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July 28, 2021

Timothy A. Parsons, Ph.D.,
Director and State Historic Preservation Officer
Florida Division of Historical Resources
Florida Department of State
R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Attn: Dr. Adrienne Daggett, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey
Malabar Road Improvements PD&E Study
Brevard County, Florida
Financial Management No.: 437210-1

Dear Dr. Parsons,

Enclosed please find one copy of the report titled *Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida*. This report presents the findings of a cultural resource assessment survey (CRAS) conducted in support of the proposed improvements to the Malabar Road from east of St. Johns Heritage Parkway to Minton Road in Brevard County, Florida. The City of Palm Bay is proposed to widening Malabar Road to accommodate additional lanes and traffic control intersections. This project will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

The project area of potential effects (APE) was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road. This APE was extended to the back or side property lines of parcels adjacent to the right-of-way or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

This CRAS was conducted in accordance with the requirements set forth in Section 106 of the National Historic Preservation Act of 1966, as amended, found in 36 CFR Part 800 (Protection of Historic Properties). The studies also comply with Chapter 267 of the Florida Statutes and Rule

Dr. Parsons, SHPO
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Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's Project Development & Environment Study (PD&E) Manual (revised July 2020), FDOT's Cultural Resources Management Handbook, and the standards stipulated in the Florida Division of Historical Resources' (FDHR) *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). This study also complies with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1979, as amended.

Due to significant disturbance within the APE, the archaeological survey was limited to the excavation of 30 shovel tests and pedestrian survey and surface inspection of the existing and proposed right-of-way. No archaeological sites were identified, and no artifacts were recovered from the APE. No further archaeological survey is recommended.

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource (8BR03535) and seven newly recorded resources (8BR04374-8BR04380). Based on the results of the current survey, it is the opinion of SEARCH that all eight resources are ineligible for the National Register of Historic Places (NRHP), due to a lack of significant historic associations and architectural and/or engineering distinction. No further architectural work is recommended.

Based on the results of this study, it is the opinion of the District that the proposed undertaking will have no effect on NRHP-listed or -eligible historic properties. No further work is recommended.

I respectfully request your concurrence with the findings of the enclosed report.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5411.

Sincerely,



For: William G. Walsh
Environmental Manager
FDOT, District Five

The Florida State Historic Preservation Officer finds the attached Cultural Resource Assessment Survey Report complete and sufficient and concurs / does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 2019-4374B. Or, the SHPO finds the attached document contains _____ insufficient information.

In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.

SHPO Comments:

Jason Aldridge DSHPO
Timothy A. Parsons, PhD, Director
Florida Division of Historical Resources

August 2, 2021
Date

**CULTURAL RESOURCE ASSESSMENT SURVEY
OF THE MALABAR ROAD IMPROVEMENTS
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY,
BREVARD COUNTY, FLORIDA**

**FINANCIAL MANAGEMENT No. 437210-1
SEARCH PROJECT No. T20003**

PREPARED FOR

**KITTELSON AND ASSOCIATES
AND
CITY OF PALM BAY, FLORIDA**

BY

SEARCH

OCTOBER 2023

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 (FHWA) AND FDOT.

**CULTURAL RESOURCE ASSESSMENT SURVEY
OF THE MALABAR ROAD IMPROVEMENTS
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY,
BREVARD COUNTY, FLORIDA**

**FINANCIAL MANAGEMENT No. 437210-1
SEARCH PROJECT No. T20003**

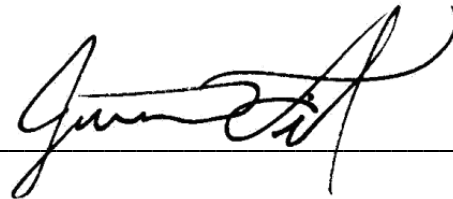
PREPARED FOR

**KITTELSON AND ASSOCIATES AND
CITY OF PALM BAY, FLORIDA**

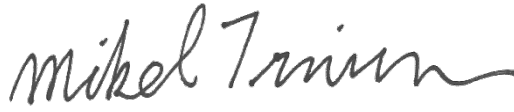
PREPARED BY

SEARCH

DAVE BOSCHI, KELLY GUERRIERI, AND ALLEN KENT

A handwritten signature in black ink, appearing to read 'Jessica Fish', written over a horizontal line.

**JESSICA FISH, MSt, RPA
PRINCIPAL INVESTIGATOR, ARCHAEOLOGY**

A handwritten signature in black ink, appearing to read 'Mikel Travisano', written over a horizontal line.

**MIKEL TRAVISANO, MS
PRINCIPAL INVESTIGATOR, ARCHITECTURAL HISTORY**

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OCTOBER 2023

EXECUTIVE SUMMARY

This report presents the findings of a Phase I cultural resource assessment survey (CRAS) conducted in support of a Project Development and Environment (PD&E) study to Malabar Road in Brevard County, Florida. The City of Palm Bay, Florida, is conducting a PD&E study for the proposed improvements to Malabar Road from east of St. Johns Heritage Parkway to Minton Road. The PD&E study includes widening Malabar Road with the construction of additional lanes and traffic control intersections. The roadway improvements will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

To encompass all potential improvements, the area of potential effects (APE) was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road. This APE was extended to the back or side property lines of parcels adjacent to the right-of-way, or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

The archaeological survey consisted of the excavation of 30 shovel tests and pedestrian survey within the archaeological APE. One previously recorded archaeological site, 8BR00025, is located within the overall APE, but outside the archaeological APE. As such, identification and evaluation of this site is beyond the scope of the current project. No artifacts were recovered during the archaeological survey, and no archaeological sites or occurrences were identified within the archaeological APE. No further archaeological survey is recommended in support of the proposed Malabar Road improvements.

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource and seven newly recorded resources. The previously recorded historic resource is a linear resource (8BR03535). The newly recorded historic resources include four linear resources (8BR04374-8BR04377), two bridges (8BR04379 and 8BR04380), and one structure (8BR04378).

The previously recorded resource (8BR03535; Melbourne-Tillman Canal No. 20) was determined ineligible for the National Register of Historic Places (NRHP) by the State Historic Preservation Officer (SHPO) in 2017 (Penders 2017).

Based on the results of the current survey, it is the opinion of SEARCH that all eight resources are ineligible for the NRHP due to a lack of significant historic associations and architectural and/or engineering distinction. No further architectural work is recommended.

Given the results of the CRAS, it is the opinion of SEARCH that the proposed Malabar Road widening project will have no effect on cultural resources listed or eligible for listing in the NRHP. No further work is recommended.

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PROJECT SUMMARY

Initiated in November 2019, this Project Development and Environment (PD&E) Study has been conducted to assess various widening alternatives for Malabar Road. This Preliminary Engineering Report (PER) documents the project's purpose and need, the alternatives developed, the process of selecting the preferred alternative, and presents the preliminary design analysis for the preferred alternative.

PROJECT DESCRIPTION

The Malabar Road PD&E Study evaluated capacity, safety, and multi-modal improvements on Malabar Road from St. Johns Heritage Parkway to Minton Road, a distance of approximately 4.0 miles (6.4 kilometers), in the City of Palm Bay and Brevard County, Florida. Malabar Road is an east-west regional roadway connecting western Brevard County/City of Palm Bay to US 1 in Malabar. The roadway's maintaining jurisdiction is Brevard County at its western edge, before transitioning to the City of Palm Bay for several miles, and then becoming a state road (State Road [SR] 514) between Interstate 95 (I-95) and US 1. Malabar Road has an existing diamond interchange with I-95. Within the study area, Malabar Road is an urban minor arterial. The study area is shown in **Figure 1**.

Malabar Road within the project limits is a two-lane roadway. The section from St. Johns Heritage Parkway to Garvey Road is undivided, whereas the section from Garvey Road to Minton Road has median turn lanes. An 8.0-foot (2.4-meter) sidewalk is present on Malabar Road's north side for the entirety of the project limits. Minimal sidewalk is present on the south side. No on road bicycle facilities are present along the study limit's length.

There are currently four signalized intersections and numerous unsignalized intersections along the study corridor. The four signalized intersections are located at Krassner Drive/Bending Branch Lane, Jupiter Boulevard, the Plaza Shopping Center, and Minton Road.

This roadway is unique due to the surrounding canal system that is operated/maintained by the Melbourne-Tillman Water Control District (MTWCD). Malabar Road within the project limits crosses over four canals (Canals C-7, C-8, C-9, and C-10). Canal C-20 runs parallel to Malabar Road on the north side from Canal C-10 (250 feet [76.2 meters] west of Bavarian Avenue) to approximately 0.3 miles (0.48 kilometers) west of Minton Road. One bridge, crossing over Canal C-10, is located within the project limits.

The proposed improvements will widen Malabar Road from two to four lanes from the St. Johns Heritage Parkway to Minton Road. The preferred alternative's typical section along the study corridor will include two 11' lanes in each direction, a 22' wide median, a 10' shared-use path on the north side, and an 8' sidewalk on the south side. The intersections at St. Johns Heritage Parkway, Krassner Drive/Bending Branch Lane, Hurley Boulevard, and Maywood Avenue/Daffodil Drive are proposed as roundabouts, while Jupiter Boulevard, the Plaza Shopping Center, and Minton Road are proposed to remain signalized.

PURPOSE & NEED

The purpose of this project is to evaluate the need for capacity improvements (roadway widening) to relieve existing congestion and accommodate projected future traffic demand. The project's secondary goals are to 1) enhance safety conditions; 2) improve multi-modal facilities; and 3) enhance regional and local mobility. The need for these improvements is described in this section.

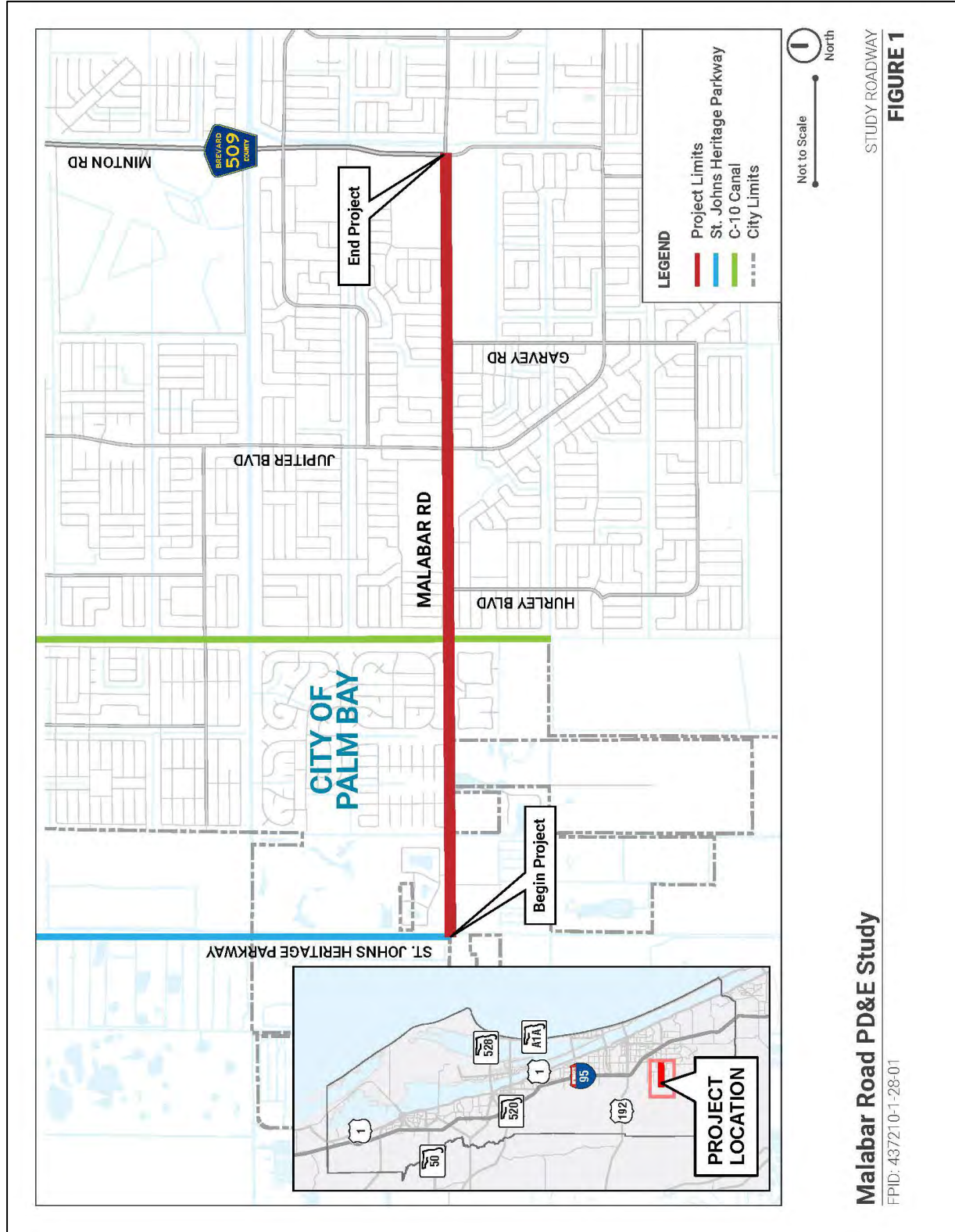


Figure 1: Study roadway

Transportation Demand/Capacity

The existing (2020) traffic analysis shows the four signalized intersections and 13 unsignalized intersections operated with an overall Level of Service (LOS) of E or better and no overcapacity movements. Even though the intersections were operating acceptably, the existing traffic analysis for the segments shows multiple segments of the Malabar Road corridor operated worse than the City standard of LOS C, with traffic volumes ranging from 7,200 to 16,000 Annual Average Daily Traffic (AADT). Because population and employment growth are expected to continue in western Palm Bay, the east–west traffic volumes along Malabar Road are anticipated to increase. This will ultimately lead to unacceptable segment and intersection operations.

Safety

Crash records were obtained for Malabar Road from 900' west of the St. Johns Heritage Parkway to ¼ mile east of Minton Road for the most recent five-year period on record (2016 through 2020). There was a total of 642 reported crashes during this period; 202 (32 percent) resulted in at least one injury. There were no reported fatal crashes along the study corridor during the five-year period. As displayed in **Figure 2**, the crashes per year along the corridor generally increased between 2016 (123 crashes) and 2019 (137 crashes). The 2020 crash data saw a decrease to 113 crashes, likely due to decreases in traffic volumes related to the COVID-19 pandemic. While the overall total crashes decreased in 2020, the total number of injury crashes was the second highest behind 2017. This could be attributed to higher travel speeds along the corridor due to the lower volume, which leads to more severe crashes. It is important to note the traffic counts for this project were performed in January 2020, prior to the beginning of the pandemic restrictions in March 2020.

The highest crash type observed was rear end, comprising 54 percent of the total crashes. Left turn (14 percent) and sideswipe crashes (12 percent) were the second and third highest crash types.

Three existing signalized intersections at Jupiter Boulevard, the Plaza Shopping Center, and Minton Road were the highest crash locations along the study corridor, accounting for 330 of the 642 total reported crashes (51 percent). The four highest crash unsignalized intersections are St. Johns Heritage Parkway, Hurley Boulevard, Hillock Avenue, and Maywood Avenue/Daffodil Drive accounting for 90 total crashes (14 percent). Two high crash segments from 0.05 miles east of Jupiter Boulevard to 0.05 west of Santa Rosa Avenue (1,400 feet in length) and from 0.05 miles east of Maywood Avenue/Daffodil Drive to 0.05 west of the Plaza Shopping Center (1,175 feet in length) accounted for 61 total crashes (10 percent). A crash rate analysis was performed on the 2016 to 2018 crash data because average crash rates were not available for 2019 and 2020. Only one segment of Malabar Road, between Jupiter Boulevard and the Plaza Shopping Center, had a higher than average crash rate for one year of analysis. While the segments had low safety ratios, the three signalized intersections at Jupiter Boulevard, the Plaza Shopping Center, and Minton Road each had higher crash rates than statewide or districtwide averages for similar roadways in at least two of the three analysis years.

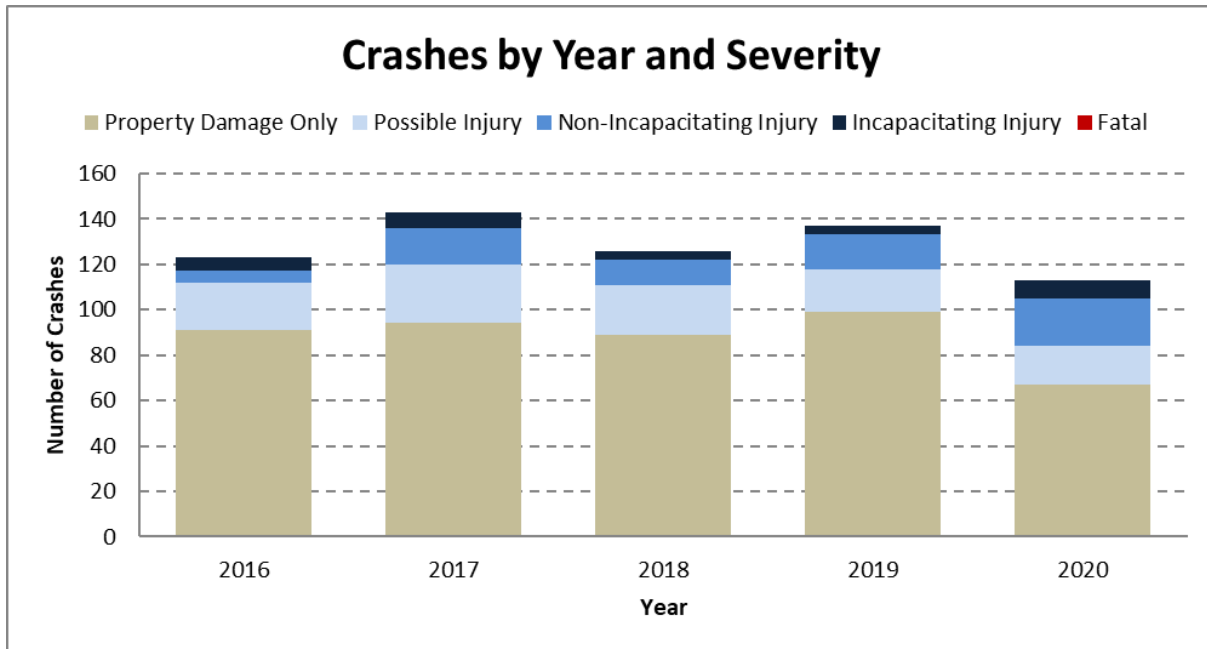


Figure 1: Crashes per Year (Corridor Wide)

Modal Interrelationships

An 8' sidewalk is present on the north side of Malabar Road for the entirety of the project limits. Where Canal C-20 exists, this facility is on the north side of the canal. Sidewalk is present for approximately 40 percent of the project limits on the south side. No on-road bicycle facilities are present along the length of the project limits.

The Office of Greenways and Trails (OGT) and the Space Coast Transportation Planning Organization (SCTPO) identified trail opportunities in the vicinity of Malabar Road. The St. Johns River Eco-Heritage Trail will align with the St. Johns Heritage Parkway and connect the Brevard Zoo Linear Trail to Malabar Road. The St. Johns River Eco-Heritage Trail will extend south where it will connect to existing trail facilities. In addition to OGT and SCTPO identified trails, two local trails are in the study vicinity. One local trail runs east-west along Malabar Road from St. John Heritage Parkway to west of Minton Road as previously discussed. The second local trail called the Cross City Trail ends just south of Malabar Road near the City of Palm Bay Public Works Department. The trail is located adjacent to the power lines and starts at Walpole Road and ends just south of Malabar Road. There is no connection between Cross City Trail and the trail paralleling Malabar Road's north side due to the presence of Canal C-20. The existing trails and trail opportunities are displayed in **Figure 15** of the *Malabar Road Preliminary Engineering Report*.

Two transit routes with 16 total transit stops (six eastbound and 10 westbound) operate along Malabar Road within the study corridor. Space Coast Area Transit Route 20 connects Heritage and West Melbourne and Route 23 provides service to the West Palm Bay area. Route 20 operates along the entire corridor, and Route 23 operates between Jupiter Boulevard and Minton Road. Both routes operate from approximately 6:30 AM to 8:30 PM on weekdays and 7:30 AM

to 5:30 PM on Saturdays with hour-long headways. The eastbound bus stop in front of the Madalyn Landing Apartments is the only stop with a bus shelter. The existing transit routes and shelters are displayed in **Figure 15** of the *Malabar Road Preliminary Engineering Report*.

System Linkage

The western Palm Bay area is anticipated to experience population and traffic growth in the next 30 years, leading to increased travel on facilities west of I-95 and south of US 192¹. The St. Johns Heritage Parkway is providing a “beltway” facility to accommodate the forecasted increase in traffic in western Palm Bay. The St. Johns Heritage Parkway is already constructed from Malabar Road to US 192, and a study is being performed for the extension of the Parkway from Babcock Street north to Malabar Road.

Malabar Road is one of three primary east–west roadways connecting to the Parkway and is the only one of those roadways that has an interchange with I-95. Malabar Road from Minton Road to Corporate Circle is four lanes, and the section from Corporate Circle to I-95 is six lanes. The Malabar Road four-lane alternative proposed from the St. Johns Heritage Parkway to Minton Road would tie into the existing four-lane section starting at Minton Road.

A PD&E study was completed in 2021 for Malabar Road from Babcock Street to US 1 with a preferred alternative to widen from two to four lanes. Design and right-of-way for the Babcock Street to US 1 project is planned in the SCTPO’s 2045 Long Range Transportation Plan (LRTP) Cost Feasible Plan for the 2026 to 2030 time period, and construction is planned for the 2031 to 2035 time period.

¹ Based on the SCTPO 2045 Long Range Transportation Plan and City of Palm Bay traffic studies.

ALTERNATIVES ANALYSIS SUMMARY

Roadway Typical Sections

Two initial typical section alternatives were developed to support the Malabar Road purpose and need for capacity and safety improvements:

- Alternative A – Minimum right-of-way alternative
 - 89.5' right-of-way alternative from the St. Johns Heritage Parkway to Canal C-10 (**Figure 3**)
 - 92.5' right-of-way alternative from Canal C-10 to Sta. 256+80 (**Figure 4**)
- Alternative B – Desired right-of-way alternative
 - 100' right-of-way alternative from the St. Johns Heritage Parkway to Canal C-10 (**Figure 5**)
 - 103' right-of-way alternative from Canal C-10 to Sta. 256+80 (**Figure 6**)

Each of the initial typical sections were applied from the St. Johns Heritage Parkway to Sta. 256+80, which is just west of the Plaza Shopping Center where Malabar Road begins to transition to a four-lane roadway. The posted speed for each typical section alternative is 35 mph from St. Johns Heritage Parkway to Championship Circle, 45 mph from Championship Circle to east of Maywood Avenue/Daffodil Drive, and 35 mph from east of Maywood Avenue/Daffodil Drive to Minton Road. This maintains the existing posted speed limits.

The initial Malabar Road typical section alternatives were developed using design provisions from the Florida Greenbook and the FDOT Design Manual (FDM). Alternative A was developed to minimize the right-of-way impacts to residential properties on the south side of Malabar Road and minimize Canal C-20 impacts on the north side of Malabar Road east of Canal C-10. The following features are common between the 89.5' and the 92.5' typical sections:

- Two 11' travel lanes in each direction;
- 15.5' wide median, including Type E curb and gutter;
- Type F curb and gutter outside of the travel lanes; and
- 10' shared-use path on the north side and 6' sidewalk on the south side.
 - The inside edge of the 6' sidewalk is at the back of curb.

The primary difference between the 89.5' and 92.5' typical sections is the presence of Canal C-20 on the north side of Malabar Road east of Canal C-10. In the 92.5' typical, an extra 3' is added on the north side for guardrail protection between the roadway and Canal C-20.

Alternative A utilized a smaller median width of 15.5' and a 6' south side sidewalk at the back of curb to reduce the overall right-of-way needed for the study corridor. A 15.5' median does not meet the minimum 22' Florida Greenbook or FDM median widths for a 45 mph facility; thus, a design variation would be needed if this alternative was to move forward. Alternative B increases the median width to a standard 22' median (including Type E curb and gutter) per FDM criteria.

Alternative B also provides a 4' grass buffer between the south side curb and the sidewalk, which was not provided in Alternative A. The additional 6.5' in the median and 4' grass buffer on the south side equates to the 10.5' difference between the 89.5'/92.5' Alternative A typical sections and the 100'/103' Alternative B typical sections. The following features are common between the 100' and the 103' typical section alternatives:

- Two 11' travel lanes in each direction;
- 22' wide median, including Type E curb and gutter;
- Type F curb and gutter outside of the travel lanes;
- 10' shared-use path on the north side and 6' sidewalk on the south side; and
- 4' grass buffer between the back of the curb and the 6' south side sidewalk.

Similar to Alternative A, the 3' difference between the 100' and 103' typical sections is north side guardrail protection between the roadway and Canal C-20.

The Alternative A and Alternative B typical sections were presented at the Alternatives Public Meeting conducted on Thursday, September 24, 2020, and subsequent local jurisdiction meetings in October 2020. During these meetings, discussion was held regarding the lack of on-road bicycle facilities being provided in the typical section alternatives. While adding on-road bicycle facilities was deemed not feasible by the study team due to the right-of-way and Canal C-20 impacts, widening the south side sidewalk to 8' was explored. A 10' shared-use path is already being proposed on the north side, so widening the south side sidewalk to 8' would provide a wider facility accommodating both pedestrians and bicycles. The 8' south side sidewalk was incorporated into the preferred alternative.

Bridge Typical Sections

One bridge structure is present over Canal C-10 at approximately Sta. 142+00. Four bridge typical sections were developed in support of the initial typical section alternatives discussed in the previous section:

- Alternative A – Minimum right-of-way bridge typical sections
 - Raised sidewalk alternative
 - Flush sidewalk with traffic separator alternative
- Alternative B – Desired right-of-way bridge typical sections
 - Raised sidewalk alternative
 - Flush sidewalk with traffic separator alternative

The Alternative A bridge typical sections have a 15.5' median consistent with the Alternative A roadway typical section. The Alternative B bridge typical sections have a 22' median consistent with Alternative B roadway typical section. The raised sidewalk bridge typical section (both Alternatives A and B) incorporates a 10' shared-use path on the north side and 6' sidewalk on the south side that is raised above the travel lanes and separated by a 1.5' paved shoulder. A traffic railing with a pedestrian/bicycle railing on top is present to the outside of the bridge structure.

The flush sidewalk bridge typical section (both Alternatives A and B) provides the same 10' shared-use path and 6' sidewalk, but the facilities are flush with the bridge deck and separated from the travel lanes by a 2.5' paved shoulder and 1'4" traffic railing. A pedestrian/bicycle railing is present to the outside of the bridge structure.

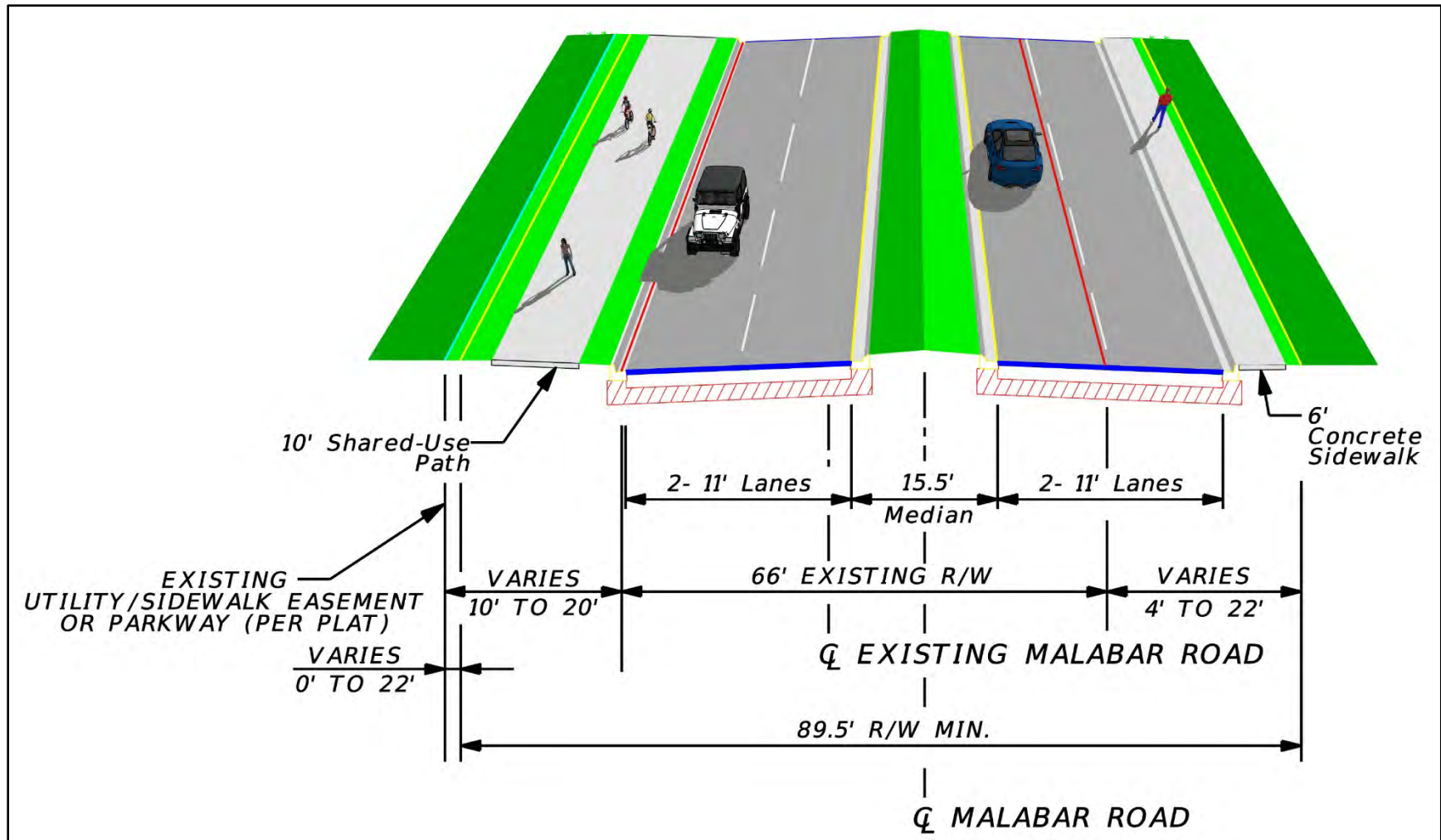


Figure 2: 89.5' Alternative A – St. Johns Heritage Parkway to Canal C-10

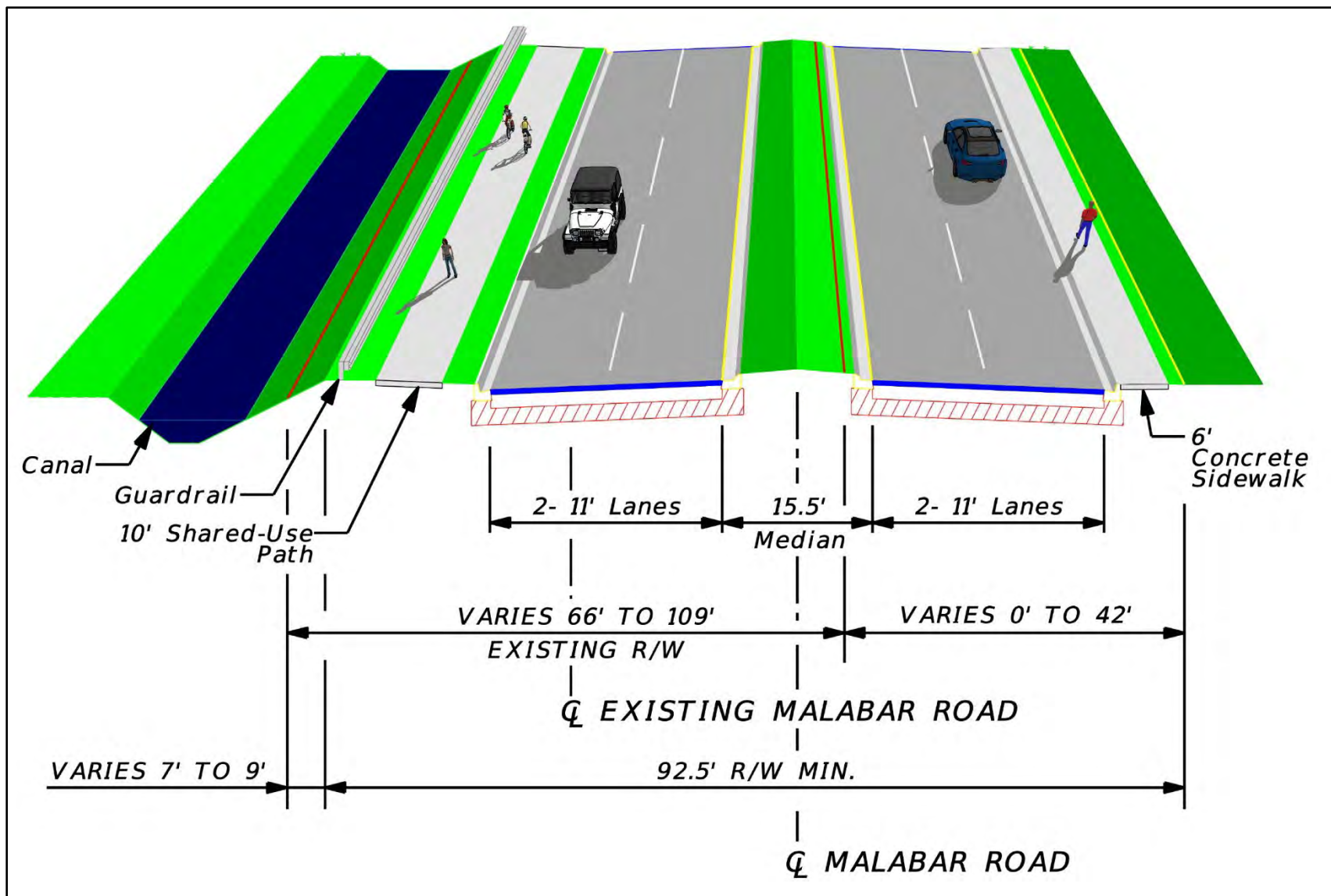


Figure 3: 92.5' Alternative A – Canal C-10 to Sta. 256+80

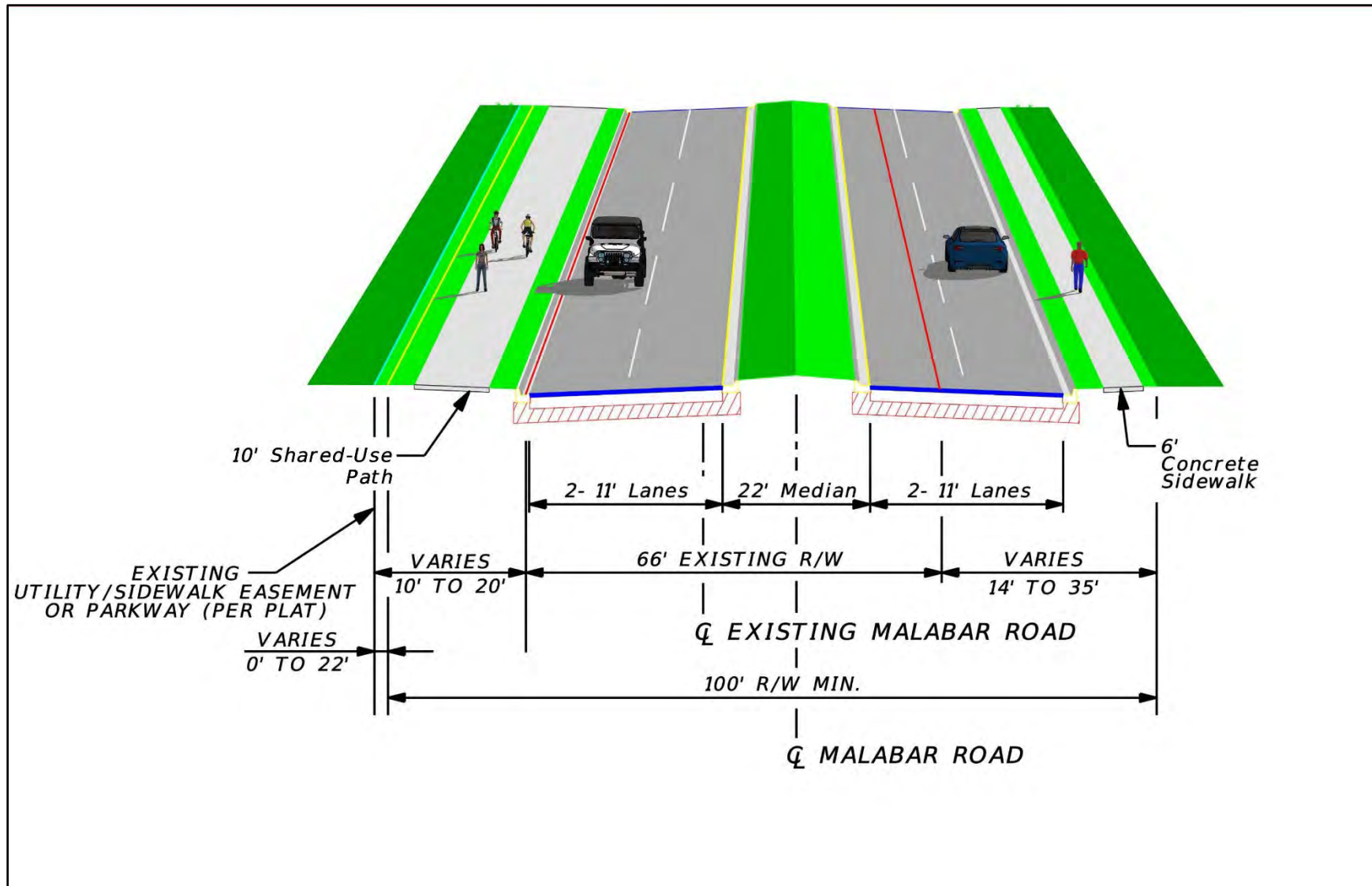


Figure 4: 100' Alternative B – St. Johns Heritage Parkway to Canal C-10

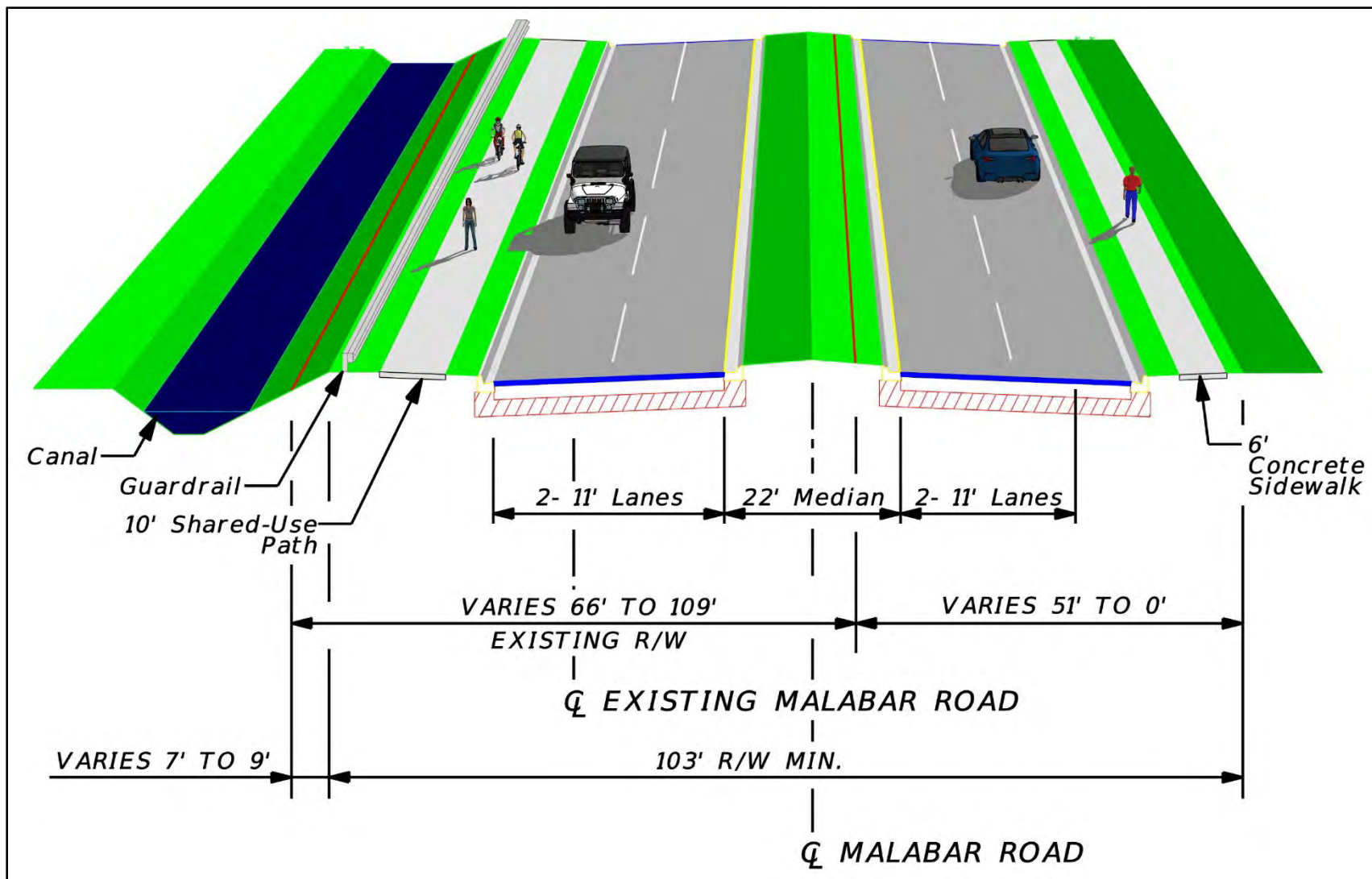


Figure 5: 103' Alternative B – Canal C-10 to Sta. 256+80

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Intersection Alternatives

The following intersections were reviewed for either a traffic signal/unsignalized intersection or a roundabout:

- Traffic Signal vs Roundabout Evaluation –
 - Malabar Road & St. Johns Heritage Parkway;
 - Malabar Road & Wisteria Avenue/Abilene Drive;
 - Malabar Road & Krassner Drive/Bending Branch Lane;
 - Malabar Road & Jupiter Boulevard; and
 - Malabar Road & Garvey Road.
- Unsignalized Intersection vs Roundabout Evaluation –
 - Malabar Road & Hurley Boulevard; and
 - Malabar Road & Maywood Avenue/Daffodil Drive.

In order to analyze and compare the signalized/unsignalized alternatives to the roundabouts at each location, an intersection operational analysis and safety analysis were performed. Based on this analysis, roundabouts are anticipated to operate better or the same as the signalized/unsignalized intersection at every location except Garvey Road. Roundabouts have been shown to reduce fatal/injury crash types versus signalized/unsignalized intersections, and the results show the roundabout has lower predicted fatal/injury crashes at every intersection.

During the intersection alternatives analysis, it was determined that the following intersections would remain signalized in the preferred alternative due to operational limitations and right-of-way impacts of a roundabout configuration:

- Malabar Road & Plaza Shopping Center; and
- Malabar Road & Minton Road.

DESCRIPTION OF PREFERRED ALTERNATIVE

Selection of Preferred Alternative

The purpose of this project is to evaluate the need for capacity improvements (roadway widening) to relieve existing congestion and accommodate projected future traffic demand. The project's secondary goals are to 1) enhance safety conditions; 2) improve multi-modal facilities; and 3) enhance regional and local mobility.

Alternative B with 8' south side sidewalks was selected as the preferred alternative by the City of Palm Bay and Brevard County. Alternative B was selected because it provides the wider median plus the 4' grass buffer, both meeting 2023 FDM standards, while having a negligible impact on right-of-way and only a slighter higher project cost when compared to Alternative A. A wider median would facilitate U-turn movements at directional median openings not having a bulb-

out. The 4-ft grass buffer between the back of curb and the sidewalk enhances pedestrian safety from an errant vehicle and provides more comfort to the pedestrian in the sidewalk. The following bullets summarize how the preferred alternative meets the primary and secondary purpose and need goals noted above:

- Transportation Demand/Capacity
 - In the 2050 build condition, each roadway segment is anticipated to operate at LOS C or better, except the segment from the Plaza Shopping Center to Minton Road.
 - This segment is anticipated to operate at LOS F due to the short distance (approximately 750') between the signalized intersections at the Plaza Shopping Center and Minton Road and the effect of the overlapping delays of these two adjacent signals.
 - The signals at the Plaza Shopping Center and Minton Road will be optimized as one system in the future build condition to enhance operations between the two signals.
 - Each of the signalized intersections are anticipated to perform at LOS E or better, and no intersections operated with a V/C ratio greater than 1.0 in either the 2050 AM or PM peak hour.
- Safety
 - Using the predictive safety analysis methods provided in the Highway Safety Manual (HSM), as traffic volumes increase in the no-build condition, crashes are predicted to increase by over 120 percent between 2020 and 2050.
 - By providing a four-lane facility, the 2050 crashes are predicted to be up to 40 percent less than a two-lane facility with the same traffic volumes.
- Modal Interrelationships
 - A 10' shared-use path will be provided on the north side of Malabar Road.
 - An 8' sidewalk will be provided on the south side of Malabar Road.
 - Existing transit stop access will be enhanced as part of the four-lane widening and sidewalk improvements.
- System Linkage
 - Providing a four-lane Malabar Road from the St. Johns Heritage Parkway to Minton Road would provide at least four travel lanes from the St. Johns Heritage Parkway to US 1 once the planned projects are constructed.
 - The project will also enhance the access to St. Johns Heritage Parkway, a critical north/south arterial in western Brevard County.

Typical Sections

The preferred alternative typical sections were designed using 2023 FDM criteria as discussed in **Section 4.2** of the *Malabar Road Preliminary Engineering Report*. The following describes the typical section elements:

- Two 11' travel lanes in each direction;
- 22' wide median, including Type E curb and gutter;
- Type F curb and gutter outside of the travel lanes;
- 10' shared-use path on the north side and 8' sidewalk on the south side; and
- 4' grass buffer between the back of the curb and the 8' south side sidewalk.

The following highlights key differences in typical section elements along the Malabar Road study corridor:

- St. Johns Heritage Parkway to Canal C-10 (**Figure 7**) –
 - Primarily contained within 102' to 106' of right-of-way.
 - Between Bending Branch Lane/Krassner Drive and the bridge over Canal C-10, the proposed roadway alignment is generally in the same location as the existing roadway. This was done to maintain the alignment of the westbound travel lanes coming from the bridge. The roadway in this section is positioned further south than the section from St. Johns Heritage Parkway to and Bending Branch Lane/Krassner Drive, resulting in the 106' right-of-way.
 - In front of the Tillman Lakes development (Abilene Drive), the right-of-way expands to 136'.
 - No roadside drainage swales are present within this section.
- Malabar Road over Canal C-10 (**Figure 8**) –
 - Two 11' travel lanes in each direction, a 10' barrier separated shared-use path on the north side, and an 8' barrier separated sidewalk on the south side.
 - 19' mountable raised median on the bridge with two 1.5' inside shoulders.
 - The overall bridge width is 93.25' with the roadway crowned at 2 percent at the centerline of construction.
- Canal C-10 to West of Jupiter Boulevard (**Figure 9**) –
 - Proposed right-of-way width varies between 100' west of Jupiter Boulevard to 194' in the areas where dry retention linear swales are present.
 - Canal C-20 runs parallel to Malabar Road on the north side for this entire section.
- West of Jupiter Boulevard to East of Jupiter Boulevard (**Figure 10**) –
 - Widening is primarily contained within a 101.5' proposed right-of-way footprint.
 - In front of the USPS, the proposed right-of-way reduces to 94.5', and the south side sidewalk is reduced to 6' and brought adjacent to the back of curb.

- Canal C-20 is being relocated to the north and retaining walls are proposed for the north and south sides of the canal.
- East of Jupiter Boulevard to Maywood Avenue/Daffodil Drive (**Figure 11**) –
 - Proposed right-of-way width is typically 101.5' in this section but does widen to 191' in the area where dry retention linear swales are present.
 - Canal C-20 runs parallel to Malabar Road on this section's north side.
- Note the preferred typical section varies through the Maywood Avenue/Daffodil Drive roundabout.
- West of Plaza Shopping Center (**Figure 12**) –
 - Widening is primarily contained within a 107' proposed right-of-way.
 - A third lane is added in the eastbound direction to accommodate turn lane improvements on the Minton Road intersection's western leg.
- The section between the Plaza Shopping Center and Minton Road intersections varies due to the turn lane configurations.

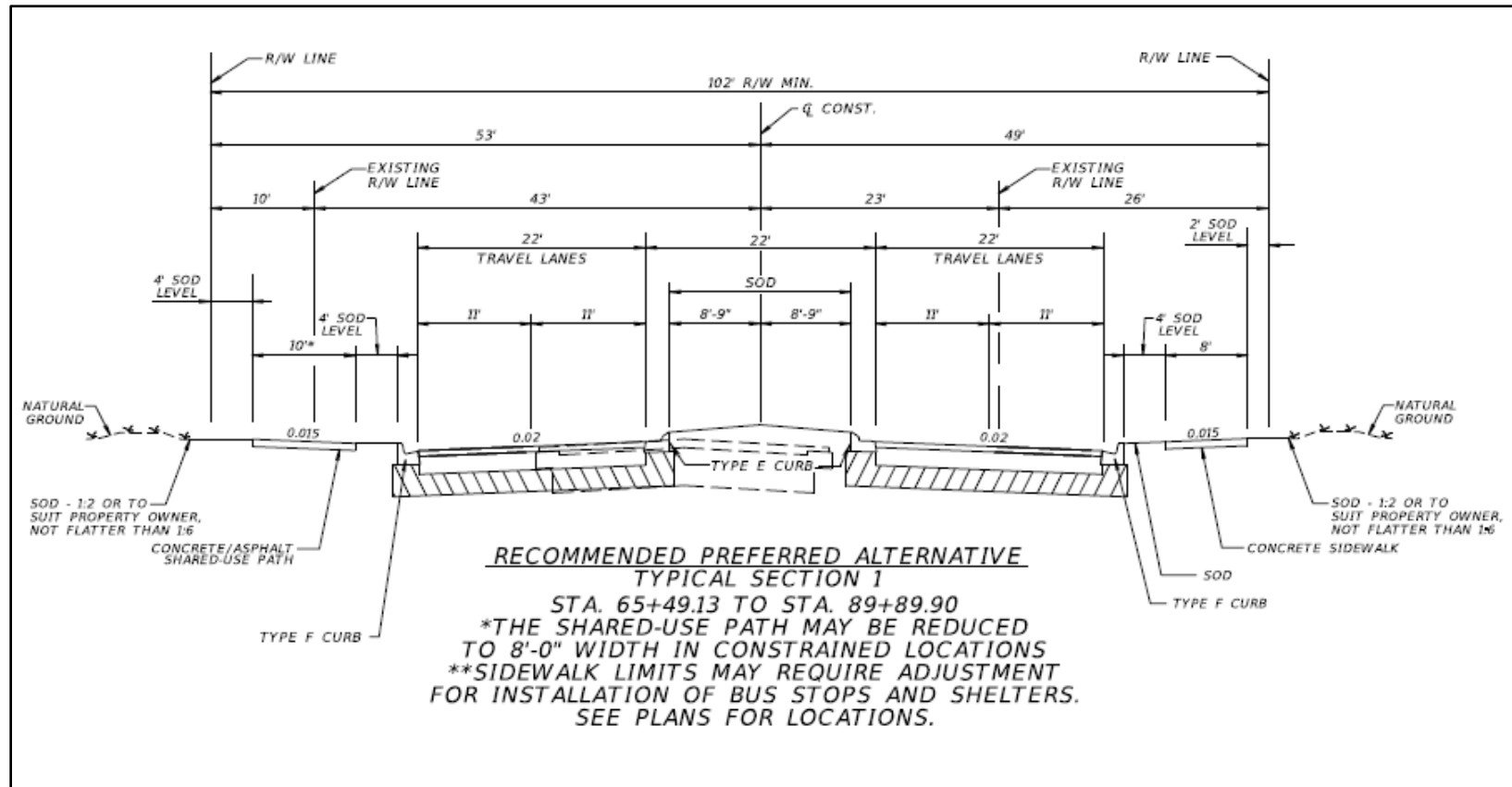


Figure 6: Representative Preferred Alternative Typical Section – St. Johns Heritage Parkway to Canal C-10

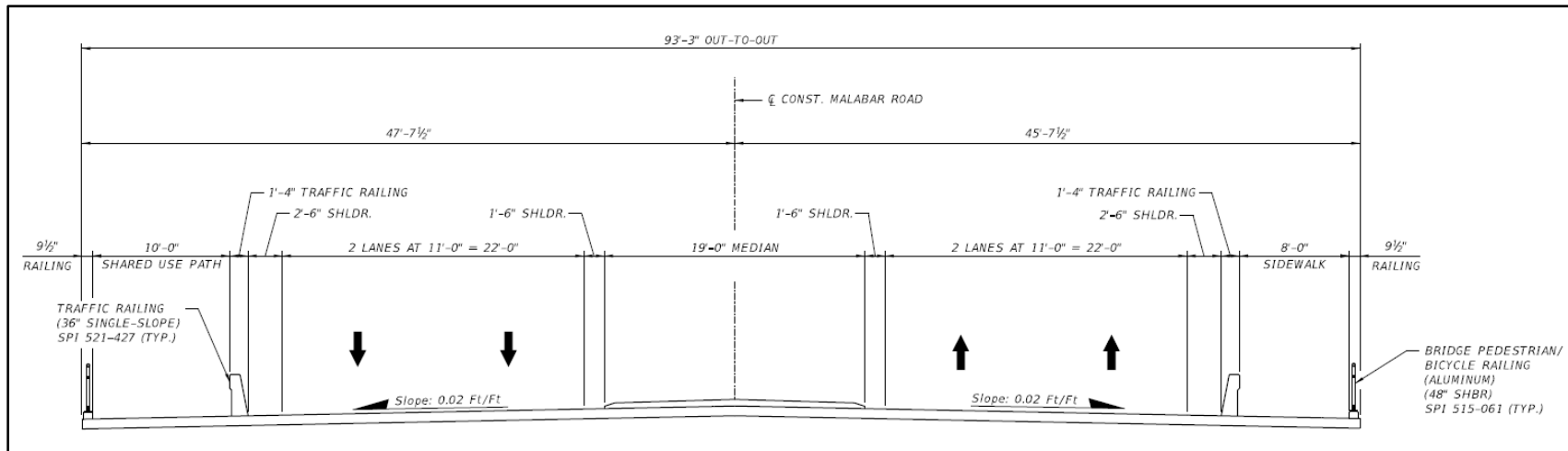


Figure 7: Preferred Alternative Typical Section – Bridge over Canal C-10

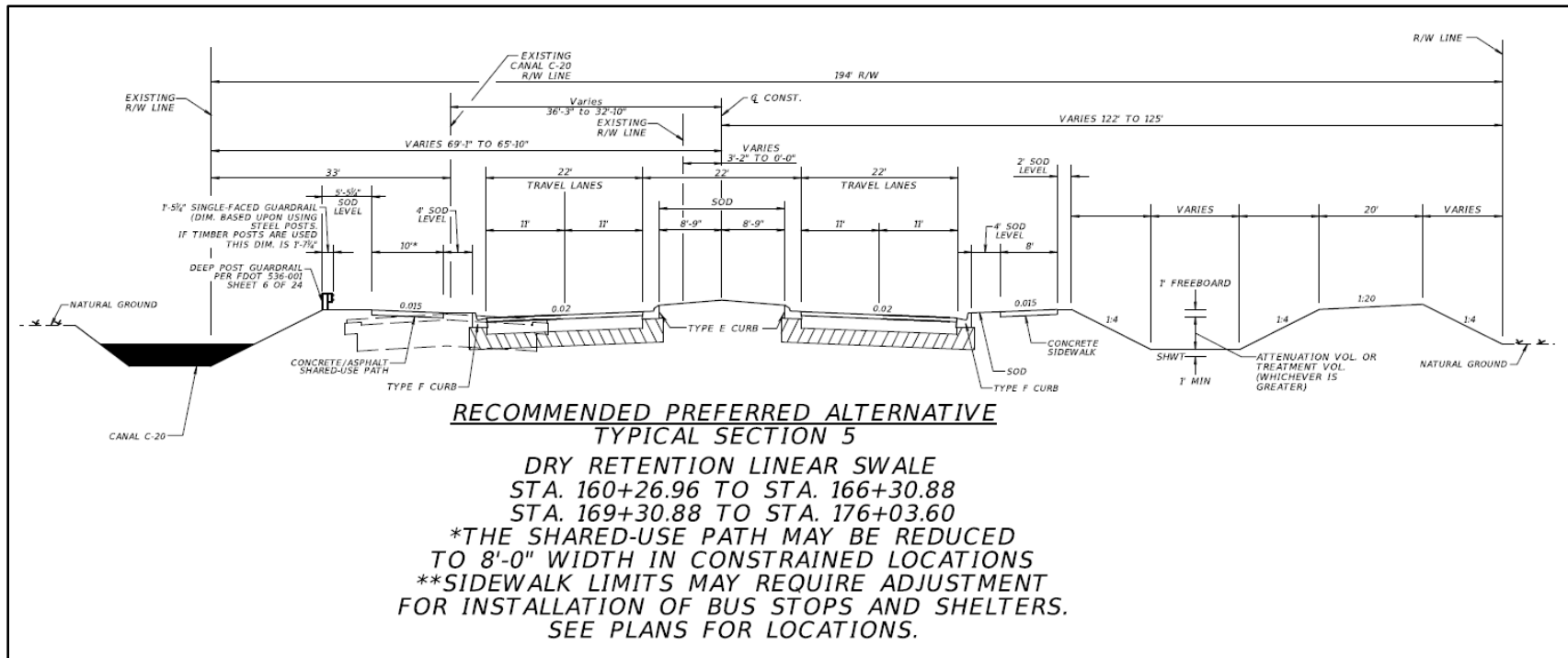


Figure 8: Representative Preferred Alternative Typical Section – Canal C-10 to West of Jupiter Boulevard

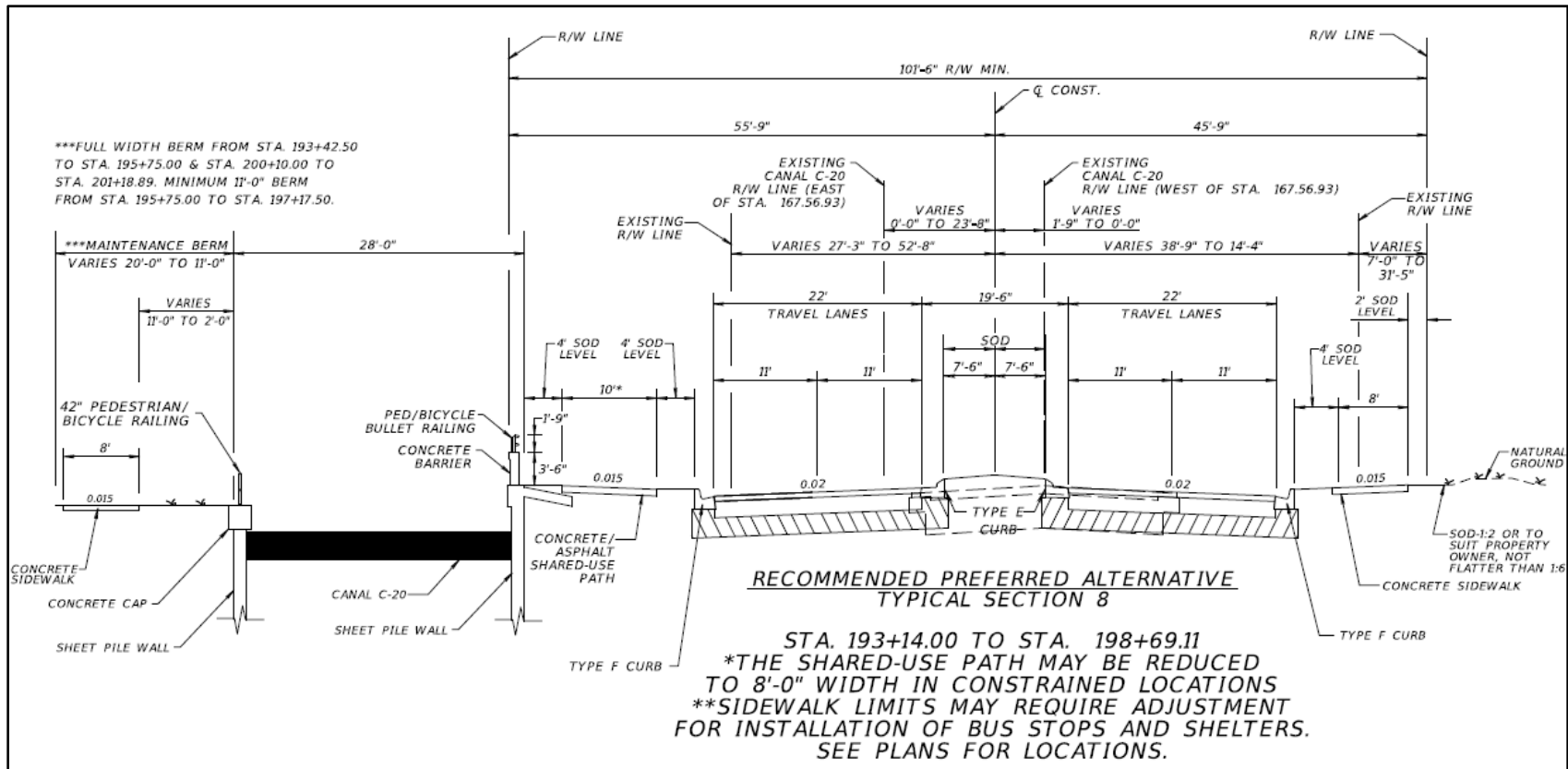


Figure 9: Representative Preferred Alternative Typical Section – West of Jupiter Boulevard to East of Jupiter Boulevard

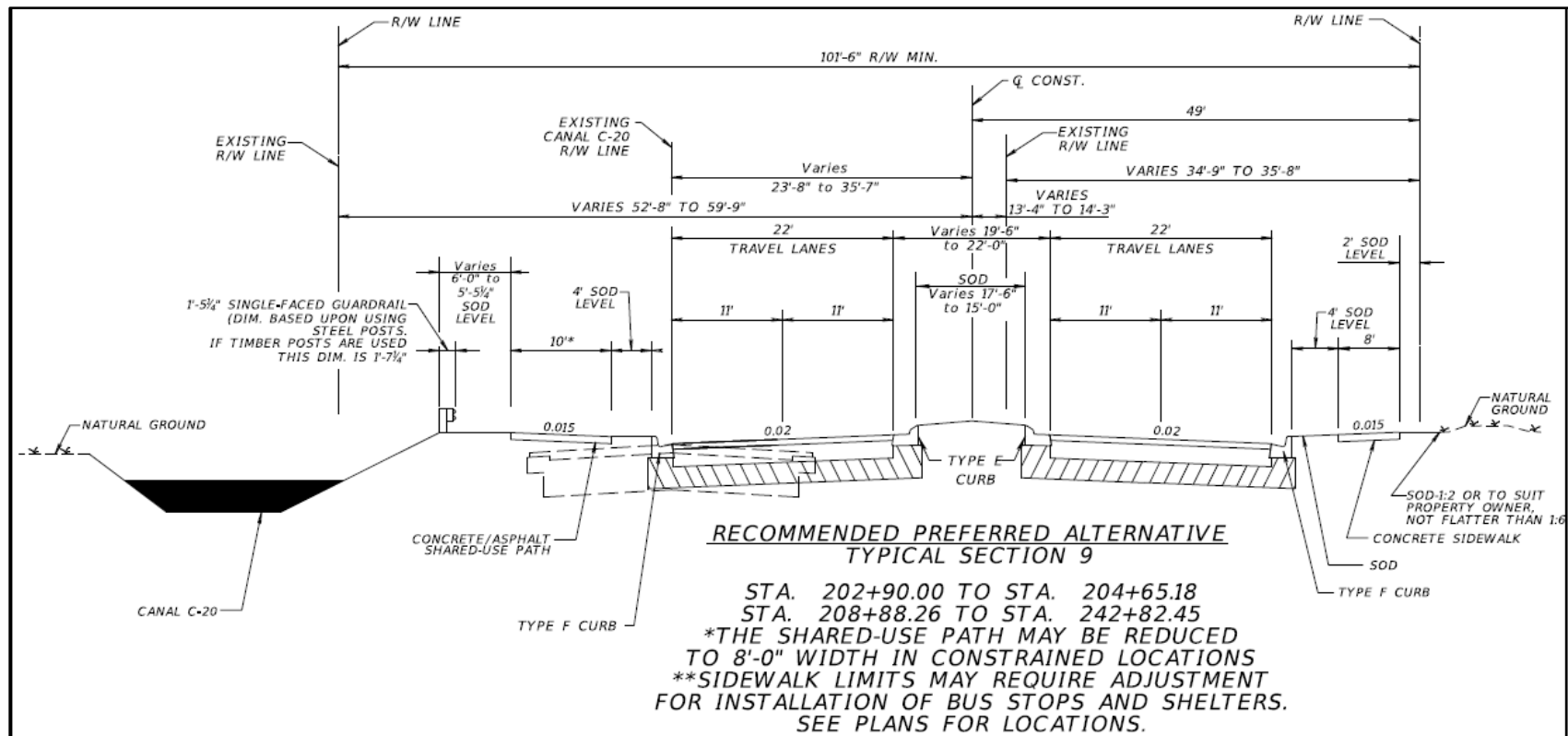


Figure 10: Representative Preferred Alternative Typical Section – East of Jupiter Boulevard to Maywood Avenue/Daffodil Drive

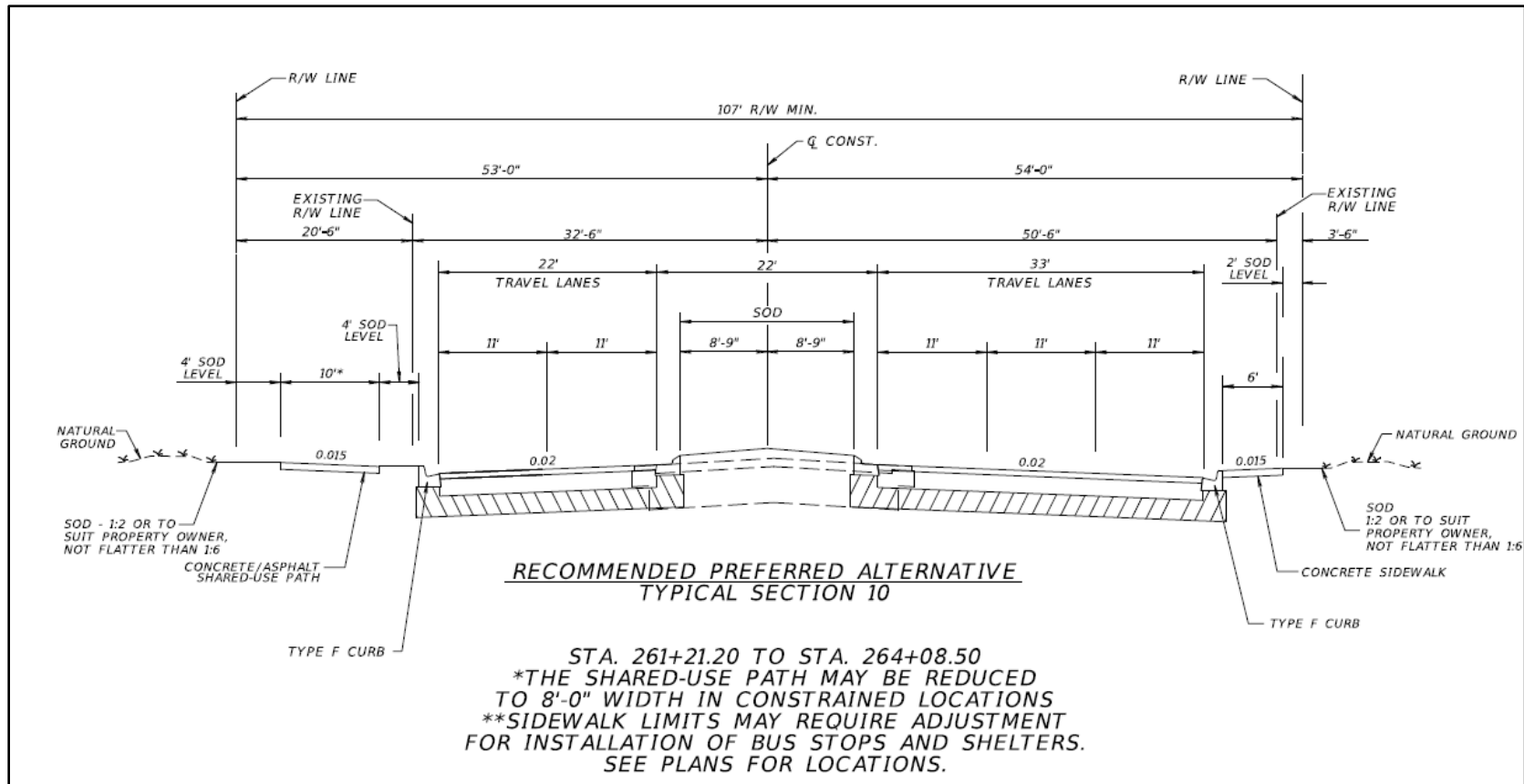


Figure 11: Representative Preferred Alternative Typical Section – West of Plaza Shopping Center

Intersections

Based on the intersection alternatives analysis, the following intersection control types are recommended for the preferred alternative:

- Traffic Signals –
 - Malabar Road & Jupiter Boulevard*;
 - Malabar Road & Garvey Road;
 - Malabar Road & Plaza Shopping Center; and
 - Malabar Road & Minton Road.
- Roundabouts –
 - Malabar Road & St. Johns Heritage Parkway;
 - Malabar Road & Krassner Drive/Bending Branch Lane;
 - Malabar Road & Hurley Boulevard; and
 - Malabar Road & Maywood Avenue/Daffodil Drive.
- Two-Way Stop Control –
 - Malabar Road & Snapdragon Drive;
 - Malabar Road & Championship Circle;
 - Malabar Road & Wisteria Avenue/Abilene Drive;
 - Malabar Road & Bavarian Avenue;
 - Malabar Road & Watoga Avenue/Avery Springs;
 - Malabar Road & Palm Bay Public Works Driveways;
 - Malabar Road & Post Office;
 - Malabar Road & Santa Rosa Avenue;
 - Malabar Road & Madalyn Landing; and
 - Malabar Road & Sutherland Drive.

* While the intersection of Malabar Road and Jupiter Boulevard would have improved operations and safety as a roundabout, the signal alternative was selected due to constrained right-of-way. The US Post Office in the intersection's southwest corner is federal property and cannot be impacted, shifting the alignment to the north requiring the Canal C-20 to be relocated even as a signalized intersection. The roundabout's larger footprint would require additional Canal C-20 relocation impacting nearby residences.

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INTRODUCTION

This report presents the findings of a Phase I cultural resource assessment survey (CRAS) conducted in support of a PD&E study to Malabar Road in Brevard County, Florida. The City of Palm Bay, Florida, is conducting a PD&E study for the proposed improvements to Malabar Road from east of St. Johns Heritage Parkway to Minton Road (**Figure 13**). The PD&E study includes widening Malabar Road with the construction of additional lanes and traffic control intersections, the replacement of FDOT Bridge No. 704004, and the rerouting of approximately 1,500 feet (457.2 meters) of Canal C-20. The roadway improvements will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

To encompass all potential improvements, the area of potential effects (APE) was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road (**Figure 14**). This APE was extended to the back or side property lines of parcels adjacent to the right-of-way, or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

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 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 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 PD&E Manual (revised July 2020), as well as 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 Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42).

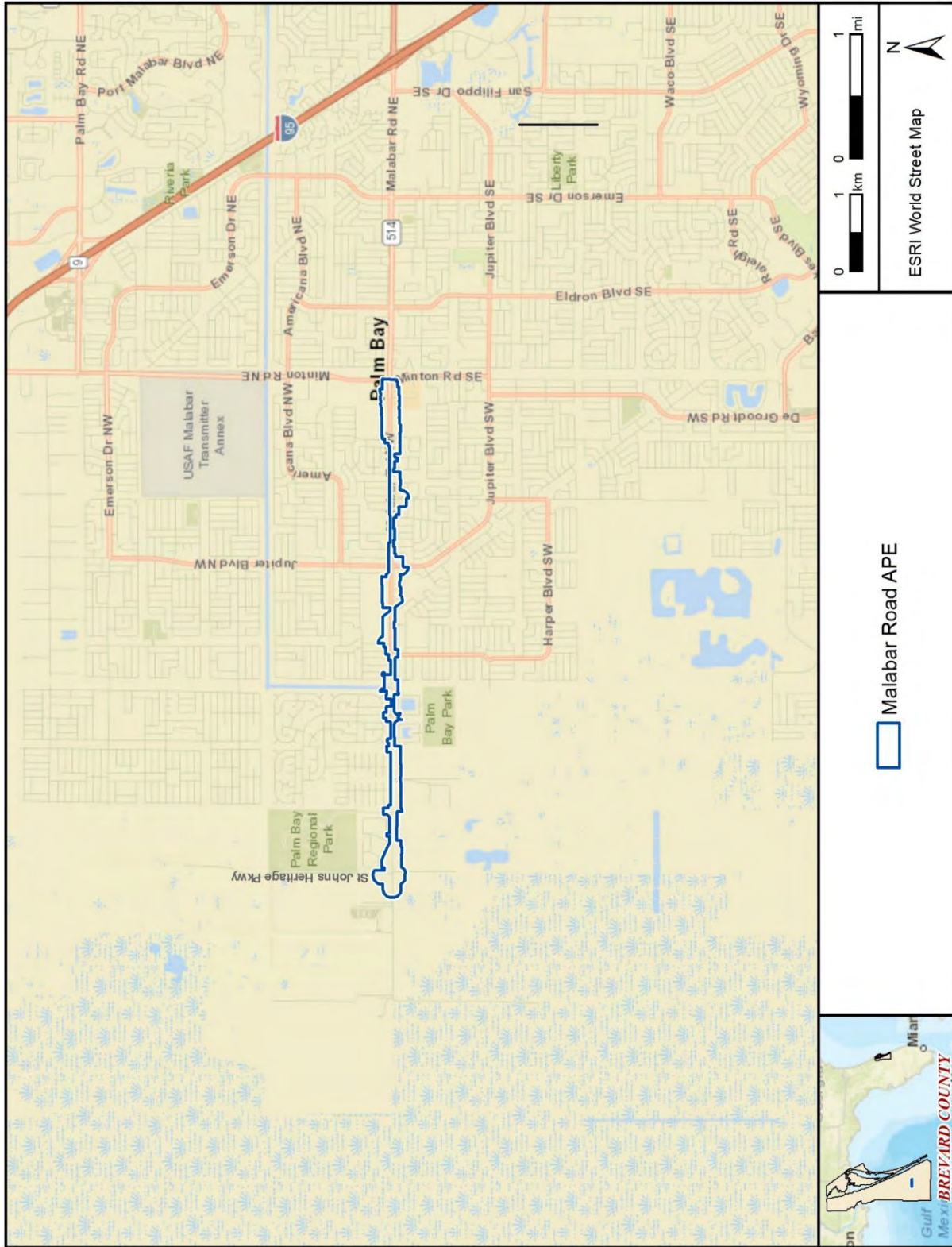


Figure 13: Malabar Road project location in Brevard County, Florida

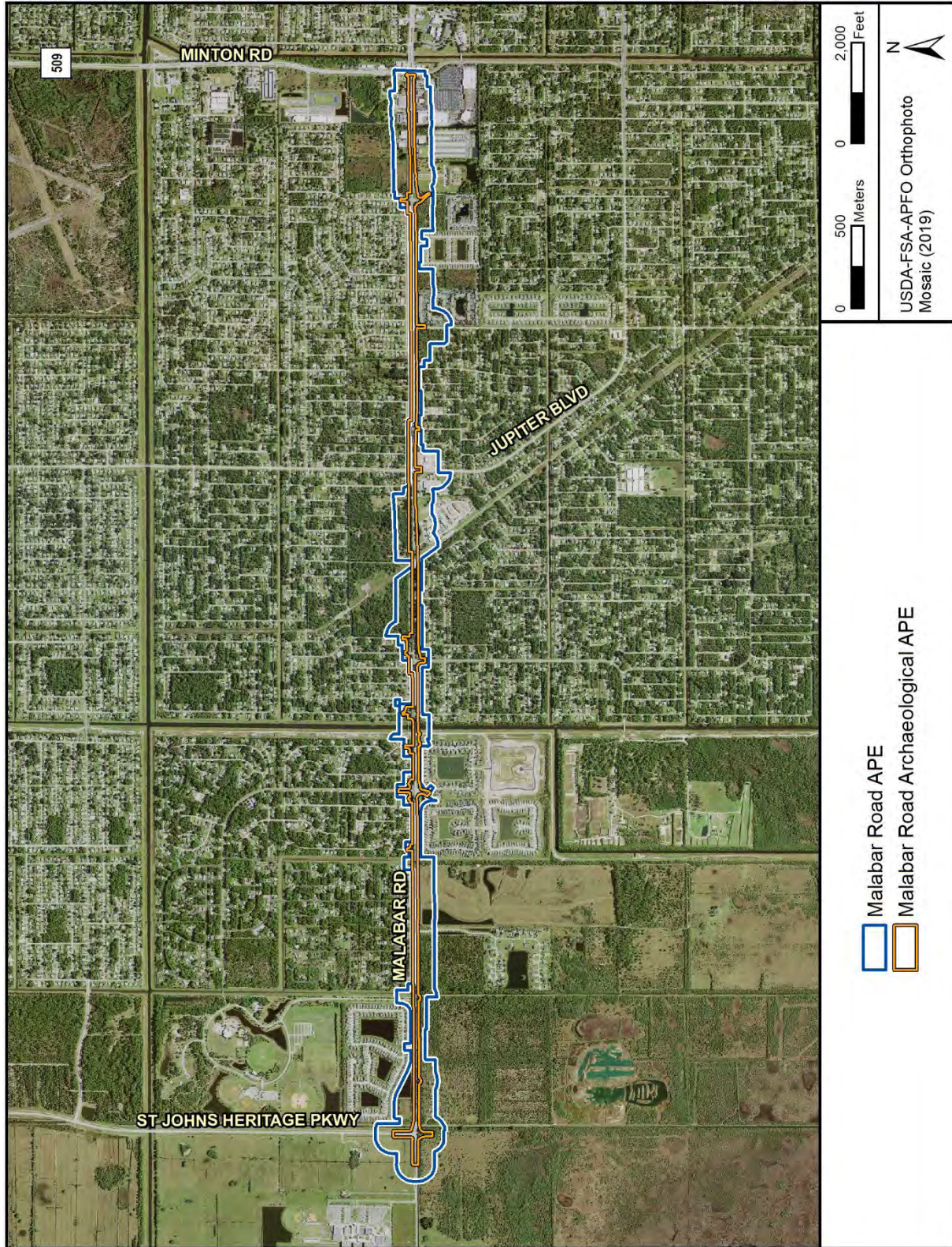


Figure 14: The Malabar Road APE, Brevard County, Florida

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PROJECT LOCATION AND ENVIRONMENT

LOCATION AND MODERN CONDITIONS

The Malabar Road project is an approximately 3.96-mile (6.37-kilometer) long corridor located in the City of Palm Bay in southern Brevard County, Florida. The project falls within Sections 33, 34, 35, and 36 of Township 28 South, Range 36 East and Sections 1, 2, 3, and 4 of Township 29 South, Range 36 East. Housing developments are located along the central portion of the proposed corridor, while commercial developments are located in the eastern portion of the proposed corridor; the western end of the proposed corridor has forested tracts that are former orchards (see **Figure 14**). The terrain crossed by the corridor slopes up slightly to the east and consists of an elevation ranging from 18 to 25 feet (5.4 to 7.6 meters) above mean sea level (amsl).

Geologically, the Malabar Road APE is within the St. Johns Marsh, part of the Eastern Flatwoods District. The St. Johns Marsh is described as seasonally flooded marshes and grass prairies, with no karst features and organic soils and having cabbage palm (Brooks 1981). Soils within the APE consist of poorly drained soils, including Pineda, EauGallie, Wabasso, and Riviera sands, and Malabar, Holopaw and Pineda soils (**Table 1; Figure 15**). Multiple canals and retention ponds are in the immediate area of the APE, and the St. Johns River is located 3.3 miles (5.3 kilometers) to the west of the APE.

Table 1: Soils by Acreage and Drainage Characteristics within the Malabar Road APE

Soil	Acreage	Percent of Total Acreage	Drainage
EauGallie sand	10.08 acres	15.6%	Poorly drained
Pineda sand	27.31 acres	42.2%	Poorly drained
Riviera sand	1.59 acres	2.5%	Poorly drained
Wabasso sand	3.15 acres	4.9%	Poorly drained
Malabar, Holopaw, and Pineda soils	22.62 acres	34.9%	Poorly drained

PALEOENVIRONMENT

Between 18,000 to 12,000 years before present (BP), Florida was a much cooler and drier place than it is today. Melting of the continental ice sheets led to a major global rise in sea level (summarized for long time scales by Rohling et al. 1998) that started from a low stand of -120 meters at 18,000 BP. The rise was slow while glacial conditions prevailed at high latitudes but became very rapid in the latest Pleistocene and earliest Holocene. It became warmer and wetter rather rapidly during the next three millennia. By about 9000 BP, a warmer and drier climate began to prevail. These changes were more drastic in northern Florida and southern Georgia than in southern Florida, where the “peninsular effect” and a more tropically influenced climate tempered the effects of the continental glaciers that were melting far to the north (Watts 1969, 1971, 1975, 1980). Sea levels, though higher, were still much lower than at present; surface

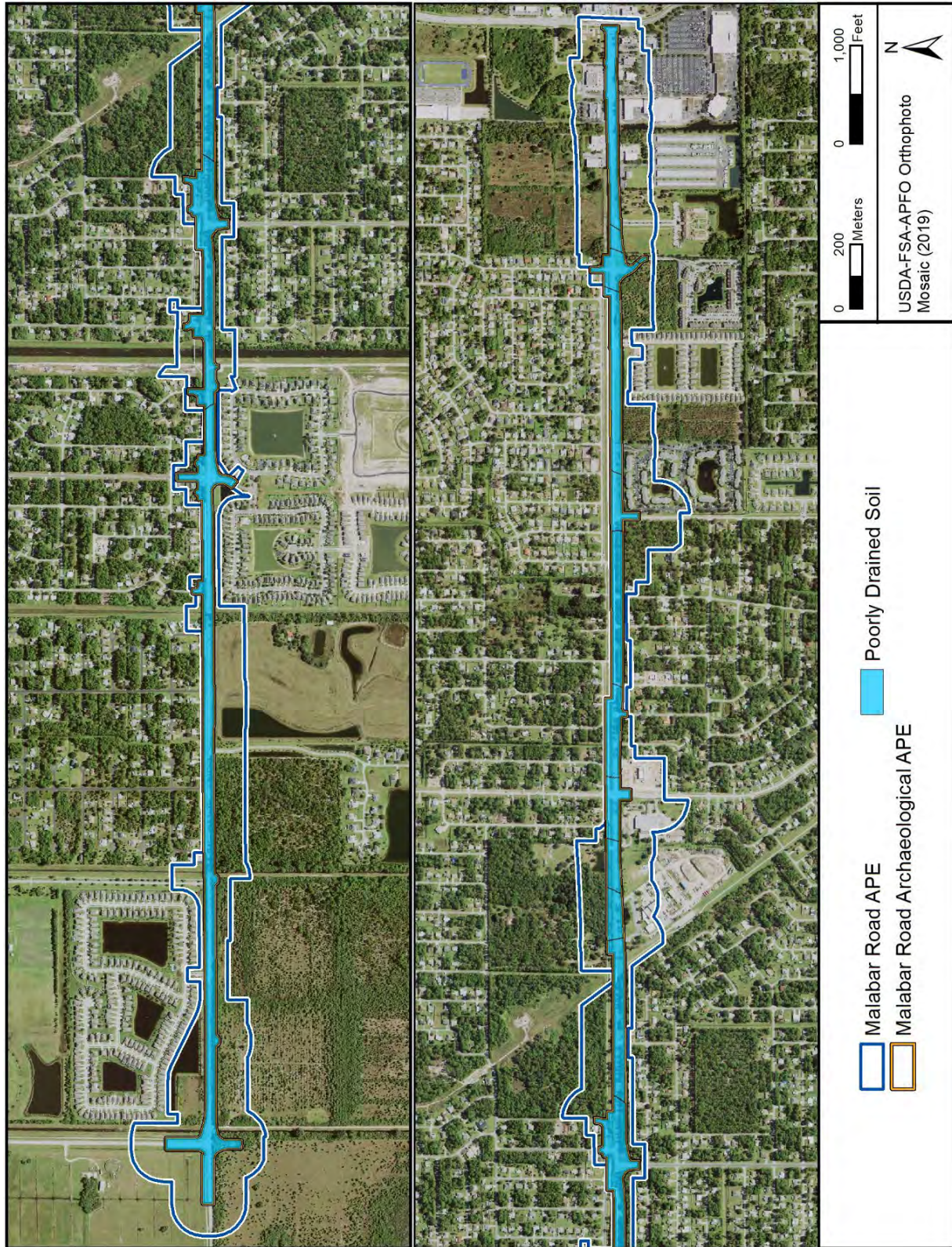


Figure 15: Soil drainage characteristics within the Malabar Road APE

water was limited, and extensive grasslands probably existed, which may have attracted mammoth, bison, and other large grazing mammals. By 6000–5000 BP, the climate had changed to one of increased precipitation and surface water flow. By the late Holocene, ca. 4000 BP, the climate, water levels, and plant communities of Florida attained essentially modern conditions. These have been relatively stable with only minor fluctuations during the past 4,000 years.

