

Willow Oak- Wheeler-Davis 230-kV Transmission Line Project

Request for Modification
to the Corridor Certification



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TECO
TAMPA ELECTRIC

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1.0 THE PROPOSED MODIFICATION

Tampa Electric Company (Tampa Electric) filed its Application for Corridor Certification for the Willow Oak-Wheeler-Davis 230-kilovolt (kV) transmission line Project under the state's Transmission Line Siting Act (TLSA) (Sections 403.52-403.5365, Florida Statutes [F.S.]) on October 12, 2007. The Siting Board issued its certification approval on August 7, 2008.

Since certification approval, there is now an opportunity to site an intermediate substation (Thonotosassa substation) between the planned Davis substation and the existing Wheeler substation. This opportunity allows for providing service to a major industrial facility, the Florida Gas Transmission Company (FGT) compressor station 27. As a result, the area of the new substation and the interconnection with the certified corridor are proposed for modification. Tampa Electric is not proposing moving the original corridor, nor proposing withdrawal of any portions of the corridor. The modification will allow for the interconnection of the new Thonotosassa substation to the certified corridor. Only one additional pole structure will be required to enter the substation and one additional pole structure will allow for exiting the substation and connecting the certified corridor.

The area proposed for modification is in Hillsborough County located just northeast of the intersection of the certified corridor and County Road (CR) 579 (also known as Mango Road). Figure 1-1 provides a location map showing the area proposed for modification.

1.1 PROPOSED AREA OF MODIFICATION

Figure 1-2 depicts the area proposed for modification on a recent aerial photograph at a scale of 1 inch equals 400 feet (ft) (1" = 400'). As can be seen from Figure 1-1, this area is rectangular in shape, located in the northeastern quadrant of the intersection of the cer-

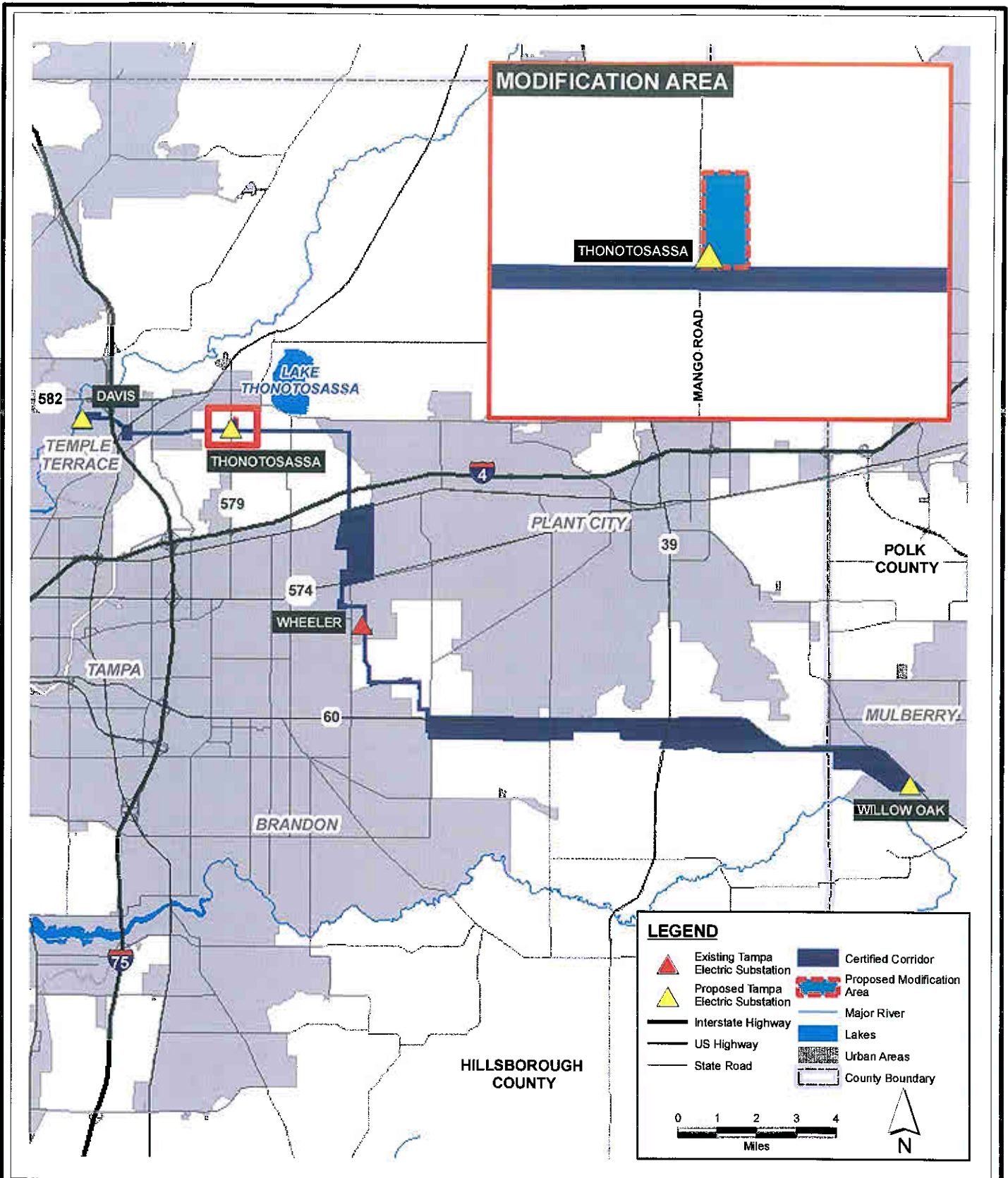


FIGURE 1-1
WILLOW OAK - WHEELER - DAVIS 230 kV TLSA
MODIFICATION AREA

Sources: FGDL, 2005; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.



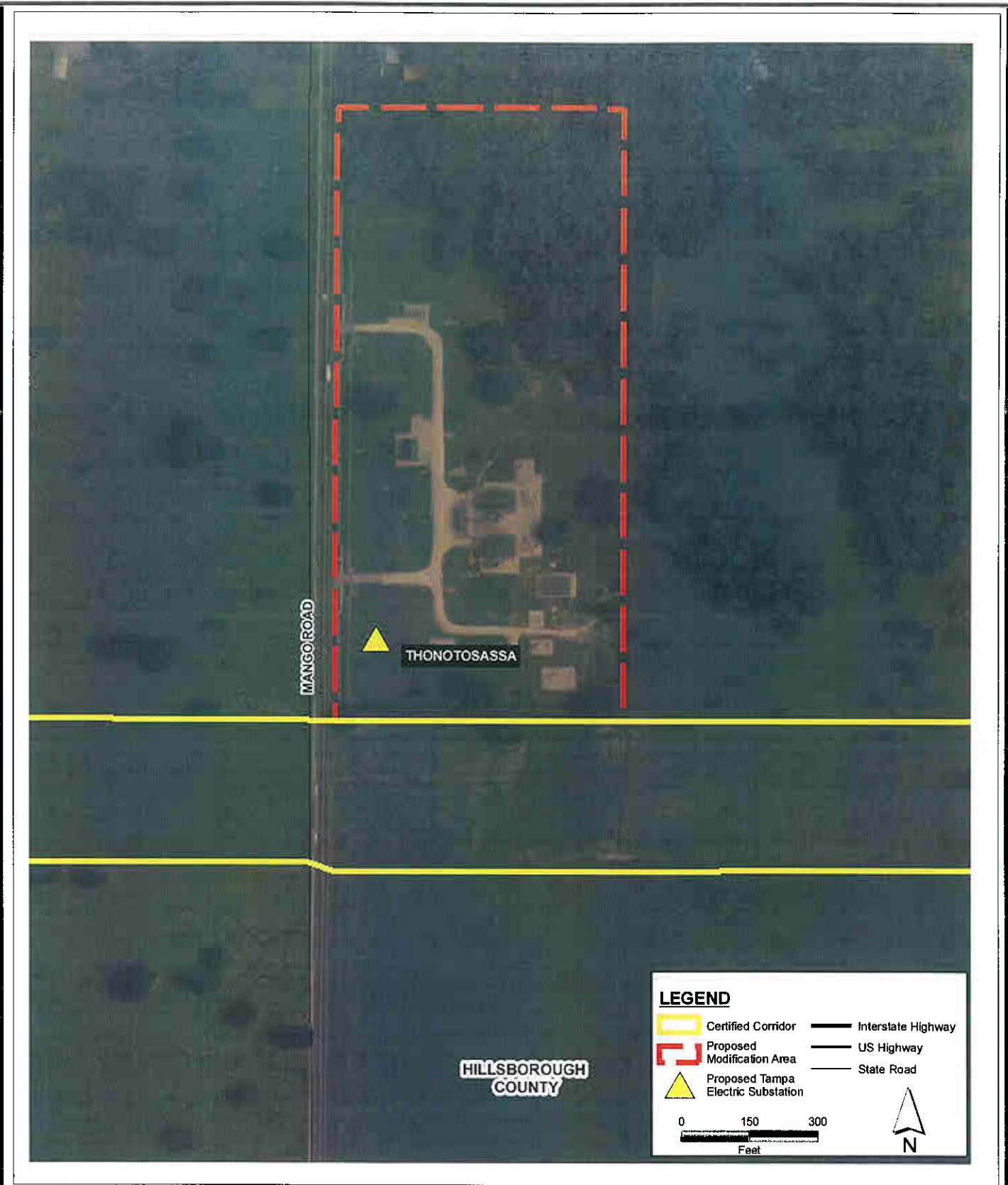


FIGURE 1-2
PROPOSED MODIFICATION AREA

Sources: NRCS, 2007; FGDL, 2005; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.



tified corridor and CR 579, approximately 2,400 ft south of Skewlee Road in unincorporated Hillsborough County.

The proposed area of modification begins immediately north of the certified corridor and extends northward approximately 1,320 ft along CR 579 and approximately 660 ft to the east, forming a rectangle encompassing approximately 20 acres.

The proposed area of modification is located at the intersection of the certified corridor and CR 579 in unincorporated Hillsborough County. FGT operates a natural gas compressor station (Station 27) on the property proposed for certification. The anticipated location of the substation is an approximately 250 ft by 150 ft area located in the southwestern portion of the larger property. There is no other development in the vicinity. The area to the north of the proposed modification is known as Thonotosassa. This area is unincorporated and is developing with primarily residential developments.

