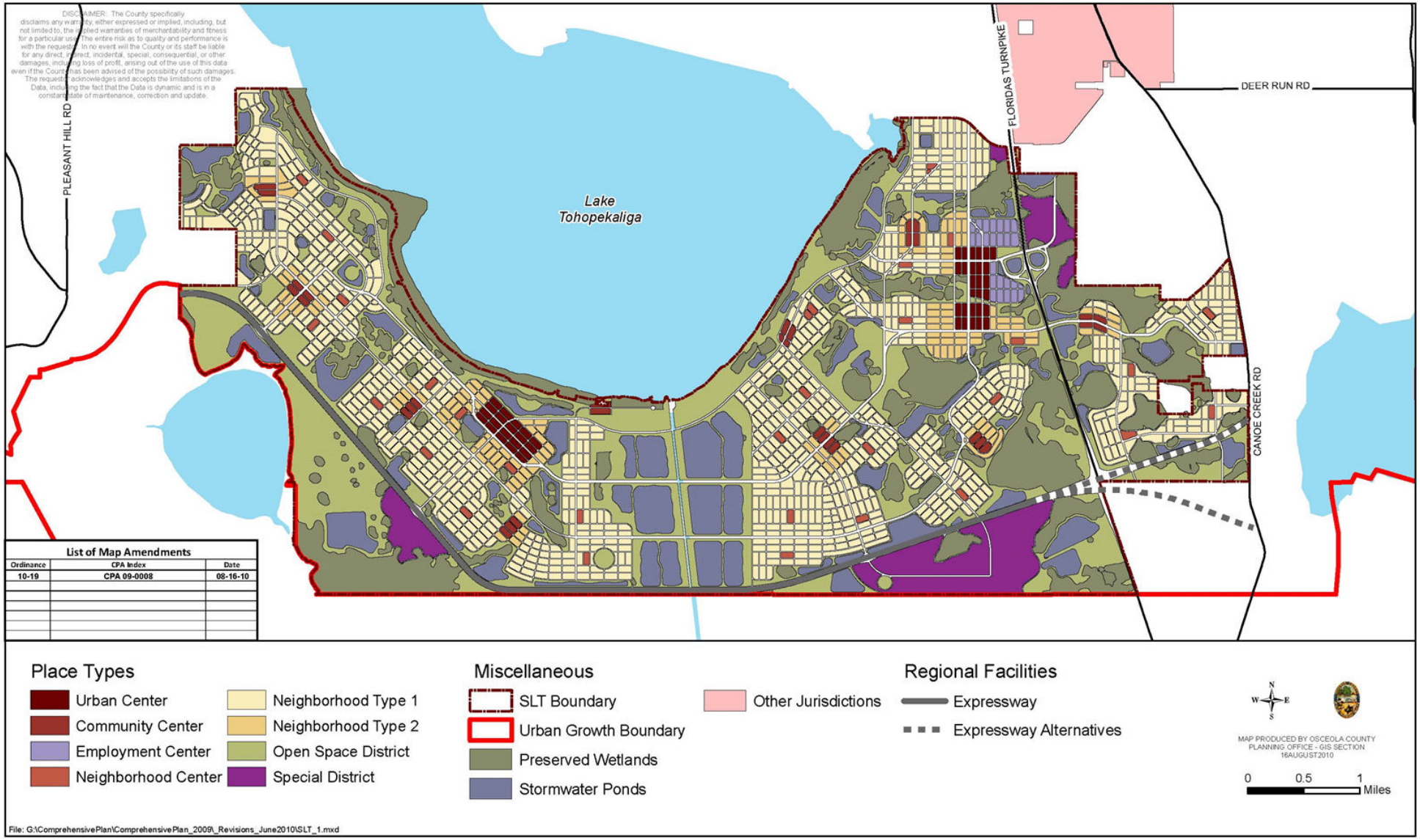
1: 2012 ADT source – Osceola County 2012 Existing Roadway Network Capacity report (Updated 06/08/12)
2: LOS based on 2012 FDOT Quality/Level of Service Handbook Table 1 (12/18/12 edition)
3: 2040 ADT source – Southport Connector Traffic Development Comparison of Future Year Model Results memo (6/1/15)
4: Assumes Cypress Parkway as a four-lane arterial
5: Assumes Cypress Parkway as a four-lane freeway with a four-lane arterial adjacent to the freeway

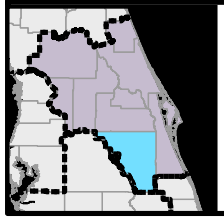
- **Transportation Demand** – Is the project included in a statewide plan or adopted urban transportation plan? Are there substantial differences in the project's traffic forecasts from those estimates from the 23 U.S.C. 134 (Metropolitan transportation planning) process?
    - The Southport Connector project is included in a statewide plan or adopted urban transportation plan. The Southport Connector is included in MetroPlan Orlando's LRTP as a policy amendment dated February 2013. This amendment revised the funding structure for the project to include toll revenue and $2.7 million in federal funds for the PD&E Study. The PD&E Study is included in MetroPlan Orlando's 2012/13-2016/17 Transportation Improvement Program and the FY 2013/14 State Transportation Improvement Program. The project has also been identified as a segment of the OCX Master Plan, connecting I-4 with Florida's Turnpike. Additionally, the Osceola County Comprehensive Plan 2025, Transportation Element, includes the Southport Connector planning effort to initiate a collaborative, facilitated planning effort with stakeholder agencies and groups to explore the best alignment, design, access, interchange locations, and mitigation for the Connector. The traffic forecasts are using the same model data as used for the MetroPlan Orlando LRTP with calibration checks to improve the accuracy of the model within the study

area. Therefore, the project's traffic forecasts are consistent with those used in the approved metropolitan planning process. A more detailed traffic study will be conducted during the PD&E phase of the project.

- **Social Demands/Economic Development** – Are there any anticipated new employment centers, schools, land use plans, recreational areas, etc. in the project area? What projected economic development/land use changes indicate the need to improve or add to the highway capacity?
  - The community of Poinciana is a Planned Unit Development located in unincorporated Polk and Osceola counties. The population of Poinciana was 53,193 as of the 2010 census; however, the greater Poinciana area includes a population in excess of 83,000 people, including the neighborhoods of Solivita, Crescent Lakes, Trafalgar, Doral, Isles of Bellalago, Cypress Cove, Deerwood, Wilderness, and Bellalago. The population in this area increased 298% between 2000 and 2010 and is anticipated to experience continued population growth.
  - There are three large-scale planning/development projects proposed within the project area, which include the South Lake Toho Master Plan, the East of Lake Toho Master Plan, and the Green Island Development of Regional Impact (DRI), which is incorporated in the South Lake Toho Master Plan.
    - South Lake Toho Master Plan
      - According to the "South Lake Toho Element" planning document, which was adopted by the Osceola County Board of County Commissioners into the Osceola County Comprehensive Plan on August 16, 2010, the goal of the South Lake Toho Conceptual Master Plan is to balance social, environmental, and economic sustainability to form enduring places for people to live and thrive.
      - The map of the South Lake Toho Master Plan is shown in Figure 6.
    - East of Lake Toho Master Plan
      - According to the "East of Lake Toho Element" planning document, which was adopted by the Osceola County Board of County Commissioners into the Osceola County Comprehensive Plan on August 16, 2010, the goal of the East of Lake Toho Master Plan is to balance social, environmental, and economic sustainability to form enduring places for people to live and thrive.
      - The map of East of Lake Toho Master Plan is shown in Figure 7.
    - Green Island Ranch DRI
      - It is a large DRI encompassing 5,977 acres of land adjacent to the east side of Lake Tohopekaliga. The project proposes single and multi-family dwelling units, retail space, regional mall, office space, research and industrial parks, and multiple schools.
      - The Green Island Ranch DRI map is shown in Figure 8.
- **Safety** - Is the proposed project necessary to correct an existing or potential safety hazard? Is the existing crash rate excessively high? Why? How will the proposed project improve it?
  - The purpose of this project is not to address a specific safety problem on an existing road. Poinciana is located in an area with limited access to the existing road network. Cypress Parkway and Pleasant Hill Road provide the major points of access to the community. Many times when a crash event occurs on one of these roads, the roadway is closed and ingress and egress to the community is restricted even further. Southport Connector will provide an alternative access route for the community. In addition, the proposed project will improve emergency evacuation for Poinciana. According to the Florida Division of Emergency Management Evacuation Route and Zone Maps for Osceola County (April 30, 2012), there is no evacuation route that directly serves the Poinciana community. US 17-92 to the north and Florida's Turnpike to the east are the only nearby designated emergency evacuation routes. Residents of the Poinciana area are in need of an enhanced emergency evacuation route.

SLT 1: Development Program





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SOUTH LAKE TOHO MASTER PLAN MAP

FIGURE 6

ELT 1: Development Program

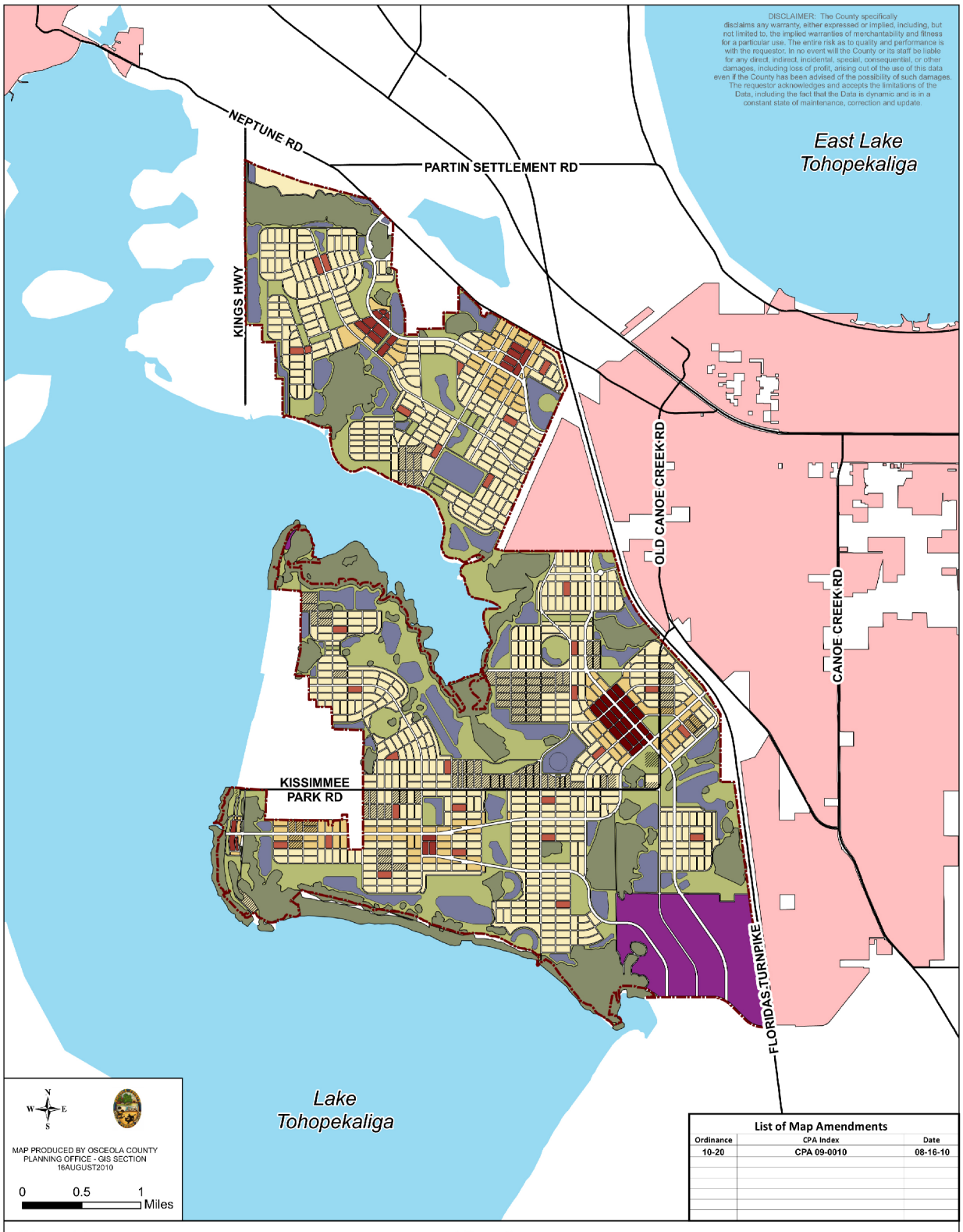

FIGURE 7

EAST LAKE TOHO MASTER PLAN MAP

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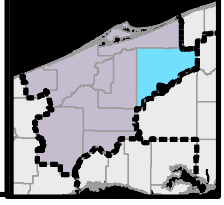
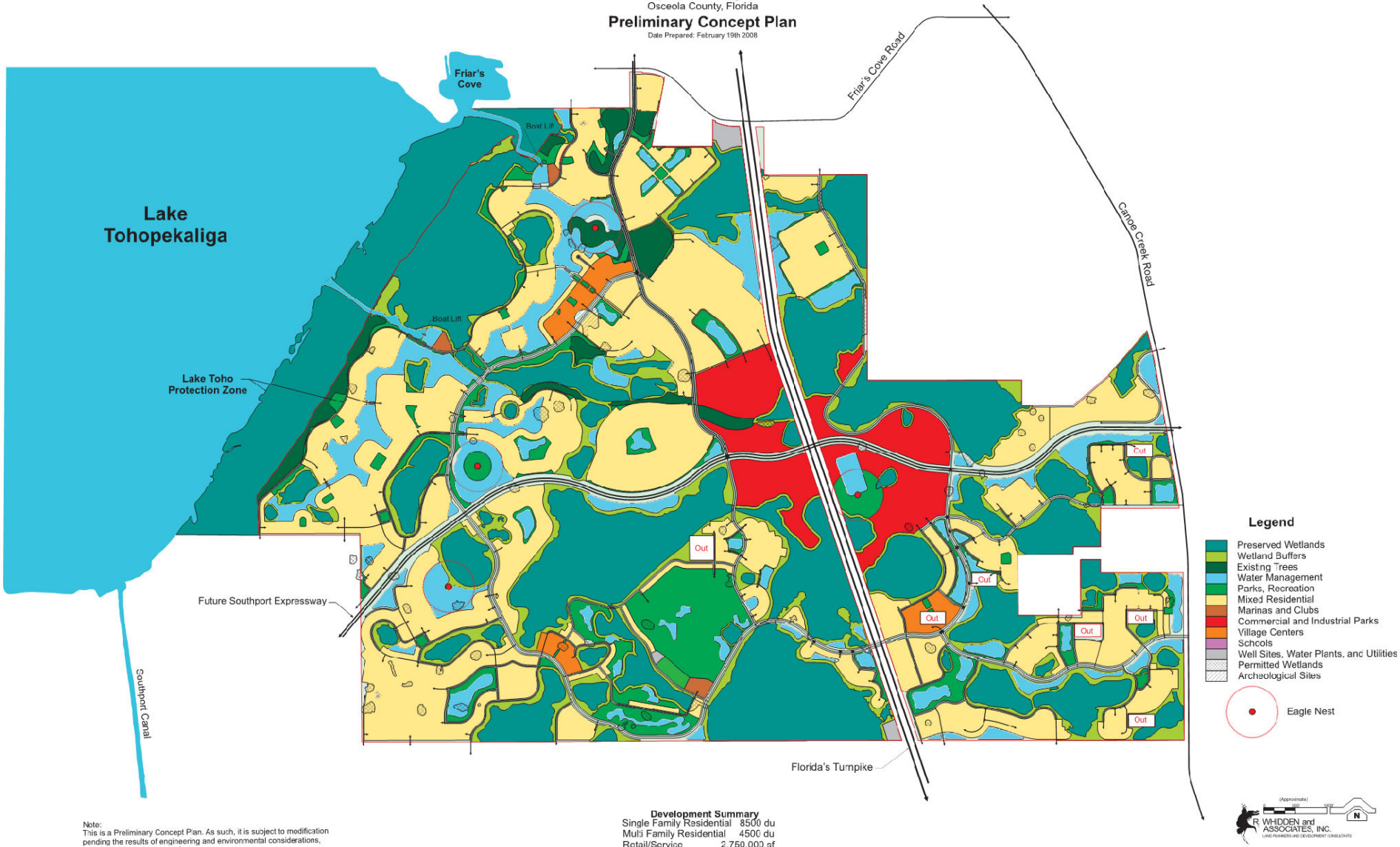


Green Island Ranch DRI

Sections 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, & 17
Township 27 South, Range 30 East
Osceola County, Florida

Preliminary Concept Plan

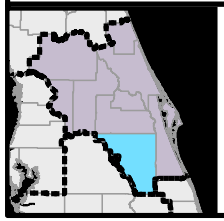
Date Prepared: February 19th 2008



Note:
This is a Preliminary Concept Plan. As such, it is subject to modification pending the results of engineering and environmental considerations, and is subject to agency review.

Development Summary

Single Family Residential	8500 du
Multi Family Residential	4500 du
Retail/Service	2,750,000 sf
Office Park	410,000 sf



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GREEN ISLAND RANCH DRI MAP

FIGURE
8

The corridors evaluated during the ACE process were developed with appropriate data, LSM, and geometric design considerations. The original ten corridors were screened and commented on by ETAT members during the ETDM Programming Screen. The comments provided were used in the evaluation of the proposed corridors that are detailed in Section 4.0. Subsequent to the corridor workshops held on January 13 and 15, 2015, Corridors 11, 12, and 13 were added based on public input received. Corridors 11, 12, and 13 were evaluated using the same methodology and considerations as the original ten corridors. Additional public involvement efforts continued after the corridor workshops. These efforts resulted in a decision by FDOT to extend the limits of the corridor evaluation to include a 2.6 mile segment of Cypress Parkway from just east of Rhododendron Avenue at the terminus of Poinciana Parkway to Pleasant Hill Road. This decision was made to provide a more equal comparison between Corridor 1 and Corridors 2 through 13. Corridor 1 provides a continuous limited access connection from Poinciana Parkway at Marigold Avenue to Florida's Turnpike. Originally, Southport Connector Corridors 2 through 13 did not provide a similar limited access connection to Poinciana Parkway. The decision to include Cypress Parkway as part of Corridors 2 through 13 provides a basis of comparison between corridors that will all essentially provide the same limited access expressway to expressway transportation service. The limits of the PD&E Study, which is the next phase of the project, remain unchanged and are from Pleasant Hill Road to Florida's Turnpike. The following sections provide additional details as to how the ten initial corridors were identified.

3.1 Data Collection

The data used to evaluate each project corridor's social, cultural, natural, and physical environmental impacts was derived from various GIS datasets within the Florida Geographical Data Library, the SFWMD, the Florida Department of Environmental Protection (FDEP), the Florida Natural Area Inventory, the Federal Emergency Management Agency, and the Florida Fish and Wildlife Conservation Commission (FWC). City and County data sources were also utilized. In addition, field and literature reviews were performed to verify key project corridor constraints. A list of GIS data layers used in the assessment of the project study area is provided in Table 3 below. These layers were then used to develop the LSM.

Table 3: GIS Layers

GIS Layer	Source (Year)
Social Layers	
Airports	Florida Geographic Data Library (FGDL) (2012)
Cemeteries	FGDL(2013)
Churches	FGDL(2009)
DRIs	FGDL(2009); Osceola County; Polk County
Fire Stations	FGDL(2013); Osceola County; Polk County
Government Buildings	FGDL(2013)
High Density Residential	SFWMD
Hospitals	FGDL(2013); Osceola County; Polk County
Law Enforcement	FGDL(2012)
Medium Density Residential	SFWMD
Planned Unit Developments	FGDL(2009); Osceola County; Polk County
Schools	FGDL(2012); Osceola County; Polk County
Cultural Layers	
State Parks	FGDL(2011)

GIS Layer	Source (Year)
FWC Managed Lands	FGDL(2010)
Greenways	FGDL(2012); Osceola County; Polk County
Historical Sites	SFWMD; Osceola County; Polk County
Indian Parcels	FGDL(2008)
Local Parks	Osceola County; Polk County
Managed Lands	Florida Natural Area Inventory
Military Lands	FGDL(2010)
Parks and Zones	SFWMD
State Historic Preservation Office (SHPO) Structures	FGDL(2013)
SHPO Bridges	FGDL(2013)
SHPO Cemeteries	FGDL(2013)
SFWMD Lands	SFWMD
Wildlife Management Areas	FGDL(2013)
Archaeological or Historic Sites	FGDL(2013)
Resource Groups	FGDL(2013)
National Register of Historic Places	FGDL(2013)
Natural Environment Layers	
Aquatic Preserves	FGDL(2011)
Bear Nuisance	FWC
Class 1 Waters	FDEP
Eagle Nests	FWC
FDEP Mitigation Banks	SFWMD(2013)
Floodways	Federal Emergency Management Agency (2013)
Native Scrub	FWC; SFWMD
OFW	FDEP(2011)
Protected Species (multiple layers)	FWC
Rookeries	FWC
Water Features	SFWMD
Wetlands	SFWMD
Physical Environment Layers	
Brownfields (EPA/FDEP)	FGDL(2013)
Electrical Power Facilities	SFWMD; FDEP(2011)
EPA Pollutant Sites (air, water, RCRA)	FGDL(2011)
Hazardous Materials Sites	FDEP(2013)
Industrial Sites	SFWMD
Landfills	FGDL(2013)
Nuclear Sites	FDEP(2011)
Oil and Gas Storage	SFWMD
Petroleum Contaminated Sites	FGDL(2013); FDEP(2013)
Power Plants	Osceola County; Polk County
Sewer Treatment Plants	FDEP(2013); SFWMD; Osceola County; Polk County
Sinkholes	FDEP(2004)
Solid Waste Facilities	FGDL(2013)
Superfund Sites	FGDL(2012)
TECO People's Gas	Polk County
Water Treatment Plants	FGDL

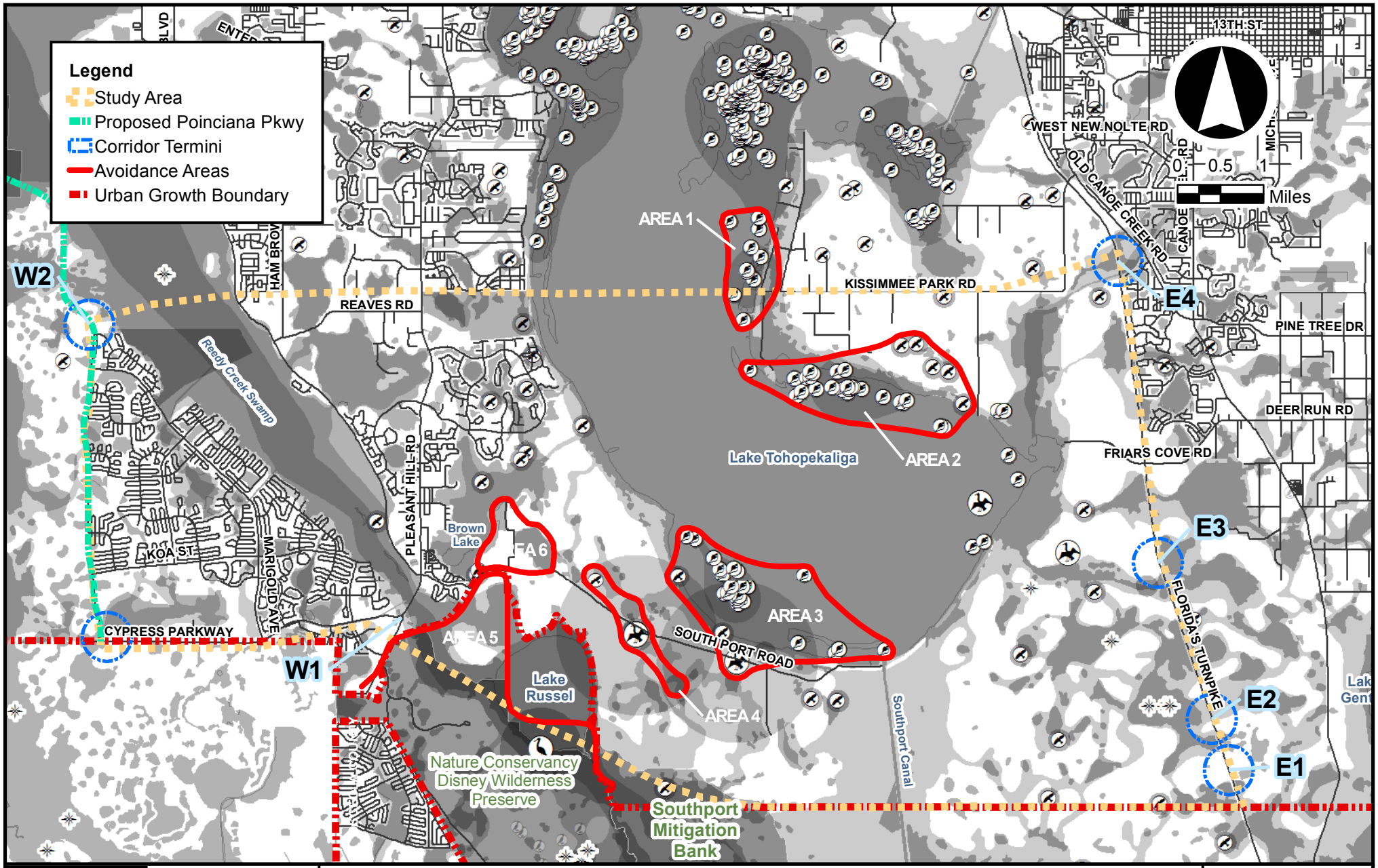
GIS Layer	Source (Year)
Well Field Protection Zones	Osceola County; Polk County
Wellhead Protection Zones	Osceola County; Polk County

3.2 Land Suitability Mapping (LSM)

LSM is the process used to help identify and select corridors that are an optimal fit within a study area. The GIS data is used to identify the locations of documented sensitive resources (e.g., historic and archaeological sites, recreational areas, and wetlands) which may be in or around the study area. By overlaying the GIS data with a map of the study area, it is possible to develop corridors that have a reduced impact on these sensitive resources. The utilization of LSM for this project helped identify several areas of constraint which were avoided in the development of the evaluation corridors. The LSM graphic can be found in Figure 9.

3.3 Geometric Design

Geometric constraints and criteria are also used in the development of corridor alternatives. Once the LSM was complete, the appropriate geometric criteria were used to develop corridors that are appropriate and practical for the project location and fit within the suitable area. The appropriate design criteria used in the development of the corridors are shown in Table 4. Once the viable corridors are determined, this table will also be used in the development of alignments associated with each corridor.



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LSM GRAPHIC

FIGURE 9

Table 4: Geometric Design Criteria

DESIGN ELEMENT	CRITERIA	SOURCE[(1) (2)]
Design Speed	70 mph	PPM Table 1.9.1
Roadway Classification	Rural Freeway	
Design Vehicle	WB-62FL	PPM Section 1.12
Design Year		
Design Year Highway Volume		
Access Management Class	Class 1	PPM Table 1.8.1
Typical Section		
Number of Lanes	4	
Lane Width	12 ft.	PPM Table 2.1.1
Shoulder Width - Inside	Total: 8 ft. Paved: 4 ft.	PPM Table 2.3.1
Shoulder Width - Outside	Total: 12 ft. Paved: 10 ft.	PPM Table 2.3.1
Median Width	88 ft.	PPM Table 2.2.1
Cross Slope Inside Lane Outside Lane Shoulders - Inside Shoulders - Outside	 0.02 0.02 0.05 0.06	 PPM Figure 2.1.1 PPM Figure 2.3.1
Border	94 ft. from edge of Traffic Lane	PPM Table 2.5.3
Roadside Slopes Front Slope Back Slope Transverse Slope	 1:6 to edge of Clear Zone 1:2 with Guardrail 1:4 or 1:3 1:10 or flatter	PPM Table 2.4.1
Horizontal Clearance to Guardrail	12 ft. from edge of Travel Lanes	PPM Section 4.3.5
Recoverable Terrain	36 ft. from edge of Travel Lanes	PPM Table 2.11.11
Horizontal Geometry		
Maximum Superelevation	0.10	PPM Table 2.9.1
Minimum Superelevation Transition Length	100 ft.	PPM Table 2.9.3
Superelevation Transition Slope Rate	1:250	PPM Table 2.9.3
Superelevation Transition On Tangent Within Curve	 80% 20%	PPM Section 2.9
Minimum Full Superelevation Curve Length	200 ft.	PPM Table 2.8.2a
Maximum Deflection (no curve)	0° 45' 00"	PPM Table 2.8.1a
Minimum Stopping Sight Distance	820 ft.	PPM Table 2.7.1
Maximum Curvature	3° 00'	PPM Table 2.8.3
Maximum Curvature Using Normal Cross Slope	0° 15'	PPM Table 2.8.4
Length of Horizontal Curve Desirable Minimum	 30V (V=Design Speed) = 2100 ft. 15V = 1050 ft.	PPM Table 2.8.2a

DESIGN ELEMENT	CRITERIA	SOURCE[(1) (2)]
Vertical Geometry		
Maximum Grade	3%	PPM Table 2.6.1
Maximum Change in Grade without Vertical Curve	0.20%	PPM Table 2.6.2
Minimum Crest Vertical Curve (Applicable for Ramp Criteria) Minimum Length	K = 506 1000 ft./1800 ft. (open highway/within interchange)	PPM Table 2.8.5
Minimum Sag Vertical Curve (Applicable for Ramp Criteria) Minimum Length	K = 206 800 ft.	PPM Table 2.8.6
Base Clearance Above Base Clearance Water Elevation	3 ft.	PPM Table 2.6.3
Roadway Clearance and Offsets (unless shielded with roadside barrier)		
Vertical Clearance for Bridges Roadway/Railroad over Roadway Roadway over Railroad Pedestrian over Roadway Pedestrian over Railroad	 16 ft. 6 in. 23 ft. 6 in. 17 ft. 6 in. 23 ft. 6 in.	PPM Table 2.10.1
Vertical Clearance for Overhead Sign Structures	17 ft. 6 in.	PPM Table 2.10.2
Horizontal Clearances		
Sign Clearance	40 ft. from travel lane (to edge of sign panel)	Index 17302
Conventional Light Pole Clearance	Min. 20 ft. from travel lane	PPM Table 2.11.2
Highmast Light Pole Clearance	Outside the Clear Zone	PPM Table 2.11.2
Utility Clearance	Outside the Clear Zone	PPM Table 2.11.3
Signal Pole Clearance	Outside the Clear Zone	PPM Table 2.11.4
Trees Clearance	Outside the Clear Zone	PPM Table 2.11.5
Bridge Piers and Abutments	Outside the Clear Zone	PPM Table 2.11.6
Clearance to Drop-off	Outside the Clear Zone	PPM Section 4.2.2
Canal Hazard Clearance	60 ft. from traveled way	PPM Section 4.2.1
Other Obstacles Clearance	Outside the Clear Zone	PPM Table 2.11.9
Shared Use Path		
Design Speed ≤4% Downgrade >4% Downgrade **Width**	 18 mph 30 mph 12 ft.	PPM Section 8.6.7
Maximum Cross Slope	2%	PPM Section 8.6.3
Horizontal Clearance to Lateral Obstruction	4 ft.	PPM Section 8.6.5
Graded Area Width	2 ft.	PPM Section 8.6.5
Graded Area Slope	1:6 max	PPM Section 8.6.5

DESIGN ELEMENT	CRITERIA	SOURCE[1] [2]
Vertical Clearance	8 ft. 10 ft. underpasses	PPM Section 8.6.6
Minimum Radii		PPM Table 8.6.2
18 mph, 2%	74 ft.	
18 mph, -2%	86 ft.	
30 mph, 2%	261 ft.	
30 mph, -2%	316 ft.	
Minimum Superelevation Transition Length	75 ft.	PPM Section 8.6.8.1
Minimum Stopping Sight Distance		PPM Table 8.6.8.2
18 mph	134 ft.	
30 mph	134 ft.	
Maximum Grade	5%	PPM Section 8.6.4
Minimum Length of Vertical Curve		PPM Section 8.6.9
S>L	$L = 2S-(900/A)$	
S<L	$L = AS^2/900$	

NOTES:

(1) Plans Preparation Manual, January 2015, FDOT

(2) Office of Design / Design Standards / Design Standards eBooklet 2016, FDOT

Section 4.0 Alternative Corridors Considered

The corridors identified for evaluation are shown in Figure 10. Corridor 1 and Corridors 2 through 13 east of Pleasant Hill Road were evaluated using a 400-foot-wide typical section shown in Figure 11. For evaluation purposes, the corridor impacts, which are discussed in Section 5.0, were determined based on a 425-foot-wide corridor for the area east of Pleasant Hill Road. The additional 25 feet of corridor width provides for additional area within the corridor width to adjust the roadway alignment in order to minimize impacts. The typical section used in the Cypress Parkway Corridor analysis from Poinciana Parkway to west of Solivita Boulevard is shown in Figure 12 and the typical section used from west of Solivita Boulevard to Pleasant Hill Road is shown in Figure 13. Since the land use along Cypress Parkway is more urban and along an existing corridor, an evaluation width matching the typical section of 524 feet and 310 feet were used for these two typical sections, respectively. The typical sections identified herein are for analysis purposes at the corridor evaluation level only and represent a conservatively wide evaluation width. A detailed evaluation of typical sections will be conducted during the PD&E phase of the project.

The No-Build Alternative, which involves no changes to the transportation facilities within the study area beyond currently planned and programmed (tentatively funded) projects, will be analyzed and documented in the NEPA phase of this project. The NEPA phase of this project will also document the identification of any Transportation System Management alternatives, which are defined as low capital cost transportation improvements designed to maximize the utilization and efficiency of the existing transportation system through improved system management.

Below are descriptions of the 13 evaluated Southport Connector corridors.

Corridor 1 begins just north of the western terminus of Marigold Avenue and ends approximately 1.1 miles south of the Kissimmee Park Road interchange at Florida's Turnpike. Corridor 1 crosses over Reedy Creek Swamp and the central portion of Lake Tohopekaliga. It has a total length of 12.2 miles, which includes 4.5 miles of bridge.

Corridor 2 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately 1.1 miles south of the Kissimmee Park Road interchange at Florida's Turnpike. Corridor 2 crosses over Reedy Creek and the central portion of Lake Tohopekaliga. It has a total length of 13.1 miles, which includes 5.1 miles of bridge.

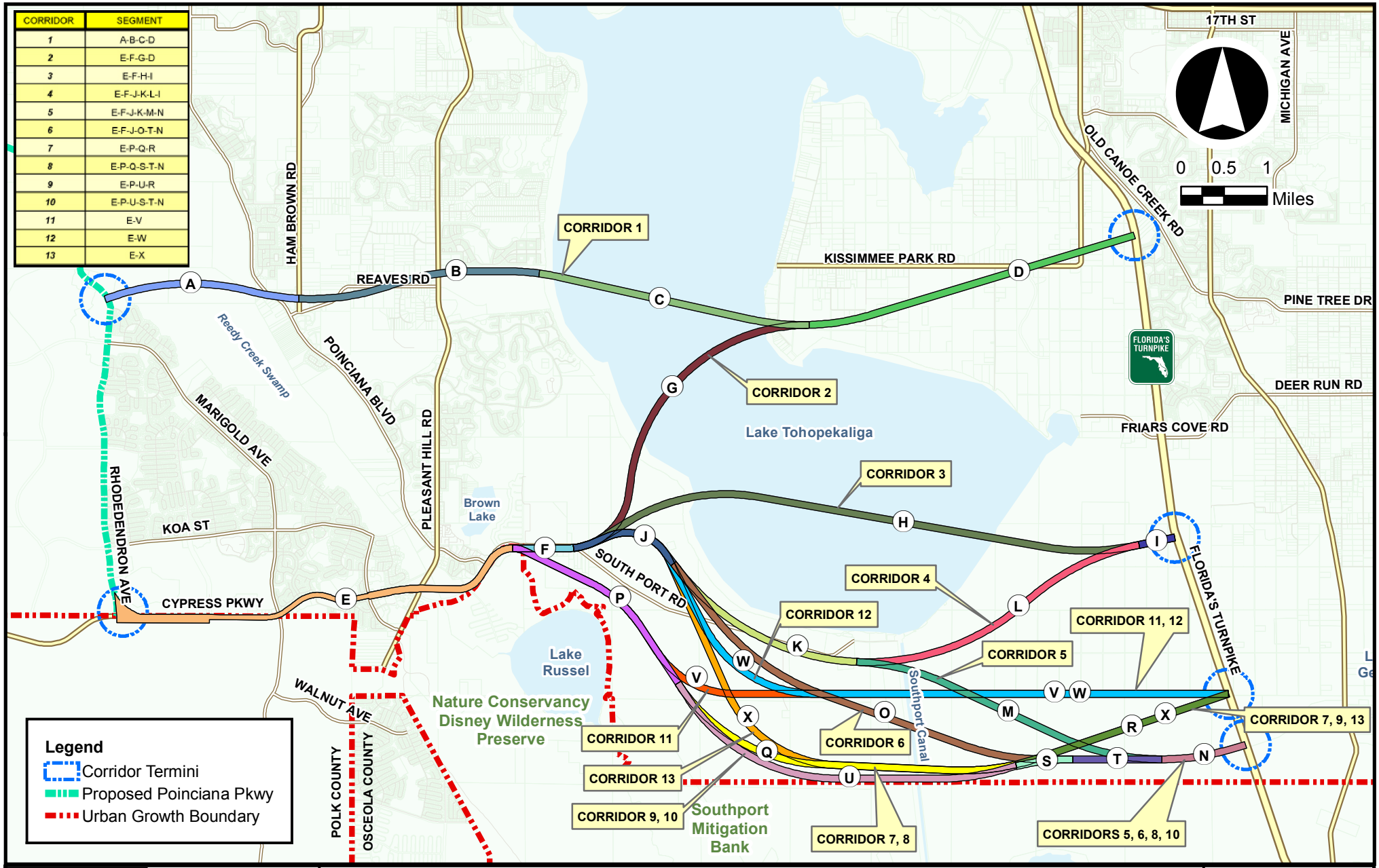
Corridor 3 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately 4.6 miles south of the Kissimmee Park Road interchange at Florida's Turnpike. Corridor 3 crosses over Reedy Creek and the southern portion of Lake Tohopekaliga. It has a total length of 12.3 miles, which includes 4.4 miles of bridge.

Corridor 4 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately 4.6 miles south of the Kissimmee Park Road interchange at Florida's Turnpike. Corridor 4 crosses over Reedy Creek and curves around the southern limits of Lake Tohopekaliga. It has a total length of 13.0 miles, which includes 2.7 miles of bridge.

Corridor 5 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 5 crosses over Reedy Creek and curves around the southern limits of Lake Tohopekaliga. It has a total length of 13.7 miles, which includes 2.7 miles of bridge.

Corridor 6 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 6 crosses over Reedy Creek and curves south of Lake Tohopekaliga. It has a total length of 13.8 miles, which includes 2.7 miles of bridge.

Corridor 7 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately 2.6 miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 7 crosses over Reedy Creek and curves to the south and then east along the Urban Growth Boundary line. It has a total length of 13.9 miles, which includes 2.7 miles of bridge.



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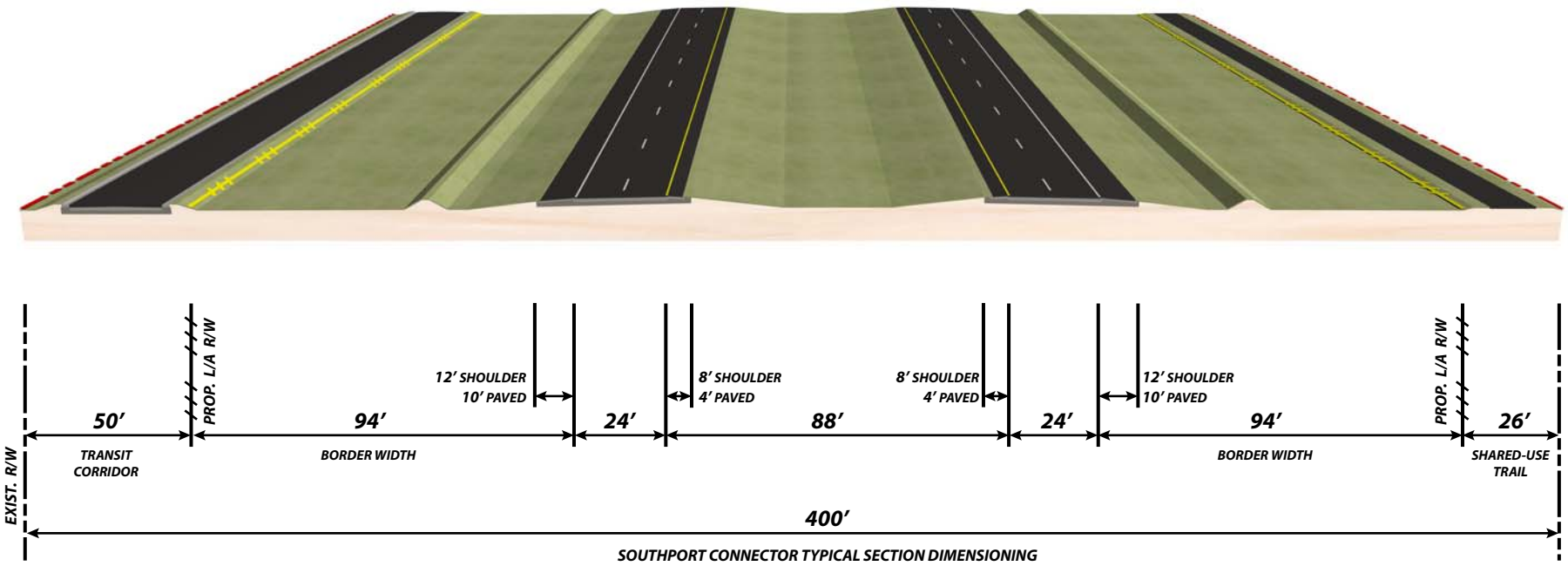
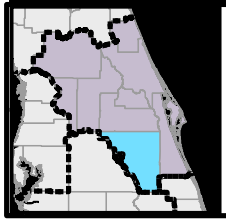
EVALUATED CORRIDORS

FIGURE 10





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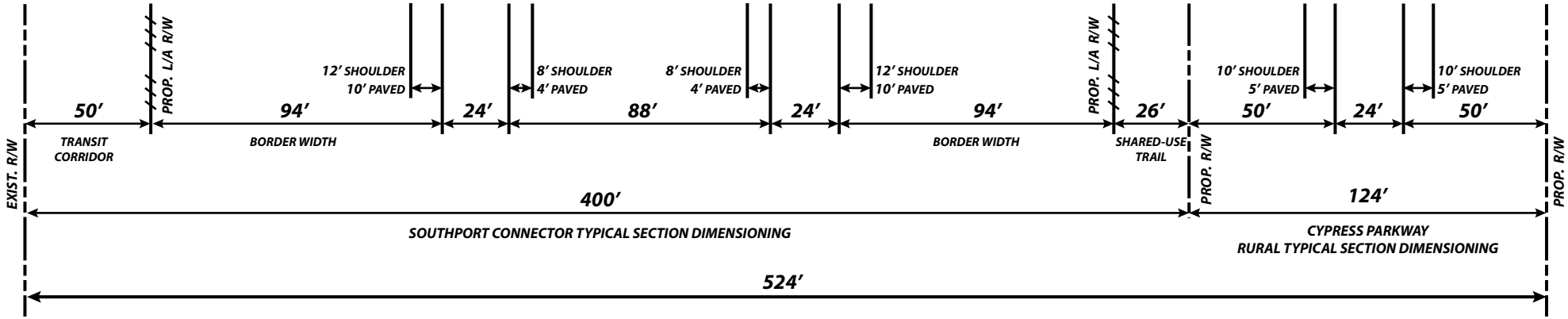
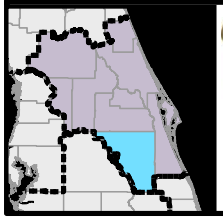
TYPICAL SECTION
SOUTHPORT CONECTOR
FROM POINCIANA PARKWAY TO THE FLORIDA TURNPIKE

FIGURE
11





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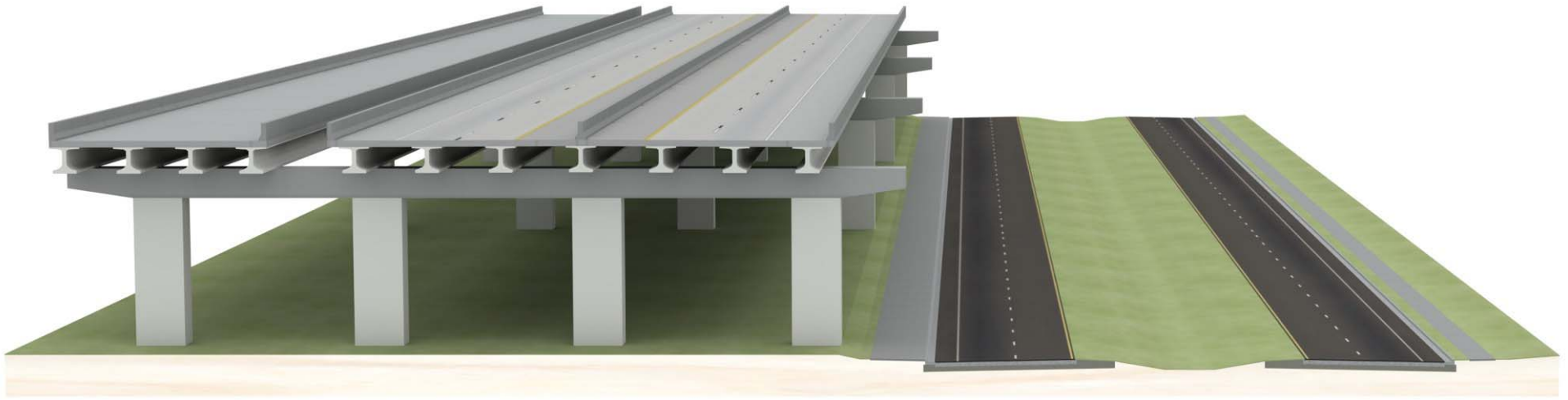
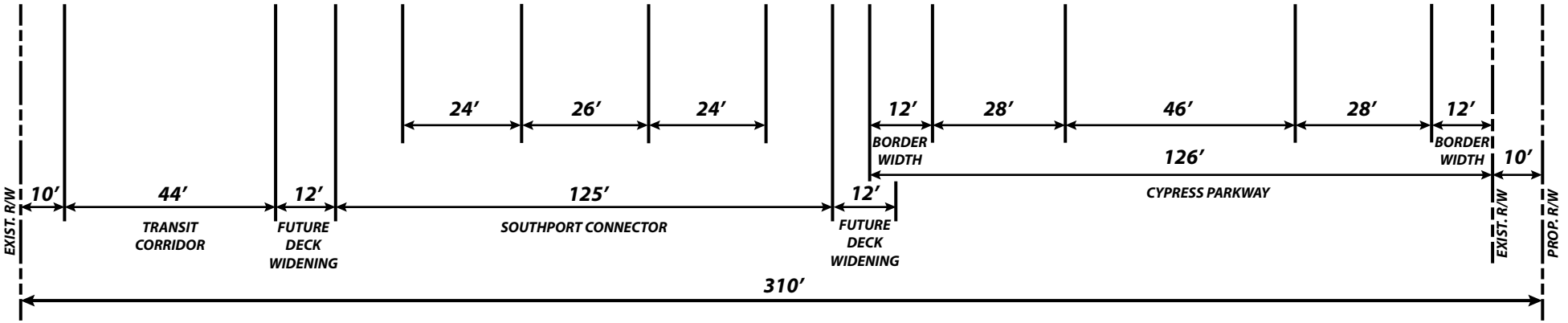
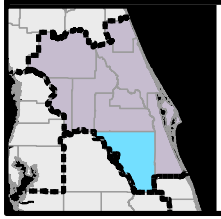
TYPICAL SECTION
SOUTH PORT CONNECTOR WITH CYPRESS PARKWAY
FROM POINCIANA PARKWAY TO WEST OF SOLIVITA BLVD

FIGURE
12







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TYPICAL SECTION
SOUTH PORT CONNECTOR WITH CYPRESS PARKWAY
FROM WEST OF SOLIVITA BLVD TO PLEASANT HILL RD

FIGURE
13

Corridor 8 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 8 crosses over Reedy Creek and curves to the south and then east along the Urban Growth Boundary line. It has a total length of 14.0 miles, which includes 2.7 miles of bridge.

