

TECHNICAL MEMORANDUM
CULTURAL RESOURCE ASSESSMENT SURVEY UPDATE
IN SUPPORT OF INTERSTATE 95 INTERCHANGE AT PIONEER TRAIL,
VOLUSIA COUNTY, FLORIDA

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CLIENT:	Florida Department of Transportation, District 5
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This technical memorandum details the results of a cultural resource assessment survey (CRAS) conducted of proposed interchange improvements to Interstate 95 (I-95) at Pioneer Trail in Volusia County, Florida. The Florida Department of Transportation (FDOT), District 5, is proposing to construct several retention ponds associated with improvements at the I-95 and Pioneer Trail interchange in Volusia County, Florida (**Figure 1**). The current study serves as an addendum to the 2019 SEARCH survey titled *Cultural Resource Assessment Survey for I-95 Interchange at Pioneer Trail, Volusia County, Florida* (Florida Master Site File [FMSF] Survey No. 26148). The current study is limited to archaeological and architectural history survey of the pond locations, as well as survey of small segments of untested right-of-way not covered by the original survey. The ponds encompass approximately 27.9 acres, and untested segments of Pioneer Road include approximately 0.36 miles (0.58 kilometers). The discussions of regional prehistory and history, research design, and laboratory methods provided in the original report (FMSF Survey No. 26148) apply to the current CRAS and are not repeated in this technical memorandum. This project is federally funded for construction in 2021.

The Area of Potential Effects (APE) defines the area within which visual, audible, and atmospheric effects that the roadway improvements and subsequent maintenance may have on historic properties. The APE for the corridor was defined as the existing right-of-way and was extended to the back or side property lines of adjacent parcels for a distance of no more than 328 feet (100 meters). The APE defined for this project includes the proposed pond footprints plus a 100-foot (30.5-meter) buffer (see **Figure 1**). The archaeological survey was conducted within the proposed pond footprints and the existing right-of-way; the architectural history survey included the entire APE. The cultural resource survey was limited to areas that were not tested as part of the 2019 CRAS (FMSF Survey No. 26148).

The purpose of the survey was to locate, identify, and bound any archaeological resources, historic structures, and potential districts within the project's APE and assess their potential for

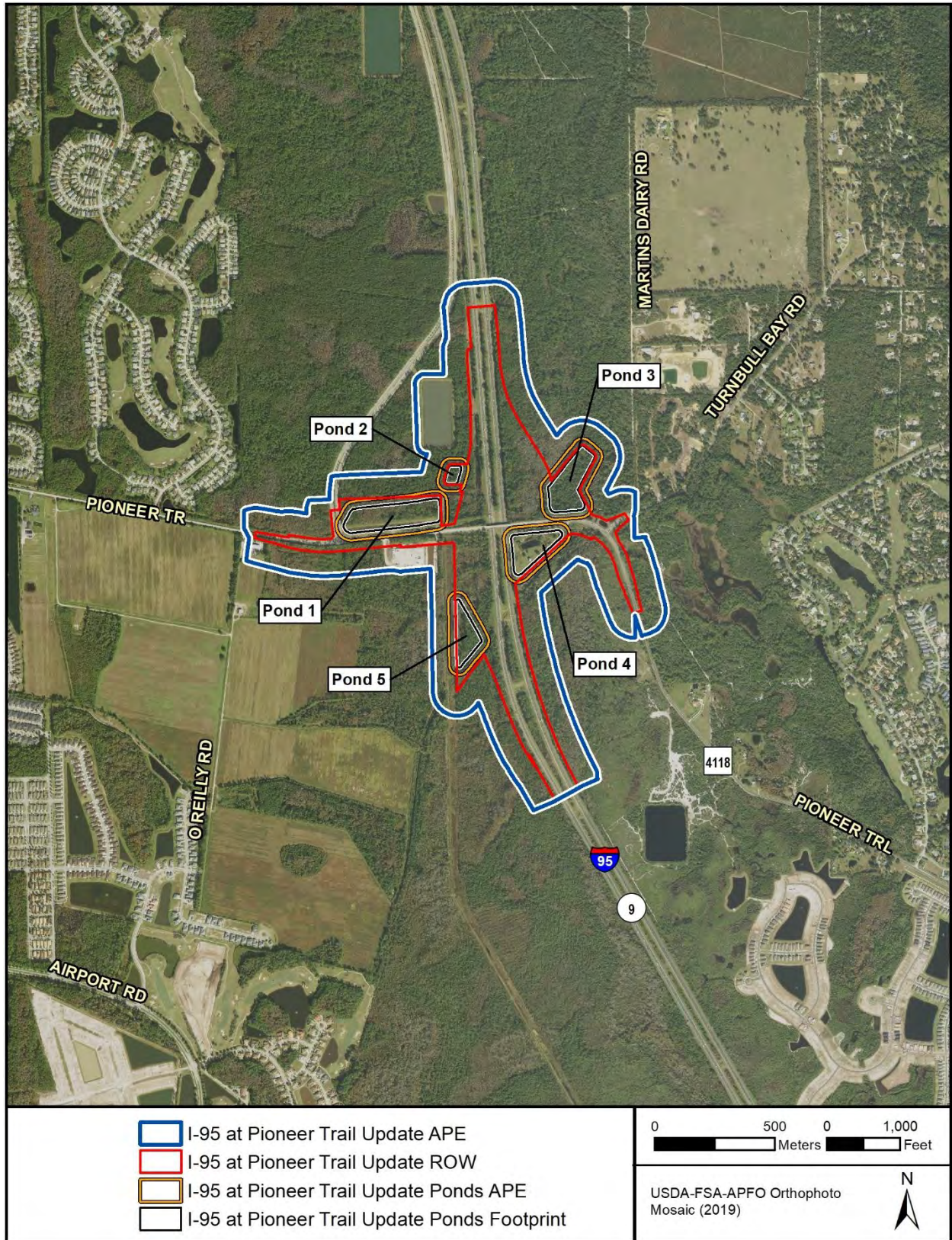


Figure 1. Location of the I-95 at Pioneer Trail Update APE in Volusia County, Florida.

listing in the National Register of Historic Places (NRHP). This study was conducted to comply with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended, and the Archeological and Historic Preservation Act of 1979, as amended. The study meets the regulations for implementing NHPA Section 106 found in 36 CFR Part 800 (*Protection of Historic Properties*). This study complies with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code. All work was performed in accordance with Part 2, Chapter 8 of the FDOT's Project Development & Environment (PD&E) Manual (revised July 2020), as well as the Florida Division of Historical Resources' (FDHR) recommendations for projects, as stipulated in the FDHR's *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The Principal Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42).

ENVIRONMENT AND MODERN CONDITIONS

The I-95 at Pioneer Trail Update APE is in the north-central portion of east Florida, approximately 2.5 miles (4.0 kilometers) northwest of Glencoe in central eastern Volusia County within Sections 4, 5, 8, and 9 of Township 17 South, Range 33 East. The APE is located within the Eastern Flatwoods physiographic district, which developed from a sequence of barrier islands and lagoons (Brooks 1981). More specifically, the APE lies within the smaller Volusia Ridge Sets province, which is characterized as accreted coastal deposits that consist of four district parts: (1) a flatwoods plain with subdued beach ridge set, known as the "Talbot Terrace," that are generally 40 feet (12 meters) above mean sea level (amsl) in elevation; (2) an eastern boundary sand ridge with a crest of 46 feet (14 meters) amsl in elevation; (3) a flatwoods plain formed by an eastern set of beach ridges, known as the "Pamlico Terrace," with elevations generally ranging from 25 to 30 feet (8.0 to 9.0 meters) amsl; and (4) a high coastal ridge, known as the "Atlantic Coastal Ridge," with a general elevation of 55 feet (17 meters) amsl that overlies coquina deposits (Brooks 1981). Soils in the project area consist of poorly drained Pomona fine sand and very poorly drained Ponoma-St. Johns Complex with smaller amount of very poorly drained Plummer and Surrency fine sands, as well as a small area of moderately well drained Albany fine sand and excessively drained St. Lucie fine sand at the east end of Pioneer Trail (**Figure 2**).

