FDOT

SR 400 (I-4) Project Development and Environment (PD&E) Study
FM No.: 432100-1-22-01

Addendum: Cultural Resource Assessment Survey of Proposed Improvements to

Segment 3 - Lake Emma Road Access Connection within the I-4 & Lake Mary Boulevard Interchange

Seminole County (77160), Florida

May 2017

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1.0 Introduction

This technical memorandum details the results of a Cultural Resource Assessment Survey (CRAS) in support of proposed improvements to the Interstate 4 (I-4) interchange at Lake Emma Road in Seminole County, Florida (**Figure 1**). The I-4 Beyond the Ultimate Project is divided into five segments; this technical memorandum is an addendum to the 2015 I-4 Segment 3 CRAS entitled *Technical Memorandum: Cultural Resources Assessment Survey of Proposed Improvements to Interstate 4 from One Mile East of State Road 434 to East of US 17-92 (Segment 3) in Seminole County, Florida* (Florida Master Site File [FMSF] Survey No. 22976). This technical memorandum also serves as an addendum to the 1999 report by Archaeological Consultants, Inc. (ACI) and Janus Research titled *Cultural Resource Assessment Survey, Interstate 4 Section 2 Project Development and Environment Study from Bee Line Expressway (S.R. 528) to S.R. 472 Interchange, Orange, Seminole, and Volusia Counties, Florida* (FMSF Survey No. 5707) (ACI and Janus Research 1999). The regional prehistory and history, historic map review, research design, and survey methodology of the current project area are consistent with those described in the previous reports and are not repeated here.

The proposed improvements include the addition of exit ramp connection from I-4 Eastbound to Lake Emma Road and entry ramp connection to I-4 Eastbound and Westbound from Lake Emma Road. The project includes improvements to Lake Emma Road at the proposed intersection with those entrance and exit ramps, as well as improvements to Lake Emma Road north of the Lake Mary Road intersection. All other portions of this interchange improvements project were surveyed under the previous Segment 3 CRAS (FMSF No. 22976).

The purpose of this survey is to update the previous I-4 corridor studies, which involves locating, identifying, and bounding archaeological resources within proposed project boundaries and updating the inventory of historic structures and potential districts within the project Area of Potential Effect (APE). Previously undocumented resources identified in the APE were assessed for their potential for listing in the National Register of Historic Places (NRHP).

The APE is defined as the area within which the roadway improvements and subsequent maintenance may have physical, visual, audible, or atmospheric effects on historic properties. The APE, as defined for this project, includes the existing and proposed right-of-way (ROW) and was extended to the back or side property lines of parcels adjacent to the corridor, limited to a distance of no more than 100 meters (330 feet) from the proposed ROW (**Figure 2**). Archaeological survey was conducted within the existing and proposed ROW, and the architectural study included the entire APE. For the purpose of this addendum report, the APE is referred to as the I-4 Segment 3 at Lake Emma Road APE.

This investigation was conducted to comply with Section 106 of the National Historic Preservation Act (as amended) and its implementing regulation 36 CFR Part 800 (Protection of Historic Properties). All work was performed in accordance with Part 2, Chapter 12, of the Florida Department of Transportation (FDOT) PD&E Manual (revised September 2016) and is consistent with the Florida Division of Historical Resources (FDHR) recommendations for such projects as stipulated in the FDHR's *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. This study also complies with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code.