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HISTORIC OVERVIEW

NATIVE AMERICAN CULTURE HISTORY

The following prehistoric overview of central Florida consists of a four-part chronology, with each period based on distinct cultural and technological characteristics recognized by archaeologists. From oldest to most recent, the four temporal periods are Paleoindian, Archaic, Post-Archaic, and Contact. While each period is briefly discussed below, readers are referred to Milanich (1994) for a more comprehensive treatment of the prehistory of Florida.

Paleoindian Period (10,000–8000 BP)

The most widely accepted model for the peopling of the Americas argues that populations originating in Asia crossed the Beringia land bridge that formerly linked Siberia to Alaska and entered the North American continent some 12,000 years ago (Smith 1986). However, data have mounted in support of entry prior to 12,000 years ago (Adovasio et al. 1990; Dillehay et al. 2008). Alternative pre-12,000 BP migration routes that have been hypothesized include populations traveling along the Pacific and Atlantic coasts using boats or following an exposed shoreline (Anderson and Gillam 2000; Bradley and Stanford 2004; Dixon 1993; Faught 2008; Fladmark 1979). Their early occupation sites would now be inundated as a result of higher sea levels. Regardless of the precise timing of the first occupations of North and South America, the current evidence suggests that Florida was not intensively inhabited by humans prior to about 14,500 years ago (Halligan et al. 2016).

While there is abundant archaeological evidence for an early occupation of northern and central Florida (Milanich 1994), there is no firm evidence for people inhabiting southeast Florida at this early time. Discoveries of human skeletal remains near Vero Beach in 1915 and Melbourne in 1925 were presumed to be of early origin because of their inferred association with extinct Pleistocene mammals (Gidley and Loomis 1926; Sellards 1916, 1917). Analysis of the Vero Beach finds by Hrdlicka (1918, 1922) concluded that the human remains were intrusive into Pleistocene deposits. However, a later analysis of the skeletal remains (Stewart 1946) and a comparison of the geological context of the finds with similar discoveries in southwest Florida (Cockrell and Murphy 1978) suggest that the original interpretations may have been correct. To date, however, there has been no independent data from the area that could confirm the presence of humans there prior to 10,000 BP.

Archaic Period (10,000–2500 BP)

Early Archaic Period (10,000–7000 BP)

The beginning of the Archaic period coincides with the onset of the Holocene period at approximately 10,000 BP. This period can be divided into two horizons based on differences in stone tool morphology: Side-Notched or Bolen (10,000–9000 BP) and Stemmed or Kirk (9000–8000 BP). Both horizons are well represented in northern and central Florida (Milanich 1994). The Cutler site in Miami has revealed much information about the Bolen horizon in southeast

Florida. The Kirk horizon is not well represented in southeastern Florida, but the Windover site in Brevard County may contain a Kirk component.

The earliest firm evidence for human occupation in southeast Florida dates to about 10,000–9500 BP. At the Cutler site, side-notched Bolen points were recovered in association with animal bones and a hearth feature (Carr 1986). Based on radiocarbon dates from a cultural stratum believed to be associated with the Bolen points, the Cutler site is dated to around 9600 BP. At that time, south Florida was just emerging from a period that was much drier than at present (Brooks 1974; Gleason et al. 1974). Lake Okeechobee and the Everglades did not exist, sea levels were much lower than at present, surface water was limited, and extensive grasslands probably existed, which may have attracted mammoth, bison, and other large grazing mammals. This landscape inhibited intensive human habitation except perhaps along the coast; however, any coastal sites are now probably inundated by higher sea levels.

The Windover site, located in Brevard County north of the current APE, provides some of the best information on Early Archaic burial practices and non-lithic material culture. Excavations at this wetland cemetery revealed the remains of 168 individuals along with numerous perishable items, such as bone pins, awls, incised tubes, shell tools and beads, an antler atlatl weight, wooden stakes, cordage, mats, and fabric. Radiocarbon dates associated with human bone or wooden artifacts range from 8120 ± 70 BP to 6980 ± 80 BP (Doran 2002), placing it at the terminal end of the Kirk horizon as it has been defined throughout the rest of the southeastern United States (Chapman 1985; Sherwood et al. 2004). The radiocarbon dates indicate that the interments were made over a long period of time and suggest that the pond was used repeatedly for interments for more than a millennium. The high degree of preservation of the bodies and the lack of any evidence of scavenging of the remains by animals suggest that the remains were placed in the cemetery within a few days or even hours after death (Dickel 2002). The interments were apparently placed in five or six discrete groups within the pond, and individual clusters may have been marked by stakes (Dickel 2002:80). The presence of marine shells at the site supports the hypothesis that these people moved from the coast, which at this time was much farther away from the site than it is today, to the interior on a relatively regular basis. Analysis of archaeobotanical remains from the site indicate occupation during the late summer/early fall (Newsom 2002:208; Tuross et al. 1994:297–298).

Middle Archaic Period (7000–5000 BP)

A dramatic increase in precipitation and runoff in south Florida is indicated by peat deposits in the Everglades that began to form about 6000–5000 BP (McDowell et al. 1969). This enabled native peoples to expand into formerly inhospitable locations. Sea levels reached modern levels and may have exceeded them for short periods (Dorsey 1997; Tanner 1991). Modern estuaries began to form, and exploitation of coastal resources began in earnest, particularly along the northern Atlantic coast (Ste. Claire 1990). The expansion of populations into new locations resulted in a variety of settlement and subsistence strategies adapted to local conditions. Sedentary settlements were established along productive rivers such as the St. Johns or in coastal areas in southwest and northeast Florida (e.g., Ste. Claire 1990). In other areas, a more mobile lifestyle was practiced (Austin 1996, 1997).

Locally, sea level rise is indicated by the deposition of coastal marsh mud in the Indian River lagoon at approximately 6000–5000 BP (Bader and Parkinson 1990). Yet there is limited archaeological evidence for Middle Archaic occupation of southeast Florida. Pre-ceramic Archaic sites have been documented in the interior around Lake Okeechobee (Gleason and Stone 1994; Hale 1989:48, 55–56), but the only documented Middle Archaic site thus far identified along the southeast coast is the Westridge site on Pine Island Ridge in Broward County (Carr et al. 1992). The Gauthier site in Brevard County contains a Middle Archaic cemetery (Carr and Jones 1981; Sigler-Eisenberg 1985).

This apparent absence of Middle Archaic sites in southeast Florida may be due in part to their low archaeological visibility. The lack of lithic raw materials for tool production in south Florida forced a greater emphasis on the use of perishable materials such as wood, bone, and shell. The highly acidic soils of the region would have destroyed these organic materials, leaving very little behind for archaeologists to discover. The dependence on perishable materials for much of the material culture of Archaic peoples is reflected at Windover Pond, where organic artifacts were recovered in abundance while lithic artifacts were nearly absent (Dickel 2002).

Late Archaic Period (5000–2500 BP)

By 5000 BP, the climate and environments of Florida had nearly reached modern conditions. This allowed further regionalization of cultures throughout Florida, as individual societies developed increasingly sophisticated adaptations to their local environments (Milanich 1994). The earliest evidence of pottery made by the native peoples of Florida appears during the Late Archaic, more than 4,000 years ago. Referred to as Orange pottery by archaeologists, this early ceramic ware was tempered with vegetal fibers, either thin strands of palmetto or Spanish moss (Bullen 1972; Griffin 1945). During a span of approximately 1,500 years, plain, incised, and punctuated types of pottery were produced, and other decorated variants underwent periods of stylistic popularity. Early pots were hand molded and tended to be thick walled, whereas some of the later vessels were thinner and formed by coiling.

The Orange culture is known primarily from the northeast Florida Atlantic coast and St. Johns River drainage basin. In addition to the distinctive fiber-tempered pottery, artifacts used by the Orange peoples include *Busycon* adzes and *Strombus* celts. It is possible that the *Busycon* adzes found in northeast Florida at this time were of local origin, while the *Strombus* celts were traded into the area from southeastern Florida (Wheeler 1992). Site types are generally oyster and coquina shell middens along the coast and freshwater pond snail middens along the inland rivers and streams. Some coastal shell rings also have been observed (Newman and Weisman 1992).

Work at Ten Mile Creek in St. Lucie County (south of Brevard County) identified four sites with fiber-temper or fiber/mixed-temper pottery, providing evidence of a Late Archaic Orange culture in southeast Florida (New South Associates, Inc. 2003). Farther to the south in Martin County, Orange populations were present and were almost exclusively coastal (Carr et al. 1995). Semi-fiber-tempered sherds were recovered from the Mt. Elizabeth site, and Orange populations may have migrated to that area from the Indian River estuary farther north. The Joseph Reed Mound on Jupiter Island may represent one of the more southerly Orange settlements. Although the

Reed Mound has been damaged by storm surges, it was once probably a constructed ring made up mostly of oyster shell. In this respect, it resembles Orange-period shell rings documented in northeast Florida (Newman and Weisman 1992).

POST-CONTACT HISTORY

European Exploration and Early Settlement, 1513–1821

The area that is now Brevard County served as an important stage for many early European expeditions in North America. Some historians believe that the Italian captain John Cabot sailed south along the Brevard coast during his 1498 explorations (Dovell 1952; Eriksen 1994). There also is evidence that Spanish slave traders raided indigenous coastal villages, for when Juan Ponce de León came to Florida, he found a local who understood Spanish. Ponce de León left Puerto Rico on March 3, 1513, with three ships. After sailing on a northwesterly course for 30 days, the ships landed either north of Cape Canaveral (Milanich 1995) or in the vicinity of modern-day Melbourne Beach (Eriksen 1994; Gannon 1996). Ponce de León called this land *La Florida* since it was sighted during the Feast of Flowers (*Pascua Florida*) (Milanich 1995). Ponce de León remained at this initial landing place for six days before pulling anchor and sailing toward Jupiter Inlet, where he landed to restock firewood and water for the ships. The fleet rode the countercurrents of the Gulf Stream to Biscayne Bay and eventually rounded the southern tip of the peninsula (Gannon 1996; Milanich 1995). The island off the Brevard coast was named *Canaveral*, the Spanish term for canebrake. The Cape is found on many sixteenth-century maps and is one of the oldest place names in North America (Eriksen 1994).

The Gulf Stream located off the Brevard coast was an important thoroughfare for the transportation of New World supplies to Europe. The Spanish treasure galleons rode this warm current from Havana through the Bahama Channel. Wrecks were common in the treacherous shoals around Cape Canaveral, and the local tribe, the Ais, would often recover the cargo. The Spanish crown realized the importance of this trade route, and when they heard that the French were developing a colony, Fort Caroline, on the St. Johns River near modern-day Jacksonville, they decided to act. Pedro Menéndez de Avilés, a highly respected officer in the Spanish navy, was issued the task of eradicating the French influence in the area and starting a colony in *La Florida* (Milanich 1995). The French colony was awaiting supplies and reinforcements coming from France under the command of Jean Ribault. Menéndez felt it was crucial to reach and destroy Fort Caroline before Ribault arrived. In August 1565, Menéndez, with his fleet of 10 ships, sighted Cape Canaveral (Gannon 1996; Milanich 1995). The Spanish force searched for six weeks along the northern Florida coast before they found the French fort. A tropical storm had scattered the French defenses and left the fort an easy target for Menéndez to destroy. While Menéndez marched south along the coast to meet the wayward French force, he kept a detailed description of the area, including Brevard County. The Spanish garrison Santa Lucia was constructed on the plateau near Jupiter Inlet as a line of defense for the new colony (Eriksen 1994; Milanich 1995).

In 1605, the Spanish sent a delegation under the command of Alvaro Mexia to the Brevard area. The diplomat was charged with placating the aggressive Ais and mapping the region. His mission was a success. Mexia was named an honorary chief of the tribe, and the Indian and Banana Rivers

(which the Spanish called *Rio de Ais* and *Ulumay Lagoon*) were explored and recorded. Mexia's maps detail many native settlements along the shores of Mosquito Lagoon (at the north end of the Banana River). It is possible that his entourage spread orange seeds along the banks of the Indian River (Eriksen 1994).

On July 24, 1715, a flotilla of 11 Spanish ships carrying 14 million pesos in gold, silver, and jewels left Havana for Europe. A few days into the voyage, 10 of the 11 ships wrecked off the East Florida coast between St. Lucie and Mantanzas. Approximately 700 sailors died, and an additional 1,500 were washed up on the coast. The Ais aided the Spaniards by providing them with supplies and instructions for gathering food in the dunes. The Spanish government, desperate to recover the lost treasure, established an encampment of salvers in the vicinity of the present-day Sebastian State Park in the far southern portion of Brevard County. Salvers recovered only one-third of the lost cargo (Eriksen 1994).

In the mid-1700s, European colonial powers fought a worldwide war, the Seven Years' War, as a means to consolidate their colonial holdings. After the British victory in the Seven Years' War in 1763, they traded their Havana conquest to Spain for Florida. The British divided the colony along the Apalachicola River into East and West Florida. In 1765, the botanist John Bartram and his son William searched for the St. Johns River headwaters (Eriksen 1994; Tebeau 1971). The two became the first Europeans to document the Brevard region (Eriksen 1994). In 1783, the Treaty of Paris restored Florida to Spain, whose control of the territory was now quite tenuous (Tebeau 1971). Vicente Manuel de Zespedes, the Spanish governor, wrote to the king in 1785 that isolated groups of Americans had settled in the area (Eriksen 1994; Tebeau 1971). Immigrants from the native tribes north of Florida now numbered 5,000 to 6,000 in the colony. The majority of these "Seminoles" were confined west of the St. Johns River. Brevard County at this time was known as the Mosquito Coast (Eriksen 1994).

American Territorial Period through the Civil War, 1821–1861

Florida became a territorial possession of the United States after President James Monroe ratified the Adams-Onís Treaty on February 22, 1821. General Andrew Jackson was appointed governor of the territory later that same year (Eriksen 1994; Tebeau 1971). Jackson partitioned Florida into two counties, Escambia to the west and St. Johns to the east. In 1824, the area encompassing most of east-central Florida, including Brevard County, was designated as Mosquito County. Colonel James Gadsden led a survey party through the eastern portion of the county in 1825 to find a route for a road from St. Augustine to what is now Dade County (Eriksen 1994; Fernald and Purdum 1992). Close to 4.0 million acres of the interior of the state was the reservation of the Seminoles, including the southwestern corner of modern-day Brevard County (Mahon 1985).

On Christmas Day 1835, the Second Seminole War brought conflict to East Florida when Native American forces razed Mosquito Lagoon plantations. Along with a severe freeze in 1835, the war decimated Mosquito County's population, as most everyone fled to safe havens outside the county (Shofner 1995). The military erected forts throughout the Brevard area. Six hundred mounted militiamen, under General Joseph Hernandez's command, constructed Fort Ann a mile south of modern-day Haulover Canal near Titusville. Camp Hernandez was erected south of

present-day Scottsmoor in northern Brevard. General Hernandez collected his troops at the camps on January 3, 1838, and proceeded to advance south along the eastern coast. Their path followed the high ground along the western side of the Indian River Lagoon before swinging west to meet Fort Taylor on Lake Winder, then angling southeast on a course parallel to what is now I-95. Of all the military trails created in Brevard, this is the only one historians are able to pinpoint accurately (Eriksen 1994). The war ended in 1842, and on March 14, 1844, Saint Lucie County (present-day Brevard County) was created from Mosquito County (present-day Orange County) (Carter 1962; Dunn 1998).

On March 3, 1845, Florida became the twenty-seventh state admitted to the Union (Eriksen 1994). Judge Theodore Washington Brevard settled in Tallahassee two years later. He spent 12 years as state comptroller and was honored for his work on January 6, 1855, when St. Lucie County was renamed Brevard County. This new county encompassed more than 7,000 square miles and had its seat of government in the small town of Susannah, north of Fort Pierce (Eriksen 1994; Fernald and Purdum 1992; Morris 1995). John Houston established Arlington, the first permanent US settlement in south Brevard County, in 1854. This town was located on land fronting the Indian River and Elbow Creek (Eriksen 1994).

On January 10, 1861, Florida seceded from the Union. Brevard County was far removed from the battlefields to the north, but still played an important role in the war. The settlers along the Indian River engaged in salt production for the Confederate Army, and the cattle range in western Brevard supplied beef. Blockade runners frequently utilized the inlets and bays of the Indian River and Mosquito Lagoon during their smuggling ventures (Tebeau 1971).

Late Nineteenth Century, 1861–1899

Prior to the 1880s, water transportation, both sea and river, was the dominant mode of long-distance travel for most of Florida's residents. Due to Florida's dearth of population, underdevelopment, and lack of capital, railroads penetrated into the state slowly. By the mid-1800s, Florida claimed only one successful rail line, and it connected Tallahassee to the Gulf of Mexico at St. Marks (Brown 1991). Most of Florida's roads were nothing but slow, bumpy, waterlogged (during summer months), sand-laden trails that even ox teams had a difficult time traversing. With the arrival of Henry Flagler and Henry Plant in the 1880s, trains began to cross the Florida landscape. Especially for communities located in the interior of Florida, trains provided "rapid transit" for agricultural produce to northern markets. While agriculture and other Florida products flowed north along the rails, tourist, immigrants, and goods traveled south in the new trains. Railroads generally brought growth to the communities and regions they touched (Covington 1957; Johnson 1966).

Throughout the 1880s, many settlements began across Brevard County, which would turn into the communities present today. Malabar was one of the oldest places on Florida's east coast with settlements dating back to 1875, and in 1883, a post office was built (Morris 1995). Citizens elected Titusville as the permanent seat of government for Brevard County in 1879. The population of the Indian River area was rapidly expanding due to a solid economic base of agriculture and fishing. In 1880, Melbourne, founded by Richard W. Goode, obtained a post

office. In 1870 John Tillman, J. B. Creech, and M. J. Culpepper formed the firm of Culpepper, Creech and Co. to purchase 75 acres of land along the Indian River. They intended to develop the land as citrus groves and quickly built a packing house at “Tillman’s Wharf” (now Castaway Point) at the mouth of Turkey Creek. In 1887, Tillman petitioned the US Postal Service for a local post office, and the area became known as the town of Tillman. This townsite would be the first settlement in within the limits of present-day Palm Bay. The area only had 40 residents, was not incorporated, and had no elected officials. By the end of the century, Tillman and his partners had abandoned their citrus business and returned to Georgia (NRHP 1987).

The introduction of the railroad also would spur on growth in both population and economy across the county. Titusville was chosen as a stop on the Jacksonville, Tampa, and Key West Railway in 1885. In 1893, the Flagler East Coast Railway line came to Titusville and Eau Gallie. In 1895, a double blast of freezing temperatures devastated the area’s citrus industry. The orange and pineapple groves recovered by 1897. The economy of the area boomed with the rejuvenated citrus industry and the new railway (Eriksen 1994).

Twentieth Century (1900) to Present

After the settlement of Tillman was abandoned by its original organizers, the land was bought by the Florida Indian River Catholic Colony in North Dakota. This new organization obtained a permit to conduct business from the State of Florida by 1911. The company ran advertisements throughout the Midwest, and by 1912, families from Indiana, Wisconsin, Kansas, and Oklahoma began pouring into Tillman, brought by the Florida East Coast Railroad. By 1914, there were approximately 100 families in the area and a local Catholic church had been built. The new settlers found that cultivation was difficult in the area due to the sandy soil and freezes that destroyed crops. The church building would be added to the NRHP in 1987 (NRHP 1987).

Not until the end of the nineteenth century did Florida realize any concerted effort in road development. With the proliferation of railroads, farmers, merchants, and others clamored for better roads to get goods and people to and from the railroad depots. Additionally, during the 1910s and 1920s, the number of automobiles in the state and nation increased exponentially, exerting more pressure on the government to develop roads. Prior to 1924, only 748 miles of hard-surfaced road existed in the state. By 1928, this number grew to 1,588 miles with an additional 59 miles in the process of being paved (Jackson 1992; Kendrick 1964; Tebeau 1971). Not surprisingly, as car ownership increased and roads improved, train dominance diminished.

The county was in the midst of a massive program of internal improvements during the first 20 years of the new century. Municipal governments constructed water towers, sewage lines, and new roads. The county purchased a large trenching machine in 1911 and began to drain the floodplain east of the St. Johns to open land for new development. The Dixie Highway route of 1915 brought an infusion of tourists to the area. In 1917, Brevard achieved its modern-day dimension when the southern portions of the county became St. Lucie and Okeechobee Counties, and the western portion became Osceola County (Fernald and Purdum 1992). The center of population in the county shifted from Titusville in the north to Eau Gallie, Cocoa, and Melbourne in the south. In 1920, 1,445 people lived in Cocoa, 1,361 in Titusville, and 533 in Melbourne.

A bridge constructed from Cocoa to Merritt Island opened a link to the many small communities on the coast. Another toll bridge from Melbourne to Merritt Island followed four years later, and by the mid-1920s, four bridges spanned the river. New towns sprouted up along the beaches as a result of these bridges (Eriksen 1994).

Florida began paving its portion of US 1 (State Road No. 4) during this era; when completed, US 1 stretched from Canada to the southern tip of Florida. State Road No. 4 paralleled Florida's east coast and became a major economic artery. Although the road was still incomplete in 1923, the legislature designated State Road No. 4, along with six other roads, to the first tier of a two-tiered road system. By 1925, nearly half a million tourists drove their cars into the Sunshine State (Federal Writers' Project 1939; Frazer and Guthrie 1995; King 1992). In 1927, the State Road Department trumpeted, "The net result of the year's work is that all the gaps [in US 1] have been closed and that there is a continuous paved road between the Georgia State line and Miami" (*Florida Highways* 1928). Communities along or near the road—including the smaller towns of Malabar and Micco—enjoyed growth and additional tourism during the boom years due to the roadway (Shofner 1995).

In 1925, residents of Tillman changed their town's name to Palm Bay (City of Palm Bay, Florida 2021). The western two-thirds of the City of Palm Bay is within the St. Johns River's historic drainage basin. Prior to the 1920s, these swampy lands were separated from Turkey Creek and the Indian River lagoon by the Ten-Mile Ridge. This was an old sand dune system that served as a natural basin divide and over which a part of I-95 was built. The Ten-Mile Ridge was breached in 1922, and a 180-mile grid of 80 canals was dug to divert stormwater to Turkey Creek. This was known as the Canal 1 (C-1) Redivision Project, and it drained the natural wetlands for conversion to agricultural use (St. Johns River Water Management District 2021).

After the stock market crash of 1929, the number of tourists visiting Brevard dramatically waned. This decline crippled the economy and bankrupted the government. The area received aid from the Civil Works Administration (CWA), which employed 800 people from December 1933 to March 1934 to repair roads, build schools, and excavate Indian mounds. In 1935, the Works Progress Administration (WPA) replaced the CWA. This agency constructed the Canaveral port and the Melbourne airport and dredged the Intracoastal Waterway from Cumberland to Miami in 1936. As World War II approached in 1939, the military chose land south of Cocoa Beach to build the Banana River Naval Air Station (Eriksen 1994). In 1942, the Navy opened the Melbourne Naval Air Station to train pilots to fly Hellcats launched from aircraft carriers. The bases became the epicenter of the economy. At war's end, both bases were closed (Morris 1948; Stone 1988).

In 1949, the US Air Force developed a long-range missile testing ground at the former Banana River Naval Air Station. The base was renamed Patrick Air Force Base in 1950 and was the site of experimental launches of hybrid rockets. The National Aeronautics and Space Administration (NASA) began operations on the Cape in 1958, and in 1963, the agency received 88,000 acres on Merritt Island on which to build Kennedy Space Center. A complex of more than 50 buildings was constructed on the island, including the largest building in the world, the Vehicle Assembly Building. Different portions of the facilities were created for manned and unmanned launches.

Launch Complex 41 was constructed between 1964 and 1965 for the new Titan III program; these rockets were capable of delivering much larger cargo and required the construction of rail facilities for transport to the launch sites. The complex also played a central role in the Viking and Voyager missions, launching probes to Mars and the outer reaches of the Solar System. The space industry had a dramatic effect on the area. Brevard County grew by 371 percent from 1950 to 1960, and the population doubled again during the 1960s (Tebeau 1971).

After several hurricanes in the 1920s and 1940s caused substantial flooding issues in Palm Bay, new plans for the canal system were designed in the 1970s to divert the water elsewhere. Environmental studies found that this diversion of fresh water would cause big changes in the salinity of the lagoon and surrounding areas, impacting fish and wildlife resources and the project was halted. In the present day, the St. Johns River Water Management District and the Melbourne-Tillman Water Control District have re-diverted a substantial portion of the C-1 drainage to a retention area west of I-95. The Melbourne-Tillman Water Control District owns and maintains more than 2,300 acres of canals and includes portions of Palm Bay and West Melbourne (Melbourne-Tillman Water Control District 2021). Stormwater stored in the retention area is pumped into a wetland treatment system, known as Sawgrass Lake Water Management Area, before draining into the St. Johns River, which is shown in **Figure 16**.

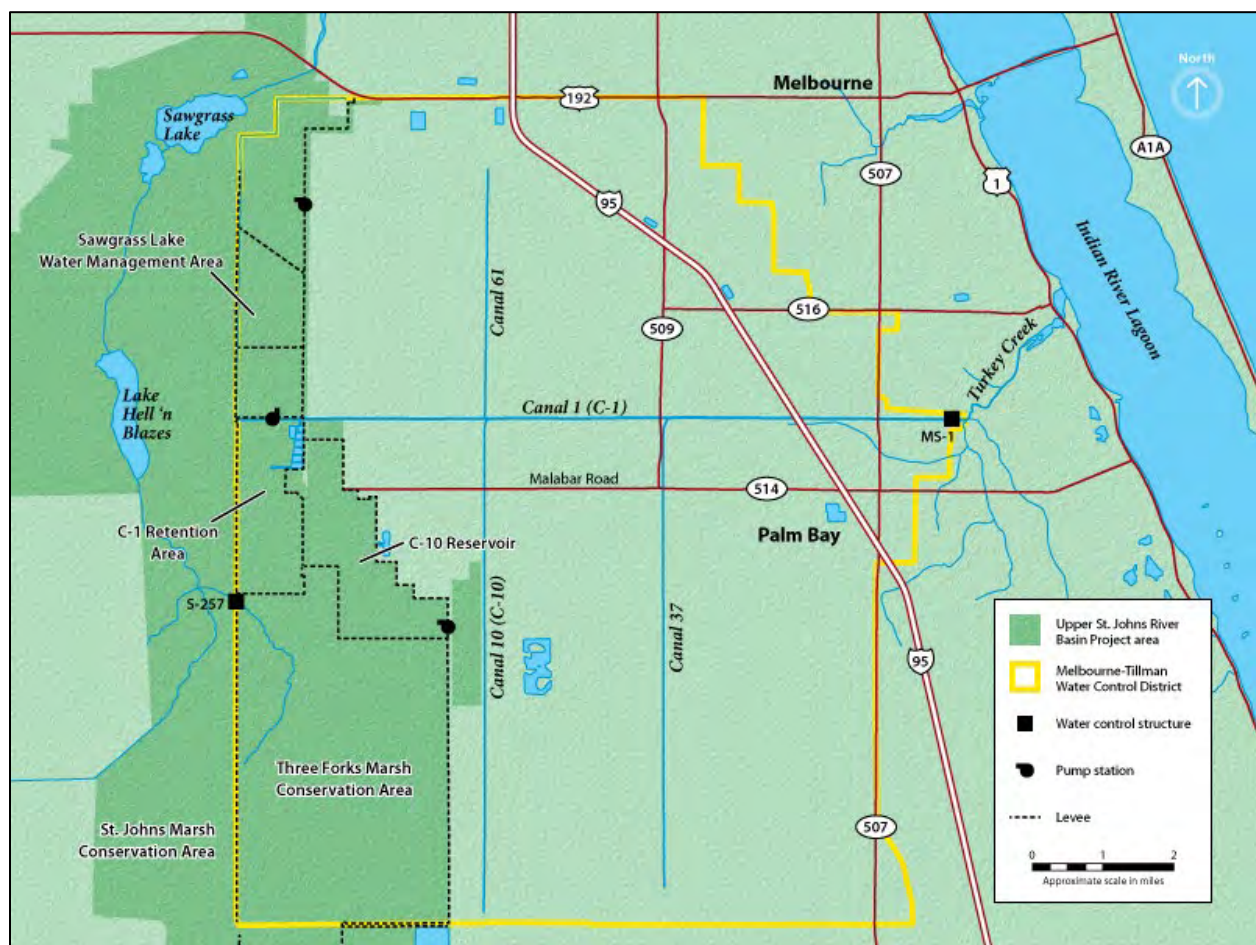


Figure 16: Map of the C-1 Rediversion Project (St. Johns River Water Management District 2021)

The 1990s brought still more changes to the area. The original launch pad at the Kennedy Space Center was demolished to make way for even larger and more advanced rockets (*Florida Today* 2001; National Park Service 1983). This growth continued to nearly 400,000 residents in 1990 and more than 500,000 by 2010 (US Census Bureau 1995, 2010).

BACKGROUND RESEARCH

FLORIDA MASTER SITE FILE REVIEW

Florida Master Site File (FMSF) data from January 2021 were reviewed to identify any previously recorded cultural resources within the project APE. The FMSF review indicates that eight previous cultural resource surveys have been conducted within the current project area (**Figure 17; Table 2**). Of these, the most relevant to the current project are FMSF Survey Nos. 20793 and 24194. FMSF Survey No. 20793 was a tract survey located on the south side of Malabar Road and included approximately 1,248 feet (380 meters) of the project corridor west of Allison Drive (see **Figure 17**); this survey conducted subsurface testing compliant with Module 3 guidelines and revisited the previously identified archaeological site 8BR00025; the survey did not identify any cultural deposits within the current APE. FMSF Survey No. 24194 was a tract survey that conducted judgmental shovel testing along the north side of Malabar Road (see **Figure 15**); this survey identified linear resource 8BR03535.

Table 2: Previous Cultural Resource Surveys within the Malabar Road APE

FMSF No.	Title	Year	Reference
1646	Proposed Response to Future Area Development Application Question 19, Parts A and B, for GDC’s West Malabar Tract, Brevard County, Florida	1981	CCC Enterprises, Inc.
8791	Cultural Resource Assessment Survey of the Palm Bay Parkway PD&E Study from Malabar Road to Ellis Road, Brevard County.	2003	Janus Research
10376	A Cultural Resource Reconnaissance Survey of the Palmer Tract, Brevard County, Florida	2004	Environmental Services, Inc. (ESI)
12516	A Cultural Resource Survey of the Chaparral Project Area, Brevard County, Florida	2006	SEARCH
14219	A Phase I Cultural Resource Survey of the Lennar South Development Property, Brevard County, Florida	2007	SEARCH
20793	Cultural Resources Survey and Assessment, Palm Island Subdivision, Brevard County, Florida	2014	SouthArc, Inc.
24194	A Cultural Resources Assessment Survey for the Proposed Avery Springs Development, Palm Bay, Brevard County, Florida	2017	Penders, Thomas E.
25794	Cultural Resource Assessment Survey, Malabar-Midway 230 kV Transmission Line, Brevard County, Florida	2017	Janus Research

One archaeological site (8BR00025) and one historic resource group (8BR03535) have been recorded within the project APE (**Table 3**; see **Figure 5**).

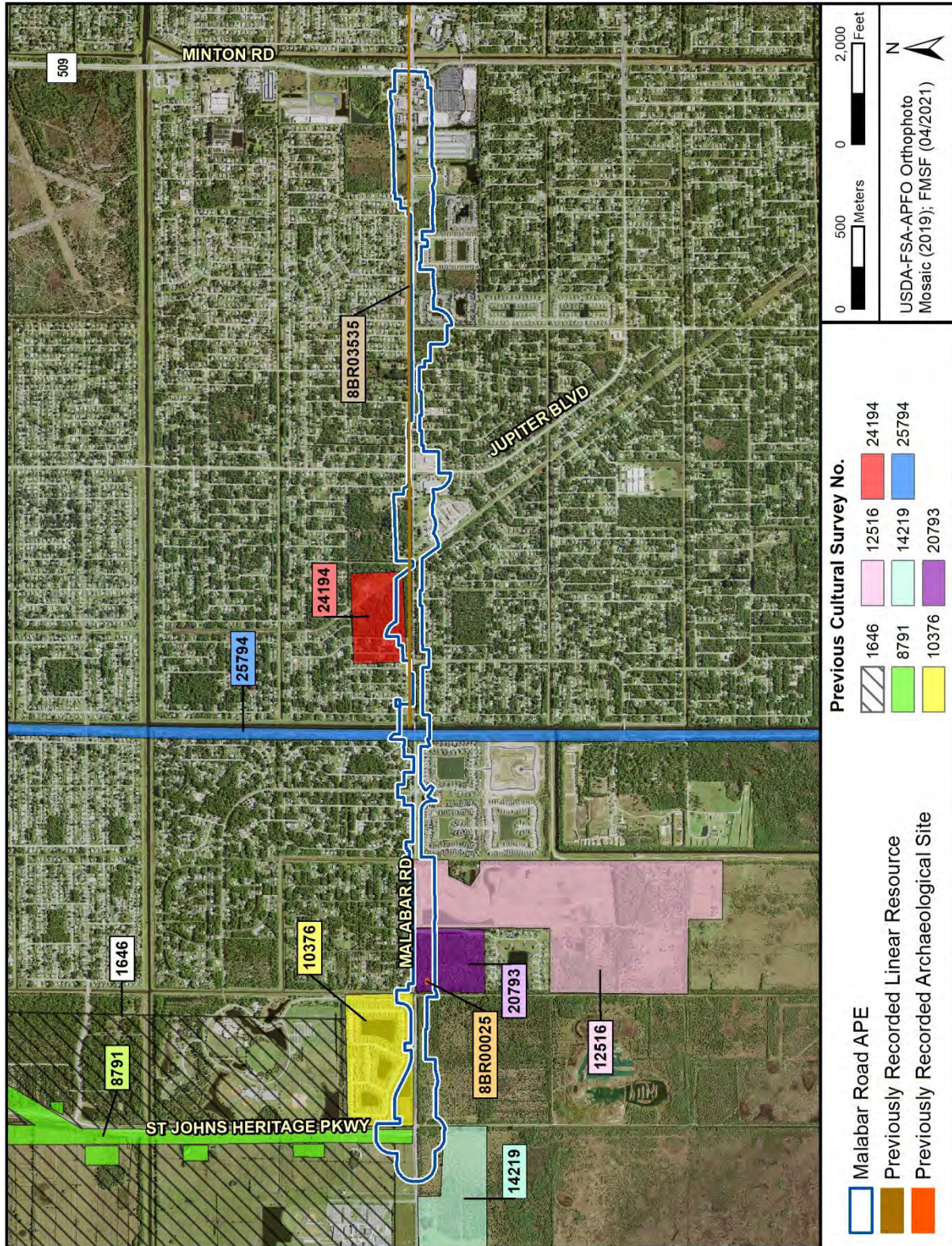


Figure 17: Previously conducted surveys and identified cultural resources intersecting the Malabar Road APE

Table 3: Previously Recorded Cultural Resources within the Malabar Road APE

<i>Archaeological Site</i>				
FMSF No.	Name	Time Period	Surveyor Evaluation	SHPO Evaluation
8BR00025	NN	Prehistoric	Ineligible for listing in NRHP	Ineligible for listing in NRHP
<i>Linear Resource</i>				
FMSF No.	Name	Time Period	Surveyor Evaluation	SHPO Evaluation
8BR03535	Melbourne-Tillman Canal No. 20	Boom Times, 1921-1929	Ineligible for listing in NRHP	Ineligible for listing in NRHP

Resource 8BR00025 is an unnamed, low-density, prehistoric scatter of oyster and clam shell with few non-diagnostic lithics. The site is located south of the archaeological APE but within the project APE at the southwest corner of the intersection of Malabar Road and Allison Drive, along a spoil pile within a former silvicultural area (see **Figure 17**). The site was identified in 1953 and revisited as part of FMSF Survey No. 20793 in 2014. Due to the paucity of artifacts, an absence of diagnostic artifacts and a lack of intact soils, 8BR00025 was recommended ineligible for inclusion on the NRHP (SouthArc, Inc. 2014). The State Historic Preservation Officer (SHPO) concurred with this assessment in a letter dated April 30, 2014.

Constructed in 1928, Resource 8BR03535 is a section of the Melbourne-Tillman Canal No. 20. The canal is orientated east-west and is located on the north side of Malabar Road, along the east half of the APE. The canal was identified as a historic linear feature as a result of FMSF Survey No. 24194. This canal is part of a network of canals that drained wetlands from the St. Johns River to Turkey Creek. The canal system does not express unique construction or engineering features and does not meet any qualifications for inclusion on the NRHP (Penders 2017). Other recorded canals within this network were previously determined to not be eligible for the NRHP. Resource 8BR03535 was determined to be ineligible for inclusion in the NRHP by the SHPO in 2017.

HISTORIC MAP AND AERIAL PHOTOGRAPH REVIEW

Historic maps and aerial photographs were examined in order to identify past land use in the vicinity of the Malabar Road 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. In Florida, these maps characteristically show landscape features such as vegetation, bodies of water, roads, and Spanish land grants. GLO maps of Florida Townships 28 and 29 South, Range 36 East created in 1845 shows no development in the area. The map indicates marshland inside the APE (**Figure 18**) (GLO 1845a, 1845b, 1845c, 1845d).

Late nineteenth-century maps show no development in the area of the APE. There are several towns on the east coast, but Eau Gallie is the closest settlement, located to the northeast near

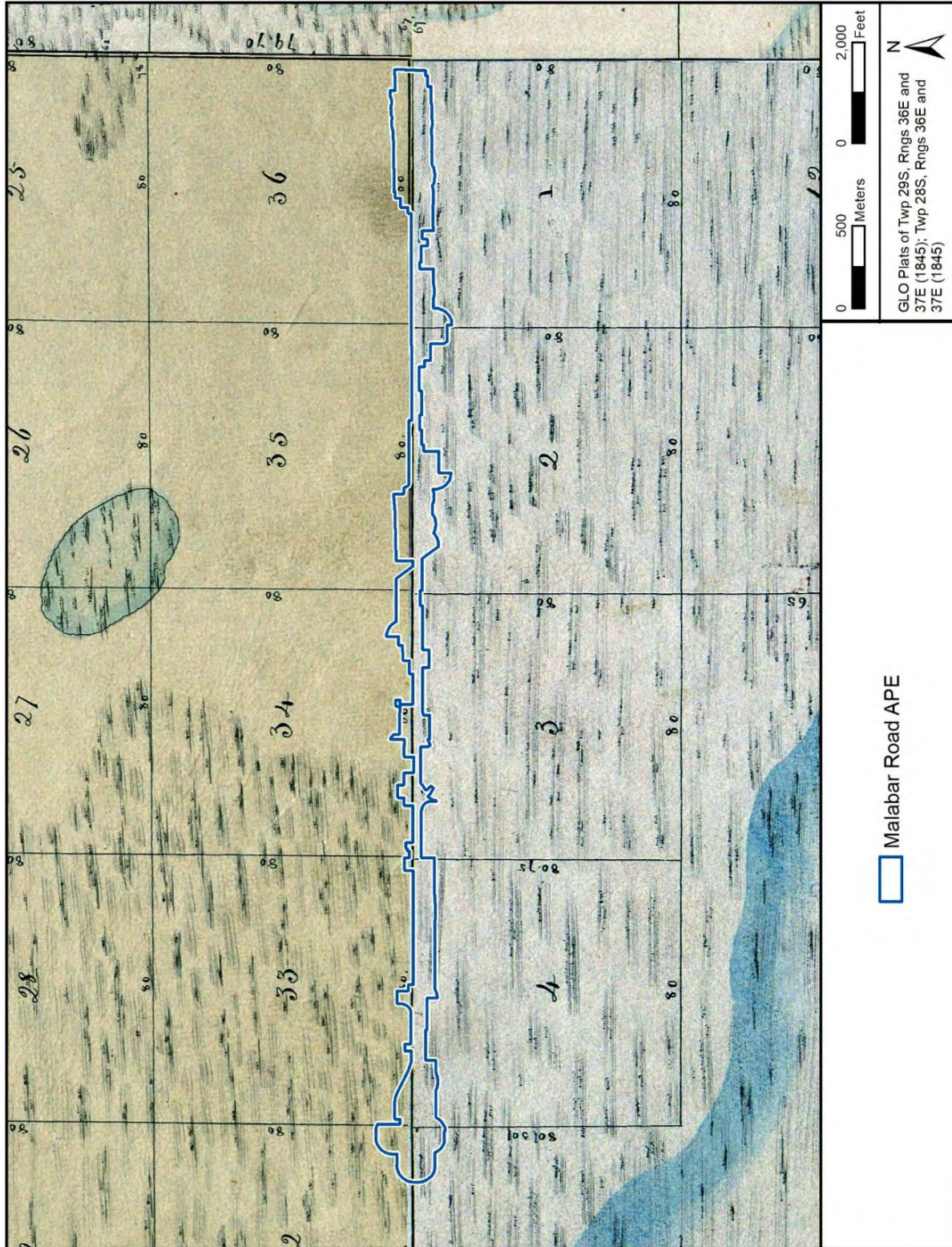


Figure 18: GLO maps of Township 28 South, Ranges 36 and 37 East; Township 29 South, Ranges 36 and 27 East (GLO 1845a, 1845b, 1845c, 1845d)

the coast (Folger 1883). An 1890 map of Brevard County illustrates a large “sawgrass lake” south of the APE, with Malabar noted to the east, and no features are evident within the APE (Norton 1890). A 1917 state highway map shows a road traveling westward from the community of Malabar, though it is unclear from this map if it reaches the APE (Florida State Road Department [FSRD] 1917). A more detailed county map from 1934 illustrates the same road traveling through an area near the APE. Most of the development in the area is limited to the coast (FSRD 1934).

By the 1940s, there was some development in the project APE. An aerial photograph from 1943 shows Malabar Road on its present path running east-west the entire length of the APE. In addition, there is evidence of four north-south canals crossing the APE at Malabar Road in the western half of the APE. In the eastern half of the APE, a north-south road enters the APE from the south and ends when it intersects Malabar Road. On the far west and far east ends of the project corridor, two orchards are evident within the APE. In the surrounding area outside the APE, there are several small roads, orchards, and an airport (**Figure 19**) (US Department of Agriculture [USDA] 1943, 2019).

A topographic map of the area from the 1950s shows more development. Malabar Road is evident following the entire path of the APE. The north-south canals are evident in the western half of the APE. The orchards also are still illustrated on both the west and east ends of the APE. There are six structures evident within the APE in the eastern half. In the western half, a small unimproved road enters from the south of the APE following the eastern edge of the orchard within the APE, before connecting with Malabar Road. SR 509 runs north-south and is obscured by the eastern edge of the APE. A canal runs east-west north of Malabar Road in the eastern half of the APE. Outside the APE, there are two unimproved roads north of the APE and a small orchard (**Figure 20**) (US Geological Survey [USGS] 1951, 1954).

Through the 1960s and into the 1970s, the area around the APE continued to grow. Topographic maps from 1971 show that the previously mentioned improvements remain. Near the center of the APE, a network of unimproved roads is evident to the south of the APE. Several north-south unimproved roads intersect Malabar Road. Four north-south unimproved roads enter the APE between the western orchard and the center of the APE. Nine structures are evident within the APE in the eastern half. On the eastern side of SR 509, outside the APE, there are several new unimproved roads, showing that the area is developing. More new roads are evident below the western orchard and northwest as well, but none cross into the APE (**Figure 21**) (USGS 1971a, 1971b).

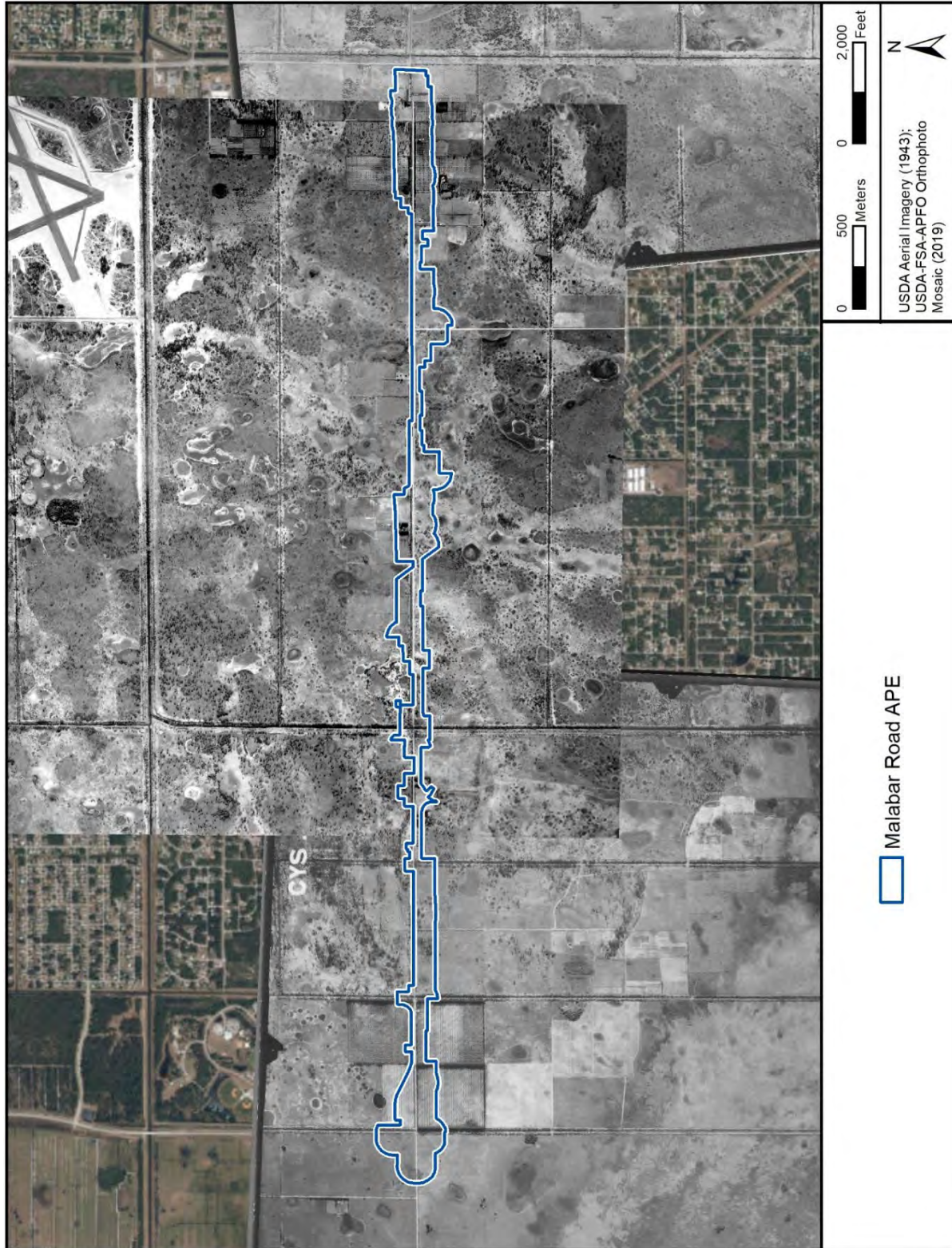


Figure 19: 1943 USDA aerial photograph of Brevard County, Florida

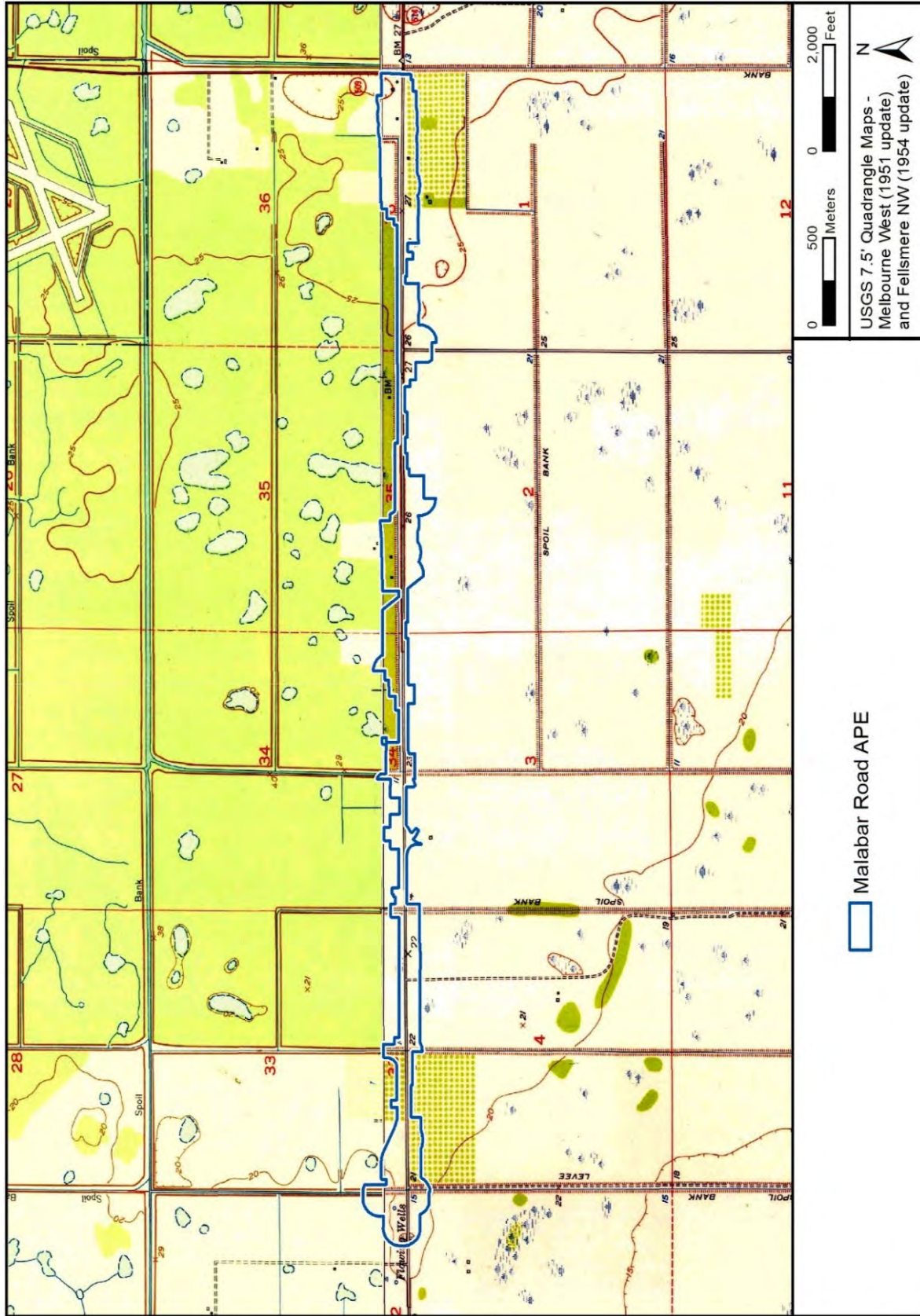


Figure 20: USGS topographic maps of Melbourne West and Fellsmere NW, Florida (USGS 1951, 1954)

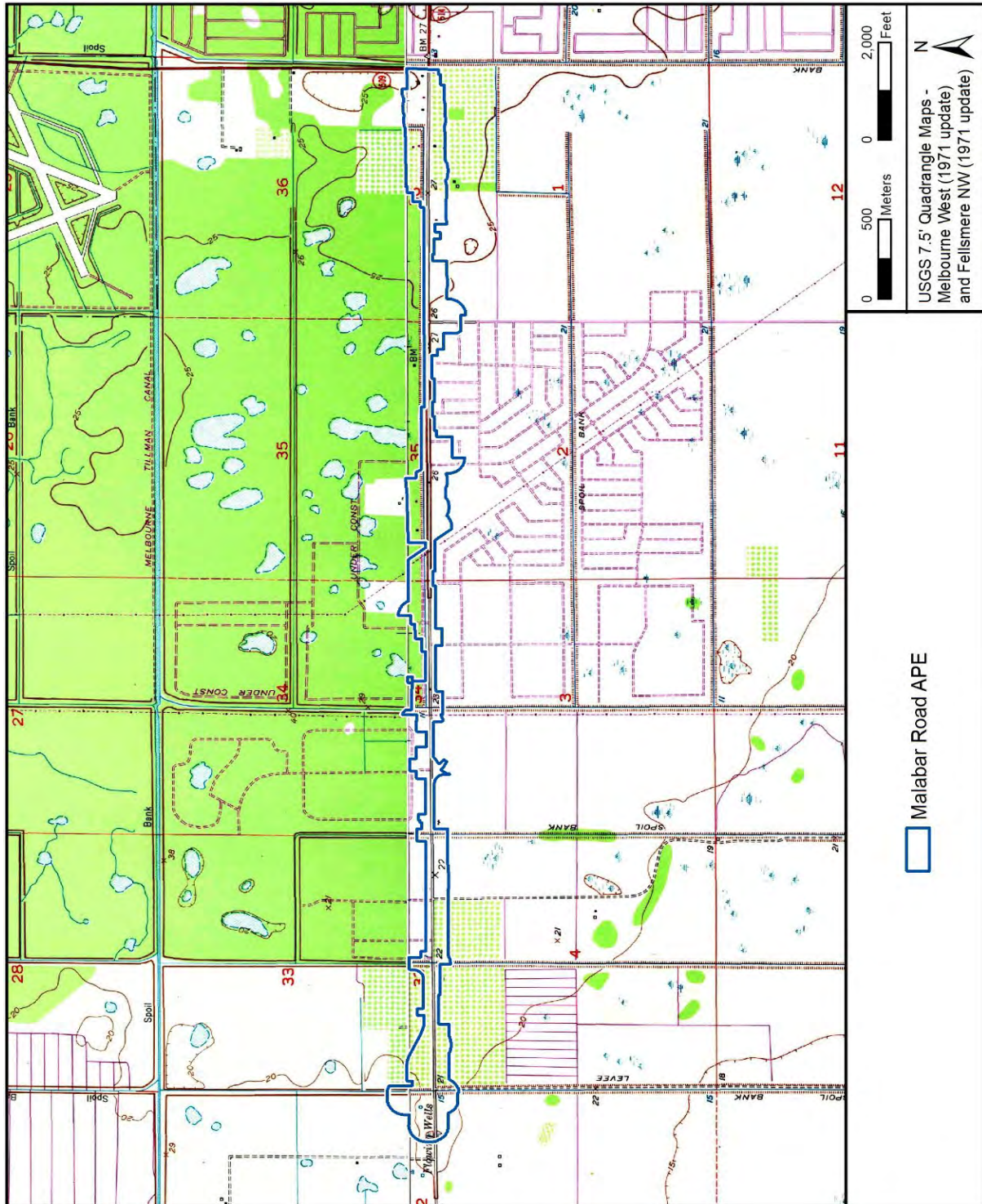


Figure 21: USGS topographic map of Melbourne West and Fellsmere NW, Florida (USGS 1971a, 1971b)

RESEARCH DESIGN

PROJECT GOALS

A research design is a plan to coordinate the cultural resource investigation from inception to the completion of the project. This plan should minimally account for three things: (1) it should make explicit the goals and intentions of the research; (2) it should define the sequence of events to be undertaken in pursuit of the research goals; and (3) it should provide a basis for evaluating the findings and conclusions drawn from the investigation.

The goal of this cultural resource survey was to locate and document evidence of historic or prehistoric occupation or use within the APE (archaeological or historic sites, historic structures, or archaeological occurrences [isolated artifact finds]), and to evaluate these for their potential eligibility for listing in the NRHP. The research strategy was composed of background investigation, a historical document search, and field survey. The background investigation involved a perusal of relevant archaeological literature, producing a summary of previous archaeological work undertaken near the project area. The FMSF was checked for previously recorded sites within the project corridor, which provided an indication of prehistoric settlement and land-use patterns for the region. Current soil surveys, vegetation maps, and relevant literature were consulted to provide a description of the physiographic and geological region of which the project area is a part. These data were used in combination to develop expectations regarding the types of archaeological sites that may be present and their likely locations (site probability areas).

The historical document search involved a review of primary and secondary historic sources as well as a review of the FMSF for any previously recorded historic structures. The original township plat maps, early aerial photographs, and other relevant sources were checked for information pertaining to the existence of historic structures, sites of historic events, and historically occupied or noted aboriginal settlements within the project limits.

NRHP CRITERIA

Cultural resources identified within the project APE were evaluated according to the criteria for listing in the NRHP. As defined by the National Park Service (NPS), 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 prehistory or 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, relative elevation), as well as the results of previously conducted surveys, the potential for prehistoric archaeological sites to be present within the Malabar Road APE was considered to be generally low. Few prehistoric sites have been identified in proximity to the project APE, and the right-of-way within which the proposed improvements will be built has undergone extensive disturbance due to road construction and maintenance as well as the installation of underground utilities. The Malabar Road APE was judged to have a low potential for historic-period archaeological sites based on the level and type of historic development identified in the map review. Similarly, the potential for historic structures was considered to be low, with the exception of historic canals.

SURVEY METHODS

Archaeological Field Methods

The Phase I field survey consisted of systematic shovel testing pre-plotted at 100-meter (328-foot) intervals and pedestrian survey according to the low potential for the presence of buried archaeological sites. Shovel tests measured approximately 50 centimeters (19.7 inches) in diameter and were excavated to a minimum depth of 100 centimeters below surface (cmb) (39.4 inches), subsurface conditions permitting. All excavated sediments were screened through 1/4-inch (0.64-centimeter) mesh hardware cloth. The locations of each shovel test were marked on aerial photographs and recorded on a handheld Wide Area Augmentation System (WAAS) Global Positioning System (GPS) unit. The cultural content, soil strata, and environmental setting of each shovel test were recorded in field notebooks. When appropriate, a Canon digital camera was utilized to document stratigraphy and environmental conditions. “No-dig” points were utilized to document portions of the APE that could not be tested due to significant subsurface disturbances.

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 1977. The field survey inventoried existing

buildings, structures, and other aspects of the built environment within the project 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.

A number of subdivisions intersect the Malabar Road APE; however, none of these subdivisions were determined to be of historic age. There are only two parcels containing potential historic structures in these subdivisions, and neither parcel is within the APE. The remainder of the subdivisions consist of non-historic development (**Figure 22**). Therefore, none of these subdivisions were recorded as part of this survey, and none of the modern subdivisions are associated with the identified canals as they were built after the canals were constructed.

Laboratory Methods

No artifacts were recovered as a result of this survey, and no laboratory analysis was required.

Curation

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

Informant Interviews

SEARCH archaeologist Dave Boschi, MA, RPA, contacted the South Brevard Historical Society (SBHS) via email on April 27, 2021, in an attempt to inquire about potential areas that may be of local importance. As of the submission of this report, the SBHS replied to note that this would be brought to the attention of their Board.

Certified Local Government Consultation

As no Certified Local Government (CLG) exists for Brevard County or the City of Palm Bay, no CLG consultation was necessary.

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

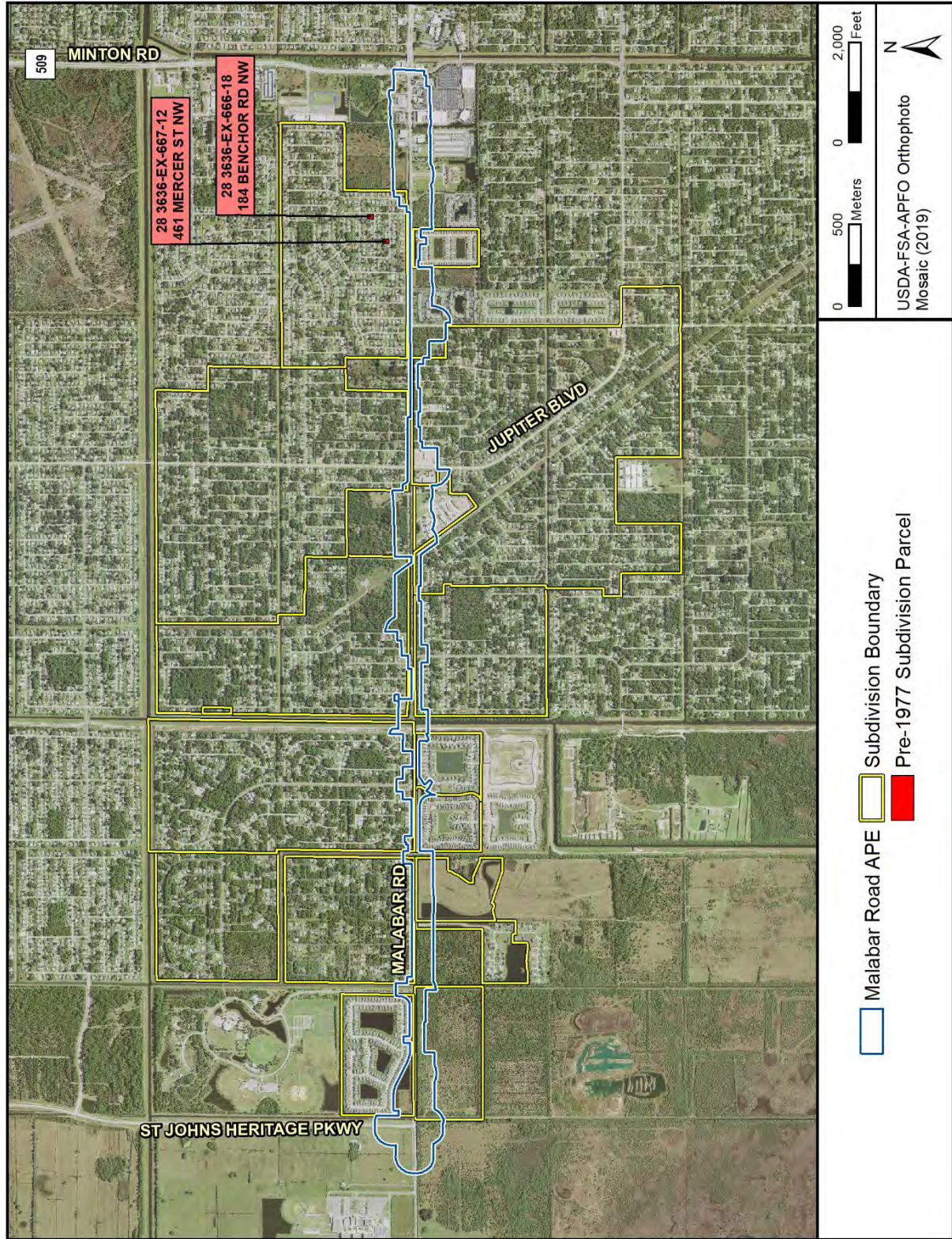


Figure 22: Location of parcels containing potentially historic structures within subdivisions intersecting the Malabar Road APE

building foundations. 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 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.

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RESULTS

ARCHAEOLOGICAL RESULTS

The Malabar Road archaeological APE is a narrow corridor along both sides of Malabar Road from west of St. Johns Heritage Parkway to Minton Road. The APE falls within the existing and proposed right-of-way lining residential developments, although the south side of Malabar Road along the western end of the corridor includes undeveloped, wooded parcels that had previously been silvicultural tracts. Aerial imagery and background research indicated a high probability of roadside utilities and disturbances, and the field visit confirmed and documented the prevalence of subsurface disturbances (**Figure 23**). Additionally, the Melbourne-Tillman Canal (8BR3535) runs along the north side of Malabar Road from Bavarian Avenue Southwest to east of Daffodil Drive. As a result, the locations available to safely conduct archaeological testing was limited to areas mostly disturbed but devoid of marked utilities. A total of 96 shovel tests were attempted, of which 30 were able to be excavated. Attempted, but not excavated, shovel tests were marked as “no-digs” (**Figures 24–30**). Marked field maps are provided in **Appendix A**.

The 30 shovel tests that were successfully excavated are located on the south side of Malabar Road; all 30 tests were negative for cultural materials. The north side of Malabar Road has been thoroughly disturbed with road and canal construction and the installation of underground utilities, leaving no viable location for archaeological testing (see **Figure 23**). Additionally, disturbance from development along the east end of the corridor left few options for shovel testing. The majority of the excavated tests presented soil profiles that demonstrate the disturbed nature of the soils within the APE. Typical soil profiles displayed mixing and mottling of soils in the upper strata, with sand, clay, or hydric soils at the base of excavations (**Figure 31**).

No completely natural soil strata were observed within the Malabar Road archaeological APE. Due to the level of disturbance and the variety of construction that has been done within the project corridor, soil profiles exhibited a high degree of variability throughout the APE.

Previously recorded site 8BR00025 is located south of the archaeological APE, but within the overall project APE. Testing in proximity to the site included two shovel tests, one to the west and one to the north, described below. Testing within the existing boundary of 8BR00025 was not possible due to the confines of the APE. Site 8BR00025 was not revisited; as such, no update to the site file is provided.

Typical soil stratigraphy in the west end of the corridor, approximately 100 meters (328 feet) west of 8BR00025, consisted of loose, light gray (10YR 7/1) sand from 0 to 30 cmbs (0 to 11.8 inches, Stratum I), mottled light yellowish-brown (10YR 6/4) and brownish-yellow (10YR 6/8) sand from 30 to 60 cmbs (11.8 to 23.6 inches, Stratum II), yellow (10YR 7/6) sand from 60 to 75 cmbs (23.6 to 29.5 inches, Stratum III), and very dark grayish-brown (10YR 3/2) sandy clay from 75 to at least 100 cmbs (29.5 to 39.4 inches, Stratum IV).



Figure 23: Representative views of environment within the Malabar Road APE. Top left: Dense vegetation with Brazilian pepper along the west end, view east. Top right: Canal and dense vegetation along the west end of APE, view south. Center left: Right-of-way, canal, and road bank along the center of the APE, view south. Center right: New underground utility installation along the center of the APE, view west. Bottom left: Developed intersection along the west of the APE, view southeast. Bottom right: Roadside drainage along the east end of the APE, view west

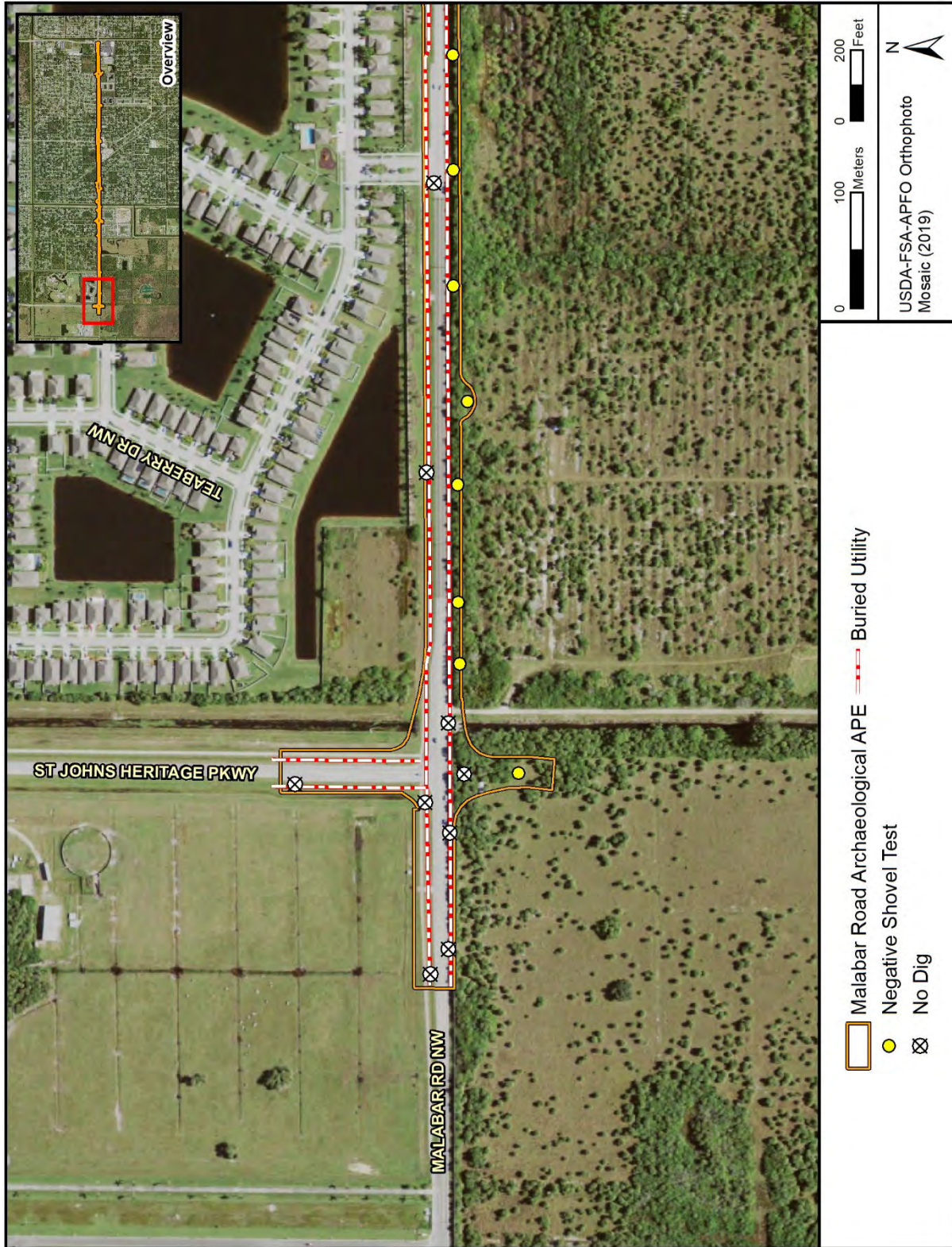


Figure 24: Archaeological survey results within the Malabar Road APE, map 1 of 7

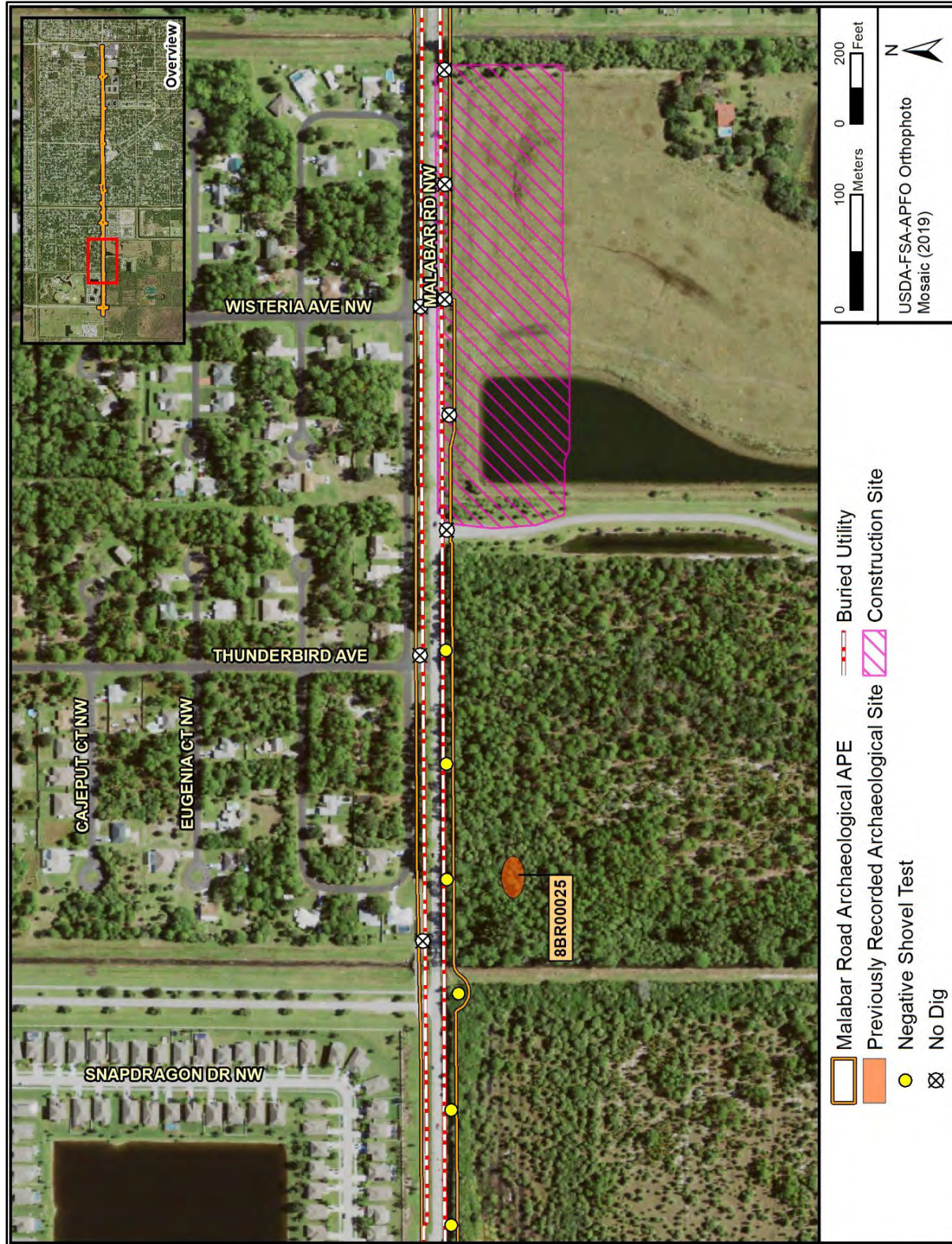


Figure 25: Archaeological survey results within the Malabar Road APE, map 2 of 7

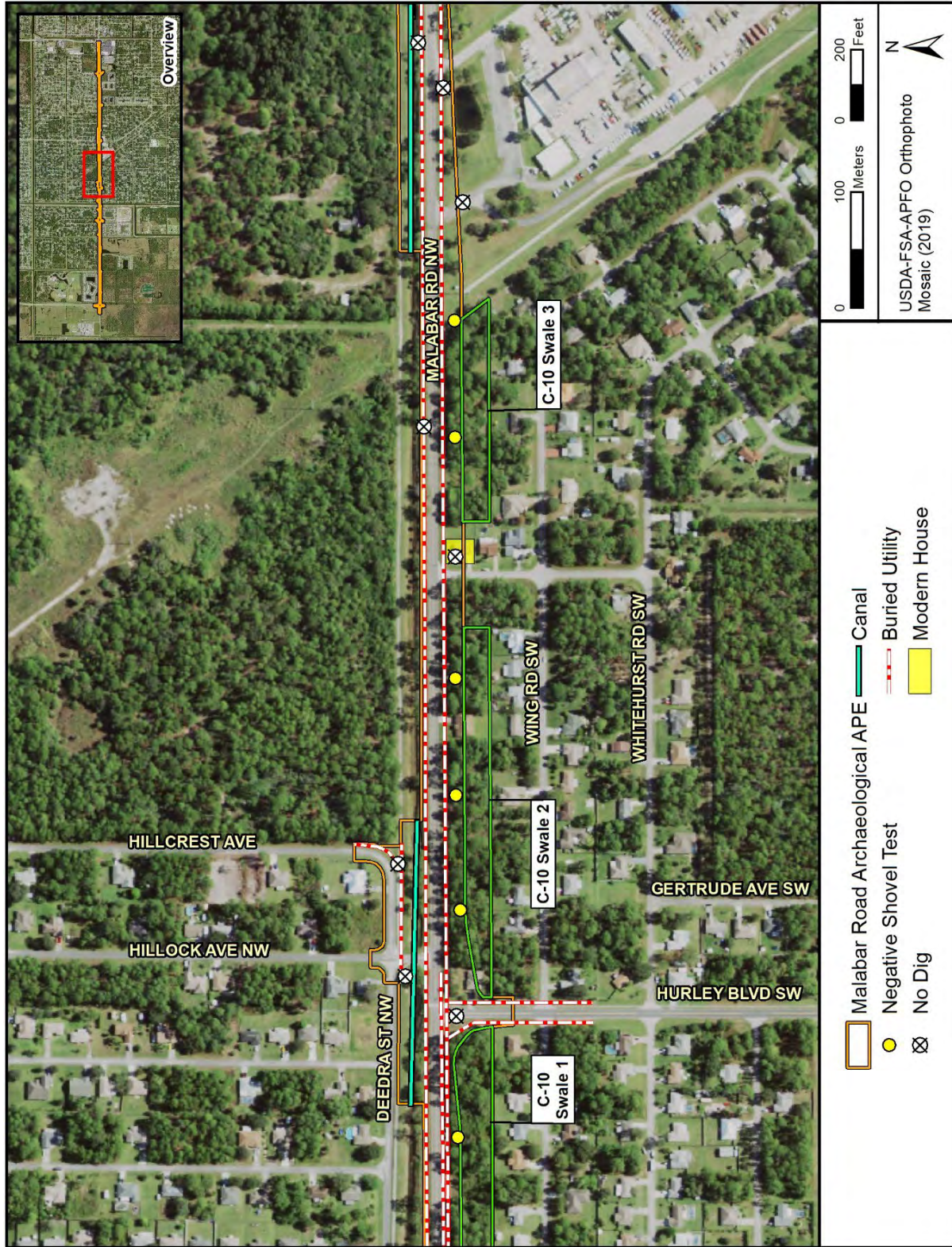


Figure 26: Archaeological survey results within the Malabar Road APE, map 3 of 7

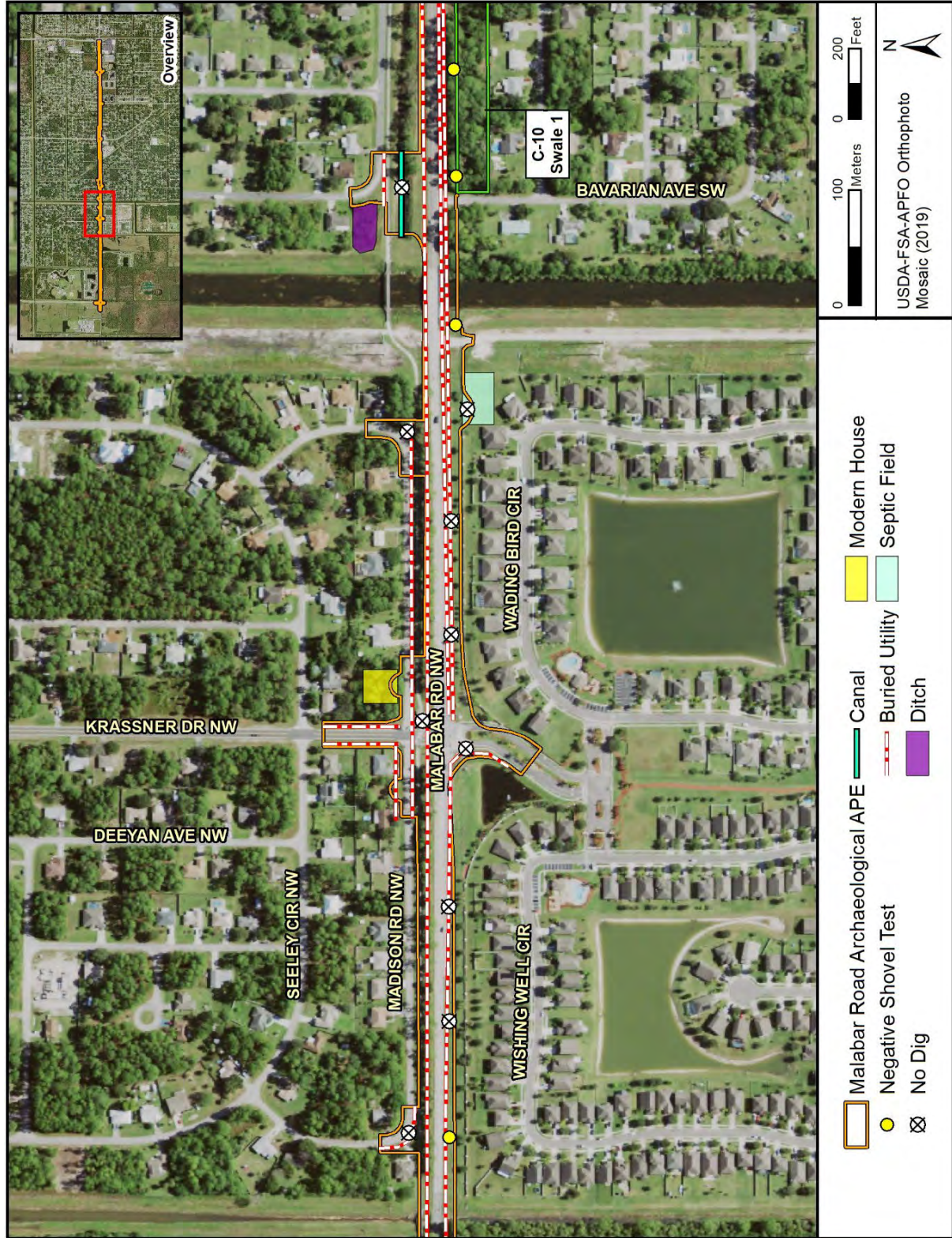


Figure 27: Archaeological survey results within the Malabar Road APE, map 4 of 7

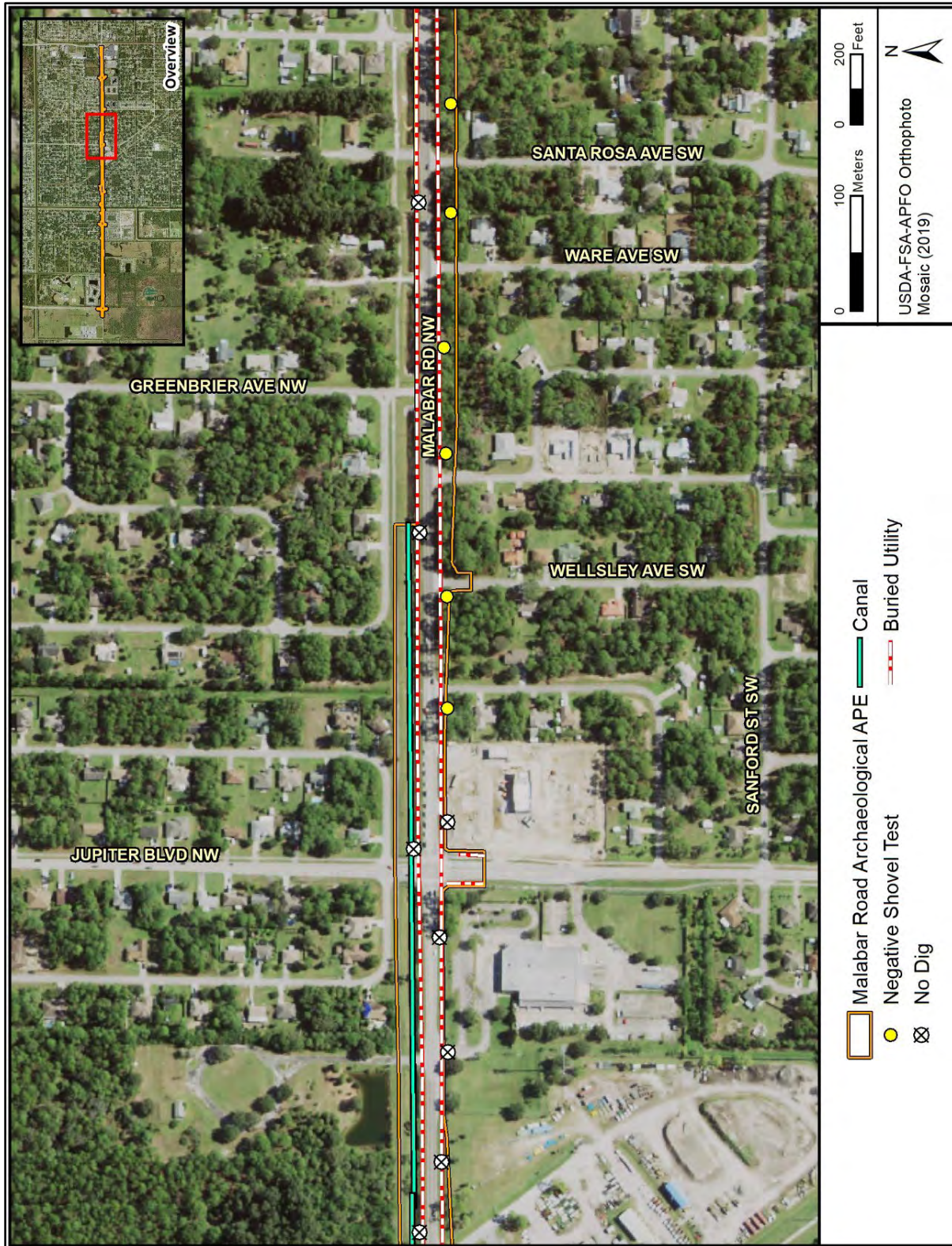


Figure 28: Archaeological survey results within the Malabar Road APE, map 5 of 7



Figure 29: Archaeological survey results within the Malabar Road APE, map 6 of 7



Figure 30: Archaeological survey results within the Malabar Road APE, map 7 of 7



Figure 31: Soil stratigraphy as displayed in shovel tests. Top left: Shovel Test 23, west end of APE view west; Top right: Shovel Test 28, west portion of APE, view east; Bottom left: Shovel Test 31, view east; Bottom right: Shovel Test 56, east end of APE, view west

Soil stratigraphy observed along the west end of corridor along Malabar Road, approximately 50 meters (164 feet) north of 8BR00025, consisted of loose light gray (10YR 7/1) sand from 0 to 30 cmbs (0 to 11.8 inches, Stratum I), a mottled light yellowish-brown (10YR 6/4) and brownish-yellow (10YR 6/8) sand from 30 to 60 cmbs (11.8 to 23.6 inches, Stratum II), yellow (10YR 7/6)

sand from 60 to 75 cmbs (23.6 to 29.5 inches, Stratum III), very dark grayish-brown (10YR 3/2) sandy clay from 75 to at least 100 cmbs (29.5 to 39.4 inches, Stratum IV) (see **Figure 31**).