Currently, the anticipated location of the planned substation within the FGT property is undeveloped, grassed land. The future land use map designation is Agricultural Estate-1/2.5 and the zoning is Agricultural-Rural (AR). No significant ecological features occur in this area. The modification area is a FGT utility use.

On April 17, 2009, an ecologist surveyed the planned Thonotosassa substation site for the presence of wetlands and listed species. The planned substation site is located in the southwestern portion of the FGT property. The planned substation site is bordered by the FGT fence line on the west and south. A barb wire fence also occurs along the southern perimeter between the planned substation site and the Tampa Electric certified corridor. The certified corridor at the transmission line tie-in is improved pasture actively grazed by cattle. In the gap between the barb wire fence along the pasture edge and the chain link fence along the FGT site, a row of red cedars (*Juniperus virginiana*) has been planted as a visual screen. Other occasional trees in the immediate area include a few live oaks (*Quercus virginiana*) and slash pines (*Pinus elliottii*). Some shrubverbena (*Lantana camara*) are also present in the gap between the fences. Other than the few trees and one



shrub referenced previously, the planned substation site is open, maintained upland field dominated by bahia grass (*Paspalum notatum*). Weedy plants growing in the field include hastateleaf dock (*Rumex hastatulus*), cutleaf eveningprimrose (*Oenothera lacinia-ta*), rabbit tobacco (*Pseudognaphalium obtusifolium*), tropical Mexican clover (*Richardia braziliensis*), thistle (*Cirsium* sp.), beggarticks (*Bidens alba*), Virginia pepperweed (*Lepidium virginicum*), and Carolina desertchicory (*Pyrrhopappus carolinianus*). The planned substation site is sloped to the east and is well-drained. No wetlands or surface water features either occur onsite or in the vicinity of the site. No listed species of plants or animals were observed onsite. Due to the highly developed condition of the site and the traffic using CR 579, no listed animals or plants would be expected.





2.0 JUSTIFICATION FOR THE MODIFICATION

The proposed modification will allow connection of a significant industrial user that is also providing land for a new substation.



3.0 ANTICIPATED EFFECTS OF THE MODIFICATION

The proposed modification area will encompass property, although adjacent to the certified corridor, not previously affected by the certified corridor. The area is within the jurisdiction of Hillsborough County, as is the certified corridor in this vicinity.

The land use designation is Agricultural Estate-1/2.5 and the zoning is AR for this area. The expanded corridor area is currently a utility use, specifically the FGT compressor station 27. The proposed transmission line will be consistent with the designated land use/zoning of the area. The land use plans and maps, land development regulations, codes, or ordinances in effect for Hillsborough County are the same that applied to Tampa Electric's certified corridor. No wetlands or surface water features are associated with the proposed modification area. No listed species of plants or animals were observed and none are expected to utilize the area.

Based upon the same review criteria used to evaluate the certified corridor, there are no adverse effects anticipated as a result of the addition of the proposed modification area.





4.0 POTENTIAL TO AFFECT CONDITIONS OF CERTIFICATION

The COCs for this project are found in the Siting Board's final order dated August 7, 2008.

The construction and operation of this Project within the proposed modification area will not affect the applicable rules and regulations of any of the state or local agencies.

5.0 AFFECTED SECTIONS OF THE APPLICATION FOR CORRIDOR CERTIFICATION

The primary changes to Tampa Electric's Application that are affected by the modifications are the map figures depicting this locale. The following lists the text changes (pages) and figure numbers that are changed as a result of this modification request. For ease in reviewing these changes, all pages and figures modified are appended to this document in the order presented herein:

- Page 1-1
- Figure 1.1-1, Page 1-2
- Figure 1.2-2, Page 1-3
- Page 1-4
- Page 1-19
- Figure 2.1-1, Page 2-3
- Figure 2.1-2, Page 2-6
- Figure 2.1-3, Page 2-9
- Page 2-10
- Figure 2.2-1, Page 2-14
- Attachment 2-1, Map 1 of 8, Page 2-60.
- Attachment 2-1, Map 2 of 8, Page 2-61
- Attachment 2-2, Map 1 of 8, Page 2-68.
- Attachment 2-2, Map 2 of 8, Page 2-69.
- Attachment 2-3, Map 1 of 8, Page 2-76.
- Attachment 2-3, Map 2 of 8, Page 2-77.
- Attachment 2-4, Map 1 of 8, Page 2-84.
- Attachment 2-4, Map 2 of 8, Page 2-85.



6.0 LEGAL AUTHORITY

Legal authority for this proposed modification is provided for in:

- Section 402.5315, F.S.—Modification of Certification.
- Section 62-17.680, Florida Administrative Code (F.A.C.)—Modification of Certification.
- COC XV—Modification of Certification.





APPENDIX

PAGES/FIGURES OF THE WILLOW OAK-WHEELER-DAVIS APPLICATION CHANGED AS A RESULT OF THE MODIFICATION REQUEST

1.0 PROJECT OVERVIEW

1.1 PROJECT INTRODUCTION

1.1.1 OVERVIEW OF THE PROJECT

The Willow Oak-Wheeler-Davis transmission line project (Willow Oak-Davis Project or the Project) is proposed by Tampa Electric Company (Tampa Electric) for certification under the State of Florida Transmission Line Siting Act (TLSA), Sections 403.52 through 403.5365, Florida Statutes (F.S.). The line will connect a new planned substation (Willow Oak) west of Mulberry in Polk County to the planned Tampa Electric Davis substation located in Temple Terrace, Hillsborough County (see Figure 1.1-1). The line will also connect with the intermediate and existing Tampa Electric Wheeler substation located along Wheeler Road northeast of Brandon in Hillsborough County and a planned substation (Thonotosassa) located along County Road (CR) 579. This new 230-kilovolt (kV) line will be located in the proposed corridor, which is approximately 30 miles long (see Figure 1.1-2).

In this application, Tampa Electric is seeking certification of a corridor of variable width between the Willow Oak and Davis substations. The new transmission line will be located on a right-of-way within this corridor, once certified. The preferred corridor ranges in width from approximately 300 feet (ft) up to nearly 1 mile (5,100 ft). In some areas, the Project may be constructed along established road rights-of-way or within right-of-way already owned by Tampa Electric.

The width of the new right-of-way will typically range from 25 to 100 ft. As provided in Section 403.522(10), F.S., once Tampa Electric acquires the property interests required for the Willow Oak-Davis Project, the boundaries of the certified corridor will narrow to only that land within the right-of-way. At that point, the remainder of the corridor will have no further legal significance related to this certification.

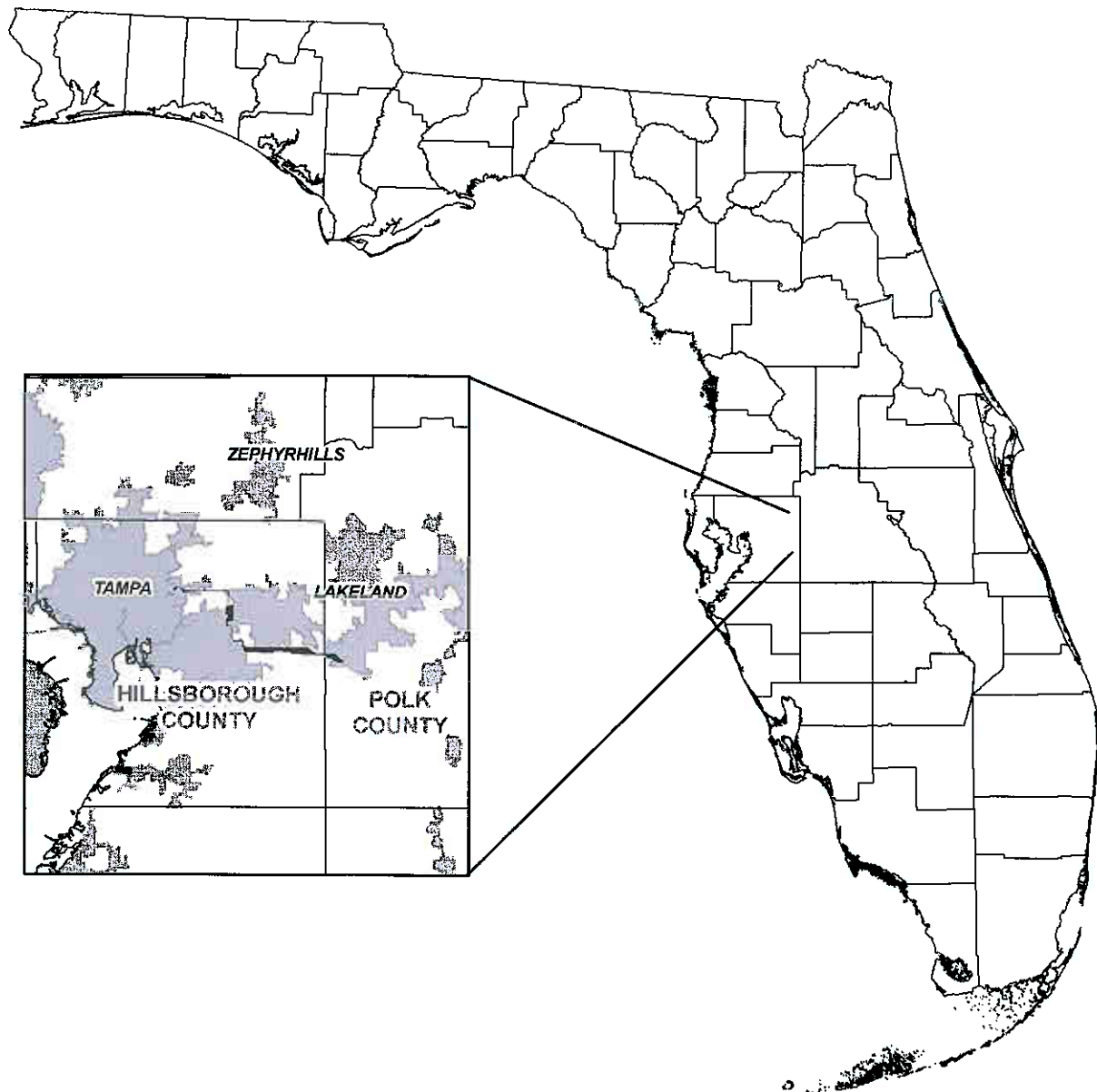


FIGURE 1.1-1. (REVISED)

LOCATION OF PROJECT AREA

Sources: Tampa Electric, 2007; ECT, 2009.