FLORIDA MASTER SITE FILE REVIEW

FMSF data from April 2020 were reviewed to identify any previous recorded cultural resources within the I-95 at Pioneer Trail Update APE. The FMSF review indicates that six previous cultural resource surveys have been conducted within the APE (**Figure 3; Table 1**). The most relevant survey is the CRAS conducted in 2019 (SEARCH 2019, FMSF Survey No. 26148) for which this study serves as an addendum. The remaining five surveys include a historic structures survey (Historic Properties Associates [HPAI], Inc. 1996, FMSF Survey No. 4449), a parcel survey in the southeast quadrant of the interchange (Panamerican Consultants, Inc. 2004, FMSF Survey No. 11228),

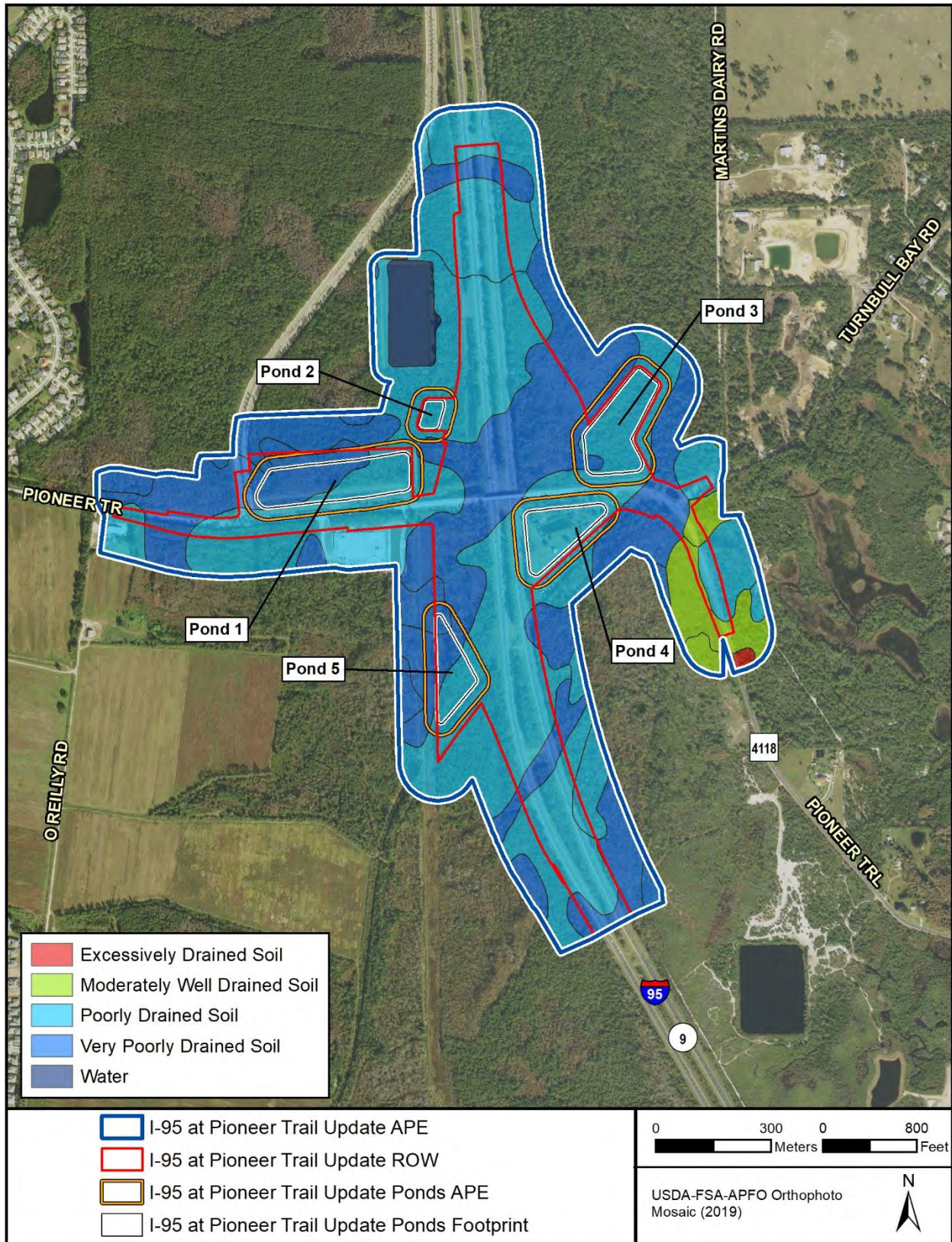


Figure 2. Soil drainage in the I-95 at Pioneer Trail Update APE in Volusia County, Florida.

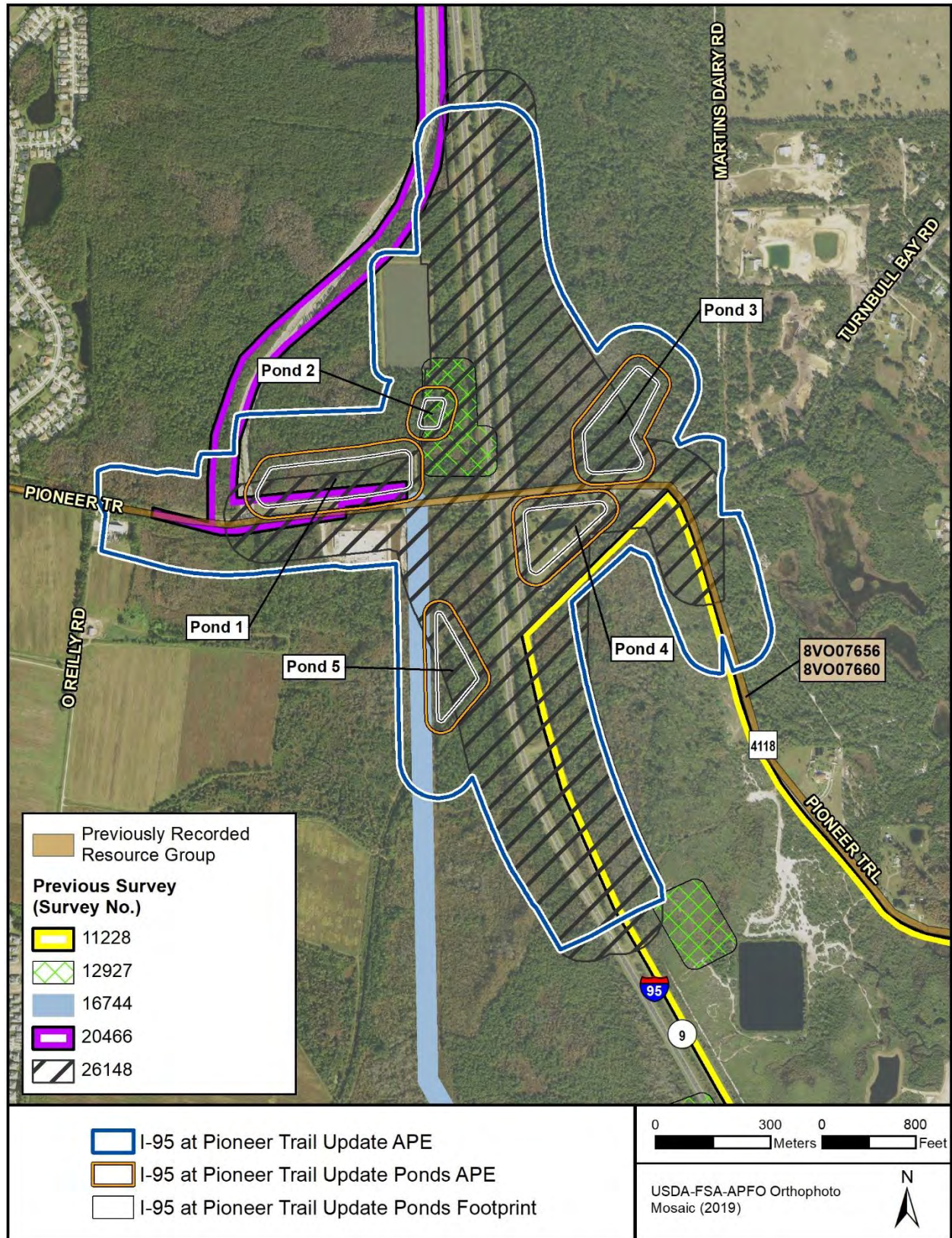


Figure 3. Previous surveys and previously recorded resources within the I-95 at Pioneer Trail Update APE.