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

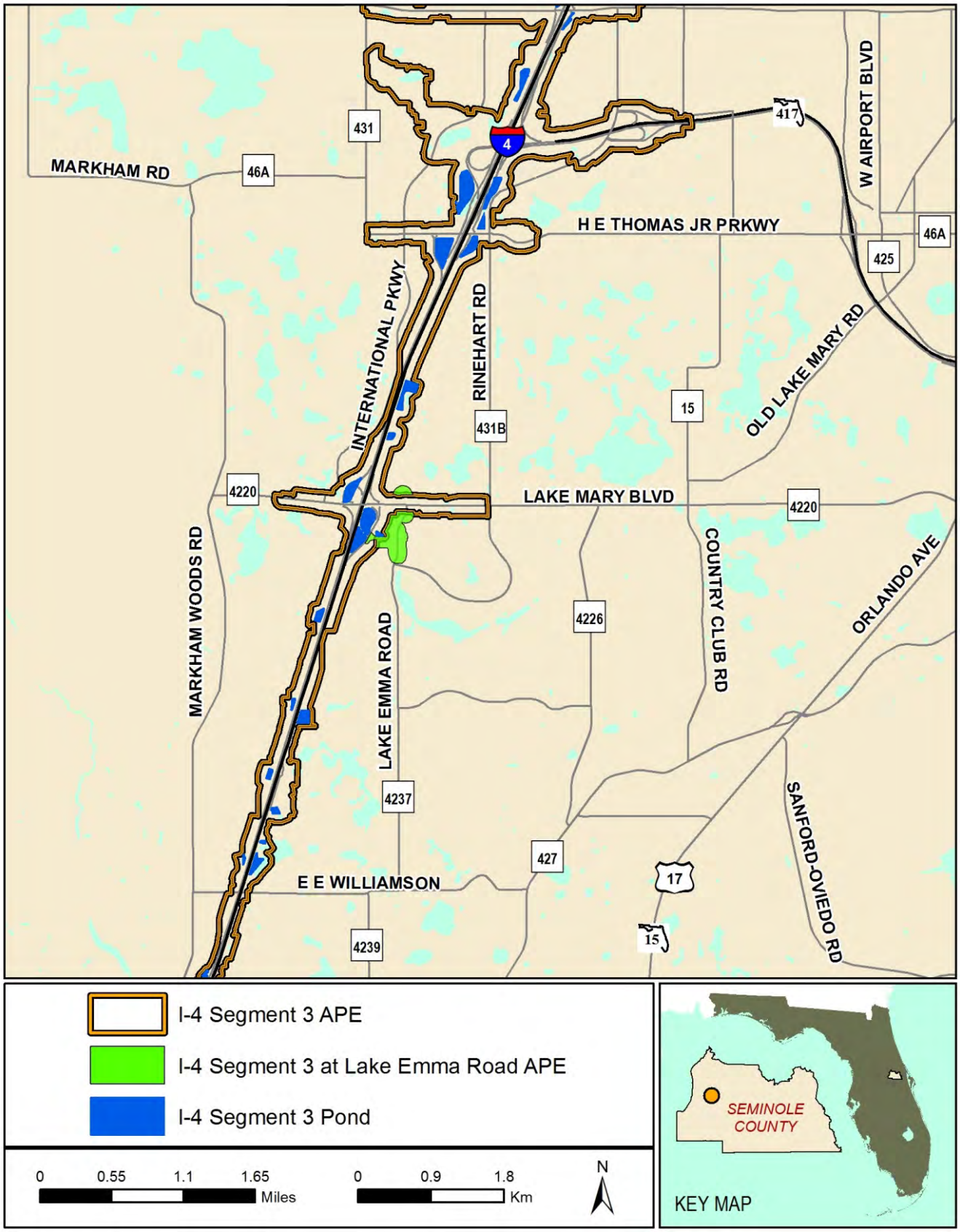

Figure 1 - Project location in Seminole County, Florida.

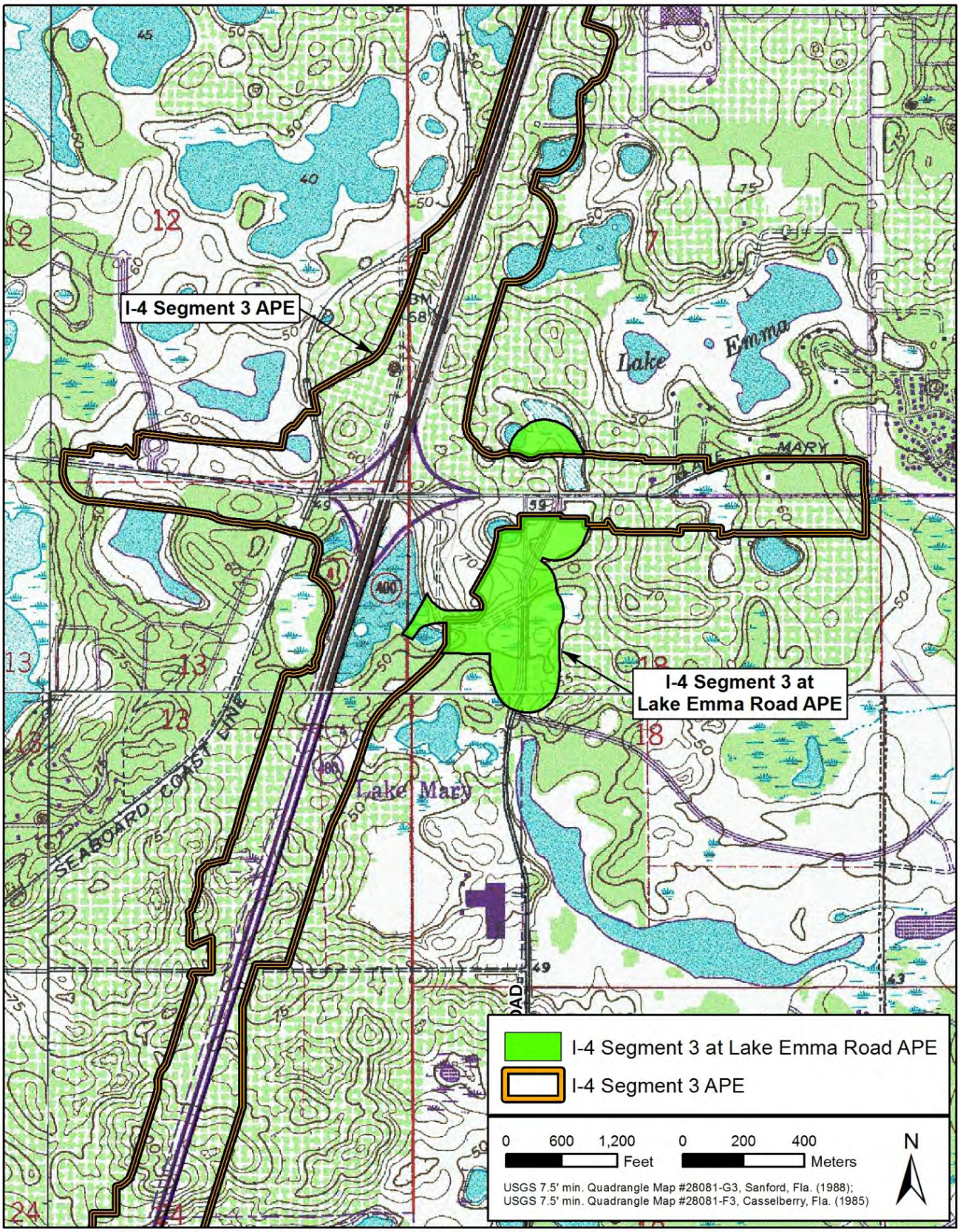

Figure 2 - I-4 Segment 3 at Lake Emma Road APE.

