



CULTURAL RESOURCE ASSESSMENT SURVEY LPGA BOULEVARD FROM US 92 (SR 600) TO WILLIAMSON BOULEVARD PROJECT DEVELOPMENT & ENVIRONMENT STUDY

PONDS ADDENDUM

FPID: 448456-1-22-01

Volusia County, Florida

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 May 26, 2022, and executed by the Federal Highway Administration and FDOT.

July 2023



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Executive Summary

This report presents the findings of a Phase I cultural resource assessment survey for 28 preferred pond locations associated with a Project Development & Environment Study for LPGA Boulevard in Volusia County, Florida. The Florida Department of Transportation, District 5, is proposing to construct 28 ponds for the LPGA Boulevard project from US 92 (State Road 600) to Williamson Boulevard. This survey serves as an addendum to *Cultural Resource Assessment Survey of LPGA Boulevard from US 92 (SR 600) to Williamson Boulevard Project Development & Environment Study Volusia County, Florida* (Florida Master Site File Survey Number pending; Kinchen et al. 2023). The current survey is limited to archaeological and architectural history survey of 28 preferred pond locations. The total area for the current survey is 42.23 acres (18.83 hectares). This project is federally funded.

The archaeological area of potential effects (APE) was limited to the proposed pond footprints. The architectural history APE included the proposed pond footprints and was extended to no more than 100.0 feet (30.5 meters) from the proposed footprint to consider viewshed effects to aboveground resources. For the purposes of this report, “APE” refers to the combined archaeological APE and architectural history APE.

The archaeological survey consisted of systematic shovel testing within the proposed pond footprints; pedestrian survey was conducted where field conditions precluded subsurface testing. Twenty shovel tests were excavated within the APE, and all were negative for cultural material. SEARCH recommends no further archaeological work.

The architectural resources within the APE were recorded and evaluated during the previous report for which this report serves as an addendum (Kinchen et al. 2023). As such, no architectural history work was completed for the current survey. SEARCH recommends no further architectural history survey.

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Introduction

This report presents the findings of a Phase I cultural resource assessment survey (CRAS) for 28 preferred pond locations associated with improvements to LPGA Boulevard in Volusia County, Florida (**Figure 1**). The Florida Department of Transportation (FDOT), District 5, is proposing to construct 28 ponds (1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, 9E, 11A, 12C/13A, 14B, 14C, 14D, 14E, 15A, 15B, 15C, 15D, 16A, 16B, 16C, 16D, 17A, 17B, and 17C) for the LPGA Boulevard project from US 92 (State Road [SR] 600) to Williamson Boulevard. This survey serves as an addendum to *Cultural Resource Assessment Survey of LPGA Boulevard from US 92 (SR 600) to Williamson Boulevard Project Development & Environment Study Volusia County, Florida* (Florida Master Site File [FMSF] Survey Number pending; Kinchen et al. 2023). The current survey is limited to archaeological and architectural history survey of the 28 proposed ponds. The total area for the current survey is 42.23 acres (ac) (18.83 hectares [ha]). The discussions of paleoenvironment, regional precontact and postcontact history, historic map and aerial review, research design, and field and laboratory methods provided in the original CRAS apply to the current survey and are not repeated in this report. This project is federally funded.

The area of potential effects (APE) was developed to consider visual, audible, and atmospheric effects that the project may have on historic resources. The archaeological APE was defined as the proposed pond footprints, while the architectural history APE included the pond footprints in addition to a 100.0-foot (ft) (30.5-meter [m]) buffer (**Figure 2**). For the purposes of this report, “APE” refers to the combined archaeological APE and architectural history APE.

The purpose of the survey was to locate, identify, and bound archaeological resources, historic buildings or structures, and potential historic districts within the project’s APE and assess their potential for listing in the National Register of Historic Places (NRHP). This study was conducted to comply with Public Law 113-287 (Title 54 US Code), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1974, as amended. The study also meets the regulations for implementing National Historic Preservation Act Section 106 found in 36 Code of Federal Regulations Part 800 (*Protection of Historic Properties*). This study also 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 Manual (revised July 2020) and 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*. The principal investigators meet the Secretary of the Interior’s *Standards and Guidelines for Archeology and Historic Preservation* (48 Federal Register 44716-42).

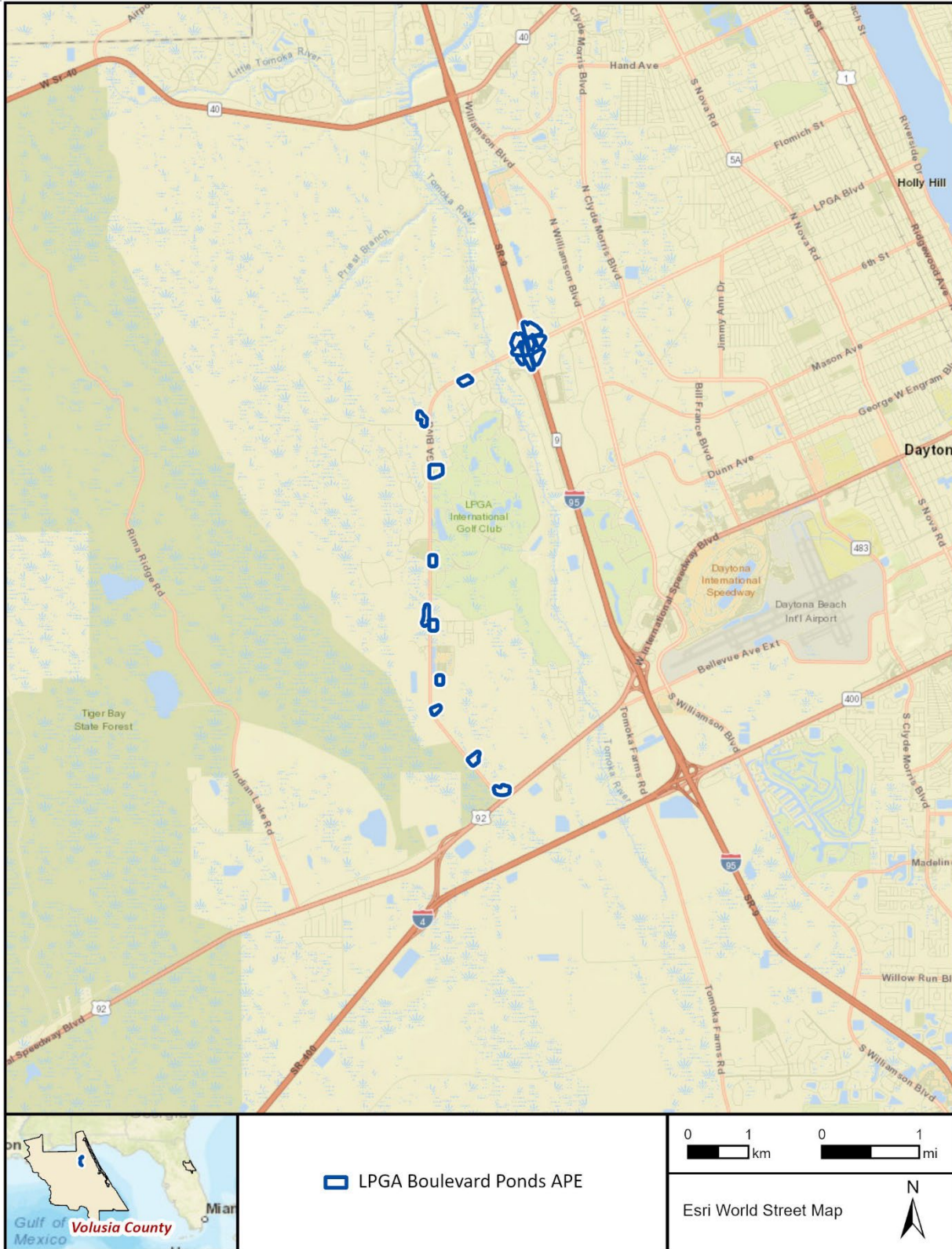


Figure 1. LPGA Boulevard ponds project location, Volusia County, Florida.