Table 1. Previously Conducted Cultural Resource Surveys within the I-95 at Pioneer Trail Update APE.

FMSF No.	Title	Year	Reference
4449	<i>Historic Properties Survey of Port Orange, Florida</i>	1996	Historic Property Associates, Inc.
11228	<i>An Archaeological and Historical Survey of the Nevel Property in Volusia County, Florida</i>	2004	Panamerican Consultants, Inc.
12927	<i>Cultural Resource Assessment Survey of I-95 from SR 50 in Volusia County to North of SR 600/US 92 in Brevard County Project Development and Environment Study</i>	2006	SEARCH
16744	<i>Cultural Resources Reconnaissance Survey Gaco-Pirola 230kV Transmission Line, Volusia County, Florida</i>	2009	Southarc, Inc.
20466	<i>Cultural Resource Assessment Survey of the South Williamson Boulevard Extension Corridor, Volusia County, Florida</i>	2013	SEARCH
26148	<i>Cultural Resource Assessment Survey for the I-95 Interchange at Pioneer Trail, Volusia County, Florida</i>	2019	SEARCH

a ponds survey for I-95 (SEARCH 2006, FMSF Survey No. 12927), a gas pipeline survey (Southarc, Inc. 2009, FMSF Survey No. 16744), and a survey of South Williamson Boulevard (SEARCH 2013, FMSF Survey No. 20466). The South Williamson Boulevard survey included the excavation of nine shovel tests within the current APE, while the 2019 survey of the interchange (FMSF Survey No. 26148) included testing throughout the interchange and portions of the current ponds.

The FMSF review also indicates that two cultural resources have been previously recorded within the project APE (**Table 2**; see **Figure 3**). Fort Kingsbury to New Smyrna Road (8VO07656) and Pioneer Trail (8VO07660) are historic trails utilized by early settlers in the area and Native Americans. Within the project APE, these resources follow the same route, running east and west through the central portion of the APE. Subsurface testing during a previous survey of Fort Kingsbury to New Smyrna Road (8VO07656) and Pioneer Trail (8VO07660) failed to produce cultural material or identify cultural features (SEARCH 2013, FMSF Survey No. 20466). FMSF Survey No. 20466 concluded that because these historic trails have been converted to modern asphalt-paved roads, they retain little historic integrity. Even though the trails were important to the development of the area, their diminished historical integrity prompted the State Historic Preservation Officer (SHPO) to evaluate previously recorded segments of these linear resources, including the majority of the sections contained within the current project APE, as ineligible for inclusion in the NRHP (SEARCH 2013); however, the FMSF also indicates insufficient information to evaluate these resources, as the entirety of these roads have not been documented.

Table 2. Previously Recorded Cultural Resources in the I-95 at Pioneer Trail Update APE.

<i>Linear Resources</i>			
FMSF Survey No.	Name	Period of Significance	SHPO Evaluation
8VO07656	Fort Kingsbury to New Smyrna Road	American 19th century; American 20th century; Civil War (1861-1865), 1st Seminole War (1817-1834); 2nd Seminole War (1835-1855), 3rd Seminole War (1856-onward); American Territorial 1821-1845	Ineligible for the NRHP
8VO07660	Pioneer Trail	American 19th century; American 20th century; Civil War (1861-1865), 1st Seminole War (1817-1834); 2nd Seminole War (1835-1855)	Ineligible for the NRHP

HISTORIC MAP AND AERIAL REVIEW

Historic maps and aerial photographs were examined in order to identify past land use in the vicinity of the I-95 at Pioneer Trail Update APE. The earliest detailed maps consulted were General Land Office (GLO) survey maps. The GLO maps were created by government land surveyors during the nineteenth century as part of the surveying, platting, and sale of public lands. These maps characteristically show landscape features such as vegetation, bodies of water, roads, and other features. The level of detail in GLO maps varies, with some also depicting structures, Native American villages, railroads, and agricultural fields. A GLO map of Florida Township 17 South, Range 33 East created in 1850 shows no clear signs of development within the APE, though some features are evident in the general area (**Figure 4**) (GLO 1845, 1850). More specifically, roads traveling in a northwest to southeast direction are illustrated to the northeast and southwest of the APE. Spanish land grant properties are evident to the east and southeast.

An 1890 map of Volusia County shows few details in this area (Norton 1890). Glencoe is noted as a settlement near the APE; additionally, this map notes a Glencoe stop along a railroad traveling westward from New Smyrna, though the railroad and the Glencoe stop are shown south of the settlement. Only the boundaries for Spanish land grants are evident within and around Glencoe, and no roads are illustrated traveling to or through the town (Norton 1890).

By the early twentieth century, a roadway had been constructed to connect Coronado Beach and New Smyrna with the interior of the county, specifically DeLand. This road is illustrated on a 1917 map traveling in a west-northwest direction from New Smyrna before turning back to the west-southwest and west, continuing towards DeLand (Florida State Road Department [FSRD] 1917). The eastern portion of this roadway may have followed the path of present-day Pioneer Trail and through the APE. This path appears more like the current road on 1926 and 1934 highway maps; by 1948, the road is labeled State Road (SR) 40, changing to SR 40A in 1955 when a more direct route from New Smyrna had been constructed (FSRD 1926, 1934, 1948, 1955).

A road traveling the path of this highway and following the route of modern Pioneer Trail is evident crossing through the APE on a 1943 aerial photograph (**Figure 5**) (US Department of Agriculture [USDA] 1943). The highway travels northward into the eastern portion then turns to the west and travels through and out of the APE. Another road from the northeast also passes into the APE and merges with the highway. Most of the land within the APE is covered by marshy plant life, though some areas in the northwestern portion appear to be cleared. Some trails or unimproved roads cross through the APE; no structures or other features are evident. These features are confirmed by a 1959 topographic map, which does label the highway through the APE as SR 40A (**Figure 6**) (US Geological Survey [USGS] 1959, 1960).

New features are evident on a topographic map updated in the early 1970s (**Figure 7**) (USGS 1972a, 1972b). Most notably, I-95 had been constructed and was illustrated passing north-south through the APE; a bridge carries SR 40A/Pioneer Trail over the new interstate. Additionally, a rectangular-shaped pond had been constructed within the northern portion of the APE.