Melissa M. Dye, MA, RPA, served as the Principal Investigator for this project. The report was written by Ms. Dye. The archaeological fieldwork was conducted by Blue Nelson, MA, RPA, and Jaime Rogers, BS. Field and report graphics were prepared by Angela Matusik, MA. Elizabeth Chambless, MS, RPA, conducted the quality-control review, and Katy Harris, MS, and Rasha Slepow, BS, edited and produced the document.

2.0 Location and Modern Conditions

The I-4 Segment 3 at Lake Emma Road APE is within Sections 7 and 18 of Township 20 South, Range 30 East, as shown on the 1985 *Casselberry* and 1988 *Sanford* US Geological Survey (USGS) topographic quadrangles (see **Figure 2**). The APE is within the Central Lakes physiographic district (Brooks 1981). The Central Lakes district is characterized as an area of sand hills with many solution depressions and lakes. Vegetation changes with elevation: marsh and wet prairies occur near the lakes, while stands of longleaf pine and turkey oak are associated with the ridges and hills more than 100 feet above mean sea level (amsl) (Brooks 1981).

Modern land use within the APE consists of roadway development associated with I-4 at the west side of the APE and Lake Emma Road at the east side of the APE. The central APE is a tract of largely undeveloped land with an existing drainage pond and associated berm along the northern edge of the current APE. **Figure 3** provides representative views of modern conditions within the APE. **Figure 4** provides the drainage characteristics of soils within the archaeological APE. Soils are either excessively drained or poorly drained soils.

Figure 3 - Representative views of modern land use within the I-4 Segment 3 at Lake Emma Road APE.