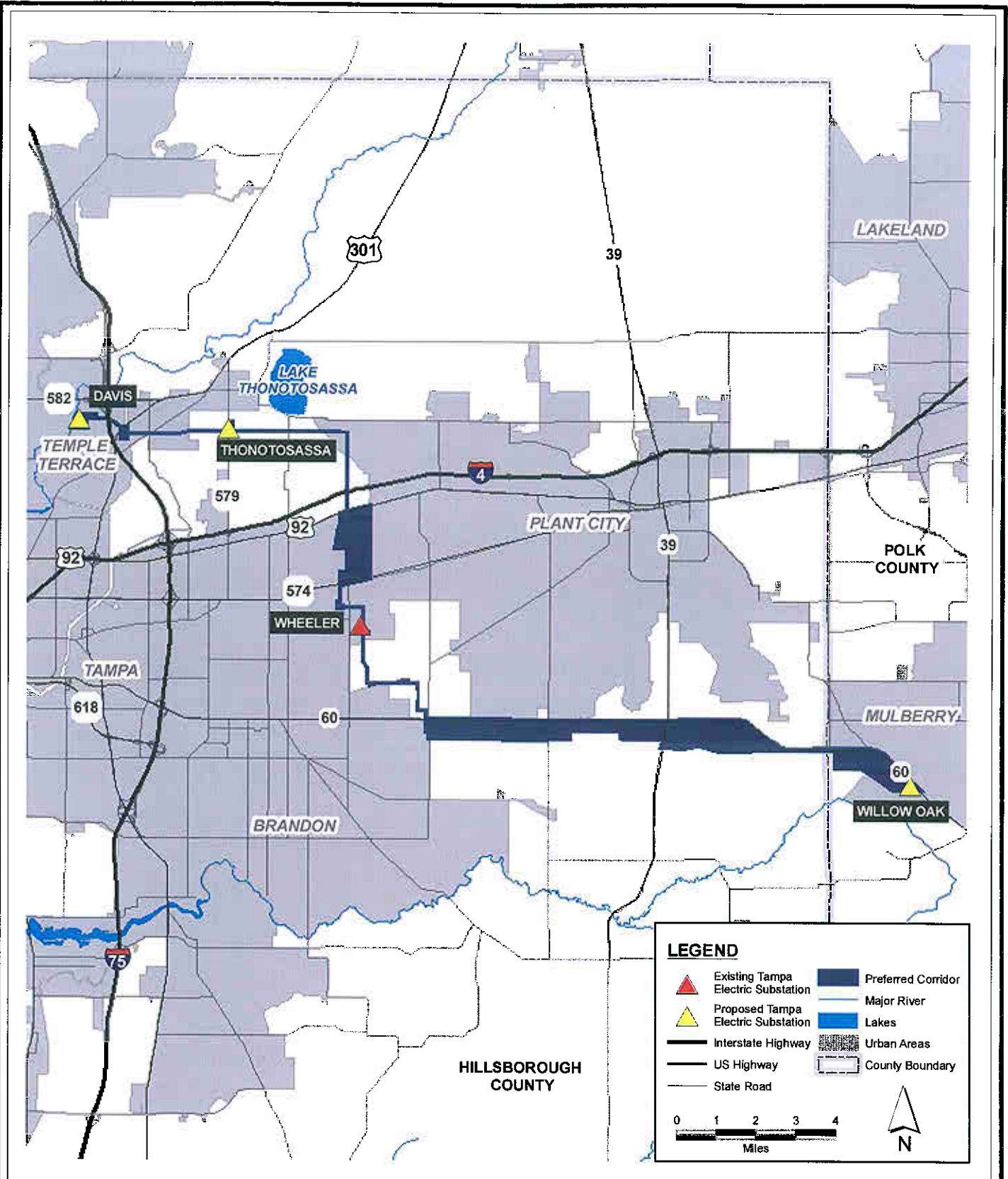


FIGURE 1.1-2. (REVISED)
WILLOW OAK - WHEELER - DAVIS 230 kV TLSA
- PREFERRED CORRIDOR ALIGNMENT

Sources:FGDL, 2005; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.



phases. They will be permitted separately from the TLSA process through local government and regulatory agency permitting.

The scheduled in-service date for the ~~Wheeler-Davis~~Thonotosassa-Davis portion of the Project is ~~summerfall~~ 2010. ~~The in-service date for the Wheeler-Thonotosassa section is scheduled for summer 2011.~~ The in-service date for the Willow Oak-Wheeler section is scheduled for spring 2012.

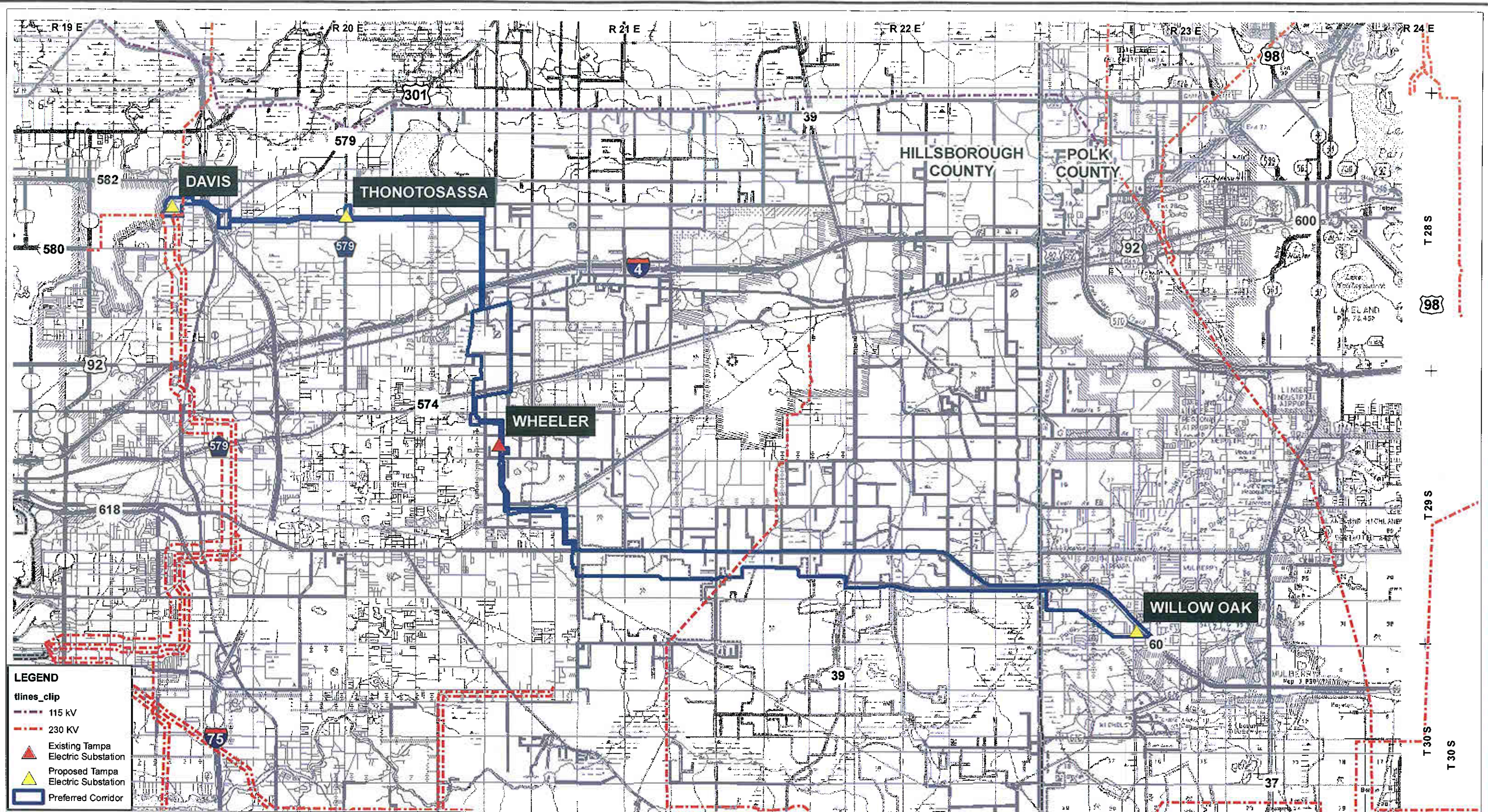
1.1.2 OVERVIEW OF THE NEED FOR THE WILLOW OAK-DAVIS PROJECT

The proposed 230-kV electrical transmission line connecting the planned Willow Oak substation in Polk County to the planned Davis substation in Hillsborough County is needed to meet the increasing power needs of the future and provide safe, reliable, and low-cost electrical service.

Transmission assessment studies conducted by Tampa Electric during 2006 have identified regional transmission system limitations in northeast Hillsborough County. The studies show that by 2012, the existing 230-kV transmission network will not have sufficient capability to provide reliable service to existing and proposed substations. Additionally, some of the projected load to be served by the proposed future distribution substations will be located further east and north of the existing 230-kV transmission network. As a result, it is necessary to increase the capability of the existing 230-kV network and provide electrical service to the new load areas and substations east and north of the existing transmission facilities.

The need for the Willow Oak-Davis 230-kV transmission line Project in Polk and Hillsborough Counties is based on the following factors:

- The need to provide additional transmission reinforcement to the existing 230-kV transmission network north of State Road (SR) 60, west of Willow Oak substation, and east of the existing River substation in a reliable manner consistent with the North American Electric Reliability Council (NERC)



1.4 PROPOSED INTERMEDIATE SUBSTATIONS

The Willow Oak-Davis Project will connect with one existing intermediate Tampa Electric substation (Wheeler) and one planned substation (Thonotosassa). Wheeler is an existing 69-kV substation and is located in Hillsborough County (see Figure 1.2-1). The planned Thonotosassa substation will be located east of CR 579 directly north of the certified corridor (see Figure 1.2-1).

1.5 COST PROJECTIONS

The exact location of the transmission line and the number and types of structures necessary to complete the transmission line project will be determined following corridor certification. The approximate costs are projections based on cost studies of similar lines. The actual cost of the line may vary from these generalized average costs depending on the ultimate locations of structures, cost of right-of-way, and other site-specific conditions. Changes in line length due to conditions imposed on line routing through the certification process may also result in cost variation.