Testing along the central portion of the corridor, where possible, revealed soil stratigraphy consisting of loose gray (10YR 6/1) sand from 0-30 cmbs (0 to 11.8 inches, Stratum I), white (10YR 8/1) sand from 30 to 80 cmbs (11.8 to 31.5 inches, Stratum II), and wet, black (10YR 2/1) sand from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum III).

Testing along the east end of the corridor, where possible, also revealed stratigraphy indicative of disturbed soils. Soil stratigraphy consisted of gray (10YR 6/1) loose sand from 0 to 30 cmbs (0 to 11.8 inches, Stratum I), white (10YR 8/1) sand from 30 to 80 cmbs (11.8 to 31.5 inches, Stratum II), and black (10YR 2/1) wet sand from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum III) (see **Figure 31**).

Pedestrian survey was used to document any portion of the APE that could not be tested due to road or canal construction, as well as underground utility installations. No archaeological sites or occurrences were encountered during the Malabar Road archaeological survey. No further archaeological work is recommended.

ARCHITECTURAL RESOURCES

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource and seven newly recorded resources (**Figures 32–35; Table 4**).

Table 4: Historic Resources Recorded within the Malabar Road APE

FMSF No.	Name/Address	Style	Year Built	Recommended NRHP Status
8BR03535	Melbourne-Tillman Canal No. 20	No style	ca. 1928	Ineligible
8BR04374	Melbourne-Tillman Canal No. 7	No style	ca. 1943 or earlier	Ineligible
8BR04375	Melbourne-Tillman Canal No. 8	No style	ca. 1943 or earlier	Ineligible
8BR04376	Melbourne-Tillman Canal No. 9	No style	ca. 1943 or earlier	Ineligible
8BR04377	Melbourne-Tillman Canal No. 10	No style	ca. 1943 or earlier	Ineligible
8BR04378	1099 Malabar Road Northwest	Masonry Vernacular	ca. 1947	Ineligible
8BR04379	Melbourne-Tillman Canal No. 9 Culvert	No style	ca. 1943 or earlier	Ineligible
8BR04380	FDOT Bridge No. 704004	No style	ca. 1972	Ineligible



Figure 32: Historic resources recorded within the Malabar Road APE, map 1 of 4



Figure 33: Historic resources recorded within the Malabar Road APE, map 2 of 4

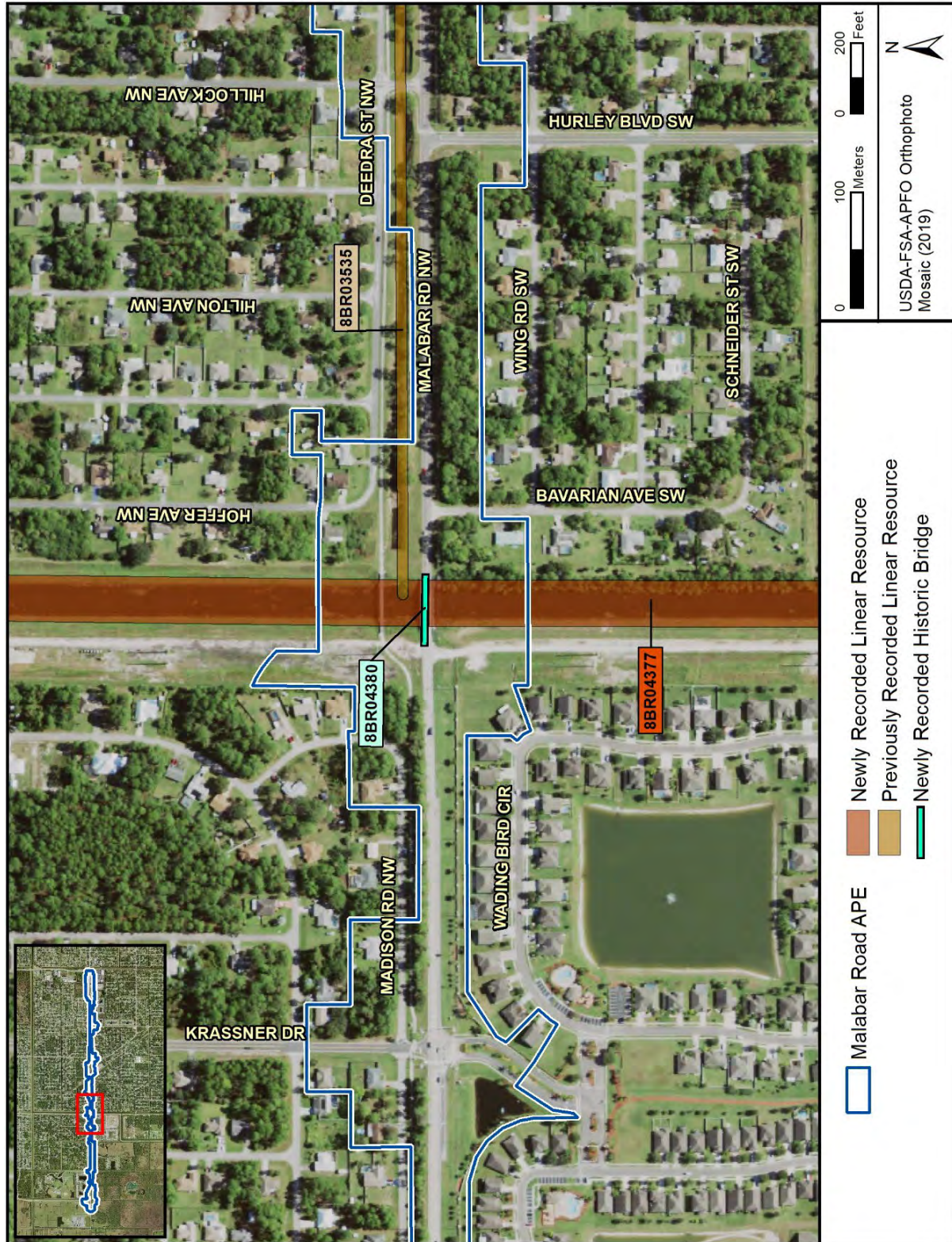


Figure 34: Historic resources recorded within the Malabar Road APE, map 3 of 4

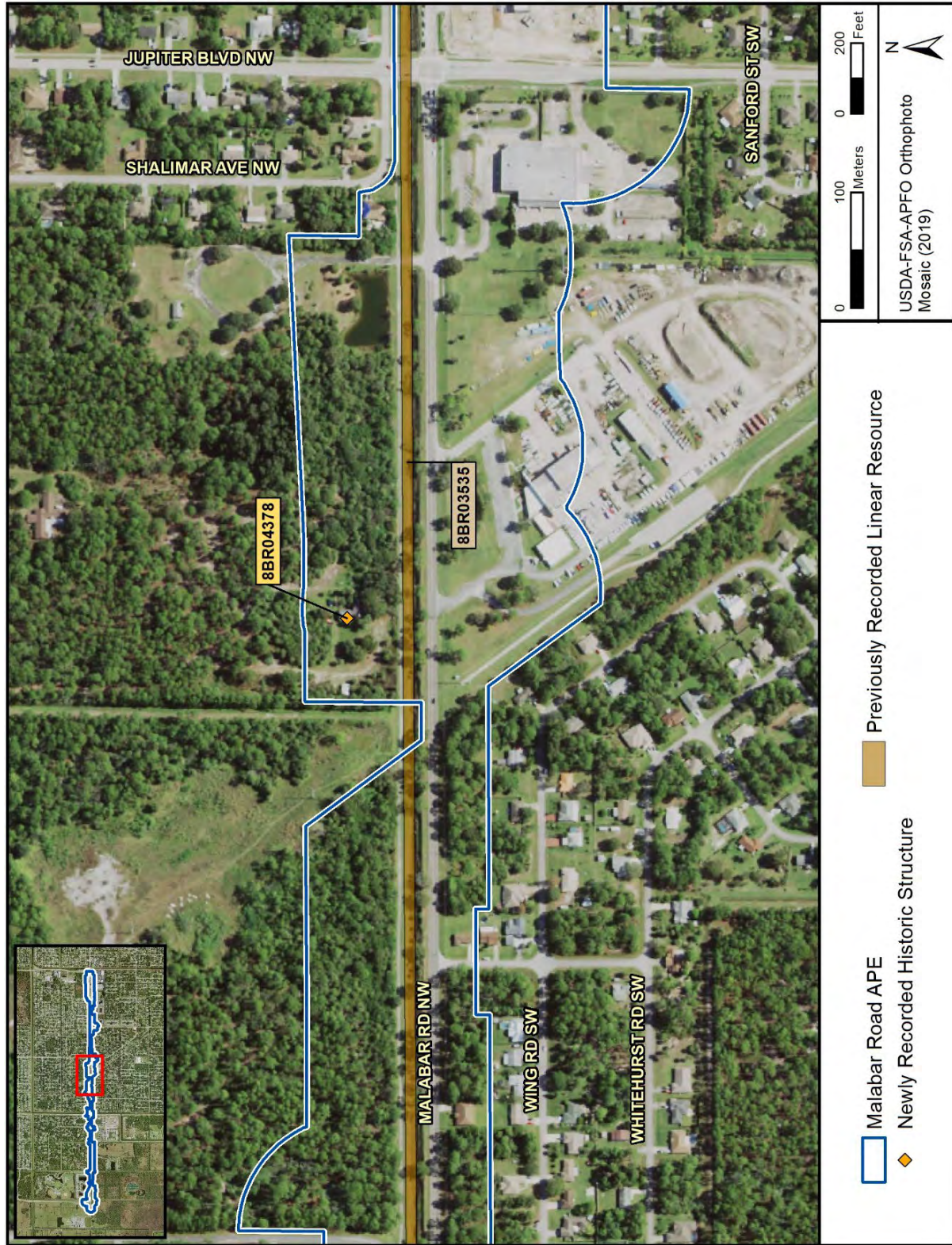


Figure 35: Historic resources recorded within the Malabar Road APE, map 4 of 4

The previously recorded historic resource is a linear resource (8BR03535). The newly recorded historic resources include four linear resources (8BR04374-8BR04377), two bridges (8BR04379 and 8BR04380), and one structure (8BR04378).

Descriptions and evaluations are provided below for all eight resources, as the presentation of their attributes in a table was deemed insufficient. FMSF forms and their associated maps and photographs are provided in **Appendix B**. The FDHR survey log sheet is provided in **Appendix C**.

NRHP EVALUATIONS

Linear Resources

8BR03535, Melbourne-Tillman Canal No. 20; 8BR04374-8BR04377, Melbourne-Tillman Canal Nos. 7-10

The Melbourne-Tillman Canal No. 20 (8BR03535) is a previously recorded historic canal, and the Melbourne-Tillman Canal Nos. 7-10 (8BR04374-8BR04377) are newly recorded historic canals located in Brevard County (see **Figures 33–35**). Resource 8BR03535 is situated in Sections 34 and 36 of Township 28 South, Range 36 East and Sections 1-3 of Township 29 South, Range 36 East; Resource 8BR04374 is situated in Sections 32 and 33 of Township 28 South, Range 36 East and Sections 4 and 5 of Section 29 South, Range 36 East; Resource 8BR04375 is situated in Section 33 of Township 28 South, Range 36 East and Section 4 of Township 29 South, Range 36 East; Resource 8BR04376 is situated in Sections 33 and 34 of Township 28 South, Range 36 East and Sections 3 and 4 of Township 29 South, Range 36 East; and Resource 8BR04377 is situated in Section 34 of Township 28 South, Range 36 East and Section 3 of Township 29 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map.

All five resources are dug-out canals with overgrown earthen embankments. Resource 8BR03535 travels roughly west to east for approximately 2.46 miles (3.96 kilometers) and is approximately 16.8 feet (5.12 meters) wide within the APE. It runs parallel to and north of Malabar Road, where it is occasionally crossed by non-historic culverts, and ends at the west boundary of 255 Malabar Road Northwest (Parcel ID 28-36-36-00-779), at which point the canal is dry (**Figure 36**, top left and right). Resource 8BR04374 runs north to south for approximately 0.26 miles (0.41 kilometers) and is approximately 27.97 feet (8.52 meters) wide within the APE (see **Figure 36**, center left), and Resource 8BR04375 runs north to south for approximately 793.29 feet (241.8 meters) and is approximately 16.85 feet (5.13 meters) wide within the APE (see **Figure 36**, center right). Both resources are carried beneath Malabar Road via non-historic culverts. Resource 8BR04376 runs north to south for approximately 797.9 feet (243.2 meters) and is approximately 14.08 feet (4.29 meters) wide within the APE. It is channeled beneath Malabar Road via Resource 8BR04379 (Melbourne-Tillman Canal No. 9 Culvert) (see **Figure 36**, bottom left). Finally, Resource 8BR04377 runs north to south for approximately 880.4 feet (268.35 meters) and is approximately 93.64 feet (28.54 meters) wide within the APE (see **Figure 36**, bottom right). It is channeled beneath Malabar Road via Resource 8BR04380 (FDOT Bridge No. 704004). All five canals are owned and maintained by the Melbourne-Tillman Water Control District.



Figure 36: Representative views of Resources 8BR03535 and 8BR04374-8BR04377 within the APE. Top left, Resource 8BR03535, facing southeast; Top right, Resource 8BR03535 at eastern terminus, facing northwest; Center left, Resource 8BR04374, facing north; Center right, Resource 8BR04375, facing northwest; Bottom left, Resource 8BR04376, facing north; Bottom right, Resource 8BR04377, facing northwest

Resource 8BR03535 was constructed ca. 1928 (Penders 2017), and Resources 8BR04374-8BR04377 were constructed prior to 1943 based on historic aerial imagery (USDA 1943). These canals were part of an overall canal network designed to drain the wetlands between the St. Johns River and Turkey Creek. They were constructed by the Melbourne-Tillman Water Control District, which was established by Brevard County in 1922. Today, the District controls 162 miles of canals between Palm Bay and West Melbourne and is presided over by representatives from those cities and from Brevard County (Melbourne-Tillman Water Control District 2021).

Based on aerial imagery, it appears that these drainage canals were constructed to prepare the area for agricultural purposes. No residential development is apparent in aerial imagery from 1943 to 1969, but agricultural development is visible between 1951 and 1969 (USDA 1943, 1951, 1958, 1969) (**Figure 37**). While the agricultural economy of the general Palm Bay area was primarily based in citrus and supplemented by the timber trade (Business View Magazine 2017),

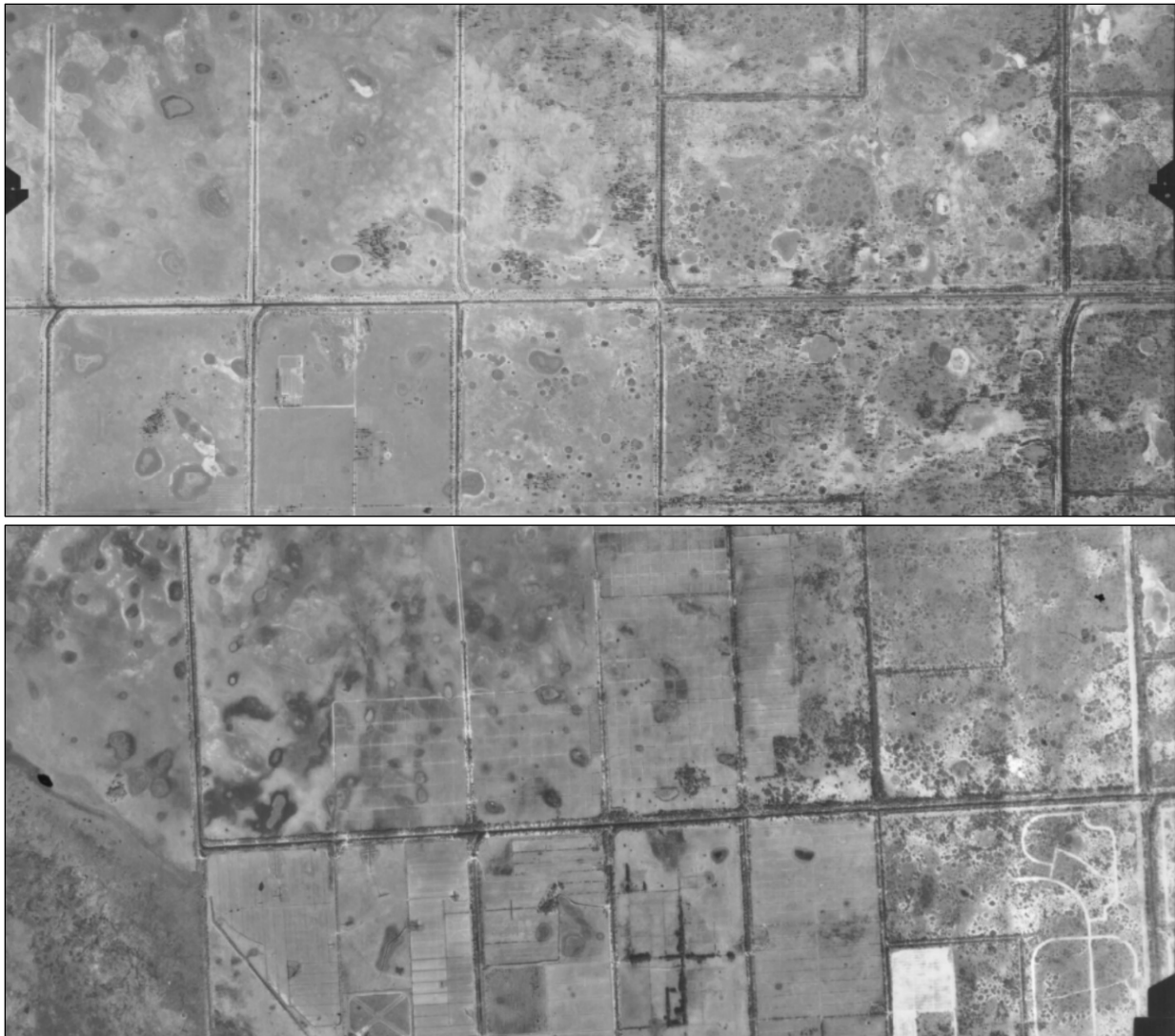


Figure 37: Aerial views of the Melbourne-Tillman Water Control District, showing agricultural development over time. Top, photograph taken in 1951; bottom, photograph taken in 1969

aside from two citrus groves at the far east and west ends of the APE, neither of these uses characterize the APE in historic aerial imagery. SEARCH did not locate any information that indicated the canals or associated farm property within or adjacent to the APE contributed to any significant agricultural developments.

Assessment

In order to facilitate an NRHP evaluation of the five Melbourne-Tillman Canals within the APE (8BR03535 and 8BR04374-8BR04377), a discussion about the relationship between historic canal function, period of construction, and historic integrity is presented here.

A 2005 memorandum on canals by Sherry Anderson, which was revised in 2012 by Ginny Jones and is Appendix E to the 2010 FMSF's *Guide to the Resource Group Form*, was used as a guide to aid in the evaluation of Resources 8BR03535 and 8BR04374-8BR04377 (Jones 2012). The memorandum provides guidance on establishing the historic context for Florida's canal resources to aid in the evaluation of their eligibility to the NRHP. According to the FMSF memorandum, canals are common throughout Florida and "most of those built as drainage ditches in the twentieth century will probably not be considered significant" (Jones 2012:24). The memorandum further states:

It is usually the older canals (19th c.), transportation canals, larger regional canals dug as part of the early 20th c. reclamation activities, or canals used in industry (such as logging, cotton) that may be potentially eligible (Jones 2012:24-25).

Changes that could potentially alter the integrity of a canal include the following:

- Re-routing of the canal.
- Disruption of canal (cutting off or filling in).
- Substantial widening or substantial loss of width.
- Concentrated number of roadways and other crossovers that prohibit navigability (only important if navigability was part of its historic use).
- Severing of canal from other waterways (larger canals, turning basins, etc.), which results in change of historic function.
- Removal of historic ancillary structures original to canal's design and purpose (pumping stations, locks, railroads, docks, etc.). The loss of one feature may not be enough to substantially damage integrity, but the removal of many such features may collectively inhibit the resource's ability to convey its significance (Jones 2012:25).

Finally, the memorandum states:

Types of changes that may not substantially damage the integrity include loss of a single historic ancillary feature, routine maintenance and rebuilding of canal walls using same material type, addition of non-historic features (pumping station, etc.), addition of several roads that do not prohibit navigability throughout the majority

of the canal. Canals can have ‘non-contributing’ portions as well but that the overall canal may still be considered potentially eligible (Jones 2012:25).

Based on the field survey and further research, it is the opinion of SEARCH that Resources 8BR03535 and 8BR04374-8BR04377 are not significant under NRHP Criterion A because they are not indicative of a particular era and are not associated with any significant period, event, or theme. Furthermore, the resources are not significant under Criterion B because they lack association with any person(s) significant in history. Also, the resources are not significant under Criterion C due to their lack of engineering distinction. The canals were part of a mid-twentieth-century drainage system, and other canals of similar design and purpose are common in the region. The canals are all dug-out, earthen channels with no outstanding features or design. Finally, 8BR03535 and 8BR04374-8BR04377 are not significant under Criterion D because they lack the potential to yield further information of historical importance. It is the opinion of SEARCH that Resources 8BR03535 and 8BR04374-8BR04377 are not eligible for listing in the NRHP.

Bridges

8BR04379, Melbourne-Tillman Canal No. 9 Culvert

The Melbourne-Tillman Canal No. 9 Culvert (8BR04379) is a newly recorded resource located in Brevard County (see **Figure 33**). The culvert bridge is located in Section 4 of Township 29 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map. Resource 8BR04379 channels the Melbourne-Tillman Canal No. 9 (8BR04376) north-south beneath Malabar Road. Resource 8BR04379 is a concrete pipe culvert with a total length of approximately 58 feet (17.68 meters) (**Figure 38**), a width of approximately 32 feet (9.75 meters), and a roadway width of approximately 23 feet (7.01 meters). Resource 8BR04379 was constructed ca. 1943 or earlier according to aerial imagery (USDA 1943), but the original culvert was likely replaced with the current concrete pipe culvert at a later date. An overgrown wall made from grout-filled bags and an earthen abutment is visible on the north end of the culvert. Resource 8BR04379 carries the two-lane concrete-paved Malabar Road east-west above the north-south Melbourne-Tillman Canal No. 9 (8BR04376). The culvert has no distinguishing details or identifying signs.



Figure 38: Resource 8BR04379, facing south

Assessment

Based the current survey, Resource 8BR04379 does not appear to meet the minimum criteria for listing in the NRHP. The culvert does not possess sufficient historical significance under Criteria A

or B to warrant inclusion in the NRHP. No additional information was located that details the role of the culvert in aiding in the development of the area or its association with persons of historical significance. Furthermore, the resource lacks sufficient engineering and architectural distinction as a concrete pipe culvert to be eligible under Criterion C as it does not embody the distinctive characteristics of a method of construction or serve as an excellent example of concrete pipe culvert design. Additionally, 8BR04379 is not significant under Criterion D as it lacks the potential to yield further information of historical importance. Therefore, it is the opinion of SEARCH that 8BR04379 is not eligible for individual listing in the NRHP.

8BR04380, FDOT Bridge No. 704004

FDOT Bridge No. 704004 (8BR04380) is a newly recorded bridge located in Brevard County (see **Figure 34**). Resource 8BR04380 is situated in Section 3 of Township 28 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map. Resource 8BR04380 is a prestressed concrete slab bridge with a total length of 140.1 feet (42.7 meters) (**Figure 39**). It was constructed ca. 1972 by Brevard County. The bridge is composed of a concrete slab deck supported by capped pile concrete piers. The deck is 36.7 feet (11.2 meters) wide, and the roadway is 28.2 feet (8.6 meters) wide. There are concrete barriers on the north and south sides of the roadway. The bridge has no distinguishing details or identifying signs.



Figure 39: Resource 8BR04380, facing southeast

Assessment

FDOT Bridge No. 704004 (8BR04380) was not included in either the 2004 edition of *Historic Highway Bridges of Florida* or the 2012 edition (Archaeological Consultants, Inc. [ACI] 2012; Jackson 2004). Based on available information and field research, Resource 8BR04380 does not appear to meet the minimum criteria for listing in the NRHP. The bridge does not possess sufficient historical significance under Criteria A or B to warrant inclusion in the NRHP. No additional information was located that details the role of the bridge in aiding in the development of the area or its association with persons of historical significance. Furthermore, the resource lacks sufficient engineering and architectural distinction as a prestressed concrete slab bridge to be eligible under Criterion C as it does not embody the distinctive characteristics of a method of construction or serve as an excellent example of concrete slab design. Additionally, 8BR04380 is not significant under Criterion D as it lacks the potential to yield further information of historical importance. Therefore, it is the opinion of SEARCH that 8BR04380 (FDOT Bridge No. 704004) is not eligible for individual listing in the NRHP.

Structure

8BR04378, 1099 Malabar Road Northwest

Resource 8BR04378, 1099 Malabar Road Northwest, is a newly recorded resource within Brevard County (see **Figure 35**). Resource 8BR04378 is situated in Section 35 of Township 28 South, Range 36 East, as shown on the 2018 *Fellsmere NW, Fla.* USGS quadrangle map. The structure is located on a rectangular parcel, bounded to the north, east, and west by private parcels and to the south by Malabar Road Northwest. The ca. 1947 residence is a one-story, irregular-plan Masonry Vernacular building set on a foundation obscured by foliage (**Figure 40**). The intersecting hip and jerkinhead hip roofs are covered with composition shingles. The windows consist of four-light metal-framed casement windows, which are paired and arranged in groups of four. These windows are accented with wood faux shutters and feature concrete windowsills. The exterior walls are covered with stucco. A concrete block chimney is located on the southeast corner of the building. The main entrance is located on the south façade and features a single door obscured by a metal-framed screen storm door. A closed partial-width porch also is located on the south façade and features a gable roof supported by masonry walls. Metal rectangular outbuildings are located to the northeast of the main residence, and large trees located to the north and south of the building largely obscure it from the right-of-way.



Figure 40: Resource 8BR04378, facing northeast

Assessment

Based on the field survey and further research, it is the opinion of SEARCH that 1099 Malabar Road Northwest (8BR04378) is not significant under Criterion A as it is not indicative of a particular era and is not associated with any significant period, event, or theme. Furthermore, the resource is not significant under Criterion B because it lacks association with any person(s) significant in history. Also, the resource is not significant under Criterion C due to its lack of architectural or engineering distinction. The resource is a common Masonry Vernacular residence with no distinctive details or unique characteristics. Finally, Resource 8BR04378 is not significant under Criterion D because it lacks the potential to yield further information of historical importance. It is the opinion of SEARCH that 8BR04378 is not eligible for listing in the NRHP, either individually or as a contributing resource to a historic district.

CONCLUSION AND RECOMMENDATIONS

This report presents the findings of a Phase I CRAS conducted in support of a PD&E study to Malabar Road in Brevard County, Florida. The City of Palm Bay is conducting a PD&E study for the proposed improvements to Malabar Road from east of St. Johns Heritage Parkway to Minton Road. The PD&E study includes widening Malabar Road with the construction of additional lanes and traffic control intersections, the replacement of FDOT Bridge No. 704004, and the rerouting of approximately 1,500 feet (457.2 meters) of Canal C-20. The roadway improvements will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). The APE was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road. This APE was extended to the back or side property lines of parcels adjacent to the right-of-way, or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

The archaeological survey consisted of the excavation of 30 shovel tests and pedestrian survey within the archaeological APE. One previously recorded archaeological site, 8BR00025, is located within the overall APE, but outside the archaeological APE. As such, identification and evaluation of this site is beyond the scope of the current project. No artifacts were recovered during the archaeological survey, and no archaeological sites or occurrences were identified within the archaeological APE. No further archaeological survey is recommended in support of the proposed Malabar Road improvements.

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource and seven newly recorded resources. The previously recorded historic resource is a linear resource (8BR03535). The newly recorded historic resources include four linear resources (8BR04374-8BR04377), two bridges (8BR04379 and 8BR04380), and one structure (8BR04378).

The previously recorded resource (8BR03535; Melbourne-Tillman Canal No. 20) was determined ineligible for the NRHP by the SHPO in 2017 (Penders 2017).

Based on the results of the current survey, it is the opinion of SEARCH that all eight resources are ineligible for the NRHP due to a lack of significant historic associations and architectural and/or engineering distinction. No further architectural work is recommended.

It is the opinion of SEARCH that the proposed Malabar Road improvements will have no effect on cultural resources listed or eligible for listing in the NRHP. No further work is recommended.

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REFERENCES CITED

Adovasio, J. M., J. Donahue, and R. Stuckenrath

1990 The Meadowcroft Rockshelter Radiocarbon Chronology 1975–1990. *American Antiquity* 55:348–355.

Anderson, David G., and Christopher Gillam

2000 Paleoindian Colonization of the Americas: Implications from an Examination of Physiography, Demography, and Artifact Distribution. *American Antiquity* 65(1):43–66.

Archaeological Consultants, Inc. (ACI)

2012 *The Historic Highway Bridges of Florida*. Florida Department of Transportation Environmental Management Office. Electronic document, <http://www.fdot.gov/environment/pubs/Historic%20Highway%20Bridges%20of%20Florida%202010%20Update.pdf>, accessed May 5, 2021.

Austin, Robert J.

1996 Prehistoric Chert Procurement and Mobility Strategies on the Lake Wales Ridge. *The Florida Anthropologist* 49:211–223.

1997 *The Economics of Lithic Resource Use in South-Central Florida*. PhD dissertation, Department of Anthropology, University of Florida. University Microfilms, Ann Arbor.

Bader, Sharon F., and R. W. Parkinson

1990 Holocene Evolution of the Indian River Lagoon in Central Brevard County, Florida. *Florida Scientist* 53:204–215.

Bradley, B., and D. Stanford

2004 The North Atlantic Ice-edge Corridor: A Possible Palaeolithic Route to the New World. *World Archaeology* 34:459–478.

Brooks, H. K.

1974 Lake Okeechobee. In *Environments of South Florida: Present and Past*, edited by P. J. Gleason, pp. 256–286. Miami Geological Society Memoir 2. Miami.

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

Brown, Jr., Canter

1991 *Florida's Peace River Frontier*. University of Central Florida Press, Orlando.

Bullen, Ripley P.

1972 The Orange Period of Peninsular Florida. In *Fiber-tempered Pottery in Southeastern United States and Northern Columbia: Its Origins, Context, and Significance*, edited by R. P. Bullen and J. B. Stoltman, pp. 9–33. Florida Anthropological Society Publication 6. Gainesville.

Business View Magazine

2017 Palm Bay Florida – City on a Roll. 5 March. Electronic document, <https://businessviewmagazine.com/palm-bay-florida-city-on-a-roll/>, accessed May 7, 2021.

Carr, Robert S.

1986 Preliminary Report on Excavations at the Cutler Fossil Site (8DA2001) in Southern Florida. *The Florida Anthropologist* 39:231–232.

Carr, Robert S., and B. Calvin Jones

1981 *Florida Anthropologist* Interview with Calvin Jones, Part II: Excavations of an Archaic Cemetery in Cocoa Beach, Florida. *The Florida Anthropologist* 34:81–89.

Carr, Robert S., D. Dickel, and M. Masson

1995 Archaeological Investigations at the Ortona Earthworks and Mounds. *The Florida Anthropologist* 48:227–264.

Carr, Robert S., Amy Felnley, Richard Ferrer, W. Steele, and Jorge Zamonillo

1992 *An Archaeological Survey of Broward County, FL*. Florida Master Site File Survey No. 2933. On file, Florida Division of Historical Resources, Tallahassee.

Carter, Clarence Edwin (editor)

1962 *The Territorial Papers of the United States, Volume XXVI, The Territory of Florida, 1839-1845*. Government Printing Office, Washington, D.C.

CCC Enterprises, Inc.

1981 *Proposed Response to Future Area Development Application Question 19, Parts A and B, for GDC's West Malabar Tract, Brevard County, Florida*. FMSF Survey No. 1646. On file, FDHR, Tallahassee.

Chapman, Jeffrey

1985 Archaeology and the Archaic Period in the Southern Ridge-and-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by R. S. Dickens Jr. and H. T. Ward, pp. 137–153. University of Alabama Press, Tuscaloosa.

City of Palm Bay, Florida

2021 History. Electronic Document, <https://www.palmbayflorida.org/our-city/about/history>, accessed April 12, 2021.

Cockrell, Wilburn A., and Larry Murphy

1978 Pleistocene Man in Florida. *Archaeology of Eastern North America* 6:1–12.

Covington, James W.

1957 *The Story of Southwestern Florida*, Volume 1 and 2. Lewis Historical Publishing Company, Inc., NY.

Dickel, David N.

2002 Analysis of Mortuary Patterns. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*, edited by G. H. Doran, pp. 73–96. University Press of Florida, Gainesville.

Dillehay, T. D., C. Ramírez, M. Pino, M. B. Collins, J. Rossen, and J. D. Pino-Navarro

2008 Monte Verde: Seaweed, Food, Medicine, and the Peopling of South America. *Science* 320:784–786.

Dixon, E. J.

1993 *Quest for the Origins of the First Americans*. University of New Mexico Press, Albuquerque.

Doran, Glen H.

2002 The Windover Radiocarbon Chronology. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*, edited By G. H. Doran, pp. 59–72. University Press of Florida, Gainesville.

Dorsey, R. A.

1997 *Predicted Sea Level Changes, Florida Gulf Coast Over the Past 21,000 Years*. Research Series Number 9. Gulf Archaeological Research Institute, Crystal River, Florida.

Dovell, J. E.

1952 *Florida: Historic, Dramatic, Contemporary*. Lewis Historical Publishing Company, Inc., New York, NY.

Dunn, Hampton

1998 *Historic Florida Courthouses*. Hallmark Publishing Company, Gloucester Point, VA.

Environmental Sciences, Inc. (ESI)

2004 *A Cultural Resource Reconnaissance Survey of the Palmer Tract, Brevard County, Florida*. FMSF Survey No. 10376. On file, FDHR, Tallahassee.

Eriksen, John M.

1994 *Brevard County: A History to 1955*. The Florida Historical Society Press, Tampa.

Faught, Michael K.

2008 Archaeological Roots of Human Diversity in the New World: A Compilation of Accurate and Precise Radiocarbon Ages from Earliest Sites. *American Antiquity* 73(4):670–698.

Federal Writers' Project

1939 *Florida: A Guide to the Southern Most State*. American Guide Series. Oxford University Press, NY.

Fernald, Edward A. and Elizabeth D. Purdum
1992 *Atlas of Florida*. University Press of Florida, Gainesville, FL.

Fladmark, E. R.
1979 Routes: Alternative Migration Corridors for Early Man in North America. *American Antiquity* 44:55–69.

Florida Highways

1928 Progress of Road Construction in Florida in 1927. January 2.

Florida State Road Department (FSRD)

1917 Road Map, State of Florida. Electronic document, <https://www.fdot.gov/geospatial/FloridaTransportationMapArchive.shtm>, accessed March 8, 2021.

1934 General Highway Map of Brevard County. Electronic document, <https://www.ufdc.ufl.edu/UF00015976/00001/>, accessed March 8, 2021.

Florida Today

2001 Spotlight on Brevard History: Launch Complex 41. 24 August:7B.

Folger, L. B.

1883 Map of Brevard County, 1883. Electronic document, <https://fcit.usf.edu/florida/maps/>, accessed March 8, 2021.

Frazer, William, and John J. Guthrie Jr.

1995 *The Florida Land Boom: Speculation, Money, and the Banks*. Quorum Books, Westport, Connecticut.

Gannon, Michael

1996 *The New History of Florida*. University Press of Florida, Gainesville.

General Land Office (GLO)

1845a Survey Map of Township 28 South, Range 36 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

1845b Survey Map of Township 28 South, Range 37 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

1845c Survey Map of Township 29 South, Range 36 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

1845d Survey Map of Township 29 South, Range 37 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

Gidley, J. W., and E. B. Loomis

1926 Fossil Man in Florida. *American Journal of Science* 12:254–264.

Gleason, P. J., and P. Stone

1994 Age, Origin, and Landscape Evolution of the Everglades Peatland. In *Everglades: The Ecosystem and Its Reconstruction*, edited by S. M. Davis and J. C. Ogden, pp. 149–197. St. Lucie Press, Delray Beach, Florida.

Gleason, P. J., A. D. Cohen, W. G. Smith, H. K. Brooks, P. A. Stone, R. L. Goodrick, and W. Spackman, Jr.

1974 The Environmental Significance of Holocene Sediments from the Everglades and Saline Tidal Plain. In *Environments of South Florida: Present and Past*, edited by P. J. Gleason, pp. 287–341. Miami Geological Society Memoir 2. Miami.

Griffin, James

1945 The Significance of the Fiber-Tempered Pottery of the St. Johns Area in Florida. *Journal of the Washington Academy of Sciences* 35:218–223.

Hale, Stephen

1989 Prehistoric Subsistence Strategies and Settlement Patterns in the Lake Okeechobee Basin of the South Florida Peninsula. PhD dissertation, Department of Anthropology, University of Florida, Gainesville.

Halligan, Jessi J., M. R. Waters, A. Perrotti, I. J. Owens, J. M. Feinberg, M. D. Bourne, B. Fenerty, B. Winsborough, D. Carlson, D. C. Fisher, T. W. Stafford Jr., and J. S. Dunbar

2016 Pre-Clovis occupation 14,550 years ago at the Page-Ladson site, Florida, and the peopling of the Americas. *Science Advances* 2(5):e1600375.

Hrdlicka, Ales

1918 Recent Discoveries Attributed to Early Man in America. *Bureau of American Ethnology Bulletin* 66:1–67.

1922 *The Anthropology of Florida*. Florida State Historical Society, Publications 1.

Jackson, Roy Adlai (editor)

1992 *The Historic Highway Bridges of Florida*. Environmental Management Office, Florida Department of Transportation, Tallahassee.

Jackson, Roy

2004 *Historic Highway Bridges of Florida*. Environmental Management Office, Florida Department of Transportation, Tallahassee.

Janus Research

2003 *Cultural Resource Assessment Survey of the Palm Bay Parkway PD&E Study from Malabar Road to Ellis Road, Brevard County*. FMSF Survey No. 8791. On file, FDHR, Tallahassee.

2017 *Cultural Resource Assessment Survey, Malabar-Midway 230 kV Transmission Line, Brevard County, Florida*. FMSF Survey No. 25794. On file, FDHR, Tallahassee.

Johnson, Dudley S.

1966 Henry Bradley Plant and Florida. *Florida Historical Quarterly* 45(2).

Jones, Ginny

2012 Guide to the Resource Group Form Version 4.0: Appendix E: Guidance on NR Eligibility of Canals. Electronic document, http://dos.myflorida.com/media/31352/guide_resourcegroup_v40.pdf, accessed May 3, 2021.

Kendrick, Baynard

1964 *Florida Trails to Turnpikes, 1914-1964*. University of Florida Press, Gainesville.

King, Joseph E.

1992 *The Historic Highway Bridges of Florida*. Environmental Management Office, Florida Department of Transportation, Tallahassee.

Mahon, John K.

1985 *History of the Second Seminole War, 1835-1842*. Rev. ed. University of Florida Press, Gainesville.

McDowell, L. L., J. C. Stephens, and E. H. Stewart

1969 Radiocarbon Chronology of the Florida Everglades Peat. *Soil Science Society of America Proceedings* 33:743–745.

Melbourne-Tillman Water Control District

2021 District Overview. Electronic Document, <http://www.melbournetillman.org/>, accessed April 27, 2021.

Milanich, Jerald T.

1994 *Archaeology of Precolumbian Florida*. University Press of Florida, Gainesville.

1995 *Florida Indians and the Invasion from Europe*. University Press of Florida, Gainesville.

Morris, Allen

1948 *The Florida Handbook, 1947-48*. The Peninsular Publishing Company, Tallahassee.

1995 *Florida Place Names*. Pineapple Press, Sarasota.

National Park Service (NPS)

1983 Cape Canaveral Air Force Station. Nomination Form, National Register of Historic Places. US Department of the Interior, Washington, DC.

National Register of Historic Places (NRHP)

1987 St. Joseph's Catholic Church. Electronic Document, <https://npgallery.nps.gov/>, accessed April 12, 2021.

Newman, Christine, and Brent Weisman

1992 Prehistoric and Historic Settlement in the Guana Tract, St. Johns County, Florida. *The Florida Anthropologist* 45:162–171.

Newsom, Lee A.

2002 The Paleoethnobotany of the Archaic Mortuary Pond. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*, edited by G. H. Doran, pp. 191–210. University Press of Florida, Gainesville.

New South Associates, Inc.

2003 *Cultural Resources Survey and Site Evaluation: Ten Mile Creek Water Preserve Area Critical Project, St. Lucie County, Florida*. Prepared for the Army Corps of Engineers, Jacksonville District. On file, Florida Division of Historical Resources, Tallahassee.

Norton, Charles Ledyard

1890 Brevard County. In *A Handbook of Florida*. Longmans, Green, and Co., New York. Electronic document, <https://fcit.usf.edu/florida/maps/>, accessed March 8, 2021.

Penders, Thomas E.

2017 *A Cultural Resources Assessment Survey for the Proposed Avery Springs Development, Palm Bay, Brevard County, Florida*. FMSF Survey No. 24194. On file, FDHR, Tallahassee.

Rohling, E. J., M. Fenton, F. J. Jorissen, P. Bertrant, G. Ganssen, and J. P. Caulet

1998 Magnitudes of Sea-Level Lowstands of the Past 500,000 Years. *Nature* 394:162–165.

SEARCH

2006 *A Cultural Resource Reconnaissance Survey of the Palmer Tract, Brevard County, Florida*. FMSF Survey No. 12516. On file, FDHR, Tallahassee.

2007 *A Phase I Cultural Resource Survey of the Lennar South Development Property, Brevard County, Florida*. FMSF Survey No. 14219. On file, FDHR, Tallahassee.

Sellards, E. H.

1916 Discovery of Fossil Human Remains in Florida in Association with Extinct Vertebrates. *American Journal of Science* 192:1–17.

1917 Further Notes on Human Remains from Vero, Florida. *American Anthropologist* 19:239–251.

Sherwood, Sarah, Boyce N. Driskell, Asa R. Randall, and Scott C. Meeks

2004 Chronology and Stratigraphy at Dust Cave, Alabama. *American Antiquity* 69:533–554.

Shofner, Jerrell H.

1995 *History of Brevard County, Volume I*. Brevard County Historical Commission, n.p.

Sigler-Eisenberg, Brenda (editor)

1985 *Archaeological Site Types, Distributions, and Preservation within the Upper St. Johns River Basin, Florida*. Florida State Museum Miscellaneous Project and Report Series Number 27. Gainesville.

Smith, Bruce D.

1986 The Archaeology of the Eastern United States: From Dalton to de Soto, 10,500–500 B.P. *Advances in World Archaeology* 5:1–93.

SouthArc, Inc.

2014 *Cultural Resources Survey and Assessment, Palm Island Subdivision, Brevard County, Florida*. FMSF Survey No. 20793. On file, FDHR, Tallahassee.

St. Johns River Water Management District

2021 Upper St. Johns River. Electronic Document, <https://www.sjrwmd.com/waterways/st-johns-river/upper/#canal-1>, accessed March 5, 2021.

Ste. Claire, Dana

1990 The Archaic in East Florida: Archaeological Evidence for Early Coastal Adaptations. *The Florida Anthropologist* 43:189–197.

Stewart, T. Dale

1946 A Re-examination of the Fossil Human Skeletal Remains from Melbourne, Florida, with Further Data on the Vero Skull. *Smithsonian Miscellaneous Collections* 106:1–28.

Stone, Elaine Murray

1988 *Brevard County: From Cape of the Canes to Space Coast*. Windsor Publications, Northridge, California.

Tanner, W. F.

1991 The “Gulf of Mexico” Late Holocene Sea Level Curve and River Delta History. *Gulf Coast Association of Geological Societies Transactions* 41:583–589.

Tebeau, Charlton W.

1971 *A History of Florida*. Revised 1980. University of Miami Press, Coral Gables.

Tuross, N., M. L. Fogel, L. Newsom, and G. H. Doran

1994 Subsistence in the Florida Archaic: The Stable-Isotope and Archaeobotanical Evidence from the Windover Site. *American Antiquity* 59:288–303.

US Census Bureau

1995 Florida, Population of Counties by Decennial Census: 1900 to 1990. Electronic document, <https://www.census.gov/population/cencounts/fl190090.txt>, accessed March 2, 2020.

2010 QuickFacts: Brevard County, Florida. Electronic document, <https://www.census.gov/quickfacts/brevardcountyflorida>, accessed March 2, 2020.

US Department of Agriculture (USDA)

- 1943 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 1951 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 1958 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 1969 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 2019 Orthophoto Mosaic of Brevard County. Electronic document, <https://www.fsa.usda.gov/>, accessed March 7, 2021.

US Geological Survey (USGS)

- 1951 Topographic Map of Melbourne West, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.
- 1954 Topographic Map of Fellsmere NW, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.
- 1971a Topographic Map of Melbourne West, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.
- 1971b Topographic Map of Fellsmere NW, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.

Watts, W. A.

- 1969 A Pollen Diagram from Mud Lake, Marion County, North-Central Florida. *Geological Society of America Bulletin* 80:631-642.
- 1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52:676-690.
- 1975 A Late Quaternary Record of Vegetation from Lake Annie, South Central Florida. *Geology* 3:344-346.
- 1980 The Late Quaternary Vegetation History of the Southeastern United States. *Annual Reviews of Ecology and Systematics* 11:387-409.

Wheeler, Ryan J.

- 1992 The Riviera Complex: An East Okeechobee Archaeological Area Settlement. *The Florida Anthropologist* 45:5-17.

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APPENDIX A.

MARKED FIELD MAPS

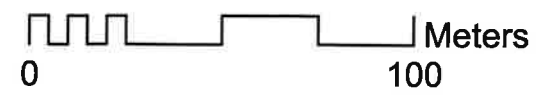


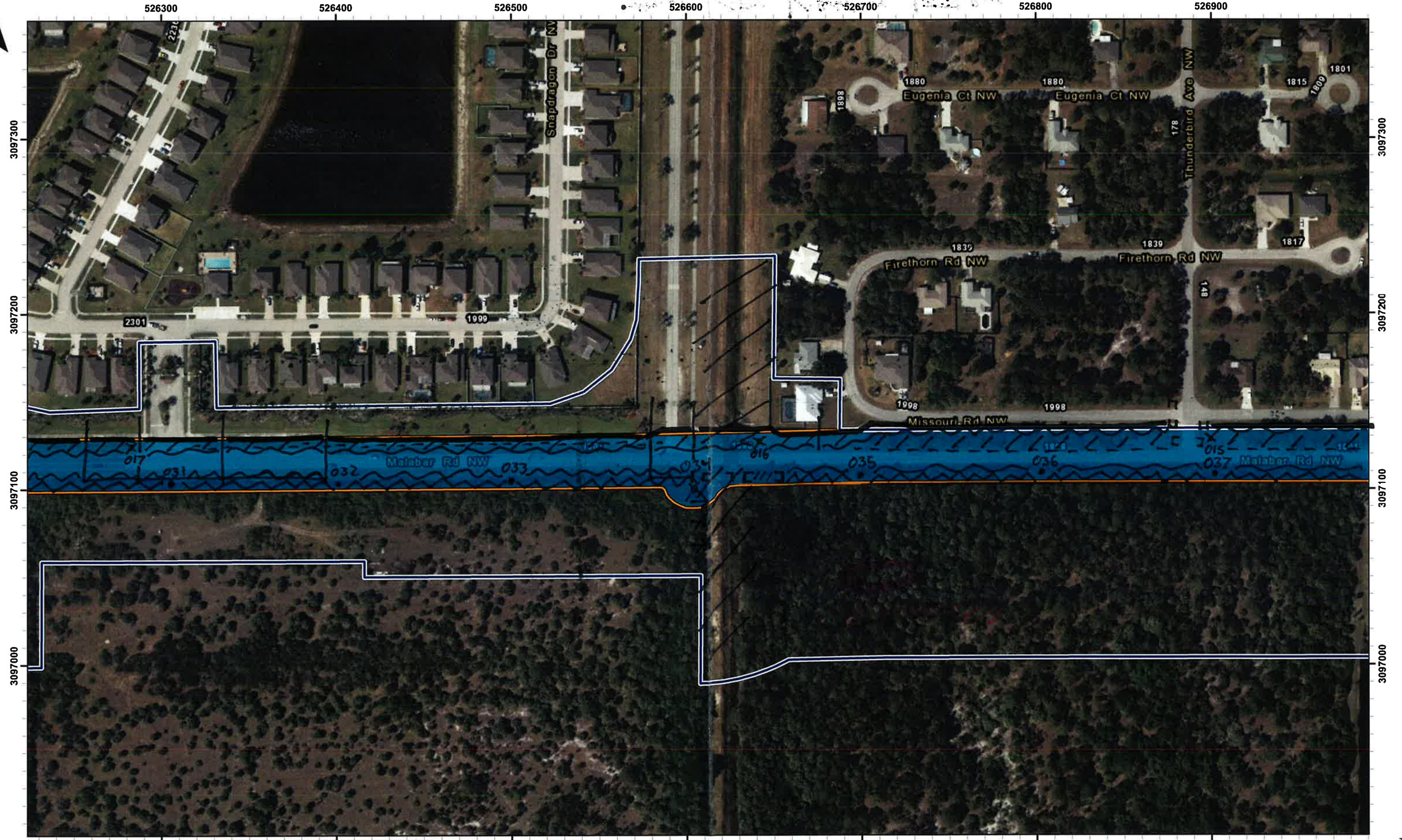
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 Major ticks: 100m interval;
 Minor ticks: 10m Interval

Malabar Road APE
 Malabar Road Archaeological APE

Poorly Drained Soil

- Neg. ST	- FOC	- Barbed Wire	- Bees
- No dig ST	- Buried Electric	- Ditch/Canal	- Culvert
- Utility Box	- Water/Sewer	- Ditch-Berm	- Sidewalk
		- Ditch-Berm	

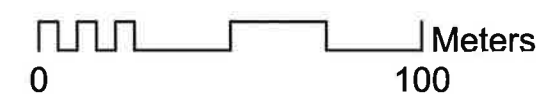


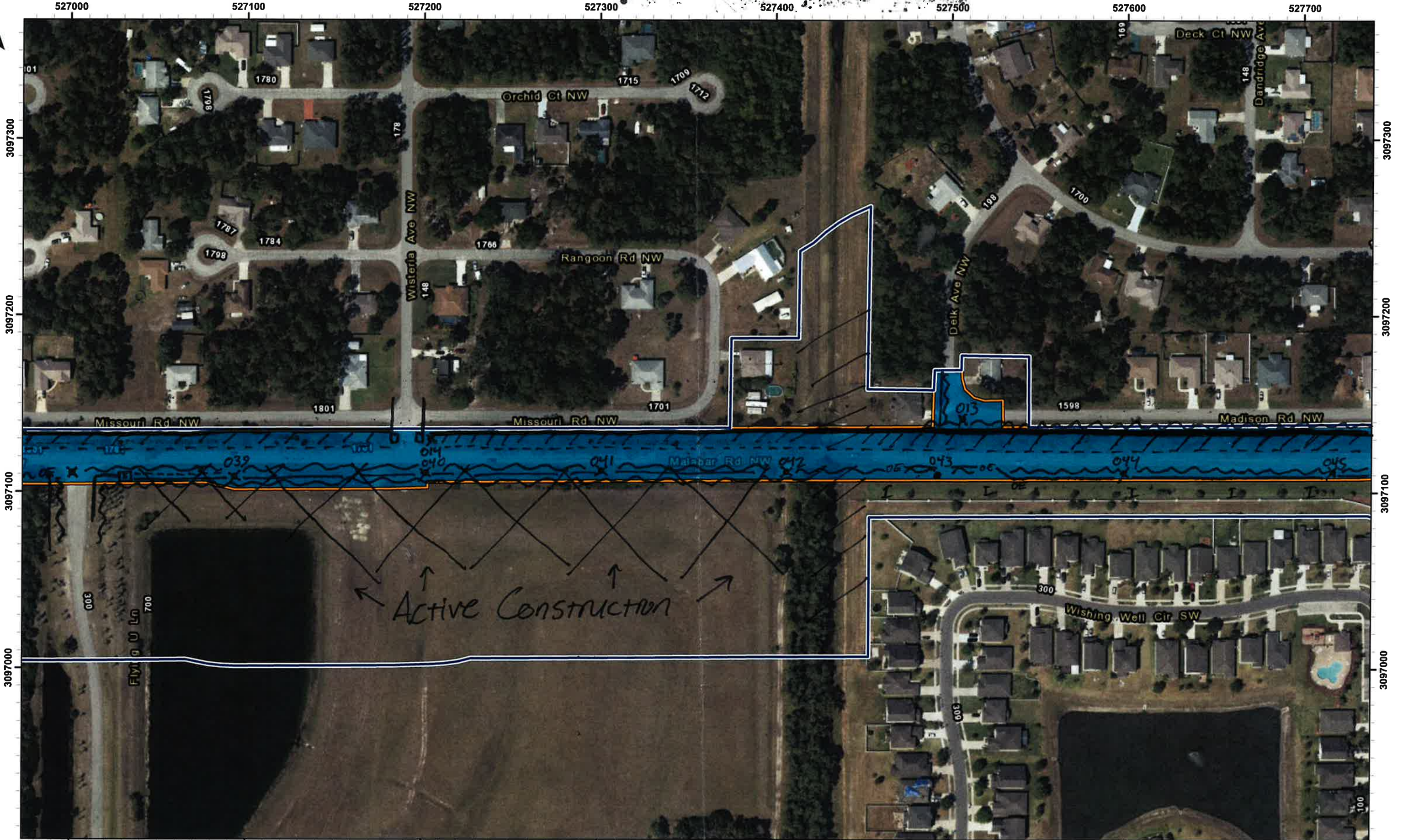


Grid UTM WGS 84 17N
 Major ticks: 100m interval;
 Minor ticks: 10m Interval

- Malabar Road APE
- Malabar Road Archaeological APE
- Poorly Drained Soil

- X - No dig ST
- o - Neg. ST
- E - Culvert
- - - Buried Electric
- ~ ~ ~ Water/Sewer
- - - FOC
- NN - Ditch-Berm
- ||| - Canal/ditch
- - Slope
- ▬ - Sidewalk



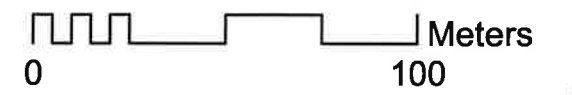


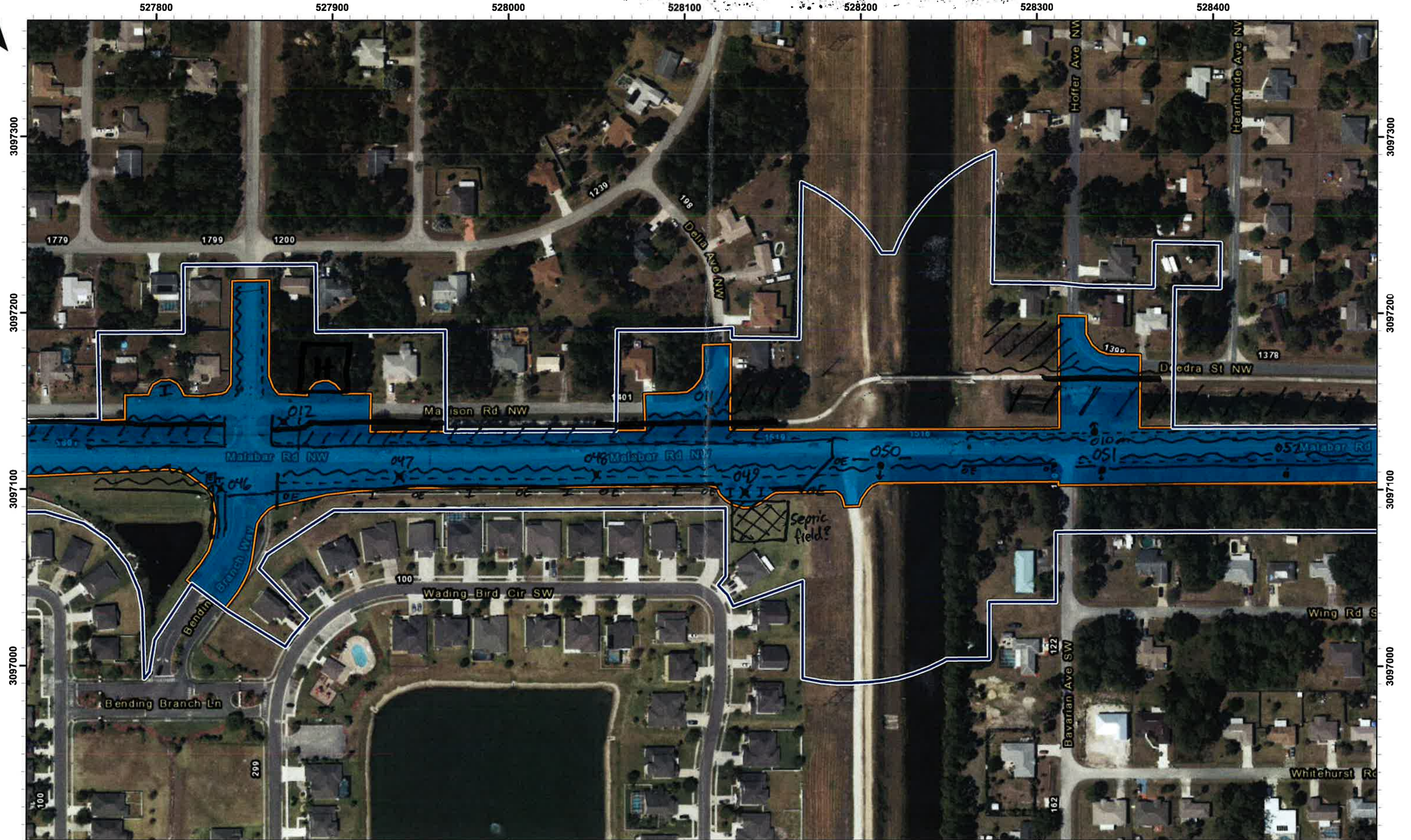
Grid UTM WGS 84 17N
 Major ticks: 100m interval;
 Minor ticks: 10m Interval

Malabar Road APE
 Malabar Road Archaeological APE

Poorly Drained Soil

N- No dig ST
 X- No dig ST
 OE- Overhead Electric
 B- Buried Electric
 FOC
 W- Water/Sewer
 U- Utility box
 C- Culvert
 D- Canal/ditch
 I- Buried irrigation
 S- Sidewalk





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

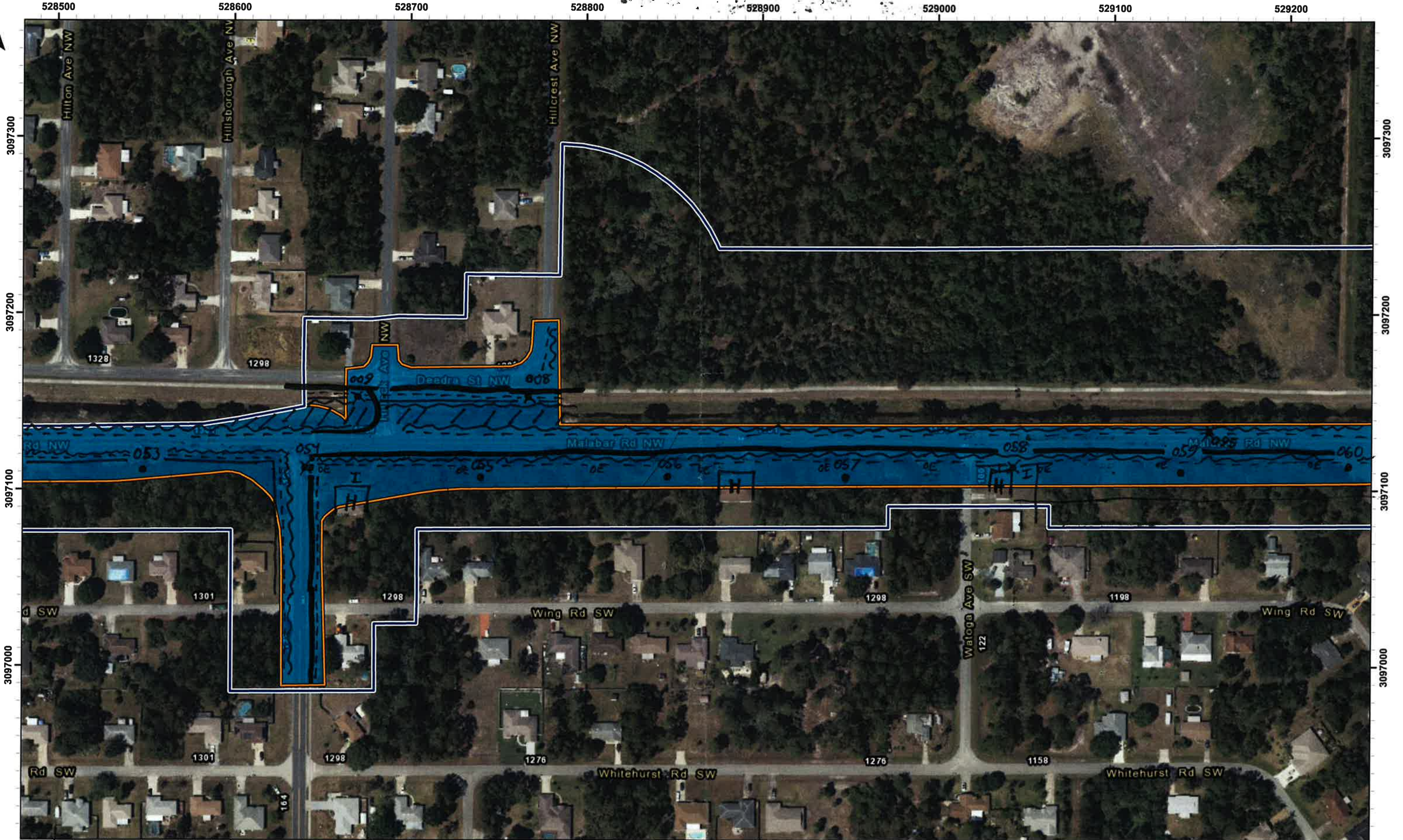
Malabar Road APE
 Malabar Road Archaeological APE