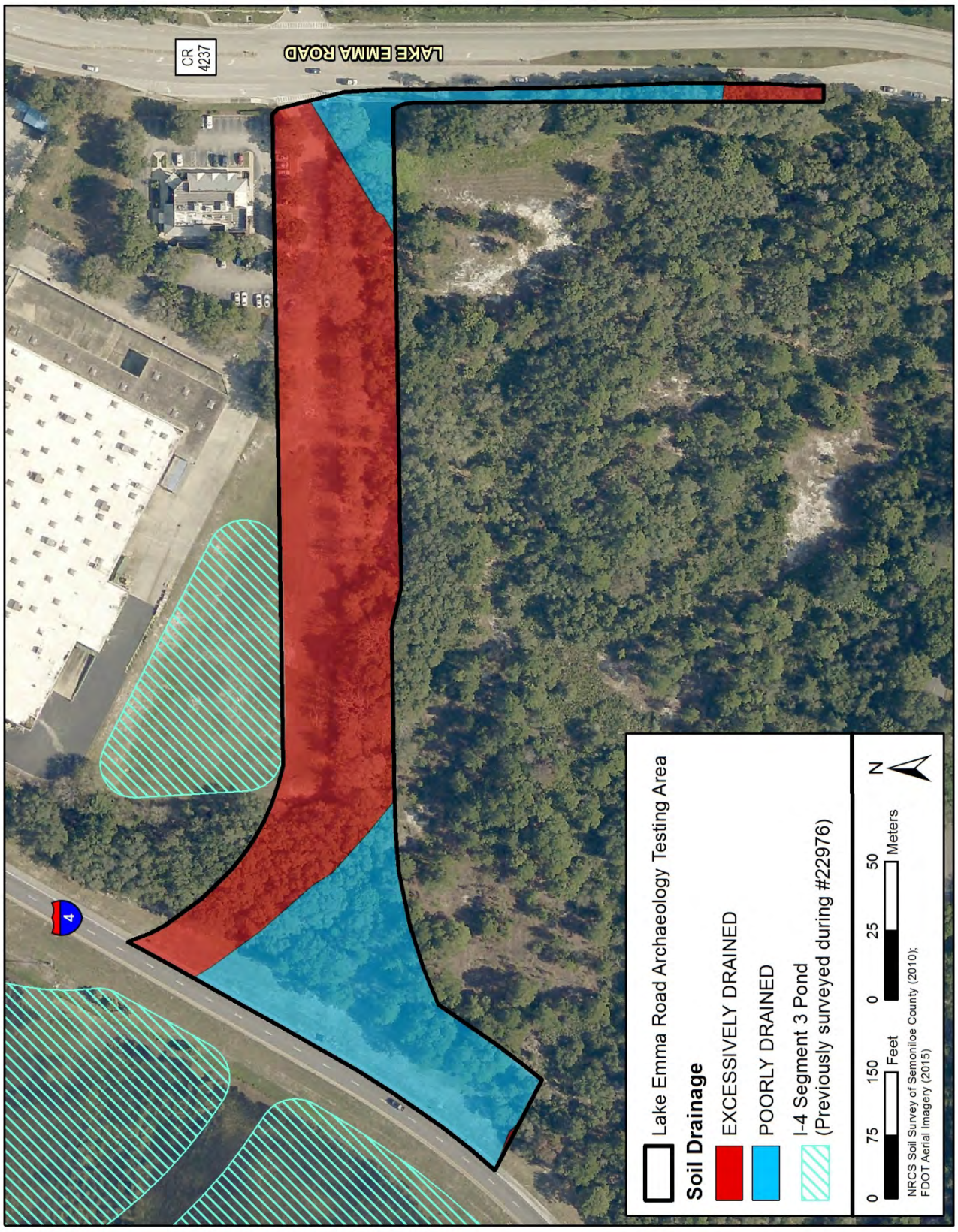

Figure 4 – Soil drainage characteristics within the I-4 Segment 3 at Lake Emma Road archaeological APE.

3.0 Florida Master Site File Review

Current data from the FMSF were reviewed in order to identify previously recorded cultural resources within one mile of the project APE. According to the FMSF, 12 cultural resources surveys have been conducted within one mile of the I-4 Segment 3 at Lake Emma Road APE, including three surveys which overlap the current project APE (**Table 1; Figure 5**). Survey No. 3889 is county-wide survey that would encompass the entire frame so it is not depicted on **Figure 5**.

Table 1. Previous Cultural Resource Surveys Conducted within One Mile of the I-4 Segment 3 at Lake Emma Road APE.

FMSF No.	Title	Date	Author
1070	An Archaeological Survey of the Proposed Primera DRI	1984	Rollins College
2239	A Cultural Resource Assessment Survey of the Heathrow International Business Center Property, Tract A, Seminole County, Florida	1990	Piper Archaeological Research, Inc.
3314	A Cultural Resource Survey of I-4 from SR 434 to Lake Mary Boulevard, Seminole County, Florida	1992	ACI
3889	Cultural Resources Study of Seminole County, Florida: Historic and Architectural Resources, Volume II	1994	Ellis Archaeology
3940	Cultural Resource Assessment Survey of Florida Power Corporation's Debary-Winter Springs 230 kV Transmission Line Right-Of-Way, Volusia and Seminole Counties, Florida	1994	Janus Research
4868	A Cultural Resource Assessment Survey of Interstate 4 from West of Lake Mary Boulevard to West of SR 15/600 Seminole County, Florida	1997	ESI
5311	A Cultural Resource Assessment of New Century Park Project Site, Seminole County, Florida	1998	Janus Research
5707	Cultural Resource Assessment Survey Interstate 4 Section 2 Project Development and Environment Study from Bee Line Expressway (S.R. 528) to S.R. 472 Interchange Orange, Seminole, and Volusia Counties, Florida	1999	ACI
6783	Section 106 Effects Determination for the I-4 Interim Improvements From S.R. 423 (John Young Parkway) to S.R. 436 (Semoran Boulevard) Orange and Seminole Counties, Florida	2000	Janus Research
6972	Cultural Resource Survey of Three Proposed Water Retention Areas Along Interstate 4 From Lake Mary Boulevard to US 17/92, Seminole County, Florida	2001	SEARCH
20178	Cultural Resource Assessment Survey, L&L Acre, Seminole County, Florida	2013	ACI
22976	Technical Memorandum: Cultural Resource Assessment Survey of Proposed Improvements to Interstate 4 from One Mile East of State Road 434 to East of US 17-92 (Segment 3) in Seminole County, Florida	2015	SEARCH

*Surveys shown in yellow overlap the current APE.