Corridor 9 begins just east of the terminus of Poinciana at Cypress Parkway and ends approximately 2.6 miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 9 crosses over Reedy Creek and curves to the south and then east along the Urban Growth Boundary line. It has a total length of 14.0 miles, which includes 2.7 miles of bridge.

Corridor 10 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 10 crosses over Reedy Creek and curves to the south and then east along the Urban Growth Boundary line. It has a total length of 14.1 miles, which includes 2.7 miles of bridge.

Corridor 11 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 11 crosses over Reedy Creek and curves to the south and then east approximately midway between Lake Tohopekaliga and the Urban Growth Boundary line. It has a total length of 13.4 miles, which includes 2.7 miles of bridge.

Corridor 12 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 12 crosses over Reedy Creek and continues east for approximately 1.5 miles and then south between two existing caracara nests. It then turns east and is concurrent with Corridor 11 as it continues easterly midway between Lake Tohopekaliga and the Urban Growth Boundary line. It has a total length of 13.7 miles, which includes 2.7 miles of bridge.

Corridor 13 begins just east of the terminus of Poinciana Parkway at Cypress Parkway and ends approximately two miles north of the Canoe Creek Service Plaza at Florida's Turnpike. Corridor 13 crosses over Reedy Creek and continues east for approximately 1.5 miles and then south between two existing caracara nests. It continues in a southerly direction and then curves east and is concurrent with Corridor 7 along the Urban Growth Boundary line. It has a total length of 14.5 miles, which includes 2.7 miles of bridge.

Section 5.0 Alternative Corridor Evaluation Results

The corridors have been assessed using project-specific criteria developed as a result of ETAT comments and public input received during ETDM screening and the initial scoping activities. The evaluation criteria allows for the comparative assessment of the corridor alternatives. The corridors have been evaluated based on consideration of meeting the project purpose and need, avoidance and minimization of potential impacts to environmental resources, engineering feasibility, estimated costs, a narrative assessment of the corridors, and agency/public input. The analysis and assessment for each of these factors are described below.

5.1 Purpose and Need Evaluation

The purpose and need evaluation assesses how well each corridor satisfies the project purpose and need. For a corridor to meet the purpose and need of the project, it needs to provide an enhanced connection as compared to the No-Build (or no action) Alternative. The need for enhancement is related to unsatisfactory future operating conditions as determined in the traffic analysis. In addition, each corridor was evaluated for regional connectivity and enhanced mobility. Support of economic development and enhancement of emergency evacuation were also evaluated as secondary purposes. Table 5 below provides the screening criteria related to purpose and need.

Table 5: Purpose and Need Screening Criteria

Southport Connector Corridor	Segments	Primary Purposes				Secondary Purposes	
		Improved Connection from Poinciana to Turnpike [1]	Improved Traffic Operations [2]	Promote Regional System Linkage [3]	Enhance Mobility of People and Goods[4]	Support Economic Development [5]	Enhance Emergency/ Evacuation [6]
1	A-B-C-D	Yes	Yes	Yes	Yes	Yes	Yes
2	E-F-G-D	Yes	Yes	Yes	Yes	Yes	Yes
3	E-F-H-I	Yes	Yes	Yes	Yes	Yes	Yes
4	E-F-J-K-L-I	Yes	Yes	Yes	Yes	Yes	Yes
5	E-F-J-K-M-N	Yes	Yes	Yes	Yes	Yes	Yes
6	E-F-J-O-T-N	Yes	Yes	Yes	Yes	Yes	Yes
7	E-P-Q-R	Yes	Yes	Yes	Yes	Yes	Yes
8	E-P-Q-S-T-N	Yes	Yes	Yes	Yes	Yes	Yes
9	E-P-U-R	Yes	Yes	Yes	Yes	Yes	Yes
10	E-P-U-S-T-N	Yes	Yes	Yes	Yes	Yes	Yes
11	E-V	Yes	Yes	Yes	Yes	Yes	Yes
12	E-W	Yes	Yes	Yes	Yes	Yes	Yes
13	E-X	Yes	Yes	Yes	Yes	Yes	Yes

[1] Based on time of travel estimates derived from the project traffic model and corridor length
[2] Based on project traffic model
[3] Based on planning consistency and intermodal connectivity
[4] Based on typical section design speed, high speed facility, and SIS criteria
[5] Maximum satisfaction occurs with improved connectivity to Florida's Turnpike in conformance with OCX Master Plan
[6] Based on access, safety, and design measures

5.2 Potential Environmental Impacts

The potential direct effect on the environment has been considered for each corridor. Table 6 below provides a matrix evaluation that has been populated with data using the GIS layers identified in Table 3 and the corridor shapes for the corridors shown in Figure 3. Quantifiable values for social, cultural, natural, and physical environment have been shown in the matrix evaluation table. Non-quantifiable factors have been given a degree of impact rating.

Numerous listed species occur within the project study area. However, many of these species are habitat generalists (i.e., having habitat requirements that are satisfied by areas that occur within all of the proposed corridors). Upon review of the available data, it was determined that the preliminary species analysis for the corridor evaluation would be based on four species: Audubon's crested caracara, bald eagle, Everglade snail kite, and Florida grasshopper sparrow. These species were selected because they are known to occur within the project study area or their presence within the area could substantially affect one alignment alternative over another.

Potential impacts to the nesting and foraging habitat for the Audubon's crested caracara, Everglade snail kite, bald eagle, and Florida grasshopper sparrow are of particular importance for this project. The Audubon's crested caracara is a federally-designated threatened species and the Everglade snail kite and Florida grasshopper sparrow are federally-listed endangered species. For the comparative analysis, an approved methodology for evaluating and ranking the impacts to species was developed and the results are contained in Appendix 2. It should be noted that all 13 corridors involve jurisdictional waters of the U.S. Coast Guard (USCG) and a USCG navigational bridge permit will be required.

Table 6: Southport Connector Corridors Environmental Evaluation Matrix

Category	Evaluation Criteria	Unit of Measure	Southport Connector Corridor												
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
			A-B-C-D	E-F-G-D	E-F-H-I	E-F-J-K-L-I	E-F-J-K-M-N	E-F-J-O-T-N	E-P-Q-R	E-P-Q-S-T-N	E-P-U-R	E-P-U-S-T-N	E-V	E-W	E-X
Social	Potential Residential Displacements	Number	18	15	11	11	11	11	11	11	11	11	11	11	11
	Potential Non-residential Displacements	Number	4	11	11	11	11	11	11	11	11	11	11	11	11
	Community Facilities Displacements	Number	1	0	0	0	0	0	0	0	0	0	0	0	0
	Neighborhoods	Number	2	3	3	3	3	3	3	3	3	3	3	3	3
	Community Cohesion (Effect on residential connectivity and social interactions)	Degree[2]	7	5	5	5	5	5	5	5	5	5	5	5	5
Cultural	Potential Section 106 Resources [1]	No. of affected historic and arch. resources	0	2	2	2	2	2	2	2	2	2	2	2	2

Category	Evaluation Criteria	Unit of Measure	Southport Connector Corridor												
			1	2	3	4	5	6	7	8	9	10	11	12	13
			A-B-C-D	E-F-G-D	E-F-H-I	E-F-J-K-L-I	E-F-J-K-M-N	E-F-J-O-T-N	E-P-Q-R	E-P-Q-S-T-N	E-P-U-R	E-P-U-S-T-N	E-V	E-W	E-X
	Potential 4(f) Resources [3]	Number	1	3	3	3	3	3	3	3	3	3	3	3	3
Natural	Approved Mitigation Banks/ Conservation Lands	Acres	8	5	5	5	5	5	5	5	5	5	5	5	5
	Snail Kite Involvement	Degree[4]	10	10	10	1	1	1	1	1	1	1	1	1	1
	FL Grasshopper Sparrow Involvement	Degree[4]	1	1	1	3	3	3	3	3	3	3	2	2	2
	Bald Eagle Involvement	Degree[4]	2	2	1	4	4	4	3	3	3	3	4	3	3
	Audubon's Crested Caracara Involvement	Degree[4]	5	5	3	9	9	6	6	6	6	7	7	6	6
	Total Degree		18	18	15	17	17	14	13	13	13	14	14	12	12
	Non-forested Wetlands	Acres	33	34	11	9	7	8	30	24	38	33	32	24	24
	Forested Wetlands	Acres	149	85	103	73	62	58	67	55	70	58	102	107	72
	Total Wetlands	Acres	182	119	114	82	69	66	97	79	108	91	134	131	96
	Water Features	Acres	134	111	187	4	5	5	3	3	3	3	3	3	3
Physical	Floodplain Impacts	Acres	325	260	351	207	173	215	221	204	243	224	278	276	227
	Floodway Impacts	Acres	50	15	15	15	15	15	15	15	15	15	15	15	15
	Prime and Unique Farmlands Soils	Acres	188	303	222	321	356	375	302	343	303	256	347	313	332

Notes: [1] Brown's Landing Mound C (not evaluated by SHPO); SFWMD C-35 (not evaluated by SHPO)

[2] Corridor 1 was given a higher degree of effect since it bisects the rural residential neighborhoods along Reaves Road and Kissimmee Park Road. The remaining corridors do not bisect existing communities or utilize the existing Cypress Parkway corridor.

[3] Corridor 1 potentially impacts the Mac Overstreet Regional Park. Corridors 2-13 potentially impact the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), Vance Harmon Park, and Poinciana Predators Field.

[4] The degree of effect for species was based on the analysis contained in Appendix 2 Listed Species Evaluation.

5.3 Engineering Considerations

Engineering criteria include factors such as utility conflicts, right-of-way, and drainage concerns and interchange spacing on Florida's Turnpike. Drainage concerns may not be able to be measured. For example, a corridor may or may not be located in an area with flooding history/potential. The drainage ratings were determined based upon a

relative scale of complexity. The higher ratings for Corridors 1, 2, and 3 are due to the complexity of the design related to drainage and stormwater management on the bridge segments over Lake Tohopekaliga. Those corridors with technical feasibility concerns are likely to have high construction costs. The engineering considerations used to screen the corridors are listed in Table 7.

The total project costs are also shown in Table 7. Construction costs were based on general FDOT long range estimates for roadway and structures using the length of the project and the typical sections shown in Figures 10, 11, and 12. Roadway and structures cost estimates provided provisions for the transit and trail components. Structures costs over Lake Tohopekaliga included an additional cost component for piping to convey stormwater off of the bridge to pond locations. Right-of-way costs were estimated based on general costs of land and buildings in the study area by land use type and unit right-of-way costs obtained from FDOT District Five. Wetland mitigation costs were based on average in-basin mitigation bank credit costs.

Subsequent to the corridor workshops, Florida's Turnpike Enterprise (FTE) evaluated the location of the potential interchange locations relative to the Kissimmee Park Road interchange and the Canoe Creek Service Plaza. FTE determined that the proposed location of the interchange associated with Corridors 1 and 2 was too close to the existing and potential future ramps at the Kissimmee Park Road interchange. FTE determined that the proposed location of the interchange associated with Corridors 5, 6, 8, and 10 was too close to the exit ramp from the Canoe Creek Service Plaza. The correspondence from FTE is contained in Appendix 4. While not considered a fatal flaw at this point, more complex interchanges would be required to make these locations viable.

Table 7: Southport Connector Corridors Engineering Screening Matrix

Southport Connector Corridor	Segments	Major Utility Conflicts	Right-of-way Needs [1]		Drainage Complexity (Rating) [2]	Interchange Spacing [3]		Project Cost [4]
			Parcels	Acres		KPR	CC	
1	A-B-C-D	2	93	471	6	1.1	8.1	$952,000,000
2	E-F-G-D	0	112	380	4	1.1	8.1	$1,065,000,000
3	E-F-H-I	0	77	278	6	4.6	4.6	$1,200,000,000
4	E-F-J-K-L-I	0	86	487	1	4.6	4.6	$734,000,000
5	E-F-J-K-M-N	0	85	512	1	7.2	1.4	$741,000,000
6	E-F-J-O-T-N	0	83	523	2	7.2	1.4	$743,000,000
7	E-P-Q-R	0	82	557	2	6.6	2.0	$746,000,000
8	E-P-Q-S-T-N	0	76	535	1	7.2	1.4	$745,000,000
9	E-P-U-R	0	78	546	2	6.6	2.0	$749,000,000
10	E-P-U-S-T-N	0	77	541	2	7.2	1.4	$747,000,000
11	E-V	0	84	506	2	6.6	2.0	$744,000,000
12	E-W	0	91	511	2	6.6	2.0	$747,000,000
13	E-X	0	82	557	2	6.6	2.0	$752,000,000

Notes: [1] No. of Parcels/Acres of Impact
[2] High Complexity has a rating of 10. Low Complexity has a rating of 1
[3] Distance in miles to Kissimmee Park Road interchange/Canoe Creek Service Plaza
[4] Includes Construction, Wetland Mitigation, Right-of-Way, Design, CEI, and Contingency Costs

5.4 Narrative Assessment by Corridor

A narrative assessment was prepared for each of the corridors identified for evaluation in compliance with elements and issues contained in 23 U.S.C 168(c). These narratives provide a discussion of the affected environment and the advantages and limitations of each corridor and highlight any specific factors that may result in an unreasonable corridor. Public and agency input, such as input received from the ETAT, the Agency Project Advisory Group (APAG), project stakeholders, and the general public, was also summarized in the narrative. The narratives are not an exhaustive discussion of each corridor but instead summarize the main characteristics of each corridor that lead to a recommendation on whether the corridor will be carried forward for further review.

5.4.1 Corridor 1

- **Social Environment:** Corridor 1 has high potential for social impacts. It has 18 residential displacements, four non-residential displacements, and one community facility displacement (Centro De La Familia Cristiana). It also bisects the rural residential neighborhoods along Reaves Road and Kissimmee Park Road.
- **Cultural Environment:** Corridor 1 has high potential for cultural impacts. The corridor goes through the Mac Overstreet Regional Park, which is a potential Section 4(f) property.
- **Natural Environment:** Corridor 1 has high potential for natural impacts. The corridor impacts two conservation easements: the Upper Lakes Basin Watershed held by the SFWMD and the Poinciana Scrub Conservation Area held by Osceola County. The corridor crosses Lake Tohopekaliga, which is managed by FWC and SFWMD for federally-endangered snail kites. The lake is also an FWC designated Fish Management Area. Corridor 1, along with Corridors 2 and 3, has the highest degree of potential impact to federally-endangered snail kites and their nests. Corridor 1 has the highest potential impacts to wetlands. These potential direct wetland impacts consist of 33 acres of non-forested wetlands and 149 acres of forested wetlands for a total of 182 acres of potential wetland impacts. Additional secondary and cumulative impacts to these systems would be anticipated due to fragmentation and increased edge effects caused by the construction of the roadway corridor through a previously undisturbed portion of Reedy Creek. There are 134 acres of water features impacted.
- **Physical Environment:** Corridor 1 has high impacts to the physical environment. It directly impacts the City of St. Cloud potable water well field and a Duke Energy electrical substation located on Ham Brown Road just north of Reaves Road. It also comes in close proximity to the City of St. Cloud Water Treatment Plant.
- **Project Estimated Costs:** Corridor 1 has the third highest estimated project cost. The estimated project cost for Corridor 1 is $952,000,000.
- **Consistency with Local Planning:** Corridor 1 is inconsistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. Corridor 1 is inconsistent with the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange spacing for Corridor 1 does not comply with the minimum FTE spacing criteria from the existing Kissimmee Park Road interchange.
- **Other Considerations:** FWC expressed concern about Corridors 1, 2, and 3 primarily because of snail kite impacts as well as the fisheries and recreational aspects. Lake Tohopekaliga is one of the largest and most active recreational lakes for bass fishing, and there are regular tournaments with a large number of boats on the water. Concerns were related to habitat, lighting, and noise impacts on snail kites; boating safety; and pollution (spills) from the road. FWC indicated that the corridors crossing the lake would be very detrimental to snail kites.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 8 summarizes the major advantages and disadvantages associated with Corridor 1.

Table 8: Corridor 1 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to bald eagle • Low degree of impact to potential grasshopper sparrow habitat • No impacts to SFWMD C-35, Southport Park and boat ramp, or SFWMD/TNC Lake Russell property • Minimal smokeshed impacts to Southport Mitigation Bank and SFWMD/TNC southern fire managed lands	• Highest degree of impact to snail kite foraging and nesting habitat • Highest number of wetland impacts • Proposed interchange does not comply with FTE minimum spacing criteria from the Kissimmee Park Road interchange • Moderate impacts to caracara foraging and nesting habitat • Highest estimated project costs • Highest number of residential relocations • High impacts to Mac Overstreet Regional Park • Impacts to SFWMD conservation easement lands • Potential smokeshed impacts to SFWMD northern fire managed lands • Impacts to Reaves Road low density residential community • Impacts to Kissimmee Park Road low density residential community • Recreational impacts to Lake Tohopekaliga • Direct impacts to Duke Energy electrical substation • Potential impacts to City of St. Cloud Water Treatment Plant • Direct impacts to City of St. Cloud potable water well field • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan and OCX Master Plan

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor has the highest wetland impacts, the third highest estimated total costs, and the highest number of residential impacts. Lake Tohopekaliga is managed for snail kites and has some of the most significant snail kite nesting habitat in the state. The alignment over the lake would potentially result in snail kite "takes" associated with the loss of nesting and foraging habitat. The US Fish and Wildlife Service (USFWS) is unlikely to support the direct take of a snail kite nest or any work within either of the nest protection zones or the Priority Management Zones. FWC has concerns related to lighting and noise impacts, which have been shown to degrade snail kite nesting habitat; boating safety; and pollution (spills) from the road. Corridor 1 also bisects two conservation easements and has major impacts to the Mac Overstreet Regional Park. The corridor bisects the rural residential community located along Kissimmee Park Road and directly impacts the City of St. Cloud potable water well field. Corridor 1 also has high potential for public controversy. The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Kissimmee Park Road interchange on Florida's Turnpike. Shifting the interchange further north or south would have major impacts to residential communities east and west of Florida's Turnpike.
- **Agency & Public Input:** After the Corridor Evaluation Workshop held in January 2015, representatives with FTE raised a concern that the northernmost termini on Florida's Turnpike was located too close in proximity to the Kissimmee Park Road interchange. Further evaluation by FTE staff determined the location of the

terminus would not be possible due to its close proximity to the ramps from the Kissimmee Park Road interchange.

Recommendation: Corridor 1 is **not recommended** to be carried forward for further analysis.

5.4.2 Corridor 2

- **Social Environment:** Corridor 2 has high potential for social impacts. It has 15 residential displacements and 11 non-residential displacements.
- **Cultural Environment:** Corridor 2 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. Corridor 2 also is adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 2 has high potential for natural impacts. The corridor crosses Lake Tohopekaliga which is managed by SFWMD and FWC for snail kites. Corridor 2, along with Corridors 1 and 3, has the highest degree of potential impact to snail kites and their nests. It also has the fourth highest potential impacts to wetlands. These potential wetland direct impacts consist of 34 acres of non-forested wetlands and 85 acres of forested wetlands for a total of 119 acres of potential wetland impacts. There are 111 acres of water features impacted.
- **Physical Environment:** Corridor 2 has high impacts to the physical environment. It comes in close proximity to the City of St. Cloud Water Treatment Plant. The corridor crosses over the City of St. Cloud potable water well field. There will also be impacts associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 2 has the second highest estimated project cost. The estimated project cost for Corridor 2 is $1,065,000,000.
- **Consistency with Local Planning:** Corridor 2 is inconsistent with the South Lake Toho Element of the Osceola County Comprehensive Plan and is inconsistent with the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange spacing for Corridor 2 does not comply with the minimum spacing criteria from the existing Kissimmee Park Road interchange.
- **Other Considerations:** FWC expressed concern about Corridors 1, 2, and 3 primarily because of the snail kite impacts as well as the fisheries and recreational aspects. Lake Tohopekaliga is one of the largest and most active recreational lakes for bass fishing, and there are regular tournaments with a large number of boats on the water. Concerns were related to habitat, lighting and noise impacts on snail kites; boating safety; and pollution (spills) from the road. FWC indicated that the corridors crossing the lake would be very detrimental to snail kites.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 9 summarizes the major advantages and disadvantages associated with Corridor 2.

Table 9: Corridor 2 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to bald eagle nests • Low degree of impact to potential grasshopper sparrow habitat • Shortest travel distance to Orlando urban area • No impacts to SFWMD C-35 or Southport Park and boat ramp • Minimal smokeshed impacts to SFWMD northern fire managed lands	• Highest degree of impact to snail kites • Proposed interchange does not comply with FTE minimum spacing distance criteria from the Kissimmee Park Road interchange • Moderate degree of impact to caracara foraging and nesting habitat • High number of wetland impacts • Higher number of residential relocations • Potential impacts to SFWMD/TNC Lake Russell property • Second highest estimated project costs • Recreational impacts to Lake Tohopekaliga • Potential impacts to City of St. Cloud Water Treatment Plant • Direct impacts to City of St. Cloud potable water well field • Impacts to commercial businesses and residences on Cypress Parkway • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan and OCX Master Plan • Impacts to Kissimmee Park Road low density residential community • Potential smokeshed impacts to SFWMD/TNC southern fire managed lands • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor has the fourth highest wetland impacts, the second highest estimated total costs, and the second highest number of residential impacts. Lake Tohopekaliga is managed for snail kites and has some of the most significant snail kite nesting habitat in the state. The alignment over the lake would potentially result in snail kite "takes" associated with the loss of nesting and foraging habitat. The USFWS is unlikely to support the direct take of a snail kite nest or any work within either of the nest protection zones or the Priority Management Zones. FWC has concerns related to lighting and noise impacts, which have been shown to degrade snail kite nesting habitat; boating safety; and pollution (spills) from the road. Corridor 2 has potential impacts to SFWMD - Lake Russell Property (Osceola County Environmental Study Center). The corridor bisects the rural residential community located along Kissimmee Park Road. It also has direct impacts to the City of St. Cloud potable water well field. The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Kissimmee Park Road interchange on Florida's Turnpike. Shifting the interchange further south would have major impacts to residential communities east of the Turnpike.
- **Agency & Public Input:** After the Corridor Evaluation Workshop held in January 2015, representatives with FTE raised a concern that the southernmost termini on Florida's Turnpike was located too close in proximity to the Kissimmee Park Road interchange. Further evaluation by FTE staff determined the location of the terminus would not be possible due to its close proximity to the ramps from the Kissimmee Park Road interchange.

Recommendation: Corridor 2 is **not recommended** to be carried forward for further analysis.

5.4.3 Corridor 3

- **Social Environment:** Corridor 3 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 3 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. Corridor 3 also is adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 3 has high potential for natural impacts. The corridor crosses Lake Tohopekaliga, which is managed by SFWMD and FWC for snail kites. Corridor 3, along with Corridors 1 and 2, has the highest degree of potential impact to snail kites. Corridor 3 has the fifth highest potential impacts to wetlands. The potential direct wetland impacts consist of 11 acres of non-forested wetlands and 103 acres of forested wetlands for a total of 114 acres of potential wetland impacts. There are 187 acres of water features impacted.
- **Physical Environment:** Corridor 3 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 3 has the highest estimated project costs. The estimated project cost for Corridor 3 is $1,200,000,000.
- **Consistency with Local Planning:** Corridor 3 is inconsistent with the South Lake Toho Element of the Osceola County Comprehensive Plan and is inconsistent with the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** FWC expressed concern about Corridors 1, 2 and 3 primarily because of the snail kite impacts as well as the fisheries and recreational aspects. Lake Tohopekaliga is one of the largest and most active recreational lakes for bass fishing, and there are regular tournaments with a large number of boats on the water. Concerns were related to lighting and noise impacts on snail kites, boating safety, and pollution (spills) from the road. FWC indicated that the corridors crossing the lake would be very detrimental to snail kites.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 10 summarizes the major advantages and disadvantages associated with Corridor 3.

Table 10: Corridor 3 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to caracara habitat • Low degree of impact to bald eagle nests • Low degree of impact to potential grasshopper sparrow habitat • No impacts to SFWMD C-35 or Southport Park and boat ramp • Minimal smokeshed impacts to SFWMD northern fire managed lands • The proposed interchange location meets FTE interchange spacing criteria	• Highest degree of impact to snail kites • High number of wetland impacts • Highest estimated project costs • Potential impacts to SFWMD/TNC Lake Russell property • Recreational impacts to Lake Tohopekaliga • Impacts to commercial businesses and residences on Cypress Parkway • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan and OCX Master Plan • Potential smokeshed impacts to SFWMD/TNC southern fire managed lands • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor has the fifth highest wetland impacts and the highest estimated total costs. Lake Tohopekaliga is managed for snail kites and has some of the most significant snail kite nesting habitat in the state. The alignment over the lake would potentially result in snail kite "takes" associated with the loss of nesting and foraging habitat. The USFWS is unlikely to support the direct take of a snail kite nest or any work within either of the nest protection zones or the Priority Management Zones. FWC has concerns related to lighting and noise impacts, which have been shown to degrade snail kite nesting habitat; boating safety; and pollution (spills) from the road.

Recommendation: Corridor 3 is **not recommended** to be carried forward for further analysis.

5.4.4 Corridor 4

- **Social Environment:** Corridor 4 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 4 has a high potential for cultural impacts. The corridor is located adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property, and adjacent to Southport Park and boat ramp, which is also a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. Corridor 4 also is adjacent to an unevaluated archaeological site and crosses a potentially historic property: SFWMD C-35.
- **Natural Environment:** Corridor 4 has high potential for natural impacts. The corridor is along the south edge of Lake Tohopekaliga. As discussed in Appendix 2, corridors located closer to lakes have a higher potential for impacting bald eagle nests than corridors located further away from the lake. Corridors 4, 5, 6, and 10 have the highest degree of effect for bald eagles due to their proximity to Lake Tohopekaliga. Corridor 4 goes through habitat that supports caracara nesting and foraging habitat. A federally-listed threatened caracara nest was identified by project ecologists during preliminary field reviews conducted in February 2013. The nest is located just south of Southport Road, which is approximately 1.6 miles west of the Southport Park, and is within the footprint of Corridors 4 and 5. Additionally, active caracara nests were identified by Joan Morrison while working for the FWC in 1995 and again in 1998. Those nests are located approximately 1.2 miles west of the nest identified by project in 2013. Corridors 4 and 5 are within the

secondary nest protection zone for the caracara nests observed by Ms. Morrison. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 4 has lower potential impacts to wetlands. These potential direct wetland impacts consist of 9 acres of non-forested wetlands and 73 acres of forested wetlands for a total of 82 acres of potential wetland impacts. There are 4 acres of water features impacted.

- **Physical Environment:** Corridor 4 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 4 has the lowest estimated project costs. The estimated project cost for Corridor 4 is $734,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 4 is inconsistent with the South Lake Toho Element of the Osceola County Comprehensive Plan and is inconsistent with the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from the Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** Due to the close proximity to Lake Tohopekaliga, it is anticipated that Corridor 4 would have a negative aesthetic impact on the recreational use of the lake.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 11 summarizes the major advantages and disadvantages associated with Corridor 4.

Table 11: Corridor 4 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower number of residential displacements • Relatively low number of wetland impacts • Lowest project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • The proposed interchange location meets FTE interchange spacing criteria	• Direct impact to caracara nest • Moderate degree of impact to caracara foraging and nesting habitat • Higher degree of impact to bald eagle nests • Moderate degree of impact to potential grasshopper sparrow habitat • Anticipated aesthetic impact to recreational use of Lake Tohopekaliga • Potential impacts to SFWMD C-35, Southport Park and boat ramp, and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern fire managed lands • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan and OCX Master Plan • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor directly impacts known caracara nests and, along with Corridor 5, has the highest relative degree of effect for caracara. It goes through the portion of the study area with the highest likelihood of impacting bald eagle nests.

Recommendation: Corridor 4 is **not recommended** to be carried forward for further analysis.

5.4.5 Corridor 5

- **Social Environment:** Corridor 5 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 5 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property, and adjacent to Southport Park and boat ramp, which is also a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 5 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 5 has high potential for natural impacts. Similar to Corridor 4, Corridor 5 is along the south edge of Lake Tohopekaliga. As discussed in Appendix 2, corridors located closer to lakes have a higher potential for impacting bald eagle nests than corridors located further away from the lake. Corridor 5 goes through habitat that supports caracara nesting and foraging habitat. A federally-listed threatened caracara nest was identified by project ecologists during preliminary field reviews conducted in February 2013. The nest is located just south of Southport Road, which is approximately 1.6 miles west of the Southport Park, and is within the footprint of Corridors 4 and 5. Additionally, active caracara nests were identified by Joan Morrison while working for the FWC in 1995 and again in 1998. Those nests are located approximately 1.2 miles west of the nest identified by project ecologists in 2013. Corridors 4 and 5 are within the secondary nest protection zone for the caracara nests observed by Ms. Morrison. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 5 has lower potential impacts to wetlands. These potential direct wetland impacts consist of 7 acres of non-forested wetlands and 62 acres of forested wetlands for a total of 69 acres of potential wetland impacts. There are 5 acres of water features impacted.
- **Physical Environment:** Corridor 5 has low to a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 5 has relatively low estimated project costs. The estimated project cost for Corridor 5 is $741,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 5 is inconsistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. The corridor is consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** Due to the close proximity to Lake Tohopekaliga, it is anticipated that Corridor 5 would have a negative aesthetic impact on the recreational use of the lake.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 12 summarizes the major advantages and disadvantages associated with Corridor 5.

Table 12: Corridor 5 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower number of residential displacements • Relatively low number of wetland impacts • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • Consistent with OCX Master Plan	• Direct impact to caracara nest • Proposed interchange does not comply with FTE minimum spacing criteria from the Canoe Creek Service Plaza • Moderate degree of impact to caracara foraging and nesting habitat • Higher degree of impact to bald eagle nests • Moderate degree of impact to potential grasshopper sparrow habitat • Anticipated aesthetic impact to recreational use of Lake Tohopekaliga • Potential impacts to SFWMD C-35, Southport Park and boat ramp and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern fire managed lands • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor goes through habitat that supports caracara nesting and foraging and, along with Corridor 4, has the highest relative degree of effect for caracara. It goes through the portion of the study area with the highest likelihood of impacting bald eagle nests. The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Agency & Public Input:** After the Corridor Evaluation Workshop held in January 2015, representatives with FTE raised a concern that the southernmost termini on Florida's Turnpike was located too close in proximity to the Canoe Creek Service Plaza. Further evaluation by FTE staff determined the location of the terminus would not be possible due to its close proximity to the ramps from the Canoe Creek Service Plaza.

Recommendation: Corridor 5 is **not recommended** to be carried forward for further analysis.

5.4.6 Corridor 6

- **Social Environment:** Corridor 6 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 6 has high potential for cultural impacts. It is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 6 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 6 has high potential for natural impacts. The corridor is rated similar to Corridors 4 and 5 since a portion of the corridor is near Lake Tohopekaliga. As discussed in Appendix 2, corridors located closer to lakes have a higher potential for impacting bald eagle nests than corridors located further away from the lake. Corridors 4, 5, 6, and 11 have the highest degree of effect for bald eagles relative

to the other corridor alternatives. Corridor 6 goes through habitat that supports caracara nesting and foraging habitat; however, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow. However, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 6 has the lowest potential impacts to wetlands. These potential direct wetland impacts consist of 8 acres of non-forested wetlands and 58 acres of forested wetlands for a total of 66 acres of potential wetland impacts. There are 5 acres of water features impacted.

- **Physical Environment:** Corridor 6 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway and a radio tower south of Lake Tohopekaliga.
- **Project Estimated Costs:** Corridor 6 has relatively low estimated project costs. The estimated project cost for Corridor 6 is $743,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 6 is inconsistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. Corridor 6 is consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** N/A
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 13 summarizes the major advantages and disadvantages associated with Corridor 6.

Table 13: Corridor 6 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower number of residential displacements • Relatively low number of wetland impacts • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • Consistent with OCX Master Plan • No impacts to Southport Park and boat ramp • Lower aesthetic impact to recreational use of Lake Tohopekaliga	• Moderate degree of impact to caracara foraging and nesting habitat • Proposed interchange does not comply with FTE minimum spacing criteria from the Canoe Creek Service Plaza • Higher degree of impact to bald eagle nests • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern and Southport Mitigation Bank fire managed lands • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor avoids impacts to known caracara nests. It has the lowest potential impact on wetlands. Corridor 6 has relatively low estimated costs. The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Agency & Public Input:** After the Corridor Evaluation Workshop held in January 2015, representatives with FTE raised a concern that the southernmost termini on Florida's Turnpike was located too close in proximity to the Canoe Creek Service Plaza. Further evaluation by FTE staff determined the location of the terminus would not be possible due to its close proximity to the ramps from the Canoe Creek Service Plaza. Prior to the Corridor Evaluation Workshop, Corridor 6 was recommended for further evaluation. However, due to the information provided by FTE, Corridor 6 is no longer recommended for further evaluation.

Recommendation: Corridor 6 is **not recommended** to be carried forward for further analysis.

5.4.7 Corridor 7

- **Social Environment:** Corridor 7 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 7 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 7 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 7 has moderate potential for natural impacts. It is further away from Lake Tohopekaliga than Corridors 4, 5, 6, and 11 and has a lower degree of potential impact to the bald eagle. Corridor 7 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 7 has a moderate potential impact to wetlands. These potential direct wetland impacts consist of 30 acres of non-forested wetlands and 67 acres of forested wetlands for a total of 97 acres of potential wetland impacts. There are 3 acres of water features impacted.
- **Physical Environment:** Corridor 7 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 7 has relatively low estimated project costs. The estimated project cost for Corridor 7 is $746,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 7 is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. Corridor 7 is also consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** N/A
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 14 summarizes the major advantages and disadvantages associated with Corridor 7.

Table 14: Corridor 7 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower degree of impact to bald eagle nests • Low number of residential displacements • Relatively low number of wetland impacts • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Consistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga • The proposed interchange location meets FTE interchange spacing criteria	• Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern and Southport Mitigation Bank fire managed lands • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor avoids impacts to known caracara nests. It goes through the area with the least likelihood of impacting bald eagle nests. Corridor 7 is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan and the OCX Master Plan.

Recommendation: Corridor 7 is **recommended** to be carried forward for further analysis.

5.4.8 Corridor 8

- **Social Environment:** Corridor 8 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 8 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 8 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 8 has moderate potential for natural impacts. It is further away from Lake Tohopekaliga than Corridors 4, 5, 6, and 11 and would likely have a reduced impact to bald eagle nesting habitat. Corridor 8 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 8 has a moderate potential impact to wetlands. These potential direct wetland impacts consist of 24 acres of non-forested wetlands and 55 acres of forested wetlands for a total of 79 acres of potential wetland impacts. There are 3 acres of water features impacted.
- **Physical Environment:** Corridor 8 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 8 has relatively low estimated project costs. The estimated project cost for Corridor 8 is $745,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.

- **Consistency with Local Planning:** Corridor 8 is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. It is also consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** N/A
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 15 summarizes the major advantages and disadvantages associated with Corridor 8.

Table 15: Corridor 8 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower degree of impact to bald eagle nests • Lower number of residential displacements • Relatively low number of wetland impacts • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Consistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga	• Proposed interchange does not comply with FTE minimum spacing criteria from the Canoe Creek Service Plaza • Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern and Southport Mitigation Bank fire managed lands • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor avoids impacts to known caracara nests. It goes through the area with the least likelihood of impacting bald eagle nests. Corridor 8 is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan and the OCX Master Plan. The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Agency & Public Input:** After the Corridor Evaluation Workshop held in January 2015, representatives with FTE raised a concern that the southernmost termini on Florida's Turnpike was located too close in proximity to the Canoe Creek Service Plaza. Further evaluation by FTE staff determined the location of the terminus would not be possible due to its close proximity to the ramps from the Canoe Creek Service Plaza. Prior to the Corridor Evaluation Workshop, Corridor 8 was recommended for further evaluation. However, due to the information provided by FTE, Corridor 8 is no longer recommended for further evaluation.

Recommendation: Corridor 8 is **not recommended** to be carried forward for further analysis.

5.4.9 Corridor 9

- **Social Environment:** Corridor 9 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 9 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field,

which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 9 is also adjacent to an unevaluated archaeological site.

- **Natural Environment:** Corridor 9 has moderate to high potential for natural impacts. It is further away from Lake Tohopekaliga than Corridors 4, 5, 6, and 11 and would likely have a reduced impact to bald eagle nesting habitat. Corridor 9 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 9 has a moderate to high potential impact to wetlands. These potential wetland impacts consist of 38 acres of non-forested wetlands and 70 acres of forested wetlands for a total of 108 acres of potential wetland impacts. There are 3 acres of water features impacted.
- **Physical Environment:** Corridor 9 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 9 has relatively low estimated project costs. The estimated project cost for Corridor 9 is $749,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 9 is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan and it is consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** Corridor 9 is almost identical to Corridor 7 but has higher wetland impacts. Corridor 7 was developed as an alternative to Corridor 9 to reduce wetland impacts.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 16 summarizes the major advantages and disadvantages associated with Corridor 9.

Table 16: Corridor 9 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower degree of impact to bald eagle nests • Lower number of residential displacements • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Consistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga • The proposed interchange location meets FTE interchange spacing criteria	• Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern and Southport Mitigation Bank fire managed lands • Corridor is very similar to Corridor 7 but has higher wetland impacts • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** Corridor 9 is almost identical to Corridor 7 (recommended for further evaluation) but has higher wetland impacts than Corridor 7.

Recommendation: Corridor 9 is **not recommended** to be carried forward for further analysis.

5.4.10 Corridor 10

- **Social Environment:** Corridor 10 has moderate to high potential for social impacts. It has 11 residential displacement and 11 non-residential displacements.
- **Cultural Environment:** Corridor 10 has high potential for cultural impacts. The corridor is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 10 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 10 has moderate to high potential for natural impacts. It is further away from Lake Tohopekaliga than Corridors 4, 5, 6, and 11 and would likely have a reduced impact to bald eagle nesting habitat. Corridor 10 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 10 has a moderate to high potential impact to wetlands. These potential wetland impacts consist of 33 acres of non-forested wetlands and 58 acres of forested wetlands for a total of 91 acres of potential wetland impacts. There are 3 acres of water features impacted.
- **Physical Environment:** Corridor 10 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 10 has relatively low estimated project costs. The estimated project cost for Corridor 10 is $747,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 10 is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. Corridor 10 is also consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** Corridor 10 is almost identical to Corridor 8 but has higher wetland impacts. Corridor 8 was developed as an alternative to Corridor 10 to reduce wetland impacts.
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 17 summarizes the major advantages and disadvantages associated with Corridor 10.

Table 17: Corridor 10 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower degree of impact to bald eagle nests • Lower number of residential displacements • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga	• Proposed interchange does not comply with FTE minimum spacing distance criteria from the Canoe Creek Service Plaza • Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern and Southport Mitigation Bank fire managed lands • Moderate impacts to non-residential displacements • Corridor is very similar to Corridor 8 but has higher wetland impacts • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** The proposed interchange location does not comply with minimum FTE interchange spacing criteria from the Canoe Creek Service Plaza on Florida's Turnpike.
- **Agency & Public Input:** After the Corridor Evaluation Workshop held in January 2015, representatives with FTE raised a concern that the southernmost termini on Florida's Turnpike was located too close in proximity to the Canoe Creek Service Plaza. Further evaluation by FTE staff determined the location of the terminus would not be possible due to its close proximity to the ramps from the Canoe Creek Service Plaza.

Recommendation: Corridor 10 is **not recommended** to be carried forward for further analysis.