Estimated per-mile cost for transmission line construction, including right-of-way acquisition, right-of-way clearing, access road construction, mitigation, and line construction, is approximately \$2 million per mile, or a total construction cost of approximately \$58.4 million. The Wheeler, Willow Oak, Thonotosassa, and Davis substation costs are estimated to be \$12.815.3 million. The estimated total project costs (2007 dollars) are estimated to be approximately \$71.273.7 million.

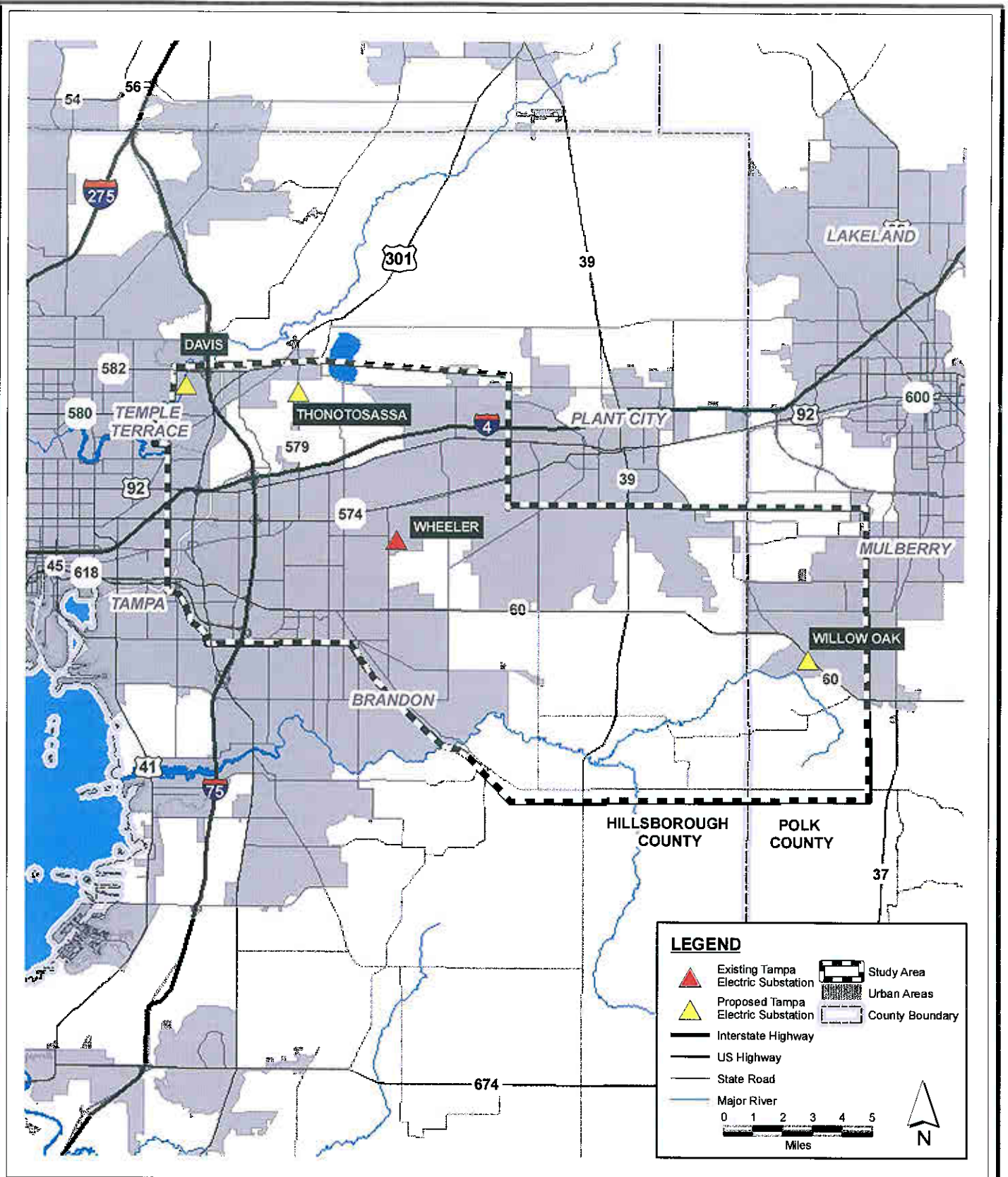


FIGURE 2.1-1. (REVISED)
WILLOW OAK - WHEELER - DAVIS 230 kV TLSA
- STUDY AREA

Sources: FGDL, 2005; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.



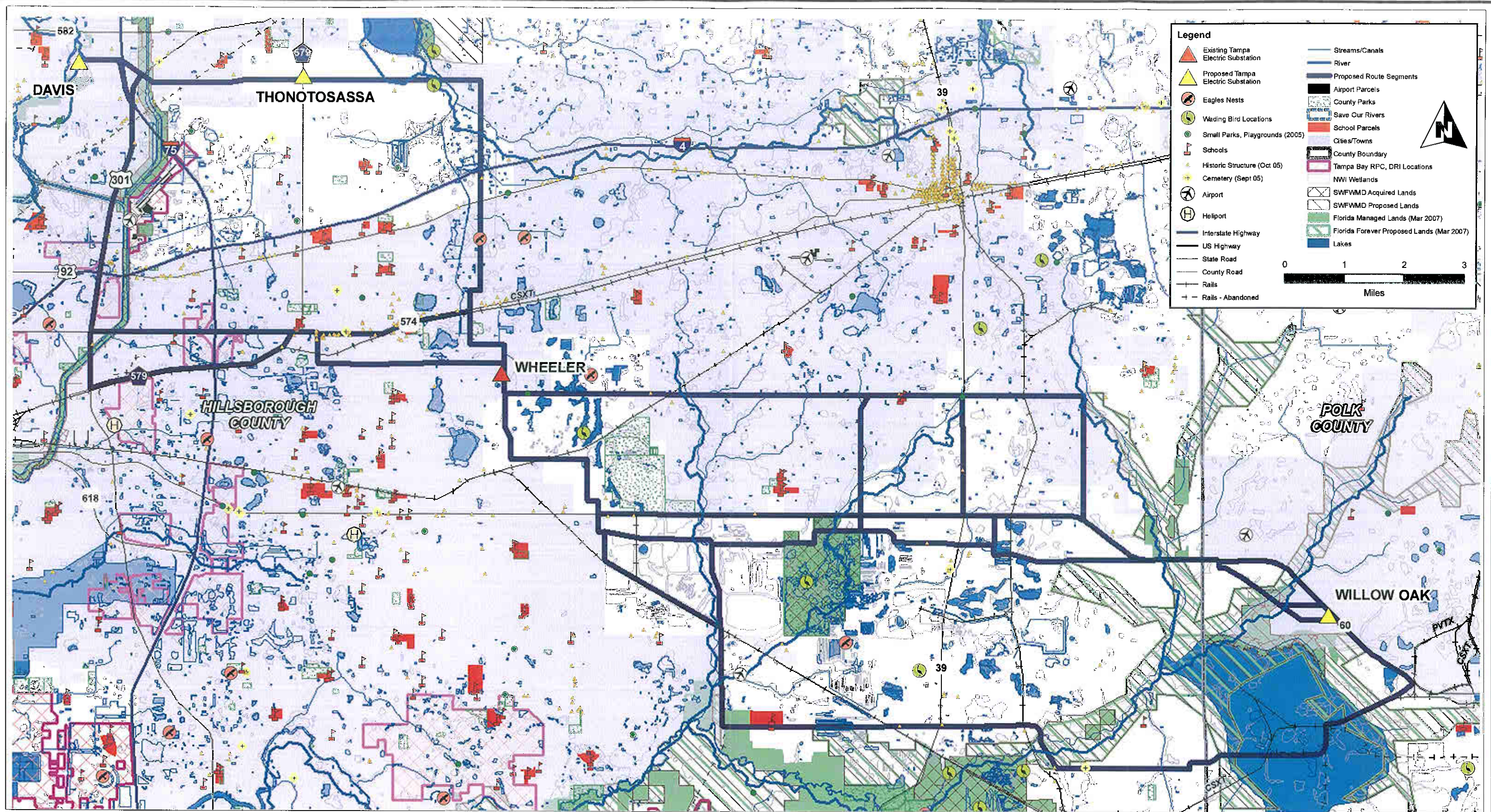


FIGURE 2.1-2. (REVISED)

REGIONAL SCREENING AND ALTERNATIVE ROUTES

Sources: FGDL, 2005/2007; Hillsborough County, 2007; Polk County 2007; FWC, 2007; Tampa Electric, 2007; ECT, 2009.