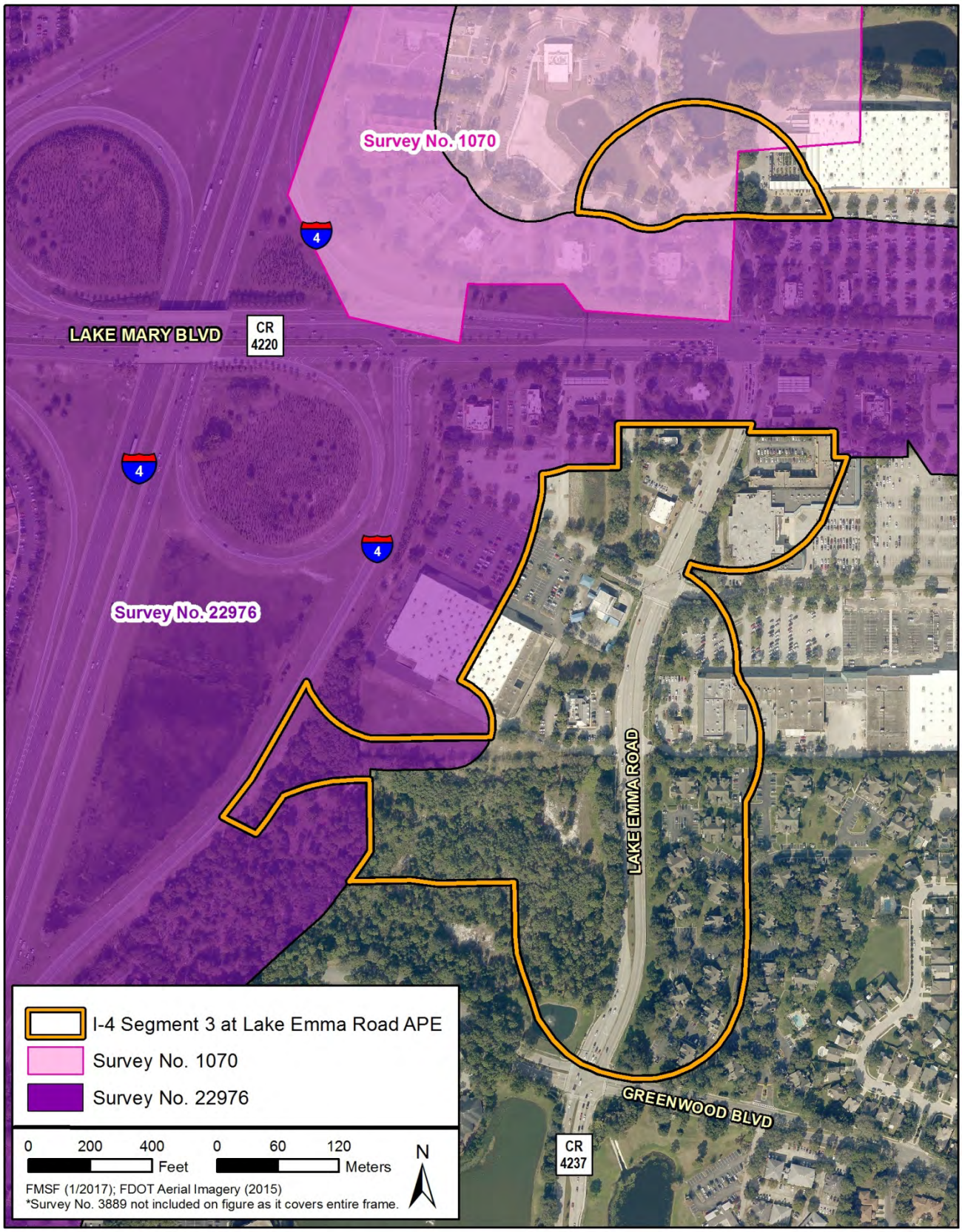

Figure 5 – Previous cultural resource surveys conducted within the I-4 Segment 3 at Lake Emma Road APE.

4.0 Survey Results

4.1 Archaeology Results

During the cultural resource survey of the I-4 Segment 3 interchange improvements at Lake Emma Road, pedestrian survey was combined with 12 subsurface shovel tests placed at 50- and 25-meter (164- and 82-foot) intervals throughout the existing and proposed ROW. See **Figure 3** for existing conditions within the APE along Lake Emma Road and the proposed interstate ramps. **Figure 6** shows the locations of shovel tests as recorded with handheld GPS units. The western portion of the APE is relatively undisturbed, but as the corridor moves to the east, more evidence of disturbance was encountered. Shovel test intervals were increased from 25- to 50-meter intervals within the excessively drained soils for this reason. Due to the presence of buried utilities and fill deposits associated with a sidewalk, no shovel tests could be safely excavated along Lake Emma Road.

Within the APE, soils are generally excessively drained, with poorly drained soils concentrated around depression features. A typical soil profile encountered within the excessively drained soils in the I-4 Segment 3 at Lake Emma Road APE consists of three strata. The upper stratum consists of gray brown fine sand from the ground surface to a depth of 20 centimeters (8 inches) below surface (cmbs), beneath which is yellow brown fine sand to a depth of 60 cmbs (24 inches), beneath which is pale brown medium sand to a terminal depth of 100 cmbs (39 inches). No cultural material was encountered during shovel testing in the project APE. A FMSF survey log sheet was prepared and is provided in **Attachment 1**.

4.2 Architectural Survey Results

In addition to a search of the FMSF for any previously recorded historic structures within the project area, older USGS quadrangle maps were reviewed for structures that were constructed prior to 1973. SEARCH has also examined the Seminole County Property Appraiser's records and determined that no historic parcels are located within the project APE. A thorough field check of the project area was undertaken. No historic structures are located within the proposed project area.