Poorly Drained Soil

• - Neg. ST
 X - No dig ST
 ↓ - Moved slightly
 --- Buried electric
 - - - FOC
 ~~~~~ water/sewer  
 - - - overhead electric  
 - utility box  
 - Buried Irrigation  
 - overhead electric  
 - New house  
 - Sidewalk  
 - Canal/ditch





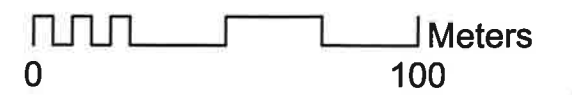


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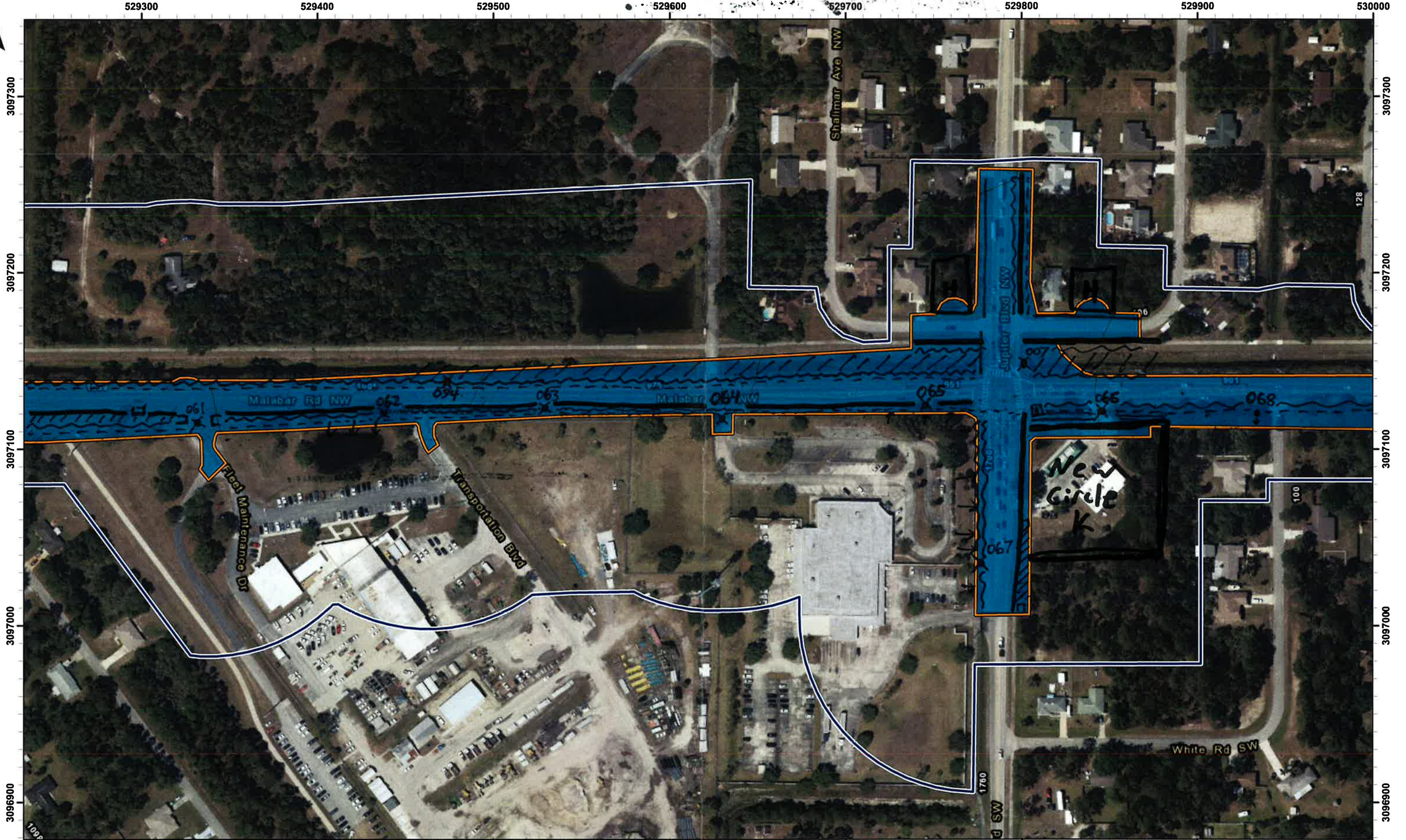
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

- Noy ST  
 - No dig ST  
 - house  
 - Buried electric  
 - FOC  
 - Water/sewer  
 - Sidewalk  
 - overhead electric  
 - Buried irrigation  
 - Canal/ditch





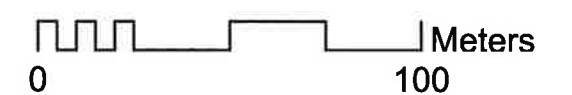


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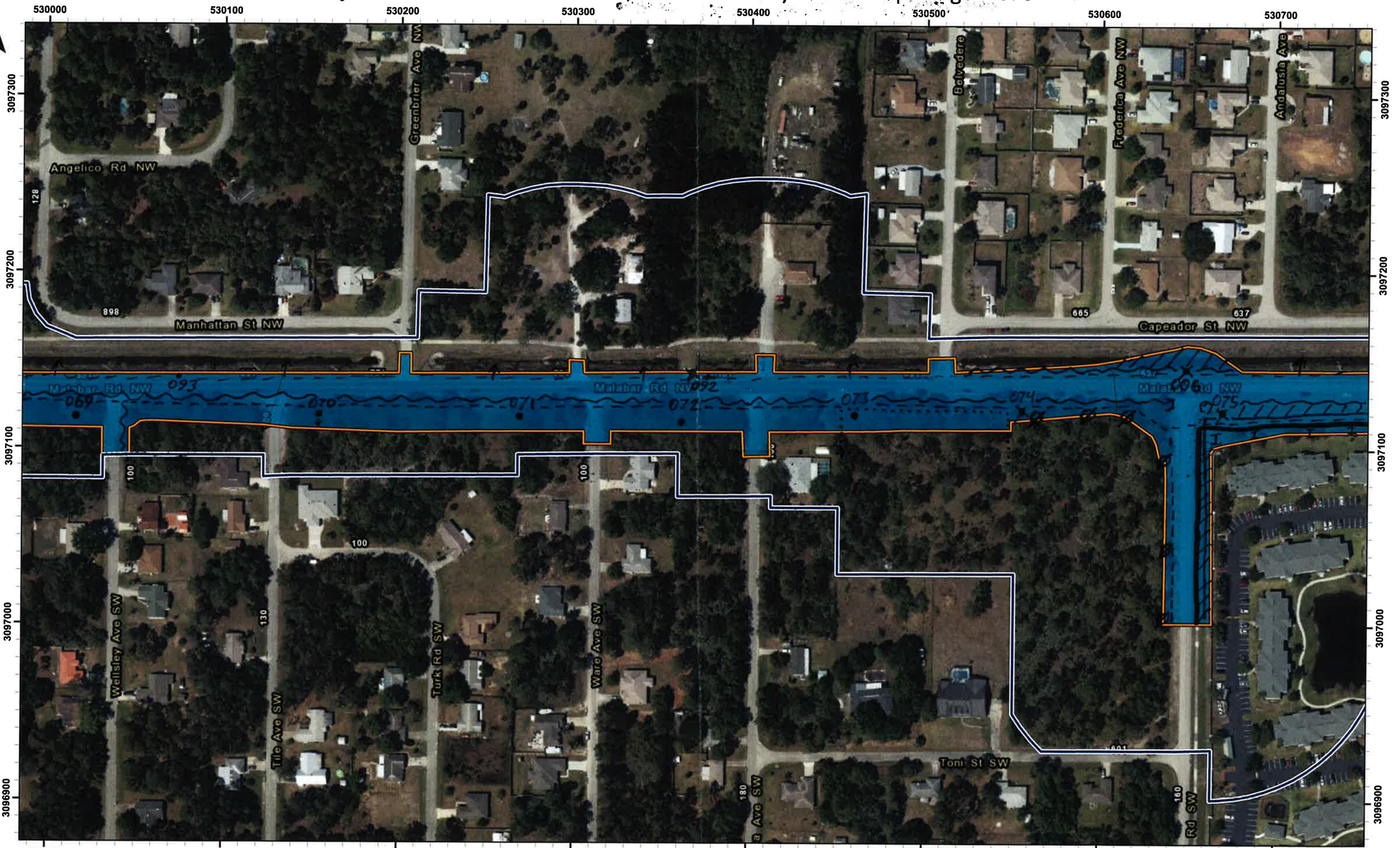
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

|               |                     |               |                  |
|---------------|---------------------|---------------|------------------|
| ● - Neg. ST   | --- Buried Electric | ↗ - Slope     | □ - Utility Box  |
| ✕ - No dig ST | - - - FOC           | ▬ - Sidewalk  | ⊗ - Adjust point |
| [ ] - Culvert | ~ ~ ~ Water/Sewer   | - Canal/ditch | ▣ - New House    |





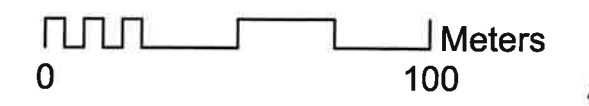


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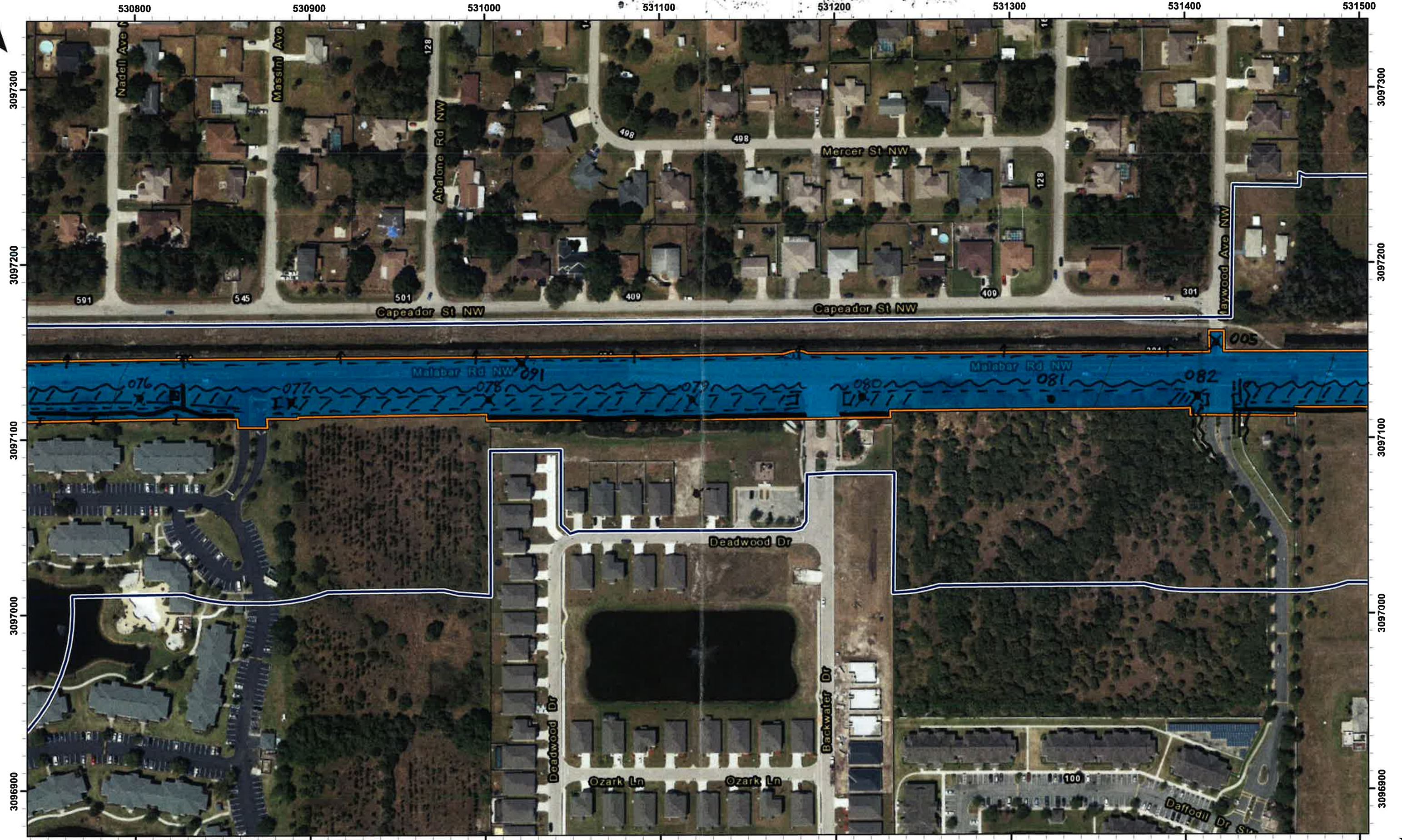
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

• - Ney ST  
 X - No dig ST  
 Ø - No trespass signage  
 --- Buried electric  
 ... Buried wire  
 - - - FOC  
 / - sidewalk  
 ||| - Canal/ditch  
 I - Buried Irrigation  
 ~ - water/sewer  
 ↗ - Slope





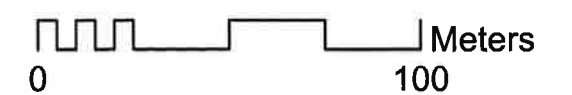


Grid UTM WGS 84 17N  
 Major ticks: 100m interval;  
 Minor ticks: 10m Interval

Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

- Ney ST  
 - No dig ST  
 - Buried Irrigation  
 - utility Box  
 - culvert  
 - Ditch  
 - Slope  
 - Water/sewer  
 - FOC  
 - Buried electric  
 - Sidewalk

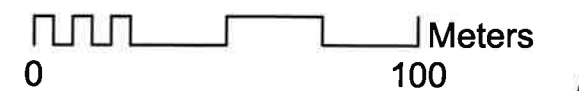






Grid UTM WGS 84 17N  
Major ticks: 100m interval;  
Minor ticks: 10m Interval

-  Malabar Road APE
-  Malabar Road Archaeological APE
-  Poorly Drained Soil







**APPENDIX B.**

**FMSF RESOURCE FORM**





Original  
 Update



**RESOURCE GROUP FORM**  
**FLORIDA MASTER SITE FILE**  
**Version 5.0 3/19**

Site #8 BR03535  
 Field Date 4-26-2021  
 Form Date 4-29-2021  
 Recorder# \_\_\_\_\_

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 20 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

**LOCATION & MAPPING**

Address: 

| Street Number | Direction | Street Name | Street Type | Suffix Direction |
|---------------|-----------|-------------|-------------|------------------|
|               |           |             |             |                  |

  
 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 34 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 28S Range 36E Section 36 ¼ section:  NW  SW  SE  NE  
 3) Township 29S Range 36E Section 1-3 ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name \_\_\_\_\_ USGS Date \_\_\_\_\_  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  
 Within the APE, 8BR03535 runs W-E for approx. 2.46 mi (3.96 km), beginning at Resource 8BR04377 and running E.

| DHR USE ONLY                             | OFFICIAL EVALUATION                                                                                                                                                                       | DHR USE ONLY           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| NR List Date _____                       | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date _____ Init. _____ |
| <input type="checkbox"/> Owner Objection | KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date _____             |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                        |

HISTORY & DESCRIPTION

Construction Year: 1928 [X]approximately [ ]year listed or earlier [ ]year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR03535 was constructed ca. 1928 as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is owned by the Melbourne-Tillman Water Control District and is partially dried up.

RESEARCH METHODS (check all that apply)

- [X]FMSF record search (sites/surveys) [ ]library research [ ]building permits [ ]Sanborn maps
[ ]FL State Archives/photo collection [ ]city directory [ ]occupant/owner interview [ ]plat maps
[X]property appraiser / tax records [ ]newspaper files [ ]neighbor interview [ ]Public Lands Survey (DEP)
[X]cultural resource survey [X]historic photos [ ]interior inspection [ ]HABS/HAER record search
[X]other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ]yes [X]no [ ]insufficient information
Potentially eligible as contributor to a National Register district? [ ]yes [X]no [ ]insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Resource 8BR03535 was determined ineligible for the NRHP by the SHPO in 2017. It has not gained significance or distinction since that evaluation and remains ineligible for listing in the NRHP.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@sear.org
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR03535\_a Facing Southwest**



**8BR03535\_b Facing South**



**8BR03535\_c Facing Southeast**



**8BR03535\_d Facing Southwest**



**8BR03535\_e Facing South**



**8BR03535\_f Facing Southeast**





**8BR03535\_g Facing North**

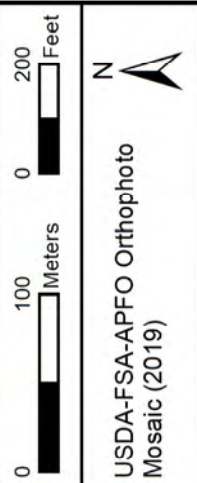
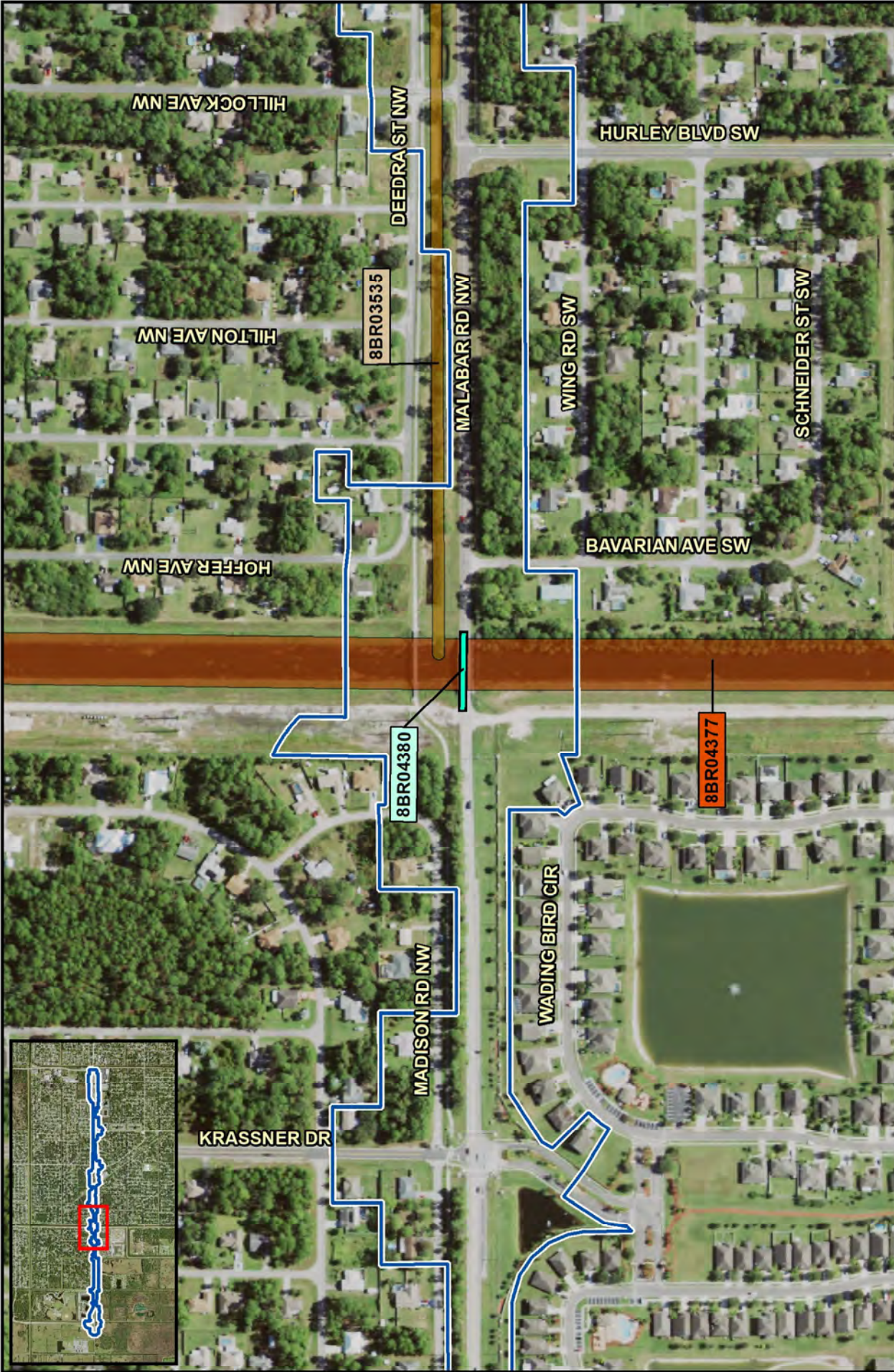


**8BR03535\_h Facing Northwest**



**8BR03535\_i Facing Northeast**

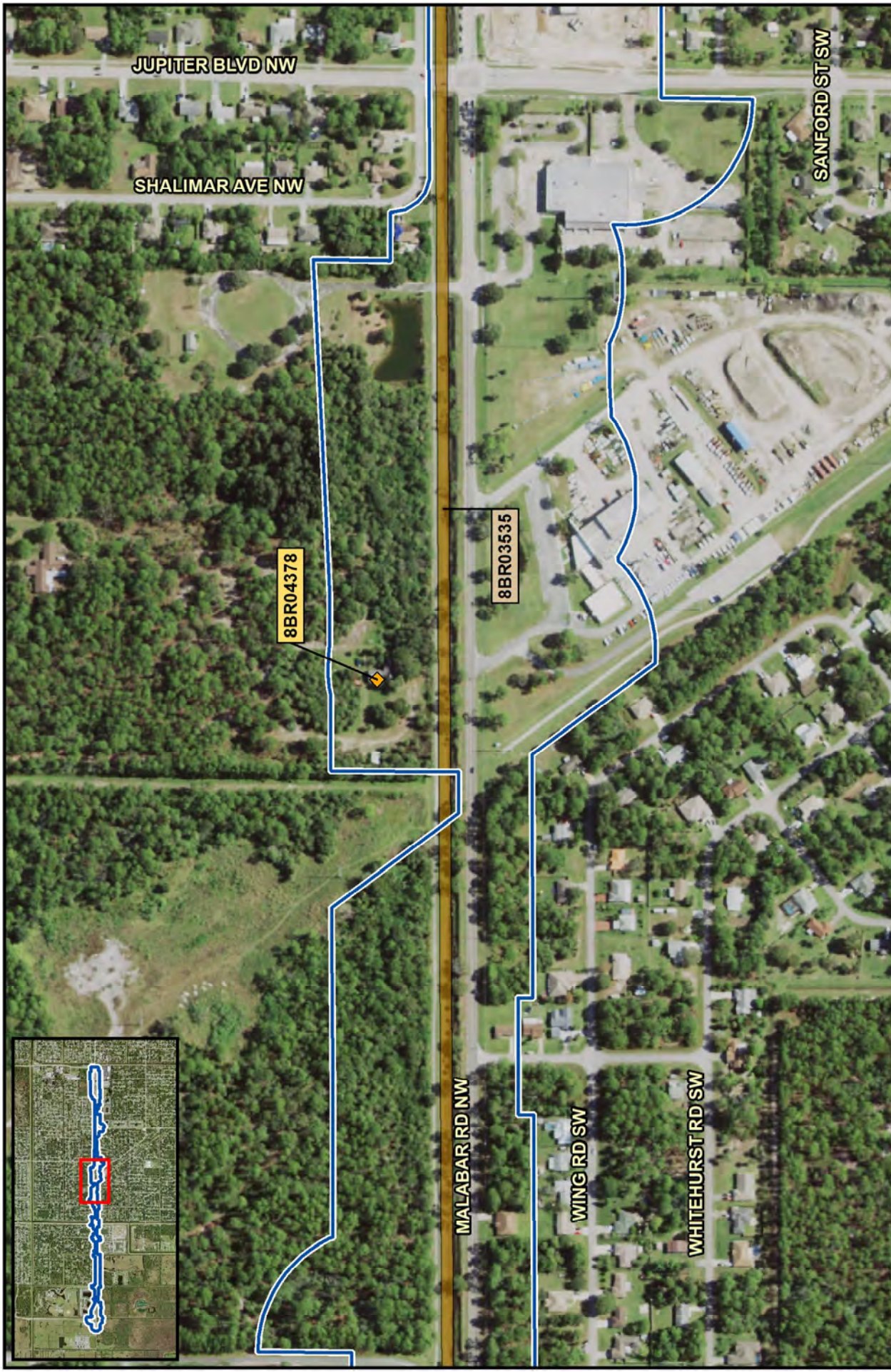




USDA-FSA-APFO Orthophoto Mosaic (2019)

- Malabar Road APE
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource
- Newly Recorded Historic Bridge





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

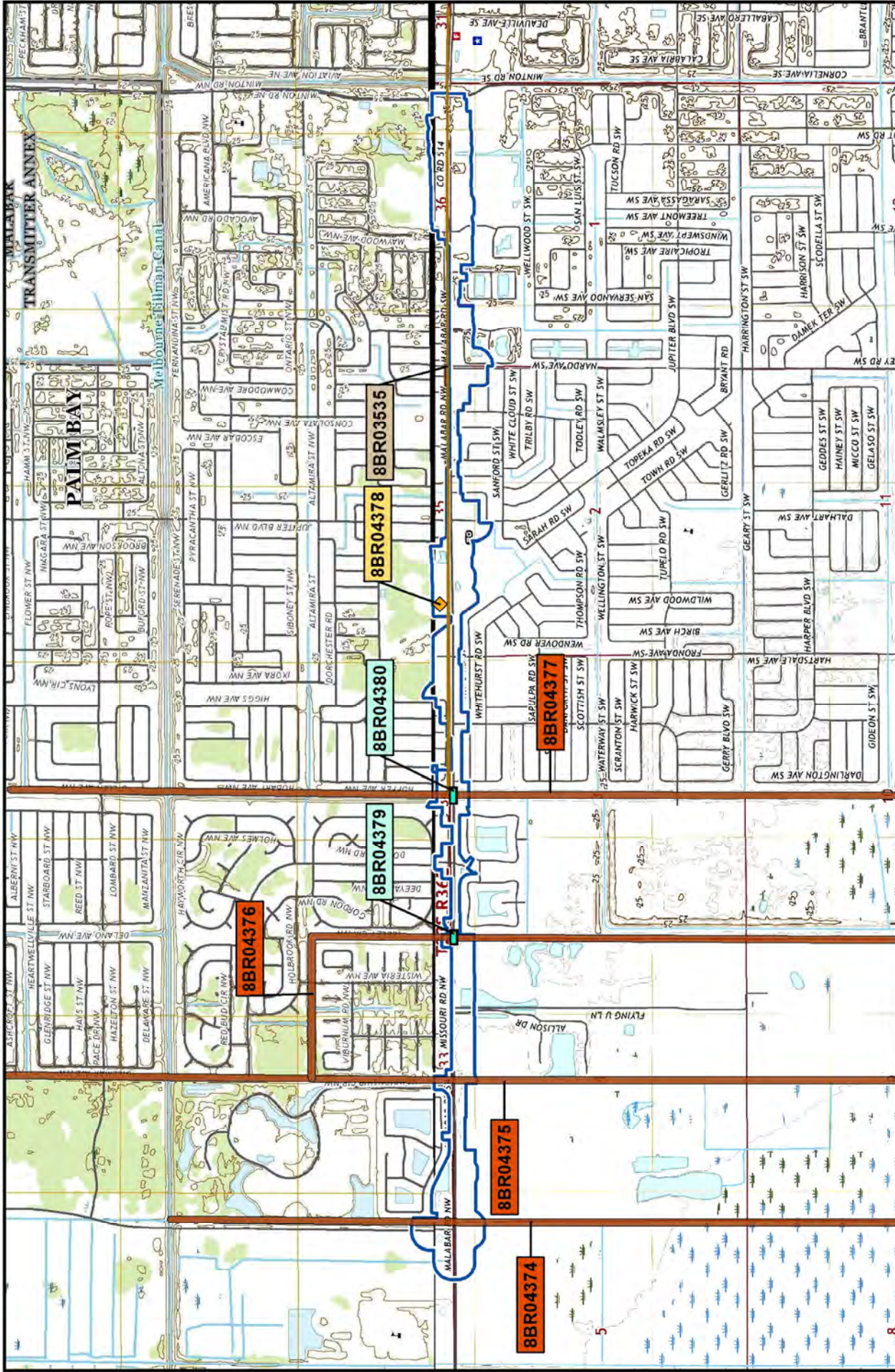
N

Malabar Road APE

Previously Recorded Linear Resource

Newly Recorded Historic Structure





0 500 0 2,000  
 Meters Feet

N

USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)

- Malabar Road APE
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge







# RESOURCE GROUP FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 BR04374  
 Field Date 4-26-2021  
 Form Date 4-30-2021  
 Recorder# \_\_\_\_\_

Original  
 Update

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 7 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Address: 

|                      |                  |                    |                    |                         |
|----------------------|------------------|--------------------|--------------------|-------------------------|
| <u>Street Number</u> | <u>Direction</u> | <u>Street Name</u> | <u>Street Type</u> | <u>Suffix Direction</u> |
|                      |                  |                    |                    |                         |

 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 32, 33 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 29S Range 36E Section 4, 5 ¼ section:  NW  SW  SE  NE  
 3) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name \_\_\_\_\_ USGS Date \_\_\_\_\_  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  

Within the APE, 8BR04374 runs N-S for approx. 0.26 mi (0.41 km), beginning approx. 762.33 ft N of Malabar Rd and continuing S. It is approx. 27.97 ft (8.52 m) wide.

| DHR USE ONLY                                                       | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |



HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04374 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is channeled beneath Malabar Rd via a non-historic culvert.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04374 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments
1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources) When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR04374\_a Facing Northeast**



**8BR04374\_b Facing North**



**8BR04374\_c Facing Northwest**



**8BR04374\_d Facing South**

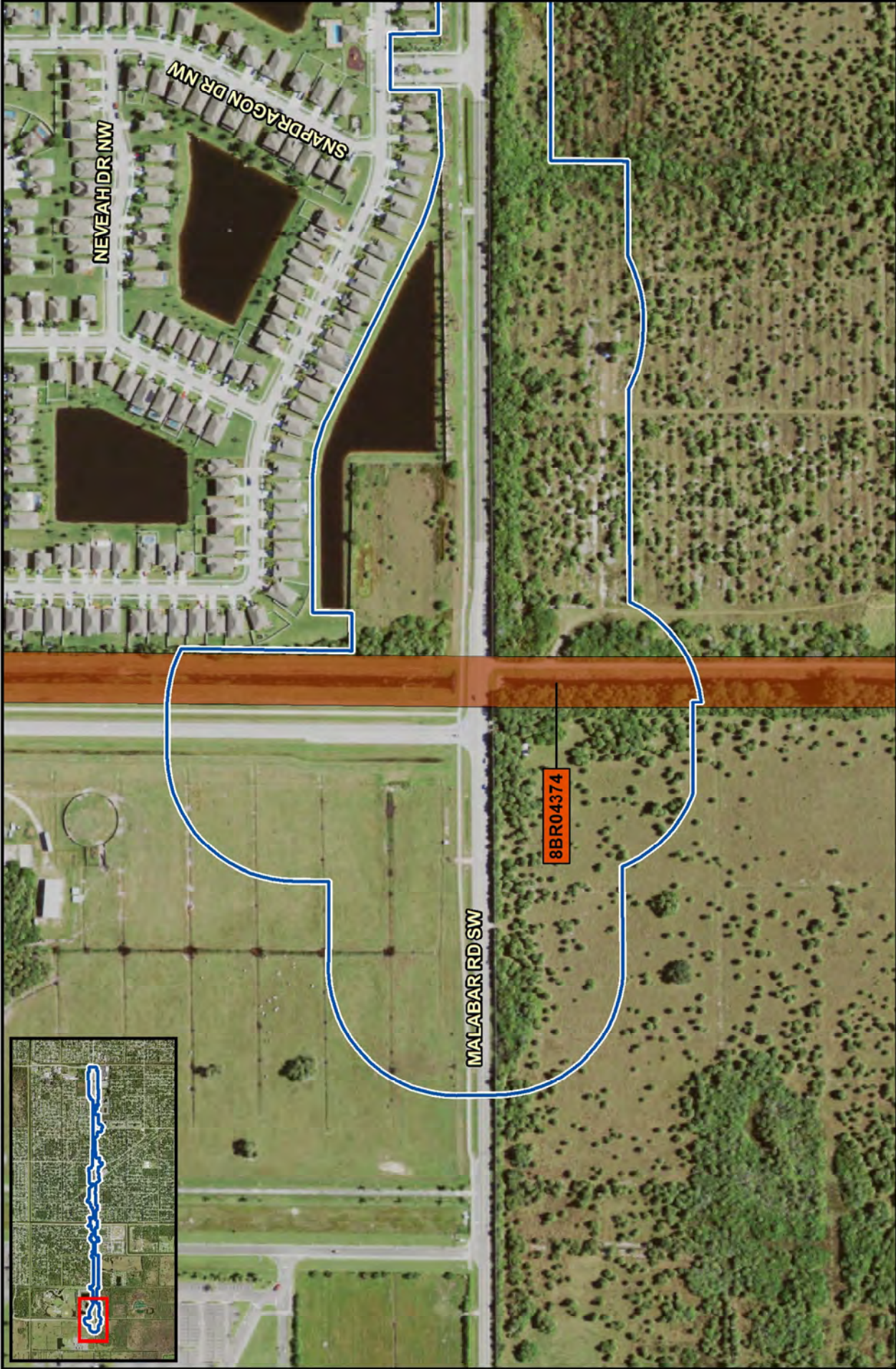


**8BR04374\_e Facing West**




**8BR04374\_f Facing Northwest**



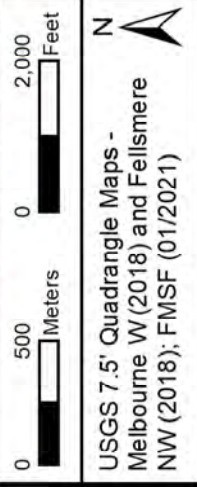
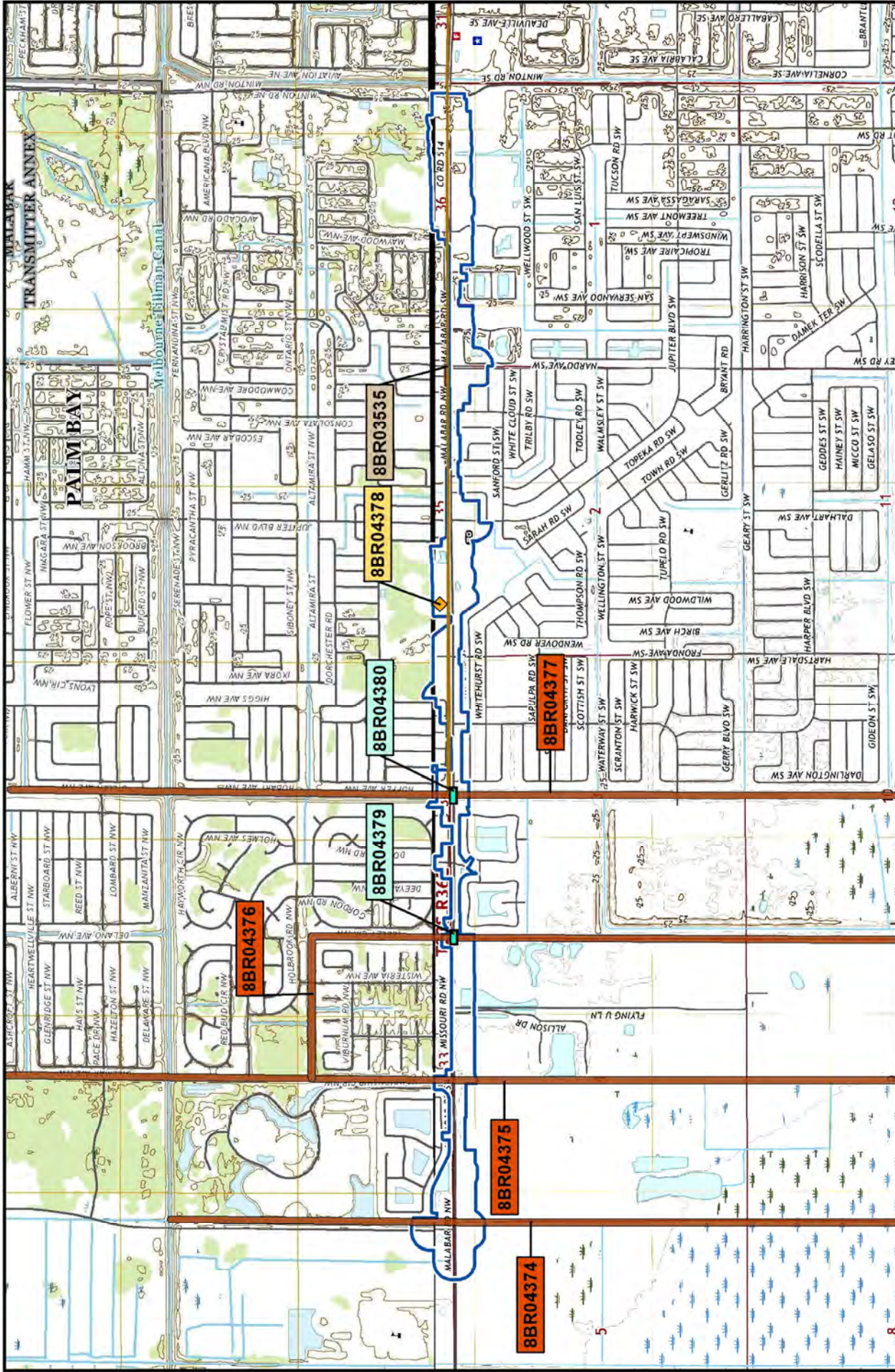


USDA-FSA-APFO Orthophoto Mosaic (2019)

 Malabar Road APE

 Newly Recorded Linear Resource





USGS 7.5' Quadrangle Maps -  
Melbourne W (2018) and Fellsmere  
NW (2018); FMSF (01/2021)

- Malabar Road APE
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge





Original  
 Update



**RESOURCE GROUP FORM**  
**FLORIDA MASTER SITE FILE**  
**Version 5.0 3/19**

Site #8 BR04375  
 Field Date 4-26-2021  
 Form Date 4-30-2021  
 Recorder# \_\_\_\_\_

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites  
 **Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures  
 **Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)  
 **Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association  
 **Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)  
 **Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)  
 **Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 8 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

**LOCATION & MAPPING**

Address: 

| Street Number | Direction | Street Name | Street Type | Suffix Direction |
|---------------|-----------|-------------|-------------|------------------|
|               |           |             |             |                  |

  
 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 33 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 29S Range 36E Section 4 ¼ section:  NW  SW  SE  NE  
 3) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name MELBOURNE WEST USGS Date 2021  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  
 Within the APE, 8BR04375 runs N-S for approx. 793.29 ft (241.80 m), beginning approx. 314.70 ft (95.92 m) N of Malabar Rd and continuing S. It is 16.85 ft (5.13 m) wide.

| DHR USE ONLY                             | OFFICIAL EVALUATION                                                                                                                                                                       | DHR USE ONLY           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| NR List Date _____                       | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date _____ Init. _____ |
| <input type="checkbox"/> Owner Objection | KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date _____             |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                        |



HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04375 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is largely dried up and runs beneath Malabar Rd via a non-historic culvert.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04375 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments
1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.



8BR04375\_a Facing North



8BR04375\_b Facing Northeast



8BR04375\_c Facing South



8BR04375\_d Facing Northwest



8BR04375\_e Facing South





0 100 200 Meters

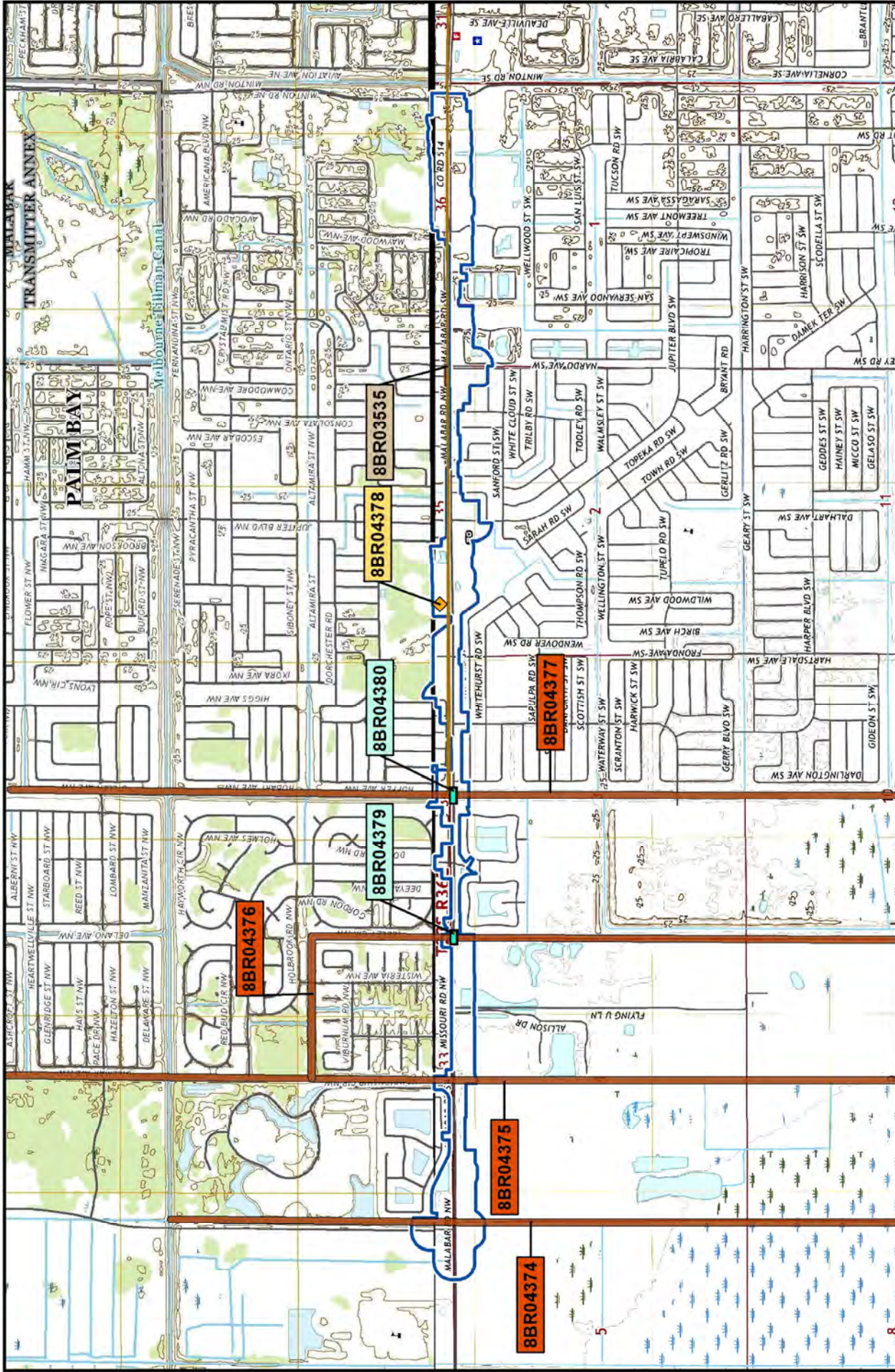
0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

N

- Malabar Road APE
- Newly Recorded Linear Resource
- Newly Recorded Historic Bridge





**Legend**

- Malabar Road APE
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource

0 500 2,000  
Meters Feet

USGS 7.5' Quadrangle Maps -  
Melbourne W (2018) and Fellsmere  
NW (2018); FMSF (01/2021)

N







# RESOURCE GROUP FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 BR04376  
 Field Date 4-26-2021  
 Form Date 4-30-2021  
 Recorder# \_\_\_\_\_

Original  
 Update

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 9 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Address: 

|                      |                  |                    |                    |                         |
|----------------------|------------------|--------------------|--------------------|-------------------------|
| <u>Street Number</u> | <u>Direction</u> | <u>Street Name</u> | <u>Street Type</u> | <u>Suffix Direction</u> |
|                      |                  |                    |                    |                         |

 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 33, 34 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 29S Range 36E Section 3, 4 ¼ section:  NW  SW  SE  NE  
 3) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name \_\_\_\_\_ USGS Date \_\_\_\_\_  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  

Within the APE, 8BR04376 runs N-S for approx. 797.90 ft (243.20 m), beginning approx. 415.12 ft (126.53 m) N of Malabar Rd and continuing S. It is 14.08 ft (4.29 m) wide.

| DHR USE ONLY                                                       | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |



HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04376 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is channeled beneath Malabar Rd via Resource 8BR04379.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04376 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.



8BR04376\_a Facing North



8BR04376\_b Facing Northwest



8BR04376\_c Facing Northeast



8BR04376\_d Facing Northeast



8BR04376\_e Facing West



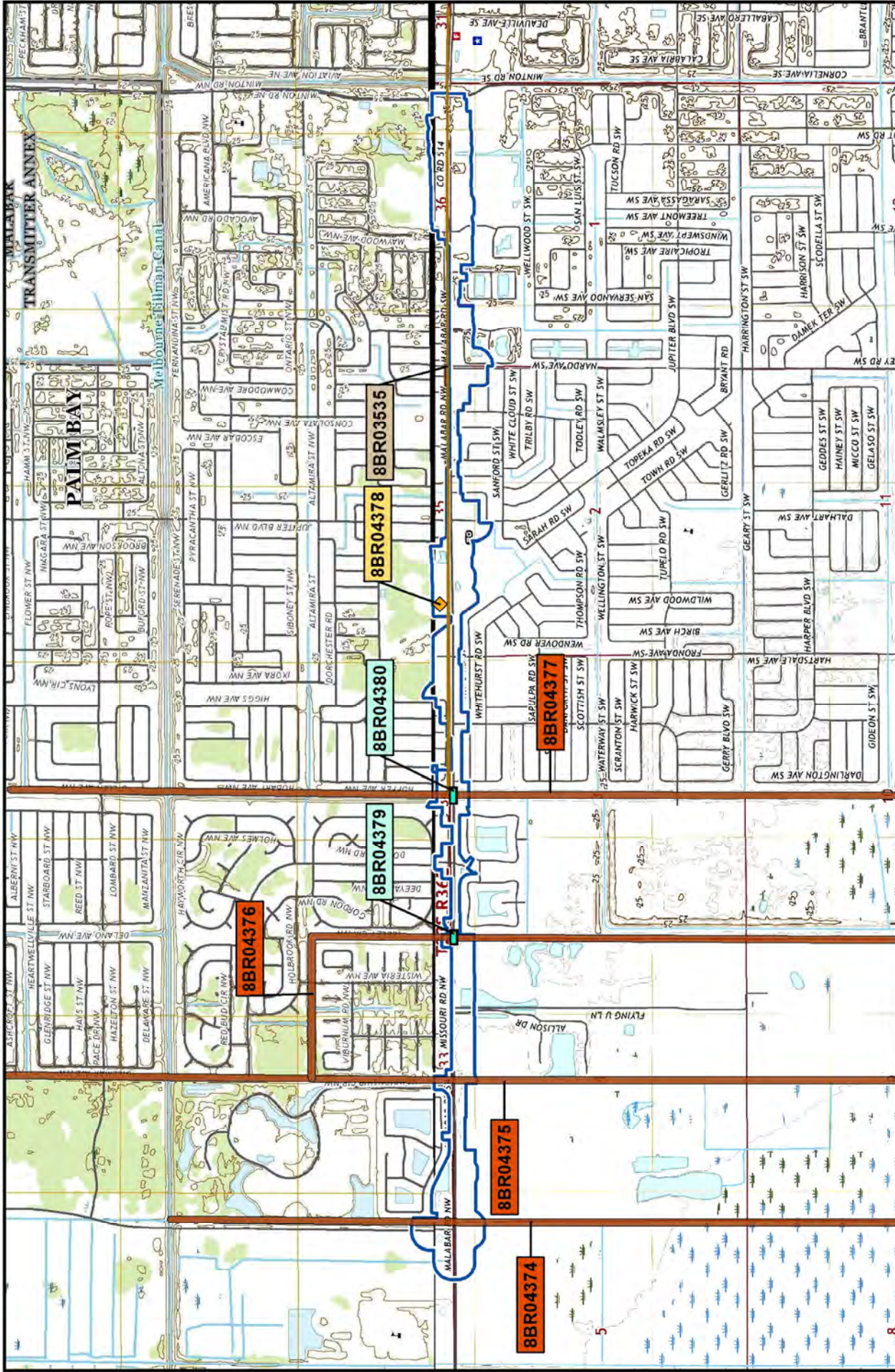


- Malabar Road APE
- Newly Recorded Linear Resource
- Newly Recorded Historic Bridge



USDA-FSA-APFO Orthophoto Mosaic (2019)





Malabar Road APE
  Newly Recorded Linear Resource
  Previously Recorded Linear Resource

Newly Recorded Historic Structure
  Newly Recorded Historic Bridge

0
  500
  2,000

Meters Feet

N

USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)







# RESOURCE GROUP FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 BR04377  
 Field Date 4-26-2021  
 Form Date 4-30-2021  
 Recorder# \_\_\_\_\_

Original  
 Update

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only: NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only: NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 10 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

| Street Number                                                                                                                                                               | Direction        | Street Name                                                                                                                  | Street Type                                                                                                                | Suffix Direction      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Address: _____                                                                                                                                                              |                  |                                                                                                                              |                                                                                                                            |                       |
| City/Town (within 3 miles) <u>Palm Bay</u>                                                                                                                                  |                  | In Current City Limits? <input checked="" type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> unknown |                                                                                                                            |                       |
| County or Counties (do not abbreviate) <u>Brevard</u>                                                                                                                       |                  |                                                                                                                              |                                                                                                                            |                       |
| Name of Public Tract (e.g., park) _____                                                                                                                                     |                  |                                                                                                                              |                                                                                                                            |                       |
| 1) Township <u>28S</u>                                                                                                                                                      | Range <u>36E</u> | Section <u>34</u>                                                                                                            | ¼ section: <input type="checkbox"/> NW <input type="checkbox"/> SW <input type="checkbox"/> SE <input type="checkbox"/> NE | Irregular-name: _____ |
| 2) Township <u>29S</u>                                                                                                                                                      | Range <u>36E</u> | Section <u>3</u>                                                                                                             | ¼ section: <input type="checkbox"/> NW <input type="checkbox"/> SW <input type="checkbox"/> SE <input type="checkbox"/> NE |                       |
| 3) Township _____                                                                                                                                                           | Range _____      | Section _____                                                                                                                | ¼ section: <input type="checkbox"/> NW <input type="checkbox"/> SW <input type="checkbox"/> SE <input type="checkbox"/> NE |                       |
| 4) Township _____                                                                                                                                                           | Range _____      | Section _____                                                                                                                | ¼ section: <input type="checkbox"/> NW <input type="checkbox"/> SW <input type="checkbox"/> SE <input type="checkbox"/> NE |                       |
| USGS 7.5' Map(s) 1) Name <u>FELLSMERE NW</u>                                                                                                                                |                  | USGS Date <u>2021</u>                                                                                                        |                                                                                                                            |                       |
| 2) Name _____                                                                                                                                                               |                  | USGS Date _____                                                                                                              |                                                                                                                            |                       |
| Plat, Aerial, or Other Map (map's name, originating office with location) _____                                                                                             |                  |                                                                                                                              |                                                                                                                            |                       |
| Landgrant _____                                                                                                                                                             |                  |                                                                                                                              |                                                                                                                            |                       |
| Verbal Description of Boundaries (description does not replace required map)                                                                                                |                  |                                                                                                                              |                                                                                                                            |                       |
| Within the APE, 8BR04377 runs N-S for approx. 880.40 ft (268.35 m), beginning approx. 445.00 ft (135.64 m) N of Malabar Rd and continuing S. It is 93.64 ft (28.54 m) wide. |                  |                                                                                                                              |                                                                                                                            |                       |

| DHR USE ONLY                                                       | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |



HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04377 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is channeled beneath Malabar Rd via Resource 8BR04380.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04377 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
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Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri
(address / phone / fax / e-mail)

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4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.



**8BR04377\_a Facing North**



**8BR04377\_b Facing Northwest**



**8BR04377\_c Facing Northeast**

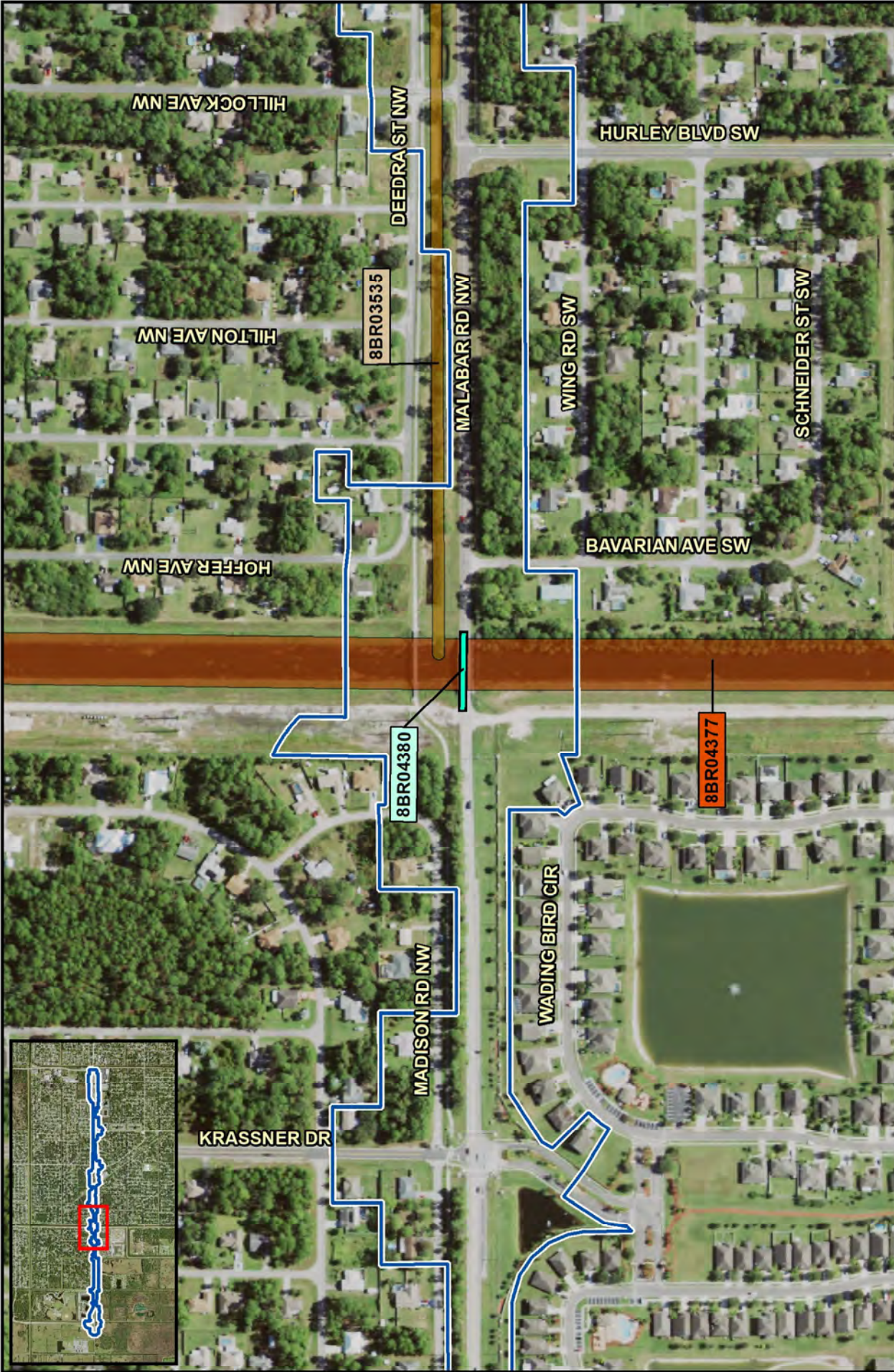


**8BR04377\_d Facing East**



**8BR04377\_e Facing Southeast**





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

N

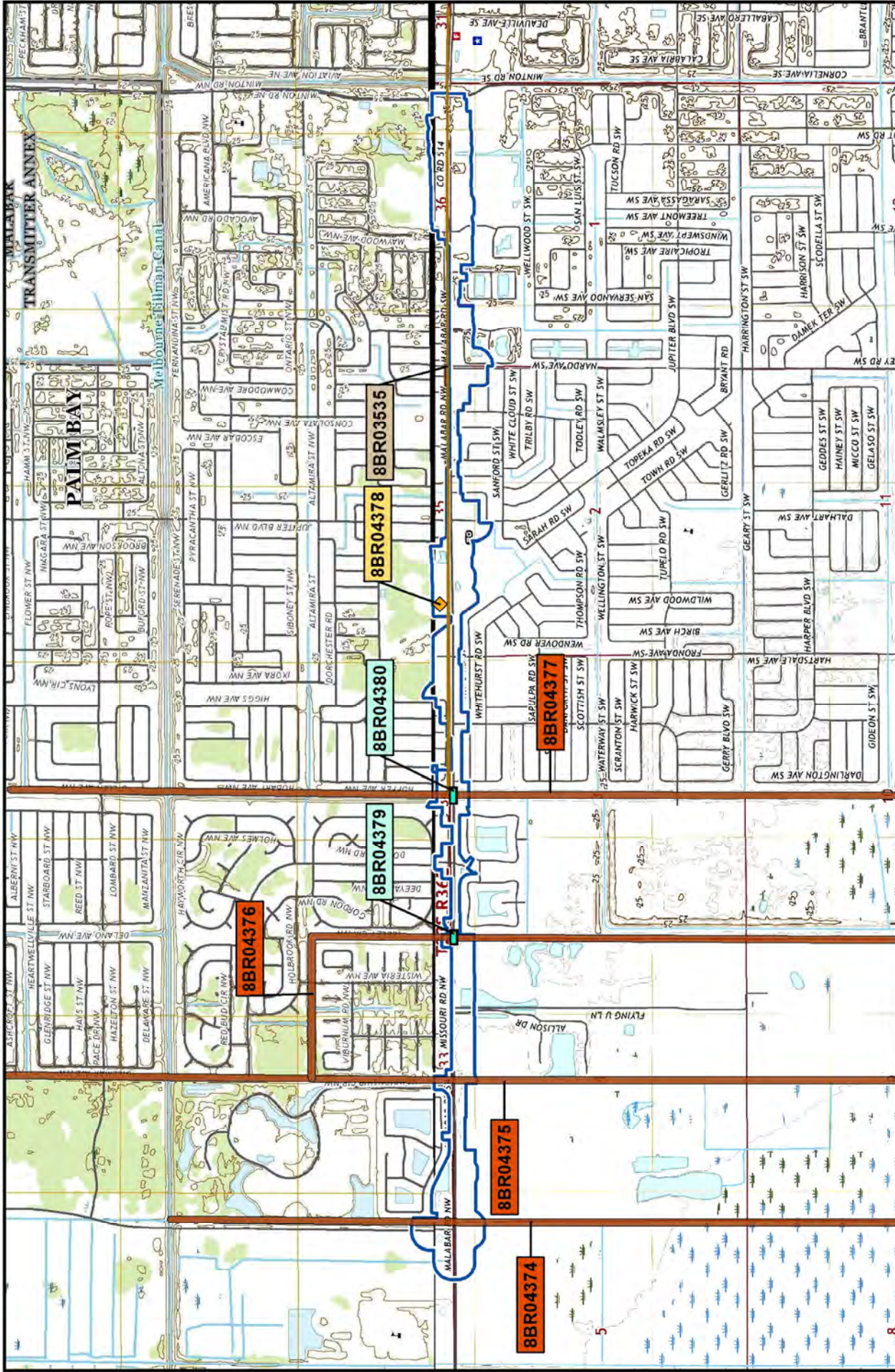
Malabar Road APE

Newly Recorded Linear Resource

Previously Recorded Linear Resource

Newly Recorded Historic Bridge





**Legend**

- Malabar Road APE
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource

0 500 0 2,000  
Meters Feet

N

USGS 7.5' Quadrangle Maps -  
Melbourne W (2018) and Fellsmere  
NW (2018); FMSF (01/2021)







# HISTORICAL STRUCTURE FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site#8 **BR04378**  
Field Date 4-26-2021  
Form Date 4-29-2021  
Recorder # \_\_\_\_\_

Original  
 Update

Shaded Fields represent the minimum acceptable level of documentation.  
Consult the *Guide to Historical Structure Forms* for detailed instructions.

Site Name(s) (address if none) 1099 Malabar Road Northwest Multiple Listing (DHR only) \_\_\_\_\_  
Survey Project Name Malabar Road Corridor Survey # (DHR only) \_\_\_\_\_  
National Register Category (please check one)  building  structure  district  site  object  
Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Address: 1099 Malabar Road NW  
Street Number Direction Street Name Street Type Suffix Direction  
Cross Streets (nearest / between) Shalimar Ave NW & Hillcrest Ave  
USGS 7.5 Map Name FELLSMERE NW USGS Date 2021 Plat or Other Map \_\_\_\_\_  
City / Town (within 3 miles) Palm Bay In City Limits?  yes  no  unknown County Brevard  
Township 28S Range 36E Section 35 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
Tax Parcel # 28-36-35-00-503 Landgrant \_\_\_\_\_  
Subdivision Name N/A Block \_\_\_\_\_ N/A Lot \_\_\_\_\_ N/A  
UTM Coordinates: Zone  16  17 Easting       Northing        
Other Coordinates: X: \_\_\_\_\_ Y: \_\_\_\_\_ Coordinate System & Datum \_\_\_\_\_  
Name of Public Tract (e.g., park) \_\_\_\_\_

### HISTORY

Construction Year: 1947  approximately  year listed or earlier  year listed or later  
Original Use Private Residence (House/Cottage/Ca From (year): 1947 To (year): 2021  
Current Use Private Residence (House/Cottage/Ca From (year): 1947 To (year): 2021  
Other Use \_\_\_\_\_ From (year): \_\_\_\_\_ To (year): \_\_\_\_\_  
Moves:  yes  no  unknown Date: \_\_\_\_\_ Original address \_\_\_\_\_  
Alterations:  yes  no  unknown Date: \_\_\_\_\_ Nature Porch poss. enclosed  
Additions:  yes  no  unknown Date: \_\_\_\_\_ Nature \_\_\_\_\_  
Architect (last name first): \_\_\_\_\_ Builder (last name first): \_\_\_\_\_  
Ownership History (especially original owner, dates, profession, etc.)  
Current owner, Clara L. Ison, purchased 2009.

Is the Resource Affected by a Local Preservation Ordinance?  yes  no  unknown Describe \_\_\_\_\_

### DESCRIPTION

Style Masonry Vernacular Exterior Plan Irregular Number of Stories 1  
Exterior Fabric(s) 1. Stucco 2. \_\_\_\_\_ 3. \_\_\_\_\_  
Roof Type(s) 1. Hip 2. Other 3. \_\_\_\_\_  
Roof Material(s) 1. Composition shingles 2. Metal shingles 3. \_\_\_\_\_  
Roof secondary strucs. (dormers etc.) 1. Shed extension 2. \_\_\_\_\_

Windows (types, materials, etc.)  
Casement, metal-frame, paired and groups of 4, 4-light

Distinguishing Architectural Features (exterior or interior ornaments)  
Jerkinhead hip roof; intersecting hip roof; foundation obscured by foliage; wood faux window shutters; concrete windowsills

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)  
Rect. outbuildings to NE of bldg; plank fence S of bldg; large trees to S/N of bldg

| DHR USE ONLY                             |                                                                                                                                                                                           | OFFICIAL EVALUATION |             | DHR USE ONLY |  |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------|--------------|--|
| NR List Date _____                       | SHPO - Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date _____          | Init. _____ |              |  |
| <input type="checkbox"/> Owner Objection | KEEPER - Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date _____          |             |              |  |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                     |             |              |  |



DESCRIPTION (continued)

Chimney: No. 1 Chimney Material(s): 1. Concrete block 2.
Structural System(s): 1. Masonry - General 2. 3.
Foundation Type(s): 1. Unknown 2.
Foundation Material(s): 1. Obscured 2.

Main Entrance (stylistic details)

S façade cen., single door obscured by metal-frame screen storm door

Porch Descriptions (types, locations, roof types, etc.)

Closed partial-width porch S façade cen., largely obscured by foliage, gable roof supported by masonry walls

Condition (overall resource condition): [ ] excellent [x] good [ ] fair [ ] deteriorated [ ] ruinous

Narrative Description of Resource

Resource 8BR04378 is a 1-story Masonry Vernacular house with an irregular plan set at grade on a foundation obscured by foliage. Composition shingles and flat tile cover the jerkinhead and intersecting hip roofs, and stucco clads the walls.

Archaeological Remains [ ] Check if Archaeological Form Completed

RESEARCH METHODS (select all that apply)

- [x] FMSF record search (sites/surveys) [x] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey (CRAS) [ ] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (describe) Pedestrian/Windshield Survey

Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)

[Empty box for bibliographic references]

OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually? [ ] yes [x] no [ ] insufficient information
Appears to meet the criteria for National Register listing as part of a district? [ ] yes [x] no [ ] insufficient information

Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)

Due to lack of sufficient historic significance and architectural distinction, 8BR04378 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. 2. 3. 4. 5. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents

- 1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments
1 USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
3 PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE
When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





8BR04378\_a Facing Northwest



8BR04378\_b Facing North



8BR04378\_c Facing North



8BR04378\_d Facing North



8BR04378\_e Facing North



8BR04378\_f Facing Northeast





8BR04378\_g Facing Northeast



8BR04378\_h Facing Northeast

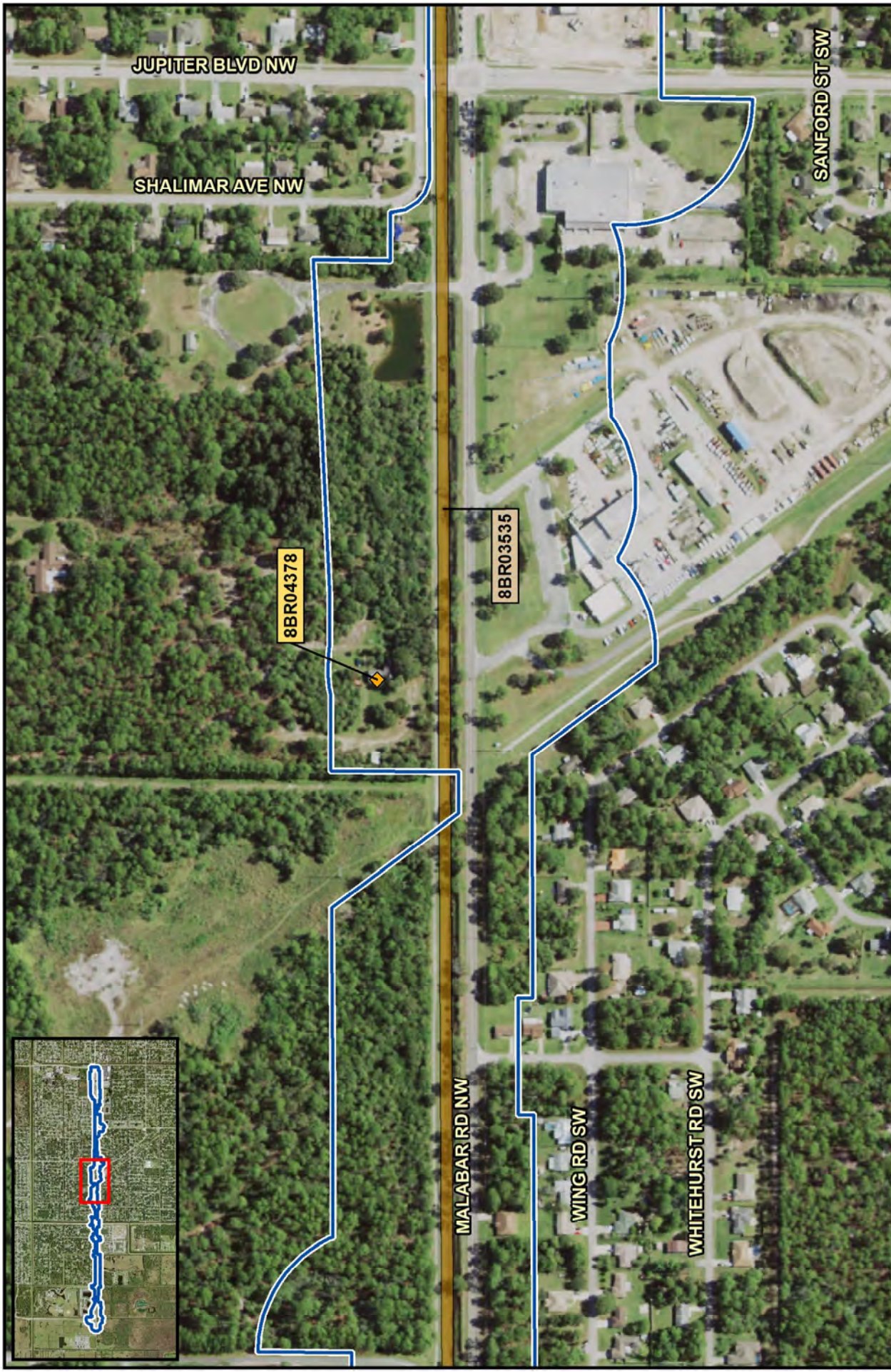


8BR04378\_i Facing Northeast



8BR04378\_j Facing Northeast





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

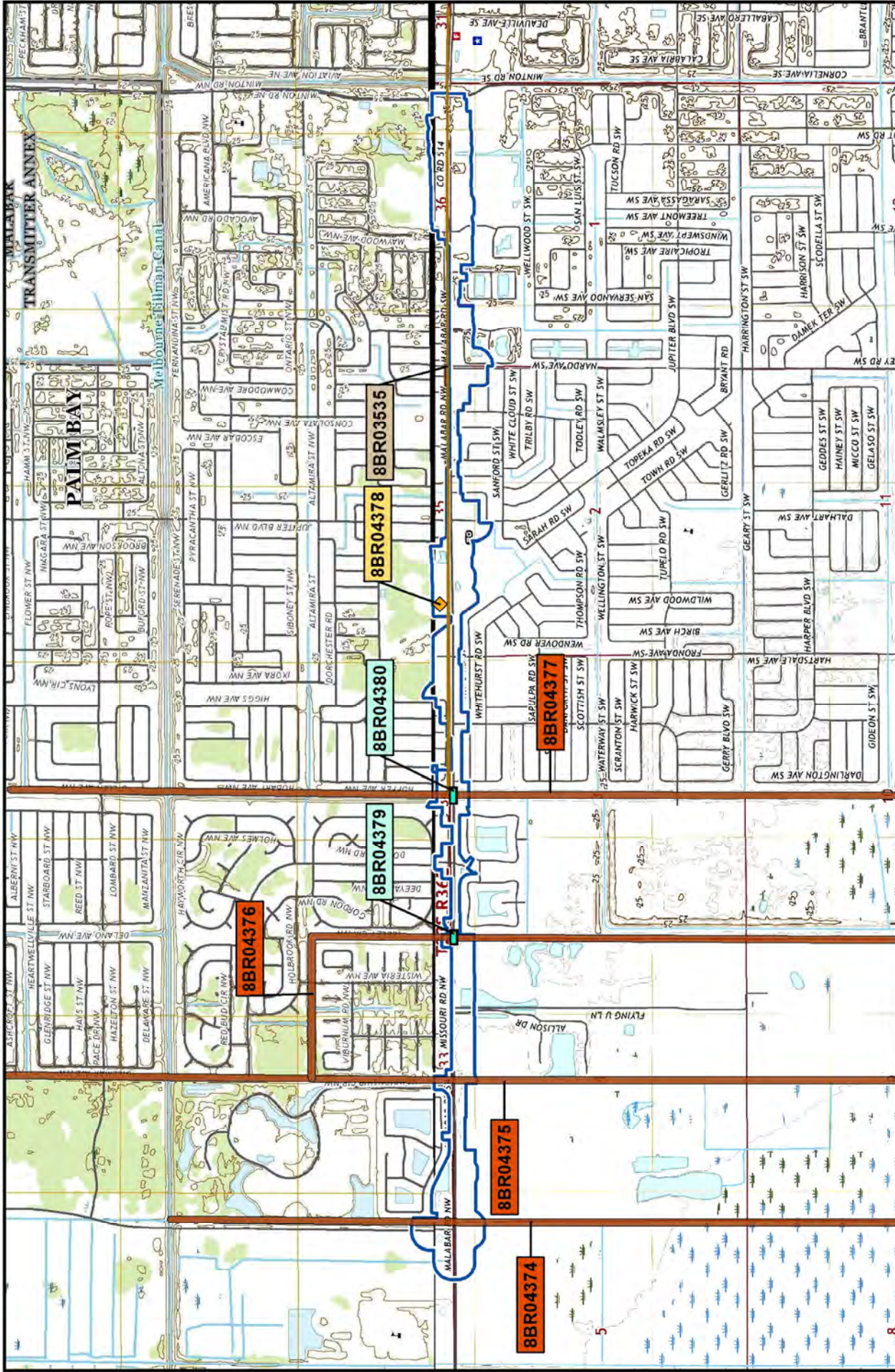
N

Malabar Road APE

Previously Recorded Linear Resource

Newly Recorded Historic Structure





Malabar Road APE  
 Newly Recorded Historic Bridge  
 Newly Recorded Historic Structure  
 Newly Recorded Linear Resource  
 Previously Recorded Linear Resource

0 500 0 2,000  
 Meters Feet

N  
 USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)





# HISTORICAL BRIDGE FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 **BR04379**  
Field Date 4-26-2021  
Form Date 4-29-2021  
Recorder # \_\_\_\_\_  
FDOT Bridge # \_\_\_\_\_

Original  
 Update

Consult *Guide to the Historical Bridge Form* for detailed instructions

Bridge Name(s) Melbourne-Tillman Canal No. 9 Culvert Multiple Listing (DHR only) \_\_\_\_\_  
Project Name Malabar Road Corridor Survey # (DHR only) \_\_\_\_\_  
Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Route(s) Carried/Feature(s) Crossed Melbourne-Tillman Canal No. 9/Melbourne Rd  
USGS 7.5 Map Name FELLSMERE NW USGS Date 2021 Plat or Other Map \_\_\_\_\_  
City/Town (within 3 miles) Palm Bay In City Limits?  yes  no  unknown County Brevard  
Township 29S Range 36E Section 4 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
Landgrant \_\_\_\_\_ Tax Parcel # \_\_\_\_\_  
UTM Coordinates: Zone  16  17 Easting  Northing   
Other Coordinates: X: \_\_\_\_\_ Y: \_\_\_\_\_ Coordinate System & Datum \_\_\_\_\_  
Name of Public Tract (e.g., park) \_\_\_\_\_

### HISTORY

Year Built 1943  approximately  year listed or earlier  year listed or later  
Still in use?  yes  no  restricted use (describe) \_\_\_\_\_  
Prior Fords, Ferries, or Bridges at this Location

Original culvert possibly replaced with concrete pipe culvert at an unknown later date

Bridge Use: original and current with dates (standard descriptions: auto, railway, pedestrian, fishing pier, abandoned)  
Original and current (1943-2021): Culvert with road

Ownership history  
Owned by Brevard County via Melbourne-Tillman Water Control District

Designers/Engineers \_\_\_\_\_  
Builders/Contractors \_\_\_\_\_  
Text of Plaque or Inscription  
\_\_\_\_\_  
\_\_\_\_\_

Narrative History (How did bridge come to be built? How was it financed?, etc.)  
Resource 8BR04379 is a ca. 1943 or later concrete pipe culvert with no distinguishing details. It channels the Melbourne-Tillman Canal No. 9 (8BR04376) under Melbourne Road.

### DESCRIPTION

#### GENERAL

Overall Bridge Design 1. Culvert 2. \_\_\_\_\_

Overall Condition  excellent  good  fair  deteriorated  ruinous

#### Style and Decorative Details

Resource 8BR04379 is a ca. 1943 or later concrete pipe culvert with an earthen and grout-filled bag abutment. The culvert features no decorative details or identifying characteristics.

#### Tender Station Description

N/A

#### Alterations: Dates and Descriptions

N/A

| DHR USE ONLY                             |                                                                                                                                                                                           | OFFICIAL EVALUATION |       | DHR USE ONLY |       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------|-------|
| NR List Date                             | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date                | _____ | Init.        | _____ |
| <input type="checkbox"/> Owner Objection | KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date                | _____ |              |       |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                     |       |              |       |



## DESCRIPTION (continued)

## SUPERSTRUCTURE

Spans: Total Number 1 Total Length(ft) 58Main Spans: Number 1 Length(ft) 58 Width(ft) 32 Roadway width(ft) 23Main Span Design CulvertMain Span Materials 1. Concrete 2. \_\_\_\_\_

Approach Spans: Number \_\_\_\_\_ Length(ft) \_\_\_\_\_ Width(ft) \_\_\_\_\_ Roadway width(ft) \_\_\_\_\_

Approach Span Design \_\_\_\_\_

Approach Span Materials 1. \_\_\_\_\_ 2. \_\_\_\_\_

Deck Materials 1. Not Applicable 2. \_\_\_\_\_

## SUBSTRUCTURE

Abutment Materials 1. Stone 2. OtherAbutment Description Overgrown grout-filled bag and earthen full abutmentPier Materials 1. Not Applicable 2. \_\_\_\_\_

Pier Description \_\_\_\_\_

## RESEARCH METHODS (check all that apply)

- |                                                                                                 |                                                           |                                                    |                                                              |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|
| <input checked="" type="checkbox"/> FDOT database search                                        | <input type="checkbox"/> Fla. Archives / photo collection | <input type="checkbox"/> newspaper files           | <input type="checkbox"/> informal archaeological inspection  |
| <input type="checkbox"/> HABS/HAER record search                                                | <input type="checkbox"/> property appraiser / tax records | <input type="checkbox"/> city directory            | <input type="checkbox"/> formal archaeological survey        |
| <input checked="" type="checkbox"/> FMSF record search (sites/surveys)                          | <input type="checkbox"/> library research                 | <input type="checkbox"/> Public Lands Survey (DEP) | <input checked="" type="checkbox"/> cultural resource survey |
| <input checked="" type="checkbox"/> Other methods (specify) <u>Pedestrian/windshield survey</u> |                                                           |                                                    |                                                              |

Bibliographic References (give FMSF manuscript # if relevant, use separate sheet if needed)

## OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places?  yes  no  insufficient informationPotentially eligible as contributor to a National Register district?  yes  no  insufficient information

Explanation of Evaluation (required, use separate sheet if needed)

Due to lack of sufficient historic significance and architectural distinction, 8BR04379 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of historical significance (See *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. \_\_\_\_\_ 3. \_\_\_\_\_ 5. \_\_\_\_\_  
 2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

## DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field &amp; analysis notes, photos, plans, other important documents

- 1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research  
 Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
- 2) Document type \_\_\_\_\_ Maintaining organization \_\_\_\_\_  
 Document description \_\_\_\_\_ File or accession #'s \_\_\_\_\_

## RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research  
 Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@  
 (address / phone / fax / e-mail)

## Required Attachments

- ① USGS 7.5' TOPO MAP WITH BRIDGE LOCATION CLEARLY MARKED
- ② PHOTO OF BRIDGE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable).  
 Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





8BR04379\_a Facing Southeast



8BR04379\_b Facing South



8BR04379\_c Facing South



8BR04379\_d Facing Southwest



8BR04379\_e Facing Southwest



8BR04379\_f Facing West



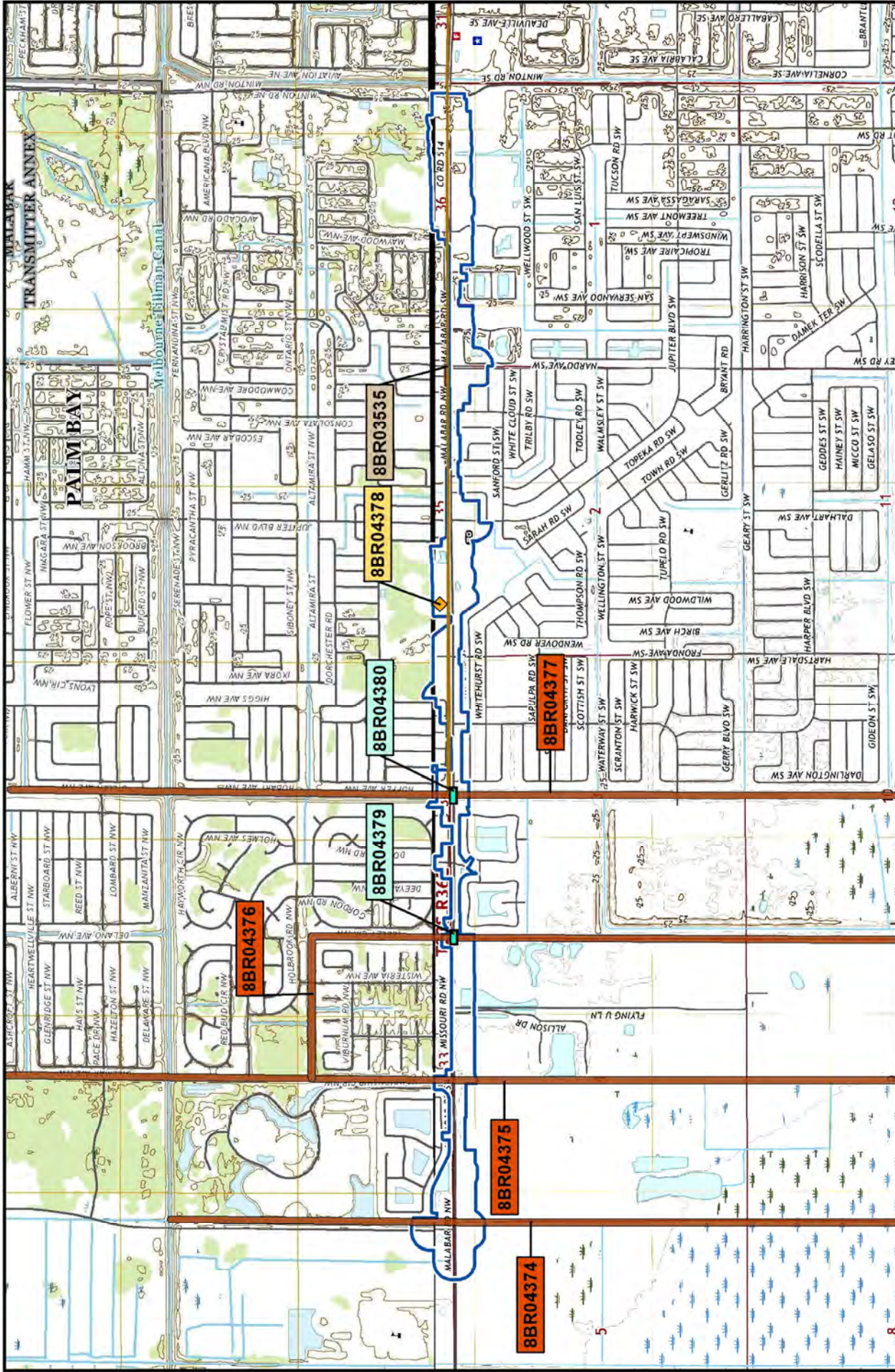


- Malabar Road APE
- Newly Recorded Linear Resource
- Newly Recorded Historic Bridge



USDA-FSA-APFO Orthophoto Mosaic (2019)





Malabar Road APE
  Newly Recorded Linear Resource
  Previously Recorded Linear Resource

Newly Recorded Historic Structure
  Newly Recorded Historic Bridge

0
  500
  2,000

Meters Feet

N

USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)







# HISTORICAL BRIDGE FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 BR04380  
Field Date 4-26-2021  
Form Date 4-29-2021  
Recorder # \_\_\_\_\_  
FDOT Bridge # 704004

Original  
 Update

Consult *Guide to the Historical Bridge Form* for detailed instructions

Bridge Name(s) FDOT Bridge No. 704004 Multiple Listing (DHR only) \_\_\_\_\_  
Project Name Malabar Road Corridor Survey # (DHR only) \_\_\_\_\_  
Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Route(s) Carried/Feature(s) Crossed Malabar Road/Melbourne-Tillman Canal No. 10  
USGS 7.5 Map Name FELLSMERE NW USGS Date 2021 Plat or Other Map \_\_\_\_\_  
City/Town (within 3 miles) Palm Bay In City Limits?  yes  no  unknown County Brevard  
Township 28S Range 36E Section 3 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
Landgrant \_\_\_\_\_ Tax Parcel # \_\_\_\_\_  
UTM Coordinates: Zone  16  17 Easting  Northing   
Other Coordinates: X: \_\_\_\_\_ Y: \_\_\_\_\_ Coordinate System & Datum \_\_\_\_\_  
Name of Public Tract (e.g., park) \_\_\_\_\_

### HISTORY

Year Built 1972  approximately  year listed or earlier  year listed or later  
Still in use?  yes  no  restricted use (describe) \_\_\_\_\_  
Prior Fords, Ferries, or Bridges at this Location  
Previous bridge replaced in 1972

Bridge Use: original and current with dates (standard descriptions: auto, railway, pedestrian, fishing pier, abandoned)

#### Ownership history

Owned by Brevard County

Designers/Engineers \_\_\_\_\_  
Builders/Contractors \_\_\_\_\_

#### Text of Plaque or Inscription

"1972" inscribed on S railing W end

#### Narrative History (How did bridge come to be built? How was it financed?, etc.)

Resource 8BR04380 is a common post-1945 concrete slab bridge. It was constructed in 1972 and carries Malabar Road W-E over the Melbourne-Tillman Canal No. 10 (8BR04377).

### DESCRIPTION

#### GENERAL

Overall Bridge Design 1. Slab 2. \_\_\_\_\_

Overall Condition  excellent  good  fair  deteriorated  ruinous

#### Style and Decorative Details

Resource 8BR04380 is a common post-1945 concrete slab bridge. It has concrete barriers on the N and S sides. It features minimal ornamentation.

#### Tender Station Description

N/A

#### Alterations: Dates and Descriptions

N/A

| DHR USE ONLY                             |                                                                                                                                                                                           | OFFICIAL EVALUATION |       | DHR USE ONLY |       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------|-------|
| NR List Date                             | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date                | _____ | Init.        | _____ |
| <input type="checkbox"/> Owner Objection | KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date                | _____ |              |       |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                     |       |              |       |



**DESCRIPTION (continued)****SUPERSTRUCTURE**Spans: Total Number 5 Total Length(ft) 140Main Spans: Number 5 Length(ft) 28 Width(ft) 37 Roadway width(ft) 28Main Span Design slabMain Span Materials 1. Concrete 2. \_\_\_\_\_

Approach Spans: Number \_\_\_\_\_ Length(ft) \_\_\_\_\_ Width(ft) \_\_\_\_\_ Roadway width(ft) \_\_\_\_\_

Approach Span Design \_\_\_\_\_

Approach Span Materials 1. \_\_\_\_\_ 2. \_\_\_\_\_

Deck Materials 1. Asphalt 2. \_\_\_\_\_**SUBSTRUCTURE**Abutment Materials 1. Concrete 2. \_\_\_\_\_Abutment Description Full concrete abutmentPier Materials 1. Concrete 2. \_\_\_\_\_Pier Description Concrete pile bent piers**RESEARCH METHODS (check all that apply)**

- |                                                             |                                                           |                                                    |                                                             |
|-------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> FDOT database search               | <input type="checkbox"/> Fla. Archives / photo collection | <input type="checkbox"/> newspaper files           | <input type="checkbox"/> informal archaeological inspection |
| <input type="checkbox"/> HABS/HAER record search            | <input type="checkbox"/> property appraiser / tax records | <input type="checkbox"/> city directory            | <input type="checkbox"/> formal archaeological survey       |
| <input type="checkbox"/> FMSF record search (sites/surveys) | <input type="checkbox"/> library research                 | <input type="checkbox"/> Public Lands Survey (DEP) | <input type="checkbox"/> cultural resource survey           |
| <input type="checkbox"/> Other methods (specify) _____      |                                                           |                                                    |                                                             |

Bibliographic References (give FMSF manuscript # if relevant, use separate sheet if needed)

**OPINION OF RESOURCE SIGNIFICANCE**Potentially eligible individually for National Register of Historic Places?  yes  no  insufficient informationPotentially eligible as contributor to a National Register district?  yes  no  insufficient information

Explanation of Evaluation (required, use separate sheet if needed)

Due to lack of sufficient historic significance and architectural and/or engineering distinction, 8BR04380 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of historical significance (See *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. \_\_\_\_\_ 3. \_\_\_\_\_ 5. \_\_\_\_\_  
 2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

**DOCUMENTATION**

Accessible Documentation Not Filed with the Site File - including field &amp; analysis notes, photos, plans, other important documents

- 1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research  
 Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
- 2) Document type \_\_\_\_\_ Maintaining organization \_\_\_\_\_  
 Document description \_\_\_\_\_ File or accession #'s \_\_\_\_\_

**RECORDER INFORMATION**

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research  
 Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@  
 (address / phone / fax / e-mail)

**Required Attachments**

- ➊ USGS 7.5' TOPO MAP WITH BRIDGE LOCATION CLEARLY MARKED
- ➋ PHOTO OF BRIDGE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable).  
 Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.



**8BR04380\_a Facing South**



**8BR04380\_b Facing South**



**8BR04380\_c Facing Southeast**



**8BR04380\_d Facing Southwest**



**8BR04380\_e Facing Southeast**



**8BR04380\_f Facing East**





8BR04380\_g Facing Southeast

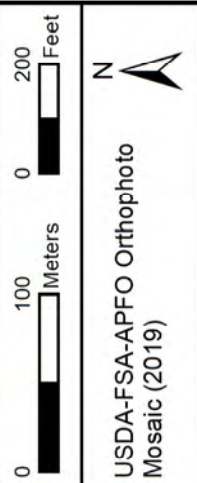
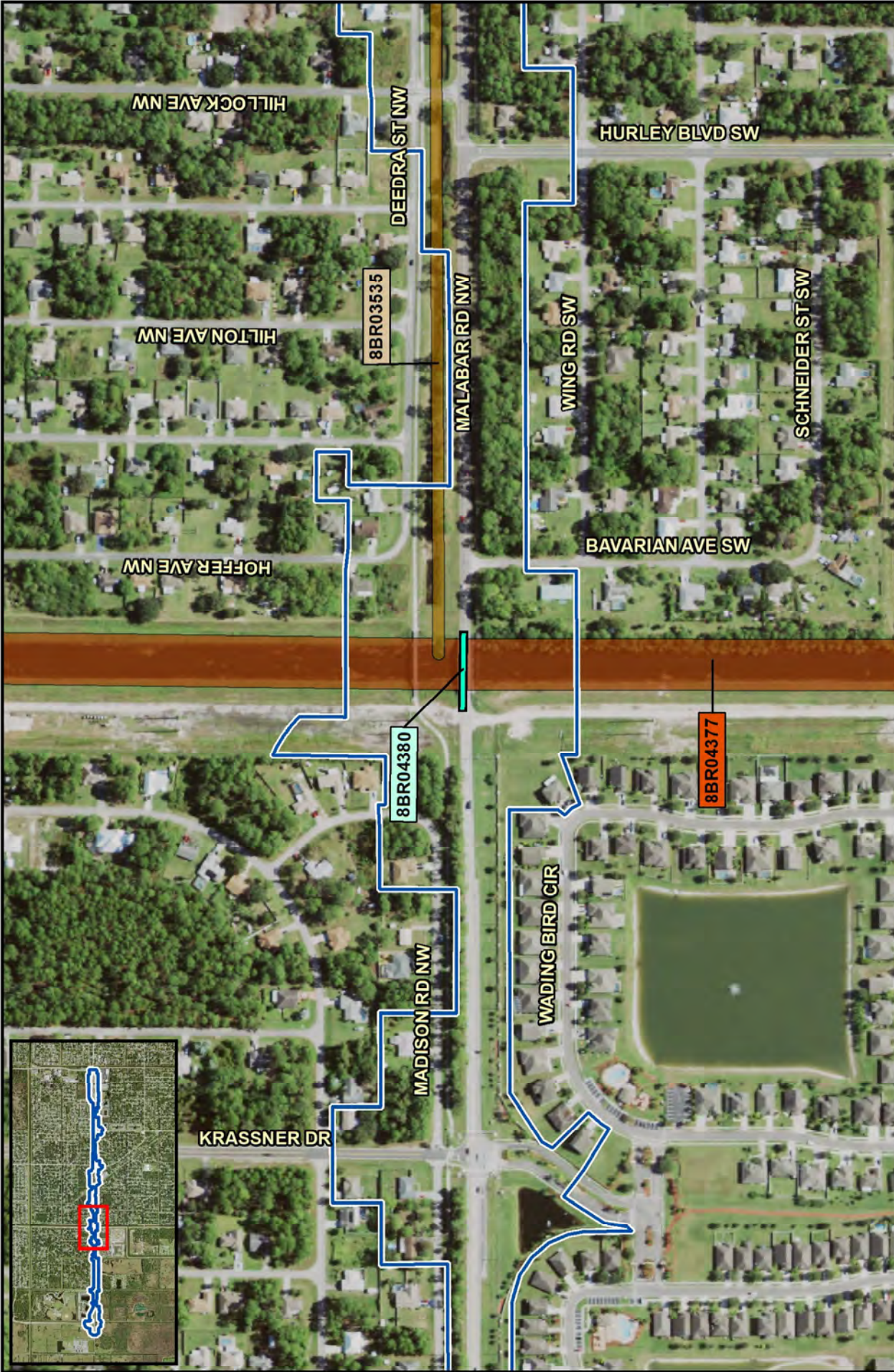


8BR04380\_h Facing East



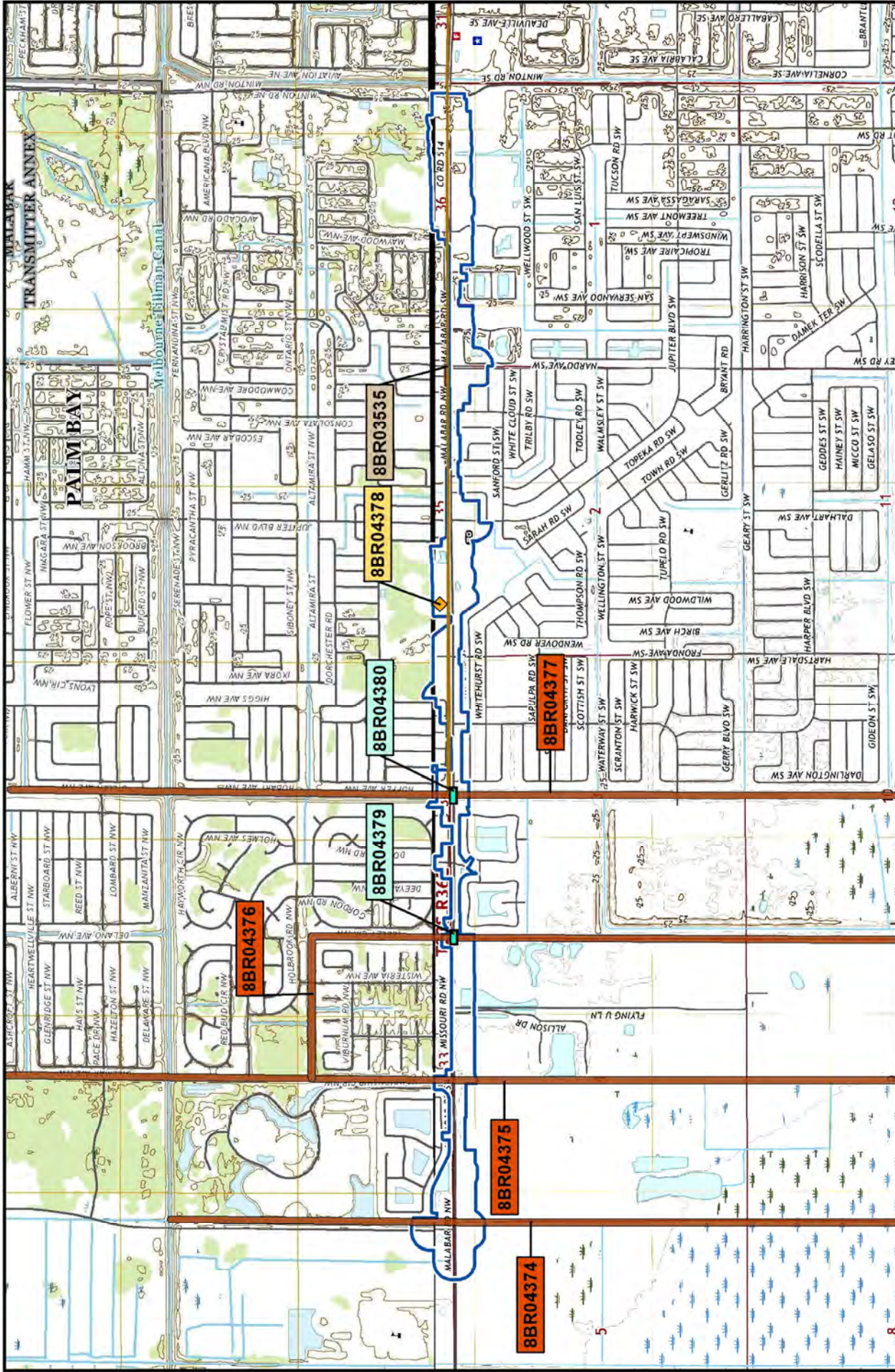
8BR04380\_i Facing East





- Malabar Road APE
  - Newly Recorded Linear Resource
  - Previously Recorded Linear Resource
  - Newly Recorded Historic Bridge
- USDA-FSA-APFO Orthophoto Mosaic (2019)





Malabar Road APE
  Newly Recorded Linear Resource
  Previously Recorded Linear Resource

Newly Recorded Historic Structure
  Newly Recorded Historic Bridge

0 500 2,000 Feet
  0 500 2,000 Meters

N

USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)

**APPENDIX C.**

**FDHR SURVEY LOG SHEET**





Ent D (FMSF only) \_\_\_\_\_



# Survey Log Sheet

Florida Master Site File  
Version 5.0 3/19

Survey # (FMSF only) \_\_\_\_\_

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

## Manuscript Information

### Survey Project (name and project phase)

Phase I Malabar Road Improvements CRAS

### Report Title (exactly as on title page)

Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida

### Report Authors (as on title page)

1. Dave Boschi3. Allen Kent2. Kelly Guerrieri4. Jessica Fish, Mikel TravisanoPublication Year 2021Number of Pages in Report (do not include site forms) 78

### Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)

Report on file at SEARCH, Newberry, Florida. SEARCH Project No. T20003. Financial Management No. 437210-1.

### 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. Malabar Road      3. \_\_\_\_\_      5. \_\_\_\_\_      7. \_\_\_\_\_  
2. \_\_\_\_\_      4. \_\_\_\_\_      6. \_\_\_\_\_      8. \_\_\_\_\_

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

Name Kittleson and Associates

Organization \_\_\_\_\_

Address/Phone/E-mail \_\_\_\_\_

Recorder of Log Sheet Dave BoschiDate Log Sheet Completed 5-10-2021Is this survey or project a continuation of a previous project?  No  Yes: Previous survey #s (FMSF only)

## Project Area Mapping

### Counties (select every county in which field survey was done; attach additional sheet if necessary)

1. Brevard      3. \_\_\_\_\_      5. \_\_\_\_\_  
2. \_\_\_\_\_      4. \_\_\_\_\_      6. \_\_\_\_\_

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

1. Name MELBOURNE WEST Year 2018      4. Name \_\_\_\_\_ Year \_\_\_\_\_  
2. Name FELLSMERE NW Year 2018      5. Name \_\_\_\_\_ Year \_\_\_\_\_  
3. Name \_\_\_\_\_ Year \_\_\_\_\_      6. Name \_\_\_\_\_ Year \_\_\_\_\_

## Field Dates and Project Area Description

Fieldwork Dates: Start 3-1-2021 End 3-5-2021 Total Area Surveyed (fill in one) \_\_\_\_\_ hectares \_\_\_\_\_ acresNumber of Distinct Tracts or Areas Surveyed 1If Corridor (fill in one for each) Width: 30 meters 100 feet Length: 6.37 kilometers 3.96 miles



Research and Field Methods

Types of Survey (select all that apply): [X]archaeological [X]architectural [ ]historical/archival [ ]underwater [ ]damage assessment [ ]monitoring report [ ]other(describe): \_\_\_\_\_

Scope/Intensity/Procedures

Archaeological testing at 50- and 100- meter intervals. Recording buildings 45 years and older.

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

[ ]Florida Archives (Gray Building) [ ]library research- local public [ ]local property or tax records [X]other historic maps [ ]LIDAR [ ]Florida Photo Archives (Gray Building) [ ]library-special collection [ ]newspaper files [X]soils maps or data [ ]other remote sensing [X]Site File property search [ ]Public Lands Survey (maps at DEP) [ ]literature search [ ]windshield survey [X]Site File survey search [ ]local informant(s) [ ]Sanborn Insurance maps [X]aerial photography [ ]other (describe): \_\_\_\_\_

Archaeological Methods (select 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) [ ]metal detector [ ]surface collection, uncontrolled [ ]water screen [ ]soil resistivity [ ]other remote sensing [X]shovel test-1/4" screen [ ]posthole tests [ ]magnetometer [X]pedestrian survey [ ]shovel test-1/8" screen [ ]auger tests [ ]side scan sonar [ ]unknown [ ]shovel test 1/16" screen [ ]coring [ ]ground penetrating radar (GPR) [ ]shovel test-unscreened [ ]test excavation (at least 1x2 m) [ ]LIDAR [ ]other (describe): \_\_\_\_\_

Historical/Architectural Methods (select 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 [X]windshield survey [ ]occupant interview [X]tax records [ ]interior documentation [X]local property records [ ]occupation permits [ ]unknown [ ]other (describe): \_\_\_\_\_

Survey Results