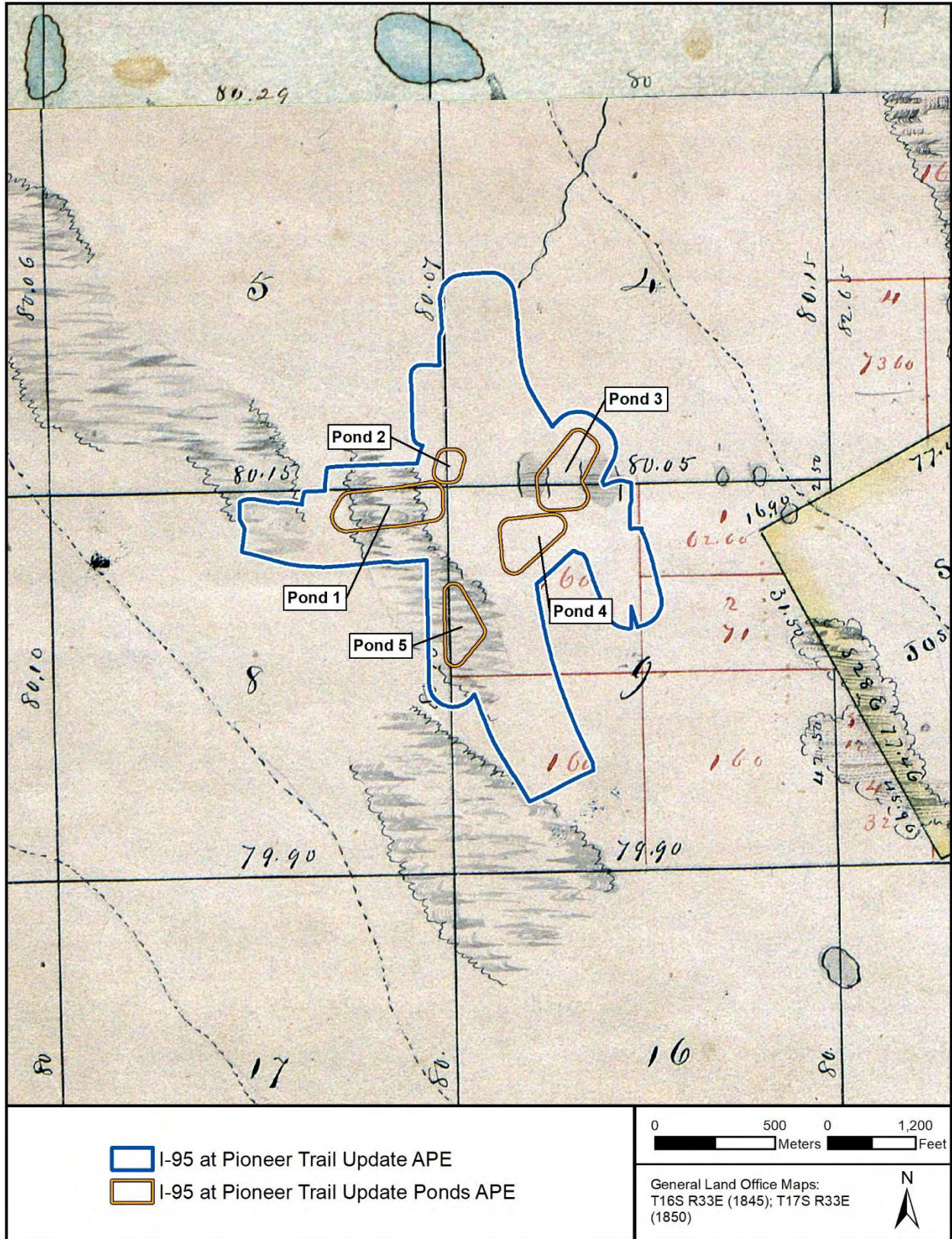


Figure 4. GLO maps of Townships 16 and 17 South, Range 33 East (GLO 1845, 1850).

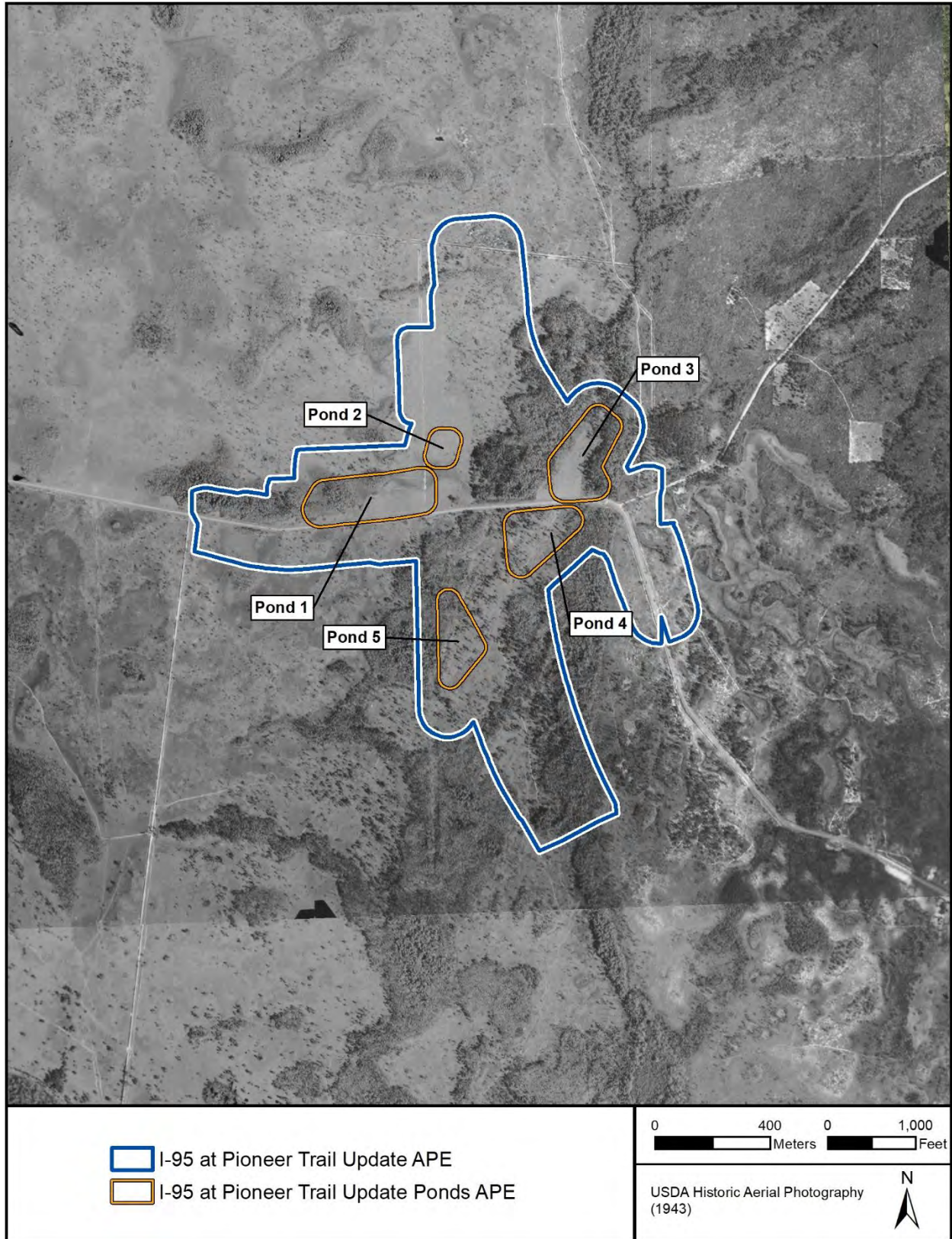


Figure 5. 1943 USDA aerial photographs of Volusia County, Florida.