Figure 2. The LPGA Boulevard ponds archaeological APE and architectural history APE in Volusia County, Florida.

Jessica Fish, MSt, RPA, served as the principal investigator for archaeology, and Mikel Travisano, MS, served as the principal investigator for architectural history. Caroline Steffy, BA, wrote the report. Tyler Kolyno, BA, Eric Wyrock, BA, Kaleb Wells, BA, and Brianna Jean-Baptiste, BA, conducted the fieldwork. All field maps and figures were created by Angelica Costa, MA. Elizabeth Chambless, MS, RPA, conducted the quality-control review, and Ali Sundook, BA, edited and produced the document.

Project Location and Environment

Location and Modern Conditions

The APE consists of 28 proposed pond footprints (1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, 9E, 11A, 12C/13A, 14B, 14C, 14D, 14E, 15A, 15B, 15C, 15D, 16A, 16B, 16C, 16D, 17A, 17B, and 17C) along LPGA Boulevard in the city of Daytona Beach in Volusia County, Florida (**Table 1**). The area bordering the APE is characterized by modern commercial development; sparse, recent residential subdivisions; and undeveloped wooded parcels. Much of the area contains planted pine forest with low-lying seasonal wetlands. Several man-made drainage ponds border the LPGA Boulevard corridor between its interchange with Interstate 95 (I-95) and International Tennis Drive. Elevations range from approximately 15.0 ft (4.6 m) to 30.0 ft (9.1 m) above mean sea level.

Geologically, the APE is a part of the larger Volusia Ridge Sets physiographic province. This province is described as accreted coastal deposits consisting of four distinct parts: a flatwoods plain of subdued beach ridge sets, an eastern boundary sand ridge, an eastern set of beach ridges forming a flatwoods plain, and the high coastal ridge. The plains are underlain by fine sands and silty sand with some clay, and the ridges have well drained sand soils (Brooks 1981). Soil drainage within the archaeological APE varies with drainage classes ranging from very poorly drained to somewhat poorly drained (**Figure 3**). The Tomoka River intersects LPGA Boulevard just west of the interchange with I-95 and is approximately 0.2 miles (mi) (0.3 kilometers [km]) to the west of Pond 14C. This river flows to the north and empties into the Halifax River. Numerous unnamed ponds and drainage canals are also in the vicinity of the project.

Table 1. Proposed Ponds of the LPGA Boulevard Ponds APE.

Pond	Size (ac/ha)	Public Land Survey System Coordinates	Location	Soils
1B	1.22/0.49	Township 15 South, Range 32 East, Section 33	North of the intersection of LPGA Boulevard and International Speedway Boulevard. Abuts Pond 1D to the east.	Poorly drained Pomona fine sand
1D	2.47/1.00	Township 15 South, Range 32 East, Section 33	North of the intersection of LPGA Boulevard and International Speedway Boulevard. Abuts Pond 1B to the west.	Very poorly drained and poorly drained Pomona fine sand and Samsula muck
2B/3A	2.62/1.06	Township 15 South, Range 32 East, Section 32	On the east side of LPGA Boulevard, approximately 0.9 mi (1.4 km) northwest of the intersection of	Very poorly drained and poorly drained Pomona fine sand and Pompano-Placid

Pond	Size (ac/ha)	Public Land Survey System Coordinates	Location	Soils
			LPGA Boulevard and International Speedway Boulevard.	mineral isolated swamps and marshes
4B	1.32/0.53	Township 15 South, Range 32 East, Section 29	Northeast of the intersection of LPGA Boulevard and Royal County Boulevard.	Poorly drained Pomona fine sand and Pineda fine sand
5B	1.39/0.56	Township 15 South, Range 32 East, Section 29	On the east side of LPGA Boulevard, just south of Welshinger-Butler Circle.	Very poorly drained and poorly drained Pomona fine sand and Pompano-Placid mineral isolated swamps and marshes
6C	2.12/0.86	Township 15 South, Range 32 East, Section 29	Southeast of the intersection with LPGA Boulevard and Slim Pine Road. East of Pond 6E.	Very poorly drained and poorly drained Pompano-Placid mineral isolated swamps and marshes, Samsula muck, and Smyrna fine sand
6E	0.40/0.16	Township 15 South, Range 32 East, Sections 20 and 29	Southwest of the intersection with LPGA Boulevard and Slim Pine Road. South of Pond 7A and west of Pond 6C.	Very poorly drained Pompano-Placid mineral isolated swamps and marshes and Samsula muck
7A	1.51/0.61	Township 15 South, Range 32 East, Section 20	Northwest of the intersection with LPGA Boulevard and Slim Pine Road. North of Pond 6E.	Very poorly drained and poorly drained Pompano-Placid mineral isolated swamps and marshes, Samsula muck, and Pomona fine sand
8B	1.82/0.74	Township 15 South, Range 32 East, Section 20	On the east side of LPGA Boulevard. Approximately 0.3 mi (0.5 km) south of International Golf Drive.	Poorly drained Pomona fine sand

Pond	Size (ac/ha)	Public Land Survey System Coordinates	Location	Soils
9C/10A	3.47/1.40	Township 15 South, Range 32 East, Section 17	On the east side of LPGA Boulevard. Approximately 0.4 mi (0.6 km) south of Tournament Drive.	Poorly drained Pineda fine sand and Pomona fine sand
9E	2.09/0.85	Township 15 South, Range 32 East, Section 17	On the east side of LPGA Boulevard. Approximately 0.4 mi (0.6 km) south of Tournament Drive. Abuts Pond 9C/10A.	Poorly drained Pineda fine sand and Pomona fine sand
11A	1.56/0.63	Township 15 South, Range 32 East, Section 8	Northwest of the intersection of LPGA Boulevard and Tournament Drive.	Very poorly drained and poorly drained Pompano-Placid mineral isolated swamps and marshes and Pomona fine sand
12C/13 A	2.48/1.00	Township 15 South, Range 32 East, Section 8	Southeast of the intersection of LPGA Boulevard and Priest Bridge.	Poorly drained Farmton fine sand
14B	2.47/1.00	Township 15 South, Range 32 East, Section 9	Overlapping the northwest cloverleaf on the LPGA Boulevard and I-95 interchange.	Somewhat poorly drained and poorly drained Arents and Immokalee sand
14C	0.53/0.22	Township 15 South, Range 32 East, Section 9	On the western edge of the LPGA Boulevard and I-95 interchange. Abuts Pond 15A to the north.	Poorly drained Immokalee sand
14D	0.45/0.18	Township 15 South, Range 32 East, Section 9	In the northwest quadrant of the cloverleaf on the LPGA Boulevard and I-95 interchange. Just east of Pond 14B. Overlaps an existing pond.	Poorly drained Immokalee sand
14E	0.17/0.07	Township 15 South, Range 32 East, Section 9	West of I-95 at the interchange with LPGA Boulevard. Abuts Pond 15B to the north.	Poorly drained Immokalee sand
15A	0.83/0.34	Township 15 South, Range	On the western edge of the LPGA Boulevard and	Poorly drained Immokalee sand