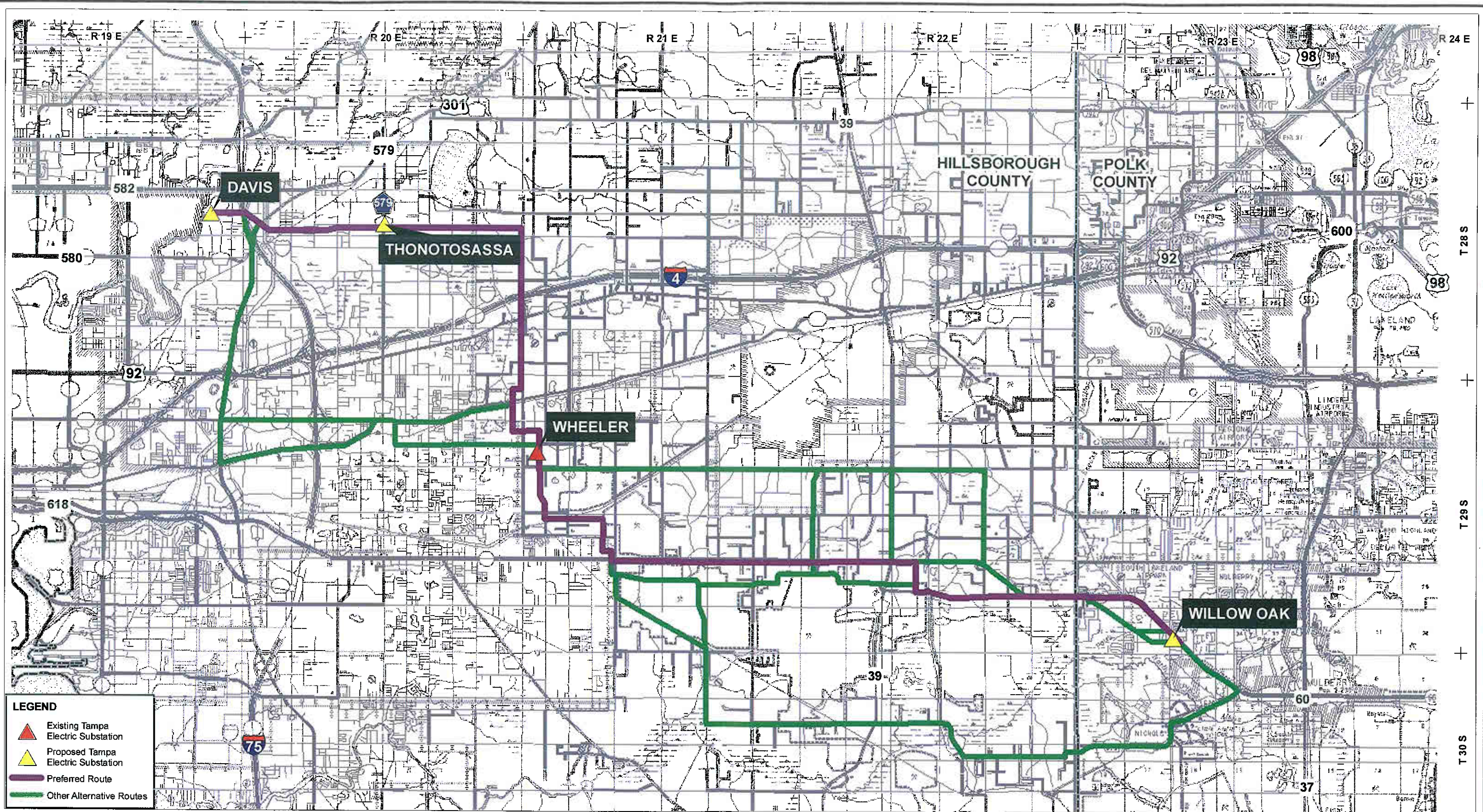
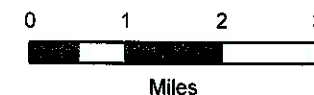


FIGURE 2.1-3. (REVISED)

PREFERRED ROUTE AND ALTERNATIVE ROUTES

Sources: Hillsborough County, 2006; Polk County, 2006; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.



The preferred corridor exits the planned Davis substation site in Temple Terrace, Hillsborough County. Tampa Electric owns a large parcel of property surrounding the substation, and all of it is included in the preferred corridor. This will allow maximum flexibility in entering or leaving the substation. The existing Tampa Electric River substation also occurs within this property.

The corridor then exits due east and is located entirely within an existing Tampa Electric right-of-way, crossing Interstate 75 (I-75) and up to the Hillsborough Bypass Canal. Here the property surrounding the canal is owned by SWFWMD, and the corridor is widened to include the SWFWMD property. This will allow Tampa Electric flexibility in identifying and acquiring a right-of-way to best minimize potential impacts to SWFWMD's plans and existing use of the property.

Upon leaving SWFWMD property, the corridor is limited to an approximately 300-ft-wide right-of-way owned by Tampa Electric. This right-of-way proceeds due east for approximately 5.4 miles. At CR 579, the corridor incorporates an area approximately 20 acres in size to the north that will be the site of the planned Thonotosassa substation. At a point just west of McIntosh Road, the corridor turns due south, again within Tampa Electric's property, to U.S. Highway 92 (U.S. 92).

At U.S. 92 (Hillsborough Avenue) and continuing south to CR 574 (Martin Luther King, Jr., Boulevard), the corridor is of variable width from approximately 3,500 to 5,100 ft. This is due to the presence of an active eagle's nest located near the center of the corridor and within Tampa Electric's right-of-way through this area. (See Section 2.3.3 for more discussion on the nest.) The corridor was widened to avoid potential impacts to the nest.

South of CR 574, the corridor is again restricted to Tampa Electric-owned right-of-way, which runs south and east to SR 60 (Brandon Boulevard). Included in this stretch is the existing Wheeler substation, which is located along Wheeler Road.

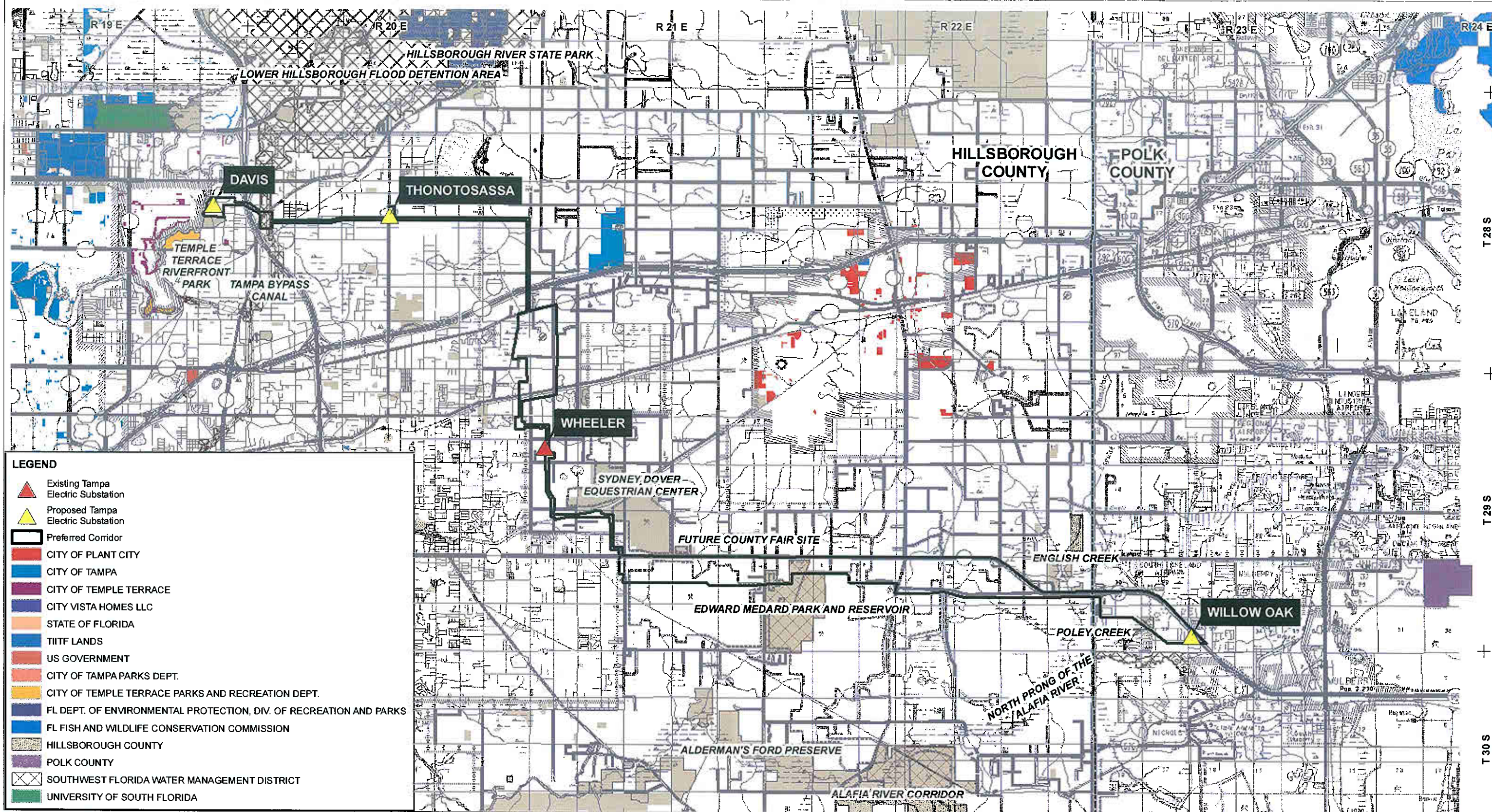
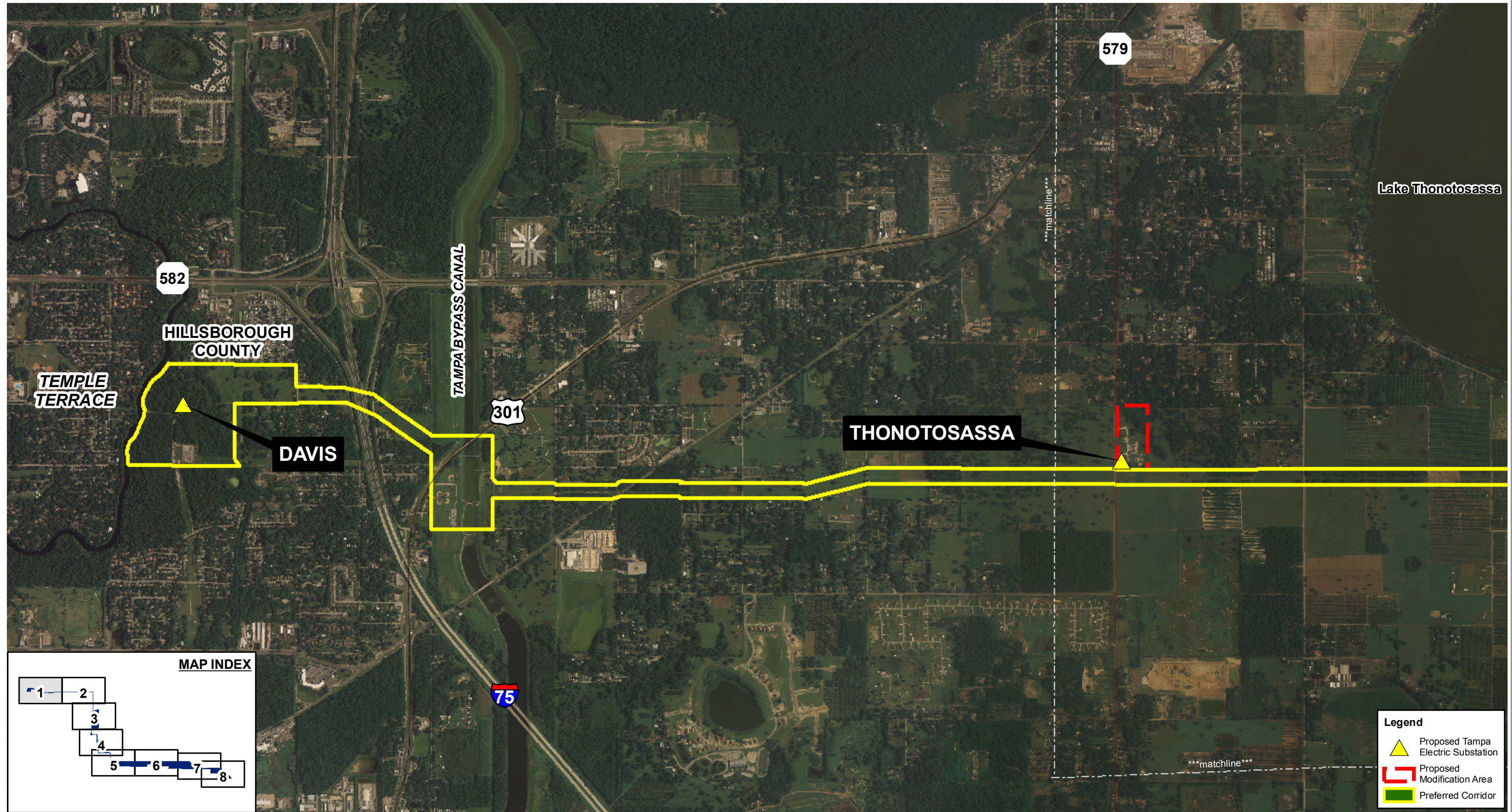