5.4.11 Corridor 11

- **Social Environment:** Corridor 11 has moderate to high potential for social impacts. It has 11 residential displacements and 11 non-residential displacements.
- **Cultural Environment:** Corridor 11 has high potential for cultural impacts. It is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 11 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 11 has moderate potential for natural impacts. Based on observed eagle activity, Corridor 11 also has the same higher potential for impacting bald eagles as Corridors 4, 5, and 6. Corridor 11 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 11 has the second highest potential impact to wetlands. These potential direct wetland impacts consist of 32 acres of non-forested wetlands and 102 acres of forested wetlands for a total of 134 acres of potential wetland impacts. There are 3 acres of water features impacted.

- **Physical Environment:** Corridor 11 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 11 has relatively low estimated project costs. The estimated project cost for Corridor 11 is $744,000,000. Corridors 4 through 11 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 11 is inconsistent with the South Lake Toho Master Plan. Corridor 11 is consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** N/A
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 18 summarizes the major advantages and disadvantages associated with Corridor 11.

Table 18: Corridor 11 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower number of residential displacements • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga • The proposed interchange location meets FTE interchange spacing criteria	• High potential wetland impacts • Higher degree of impact to bald eagle nests • Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD/TNC Lake Russell property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD/TNC southern and Southport Mitigation Bank fire managed lands • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor avoids impacts to known caracara nests. It goes through the area with the least likelihood of impacting bald eagle nests. Corridor 11 is consistent with the OCX Master Plan. Corridor 11 is very similar to Corridor 12 but is closer to TNC fire managed lands than Corridor 12.

Recommendation: Corridor 11 is **not recommended** to be carried forward for further analysis.

5.4.12 Corridor 12

- **Social Environment:** Corridor 12 has moderate to high potential for social impacts. It has 11 residential displacements and 11 non-residential displacements.
- **Cultural Environment:** Corridor 12 has high potential for cultural impacts. It is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both

anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 12 is also adjacent to an unevaluated archaeological site.

- **Natural Environment:** Corridor 12 has moderate potential for natural impacts. Corridor 12 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 12 has the third highest potential impact to wetlands. These potential direct wetland impacts consist of 24 acres of non-forested wetlands and 107 acres of forested wetlands for a total of 131 acres of potential wetland impacts. There are 3 acres of water features impacted.
- **Physical Environment:** Corridor 12 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 12 has relatively low estimated project costs. The estimated project cost for Corridor 12 is $747,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 12 is inconsistent with the South Lake Toho Master Plan. Corridor 12 is consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** N/A
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 19 summarizes the major advantages and disadvantages associated with Corridor 12.

Table 19: Corridor 12 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Lower degree of impact to bald eagle nests • Lower number of residential displacements • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • Located farther away from TNC Lake Russell and Southport Mitigation Bank fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga • The proposed interchange location meets FTE interchange spacing criteria	• High potential wetland impacts • Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD and, to a lesser degree, TNC and Southport Mitigation Bank fire managed lands • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor avoids impacts to known caracara nests. It goes through the area with the least likelihood of impacting bald eagle nests. Corridor 12 is

consistent with the OCX Master Plan. Corridor 12 is very similar to Corridor 11 but is farther away from TNC fire managed lands than Corridor 11.

Recommendation: Corridor 12 is **recommended** to be carried forward for further analysis.

5.4.13 Corridor 13

- **Social Environment:** Corridor 13 has moderate to high potential for social impacts. It has 11 residential displacements and 11 non-residential displacements.
- **Cultural Environment:** Corridor 13 has high potential for cultural impacts. It is adjacent to the SFWMD - Lake Russell Property (Osceola County Environmental Study Center), which is a Section 4(f) property. The corridor also goes along the north side of Vance Harmon Park and Poinciana Predators Field, which are both anticipated to be determined to be Section 4(f) properties. It crosses SFWMD C-35, which is a potential historic property. Corridor 13 is also adjacent to an unevaluated archaeological site.
- **Natural Environment:** Corridor 13 has moderate potential for natural impacts. Corridor 13 goes through habitat that may support caracara nesting and foraging. However, the corridor alignment does not traverse through any known caracara nests. Corridors 4 through 13 traverse through habitat that may support Florida's grasshopper sparrow; however, no occurrences of the grasshopper sparrow have been documented in this area. It has been determined by USFWS that the study area is not within Florida's grasshopper sparrow USFWS consultation area. Corridor 13 has a moderate potential impact to wetlands. These potential direct wetland impacts consist of 24 acres of non-forested wetlands and 72 acres of forested wetlands for a total of 96 acres of potential wetland impacts. There are 3 acres of water features impacted.
- **Physical Environment:** Corridor 13 has a moderate to high impact to the physical environment. These impacts are primarily associated with utility relocations in the vicinity of Pleasant Hill Road and Cypress Parkway.
- **Project Estimated Costs:** Corridor 13 has relatively low estimated project costs. The estimated project cost for Corridor 13 is $752,000,000. Corridors 4 through 13 have estimated costs that are all within 10 percent of each other.
- **Consistency with Local Planning:** Corridor 13 is inconsistent with the South Lake Toho Master Plan but to a lesser extent than Corridor 12. Corridor 13 is consistent with the OCX Master Plan since the eastern terminus is in the general location of the terminus shown in the OCX Master Plan.
- **Interchange Spacing:** The proposed interchange location complies with minimum FTE interchange spacing criteria from Kissimmee Park Road interchange and the Canoe Creek Service Plaza on Florida's Turnpike.
- **Other Considerations:** N/A
- **Advantages and Disadvantages:** Based on the corridor evaluation and the review of land use characteristics, Table 20 summarizes the major advantages and disadvantages associated with Corridor 13.

Table 20: Corridor 13 – Summary of Advantages and Disadvantages

Advantages	Disadvantages
• Low degree of impact to snail kite foraging and nesting habitat • Relatively low number of wetland impacts • Lower number of residential displacements • Lower project costs • Minimal smokeshed impacts to SFWMD northern fire managed lands • Located farther away from TNC Lake Russell fire managed lands • No impacts to Southport Park and boat ramp • Consistent with OCX Master Plan • Lower aesthetic impact to recreational use of Lake Tohopekaliga • The proposed interchange location meets FTE interchange spacing criteria	• Moderate degree of impact to caracara foraging and nesting habitat • Moderate degree of impact to potential grasshopper sparrow habitat • Potential impacts to SFWMD C-35 and SFWMD property • Impacts to commercial businesses and residences on Cypress Parkway • Potential smokeshed impacts to SFWMD and Southport Mitigation Bank, and to a lesser degree, TNC fire managed lands • Inconsistent with South Lake Toho Element of the Osceola County Comprehensive Plan • Moderate impacts to non-residential displacements • High degree of impact to existing utilities along Cypress Parkway • Potential impacts to Vance Harmon Park and Poinciana Predators Field

Note: Refer to Table 6 for the summary comparing impacts to social, cultural, natural, and physical environments.

- **Specific Factors Affecting Reasonableness of Corridor:** This corridor avoids impacts to known caracara nests. It goes through the area with the least likelihood of impacting bald eagle nests. Corridor 13 is consistent with the OCX Master Plan. Corridor 13 is very similar to Corridor 7 but is farther away from TNC fire managed lands than Corridor 7.

Recommendation: Corridor 13 is **recommended** to be carried forward for further analysis.

5.6 Alternative Corridor Evaluation Summary

The findings and assessments made in the previous sections of this report have been summarized into Table 21 shown below.

Table 21: Southport Connector Corridor Evaluation Summary

Southport Connector Corridor	Segments	Purpose and Need Satisfaction	Evaluation Criteria			Recommended for Further Consideration
			Environmental Impacts[1]	Engineering Factors[2]	Estimated Cost	
1	A-B-C-D	Yes	High	High	$952,000,000	No
2	E-F-G-D	Yes	High	High	$1,065,000,000	No
3	E-F-H-I	Yes	High	High	$1,200,000,000	No
4	E-F-J-K-L-I	Yes	High	Med	$734,000,000	No
5	E-F-J-K-M-N	Yes	High	Med	$741,000,000	No
6	E-F-J-O-T-N	Yes	Med	Med	$743,000,000	No
7	**E-P-Q-R**	**Yes**	**Med**	**Med**	**$746,000,000**	**Yes**
8	E-P-Q-S-T-N	Yes	Med	Med	$745,000,000	No
9	E-P-U-R	Yes	Med	Med	$749,000,000	No
10	E-P-U-S-T-N	Yes	Med	Med	$747,000,000	No
11	E-V	Yes	Med	Med	$744,000,000	No
12	**E-W**	**Yes**	**Med**	**Med**	**$747,000,000**	**Yes**
13	**E-X**	**Yes**	**Med**	**Med**	**$752,000,000**	**Yes**

[1] A high rating for environmental impacts would reflect a relatively larger number of impacts or impacts for which it would be difficult to obtain environmental permits. A medium rating would reflect a lesser number of impacts or impacts for which it would be less difficult to obtain environmental permits.

[2] A high rating for engineering impacts would reflect a relatively higher impact to existing utilities and a higher difficulty in addressing engineering issues, such as drainage across Lake Tohopekaliga. A medium rating would reflect a lesser number of impacts or impacts for which it would be less difficult to address engineering issues.

Section 6.0 Agency and Public Input

Continuous public outreach during all stages of the project is important in order to engage stakeholders and identify community values and concerns that may affect the development and evaluation of corridors. The coordination efforts to date have helped in the process of identifying corridors to include for further evaluation.

A summary of the outreach efforts and meetings to date are shown in Table 22. A summary of the responses to ETAT comments is shown in Table 23 and a summary of upcoming activities is shown in Table 24.

Table 22: Public/Agency Coordination Conducted to Date

Item	Description	Date
Advance Notification Package	The package was sent to the State Clearinghouse (FDEP), participating agencies, non-participating agencies and organizations, and special interest groups electronically and via hard copies to agencies as requested. The AN Package is also on the ETDM public access site (https://etdmpub.fla-etat.org).	September 5, 2012
Osceola County Planning and Zoning Meeting	This meeting was held to discuss potential access issues for the South Lake Toho Master Plan and review corridor alternatives for the Southport Connector PD&E ACE.	June 4, 2013
ETAT Member Webinar	The webinar was held to introduce the project and provide an opportunity for input into the project's purpose and need as well as input on the initial corridors.	August 21, 2013
Bronson Ranch Coordination Meeting	The purpose of the meeting was to introduce the study team to the Bronson representatives and to discuss the project process.	August 22, 2013
Southport Ranch Coordination Meeting	The purpose of the meeting was to discuss the project and introduce the study team. Gary Lee of Southport Ranch requested 48 hours notice prior to team members entering the property.	August 22, 2013
First APAG Meeting	The APAG consists of representatives from TNC, Audubon Society, Sierra Club, Reedy Creek Improvement District (RCID), ETAT members, FDOT District One and Five, OCX, Osceola County, Walt Disney World, Florida's Turnpike Enterprise, water management districts, community groups, and others. The members of the APAG are anticipated to meet bi-annually and will receive monthly status e-mail updates.	August 27, 2013
Project Website (www.SouthportConnector.com)	The website includes meeting information and report summaries which will be available for viewing and downloading and provides an opportunity for public comment. The website is being updated monthly and on an as-need basis.	August 29, 2013
Public Information Meetings	Two public meetings were held: one at the Providence Golf Club in Davenport and one at the Association of Poinciana Villages Community Center in Poinciana. These meetings were scheduled to inform local officials and the general public of the potential corridors being brought to the area.	September 10 and 12, 2013
USCG and SFWMD Coordination	Email correspondence regarding the C-35 and the methodology required to conduct the navigation study.	December 10, 2013
Poinciana Residents for Smart Change Meeting	Project staff gave a presentation at the PRSC meeting including an overview of the project, schedule, and findings to date.	April 28, 1014
USFWS Coordination Meeting	This meeting was held to discuss the MM and subsequent ACER and get initial feedback before starting the ACE process.	June 18, 2014
US Army Corps of Engineers (USACE) Coordination Meeting	This meeting was held to discuss the MM and subsequent ACER and get initial feedback before starting the ACE process.	July 1, 2014

Item	Description	Date
SFWMD Coordination Meeting	This meeting was held to discuss the MM and subsequent ACER and get initial feedback before starting the ACE process.	July 7, 2014
FWC Coordination Meeting	This meeting was held to discuss the MM and subsequent ACER and get initial feedback before starting the ACE process.	July 18, 2014
USACE Pre-APAG Coordination Meeting	This meeting was held to review the ACE and the APAG presentation prior to the APAG meeting to allow USACE and FHWA to preview and comment.	December 5, 2014
USFWS and FHWA Pre-APAG Meeting	This meeting was held to review the ACE and the APAG presentation prior to the APAG meeting to allow USFWS and FHWA to preview and comment.	December 10, 2014
FWC and FHWA Pre-APAG Meeting	This meeting was held to review the ACE and the APAG presentation prior to the APAG meeting to allow FWC and FHWA to preview and comment.	December 10, 2014
Second APAG Meeting	This meeting was held to discuss the results and recommendations for eliminating unreasonable alternatives.	December 11, 2014
Corridor Evaluation Public Workshop	Two workshops were held: one at Living Waters Fellowship Church in Kissimmee and one at the Church of St. Luke and St. Peter in St. Cloud. These meetings were held to present the public with the corridors that have been selected to move forward after the completion of the ACE process.	January 13 and 15, 2015
The Nature Conservancy Coordination Meeting	This meeting was held to discuss the potential impacts of the project corridors on the land management activities and prescribed fire usage on the TNC-owned Disney Wilderness Preserve. TNC staff expressed a strong interest in Corridor 7 being eliminated due to proximity to DWP and that they preferred Corridor 11.	June 2, 2015
Green Island Ranch Coordination Meeting	This meeting was held to review the corridors with Jeremy Kibler of Green island Ranch including the addition of Corridor 11 based on previous communication with Roy Partin.	May 21, 2015
SFWMD Coordination Meeting	This meeting was held to discuss the potential impacts of the project corridors on the land management activities and prescribed fire usage on the SFWMD-owned Osceola Environmental Education Center Scrub Site	June 11, 2015
Osceola County Coordination Meeting	This meeting was held to discuss the completion of the ACER and the anticipated recommendations. The County expressed interest in keeping Corridors 7, 12, and 13 for further analysis.	July 23, 2015

Table 23: Summary of Responses to ETAT Comments

Issue	Degree of Effect	Organization	FDOT Responses To ETAT Comments
Land Use Changes	Moderate to Substantial	FHWA	Direct and indirect effects of the project on land use will be evaluated. Direct and indirect effects of the project on the City of St. Cloud potable water well field will be evaluated. Planning consistency will be coordinated and documented during the PD&E Study including coordination with Osceola County.
Social	Substantial	FHWA	A sociocultural effect evaluation will be prepared during the PD&E Study.
Farmlands	Substantial	Natural Resources Conservation Service, FHWA	Direct and indirect effects of the project on prime and unique farmlands and listed species, which will utilize farmlands, will be evaluated.
Economic	None	Florida Department of Economic Opportunity, FHWA	Effects of the project alternatives on the area's economy will be evaluated in a sociocultural effects study as part of the PD&E Study.
Section 4(f) Potential	Substantial	FHWA	Section 4(f) applicability will be evaluated during the study. Impacts to Section 4(f) resources will be minimized and avoided to the greatest extent practicable. An evaluation will be performed to analyze any direct or constructive use of these resources.
Historic and Archaeological Sites	Substantial	FHWA,SHPO	Impacts to historic and archaeological resources, including underwater resources, will be evaluated during the study, and a Cultural Resource Assessment will be performed. Impacts to cultural resources will be minimized and avoided to the greatest extent practicable. An evaluation will be performed to analyze any direct or constructive use of resources protected under Section 4(f).
Recreation Areas	Substantial	FHWA, National Park Service (NPS), FDEP	Section 4(f) and Section 6(f) applicability will be evaluated during the study. Impacts to Section 4(f) and Section 6(f) resources will be minimized and avoided to the greatest extent practicable. An evaluation will be performed to analyze any direct or constructive use of these resources. Should an alternative be selected that involves impacts to a Section 6(f) resource, coordination with NPS and FDEP will be initiated.
Wetlands	Moderate to Substantial	SFWMD,USACE, USFWS	Wetlands within the project area will be delineated and functional analyses will be performed for viable alternatives that meet the purpose and need of the project. Wetland impacts will be avoided and minimized to the greatest extent practicable. Based on the ACE and ETAT input, unreasonable alternatives may be eliminated from further consideration.
Water Quality and Quantity	Moderate to Substantial	SFWMD, FHWA, FDEP	Impacts to water quality and quantity will be avoided through pollutant treatment of proposed and existing roadways within the impacted basins. Wetland impacts will be avoided and minimized to the greatest extent practicable.
Floodplains	Moderate to Substantial	SFWMD, FHWA	Floodplain impacts will be avoided and minimized to the greatest extent practicable. Compensation will be provided for unavoidable loss of floodplain volume and conveyance structures will be sized to prevent an increase in flood elevations.
Wildlife and Habitat	Moderate to Issue Resolution	SFWMD, FHWA, USFWS, FWC	Wildlife surveys for the Biological Assessment will be completed during the upcoming study will evaluate the presence of listed species and their habitats and evaluate potential, secondary, and cumulative impacts. Impacts to listed species and their habitats will be avoided and minimized to the greatest extent practicable.
Coastal and Marine	None	FHWA, National Marine Fisheries Service	There is no involvement with coastal or marine resources.
Air Quality	Minimal	FHWA, US Environmental Protection Agency	The proposed project is expected to have minimal impact on air quality. The project is located in an attainment area; therefore, an Air Quality Screening Analysis will likely not be necessary.
Contamination	Moderate	FHWA, FDEP	A Contamination Screening Evaluation Report will be prepared during the PD&E Study.
Infrastructure	Moderate to Substantial	FHWA	Any public land corner or bench mark within the limits of construction is to be protected. The SFWMD's Data Collection Bureau will be informed of potential impacts during the design phase. We will coordinate with SFWMD regarding any proposed crossings of Reedy Creek or C-35.

Issue	Degree of Effect	Organization	FDOT Responses To ETAT Comments
Navigation	Substantial	USCG	A waterway study will be performed to determine the characteristics of vessels using the waterways and identify navigational needs. Also, the bridge questionnaire will be used to determine if USCG permit(s) are necessary.
Special Designations	Substantial	FHWA	Direct and indirect effects of the project on the City of St. Cloud potable water well field will be evaluated. An evaluation of Prime Farmland, Save Our Rivers Lands, and Sole Source Aquifers will be included in the PD&E Study.

Table 24: Future Public/Agency Coordination

Item	Description	Date
Issue Resolution	Meetings will be conducted with agencies as part of the Issue Resolution process but also as requested to discuss the results of methodology. Further analysis is included as part of the PD&E.	Ongoing
Alternatives Public Meeting	This meeting will be held to present the public with the alternatives that will be considered for final selection as the preferred alternative.	Second Quarter, 2016

6.1 FTE Input Regarding Alternate Eastern Termini at Florida's Turnpike

Representatives with FTE raised a concern after the corridor workshops that the southernmost termini on Florida's Turnpike was located too close in proximity to the Canoe Creek Service Plaza. Further evaluation by FTE staff determined the location of the terminus would not be possible due to its close proximity to the ramps from the Canoe Creek Service Plaza. Therefore, two of the recommended corridors at the time the corridor workshops were held - Corridors 6 and 8 - are no longer recommended for further evaluation as well as Corridors 5 and 10. In a similar manner, the location of the terminus for Corridors 1 and 2 were determined by FTE staff to be too close to the Kissimmee Park Road interchange (see Appendix 4, Emails from FTE dated January 23, 2015 and February 26, 2015). Corridors 1 and 2 were not recommended for further evaluation as presented in the corridor workshops.

6.2 Modifications to Corridors Based on Public Input

Input received at two public meetings resulted in modifications to the corridors being evaluated. The public meetings were the APAG meeting held December 11, 2014, and the Corridor Evaluation Public Workshop held on January 13 and 15, 2015. The APAG and the Corridor Evaluation Public Workshop meeting summaries are contained in the project file.

Additional public involvement efforts continued after the corridor workshops. Audubon Florida sent a letter addressing a number of issues. (See Appendix 4, Audubon Florida letter dated January 21, 2015.) Audubon Florida requested that Corridor 1 not be removed from further consideration. In order to provide a more equal comparison between Corridor 1 and the corridors south of Lake Tohopekaliga, a decision was made by FDOT to extend the limits of the corridor evaluation to include a 2.6 mile segment of Cypress Parkway from Poinciana Parkway to Pleasant Hill Road. Corridor 1 provides a continuous limited access connection from Poinciana Parkway at Marigold Avenue to Florida's Turnpike. Originally, Southport Connector Corridors 2 through 13 did not provide a similar limited access connection to Poinciana Parkway. The decision to include Cypress Parkway as part of Corridors 2 through 13 provides a basis of comparison between corridors that will all essentially provide the same limited access expressway to expressway transportation service.

A stakeholder recommended several additional corridors for evaluation. (See Appendix 4, Roy F. Partin letter dated April 14, 2014.) These corridors were given a preliminary review which resulted in the addition of Corridor 11. Corridor 11 was added after the corridor workshops held in January 2015 and was evaluated in a manner consistent with the other ten corridor alternatives. The results of the evaluation of Corridor 11 have been outlined in previous sections.

A teleconference meeting was held on June 2, 2015, with TNC with respect to the potential impacts of the corridors on the ability of TNC to manage lands with fire due to the proximity of the corridors to the managed lands and the safety concerns for motorists resulting from smoke. TNC expressed opposition to Corridor 7 during that meeting due to its proximity to the managed lands. TNC followed up with a letter dated June 8, 2015. (See Appendix 4, TNC letter dated June 8, 2015.) In order to increase the distance from TNC fire managed lands, Corridor 7, in the vicinity of Lake Russell, was shifted slightly north to the edge of the primary zone of an existing caracara nest.

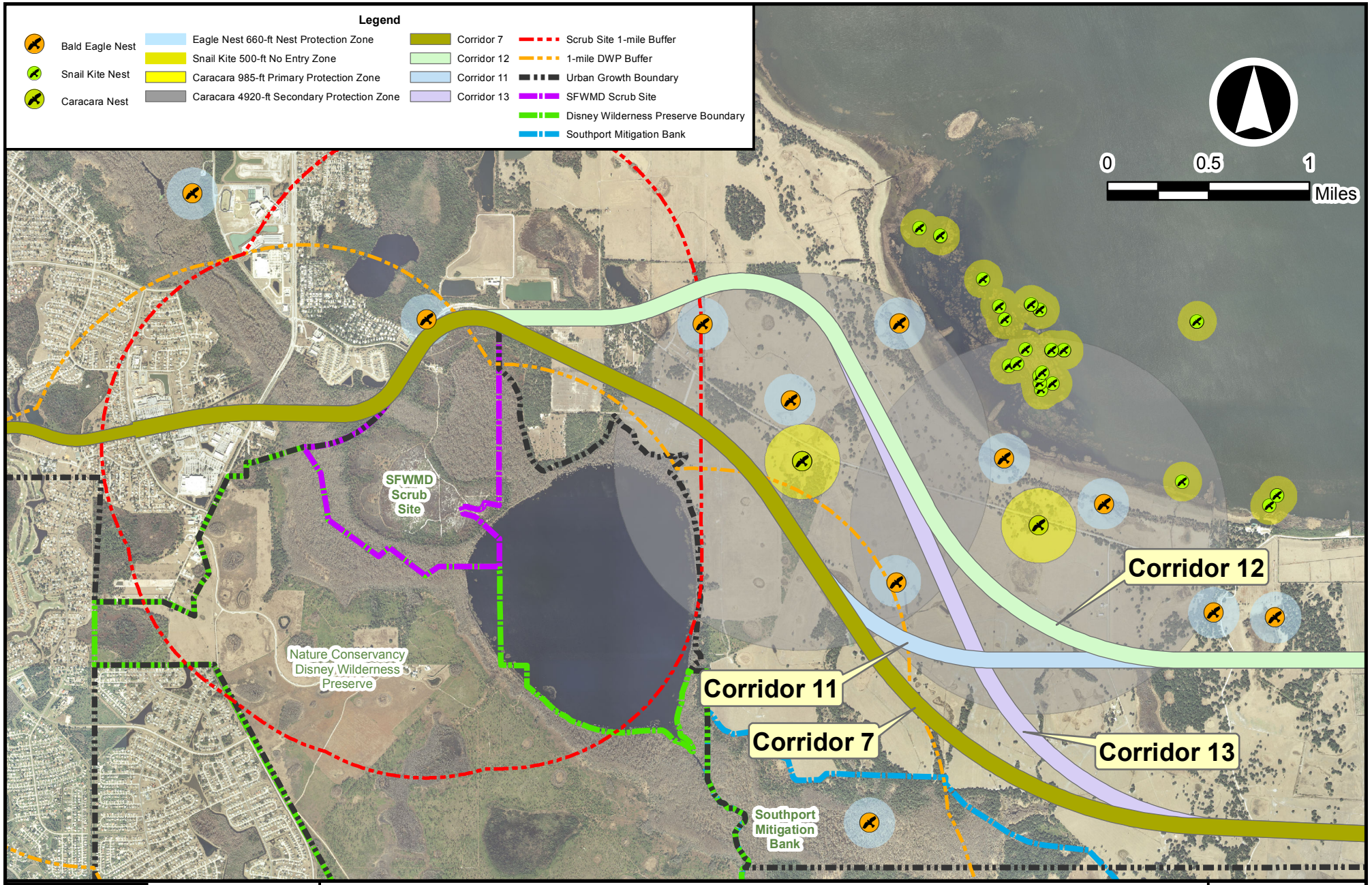
A stakeholder recommended corridor alignment alternatives that followed Southport Road to the SFWMD C-35 and then continued southeasterly to connect to Florida's Turnpike. (See Appendix 4, Lee letter dated February 23, 2015.) These corridor alternatives would directly impact two caracara nests and were, therefore, not acceptable.

In an attempt to develop corridors that best balanced the issues raised by these three stakeholders, Corridors 12 and 13 were developed. These corridors avoid the caracara nests, stay north of Southport Road to the extent possible, and stay farther away from TNC fire managed lands than Corridor 7. Figure 14 shows the western portions of Corridors 7, 11, 12, and 13 with environmental features. The figure depicts a shift in Corridor 7, the avoidance of caracara, and eagle nests.

A meeting was held with representatives from Osceola County on June, 7 2015, and Corridors 7, 11, 12, and 13 were discussed at that meeting. The County representatives expressed a strong support for Corridor 7 because it is consistent with the South Lake Toho Element of the Osceola County Comprehensive Plan. The County also expressed support, but to a lesser degree, to Corridors 12 and 13 being carried forward to the next phase of the study. Corridor 11 was not supported because it is similar to Corridor 12 but located closer to TNC fire managed lands. (See Appendix 4, Osceola County email dated July 16, 2015.)

6.4 Corridor Workshop Summary

A Corridor Evaluation Workshop for this project was held on two dates: January 13, 2015, and January 15, 2015. The purpose of these workshops was to present project updates to the general public and request comments on the project corridors being evaluated. Each workshop was an informal open house beginning at 5:30 p.m. An informational video presentation was run continuously throughout the open house. The information provided to the public was the same at both workshops. A total of 75 persons submitted comments at the workshops. Of the comments received, 38 comments were in support of one or more of the alternatives recommended for further evaluation; 45 were in general favor of the project; two supported a non-recommended alternative (Corridor 1); one supported the No-Build Alternative; and 25 were not related to the alternatives, such as a request for a meeting and a request to be added to the mailing list.



FDOT

Florida Department of Transportation
District 5

Poinciana Parkway Southport Connector Alternative Corridor Evaluation
from Poinciana Parkway to Florida's Turnpike
Osceola County, Florida
Financial Project No.: 433693-1-22-01
ETDM No.: 13961

CORRIDORS 7, 11, 12, & 13 ENVIRONMENTAL CONSTRAINTS

FIGURE 14

Section 7.0 Recommendations

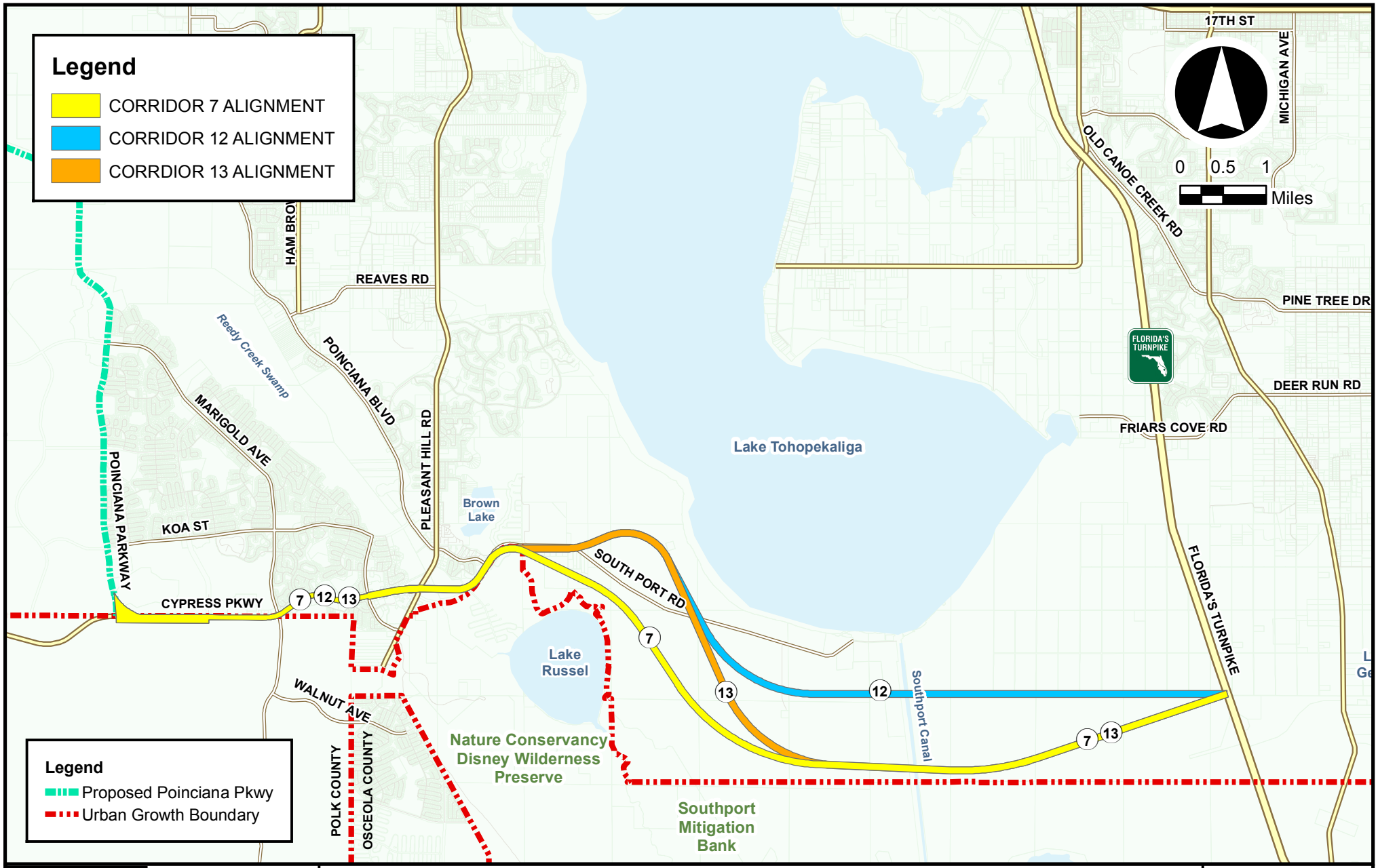
7.1 Recommended Alternative Corridors

Table 25 below provides a summary of impacts for the corridors recommended for further consideration. These three corridors are recommended for further evaluation in the PD&E Study, which is the next phase of the project, because they best meet the needs of the project while minimizing environmental impacts and estimated costs. Figure 15 shows the three recommended corridors for further evaluation.

Table 25: Summary of Impacts for Recommended Alternative Corridors

Corridor	Environmental Impacts	Engineering Factors	Estimated Total Project Cost
7	Med	Med	$746,000,000
12	Med	Med	$747,000,000
13	Med	Med	$752,000,000

In order to accurately compare corridors, the ACE process included the evaluation of Corridors 2 through 13 from Rhododendron Avenue at the terminus of Poinciana Parkway to Florida's Turnpike; however, the limits of the currently funded PD&E Study are from Pleasant Hill Road to Florida's Turnpike. The remaining segment of these corridors will be evaluated under a separate PD&E study as described in MetroPlan Orlando's 2040 LRTP Cost Feasible element as the Cypress Parkway Segment from Rhododendron Avenue to Pleasant Hill Road.



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CORRIDORS RECOMMENDED FOR FURTHER EVALUATION

FIGURE 15

Appendix 1

Approved Methodology Memorandum

TECHNICAL MEMORANDUM

Alternative Corridor Evaluation (ACE) Methodology Memorandum (MM)

Poinciana Parkway Southport Connector
Project Development and Environment (PD&E) Study
From Pleasant Hill Road to Florida's Turnpike
FPID: 433693-1-22-01
ETDM #: 13961
Osceola County, Florida

PREPARED BY:	Florida Department of Transportation, District Five
DATE:	August 12, 2014
SUBJECT:	Revised Alternative Corridor Evaluation Report Methodology Memorandum

The purpose of this Methodology Memorandum (MM) is to document the evaluation methodology to be conducted for the Southport Connector Project Development and Environment (PD&E) Study. The memorandum details the goals of the evaluation, the methodology, how coordination with stakeholders will occur, and the basis for decision-making. This MM was revised in response to comments from the Environmental Technical Advisory Team (ETAT) members received July 18, 2014, after a 30-day minimum comment period. The evaluation of the corridors will be detailed in the Alternative Corridor Evaluation Report (ACER). The results in the ACER will identify the reasonable alternatives for National Environmental Policy Act (NEPA) analysis.

1.0 BACKGROUND

1.1 CONTACT PERSONNEL

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1.2 PROJECT INFORMATION

The FDOT, District Five, in cooperation with the Federal Highway Administration (FHWA), initiated the Southport Connector PD&E Study in Osceola County, Florida June 2013. The PD&E Study involves the analysis of a range of alternative corridors to provide for a connection between Pleasant Hill Road and Florida's Turnpike.

The proposed Southport Connector identified in the Osceola County Expressway Authority (OCX) Master Plan to serve Osceola County's urban growth area. OCX initiated a design/build project for a segment of the beltway system referred to as Poinciana Parkway Bridge Segment and Southwest Segment. The Bridge Segment begins at US 17/92 and crosses Reedy Creek to a point just north of the intersection of Marigold Avenue and East Bourne Drive. The Southwest Segment begins at the end of the Bridge Segment and runs south along Rhododendron Avenue to Cypress Parkway. In addition, FDOT is conducting an independent PD&E Study for the I-4 Segment of Poinciana Parkway from I-4 to the Bridge Segment.

1.3 PROJECT DESCRIPTION

The proposed Southport Connector, as envisioned in the OCX Master Plan, would begin in the vicinity of the intersection of Cypress Parkway and Pleasant Hill Road. However, an additional beginning point is being considered at a point on the Poinciana Parkway just north of Marigold Avenue at the terminus of the Poinciana Parkway Bridge Segment. The eastern terminus of the proposed Southport Connector will be at Florida's Turnpike and several termini locations are being considered. The project study area is shown on the project location map in ***Exhibit 1***.

The following goals and objectives are contained in OCX's Master Plan:

Goal 3. Promote a high quality of life for Osceola County residents.
Objective 3.1. Reduce delay by providing limited access transportation options.
Objective 3.2. Improve capacity with new lineage and transit options.

Therefore, in conformance with the goals and objectives of the OCX Master Plan, the proposed Southport Connector will be a new limited access facility with transit options.

1.4 PURPOSE AND NEED

The purpose and need of the project was screened in the Programming Screen and accepted by FHWA on December 12, 2013. The purpose of the project is to achieve the following primary goals:

- Improve roadway connection from the community of Poinciana to Florida's Turnpike: The majority of the Poinciana area's residents are employed in Orange County. Therefore, a new connection to the Florida Turnpike will provide an alternative route to jobs and employment centers.

- Enhance mobility: Due to the anticipated population and employment growth in the study area, the proposed facility will play a critical role in accommodating travel demands and improving the movement of goods and people.

- Improve overall traffic operations: The proposed facility would relieve congestion on local roads by separating local and regional traffic.

- Promote regional system linkage: The proposed facility is identified in MetroPlan Orlando's 2030 Long Range Transportation Plan. The proposed Connector is part of a planned limited

access, high-speed toll facility identified in the OCX Master Plan to serve the Osceola County's urban growth area.

Secondary objectives for the project include desirable features that support the purpose of the project. The secondary objectives are to support economic development and enhance emergency response/evacuation.

2.0 GOALS AND OBJECTIVES OF THE OF THE ALTERNATIVE CORRIDOR EVALUATION

The purpose of the ACE is to document and link planning activities for use in the National Environmental Policy Act (NEPA) environmental analysis in accordance with the Planning and Environment Linkages described under Moving Ahead for Progress in the 21st Century (MAP-21). The goals of the ACE are to address Environmental Technical Advisory Team (ETAT) comments and eliminate unreasonable corridors based on factors such as not meeting the purpose and need, travel demand, and disproportionate and/or significant impacts.

2.1 STATUS IN PROJECT DELIVERY

The ETDM Programming Screen was initiated on September 6, 2013 (ETDM#13961 - Poinciana Parkway Southport Connector, https://etdmpub.fla-etat.org). As shown on ***Exhibit 2***, 10 initial corridors were developed for the purpose of the ETDM programming screen. The ETDM programming screen review period was extended to allow for additional agency review and was closed on November 20, 2013. An additional extension was granted for the FHWA. Agency representatives input regarding the initial corridors completed the review in December 2013. Prior to the ETDM screening, a webinar was held on August 21, 2013 to inform the ETAT members of the purpose of and need for the project, initial corridors to be screened and a high-level overview of the social, cultural, natural and physical environments.

The 10 initial corridors entered in the ETDM programming screen were developed using Land Suitability Mapping (LSM). Using the Geographic Information Systems (GIS)-based Environmental Screening Tool (EST), the initial corridors were 1,400-foot wide. The corridors were initially developed at a width of 400-foot and therefore the impacts were quantified in the EST at a minimum of 1,400 feet (400-foot wide corridors with a 500-foot buffer distance on each side of the corridor).

These initial corridors are the starting point for the ACE process. No additional corridors were identified in the ETDM programming screen. The naming of each corridor or alternative will remain consistent throughout ACE and be carried through the PD&E phase.

The purpose and need of the project was screened in the Programming Screen and accepted by FHWA on December 12, 2013. The purpose and need is in the process of being updated to reflect new information regarding traffic analysis and the Poinciana Parkway Design-Build Project including the extension of Rhododendron Avenue.

The draft MM was distributed for ETAT review on June 3, 2014. ETAT members were given until July 18, 2014 to provide comments. The ETAT comments were reviewed, considered and incorporated into this Revised MM and into the ACE process, as feasible. Meetings were held between the Florida Department of Transportation (FDOT) and U.S. Fish and Wildlife Service (USFWS) on June 18, 2014, with the U.S. Army Corps of Engineers (USACE) on Jul 1, 2014, with South Florida Water Management district on July 8, 2014 and with Florida fish and Wildlife Conservation Commission (FWC) on July

18, 2014 to initiate project coordination. Upcoming opportunities for public and agency input include a second Agency Project Advisory Group (APAG) meeting and the second public meeting.

2.2 INTENT OF STUDY

The ACE process, as defined in the Project Development and Environment Manual Part 2, Chapter 6 and Efficient Transportation Decision Making (ETDM) Manual meets the intent of 23 CFR 450 (Planning regulations) and Title 23 USC 168 (Integration of planning and environmental review). The intent of this study is to link planning decisions so they can be directly incorporated into the NEPA process.

2.3 IDENTIFY THE DECISION POINTS/MILESTONES

This Revised MM is included in the republished Preliminary Programming Screen Report. The Revised MM and ACE will be documented in the ACER, which will be referenced in the NEPA document. The results of the ACE will determine which corridors are considered unreasonable and should be eliminated from further study. FHWA, the Lead Federal Agency, adopts the ACER which is approved by FDOT (per 23 USC 168).

Recommendations made are recorded in the EST, and published in the Final Programming Screen Summary Report for use in the NEPA phase. The PD&E study will analyze reasonable alternatives that meet the purpose and need for the project to satisfy federal requirements associated with NEPA.

3.0 ALTERNATIVE CORRIDOR EVALUATION METHODOLOGY

3.1 DATA COLLECTION

The data used to further evaluate the project corridor's social, cultural, natural and physical environmental impacts will be derived from (GIS), literature and field reviews where appropriate. Various GIS datasets within the Florida Geographical Data Library (FGDL), the South Florida Water Management District (SFWMD), the FWC and City and County data sources will be utilized. In addition, field and literature reviews will be performed to verify key project corridor constraints. A preliminary list of GIS data layers which may be used in the assessment of the project study area is provided in Table 1.

Table 1
POTENTIAL GIS LAYERS

GIS Layer	Source (Year)
Social Layers	
Airports	Florida Geographic Data Library (FGDL) (2012)
Cemeteries	FGDL(2013)
Churches	FGDL(2009)
DRI's	FGDL(2009); Osceola County; Polk County
Fire Stations	FGDL(2013); Osceola County; Polk County
Government Buildings	FGDL(2013)
High Density Residential	South Florida Water Management District (SFWMD)
Hospitals	FGDL(2013); Osceola County; Polk County
Law Enforcement	FGDL(2012)
Medium Density Residential	SWFWMD
Planned Unit Developments (PUD)	FGDL(2009); Osceola County; Polk County
Schools	FGDL(2012); Osceola County; Polk County
Cultural Layers	
State Parks	FGDL(2011)
FFWCC Managed Lands	FGDL(2010)
Greenways	FGDL(2012); Osceola County; Polk County
Historical Sites	SFWMD; Osceola County; Polk County
Indian Parcels	FGDL(2008)
Local Parks	Osceola County; Polk County
Managed Lands	Florida Natural Area Inventory (FNAI)
Military Lands	FGDL(2010)
Parks and Zones	SFWMD
SHPO Structures	FGDL(2013)
SHPO Bridges	FGDL(2013)
SHPO Cemeteries	FGDL(2013)
SFWMD Lands	SFWMD
Wildlife Management Areas	FGDL(2013)
Archaeological or Historic Sites	FGDL (2013)
Resource Groups	FGDL (2013)
National Register of Historic Places	FGDL (2013)
Natural Environment Layers	
Aquatic Preserves	FGDL(2011)
Bear Nuisance	Florida Fish and Wildlife Conservation Commission (FFWCC)
Class 1 Waters	FDEP
Eagle Nests	FFWCC
FDEP Mitigation Banks	SFWMD (2013)
Floodways	FEMA(2013)
Native Scrub	FFWCC; SWFWMD
OFW	FDEP(2011)
Protected Species (multiple layers)	FFWCC

GIS Layer	Source (Year)
Rookeries	FFWCC
Water Features	SFWMD
Wetlands	SFWMD
Physical Environment Layers	
Brownfields (EPA/FDEP)	FGDL(2013)
Electrical Power Facilities	SFWMD; FDEP(2011)
EPA Pollutant Sites (air, water, RCRA)	FGDL(2011)
Hazardous Materials Sites	FDEP(2013)
Industrial Sites	SFWMD
Landfills	FGDL(2013)
Nuclear Sites	FDEP(2011)
Oil and Gas Storage	SFWMD
Petroleum Contaminated Sites	FGDL(2013); FDEP(2013)
Power Plants	Osceola County; Polk County
Sewer Treatment Plants	FDEP(2013); SFWMD; Osceola County; Polk County
Sinkholes	FDEP(2004)
Solid Waste Facilities	FGDL(2013)
Superfund Sites	FGDL(2012)
TECO People's Gas	Polk County
Water Treatment Plants	FGDL
Well Field Protection Zones	Osceola County; Polk County
Wellhead Protection Zones	Osceola County; Polk County

3.1 IDENTIFY CORRIDOR CONSTRAINTS

The GIS data will be used to identify those corridors that avoid and minimize impacts to sensitive environmental features to the extent possible. The attached series of maps (Exhibits 3, 4, 5 and 6) feature specific database categories showing social, cultural, natural, and physical data. Based on ETAT commentary the following features were identified as important considerations. This includes, but is not limited to, potential land use changes from agriculture/prime farm lands to high density residential, well field impacts, environmental justice, 4(f) impacts (Reedy Creek Conservation area, Upper Lakes Basin Watershed, Poinciana Scrub Conservation Area, Lake Hatchineha Watershed, Florida Forever BOT Project area, Vance Harmon Park on Cypress Parkway, the planned Mac Overstreet Regional Park, Southport Canal, Southport Park, potential historic/archaeological sites and recreational areas associated with Lake Tohopekaliga), wetlands, water quality, floodplains, wildlife and habitat (including Everglade snail kite, , wood stork, sandhill crane, bald eagle, Florida grasshopper sparrow, Audubon's crested caracara, eastern indigo snake, gopher tortoise, and Sherman's fox squirrel), and navigable waters.