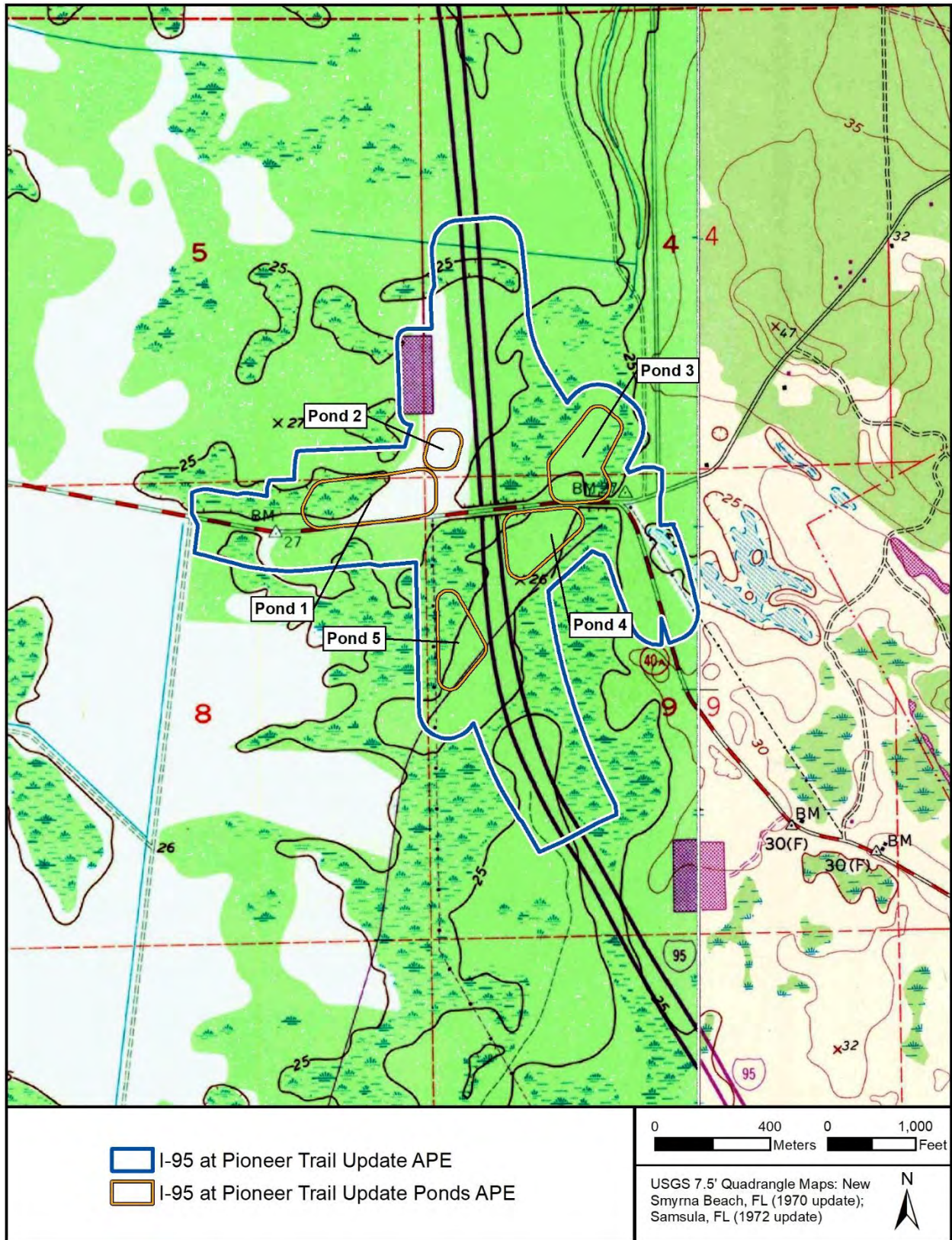


Figure 7. USGS topographic maps of New Smyrna Beach and Samsula, Florida (USGS 1972a, 1972b).

SURVEY METHODOLOGY

Archaeological Field Methods

The potential for archaeological sites to be present within the pond footprints and corridor was evaluated based on an examination of environmental variables (i.e., soil drainage, relative elevation, proximity to water or wetland resources), as well as the negative results of previously conducted surveys. Soils within the current APE were poorly drained (see **Figure 3**), and all previous shovel testing was negative; as such, the APE was assessed with low probability for intact prehistoric archaeological deposits. Although Pioneer Trail itself is a historic linear resource, the map review conducted as part of the original 2019 survey (FMSF Survey No. 26148) indicated that additional historic use of the APE was minimal. This review, coupled with the negative results of the original survey, indicated a low probability for historic archaeological resources.

The Phase I field survey for the proposed pond locations consisted of subsurface shovel testing at varying intervals according to the potential for containing buried archaeological sites. Shovel tests were judgmentally placed to achieve coverage within each pond APE. The FDHR manual specifies that non-systematic testing (i.e., judgmental testing) is appropriate in “geographically restricted areas such as proposed pond sites” (FDHR 2002:17-18). The pond locations also were visually examined via pedestrian survey for the presence of exposed artifacts and aboveground features (e.g., structural remains and prehistoric mounds).

For the small segments of right-of-way, the Phase I field survey consisted of systematic subsurface shovel testing according to the potential for buried archaeological sites. As the project area was determined to have generally low archaeological potential based on the poor soil drainage and negative results of previous surveys, shovel tests were excavated at 100-meter intervals within the right-of-way. Shovel tests measured approximately 50 centimeters (19.7 inches) in diameter and were excavated to a minimum depth of 100 centimeters (39.4 inches) below surface (cmbs), subsurface conditions permitting. All excavated sediments were screened through 6.4-millimeter (1/4-inch) mesh hardware cloth. “No-dig” points were recorded in locations where testing was attempted, but confirmed to be infeasible due to buried utilities or disturbances. The location of each shovel test and “no-dig” point was marked on aerial photographs of the project area (**Attachment A**). Global Positioning System (GPS) coordinates were recorded for each shovel test and “no-dig” location with handheld units that used Wide Area Augmentation System (WAAS). The cultural content, stratigraphy, and environmental setting of each shovel test were recorded.

Architectural Field Methods

The architectural survey for the project utilized standard procedures for the location, investigation, and recording of historic properties. In addition to a search of the FMSF database for previously recorded historic properties within the project area, USGS quadrangle maps were

reviewed for structures that were constructed prior to 1976. The field survey inventoried existing buildings, structures, and other aspects of the built environment within the I-95 at Pioneer Trail Update APE. Each historic resource was plotted with a GPS unit on USGS quadrangle maps and on project aerials. All identified historic resources were photographed with a digital camera, and all pertinent information regarding the architectural style, distinguishing characteristics, and condition was recorded on FMSF structure forms. Upon completion of fieldwork, forms and photographs were returned to the SEARCH offices for analysis. Date of construction, design, architectural features, condition, and integrity of the structure, as well as how the resources relate to the surrounding landscape, were carefully considered. The resources were evaluated regarding their eligibility for listing in the NRHP and then recommended eligible, potentially eligible, or not eligible.

One unrecorded historic-aged (pre-1976) bridge was identified within the I-95 at Pioneer Trail Update APE. The County Road (CR) 4118 Bridge over I-95 (FDOT Bridge No. 790066) is an example of a post-1945 concrete stringer/multi-beam bridge and was constructed in 1969, according to the FDOT Bridge Maintenance Inventory's Florida Bridge Information list (FDOT 2020, 2nd Quarter).

The 2012 *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* (Federal Register 2012:68793-68795) "relieves federal agencies from the Section 106 requirement to consider the effects of undertakings on the bridge types identified in Section V of this Program Comment" if a bridge does not meet three considerations listed in Section IV (Federal Register 2012:68793). Using these three considerations, SEARCH examined the CR 4118 Bridge over I-95 (FDOT Bridge No. 790066) to determine if the bridge meets the qualifications for application of the Program Comment.

First, based on a review of the FMSF, SEARCH determined that the bridge is not listed in the NRHP, nor has it been determined eligible for such listing. Furthermore, the bridge is not located adjacent to or within a NRHP-listed or -eligible historic district. SEARCH personnel examined records for the bridge and determined that it does not constitute an example of one of the following bridge types: an arch bridge; a truss bridge; a bridge with movable spans; a suspension bridge; a cable-stayed bridge; or a covered bridge. Finally, this bridge was not identified by the latest statewide bridge survey (Archaeological Consultants, Inc. 2012) as having "exceptional significance for association with an event or individual, or being a very early or particularly important example of its type in a State or the nation, having distinctive engineering or architectural features that depart from standard designs, such as an aesthetic railing or balustrade, includes spans of exceptional length or complexity, or displaying other elements that were engineered to respond to a unique environmental context," which would exempt it from the Program Comment (Federal Register 2012:68794).

Based on the above considerations for the Program Comment, the CR 4118 Bridge over I-95 (FDOT Bridge No. 790066) is excluded from Section 106 consideration (Federal Register 2012:68793). For this reason, the CR 4118 Bridge over I-95 (FDOT Bridge No. 790066) was not evaluated by the present survey. The Section 106 responsibilities of FDOT and the Federal Highway Administration (FHWA) have been completed with regard to this bridge.

In addition, construction of the section of I-95 within the APE began in the early 1960s, thereby constituting a historic-aged roadway. The 2005 *Exemption Regarding Historic Preservation Review Process for Effects to the Interstate Highway System* exempts the Interstate Highway System from Section 106 consideration (Federal Register 2005:11928). Therefore, I-95 was not surveyed and evaluated as part of this CRAS addendum.

Procedures to Deal with Unexpected Discoveries

Every reasonable effort has been made during this investigation to identify and evaluate possible locations of prehistoric and historic archaeological sites; however, the possibility exists that evidence of cultural resources may yet be encountered within the project limits. Should evidence of unrecorded cultural resources be discovered during construction activities, all work in that portion of the project area must stop. Evidence of cultural resources includes aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits, and historic building foundations. Should questionable materials be uncovered during the excavation of the project area, representatives of the FDOT, District 5, will assist in the identification and preliminary assessment of the materials. If such evidence is found, the FDHR will be notified within two working days.