Pond	Size (ac/ha)	Public Land Survey System Coordinates	Location	Soils
		32 East, Section 9	I-95 interchange. Abuts Pond 14C to the south.	
15B	0.76/0.31	Township 15 South, Range 32 East, Section 9	West of I-95 at the interchange with LPGA Boulevard. Abuts Pond 14E to the south.	Poorly drained Immokalee sand
15C	0.81/0.33	Township 15 South, Range 32 East, Section 9	In the southwest quadrant of the cloverleaf on the LPGA Boulevard and I-95 interchange. South of Pond 15A and west of Pond 15D.	Poorly drained Immokalee sand
15D	1.56/0.63	Township 15 South, Range 32 East, Section 9	West of I-95 in the southwest quadrant of the cloverleaf on the LPGA Boulevard and I-95 interchange. East of Pond 15C. Overlaps an existing pond.	Poorly drained Immokalee sand and Farnton fine sand
16A	1.96/0.79	Township 15 South, Range 32 East, Sections 4 and 9	East of I-95 in the northeast quadrant of the cloverleaf on the LPGA Boulevard and I-95 interchange. West of Pond 16B. Overlaps an existing pond.	Poorly drained Pomona fine sand
16B	3.07/1.24	Township 15 South, Range 32 East, Sections 4 and 9	In the northeast quadrant of the cloverleaf on the LPGA Boulevard and I-95 interchange. East of Pond 16A.	Very poorly drained and poorly drained Pomona-St. Johns fine sand and Pomona fine sand
16C	0.72/0.29	Township 15 South, Range 32 East, Section 9	East of I-95 at the interchange with LPGA Boulevard. Abuts Pond 17A to the north.	Poorly drained Immokalee sand and Pomona fine sand
16D	0.92/0.37	Township 15 South, Range 32 East, Section 9	On the eastern edge of the LPGA Boulevard and I-95 interchange. Abuts Pond 17B to the north.	Very poorly drained Pomona fine sand
17A	0.41/0.17	Township 15 South, Range	East of I-95 at the interchange with LPGA	Poorly drained Immokalee sand and Pomona fine sand

Pond	Size (ac/ha)	Public Land Survey System Coordinates	Location	Soils
		32 East, Section 9	Boulevard. Abuts Pond 16C to the south.	
17B	0.96/0.39	Township 15 South, Range 32 East, Section 9	On the eastern edge of the LPGA Boulevard and I-95 interchange. Abuts Pond 16D to the south.	Very poorly drained and poorly drained Pomona-St. Johns fine sand and Pomona fine sand
17C	3.38/1.37	Township 15 South, Range 32 East, Section 9	In the southeast quadrant of the cloverleaf on the LPGA Boulevard and I-95 interchange.	Very poorly drained and poorly drained Pomona-St. Johns fine sand and Pomona fine sand



Figure 3. Soil drainage within the LPGA Boulevard Ponds archaeological APE.

Background Research

Florida Master Site File Review

SEARCH reviewed FMSF data from April 2023 to identify previously recorded cultural resources within the current project APE. Thirteen previous cultural resource surveys have been conducted within the APE (**Table 2; Figure 4**). Of these, the most relevant to the current survey are Survey No. 2791, Survey No. 3214, and the survey conducted by SEARCH in 2023 for which the current report serves as an addendum (Kinchen et al. 2023).

FMSF Survey No. 2791 was an archaeological and architectural history survey conducted in 1991 in support of proposed improvements to property east of the LPGA Boulevard corridor (Estabrook and Austin 1991). Field methods included pedestrian survey, surface collection, and shovel testing at varying intervals. The survey identified one archaeological site, which is located approximately 0.6 mi (1.0 km) southwest of Pond 15D.

FMSF Survey No. 3214 was conducted in 1992 (Austin and Weant 1992) and was an addendum to FMSF Survey No. 2791. Survey methods included pedestrian survey, surface collection, and shovel testing at 25 and 50 m (82 and 164 ft) intervals with supplemental judgmentally placed shovel tests. The survey identified nine archaeological sites, none of which are located within the current APE.

SEARCH conducted a CRAS in 2023 for which the current project serves as an addendum (Kinchen et al. 2023). Field methods included systematic shovel testing, pedestrian survey, and the recordation of pre-1978 historic resources. Pedestrian archaeological survey was conducted within proposed pond footprints 14B, 14C, 14D, 14E, 15A, 15B, 15C, 15D, 16A, 16B, 16C, 16D, 17A, 17B, and 17C. Excavation was not possible within those locations due to disturbance and buried utilities, and pedestrian survey was implemented. Testing of the corridor resulted in the identification of three archaeological sites (8VO10479, 8VO10480, and 8VO10481), two archaeological occurrences (AO-1 and AO-2), and one historic resource (8VO10488). Resource 8VO10488 (Tomoka River to Bennett Swamp Canal) intersects the current project APE at Ponds 6C, 6E, and 7A (**Figure 5**).

Table 2. Previous Cultural Resources Assessment Surveys within the LPGA Boulevard Ponds APE.

FMSF No.	Title	Year	Consultant/Author
2472	<i>Archaeological/Historical Resources Assessment Survey: 11th Street Interchange at I-95 in Holly Hill Volusia County, Florida</i>	1990	Browning, William D., and Roy A. Jackson
2791	<i>Cultural Resource Assessment Survey of the Consolidated-Tomoka Land Company's Proposed LPGA DRI Project Site, Volusia County, Florida</i>	1991	Estabrook, Richard W., and Robert J. Austin

FMSF No.	Title	Year	Consultant/Author
3214	<i>Cultural Resource Assessment Survey of the Consolidated-Tomoka Land Company's Proposed LPGA DRI Project Site (Phase 2), Volusia County, Florida</i>	1992	Austin, Robert J., and Laura M. Weant
3931	<i>An Intensive Cultural Resource Assessment Survey of the I-95 Widening 11th Street to State Road 40 Volusia County, Florida</i>	1994	Ashley, Keith, and Greg Smith
4646	<i>A Cultural Resource Assessment Survey of Interstate 95 From a Point 0.32 Km North of U.S. 92 in Volusia County to a Point 0.64 Km North of the St. Johns County Line in Flagler County, Florida</i>	1995	Florida Archaeological Services, Inc.
9245	<i>Phase 1 Cultural Resource Assessment Survey of the Bayberry Lakes Development Property, Volusia County, Florida</i>	2003	Stokes, Anne
12023	<i>Cultural Resource Assessment Survey, LPGA Boulevard Extension Project Development and Environment (PD&E) Study from CR 415 near the Volusia County Landfill Entrance to SR 600 (US 92) at LPGA Boulevard, Volusia County, Florida</i>	2005	Deming, Joan
13739	<i>A Phase 1 Cultural Resource Assessment Survey of the Proposed Improvements to SR 600 (US 92) from the I-4 Ramps to Tomoka Farms Road in Volusia County</i>	2006	Chambless, Elizabeth
16074	<i>An Intensive Cultural Resource Assessment Survey of the City of Daytona Beach Transmission Line Corridor, Volusia County, Florida</i>	2008	Arbuthnot, Michael, and Brian Marks
21696	<i>Cultural Resource Assessment Survey of the Minto Tract, Volusia County, Florida</i>	2015	ACI
25508	<i>Cultural Resource Assessment Survey of the ICI Option Parcel, Volusia County, Florida</i>	2018b	ACI
28310	<i>Cultural Resource Assessment Survey for the SR 600 Improvements, Volusia County, Florida</i>	2022	Matusik et al.
TBD	<i>Cultural Resource Assessment Survey of LPGA Boulevard from US 92 (SR 600) to Williamson Boulevard Project Development & Environment Study Volusia County, Florida</i>	2023	Kinchen et al.