3.2 IDENTIFY POTENTIAL CORRIDORS

Potential corridors were developed that provide for a 425-foot width shown in ***Exhibit 2***, based on:

- The OCX Master Plan limited access expressway with adjacent corridors for transit and a potential multi-use trail.
- Conforming to geometric design criteria and minimize impacts to the identified social,

cultural, natural and physical features.

- Preliminary considerations for the anticipated typical section, which will provide for a more accurate representation of potential impacts (social, cultural, natural and physical).
- Avoidance of publicly owned conservation lands or mitigation banks.

The 425-foot wide corridor includes an additional 26 feet to allow for flexibility in developing proposed alignments. The corridor width will increase near interchange locations due to the design envelope necessary to develop ramps and fly-overs. *The typic*al section of the corridor is shown on *Exhibit 7*.

3.3 CORRIDOR ANALYSIS AND EVALUATION CRITERIA

Corridors will be assessed using project specific criteria developed as a result of ETAT comments and public input received during ETDM Screening and the initial scoping activities. The evaluation criteria allows for the comparative assessment of the corridor alternatives. The corridors will be evaluated based on consideration of meeting the project purpose and need, avoidance and minimization of potential impacts to environmental resources, engineering feasibility, a narrative assessment of the corridors, and agency/public input. The analysis and assessment for each of these factors are described below.

3.4.1 Purpose and Need Evaluation

The purpose and need evaluation assesses how well each corridor satisfies the project purpose and need. For a corridor to meet the purpose and need of the project, it would need to provide an enhanced connection as compared to the No Build (or No Action) Alternative. The need for enhancement is related to unsatisfactory future operating conditions to be determined in the traffic analysis. In addition, each corridor will be evaluated for regional connectivity, emergency evacuation, and support of economic development. ***Table 2*** below provides the screening criteria related to purpose and need. Enhanced mobility, improved traffic operations, promoting regional system linkage, support of economic development and enhancement of emergency evacuation will also be evaluated.

Table 2
PURPOSE AND NEED SCREENING CRITERIA

Corridor	Segments	Primary Objectives				Secondary Objectives	
		Improved Connection from Poinciana to Turnpike [1]	Enhance Mobility of People and Goods[2]	Improved Traffic Operations [3]	Promote Regional System Linkage [4]	Support Economic Development [5]	Enhance Emergency/ Evacuation [6]
1	A-B-C-D						
2	E-F-G-D						
3	E-F-H-I						
4	E-F-J-K-L-I						
5	E-F-J-K-M-N						
6	E-F-J-O-T-N						
7	E-P-Q-R						
8	E-P-Q-S-T-N						
9	E-P-U-R						
10	E-P-U-S-T-N						

Notes: Yes=Highest Benefit; Moderate=Neutral Benefit; No=Unsatisfactory

1. Based on time of travel estimates derived from the project traffic model and corridor length
2. Based on typical section design speed, high speed facility, SIS criteria
3. Based on project traffic model
4. Based on planning consistency and intermodal connectivity
5. Maximum satisfaction occurs with improved connectivity to Florida's turnpike in conformance with OCX Master Plan.
6. Based on access, safety and design measures

3.4.2 Environmental Evaluation

The potential direct, indirect, and cumulative effects on the environment will be considered for each corridor. ***Table 3*** provides a matrix evaluation table that will be populated with data using the GIS layers identified in ***Table 1*** and the corridor shapes for the corridors shown in ***Exhibit 2.*** Quantifiable values for social, cultural natural, and physical environment will be shown in the matrix evaluation table. Non-quantifiable factors will be given a likelihood of impact rating.

Table 3
ENVIRONMENTAL EVALUATION CRITERIA

Category	Evaluation Criteria	Unit of Measure	Potential Corridors									
			1	2	3	4	5	6	7	8	9	10
			A-B-C-D	E-F-G-D	E-F-H-I	E-F-J-K-L-I	E-F-J-K-M-N	E-F-J-O-T-N	E-P-Q-R	E-P-Q-S-T-N	E-P-U-R	E-P-U-S-T-N
Social	Potential Residential Displacements	Number										

Category	Evaluation Criteria	Unit of Measure	Potential Corridors									
			1	2	3	4	5	6	7	8	9	10
			A-B-C-D	E-F-G-D	E-F-H-I	E-F-J-K-L-I	E-F-J-K-M-N	E-F-J-O-T-N	E-P-Q-R	E-P-Q-S-T-N	E-P-U-R	E-P-U-S-T-N
	Potential Non-residential Displacements	Number										
	Community Facilities	Number										
	Neighborhoods	Number										
	Community Cohesion	Effects to residential connectivity and social interaction										
	Socioeconomic Impact to Special Populations	Potential for disproportionate impacts										
Cultural	Potential Section 106 Resources	No. of affected historic and archeological resources										
	Potential 4(f) Resources	Number										
	Approved Mitigation Banks/Conservation Lands	Acres										
Natural	Snail Kite Involvement	Degree										
	FL Grasshopper Sparrow Involvement	Degree										
	Bald Eagle Involvement	Degree										
	Audubon's Crested Caracara Involvement	Degree										
	Non-forested Wetlands	Acres										
	Forested Wetlands	Acres										
	Water Features	Acres										
Physical	Potential Contamination Sites	Number										

Category	Evaluation Criteria	Unit of Measure	Potential Corridors									
			1	2	3	4	5	6	7	8	9	10
			A-B-C-D	E-F-G-D	E-F-H-I	E-F-J-K-L-I	E-F-J-K-M-N	E-F-J-O-T-N	E-P-Q-R	E-P-Q-S-T-N	E-P-U-R	E-P-U-S-T-N
	Floodplain Impacts	Acres										
	Floodway Impacts	Acres										
	Noise	Receptors										

Potential impacts nesting and foraging habitat for the Audubon's crested caracara, Everglade snail kite, bald eagle, and Florida grasshopper sparrow are of particular importance for the Southport Connector project. For the comparative analysis, a methodology for evaluating and ranking the impacts to species has been developed and is contained in ***Appendix A***.

3.4.3 Engineering Considerations

The engineering considerations used to screen corridors are listed in ***Table 4***. Engineering factors such as utility conflicts, right-of-way, and interchange spacing on the Turnpike. Drainage issues may not be able to be measured; for instance, a corridor may either be located in an area with flooding issues or it may not. Those corridors with technical feasibility concerns are likely to have high construction costs.

Table 4
ENGINEERING SCREENING CRITERIA

Corridor	Segments	Major Utility Conflicts	Right-of-way Needs	Drainage Issues	Interchange Spacing
1	A-B-C-D				
2	E-F-G-D				
3	E-F-H-I				
4	E-F-J-K-L-I				
5	E-F-J-K-M-N				
6	E-F-J-O-T-N				
7	E-P-Q-R				
8	E-P-Q-S-T-N				
9	E-P-U-R				
10	E-P-U-S-T-N				

The estimated construction, wetland mitigation, and right-of-way costs will be listed in ***Table 5*** below. Construction costs will be based on general FDOT long range estimates for roadway and structures using the length of the project and the four-lane typical section shown in ***Exhibit 7***.

Roadway and structures cost estimates will provide provisions for the transit and trail components. Structures costs over Lake Tohopekaliga will include an additional cost component for piping to convey stormwater off of the bridge to pond locations. Right-of-way costs will be estimated based on general costs of land and buildings in the study area by land use type and unit right-of-way costs obtained from FDOT District 5. Wetland mitigation costs will be based on in-basin mitigation bank credit costs.

Table 5
PROJECT COST CRITERIA

Corridor	Segments	Construction Costs	Wetland Mitigation Costs	Right-of-Way Costs	Total Costs
1	A-B-C-D				
2	E-F-G-D				
3	E-F-H-I				
4	E-F-J-K-L-I				
5	E-F-J-K-M-N				
6	E-F-J-O-T-N				
7	E-P-Q-R				
8	E-P-Q-S-T-N				
9	E-P-U-R				
10	E-P-U-S-T-N				

3.4.4 Narrative of Assessment

Based on the corridor evaluations described above, a narrative discussion and assessment of each of the corridors will be prepared in compliance with elements and issues contained in 23 USC 168(c). This narrative will provide a discussion of the affected environment, advantages and limitations of each corridor and highlight any specific factors that may result in an unreasonable corridor. Public and agency input (consideration of input received from the ETAT, Agency Project Advisory Group (APAG), project stakeholders and the general public) will be summarized in the narrative.

3.4.5 Public and Agency Considerations

Public, agency and ETAT members input received during the Screening process will be used to refine the purpose and need, corridor constraints and evaluation criteria in order to evaluate the corridors. A complete description of the opportunities for public input into the corridor evaluation process is in Section 4. The results documented in the ACER will be made available to the stakeholders through the EST for a 30 calendar day period. Notification of the public meetings will be distributed to all the individuals on the project mailing list including local officials, agencies including appropriate Native American tribes, stakeholders, special interest groups and property owners within the affected study area. If meetings are needed to explain the results of the ACER, they will be scheduled as necessary.

3.5 APPROACH TO ELIMINATING UNREASONABLE ALTERNATIVES

Any corridor that does not meet the purpose and need for the project is considered unreasonable and will be eliminated from further consideration upon FHWA approval. The corridors considered reasonable for detailed study as a result of the Purpose and Need Evaluation will be compared using the evaluation criteria described in Section 3.4. The corridor evaluation involves both quantitative and qualitative comparisons of the evaluation criteria. The comparative analysis will include rating the following:

- Environmental Impacts and Construction Cost Estimates (Quantitative)
- Engineering factors (technical feasibility) (Qualitative)
- Narrative assessment (advantages and limitations) (Qualitative)

This rating process is discussed further in Sections 3.5.1 and 3.5.2. Upon completion of this assessment and FHWA approval, remaining reasonable corridors will be carried forward in the PD&E Study.

The PD&E study project documentation will be prepared in accordance with the PD&E Manual and shall, therefore, be in compliance with all applicable state and federal laws, executive orders, and regulations. In compliance with the ETDM Master Agreement, agency involvement regarding project needs, issues, evaluation criteria, avoidance, minimization, decisions, and preliminary mitigation concepts will be a continuous effort throughout the ETDM and ACE processes. The evaluation criteria and units of measure used to evaluate and compare alternatives will include resources issues that are consistent and acceptable to each respective resource agency. The ACE process ensures that all alternatives are evaluated consistently.

3.5.1 Environmental Impacts and Cost Estimates (Rating of Quantitative Data)

The evaluation process includes the development of an evaluation matrix to facilitate comparison of corridors. The evaluation matrix will identify the buffer width used, quantify potential impacts, and list the source of the data. The potential impacts for each criterion will be provided for the entire corridor and summarized in a matrix similar to ***Table 6***. For each evaluation criteria, a comparison will be made using a standard deviation method to compare Corridors 1 through 10. Red will be assigned to potential impacts greater than one standard deviation above the mean, yellow will be assigned to evaluation criteria within one standard deviation of the mean, and green will be assigned to evaluation criteria with zero or greater than one standard deviation below the mean. For each of the evaluation criteria, the corridors will be rated based on a score of 1 to 3 where 1 represents the least potential impact (green) and 3 represents the highest potential impact (red). Potential impacts of each corridor will be assigned a color code and number based on the standard deviation for the evaluation criteria results. Red indicates that the potential impacts are substantially higher than average when compared to the other alternatives. Green indicates that the potential impacts are substantially lower than average when compared to the other alternatives.

Table 6
EXAMPLE OF SUMMARY COMPARATIVE MATRIX FOR ENVIRONMENTAL IMPACTS AND COSTS

Evaluation Criteria	Buffer Width (CL)	Measurement Within the Screening Buffer	Source	ALTERNATIVES										
				0	1	2	3	4	5	6	7	8	9	10
Recreational Lands (Parks)	200	Number of Parks	UF GEOPLAN/ Parcel Derived Parks											

For each evaluation category, the total score is based on summing the individual criteria rankings. The total costs for each of the corridor alternatives will be shown in ***Table 7***.

3.5.2 Summary Corridor Ratings

The evaluation factors shall be summarized in a format similar to ***Table 7*** including the ratings from the environmental impact/cost rating summary (quantitative data) and ratings from the engineering, public and agency input (qualitative data).

Table 7
CORRIDOR EVALUATION SUMMARY

Corridor	Segments	Purpose and Need Satisfaction	Evaluation Criteria			Recommended for Further Consideration
			Environmental Impacts	Engineering Factors	Costs	
1	A-B-C-D					
2	E-F-G-D					
3	E-F-H-I					
4	E-F-J-K-L-I					
5	E-F-J-K-M-N					
6	E-F-J-O-T-N					
7	E-P-Q-R					
8	E-P-Q-S-T-N					
9	E-P-U-R					
10	E-P-U-S-T-N					

3.6 ALTERNATIVE CORRIDOR EVALUATION REPORT

The results of the analysis described above will be summarized in a Final ACER. This report will be submitted to the ETAT and interested stakeholders through the EST for 30 calendar day period. Once comments are addressed, a corridor public workshop will be held to allow the public to provide input.

The appropriate decision making matrices (i.e., the evaluation matrices similar to Tables 2, 3, and 4, and a corridor evaluation summary similar to Table 6) will be included in the ACER to substantiate findings and the reasons for eliminating corridors and identifying corridors that will be carried forward into the PD&E phase. The ACER will be included in the republished Preliminary Programming Screen Report. The NEPA class of action determination (i.e. Environmental Assessment or Environmental Impact Statement), degree of effect, summary of public comments, and dispute resolution issues will be addressed in the Preliminary Programming Screen Report.

4.0 OPPORTUNITY FOR AGENCY/PUBLIC INPUT

Continuous Public outreach during the initial stages of the project has and will be used to engage stakeholders to identify community values and concerns that may affect the development and evaluation of corridors. ***Table 8*** lists the public and agency events that have been conducted to date; ***Table 9*** summarizes ETAT comments and ***Table 10*** summarizes near-term outreach that will occur in conjunction with, and following the MM/ACER process.

Table 8
PUBLIC / AGENCY COORDINATION CONDUCTED TO DATE

Item	Description	Date
A webinar with members of the ETAT	The webinar was held to introduce the project and provide an opportunity for input into the project's purpose and need and on the initial corridors.	August 21, 2013
Advanced Notification Package	The package was sent to the State Clearing House (Florida Department of Environmental Protection), participating agencies, non-participating agencies and organizations and special interest groups electronically and via hard copies to agencies as requested. The AN Package is also on the ETDM public access site (https://etdmpub.fla-etat.org).	September 5, 2012
Project Website (www.SouthportConnector.com)	The website includes meeting information, report summaries which will be available for viewing and downloading, and provide opportunity for public comment. The website is being updated monthly and on an as need basis.	August 29, 2013
First APAG Meeting	The APAG consists of representatives from The Nature Conservancy (TNC), Audubon Society, Sierra Club, Reedy Creek Improvement District (RCID), ETAT members, FDOT District One and Five, Osceola County Expressway Authority (OCX), Osceola County, Walt Disney World, Florida's Turnpike Enterprise, water management districts, community groups and others. The members of the APAG are anticipated to meet bi-annually and will receive monthly status e-mail updates.	August 27, 2013
ETDM comments	The most significant degrees of effect for each issue category, the ETAT organization that provided that comment, and draft responses are summarized in ***Table 9***.	From September to November 2013.
Public Meetings	Two public meetings were held, one at the Providence Golf Club in Davenport and one at the Association of Poinciana Villages Community Center in Poinciana. These meetings were scheduled to inform local officials and the general public of the potential corridors being brought to the area	September 10 and 12, 2013

Table 9

SUMMARY OF ETAT COMMENTS

Issue	Degree of Effect	Organization	FDOT Responses to ETAT Comments
Land Use Changes	Moderate to Substantial	FHWA	Direct and indirect effects of the project on land use will be evaluated. Direct and indirect effects of the project on the City of St. Cloud well field will be evaluated. Planning consistency will be coordinated and documented during the PD&E study including coordination with Osceola County.
Social	Substantial	FHWA	A sociocultural effect evaluation will be prepared during the PD&E study.
Farmlands	Substantial	Natural Resources Conservation Service, FHWA	Direct and indirect effects of the project on prime and unique farmlands and listed species, which will utilize farmlands, will be evaluated.
Economic	None	FDEO, FHWA	Effects of the project alternatives on the area's economy will be evaluated in a sociocultural effects study as part of the PD&E Study.
Section 4(f) Potential	Substantial	FHWA	Section 4(f) applicability will be evaluated during the study. Impacts to Section 4(f) resources will be minimized and avoided to the greatest extent practicable. An evaluation will be performed to analyze any direct or constructive use of these resources.
Historic and Archaeological Sites	Substantial	FHWA	Impacts to historic and archaeological resources, including underwater resources, will be evaluated during the study, and a Cultural Resource Assessment will be performed. Impacts to cultural resources will be minimized and avoided to the greatest extent practicable. An evaluation will be performed to analyze any direct or constructive use of resources protected under Section 4(f).
Recreation Areas	Substantial	FHWA, NPS, FDEP	Section 4(f) and Section 6(f) applicability will be evaluated during the study. Impacts to Section 4(f) and Section 6(f) resources will be minimized and avoided to the greatest extent practicable. An evaluation will be performed to analyze any direct or constructive use of these resources. Should an alternative be selected that involves impacts to a Section 6(f) resource, coordination with NPS and FDEP will be initiated.
Wetlands	Moderate to Substantial	South Florida Water Management District (SFWMD), US Army Corps of Engineers; US Fish and Wildlife Service	Wetlands within the project area will be delineated and functional analyses will be performed for viable alternatives that meet the purpose and need of the project. Wetland impacts will be avoided and minimized to the greatest extent practicable. Based on the ACE and ETAT input, unreasonable alternatives may be eliminated from further consideration.
Water Quality and Quantity	Moderate to Substantial	SFWMD, FHWA, FDEP	Impacts to water quality and quantity will be avoided through pollutant treatment of proposed and existing roadways within the impacted basins. Wetland impacts will be avoided and minimized to the greatest extent practicable.
Floodplains	Moderate to Substantial	SFWMD, FHWA	Floodplain impacts will be avoided and minimized to the greatest extent practicable. Compensation will be provided for unavoidable loss of floodplain volume and conveyance structures will be sized to prevent an increase in flood elevations.
Wildlife and Habitat	Moderate to Dispute Resolution	SFWMD, FHWA, USFWS, FWC	Wildlife surveys for the Biological Assessment will be completed during the upcoming study will evaluate the presence of listed species and their habitats and evaluate potential, secondary, and cumulative impacts. Impacts to listed species and their habitats will be avoided and minimized to the greatest extent practicable.

Issue	Degree of Effect	Organization	FDOT Responses to ETAT Comments
Coastal and Marine	None	FHWA, NMFS	There is no involvement with coastal or marine resources.
Air Quality	Minimal	FHWA, USEPA	The proposed project is expected to have minimal impact on air quality. The project is located in an attainment area; therefore, an Air Quality Screening Analysis will likely not be necessary.
Contamination	Moderate	FHWA, FDEP	A Contamination Screening Evaluation Report will be prepared during the PD&E study.
Infrastructure	Moderate to Substantial	FHWA	Any public land corner or bench mark within the limits of construction is to be protected. The SFWMD's Data Collection Bureau will be informed of potential impacts during the design phase. We will coordinate with SFWMD regarding any proposed crossings of Reedy Creek or C-35.
Navigation	Substantial	USCG	A waterway study will be performed to determine the characteristics of vessels using the waterways and identify navigational needs. Also, the bridge questionnaire will be used to determine if USCG permit(s) are necessary.
Special Designations	Substantial	FHWA	Direct and indirect effects of the project on the City of St. Cloud well field will be evaluated. An evaluation of Prime Farmland, Save Our Rivers Lands, and Sole Source Aquifers will be included in the PD&E study.

Table 10
FUTURE PUBLIC / AGENCY COORDINATION

Item	Description	Date
MM Process	The MM will be used as a tool during the Dispute Resolution process and to inform the ETAT and other stakeholders of the revised impacts based on the ACE	Draft submitted June 2, 2014
Dispute Resolution	Meetings will be conducted with agencies as part of the Dispute Resolution process but also as requested to discuss the results of methodology	Ongoing
Second APAG Meeting	This meeting will be held to discuss the results and recommendations for eliminating unreasonable alternatives.	To be determined

5.0 CONCLUSION

In conclusion, the purpose of this MM is to document the ACE methodology to be conducted for the Southport Connector PD&E Study. The memorandum details the goals of the evaluation, the methodology, how coordination with stakeholders will occur, and the basis for decision-making. The evaluation of the corridors will be detailed in the Alternative Corridor Evaluation Report. The results will identify the reasonable alternatives for NEPA analysis.

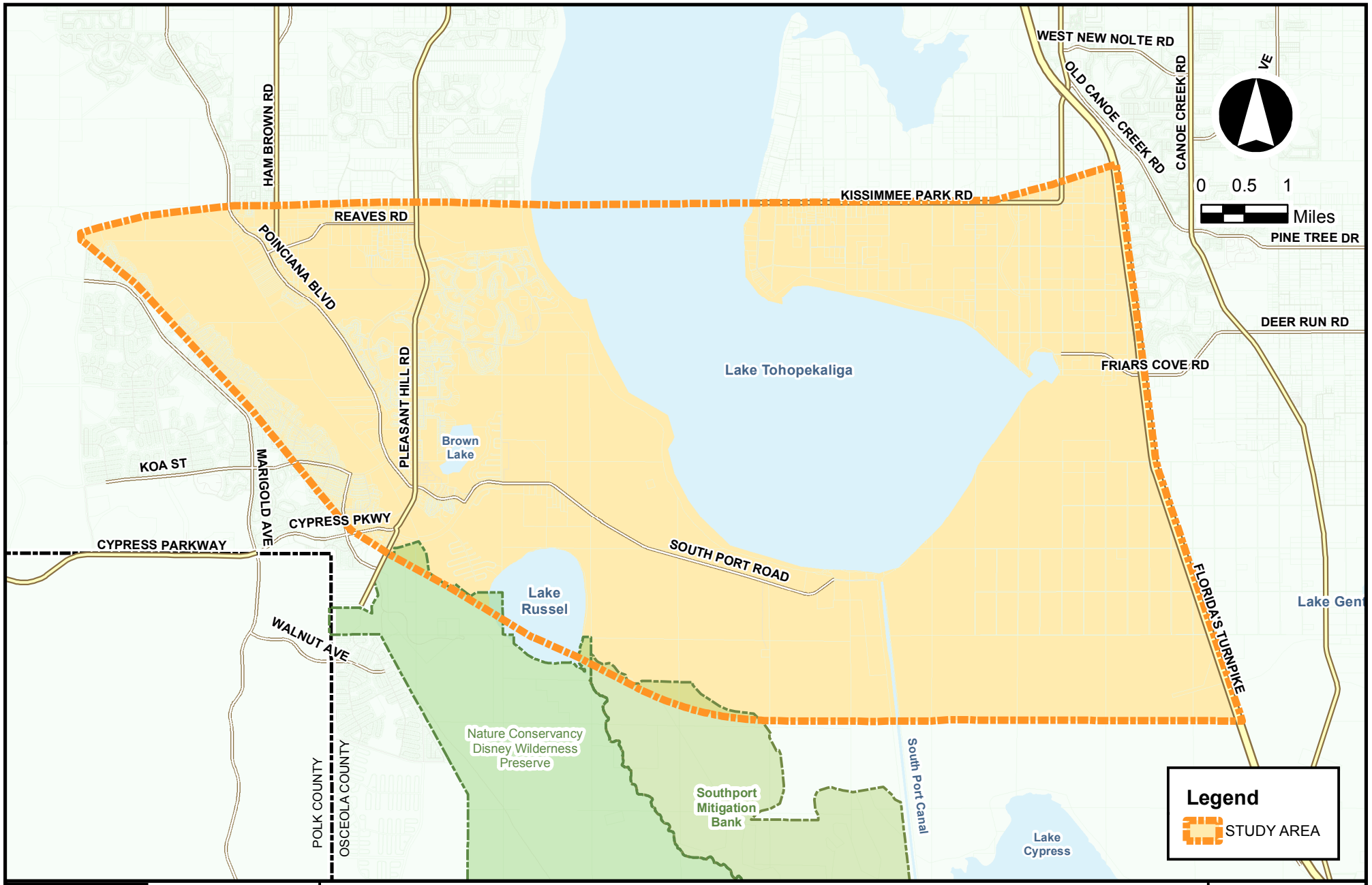
Attachments

List of Exhibits and Appendices

Exhibit Number	*Title*
1	Project Location Map
2	Initial Corridors
3	Social Features
4	Cultural Features
5	Natural Features
6	Physical Features
7	Draft Corridor Typical Section
8	Listed Species Evaluation Methodology

Methodology Memorandum

Exhibits

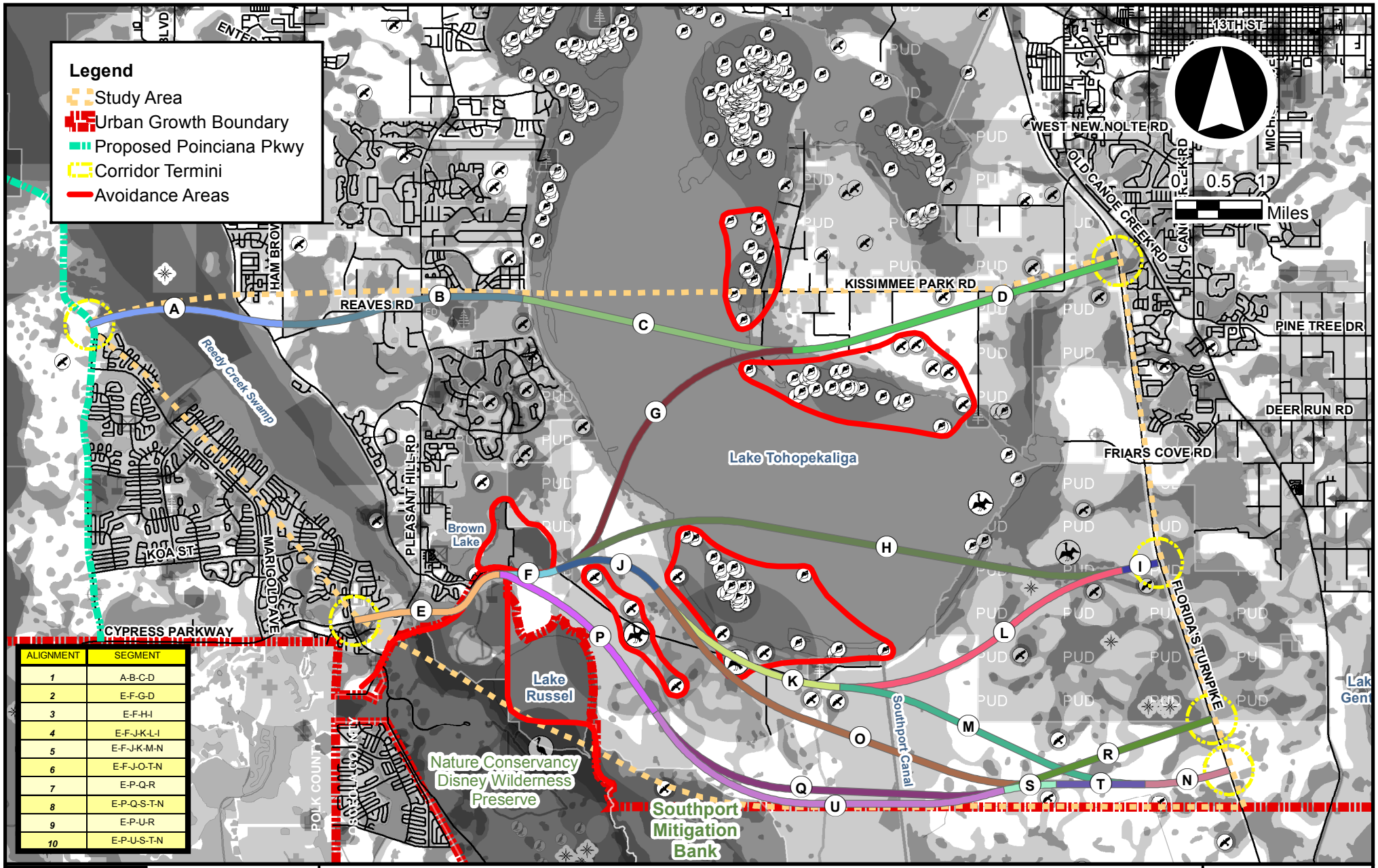


Florida Department of Transportation
District 5

Poinciana Parkway Southport Connector
PD&E Study
from Pleasant Hill Road
to Florida's Turnpike
Osceola County, Florida
Financial Project No.: 433693-1-22-01
Federal Project No: N/A

PROJECT LOCATION MAP

EXHIBIT
1



ALIGNMENT	SEGMENT
1	A-B-C-D
2	E-F-G-D
3	E-F-H-I
4	E-F-J-K-L-I
5	E-F-J-K-M-N
6	E-F-J-O-T-N
7	E-P-Q-R
8	E-P-Q-S-T-N
9	E-P-U-R
10	E-P-U-S-T-N

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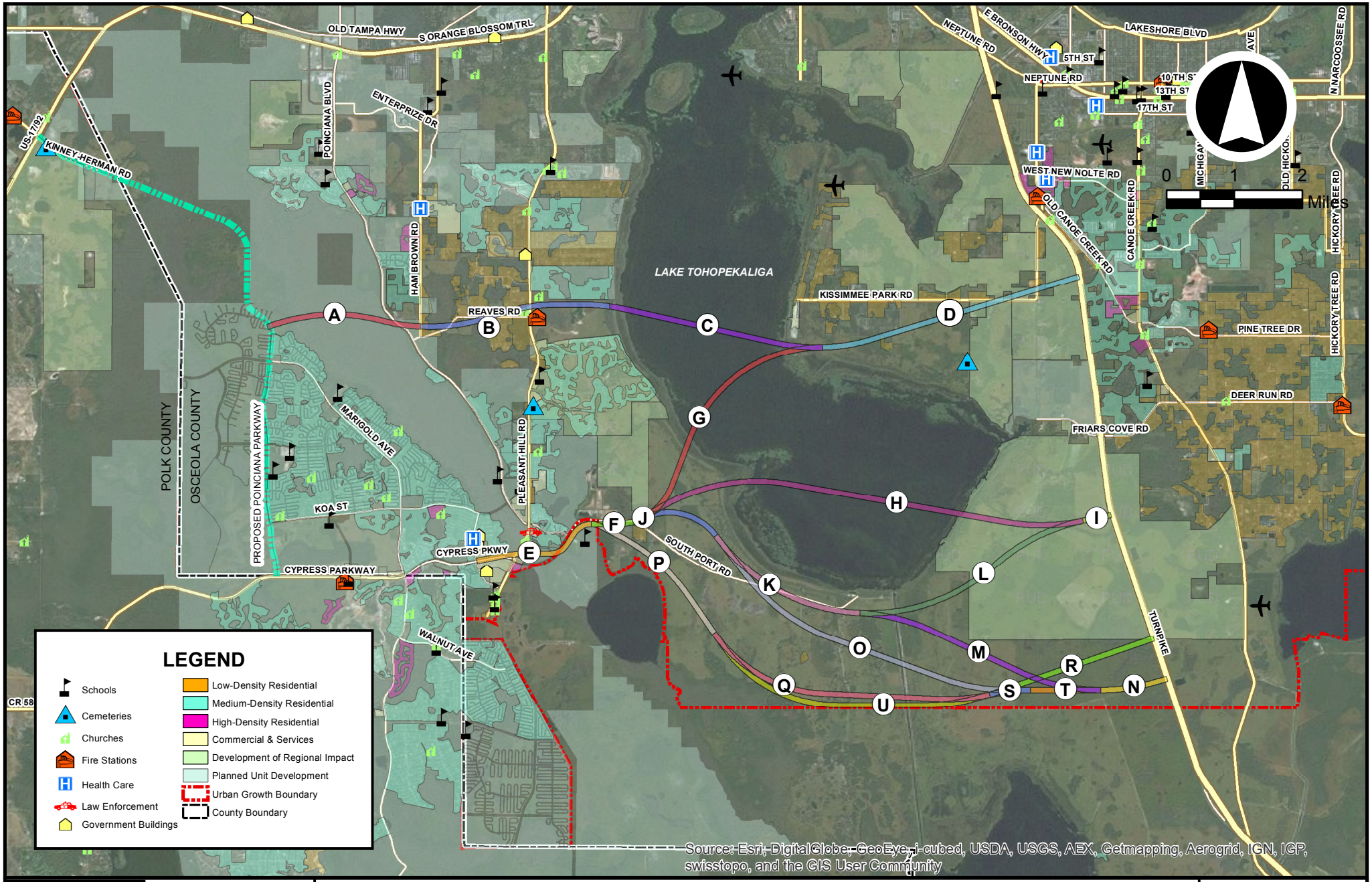
INITIAL CORRIDORS MAP

EXHIBIT
2



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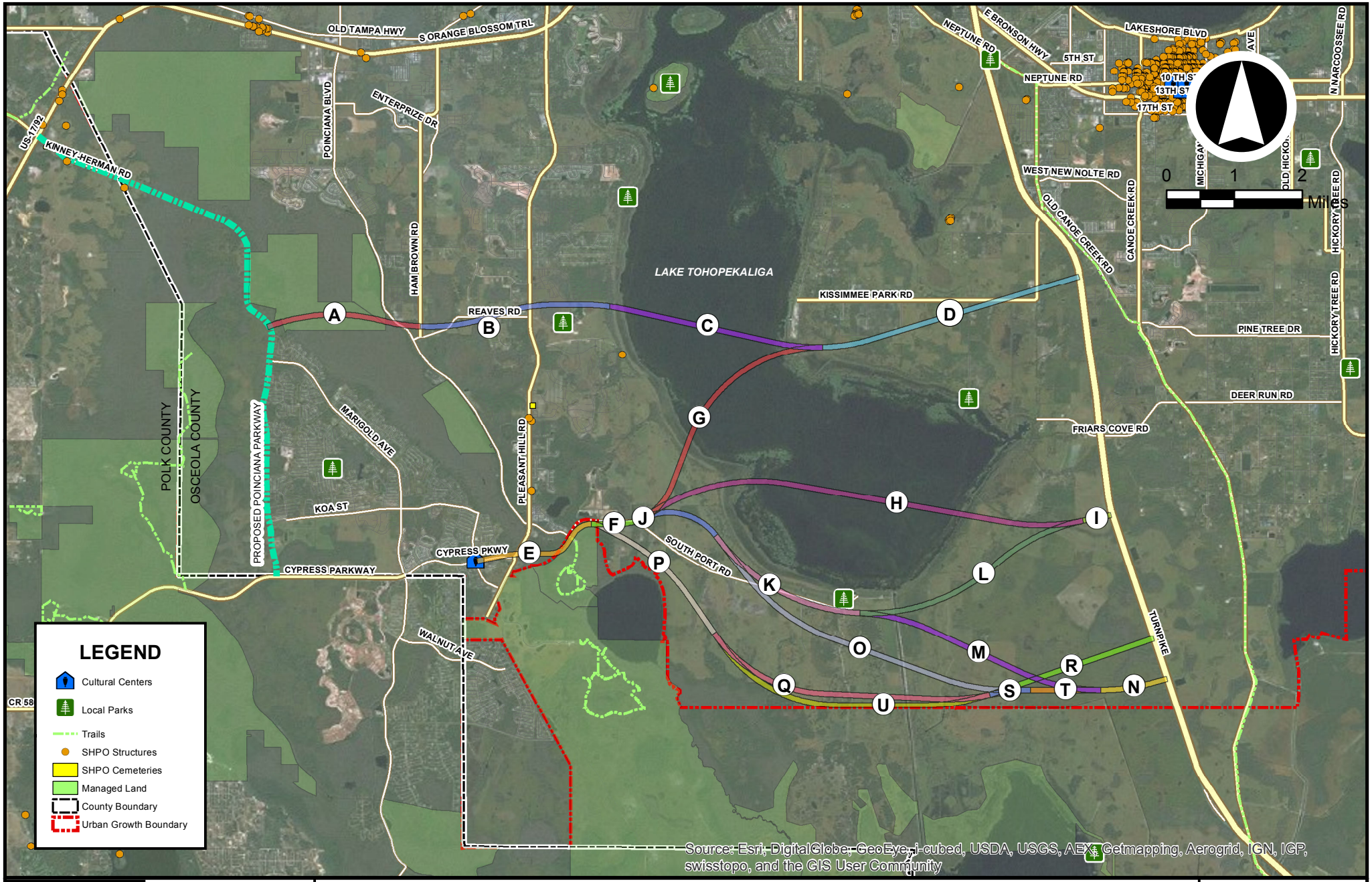
SOCIAL FEATURES

EXHIBIT
3



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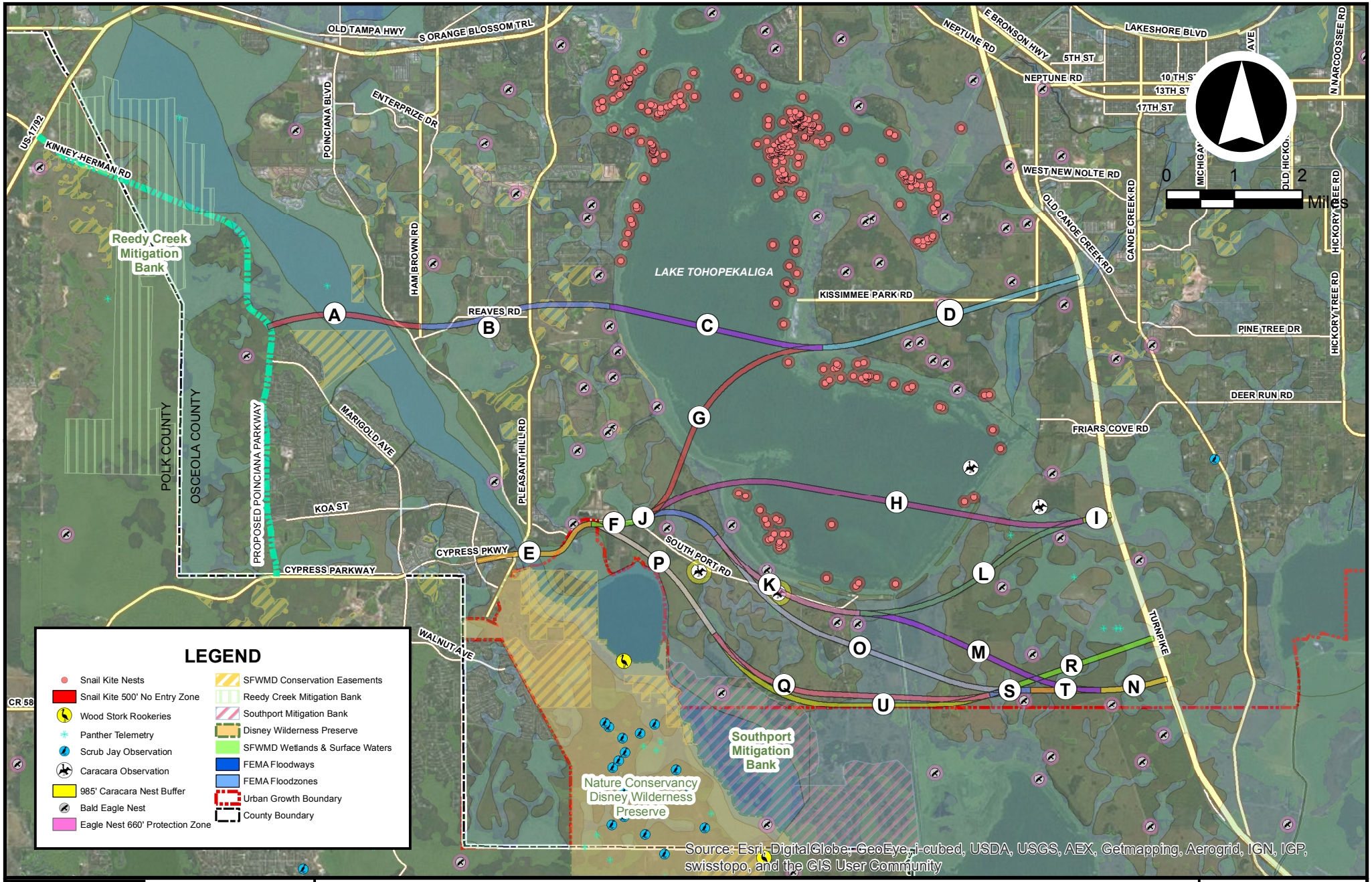
CULTURAL FEATURES

EXHIBIT
4



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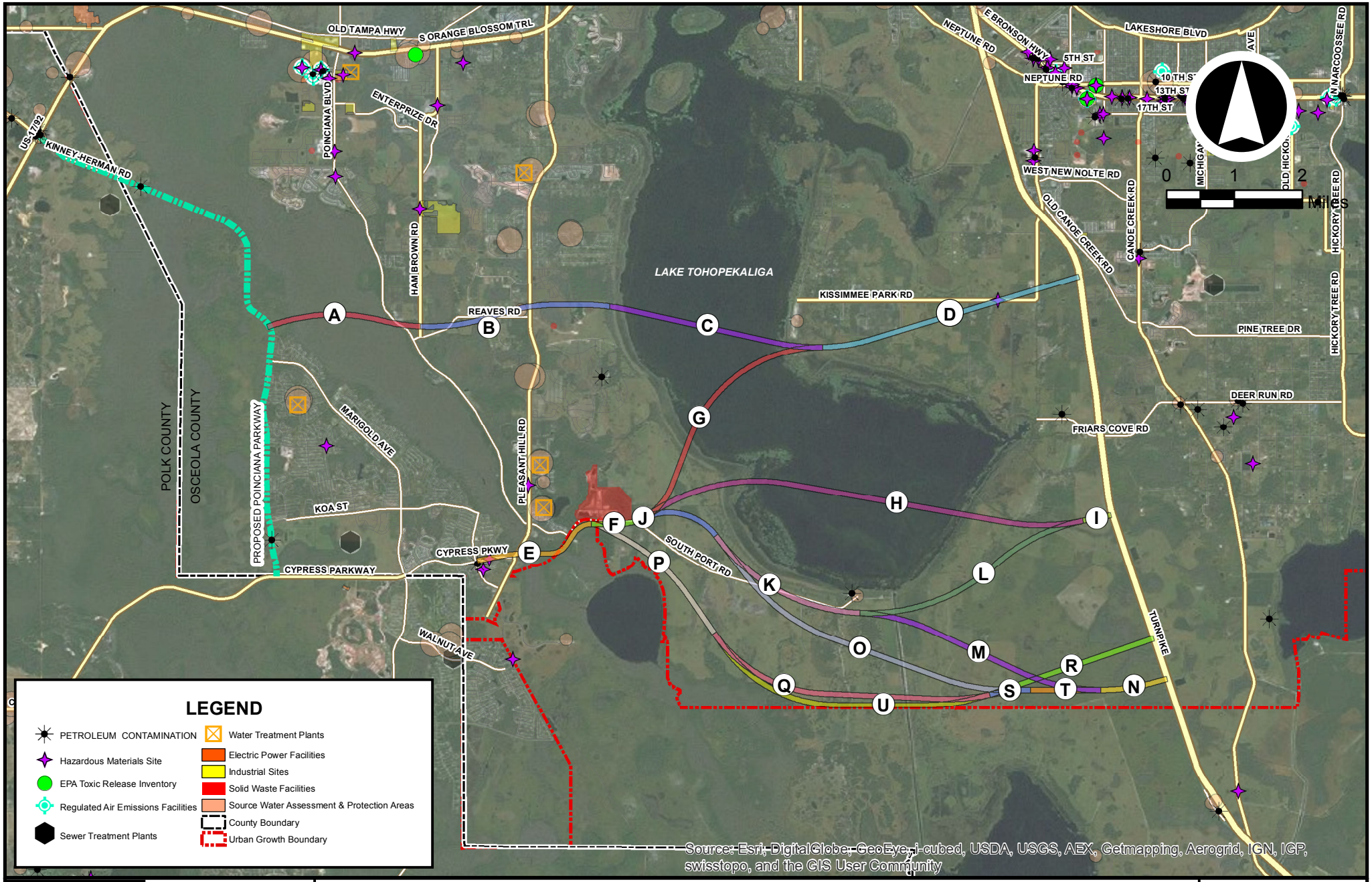
NATURAL FEATURES

EXHIBIT
5



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Financial Project No.: 433693-1-22-01
Federal Project No: N/A

PHYSICAL FEATURES

EXHIBIT
6

Exhibit 8

Listed Species Evaluation Methodology

INTRODUCTION

The following summarizes the methodology for evaluating the impacts of the alternative corridors on key listed species. To date, no surveys for state and/or federally-listed wildlife species have been completed, so the preliminary listed species evaluations utilized a combination of preliminary field reviews and habitat assessments, available GIS data (Soil, FLUCFCS, habitat, and occurrence shape files), and literature regarding the distribution, habitat requirements, and life histories of listed species with the potential to occur within the various alignments.