Resource Significance Evaluated? [X]Yes [ ]No

Count of Previously Recorded Resources 1 Count of Newly Recorded Resources 7

List Previously Recorded Site ID#s with Site File Forms Completed (attach additional pages if necessary)

BR03535

List Newly Recorded Site ID#s (attach additional pages if necessary)

BR04374, BR04375, BR04376, BR04377, BR04378, BR04379, BR04380

Site Forms Used: [ ]Site File Paper Forms [X]Site File PDF Forms

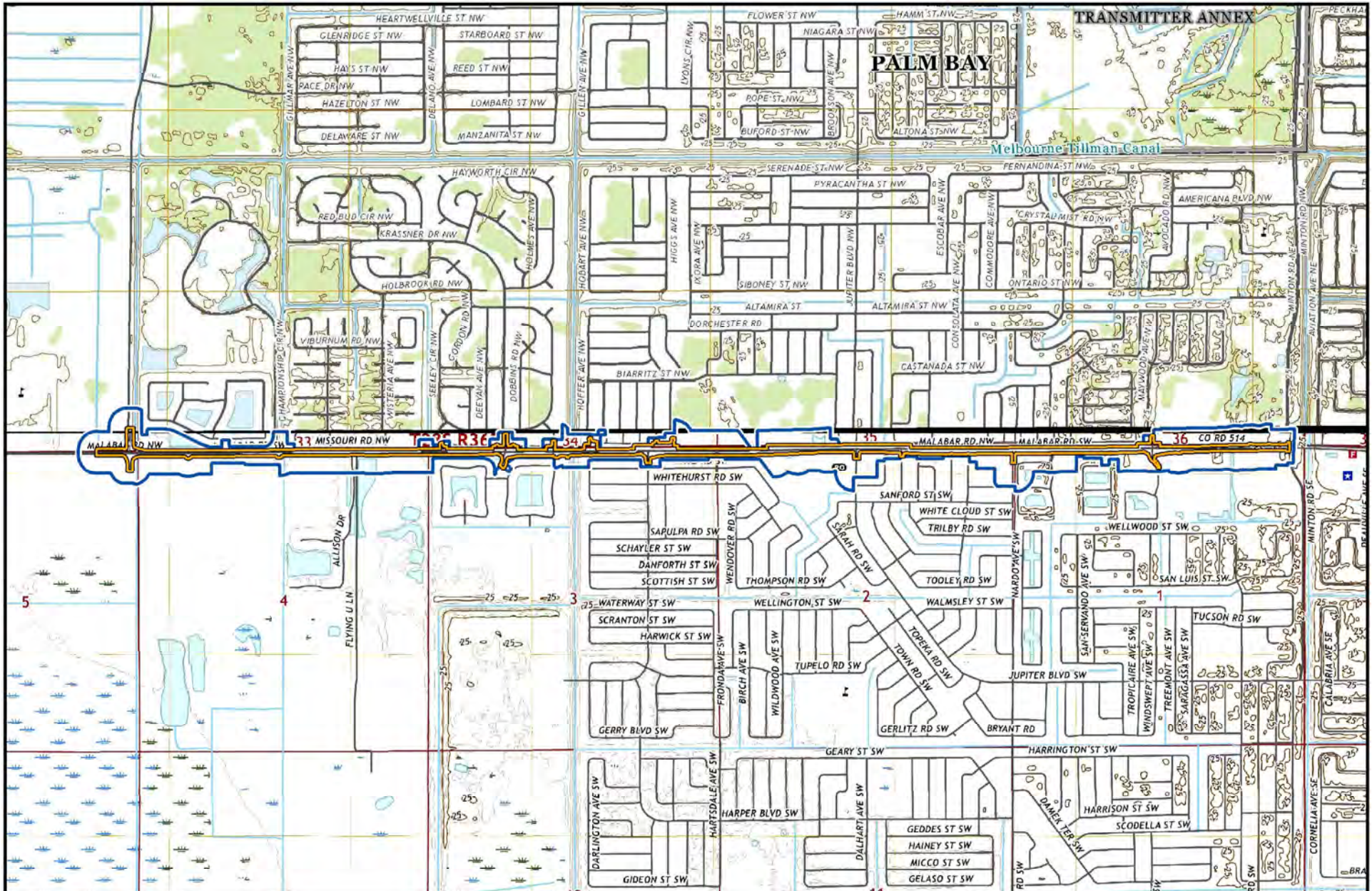
REQUIRED: Attach Map of Survey or Project Area Boundary

SHPO USE ONLY

SHPO USE ONLY

SHPO USE ONLY

Origin of Report: [ ]872 [ ]Public Lands [ ]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 [ ]Desktop Analysis [ ]MPS [ ]MRA [ ]TG [ ]Other: \_\_\_\_\_ Document Destination: Plottable Projects Plotability: \_\_\_\_\_



- Malabar Road APE
- Malabar Road Archaeological APE



USGS 7.5' Quadrangle Maps -  
Melbourne West (2018) and  
Fellsmere NW (2018)

N  
↑





*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

719 South Woodland Boulevard  
DeLand, Florida 32720-6834

KEVIN J. THIBAUT, P.E.  
SECRETARY

January 13, 2022

Timothy A. Parsons, Ph.D.,  
Director and State Historic Preservation Officer  
Florida Division of Historical Resources  
Florida Department of State  
R.A. Gray Building  
500 South Bronough Street  
Tallahassee, Florida 32399-0250

Attn: Mr. Cletus Rooney, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey  
Malabar Road Ponds  
Brevard County, Florida  
Financial Management No.: 437210-1

Dear Dr. Parsons,

Enclosed please find one copy of the report titled *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida*. This report presents the findings of a cultural resource assessment survey (CRAS) conducted in support of the proposed pond construction associated with the proposed widening of Malabar Road from east of the St. Johns Heritage Parkway to Minton Road in Brevard County, Florida. The City of Palm Bay is proposing to construct nine ponds along Malabar Road. The nine pond locations total 48.68 acres. This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

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 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 footprints; the architectural history survey included the entire APE.

This CRAS was conducted in accordance with the requirements set forth in Section 106 of the National Historic Preservation Act of 1966, as amended, found in 36 CFR Part 800 (Protection of Historic Properties). The studies also comply with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's Project Development &

Dr. Parsons, SHPO  
FM # 437210-1  
January 13, 2022  
Page 2

Environment (PD&E) Manual (revised July 2020), FDOT's Cultural Resources Management Handbook, and the standards stipulated in the Florida Division of Historical Resources' (FDHR) *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). This study also complies with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1979, as amended.

The current archaeological survey included the excavation of 23 shovel tests within the proposed ponds. All testing was negative for cultural materials. No archaeological sites were identified, and no artifacts were recovered from the APE. No further archaeological survey is recommended.

The architectural survey resulted in the revisit and evaluation of one historic resource within the Malabar Road Ponds APE (8BR04375). Based on the results of the current survey, it is the opinion of SEARCH that 8BR04375 is ineligible for the National Register of Historic Places (NRHP) due to a lack of significant historic associations and architectural and/or engineering distinction. No further architectural work is recommended.

Based on the results of this study, it is the opinion of the District that the proposed undertaking will have no effect on NRHP-listed or -eligible historic properties. No further work is recommended.

I respectfully request your concurrence with the findings of the enclosed report.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5411.

Sincerely,



For: William G. Walsh  
Environmental Manager  
FDOT, District Five

---



The Florida State Historic Preservation Officer finds the attached Cultural Resource Assessment Survey Report complete and sufficient and  concurs /  does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 2019-4374. Or, the SHPO finds the attached document contains \_\_\_\_\_ insufficient information.

In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.

SHPO Comments:

\_\_\_\_\_  
Timothy A. Parsons, PhD, Director  
Florida Division of Historical Resources

2/22/2022

\_\_\_\_\_  
Date

**TECHNICAL MEMORANDUM  
CULTURAL RESOURCE ASSESSMENT SURVEY  
IN SUPPORT OF MALABAR ROAD PONDS**

**Malabar Road Project Development and Environment (PD&E)  
Study**

**From St. Johns Heritage Parkway to Minton Road**

City of Palm Bay and Brevard County, Florida

Financial Project ID Number: 437210-1-28-01

ETDM Number: 14396

December 2021

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.



**TECHNICAL MEMORANDUM**  
**CULTURAL RESOURCE ASSESSMENT SURVEY**  
**IN SUPPORT OF MALABAR ROAD IMPROVEMENTS PONDS,**  
**BREVARD COUNTY, FLORIDA**

|                                 |                                                                   |
|---------------------------------|-------------------------------------------------------------------|
| <b>CONSULTANT:</b>              | SEARCH<br>700 N. 9 <sup>th</sup> Avenue, Pensacola, Florida 32501 |
| <b>PRINCIPAL INVESTIGATOR:</b>  | Jessica Fish, MSt, RPA                                            |
| <b>ARCHITECTURAL HISTORIAN:</b> | Mikel Travisano, MS                                               |
| <b>PROJECT ARCHAEOLOGIST:</b>   | Dave Boschi, MA, RPA                                              |
| <b>CLIENT:</b>                  | Kittelson & Associates and the City of Palm Bay, Florida          |
| <b>DATE:</b>                    | December 2021                                                     |
| <b>FINANCIAL MANAGEMENT #:</b>  | 437210-1                                                          |
| <b>SEARCH PROJECT #:</b>        | T20003                                                            |

---

This technical memorandum details the results of a cultural resource assessment survey (CRAS) of preferred pond and swale locations in Brevard County, Florida, associated with improvements to Malabar Road (**Figure 1**). The City of Palm Bay, Florida, is proposing to widen Malabar Road from Minton Road to east of St. Johns Heritage Parkway in Brevard County, Florida, as well as the construction of associated ponds, swales, and floodplain compensation areas (FPCAs). The current report serves as an addendum to the 2021 SEARCH survey titled *Cultural Resource Assessment Survey for the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida* (Florida Master Site File [FMSF] Survey No. TBD). The FPCA is 1.64 acres, the four pond locations cover 24.52 acres, and the five swales encompass 26.26 acres. The total area tested for the current survey is 52.42 acres. The discussions of regional prehistory and history, research design, and laboratory methods provided in the previous report applies to the current CRAS and are not repeated in this technical memorandum. This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

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 defined for this project includes the proposed pond, FPCA, and swale footprints, plus a 100-foot (30.5-meter) buffer (**Figure 2**). The archaeological survey was conducted within the proposed footprints; the architectural history survey included the entire APE.

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 listing in the National Register of Historic Places (NRHP). The work was conducted to comply with Public Law 113-287 (Title 54 USC), which incorporates the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended, including Section 106 (54 U.S.C. §306108), the

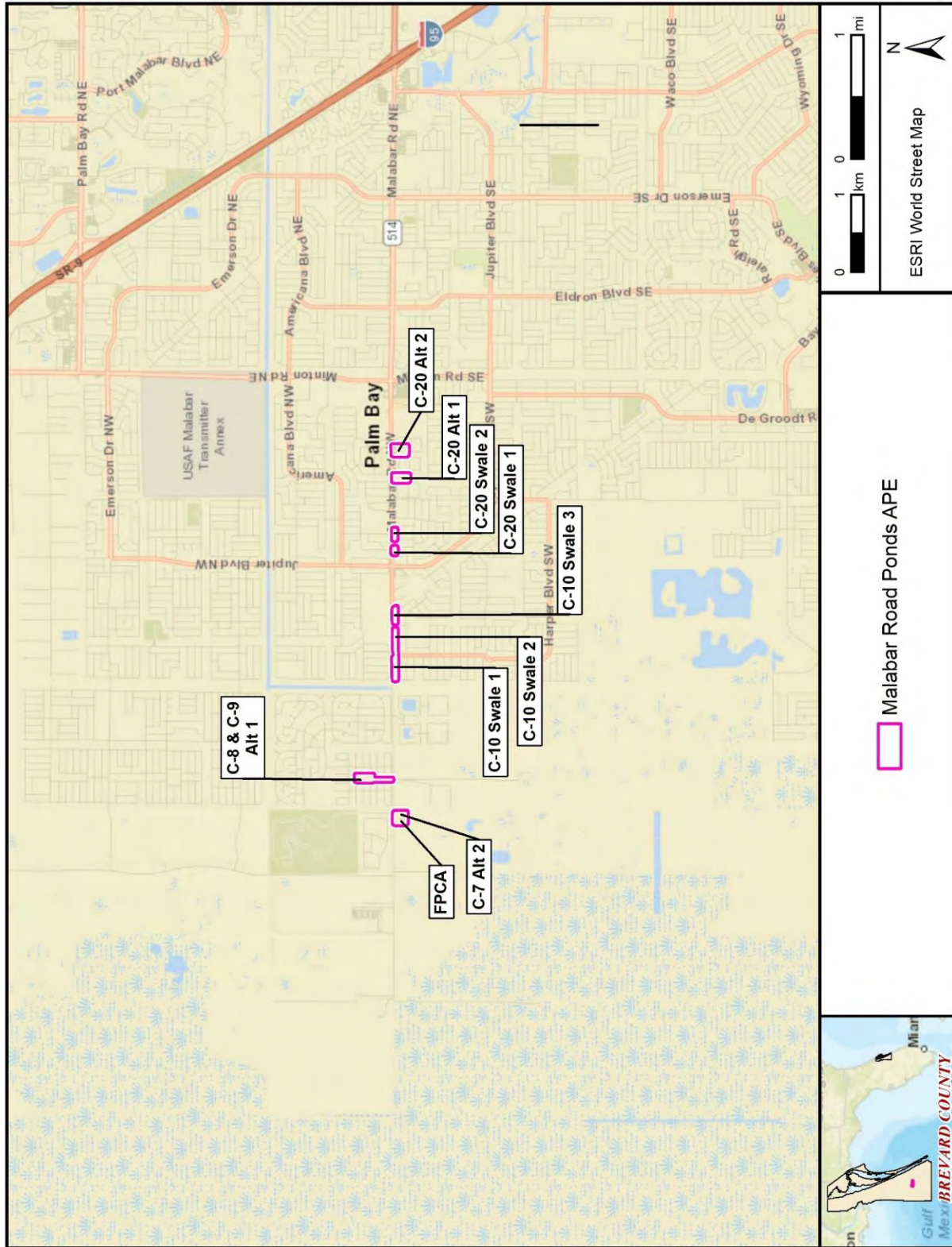


Figure 1. Location of the Malabar Road Ponds project location in Brevard County, Florida.



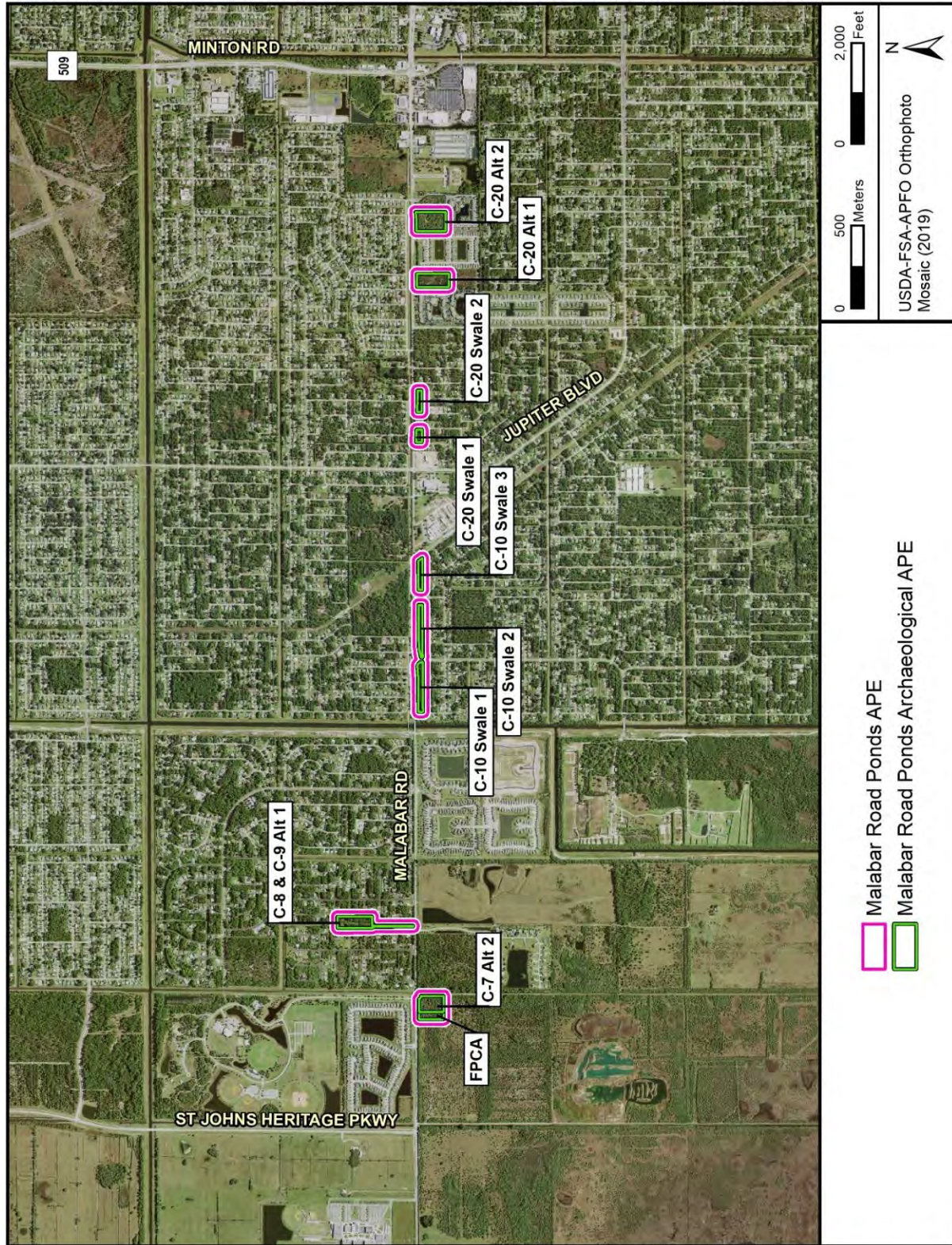


Figure 2. The Malabar Road Ponds APE in Brevard County, Florida.

Archaeological and Historic Preservation Act of 1979, as amended, 36 CFR Part 800 (Protection of Historic Properties), and all laws, regulations, and guidelines promulgated by the State of Florida governing cultural resources work, in particular Chapters 267.031(1) and 267.12, Florida Statutes and 1A-46, Florida Administrative Code. All work was performed in accordance with Part 2, Chapter 8 of the Florida Department of Transportation’s (FDOT) Project Development & Environment (PD&E) Manual (revised July 2020), as well as 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 work was performed by professional archaeologists who meet the qualifications established in the Secretary of the Interior's *Standards and Guidelines* (48 FR 44716, 29 September 1983).

## ENVIRONMENT AND MODERN CONDITIONS

The Malabar Road Ponds APE is located along an approximately 4.0-mile (6.4-kilometer) long corridor in southern Brevard County, Florida, within Sections 1, 2, 3, and 4 of Township 29 South, Range 36 East and Section 33 of Township 28 South, Range 36 East. The total acreage for the proposed drainages is 52.42 acres. Pond C-7 Alt 2 and the floodplain conservation area are located on wooded parcels that were formerly groves; the remaining ponds and most of the swales are within forested parcels bordering residential developments. C-10 Swale 2 includes a parcel with an existing residential structure (see **Figure 2**). **Table 1** provides additional detail regarding the size, soils, and setting of each individual drainage.

**Table 1. Acreage, Location, Soils, and Setting of the Malabar Road Ponds APE.**

| Area            | Acreage     | Section, Township and Range | Soil Drainage Characteristic                       | Soil                                                              | Setting                       |
|-----------------|-------------|-----------------------------|----------------------------------------------------|-------------------------------------------------------------------|-------------------------------|
| FPCA            | 1.64        | Sec 4, T29S, R 36E          | Poorly drained                                     | Pineda sand                                                       | wooded/former silviculture    |
| C-7 Alt 2       | 3.43 acres  | Sec 4, T29S, R36E           | Poorly drained                                     | Pineda sand                                                       | wooded/former silviculture    |
| C-8 & C-9 Alt 1 | 12.35 acres | Sec 33, T28S, R36E          | Poorly drained<br>Poorly drained                   | Malabar, Holopaw, and Pineda soils<br>Pineda sand                 | wooded, partially residential |
| C-10 Swale 1    | 7.34 acres  | Sec 3, T29S, R36E           | Poorly drained                                     | Malabar, Holopaw, and Pineda soils                                | wooded, and residential       |
| C-10 Swale 2    | 7.15 acres  | Sec 3, R29S, T36E           | Poorly drained<br>Poorly drained                   | Malabar, Holopaw, and Pineda soils<br>EauGallie sand              | wooded, and residential       |
| C-10 Swale 3    | 4.90 acres  | Sec 2, T29S, R36E           | Poorly drained                                     | EauGallie sand                                                    | wooded, and residential       |
| C-20 Swale 1    | 3.00 acres  | Sec 2, T29S, R36E           | Poorly drained                                     | Wabasso sand                                                      | wooded, partially residential |
| C-20 Swale 2    | 3.87 acres  | Sec 2, T29S, R36E           | Poorly drained<br>Poorly drained<br>Poorly drained | Pineda sand<br>Malabar, Holopaw, and Pineda soils<br>Wabasso sand | wooded, partially residential |



**Table 1. Acreage, Location, Soils, and Setting of the Malabar Road Ponds APE.**

| Area       | Acreage    | Section, Township and Range | Soil Drainage Characteristic     | Soil                                                 | Setting                            |
|------------|------------|-----------------------------|----------------------------------|------------------------------------------------------|------------------------------------|
| C-20 Alt 1 | 3.74 acres | Sec 1, T29S, R36E           | Poorly drained<br>Poorly drained | EauGallie sand<br>Malabar, Holopaw, and Pineda soils | wooded,<br>adjacent to residential |
| C-20 Alt 2 | 5 acres    | Sec 1, T29S, R36E           | Poorly drained<br>Poorly drained | EauGallie sand<br>Malabar, Holopaw, and Pineda soils | wooded,<br>adjacent to residential |

Geologically, the APE is located within the St. Johns Marsh province, a part of the larger Eastern Flatwoods District (Brooks 1981). This region is typically vegetated by marshes and grass prairies with cabbage palms and willow. Seasonal flooding is common, and soils consist of fine sand, silty sand, and clayey sand. Elevations are typically around 18 feet (5.5 meters) above mean sea level (amsl). No natural drainages are present within the APE, although several canals are present. All soils within the APE have been classified as poorly drained and include Pineda sand, EauGallie sand, Wabasso sand, and Malabar, Holopaw, and Pineda soils (see **Table 1; Figure 3**).

## FLORIDA MASTER SITE FILE REVIEW

A review of the FMSF database (updated April 2021) indicates that three cultural resource surveys have been conducted within the current Malabar Road Ponds APE (**Table 2; Figure 4**). Of these, the most relevant to the current study is the 2021 SEARCH survey (FMSF Survey No. TBD) for which the current report serves as an addendum. This survey included small portions of each pond location (see **Figure 4**), but did not include any subsurface testing within the current archaeological APE.

**Table 2. Previous Cultural Resource Surveys Conducted within the Malabar Road Ponds APE.**

| FMSF No. | Title                                                                                                                                          | Intersecting Pond | Year | Reference      |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------|----------------|
| 12516    | <i>A Cultural Resource Survey of the Chaparral Project Area, Brevard County, Florida</i>                                                       | C-8 & C-9 Alt 1   | 2006 | SEARCH         |
| 20793    | <i>Cultural Resources Survey and Assessment, Palm Island Subdivision, Brevard County Florida</i>                                               | C-8 & C-9 Alt 1   | 2014 | SouthArc, Inc. |
| TBD      | <i>Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida</i> | All ponds         | 2021 | SEARCH         |

Two previous surveys (FMSF Survey No. 12516 and 20793) intersect the southern end of the easement associated with C-8 and C-9 Alt 1 (see **Figure 4**). FMSF Survey No. 12516 was a CRAS conducted in 2006 by SEARCH; this survey intersects approximately 545 square meters (0.13 acres) of roadside embankment and landscaped right-of-way on the south side of Malabar Road.

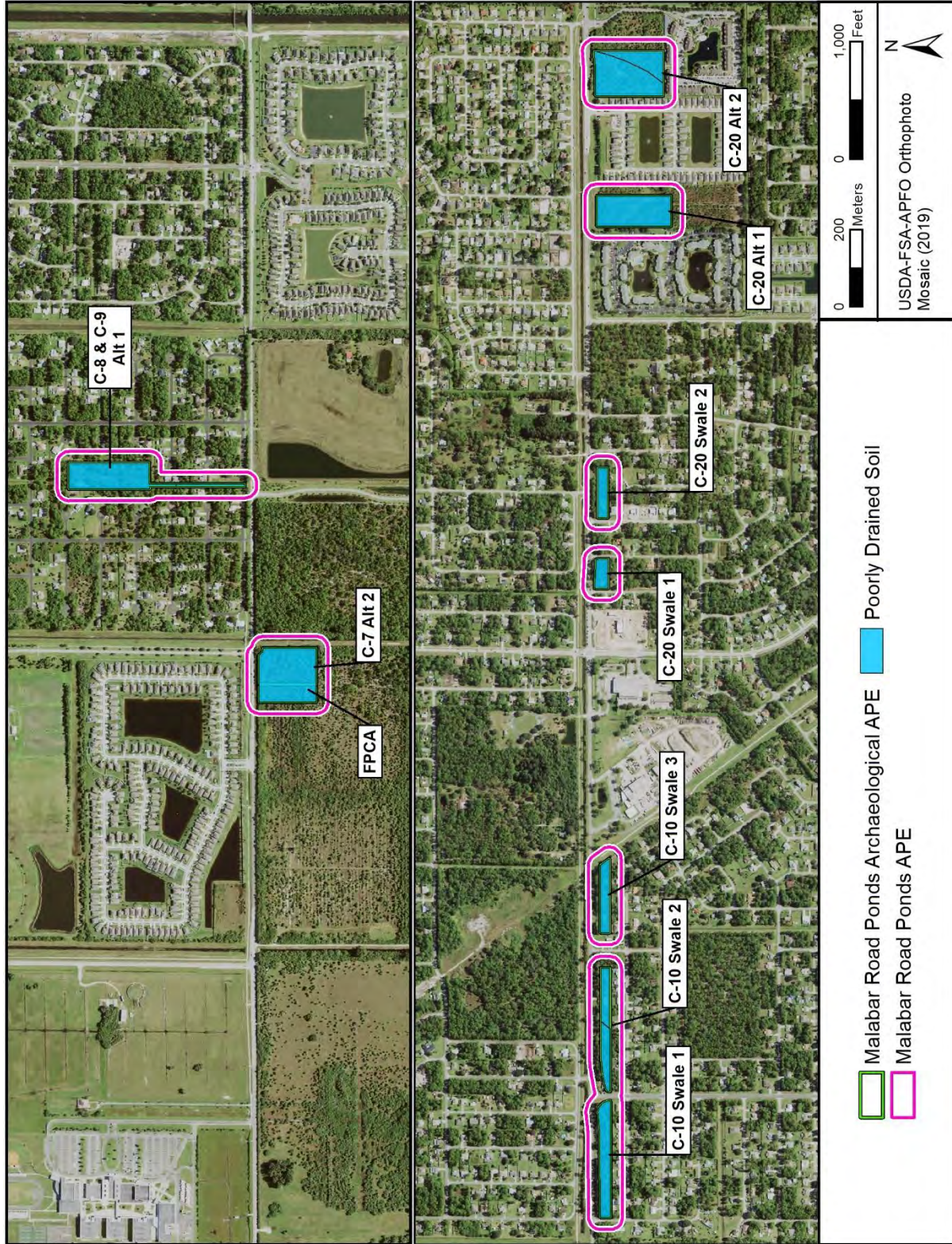


Figure 3. Soil drainage characteristics within the archaeological APE.



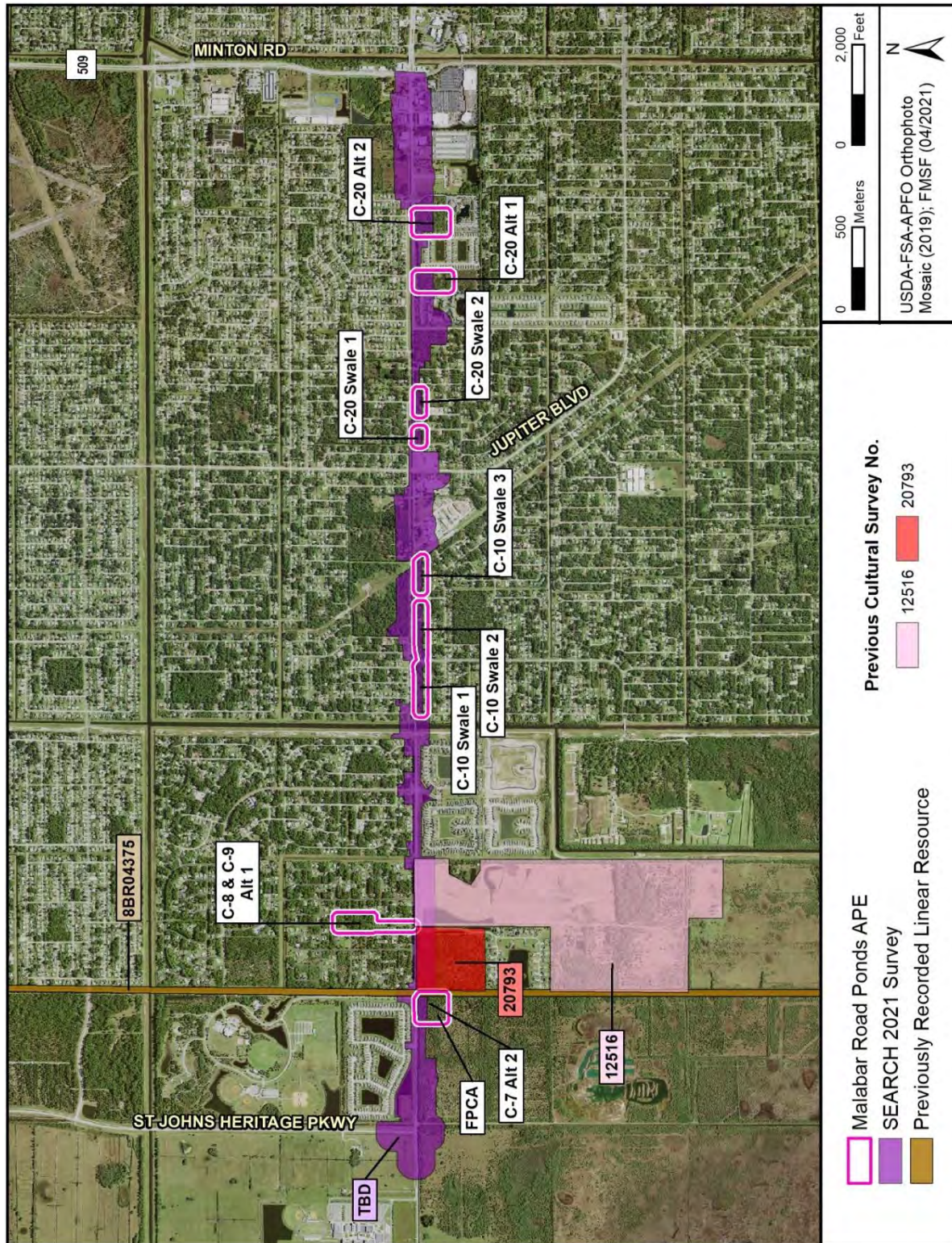


Figure 4. Previously conducted cultural resource surveys and previously recorded cultural resources intersecting the Malabar Road Ponds APE.

FMSF Survey No. 20793 was a CRAS conducted by SouthArc, Inc. in 2014; this survey intersects approximately 215 square meters (0.05 acres) of roadside embankment on the south side of Malabar Road, between Allison Drive and Flying U Lane (see **Figure 4**). Neither of these surveys included subsurface testing within the current APE.

Further review of the most recent FMSF data indicates that no previously recorded archaeological sites, historic structures, bridges, cemeteries, or resource groups fall within any of the proposed pond locations. However, the 2021 SEARCH survey (FMSF Survey No. TBD) identified one newly recorded linear resource (8BR04375) running along the eastern edge of Pond C-7 Alt 2. Linear resource 8BR04375, the Melbourne-Tillman Canal No. 8 (also known as the C-8 Canal), is a historic man-made carrier canal with an overgrown earthen embankment of similar design and purpose common in the region. Failing to meet any criterion for NRHP listing, 8BR04375 was recommended not eligible for listing in the NRHP (SEARCH 2021). On August 2, 2021, the State Historic Preservation Officer (SHPO) concurred with this recommendation. In this report, the C-8 Canal will be referred to its FMSF resource name, the Melbourne-Tillman Canal No. 8.

## Historic Map and Aerial Imagery Review

Historic maps and aerial photographs were examined in order to identify past land use in the vicinity of the Malabar Road Ponds 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. In Florida, these maps characteristically show landscape features such as vegetation, bodies of water, roads, and Spanish land grants. 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 Townships 28 and 29 South, Range 36 East from 1845 shows no development within the APE. All features within the APE are naturally occurring (**Figure 5**) (GLO 1845a, 1845b, 1845c, 1845d).

Late nineteenth-century maps show no development in the area of the APE. There are several towns on the east coast, several miles east of the current project (Folger 1883). An 1890 map of Brevard County illustrates a large “sawgrass lake” south of the APE, but no features are evident within the APE (Norton 1890). A 1917 state highway map shows a road traveling westward from Malabar, though it is unclear from this map if it reaches the APE (Florida State Road Department [FSRD] 1917). A more detailed county map from 1934 illustrates the road traveling through area near the APE (FSRD 1934).

An aerial photograph from 1943 shows development. Malabar Road is evident on its current east-west path and a canal runs east-west on the north side of the road, although both of these features are obscured by the edge of the APE. FPCA and C-7 Alt 2 covered an improved field and a structure is evident within the APE near Malabar Road. The western border of C-7 Alt 2 obscures a north-south canal that extends to Malabar Road. In C-8 and C-9 Alt 1, no improvements are evident. The southern border of this pond obscures a north-south road that intersects Malabar Road. The five swales near the center of the APE contain no improvements. These sections may



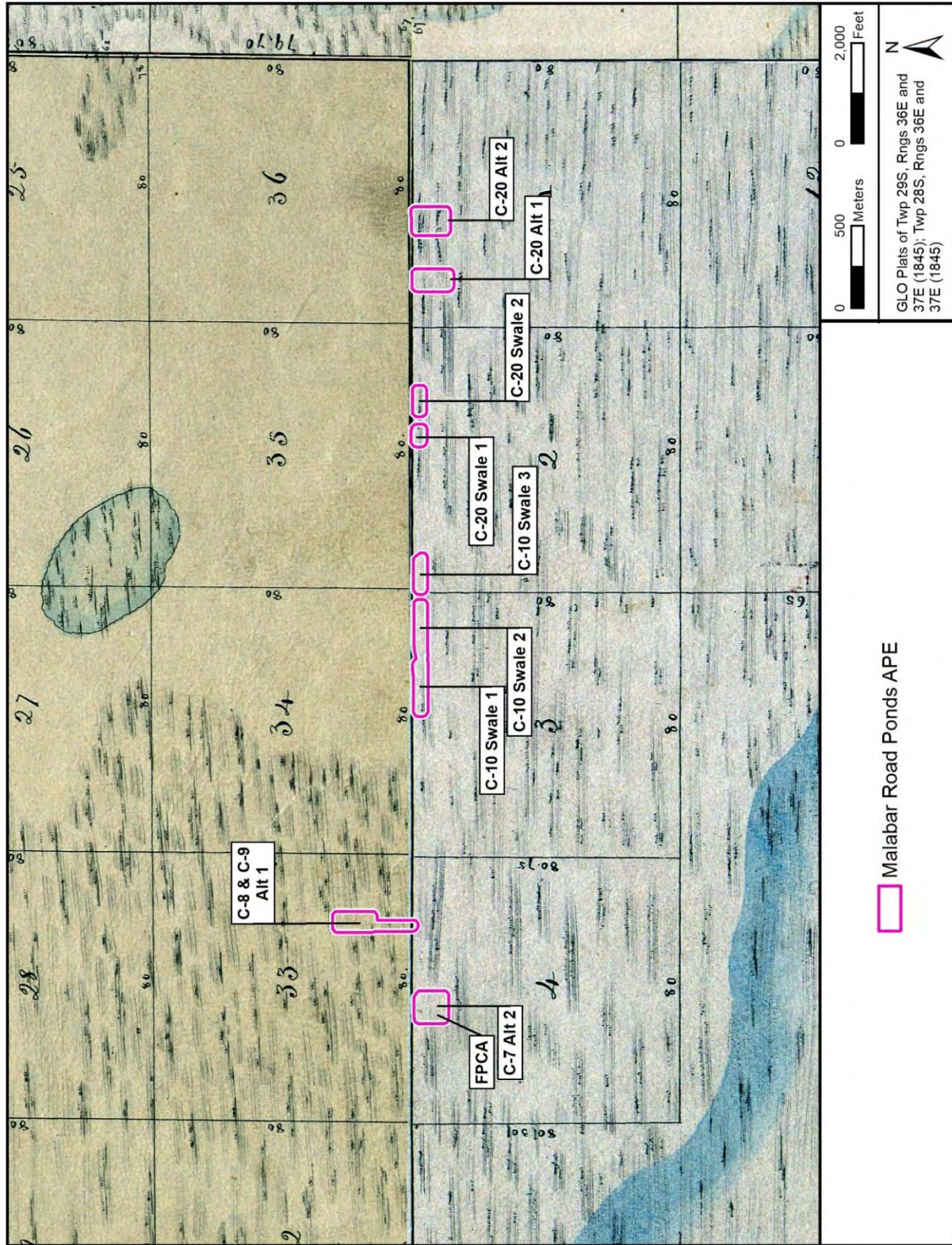


Figure 5. GLO survey maps of Townships 28 and 29 South, Ranges 36 and 37 East (GLO 1845a, 1845b, 1845c, 1845d).

be crossed by small north-south roads from the improved fields to the north that intersect Malabar Road. C-120 Alt 2 contains two improved fields and three structures. A north-south road is evident crossing this pond before intersecting an east-west road evident within the APE. Outside the APE, several canals and roads are evident. An airport also is evident to the northeast of the APE (**Figure 6**) (US Department of Agriculture [USDA] 1943).

A topographic map from the 1950s shows continued development. FPCA and C-7 Alt 2 cover an orchard, and two structures are evident within the APE in the northeast corner. C-8 and C-9 Alt 1 shows no change from 1941. There are no major changes within the swales. C-20 Alt 2 contains one structure, and a second structure is obscured by the western border of the APE. The improved fields are no longer evident within this section of the APE. Outside the APE, more structures are evident near Malabar Road (**Figure 7**) (US Geological Survey [USGS] 1951, 1953). A topographic map from the 1970s shows continued development outside the APE. Several new north-south roads are under construction within the swales and resemble their present-day pattern. No other changes are evident in the remaining sections of the APE (**Figure 8**) (USGS 1970a, 1970b).

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## SURVEY METHODOLOGY

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### Archaeological Field Methods

The Phase I field survey consisted of subsurface shovel testing within the proposed pond locations 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 were visually examined via pedestrian survey for the presence of exposed artifacts and aboveground features (e.g., structural remains and prehistoric mounds).

The potential for archaeological sites to be present within the pond footprints 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 generally negative results of previously conducted surveys. Soils within the current APE were poorly drained (see **Figure 3**); therefore, the potential for encountering archaeological deposits was determined to be generally low. The FPCA and Pond C-7 Alt 2 were assessed at a moderate probability due to the proximity of previously recorded archaeological site 8BR00025. This site is located approximately 574 feet (175 meters) east of the FPCA and approximately 253 feet (77 meters) east of the Pond C-7 Alt 2 and has been determined ineligible for inclusion on the NRHP.

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



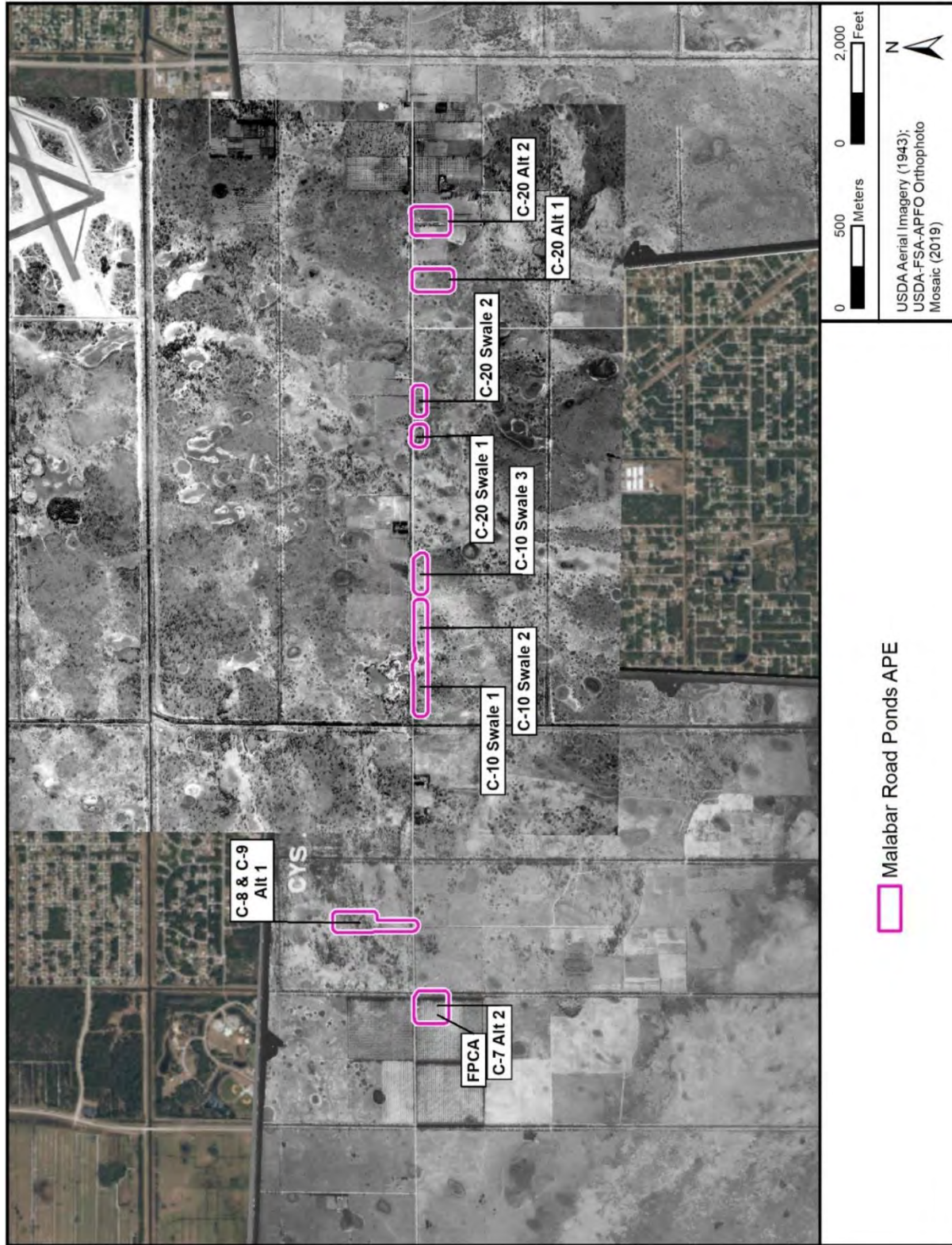


Figure 6. 1943 USDA aerial photograph of Brevard County, Florida.



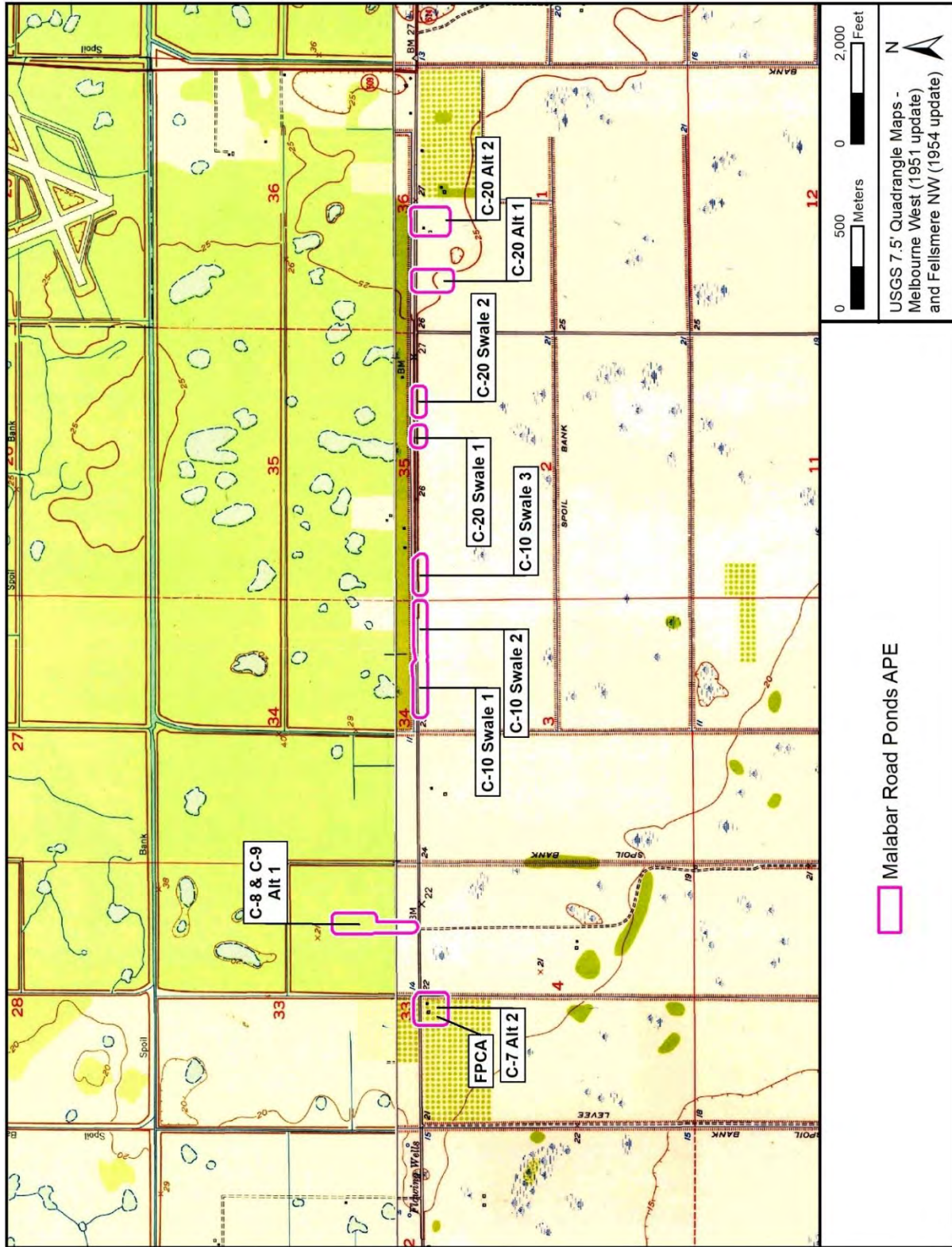


Figure 7. USGS topographic map of Fellsmere NW and Melbourne West, Florida (USGS 1951, 1953).



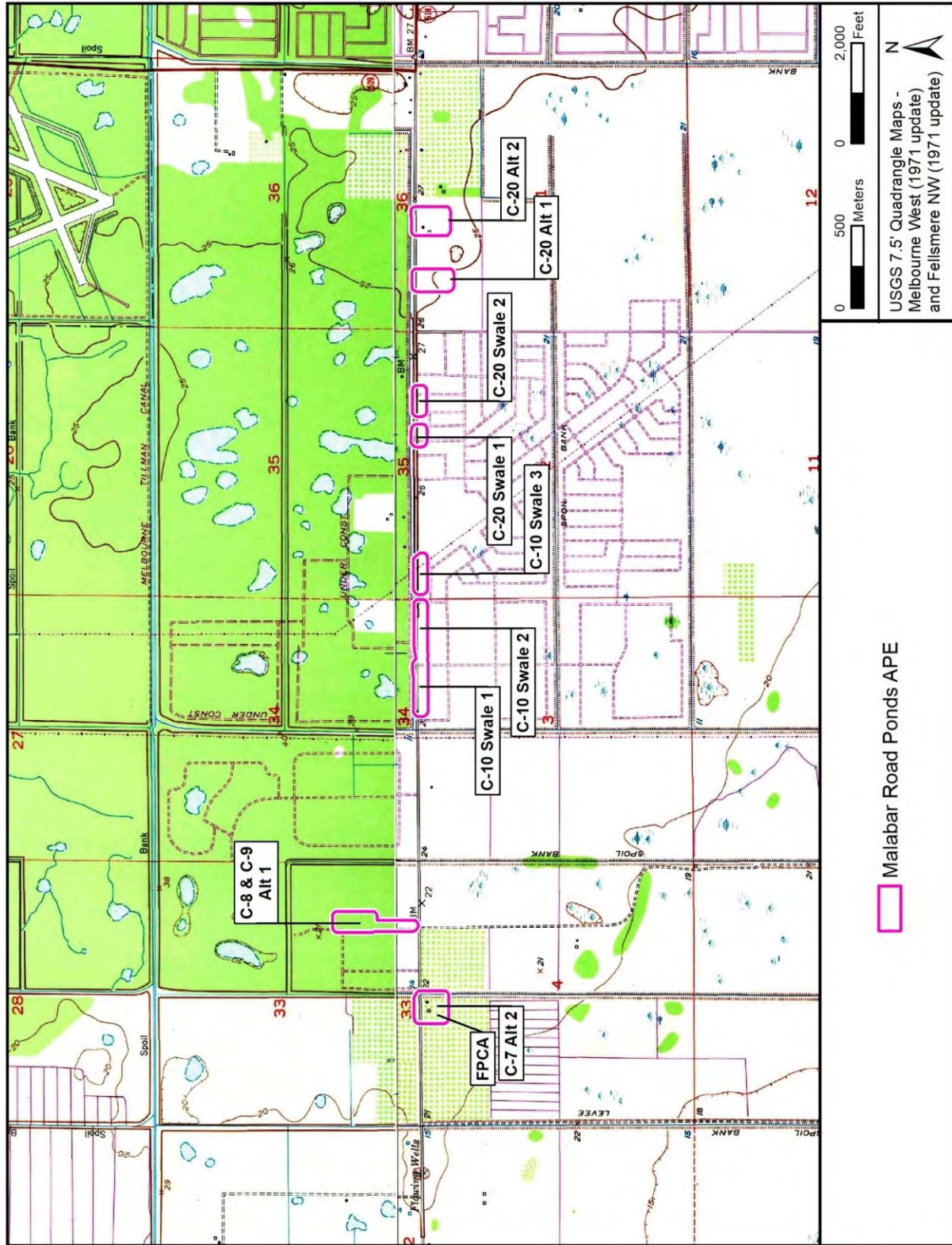


Figure 8. USGS topographic map of Fellsmere NW and Melbourne West, Florida (USGS 1970a, 1970b).

(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 in field notebooks.

## **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 1977. The field survey inventoried existing buildings, structures, and other aspects of the built environment within the project 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.

## **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. 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 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.

## **Curation**

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



## Informant Interviews

SEARCH archaeologist Dave Boschi, MA, RPA, contacted the South Brevard Historical Society (SBHS) via email on April 27, 2021, in an attempt to inquire about potential areas that may be of local importance. As of the submission of this report, the SBHS replied to note that this would be brought to the attention of their Board.

## Certified Local Government Consultation

As no Certified Local Government (CLG) exists for Brevard County or the City of Palm Bay, no CLG consultation was necessary.

## SURVEY RESULTS

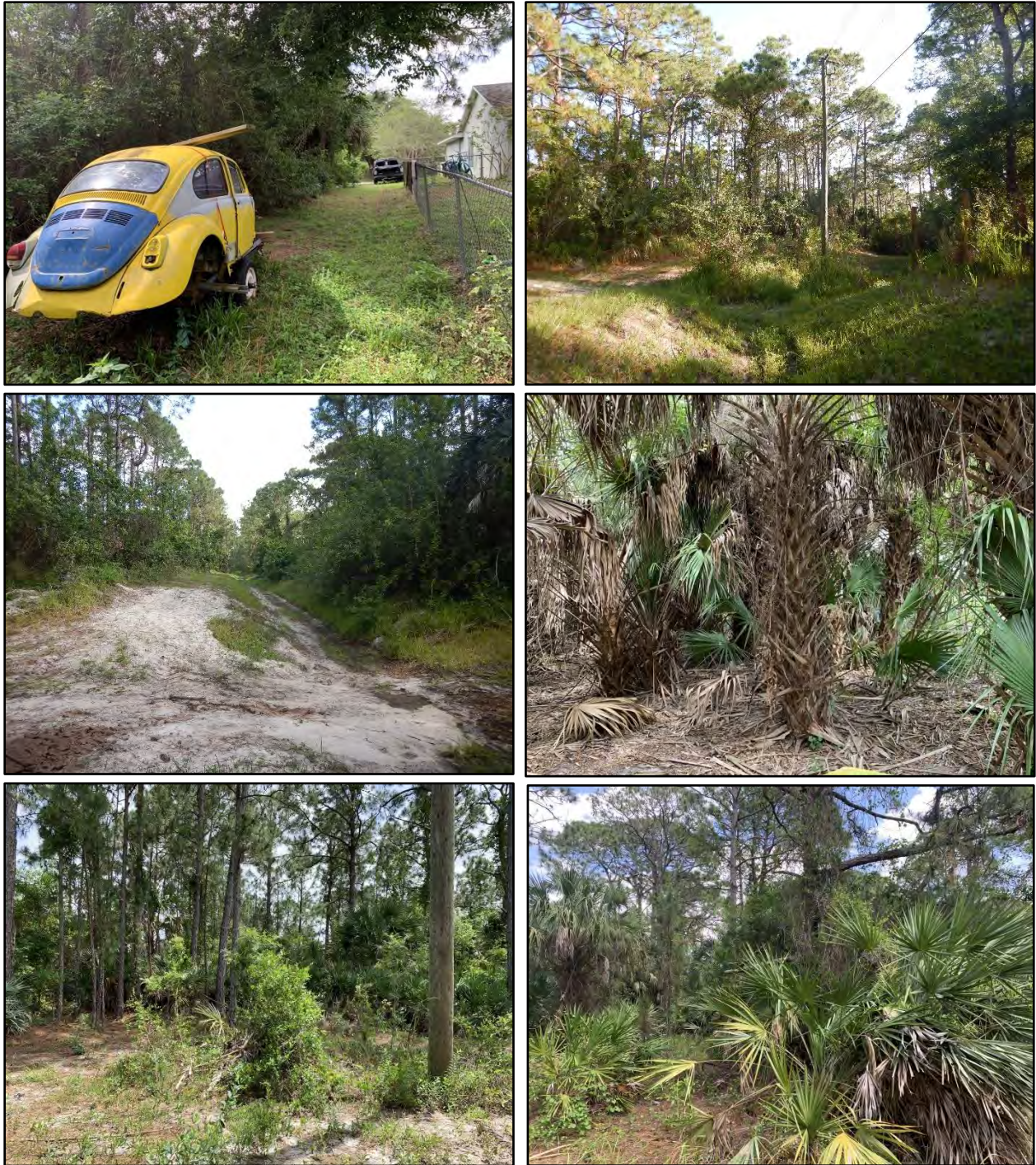
### Archaeological Results

The Malabar Road Ponds archaeological APE is located in a mostly wooded area between residential neighborhoods in the City of Palm Bay, Florida. The APE includes wooded parcels adjacent to single-family residences and former silvicultural tracts at the west end of the APE. Disturbances noted within the APE included past silvicultural use, access roads, and residential development (**Figures 9 and 10**; see **Figures 3 and 6-8**).

A total of 25 shovel tests were excavated within the Malabar Road Ponds archaeological APE, all of which were negative for cultural material (**Figures 11-13**; see **Figure 10**). Discussion of individual ponds is provided below. Soil profiles varied by location (**Figures 14-16**). The fieldwork results of the survey are summarized in **Table 3** and shown in **Figures 10-13**.

**Table 3. Survey Results by Area within the Archaeological APE.**

| Area            | Footprint Acreage | Soil Drainage Characteristic | Archaeological Probability | Field Results | Result   | Recommendation  |
|-----------------|-------------------|------------------------------|----------------------------|---------------|----------|-----------------|
| FPCA            | 1.64 acres        | Poorly drained               | Moderate                   | 3 STPs        | Negative | No further work |
| C-7 Alt 2       | 3.43 acres        | Poorly drained               | Moderate                   | 6 STPs        | Negative | No further work |
| C-8 & C-9 Alt 1 | 3.83 acres        | Poorly drained               | Low                        | 5 STPs        | Negative | No further work |
| C-10 Swale 1    | 2.1 acres         | Poorly drained               | Low                        | 2 STPs        | Negative | No further work |
| C-10 Swale 2    | 1.67 acres        | Poorly drained               | Low                        | 2 STPs        | Negative | No further work |
| C-10 Swale 3    | 1.1 acres         | Poorly drained               | Low                        | 1 STP         | Negative | No further work |
| C-20 Swale 1    | 0.63 acres        | Poorly drained               | Low                        | 1 STP         | Negative | No further work |
| C-20 Swale 2    | 0.79 acres        | Poorly drained               | Low                        | 1 STP         | Negative | No further work |
| C-20 Alt 1      | 3.74 acres        | Poorly drained               | Low                        | 2 STPs        | Negative | No further work |
| C-20 Alt 2      | 5.0 acres         | Poorly drained               | Low                        | 2 STPs        | Negative | No further work |



**Figure 9. Conditions within the Malabar Road Ponds APE. Top left: C-10 Swale 1, view south; Top right: C-8 & C-9 Alt 1 easement, view north; Center left: Access road and drainage at C-8 & C-9 Alt 1, view north; Center right: Mature palmetto at C-20 Alt 2, view east; Bottom left: C-20 Swale 2, view south; Bottom right: C-10 Swale 3, view east.**



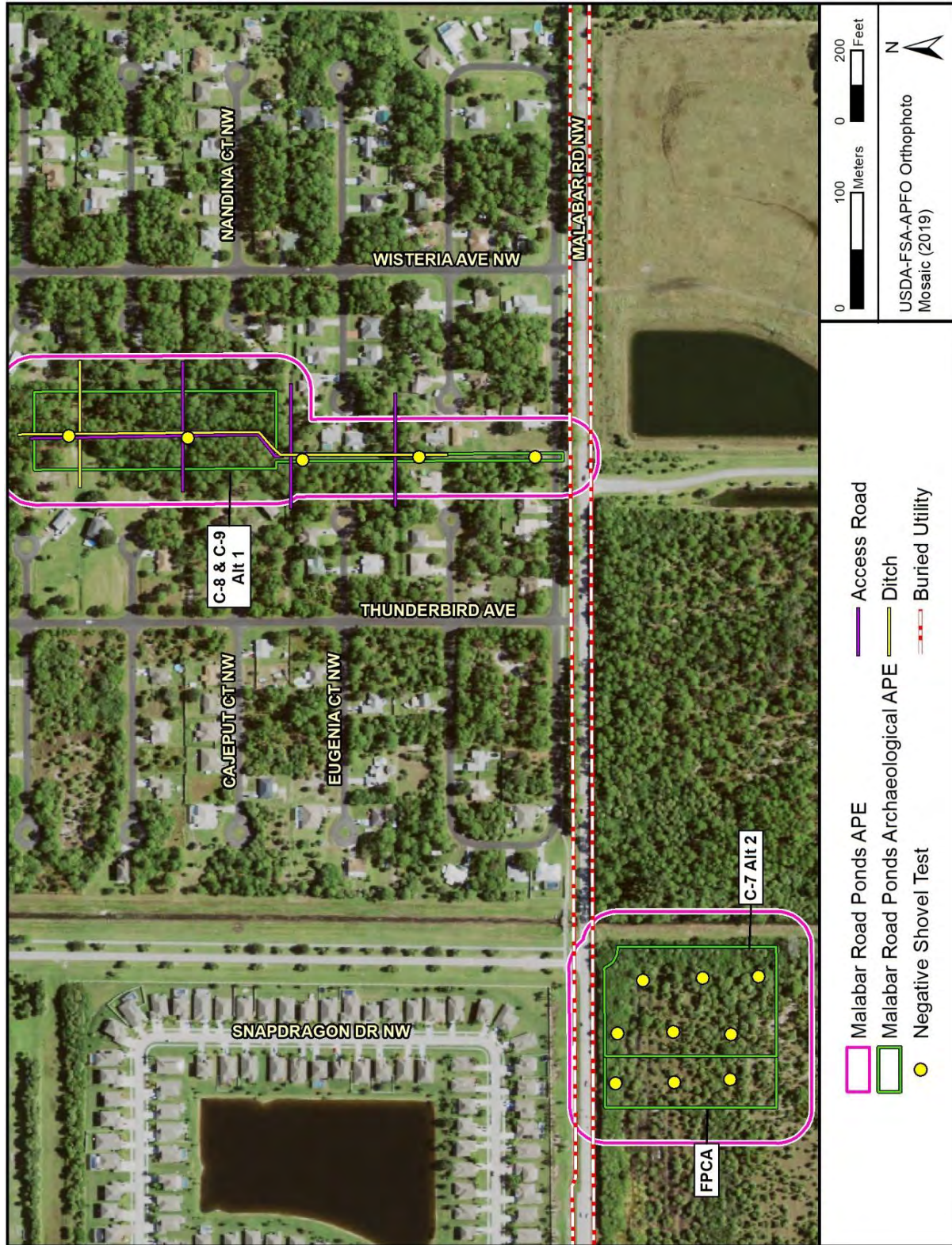


Figure 10. Archaeological survey results within the Malabar Road Ponds APE, map 1 of 4.



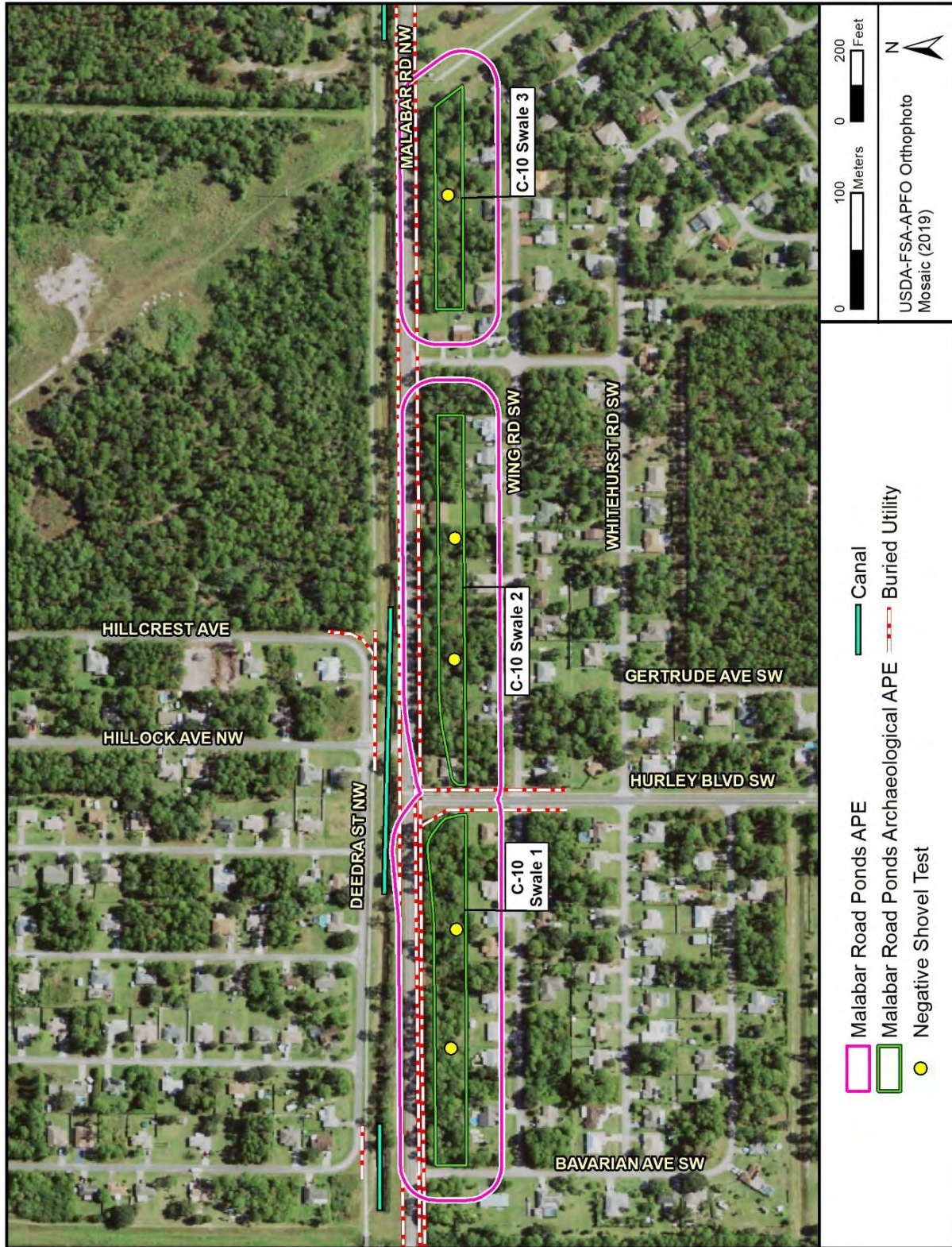


Figure 11. Archaeological survey results within the Malabar Road Ponds APE, map 2 of 4.



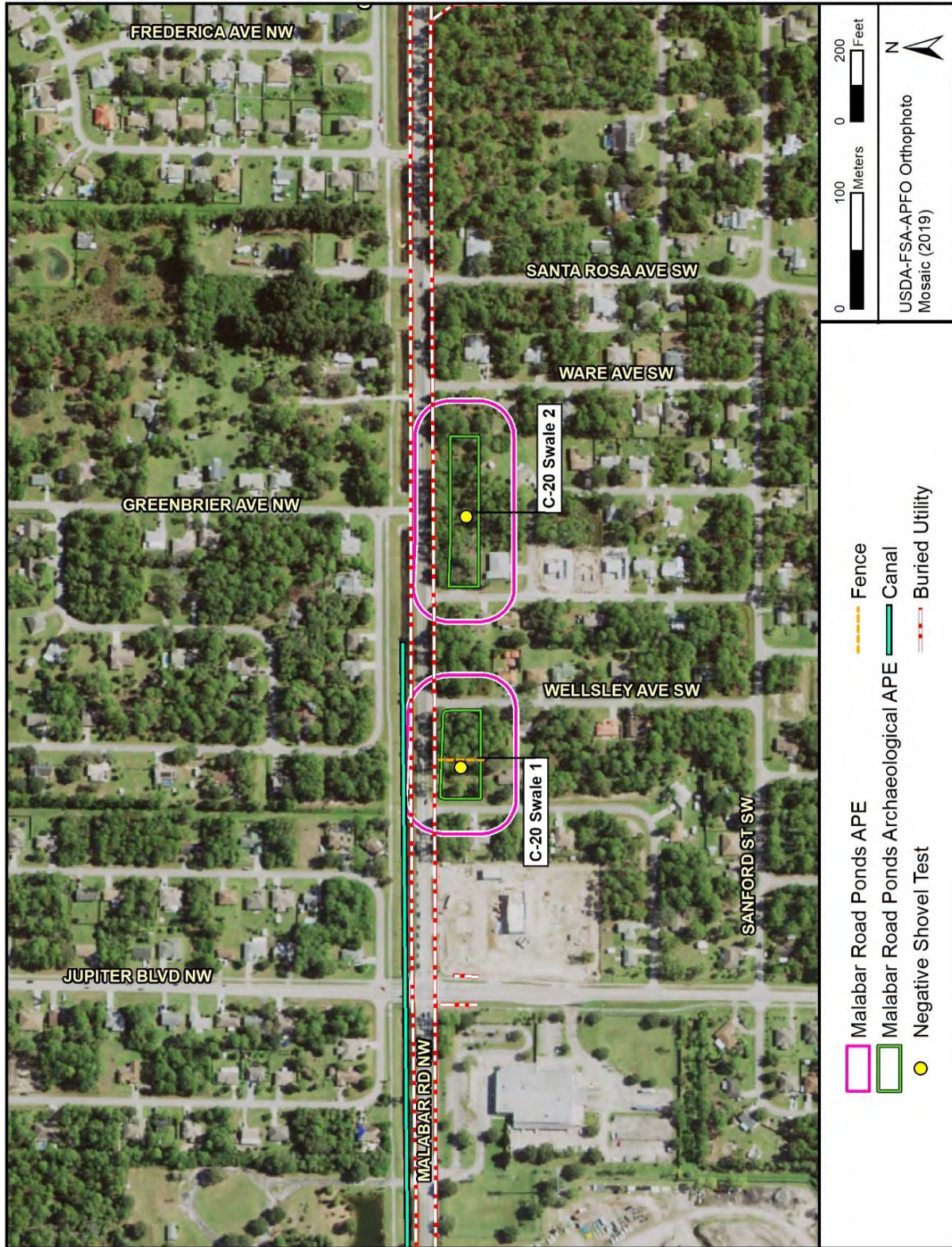


Figure 12. Archaeological survey results within the Malabar Road Ponds APE, map 3 of 4.



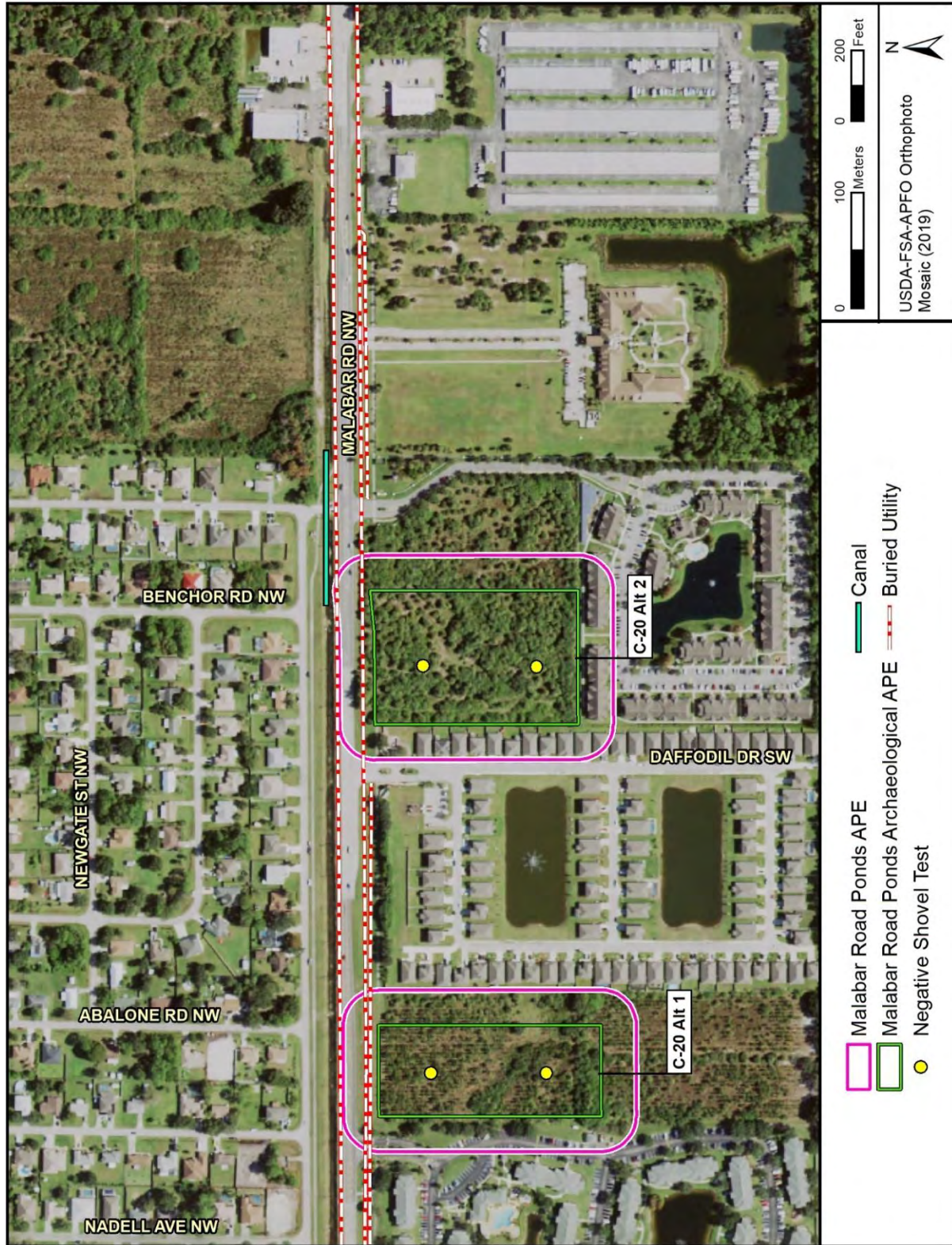


Figure 13. Archaeological survey results within the Malabar Road Ponds APE, map 4 of 4.





Figure 14. Soil profiles in the Malabar Road Ponds archaeological APE. Top left: STP 1, FPCA; Top right: STP 7, C-7 Alt 2; Bottom left: STP 12, C-8 & C-9 Alt 1; Bottom right: STP 23, C-20 Alt 2.





**Figure 15. Soil profiles in the Malabar Road Ponds archaeological APE. Left: STP 15, C-10 Swale 1; Center: STP 8, C-10 Swale 2; Right: STP 19, C-10 Swale 3.**



**Figure 16. Soil profiles in the Malabar Road Ponds archaeological APE. Left: STP 20, C-20 Swale 1; Right: STP 21, C-20 Swale 2.**



## FPCA

The FPCA consists of 1.64 acres of pine, oak, and palmetto (**Figure 17**) located on the south side of Malabar Road, approximately 279 feet (85 meters) west of Championship Circle NW and adjacent to C-7 Alt 2 (see **Figure 2**). Soils are poorly drained, and the area has been previously used for silvicultural purposes (see **Figures 6-8**). The terrain is relatively flat. Previously recorded site 8BR00025 is located approximately 574 feet (175 meters) east of the FPCA. Based on these factors, the FPCA was assessed at a moderate probability for archaeological deposits.



**Figure 17. Representative view at the FPCA, view south.**

A total of three shovel tests were conducted within the FPCA. Of these three, all were negative for cultural materials (see **Figure 10**). Soils consisted of gray (10YR 5/1) sand from 0 to 40 cmbs (15.7 inches), grayish-brown (10YR 5/2) sand from 40 to 50 cmbs (15.7 to 19.7 inches, Stratum II), brownish-yellow (10YR 6/8) sandy loam from 50 to 80 cmbs (19.7 to 31.5 inches, Stratum III), thick light yellowish-brown (10YR 6/4) sandy loam from 80 to 90 cmbs (31.5 to 35.4 inches, Stratum IV), and gray (10YR 6/1) sandy loam from 90 to at least 100 cmbs (35.4 to 39.4 inches, Stratum V) (see **Figure 14**). No further work is recommended at the FPCA.

## C-7 Alt 2

C-7 Alt 2 is a 3.43-acre proposed pond located south of Malabar Road; the FPCA is adjacent to the west, and the Melbourne-Tillman Canal No. 8 (8BR04375) flows along the east side (see **Figure 2**). Vegetation consists of young pine and palmetto, with occasional dense underbrush on flat terrain (**Figure 18**). Soils are poorly drained and the area has been previously used for silviculture (see **Figures 6-8**). Previously recorded site 8BR00025 is located approximately 253 feet (77 meters) east of Pond C-7 Alt 2. Based on these factors, C-7 Alt 2 was assessed at a moderate probability for archaeological deposits.



**Figure 18. Representative view within Pond C-7 Alt 2, view south.**

A total of six shovel tests were conducted within C-7 Alt 2 (see **Figure 10**). All six tests were negative for cultural materials. Soils consisted of gray (7.5YR 6/1) fine sand from 0 to 15 cmbs (5.9 inches, Stratum I), gray (7.5YR 5/1) loamy sand from 15 to 45 cmbs (5.9 to 17.7 inches, Stratum II), pink (7.5YR 8/4) fine sand with ferrous staining from 45 to 80 cmbs (17.7 to 31.5 inches, Stratum III), and dark brown (7.5YR 3/2) loamy sand from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum IV) (see **Figure 14**). No further archaeological work at C-7 Alt 2 is recommended.

### **C-8 & C-9 Alt 1**

C-8 & C-9 Alt 1 is a 3.83-acre proposed pond and easement located north of Malabar Road, south of Viburnum Road NW, east of Thunderbird Avenue, and west of Wisteria Avenue NW (see **Figure 2**). The forested area includes east-west oriented access roads connecting adjacent residential lots, and a drainage feature within the north half (**Figure 19**). The soils are poorly drained and the elevation is relatively flat. Based on these factors, C-8 & C-9 Alt 1 was assessed with low probability.



**Figure 19. Drainage between residential and wooded setting within C-8 & C-9 Alt 1, view south.**

A total of five shovel tests were conducted within C-8 & C-9 Alt 1, and all were negative for cultural materials (see **Figure 10**). Soils consisted of gray (7.5YR 5/1) coarse sand from 0 to 12 cmbs (4.7 inches, Stratum I), white (7.5YR 8/1) mottled with light brown (7.5YR 6/4) coarse sand from 12 to 65 cmbs (4.7 to 25.6 inches, Stratum II), and brown (7.5YR 5/3) coarse sand with gray (7.5YR 5/1) sandy clay from 65 to at least 100 cmbs (25.6 to 39.4 inches, Stratum III) (see **Figure 14**). No further archaeological work at C-8 & C-9 Alt 1 is recommended.

### **C-10 Swale 1**

C-10 Swale 1 is a 2.1-acre proposed swale located south of Malabar Road and north of Wing Road SW, between Bavarian Avenue SW and Hurley Boulevard SW (see **Figure 2**). The relatively flat area is adjacent to residences, forested with oaks, palmetto, and pines with tall grasses and contains poorly drained soils (**Figure 20**). Based on these factors, C-10 Swale 1 was assessed at a low probability for archaeological deposits.



**Figure 20. Representative setting at C-10 Swale 1, view west.**



A total of two shovel tests were conducted within C-10 Swale 1 (see **Figure 11**); both were negative for cultural materials. Soils consisted of dark gray (10YR 4/1) sand from 0 to 35 cmbs (13.8 inches, Stratum I), gray (10YR 5/1) sandy loam from 35 to 65 cmbs (13.8 to 25.6 inches, Stratum II), and black (10YR 2/1) sandy loam from 65 to at least 100 cmbs (25.6 to 39.4 inches, Stratum III) (see **Figure 15**). No further archaeological work at C-10 Swale 1 is recommended.

### **C-10 Swale 2**

C-10 Swale 2 is a 1.67-acre proposed swale located south of Malabar Road and north of Wing Road SW, between Hurley Boulevard and Watoga Avenue SW (see **Figure 2**). The area has mature pine and young palmetto on relatively flat terrain with poorly drained soils (**Figure 21**). Based on these factors, C-10 Swale 2 was assessed at a low probability for archaeological deposits.

A total of two shovel tests were conducted within C-10 Swale 2 (see **Figure 11**); both were negative for cultural materials. Soils consisted of gray (7.5YR 6/1) loamy sand from 0 to 55 cmbs (21.7 inches, Stratum I), dark brown (7.5YR 3/2) loamy sand from 55 to 80 cmbs (21.7 to 31.5 inches, Stratum II), and very dark brown (7.5YR 2.5/2) loamy sand from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum III) (see **Figure 15**). No further archaeological work at C-10 Swale 2 is recommended.



**Figure 21. Typical setting within C-10 Swale 2, view north.**

### **C-10 Swale 3**

C-10 Swale 3 is a 1.1-acre proposed swale located south of Malabar Road and north of Wing Road SW, between Watoga Avenue SW and the City of Palm Bay Public Works Department (see **Figure 2**). The area is wooded with oak, palmetto, and pine on relatively flat terrain with poorly drained soils (**Figure 22**). Based on these factors, C-10 Swale 3 was assessed at a low probability for archaeological deposits.

A single shovel test was excavated within C-10 Swale 3 (see **Figure 11**). The shovel



**Figure 22. Typical setting at C-10 Swale 3, view south.**

test was negative for cultural materials. Soils consisted of gray (10YR 5/1) fine sand from 0 to 32 cmbs (12.6 inches, Stratum I), dark grayish-brown (10YR 4/2) sandy loam from 32 to 49 cmbs (12.6 to 19.3 inches, Stratum II), very pale brown (10YR 8/2) sandy loam from 49 to 71 cmbs (19.3 to 28 inches, Stratum III), and dark brown (10YR 3/3) sandy loam from 71 to at least 100 cmbs (28 to 39.4 inches, Stratum IV) (see **Figure 15**). No further archaeological work at C-10 Swale 3 is recommended.

### **C-20 Swale 1**

C-20 Swale 1 is a 0.63-acre proposed swale located south of Malabar Road, between White Road SW and Wellsley Avenue SW (see **Figure 2**). The area is wooded, relatively flat, and has poorly drained soil (**Figure 23**). Based on these factors, C-20 Swale 1 was assessed at a low probability for archaeological deposits.



**Figure 23.** Setting at C-20 Swale 1 with Malabar Road in the distance, view north.

A single shovel test was conducted within C-20 Swale 1 (see **Figure 12**). The test was negative for cultural materials. Soils consisted of very dark gray (10YR 3/1) loamy clay sand with shell and modern trash from 0 to 18 cmbs (7.1 inches, Stratum I), light grayish-brown (10YR 6/2) sand mottled with gray (10YR 5/1) clay from 18 to 80 cmbs (7.1 to 31.5 inches, Stratum II), and dark gray (10YR 4/1) clay from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum III) (see **Figure 16**). No further archaeological work at C-20 Swale 1 is recommended.

### **C-20 Swale 2**

C-20 Swale 2 is a 0.79-acre proposed swale located south of Malabar Road, between Tile Avenue SW and Ware Avenue SW, and north of Turk Road SW (see **Figure 2**). The area is wooded with pines and palmetto, is relatively flat, and has poorly drained soils (**Figure 24**). Based on these factors, C-20 Swale 2 was assessed with a low probability for archaeological deposits.



**Figure 24.** Setting at C-20 Swale 2, view east.

One shovel test was conducted within C-20 Swale 2 (see **Figure 12**). The test was



negative for cultural materials. Soils consisted of light brownish-gray (10YR 6/2) fine sand from 0 to 20 cmbs (7.9 inches, Stratum I), light yellowish-brown (10YR 6/4) fine sand from 20 to 40 cmbs (7.9 to 15.7 inches, Stratum II), very pale brown (10YR 8/3) sandy loam with ferrous staining from 40 to 68 cmbs (15.7 to 26.8 inches, Stratum III), and very dark brown (10YR 2/2) sandy loam from 68 to at least 100 cmbs (26.8 to 39.4 inches, Stratum IV) (see **Figure 16**). No further archaeological work at C-20 Swale 2 is recommended.

### **C-20 Alt 1**

C-20 Alt 1 is a 3.74-acre proposed pond located south of Malabar Road and west of Alamere Drive SW (see **Figure 2**). The area has rows of planted pine and mature palmetto with poorly drained soils on level terrain (**Figure 25**). Based on the poor soil drainage and disturbance from the pine plantation, C-20 Alt 1 was assessed with a low probability for archaeological deposits.

A total of two shovel tests were conducted within C-20 Alt 1 (see **Figure 13**); both were negative for cultural materials. Soils consisted of black (7.5YR 2.5/1) loamy sand from 0 to 25 cmbs (9.8 inches, Stratum I), light gray (10YR 7/1) damp loamy sand from 25 to 60 cmbs (9.8 to 23.6 inches, Stratum II), and light gray (10YR 7/2) wet sand from 60 to 95 cmbs (23.6 to 37.4 inches, Stratum V) (see **Figure 25**). Some subsurface disturbance was noted and both shovel tests were inundated before reaching 100 cmbs (39.4 inches). No further archaeological work at C-20 Alt 1 is recommended.

### **C-20 Alt 2**

C-20 Alt 2 is a 5.0-acre proposed pond located south of Malabar Road, east of Sutherland Drive SW, and north of Daffodil Drive SW (see **Figure 2**). The area has mature palmetto with poorly drained soils on level terrain (**Figure 26**). Based on these factors, C-20 Alt 2 was assessed with a low probability for archaeological deposits.



**Figure 25. Left: Typical environment within C-20 Alt 1, view north. Right: Typical soil profile from shovel test within C-20 Alt 1.**

A total of two shovel tests were conducted within C-20 Alt 2 (see **Figure 13**); both were negative for cultural materials. Soils consisted of brown (7.5YR 4/2) loamy sand from 0 to 25 cmbs (9.8 inches, Stratum I), light brown (7.5YR 6/4) damp loamy sand with concretions from 25 to 40 cmbs (9.8 to 15.7 inches, Stratum II), black (7.5YR 2.5/1) damp loamy sand from 40 to 60 cmbs (15.7 to 23.6 inches, Stratum III), light gray (7.5YR 7/1) damp loamy sand from 60 to 90 cmbs (23.6 to 35.4 inches, Stratum IV), and pinkish-gray (7.5YR 6/2) damp loamy sand from 90 to at least 100 cmbs (35.4 to 39.4 inches, Stratum V) (see **Figure 14**). Modern trash and shell were noted in Strata I and II. No further archaeological work at C-20 Alt 2 is recommended.



**Figure 26. Typical environment within C-20 Alt 2, view south.**

## Architectural Results

The architectural survey resulted in the identification and evaluation of one newly recorded historic resource within the Malabar Road Ponds APE (**Figure 27**). The newly recorded historic resource is a canal (8BR04375). This resource also was documented during the 2021 CRAS (FMSF Survey No. TBD), for which the current study serves as an addendum. The evaluation of this resource (below) expands upon the documentation provided in the 2021 report.

A description and evaluation are provided below for Resource 8BR04375. The FMSF resource form and its associated maps and photographs are provided in **Attachment B**. The FDHR survey log sheet is provided in **Attachment C**.

## NRHP EVALUATIONS

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### Linear Resources

#### ***8BR04375, Melbourne-Tillman Canal No. 8***

The Melbourne-Tillman Canal No. 8 (8BR04375) is a newly recorded historic canal located in Brevard County (see **Figure 27**). Resource 8BR04375 is situated in Section 4 of Township 29 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map. Resource 8BR04375 runs north-south for approximately 600.8 feet (183.12 meters) and is approximately 16.85 feet (5.13 meters) wide within the APE (**Figure 28**). The resource is carried beneath



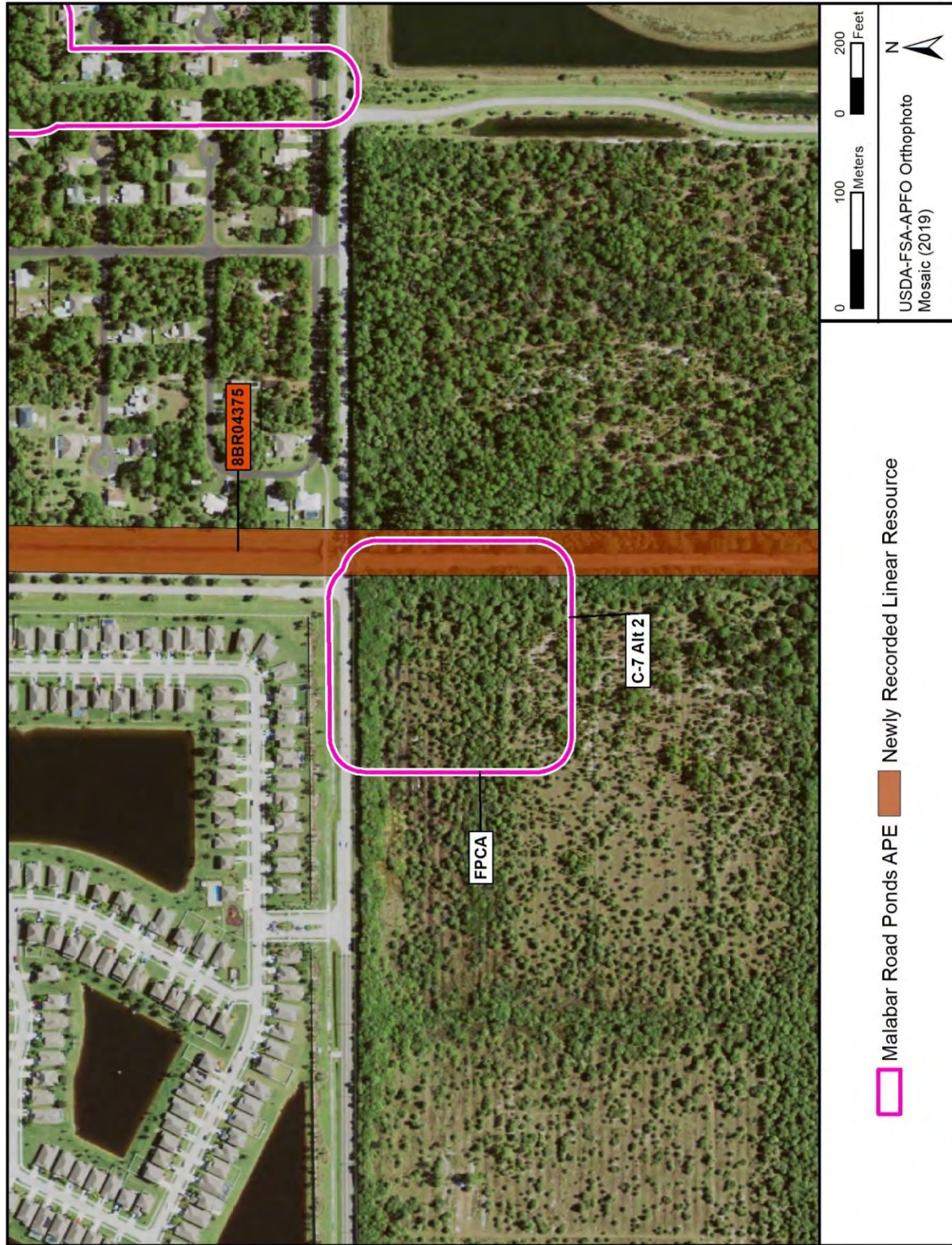


Figure 27. Historic resources recorded within the Malabar Road Ponds APE.

Malabar Road via a non-historic culvert. It is a dug-out canal with overgrown earthen embankments. Resource 8BR04375 is owned and maintained by the Melbourne-Tillman Water Control District.



**Figure 28. Representative view of Resource 8BR04375 within the APE, facing south.**

Resource 8BR04375 was constructed prior to 1943 based on historic aerial imagery (USDA 1943). It is part of an overall canal network designed to drain the wetlands between the St. Johns River and Turkey Creek. The resource was constructed by the Melbourne-Tillman Water Control District, which was established by Brevard County in 1922. Today, the District controls 162 miles of canals between Palm Bay and West Melbourne and is presided over by representatives from those cities and from Brevard County (Melbourne-Tillman Water Control District n.d.).

### Assessment

In order to facilitate an NRHP evaluation of Melbourne-Tillman Canal No. 8 (8BR04375), a discussion about the relationship between historic canal function, period of construction, and historic integrity is presented here.

A 2005 memorandum on canals by Sherry Anderson, which was revised in 2012 by Ginny Jones and is Appendix E to the 2010 FMSF's *Guide to the Resource Group Form*, was used as a guide to aid in the evaluation of Resource 8BR04375 (Jones 2012). The memorandum provides guidance on establishing the historic context for Florida's canal resources to aid in the evaluation of their eligibility to the NRHP. According to the FMSF memorandum, canals are common throughout Florida and "most of those built as drainage ditches in the twentieth century will probably not be considered significant" (Jones 2012:24). The memorandum further states:

It is usually the older canals (19th c.), transportation canals, larger regional canals dug as part of the early 20<sup>th</sup> c. reclamation activities, or canals used in industry (such as logging, cotton) that may be potentially eligible (Jones 2012:24-25).

Changes that could potentially alter the integrity of a canal include the following:

- Re-routing of the canal.
- Disruption of canal (cutting off or filling in).
- Substantial widening or substantial loss of width.
- Concentrated number of roadways and other crossovers that prohibit navigability (only important if navigability was part of its historic use).



- Severing of canal from other waterways (larger canals, turning basins, etc.), which results in change of historic function.
- Removal of historic ancillary structures original to canal's design and purpose (pumping stations, locks, railroads, docks, etc.). The loss of one feature may not be enough to substantially damage integrity, but the removal of many such features may collectively inhibit the resource's ability to convey its significance (Jones 2012:25).

Finally, the memorandum states:

Types of changes that may not substantially damage the integrity include loss of a single historic ancillary feature, routine maintenance and rebuilding of canal walls using same material type, addition of non-historic features (pumping station, etc.), addition of several roads that do not prohibit navigability throughout the majority of the canal. Canals can have 'non-contributing' portions as well but that the overall canal may still be considered potentially eligible (Jones 2012:25).

Based on the field survey and further research, it is the opinion of SEARCH that Resource 8BR04375 is not significant under NRHP Criterion A because it is not indicative of a particular era and is not associated with any significant period, event, or theme. Furthermore, the resource is not significant under Criterion B because it lacks association with any person(s) significant in history. Also, the resource is not significant under Criterion C due to its lack of engineering distinction. The canal was part of a mid-twentieth-century drainage system, and other canals of similar design and purpose are common in the region. The canal is a man-made earthen carrier channel with no outstanding features or design. Finally, 8BR04375 is not significant under Criterion D because it lacks the potential to yield further information of historical importance. It is the opinion of SEARCH that Resource 8BR04375 is not eligible for listing in the NRHP.

## CONCLUSIONS

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This technical memorandum details the results of a CRAS of four preferred pond locations, five swales, and one FPCA associated with proposed improvements to Malabar Road in Brevard County, Florida. This technical memorandum serves as an addendum to the previous CRAS report completed by SEARCH in support of the Malabar Road PD&E study in 2021 (FMSF Survey No. TBD). The APE defined for this project includes the proposed pond, FPCA, and swale footprints plus a 100-foot (30.5-meter) buffer (see **Figure 2**). The archaeological survey was conducted within the proposed footprints; the architectural history survey included the entire APE.

The current archaeological survey included the excavation of 25 shovel tests within the proposed ponds, swales, and floodplain conservation area. All testing was negative for cultural materials. No archaeological sites, features, or occurrences were identified during the archaeological survey. No further archaeological survey is recommended for the Malabar Road ponds, swales, or floodplain conservation area.

The architectural survey resulted in the identification and evaluation of one newly recorded historic resource within the Malabar Road Ponds APE. The newly recorded historic resource is a linear resource (8BR04375). Based on the results of the current survey, it is the opinion of SEARCH that the Melbourne-Tillman Canal No. 8 (8BR04375) is ineligible for the NRHP due to a lack of significant historic associations and architectural distinction. No further architectural work is recommended.

No NRHP-eligible or -listed resources were identified within the Malabar Road Ponds 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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## REFERENCES CITED

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Brooks, H. K.

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

Florida Division of Historical Resources (FDHR)

- 2002 *Cultural Resources Management Standards & Operational Manual, Module Three: Guidelines for Use By Historic Preservation Professionals*. Florida Division of Historical Resources, Tallahassee.

Florida State Road Department (FSRD)

- 1917 Road Map, State of Florida. Electronic document, <https://www.fdot.gov/geospatial/FloridaTransportationMapArchive.htm>, accessed April 15, 2021.
- 1934 General Highway Map of Brevard County. Electronic document, <https://www.ufdc.ufl.edu/UF00015976/00001/>, accessed April 15, 2021.

Folger, L. B.

- 1883 Map of Brevard County, 1883. Electronic document, <https://fcit.usf.edu/florida/maps/>, accessed April 12, 2021.

General Land Office (GLO)

- 1845a Survey Map of Township 28 South, Range 36 East. Electronic document, <http://glorerecords.blm.gov/>, accessed April 12, 2021.
- 1845b Survey Map of Township 28 South, Range 37 East. Electronic document, <http://glorerecords.blm.gov/>, accessed April 12, 2021.
- 1845c Survey Map of Township 29 South, Range 36 East. Electronic document, <http://glorerecords.blm.gov/>, accessed April 12, 2021.
- 1845d Survey Map of Township 29 South, Range 37 East. Electronic document, <http://glorerecords.blm.gov/>, accessed April 12, 2021.

Jones, Ginny

- 2012 Guide to the Resource Group Form Version 4.0: Appendix E: Guidance on NR Eligibility of Canals. Electronic document, [http://dos.myflorida.com/media/31352/guide\\_resourcegroup\\_v40.pdf](http://dos.myflorida.com/media/31352/guide_resourcegroup_v40.pdf), accessed May 3, 2021.

Melbourne-Tillman Water Control District

- n.d. District overview. Electronic document, <http://www.melbournetillman.org/>, accessed April 27, 2021.

Norton, Charles Ledyard