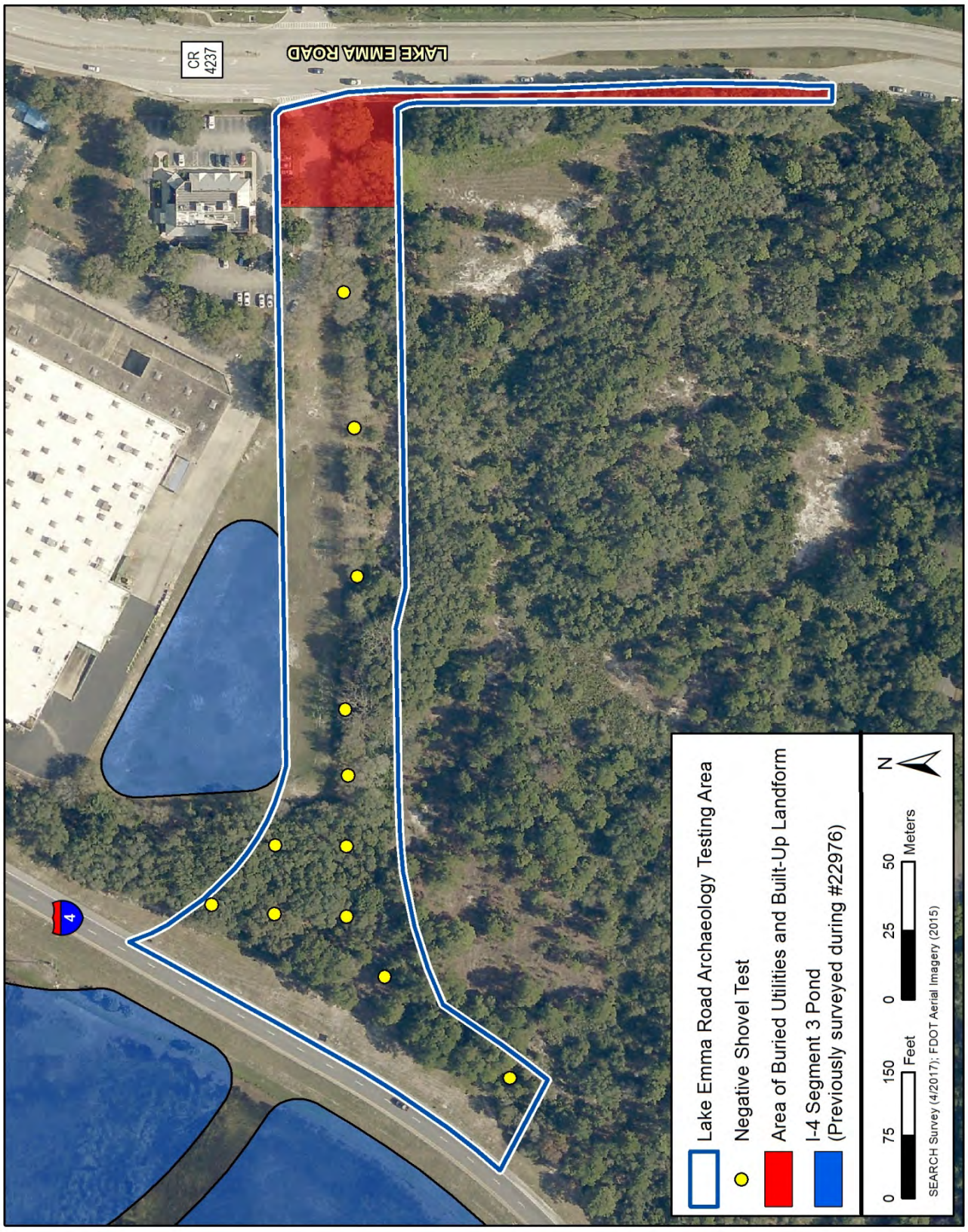

Figure 6 - Shovel test locations within the I-4 Segment 3 at Lake Emma Road APE.

5.0 Conclusions and Recommendations

This technical memorandum details the results of a CRAS conducted in support of the Lake Emma Road Access Connection within the I-4 and Lake Mary Boulevard Interchange in Seminole County, Florida. The I-4 Beyond the Ultimate Project is divided into five segments; this technical memorandum is an addendum to the 2015 I-4 Segment 3 CRAS entitled *Technical Memorandum: Cultural Resources Assessment Survey of Proposed Improvements to Interstate 4 from One Mile East of State Road 434 to East US 17-92 (Segment 3) in Seminole County, Florida* (FMSF Survey No. 22976). This technical memorandum also serves as an addendum to the 1999 report by ACI and Janus Research titled *Cultural Resource Assessment Survey, Interstate 4 Section 2 Project Development and Environment Study from Bee Line Expressway (S.R. 528) to S.R. 472 Interchange, Orange, Seminole, and Volusia Counties, Florida* (FMSF Survey No. 5707) (ACI and Janus Research 1999). The regional prehistory and history, historic map review, research design, and survey methodology of the current project area are consistent with those described in the previous reports and are not repeated here. Archaeological survey was conducted within the existing and proposed ROW, and architectural survey included the entire APE.

SEARCH's field investigations consisted of pedestrian surface inspection and the excavation of 12 shovel tests within the project corridor. No artifacts were recovered from any of the 12 shovel tests, and no archaeological sites or occurrences were identified. No further archaeological survey is recommended for the proposed interchange improvements.

No previously recorded or unrecorded architectural resources were identified within the I-4 Segment 3 at Lake Emma Road APE. No additional architectural survey is recommended.

6.0 References Cited

Archaeological Consultants, Inc. (ACI) and Janus Research

1999 *Cultural Resource Assessment Survey, Interstate 4 Section 2 Project Development and Environment Study from Bee Line Expressway (S.R. 528) to S.R. 472 Interchange, Orange, Seminole, and Volusia Counties, Florida.* Florida Master Site File Survey No. 5707. On file, Florida Division of Historical Resources, Tallahassee.

Brooks, H. K.

1981 *Guide to the Physiographic Divisions of Florida*. Florida Cooperative Extension Service. University of Florida, Gainesville.

SEARCH

2015 *Technical Memorandum: Cultural Resources Assessment Survey of Proposed Improvements to Interstate 4 from One Mile East of State Road 434 to East US 17-92 (Segment 3) in Seminole County, Florida*. Florida Master Site File Survey No. 22976. On file, Florida Division of Historical Resources, Tallahassee.