FIGURE 2.2-1 (REVISED)

GOVERNMENTAL JURISDICTIONS

Sources: Hillsborough County, 2006; Polk County, 2006; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.

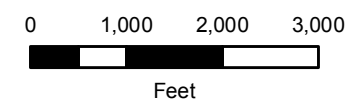


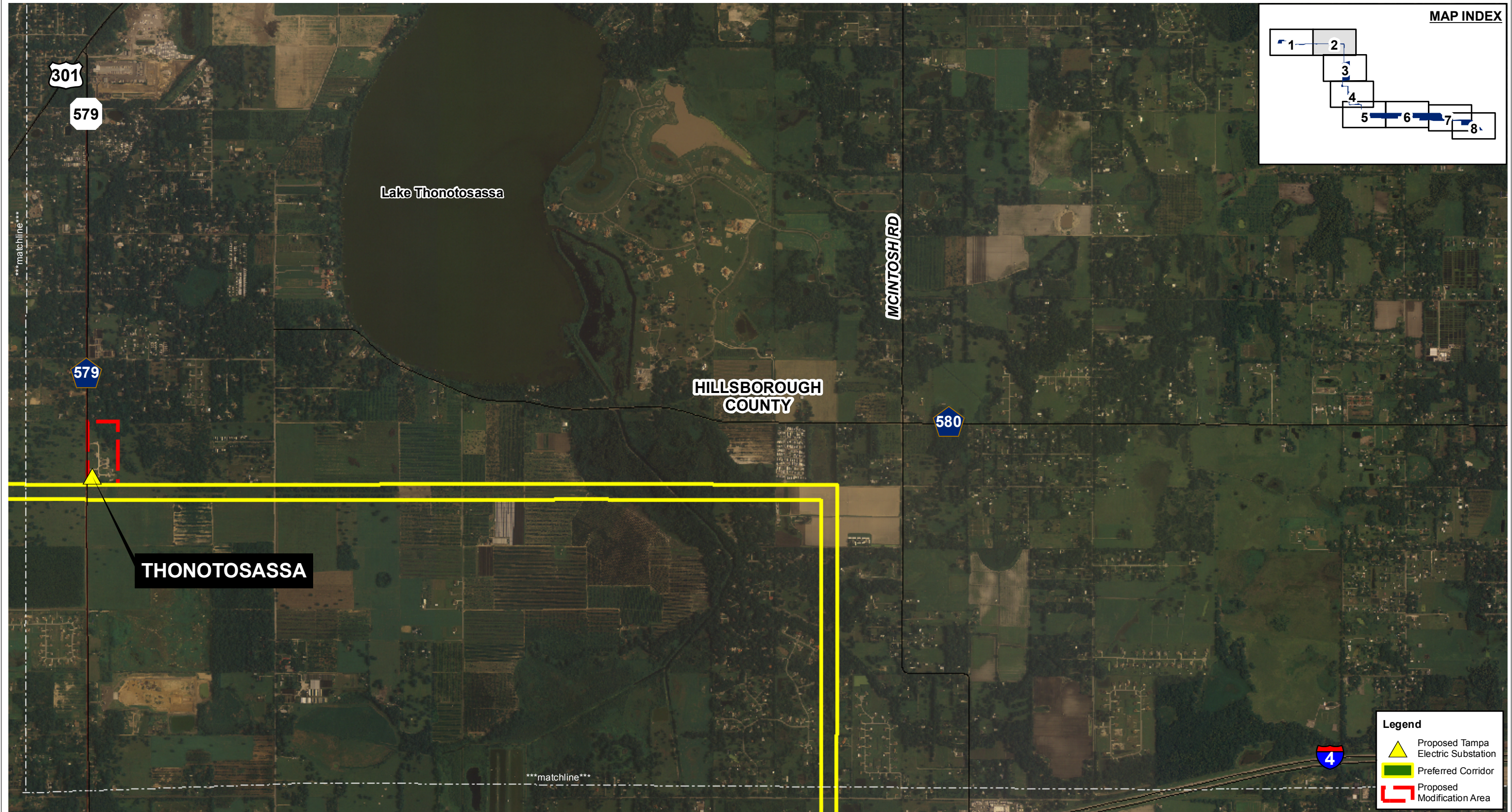


ATTACHMENT 2-1. (REVISED)

AERIAL PHOTOGRAPH: MAP 1 OF 8

Sources: NRCS, 2007; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.

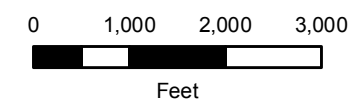


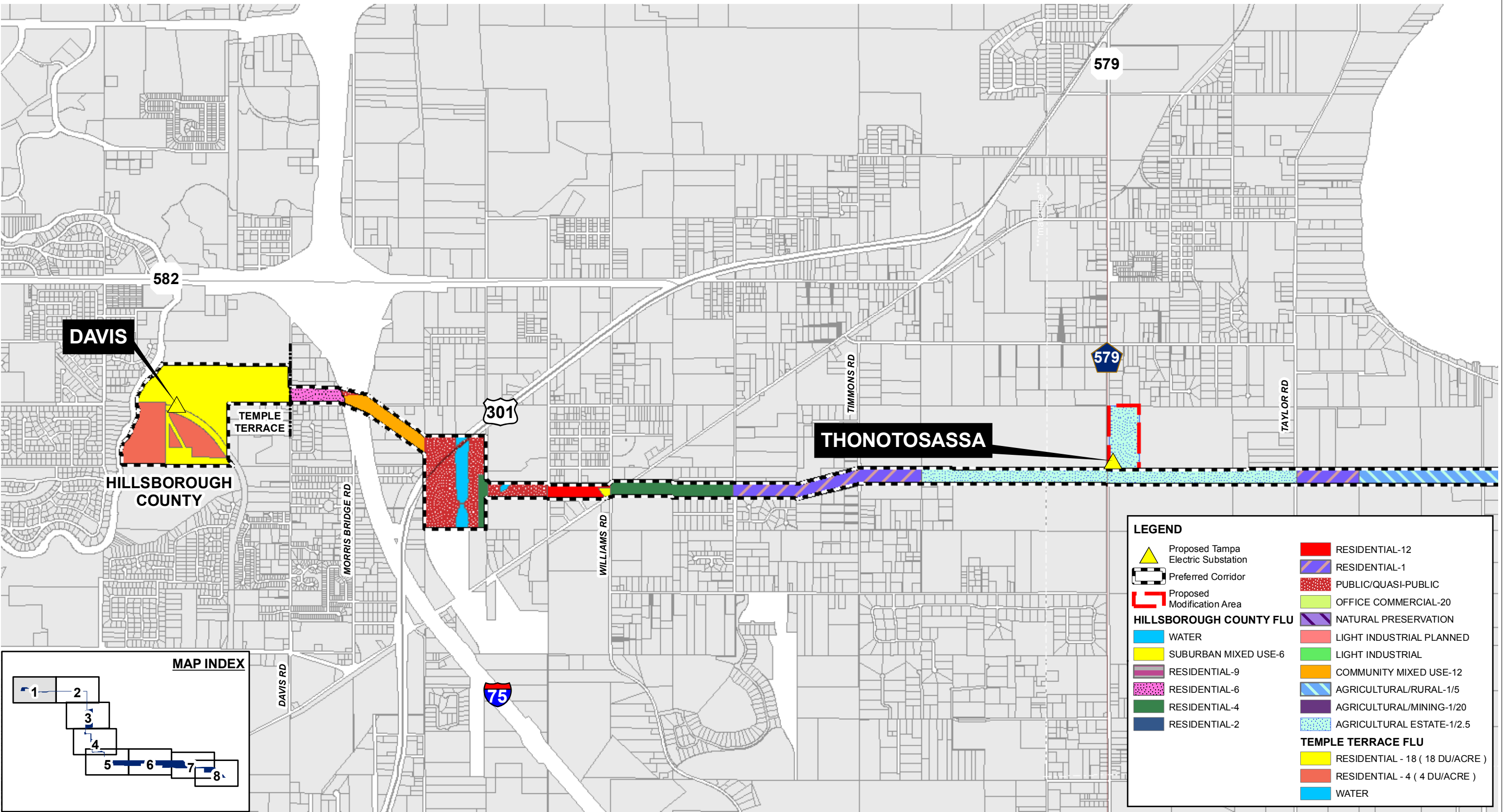


ATTACHMENT 2-1. (REVISED)

AERIAL PHOTOGRAPH: MAP 2 OF 8

Sources: SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.