Based on the preliminary desktop review, the likelihood of occurrence of each state and federally-listed species was given a relative rating of "high," "medium," or "low." Following this initial evaluation, it was determined that some species (i.e., the sand skink [*Neoseps reynoldsi*] and bluetail mole skink [*Eumeces egregius lividus*]) were unlikely to occur in any alignment, due to a lack of available habitat, as defined by U.S. Fish and Wildlife Service (USFWS) guidelines (USFWS 2012). Other species (i.e., gopher tortoise [*Gopherus polyphemus*], Sherman's fox squirrel [*Sciurus niger shermani*], eastern indigo snake [*Drymarchon corais couperi*], wood stork [*Mycteria americana*]) are habitat generalists, or have habitat requirements that are satisfied by areas that occur within all alignments. Without formal survey data, it was determined that these species could not be utilized to effectively rank/score the various alignments.

It was determined that the preliminary listed species analysis could most effectively compare each alignment based on four (4) species, that are either known to occur within the vicinity of the alignments, or whose presence within the project could substantially affect one alignment alternative over another. The species utilized to score/rank the various alignments include the Audubon's crested caracara (*Polyborus plancus audubonii*), bald eagle (*Haliaeetus leucocephalus*), everglade snail kite (*Rostrhamus sociabilis plumbeus*), and Florida grasshopper sparrow (*Ammodramus savannarum floridanus*). Details regarding the assessment for each of the above species is further detailed below.

AUDUBON'S CRESTED CARACARA

No current occurrence data for this species is available within the various project corridors. However, Inwood biologists have identified caracara within areas associated with all alignment alternatives. Based on the presence of suitable habitat, and the observed occurrence of caracara during several, brief field reviews, it was determined that the likelihood of occurrence of this federally threatened species was high within all alignments. Furthermore, it was assumed that the probability of nesting caracara was the same across all areas of suitable habitat. Based on the average nesting territory size of 750-acres (approximately 0.6-mile radius from the nest tree), potential nesting territories were delineated within suitable nesting habitats in the study area to provide an estimate of the potential number of nesting territories that could occur. In addition, suitable caracara habitat (as defined in Morrison 2001) was mapped within each project corridor.

Two criteria will be utilized to provide a relative ranking of the potential impacts to caracara: (1) acres of suitable habitat within each alignment, and (2) potential number of nesting territories encountered by each alignment. The acreage of suitable habitats within each alignment will then adjusted to a 10-point

rating scale that depicts the relative impact of each alignment on suitable caracara habitat. The results of the analysis will be depicted in Table 1.

Table 1. Caracara Analysis

Caracara Analysis						
Alignment	**Acres Suitable Habitat**	**Potential Number of Territories (based on 0.6-mile average radius)**	**Rating Based on Acres Habitat**	**Rating Based on Potential # Territories**	**Sum of Ratings**	**Overall Rating (Adjusted to 10-point Scale)**
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

BALD EAGLE

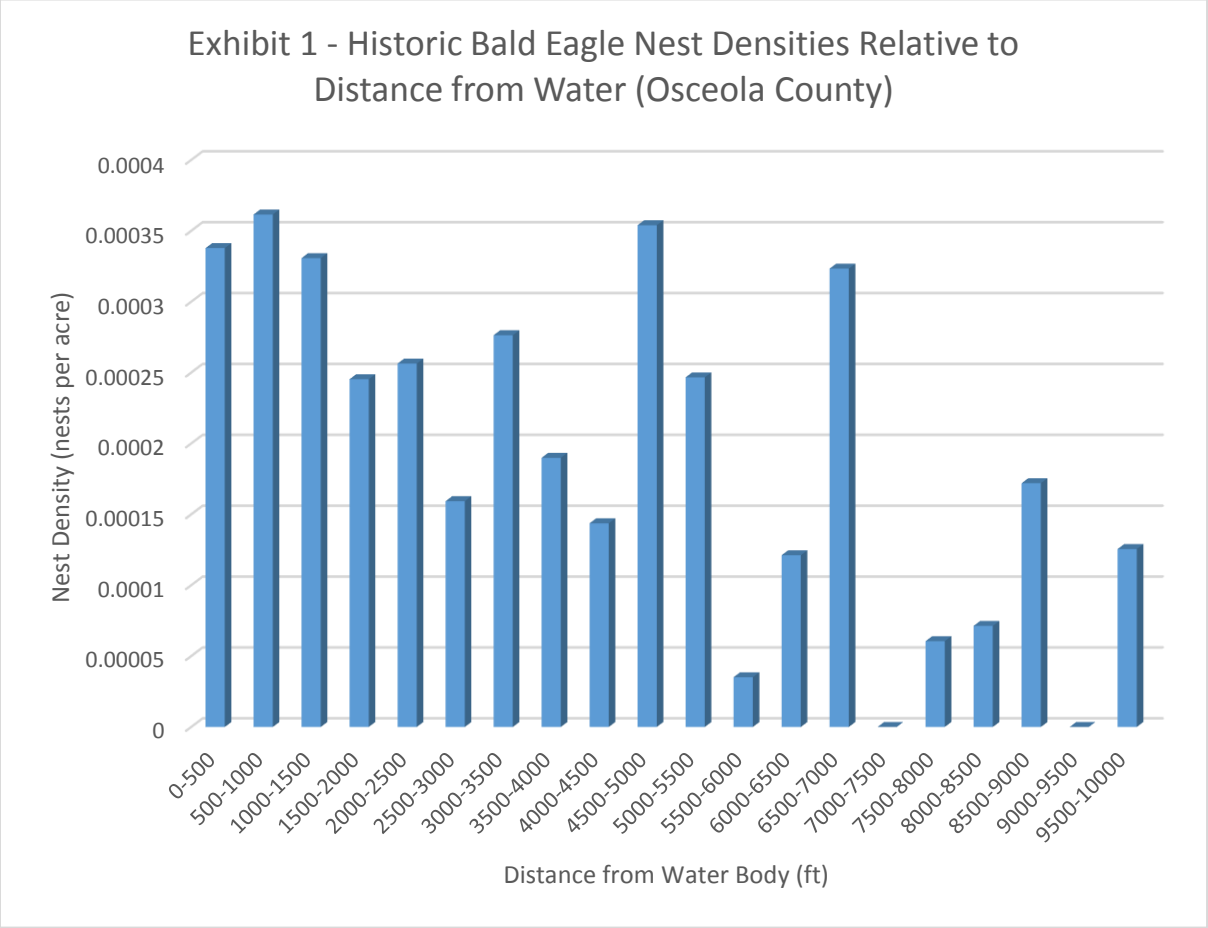
Although the bald eagle was removed from the federal and state endangered species list in 2007 and 2008, respectively, it is still afforded protection under the federal Bald and Golden Eagle Protection Act (1940) and the Migratory Bird Treaty Act (1918). These federal protections prohibit the take of eagles, their nests, or trees containing their nests.

The FFWCC completes nesting season surveys for Osceola County on an annual basis, and up-to-date nesting data for the Osceola County population is readily available. As such, potential impacts to this species and their nests could be accurately assessed based on the available nesting data. Several criteria were developed to determine the relative potential of each alignment to impact bald eagle nests, and/or nesting habitat, and are described below.

The FFWCC defines two (2) protection zones that surround active, and alternate bald eagle nests (FFWCC, 2008). The primary zone extends 330’ from the nest, and the secondary zone extends 660’ from the nest. Both 330’ and 660’ protection zones will be generated in GIS utilizing the FFWCC bald eagle nest data. Each alignment will be given a relative rating based on the number of primary and secondary zone encroachments.

The second factor that will be utilized in the bald eagle rating analysis is proximity to water. The bald eagle is a piscivorous raptor that is dependent on water for its primary food. Information provided by

FFWCC states that nearly all bald eagle nests in Florida occur within 1.8 miles of water. Based on this relationship between nesting eagles and water, a GIS-based analysis will be conducted to determine the likelihood of encountering nesting eagles based on the proximity of each alignment to water. Information utilized in this analysis will included the FFWCC bald eagle nest data for Osceola County (1981-2012), and St. Johns River Water Management District (SJRWMD) and South Florida Water Management District (SFWMD) Land Use GIS layers. Bald eagle nest densities were calculated in 500' increments, from 0-10,000' from the edge of all water bodies (FLUCFCS category 5000). The following Figure 1 depicts the results of the density calculations.



The acreage of suitable nesting habitat within each alignment will then be quantified and categorized based on the distance from water. The water bodies themselves will not be included in the acreage calculations, as they are not considered suitable nesting habitat. The results of this analysis will outline the relative probability of each alignment to encounter bald eagle nests, based on their proximity to water bodies.

The final factor that will be included in the overall analysis of potential bald eagle impacts is the acreage of nesting habitat within each alignment. As long as suitable nesting trees are present, bald eagles will nest in a variety of habitat types, including both forested, and non-forested uplands and wetlands, as well as agricultural and residential land uses. For the purposes of this analysis, only the water bodies themselves will be excluded from those areas considered to be suitable nesting habitat. The ten alignments will then be rated based on the overall impacts to suitable bald eagle nesting habitat.

The values obtained in each of the three scoring categories will then be adjusted relative to each of the 10 alignments. The result will be a relative rating of each alignment for each of the three categories. The overall rating for each alignment will then made by combining the ratings from the three scoring categories, above and rating them on a 10 point scale. The results of the Bald Eagle Analysis will be summarized in the following Table 2.

Table 2. Bald Eagle Analysis

Bald Eagle Analysis								
Alignment	**Acres Potential Nesting Habitat**	**Number of Primary Zones**	**Number of Secondary Zones**	**Rating Based on Number of Protection Zones**	**Rating Based on Acres Suitable Nesting Habitat**	**Rating Based on Alignment Proximity to Water**	**Sum of Ratings**	**Overall Rating (Adjusted to 10-Point Scale)**
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

EVERGLADE SNAIL KITE

The Everglade snail kite is a federally-listed, endangered raptor whose nesting habitat is restricted to lakeshore emergent vegetation (USFWS 1999). Within the project corridor, snail kite nesting is limited to the Lake Tohopekaliga (Toho) shoreline, and the presence of this species has been confirmed through visual observation by Inwood biologists. Historic snail kite nesting location data for Lake Toho from 1991-2013 was obtained from the USFWS. This data contains point locations for yearly snail kite nests and is collected by USFWS and the Florida Fish and Wildlife Conservation Commission (FFWCC). The USFWS defines two areas surrounding snail kite nests that are important to consider when determining potential impacts (USFWS 2006). An inner protective zone of 500 ft is recommended to reduce disturbance to nesting birds. This is based on known flushing distances that have been observed for this species. The second protective zone is a 1,640 ft area that should be protected from habitat disturbances such as anthropogenic water level changes and vegetative alternations during the breeding season, which occurs from January to May. This additional zone of protection is intended to protect foraging habitat for nesting birds, who typically have a restricted foraging range when compared to non-nesting individuals such as juveniles.

The alignments will be rated based on the number of snail kite nests and the number of "no entry" (425') buffer zones that are impacted by each alignment, as well as the acreage of potential nesting habitat (i.e., lakeshore wetlands with emergent vegetation) that is impacted. Additionally, weight will be given to the likelihood of each alignment impacting snail kites due to their proximity to known nests and/or nesting habitat. The results of the Everglade snail kite analysis will be summarized in Table 3, below.

Table 3. Everglade Snail Kite Analysis

Everglade Snail Kite Habitat Analysis						
Alignment	**Acres Potential Nesting Habitat**	**Number of Nests & Buffer Zones Impacted**	**Rating Based on Acres of Habitat**	**Rating Based on Number of Nests/Buffer Zones**	**Sum of Ratings**	**Overall Rating (Adjusted to 10-Point Scale)**
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

FLORIDA GRASSHOPPER SPARROW

The Florida grasshopper sparrow (FGS) is a federally-listed, endangered passerine species whose nesting habitat is restricted to dry prairie that is relatively open and low, and has a history of frequent fires (USFWS 2004). According to the SLOPES, suitable habitat for FGS is dry prairie including improved pasture, palmetto prairie, and unimproved pasture. Additional habitat characteristics include:

- Open, dry habitats within less than 1 tree per acre
- Minimum of 20% cover of bare ground
- Large, contiguous areas of suitable habitat (240-1348 ha)

Much of the project corridor has been converted over time from dry prairie to pasture used for cattle grazing, which usually results in the decline or extirpation of breeding populations (USFWS 2004). There are currently six known populations for Florida grasshopper sparrows. Three populations exist on Avon Park Air Force Range, one on Kissimmee Prairie State Preserve, one on Three Lakes Wildlife Management Area, and one on private property (USFWS 2004).

Known populations of FGS are located approximately 12 miles south-southeast of the project corridor. However, suitable habitat, based on the *Species Conservation Guidelines for the Florida Grasshopper Sparrow* (USFWS 2004), has been identified by Inwood Biologists north of Lake Cypress Road and south of Friar's Cove Road just outside the project corridor with potential to support FGS. Due to their high site

fidelity, FGS surveys should include all potential habitat and include a 100-meter (328-ft) buffer surrounding it (USFWS 2004). As no available occurrence data is available within the various alignment corridors, a GIS-based analysis of potential FGS habitats will be completed. The following land uses and cover types will be included in the analysis:

- Improved Pastures (FLUCFCS #1100)
- Unimproved Pastures (FLUCFCS #1120)
- Herbaceous (Dry Prairie) (FLUCFCS #3100)

The acreages of each of these habitat types will be calculated using GIS, and the alignments will be rated (on a 10-point scale) based on the relative occurrence of the above habitat types. It should be noted that this analysis will focus only on the type of habitat, as defined by FLUCFCS and the SLOPES, and will not take into account specific features like tree density, frequency of fire, grazing practices, and percent bare ground. These characteristics are crucial when determining habitat suitability for grasshopper sparrows, but are beyond the scope of the desktop analysis. Table 4, below, will summarize the results and ratings of the Florida grasshopper sparrow habitat analysis.

Table 4. Results of Florida Grasshopper Sparrow Analysis

Florida Grasshopper Sparrow Habitat Analysis		
Alignment	**Acres Potential Habitat**	**Rating (adjusted to 10-Point Scale)**
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

ADDITIONAL SCORING CONSIDERATIONS

Upon completion of the quantitative analyses for each of the above species, additional criteria will be considered to rate each alignment's overall impact to listed species. Whereas the above analyses will allow for the alignments to be rated relative to a single species, the overall goal is to develop a system that rates each alignment relative to all of the above assessed species. As an example, based on preliminary feedback from the USFWS, and recent recovery efforts specifically directed at grasshopper sparrows (i.e., captive breeding program), it is anticipated that avoidance of impacts to occupied habitat will be the only option available for addressing the presence of grasshopper sparrows. In contrast,

although a “take” of bald eagle nests will not be considered viable, there are established conservation guidelines and a permitting program in-place that will allow construction activities to occur within the designated protection zones (REF). As such, greater weight will be given to potential impacts to grasshopper sparrows, than bald eagles. This weighting of one species relative to another will be based on several factors, including but not limited to:

- Whether permitting protocols exist;
- Availability of avoidance, minimization, and mitigation measures;
- Sensitivity of species to habitat alteration;
- Effect of proposed activity to ongoing species recovery efforts;

The result of the overall listed species analysis will be to provide a recommended alternative that both minimizes adverse environmental impacts, and is also technically feasible and permissible.

References

Florida Fish and Wildlife Conservation Commission (FFWCC). 2008. Bald Eagle Management Plan, *Haliaeetus leucocephalus*. FWC, Tallahassee, Florida. Available from: http://myfwc.com/media/427567/Eagle_Plan_April_2008.pdf

Morrison, J.L. 2001. Recommended Management Practices and Survey Protocols for Audubon's Crested Caracara (*Caracara cheriway audubonii*) in Florida. Technical Report No. 18. FWC, Tallahassee, Florida. Available from: http://www.fws.gov/verobeach/BirdsPDFs/ManagementPracticesCaracara.pdf?spcode=A003

U.S. Fish and Wildlife Service (USFWS). 2004. Draft Species Conservation Guildelines South Florida: Florida Grasshopper Sparrow. South Florida Ecological Services Office, Vero Beach, Florida. Available From: http://www.fws.gov/verobeach/BirdsPDFs/FloridaGrasshopperSparrowConservationGuidelines.pdf

U.S. Fish and Wildlife Service (USFWS). 2012. Peninsular Florida Species Conservation and Consultation Guide: Sand Skink and Blue-tailed (Bluetail) Mole Skink. South Florida Ecological Services Office, Vero Beach, Florida. Available From: http://www.fws.gov/verobeach/ReptilesPDFs/20120206_Skink%20CCG_Final.pdf

U.S. Fish and Wildlife Service (USFWS). 2006. Draft Snail Kite Management Guidelines. South Florida Ecological Services Office, Vero Beach, Florida. Available from: http://www.fws.gov/verobeach/BirdsPDFs/20060221SnailKiteManagementGuidelines2.pdf

U.S. Fish and Wildlife Service (USFWS). 1999. South Florida Multi-Species Recovery Plan: Everglade Snail Kite (*Rostrhamus sociabilis plumbeus*). South Florida Ecological Services Office, Vero Beach, Florida. Available from: http://www.fws.gov/verobeach/MSRPPDFs/EvergladeSnailKite.pdf

Appendix 2: Listed Species Evaluation

Listed Species Evaluation

INTRODUCTION

The following summarizes the process used to evaluate the potential impacts of the corridor alternatives on the key listed species identified in the Methodology Memorandum: the Audubon's crested caracara (*Polyborus plancus audubonii*), the bald eagle (*Haliaeetus leucocephalus*), the Everglade snail kite (*Rostrhamus sociablis plumbeus*), and the Florida grasshopper sparrow (*Ammodramus savannarum floridanus*). The evaluation was completed without the benefit of species-specific surveys and relies upon available GIS data; preliminary field reviews and habitat assessments by Inwood ecologists; available literature regarding the distribution, life histories, and habitat requirements of the key listed species; and the best scientific judgment of the authors. The results of the evaluation are included in the Alternative Corridor Evaluation Report.

Each of the four key species were given a degree of adverse effect based on a scale of 1 to 10 with 1 being little to no adverse effect and 10 being a potential take of the species. These effect determinations were made independently for each species and included the assessment of potential impacts to known nesting territories, nesting habitat, foraging habitat, direct observations by Inwood ecologists, and coordination with regulatory agencies. Details regarding the evaluation completed for each species is further detailed below.

AUDUBON'S CRESTED CARACARA

No current occurrence data is available for this species within the project study area. However, during preliminary field reviews within the project study area, Inwood ecologists documented caracara nesting and foraging. In determining the degree of effect for caracara within the project study area, two factors were considered: (1) acres of suitable habitat within the footprint of each corridor alternative, and (2) the potential number of 750- acre (0.6-mile radius of nest tree) nesting territories that could occur within the footprint of each corridor alternative.

Land use and land cover data obtained from the South Florida Water Management District, Osceola County, and the Florida Natural Areas Inventory was reviewed and compared to habitat types within the project study area where caracara had been directly observed by Inwood ecologists. Within the project study area, suitable caracara habitat was considered to be both improved and unimproved pasture areas on the south side of Lake Toho as well as pasture and citrus groves located in the northeast portion of the project study area along both sides of Kissimmee Park Road and Canoe Creek Road. In addition to meeting the habitat criteria defined by Morrison and Humphrey (2001) and the Species Conservation Guidelines for the Audubon's Crested Caracara in South Florida (USFWS 2004), caracara were directly observed in these areas by Inwood ecologists.

Table 1 below details the results of the caracara analysis conducted using the methods outlined above. Each rating in the table is based on the range of values encountered within each corridor

alternative. The Adjusted Rating is based upon the sum of the interim ratings that is then normalized to a 10-point scale.

Table 1: Caracara Analysis

Results of Caracara Analysis						
Alignment	**Acres Suitable Habitat**	**Potential Number of Territories (based on 0.6-mile radius average)**	**Rating Based on Acres Habitat (see table below for adjusted ranking)**	**Rating Based on Potential # Territories**	**Sum of Ratings**	**Adjusted Rating (relative rating based on sum of scores)**
1	265.0923	4	3	1	4	1
2	301.7713	6	4	6	10	3
3	206.4189	5	1	3	4	1
4	420.1047	8	9	10	19	7
5	504.4521	8	12	10	22	9
6	512.5094	9	12	13	25	10
7	512.4082	9	12	13	25	10
8	517.0281	8	13	10	23	9
9	517.6863	8	13	10	23	9
10	522.0704	8	13	10	23	9
11	486.9388	8	11	10	21	8
12	502.6876	8	12	10	22	9
13	539.7655	9	13	13	26	10

The following tables include the supporting information used to populate the table above. Each criteria was normalized to determine their rating relative to the each other. The normalization methodology used for the suitable habitat rating required the determination of the range between the highest (539.76) and lowest (206.41) values in the dataset. The range for these values is 333.35 (highest value – lowest value = range). The interval within the range was then determined by dividing the number of alternatives, 13, by the range. This resulted in an interval of 25.64, which is 333.35/13 and rounded to the nearest tenth.

Suitable Habitat Rating Normalization			
Max	Min	Range	Interval
539.76	206.41	333.35	25.6

The normalized data was entered into a table from highest to lowest followed by a second column indicating the acreage range based upon the interval from the previous table. Rankings

were applied on a scale of 10 to 1 with 10 being the highest and 1 being the lowest. The acres of suitable habitat for each corridor alternative are derived from the GIS analysis, and assuming uniformity of habitat quality, were located within the ranked ranges and entered into the table.

Suitable Habitat Adjusted Rating			
Acreage	Acreage Range	Rank	Corridor
539.76	513.61 – 539.76	13	7, 8, 9, 10, 13
513.61	488.01 – 513.61	12	5, 6, 12
488.01	462.41 – 488.01	11	11
462.41	436.81 – 462.41	10	
436.81	411.21 – 436.81	9	4
411.21	385.61 – 411.21	8	
385.61	360.01 – 385.61	7	
360.01	334.41 – 360.01	6	
334.41	308.81 – 334.41	5	
308.81	283.21 – 308.81	4	2
238.21	257.61 – 283.21	3	1
257.61	232.01 – 257.61	2	
232.01	206.41 – 232.01	1	3

The normalization methodology used for the potential nesting territories rating required the determination of the range between the highest (9) and lowest (4) values in the dataset. The range for these values is 5 (highest value – lowest value = range). The interval within the range was then determined by dividing the number of alternatives, 13, by the range. This resulted in an interval of 0.38, which is 5/13 and rounded to the nearest tenth.

Potential Nesting Territories Rating Normalization			
Max	Min	Range	Interval
9	4	5	0.4

The range was entered into a table from highest to lowest based upon the interval from the previous table. Ranking was applied on a scale of 10 to 1 with 10 being the highest and 1 being the lowest. The number of potential nesting territories for each corridor alternative are derived from the GIS analysis and, assuming uniform distribution of nesting territories within all suitable habitat, were located within the ranked ranges and entered into the table.

Potential Nesting Territories Adjusted Rating		
Range	Corridor	Rating
8.8 – 9.0	6, 13	13
8.4 – 8.8		12
8.0 – 8.4		11
7.6 – 8.0	4, 5, 7, 8, 9, 10, 11, 12	10

7.2 – 7.6		9
6.8 – 7.2		8
6.4 – 6.8		7
6.0 – 6.4	2	6
5.6 – 6.0		5
5.2 – 5.6		4
4.8 – 5.2	3	3
4.4 – 4.8		2
4.0 – 4.4	1	1

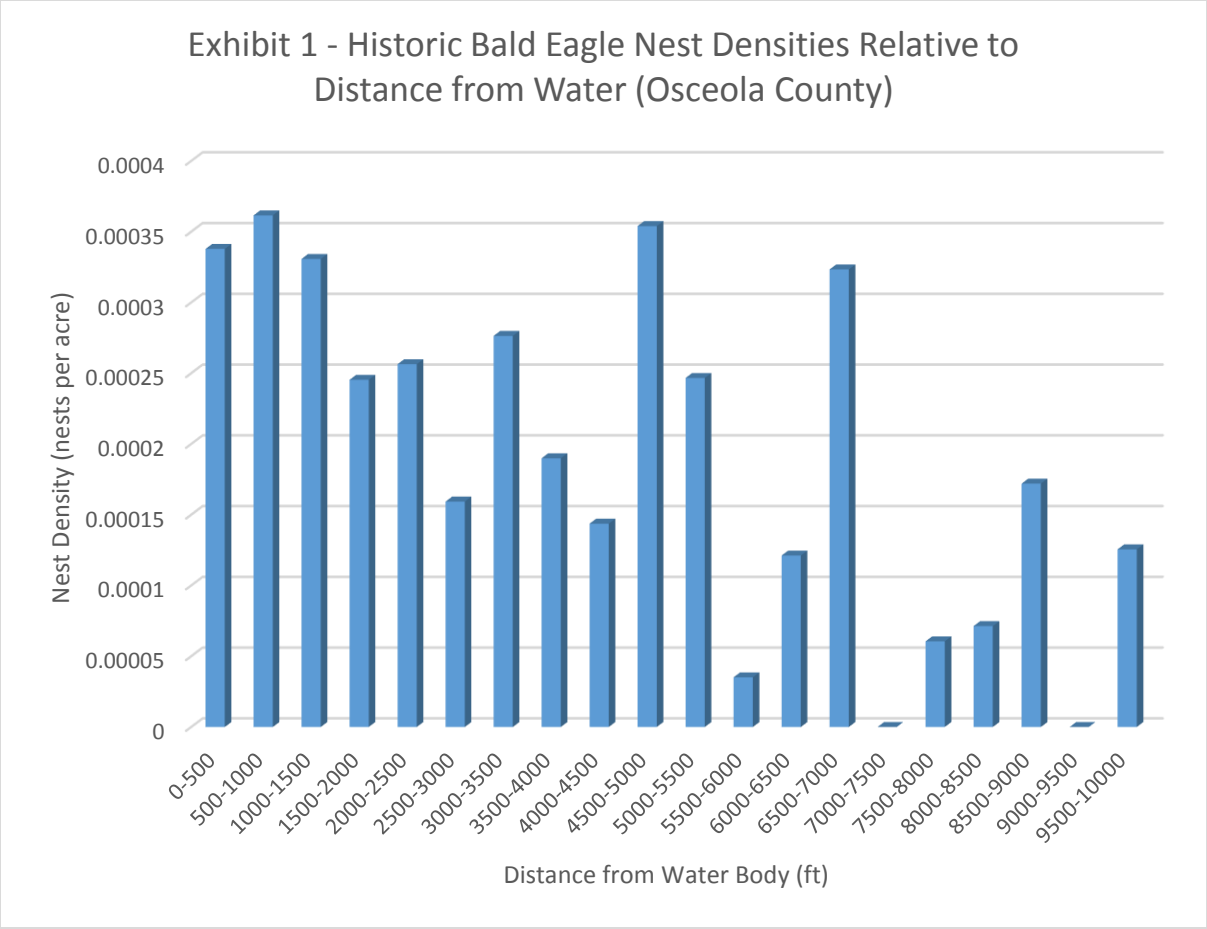
BALD EAGLE

Although the bald eagle was removed from the federal and state endangered species list in 2007 and 2008, respectively, it is still afforded protection under the federal Bald and Golden Eagle Protection Act (1940) and the Migratory Bird Treaty Act (1918). These federal protections prohibit the take of eagles, their nests, or trees containing their nests. The bald eagle is also afforded protections by the state's eagle rule adopted by the FWC.

The FWC completes nesting season surveys for Osceola County every three years, and up-to-date nesting data for the Osceola County population is readily available. As such, potential impacts to this species and their nests could be accurately assessed based on the available nesting data. Several criteria were developed to determine the relative potential of each corridor to impact bald eagle nests, and/or nesting habitat, and are described below.

The FWC defines two protection zones that surround active, and alternate bald eagle nests (FWC, 2008). The primary zone extends 330 feet from the nest, and the secondary zone extends 660 feet from the nest. Both the 330 foot and 660 foot protection zones were generated in GIS utilizing the FWC's bald eagle nest data. Each corridor was given a relative rating based on the number of primary and secondary zone encroachments.

The second factor that was utilized in the bald eagle rating analysis is proximity to water. The bald eagle is a piscivorous raptor that is dependent on water for its primary food. Information provided by FWC states that nearly all bald eagle nests in Florida occur within 1.8 miles of water. Based on this relationship between nesting eagles and water, a GIS-based analysis was conducted to determine the likelihood of encountering nesting eagles based on the proximity of each corridor to water. Information utilized in this analysis included the FFWCC bald eagle nest data for Osceola County (1981-2012), and St. Johns River Water Management District (SJRWMD) and South Florida Water Management District (SFWMD) Land Use GIS layers. Bald eagle nest densities were calculated in 500' increments, from 0-10,000' from the edge of all water bodies (FLUCFCS category 5000). The following Figure 1 depicts the results of the density calculations.



The acreage of suitable nesting habitat within each corridor was quantified and categorized based on the distance from water. The water bodies themselves were not included in the acreage calculations, as they are not considered suitable nesting habitat. The results of this analysis outlines the relative probability of each corridor to encounter bald eagle nests, based on their proximity to water bodies.

The final factor that was included in the overall analysis of potential bald eagle impacts is the acreage of nesting habitat within each corridor. As long as suitable nesting trees are present, bald eagles will nest in a variety of habitat types, including both forested, and non-forested uplands and wetlands, as well as agricultural and residential land uses. For the purposes of this analysis, only the water bodies themselves were excluded from those areas considered to be suitable nesting habitat. The ten corridors were then rated based on their overall impacts to suitable bald eagle nesting habitat.

The values obtained in each of the three scoring categories were adjusted relative to each of the 13 corridors. The result was a relative rating of each corridor for each of the three categories. The overall rating for each corridor was made by combining the ratings from the three scoring

categories, above, and rating them on a 10 point scale. The results of the Bald Eagle Analysis are summarized in Table 2 below.

Table 2: Bald Eagle Analysis

Bald Eagle Analysis								
Corridor	**Acres Potential Nesting Habitat**	**Number of Primary Zones**	**Number of Secondary Zones**	**Rating Based on Number of Protection Zones**	**Rating Based on Acres Suitable Nesting Habitat**	**Rating Based on Corridor Proximity to Water**	**Sum of Ratings**	**Overall Rating (Adjusted to 10-Point Scale)**
1	496.68	0	0	1	2	5	8	2
2	591.82	0	1	2	6	9	17	6
3	474.38	0	1	2	1	1	4	1
4	693.93	0	4	5	10	13	28	10
5	729.99	0	3	4	12	13	29	10
6	738.07	0	2	3	12	10	25	9
7	742.87	1	1	3	13	4	20	7
8	743.63	0	2	3	13	5	21	7
9	744.29	0	1	2	13	4	19	6
10	748.67	0	2	3	13	5	21	7
11	713.54	0	1	2	11	6	19	6
12	729.13	0	1	2	12	8	22	8
13	766.21	0	1	2	13	6	21	7

The following tables include the supporting information used to populate the table above. The normalization methodology used for the suitable nesting habitat rating required the determination of the range between the highest (766) and lowest (474) values in the dataset. The range for these values is 291 (highest value – lowest value = range). The interval within the range was then determined by dividing the number of alternatives, 13, by the range. This resulted in an interval of 22.4, which is 291/13 and rounded to the nearest tenth.

Suitable Nesting Habitat Rating Normalization			
Max	Min	Differential	Interval
766.21	474.38	291.83	22.4

The range was entered into a table from highest to lowest based upon the interval from the previous table. Ranking was applied on a scale of 10 to 1 with 10 being the highest and 1 being

the lowest. The acreage of potential nesting habitat with each corridor alternative are derived from the GIS analyses, and assuming uniform quality of nesting territories within all suitable habitat, were located within the ranked ranges and entered into the table.

Potential Nesting Habitat Adjusted Rating		
Range	Corridor	Rating
742.8 – 766.2	7, 8, 9, 10, 13	13
720.4 – 742.8	5, 6, 12	12
698.0 – 720.4	11	11
675.6 – 698.0	4	10
653.2 – 675.6		9
630.8 – 653.2		8
608.4 – 630.8		7
586.0 – 608.4	2	6
563.6 – 586.0		5
541.2 – 563.6		4
518.8 – 541.2		3
496.4 – 518.8	1	2
474.4 – 496.4	3	1

The potential number of primary (330 feet from the nest tree) and secondary (660 feet from the nest tree) protection zones were determined for each corridor alternative and were calculated based upon available nesting data obtained from the FWC. The rating assigned, based on the number of protection zones, was calculated as number of primary zones + number of secondary zones + 1. The 1 was added to the calculation to account for the fact that, while bald eagles have a high site fidelity, some existing nests are lost and new or alternate nests are built every year. Therefore, a factor of 1 was added to the rating category to account for this fluctuation.

The final rating was based on each of the corridor alternatives' proximity to water. The analysis included the average distance to open water for each corridor. The distance for each corridor was normalized using the same parameters as above. The ratings following the normalization were then included in the table to be used to calculate the overall rating of each corridor alternative relative to bald eagle nests. The table below outlines the data utilized to obtain the ratings based on the proximity to water utilizing historic nesting data.

Bald Eagle Nesting Density Based Upon Distance to Open Water				
Buffer (Distance from Waterbody)	Number of Nests	Total Acreage within Buffer Area	Adjusted Acreage within Buffer Area (Previous Buffer Removed)	Nest Density per Acre
Open Water	N/A	93733.39	93733.39	N/A

0 – 500	28	176609.82	82876.43	0.000337852
500 – 1000	32	265123.67	88513.85	0.000361525
1000 – 1500	28	349777.93	84654.26	0.000330757
1500 – 2000	19	427224.87	77446.93	0.000245329
2000 – 2500	18	497439.75	70214.88	0.000256356
2500 – 3000	10	560210.09	62770.34	0.000159311
3000 – 3500	15	614486.77	54276.68	0.000276362
3500 – 4000	9	661888.03	47401.25	0.000189868
4000 – 4500	6	703649.21	41761.19	0.000143674
4500 – 5000	13	740376.31	36727.09	0.000353962
5000 – 5500	8	772813.22	32436.92	0.000246633
5500 – 6000	1	801311.14	28497.92	0.000035090
6000 – 6500	3	826068.49	24757.35	0.000121176
6500 – 7000	7	847717.38	21648.89	0.000323342
7000 – 7500	0	866671.78	19854.40	0
7500 – 8000	1	883186.71	16514.94	0.000060551
8000 – 8500	1	897204.74	14018.03	0.000071337
8500 – 9000	2	908832.36	11627.61	0.000172004
9000 – 9500	0	918370.44	9538.08	0
9500 - 10000	1	926338.14	7967.71	0.000125507

EVERGLADE SNAIL KITE

The Everglade snail kite is a federally-listed, endangered raptor whose nesting habitat is restricted to lakeshore emergent vegetation (USFWS 1999). Within the project corridor, snail kite nesting is limited to the Lake Tohopekaliga (Toho) shoreline, and the presence of this species has been confirmed through visual observation by Inwood biologists during preliminary field reviews. Historic snail kite nesting location data for Lake Toho from 1991-2013 was obtained from the USFWS. This data contains point locations for yearly snail kite nests and is collected by USFWS and the FWC. The USFWS defines two areas surrounding snail kite nests that are important to consider when determining potential impacts (USFWS 2006). An inner protective zone of 500 feet is recommended to reduce disturbance to nesting birds. This is based on known flushing distances that have been observed for this species. The second protective zone is a 1,640 feet area that should be protected from habitat disturbances such as anthropogenic water level changes and vegetative alternations during the breeding season, which occurs from January to May. This additional zone of protection is intended to protect foraging habitat for nesting birds, who typically have a restricted foraging range when compared to non-nesting individuals such as juveniles.

The corridor s were rated based on the number of snail kite nests and the number of “no entry” (1,640 ft) buffer zones that would be impacted by each corridor, as well as the acreage of potential nesting habitat (i.e., lakeshore wetlands with emergent vegetation) that would be

impacted as well. Additionally, weight was given to the likelihood of each corridor impacting snail kites due to their proximity to known nests and/or nesting habitat. The results of the Everglade snail kite analysis is summarized in Table 3, below.

Table 3: Everglade Snail Kite Analysis

Everglade Snail Kite Habitat Analysis						
Corridor	**Acres Potential Nesting Habitat**	**Number of Nests & Buffer Zones Impacted**	**Rating Based on Acres of Habitat**	**Rating Based on Number of Nests/Buffer Zones**	**Sum of Ratings**	**Overall Rating (Adjusted to 10-Point Scale)***
1	12.0	25	6	7	13	5
2	9.3	17	5	9	14	6
3	26.8	7	13	13	26	10
4	0.0	0	0	0	0	0
5	0.0	0	0	0	0	0
6	0.0	0	0	0	0	0
7	0.0	0	0	0	0	0
8	0.0	0	0	0	0	0
9	0.0	0	0	0	0	0
10	0.0	0	0	0	0	0
11	0.0	0	0	0	0	0
12	0.0	0	0	0	0	0
13	0.0	0	0	0	0	0

***Coordination with the USFWS has indicated that, while habitat impact rankings are appropriate for comparison purposes, impacts to snail kite nests or habitat on Lake Toho are not likely to be approved.**

The following tables include the supporting information used to populate the table above. The normalization methodology used for the suitable nesting habitat rating required the determination of the range between the highest (26.8) and lowest (0.0) values in the dataset. The range for these values is 26.8 (highest value – lowest value = range). The interval within the range was then determined by dividing the number of alternatives, 13, by the range. This resulted in an interval of 2.06, which is 26.8/13.

Nesting Habitat Rating Normalization			
Max	Min	Differential	Interval
26.8	0	26.8	2.1

The range was entered into a table from highest to lowest based upon the interval from the previous table. Ranking was applied on a scale of 10-1 with 10 being the highest and 1 being the lowest. The acreage of potential nesting habitat with each corridor alternative were derived from the GIS analysis and, assuming uniform quality of nesting territories within all suitable habitat, were located within the ranked ranges and entered into the table.

Nesting Habitat Adjusted Rating		
Range	Corridor	Rating
25.2 – 26.8	3	13
23.1 – 25.2		12
21.0 – 23.1		11
18.9 – 21.0		10
16.8 – 18.9		9
14.7 – 16.8		8
12.6 – 14.7		7
10.5 – 12.6	1	6
8.4 – 10.5	2	5
6.3 – 8.4		4
4.2 – 6.3		3
2.1 – 4.2		2
0.0 – 2.1		1

FLORIDA GRASSHOPPER SPARROW

The Florida grasshopper sparrow (FGS) is a federally-listed, endangered passerine species whose nesting habitat is restricted to dry prairie that is relatively open and low, and has a history of frequent fires (USFWS 2004). According to the SLOPES, suitable habitat for FGS is dry prairie including improved pasture, palmetto prairie, and unimproved pasture. Additional habitat characteristics include:

- Open, dry habitats within less than 1 tree per acre
- Minimum of 20% cover of bare ground
- Large, contiguous areas of suitable habitat (240-1348 ha)

Much of the project corridor has been converted over time from dry prairie to pasture used for cattle grazing, which usually results in the decline or extirpation of breeding populations (USFWS 2004). There are currently six known populations for Florida grasshopper sparrows. Three populations exist on Avon Park Air Force Range, one on Kissimmee Prairie State Preserve, one on Three Lakes Wildlife Management Area, and one on private property (USFWS 2004).

Known populations of FGS are located approximately 12 miles south-southeast of the project corridor. However, potential FGS habitat, based on the *Species Conservation Guidelines for the Florida Grasshopper Sparrow* (USFWS 2004), was identified by Inwood Biologists north of Lake Cypress Road and south of Friar's Cove Road just outside the project study. Due to their high site fidelity, FGS surveys should include all potential habitat and include a 100-meter (328-ft) buffer surrounding it (USFWS 2004). As no available occurrence data is available within the various corridor corridors, a GIS-based analysis of potential FGS habitats was completed. The following land uses and cover types were included in the analysis:

- Improved Pastures (FLUCFCS #1100)
- Unimproved Pastures (FLUCFCS #1120)
- Herbaceous (Dry Prairie) (FLUCFCS #3100)

The acreages of each of these habitat types was calculated using GIS, and the corridors were rated (on a 10-point scale) based on the relative occurrence of the above habitat types. It should be noted that this analysis focused only on the type of habitat, as defined by FLUCFCS and the SLOPES, and did not take into account specific features like tree density, frequency of fire, grazing practices, and percent bare ground. These characteristics are crucial when determining habitat suitability for grasshopper sparrows, but were beyond the scope of the desktop analysis. Table 4 below summarizes the results and ratings of the Florida grasshopper sparrow habitat analysis.

Table 4: Florida Grasshopper Sparrow Analysis

Florida Grasshopper Sparrow Habitat Analysis		
Corridor	**Acres Potential Habitat**	**Rating (adjusted to 10-Point Scale)**
1	97.9	1
2	187.0	3
3	166.2	2
4	319.0	7
5	427.3	10
6	439.3	10
7	407.3	10
8	437.4	10
9	399.0	9
10	427.9	10
11	276.1	6
12	297.7	6
13	442.1	10

The following tables include the supporting information used to populate the table above. The normalization methodology used for the suitable nesting habitat rating required the determination of the range between the highest (442.4) and lowest (97.9) values in the dataset. The range for these values is 344.5 (highest value – lowest value = range). The interval within the range was then determined by dividing the number of alternatives, 10, by the range. This resulted in an interval of 34.45, which is 344.5/10.

Habitat Rating Normalization			
Max	Min	Differential	Interval
442.4	97.9	344.5	34.4

The range was entered into a table from highest to lowest based upon the interval from the previous table. Ranking was applied on a scale of 10 to 1 with 10 being the highest and 1 being the lowest. The acreage of potential habitat with each corridor alternative are derived from the GIS analysis and, assuming uniform quality of suitable habitat, were located within the ranked ranges and entered into the table.