US Geological Survey (USGS)

1985 *Casselberry, Fla.* topographic quadrangle. US Geological Survey, Reston, Virginia.

1988 *Sanford, Fla.* topographic quadrangle. US Geological Survey, Reston, Virginia.

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Attachment 1

FMSF Survey Log Sheet

Ent D (FMSF only)_____

Survey Log Sheet

Florida Master Site File
Version 4.1 1/07

Survey # (FMSF only) _____

Consult *Guide to the Survey Log Sheet* for detailed instructions.

Identification and Bibliographic Information

Survey Project (name and project phase) Tech Memo: CRAS of Proposed Improvements to Interstate 4 at Lake Emma Road in Seminole County, Florida

Report Title (exactly as on title page) Addendum: Cultural Resource Assessment Survey of Proposed Improvements to Segment 3 - Lake Emma Road Access Connection within the I-4 & Lake Mary Boulevard Interchange, Seminole County (77160), Florida

Report Authors (as on title page, last names first) 1. Dye, Melissa 3. _____ 2. _____ 4. _____

Publication Date (year) 2017 **Total Number of Pages in Report** (count text, figures, tables, not site forms) 15

Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)
on File at SEARCH, Newberry, Florida. SEARCH Project No. 2964-13048T, FM # 432100-1-22-01.

Supervisors of Fieldwork (even if same as author) Names Dye, Melissa

Affiliation of Fieldworkers: Organization Southeastern Archaeological Research City Pensacola, Florida

Key Words/Phrases (Don't use county name, or common words like *archaeology*, *structure*, *survey, architecture, etc.*)

1. Lake Emma Road 3. Lake Mary Road 5. _____ 7. _____
2. Sanford 4. _____ 6. _____ 8. _____

Survey Sponsors (corporation, government unit, organization or person directly funding fieldwork)

Name HNTB, Inc. Organization _____

Address/Phone/E-mail _____

Recorder of Log Sheet Dye, Melissa **Date Log Sheet Completed** 5-3-2017

Is this survey or project a continuation of a previous project? ☐ No ☒ Yes: **Previous survey #s (FMSF only)** 5707, 22976

Mapping

Counties (List each one in which field survey was done; attach additional sheet if necessary)

1. Seminole 3. _____ 5. _____
2. _____ 4. _____ 6. _____

USGS 1:24,000 Map Names/Year of Latest Revision (attach additional sheet if necessary)

1. Name SANFORD Year 1988 4. Name _____ Year _____
2. Name CASSELBERRY Year 1985 5. Name _____ Year _____
3. Name _____ Year _____ 6. Name _____ Year _____

Description of Survey Area

Dates for Fieldwork: Start 4-28-2017 End 4-28-2017 **Total Area Surveyed** (fill in one) _____ hectares 48.3 acres

Number of Distinct Tracts or Areas Surveyed 1

If Corridor (fill in one for each) **Width:** _____ meters _____ feet **Length:** _____ kilometers _____ miles

Survey Log Sheet

Survey #_____

Research and Field Methods

Types of Survey (check all that apply): ☒archaeological ☒architectural ☒historical/archival ☐underwater
☐damage assessment ☐monitoring report ☐other(describe): _____

Scope/Intensity/Procedures 12 shovel tests were dug at 25- and 50-m intervals within existing and proposed right-of-way. Shovel tests were 50 cm in diameter & 100 cm deep, and sediment was screened through 1/4" hardware cloth. Pedestrian survey of historic resources.

Preliminary Methods (check as many as apply to the project as a whole)

☐Florida Archives (Gray Building)	☒library research- *local public*	☒local property or tax records	☒other historic maps
☐Florida Photo Archives (Gray Building)	☐library-special collection - *nonlocal*	☐newspaper files	☒soils maps or data
☒Site File property search	☐Public Lands Survey (maps at DEP)	☒literature search	☐windshield survey
☒Site File survey search	☐local informant(s)	☐Sanborn Insurance maps	☒aerial photography

☐other (describe): _____

Archaeological Methods (check as many as apply to the project as a whole)

☐Check here if **NO** archaeological methods were used.

☐surface collection, controlled	☐shovel test-other screen size	☐block excavation (at least 2x2 m)
☐surface collection, **un**controlled	☐water screen	☐soil resistivity
☒shovel test-1/4"screen	☐posthole tests	☐magnetometer
☐shovel test-1/8" screen	☐auger tests	☐side scan sonar
☐shovel test 1/16"screen	☐coring	☒pedestrian survey
☐shovel test-unscreened	☐test excavation (at least 1x2 m)	☐unknown

☐other (describe): _____

Historical/Architectural Methods (check as many as apply to the project as a whole)

☐Check here if **NO** historical/architectural methods were used.