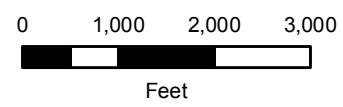


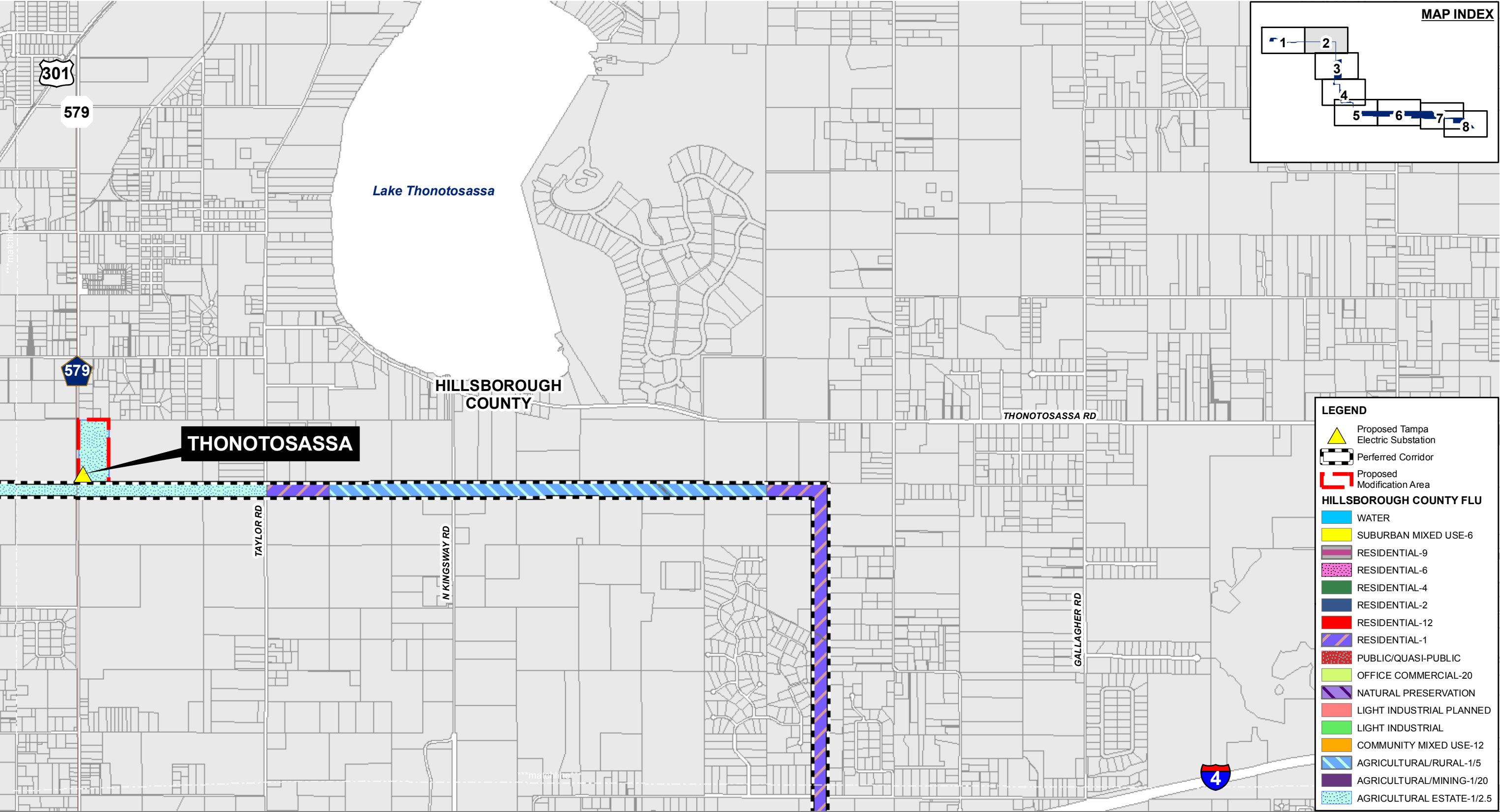


ATTACHMENT 2-2. (REVISED)

FUTURE LAND USE: MAP 1 OF 8

Sources: Hillsborough County, 2005/2006; Tampa Electric, 2007; ECT, 2009.

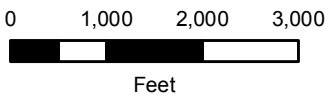


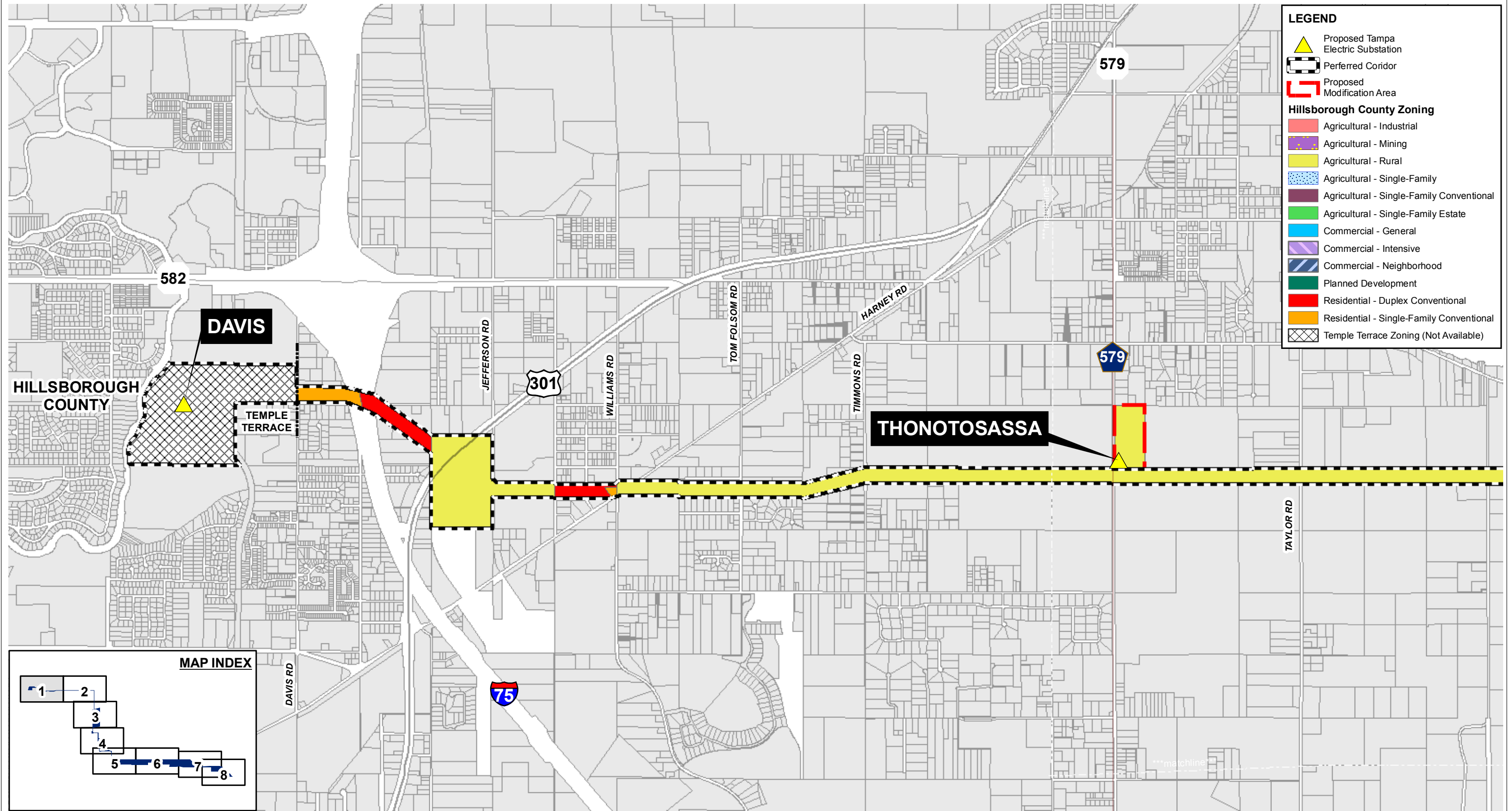


ATTACHMENT 2-2. (REVISED)

FUTURE LAND USE: MAP 2 OF 8

Sources: Hillsborough County, 2005/2006; SWFWMD, 2006; Tampa Electric, 2007; ECT, 2009.