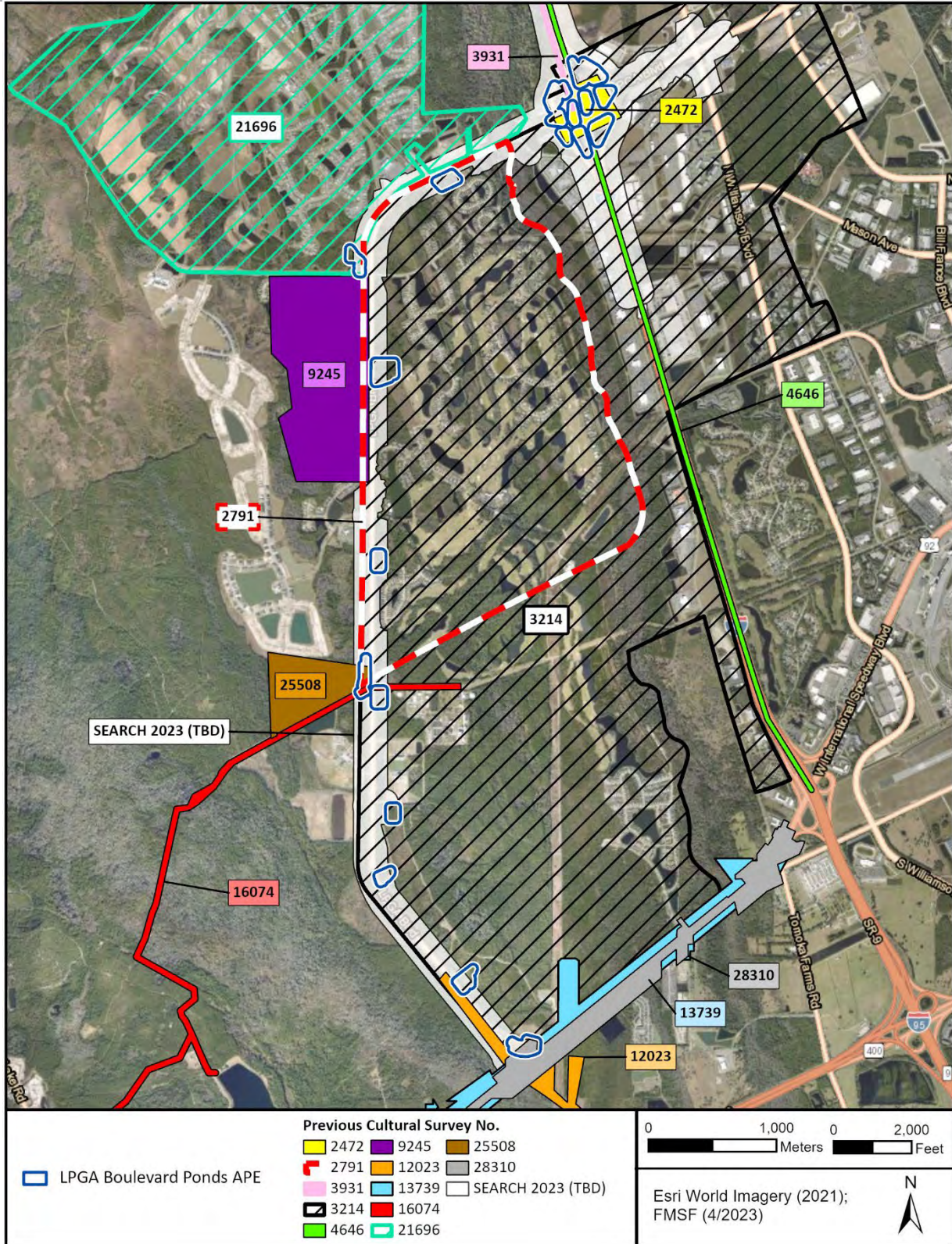


Figure 4. Previously conducted surveys within the LPGA Boulevard ponds APE.

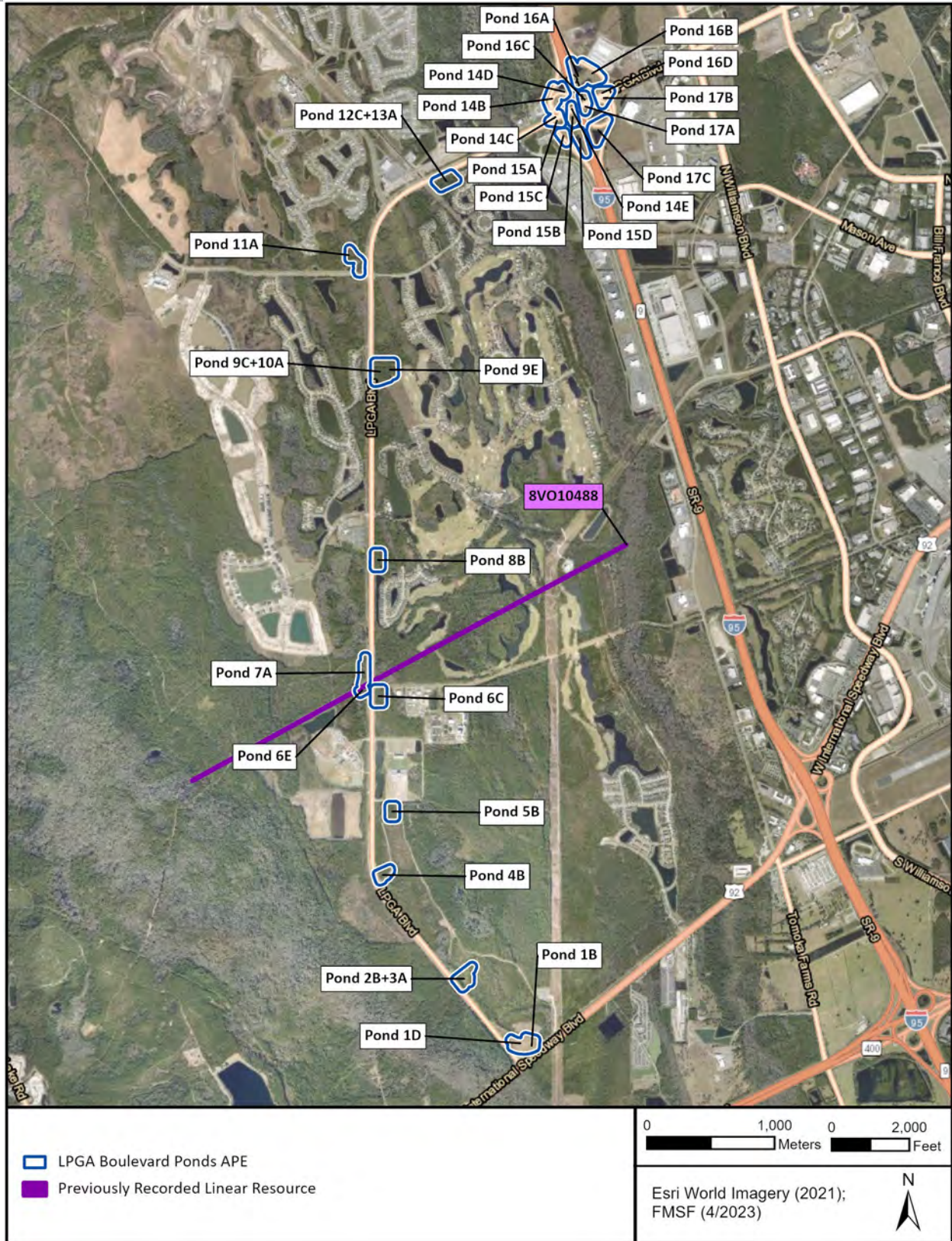


Figure 5. Previously recorded cultural resources within the LPGA Boulevard ponds APE.