In the unlikely event that human skeletal remains or associated burial artifacts are uncovered within the project area, all work in that area must stop. The FDOT, District 5, Cultural Resources Coordinator must be contacted. The discovery must be reported to local law enforcement, who will in turn contact the medical examiner. The medical examiner will determine whether or not the State Archaeologist should be contacted per the requirements of Chapter 872.05, Florida Statutes.

SURVEY RESULTS

Archaeology Results

The I-95 at Pioneer Trail Update archaeological APE consists of short segments of right-of-way not previously tested by the 2019 survey (FMSF Survey No. 26148) and untested portions of new or modified retention ponds. Within the APE, Pioneer Trail is a two-lane paved route, with narrow, paved shoulders and heavily vegetated on both sides. Shallow drainage ditches and overhead utilities are present in the grassy portions of the right-of-way. The untested ponds are generally poorly drained and heavily vegetated.

A total of 18 shovel tests were excavated within the archaeological APE, all of which were negative for cultural material. An additional five “no-dig” points were taken in areas where shovel testing was attempted, but confirmed to be infeasible due to buried utilities (**Figure 8**). As soil conditions and stratigraphy varied between the ponds and the corridor, the typical stratigraphy for each location is discussed individually below. An FDHR survey log sheet is provided in **Attachment B**.

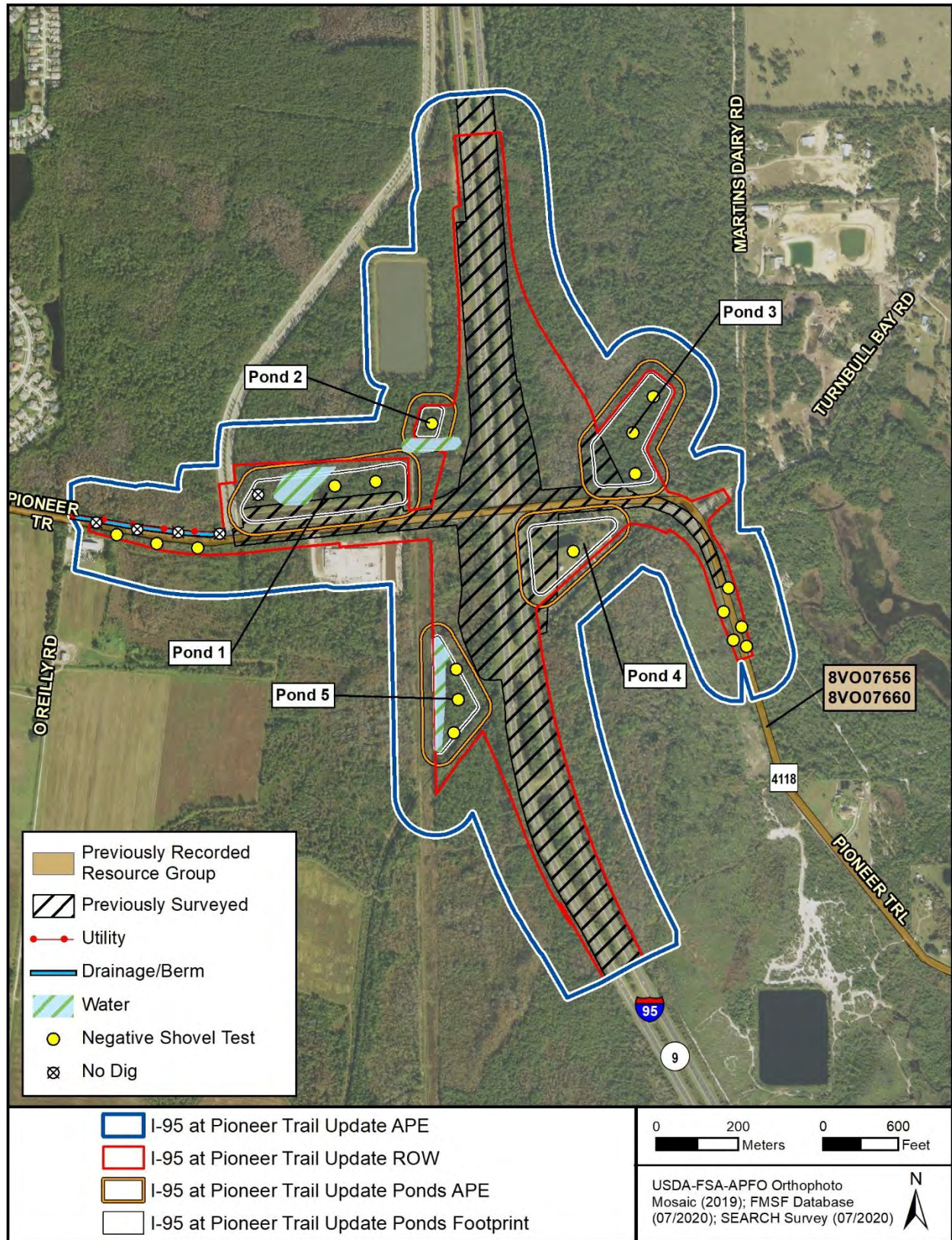


Figure 8. Archaeological testing in the I-95 at Pioneer Trail Update archaeological APE.

Pond 1

Pond 1 is a 9.6-acre pond located along the north side of Pioneer Road, west of I-95. The southern half of the pond was previously tested as part of FMSF Survey No. 26148. The pond is thickly vegetated by palmetto and pines, and standing water was noted (**Figure 9**). Two shovel tests were excavated within the boundaries of Pond 1; in addition, one “no-dig” point was employed at the west end of the pond where standing water was encountered (see **Figure 8**). Stratigraphy in both shovel tests consisted of dark brown or black mucky sand. In one shovel test, the water table was almost immediately encountered. In the second shovel test, the water table was encountered at approximately 40 cmbs (15.7 inches).



Figure 9. Overview of Pond 1, view north.

Pond 2

Pond 2 is a small, 1.0-acre pond located in the northwest quadrant of the interchange, northeast of Pond 1. Standing water was noted to the south of the pond. Vegetation consisted of palmetto and pines (**Figure 10**). A single, negative shovel test was excavated within Pond 2 (see **Figure 8**). Stratigraphy consisted of black wet sand to 15 cmbs (5.9 inches; Stratum I). At 15 cmbs (5.9 inches), the water table was encountered and excavation terminated.



Figure 10. Overview of Pond 2, view north.

Pond 3

Pond 3 is an irregularly-shaped, 7.5-acre pond along the north side of Pioneer Trail, east of the I-95 interchange. The western half of the pond was previously tested during FMSF Survey No. 26148. Vegetation consists of dense palmettos and pines (**Figure 11**). Three shovel tests were



Figure 11. Overview of Pond 3, view west.

excavated in the untested portion of the pond, all of which were negative for cultural material (see **Figure 8**). Soil stratigraphy typically consisted of dark gray sand to 30 cmbs (11.8 inches; Stratum I), white sand from 30 to 50 cmbs (11.8 to 19.7 inches; Stratum II), and black spodic soils or standing water over 50 cmbs (19.7 inches).

Pond 4

Pond 4 is a 5.5-acre triangular pond situated in the southeast corner of the interchange. A small retention pond is already located in the center of this proposed pond site, and the western half of the pond was previously tested as part of the original survey (FMSF Survey No. 26148). This pond is situated adjacent to a horse farm, and a small structure (non-historic) is located within the proposed pond site, according to current aerials. This location is largely clear with scattered mature trees (**Figure 12**).



Figure 12. Overview of Pond 4, view east.

Due to the presence of an existing pond, the previous testing, and existing structures, only one shovel test was able to be excavated within Pond 4, which was negative for cultural material (see **Figure 8**). The soil profile consisted of black and gray mottled loamy sand to approximately 25 cmbs (9.8 inches; Stratum I), gray loamy sand from 25 to 50 cmbs (9.8 to 19.7 inches; Stratum II), black very compact spodic soils from 50 to 60 cmbs (19.7 to 23.6 inches; Stratum III), and heavily compact, wet black soils over 60 cmbs (23.6 inches; Stratum IV).