Habitat Adjusted Rating		
Range	Corridor	Rating
407.5 – 441.9	5, 6, 7, 8, 10, 13	10
373.1 – 407.5	9	9
338.7 – 373.1		8
304.3 – 338.7	4	7
269.9 – 304.3	11, 12	6
235.5 – 269.9		5
201.1 – 235.5		4
166.7 – 201.1	2	3
132.3 – 166.7	3	2
97.9 – 132.3	1	1

ADDITIONAL SCORING CONSIDERATIONS

Additional criteria were considered to rate each corridor's overall impact to the four key listed species. Whereas the above analyses allow for the corridor s to be rated relative to a single species, the overall goal was to develop a system that rated each corridor relative to all of the above assessed species. As an example, based on preliminary feedback from the USFWS, and recent recovery efforts specifically directed at grasshopper sparrows (i.e., captive breeding program, FWC surveys and research), it is anticipated that avoidance of impacts to occupied habitat will be the only option available for addressing the presence of grasshopper sparrows. In contrast, although a "take" of bald eagle nests will not be considered viable, there are established conservation guidelines and a permitting program in-place that will allow construction activities to occur within the designated protection zones (FWC 2008). Similarly, conservation guidelines are available to avoid or minimize impacts to caracara (USFWS 2004). As such, greater weight was given to potential impacts to grasshopper sparrows than to bald eagles or caracara. This weighting of one species relative to another was based on several factors, including but not limited to:

- Whether permitting protocols exist;

- Availability of avoidance, minimization, and mitigation measures;
- Sensitivity of species to habitat alteration;
- Effect of proposed activity to ongoing species recovery efforts;

The result of the overall listed species analysis provided a recommended alternative that both minimizes adverse environmental impacts, and is also technically feasible and permissible.

CONCLUSIONS

Upon completion of the preliminary GIS analyses for the four key species, additional scoring considerations were applied in order to determine the overall degree of effect for each corridor on each of the key species. Table 5 below includes the final degree of effect determinations made for each of the key species.

Table 5: Degree of Effect Determinations for Key Listed Species

Key Species Degree of Effect													
Species	Corridor												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Caracara	5	5	3	10	10	9	8	7	7	7	6	7	9
Bald Eagle	2	2	1	5	5	4	6	3	3	3	3	3	3
Snail Kite	10	10	10	1	1	1	1	1	1	1	1	1	1
Grasshopper Sparrow	1	1	1	3	3	3	3	3	3	3	2	2	2

A synopsis of the factors applied to each species in order to determine the degree of effect is included below.

Audubon's Crested Caracara

Based on the GIS analysis, Corridors 6 and 13 initially received the highest overall ranking in terms of potential impacts to suitable caracara habitat. This result is due to the following factors: both of these corridors crosses Lake Toho; these corridors are located south of Lake Toho, where the vast majority of suitable caracara habitat is found; and, they bisect the most numbers of potential primary or secondary caracara nesting territories. Inwood ecologists have observed caracara perched and foraging on suitable habitat on the south side of Lake Toho as well as pastures on the north and south sides of Kissimmee Park Road.

However, Corridors 4 and 5 received the highest overall ranking because these corridors would directly impact a caracara nest, identified by Inwood ecologists in February 2013. The nest is located just south of Southport Road, approximately 1.6 miles west of the Southport Marina. This previously unidentified nest was active in 2014 and 2015. It is located approximately 1.2 miles east of active caracara nests identified by Joan Morrison, FWC, in 1995 and 1998.

Audubon's crested caracara exhibit high site fidelity and are known to return to the same area, and even the same tree, over the course of multiple nesting seasons (Morrison 1999). It should also be noted that Corridor 7 is located just outside of the USFWS primary nest protection zone for the caracara nest identified by Morrison.

The USFWS is unlikely to support the direct take of a caracara nest. However, the current guidance included in the Species Conservation Guidelines for the Audubon's Crested Caracara in South Florida (USFWS 2004) includes conservation measures to avoid or minimize the potential impacts to caracara and their habitat that, when applied, will result in the avoidance or minimization of impacts to caracara and its habitat. Depending on the nature of the work being proposed, some USFWS conservation measures can include impact minimization actions and/or habitat enhancement, muffling of equipment, monitoring of nest sites, or conducting work outside of the nesting season.

The final ratings are provided in Table 5. These ratings are based upon:

- A review of the GIS analysis including the relative location and acreage of impacts to potential caracara habitat
- Field reviews and observations conducted by Inwood ecologists
- A review of the conservation guidelines provided by the USFWS and FWC
- Availability and practicability of impact minimization actions

Based on the conclusions of the preliminary GIS analysis coupled with the additional scoring considerations and guidance from the conservation guidelines, it is recommended that caracara nesting surveys be conducted for all corridors selected for continued evaluation following the completion of the Alternative Corridor Analysis.

Bald Eagle

Based on the GIS analysis, Corridor 7 received the highest overall ranking in terms of potential impacts to suitable bald eagle habitat. This is the only corridor that intersects a primary bald eagle nest protection zone, which comes with certain development restrictions. Corridors 4 and 5 received high rankings because these corridors intersect the greatest number of eagle nest buffer zones, and support the highest potential density of eagle nests among the corridors. In addition, Corridors 4 and 5 have relatively high impacts to potential nesting habitat.

Bald eagles are sensitive to a variety of human activities. However, not all bald eagles react to human activities the same way when it comes to nesting. Bald eagles have been documented to nest within yards of human activity without noticeable adverse effect. Factors thought to influence bald eagle tolerance of human activities include visibility, duration, noise level, extent of the area affected by human activity, prior experiences with humans, and tolerance of the individual nesting pair (USFWS 2007).

The USFWS is unlikely to support the direct take of a bald eagle nest. However, the National Bald Eagle Management Guidelines (USFWS 2007) and Bald Eagle Management Plan (FWC 2008) include activity-specific recommendations for avoiding bald eagle disturbance as a result of new or intermittent activities proposed in the vicinity of their nests. Category A in the management guidelines includes the construction of roads, trails, canals, power lines, and other linear utilities. These activities are considered some of the least disruptive to eagles as they generally include only a minimal amount of vertical construction. Recommendation for these categories include maintaining landscaped buffers at least 660 feet away from active nests are based primarily on maintaining a visual buffer between the work being done and the nest tree.

The final ratings are provided in Table 5. These ratings are based upon:

- A review of the GIS analysis including the relative location and acreage of impacts to potential nesting habitat
- A review of the density and location of bald eagle nests in Osceola County and their proximity to open water
- Clear guidance from the USFWS and FWC outlining nesting disturbance minimization techniques for roads
- Availability and practicability of impact minimization actions

Based on the conclusions of the preliminary GIS analysis coupled with the additional scoring considerations and guidance from the conservation guidelines, it is recommended that bald eagle nesting surveys be conducted for all corridors selected for continued evaluation, if current data from FWC is unavailable, following the completion of the Alternative Corridor Analysis.

Everglade Snail Kite

Based on the GIS analysis, the highest ranking for impacts to suitable snail kite nesting habitat are associated within Corridors 1, 2, and 3. These results are attributed to the fact that snail kite nesting is restricted to woody vegetation such as willows, cypress, pond apple, and even some exotics that is located over open water. Foraging generally takes place within relatively shallow wetland vegetation, either within extensive marsh systems or in lake littoral zones. Within the project study area, snail kite nesting and foraging habitat is limited to the shoreline and islands of Lake Toho.

The snail kite is afforded two levels of buffer zones that are established around every active nest. In addition, portions of their habitat, including portions of Lake Toho, have been designated by the USFWS as Priority Management Zones. The Priority Management Zones are based on the frequency and density of snail kite nests within each area and are highly variable. The zones are designated to represent the 90 percent probability function for kite nests over a 10-year period. The zones are also intended to identify the likelihood of future kite nesting and approximately 90 percent of the kite nesting, on average, will occur within these polygons if patterns of nest selection continue as in the past (USFWS Snail Kite Management Guidelines, 2006).

Inwood analyzed snail kite nesting data from 1991-2013 provided by the USFWS. The analysis showed that, unlike many terrestrial-nesting raptors such as bald eagles, caracara, and ospreys, snail kite nesting locations were dynamic with nest locations varying on a yearly basis. Lake Toho water levels are managed by the SFWMD and the US Army Corps of Engineers to maximize available nesting and foraging habitat for snail kites, which helps maintain consistent nesting habitat and established the Priority Management Zones.

The USFWS is unlikely to support the direct take of a snail kite nest or any work within either of the nest protection zones or the Priority Management Zones. Inwood's experience on other projects as well as informal coordination with USFWS staff regarding work within snail kite habitat indications that the USFWS will not support issuing a Biological Opinion that includes an Incidental Take Statement for snail kite habitat.

The final ratings are provided in Table 5. These ratings are based upon:

- A review of the GIS analysis including the relative location and acreage of impacts to potential nesting and foraging habitat
- A review of the snail kite Priority Management Zones in and around Lake Toho
- Informal coordination with USFWS staff regarding impacts to snail kite habitat on this and other transportation projects under the jurisdiction of the USFWS Vero Beach office
- Availability and practicability of corridor alternatives that avoid impacts to snail kites and their habitat

Based on the conclusions of the preliminary GIS analysis coupled with the additional scoring considerations and guidance from the conservation guidelines, it is recommended that coordination with USFWS and FWC snail kite management staff be conducted for all corridors selected for continued evaluation following the completion of the Alternative Corridor Analysis.

<u>Florida Grasshopper Sparrow</u>

Based on the GIS analysis, Corridors 5, 6, 7, 8, 10 and 13 received the highest overall ranking in terms of potential impacts to suitable Florida grasshopper sparrow habitat. These results are due to the fact that grasshopper sparrows are endemic to dry prairie habitat. The majority of the project's study area is comprised of pastures, a land use that is thought to be incompatible with grasshopper sparrow habitat requirements (Pranty and Tucker 2006). Moreover, the grasshopper sparrow consultation area was recently updated by the USDA Natural Resources Conservation Service. According to the information provided by the USDA, the project's study is outside the Florida grasshopper sparrow consultation area. The USFWS recently indicated that grasshopper sparrow surveys would not be necessary for the project. As a result, the project is not likely to adversely affect Florida grasshopper sparrows.

Appendix 3

Traffic Technical Memorandum

DRAFT TECHNICAL MEMORANDUM

Southport Connector Project Traffic Development

Comparison of Future Year Model Results

Date:	September 10, 2015	Project #:11730.030
To:	Florida Department of Transportation	
From:	Karl Passetti, PE; Lillian Tsang, PE	
cc:		

INTRODUCTION

The Florida Department of Transportation (FDOT), District Five, in cooperation with the Federal Highway Administration (FHWA), initiated an Alternative Corridor Evaluation (ACE) associated with the Southport Connector Project Development and Environment (PD&E) Study in June 2013. The ACE involves the analysis of a range of alternative corridors to provide for a connection between the Poinciana community and Florida's Turnpike. The proposed Southport Connector is identified in the Osceola County Expressway Authority (OCX) Master Plan to serve Osceola County's urban growth area. The OCX Master Plan also identifies other roadway segments that would ultimately result in a beltway around the urban growth area.

This draft technical memorandum provides a summary of the 2040 travel forecasts prepared by Kittelson & Associates, Inc. (KAI) for the Southport Connector alternative corridors analysis. The memorandum describes the analysis and serves as transmittal of the 2040 forecast results in Excel spreadsheet format. The forecasting results are summarized at 61 key roadway segments in the greater study area. The study segment locations are displayed in graphics shown in Appendices A-1 to A-4 for each modeling alternative corridor.

This memorandum also presents the results of the select link model analysis for the Southport Connector. The purpose of the select link analysis is to use the travel demand model to gain an understanding of where vehicles are coming from and going to relative to a defined point in the roadway network. The select link analysis was conducted to evaluate the travel patterns served by the alternatives in an effort to better quantify the differences between the alternatives and their effectiveness of achieving the purpose and need for the project.

DESCRIPTION OF ALTERNATIVES

KAI utilized the I-4/Poinciana 2040 model that was based on the official 2035 CFRPM v5.0 model to evaluate up to 18 alternatives that are variations of the local network and the Southport connections. There were 11 corridor alternatives that were evaluated during the ACE. Corridor 1 began at Poinciana Parkway near Marigold Avenue. Corridors 2 – 11 originally began at Pleasant Hill Road and Cypress Parkway. However, during the ACE analysis, the project limits were extended west along Cypress Parkway to just east of Rhododendron Boulevard, at the terminus of the Poinciana Parkway extension. The corridors are shown in Figure 1.

Of the 11 alignments that the study team analyzed, KAI conducted an initial modeling of the following five representative alternatives: 1, 2, 3, 4 and 8 (it is noted that from a traffic modeling perspective Corridor 8 is representative of Corridors 5 through 11). The result of the ACE is that Corridors 7 and 11 were recommended for further evaluation during the next phase of the PD&E Study. Corridor 1 is also being considered further in this

technical memorandum in response to comments received from the project stakeholders through the public involvement process of the ACE. Therefore, Corridors 1 and 8, shown in Figure 1, were selected for more detailed traffic modelling.

The following network scenarios were used in the model analysis of Corridors 1 and 8:

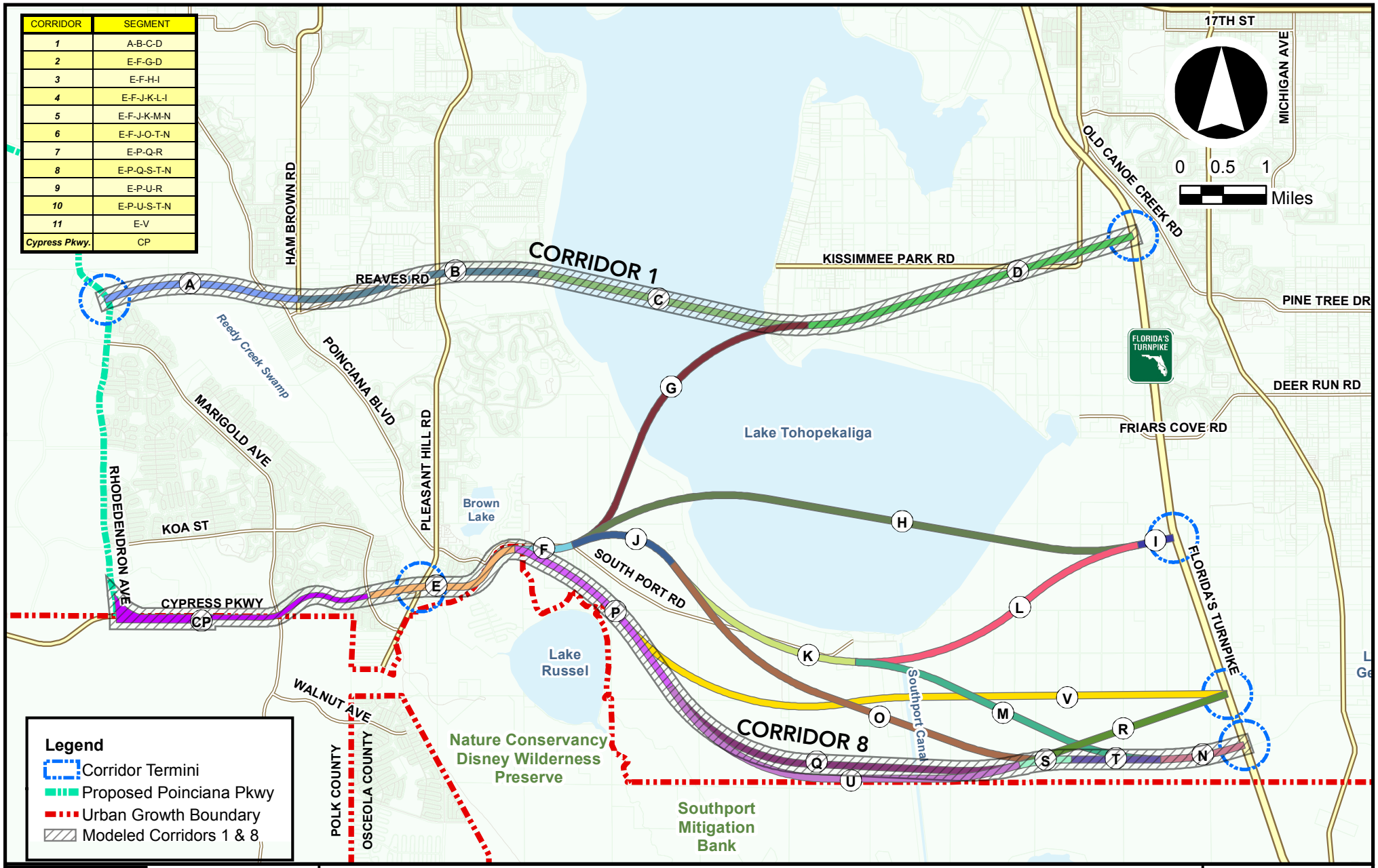
- Scenario A: The base network consists of the modeling assumptions used in the I-4 Beyond the Ultimate, Poinciana Design Build project (Bridge Segment – 4 lanes), the Southwest (Rhododendron) Segment, the Osceola Parkway Extension Expressway, and the network updates for South Lake Toho Master Plan. This scenario represents the No-Build scenario commonly used for comparison purposes in traffic evaluations.
- Scenario B: This roadway network scenario consists of the existing roadway network plus the MetroPlan Orlando Long Range Transportation Plan network and includes the complete OCX Master Plan, including: Poinciana Parkway I-4 Segment, Poinciana Parkway, Southport Connector, Northeast Connector and Osceola Parkway Extension. The network updates for the South Lake Toho Master Plan are also included. This scenario represents the Build scenario commonly used for comparison purposes in traffic evaluations.
- Scenario C: This roadway network scenario consists of the existing roadway network plus the MetroPlan Orlando Long Range Transportation Plan network but does not include the following OCX Master Plan segments: Poinciana Parkway I-4 Segment or the Northeast Connector. In addition, the Cypress Parkway portion of the Poinciana Parkway segment is not included in the network for Alternative 1. This scenario was added to verify whether or not the Southport Connector would be viable independently of the other OCX master Plan Segment. The network updates for the South Lake Toho Master Plan are also included.

The Southport Connector alternatives included in the analysis are identified in the matrix in Table 1 and shown in Figure 1.

Table 1: Southport Connector Alternatives Included in Analysis

Network Scenario		No-Build	1	8
A	Base	A	-	-
B	Base + Complete OCX Master Plan		B-1	B-8
C	Base + Reduced OCX Master Plan		C-1	C-8

- Base consists of modeling assumptions used in the I-4 Beyond the Ultimate, Poinciana Design Build project (Bridge Segment – 4 lanes), the Southwest (Rhododendron) Segment, the Osceola Parkway Extension Expressway, and the network updates for South Lake Toho Master Plan
  - Complete OCX Master Plan includes: Poinciana Parkway I-4 Segment, Poinciana Parkway, Southport Connector, Northeast Connector and Osceola Parkway Extension.
  - Reduced OCX Master Plan does not include the following OCX Master Plan segments: Poinciana Parkway I-4 Segment or the Northeast Connector. In addition, the Cypress Parkway portion of the Poinciana Parkway segment is not included in the network for Alternative 1.



CORRIDOR	SEGMENT
1	A-B-C-D
2	E-F-G-D
3	E-F-H-I
4	E-F-J-K-L-I
5	E-F-J-K-M-N
6	E-F-J-O-T-N
7	E-P-Q-R
8	E-P-Q-S-T-N
9	E-P-U-R
10	E-P-U-S-T-N
11	E-V
Cypress Pkwy.	CP

Centennial FDOT 1915★2015

Florida Department of Transportation
District 5

Poinciana Parkway Southport Connector
PD&E Study
from Pleasant Hill Road
to Florida's Turnpike
Osceola County, Florida
Financial Project No.: 433693-1-22-01
Federal Project No: N/A

EVALUATED CORRIDORS

FIGURE
1

COMPARISON OF SOUTHPORT CONNECTOR ALTERNATIVES

KAI has provided a summary of results of the Southport Connector Alternatives for 61 reporting roadway segments. The 2040 results have been converted to Annual Average Daily Traffic (AADT) using the appropriate seasonal Model Output Conversion Factor (MOCF) value for the study area (MOCF=0.96). It is noted that while some segments in the study area are located just beyond the Osceola County boundary, the Osceola County MOCF is used for the entire area to better facilitate comparisons. The forecasts for the 2040 Southport alternatives are compared against the 2040 No-Build case (Alternative A), and compared to each other. A detailed comparison for the 61 reporting segments is included in the attached Excel file providing a comparison of total volume, volume change, percent change in volume, and annualized percent change in volume. The table and supporting trend charts provide a convenient way to observe how the AADT volumes change from one alignment to another. CUBE software model output files are available on request for all the alternatives, should more detailed results be required.

The AADT volumes for the Southport Connector alternatives are shown in Table 2 together with volumes on existing and background facilities to demonstrate how they vary when the Southport Connector alternatives are introduced. The segment locations used for this summary are identified in Table 3, (as they do vary from scenario to scenario) and graphically displayed in Appendices A-1 to A-4. A trend analysis of the AADT volumes for the Southport Connector alternatives (blue trend line) and selected existing and background facilities are shown in Figure 2. A comparison of the 2040 AADT volumes to the roadway capacity for the segment locations is shown in Table 4.

Table 2: 2040 AADT Comparison for Southport Connector Alternatives

Study Segment	General Location Description	Southport Connector Alternative Alignment				
		Alt A	Alt B-1	Alt B-8	Alt C-1	Alt C-8
Southport Connector	East of Pleasant Hill Road	-	68,357	68,257	69,350	59,726
Southport Arterial	East of Pleasant Hill Road	-	30,479	-	27,928	-
Northeast Expressway	Between Turnpike and Canoe Creek Road	-	18,732	45,619	-	-
Poinciana Parkway	Bridge Segment	57,235	80,574	76,788	52,805	54,343
Cypress Parkway	West of Rhodondendron Segment	34,387	32,288	33,296	30,760	33,024
Pleasant Hill Road (CR 531)	North of Cypress Parkway	60,289	50,375	58,447	56,572	68,641
US 17/92	Between Ham Brown Road (CR 535) and Pleasant Hill Road (CR 531)	43,257	36,761	35,961	38,360	38,705
SUM		195,168	317,566	318,387	275,775	254,439

Note: Segment locations for Southport Connector alternatives vary by scenario and are identified numerically in Table 3 and displayed in Appendices A-1 to A-4

Table 3: Segment Locations for Southport Connector Alternatives

Study Segment	General Location Description	Southport Connector Alternative Alignment				
		Alt A	Alt B-1	Alt B-8	Alt C-1	Alt C-8
Southport Connector	East of Pleasant Hill Road	-	71	77	71	77
Southport Arterial	East of Pleasant Hill Road	-	85	-	85	-
Northeast Expressway	Between Turnpike and Canoe Creek Road	-	101	101	-	-
Poinciana Parkway	Bridge Segment	11	11	11	11	11
Cypress Parkway	West of Rhodondendron Segment	31	31	31	31	31
Pleasant Hill Road (CR 531)	North of Cypress Parkway	35	35	35	35	35
US 17/92	Between Ham Brown Road (CR 535) and Pleasant Hill Road (CR 531)	47	47	47	47	47

Note: Segment locations for Southport Connector alternatives vary by scenario and are identified numerically below and displayed in Appendices A-1 to A-4

Table 4: 2040 AADT to Roadway Capacity Comparison for Southport Connector Alternatives

Study Segment	General Location Description	Southport Connector Alternative Alignment				
		Alt A	Alt B-1	Alt B-8	Alt C-1	Alt C-8
Southport Connector	East of Pleasant Hill Road	-	0.79	0.79	0.80	0.96
Southport Arterial	East of Pleasant Hill Road	-	2.07	-	1.94	-
Northeast Expressway	Between Turnpike and Canoe Creek Road	-	0.23	0.53	-	-
Poinciana Parkway	Bridge Segment	0.67	0.94	0.90	0.61	0.63
Cypress Parkway	West of Rhodondendron Segment	1.54	1.42	1.48	1.38	1.49
Pleasant Hill Road (CR 531)	North of Cypress Parkway	1.32	1.11	1.32	1.26	1.51
US 17/92	Between Ham Brown Road (CR 535) and Pleasant Hill Road (CR 531)	1.32	1.13	1.09	1.15	1.19

In addition, a comparison has also been provided to evaluate the impact of the Southport Connector alternatives on freeway segments for I-4 and the Turnpike in the study area. A trend analysis has been provided in Figure 3 that displays the percent change in volume on the freeways for each scenario as compared to the 2040 no-build run (Alternative A). Freeway segments used in this summary include Segments 1 through 7 for I-4 and 51 through 57 for the Turnpike. These segments are graphically displayed in Appendices A-1 to A-4.

Figure 2: Southport Connector Alternatives - Comparison of Year 2040 AADT Volume

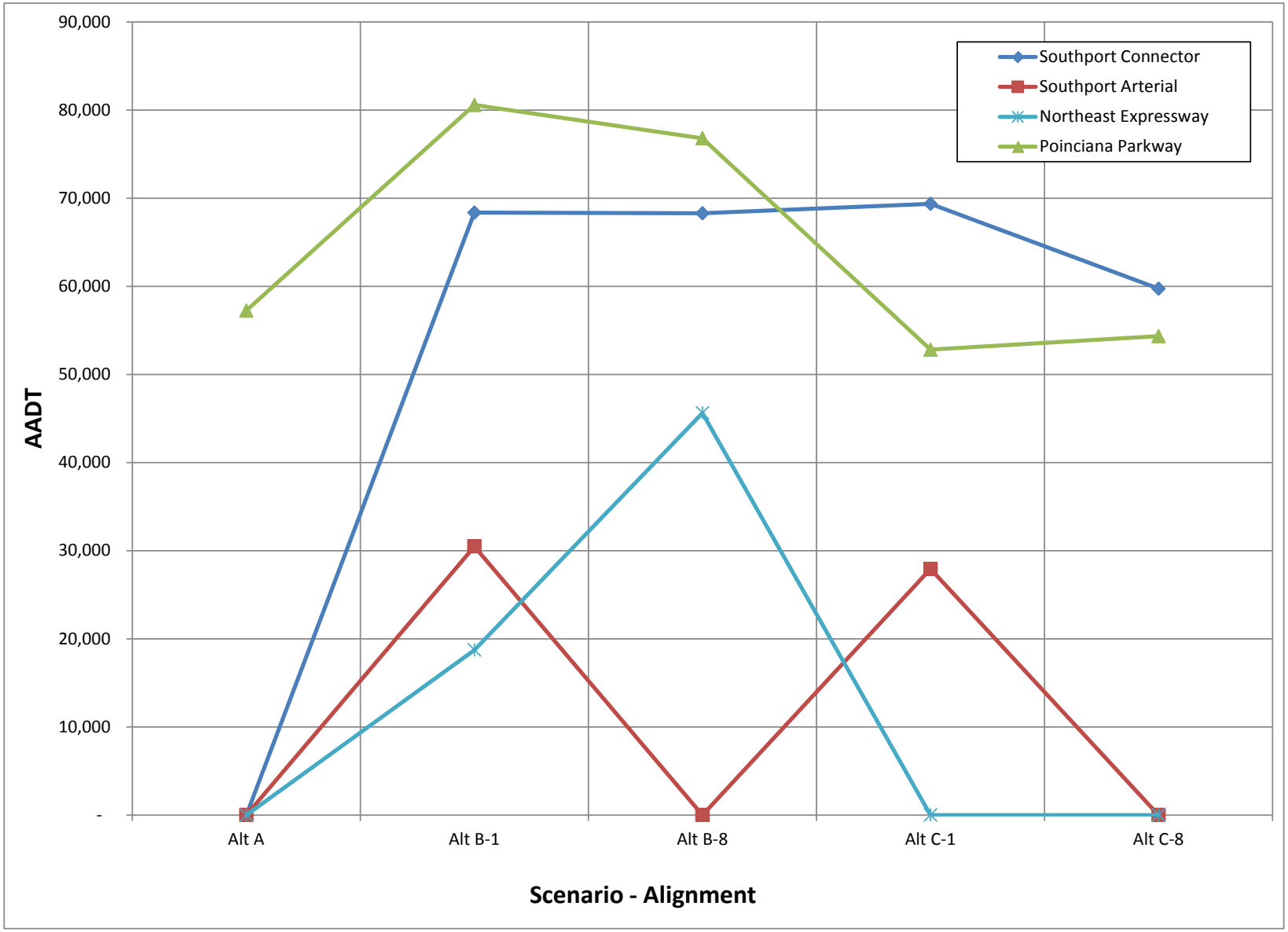
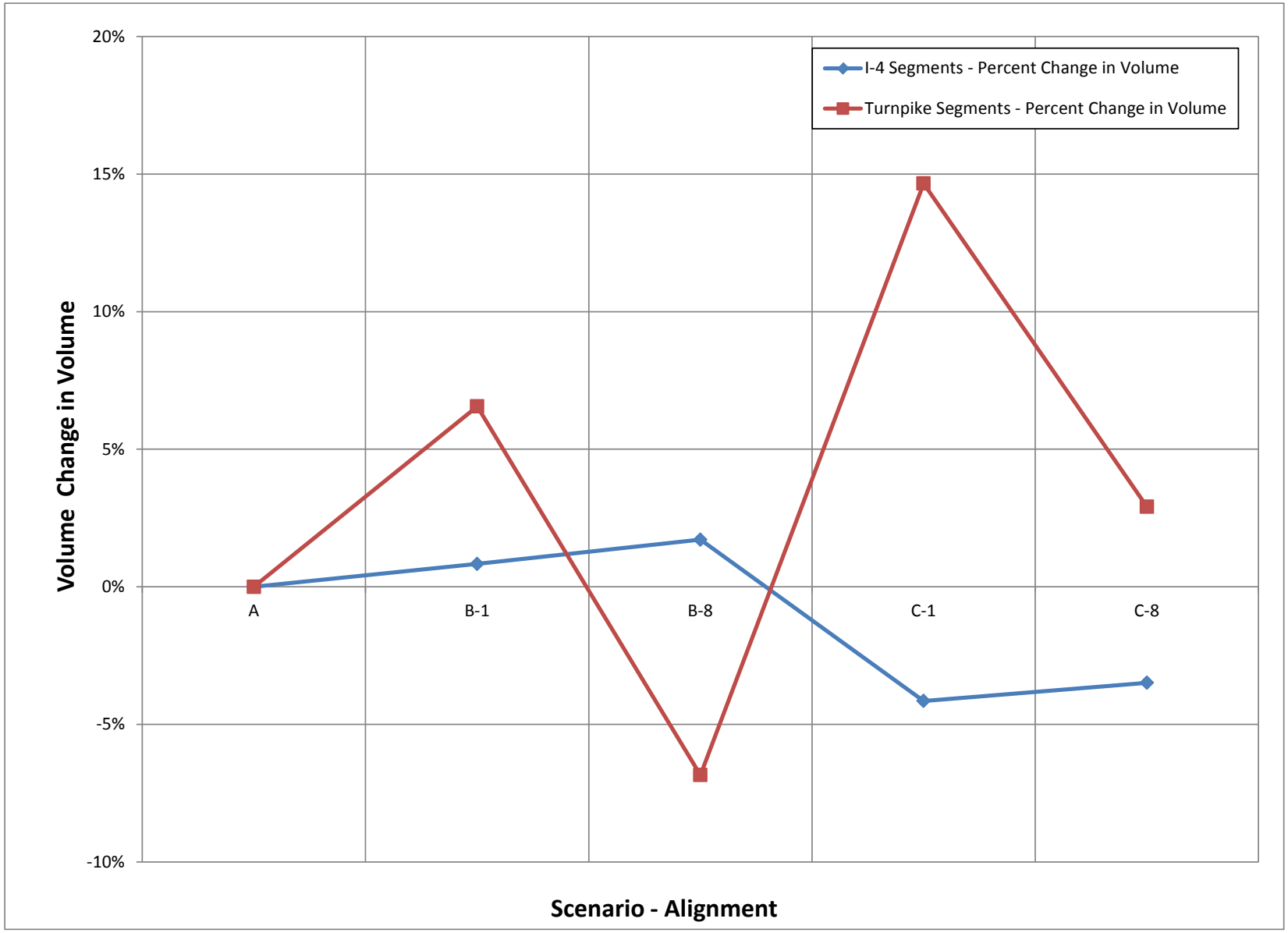


Figure 3: Year 2040 AADT Volume Comparison on I-4 and the Turnpike Freeway Segments– Percent Change in Volumes Comparing to No-Build



Based on this comparison, the following trends for the key Freeway segments were observed:

- Freeway volumes on I-4 generally increase for Alternatives B-1 and B-8 over the no-build scenario, while the volumes reduce below no-build levels for Alternatives C-1 and C-8.
- Freeway volumes on the Turnpike generally increase for most alternatives over the no-build scenario. Reduction in volumes to below no-build levels are observed for Alternative B-8.
- The Southport Connector alternatives generally have a larger influence (percent change in volume) on the Turnpike segments than on I-4 segments.

SOUTHPORT CONNECTOR SELECT LINK ANALYSIS

A select link analysis for both Eastbound Southport Connector and Westbound Southport Connector are performed for Alternatives B-1, B-8, C-1, and C-8 to trace where vehicles are coming from and going to relative to a defined point in the roadway network. Figures 4 through 7 show the select link analysis results graphically. The numbers shown are the percentage of traffic of the selected link using each facility. The link of interest would show 100% in each figure. The percentages are shown only on major facilities to and from the selected link; the percentages on the minor routes are not shown. The bandwidth and percentage of traffic in red represent traffic using Eastbound Southport Connector while the bandwidth and percentage of traffic in blue represent traffic using Westbound Southport Connector.

KEY ROADWAY TRAFFIC SUMMARY

A planning level analysis of Pleasant Hill Road and Cypress Parkway within the Poinciana area was conducted using available traffic data, the 2012 FDOT Quality/Level of Service Handbook tables, and future model forecasts. The results of the analysis are shown in Table 5. It is noted that a detailed traffic assessment, including traffic data collection and highway capacity analysis, will be conducted during the PD&E phase of the study.

Table 5: Traffic Summary of Pleasant Hill Road and Cypress Parkway

Roadway/Segment		2012		2040[3]									
				Alt A		Alt B-1		Alt B-8		Alt C-1		Alt C-8	
		ADT[1]	LOS[2]	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS
Pleasant Hill Road	Cypress Pkwy to Poinciana Blvd	49,270	C	62,801	F	52,474	C	60,882	F	58,929	D	71,501	F
	Poinciana Blvd to Grasmere View Pkwy	35,847	C	37,863	C	40,055	F	29,351	C	41,912	F	33,723	C
	Grasmere View Pkwy to US 17-92	47,834	F	36,926	C	29,653	C	29,869	C	32,727	C	32,625	C
Cypress Parkway	Marigold Ave to Dover Plum Ave	42,365	F[4]	39,344	C[4]	46,090	B[5]	82,013	C[5]	45,351	B[5]	81,519	C[5]
	Dover Plum Ave to Pleasant Hill Rd	Not Reported		62,801	C[4]	72,612	C[5]	109,095	D[5]	75,244	C[5]	114,669	D[5]

1: 2012 ADT source – Osceola County 2012 Existing Roadway Network Capacity report (Updated 06/08/12)
2: LOS based on 2012 FDOT Quality/Level of Service Handbook Table 1 (12/18/12 edition)
3: 2040 ADT source – Southport Connector Traffic Development Comparison of Future Year Model Results memo (6/1/15)
4: Assumes Cypress Parkway as a four-lane arterial
5: Assumes Cypress Parkway as a four-lane freeway with a four-lane arterial adjacent to the freeway

SCENARIO AND ALTERNATIVE COMPARISONS

Based on the analysis, the following observations were made for the scenarios and alternatives evaluated:

Alternative B: Expected Scenario for Planning Purposes

- When comparing the volumes forecasted on Southport Connector under Alignment 1 to Alignment 8, the Southport Connector is forecasted to be approximately 68,000 AADT under both alignments.
    - Although Southport Connector would be a shorter and more direct route under Alignment 1, it would be directly connected to the Northeast Expressway under Alignment 8. Therefore the traffic forecasted on Southport Connector under these two alignments would be similar.
    - A large percentage of traffic that uses the Southport Connector comes from the Northeast Expressway under Alignment 8 due to the direct connectivity.
- For the Alternative B series scenario, the Turnpike between the Southport Connector and Northeast connection is forecasted to be approximately 93,000 under Alignment 1, and 72,000 under Alignment 8 – close to a 30% difference with Alignment 1 being higher. The same amount of traffic uses the Northeast Expressway instead of the Turnpike under Alignment 8 due to the direct connectivity to the Southport Connector.

Alternative C: Verification of Independent Utility

- For the Alternative C series scenario, Southport Connector is forecasted to be approximately 69,000 AADT under Alignment 1, and 60,000 under Alignment 8 - close to a 15% difference with Alignment 1 being higher.
    - Southport Connector would be a shorter, more direct East/West grade-separated, toll facility connecting Poinciana Parkway and the Turnpike under Alignment 1. Therefore the volumes forecasted under Alignment 1 are higher than Alignment 8.
- For the Alternative C series scenario, the Turnpike north of the Southport Connector connection is forecasted to be approximately 120,000 under Alignment 1, and 108,000 under Alignment 8 – close to a 10% difference with Alignment 1 being higher. Under Alignment 8, the same amount of traffic would use other parallel routes such is I-4 and US 17.

Volume Comparisons

- When comparing the volumes forecasted on Southport Connector between the Alternatives B and C:
    - Alternatives B-1 and C-1 would carry about 71,000 under both scenarios.
    - Alternative C-8 would carry approximately 60,000 while Alternative B-8 would carry approximately 68,000 - about 15% less than Alternative B-8. This is because the I-4 connection at SR 429 and the Northeast Expressway are not assumed under Alternative C.
- When comparing the volumes forecasted on other facilities between the Alternatives B and C (for both Alignments 1 and 8):
    - Roadways surrounded by the Poinciana Parkway and the Northeast Expressway, including the Turnpike, would be forecasted to have a lower volume under Alternative B. This is due to the

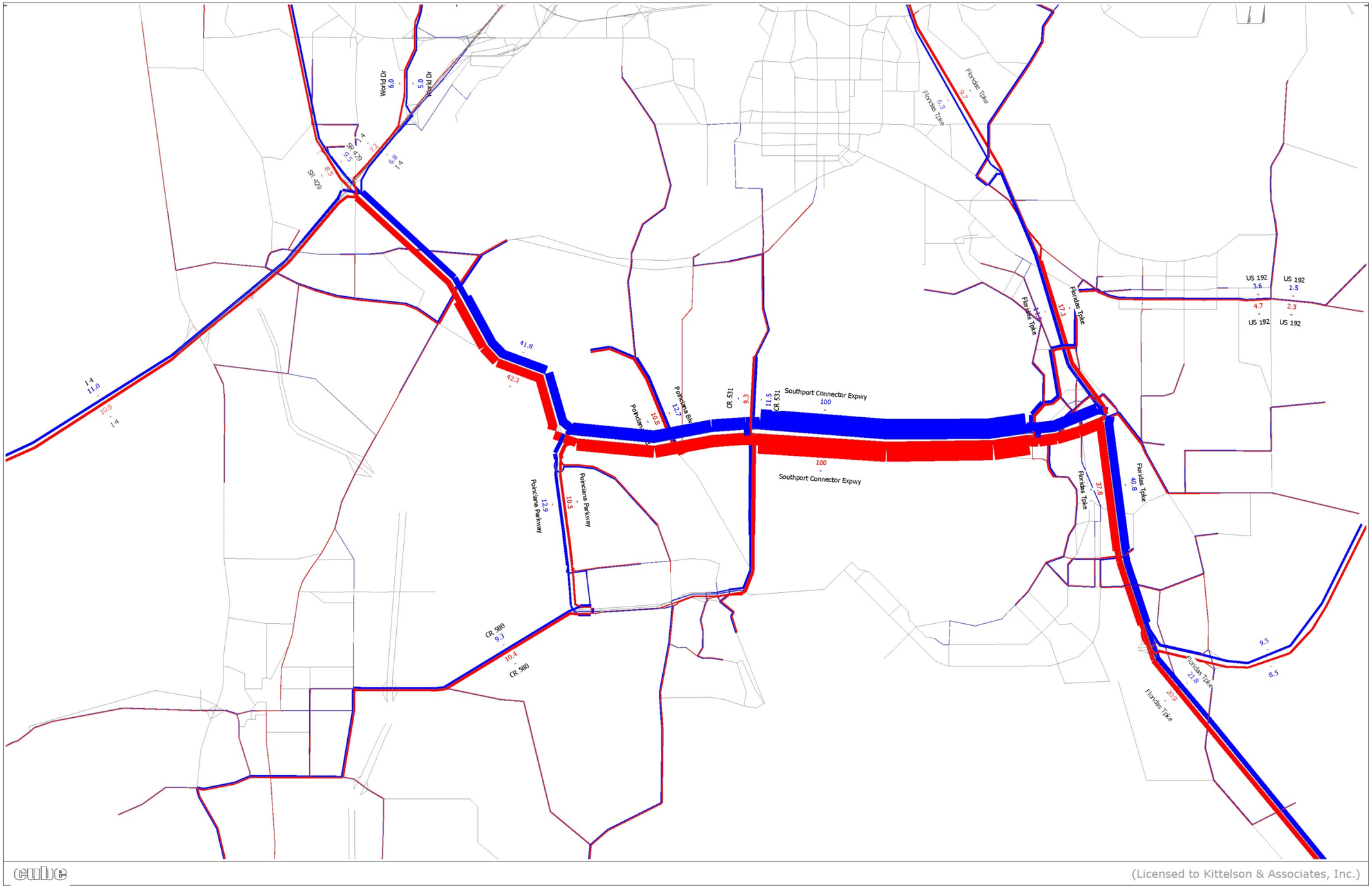
construction of the Poinciana Parkway and the Northeast Expressway, providing alternative routes for traffic to travel across the study area.

CONCLUSIONS

Based on the analysis conducted for this study, the following conclusions were made:

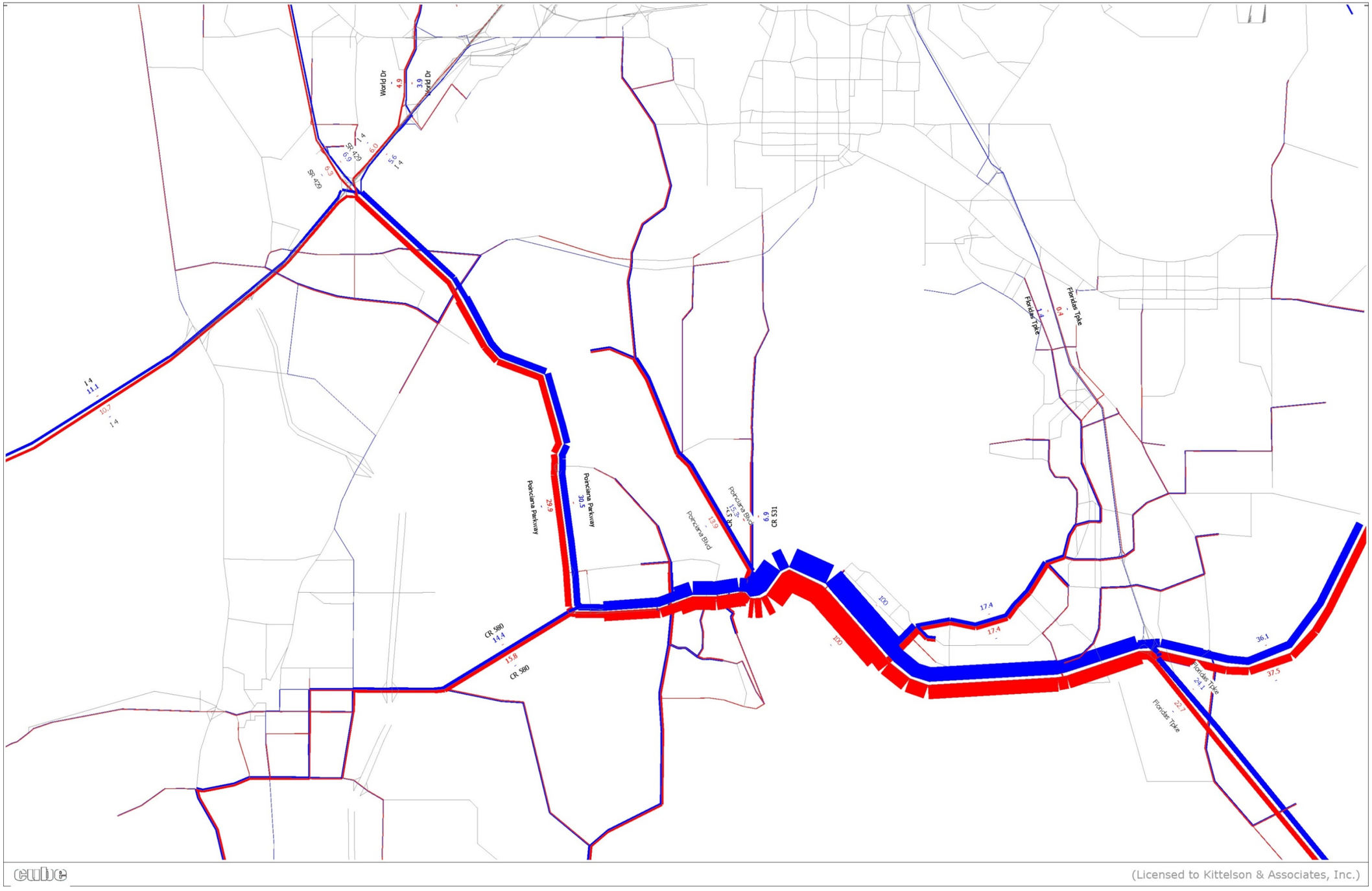
- Both Scenario B and Scenario C provide improved connectivity from the Poinciana area to the Turnpike. For both scenarios Alternative 1 attracts more traffic from the northern portion of the Poinciana area while Alternative 8 attracts more traffic from the southern portion of the Poinciana area. This can be attributed to the travel distance/modeled travel time for vehicles to access the proposed alternative.
- Scenario B, Alternative 8 provides the highest level of regional connectivity of the alternatives evaluated. This is shown by the increased AADTs on the Northeast Expressway and the consistency with the OCX Master Plan and MetroPlan Orlando LRTP.
- Scenario B, Alternative 8 eliminates the need to utilize the portion of the Turnpike between the Northeast Expressway and the Southport Connector required in Scenario B, Alternative 1 to travel between the Poinciana area and areas served by the Northeast Expressway. Scenario B, Alternative 8 also eliminates the need for an interchange at both the Turnpike/Northeast Expressway and the Turnpike/Southport Connector (i.e. only one interchange at Turnpike Southport Connector/Northeast Expressway is needed). The elimination of this movement and the elimination of the interchange associated with Scenario B, Alternative 8 results in improved conditions on the Turnpike as compared to Scenario B, Alternative 1.
- The Poinciana Parkway and the Northeast Expressway both contribute to relieve traffic on existing facilities from/towards Poinciana. These facilities include CR 531, US 17, and the Turnpike.
- The Southport Connector alternatives carry similar amount of traffic under Alternatives B-1, B-8 and C-1.