Linear resource 8VO10488 (Tomoka River to Bennett Swamp Canal) is a canal that was constructed between 1943 and 1952 to facilitate drainage in the area (Kinchen et al. 2023). It runs northeast to southwest, connecting the Tomoka River and Bennet Swamp, and intersects the current project APE at Ponds 6C, 6E, and 7A. This resource has been recommended ineligible for listing in the NRHP by the State Historic Preservation Officer.

The FMSF review also indicates that no other previously recorded resources have been documented within the LPGA Boulevard ponds APE.

NRHP Criteria

Cultural resources identified within the overall APE were evaluated according to the criteria for listing in the NRHP. As defined by the National Park Service, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events or activities that have made a significant contribution to the broad patterns of our history; or
- B. that are associated with the lives of persons significant in our past; or
- C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. that have yielded, or may be likely to yield, information important in precontact or postcontact history.

NRHP-eligible districts must possess a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. NRHP-eligible districts and buildings must also possess historic significance, historic integrity, and historical context.

Cultural Resource Potential

Based on an examination of environmental variables (soil drainage, access to wetlands and marine resources, and relative elevation) and the results of previously conducted surveys (FMSF Survey Nos. 2791, 3214, and Kinchen et al. 2023), the potential for Native American archaeological sites to be within the APE was generally low. While the previously conducted surveys have identified Native American sites in proximity to the APE, the soils within the proposed pond footprints are generally poorly drained with relatively low elevations. Additionally, much of the LPGA Boulevard right-of-way, such as the I-95 interchange, has undergone extensive disturbance due to road construction and maintenance and is unlikely to contain intact archaeological deposits.

The potential for historic-period cultural resources to be within the APE was also low; however, Pond 4B had moderate potential due to the results from the previously conducted 2023 survey (Kinchen et al. 2023), which identified Resource 8VO10481, a historic scatter, approximately 132.5 ft (40.4 m) southwest of the pond footprint. The remainder of the APE had low potential

for historic-period cultural resources based on the 2023 survey that identified no other historic resources within the APE.

Survey Methods

Curation

The original maps and field notes are presently housed at the Newberry, Florida, SEARCH office. The original maps and field notes will be turned over to FDOT, District 5, upon project completion; copies will be retained by SEARCH.

Procedures to Deal with Unexpected Discoveries

Every reasonable effort was made during this investigation to identify and evaluate possible locations of Native American and historic archaeological sites; however, the possibility exists that evidence of cultural resources may 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 precontact or historic pottery, stone tools, bone or shell tools, historic trash pits, and historic building foundations. Should potential cultural artifacts or features be uncovered during the excavation of the project area, representatives of FDOT, District 5, will assist in the identification and preliminary assessment of the resources. 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 the state archaeologist should be contacted per the requirements of Chapter 872.05, Florida Statutes.

Results

Archaeological Results

The archaeological APE consists of 28 proposed pond footprints (1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, 9E, 11A, 12C/13A, 14B, 14C, 14D, 14E, 15A, 15B, 15C, 15D, 16A, 16B, 16C, 16D, 17A, 17B, and 17C) along the LPGA Boulevard corridor between US 92 (SR 600) and Williamson Boulevard in Volusia County, Florida. Most of the APE is undeveloped and contains wooded parcels; however, the northern end of the APE (Ponds 14B, 14C, 14D, 14E, 15A, 15B, 15C, 15D, 16A, 16B, 16C, 16D, 17A, 17B, and 17C) has been disturbed by development of the I-95 interchange. This area contains buried utilities, has extensive slope, or is inundated.

Table 3 provides a summary of the archaeological results within each pond location. The field visit confirmed the artificial and disturbed nature of the soils within the northern end of the APE at the interchange with I-95. Excavation was not possible at Ponds 14B, 14C, 14D, 14E, 15A, 15B, 15C, 15D, 16A, 16B, 16C, 16D, 17A, 17B, and 17C due to inundation, ditches, buried utilities, slope, and disturbance (**Figure 6**). Additionally, evidence of active construction was observed at the location of Pond 12C/13A, and Pond 11A was inundated (**Figure 6**). In total, 20 shovel tests were excavated in the archaeological APE for the current field effort, and all were negative for cultural material (**Figure 7**). Marked field maps showing the location of shovel tests, buried utilities, and other disturbances identified in the current survey are included in **Appendix A**. An FDHR survey log sheet is provided in **Appendix B**. Further discussion of archaeological testing within the pond footprints is continued below.

No archaeological sites or occurrences were recorded, and SEARCH recommends no further work for the LPGA Boulevard ponds project.

Table 3. Results of Archaeological Testing in the LPGA Boulevard Ponds Update APE.

Location	Total Shovel Tests	Primary Reason Precluding Excavation	Recommendations
1B	1	N/A	No further work.
1D	2	N/A	No further work.
2B/3A	3	N/A	No further work.
4B	2	N/A	No further work.
5B	1	N/A	No further work.
6C	2	N/A	No further work.
6E	1	N/A	No further work.
7A	2	N/A	No further work.
8B	2	N/A	No further work.
9C/10A	2	N/A	No further work.
9E	2	N/A	No further work.

Location	Total Shovel Tests	Primary Reason Precluding Excavation	Recommendations
11A	0	Inundation	No further work.
12C/13A	0	Active construction	No further work.
14B	0	Ditch	No further work.
14C	0	Buried utilities	No further work.
14D	0	Slope	No further work.
14E	0	Slope	No further work.
15A	0	Buried utilities	No further work.
15B	0	Inundation	No further work.
15C	0	Inundation	No further work.
15D	0	Inundation	No further work.
16A	0	Disturbance	No further work.
16B	0	Disturbance	No further work.
16C	0	Slope	No further work.
16D	0	Slope	No further work.
17A	0	Slope	No further work.
17B	0	Ditch	No further work.
17C	0	Slope	No further work.
Total	20		



Figure 6. Representative views precluding excavation within the APE. Top left: slope and inundation within Pond 14D, view south. Top right: utilities and inundation within Pond 15C, view east. Center left: heavily disturbed landform with inundation within Pond 16A, view north. Center right: ditch with slope within Ponds 16D and 17B, view south. Bottom left: active construction within the footprint of Ponds 12C and 13A, view east. Bottom right: environment and standing water on surface within the footprint of Pond 11A, view south.



Figure 7. Results of testing within the LPGA Boulevard ponds archaeological APE.