- 1890 Brevard County. In *A Handbook of Florida*. Longmans, Green, and Co., New York. Electronic document, <https://fcit.usf.edu/florida/maps/>, accessed April 15, 2021.

## SEARCH

- 2006 *A Cultural Resource Survey of the Chaparral Project Area, Brevard County, Florida*. FMSF Survey No. 12516. On file, FDHR, Tallahassee.
- 2021 *Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida*. FMSF Survey No. TBD. On file, FDHR, Tallahassee.

### SouthArc, Inc.

- 2014 *Cultural Resources Survey and Assessment, Palm Island Subdivision, Brevard County Florida*. FMSF Survey No. 20793. On file, FDHR, Tallahassee.

### US Department of Agriculture (USDA)

- 1943 Aerial photographs of Brevard County. Electronic document, <https://ufdc.ufl.edu/aerials>, accessed May 3, 2021.

### US Geological Survey (USGS)

- 1951 Topographic Map of Melbourne West, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed April 12, 2021.
- 1953 Topographic Map of Fellsmere NW, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed April 12, 2021.
- 1970a Topographic Map of Melbourne West, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed April 12, 2021.
- 1970b Topographic Map of Fellsmere NW, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed April 12, 2021.



**ATTACHMENT A:**  
**MARKED FIELD MAPS**

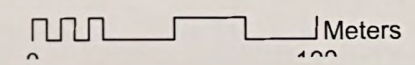




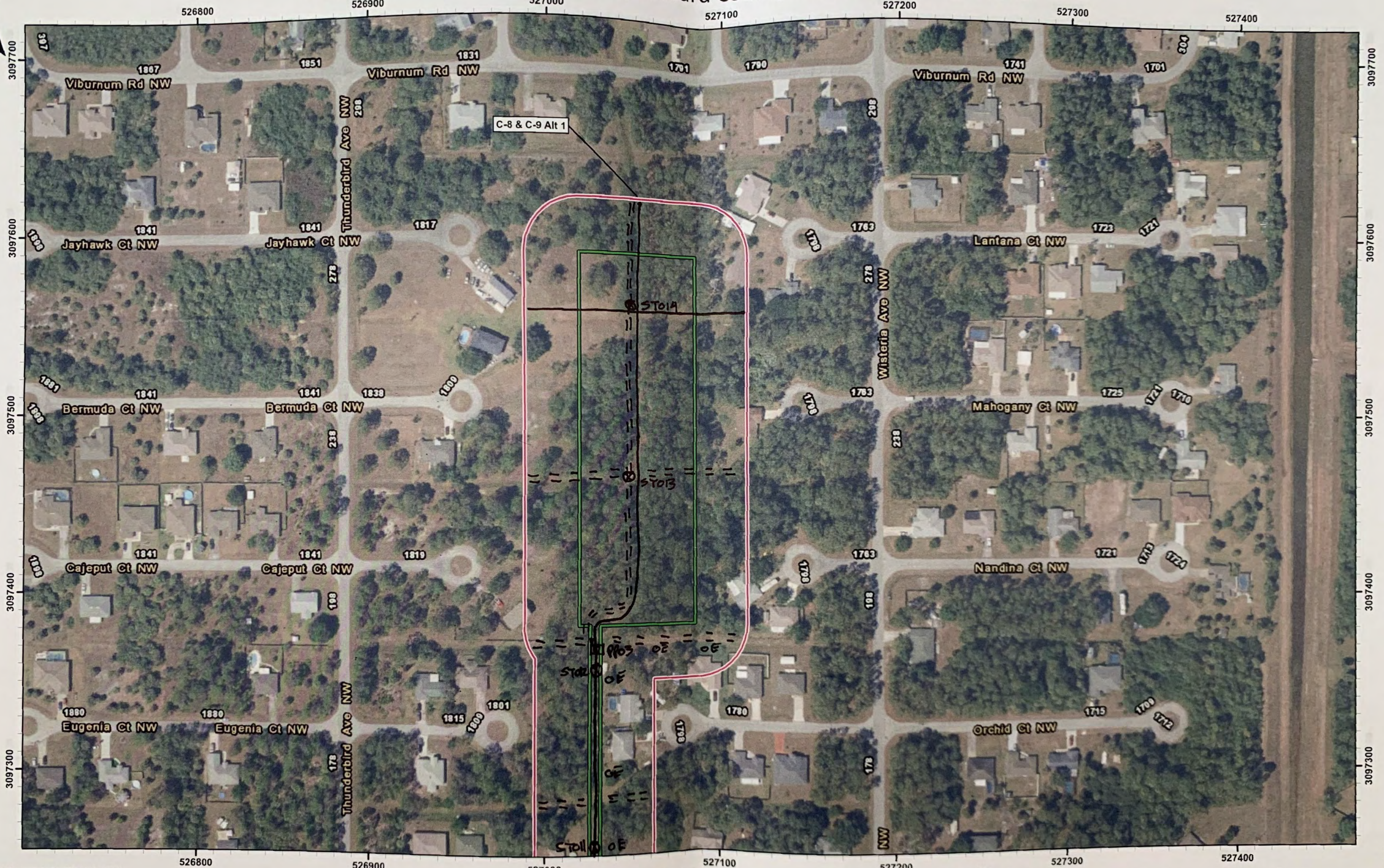


Grid UTM WGS 84 17N  
Major ticks: 100m interval;

- Malabar Road Ponds APE
- Malabar Road Ponds Footprint
- = photo point
- = Culvert
- = Utility Box
- = Access Road
- = Berm
- = Ditch
- ⊗ = Negative
- ⊙ = Positive
- ~ = Water
- ~ = Slope
- = Overhead Electric



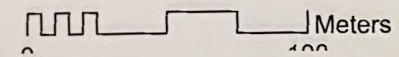




Grid UTM WGS 84 17N  
Major ticks: 100m interval;

Malabar Road Ponds APE  
Malabar Road Ponds Footprint

--- = Ditch  
OE = Overhead Electric  
--- = Access Road  
⊗ = Negative ST  
⊙ = Positive ST  
⊠ = Photo Point







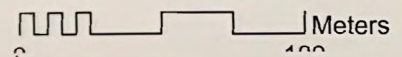
Grid UTM WGS 84 17N  
Major ticks: 100m interval;

Malabar Road Ponds APE  
 Malabar Road Ponds Footprint

⊗ = Negative ST  
 ● = Positive ST  
 ↘ = slope

OE = overhead electric  
 CF = Culvert  
 PF = Photo Point

S = Sewer line  
 SW = Sidewalk  
 Foc = Fiber optic cable line



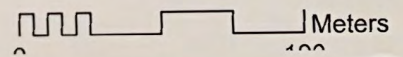




Grid UTM WGS 84 17N  
Major ticks: 100m interval;

- Malabar Road Ponds APE
- Malabar Road Ponds Footprint

- = Negative ST
- = Positive ST
- OE = Overhead Electric
- FOC = Fiber optic Cable Line
- SW = Sidewalk
- S = Sewer line
- C = Culvert
- FH = Fire Hydrant

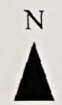
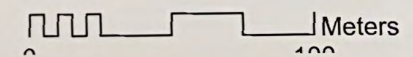






Grid UTM WGS 84 17N  
Major ticks: 100m interval;

Malabar Road Ponds APE  
 Malabar Road Ponds Footprint  
 = Fence  
 = Photo Point  
⊗ = Negative ST  
⊙ = Positive ST  
 Foc = Fiber Optic Cable  
 OB = Overhead Electric





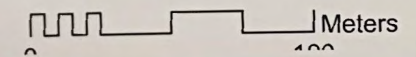


Grid UTM WGS 84 17N  
Major ticks: 100m interval;

Malabar Road Ponds APE  
 Malabar Road Ponds Footprint

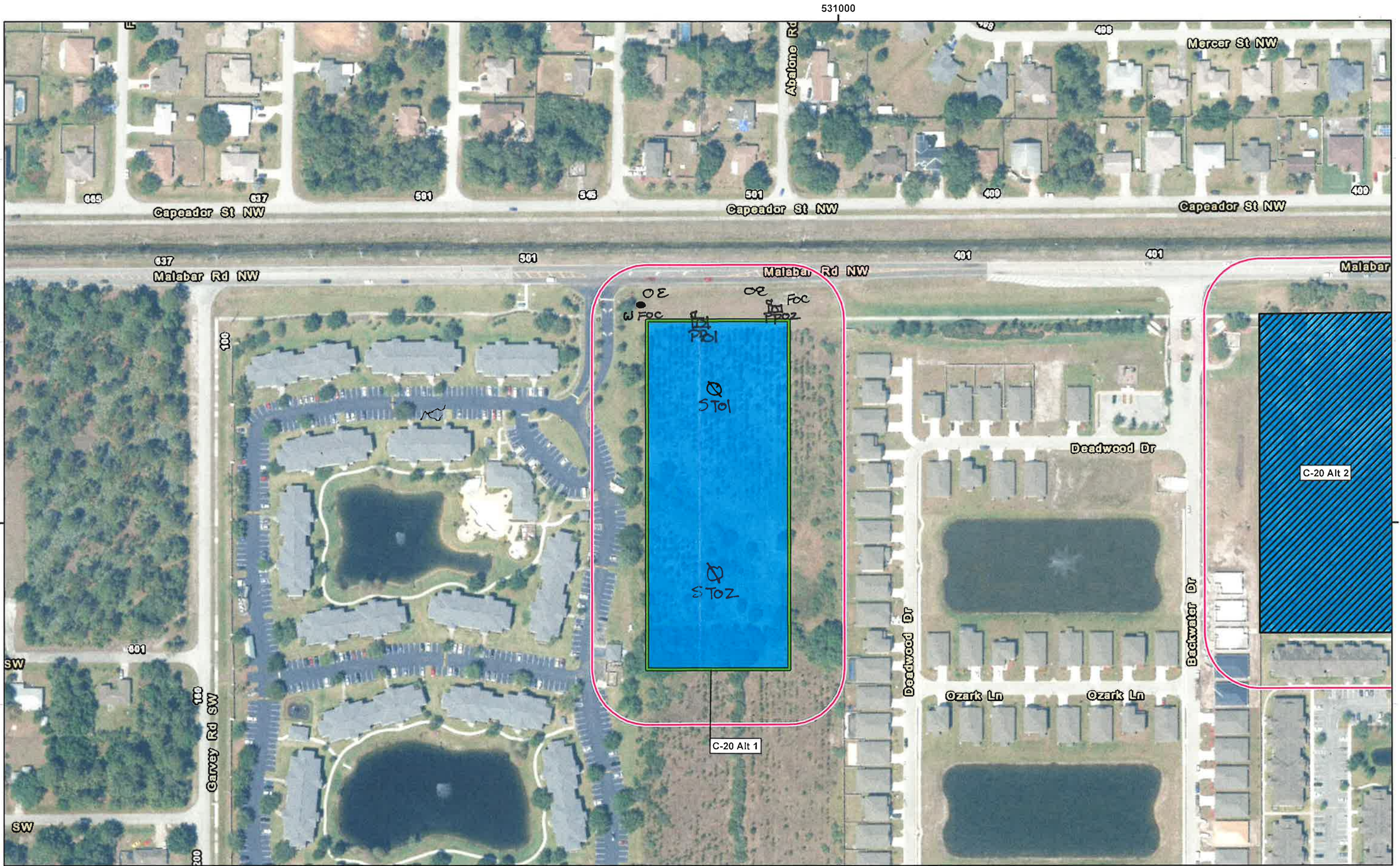
⊗ = Negative ST  
 ● = Positive ST  
 □ = Photo Point

OB = overhead electric  
 IC = culvert  
 Foc = Fiber optic Cable





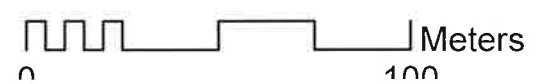
# Project #T20003 - Malabar Road Ponds, Brevard County - Field Map - Overview



Grid UTM WGS 84 17N  
 Major ticks: 500m interval;  
 Minor ticks: 100m interval

- Malabar Road Ponds APE
- Poorly Drained Soil
- Previously Tested Footprint
- Newly Added Footprint

OE = overhead Electric  
 W = water line  
 ● = Manhole  
 FOC = Fiber Optic Cable  
 ⊗ = Negative  
 [ ] = Shovel Test  
 [ ] = Photo Point









**ATTACHMENT B:**  
**FMSF RESOURCE FORM**







RESOURCE GROUP FORM
FLORIDA MASTER SITE FILE
Version 5.0 3/19

Site #8 BR04375
Field Date 4-26-2021
Form Date 4-30-2021
Recorder#

Original
Update

Consult the Guide to the Resource Group Form for additional instructions

NOTE: Use this form to document districts, landscapes, building complexes and linear resources as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. Do not use this form for National Register multiple property submissions (MPSs). National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

Check ONE box that best describes the Resource Group:

- Historic district (NR category "district"): buildings and NR structures only: NO archaeological sites
Archaeological district (NR category "district"): archaeological sites only: NO buildings or NR structures
Mixed district (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
Building complex (NR category usually "building(s)": multiple buildings in close spatial and functional association
Designed historic landscape (NR category usually "district" or "site"): can include multiple resources (see National Register Bulletin #18, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
Rural historic landscape (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
Linear resource (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 8 Multiple Listing [DHR only]
Project Name Malabar Road Ponds FMSF Survey #
National Register Category (please check one): building(s) structure district site object
Linear Resource Type (if applicable): canal railway road other (describe):
Ownership: private-profit private-nonprofit private-individual private-nonspecific city county state federal Native American foreign unknown

LOCATION & MAPPING

Address: Street Number Direction Street Name Street Type Suffix Direction
City/Town (within 3 miles) Palm Bay In Current City Limits? yes no unknown
County or Counties (do not abbreviate) Brevard
Name of Public Tract (e.g., park)
1) Township 29S Range 36E Section 4 1/4 section: NW SW SE NE Irregular-name:
2) Township Range Section 1/4 section: NW SW SE NE
3) Township Range Section 1/4 section: NW SW SE NE
4) Township Range Section 1/4 section: NW SW SE NE
USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021
2) Name USGS Date
Plat, Aerial, or Other Map (map's name, originating office with location)
Landgrant
Verbal Description of Boundaries (description does not replace required map)
Within the APE, 8BR04375 runs N-S for approx. 600.80 ft (183.12 m), beginning S of Malabar Rd and continuing S. It is 16.85 ft (5.13 m) wide.

Table with 3 columns: DHR USE ONLY, OFFICIAL EVALUATION, DHR USE ONLY. Rows include NR List Date, Owner Objection, SHPO - Appears to meet criteria for NR listing, KEEPER - Determined eligible, and NR Criteria for Evaluation.

HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04375 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is largely dried up and runs beneath Malabar Rd via a non-historic culvert.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04375 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments
1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources) When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





8BR04375\_a Facing North



8BR04375\_b Facing Northeast



8BR04375\_c Facing South



8BR04375\_d Facing Northwest



8BR04375\_e Facing South





8BR04375

FPCA

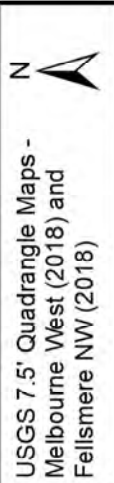
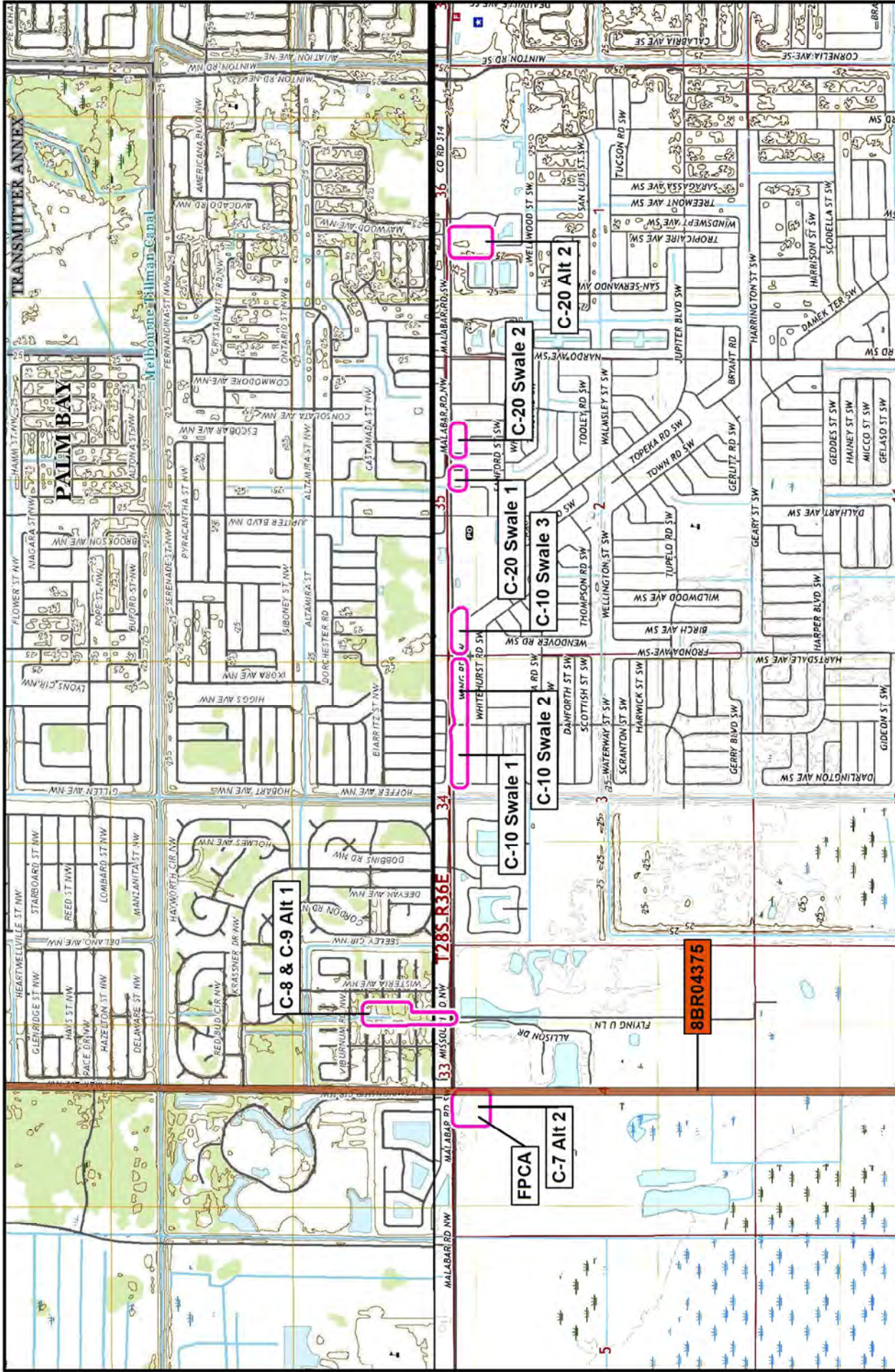
C-7 Alt 2

Malabar Road Ponds APE Newly Recorded Linear Resource



USDA-FSA-APFO Orthophoto Mosaic (2019)





USGS 7.5' Quadrangle Maps -  
Melbourne West (2018) and  
Fellsmere NW (2018)

Malabar Road Ponds APE  Newly Recorded Linear Resource





**ATTACHMENT C:**  
**FDHR SURVEY LOG SHEET**





Ent D (FMSF only) \_\_\_\_\_



# Survey Log Sheet

Florida Master Site File  
Version 5.0 3/19

Survey # (FMSF only) \_\_\_\_\_

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

## Manuscript Information

### Survey Project (name and project phase)

Malabar Road Ponds CRAS Addendum

### Report Title (exactly as on title page)

Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida

### Report Authors (as on title page)

1. Jessica Fish

3. Dave Boschi

2. Mikel Travisano

4. Kelly Guerrieri

Publication Year 2021

Number of Pages in Report (do not include site forms) 34

### Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)

Report on file at SEARCH, Newberry, Florida. SEARCH Project No. T20003. Financial Management No. 437210-1.

### 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. Malabar Road 3. \_\_\_\_\_ 5. \_\_\_\_\_ 7. \_\_\_\_\_  
2. Ponds 4. \_\_\_\_\_ 6. \_\_\_\_\_ 8. \_\_\_\_\_

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

Name Kittleson and Associates

Organization \_\_\_\_\_

Address/Phone/E-mail \_\_\_\_\_

Recorder of Log Sheet Dave Boschi

Date Log Sheet Completed 6-1-2021

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

## Project Area Mapping

### Counties (select every county in which field survey was done; attach additional sheet if necessary)

1. Brevard 3. \_\_\_\_\_ 5. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

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

1. Name MELBOURNE WEST Year 1971 4. Name \_\_\_\_\_ Year \_\_\_\_\_  
2. Name FELLSMERE NW Year 1971 5. Name \_\_\_\_\_ Year \_\_\_\_\_  
3. Name \_\_\_\_\_ Year \_\_\_\_\_ 6. Name \_\_\_\_\_ Year \_\_\_\_\_

## Field Dates and Project Area Description

Fieldwork Dates: Start 4-22-2021 End 10-8-2021 Total Area Surveyed (fill in one) \_\_\_\_\_ hectares 52.42 acres

Number of Distinct Tracts or Areas Surveyed 10

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

Research and Field Methods

Types of Survey (select all that apply): [x]archaeological [x]architectural [ ]historical/archival [ ]underwater [ ]damage assessment [ ]monitoring report [ ]other(describe): \_\_\_\_\_

Scope/Intensity/Procedures

Shovel testing conducting at low-moderate probability and recording structures 45 years or older

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

[ ]Florida Archives (Gray Building) [ ]library research- local public [ ]local property or tax records [x]other historic maps [ ]LIDAR [ ]Florida Photo Archives (Gray Building) [ ]library-special collection [ ]newspaper files [x]soils maps or data [ ]other remote sensing [x]Site File property search [ ]Public Lands Survey (maps at DEP) [ ]literature search [ ]windshield survey [x]Site File survey search [ ]local informant(s) [ ]Sanborn Insurance maps [x]aerial photography [ ]other (describe): \_\_\_\_\_

Archaeological Methods (select 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) [ ]metal detector [ ]surface collection, uncontrolled [ ]water screen [ ]soil resistivity [ ]other remote sensing [x]shovel test-1/4" screen [ ]posthole tests [ ]magnetometer [x]pedestrian survey [ ]shovel test-1/8" screen [ ]auger tests [ ]side scan sonar [ ]unknown [ ]shovel test 1/16" screen [ ]coring [ ]ground penetrating radar (GPR) [ ]shovel test-unscreened [ ]test excavation (at least 1x2 m) [ ]LIDAR [ ]other (describe): \_\_\_\_\_

Historical/Architectural Methods (select 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 [x]windshield survey [ ]occupant interview [x]tax records [ ]interior documentation [x]local property records [ ]occupation permits [ ]unknown [x]other (describe): pedestrian survey

Survey Results

Resource Significance Evaluated? [x]Yes [ ]No

Count of Previously Recorded Resources 1 Count of Newly Recorded Resources 0

List Previously Recorded Site ID#s with Site File Forms Completed (attach additional pages if necessary)

BR04375

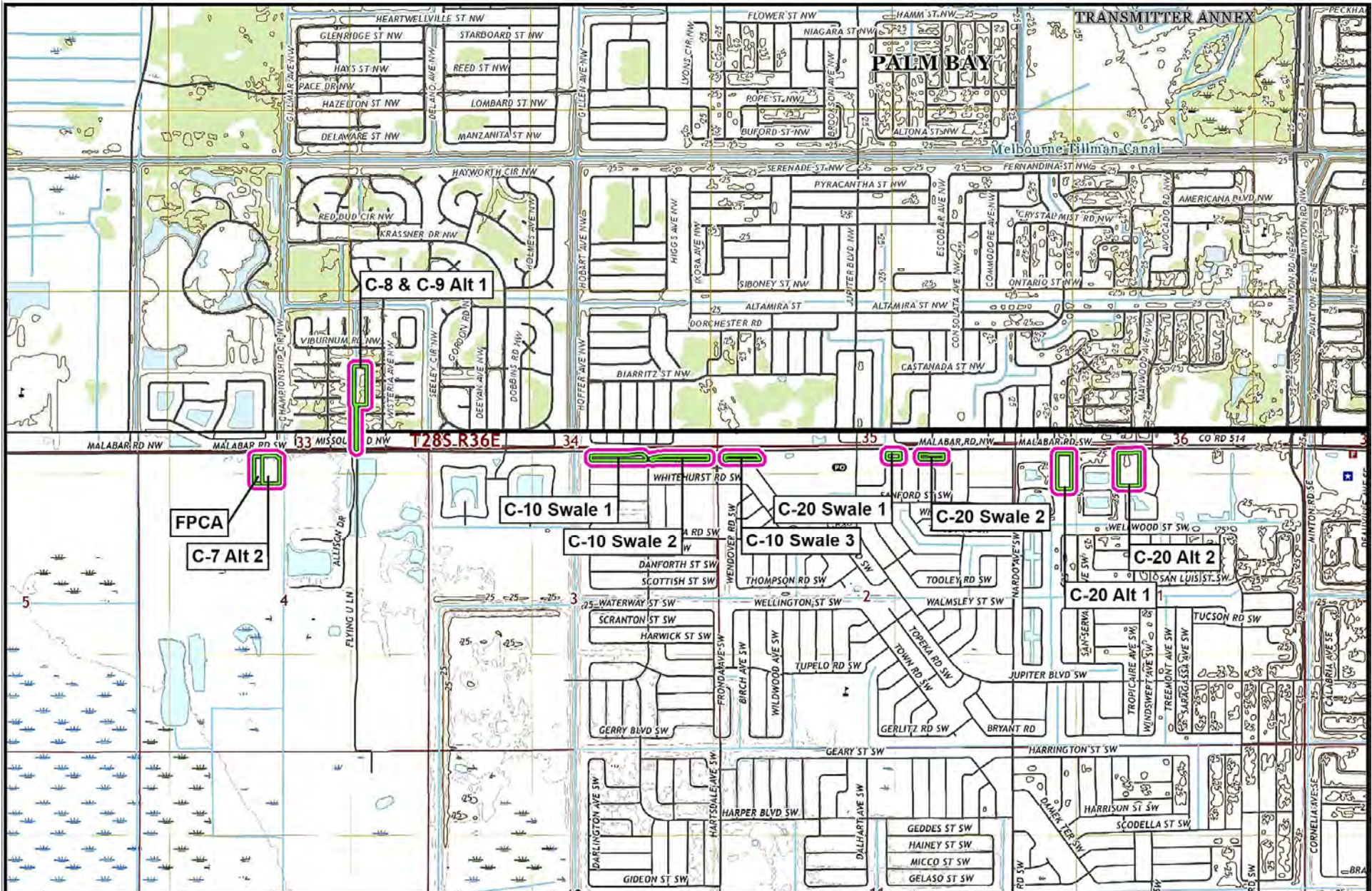
List Newly Recorded Site ID#s (attach additional pages if necessary)

Site Forms Used: [ ]Site File Paper Forms [x]Site File PDF Forms

REQUIRED: Attach Map of Survey or Project Area Boundary

SHPO USE ONLY SHPO USE ONLY SHPO USE ONLY Origin of Report: [ ]872 [ ]Public Lands [ ]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 [ ]Desktop Analysis [ ]MPS [ ]MRA [ ]TG [ ]Other: \_\_\_\_\_ Document Destination: Plottable Projects Plotability: [ ]





- Malabar Road Ponds APE
- Malabar Road Ponds Archaeological APE



USGS 7.5' Quadrangle Maps -  
 Melbourne West (2018) and  
 Fellsmere NW (2018)







*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

719 South Woodland Boulevard  
DeLand, Florida 32720-6834

KEVIN J. THIBAUT, P.E.  
SECRETARY

October 20, 2022

Alissa S. Lotane,  
Director and State Historic Preservation Officer  
Florida Division of Historical Resources  
Florida Department of State  
R.A. Gray Building  
500 South Bronough Street  
Tallahassee, Florida 32399-0250

Attn: Ms. Alyssa McManus, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey  
Malabar Road Improvements Pond Addendum  
Brevard County, Florida  
Financial Management No.: 437210-1

Dear Ms. Lotane,

Enclosed please find one copy of the report titled *Cultural Resource Assessment Addendum in Support of the Malabar Road Ponds Update, Brevard County, Florida*. This report presents the findings of a cultural resource assessment survey (CRAS) conducted in support of the proposed improvements to the Malabar Road from east of St. Johns Heritage Parkway to Minton Road in Brevard County, Florida. The City of Palm Bay is proposing to widen Malabar Road to accommodate additional lanes and traffic control intersections as well as construct associated ponds, swales, and floodplain compensation areas (FPCAs). The current report is limited to survey of one newly relocated pond, Pond C-20 Alt 1. This report serves as an addendum to the 2021 SEARCH surveys titled *Cultural Resource Assessment Survey for the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida* (Florida Master Site File [FMSF] Survey No. 28025, Boschi et al., 2021) and *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida* (FMSF Survey No. 28024, Fish et al. 2021). The current project was limited to 2.85 hectares (7.04 acres) of previously unsurveyed pond. This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

The project area of potential effects (APE) was defined to include the Pond C-20 Alt 1 footprint. No buffer was used as no structures of historic age (45 years or older) are located within or adjacent to the pond footprint.



Ms. Lotane, SHPO  
FM # 437210-1  
October 20, 2022  
Page 2

This CRAS was conducted in accordance with the requirements set forth in Section 106 of the National Historic Preservation Act of 1966, as amended, found in 36 CFR Part 800 (Protection of Historic Properties). The studies also comply with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's Project Development & Environment Study (PD&E) Manual (revised July 2020), FDOT's Cultural Resources Management Handbook, and the standards stipulated in the Florida Division of Historical Resources' (FDHR) *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). This study also complies with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act of 1966, as amended, and the Archeological and Historic Preservation Act of 1979, as amended.

The archaeological survey included the excavation of three shovel tests, all of which were negative for artifacts. No archaeological sites, occurrences, or features were recorded and no further work is recommended.

No architectural survey was conducted as no buildings of historic age (45 years or older) are located within or adjacent to the proposed pond footprint.

Based on the results of this study, it is the opinion of the District that the proposed undertaking will have no effect on NRHP-listed or -eligible historic properties. No further work is recommended.

I respectfully request your concurrence with the findings of the enclosed report.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5411.

Sincerely,



For: William G. Walsh  
Environmental Manager  
FDOT, District Five

---

The Florida State Historic Preservation Officer finds the attached Cultural Resource Assessment Survey Report complete and sufficient and  concurs /  does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 201904374D. Or, the SHPO finds the attached document contains \_\_\_\_\_ insufficient information.

In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.

SHPO Comments:

|  |
|--|
|  |
|  |
|  |
|  |

|                                          |           |
|------------------------------------------|-----------|
| Alissa S. Lotane, Director               | 11.1.2022 |
| Florida Division of Historical Resources | Date      |



**CULTURAL RESOURCE ASSESSMENT SURVEY  
OF THE MALABAR ROAD IMPROVEMENTS  
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY,  
BREVARD COUNTY, FLORIDA**

**FINANCIAL MANAGEMENT No. 437210-1  
SEARCH PROJECT No. T20003**

**PREPARED FOR**

**KITTELSON AND ASSOCIATES  
AND  
CITY OF PALM BAY, FLORIDA**

**BY**

**SEARCH**

**OCTOBER 2023**

**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 (FHWA) AND FDOT.**





**CULTURAL RESOURCE ASSESSMENT SURVEY  
OF THE MALABAR ROAD IMPROVEMENTS  
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY,  
BREVARD COUNTY, FLORIDA**

**FINANCIAL MANAGEMENT No. 437210-1  
SEARCH PROJECT No. T20003**

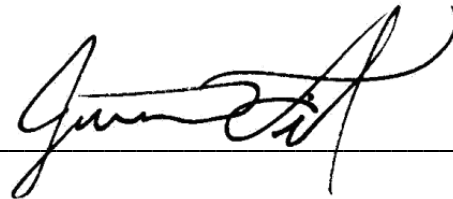
**PREPARED FOR**

**KITTELSON AND ASSOCIATES AND  
CITY OF PALM BAY, FLORIDA**

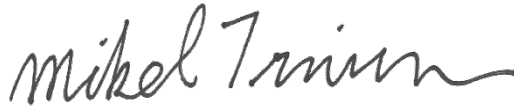
**PREPARED BY**

**SEARCH**

**DAVE BOSCHI, KELLY GUERRIERI, AND ALLEN KENT**

A handwritten signature in black ink, appearing to read 'Jessica Fish', written over a horizontal line.

**JESSICA FISH, MSt, RPA  
PRINCIPAL INVESTIGATOR, ARCHAEOLOGY**

A handwritten signature in black ink, appearing to read 'Mikel Travisano', written over a horizontal line.

**MIKEL TRAVISANO, MS  
PRINCIPAL INVESTIGATOR, ARCHITECTURAL HISTORY**

**WWW.SEARCHINC.COM**

**OCTOBER 2023**





## EXECUTIVE SUMMARY

This report presents the findings of a Phase I cultural resource assessment survey (CRAS) conducted in support of a Project Development and Environment (PD&E) study to Malabar Road in Brevard County, Florida. The City of Palm Bay, Florida, is conducting a PD&E study for the proposed improvements to Malabar Road from east of St. Johns Heritage Parkway to Minton Road. The PD&E study includes widening Malabar Road with the construction of additional lanes and traffic control intersections. The roadway improvements will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

To encompass all potential improvements, the area of potential effects (APE) was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road. This APE was extended to the back or side property lines of parcels adjacent to the right-of-way, or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

The archaeological survey consisted of the excavation of 30 shovel tests and pedestrian survey within the archaeological APE. One previously recorded archaeological site, 8BR00025, is located within the overall APE, but outside the archaeological APE. As such, identification and evaluation of this site is beyond the scope of the current project. No artifacts were recovered during the archaeological survey, and no archaeological sites or occurrences were identified within the archaeological APE. No further archaeological survey is recommended in support of the proposed Malabar Road improvements.

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource and seven newly recorded resources. The previously recorded historic resource is a linear resource (8BR03535). The newly recorded historic resources include four linear resources (8BR04374-8BR04377), two bridges (8BR04379 and 8BR04380), and one structure (8BR04378).

The previously recorded resource (8BR03535; Melbourne-Tillman Canal No. 20) was determined ineligible for the National Register of Historic Places (NRHP) by the State Historic Preservation Officer (SHPO) in 2017 (Penders 2017).

Based on the results of the current survey, it is the opinion of SEARCH that all eight resources are ineligible for the NRHP due to a lack of significant historic associations and architectural and/or engineering distinction. No further architectural work is recommended.

Given the results of the CRAS, it is the opinion of SEARCH that the proposed Malabar Road widening project will have no effect on cultural resources listed or eligible for listing in the NRHP. No further work is recommended.



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## PROJECT SUMMARY

Initiated in November 2019, this Project Development and Environment (PD&E) Study has been conducted to assess various widening alternatives for Malabar Road. This Preliminary Engineering Report (PER) documents the project's purpose and need, the alternatives developed, the process of selecting the preferred alternative, and presents the preliminary design analysis for the preferred alternative.

### PROJECT DESCRIPTION

The Malabar Road PD&E Study evaluated capacity, safety, and multi-modal improvements on Malabar Road from St. Johns Heritage Parkway to Minton Road, a distance of approximately 4.0 miles (6.4 kilometers), in the City of Palm Bay and Brevard County, Florida. Malabar Road is an east-west regional roadway connecting western Brevard County/City of Palm Bay to US 1 in Malabar. The roadway's maintaining jurisdiction is Brevard County at its western edge, before transitioning to the City of Palm Bay for several miles, and then becoming a state road (State Road [SR] 514) between Interstate 95 (I-95) and US 1. Malabar Road has an existing diamond interchange with I-95. Within the study area, Malabar Road is an urban minor arterial. The study area is shown in **Figure 1**.

Malabar Road within the project limits is a two-lane roadway. The section from St. Johns Heritage Parkway to Garvey Road is undivided, whereas the section from Garvey Road to Minton Road has median turn lanes. An 8.0-foot (2.4-meter) sidewalk is present on Malabar Road's north side for the entirety of the project limits. Minimal sidewalk is present on the south side. No on road bicycle facilities are present along the study limit's length.

There are currently four signalized intersections and numerous unsignalized intersections along the study corridor. The four signalized intersections are located at Krassner Drive/Bending Branch Lane, Jupiter Boulevard, the Plaza Shopping Center, and Minton Road.

This roadway is unique due to the surrounding canal system that is operated/maintained by the Melbourne-Tillman Water Control District (MTWCD). Malabar Road within the project limits crosses over four canals (Canals C-7, C-8, C-9, and C-10). Canal C-20 runs parallel to Malabar Road on the north side from Canal C-10 (250 feet [76.2 meters] west of Bavarian Avenue) to approximately 0.3 miles (0.48 kilometers) west of Minton Road. One bridge, crossing over Canal C-10, is located within the project limits.

The proposed improvements will widen Malabar Road from two to four lanes from the St. Johns Heritage Parkway to Minton Road. The preferred alternative's typical section along the study corridor will include two 11' lanes in each direction, a 22' wide median, a 10' shared-use path on the north side, and an 8' sidewalk on the south side. The intersections at St. Johns Heritage Parkway, Krassner Drive/Bending Branch Lane, Hurley Boulevard, and Maywood Avenue/Daffodil Drive are proposed as roundabouts, while Jupiter Boulevard, the Plaza Shopping Center, and Minton Road are proposed to remain signalized.

## **PURPOSE & NEED**

The purpose of this project is to evaluate the need for capacity improvements (roadway widening) to relieve existing congestion and accommodate projected future traffic demand. The project's secondary goals are to 1) enhance safety conditions; 2) improve multi-modal facilities; and 3) enhance regional and local mobility. The need for these improvements is described in this section.



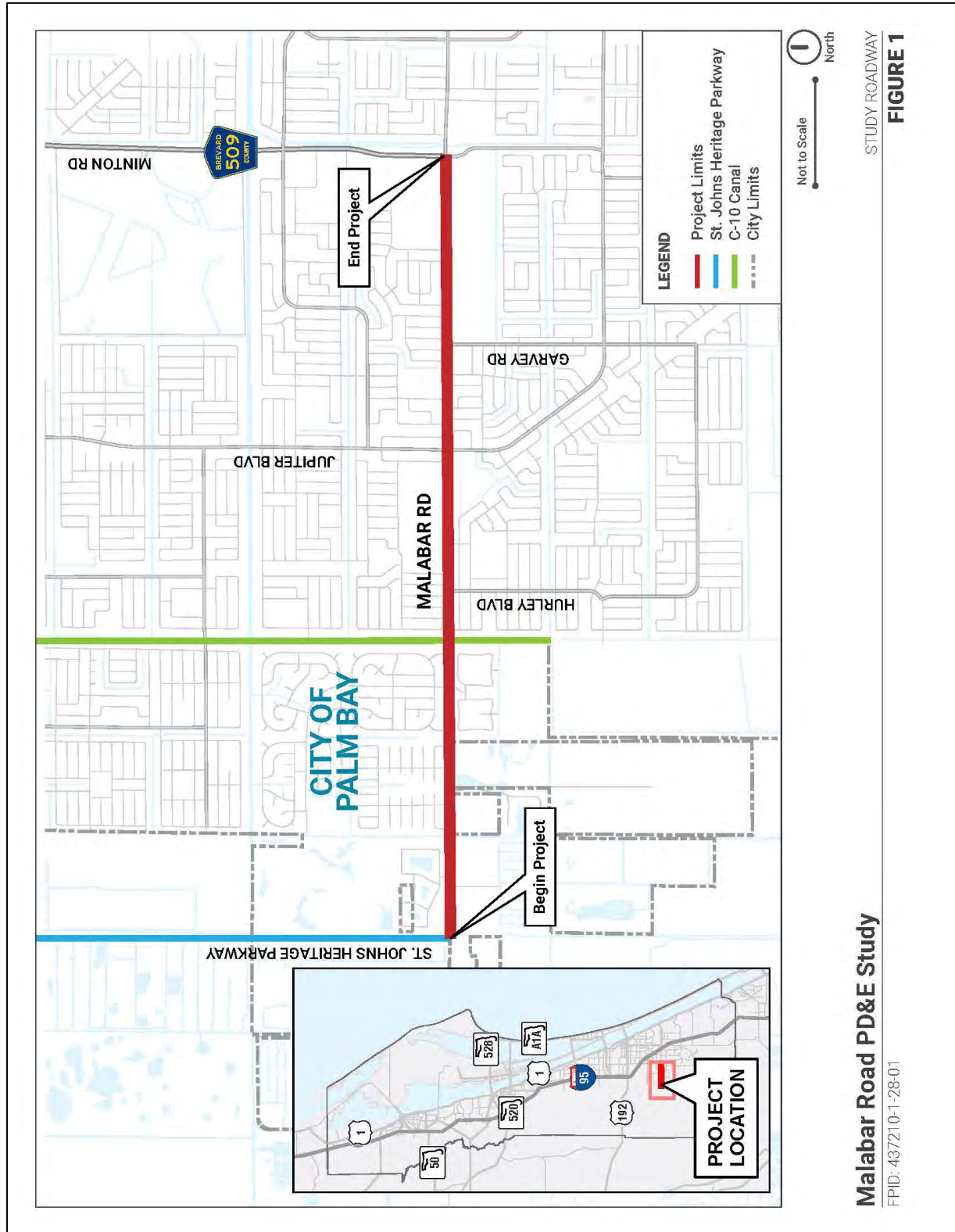


Figure 1: Study roadway

## Transportation Demand/Capacity

The existing (2020) traffic analysis shows the four signalized intersections and 13 unsignalized intersections operated with an overall Level of Service (LOS) of E or better and no overcapacity movements. Even though the intersections were operating acceptably, the existing traffic analysis for the segments shows multiple segments of the Malabar Road corridor operated worse than the City standard of LOS C, with traffic volumes ranging from 7,200 to 16,000 Annual Average Daily Traffic (AADT). Because population and employment growth are expected to continue in western Palm Bay, the east–west traffic volumes along Malabar Road are anticipated to increase. This will ultimately lead to unacceptable segment and intersection operations.

## Safety

Crash records were obtained for Malabar Road from 900' west of the St. Johns Heritage Parkway to ¼ mile east of Minton Road for the most recent five-year period on record (2016 through 2020). There was a total of 642 reported crashes during this period; 202 (32 percent) resulted in at least one injury. There were no reported fatal crashes along the study corridor during the five-year period. As displayed in **Figure 2**, the crashes per year along the corridor generally increased between 2016 (123 crashes) and 2019 (137 crashes). The 2020 crash data saw a decrease to 113 crashes, likely due to decreases in traffic volumes related to the COVID-19 pandemic. While the overall total crashes decreased in 2020, the total number of injury crashes was the second highest behind 2017. This could be attributed to higher travel speeds along the corridor due to the lower volume, which leads to more severe crashes. It is important to note the traffic counts for this project were performed in January 2020, prior to the beginning of the pandemic restrictions in March 2020.

The highest crash type observed was rear end, comprising 54 percent of the total crashes. Left turn (14 percent) and sideswipe crashes (12 percent) were the second and third highest crash types.

Three existing signalized intersections at Jupiter Boulevard, the Plaza Shopping Center, and Minton Road were the highest crash locations along the study corridor, accounting for 330 of the 642 total reported crashes (51 percent). The four highest crash unsignalized intersections are St. Johns Heritage Parkway, Hurley Boulevard, Hillock Avenue, and Maywood Avenue/Daffodil Drive accounting for 90 total crashes (14 percent). Two high crash segments from 0.05 miles east of Jupiter Boulevard to 0.05 west of Santa Rosa Avenue (1,400 feet in length) and from 0.05 miles east of Maywood Avenue/Daffodil Drive to 0.05 west of the Plaza Shopping Center (1,175 feet in length) accounted for 61 total crashes (10 percent). A crash rate analysis was performed on the 2016 to 2018 crash data because average crash rates were not available for 2019 and 2020. Only one segment of Malabar Road, between Jupiter Boulevard and the Plaza Shopping Center, had a higher than average crash rate for one year of analysis. While the segments had low safety ratios, the three signalized intersections at Jupiter Boulevard, the Plaza Shopping Center, and Minton Road each had higher crash rates than statewide or districtwide averages for similar roadways in at least two of the three analysis years.



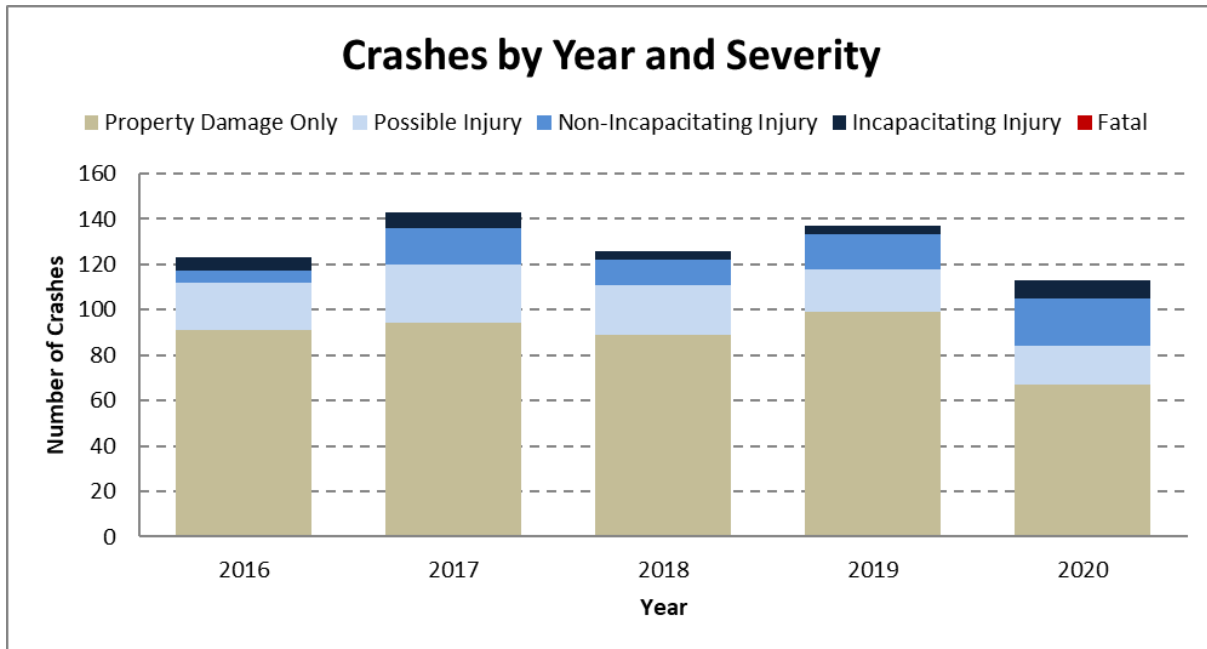


Figure 1: Crashes per Year (Corridor Wide)

## Modal Interrelationships

An 8' sidewalk is present on the north side of Malabar Road for the entirety of the project limits. Where Canal C-20 exists, this facility is on the north side of the canal. Sidewalk is present for approximately 40 percent of the project limits on the south side. No on-road bicycle facilities are present along the length of the project limits.

The Office of Greenways and Trails (OGT) and the Space Coast Transportation Planning Organization (SCTPO) identified trail opportunities in the vicinity of Malabar Road. The St. Johns River Eco-Heritage Trail will align with the St. Johns Heritage Parkway and connect the Brevard Zoo Linear Trail to Malabar Road. The St. Johns River Eco-Heritage Trail will extend south where it will connect to existing trail facilities. In addition to OGT and SCTPO identified trails, two local trails are in the study vicinity. One local trail runs east–west along Malabar Road from St. John Heritage Parkway to west of Minton Road as previously discussed. The second local trail called the Cross City Trail ends just south of Malabar Road near the City of Palm Bay Public Works Department. The trail is located adjacent to the power lines and starts at Walpole Road and ends just south of Malabar Road. There is no connection between Cross City Trail and the trail paralleling Malabar Road's north side due to the presence of Canal C-20. The existing trails and trail opportunities are displayed in **Figure 15** of the *Malabar Road Preliminary Engineering Report*.

Two transit routes with 16 total transit stops (six eastbound and 10 westbound) operate along Malabar Road within the study corridor. Space Coast Area Transit Route 20 connects Heritage and West Melbourne and Route 23 provides service to the West Palm Bay area. Route 20 operates along the entire corridor, and Route 23 operates between Jupiter Boulevard and Minton Road. Both routes operate from approximately 6:30 AM to 8:30 PM on weekdays and 7:30 AM

to 5:30 PM on Saturdays with hour-long headways. The eastbound bus stop in front of the Madalyn Landing Apartments is the only stop with a bus shelter. The existing transit routes and shelters are displayed in **Figure 15** of the *Malabar Road Preliminary Engineering Report*.

## System Linkage

The western Palm Bay area is anticipated to experience population and traffic growth in the next 30 years, leading to increased travel on facilities west of I-95 and south of US 192<sup>1</sup>. The St. Johns Heritage Parkway is providing a “beltway” facility to accommodate the forecasted increase in traffic in western Palm Bay. The St. Johns Heritage Parkway is already constructed from Malabar Road to US 192, and a study is being performed for the extension of the Parkway from Babcock Street north to Malabar Road.

Malabar Road is one of three primary east–west roadways connecting to the Parkway and is the only one of those roadways that has an interchange with I-95. Malabar Road from Minton Road to Corporate Circle is four lanes, and the section from Corporate Circle to I-95 is six lanes. The Malabar Road four-lane alternative proposed from the St. Johns Heritage Parkway to Minton Road would tie into the existing four-lane section starting at Minton Road.

A PD&E study was completed in 2021 for Malabar Road from Babcock Street to US 1 with a preferred alternative to widen from two to four lanes. Design and right-of-way for the Babcock Street to US 1 project is planned in the SCTPO’s 2045 Long Range Transportation Plan (LRTP) Cost Feasible Plan for the 2026 to 2030 time period, and construction is planned for the 2031 to 2035 time period.

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<sup>1</sup> Based on the SCTPO 2045 Long Range Transportation Plan and City of Palm Bay traffic studies.



## ALTERNATIVES ANALYSIS SUMMARY

### Roadway Typical Sections

Two initial typical section alternatives were developed to support the Malabar Road purpose and need for capacity and safety improvements:

- Alternative A – Minimum right-of-way alternative
  - 89.5' right-of-way alternative from the St. Johns Heritage Parkway to Canal C-10 (**Figure 3**)
  - 92.5' right-of-way alternative from Canal C-10 to Sta. 256+80 (**Figure 4**)
- Alternative B – Desired right-of-way alternative
  - 100' right-of-way alternative from the St. Johns Heritage Parkway to Canal C-10 (**Figure 5**)
  - 103' right-of-way alternative from Canal C-10 to Sta. 256+80 (**Figure 6**)

Each of the initial typical sections were applied from the St. Johns Heritage Parkway to Sta. 256+80, which is just west of the Plaza Shopping Center where Malabar Road begins to transition to a four-lane roadway. The posted speed for each typical section alternative is 35 mph from St. Johns Heritage Parkway to Championship Circle, 45 mph from Championship Circle to east of Maywood Avenue/Daffodil Drive, and 35 mph from east of Maywood Avenue/Daffodil Drive to Minton Road. This maintains the existing posted speed limits.

The initial Malabar Road typical section alternatives were developed using design provisions from the Florida Greenbook and the FDOT Design Manual (FDM). Alternative A was developed to minimize the right-of-way impacts to residential properties on the south side of Malabar Road and minimize Canal C-20 impacts on the north side of Malabar Road east of Canal C-10. The following features are common between the 89.5' and the 92.5' typical sections:

- Two 11' travel lanes in each direction;
- 15.5' wide median, including Type E curb and gutter;
- Type F curb and gutter outside of the travel lanes; and
- 10' shared-use path on the north side and 6' sidewalk on the south side.
  - The inside edge of the 6' sidewalk is at the back of curb.

The primary difference between the 89.5' and 92.5' typical sections is the presence of Canal C-20 on the north side of Malabar Road east of Canal C-10. In the 92.5' typical, an extra 3' is added on the north side for guardrail protection between the roadway and Canal C-20.

Alternative A utilized a smaller median width of 15.5' and a 6' south side sidewalk at the back of curb to reduce the overall right-of-way needed for the study corridor. A 15.5' median does not meet the minimum 22' Florida Greenbook or FDM median widths for a 45 mph facility; thus, a design variation would be needed if this alternative was to move forward. Alternative B increases the median width to a standard 22' median (including Type E curb and gutter) per FDM criteria.

Alternative B also provides a 4' grass buffer between the south side curb and the sidewalk, which was not provided in Alternative A. The additional 6.5' in the median and 4' grass buffer on the south side equates to the 10.5' difference between the 89.5'/92.5' Alternative A typical sections and the 100'/103' Alternative B typical sections. The following features are common between the 100' and the 103' typical section alternatives:

- Two 11' travel lanes in each direction;
- 22' wide median, including Type E curb and gutter;
- Type F curb and gutter outside of the travel lanes;
- 10' shared-use path on the north side and 6' sidewalk on the south side; and
- 4' grass buffer between the back of the curb and the 6' south side sidewalk.

Similar to Alternative A, the 3' difference between the 100' and 103' typical sections is north side guardrail protection between the roadway and Canal C-20.

The Alternative A and Alternative B typical sections were presented at the Alternatives Public Meeting conducted on Thursday, September 24, 2020, and subsequent local jurisdiction meetings in October 2020. During these meetings, discussion was held regarding the lack of on-road bicycle facilities being provided in the typical section alternatives. While adding on-road bicycle facilities was deemed not feasible by the study team due to the right-of-way and Canal C-20 impacts, widening the south side sidewalk to 8' was explored. A 10' shared-use path is already being proposed on the north side, so widening the south side sidewalk to 8' would provide a wider facility accommodating both pedestrians and bicycles. The 8' south side sidewalk was incorporated into the preferred alternative.

## Bridge Typical Sections

One bridge structure is present over Canal C-10 at approximately Sta. 142+00. Four bridge typical sections were developed in support of the initial typical section alternatives discussed in the previous section:

- Alternative A – Minimum right-of-way bridge typical sections
  - Raised sidewalk alternative
  - Flush sidewalk with traffic separator alternative
- Alternative B – Desired right-of-way bridge typical sections
  - Raised sidewalk alternative
  - Flush sidewalk with traffic separator alternative

The Alternative A bridge typical sections have a 15.5' median consistent with the Alternative A roadway typical section. The Alternative B bridge typical sections have a 22' median consistent with Alternative B roadway typical section. The raised sidewalk bridge typical section (both Alternatives A and B) incorporates a 10' shared-use path on the north side and 6' sidewalk on the south side that is raised above the travel lanes and separated by a 1.5' paved shoulder. A traffic railing with a pedestrian/bicycle railing on top is present to the outside of the bridge structure.



The flush sidewalk bridge typical section (both Alternatives A and B) provides the same 10' shared-use path and 6' sidewalk, but the facilities are flush with the bridge deck and separated from the travel lanes by a 2.5' paved shoulder and 1'4" traffic railing. A pedestrian/bicycle railing is present to the outside of the bridge structure.

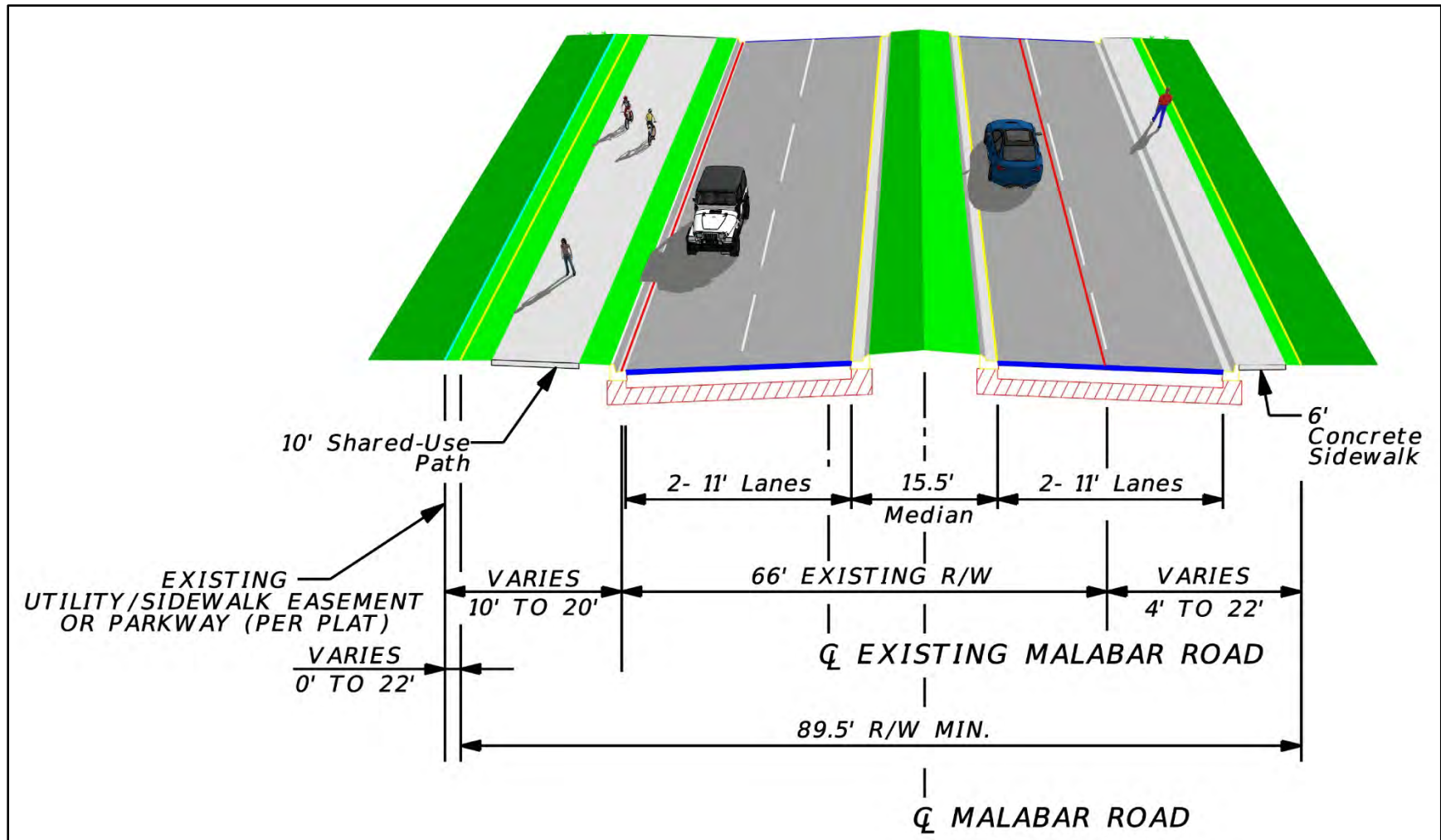


Figure 2: 89.5' Alternative A – St. Johns Heritage Parkway to Canal C-10



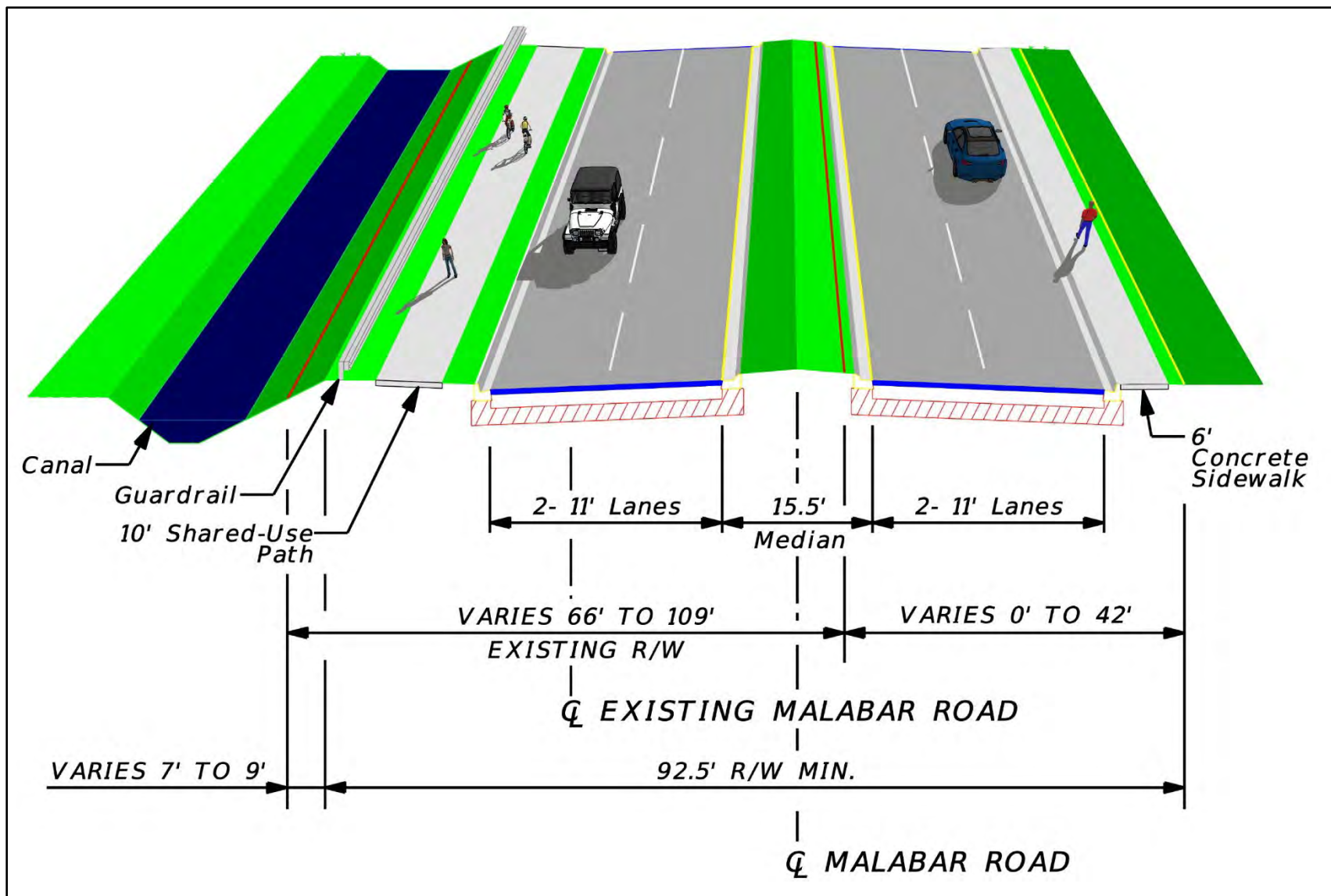


Figure 3: 92.5' Alternative A – Canal C-10 to Sta. 256+80

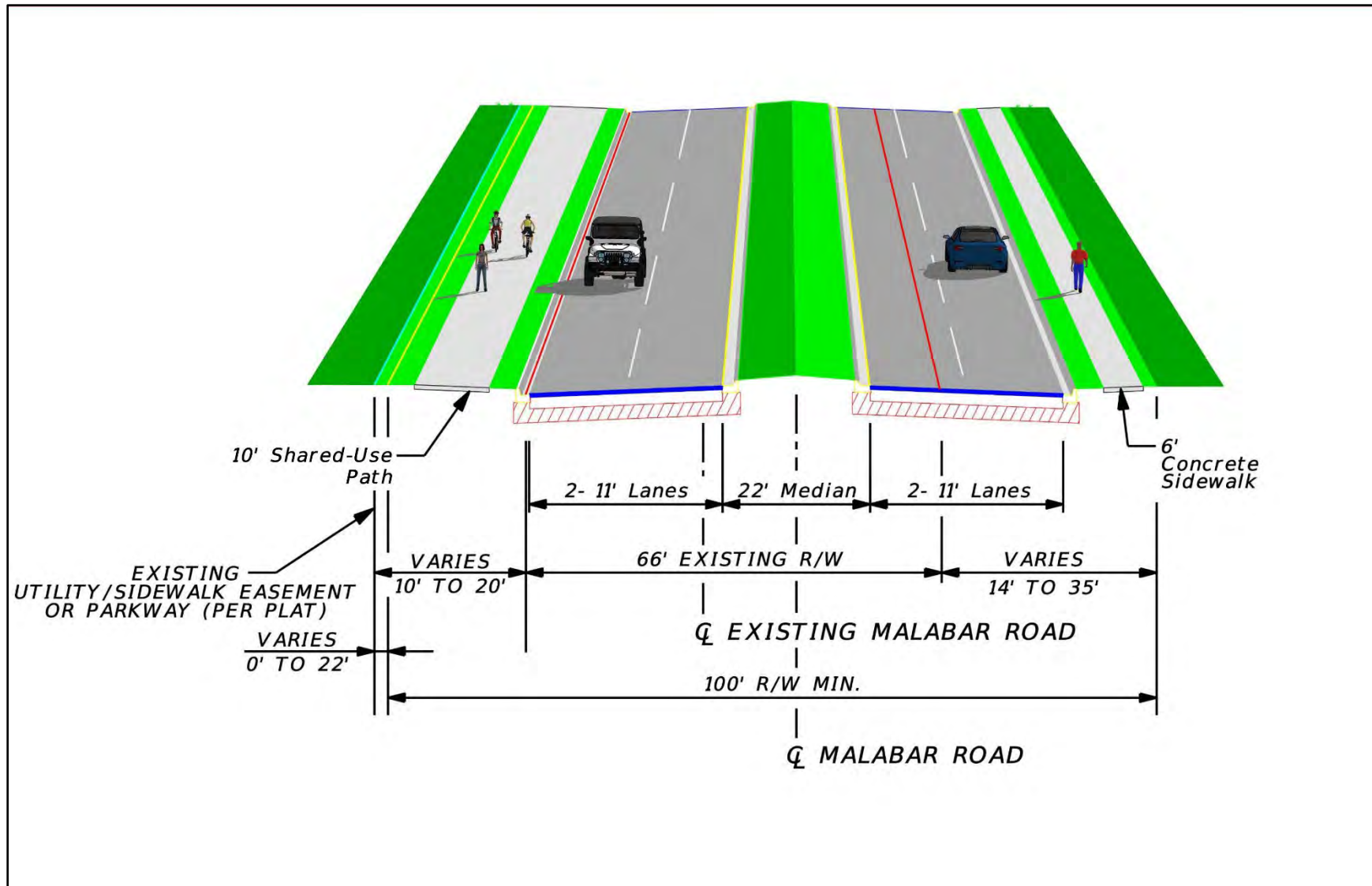


Figure 4: 100' Alternative B – St. Johns Heritage Parkway to Canal C-10



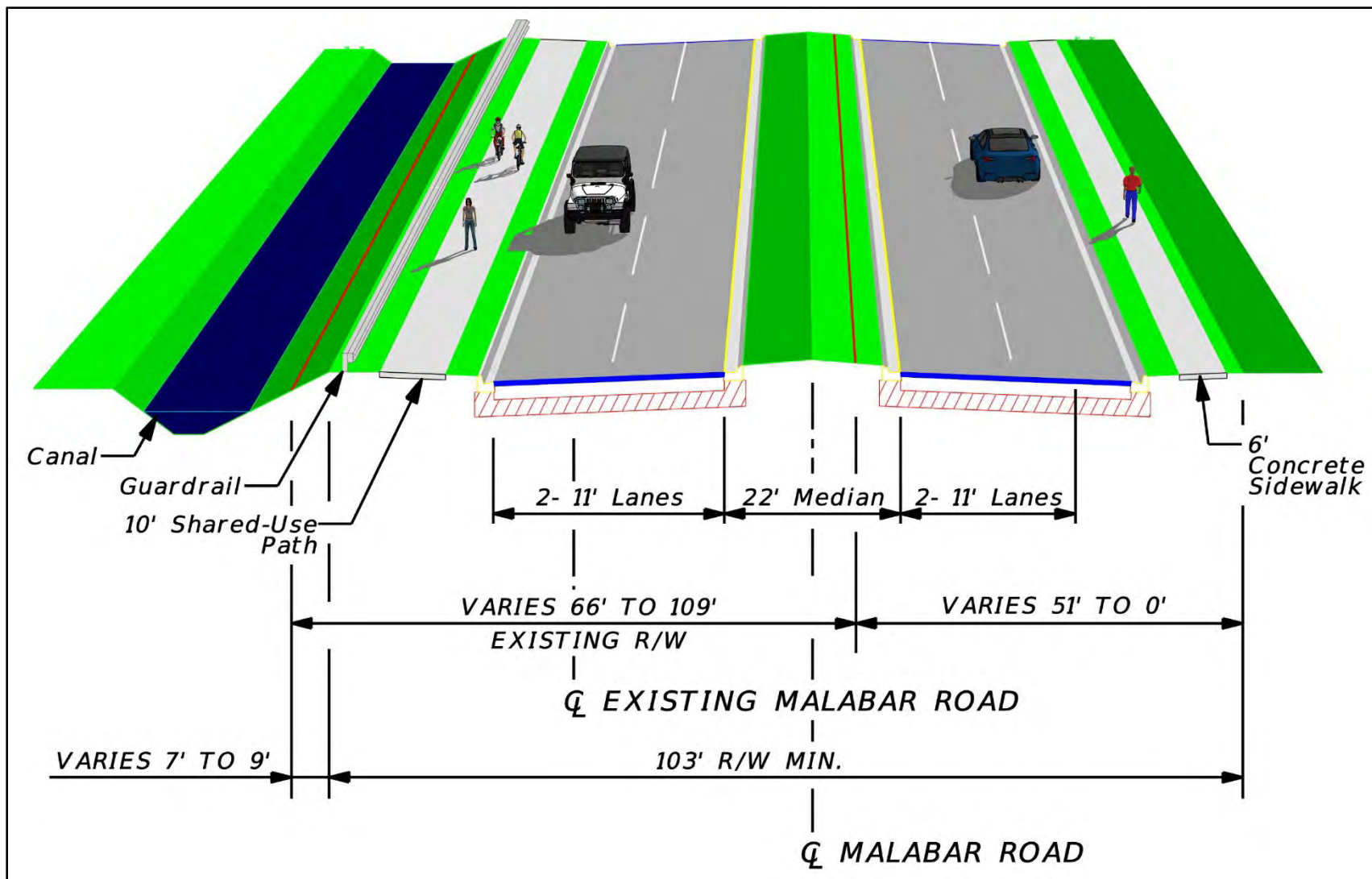


Figure 5: 103' Alternative B – Canal C-10 to Sta. 256+80

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## Intersection Alternatives

The following intersections were reviewed for either a traffic signal/unsignalized intersection or a roundabout:

- Traffic Signal vs Roundabout Evaluation –
  - Malabar Road & St. Johns Heritage Parkway;
  - Malabar Road & Wisteria Avenue/Abilene Drive;
  - Malabar Road & Krassner Drive/Bending Branch Lane;
  - Malabar Road & Jupiter Boulevard; and
  - Malabar Road & Garvey Road.
- Unsignalized Intersection vs Roundabout Evaluation –
  - Malabar Road & Hurley Boulevard; and
  - Malabar Road & Maywood Avenue/Daffodil Drive.

In order to analyze and compare the signalized/unsignalized alternatives to the roundabouts at each location, an intersection operational analysis and safety analysis were performed. Based on this analysis, roundabouts are anticipated to operate better or the same as the signalized/unsignalized intersection at every location except Garvey Road. Roundabouts have been shown to reduce fatal/injury crash types versus signalized/unsignalized intersections, and the results show the roundabout has lower predicted fatal/injury crashes at every intersection.

During the intersection alternatives analysis, it was determined that the following intersections would remain signalized in the preferred alternative due to operational limitations and right-of-way impacts of a roundabout configuration:

- Malabar Road & Plaza Shopping Center; and
- Malabar Road & Minton Road.

## DESCRIPTION OF PREFERRED ALTERNATIVE

### Selection of Preferred Alternative

The purpose of this project is to evaluate the need for capacity improvements (roadway widening) to relieve existing congestion and accommodate projected future traffic demand. The project's secondary goals are to 1) enhance safety conditions; 2) improve multi-modal facilities; and 3) enhance regional and local mobility.

Alternative B with 8' south side sidewalks was selected as the preferred alternative by the City of Palm Bay and Brevard County. Alternative B was selected because it provides the wider median plus the 4' grass buffer, both meeting 2023 FDM standards, while having a negligible impact on right-of-way and only a slighter higher project cost when compared to Alternative A. A wider median would facilitate U-turn movements at directional median openings not having a bulb-

out. The 4-ft grass buffer between the back of curb and the sidewalk enhances pedestrian safety from an errant vehicle and provides more comfort to the pedestrian in the sidewalk. The following bullets summarize how the preferred alternative meets the primary and secondary purpose and need goals noted above:

- Transportation Demand/Capacity
  - In the 2050 build condition, each roadway segment is anticipated to operate at LOS C or better, except the segment from the Plaza Shopping Center to Minton Road.
    - This segment is anticipated to operate at LOS F due to the short distance (approximately 750') between the signalized intersections at the Plaza Shopping Center and Minton Road and the effect of the overlapping delays of these two adjacent signals.
    - The signals at the Plaza Shopping Center and Minton Road will be optimized as one system in the future build condition to enhance operations between the two signals.
  - Each of the signalized intersections are anticipated to perform at LOS E or better, and no intersections operated with a V/C ratio greater than 1.0 in either the 2050 AM or PM peak hour.
- Safety
  - Using the predictive safety analysis methods provided in the Highway Safety Manual (HSM), as traffic volumes increase in the no-build condition, crashes are predicted to increase by over 120 percent between 2020 and 2050.
  - By providing a four-lane facility, the 2050 crashes are predicted to be up to 40 percent less than a two-lane facility with the same traffic volumes.
- Modal Interrelationships
  - A 10' shared-use path will be provided on the north side of Malabar Road.
  - An 8' sidewalk will be provided on the south side of Malabar Road.
  - Existing transit stop access will be enhanced as part of the four-lane widening and sidewalk improvements.
- System Linkage
  - Providing a four-lane Malabar Road from the St. Johns Heritage Parkway to Minton Road would provide at least four travel lanes from the St. Johns Heritage Parkway to US 1 once the planned projects are constructed.
  - The project will also enhance the access to St. Johns Heritage Parkway, a critical north/south arterial in western Brevard County.



## Typical Sections

The preferred alternative typical sections were designed using 2023 FDM criteria as discussed in **Section 4.2** of the *Malabar Road Preliminary Engineering Report*. The following describes the typical section elements:

- Two 11' travel lanes in each direction;
- 22' wide median, including Type E curb and gutter;
- Type F curb and gutter outside of the travel lanes;
- 10' shared-use path on the north side and 8' sidewalk on the south side; and
- 4' grass buffer between the back of the curb and the 8' south side sidewalk.

The following highlights key differences in typical section elements along the Malabar Road study corridor:

- St. Johns Heritage Parkway to Canal C-10 (**Figure 7**) –
  - Primarily contained within 102' to 106' of right-of-way.
    - Between Bending Branch Lane/Krassner Drive and the bridge over Canal C-10, the proposed roadway alignment is generally in the same location as the existing roadway. This was done to maintain the alignment of the westbound travel lanes coming from the bridge. The roadway in this section is positioned further south than the section from St. Johns Heritage Parkway to and Bending Branch Lane/Krassner Drive, resulting in the 106' right-of-way.
    - In front of the Tillman Lakes development (Abilene Drive), the right-of-way expands to 136'.
  - No roadside drainage swales are present within this section.
- Malabar Road over Canal C-10 (**Figure 8**) –
  - Two 11' travel lanes in each direction, a 10' barrier separated shared-use path on the north side, and an 8' barrier separated sidewalk on the south side.
  - 19' mountable raised median on the bridge with two 1.5' inside shoulders.
  - The overall bridge width is 93.25' with the roadway crowned at 2 percent at the centerline of construction.
- Canal C-10 to West of Jupiter Boulevard (**Figure 9**) –
  - Proposed right-of-way width varies between 100' west of Jupiter Boulevard to 194' in the areas where dry retention linear swales are present.
  - Canal C-20 runs parallel to Malabar Road on the north side for this entire section.
- West of Jupiter Boulevard to East of Jupiter Boulevard (**Figure 10**) –
  - Widening is primarily contained within a 101.5' proposed right-of-way footprint.
  - In front of the USPS, the proposed right-of-way reduces to 94.5', and the south side sidewalk is reduced to 6' and brought adjacent to the back of curb.

- Canal C-20 is being relocated to the north and retaining walls are proposed for the north and south sides of the canal.
- East of Jupiter Boulevard to Maywood Avenue/Daffodil Drive (**Figure 11**) –
  - Proposed right-of-way width is typically 101.5' in this section but does widen to 191' in the area where dry retention linear swales are present.
  - Canal C-20 runs parallel to Malabar Road on this section's north side.
- Note the preferred typical section varies through the Maywood Avenue/Daffodil Drive roundabout.
- West of Plaza Shopping Center (**Figure 12**) –
  - Widening is primarily contained within a 107' proposed right-of-way.
  - A third lane is added in the eastbound direction to accommodate turn lane improvements on the Minton Road intersection's western leg.
- The section between the Plaza Shopping Center and Minton Road intersections varies due to the turn lane configurations.



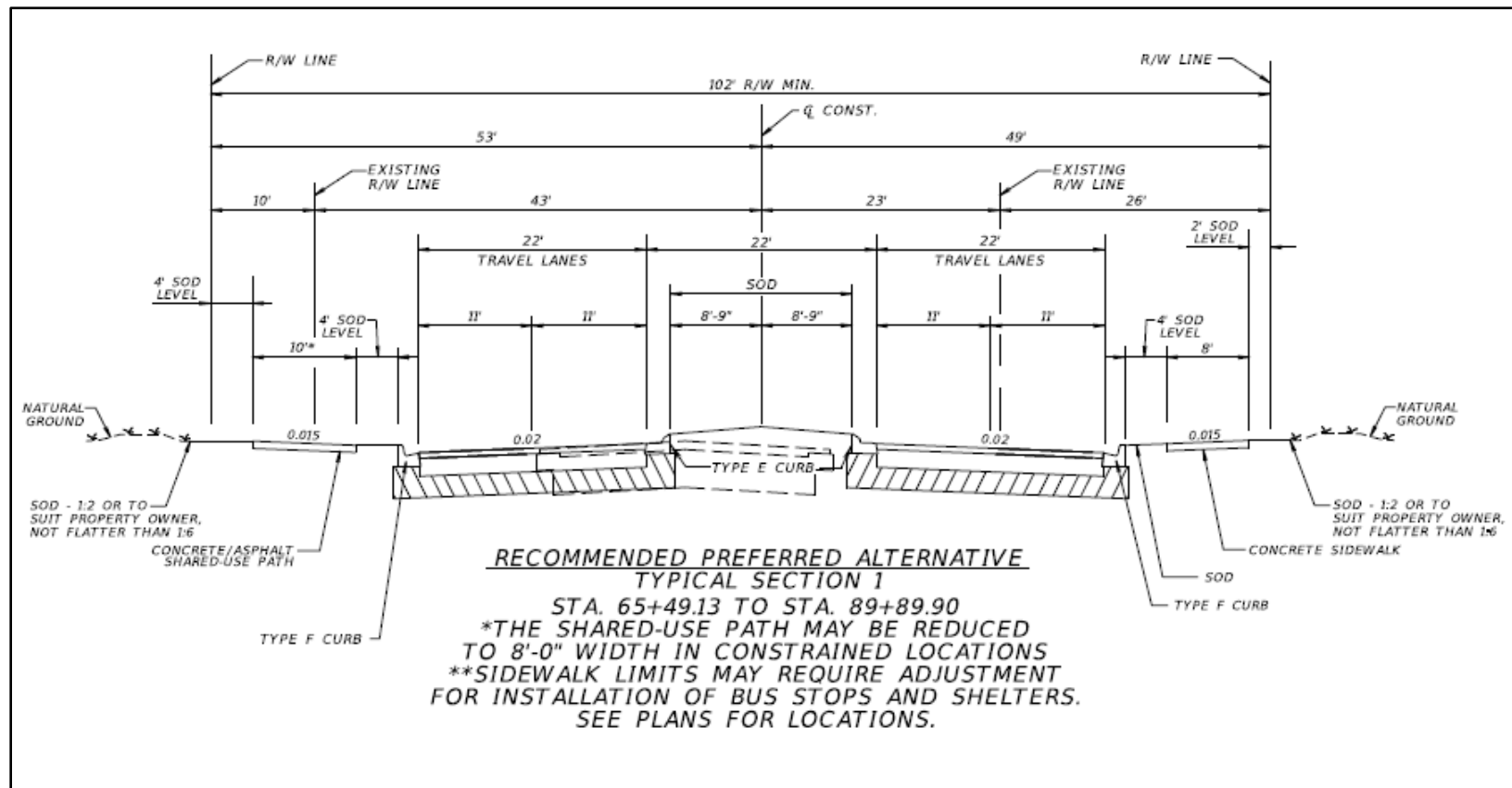


Figure 6: Representative Preferred Alternative Typical Section – St. Johns Heritage Parkway to Canal C-10

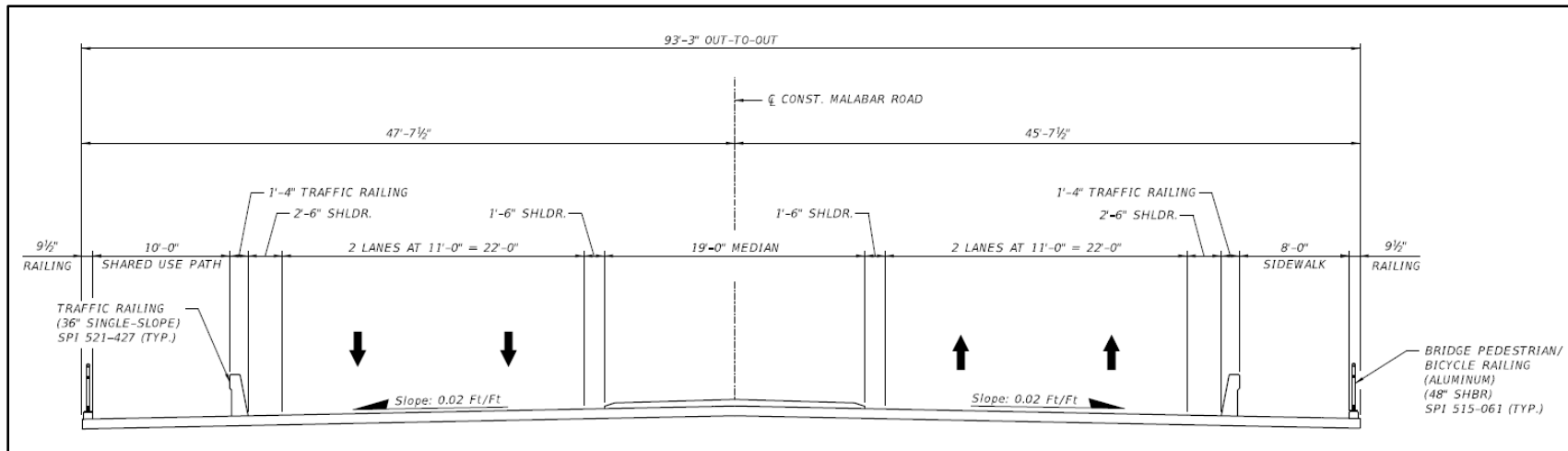


Figure 7: Preferred Alternative Typical Section – Bridge over Canal C-10



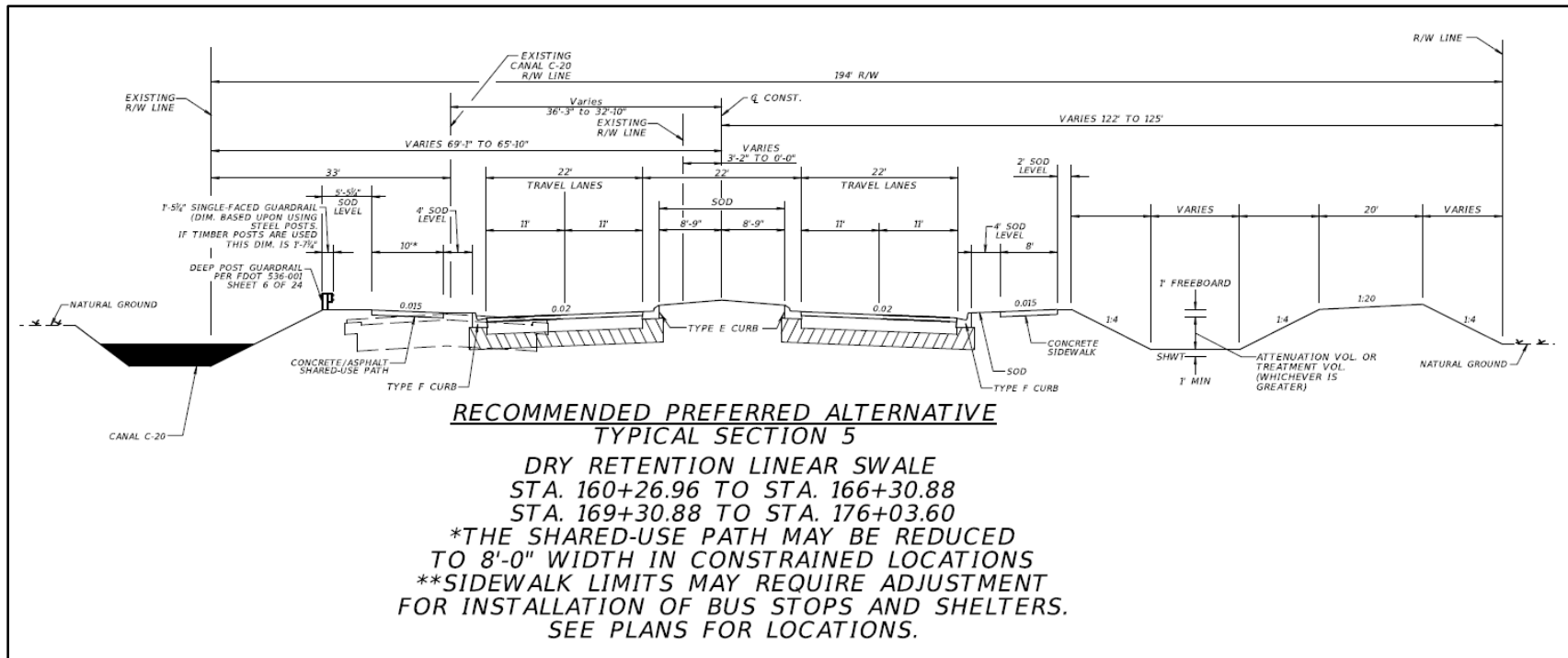


Figure 8: Representative Preferred Alternative Typical Section – Canal C-10 to West of Jupiter Boulevard

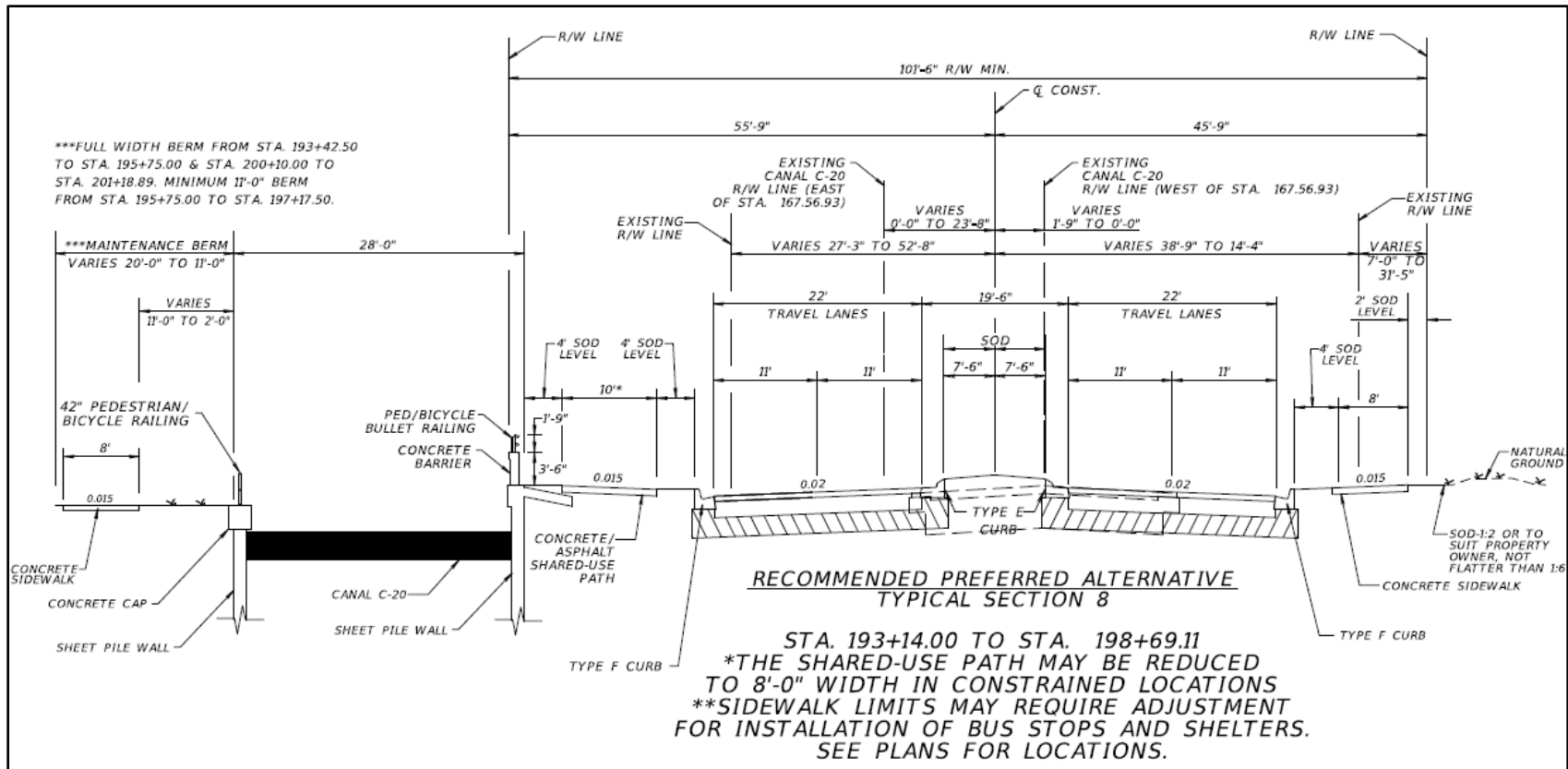


Figure 9: Representative Preferred Alternative Typical Section – West of Jupiter Boulevard to East of Jupiter Boulevard



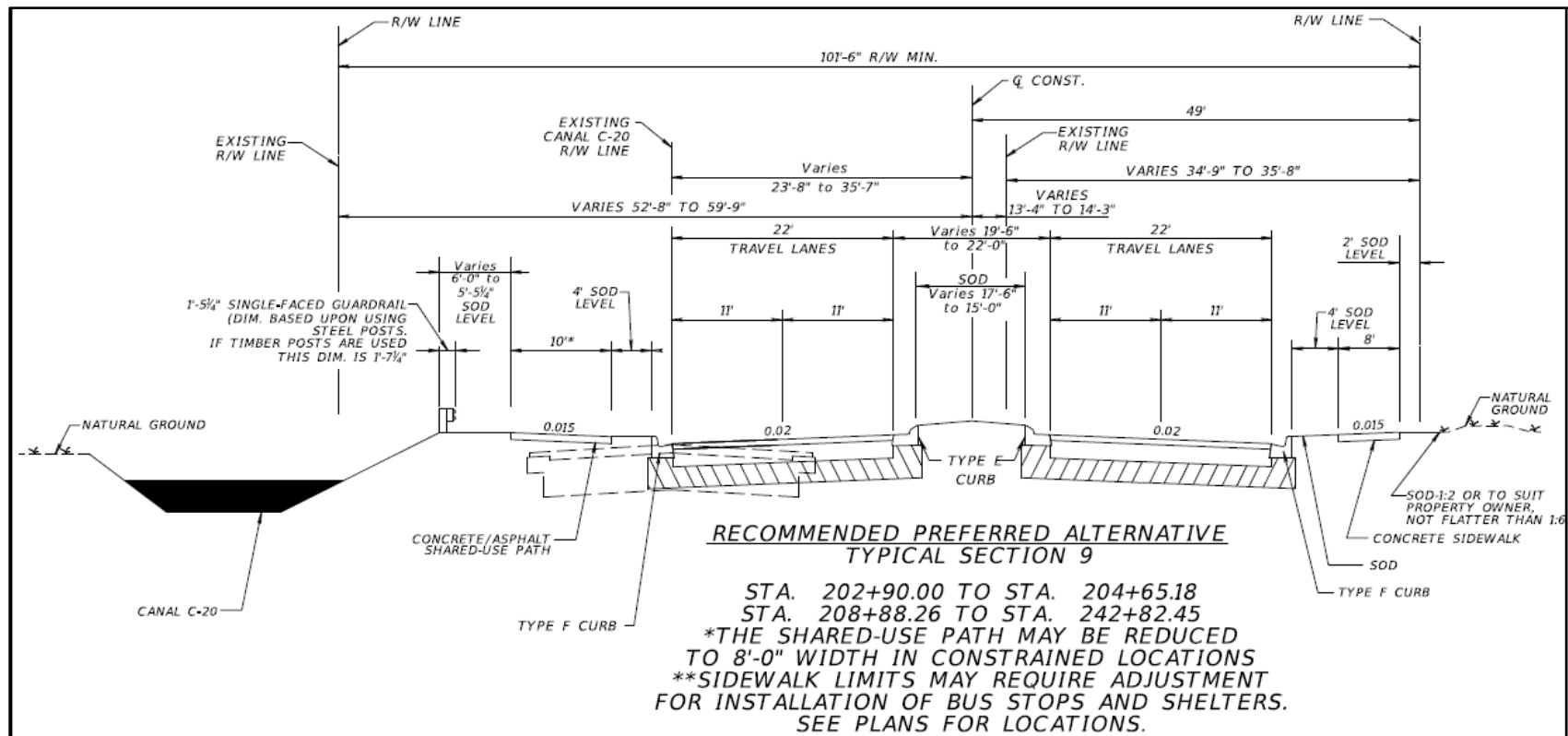


Figure 10: Representative Preferred Alternative Typical Section – East of Jupiter Boulevard to Maywood Avenue/Daffodil Drive

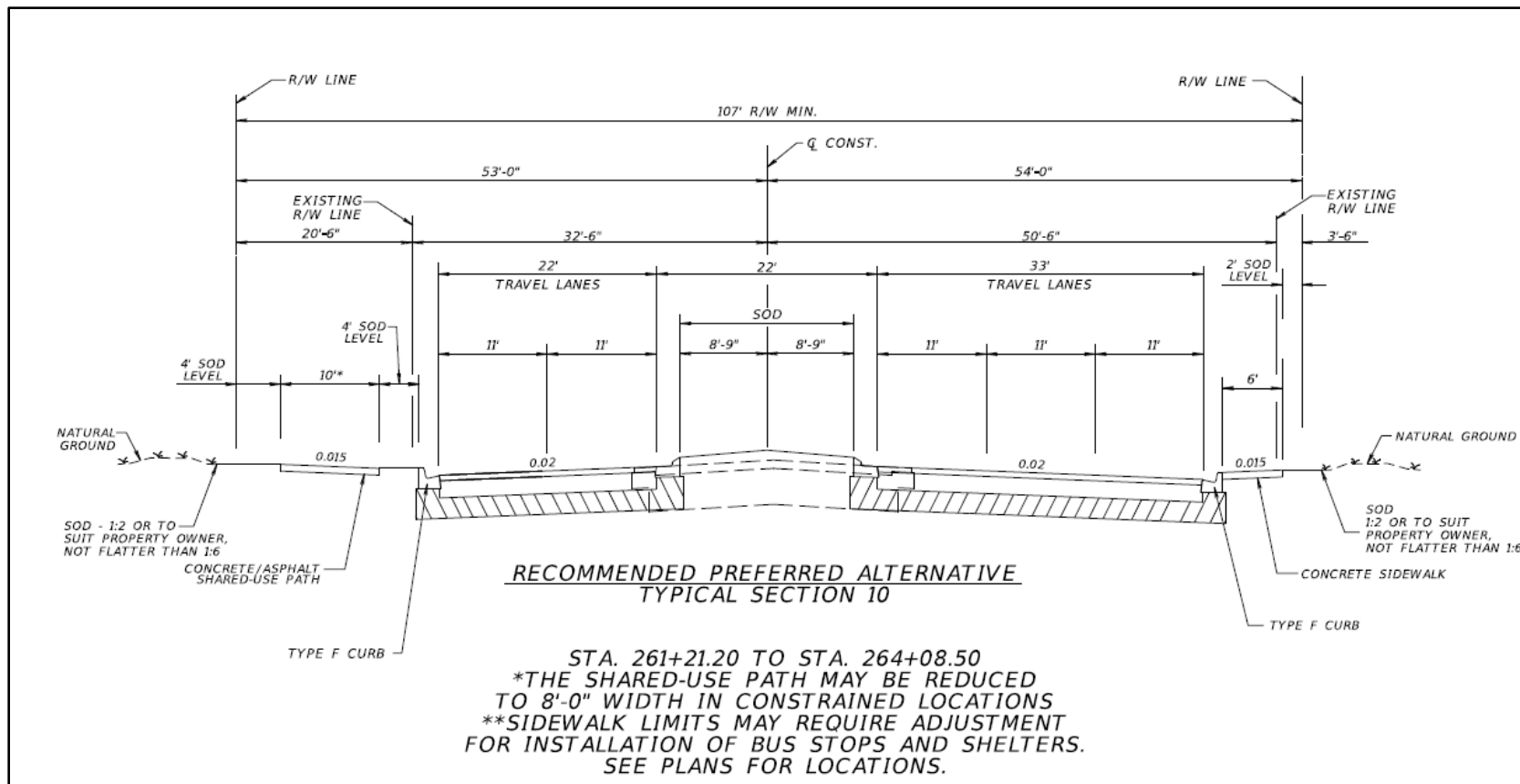


Figure 11: Representative Preferred Alternative Typical Section – West of Plaza Shopping Center



## Intersections

Based on the intersection alternatives analysis, the following intersection control types are recommended for the preferred alternative:

- Traffic Signals –
  - Malabar Road & Jupiter Boulevard\*;
  - Malabar Road & Garvey Road;
  - Malabar Road & Plaza Shopping Center; and
  - Malabar Road & Minton Road.
- Roundabouts –
  - Malabar Road & St. Johns Heritage Parkway;
  - Malabar Road & Krassner Drive/Bending Branch Lane;
  - Malabar Road & Hurley Boulevard; and
  - Malabar Road & Maywood Avenue/Daffodil Drive.
- Two-Way Stop Control –
  - Malabar Road & Snapdragon Drive;
  - Malabar Road & Championship Circle;
  - Malabar Road & Wisteria Avenue/Abilene Drive;
  - Malabar Road & Bavarian Avenue;
  - Malabar Road & Watoga Avenue/Avery Springs;
  - Malabar Road & Palm Bay Public Works Driveways;
  - Malabar Road & Post Office;
  - Malabar Road & Santa Rosa Avenue;
  - Malabar Road & Madalyn Landing; and
  - Malabar Road & Sutherland Drive.

\* While the intersection of Malabar Road and Jupiter Boulevard would have improved operations and safety as a roundabout, the signal alternative was selected due to constrained right-of-way. The US Post Office in the intersection's southwest corner is federal property and cannot be impacted, shifting the alignment to the north requiring the Canal C-20 to be relocated even as a signalized intersection. The roundabout's larger footprint would require additional Canal C-20 relocation impacting nearby residences.

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## INTRODUCTION

This report presents the findings of a Phase I cultural resource assessment survey (CRAS) conducted in support of a PD&E study to Malabar Road in Brevard County, Florida. The City of Palm Bay, Florida, is conducting a PD&E study for the proposed improvements to Malabar Road from east of St. Johns Heritage Parkway to Minton Road (**Figure 13**). The PD&E study includes widening Malabar Road with the construction of additional lanes and traffic control intersections, the replacement of FDOT Bridge No. 704004, and the rerouting of approximately 1,500 feet (457.2 meters) of Canal C-20. The roadway improvements will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