☐building permits	☐demolition permits	☒neighbor interview	☐subdivision maps
☐commercial permits	☒exposed ground inspected	☐occupant interview	☒tax records
☐interior documentation	☒local property records	☐occupation permits	☐unknown

☐other (describe): _____

Survey Results (cultural resources recorded)

Site Significance Evaluated? ☐Yes ☒No

Count of Previously Recorded Sites 0 **Count of Newly Recorded Sites** 0

Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8". Attach additional pages if necessary.) _____

Newly Recorded Site #'s (Are all originals and not updates? List site #'s without "8". Attach additional pages if necessary.) _____

Site Forms Used: ☐Site File Paper Form ☒Site File Electronic Recording Form

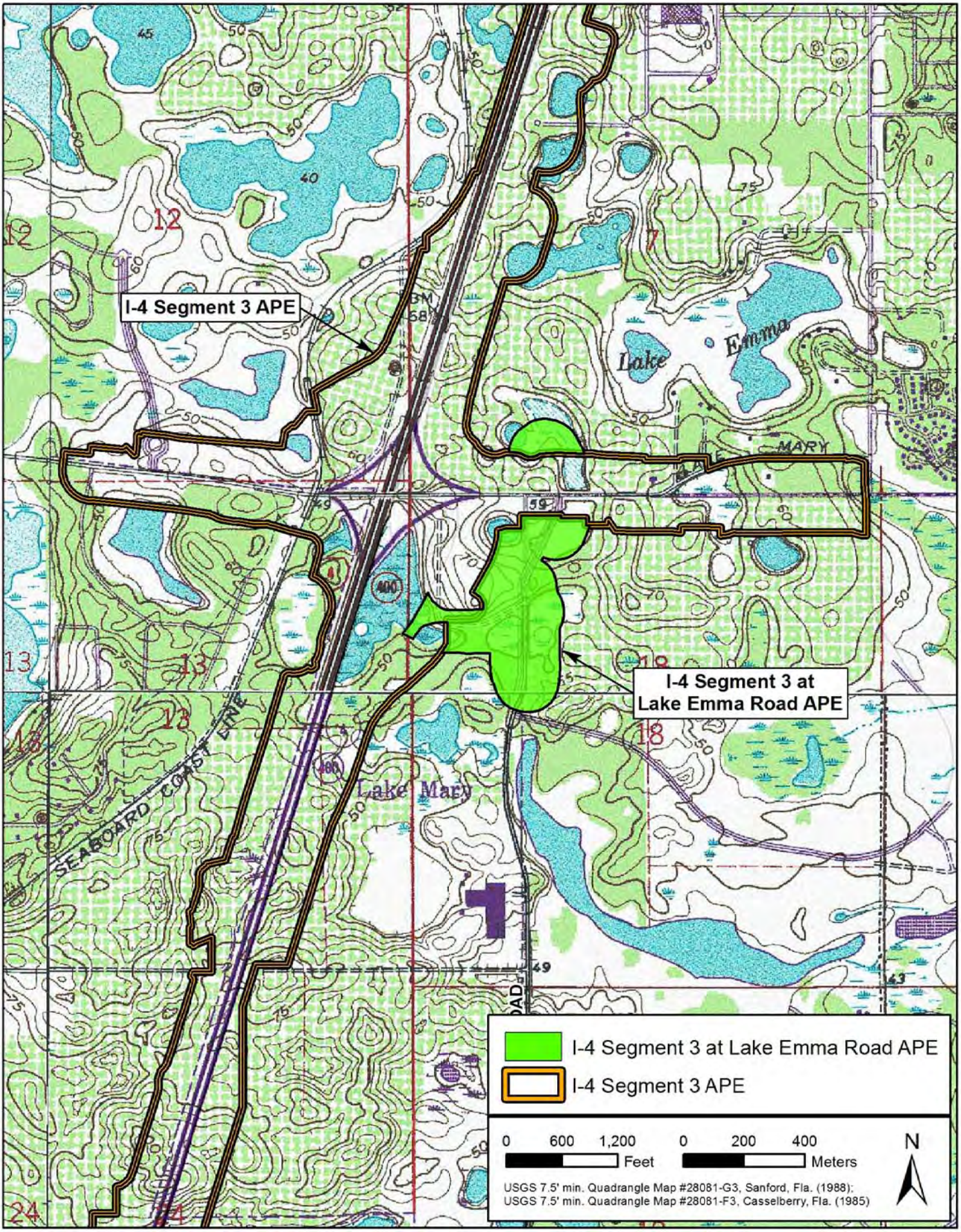
*****REQUIRED: ATTACH PLOT OF SURVEY AREA ON PHOTOCOPY OF USGS 1:24,000 MAP(S)*****

SHPO USE ONLY **SHPO USE ONLY** **SHPO USE ONLY**

Origin of Report: ☐872 ☐CARL ☐UW ☐1A32 # _____ ☐Academic ☐Contract ☐Avocational
☐Grant Project # _____ ☐Compliance Review: CRAT # _____

Type of Document: ☐Archaeological Survey ☐Historical/Architectural Survey ☐Marine Survey ☐Cell Tower CRAS ☐Monitoring Report
☐Overview ☐Excavation Report ☐Multi-Site Excavation Report ☐Structure Detailed Report ☐Library, Hist. or Archival Doc
☐MPS ☐MRA ☐TG ☐Other: _____

Document Destination: _____ **Plotability:** _____


I-4 Segment 3 APE
I-4 Segment 3 at Lake Emma Road APE
Lake Emma
Lake Mary
SEABOARD COAST LINE
I-4 Segment 3 at Lake Emma Road APE
I-4 Segment 3 APE
0 600 1,200 Feet
0 200 400 Meters
N
USGS 7.5' min. Quadrangle Map #28081-G3, Sanford, Fla. (1988);
USGS 7.5' min. Quadrangle Map #28081-F3, Casselberry, Fla. (1985)