Ponds 1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, and 9E

The footprints of Ponds 1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, and 9E cover 19.19 ac (9.50 ha). Shovel testing was conducted at low-probability intervals (328 ft [100 m]) in each footprint with the exception of the western portion of Pond 4B, which was tested at moderate-probability intervals (164 ft [50 m]) within 328 ft (100 m) of site 8VO10481 and at a low-probability throughout the remainder of the footprint. Vegetation within these footprints consisted predominately of sparsely wooded areas with planted pine (**Figure 8**); however, Ponds 1B and 1D were within open, grassy areas, and an electrical line corridor ran through the footprint of Pond 9C/10A.

Twenty shovel tests were excavated within these pond footprints (see **Figure 7**). None of these tests contained cultural materials, and no archaeological sites or occurrences were identified within Ponds 1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, or 9E.

Soils within these pond footprints generally consisted of gray (10YR 6/1) sand from 0 to 25 centimeters below surface (cmbs) (0 to 10 inches below surface [inbs]; Stratum I), light gray (10YR 7/1) sand from 25 to 44 cmbs (10 to 17 inbs; Stratum II), and black (10YR 2/1) sand from 53 to 93 cmbs (17 to 37 inbs; Stratum III) (**Figure 9**). Shovel tests terminated due to inundation between 40 and 93 cmbs (16 to 37 inbs) (n=5), sterile substratum between 50 and 95 cmbs (20 to 37 inbs) (n=2), compaction impasse at spodic soils between 50 and 70 cmbs (20 to 28 inbs) (n=8), or upon reaching a maximum depth of 100 cmbs (39 inbs) (n=5).



Figure 8. Example of environmental conditions within Ponds 1B, 1D, 2B/3A, 4B, 5B, 6C, 6E, 7A, 8B, 9C/10A, and 9E. Top: environmental overview of Pond 4B, view south. Bottom: environmental overview of Pond 9E, view east.



Figure 9. Typical shovel test profile, view north.

Architectural Survey

Because SEARCH had recently documented the historic resources within the APE during the original corridor survey for the present project, no further architectural history work was conducted for the current survey.

Conclusion and Recommendations

This report presents the findings of a Phase I CRAS for 28 preferred pond locations associated with a Project Development & Environment Study for LPGA Boulevard in Volusia County, Florida. The FDOT, District 5, is proposing to construct 28 ponds for the LPGA Boulevard project from US 92 (State Road 600) to Williamson Boulevard. This survey serves as an addendum to *Cultural Resource Assessment Survey of LPGA Boulevard from US 92 (SR 600) to Williamson Boulevard Project Development & Environment Study Volusia County, Florida* (FMSF No. pending; Kinchen et al. 2023). The current survey is limited to archaeological and architectural history survey of 28 preferred pond locations. The total area for the current survey is 42.23 ac (18.83 ha). This project is federally funded.

The archaeological survey consisted of systematic shovel testing within the proposed pond footprints and pedestrian survey where field conditions precluded subsurface testing. Twenty shovel tests were excavated within the APE, and all were negative for cultural material. SEARCH recommends no further archaeological work.

The architectural resources within the APE were recorded and evaluated during the previous report for which this report serves as an addendum (Kinchen et al. 2023). As such, no architectural history work was completed for the current survey. SEARCH recommends no further architectural history survey.

No NRHP-listed or eligible cultural resources were identified within the project APE. SEARCH recommends no further cultural resources work.

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


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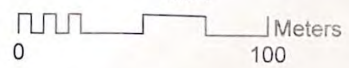
APPENDIX A

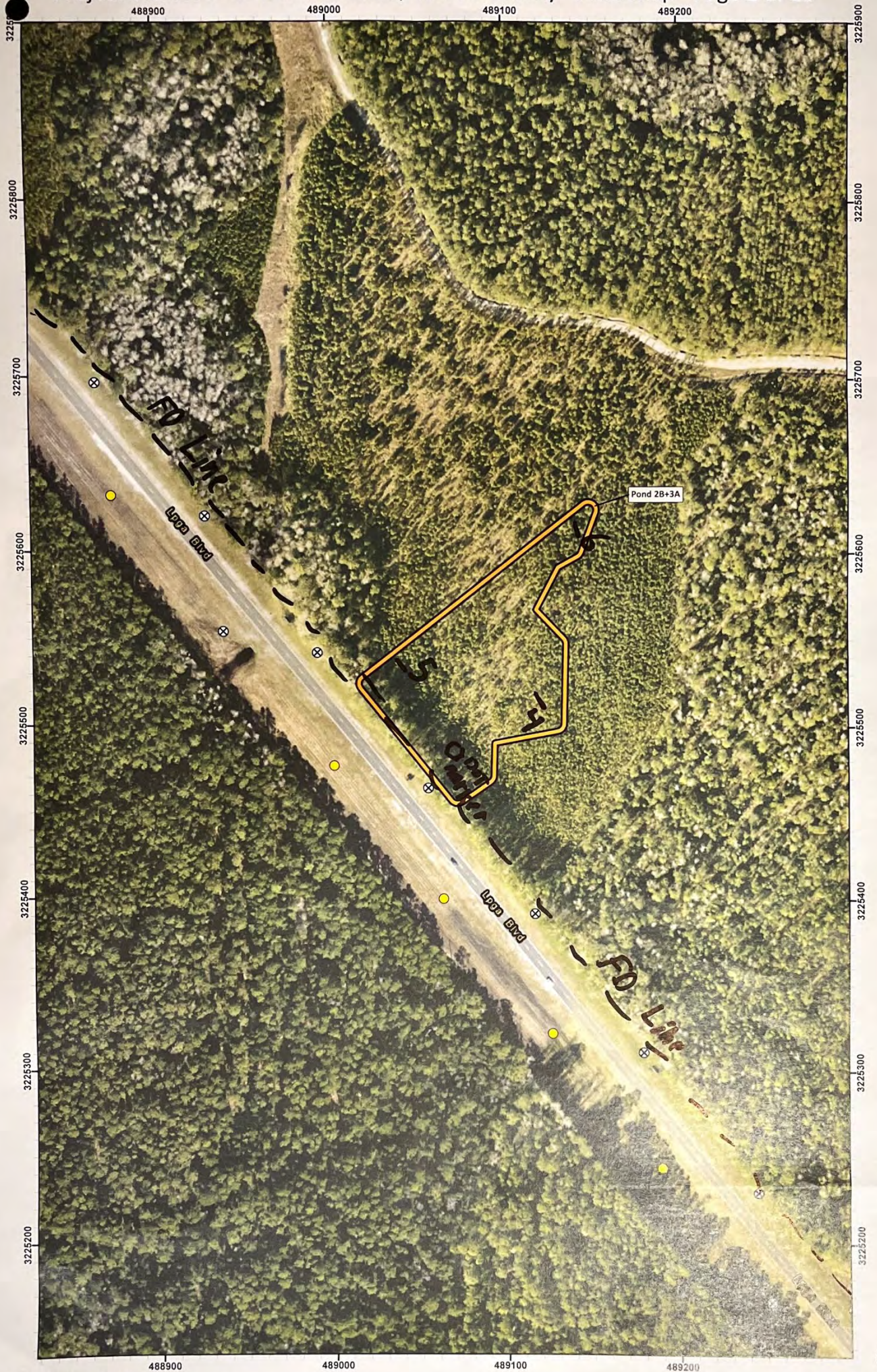
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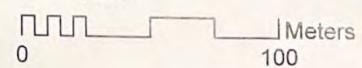
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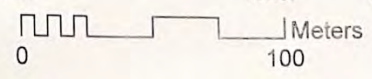
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- Prev. Rec. Archaeological Site
- Prev. Positive STP
- Prev. Negative STP
- Prev. No-Dig
- Prev. No-Dig