To encompass all potential improvements, the area of potential effects (APE) was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road (**Figure 14**). This APE was extended to the back or side property lines of parcels adjacent to the right-of-way, or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

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 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 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 PD&E Manual (revised July 2020), as well as 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 Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42).

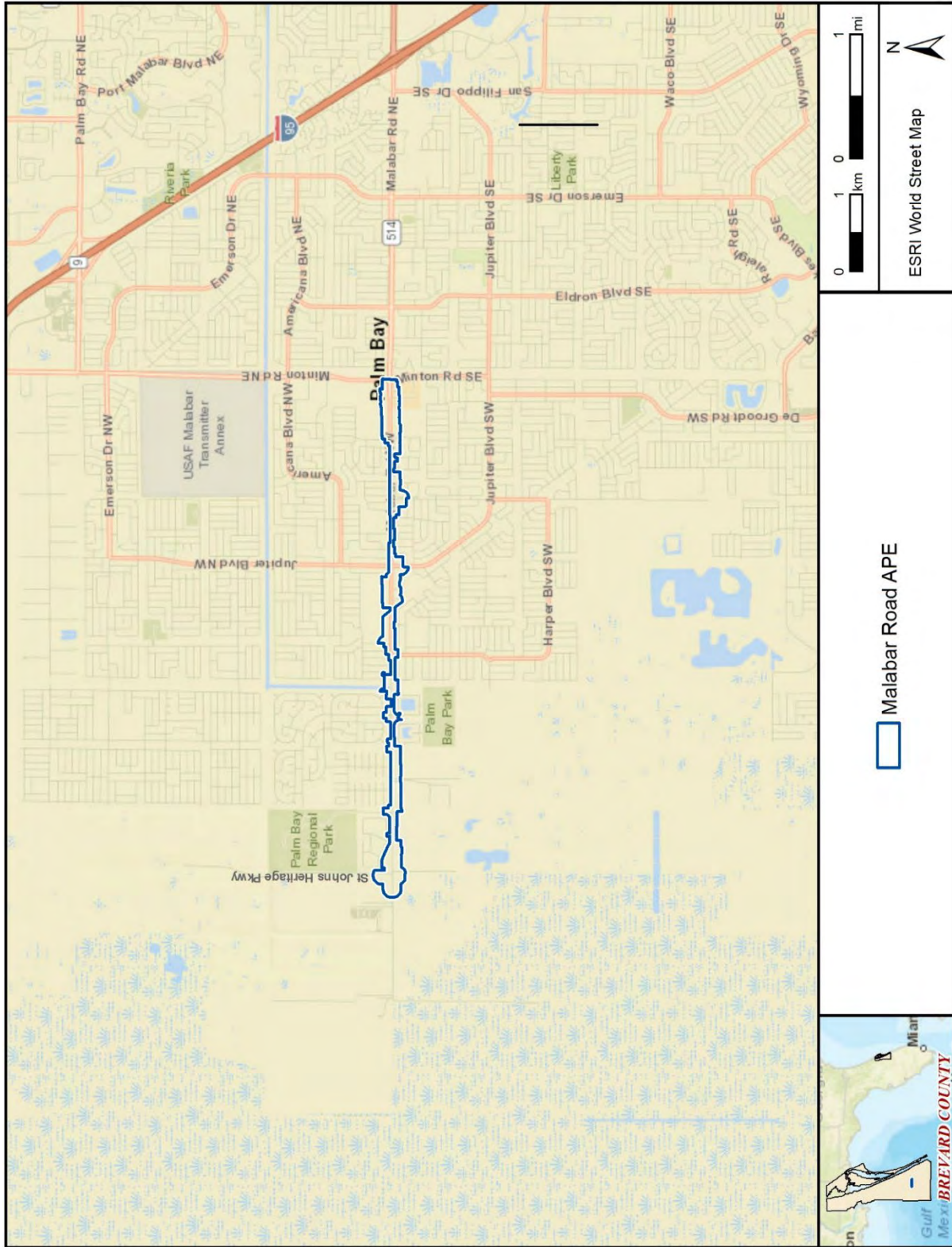


Figure 13: Malabar Road project location in Brevard County, Florida



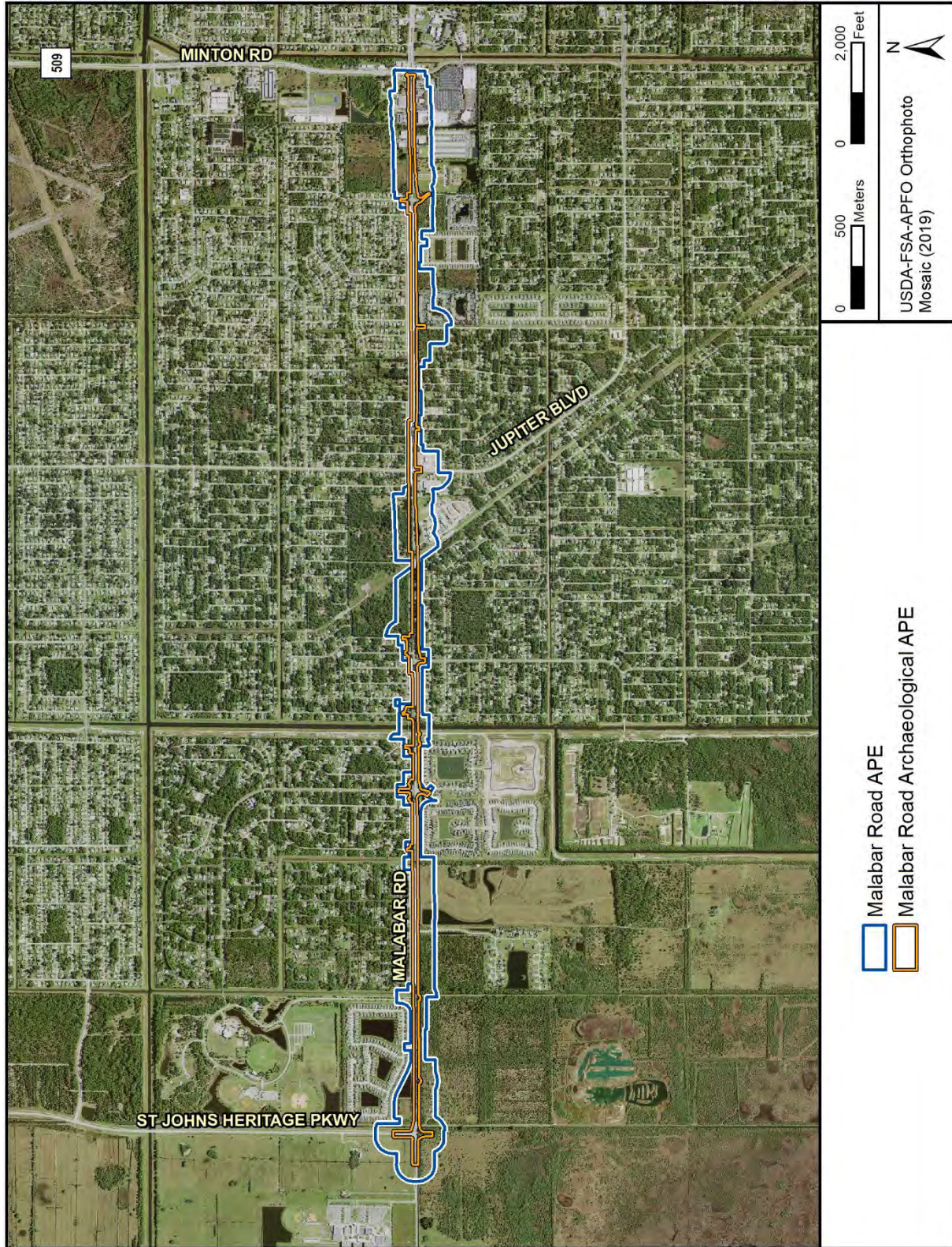


Figure 14: The Malabar Road APE, Brevard County, Florida

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## PROJECT LOCATION AND ENVIRONMENT

### LOCATION AND MODERN CONDITIONS

The Malabar Road project is an approximately 3.96-mile (6.37-kilometer) long corridor located in the City of Palm Bay in southern Brevard County, Florida. The project falls within Sections 33, 34, 35, and 36 of Township 28 South, Range 36 East and Sections 1, 2, 3, and 4 of Township 29 South, Range 36 East. Housing developments are located along the central portion of the proposed corridor, while commercial developments are located in the eastern portion of the proposed corridor; the western end of the proposed corridor has forested tracts that are former orchards (see **Figure 14**). The terrain crossed by the corridor slopes up slightly to the east and consists of an elevation ranging from 18 to 25 feet (5.4 to 7.6 meters) above mean sea level (amsl).

Geologically, the Malabar Road APE is within the St. Johns Marsh, part of the Eastern Flatwoods District. The St. Johns Marsh is described as seasonally flooded marshes and grass prairies, with no karst features and organic soils and having cabbage palm (Brooks 1981). Soils within the APE consist of poorly drained soils, including Pineda, EauGallie, Wabasso, and Riviera sands, and Malabar, Holopaw and Pineda soils (**Table 1; Figure 15**). Multiple canals and retention ponds are in the immediate area of the APE, and the St. Johns River is located 3.3 miles (5.3 kilometers) to the west of the APE.

**Table 1: Soils by Acreage and Drainage Characteristics within the Malabar Road APE**

| Soil                               | Acreage     | Percent of Total Acreage | Drainage       |
|------------------------------------|-------------|--------------------------|----------------|
| EauGallie sand                     | 10.08 acres | 15.6%                    | Poorly drained |
| Pineda sand                        | 27.31 acres | 42.2%                    | Poorly drained |
| Riviera sand                       | 1.59 acres  | 2.5%                     | Poorly drained |
| Wabasso sand                       | 3.15 acres  | 4.9%                     | Poorly drained |
| Malabar, Holopaw, and Pineda soils | 22.62 acres | 34.9%                    | Poorly drained |

### PALEOENVIRONMENT

Between 18,000 to 12,000 years before present (BP), Florida was a much cooler and drier place than it is today. Melting of the continental ice sheets led to a major global rise in sea level (summarized for long time scales by Rohling et al. 1998) that started from a low stand of -120 meters at 18,000 BP. The rise was slow while glacial conditions prevailed at high latitudes but became very rapid in the latest Pleistocene and earliest Holocene. It became warmer and wetter rather rapidly during the next three millennia. By about 9000 BP, a warmer and drier climate began to prevail. These changes were more drastic in northern Florida and southern Georgia than in southern Florida, where the “peninsular effect” and a more tropically influenced climate tempered the effects of the continental glaciers that were melting far to the north (Watts 1969, 1971, 1975, 1980). Sea levels, though higher, were still much lower than at present; surface



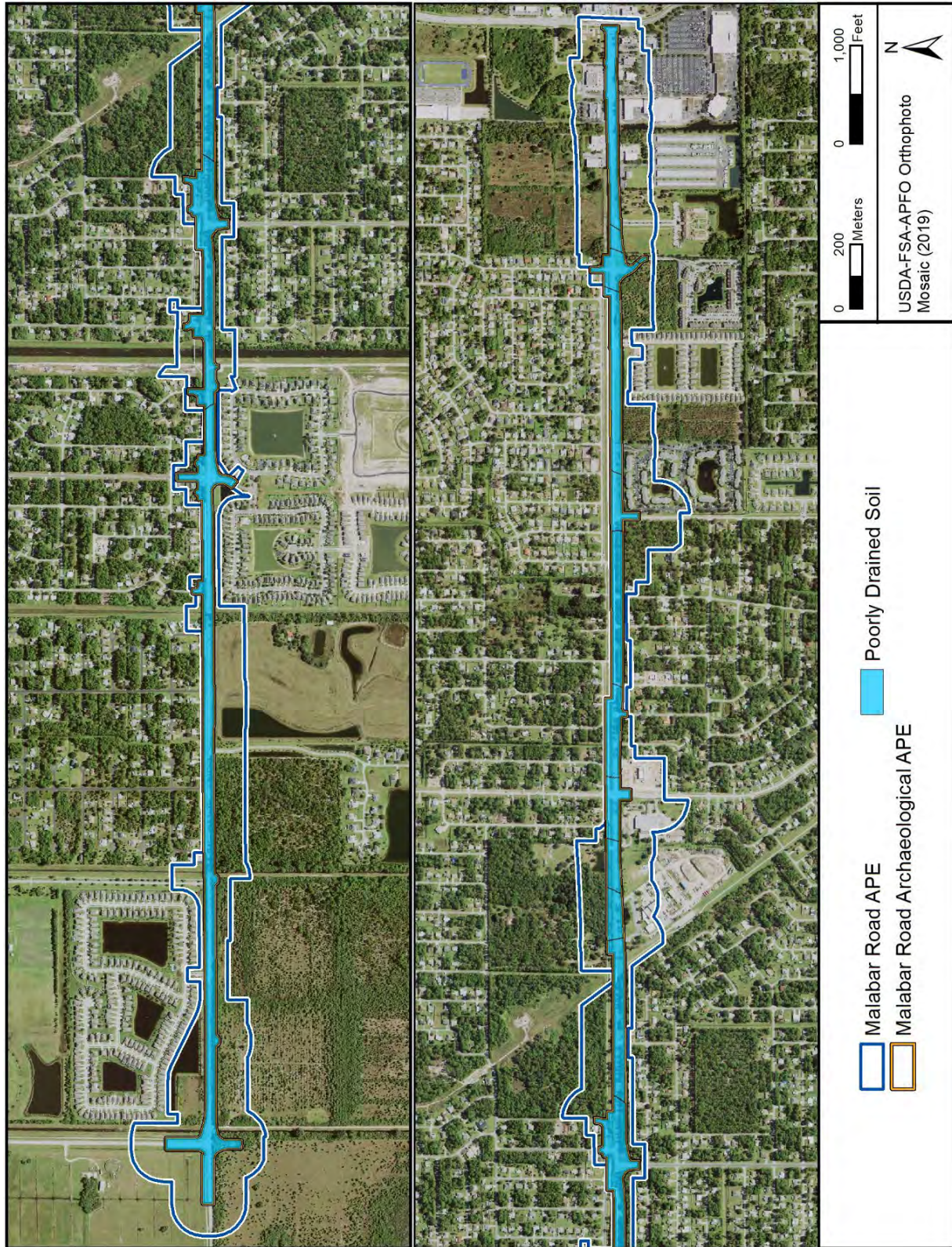


Figure 15: Soil drainage characteristics within the Malabar Road APE



water was limited, and extensive grasslands probably existed, which may have attracted mammoth, bison, and other large grazing mammals. By 6000–5000 BP, the climate had changed to one of increased precipitation and surface water flow. By the late Holocene, ca. 4000 BP, the climate, water levels, and plant communities of Florida attained essentially modern conditions. These have been relatively stable with only minor fluctuations during the past 4,000 years.

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## HISTORIC OVERVIEW

### NATIVE AMERICAN CULTURE HISTORY

The following prehistoric overview of central Florida consists of a four-part chronology, with each period based on distinct cultural and technological characteristics recognized by archaeologists. From oldest to most recent, the four temporal periods are Paleoindian, Archaic, Post-Archaic, and Contact. While each period is briefly discussed below, readers are referred to Milanich (1994) for a more comprehensive treatment of the prehistory of Florida.

#### **Paleoindian Period (10,000–8000 BP)**

The most widely accepted model for the peopling of the Americas argues that populations originating in Asia crossed the Beringia land bridge that formerly linked Siberia to Alaska and entered the North American continent some 12,000 years ago (Smith 1986). However, data have mounted in support of entry prior to 12,000 years ago (Adovasio et al. 1990; Dillehay et al. 2008). Alternative pre-12,000 BP migration routes that have been hypothesized include populations traveling along the Pacific and Atlantic coasts using boats or following an exposed shoreline (Anderson and Gillam 2000; Bradley and Stanford 2004; Dixon 1993; Faught 2008; Fladmark 1979). Their early occupation sites would now be inundated as a result of higher sea levels. Regardless of the precise timing of the first occupations of North and South America, the current evidence suggests that Florida was not intensively inhabited by humans prior to about 14,500 years ago (Halligan et al. 2016).

While there is abundant archaeological evidence for an early occupation of northern and central Florida (Milanich 1994), there is no firm evidence for people inhabiting southeast Florida at this early time. Discoveries of human skeletal remains near Vero Beach in 1915 and Melbourne in 1925 were presumed to be of early origin because of their inferred association with extinct Pleistocene mammals (Gidley and Loomis 1926; Sellards 1916, 1917). Analysis of the Vero Beach finds by Hrdlicka (1918, 1922) concluded that the human remains were intrusive into Pleistocene deposits. However, a later analysis of the skeletal remains (Stewart 1946) and a comparison of the geological context of the finds with similar discoveries in southwest Florida (Cockrell and Murphy 1978) suggest that the original interpretations may have been correct. To date, however, there has been no independent data from the area that could confirm the presence of humans there prior to 10,000 BP.

#### **Archaic Period (10,000–2500 BP)**

##### ***Early Archaic Period (10,000–7000 BP)***

The beginning of the Archaic period coincides with the onset of the Holocene period at approximately 10,000 BP. This period can be divided into two horizons based on differences in stone tool morphology: Side-Notched or Bolen (10,000–9000 BP) and Stemmed or Kirk (9000–8000 BP). Both horizons are well represented in northern and central Florida (Milanich 1994). The Cutler site in Miami has revealed much information about the Bolen horizon in southeast

Florida. The Kirk horizon is not well represented in southeastern Florida, but the Windover site in Brevard County may contain a Kirk component.

The earliest firm evidence for human occupation in southeast Florida dates to about 10,000–9500 BP. At the Cutler site, side-notched Bolen points were recovered in association with animal bones and a hearth feature (Carr 1986). Based on radiocarbon dates from a cultural stratum believed to be associated with the Bolen points, the Cutler site is dated to around 9600 BP. At that time, south Florida was just emerging from a period that was much drier than at present (Brooks 1974; Gleason et al. 1974). Lake Okeechobee and the Everglades did not exist, sea levels were much lower than at present, surface water was limited, and extensive grasslands probably existed, which may have attracted mammoth, bison, and other large grazing mammals. This landscape inhibited intensive human habitation except perhaps along the coast; however, any coastal sites are now probably inundated by higher sea levels.

The Windover site, located in Brevard County north of the current APE, provides some of the best information on Early Archaic burial practices and non-lithic material culture. Excavations at this wetland cemetery revealed the remains of 168 individuals along with numerous perishable items, such as bone pins, awls, incised tubes, shell tools and beads, an antler atlatl weight, wooden stakes, cordage, mats, and fabric. Radiocarbon dates associated with human bone or wooden artifacts range from  $8120 \pm 70$  BP to  $6980 \pm 80$  BP (Doran 2002), placing it at the terminal end of the Kirk horizon as it has been defined throughout the rest of the southeastern United States (Chapman 1985; Sherwood et al. 2004). The radiocarbon dates indicate that the interments were made over a long period of time and suggest that the pond was used repeatedly for interments for more than a millennium. The high degree of preservation of the bodies and the lack of any evidence of scavenging of the remains by animals suggest that the remains were placed in the cemetery within a few days or even hours after death (Dickel 2002). The interments were apparently placed in five or six discrete groups within the pond, and individual clusters may have been marked by stakes (Dickel 2002:80). The presence of marine shells at the site supports the hypothesis that these people moved from the coast, which at this time was much farther away from the site than it is today, to the interior on a relatively regular basis. Analysis of archaeobotanical remains from the site indicate occupation during the late summer/early fall (Newsom 2002:208; Tuross et al. 1994:297–298).

### ***Middle Archaic Period (7000–5000 BP)***

A dramatic increase in precipitation and runoff in south Florida is indicated by peat deposits in the Everglades that began to form about 6000–5000 BP (McDowell et al. 1969). This enabled native peoples to expand into formerly inhospitable locations. Sea levels reached modern levels and may have exceeded them for short periods (Dorsey 1997; Tanner 1991). Modern estuaries began to form, and exploitation of coastal resources began in earnest, particularly along the northern Atlantic coast (Ste. Claire 1990). The expansion of populations into new locations resulted in a variety of settlement and subsistence strategies adapted to local conditions. Sedentary settlements were established along productive rivers such as the St. Johns or in coastal areas in southwest and northeast Florida (e.g., Ste. Claire 1990). In other areas, a more mobile lifestyle was practiced (Austin 1996, 1997).



Locally, sea level rise is indicated by the deposition of coastal marsh mud in the Indian River lagoon at approximately 6000–5000 BP (Bader and Parkinson 1990). Yet there is limited archaeological evidence for Middle Archaic occupation of southeast Florida. Pre-ceramic Archaic sites have been documented in the interior around Lake Okeechobee (Gleason and Stone 1994; Hale 1989:48, 55–56), but the only documented Middle Archaic site thus far identified along the southeast coast is the Westridge site on Pine Island Ridge in Broward County (Carr et al. 1992). The Gauthier site in Brevard County contains a Middle Archaic cemetery (Carr and Jones 1981; Sigler-Eisenberg 1985).

This apparent absence of Middle Archaic sites in southeast Florida may be due in part to their low archaeological visibility. The lack of lithic raw materials for tool production in south Florida forced a greater emphasis on the use of perishable materials such as wood, bone, and shell. The highly acidic soils of the region would have destroyed these organic materials, leaving very little behind for archaeologists to discover. The dependence on perishable materials for much of the material culture of Archaic peoples is reflected at Windover Pond, where organic artifacts were recovered in abundance while lithic artifacts were nearly absent (Dickel 2002).

### **Late Archaic Period (5000–2500 BP)**

By 5000 BP, the climate and environments of Florida had nearly reached modern conditions. This allowed further regionalization of cultures throughout Florida, as individual societies developed increasingly sophisticated adaptations to their local environments (Milanich 1994). The earliest evidence of pottery made by the native peoples of Florida appears during the Late Archaic, more than 4,000 years ago. Referred to as Orange pottery by archaeologists, this early ceramic ware was tempered with vegetal fibers, either thin strands of palmetto or Spanish moss (Bullen 1972; Griffin 1945). During a span of approximately 1,500 years, plain, incised, and punctuated types of pottery were produced, and other decorated variants underwent periods of stylistic popularity. Early pots were hand molded and tended to be thick walled, whereas some of the later vessels were thinner and formed by coiling.

The Orange culture is known primarily from the northeast Florida Atlantic coast and St. Johns River drainage basin. In addition to the distinctive fiber-tempered pottery, artifacts used by the Orange peoples include *Busycon* adzes and *Strombus* celts. It is possible that the *Busycon* adzes found in northeast Florida at this time were of local origin, while the *Strombus* celts were traded into the area from southeastern Florida (Wheeler 1992). Site types are generally oyster and coquina shell middens along the coast and freshwater pond snail middens along the inland rivers and streams. Some coastal shell rings also have been observed (Newman and Weisman 1992).

Work at Ten Mile Creek in St. Lucie County (south of Brevard County) identified four sites with fiber-temper or fiber/mixed-temper pottery, providing evidence of a Late Archaic Orange culture in southeast Florida (New South Associates, Inc. 2003). Farther to the south in Martin County, Orange populations were present and were almost exclusively coastal (Carr et al. 1995). Semi-fiber-tempered sherds were recovered from the Mt. Elizabeth site, and Orange populations may have migrated to that area from the Indian River estuary farther north. The Joseph Reed Mound on Jupiter Island may represent one of the more southerly Orange settlements. Although the

Reed Mound has been damaged by storm surges, it was once probably a constructed ring made up mostly of oyster shell. In this respect, it resembles Orange-period shell rings documented in northeast Florida (Newman and Weisman 1992).

## POST-CONTACT HISTORY

### European Exploration and Early Settlement, 1513–1821

The area that is now Brevard County served as an important stage for many early European expeditions in North America. Some historians believe that the Italian captain John Cabot sailed south along the Brevard coast during his 1498 explorations (Dovell 1952; Eriksen 1994). There also is evidence that Spanish slave traders raided indigenous coastal villages, for when Juan Ponce de León came to Florida, he found a local who understood Spanish. Ponce de León left Puerto Rico on March 3, 1513, with three ships. After sailing on a northwesterly course for 30 days, the ships landed either north of Cape Canaveral (Milanich 1995) or in the vicinity of modern-day Melbourne Beach (Eriksen 1994; Gannon 1996). Ponce de León called this land *La Florida* since it was sighted during the Feast of Flowers (*Pascua Florida*) (Milanich 1995). Ponce de León remained at this initial landing place for six days before pulling anchor and sailing toward Jupiter Inlet, where he landed to restock firewood and water for the ships. The fleet rode the countercurrents of the Gulf Stream to Biscayne Bay and eventually rounded the southern tip of the peninsula (Gannon 1996; Milanich 1995). The island off the Brevard coast was named *Canaveral*, the Spanish term for canebrake. The Cape is found on many sixteenth-century maps and is one of the oldest place names in North America (Eriksen 1994).

The Gulf Stream located off the Brevard coast was an important thoroughfare for the transportation of New World supplies to Europe. The Spanish treasure galleons rode this warm current from Havana through the Bahama Channel. Wrecks were common in the treacherous shoals around Cape Canaveral, and the local tribe, the Ais, would often recover the cargo. The Spanish crown realized the importance of this trade route, and when they heard that the French were developing a colony, Fort Caroline, on the St. Johns River near modern-day Jacksonville, they decided to act. Pedro Menéndez de Avilés, a highly respected officer in the Spanish navy, was issued the task of eradicating the French influence in the area and starting a colony in *La Florida* (Milanich 1995). The French colony was awaiting supplies and reinforcements coming from France under the command of Jean Ribault. Menéndez felt it was crucial to reach and destroy Fort Caroline before Ribault arrived. In August 1565, Menéndez, with his fleet of 10 ships, sighted Cape Canaveral (Gannon 1996; Milanich 1995). The Spanish force searched for six weeks along the northern Florida coast before they found the French fort. A tropical storm had scattered the French defenses and left the fort an easy target for Menéndez to destroy. While Menéndez marched south along the coast to meet the wayward French force, he kept a detailed description of the area, including Brevard County. The Spanish garrison Santa Lucia was constructed on the plateau near Jupiter Inlet as a line of defense for the new colony (Eriksen 1994; Milanich 1995).

In 1605, the Spanish sent a delegation under the command of Alvaro Mexia to the Brevard area. The diplomat was charged with placating the aggressive Ais and mapping the region. His mission was a success. Mexia was named an honorary chief of the tribe, and the Indian and Banana Rivers



(which the Spanish called *Rio de Ais* and *Ulumay Lagoon*) were explored and recorded. Mexia's maps detail many native settlements along the shores of Mosquito Lagoon (at the north end of the Banana River). It is possible that his entourage spread orange seeds along the banks of the Indian River (Eriksen 1994).

On July 24, 1715, a flotilla of 11 Spanish ships carrying 14 million pesos in gold, silver, and jewels left Havana for Europe. A few days into the voyage, 10 of the 11 ships wrecked off the East Florida coast between St. Lucie and Mantanzas. Approximately 700 sailors died, and an additional 1,500 were washed up on the coast. The Ais aided the Spaniards by providing them with supplies and instructions for gathering food in the dunes. The Spanish government, desperate to recover the lost treasure, established an encampment of salvers in the vicinity of the present-day Sebastian State Park in the far southern portion of Brevard County. Salvers recovered only one-third of the lost cargo (Eriksen 1994).

In the mid-1700s, European colonial powers fought a worldwide war, the Seven Years' War, as a means to consolidate their colonial holdings. After the British victory in the Seven Years' War in 1763, they traded their Havana conquest to Spain for Florida. The British divided the colony along the Apalachicola River into East and West Florida. In 1765, the botanist John Bartram and his son William searched for the St. Johns River headwaters (Eriksen 1994; Tebeau 1971). The two became the first Europeans to document the Brevard region (Eriksen 1994). In 1783, the Treaty of Paris restored Florida to Spain, whose control of the territory was now quite tenuous (Tebeau 1971). Vicente Manuel de Zéspedes, the Spanish governor, wrote to the king in 1785 that isolated groups of Americans had settled in the area (Eriksen 1994; Tebeau 1971). Immigrants from the native tribes north of Florida now numbered 5,000 to 6,000 in the colony. The majority of these "Seminoles" were confined west of the St. Johns River. Brevard County at this time was known as the Mosquito Coast (Eriksen 1994).

### **American Territorial Period through the Civil War, 1821–1861**

Florida became a territorial possession of the United States after President James Monroe ratified the Adams-Onís Treaty on February 22, 1821. General Andrew Jackson was appointed governor of the territory later that same year (Eriksen 1994; Tebeau 1971). Jackson partitioned Florida into two counties, Escambia to the west and St. Johns to the east. In 1824, the area encompassing most of east-central Florida, including Brevard County, was designated as Mosquito County. Colonel James Gadsden led a survey party through the eastern portion of the county in 1825 to find a route for a road from St. Augustine to what is now Dade County (Eriksen 1994; Fernald and Purdum 1992). Close to 4.0 million acres of the interior of the state was the reservation of the Seminoles, including the southwestern corner of modern-day Brevard County (Mahon 1985).

On Christmas Day 1835, the Second Seminole War brought conflict to East Florida when Native American forces razed Mosquito Lagoon plantations. Along with a severe freeze in 1835, the war decimated Mosquito County's population, as most everyone fled to safe havens outside the county (Shofner 1995). The military erected forts throughout the Brevard area. Six hundred mounted militiamen, under General Joseph Hernandez's command, constructed Fort Ann a mile south of modern-day Haulover Canal near Titusville. Camp Hernandez was erected south of

present-day Scottsmoor in northern Brevard. General Hernandez collected his troops at the camps on January 3, 1838, and proceeded to advance south along the eastern coast. Their path followed the high ground along the western side of the Indian River Lagoon before swinging west to meet Fort Taylor on Lake Winder, then angling southeast on a course parallel to what is now I-95. Of all the military trails created in Brevard, this is the only one historians are able to pinpoint accurately (Eriksen 1994). The war ended in 1842, and on March 14, 1844, Saint Lucie County (present-day Brevard County) was created from Mosquito County (present-day Orange County) (Carter 1962; Dunn 1998).

On March 3, 1845, Florida became the twenty-seventh state admitted to the Union (Eriksen 1994). Judge Theodore Washington Brevard settled in Tallahassee two years later. He spent 12 years as state comptroller and was honored for his work on January 6, 1855, when St. Lucie County was renamed Brevard County. This new county encompassed more than 7,000 square miles and had its seat of government in the small town of Susannah, north of Fort Pierce (Eriksen 1994; Fernald and Purdum 1992; Morris 1995). John Houston established Arlington, the first permanent US settlement in south Brevard County, in 1854. This town was located on land fronting the Indian River and Elbow Creek (Eriksen 1994).

On January 10, 1861, Florida seceded from the Union. Brevard County was far removed from the battlefields to the north, but still played an important role in the war. The settlers along the Indian River engaged in salt production for the Confederate Army, and the cattle range in western Brevard supplied beef. Blockade runners frequently utilized the inlets and bays of the Indian River and Mosquito Lagoon during their smuggling ventures (Tebeau 1971).

### **Late Nineteenth Century, 1861–1899**

Prior to the 1880s, water transportation, both sea and river, was the dominant mode of long-distance travel for most of Florida's residents. Due to Florida's dearth of population, underdevelopment, and lack of capital, railroads penetrated into the state slowly. By the mid-1800s, Florida claimed only one successful rail line, and it connected Tallahassee to the Gulf of Mexico at St. Marks (Brown 1991). Most of Florida's roads were nothing but slow, bumpy, waterlogged (during summer months), sand-laden trails that even ox teams had a difficult time traversing. With the arrival of Henry Flagler and Henry Plant in the 1880s, trains began to cross the Florida landscape. Especially for communities located in the interior of Florida, trains provided "rapid transit" for agricultural produce to northern markets. While agriculture and other Florida products flowed north along the rails, tourist, immigrants, and goods traveled south in the new trains. Railroads generally brought growth to the communities and regions they touched (Covington 1957; Johnson 1966).

Throughout the 1880s, many settlements began across Brevard County, which would turn into the communities present today. Malabar was one of the oldest places on Florida's east coast with settlements dating back to 1875, and in 1883, a post office was built (Morris 1995). Citizens elected Titusville as the permanent seat of government for Brevard County in 1879. The population of the Indian River area was rapidly expanding due to a solid economic base of agriculture and fishing. In 1880, Melbourne, founded by Richard W. Goode, obtained a post



office. In 1870 John Tillman, J. B. Creech, and M. J. Culpepper formed the firm of Culpepper, Creech and Co. to purchase 75 acres of land along the Indian River. They intended to develop the land as citrus groves and quickly built a packing house at “Tillman’s Wharf” (now Castaway Point) at the mouth of Turkey Creek. In 1887, Tillman petitioned the US Postal Service for a local post office, and the area became known as the town of Tillman. This townsite would be the first settlement in within the limits of present-day Palm Bay. The area only had 40 residents, was not incorporated, and had no elected officials. By the end of the century, Tillman and his partners had abandoned their citrus business and returned to Georgia (NRHP 1987).

The introduction of the railroad also would spur on growth in both population and economy across the county. Titusville was chosen as a stop on the Jacksonville, Tampa, and Key West Railway in 1885. In 1893, the Flagler East Coast Railway line came to Titusville and Eau Gallie. In 1895, a double blast of freezing temperatures devastated the area’s citrus industry. The orange and pineapple groves recovered by 1897. The economy of the area boomed with the rejuvenated citrus industry and the new railway (Eriksen 1994).

### **Twentieth Century (1900) to Present**

After the settlement of Tillman was abandoned by its original organizers, the land was bought by the Florida Indian River Catholic Colony in North Dakota. This new organization obtained a permit to conduct business from the State of Florida by 1911. The company ran advertisements throughout the Midwest, and by 1912, families from Indiana, Wisconsin, Kansas, and Oklahoma began pouring into Tillman, brought by the Florida East Coast Railroad. By 1914, there were approximately 100 families in the area and a local Catholic church had been built. The new settlers found that cultivation was difficult in the area due to the sandy soil and freezes that destroyed crops. The church building would be added to the NRHP in 1987 (NRHP 1987).

Not until the end of the nineteenth century did Florida realize any concerted effort in road development. With the proliferation of railroads, farmers, merchants, and others clamored for better roads to get goods and people to and from the railroad depots. Additionally, during the 1910s and 1920s, the number of automobiles in the state and nation increased exponentially, exerting more pressure on the government to develop roads. Prior to 1924, only 748 miles of hard-surfaced road existed in the state. By 1928, this number grew to 1,588 miles with an additional 59 miles in the process of being paved (Jackson 1992; Kendrick 1964; Tebeau 1971). Not surprisingly, as car ownership increased and roads improved, train dominance diminished.

The county was in the midst of a massive program of internal improvements during the first 20 years of the new century. Municipal governments constructed water towers, sewage lines, and new roads. The county purchased a large trenching machine in 1911 and began to drain the floodplain east of the St. Johns to open land for new development. The Dixie Highway route of 1915 brought an infusion of tourists to the area. In 1917, Brevard achieved its modern-day dimension when the southern portions of the county became St. Lucie and Okeechobee Counties, and the western portion became Osceola County (Fernald and Purdum 1992). The center of population in the county shifted from Titusville in the north to Eau Gallie, Cocoa, and Melbourne in the south. In 1920, 1,445 people lived in Cocoa, 1,361 in Titusville, and 533 in Melbourne.

A bridge constructed from Cocoa to Merritt Island opened a link to the many small communities on the coast. Another toll bridge from Melbourne to Merritt Island followed four years later, and by the mid-1920s, four bridges spanned the river. New towns sprouted up along the beaches as a result of these bridges (Eriksen 1994).

Florida began paving its portion of US 1 (State Road No. 4) during this era; when completed, US 1 stretched from Canada to the southern tip of Florida. State Road No. 4 paralleled Florida's east coast and became a major economic artery. Although the road was still incomplete in 1923, the legislature designated State Road No. 4, along with six other roads, to the first tier of a two-tiered road system. By 1925, nearly half a million tourists drove their cars into the Sunshine State (Federal Writers' Project 1939; Frazer and Guthrie 1995; King 1992). In 1927, the State Road Department trumpeted, "The net result of the year's work is that all the gaps [in US 1] have been closed and that there is a continuous paved road between the Georgia State line and Miami" (*Florida Highways* 1928). Communities along or near the road—including the smaller towns of Malabar and Micco—enjoyed growth and additional tourism during the boom years due to the roadway (Shofner 1995).

In 1925, residents of Tillman changed their town's name to Palm Bay (City of Palm Bay, Florida 2021). The western two-thirds of the City of Palm Bay is within the St. Johns River's historic drainage basin. Prior to the 1920s, these swampy lands were separated from Turkey Creek and the Indian River lagoon by the Ten-Mile Ridge. This was an old sand dune system that served as a natural basin divide and over which a part of I-95 was built. The Ten-Mile Ridge was breached in 1922, and a 180-mile grid of 80 canals was dug to divert stormwater to Turkey Creek. This was known as the Canal 1 (C-1) Redivision Project, and it drained the natural wetlands for conversion to agricultural use (St. Johns River Water Management District 2021).

After the stock market crash of 1929, the number of tourists visiting Brevard dramatically waned. This decline crippled the economy and bankrupted the government. The area received aid from the Civil Works Administration (CWA), which employed 800 people from December 1933 to March 1934 to repair roads, build schools, and excavate Indian mounds. In 1935, the Works Progress Administration (WPA) replaced the CWA. This agency constructed the Canaveral port and the Melbourne airport and dredged the Intracoastal Waterway from Cumberland to Miami in 1936. As World War II approached in 1939, the military chose land south of Cocoa Beach to build the Banana River Naval Air Station (Eriksen 1994). In 1942, the Navy opened the Melbourne Naval Air Station to train pilots to fly Hellcats launched from aircraft carriers. The bases became the epicenter of the economy. At war's end, both bases were closed (Morris 1948; Stone 1988).

In 1949, the US Air Force developed a long-range missile testing ground at the former Banana River Naval Air Station. The base was renamed Patrick Air Force Base in 1950 and was the site of experimental launches of hybrid rockets. The National Aeronautics and Space Administration (NASA) began operations on the Cape in 1958, and in 1963, the agency received 88,000 acres on Merritt Island on which to build Kennedy Space Center. A complex of more than 50 buildings was constructed on the island, including the largest building in the world, the Vehicle Assembly Building. Different portions of the facilities were created for manned and unmanned launches.



Launch Complex 41 was constructed between 1964 and 1965 for the new Titan III program; these rockets were capable of delivering much larger cargo and required the construction of rail facilities for transport to the launch sites. The complex also played a central role in the Viking and Voyager missions, launching probes to Mars and the outer reaches of the Solar System. The space industry had a dramatic effect on the area. Brevard County grew by 371 percent from 1950 to 1960, and the population doubled again during the 1960s (Tebeau 1971).

After several hurricanes in the 1920s and 1940s caused substantial flooding issues in Palm Bay, new plans for the canal system were designed in the 1970s to divert the water elsewhere. Environmental studies found that this diversion of fresh water would cause big changes in the salinity of the lagoon and surrounding areas, impacting fish and wildlife resources and the project was halted. In the present day, the St. Johns River Water Management District and the Melbourne-Tillman Water Control District have re-diverted a substantial portion of the C-1 drainage to a retention area west of I-95. The Melbourne-Tillman Water Control District owns and maintains more than 2,300 acres of canals and includes portions of Palm Bay and West Melbourne (Melbourne-Tillman Water Control District 2021). Stormwater stored in the retention area is pumped into a wetland treatment system, known as Sawgrass Lake Water Management Area, before draining into the St. Johns River, which is shown in **Figure 16**.

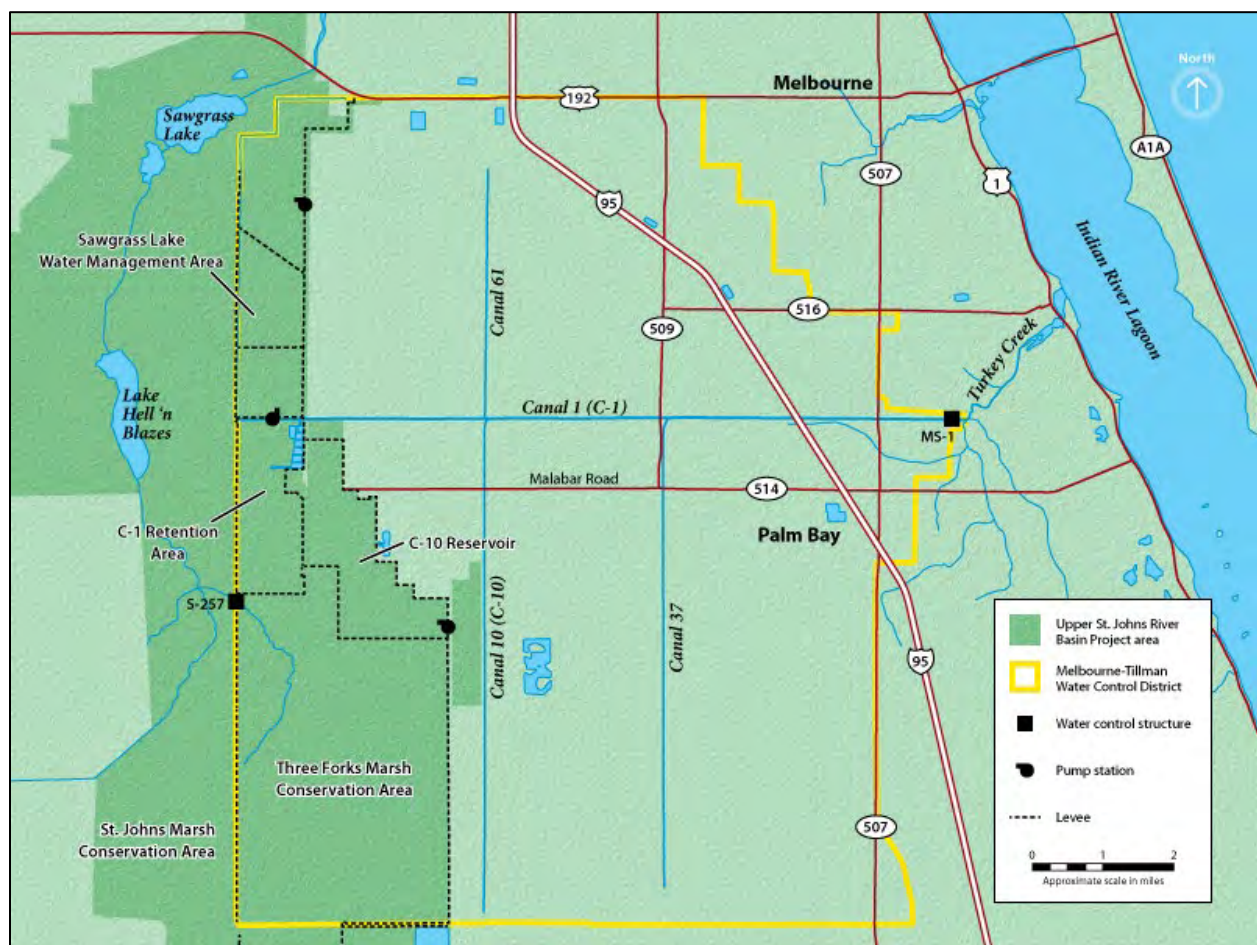


Figure 16: Map of the C-1 Rediversion Project (St. Johns River Water Management District 2021)

The 1990s brought still more changes to the area. The original launch pad at the Kennedy Space Center was demolished to make way for even larger and more advanced rockets (*Florida Today* 2001; National Park Service 1983). This growth continued to nearly 400,000 residents in 1990 and more than 500,000 by 2010 (US Census Bureau 1995, 2010).



## BACKGROUND RESEARCH

### FLORIDA MASTER SITE FILE REVIEW

Florida Master Site File (FMSF) data from January 2021 were reviewed to identify any previously recorded cultural resources within the project APE. The FMSF review indicates that eight previous cultural resource surveys have been conducted within the current project area (**Figure 17; Table 2**). Of these, the most relevant to the current project are FMSF Survey Nos. 20793 and 24194. FMSF Survey No. 20793 was a tract survey located on the south side of Malabar Road and included approximately 1,248 feet (380 meters) of the project corridor west of Allison Drive (see **Figure 17**); this survey conducted subsurface testing compliant with Module 3 guidelines and revisited the previously identified archaeological site 8BR00025; the survey did not identify any cultural deposits within the current APE. FMSF Survey No. 24194 was a tract survey that conducted judgmental shovel testing along the north side of Malabar Road (see **Figure 15**); this survey identified linear resource 8BR03535.

**Table 2: Previous Cultural Resource Surveys within the Malabar Road APE**

| FMSF No. | Title                                                                                                                                      | Year | Reference                          |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------|
| 1646     | Proposed Response to Future Area Development Application Question 19, Parts A and B, for GDC's West Malabar Tract, Brevard County, Florida | 1981 | CCC Enterprises, Inc.              |
| 8791     | Cultural Resource Assessment Survey of the Palm Bay Parkway PD&E Study from Malabar Road to Ellis Road, Brevard County.                    | 2003 | Janus Research                     |
| 10376    | A Cultural Resource Reconnaissance Survey of the Palmer Tract, Brevard County, Florida                                                     | 2004 | Environmental Services, Inc. (ESI) |
| 12516    | A Cultural Resource Survey of the Chaparral Project Area, Brevard County, Florida                                                          | 2006 | SEARCH                             |
| 14219    | A Phase I Cultural Resource Survey of the Lennar South Development Property, Brevard County, Florida                                       | 2007 | SEARCH                             |
| 20793    | Cultural Resources Survey and Assessment, Palm Island Subdivision, Brevard County, Florida                                                 | 2014 | SouthArc, Inc.                     |
| 24194    | A Cultural Resources Assessment Survey for the Proposed Avery Springs Development, Palm Bay, Brevard County, Florida                       | 2017 | Penders, Thomas E.                 |
| 25794    | Cultural Resource Assessment Survey, Malabar-Midway 230 kV Transmission Line, Brevard County, Florida                                      | 2017 | Janus Research                     |

One archaeological site (8BR00025) and one historic resource group (8BR03535) have been recorded within the project APE (**Table 3**; see **Figure 5**).







**Table 3: Previously Recorded Cultural Resources within the Malabar Road APE**

| <i>Archaeological Site</i> |                                |                       |                                |                                |
|----------------------------|--------------------------------|-----------------------|--------------------------------|--------------------------------|
| <b>FMSF No.</b>            | <b>Name</b>                    | <b>Time Period</b>    | <b>Surveyor Evaluation</b>     | <b>SHPO Evaluation</b>         |
| 8BR00025                   | NN                             | Prehistoric           | Ineligible for listing in NRHP | Ineligible for listing in NRHP |
| <i>Linear Resource</i>     |                                |                       |                                |                                |
| <b>FMSF No.</b>            | <b>Name</b>                    | <b>Time Period</b>    | <b>Surveyor Evaluation</b>     | <b>SHPO Evaluation</b>         |
| 8BR03535                   | Melbourne-Tillman Canal No. 20 | Boom Times, 1921-1929 | Ineligible for listing in NRHP | Ineligible for listing in NRHP |

Resource 8BR00025 is an unnamed, low-density, prehistoric scatter of oyster and clam shell with few non-diagnostic lithics. The site is located south of the archaeological APE but within the project APE at the southwest corner of the intersection of Malabar Road and Allison Drive, along a spoil pile within a former silvicultural area (see **Figure 17**). The site was identified in 1953 and revisited as part of FMSF Survey No. 20793 in 2014. Due to the paucity of artifacts, an absence of diagnostic artifacts and a lack of intact soils, 8BR00025 was recommended ineligible for inclusion on the NRHP (SouthArc, Inc. 2014). The State Historic Preservation Officer (SHPO) concurred with this assessment in a letter dated April 30, 2014.

Constructed in 1928, Resource 8BR03535 is a section of the Melbourne-Tillman Canal No. 20. The canal is orientated east-west and is located on the north side of Malabar Road, along the east half of the APE. The canal was identified as a historic linear feature as a result of FMSF Survey No. 24194. This canal is part of a network of canals that drained wetlands from the St. Johns River to Turkey Creek. The canal system does not express unique construction or engineering features and does not meet any qualifications for inclusion on the NRHP (Penders 2017). Other recorded canals within this network were previously determined to not be eligible for the NRHP. Resource 8BR03535 was determined to be ineligible for inclusion in the NRHP by the SHPO in 2017.

## **HISTORIC MAP AND AERIAL PHOTOGRAPH REVIEW**

Historic maps and aerial photographs were examined in order to identify past land use in the vicinity of the Malabar Road 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. In Florida, these maps characteristically show landscape features such as vegetation, bodies of water, roads, and Spanish land grants. GLO maps of Florida Townships 28 and 29 South, Range 36 East created in 1845 shows no development in the area. The map indicates marshland inside the APE (**Figure 18**) (GLO 1845a, 1845b, 1845c, 1845d).

Late nineteenth-century maps show no development in the area of the APE. There are several towns on the east coast, but Eau Gallie is the closest settlement, located to the northeast near

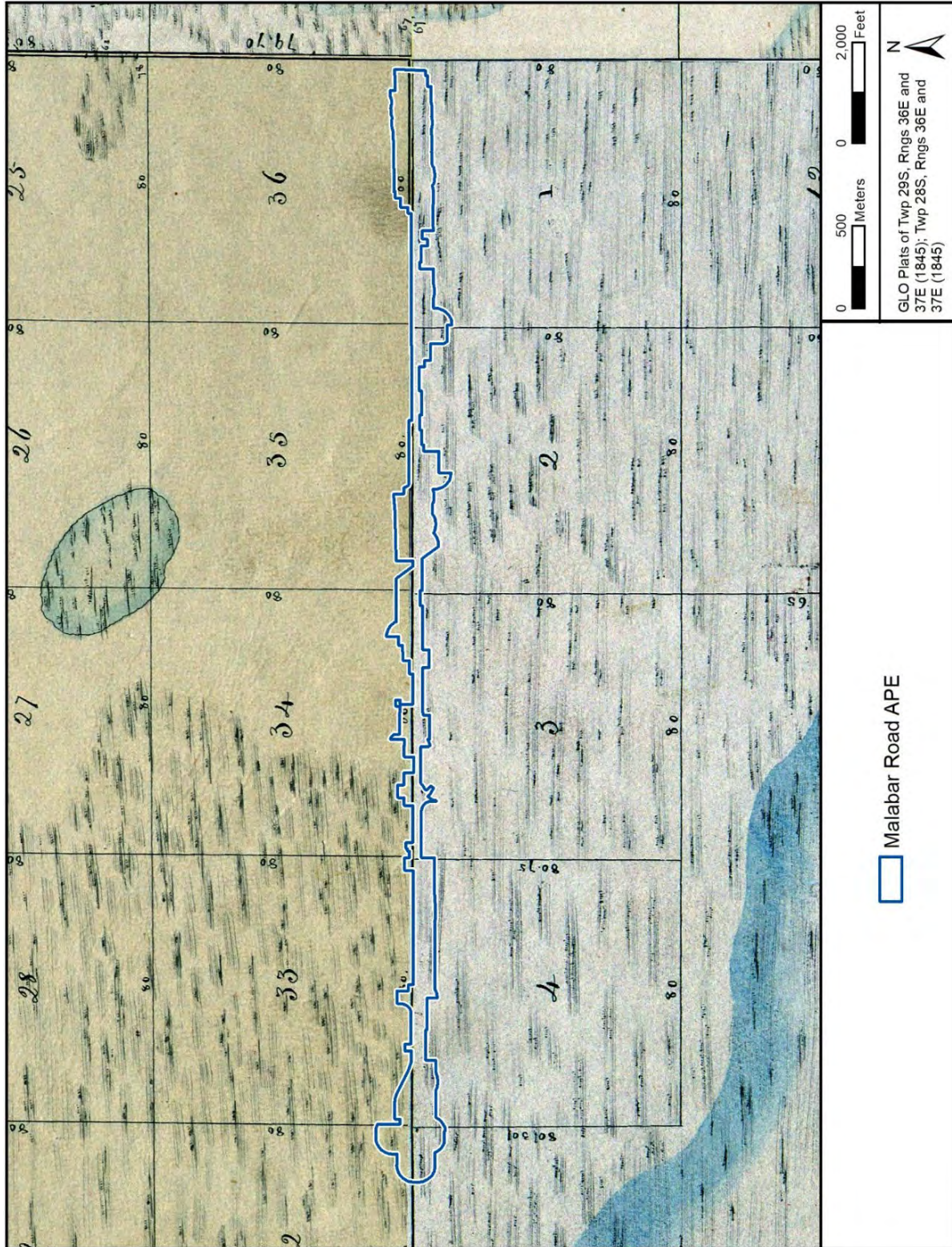


Figure 18: GLO maps of Township 28 South, Ranges 36 and 37 East; Township 29 South, Ranges 36 and 27 East (GLO 1845a, 1845b, 1845c, 1845d)



the coast (Folger 1883). An 1890 map of Brevard County illustrates a large “sawgrass lake” south of the APE, with Malabar noted to the east, and no features are evident within the APE (Norton 1890). A 1917 state highway map shows a road traveling westward from the community of Malabar, though it is unclear from this map if it reaches the APE (Florida State Road Department [FSRD] 1917). A more detailed county map from 1934 illustrates the same road traveling through an area near the APE. Most of the development in the area is limited to the coast (FSRD 1934).

By the 1940s, there was some development in the project APE. An aerial photograph from 1943 shows Malabar Road on its present path running east-west the entire length of the APE. In addition, there is evidence of four north-south canals crossing the APE at Malabar Road in the western half of the APE. In the eastern half of the APE, a north-south road enters the APE from the south and ends when it intersects Malabar Road. On the far west and far east ends of the project corridor, two orchards are evident within the APE. In the surrounding area outside the APE, there are several small roads, orchards, and an airport (**Figure 19**) (US Department of Agriculture [USDA] 1943, 2019).

A topographic map of the area from the 1950s shows more development. Malabar Road is evident following the entire path of the APE. The north-south canals are evident in the western half of the APE. The orchards also are still illustrated on both the west and east ends of the APE. There are six structures evident within the APE in the eastern half. In the western half, a small unimproved road enters from the south of the APE following the eastern edge of the orchard within the APE, before connecting with Malabar Road. SR 509 runs north-south and is obscured by the eastern edge of the APE. A canal runs east-west north of Malabar Road in the eastern half of the APE. Outside the APE, there are two unimproved roads north of the APE and a small orchard (**Figure 20**) (US Geological Survey [USGS] 1951, 1954).

Through the 1960s and into the 1970s, the area around the APE continued to grow. Topographic maps from 1971 show that the previously mentioned improvements remain. Near the center of the APE, a network of unimproved roads is evident to the south of the APE. Several north-south unimproved roads intersect Malabar Road. Four north-south unimproved roads enter the APE between the western orchard and the center of the APE. Nine structures are evident within the APE in the eastern half. On the eastern side of SR 509, outside the APE, there are several new unimproved roads, showing that the area is developing. More new roads are evident below the western orchard and northwest as well, but none cross into the APE (**Figure 21**) (USGS 1971a, 1971b).

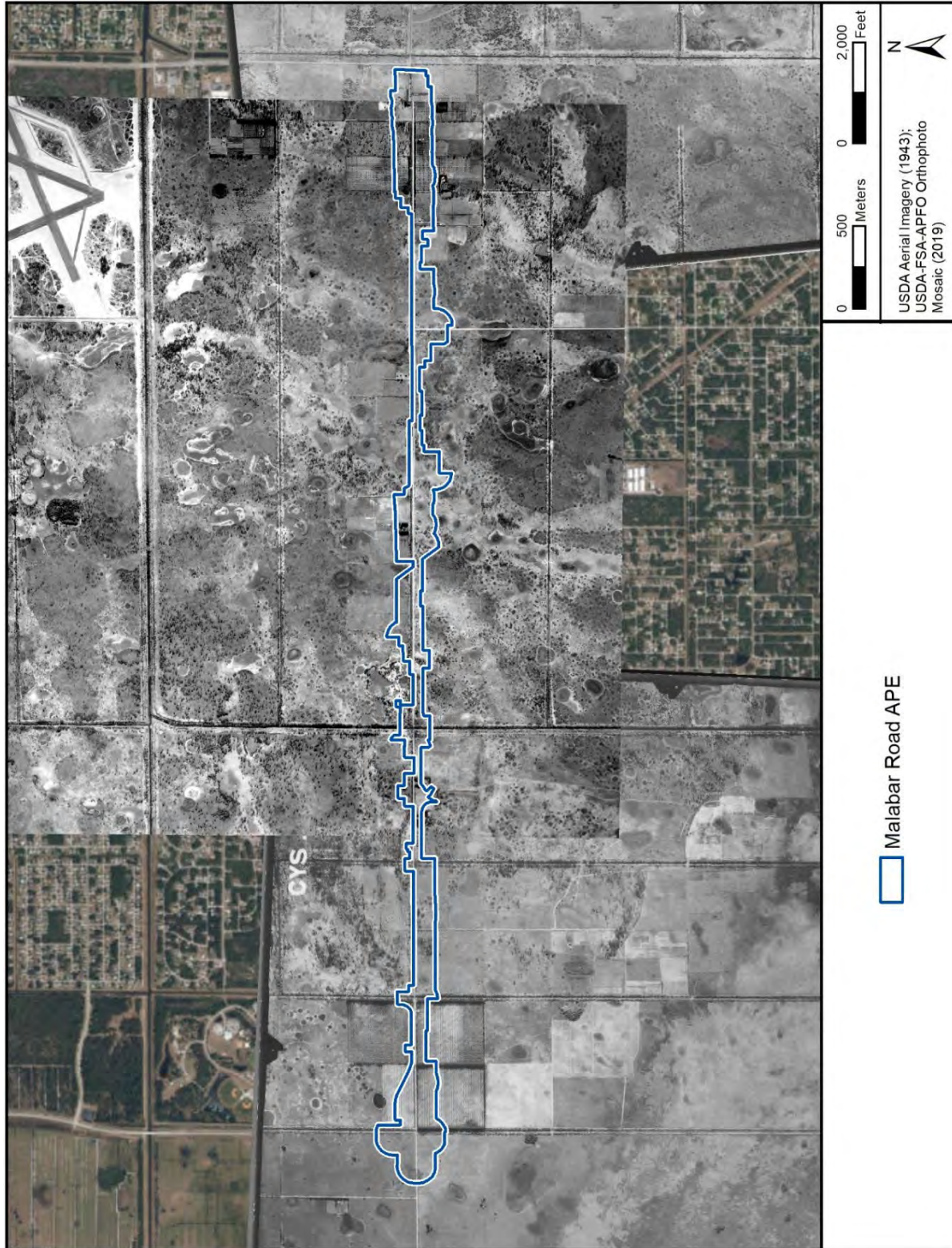


Figure 19: 1943 USDA aerial photograph of Brevard County, Florida



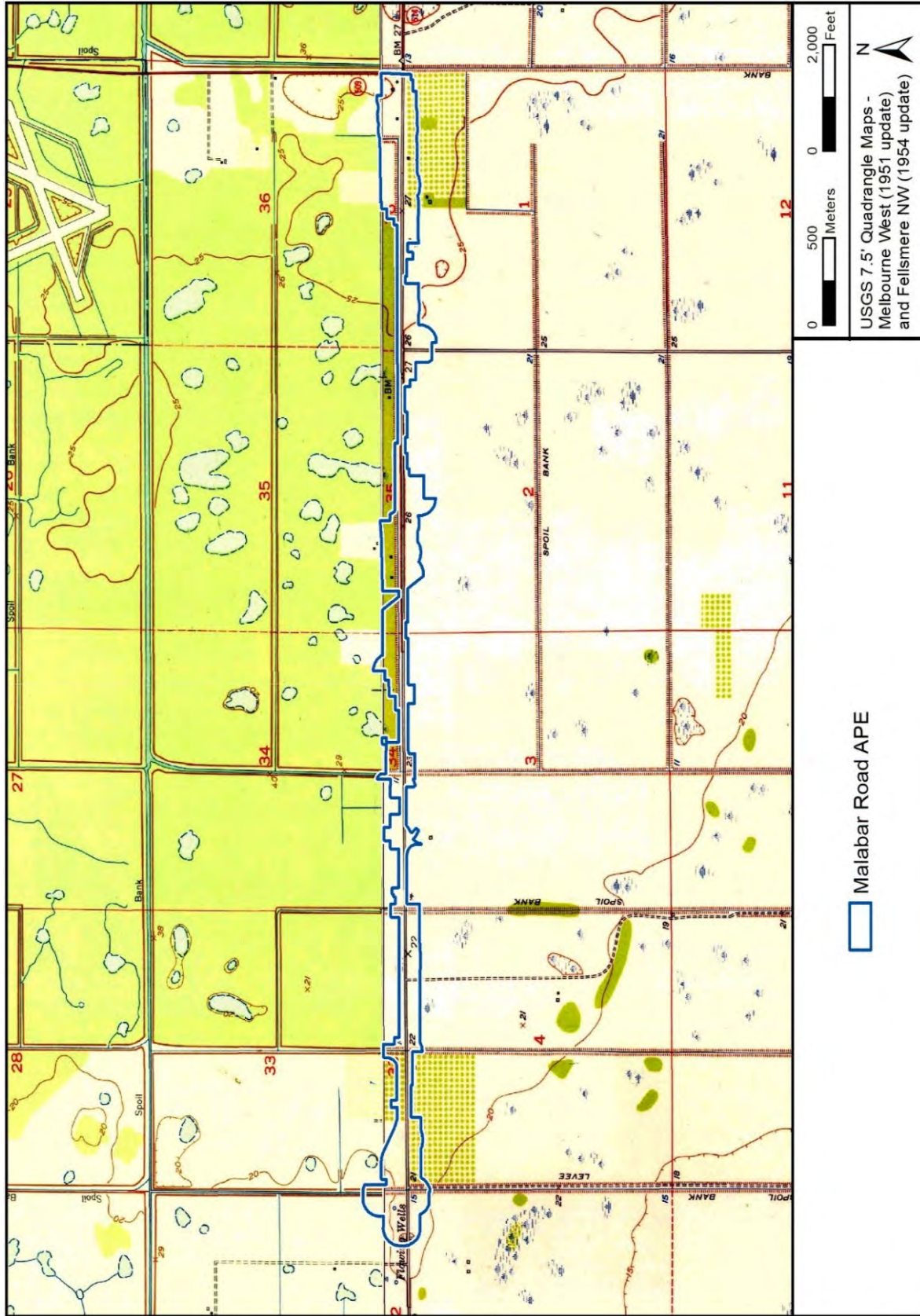


Figure 20: USGS topographic maps of Melbourne West and Fellsmere NW, Florida (USGS 1951, 1954)



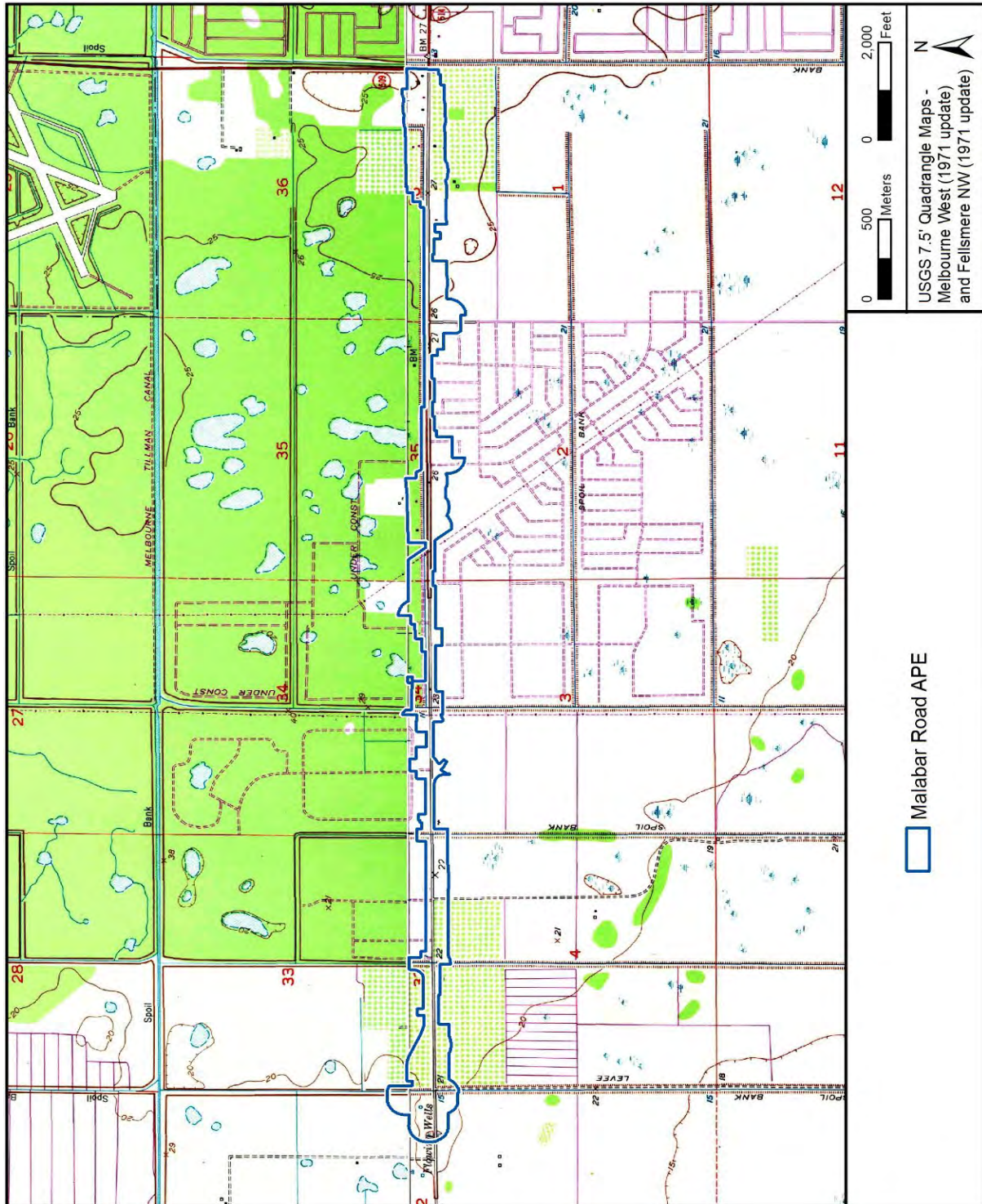


Figure 21: USGS topographic map of Melbourne West and Fellsmere NW, Florida (USGS 1971a, 1971b)



## RESEARCH DESIGN

### PROJECT GOALS

A research design is a plan to coordinate the cultural resource investigation from inception to the completion of the project. This plan should minimally account for three things: (1) it should make explicit the goals and intentions of the research; (2) it should define the sequence of events to be undertaken in pursuit of the research goals; and (3) it should provide a basis for evaluating the findings and conclusions drawn from the investigation.

The goal of this cultural resource survey was to locate and document evidence of historic or prehistoric occupation or use within the APE (archaeological or historic sites, historic structures, or archaeological occurrences [isolated artifact finds]), and to evaluate these for their potential eligibility for listing in the NRHP. The research strategy was composed of background investigation, a historical document search, and field survey. The background investigation involved a perusal of relevant archaeological literature, producing a summary of previous archaeological work undertaken near the project area. The FMSF was checked for previously recorded sites within the project corridor, which provided an indication of prehistoric settlement and land-use patterns for the region. Current soil surveys, vegetation maps, and relevant literature were consulted to provide a description of the physiographic and geological region of which the project area is a part. These data were used in combination to develop expectations regarding the types of archaeological sites that may be present and their likely locations (site probability areas).

The historical document search involved a review of primary and secondary historic sources as well as a review of the FMSF for any previously recorded historic structures. The original township plat maps, early aerial photographs, and other relevant sources were checked for information pertaining to the existence of historic structures, sites of historic events, and historically occupied or noted aboriginal settlements within the project limits.