- **Figure 4: Select Link Analysis for Traffic on Southport Connector for Alternative B-1**



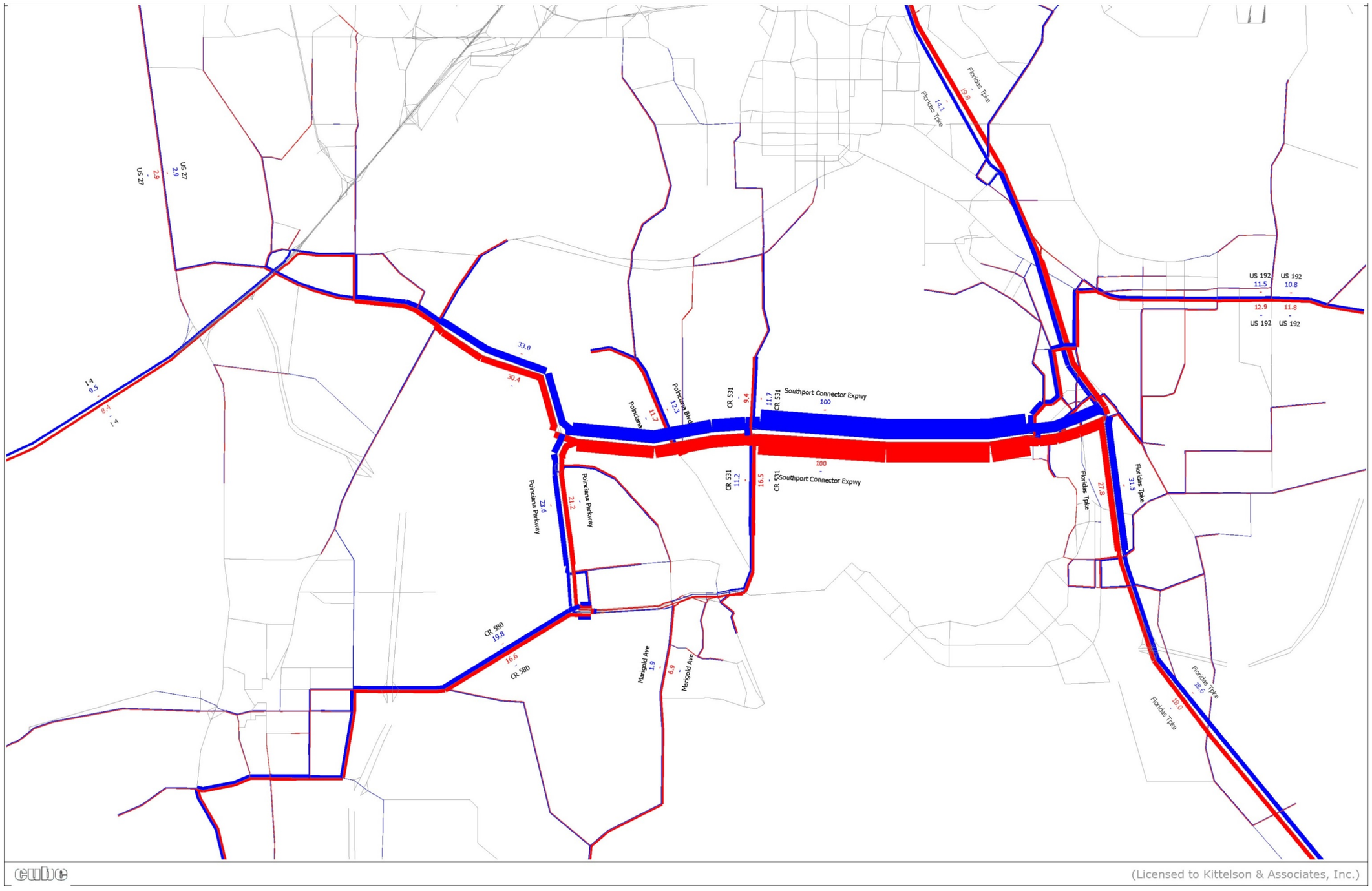
*Bandwidth and percentage of traffic in red represent traffic using Eastbound Southport Connector; bandwidth and percentages of traffic in blue represent traffic using Westbound Southport Connector.

- **Figure 5: Select Link Analysis for Traffic on Southport Connector for Alternative B-8**



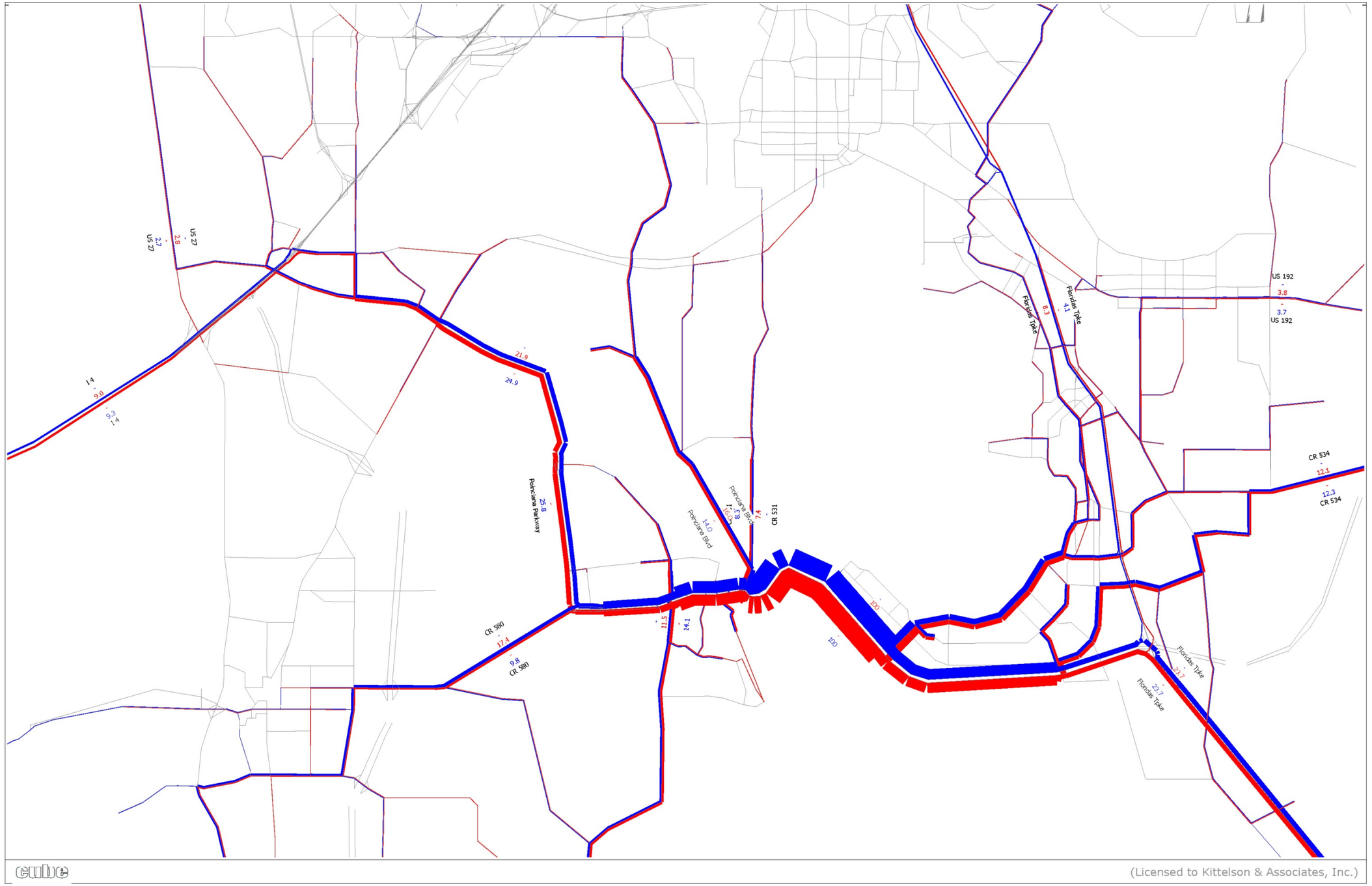
*Bandwidth and percentage of traffic in red represent traffic using Eastbound Southport Connector; bandwidth and percentages of traffic in blue represent traffic using Westbound Southport Connector.

Figure 6: Select Link Analysis for Traffic on Southport Connector for Alternative C-1



*Bandwidth and percentage of traffic in red represent traffic using Eastbound Southport Connector; bandwidth and percentages of traffic in blue represent traffic using Westbound Southport Connector.

Figure 7: Select Link Analysis for Traffic on Southport Connector for Alternative C-8



*Bandwidth and percentage of traffic in red represent traffic using Eastbound Southport Connector; bandwidth and percentages of traffic in blue represent traffic using Westbound Southport Connector.

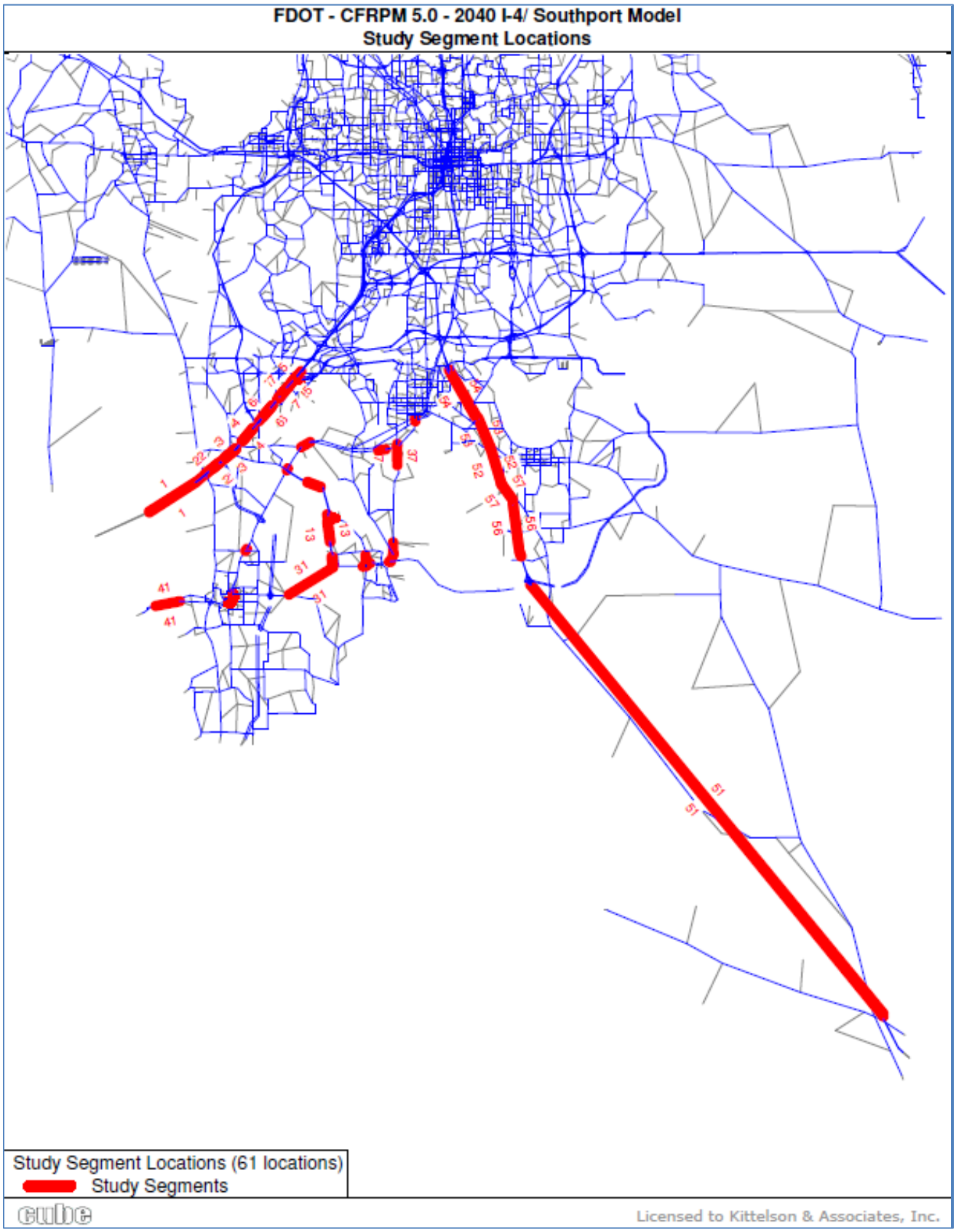
APPENDIX

A. Southport Connector Study Segment Locations

B. Detailed 2040 Forecast Results (attached as separate Excel file)

C. Model Files (Transmitted Electronically)

Figure A-1: Study Segment locations – Overall Study Area



Note: Southport Connector segments vary by scenario and therefore are not displayed in above graphic

Figure A-2: Study Segment locations –2040 No-Build (Alternative A) – Southport Detailed Study Area

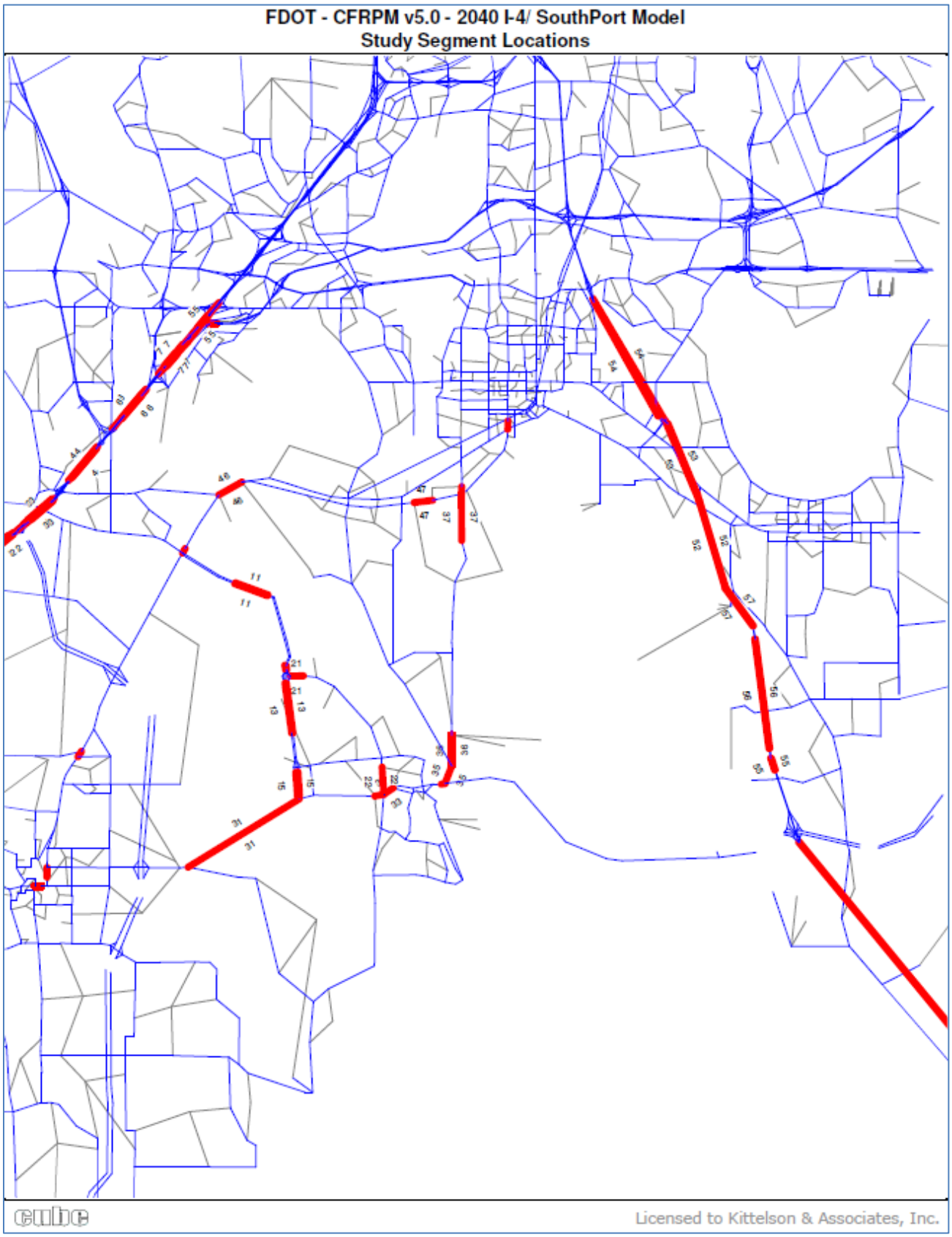


Figure A-3: Study Segment locations – 2040 Alignment 1(Alt B-1 and Alt C-1) – Southport Study Area

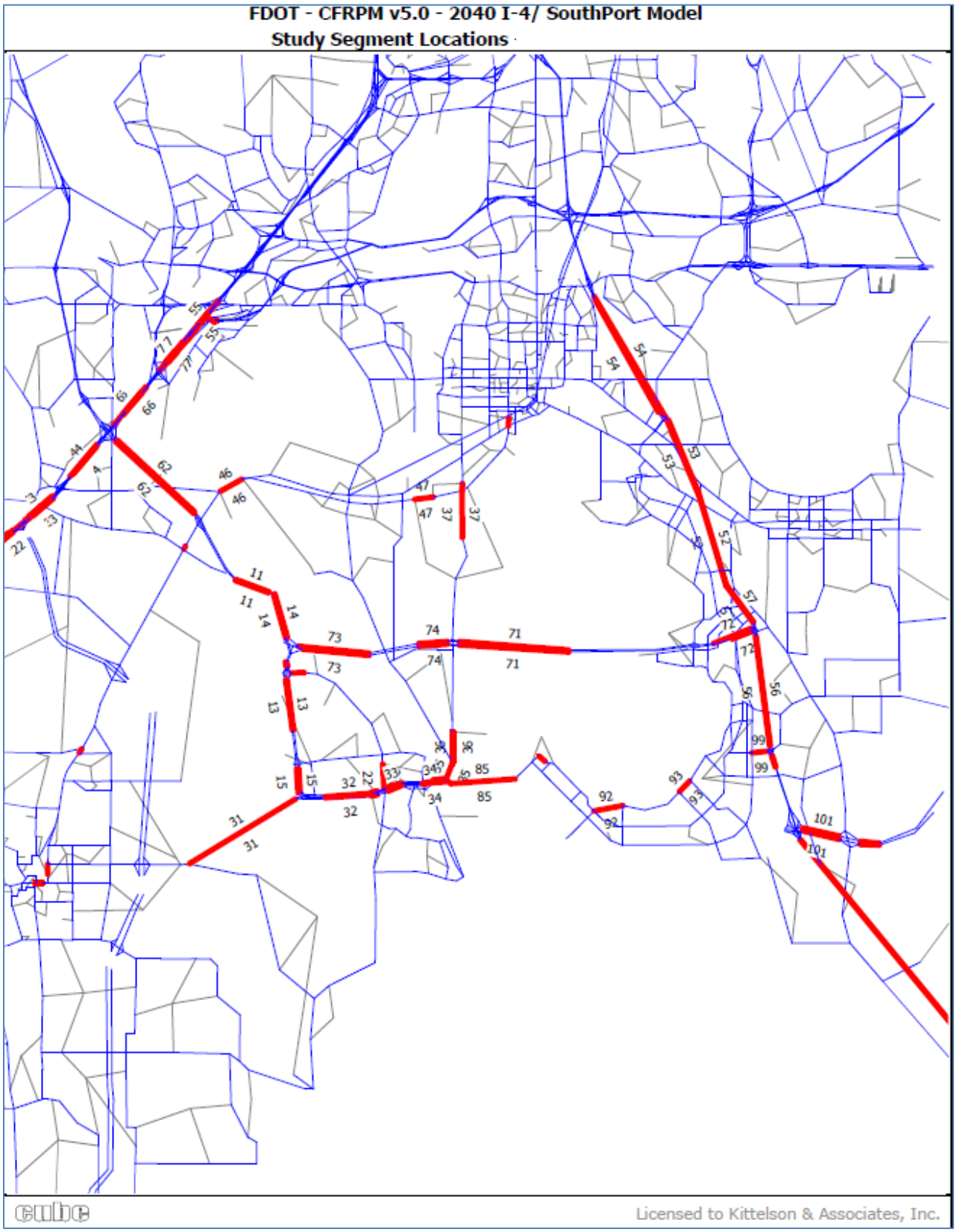
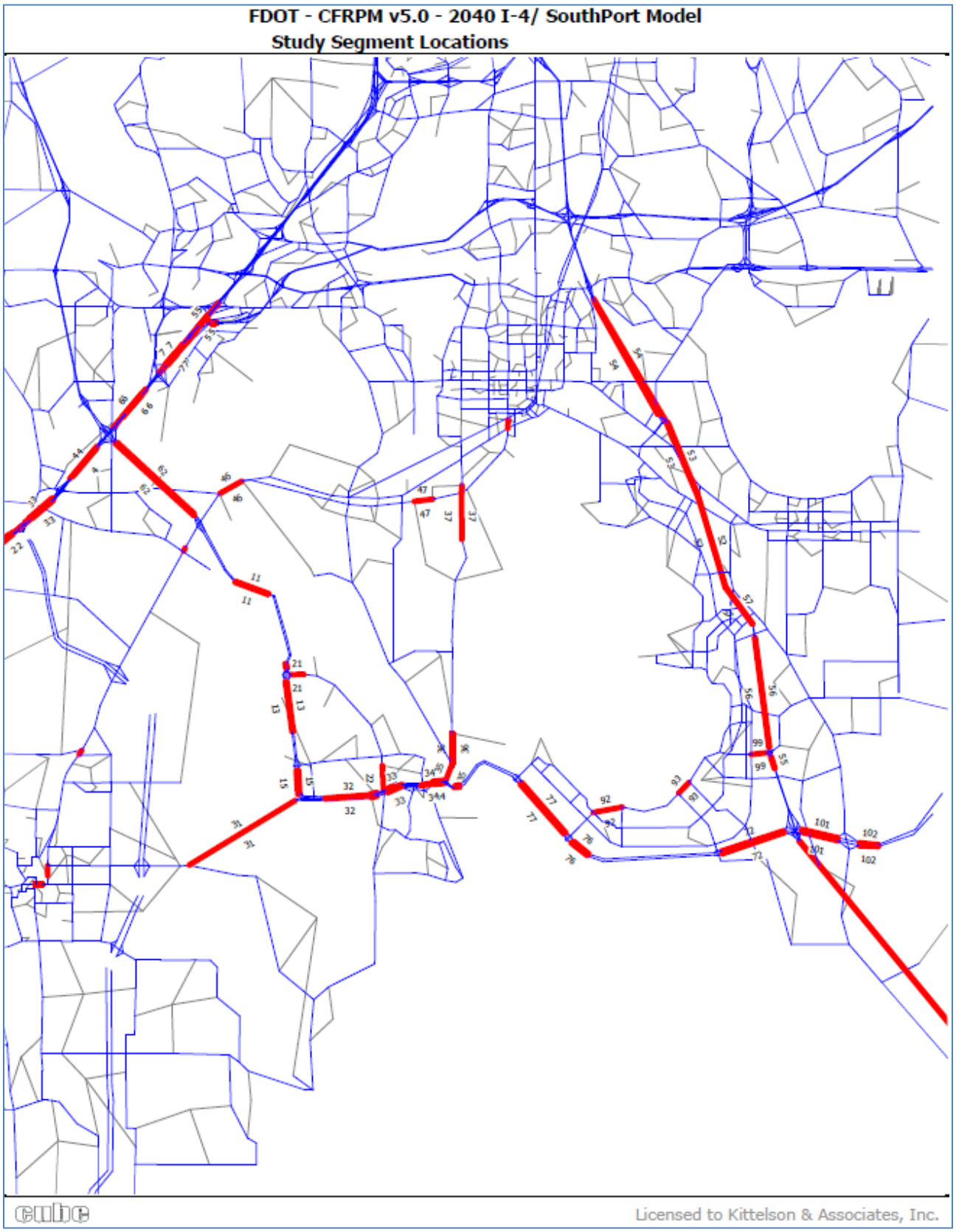


Figure A-4: Study Segment locations – 2040 Alignment 8 (Alt B-8 and Alt C-8) – Southport Study Area



Appendix 4

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RE: Poinciana Parkway Southport Connector Project Development and Environment (PD&E) Study & I-4 Poinciana Parkway Connector Project, Financial Project ID Numbers: 433693-1-22-01 and 433693-2-22-01

Dear Ms. Sirmans and Mr. Hull:

This letter responds to the tentative decision announced during the Project Advisory Group Meeting on December 11, 2014 to eliminate from further consideration all Alignment Corridors other than Nos. 6, 7, and 8.

We concur with this decision with the exception of the elimination of Corridor 1 (the east-west crossing of West Lake Tohopekaliga), which we believe is a premature. Corridor 1 should be retained in the study process.

This letter is written in regard to both FDOT projects under consideration in parallel studies, including the Southport-Poinciana Parkway Connector and the I-4 Poinciana Parkway Connector. While these are the subject of separate PD&E studies, they amount to a single project in terms of regional transportation movements. Decisions about the alignment corridor for either of these projects will fundamentally impact the transportation performance of the other, including the purposes served.

The proposed elimination of Corridor 1 from further study is inappropriate and premature for the following reasons:

(1) <u>Environmental Impacts of the Corridors South of Lake Tohopekaliga are severely understated in current study documents.</u>

Each of the corridors which propose a road location south of Lake Tohopekaliga, including corridors 6,7 and 8, will result in long term, continuing impacts to the following existing and prospective conservation properties and projects:

(a) Disney Wilderness Preserve, The Nature Conservancy 11,500+- acres
(b) South Florida Water Management District Lake Russell Environmental Education Property, 500+- acres
(c) Southport Mitigation Bank, Southport Ranch 3,280+- acres
(d) Mira Lago Mitigation Property, Walt Disney Company, 3,000+- acres
(e) Everglades Headwaters National Wildlife Refuge, potentially 150,000+- acres, Under Acquisition, U.S. Fish and Wildlife Service.
(f) Kissimmee River Restoration Headwaters Revitalization project.

The current study documents do not consider the specific actions that have taken place for the past two decades to assemble conservation lands in the Everglades Headwaters area, including the properties listed above, and the long term management needs of these properties. Any of the corridors which pass south of Lake Tohopekaliga (such as 6,7 and 8) will directly impact two of these properties by intruding within the management boundary (SFWMD Lake Russell Environmental Education Property and Southport Mitigation Bank). These properties, and the other adjacent properties listed above will also be impacted by impingement on the practicality of continuing the primary management tool utilized on these tracts; aggressive regimen of prescribed fire management necessary to maintain pine flatwoods and scrub habitats. The "smokeshed" of all of these properties will be complicated by existence of a nearby high speed expressway type road. The implications of this for burn managers are compelling. Permissible "burn days" during the year on these tracts will be sharply reduced. The costs of conducting prescribed fire will be substantially increased for land managers due to the need to proceed with much smaller burn areas. The proximity of the highway alone will cause risk-adverse managers to discourage emphasis on fire management. The impact will be long-term deterioration of the high quality wildlife habitat on each of these tracts.

The corridors routed south of Lake Tohopekaliga will also serve to project urban development pressures south, and challenge the ability to maintain the "Urban Growth Boundary" established in the county comprehensive plan. It is inconceivable that the location of the Southport Connector expressway at the edge of the Urban Growth Boundary will permit the boundary to remain at its current location; almost certainly the urban growth pressures associated with the existence of such an expressway will drive urban growth further south into the Everglades Headwaters area, surrounding the properties identified above, and essentially nullifying their ecosystem functions.

Further, The Kissimmee Headwaters Revitalization Project, part of the congressionally authorized Kissimmee Restoration Project, contemplates changes in the water management schedule of Lake Cypress, allowing the lake to reach the level of 54' NGVD, which is a 1.5 foot increase, and just one foot lower than the full pool elevation of Lake Toho. This will raise regional water levels and water tables significantly as compared with present conditions. Wetland and floodplain impact calculations shown in study documents for all of the alignments appear to be based on existing lake level, water table, and wetland conditions, rather than projected conditions resulting from the implementation of the Kissimmee Headwaters Revitalization Project. The corridors south of Lake Tohopekaliga (including 6, 7 and 8) will be particularly impacted by the results of this project. The actual wetland and floodplain impacts assigned in study documents to these corridors are understated because significantly larger floodplain and wetland areas will result from the Headwaters Revitalization project.

It is evident from a review of study documents that the potential impacts on the long term management of conservation land tracts such as Disney Wilderness Preserve were simply not reviewed, considered, or ranked in any way. An examination of the evaluation matrix documents presented at the November 11th meeting reveals that highway impacts such as impact on the practicality of conducting fire management on adjacent tracts were simply not part of the evaluation process. This is a very serious oversight.

(2) <u>Environmental Impacts for Corridor 1 are overstated for the Everglade Snail Kite in current study documents. Impacts for Routes South of Lake Tohopekaliga on the Crested Caracara are understated.</u>

The current study documents assign a "10" ranking to Corridor 1 with regard to the endangered Everglade Snail Kite. However, the rankings for Corridor 1 which emerged from the site specific evaluation of the different corridor alignments and are shown in the document "Everglade Snail Kite Analysis Results" were actually a "1". Study managers apparently then arbitrarily assigned a "10" impact rating due to the speculative possibility that impacts on Everglade Snail Kites were arguably higher for any route crossing Lake Tohopekaliga. Audubon's view, based on the opinion of Dr. Paul Gray, the member of Audubon's science team assigned to Everglade Kite issues, is that the impacts of alternative 1 would be temporary impacts associated with construction and would involve a low number of nests. The areas proposed for segments C and G of Corridor 1 are not where most Kite nesting has been on the lake, partly because they have relatively narrow littoral zones with limited nesting opportunity. After construction, the roadway would likely have little impact on Kites.

Conversely, Corridors 6, 7 and 8 south of Lake Tohopekaliga pose potentially greater threats to Crested Caracara than acknowledged in current study documents. If urban growth accompanies and is promoted by the roadway (and that appears to be Osceola County's clear intent) then all Crested Caracara habitat near Corridors 6, 7 and 8 could be lost. Highways also are a leading source of ongoing mortality for Crested Caracara, largely because of high juvenile mortality, meaning a new highway could impact local Crested Caracara populations permanently and significantly. These Crested Caracara impacts have special significance in the areas south of Lake Tohopekaliga due to the fact that long term planning and investment has been made and will continue to be made there in the acquisition and management of conservation lands at that location.

(3) <u>Only Alternative 1 Can Serve the Broadest Range of Local and Regional Transportation Needs.</u>

Alternative 1 is the only alternative developed which will both provide a direct expressway, limited access connection between the Florida Turnpike and Interstate 4, plus provide connection to 4 major arterials in the Poinciana Area. Alternative 1 has the potential to intercept Poinciana traffic at 4 points; Pleasant Hill Road, Poinciana Blvd, Marigold, and the future Rhododendron. From those interchanges, Poinciana travelers would have the option to go west to Interstate 4 and the "attractions area", or east to the Florida Turnpike to access the Orlando area.

In contrast, all of the other alternatives:

- Lose their limited access expressway configuration once reaching Cypress Parkway, where intersections and stoplights will impede smooth traffic movement.
- Would require disruptive visual and community connectivity impacts through downtown Poinciana if an eventual upgrade to limited access expressway lanes were attempted in the future.
- Have the potential of adding traffic to existing congestion on surface roadways in downtown Poinciana.
- Connect to the Florida Turnpike at a location which is only favorable to traffic movements in a southeasterly direction.

Should either corridors 6, 7 or 8 be built, Poinciana Residents attempting to use the Southport Connector to commute to Orlando would be required to add approximately 15 extra miles to a one-way trip, plus absorb additional toll costs on both the Southport Connector and the Florida Turnpike. Forcing motorists to first head southeast away from Orlando in order to reach Orlando establishes an awkward and non-intuitive commuting route. While it is clear that congestion on arterials serving Poinciana North-South movements requires significant improvements, the study materials do not credibly establish how a link to the Florida Turnpike traveling in a southeasterly direction from Poinciana fulfills this need. In contrast it is clear Corridor 1 would remove significant traffic from all 4 north-south arterials serving Poinciana, distributing that traffic either to I-4 to the west or the Turnpike to the east. Alternative 1 would deliver northbound Poinciana traffic to the Turnpike at an interchange closer to Orlando and do so with the direction of travel consistently headed toward the destinations of most commuters.

<u>Conclusion</u>

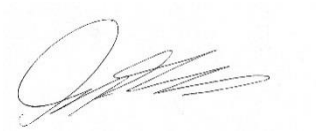
The current work product of the PDE processes concerning the Poinciana Parkway Southport Connector Study & I-4 Poinciana Parkway Connector Projects strongly suggests that both projects are proceeding in the design process without a clear definition of purpose. A knowledgeable choice between Corridor 1 and Corridors 6, 7 and 8 can only be made after much more detailed traffic projection studies, including origin/destination studies, are undertaken. While these projects involve both the Osceola County

Expressway Authority and the Florida Department of Transportation, we strongly suggest that the Florida Department of Transportation perform its own careful and independent evaluation of the relationship of these projects to actual regional and state transportation needs before the formal PD&E process proceeds further.

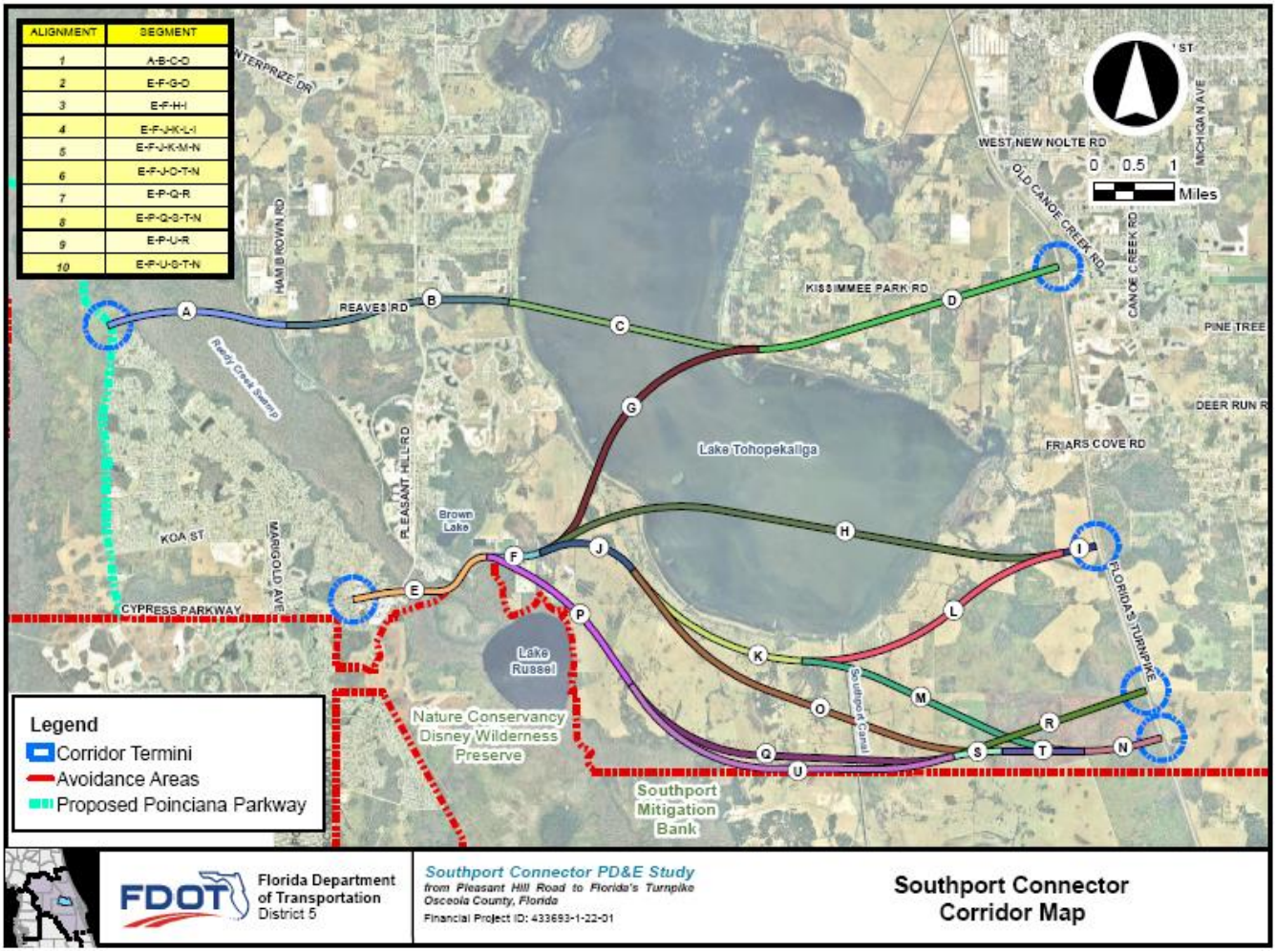
Florida DOT should also evaluate how any corridor south of Lake Tohopekaliga can be compatible with other state policy objectives related to the restoration of the Kissimmee River and the Everglades.

Audubon Florida requests that Corridor 1 not be removed from consideration at this time.

Sincerely,



Charles Lee
Director of Advocacy


ALIGNMENT
SEGMENT
1
A-B-C-D
2
E-F-G-D
3
E-F-H-I
4
E-F-J-K-L-I
5
E-F-J-K-M-N
6
E-F-J-O-T-N
7
E-P-Q-R
8
E-P-Q-S-T-N
9
E-P-U-R
10
E-P-U-S-T-N
WEST NEW NOLTE RD
OLD CANOE CREEK RD
KISSIMMEE PARK RD
REAVES RD
HAMBROWN RD
PLEASANT HILL RD
CANOE CREEK RD
PINE TREE
DEER RUN R
FRIARS COVE RD
Lake Tohopekaliga
Brown Lake
KOA ST
MARIGOLD AVE
CYPRESS PARKWAY
FLORIDA'S TURNPIKE
Lake Russel
Nature Conservancy
Disney Wilderness
Preserve
Southport Canal
Southport
Mitigation
Bank
0 0.5 1
Miles
Legend
Corridor Termini
Avoidance Areas
Proposed Poinciana Parkway
FDOT
Florida Department
of Transportation
District 5
Southport Connector PD&E Study
from Pleasant Hill Road to Florida's Turnpike
Osceola County, Florida
Financial Project ID: 433693-1-22-01
Southport Connector
Corridor Map

Roy F. Partin
President/Director
Green Island Ranch, Inc.
Friars Cove, Inc.
Canoe Creek Properties, LLP
Master Developer, Green Island DRI
3160 Friars Cove Road
Saint Cloud, FL 34772

Mr. Alex B. Hull
President/Principal
Inwood Consulting Engineers, Inc.
3000 Dovera Drive
Suite 200
Oviedo, FL 32765

April 14, 2014

Re: Poinciana Parkway Southport Connector PD&E Study
FDOT Financial Project ID Number 433693-1

Dear Mr. Hull:

As of today's date, we have not received any correspondence from you with regard to the Poinciana Parkway Southport Connector PD&E Study beyond that which was exchanged on September 3, 2013 in order to coordinate access to the property "for the purposes of environmental assessments". With the Green Island DRI property being one of the major land owners/stakeholders within the Poinciana Parkway Southport Connector corridor, it certainly does not seem consistent with the intended process, your previous indications nor our previous requests to be kept apprised.

Additionally, it is our understanding that on September 4, 2013 two members of your firm, which included Mr. Nathan E. Chambers, entered the Green Island DRI property however, were unable to complete the intended "environmental assessments" and had indicated they would return to do so. To date, no additional "environmental assessments" have been coordinated or completed within the limits of the Green Island DRI.

We respectfully request a formal update as to the status of the Poinciana Parkway Southport Connector PD&E Study, an account of any related activities which may have occurred from September 5, 2013 to the receipt of this letter, as well as the currently proposed project schedule. In addition, we request that the attached Figures (Green Island Figures 1-3) which utilize published FDOT "Figure 2" of the "Alternative Alignments Map" and depict viable alignment alternatives, be considered as part of the PD&E Study. Said alternatives are broken into three groups of which all fundamentally achieve the goals and objectives of

the Osceola County Comprehensive Plan, the Osceola County Expressway Authority 2040 Master Plan and Central Florida's 2030 Long Range Transportation Plan while also ensuring regional connectivity, protecting water quality, further minimizing environmental impacts and implementing the required connectivity to support the intended and approved growth.

We look forward to your response.