Grid UTM WGS 84 17N
Major ticks: 100m Interval;
Minor ticks: 10m Interval

LPGA Boulevard Ponds Archaeological APE
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Prev. No-Dig

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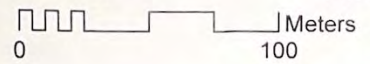
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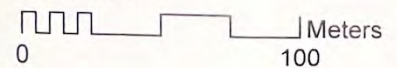
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





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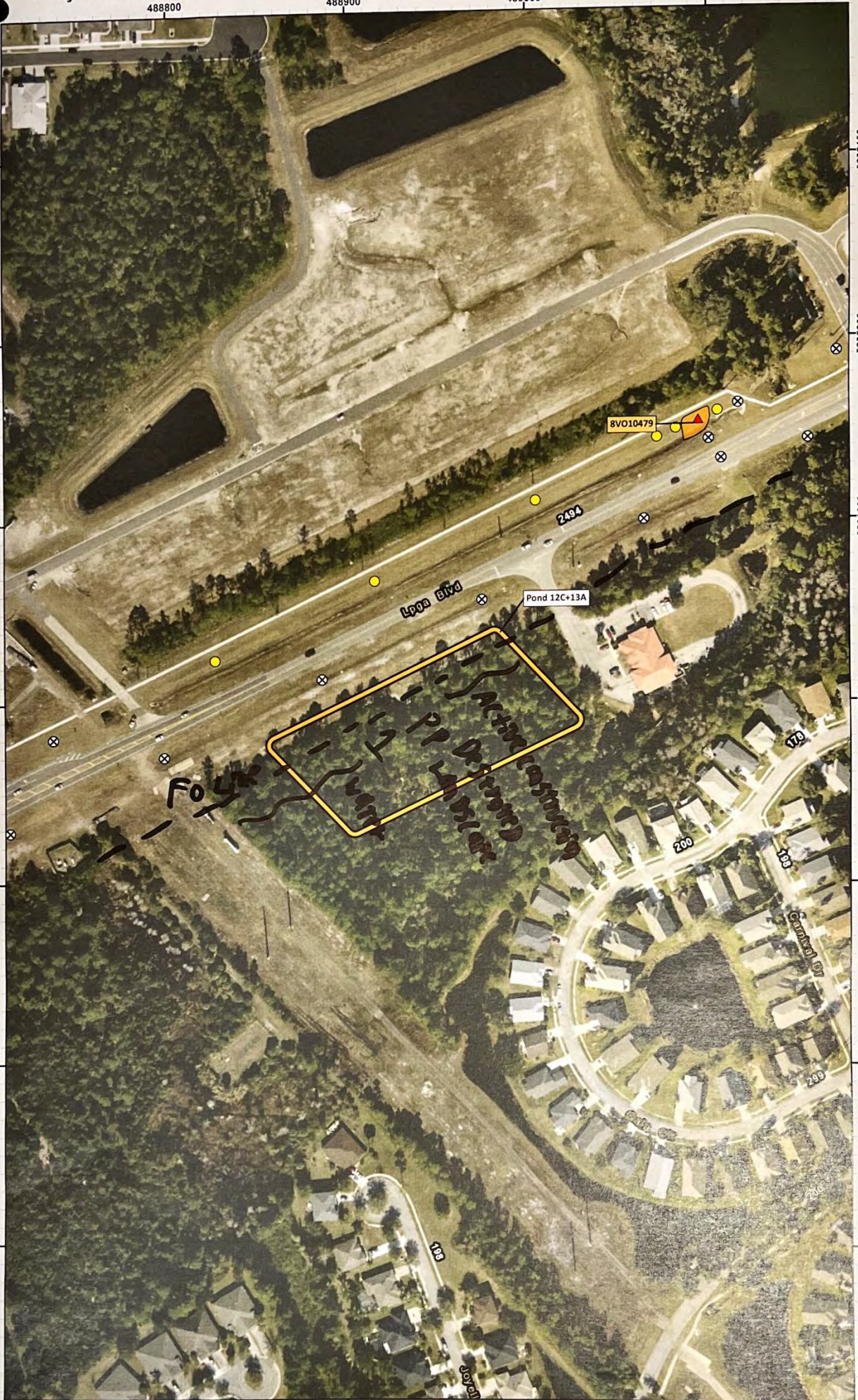
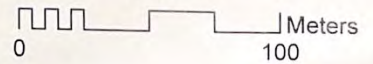
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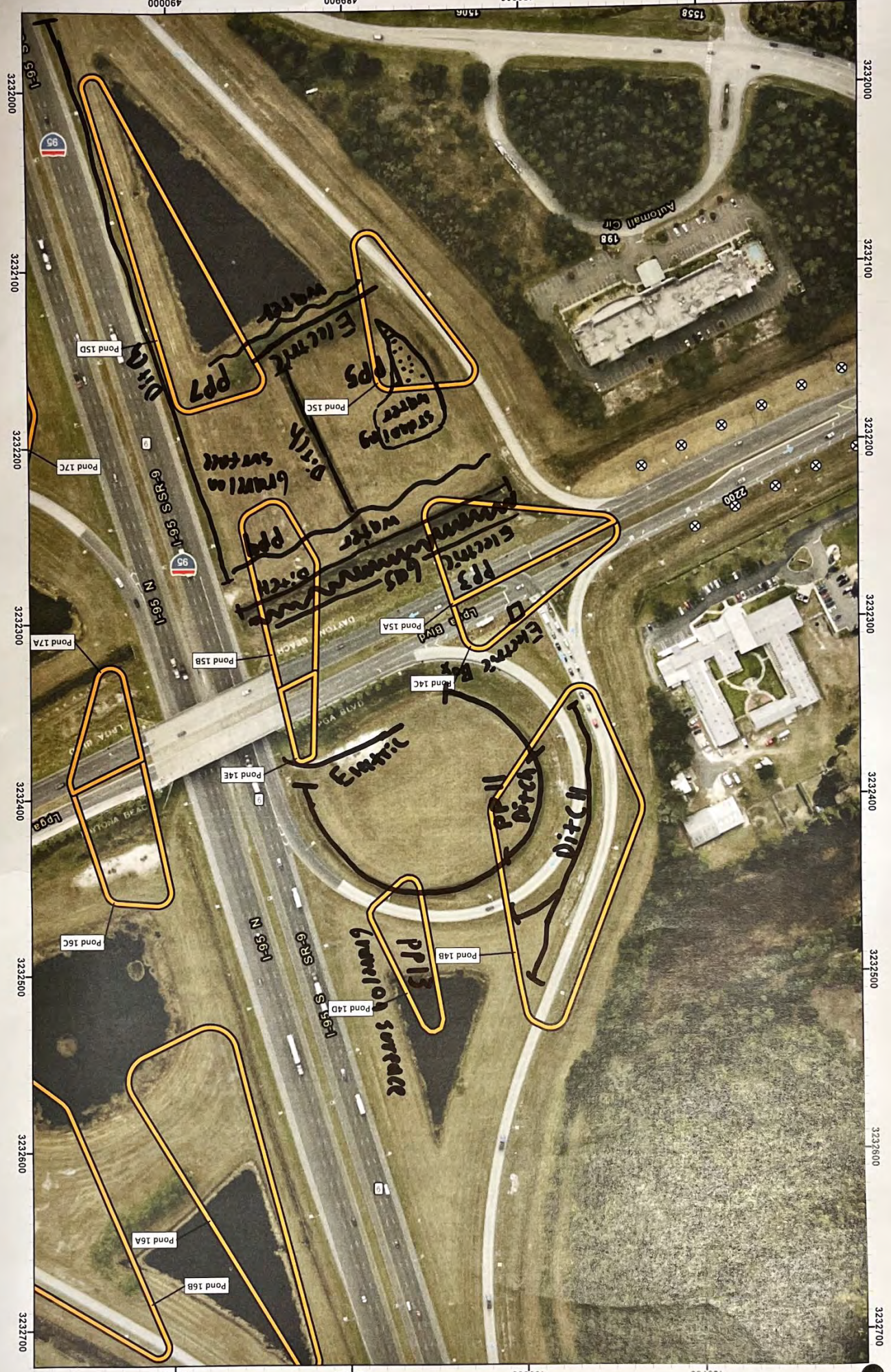
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Major ticks: 100m interval;
Minor ticks: 10m interval;