Pond 5

Pond 5 is a triangular, 4.3-acre pond located along the west side of I-95, south of Pioneer Trail. The west edge of the pond is bounded by an existing utility corridor, and the pond is vegetated by dense palmetto and wetland vegetation (**Figure 13**). A total of three shovel tests were excavated within the pond footprint, all of which were negative for cultural material (see **Figure 8**). The typical soil stratigraphy consisted of black or dark gray, mucky sand to at least 40 cmbs (15.7 inches; Stratum I), at which point crews encountered the water table and excavation terminated.



Figure 13. Overview of Pond 5, view north.

Pioneer Road—East End

The current APE along Pioneer Road extends approximately 590.6 feet (180 meters) farther east than what was tested as part of the 2019 survey (see **Figure 8**). Although the right-of-way is largely clear, the natural vegetation present just outside the unmaintained portion of the corridor consists of dense palmettos, oak, and pines (**Figure 14**). An overhead utility line runs along the west side of the road, and shallow grassy drainage ditches are present along both shoulders. Five shovel tests were excavated in this portion of the APE, all of which were negative for cultural material. Two different soil profiles were noted. Soils in the two easternmost shovel tests consisted of gray fine sand to approximately 10 cmbs (3.9 inches; Stratum I), white fine sand to from 10 to 90 cmbs (3.9 to 35.4 inches; Stratum II), and black spodic soils over 90 cmbs (35.4 inches; Stratum III). The three westernmost shovel tests exhibited dark gray coarse sand to approximately 20 cmbs (7.9 inches; Stratum I), gray sand from 20 to 80 cmbs (7.9 to 31.5 inches; Stratum II), black spodic soils from 80 to 100 cmbs (31.5 to 39.3 inches; Stratum III), and yellowish-brown fine sand over 100 cmbs (39.3 inches; Stratum IV).



Figure 14. Overview of east of Pioneer Road, view east.

Pioneer Road—West End

The current project limits along Pioneer Road extends approximately 1,312.3 feet (400 meters) west of archaeological APE tested as part of the original survey (FMSF Survey No. 26148). Minor widening to the south of the current roadway will necessitate the acquisition of additional right-of-way; as such, the archaeological APE in this area of the project corridor was slightly wider on the southern side of Pioneer Road. Several buried utilities (gas, sewer, etc.) as well as a drainage ditch are located on the north side of the roadway, while the south side was marked with wetland flags (**Figure 15**). Due to buried utilities, no testing could be conducted on the north side; a pedestrian survey was used to inspect the area for evidence of archaeological deposits, and four “no-dig” points were used to document



Figure 15. Overview of west end of Pioneer Road, north side, view west.

Due to buried utilities, no testing could be conducted on the north side; a pedestrian survey was used to inspect the area for evidence of archaeological deposits, and four “no-dig” points were used to document

this survey (see **Figure 8**). Three shovel tests were excavated along the south side of Pioneer Road; all three shovel tests revealed black, mucky sand and terminated in standing water at 10 cmbs (3.9 inches).

No archaeological sites or archaeological occurrences were recorded within the I-95 at Pioneer Trail Update archaeological APE. No further archaeological work is recommended.

Architecture Results

The architectural survey resulted in the identification of two previously recorded historic resources within the I-95 at Pioneer Trail Update APE: Fort Kingsbury to New Smyrna Road (8VO07656) and Pioneer Trail (8VO07660) (see **Figure 3**). These two resources follow the same alignment, and the portions of both resources within the current APE were documented by SEARCH in 2019 (FMSF Survey No. 26148). As a result of that survey, the SHPO determined the portions of 8VO07656 and 8VO07660 within the APE ineligible for listing in the NRHP on July 1, 2019 (SEARCH 2019).

A thorough field check of the project area was undertaken for this CRAS addendum. Based on this field visit, it is the opinion of SEARCH that the conditions of these two linear resources within the project APE has not changed since their previous recordation in 2019, and they remain ineligible for listing in the NRHP. As a result, Resources 8VO07656 and 8VO07660 were not re-evaluated as part of this CRAS addendum. **Figure 16** shows the condition of the modern roadway as observed during the field visit.

CONCLUSIONS

This technical memorandum details the results of a CRAS conducted of proposed interchange improvements to I-95 at Pioneer Trail in Volusia County, Florida. The current study serves as an



Figure 16. Resources 8VO07656 and 8VO07660 within the I-95 at Pioneer Trail Update APE, facing northwest (left) and southeast (right).

addendum to the 2019 SEARCH survey (FMSF Survey No. 26148). The APE for the corridor was defined as the existing right-of-way and was extended to the back or side property lines of adjacent parcels for a distance of no more than 328 feet (100 meters). The APE defined for this project includes the proposed pond footprints plus a 100-foot (30.5-meter) buffer. The archaeological survey was conducted within the proposed pond footprints and the existing right-of-way; the architectural history survey included the entire APE. The cultural resource survey was limited to areas that were not tested as part of the 2019 CRAS (FMSF Survey No. 26148).

The archaeological survey included the excavation of 18 shovel tests within the proposed ponds and untested segments of right-of-way, all of which were negative for cultural material. In addition, five “no-dig” points were used to document the pedestrian survey conducted of areas that were unsafe to test. No archaeological sites or archaeological occurrences were recorded, and no further archaeological survey is recommended.

The architectural survey resulted in the identification of two previously recorded historic resources within the I-95 at Pioneer Trail Update APE: Fort Kingsbury to New Smyrna Road (8VO07656) and Pioneer Trail (8VO07660). These two resources follow the same alignment, and the portions of both resources within the current APE were documented by SEARCH in 2019 (FMSF Survey No. 26148). As a result of that survey, the SHPO determined the portions of 8VO07656 and 8VO07660 within the APE ineligible for listing in the NRHP on July 1, 2019 (SEARCH 2019). Based on the field visit, it is the opinion of SEARCH that the conditions of these two linear resources have not changed since their previous recordation in 2019, and they remain ineligible for listing in the NRHP. As a result, Resources 8VO07656 and 8VO07660 were not re-evaluated as part of this CRAS addendum.

One historic-aged bridge was identified within the APE. The CR 4118 Bridge over I-95 (FDOT Bridge No. 790066) is an example of a post 1945 concrete stringer/multi-beam bridge. Therefore, this bridge fits the description of common bridges within the scope of the 2012 *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* and is excluded from Section 106 consideration (Federal Register 2012:68793). Further discussion of the application of the Program Comment is provided in the Methods section of this document.

In addition, construction of the section of I-95 within the APE began in the early 1960s, thereby constituting a historic-aged roadway. The 2005 *Exemption Regarding Historic Preservation Review Process for Effects to the Interstate Highway System* exempts the Interstate Highway System from Section 106 consideration (Federal Register 2005:11928). Therefore, I-95 was not surveyed and evaluated as part of this CRAS addendum. Further discussion of this exemption also is provided in the Methods section of this document. No additional architectural history survey is recommended.

No NRHP-eligible or -listed resources were identified within the I-95 at Pioneer Trail Update APE. In the opinion of SEARCH, the proposed construction will have no effect on cultural resources listed or eligible for listing in the NRHP. No further work is recommended.