Respectfully,

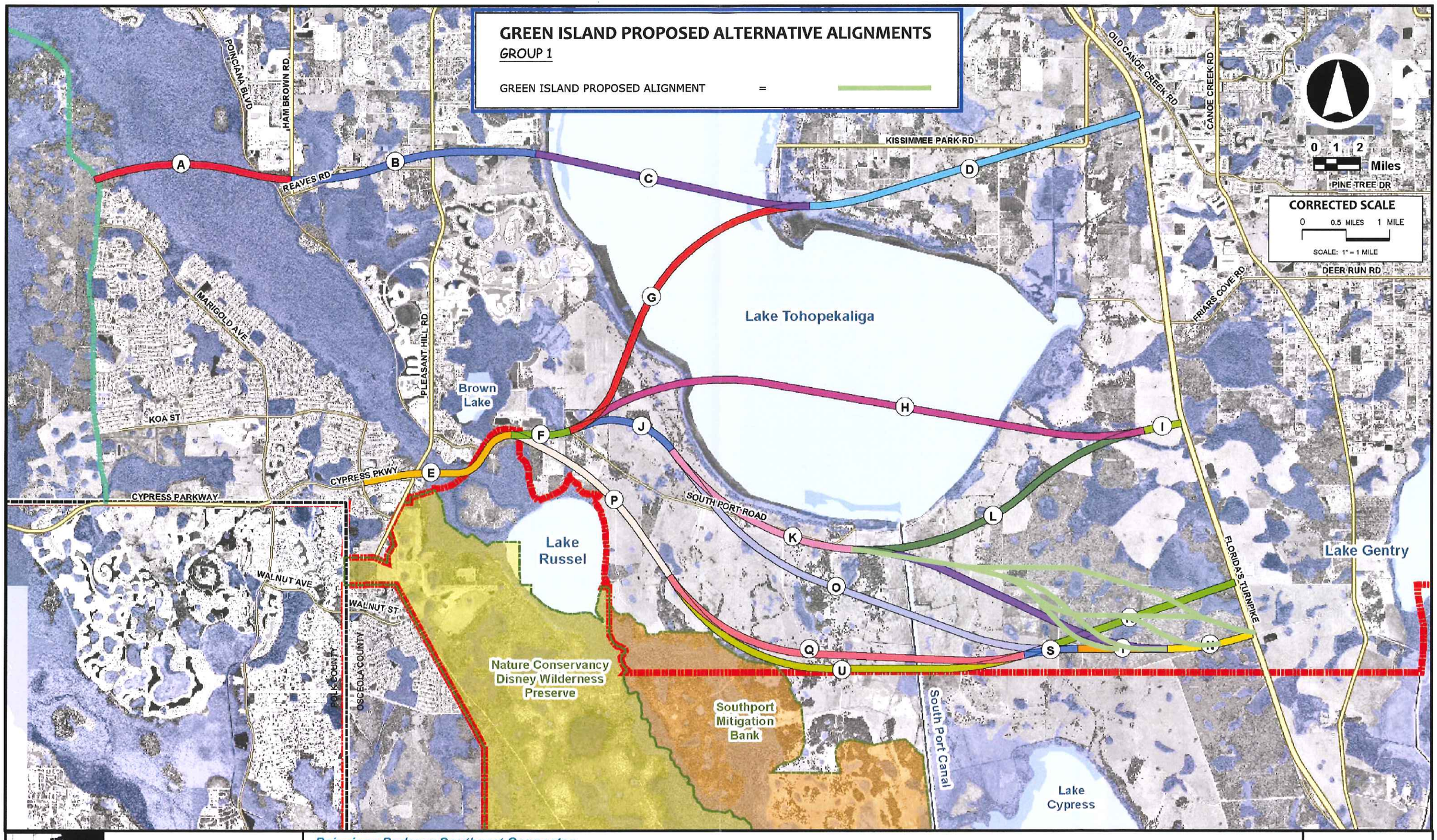
Roy F. Partin
President/Director
Green Island Ranch, Inc.
Friars Cove, Inc.
Canoe Creek Properties, LLP
Master Developer, Green Island DRI
407.709.9400 phone
saucer7@embarqmail.com

Cc: Amy Sirmans, Project Manager, FDOT

GREEN ISLAND PROPOSED ALTERNATIVE ALIGNMENTS

GROUP 1

GREEN ISLAND PROPOSED ALIGNMENT =



Florida Department of Transportation
District 5

Poinciana Parkway Southport Connector
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from Pleasant Hill Road
to Florida's Turnpike
Osceola County, Florida
Financial Project No.: 433693-1-22-01
Federal Project No: N/A

ALTERNATIVE ALIGNMENTS MAP

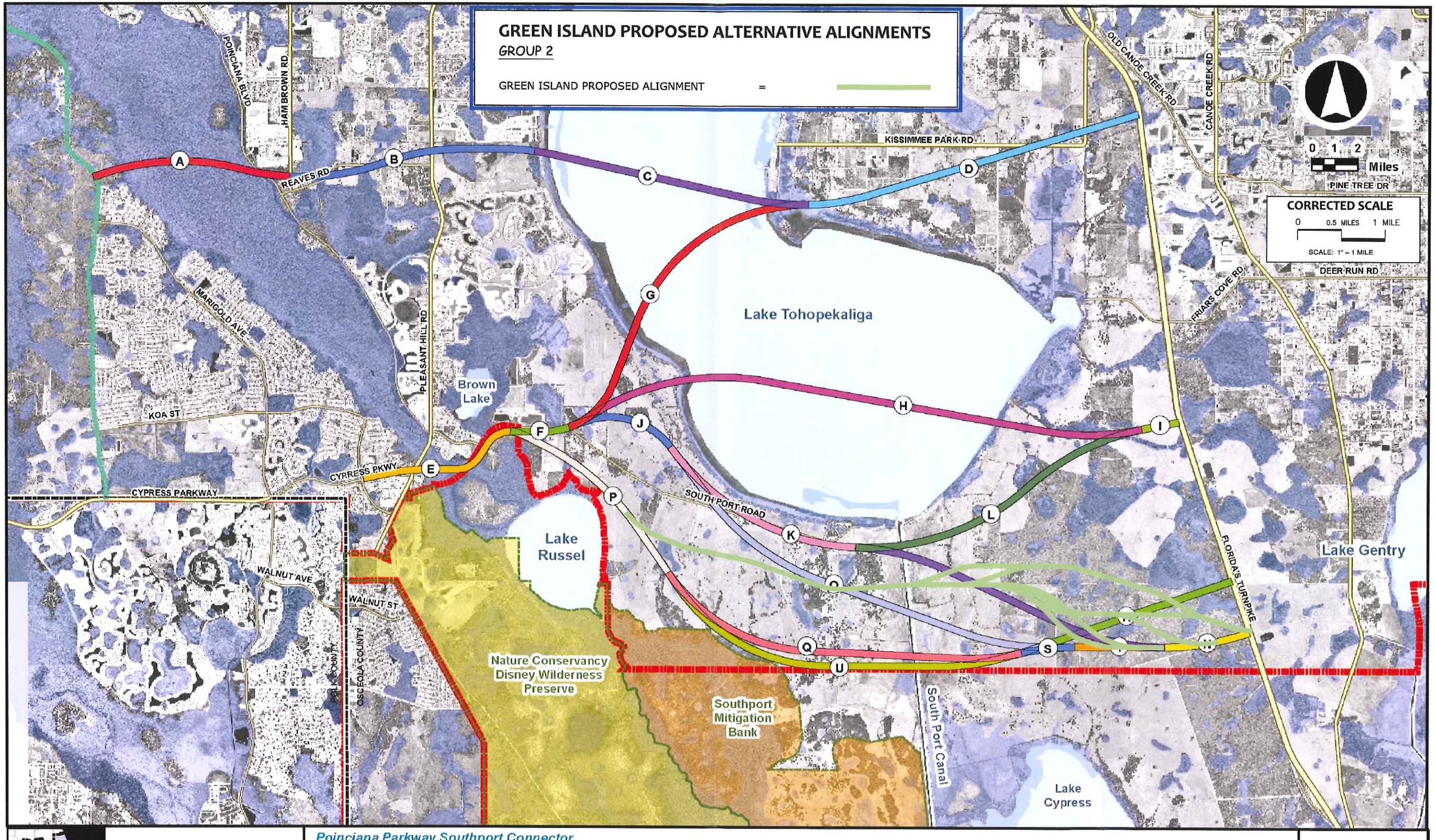
GREEN ISLAND

FIGURE 1

GREEN ISLAND PROPOSED ALTERNATIVE ALIGNMENTS

GROUP 2

GREEN ISLAND PROPOSED ALIGNMENT =



Florida Department of Transportation
District 5

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Federal Project No: N/A

ALTERNATIVE ALIGNMENTS MAP

GREEN ISLAND

FIGURE 2

GREEN ISLAND PROPOSED ALTERNATIVE ALIGNMENTS

GROUP 3

GREEN ISLAND PROPOSED ALIGNMENT =

A
B
C
D
E
F
G
H
I
J
K
L
O
P
Q
S
U

POINCIANA BLVD
HAM BROWN RD
REAVES RD
MARIGOLD AVE
PLEASANT HILL RD
KOA ST
CYPRESS PKWY
CYPRESS PARKWAY
WALNUT AVE
WALNUT ST
OSCEOLA COUNTY
KISSIMMEE PARK RD
OLD CANOE CREEK RD
CANOE CREEK RD
PINE TREE DR
DEER RUN RD
FRIARS COVE RD
SOUTH PORT ROAD
FLORIDA'S TURNPIKE

Lake Tohopekaliga
Brown Lake
Lake Russel
Nature Conservancy Disney Wilderness Preserve
Southport Mitigation Bank
South Port Canal
Lake Cypress
Lake Gentry

0 1 2 Miles

CORRECTED SCALE
0 0.5 MILES 1 MILE
SCALE: 1" = 1 MILE

Florida Department of Transportation
District 5

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Financial Project No.: 433693-1-22-01
Federal Project No: N/A

ALTERNATIVE ALIGNMENTS MAP

GREEN ISLAND

FIGURE 3

Amy M. Sirmans, P.E.
Project Development Engineer
District Five
Florida Department of Transportation
amy.sirmans@dot.state.fl.us

June 8, 2015

Dear Ms. Sirmans:

The purpose of this letter is to follow-up on our phone call of June 2, 2015 with you and Alex Hull regarding the alternative alignments of the Southport Connector and the impact of the alignments on fire management on The Nature Conservancy's Disney Wilderness Preserve (DWP). As you know, the ability of The Nature Conservancy to perform prescribed fire on DWP is critical to the maintenance of habitat for a number of state and federally listed rare and endangered species, including Red-cockaded Woodpecker, Indigo snake and the gopher tortoise. Maintaining appropriate habitat for many of these species requires fire management. Attached to this letter are lists of over 25 rare and endangered plants and invertebrates found on Disney Wilderness Preserve.

The Nature Conservancy has consistently maintained that in order to greatly reduce potential smoke impacts from prescribed fire, it is necessary to choose a Connector alignment that maximizes distance from the preserve. Unfortunately, the two alignments that the consulting engineer has selected for NEPA alternatives analysis are the two closest of all of the possible alignments considered. A substantial portion of Alignment 7 is the closest to the border of DWP, with a portion falling within the smoke shed identified in the DWP burn unit information attached to this letter.

The closer the alignment is to the preserve, the more restrictions are placed upon the Conservancy's safe fire management practices. We believe that Alignment 7 will incur some level of conflict between the safe operation of the proposed expressway and The Nature Conservancy's ability to manage our property. In contrast, the majority of Alignment 11 falls between 1 and 2 miles from DWP. This additional distance is critical to providing an adequate smoke buffer as we have consistently communicated.

Due to the location of Poinciana on the western boundary of DWP, the majority of burn days on the northern third of the Preserve incorporate westerly and southwesterly wind directions in order to avoid negatively impacting the residents to the west. For the past 20 years, the smoke from these units has historically been directed to the east and northeast of DWP. Therefore, in order for TNC to continue the safe practice of prescribed burning adjacent to Poinciana and to limit the potential impact upon roadways, the preferred placement of the Southport Connector would be the northernmost option.

We appreciate the opportunity to communicate our concerns and hope that you take them under consideration as alternative corridors are evaluated. As stated above, we strongly prefer Alignment 11 as we believe that Alignment 7 will likely negatively impact The Nature Conservancy's ability to conduct

prescribed fire on the northernmost third of our property and could impair the safe operation of the expressway. We will continue to evaluate the impact of the proposed corridor alignments on Disney Wilderness Preserve and appreciate your efforts to reach out to us.

Sincerely yours,

Zachary Prusak, Central Florida Conservation Director & Florida Fire Manager

Janet Bowman, Director of Legislative Policy & Strategies

Southport Ranch, LLC

P.O. Box 422312
Kissimmee, FL 34742
407-846-0229
407-846-7664 (fax)

Transmitted via Email

February 23, 2015

Amy Sirmans
Project Manager
Florida Department of Transportation District Five
719 South Woodland Boulevard
Deland, Florida 32720

Alex Hull
Consultant Project Manager
Inwood Consulting Engineers, Inc.
3000 Dovera Drive, Suite 200
Oviedo, Florida 32765

Re: Southport Connector Project Development and Environment (PD&E Study) Study

Ms. Sirmans and Mr. Hull:

This letter is submitted to object to the "Preferred route" that is being touted by FDOT for the potential Southport Connector road.

Environmental Implications:

As I have indicated on previous occasions, Southport Ranch, LLC vehemently opposes this project because of the damages that will be caused to its property. The proposed route will do irreparable damage to the ranch and the property where Southport Mitigation Bank is located. The Southport Ranch property has been utilized for ranching close to 100 years and protecting the property together with its natural amenities is an established priority of ownership. The ideas of protecting a nest, to rape the remainder clearly reflects a distain for the amenities of natural resources that the ranch sustains and gross misunderstanding of environmental protection. Ownership has proven its desires by establishing the mitigation bank to preserve and protect the ranch and local ecosystem.

It is obvious that little consideration has been given by FDOT and the consultant to the environmental implications by selecting the location of the preferred route. The "preferred route" being pushed by FDOT and its consultant impacts not only the Southport Ranch property, but also the Disney Wilderness Preserve, the South Florida Water Management District Lake Russell Education Property, Mira Lago Mitigation Property, and the Kissimmee River Restoration project.

Urban Growth Boundary:
It is also highly suspect to locate such a project adjacent to or in close proximity to the "Urban Growth Boundary" as established by Osceola County. Such location will lead to the "Urban Growth Boundary" being moved further south to expand development to increase financial support for the project. The value of protecting the established ecosystem is significant and to ignore its value is shortsighted.

Other Routes:
The proposed routes across Lake Toho were determined not to have merit because of environmental consequences. The supporters (Audubon Florida) of the "lake routes" have been advised that they did not understand the environmental impacts involving the snail kite and other water species. It has been indicated that the County desires to protect water bodies; however the County has proposed a road to extend across the north end of East Lake Toho.

The "preferred route" is questioned as well from the perspective of development. Osceola County approved a number of significant developments prior to the 2008 real estate market collapse. The current route totally averts the Green Island development and the other approved projects entirely. Again, this is highly suspect, given that Osceola County relied on these projects and related economic development opportunities as the "engine" to justify the minutia of the comprehensive plan and this project. It has been stated that the the routes across Lake Toho fail to promote development. However, the "preferred route" not only avoids the fore described approved developments but also locates the project on the south end of the "Urban Growth Boundary" without the availability of access

Scope of Services:
There are a number of questions that arise when review is given to the "Scope of Services" between the Consultant and FDOT. It seems strange that consideration is not given to other planned roadways that are shown in the Osceola County Comprehensive Plan and their potential influence on traffic and the ability of this roadway to sustain itself. It is also suspect that a defined source of purpose cannot be provided as to the need of the road.

A simple minded person could interpret these proceedings and efforts to be a means of defending what has already been pre-determined.

Financial Feasibility:
The merits of financial feasibility are of course another matter of smoke and mirrors. According to MetroPlan the "Project" is funded, yet funding cannot be identified. Osceola County does not have the capacity to fund the "Project" and Osceola County is the defined source of funding for the Osceola County Expressway Authority (OCX) so that means OCX does not have the ability. Question also arises as to Osceola County's ability to fund improvements to Canoe Creek Road as it will be necessary to improve that facility.

The comment that the State has lots of money is simply not true. Neither the State nor Florida's Turnpike Enterprise have shown the ability to fund the project. In fact, according to MetroPlan, the funding is not available for the additional lanes of the Turnpike in Osceola County that would be required to serve the thousands of new trips to be dumped on the Turnpike by this project.

It is suspected that given the "monkey shines" to date that the trip generation numbers will generate even far greater questions.

Closing Comments:

It continues to be a "sand spur" to Southport Ranch, LLC that any government, Federal, State, or Local can initiate efforts to rape and destroy six generations and over 90 years of ownership. The ownership has committed a significant portion of its property to preservation and has no desire to pursue development. The Southport property is a treasure that continues to sustain itself despite the efforts of government.

I was told once by a fancy educated government feller that preservation of property is only meant to apply until government believes it has a better use.

While simple minded, I do realize that "there is too much smoke, not to be fire" and that the Southport Ranch, LLC property is a target of FDOT and the County. The "preferred route" documents this statement to be true, as there are alternative routes that do not have near the implications of the preferred route. For every reason FDOT and the consultant can generate to support their route, there are a like number to challenge their route.

There is credence to the "Lake route", however, to date it does not appear that a real effort has been extended to thoroughly evaluate the route.

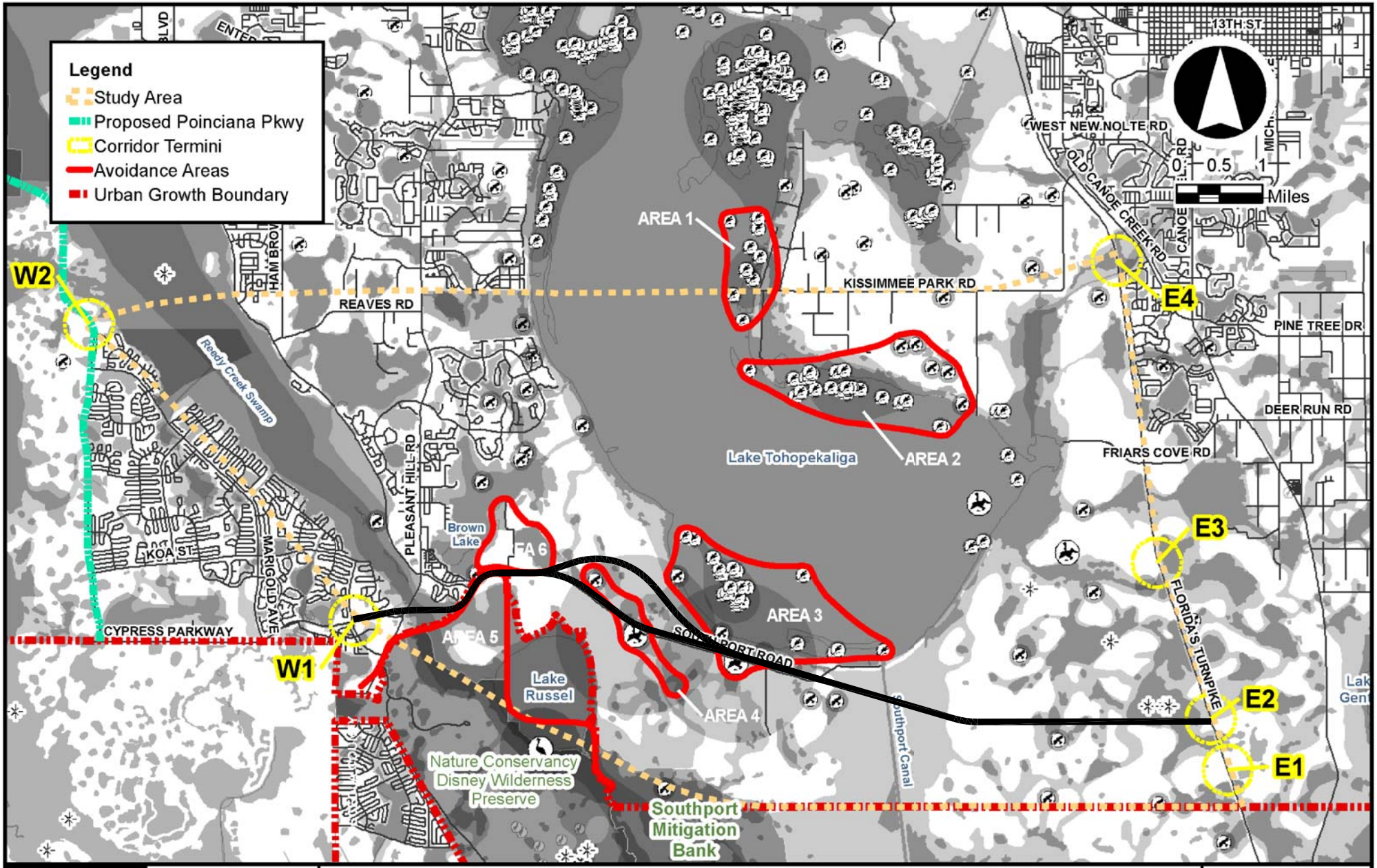
I am attaching two exhibits, one exhibit shows another route that should have been evaluated previously. The route that I am proposing would generally follow the Partin/Bronson property line from the Turnpike, and then turn north westerly to a location generally adjacent to the existing Southport Road. This route accomplishes three things: it lessens the degree of environmental impact, protects the established Urban Growth Boundary, and would serve the existing approved developments east of the Southport Canal, as well as serve the Bronson parcel.

The second exhibit illustrates the proposed route in relation to the "Urban Growth Boundary". The location of this route protects the urban boundary, lessens the impact to the ecosystem, as well as those properties currently being protected by private or governmental bodies. In addition, this route also decreases project cost and significantly decreases damages to be incurred by property owners.

Sincerely,

Gary L. Lee
Manager
Southport Ranch, LLC

Copies to:
Governor Rick Scott
FDOT Secretary Jim Boxold
Brandon Arrington, Osceola County Commissioner; barr@osceola.org
Cheryl Grieb, Osceola County Commissioner; cheryl.grieb@osceola.org
Michael E. Harford, Osceola County Commissioner; michael.harford@osceola.org
Fred Hawkins, Jr., Osceola County Commissioner; fhaw@osceola.org
Viviana Janer, Osceola County Commissioner; viviana.janer@osceola.org
Charles Lee, Director of Advocacy Audubon Florida; Chlee2@earthlink.net



FDOT
Florida Department of Transportation
District 5

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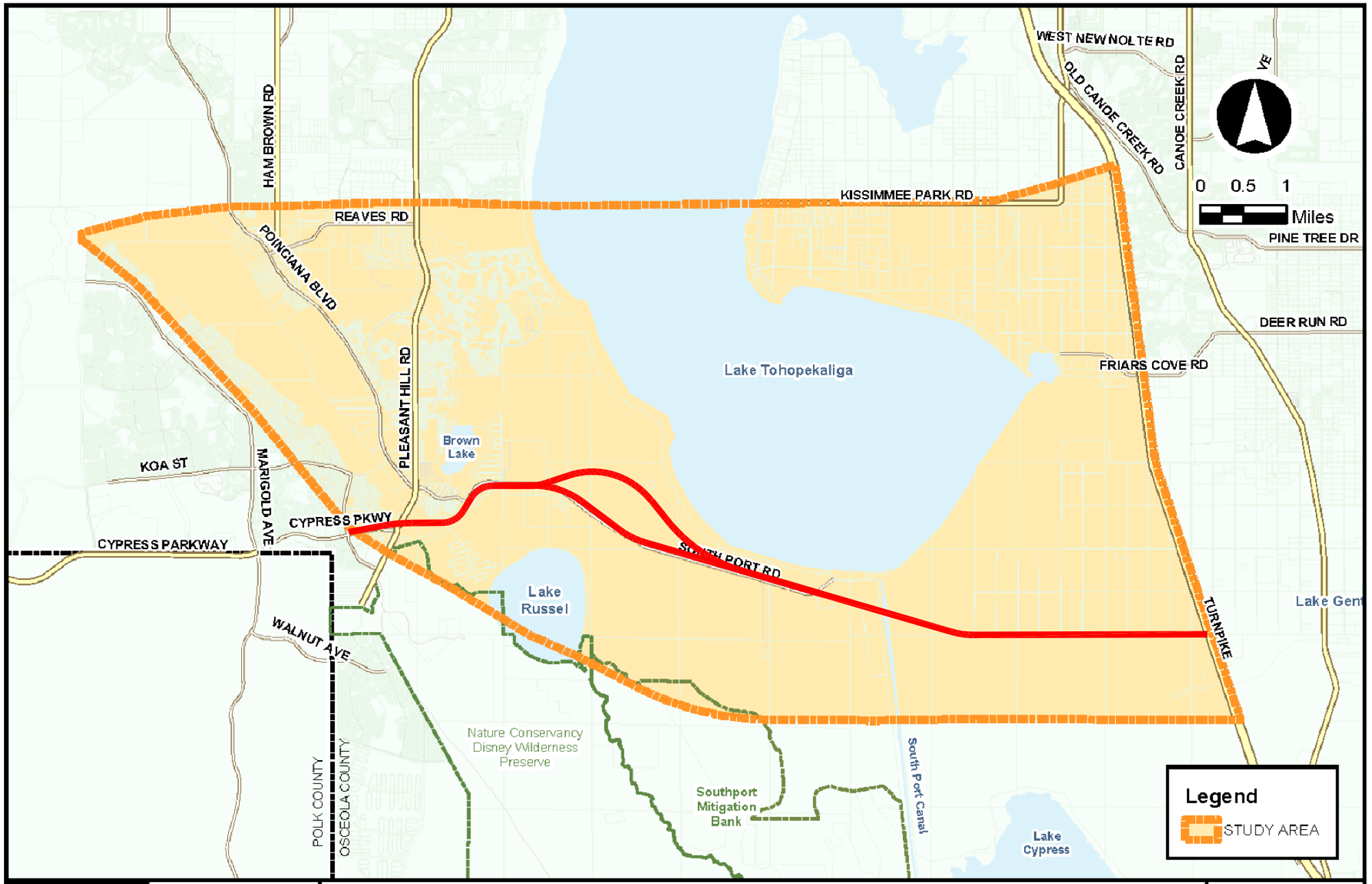
Federal Project No: N/A

LAND SUITABILITY MAP

EXHIBIT
5



Florida Department of Transportation
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PROJECT STUDY AREA

EXHIBIT
3

Alex Hull

From: Pinzon, Henry <Henry.Pinzon@dot.state.fl.us>
Sent: Friday, January 23, 2015 1:45 PM
To: Alex Hull; Sirmans, Amy
Cc: Geoff VanBueren; Emam, Emam B.; Jung, Rax
Subject: FW: Poinciana Parkway Southport Connector PD&E Study

Alex/Amy,

Turnpike's recommendation is to use Distance B (N to CC service center = 2.0 Miles) since it will provide at least 1.5 mile weaving distance between the entrance and exit ramps (See analysis below).

Please let us know if you have any questions.

Thanks,

Henry Pinzon, P.E.
Environmental Management Engineer

Tel: 407-264-3802
Cell: 407-782-0207
Fax: 407-822-5821

Turnpike Headquarters
MP 263 Bldg. 5315
P.O. Box 613069
Ocoee, FL 34761

From: Emam, Emam B.
Sent: Thursday, January 22, 2015 2:45 PM
To: Pinzon, Henry
Cc: Velasquez, Andrew; Banet, Josiah
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Henry,

The minimum acceptable distance between ramps is dependent upon the merge, diverge, and weaving operations that take place between ramps as well as distances required for signing. The Texas Roadway Design Manual guidance provides for two minimum ramp spacing lengths: right-exit without an auxiliary lane (2000 ft) and right-exit with the auxiliary lane (1500 ft). These distances apply regardless of design speed. The American Association of State Highway and Transportation Officials' (AASHTO's) Green Book similarly provides a minimum right-exit ramp spacing of 2,000 ft between system and service interchanges and 1,600 ft between two service interchanges; but again, these values are independent of design speed and proposed Poinciana Parkway (right entrance) and Canoe Creek service plaza (left-exit).

A project performed in cooperation with the Texas Department of Transportation and the Federal Highway entitled "*Guidelines For Spacing Between Freeway Ramps*", report number FHWA/TX-10/0-5860-1 and was published on March 2010. The evaluations using the field data collected as part of this project identified a weaving length of about 2,500 ft to reach 65 mph when assuming low freeway/ramp volume and weaving ratios. The weaving length for other predicted speeds using the assumed low freeway/ramp volume and weaving ratio are:

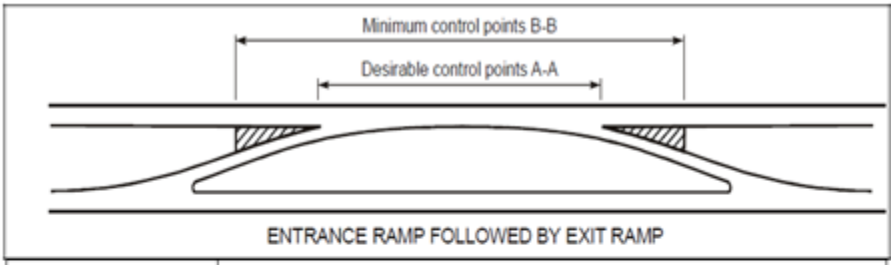
- Design Speed 70 mph: Weaving Distance 4,500 ft or 0.9 mi,
- Design Speed 80 mph: Weaving Distance 8,500 ft or 1.6 mi,
- Design Speed 90 mph: Weaving Distance 12,500 ft or 2.4 mi, and
- Design Speed 100 mph: Weaving Distance 16,500 ft or 3.1 mi.

Values are calculated using decision sight distance, and a 1 mile spacing based on the MUTCD guidance that advance sign for an exit being at 1 mile before the exit (2 miles if spacing permits) which represented Alternative 3 in the table below.

Accordingly, Poinciana Parkway Southport Connector (Alternative B) is recommended since it will provide at least 1.5 mile weaving distance between the entrance and exit ramps. An adequate distance is recommended to allow the heavy truck to accelerate to 70mph and change three lanes (weaving) to access the Canoe Creek Service plaza (left-exit).

Please let me know if you have any questions.

Thanks,
Emam



ENTRANCE RAMP FOLLOWED BY EXIT RAMP

Design Speed (mph)	Suggested Weaving Length (ft)		
	Alternative 1	Alternative 2	Alternative 3
Below 70	1500	6600	2500
70	2000	6600	4500
80	2600	6600	8500
90	3300	6600	12,500
100	4100	6600	16,500

Alternative 1 reflects the situation when a vehicle is at the design speed at the end of the entrance ramp and must come to a complete stop and then accelerate back to freeway speed.
Alternative 2 is based on England's recommendation for weaving lengths for rural motorways and consideration of preliminary safety findings.
Alternative 3 are the values calculated using regression equations developed from this project's field studies and low freeway/ramp volume and weaving ratio.

From: Pinzon, Henry
Sent: Tuesday, January 20, 2015 7:52 AM
To: Geoff VanBueren; Hull, Alex; Sirmans, Amy

Cc: Emam, Emam B.
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

We will evaluate the safe distance to cross 3 lanes of traffic and we will provide a recommendation for the best interchange location.

Thanks,

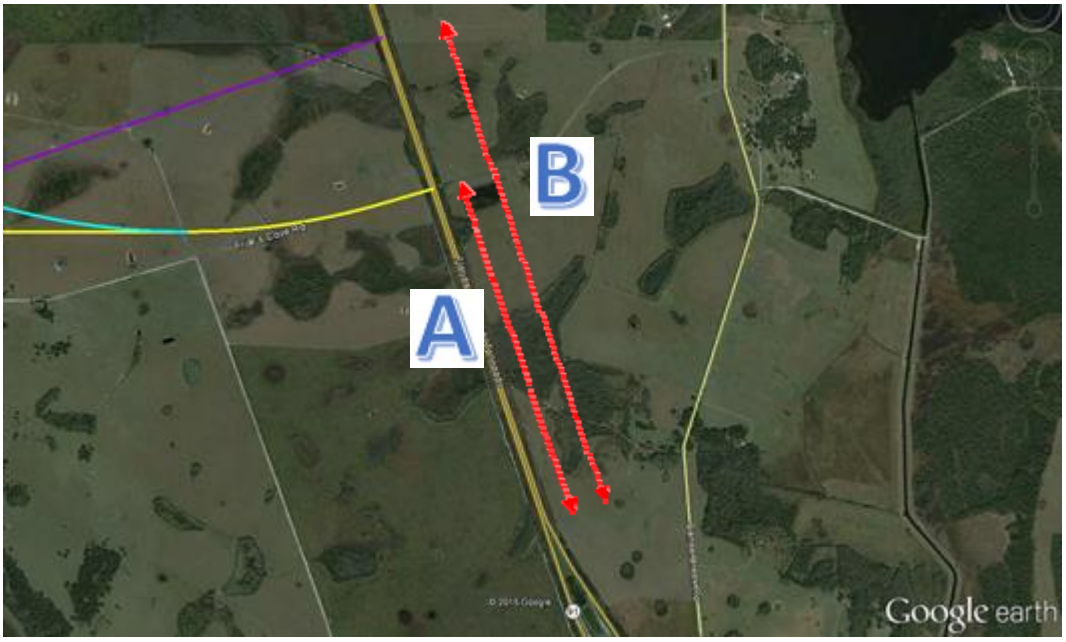
Henry Pinzon, P.E.
Environmental Management Office Engineer

Tel: 407-264-3802
Cell: 407-782-0207
Fax: 407-822-5821

Turnpike Headquarters
MP 263 Bldg. 5315
P.O. Box 613069
Ocoee, FL 34761

From: Geoff VanBueren [mailto:gvanbueren@inwoodinc.com]
Sent: Monday, January 19, 2015 9:06 AM
To: Pinzon, Henry; Hull, Alex; Sirmans, Amy
Cc: Emam, Emam B.
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Henry, we will not begin developing interchange alternatives until the next phase of the study. At this point, the distances shown in the graphic below are from the centerline of the Southport Connector Termini to the "merge/diverge" point just north of the Canoe Creek service center. The service center is 0.4 miles further south of this location.
Dist. A (R to CC service center) = 1.4 miles
Dist. B (N to CC service center) = 2.0 Miles



Geoff VanBueren P.E.
PROJECT ENGINEER

INWOOD CONSULTING ENGINEERS
3000 Dovera Dr., Suite 200, Oviedo, FL 32765
P: 407-971-8850 (Main)
P: 407-205-1480 (Direct)
inwoodinc.com

From: Pinzon, Henry [mailto:Henry.Pinzon@dot.state.fl.us]
Sent: Friday, January 16, 2015 11:38 AM
To: Geoff VanBueren; Alex Hull; Sirmans, Amy
Cc: Emam, Emam B.
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Are these distances from the ramp terminals? Please send me a sketch showing the location from where the distance are taken.

Thanks,

Henry Pinzon, P.E.
Environmental Management Office Engineer

Tel: 407-264-3802
Cell: 407-782-0207
Fax: 407-822-5821

Turnpike Headquarters
MP 263 Bldg. 5315
P.O. Box 613069
Ocoee, FL 34761

From: Geoff VanBueren [mailto:gvanbueren@inwoodinc.com]
Sent: Friday, January 16, 2015 11:20 AM
To: Hull, Alex; Sirmans, Amy; Pinzon, Henry
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Distances:

R to N: 0.6 miles

R to CC Service Plaza: 2.6 miles

N to CC Service Plaza: 2.0 miles

Geoff VanBueren P.E.
PROJECT ENGINEER

INWOOD CONSULTING ENGINEERS
3000 Dovera Dr., Suite 200, Oviedo, FL 32765
P: 407-971-8850 (Main)

P: 407-205-1480 (Direct)
inwoodinc.com

From: Alex Hull
Sent: Friday, January 16, 2015 10:24 AM
To: Geoff VanBueren
Subject: Fwd: Poinciana Parkway Southport Connector PD&E Study

Alex Hull
Inwood Consulting Engineers
Sent from my iPhone

Begin forwarded message:

> **From:** "Pinzon, Henry" <Henry.Pinzon@dot.state.fl.us>
> **Date:** January 16, 2015 at 9:34:31 AM EST
> **To:** "Hull, Alex" <ahull@inwoodinc.com>
> **Cc:** "Sirmans, Amy" <Amy.Sirmans@dot.state.fl.us>
> **Subject: Poinciana Parkway Southport Connector PD&E Study**
>
> Good morning Alex,
>
> As discussed at the meeting last night, please send me the distance between alternatives R&N and the Canoe Creek Service Plaza (If possible from potential ramp terminals).
>
> Thanks,
>
> Henry Pinzon, P.E.
> Environmental Management Office Engineer
>
> Tel: 407-264-3802
> Cell: 407-782-0207
> Fax: 407-822-5821
>
> Turnpike Headquarters
> MP 263 Bldg. 5315
> P.O. Box 613069
> Ocoee, FL 34761

Alex Hull

From: Pinzon, Henry <Henry.Pinzon@dot.state.fl.us>
Sent: Thursday, February 26, 2015 9:17 AM
To: Alex Hull; Sirmans, Amy
Cc: Geoff VanBueren; Emam, Emam B.; Jung, Rax; Tate, Clif
Subject: FW: Poinciana Parkway Southport Connector PD&E Study

Alex,

Below is Turnpike's evaluation of Corridor 1. Please let us know if you need additional information.

Thanks,

Henry Pinzon, P.E.
Environmental Management Engineer

Tel: 407-264-3802
Cell: 407-782-0207
Fax: 407-822-5821

Turnpike Headquarters
MP 263 Bldg. 5315
P.O. Box 613069
Ocoee, FL 34761

From: Emam, Emam B.
Sent: Thursday, February 26, 2015 8:55 AM
To: Pinzon, Henry
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Henry,

Please let me know if you have any questions on the response below that addresses Corridor 1 Alternative issues/concerns:

Rule Chapter 14-97 F.A.C., State Highway System (SHS) Access Management Classification System and Standards, provide the access control classification and access management standards to be used in the planning, design, and permitting of connections to control of vehicular ingress to, and egress from, the SHS.

Table 1
Access Management Standards for Limited Access Facilities

Access Class	Segment Location	Applicable Interchange Spacing Standard
1	Area Type 1 – CBD & CBD Fringe for Cities in Urbanized Areas	1 Mile

	Area Type 2 – Existing Urbanized Areas Other Than Area Type 1	2 Miles
	Area Type 3 – Transitioning Urbanized Areas and Urban Areas Other Than Area Type 1 OR 2	3 Miles
	Area Type 4 – Rural Areas	6 Miles

Corridor 1 interchange with the Turnpike is located about 1.1 mile to the south of the Kissimmee Park Road interchange bridge. The distance does not meet the applicable interchange spacing standard Area Types 2, 3 and 4 in the Table above.

With the consideration of the future Kissimmee Park Road ramps to/from the south (Diagonal Ramps), the distance between the southbound on-ramp from Kissimmee Park Road and Corridor 1 will be less than 1.0 mile which again does not meet the applicable interchange spacing standard Area Types 1. However, the area type existing classification is Type 4 and in the future it would be Type 3.

Though, a variation of the spacing may be requested. Operational and safety concerns due to the short weaving distance between the two interchange cannot be tolerated. Therefore, Turnpike would not support or approve the construction of such interchange with very substantial spacing variation.

Please let me know if you have any questions.

Thanks,
Emam

From: Pinzon, Henry
Sent: Wednesday, February 25, 2015 3:19 PM
To: Hull, Alex; Sirmans, Amy
Cc: Geoff VanBueren; Emam, Emam B.; Jung, Rax; Tate, Clif
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Thanks Alex, we will send you our comments for Corridor 1.

Henry Pinzon, P.E.
Environmental Management Engineer

Tel: 407-264-3802
Cell: 407-782-0207
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From: Alex Hull [mailto:ahull@inwoodinc.com]
Sent: Wednesday, February 25, 2015 2:46 PM
To: Pinzon, Henry; Sirmans, Amy

Cc: Geoff VanBueren; Emam, Emam B.; Jung, Rax; Tate, Clif
Subject: RE: Poinciana Parkway Southport Connector PD&E Study

Henry,

Attached are the meeting minutes from our February 5, 2015 meeting. I am also attaching a graphic that shows the location of a proposed Turnpike interchange for Corridor 1 just south of the Kissimmee Park Road interchange. I would like to get your thoughts on this interchange location as well. There is interest by an environmental stakeholder group in Corridor 1.

Alex B. Hull, PE
Principal

INWOOD CONSULTING ENGINEERS
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From: Pinzon, Henry [mailto:Henry.Pinzon@dot.state.fl.us]
Sent: Friday, January 23, 2015 1:45 PM
To: Alex Hull; Sirmans, Amy
Cc: Geoff VanBueren; Emam, Emam B.; Jung, Rax
Subject: FW: Poinciana Parkway Southport Connector PD&E Study

Alex/Amy,

Turnpike's recommendation is to use Distance B (N to CC service center = 2.0 Miles) since it will provide at least 1.5 mile weaving distance between the entrance and exit ramps (See analysis below).

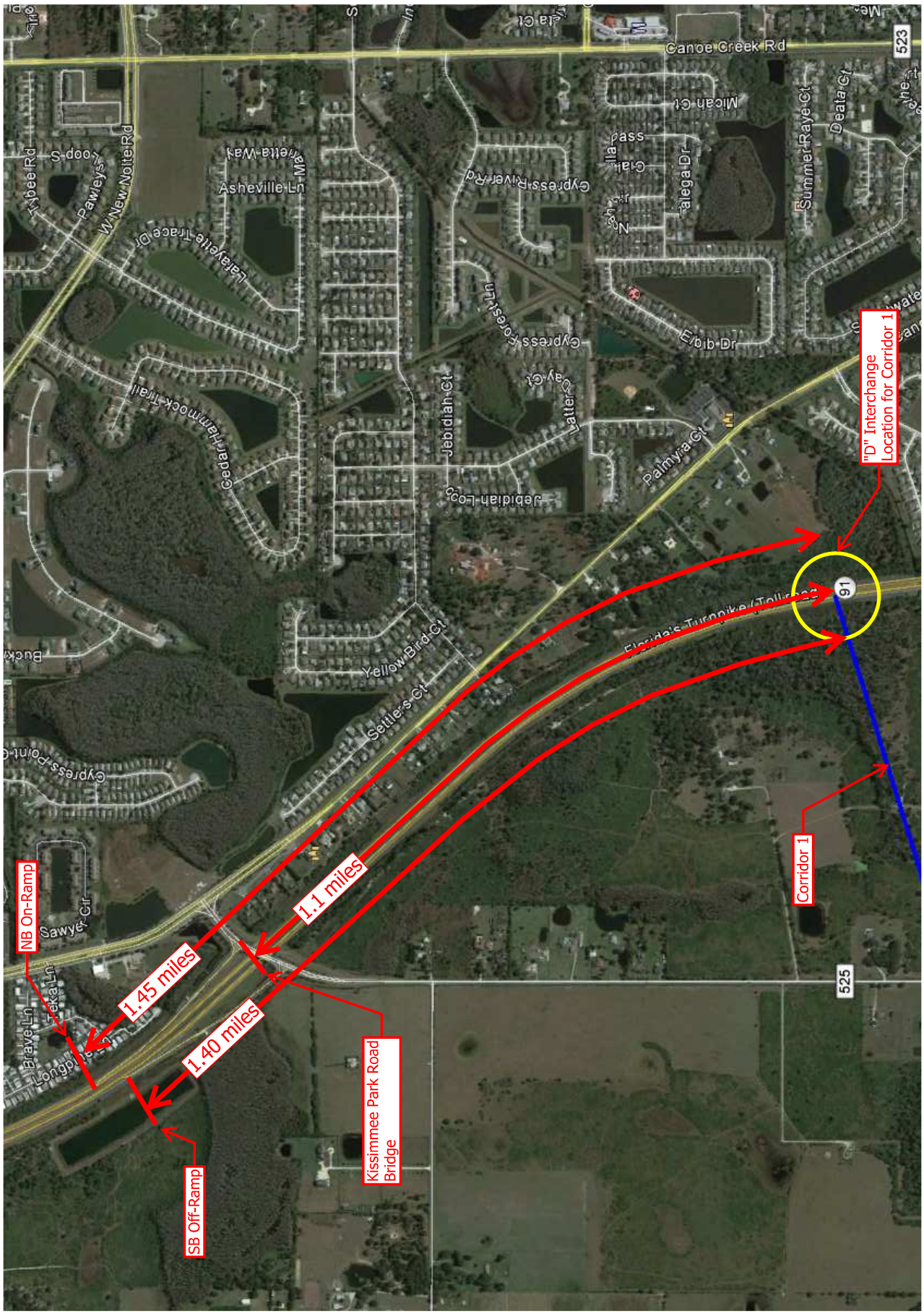
Please let us know if you have any questions.

Thanks,

Henry Pinzon, P.E.
Environmental Management Engineer

Tel: 407-264-3802
Cell: 407-782-0207
Fax: 407-822-5821

Turnpike Headquarters
MP 263 Bldg. 5315


"D" Interchange
Location for Corridor 1
Corridor 1
NB On-Ramp
SB Off-Ramp
1.45 miles
1.1 miles
1.40 miles
Kissimmee Park Road
Bridge
Canoe Creek Rd
523
525
91
Florida's Turnpike/Toll Road
Asheville Ln
Yellow Bird Ct
Settlers Ct
Jebidiah Ct
Palmyra Ct
Summer Rave Ct
Deata Ct
Micah Ct
Talega Dr
Elbib Dr
Cypress River Rd
Cypress Forest Ln
Gebarhammock Trail
Sawyer Cir
Brave Ln