LPGA Boulevard Ponds Archaeological APE
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APPENDIX B

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 for the LPGA Boulevard from US 92 to Williamson Boulevard PD&E Study, Ponds Addendum, Volusia County, Florida

Report Title (exactly as on title page) Cultural Resource Assessment Survey for the LPGA Boulevard from US 92 to Williamson Boulevard Project Development and Environment Study, Ponds Addendum, Volusia County, Florida

Report Authors (as on title page, last names first) 1. Steffy, Caroline 3. _____
2. Fish, Jessica 4. _____

Publication Date (year) 2023 Total Number of Pages in Report (count text, figures, tables, not site forms) 36

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. SEARCH Project No. T21204, FDOT FM No. 448456-1-22-01

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

Affiliation of Fieldworkers: Organization Southeastern Archaeological Research City Orlando, FL

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

1. LPGA 3. SR 600 5. _____ 7. _____
2. US 92 4. Williamson Blvd 6. _____ 8. _____

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

Name FDOT Organization Florida Dept of Transportation - District 5

Address/Phone/E-mail 719 S. Woodland Boulevard, DeLand, FL 32720

Recorder of Log Sheet Steffy, Caroline Date Log Sheet Completed 6-20-2023

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 <u>DAYTONA BEACH</u>	Year <u>1993</u>	4. Name _____	Year _____
2. Name <u>DAYTONA BEACH NW</u>	Year <u>1993</u>	5. Name _____	Year _____
3. Name _____	Year _____	6. Name _____	Year _____

Description of Survey Area

Dates for Fieldwork: Start 5-22-2023 End 5-25-2023 Total Area Surveyed (fill in one) 18.83 hectares _____ acres

Number of Distinct Tracts or Areas Surveyed 28

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 Phase I survey, systematic shovel testing and pedestrian survey, recording of pre-1978 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, 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): _____

Survey Results (cultural resources recorded)

Site Significance Evaluated? Yes No

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

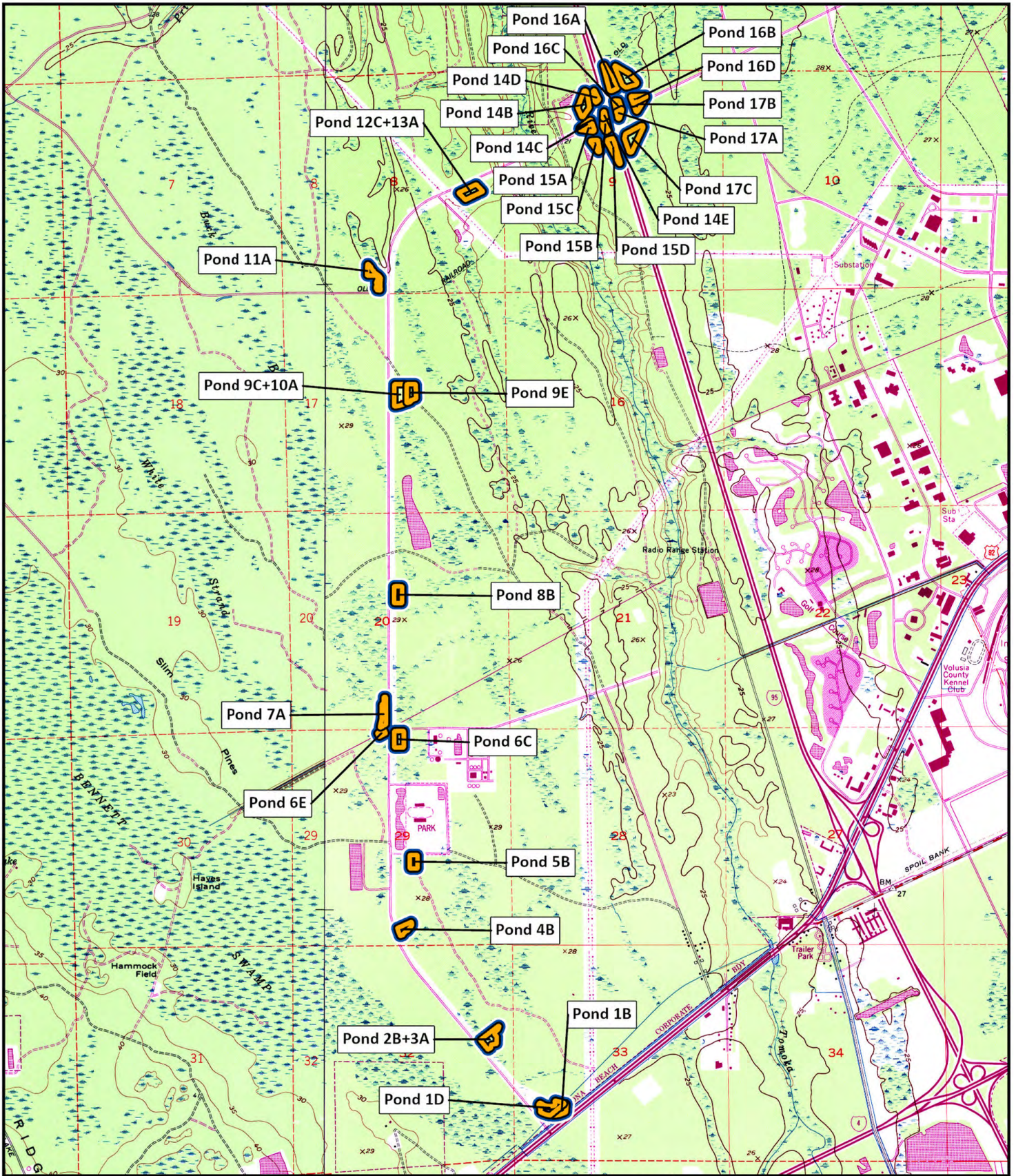
Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8". Attach additional pages if necessary.) _____

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: _____



- LPGA Boulevard Ponds Architectural History APE
- LPGA Boulevard Ponds Archaeological APE



USGS 7.5' Quadrangle Maps:
Daytona Beach (1993) and
Daytona Beach NW (1993)





Florida Department of Transportation District 5

Environmental Management Office

719 S. Woodland Blvd.

DeLand, FL 32720