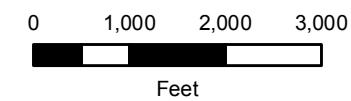


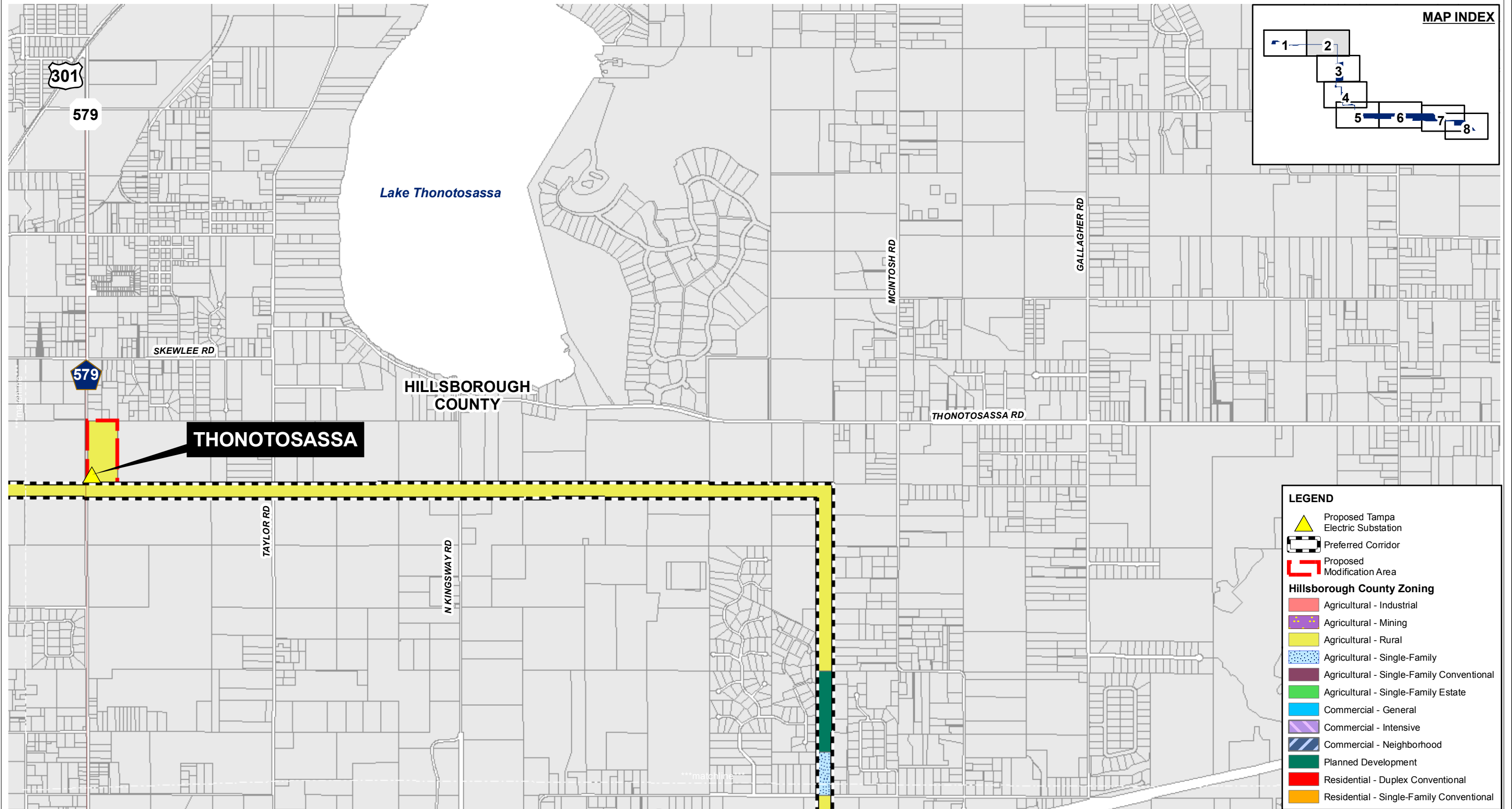


ATTACHMENT 2-3. (REVISED)

ZONING: MAP 1 OF 8

Sources: Hillsborough County, 2005/2006; Tampa Electric, 2007; ECT, 2009.

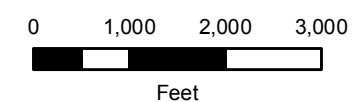


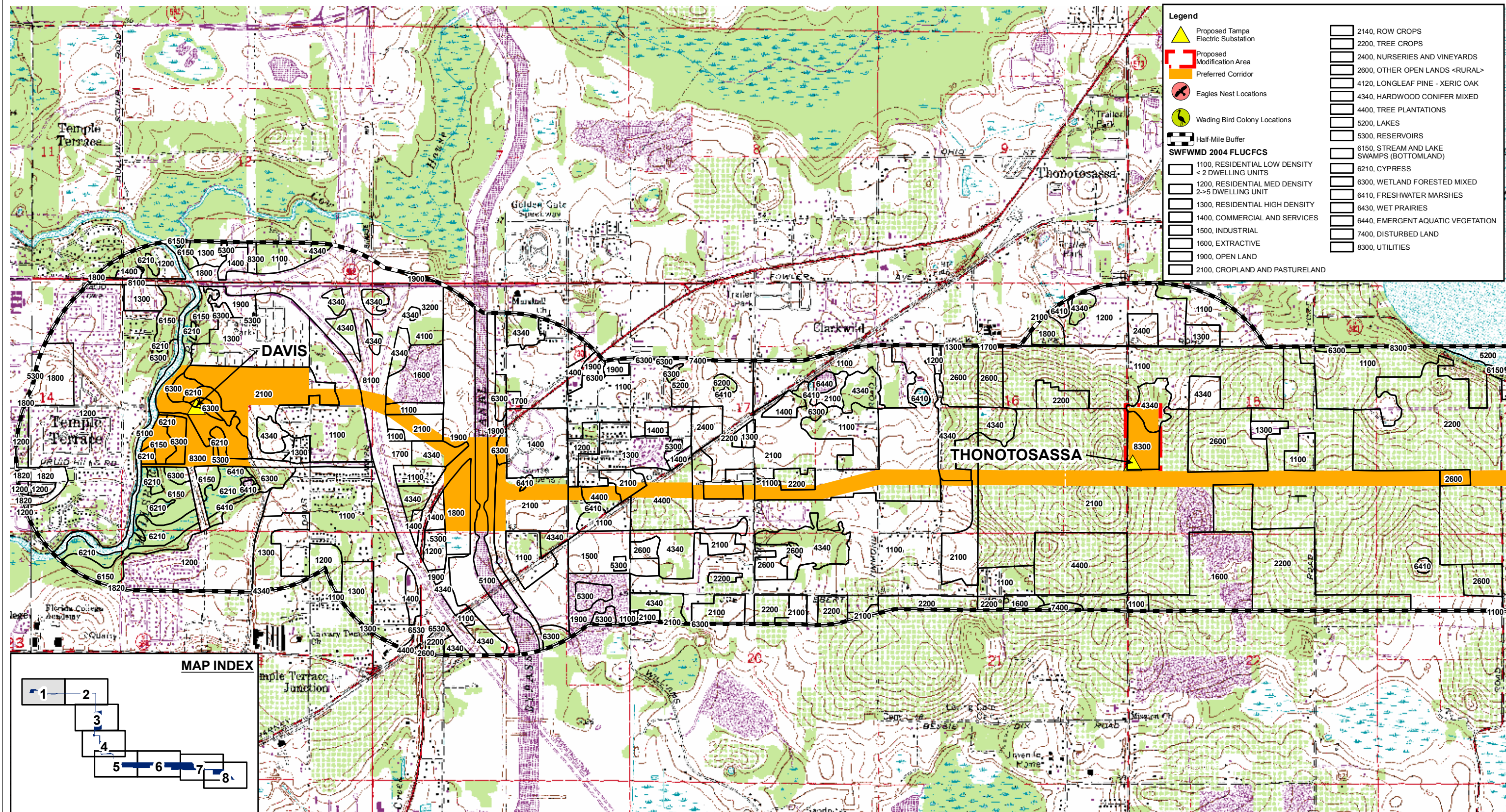


ATTACHMENT 2-3. (REVISED)

ZONING: MAP 2 OF 8

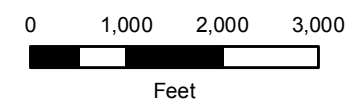
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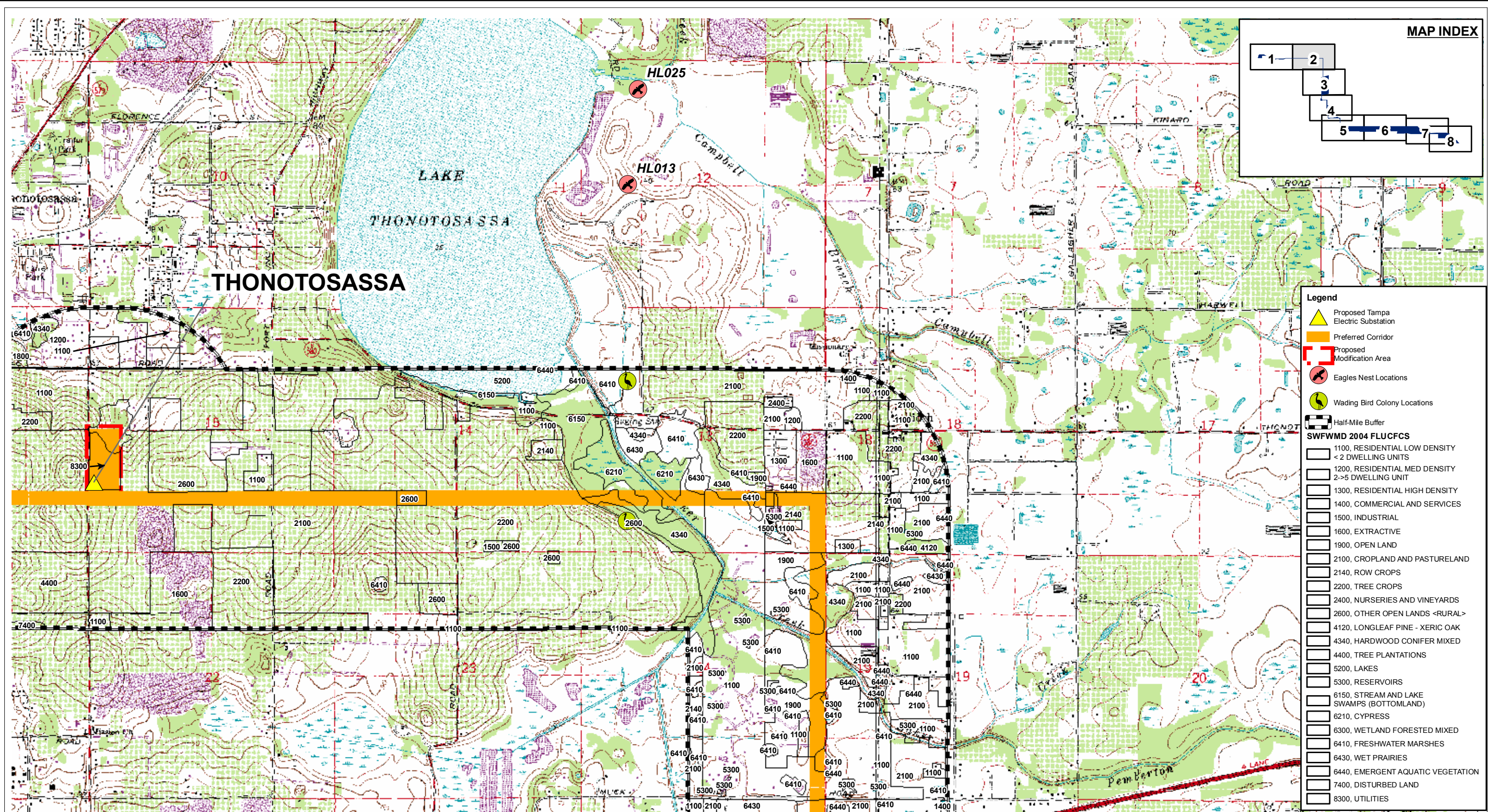


ATTACHMENT 2-4. (REVISED)

LAND USE/VEGETATION: MAP 1 OF 8

Sources: SWFWMD, 2004/2006; Tampa Electric, 2007; ECT, 2009.





ATTACHMENT 2-4. (REVISED)

LAND USE/VEGETATION: MAP 2 OF 8

Sources: SWFWMD, 2004/2006; Tampa Electric, 2007; ECT, 2009.