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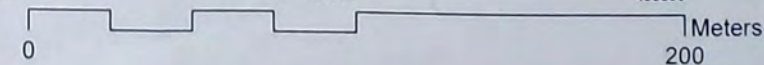
ATTACHMENT A:
MARKED FIELD MAPS

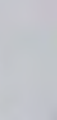
Project #T20102 - I-95 at Pioneer Trail Update, Volusia County - Field Map - Aerial - Page 1 of 7



Grid UTM WGS 84 16N
Major ticks: 100m interval;
Minor ticks: 20m Interval

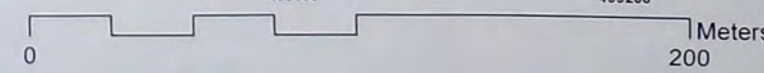
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- Ponds APE
- Ponds Footprint
- Previously Surveyed
- Resource Group





Grid UTM WGS 84 16N
 Major ticks: 100m interval;
 Minor ticks: 20m Interval

- I-95 at Pioneer Trail Update APE
- Ponds APE
- Ponds Footprint
- Previously Surveyed
- Resource Group



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Grid UTM WGS 84 16N
Major ticks: 100m interval;
Minor ticks: 20m Interval

-  I-95 at Pioneer Trail Update APE
-  Ponds APE
-  Ponds Footprint
-  Previously Surveyed
-  Resource Group



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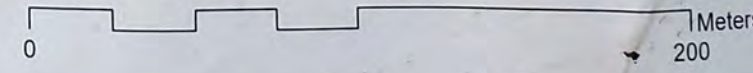


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Minor ticks: 20m Interval

- I-95 at Pioneer Trail Update APE
- Ponds Footprint
- Resource Group
- Ponds APE
- Previously Surveyed



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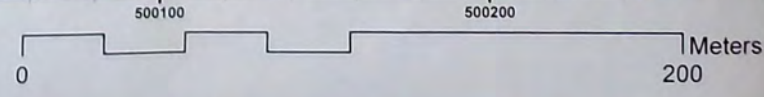


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Minor ticks: 20m Interval

- I-95 at Pioneer Trail Update APE
- Ponds APE
- Ponds Footprint
- Previously Surveyed
- Resource Group





Grid UTM WGS 84 16N
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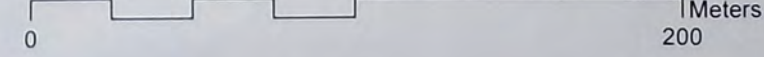
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| I-95 at Pioneer Trail Update APE | Ponds Footprint | Resource Group |
| Ponds APE | Previously Surveyed | |





Grid UTM WGS 84 16N
Major ticks: 100m interval;
Minor ticks: 20m Interval

- I-95 at Pioneer Trail Update APE
- Ponds APE
- Ponds Footprint
- Previously Surveyed
- Resource Group



ATTACHMENT 2:

FDHR 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) CRAS in Support of I-95 Interchange at Pioneer Trail, Volusia County, Florida

Report Title (exactly as on title page) Technical Memorandum: Cultural Resource Assessment Survey Update in Support of Interstate 95 Interchange at Pioneer Trail, Volusia County, Florida

Report Authors (as on title page, last names first) 1. Fish, Jessica 3. Milton, Paetyn
2. Newton, Jason 4. _____

Publication Date (year) 2020 Total Number of Pages in Report (count text, figures, tables, not site forms) 22

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. T20102. Financial Management No. 436292-1.

Supervisors of Fieldwork (even if same as author) Names Jessica Fish

Affiliation of Fieldworkers: Organization Southeastern Archaeological Research City Orlando

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

1. I-95 3. Fort Kingsbury to New Smyrna 5. _____ 7. _____
2. Pioneer Trail 4. _____ 6. _____ 8. _____

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

Name _____ Organization Florida Dept of Transportation - District 5

Address/Phone/E-mail _____

Recorder of Log Sheet Jason Newton Date Log Sheet Completed 8-5-2020

Is this survey or project a continuation of a previous project? No Yes: Previous survey #s (FMSF only) _____

Mapping

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

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

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

1. Name NEW SMYRNA BEACH Year 2018 4. Name _____ Year _____
2. Name SAMSULA Year 2018 5. Name _____ Year _____
3. Name _____ Year _____ 6. Name _____ Year _____

Description of Survey Area

Dates for Fieldwork: Start 7-15-2020 End 7-28-2020 Total Area Surveyed (fill in one) _____ hectares 365.4 acres

Number of Distinct Tracts or Areas Surveyed 1

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

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 Pedestrian survey and shovel testing for archaeological resources; pedestrian survey for architectural 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, uncontrolled 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): Pedestrian survey, aerial maps

Survey Results (cultural resources recorded)

Site Significance Evaluated? Yes No

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

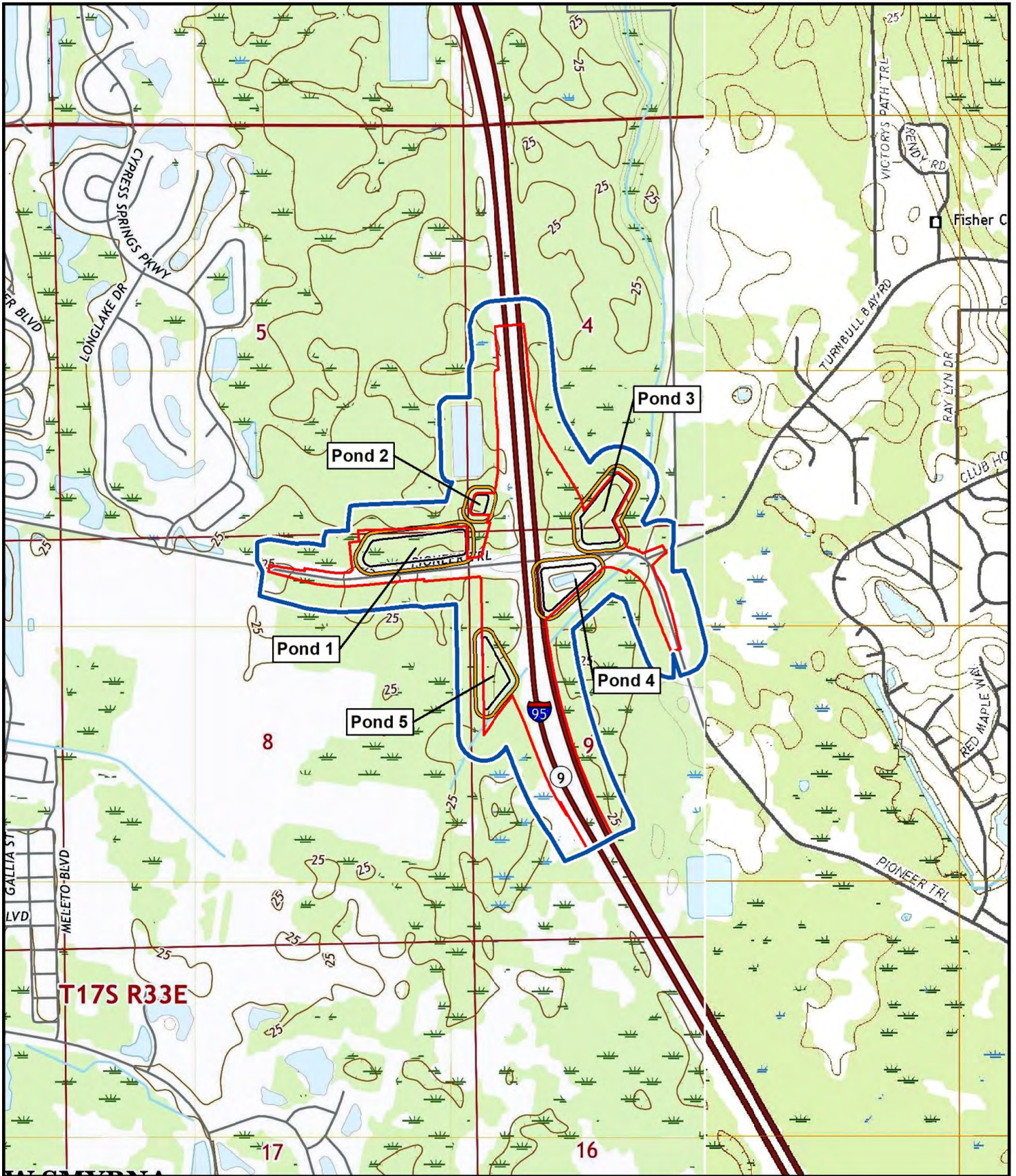
Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8". Attach additional pages if necessary.) _____

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-95 at Pioneer Trail Update APE
- I-95 at Pioneer Trail Update ROW
- I-95 at Pioneer Trail Update Ponds APE
- I-95 at Pioneer Trail Update Ponds Footprint



USGS 7.5' Quadrangle Maps -
New Smyrna Beach, FL & Samsula,
FL (2018)