### NRHP CRITERIA

Cultural resources identified within the project APE were evaluated according to the criteria for listing in the NRHP. As defined by the National Park Service (NPS), 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 prehistory or 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, relative elevation), as well as the results of previously conducted surveys, the potential for prehistoric archaeological sites to be present within the Malabar Road APE was considered to be generally low. Few prehistoric sites have been identified in proximity to the project APE, and the right-of-way within which the proposed improvements will be built has undergone extensive disturbance due to road construction and maintenance as well as the installation of underground utilities. The Malabar Road APE was judged to have a low potential for historic-period archaeological sites based on the level and type of historic development identified in the map review. Similarly, the potential for historic structures was considered to be low, with the exception of historic canals.

## **SURVEY METHODS**

### **Archaeological Field Methods**

The Phase I field survey consisted of systematic shovel testing pre-plotted at 100-meter (328-foot) intervals and pedestrian survey according to the low potential for the presence of buried archaeological sites. Shovel tests measured approximately 50 centimeters (19.7 inches) in diameter and were excavated to a minimum depth of 100 centimeters below surface (cmb) (39.4 inches), subsurface conditions permitting. All excavated sediments were screened through 1/4-inch (0.64-centimeter) mesh hardware cloth. The locations of each shovel test were marked on aerial photographs and recorded on a handheld Wide Area Augmentation System (WAAS) Global Positioning System (GPS) unit. The cultural content, soil strata, and environmental setting of each shovel test were recorded in field notebooks. When appropriate, a Canon digital camera was utilized to document stratigraphy and environmental conditions. “No-dig” points were utilized to document portions of the APE that could not be tested due to significant subsurface disturbances.

### **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 1977. The field survey inventoried existing



buildings, structures, and other aspects of the built environment within the project 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.

A number of subdivisions intersect the Malabar Road APE; however, none of these subdivisions were determined to be of historic age. There are only two parcels containing potential historic structures in these subdivisions, and neither parcel is within the APE. The remainder of the subdivisions consist of non-historic development (**Figure 22**). Therefore, none of these subdivisions were recorded as part of this survey, and none of the modern subdivisions are associated with the identified canals as they were built after the canals were constructed.

### **Laboratory Methods**

No artifacts were recovered as a result of this survey, and no laboratory analysis was required.

### **Curation**

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

### **Informant Interviews**

SEARCH archaeologist Dave Boschi, MA, RPA, contacted the South Brevard Historical Society (SBHS) via email on April 27, 2021, in an attempt to inquire about potential areas that may be of local importance. As of the submission of this report, the SBHS replied to note that this would be brought to the attention of their Board.

### **Certified Local Government Consultation**

As no Certified Local Government (CLG) exists for Brevard County or the City of Palm Bay, no CLG consultation was necessary.

### **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



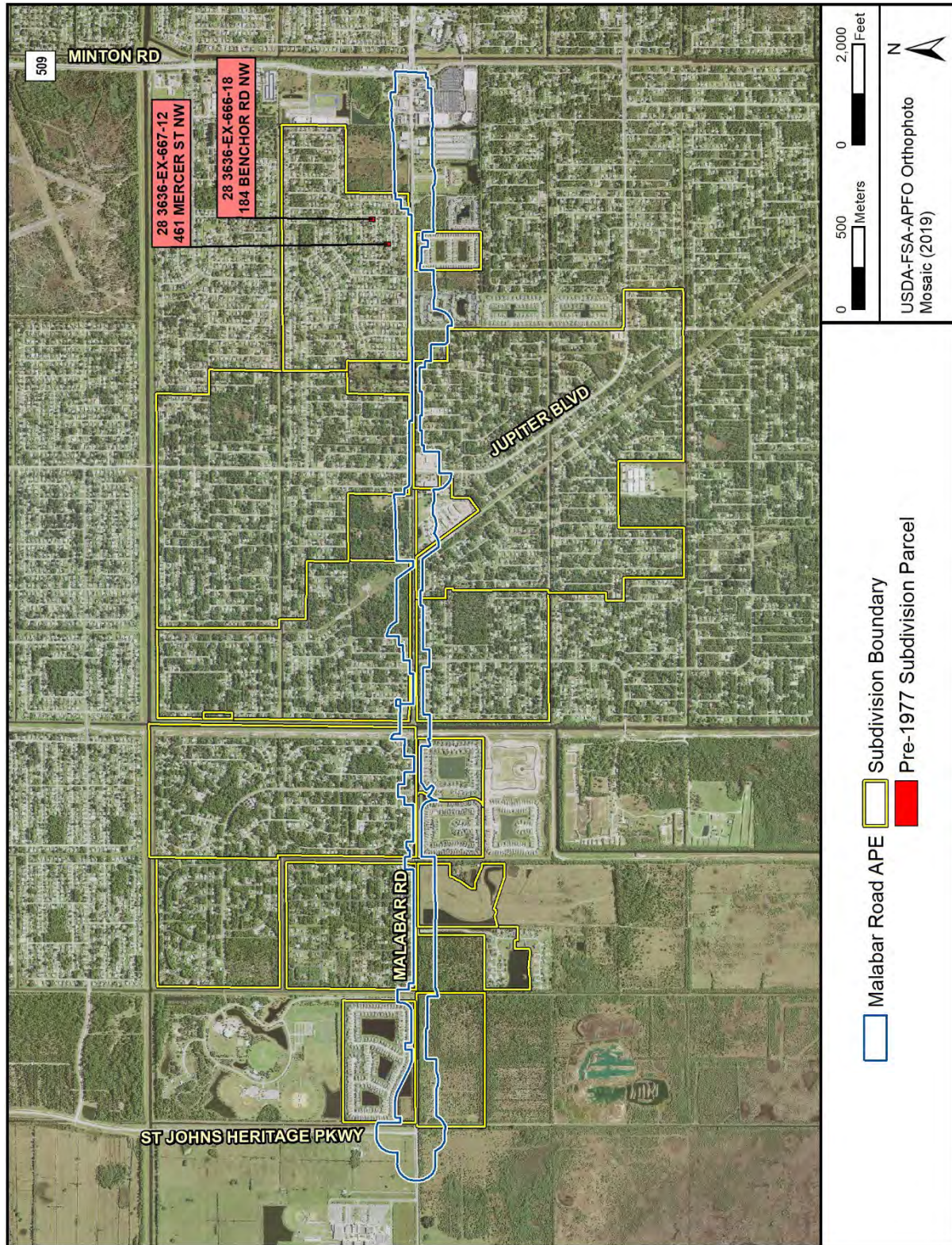


Figure 22: Location of parcels containing potentially historic structures within subdivisions intersecting the Malabar Road APE



building foundations. 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 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.

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## RESULTS

### ARCHAEOLOGICAL RESULTS

The Malabar Road archaeological APE is a narrow corridor along both sides of Malabar Road from west of St. Johns Heritage Parkway to Minton Road. The APE falls within the existing and proposed right-of-way lining residential developments, although the south side of Malabar Road along the western end of the corridor includes undeveloped, wooded parcels that had previously been silvicultural tracts. Aerial imagery and background research indicated a high probability of roadside utilities and disturbances, and the field visit confirmed and documented the prevalence of subsurface disturbances (**Figure 23**). Additionally, the Melbourne-Tillman Canal (8BR3535) runs along the north side of Malabar Road from Bavarian Avenue Southwest to east of Daffodil Drive. As a result, the locations available to safely conduct archaeological testing was limited to areas mostly disturbed but devoid of marked utilities. A total of 96 shovel tests were attempted, of which 30 were able to be excavated. Attempted, but not excavated, shovel tests were marked as “no-digs” (**Figures 24–30**). Marked field maps are provided in **Appendix A**.

The 30 shovel tests that were successfully excavated are located on the south side of Malabar Road; all 30 tests were negative for cultural materials. The north side of Malabar Road has been thoroughly disturbed with road and canal construction and the installation of underground utilities, leaving no viable location for archaeological testing (see **Figure 23**). Additionally, disturbance from development along the east end of the corridor left few options for shovel testing. The majority of the excavated tests presented soil profiles that demonstrate the disturbed nature of the soils within the APE. Typical soil profiles displayed mixing and mottling of soils in the upper strata, with sand, clay, or hydric soils at the base of excavations (**Figure 31**).

No completely natural soil strata were observed within the Malabar Road archaeological APE. Due to the level of disturbance and the variety of construction that has been done within the project corridor, soil profiles exhibited a high degree of variability throughout the APE.

Previously recorded site 8BR00025 is located south of the archaeological APE, but within the overall project APE. Testing in proximity to the site included two shovel tests, one to the west and one to the north, described below. Testing within the existing boundary of 8BR00025 was not possible due to the confines of the APE. Site 8BR00025 was not revisited; as such, no update to the site file is provided.

Typical soil stratigraphy in the west end of the corridor, approximately 100 meters (328 feet) west of 8BR00025, consisted of loose, light gray (10YR 7/1) sand from 0 to 30 cmbs (0 to 11.8 inches, Stratum I), mottled light yellowish-brown (10YR 6/4) and brownish-yellow (10YR 6/8) sand from 30 to 60 cmbs (11.8 to 23.6 inches, Stratum II), yellow (10YR 7/6) sand from 60 to 75 cmbs (23.6 to 29.5 inches, Stratum III), and very dark grayish-brown (10YR 3/2) sandy clay from 75 to at least 100 cmbs (29.5 to 39.4 inches, Stratum IV).



**Figure 23: Representative views of environment within the Malabar Road APE. Top left: Dense vegetation with Brazilian pepper along the west end, view east. Top right: Canal and dense vegetation along the west end of APE, view south. Center left: Right-of-way, canal, and road bank along the center of the APE, view south. Center right: New underground utility installation along the center of the APE, view west. Bottom left: Developed intersection along the west of the APE, view southeast. Bottom right: Roadside drainage along the east end of the APE, view west**



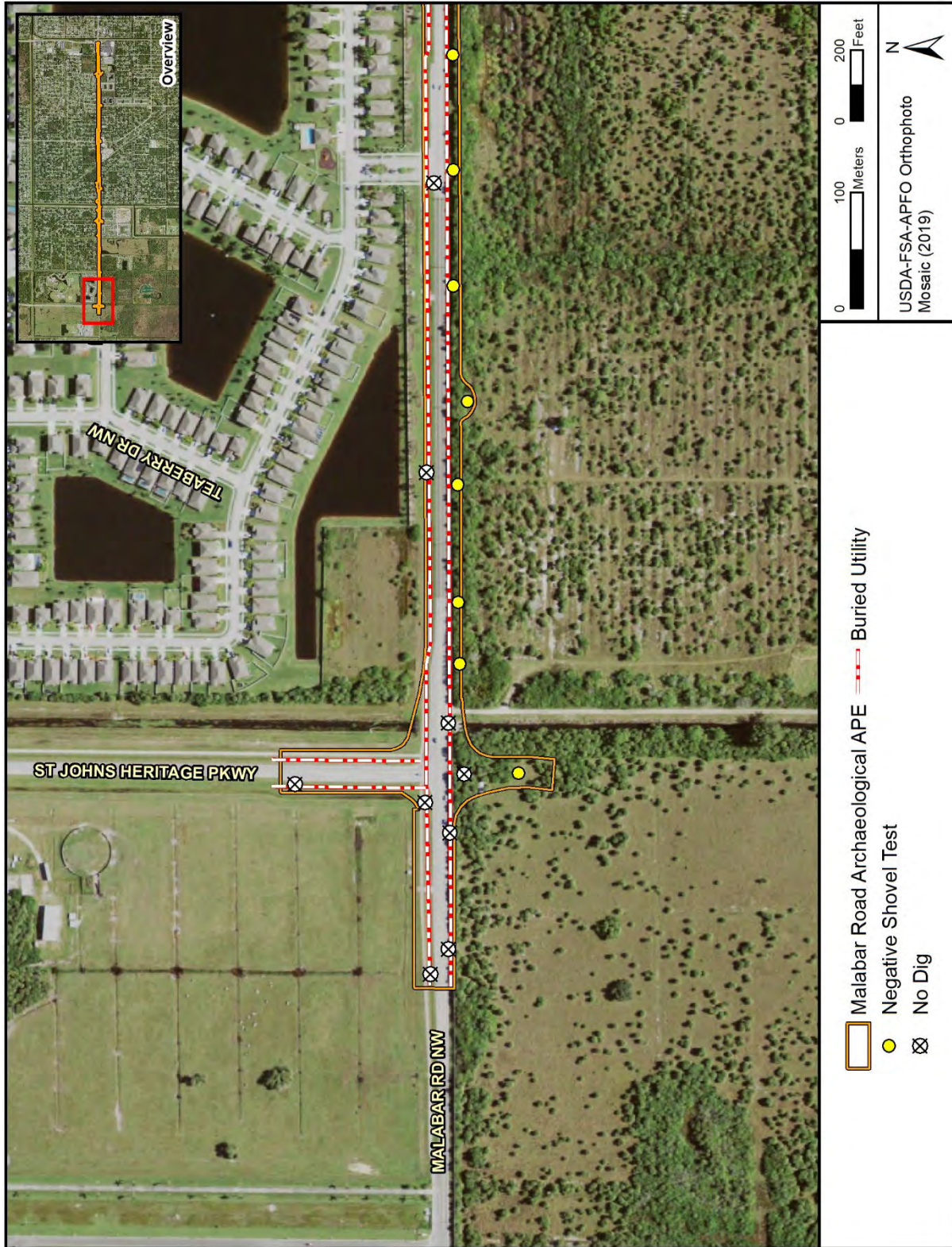


Figure 24: Archaeological survey results within the Malabar Road APE, map 1 of 7



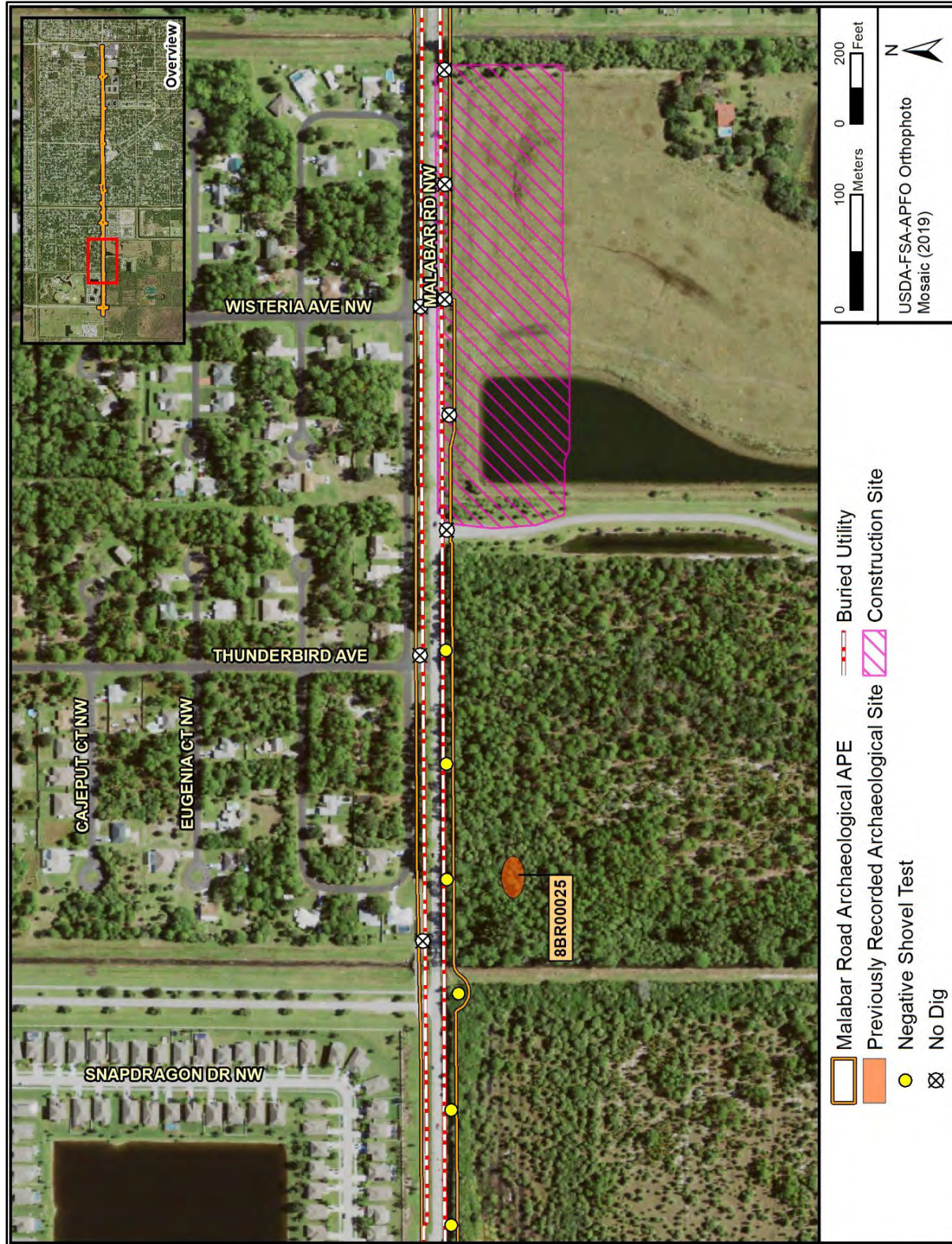


Figure 25: Archaeological survey results within the Malabar Road APE, map 2 of 7



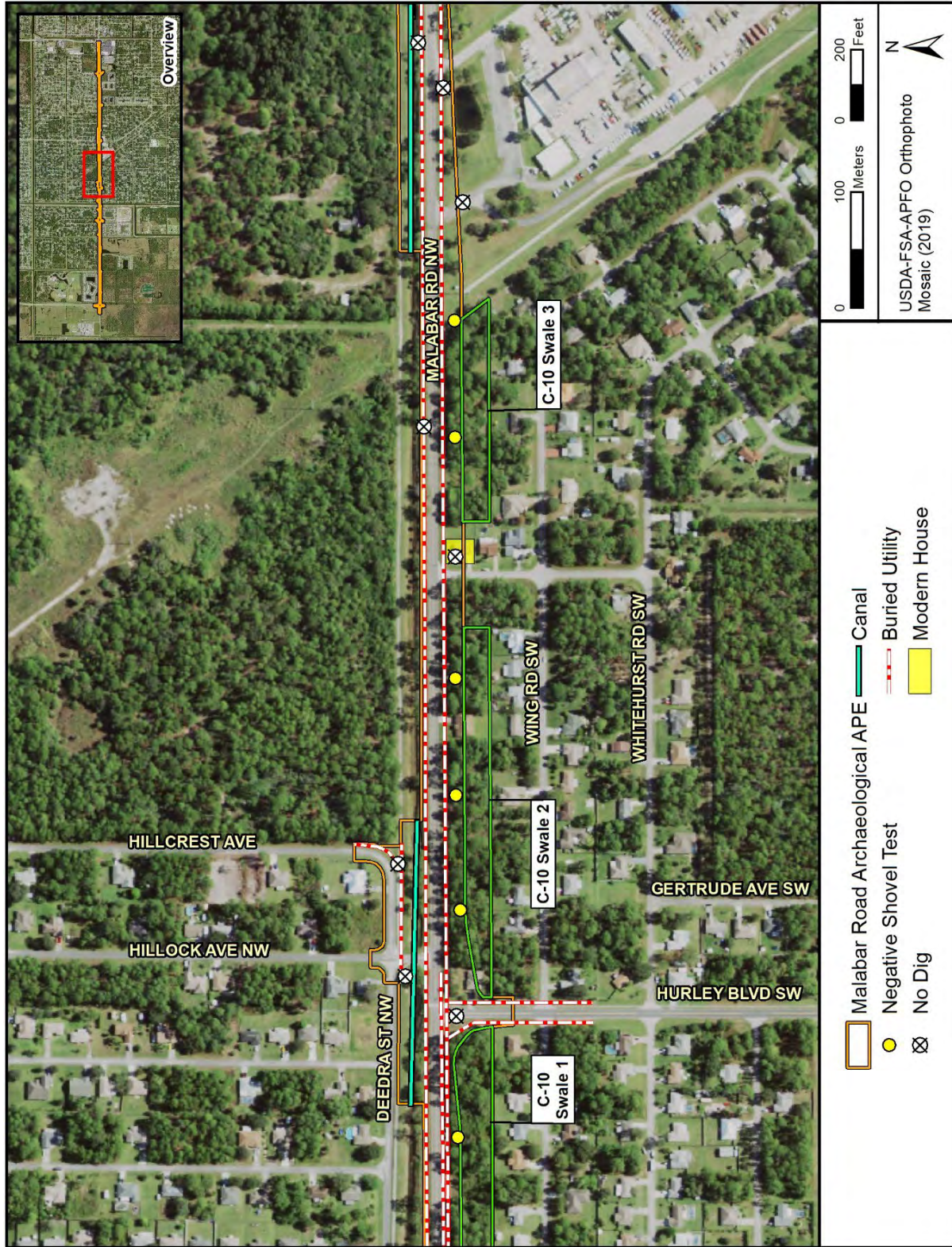


Figure 26: Archaeological survey results within the Malabar Road APE, map 3 of 7



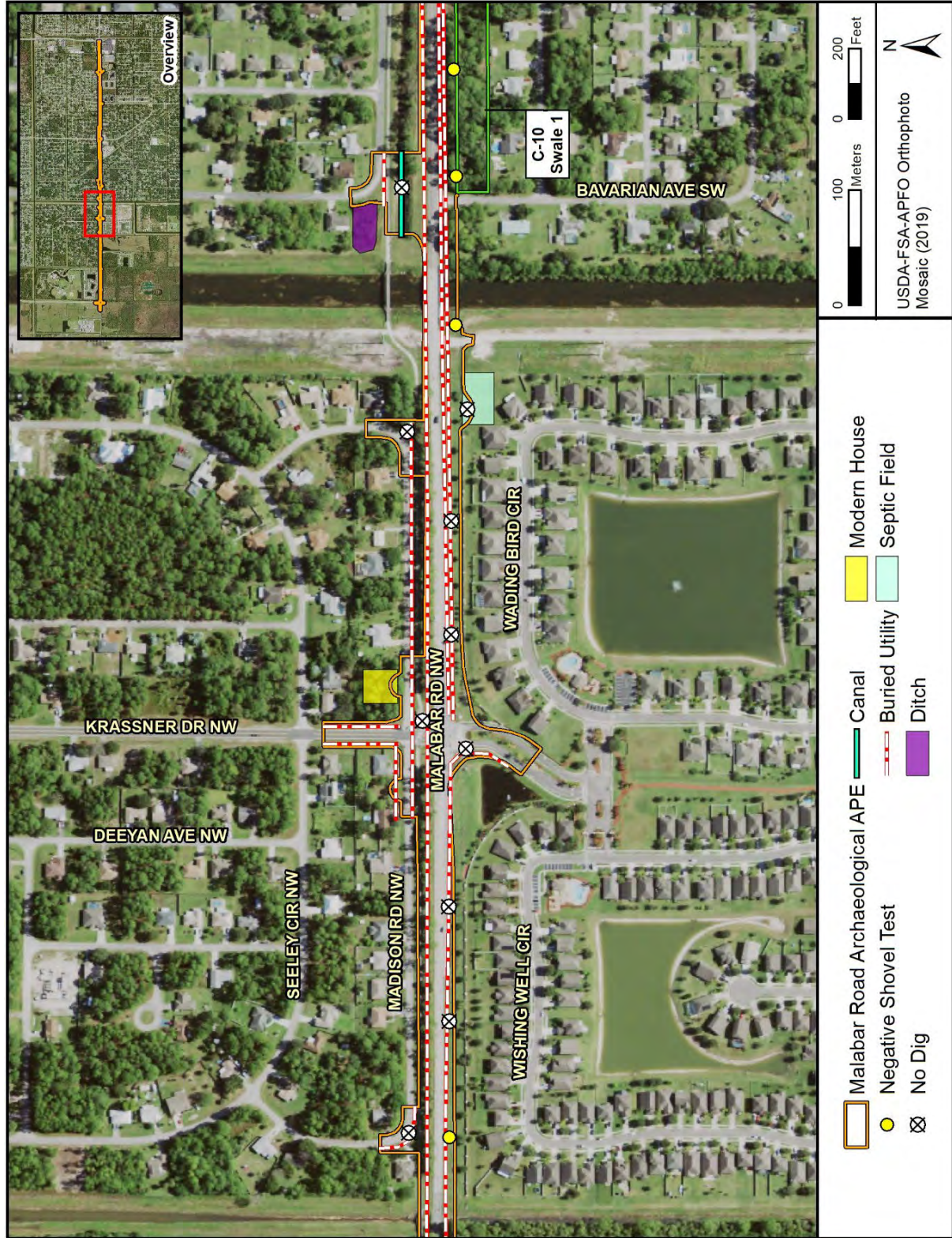


Figure 27: Archaeological survey results within the Malabar Road APE, map 4 of 7



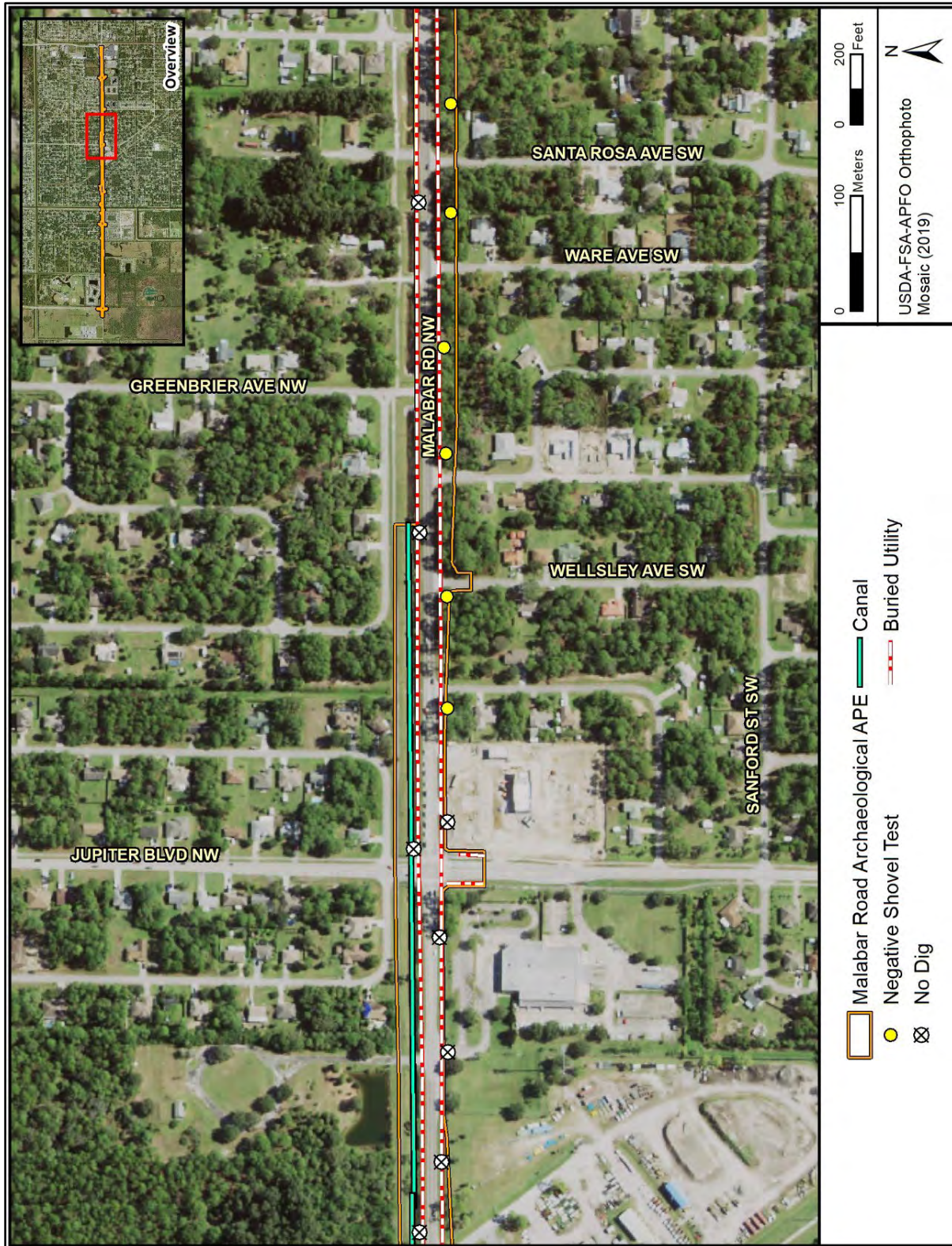


Figure 28: Archaeological survey results within the Malabar Road APE, map 5 of 7





Figure 29: Archaeological survey results within the Malabar Road APE, map 6 of 7





Figure 30: Archaeological survey results within the Malabar Road APE, map 7 of 7





**Figure 31: Soil stratigraphy as displayed in shovel tests. Top left: Shovel Test 23, west end of APE view west; Top right: Shovel Test 28, west portion of APE, view east; Bottom left: Shovel Test 31, view east; Bottom right: Shovel Test 56, east end of APE, view west**

Soil stratigraphy observed along the west end of corridor along Malabar Road, approximately 50 meters (164 feet) north of 8BR00025, consisted of loose light gray (10YR 7/1) sand from 0 to 30 cmbs (0 to 11.8 inches, Stratum I), a mottled light yellowish-brown (10YR 6/4) and brownish-yellow (10YR 6/8) sand from 30 to 60 cmbs (11.8 to 23.6 inches, Stratum II), yellow (10YR 7/6)



sand from 60 to 75 cmbs (23.6 to 29.5 inches, Stratum III), very dark grayish-brown (10YR 3/2) sandy clay from 75 to at least 100 cmbs (29.5 to 39.4 inches, Stratum IV) (see **Figure 31**).

Testing along the central portion of the corridor, where possible, revealed soil stratigraphy consisting of loose gray (10YR 6/1) sand from 0-30 cmbs (0 to 11.8 inches, Stratum I), white (10YR 8/1) sand from 30 to 80 cmbs (11.8 to 31.5 inches, Stratum II), and wet, black (10YR 2/1) sand from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum III).

Testing along the east end of the corridor, where possible, also revealed stratigraphy indicative of disturbed soils. Soil stratigraphy consisted of gray (10YR 6/1) loose sand from 0 to 30 cmbs (0 to 11.8 inches, Stratum I), white (10YR 8/1) sand from 30 to 80 cmbs (11.8 to 31.5 inches, Stratum II), and black (10YR 2/1) wet sand from 80 to at least 100 cmbs (31.5 to 39.4 inches, Stratum III) (see **Figure 31**).

Pedestrian survey was used to document any portion of the APE that could not be tested due to road or canal construction, as well as underground utility installations. No archaeological sites or occurrences were encountered during the Malabar Road archaeological survey. No further archaeological work is recommended.

## ARCHITECTURAL RESOURCES

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource and seven newly recorded resources (**Figures 32–35; Table 4**).

**Table 4: Historic Resources Recorded within the Malabar Road APE**

| FMSF No. | Name/Address                          | Style              | Year Built          | Recommended NRHP Status |
|----------|---------------------------------------|--------------------|---------------------|-------------------------|
| 8BR03535 | Melbourne-Tillman Canal No. 20        | No style           | ca. 1928            | Ineligible              |
| 8BR04374 | Melbourne-Tillman Canal No. 7         | No style           | ca. 1943 or earlier | Ineligible              |
| 8BR04375 | Melbourne-Tillman Canal No. 8         | No style           | ca. 1943 or earlier | Ineligible              |
| 8BR04376 | Melbourne-Tillman Canal No. 9         | No style           | ca. 1943 or earlier | Ineligible              |
| 8BR04377 | Melbourne-Tillman Canal No. 10        | No style           | ca. 1943 or earlier | Ineligible              |
| 8BR04378 | 1099 Malabar Road Northwest           | Masonry Vernacular | ca. 1947            | Ineligible              |
| 8BR04379 | Melbourne-Tillman Canal No. 9 Culvert | No style           | ca. 1943 or earlier | Ineligible              |
| 8BR04380 | FDOT Bridge No. 704004                | No style           | ca. 1972            | Ineligible              |



Figure 32: Historic resources recorded within the Malabar Road APE, map 1 of 4





Figure 33: Historic resources recorded within the Malabar Road APE, map 2 of 4



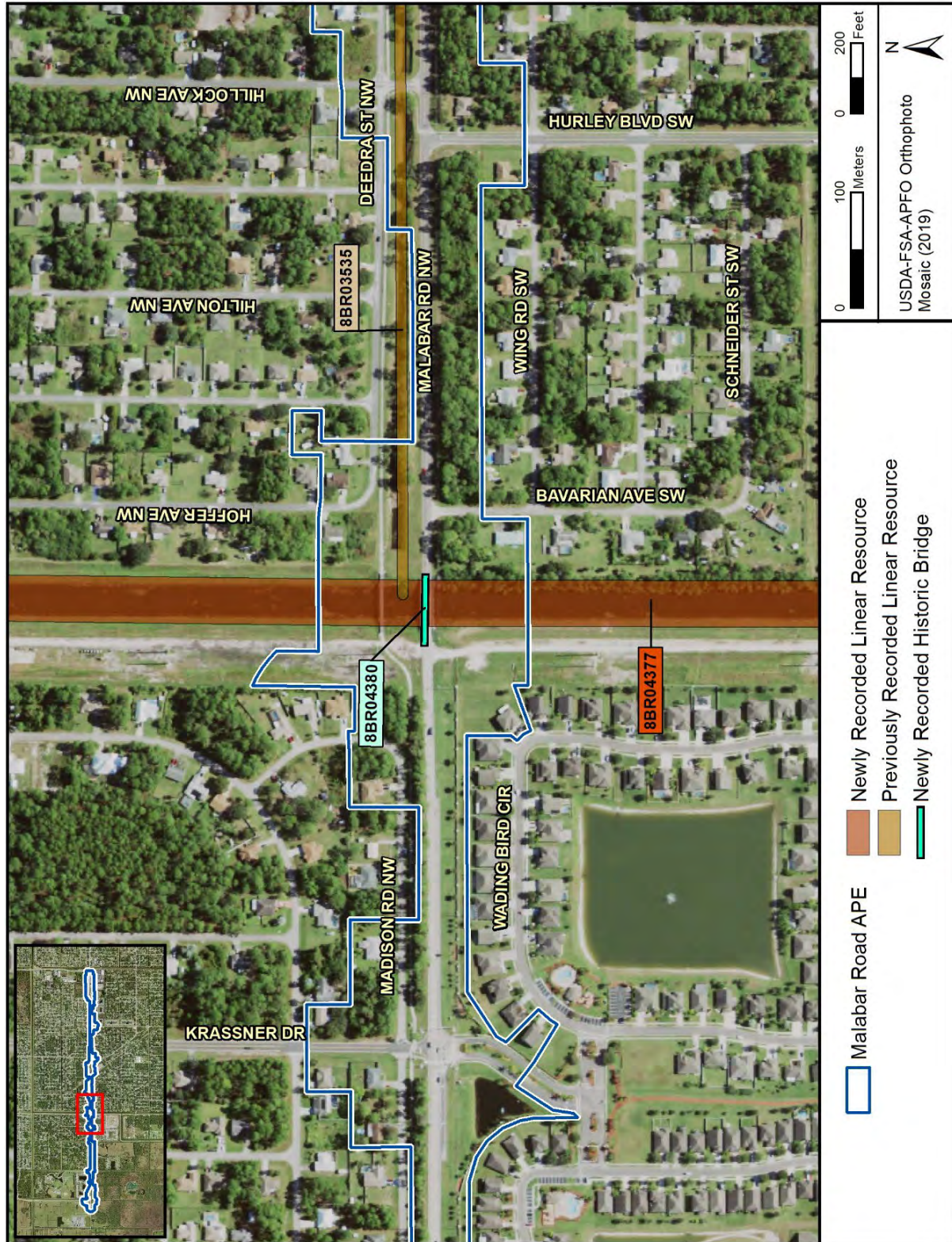


Figure 34: Historic resources recorded within the Malabar Road APE, map 3 of 4



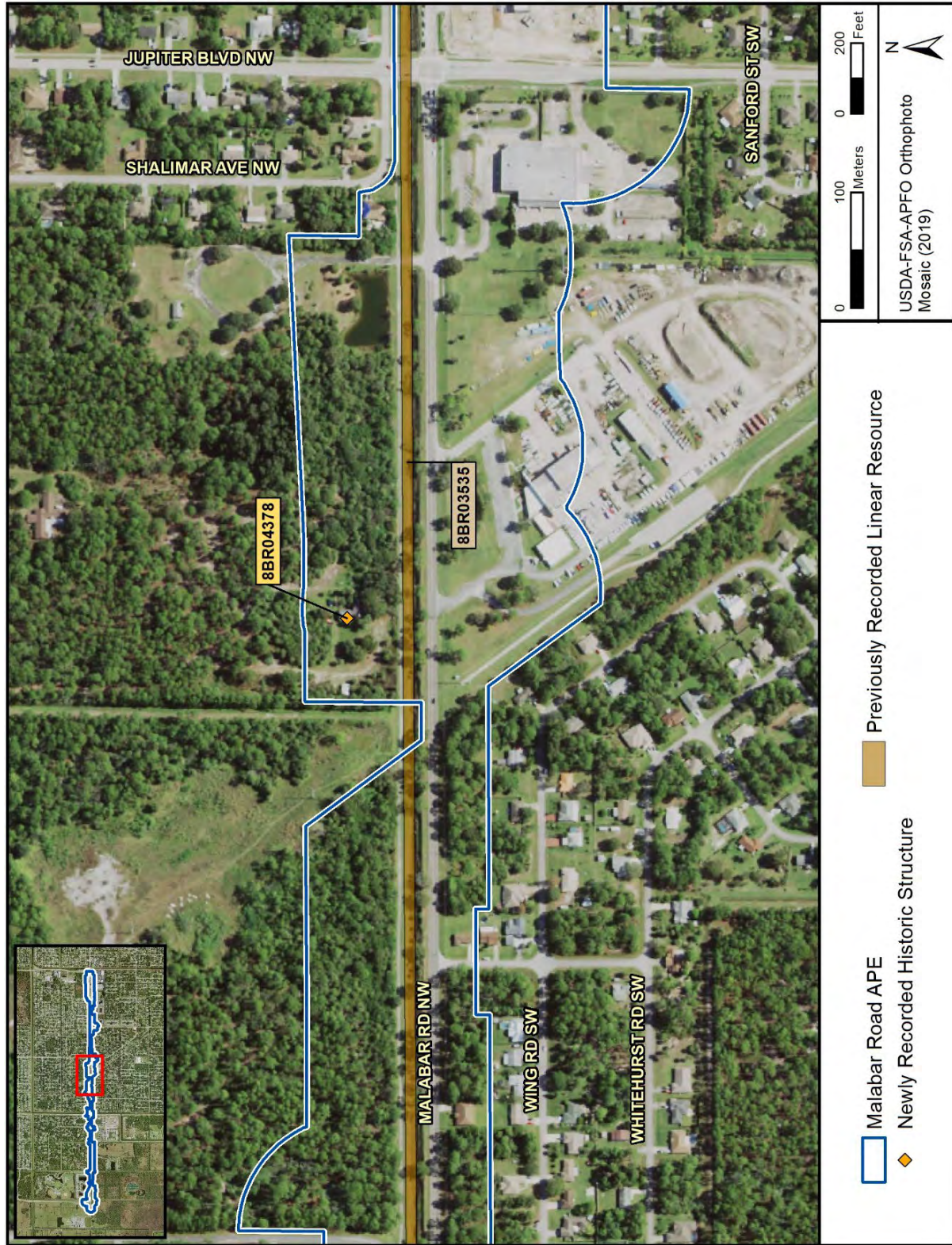


Figure 35: Historic resources recorded within the Malabar Road APE, map 4 of 4

The previously recorded historic resource is a linear resource (8BR03535). The newly recorded historic resources include four linear resources (8BR04374-8BR04377), two bridges (8BR04379 and 8BR04380), and one structure (8BR04378).

Descriptions and evaluations are provided below for all eight resources, as the presentation of their attributes in a table was deemed insufficient. FMSF forms and their associated maps and photographs are provided in **Appendix B**. The FDHR survey log sheet is provided in **Appendix C**.

## NRHP EVALUATIONS

### Linear Resources

#### ***8BR03535, Melbourne-Tillman Canal No. 20; 8BR04374-8BR04377, Melbourne-Tillman Canal Nos. 7-10***

The Melbourne-Tillman Canal No. 20 (8BR03535) is a previously recorded historic canal, and the Melbourne-Tillman Canal Nos. 7-10 (8BR04374-8BR04377) are newly recorded historic canals located in Brevard County (see **Figures 33–35**). Resource 8BR03535 is situated in Sections 34 and 36 of Township 28 South, Range 36 East and Sections 1-3 of Township 29 South, Range 36 East; Resource 8BR04374 is situated in Sections 32 and 33 of Township 28 South, Range 36 East and Sections 4 and 5 of Section 29 South, Range 36 East; Resource 8BR04375 is situated in Section 33 of Township 28 South, Range 36 East and Section 4 of Township 29 South, Range 36 East; Resource 8BR04376 is situated in Sections 33 and 34 of Township 28 South, Range 36 East and Sections 3 and 4 of Township 29 South, Range 36 East; and Resource 8BR04377 is situated in Section 34 of Township 28 South, Range 36 East and Section 3 of Township 29 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map.

All five resources are dug-out canals with overgrown earthen embankments. Resource 8BR03535 travels roughly west to east for approximately 2.46 miles (3.96 kilometers) and is approximately 16.8 feet (5.12 meters) wide within the APE. It runs parallel to and north of Malabar Road, where it is occasionally crossed by non-historic culverts, and ends at the west boundary of 255 Malabar Road Northwest (Parcel ID 28-36-36-00-779), at which point the canal is dry (**Figure 36**, top left and right). Resource 8BR04374 runs north to south for approximately 0.26 miles (0.41 kilometers) and is approximately 27.97 feet (8.52 meters) wide within the APE (see **Figure 36**, center left), and Resource 8BR04375 runs north to south for approximately 793.29 feet (241.8 meters) and is approximately 16.85 feet (5.13 meters) wide within the APE (see **Figure 36**, center right). Both resources are carried beneath Malabar Road via non-historic culverts. Resource 8BR04376 runs north to south for approximately 797.9 feet (243.2 meters) and is approximately 14.08 feet (4.29 meters) wide within the APE. It is channeled beneath Malabar Road via Resource 8BR04379 (Melbourne-Tillman Canal No. 9 Culvert) (see **Figure 36**, bottom left). Finally, Resource 8BR04377 runs north to south for approximately 880.4 feet (268.35 meters) and is approximately 93.64 feet (28.54 meters) wide within the APE (see **Figure 36**, bottom right). It is channeled beneath Malabar Road via Resource 8BR04380 (FDOT Bridge No. 704004). All five canals are owned and maintained by the Melbourne-Tillman Water Control District.



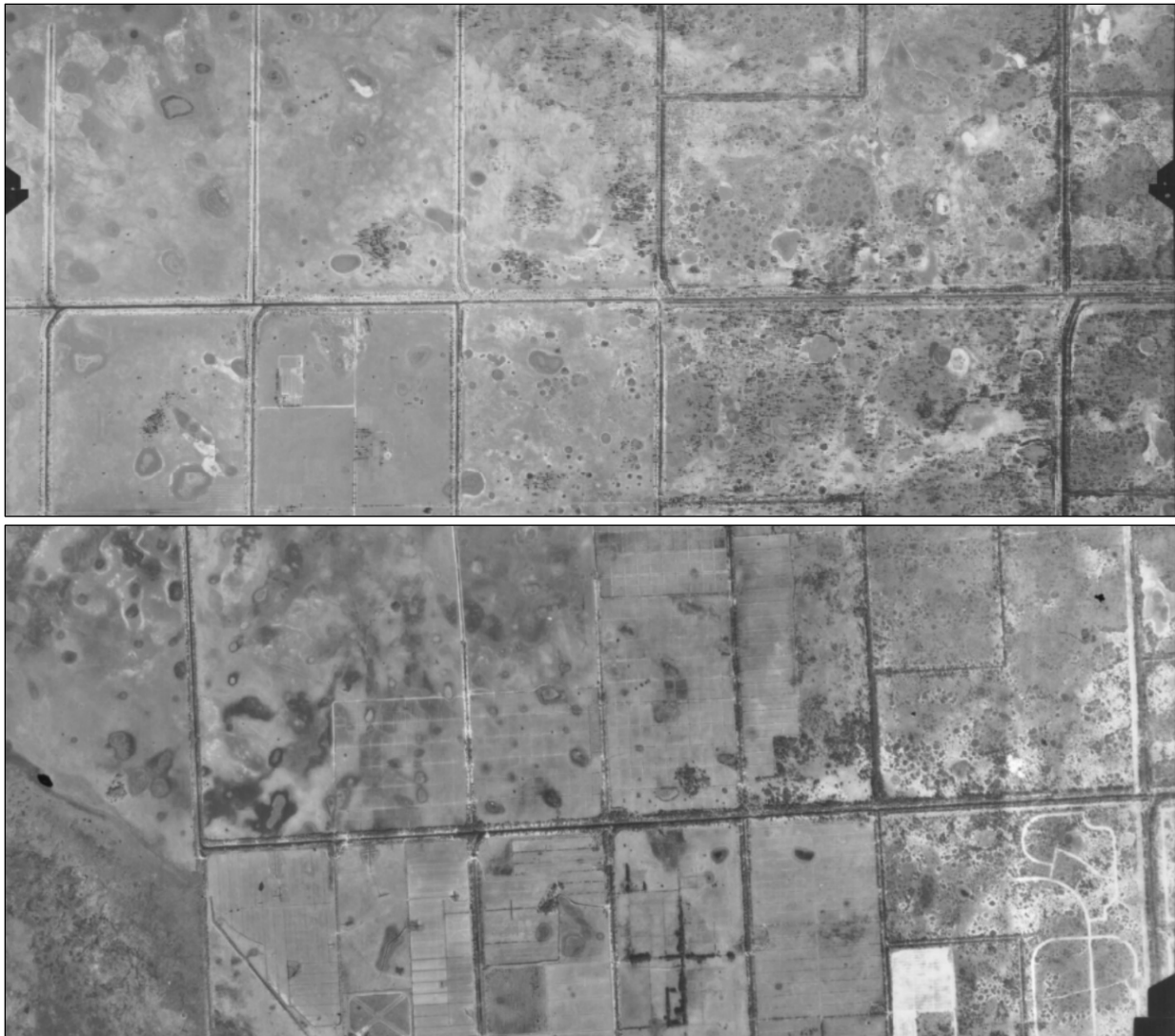


**Figure 36: Representative views of Resources 8BR03535 and 8BR04374-8BR04377 within the APE. Top left, Resource 8BR03535, facing southeast; Top right, Resource 8BR03535 at eastern terminus, facing northwest; Center left, Resource 8BR04374, facing north; Center right, Resource 8BR04375, facing northwest; Bottom left, Resource 8BR04376, facing north; Bottom right, Resource 8BR04377, facing northwest**



Resource 8BR03535 was constructed ca. 1928 (Penders 2017), and Resources 8BR04374-8BR04377 were constructed prior to 1943 based on historic aerial imagery (USDA 1943). These canals were part of an overall canal network designed to drain the wetlands between the St. Johns River and Turkey Creek. They were constructed by the Melbourne-Tillman Water Control District, which was established by Brevard County in 1922. Today, the District controls 162 miles of canals between Palm Bay and West Melbourne and is presided over by representatives from those cities and from Brevard County (Melbourne-Tillman Water Control District 2021).

Based on aerial imagery, it appears that these drainage canals were constructed to prepare the area for agricultural purposes. No residential development is apparent in aerial imagery from 1943 to 1969, but agricultural development is visible between 1951 and 1969 (USDA 1943, 1951, 1958, 1969) (**Figure 37**). While the agricultural economy of the general Palm Bay area was primarily based in citrus and supplemented by the timber trade (Business View Magazine 2017),



**Figure 37: Aerial views of the Melbourne-Tillman Water Control District, showing agricultural development over time. Top, photograph taken in 1951; bottom, photograph taken in 1969**



aside from two citrus groves at the far east and west ends of the APE, neither of these uses characterize the APE in historic aerial imagery. SEARCH did not locate any information that indicated the canals or associated farm property within or adjacent to the APE contributed to any significant agricultural developments.

### Assessment

In order to facilitate an NRHP evaluation of the five Melbourne-Tillman Canals within the APE (8BR03535 and 8BR04374-8BR04377), a discussion about the relationship between historic canal function, period of construction, and historic integrity is presented here.

A 2005 memorandum on canals by Sherry Anderson, which was revised in 2012 by Ginny Jones and is Appendix E to the 2010 FMSF's *Guide to the Resource Group Form*, was used as a guide to aid in the evaluation of Resources 8BR03535 and 8BR04374-8BR04377 (Jones 2012). The memorandum provides guidance on establishing the historic context for Florida's canal resources to aid in the evaluation of their eligibility to the NRHP. According to the FMSF memorandum, canals are common throughout Florida and "most of those built as drainage ditches in the twentieth century will probably not be considered significant" (Jones 2012:24). The memorandum further states:

It is usually the older canals (19th c.), transportation canals, larger regional canals dug as part of the early 20<sup>th</sup> c. reclamation activities, or canals used in industry (such as logging, cotton) that may be potentially eligible (Jones 2012:24-25).

Changes that could potentially alter the integrity of a canal include the following:

- Re-routing of the canal.
- Disruption of canal (cutting off or filling in).
- Substantial widening or substantial loss of width.
- Concentrated number of roadways and other crossovers that prohibit navigability (only important if navigability was part of its historic use).
- Severing of canal from other waterways (larger canals, turning basins, etc.), which results in change of historic function.
- Removal of historic ancillary structures original to canal's design and purpose (pumping stations, locks, railroads, docks, etc.). The loss of one feature may not be enough to substantially damage integrity, but the removal of many such features may collectively inhibit the resource's ability to convey its significance (Jones 2012:25).

Finally, the memorandum states:

Types of changes that may not substantially damage the integrity include loss of a single historic ancillary feature, routine maintenance and rebuilding of canal walls using same material type, addition of non-historic features (pumping station, etc.), addition of several roads that do not prohibit navigability throughout the majority

of the canal. Canals can have ‘non-contributing’ portions as well but that the overall canal may still be considered potentially eligible (Jones 2012:25).

Based on the field survey and further research, it is the opinion of SEARCH that Resources 8BR03535 and 8BR04374-8BR04377 are not significant under NRHP Criterion A because they are not indicative of a particular era and are not associated with any significant period, event, or theme. Furthermore, the resources are not significant under Criterion B because they lack association with any person(s) significant in history. Also, the resources are not significant under Criterion C due to their lack of engineering distinction. The canals were part of a mid-twentieth-century drainage system, and other canals of similar design and purpose are common in the region. The canals are all dug-out, earthen channels with no outstanding features or design. Finally, 8BR03535 and 8BR04374-8BR04377 are not significant under Criterion D because they lack the potential to yield further information of historical importance. It is the opinion of SEARCH that Resources 8BR03535 and 8BR04374-8BR04377 are not eligible for listing in the NRHP.

## Bridges

### ***8BR04379, Melbourne-Tillman Canal No. 9 Culvert***

The Melbourne-Tillman Canal No. 9 Culvert (8BR04379) is a newly recorded resource located in Brevard County (see **Figure 33**). The culvert bridge is located in Section 4 of Township 29 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map. Resource 8BR04379 channels the Melbourne-Tillman Canal No. 9 (8BR04376) north-south beneath Malabar Road. Resource 8BR04379 is a concrete pipe culvert with a total length of approximately 58 feet (17.68 meters) (**Figure 38**), a width of approximately 32 feet (9.75 meters), and a roadway width of approximately 23 feet (7.01 meters). Resource 8BR04379 was constructed ca. 1943 or earlier according to aerial imagery (USDA 1943), but the original culvert was likely replaced with the current concrete pipe culvert at a later date. An overgrown wall made from grout-filled bags and an earthen abutment is visible on the north end of the culvert. Resource 8BR04379 carries the two-lane concrete-paved Malabar Road east-west above the north-south Melbourne-Tillman Canal No. 9 (8BR04376). The culvert has no distinguishing details or identifying signs.



**Figure 38: Resource 8BR04379, facing south**

### *Assessment*

Based the current survey, Resource 8BR04379 does not appear to meet the minimum criteria for listing in the NRHP. The culvert does not possess sufficient historical significance under Criteria A



or B to warrant inclusion in the NRHP. No additional information was located that details the role of the culvert in aiding in the development of the area or its association with persons of historical significance. Furthermore, the resource lacks sufficient engineering and architectural distinction as a concrete pipe culvert to be eligible under Criterion C as it does not embody the distinctive characteristics of a method of construction or serve as an excellent example of concrete pipe culvert design. Additionally, 8BR04379 is not significant under Criterion D as it lacks the potential to yield further information of historical importance. Therefore, it is the opinion of SEARCH that 8BR04379 is not eligible for individual listing in the NRHP.

### **8BR04380, FDOT Bridge No. 704004**

FDOT Bridge No. 704004 (8BR04380) is a newly recorded bridge located in Brevard County (see **Figure 34**). Resource 8BR04380 is situated in Section 3 of Township 28 South, Range 36 East, as shown on the 2021 *Fellsmere NW, Fla.* USGS quadrangle map. Resource 8BR04380 is a prestressed concrete slab bridge with a total length of 140.1 feet (42.7 meters) (**Figure 39**). It was constructed ca. 1972 by Brevard County. The bridge is composed of a concrete slab deck supported by capped pile concrete piers. The deck is 36.7 feet (11.2 meters) wide, and the roadway is 28.2 feet (8.6 meters) wide. There are concrete barriers on the north and south sides of the roadway. The bridge has no distinguishing details or identifying signs.



**Figure 39: Resource 8BR04380, facing southeast**

### *Assessment*

FDOT Bridge No. 704004 (8BR04380) was not included in either the 2004 edition of *Historic Highway Bridges of Florida* or the 2012 edition (Archaeological Consultants, Inc. [ACI] 2012; Jackson 2004). Based on available information and field research, Resource 8BR04380 does not appear to meet the minimum criteria for listing in the NRHP. The bridge does not possess sufficient historical significance under Criteria A or B to warrant inclusion in the NRHP. No additional information was located that details the role of the bridge in aiding in the development of the area or its association with persons of historical significance. Furthermore, the resource lacks sufficient engineering and architectural distinction as a prestressed concrete slab bridge to be eligible under Criterion C as it does not embody the distinctive characteristics of a method of construction or serve as an excellent example of concrete slab design. Additionally, 8BR04380 is not significant under Criterion D as it lacks the potential to yield further information of historical importance. Therefore, it is the opinion of SEARCH that 8BR04380 (FDOT Bridge No. 704004) is not eligible for individual listing in the NRHP.

## Structure

### **8BR04378, 1099 Malabar Road Northwest**

Resource 8BR04378, 1099 Malabar Road Northwest, is a newly recorded resource within Brevard County (see **Figure 35**). Resource 8BR04378 is situated in Section 35 of Township 28 South, Range 36 East, as shown on the 2018 *Fellsmere NW, Fla.* USGS quadrangle map. The structure is located on a rectangular parcel, bounded to the north, east, and west by private parcels and to the south by Malabar Road Northwest. The ca. 1947 residence is a one-story, irregular-plan Masonry Vernacular building set on a foundation obscured by foliage (**Figure 40**). The intersecting hip and jerkinhead hip roofs are covered with composition shingles. The windows consist of four-light metal-framed casement windows, which are paired and arranged in groups of four. These windows are accented with wood faux shutters and feature concrete windowsills. The exterior walls are covered with stucco. A concrete block chimney is located on the southeast corner of the building. The main entrance is located on the south façade and features a single door obscured by a metal-framed screen storm door. A closed partial-width porch also is located on the south façade and features a gable roof supported by masonry walls. Metal rectangular outbuildings are located to the northeast of the main residence, and large trees located to the north and south of the building largely obscure it from the right-of-way.



**Figure 40: Resource 8BR04378, facing northeast**

### *Assessment*

Based on the field survey and further research, it is the opinion of SEARCH that 1099 Malabar Road Northwest (8BR04378) is not significant under Criterion A as it is not indicative of a particular era and is not associated with any significant period, event, or theme. Furthermore, the resource is not significant under Criterion B because it lacks association with any person(s) significant in history. Also, the resource is not significant under Criterion C due to its lack of architectural or engineering distinction. The resource is a common Masonry Vernacular residence with no distinctive details or unique characteristics. Finally, Resource 8BR04378 is not significant under Criterion D because it lacks the potential to yield further information of historical importance. It is the opinion of SEARCH that 8BR04378 is not eligible for listing in the NRHP, either individually or as a contributing resource to a historic district.



## CONCLUSION AND RECOMMENDATIONS

This report presents the findings of a Phase I CRAS conducted in support of a PD&E study to Malabar Road in Brevard County, Florida. The City of Palm Bay is conducting a PD&E study for the proposed improvements to Malabar Road from east of St. Johns Heritage Parkway to Minton Road. The PD&E study includes widening Malabar Road with the construction of additional lanes and traffic control intersections, the replacement of FDOT Bridge No. 704004, and the rerouting of approximately 1,500 feet (457.2 meters) of Canal C-20. The roadway improvements will require the acquisition of up to 75 feet (22.9 meters) of new right-of-way, although the majority of right-of-way acquisition will be less than 45 feet (13.7 meters). The APE was defined to include the existing and proposed right-of-way from approximately 984 feet (300 meters) west of St. Johns Heritage Parkway to the intersection with Minton Road. This APE was extended to the back or side property lines of parcels adjacent to the right-of-way, or a distance of no more than 328 feet (100 meters) from the right-of-way line. The archaeological survey was conducted within the existing and proposed right-of-way. The historic structure survey was conducted within the entire APE.

The archaeological survey consisted of the excavation of 30 shovel tests and pedestrian survey within the archaeological APE. One previously recorded archaeological site, 8BR00025, is located within the overall APE, but outside the archaeological APE. As such, identification and evaluation of this site is beyond the scope of the current project. No artifacts were recovered during the archaeological survey, and no archaeological sites or occurrences were identified within the archaeological APE. No further archaeological survey is recommended in support of the proposed Malabar Road improvements.

The architectural survey resulted in the identification and evaluation of eight historic resources within the Malabar Road APE, including one previously recorded resource and seven newly recorded resources. The previously recorded historic resource is a linear resource (8BR03535). The newly recorded historic resources include four linear resources (8BR04374-8BR04377), two bridges (8BR04379 and 8BR04380), and one structure (8BR04378).

The previously recorded resource (8BR03535; Melbourne-Tillman Canal No. 20) was determined ineligible for the NRHP by the SHPO in 2017 (Penders 2017).

Based on the results of the current survey, it is the opinion of SEARCH that all eight resources are ineligible for the NRHP due to a lack of significant historic associations and architectural and/or engineering distinction. No further architectural work is recommended.

It is the opinion of SEARCH that the proposed Malabar Road improvements will have no effect on cultural resources listed or eligible for listing in the NRHP. No further work is recommended.

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## REFERENCES CITED

Adovasio, J. M., J. Donahue, and R. Stuckenrath

1990 The Meadowcroft Rockshelter Radiocarbon Chronology 1975–1990. *American Antiquity* 55:348–355.

Anderson, David G., and Christopher Gillam

2000 Paleoindian Colonization of the Americas: Implications from an Examination of Physiography, Demography, and Artifact Distribution. *American Antiquity* 65(1):43–66.

Archaeological Consultants, Inc. (ACI)

2012 *The Historic Highway Bridges of Florida*. Florida Department of Transportation Environmental Management Office. Electronic document, <http://www.fdot.gov/environment/pubs/Historic%20Highway%20Bridges%20of%20Florida%202010%20Update.pdf>, accessed May 5, 2021.

Austin, Robert J.

1996 Prehistoric Chert Procurement and Mobility Strategies on the Lake Wales Ridge. *The Florida Anthropologist* 49:211–223.

1997 *The Economics of Lithic Resource Use in South-Central Florida*. PhD dissertation, Department of Anthropology, University of Florida. University Microfilms, Ann Arbor.

Bader, Sharon F., and R. W. Parkinson

1990 Holocene Evolution of the Indian River Lagoon in Central Brevard County, Florida. *Florida Scientist* 53:204–215.

Bradley, B., and D. Stanford

2004 The North Atlantic Ice-edge Corridor: A Possible Palaeolithic Route to the New World. *World Archaeology* 34:459–478.

Brooks, H. K.

1974 Lake Okeechobee. In *Environments of South Florida: Present and Past*, edited by P. J. Gleason, pp. 256–286. Miami Geological Society Memoir 2. Miami.

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

Brown, Jr., Canter

1991 *Florida's Peace River Frontier*. University of Central Florida Press, Orlando.

Bullen, Ripley P.

1972 The Orange Period of Peninsular Florida. In *Fiber-tempered Pottery in Southeastern United States and Northern Columbia: Its Origins, Context, and Significance*, edited by R. P. Bullen and J. B. Stoltman, pp. 9–33. Florida Anthropological Society Publication 6. Gainesville.

Business View Magazine

2017 Palm Bay Florida – City on a Roll. 5 March. Electronic document, <https://businessviewmagazine.com/palm-bay-florida-city-on-a-roll/>, accessed May 7, 2021.

Carr, Robert S.

1986 Preliminary Report on Excavations at the Cutler Fossil Site (8DA2001) in Southern Florida. *The Florida Anthropologist* 39:231–232.

Carr, Robert S., and B. Calvin Jones

1981 *Florida Anthropologist* Interview with Calvin Jones, Part II: Excavations of an Archaic Cemetery in Cocoa Beach, Florida. *The Florida Anthropologist* 34:81–89.

Carr, Robert S., D. Dickel, and M. Masson

1995 Archaeological Investigations at the Ortona Earthworks and Mounds. *The Florida Anthropologist* 48:227–264.

Carr, Robert S., Amy Felnley, Richard Ferrer, W. Steele, and Jorge Zamonillo

1992 *An Archaeological Survey of Broward County, FL*. Florida Master Site File Survey No. 2933. On file, Florida Division of Historical Resources, Tallahassee.

Carter, Clarence Edwin (editor)

1962 *The Territorial Papers of the United States, Volume XXVI, The Territory of Florida, 1839-1845*. Government Printing Office, Washington, D.C.

CCC Enterprises, Inc.

1981 *Proposed Response to Future Area Development Application Question 19, Parts A and B, for GDC's West Malabar Tract, Brevard County, Florida*. FMSF Survey No. 1646. On file, FDHR, Tallahassee.

Chapman, Jeffrey

1985 Archaeology and the Archaic Period in the Southern Ridge-and-Valley Province. In *Structure and Process in Southeastern Archaeology*, edited by R. S. Dickens Jr. and H. T. Ward, pp. 137–153. University of Alabama Press, Tuscaloosa.

City of Palm Bay, Florida

2021 History. Electronic Document, <https://www.palmbayflorida.org/our-city/about/history>, accessed April 12, 2021.

Cockrell, Wilburn A., and Larry Murphy

1978 Pleistocene Man in Florida. *Archaeology of Eastern North America* 6:1–12.

Covington, James W.

1957 *The Story of Southwestern Florida*, Volume 1 and 2. Lewis Historical Publishing Company, Inc., NY.



Dickel, David N.

2002 Analysis of Mortuary Patterns. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*, edited by G. H. Doran, pp. 73–96. University Press of Florida, Gainesville.

Dillehay, T. D., C. Ramírez, M. Pino, M. B. Collins, J. Rossen, and J. D. Pino-Navarro

2008 Monte Verde: Seaweed, Food, Medicine, and the Peopling of South America. *Science* 320:784–786.

Dixon, E. J.

1993 *Quest for the Origins of the First Americans*. University of New Mexico Press, Albuquerque.

Doran, Glen H.

2002 The Windover Radiocarbon Chronology. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*, edited By G. H. Doran, pp. 59–72. University Press of Florida, Gainesville.

Dorsey, R. A.

1997 *Predicted Sea Level Changes, Florida Gulf Coast Over the Past 21,000 Years*. Research Series Number 9. Gulf Archaeological Research Institute, Crystal River, Florida.

Dovell, J. E.

1952 *Florida: Historic, Dramatic, Contemporary*. Lewis Historical Publishing Company, Inc., New York, NY.

Dunn, Hampton

1998 *Historic Florida Courthouses*. Hallmark Publishing Company, Gloucester Point, VA.

Environmental Sciences, Inc. (ESI)

2004 *A Cultural Resource Reconnaissance Survey of the Palmer Tract, Brevard County, Florida*. FMSF Survey No. 10376. On file, FDHR, Tallahassee.

Eriksen, John M.

1994 *Brevard County: A History to 1955*. The Florida Historical Society Press, Tampa.

Faught, Michael K.

2008 Archaeological Roots of Human Diversity in the New World: A Compilation of Accurate and Precise Radiocarbon Ages from Earliest Sites. *American Antiquity* 73(4):670–698.

Federal Writers' Project

1939 *Florida: A Guide to the Southern Most State*. American Guide Series. Oxford University Press, NY.

Fernald, Edward A. and Elizabeth D. Purdum  
1992 *Atlas of Florida*. University Press of Florida, Gainesville, FL.

Fladmark, E. R.  
1979 Routes: Alternative Migration Corridors for Early Man in North America. *American Antiquity* 44:55–69.

#### *Florida Highways*

1928 Progress of Road Construction in Florida in 1927. January 2.

#### Florida State Road Department (FSRD)

1917 Road Map, State of Florida. Electronic document, <https://www.fdot.gov/geospatial/FloridaTransportationMapArchive.shtm>, accessed March 8, 2021.

1934 General Highway Map of Brevard County. Electronic document, <https://www.ufdc.ufl.edu/UF00015976/00001/>, accessed March 8, 2021.

#### *Florida Today*

2001 Spotlight on Brevard History: Launch Complex 41. 24 August:7B.

#### Folger, L. B.

1883 Map of Brevard County, 1883. Electronic document, <https://fcit.usf.edu/florida/maps/>, accessed March 8, 2021.

#### Frazer, William, and John J. Guthrie Jr.

1995 *The Florida Land Boom: Speculation, Money, and the Banks*. Quorum Books, Westport, Connecticut.

#### Gannon, Michael

1996 *The New History of Florida*. University Press of Florida, Gainesville.

#### General Land Office (GLO)

1845a Survey Map of Township 28 South, Range 36 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

1845b Survey Map of Township 28 South, Range 37 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

1845c Survey Map of Township 29 South, Range 36 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

1845d Survey Map of Township 29 South, Range 37 East. Electronic document, <http://glorerecords.blm.gov/>, Accessed March 1, 2021.

#### Gidley, J. W., and E. B. Loomis

1926 Fossil Man in Florida. *American Journal of Science* 12:254–264.



Gleason, P. J., and P. Stone

1994 Age, Origin, and Landscape Evolution of the Everglades Peatland. In *Everglades: The Ecosystem and Its Reconstruction*, edited by S. M. Davis and J. C. Ogden, pp. 149–197. St. Lucie Press, Delray Beach, Florida.

Gleason, P. J., A. D. Cohen, W. G. Smith, H. K. Brooks, P. A. Stone, R. L. Goodrick, and W. Spackman, Jr.

1974 The Environmental Significance of Holocene Sediments from the Everglades and Saline Tidal Plain. In *Environments of South Florida: Present and Past*, edited by P. J. Gleason, pp. 287–341. Miami Geological Society Memoir 2. Miami.

Griffin, James

1945 The Significance of the Fiber-Tempered Pottery of the St. Johns Area in Florida. *Journal of the Washington Academy of Sciences* 35:218–223.

Hale, Stephen

1989 Prehistoric Subsistence Strategies and Settlement Patterns in the Lake Okeechobee Basin of the South Florida Peninsula. PhD dissertation, Department of Anthropology, University of Florida, Gainesville.

Halligan, Jessi J., M. R. Waters, A. Perrotti, I. J. Owens, J. M. Feinberg, M. D. Bourne, B. Fenerty, B. Winsborough, D. Carlson, D. C. Fisher, T. W. Stafford Jr., and J. S. Dunbar

2016 Pre-Clovis occupation 14,550 years ago at the Page-Ladson site, Florida, and the peopling of the Americas. *Science Advances* 2(5):e1600375.

Hrdlicka, Ales

1918 Recent Discoveries Attributed to Early Man in America. *Bureau of American Ethnology Bulletin* 66:1–67.

1922 *The Anthropology of Florida*. Florida State Historical Society, Publications 1.

Jackson, Roy Adlai (editor)

1992 *The Historic Highway Bridges of Florida*. Environmental Management Office, Florida Department of Transportation, Tallahassee.

Jackson, Roy

2004 *Historic Highway Bridges of Florida*. Environmental Management Office, Florida Department of Transportation, Tallahassee.

Janus Research

2003 *Cultural Resource Assessment Survey of the Palm Bay Parkway PD&E Study from Malabar Road to Ellis Road, Brevard County*. FMSF Survey No. 8791. On file, FDHR, Tallahassee.

2017 *Cultural Resource Assessment Survey, Malabar-Midway 230 kV Transmission Line, Brevard County, Florida*. FMSF Survey No. 25794. On file, FDHR, Tallahassee.

Johnson, Dudley S.

1966 Henry Bradley Plant and Florida. *Florida Historical Quarterly* 45(2).

Jones, Ginny

2012 Guide to the Resource Group Form Version 4.0: Appendix E: Guidance on NR Eligibility of Canals. Electronic document, [http://dos.myflorida.com/media/31352/guide\\_resourcegroup\\_v40.pdf](http://dos.myflorida.com/media/31352/guide_resourcegroup_v40.pdf), accessed May 3, 2021.

Kendrick, Baynard

1964 *Florida Trails to Turnpikes, 1914-1964*. University of Florida Press, Gainesville.

King, Joseph E.

1992 *The Historic Highway Bridges of Florida*. Environmental Management Office, Florida Department of Transportation, Tallahassee.

Mahon, John K.

1985 *History of the Second Seminole War, 1835-1842*. Rev. ed. University of Florida Press, Gainesville.

McDowell, L. L., J. C. Stephens, and E. H. Stewart

1969 Radiocarbon Chronology of the Florida Everglades Peat. *Soil Science Society of America Proceedings* 33:743–745.

Melbourne-Tillman Water Control District

2021 District Overview. Electronic Document, <http://www.melbournetillman.org/>, accessed April 27, 2021.

Milanich, Jerald T.

1994 *Archaeology of Precolumbian Florida*. University Press of Florida, Gainesville.

1995 *Florida Indians and the Invasion from Europe*. University Press of Florida, Gainesville.

Morris, Allen

1948 *The Florida Handbook, 1947-48*. The Peninsular Publishing Company, Tallahassee.

1995 *Florida Place Names*. Pineapple Press, Sarasota.

National Park Service (NPS)

1983 Cape Canaveral Air Force Station. Nomination Form, National Register of Historic Places. US Department of the Interior, Washington, DC.

National Register of Historic Places (NRHP)

1987 St. Joseph's Catholic Church. Electronic Document, <https://npgallery.nps.gov/>, accessed April 12, 2021.



Newman, Christine, and Brent Weisman

1992 Prehistoric and Historic Settlement in the Guana Tract, St. Johns County, Florida. *The Florida Anthropologist* 45:162–171.

Newsom, Lee A.

2002 The Paleoethnobotany of the Archaic Mortuary Pond. In *Windover: Multidisciplinary Investigations of an Early Archaic Florida Cemetery*, edited by G. H. Doran, pp. 191–210. University Press of Florida, Gainesville.

New South Associates, Inc.

2003 *Cultural Resources Survey and Site Evaluation: Ten Mile Creek Water Preserve Area Critical Project, St. Lucie County, Florida*. Prepared for the Army Corps of Engineers, Jacksonville District. On file, Florida Division of Historical Resources, Tallahassee.

Norton, Charles Ledyard

1890 Brevard County. In *A Handbook of Florida*. Longmans, Green, and Co., New York. Electronic document, <https://fcit.usf.edu/florida/maps/>, accessed March 8, 2021.

Penders, Thomas E.

2017 *A Cultural Resources Assessment Survey for the Proposed Avery Springs Development, Palm Bay, Brevard County, Florida*. FMSF Survey No. 24194. On file, FDHR, Tallahassee.

Rohling, E. J., M. Fenton, F. J. Jorissen, P. Bertrant, G. Ganssen, and J. P. Caulet

1998 Magnitudes of Sea-Level Lowstands of the Past 500,000 Years. *Nature* 394:162–165.

SEARCH

2006 *A Cultural Resource Reconnaissance Survey of the Palmer Tract, Brevard County, Florida*. FMSF Survey No. 12516. On file, FDHR, Tallahassee.

2007 *A Phase I Cultural Resource Survey of the Lennar South Development Property, Brevard County, Florida*. FMSF Survey No. 14219. On file, FDHR, Tallahassee.

Sellards, E. H.

1916 Discovery of Fossil Human Remains in Florida in Association with Extinct Vertebrates. *American Journal of Science* 192:1–17.

1917 Further Notes on Human Remains from Vero, Florida. *American Anthropologist* 19:239–251.

Sherwood, Sarah, Boyce N. Driskell, Asa R. Randall, and Scott C. Meeks

2004 Chronology and Stratigraphy at Dust Cave, Alabama. *American Antiquity* 69:533–554.

Shofner, Jerrell H.

1995 *History of Brevard County, Volume I*. Brevard County Historical Commission, n.p.

Sigler-Eisenberg, Brenda (editor)

1985 *Archaeological Site Types, Distributions, and Preservation within the Upper St. Johns River Basin, Florida*. Florida State Museum Miscellaneous Project and Report Series Number 27. Gainesville.

Smith, Bruce D.

1986 The Archaeology of the Eastern United States: From Dalton to de Soto, 10,500–500 B.P. *Advances in World Archaeology* 5:1–93.

SouthArc, Inc.

2014 *Cultural Resources Survey and Assessment, Palm Island Subdivision, Brevard County, Florida*. FMSF Survey No. 20793. On file, FDHR, Tallahassee.

St. Johns River Water Management District

2021 Upper St. Johns River. Electronic Document, <https://www.sjrwmd.com/waterways/st-johns-river/upper/#canal-1>, accessed March 5, 2021.

Ste. Claire, Dana

1990 The Archaic in East Florida: Archaeological Evidence for Early Coastal Adaptations. *The Florida Anthropologist* 43:189–197.

Stewart, T. Dale

1946 A Re-examination of the Fossil Human Skeletal Remains from Melbourne, Florida, with Further Data on the Vero Skull. *Smithsonian Miscellaneous Collections* 106:1–28.

Stone, Elaine Murray

1988 *Brevard County: From Cape of the Canes to Space Coast*. Windsor Publications, Northridge, California.

Tanner, W. F.

1991 The “Gulf of Mexico” Late Holocene Sea Level Curve and River Delta History. *Gulf Coast Association of Geological Societies Transactions* 41:583–589.

Tebeau, Charlton W.

1971 *A History of Florida*. Revised 1980. University of Miami Press, Coral Gables.

Tuross, N., M. L. Fogel, L. Newsom, and G. H. Doran

1994 Subsistence in the Florida Archaic: The Stable-Isotope and Archaeobotanical Evidence from the Windover Site. *American Antiquity* 59:288–303.

US Census Bureau

1995 Florida, Population of Counties by Decennial Census: 1900 to 1990. Electronic document, <https://www.census.gov/population/cencounts/fl190090.txt>, accessed March 2, 2020.

2010 QuickFacts: Brevard County, Florida. Electronic document, <https://www.census.gov/quickfacts/brevardcountyflorida>, accessed March 2, 2020.



## US Department of Agriculture (USDA)

- 1943 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 1951 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 1958 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 1969 Aerial Photograph of Brevard County. Electronic document, <https://ufdc.ufl.edu/UF00071730/00006/>, accessed March 1, 2021.
- 2019 Orthophoto Mosaic of Brevard County. Electronic document, <https://www.fsa.usda.gov/>, accessed March 7, 2021.

## US Geological Survey (USGS)

- 1951 Topographic Map of Melbourne West, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.
- 1954 Topographic Map of Fellsmere NW, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.
- 1971a Topographic Map of Melbourne West, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.
- 1971b Topographic Map of Fellsmere NW, FL. Electronic document, <http://ngmdb.usgs.gov/topoview/viewer/>, accessed March 1, 2021.

## Watts, W. A.

- 1969 A Pollen Diagram from Mud Lake, Marion County, North-Central Florida. *Geological Society of America Bulletin* 80:631-642.
- 1971 Postglacial and Interglacial Vegetation History of Southern Georgia and Central Florida. *Ecology* 52:676-690.
- 1975 A Late Quaternary Record of Vegetation from Lake Annie, South Central Florida. *Geology* 3:344-346.
- 1980 The Late Quaternary Vegetation History of the Southeastern United States. *Annual Reviews of Ecology and Systematics* 11:387-409.

## Wheeler, Ryan J.

- 1992 The Riviera Complex: An East Okeechobee Archaeological Area Settlement. *The Florida Anthropologist* 45:5-17.

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**APPENDIX A.**

**MARKED FIELD MAPS**





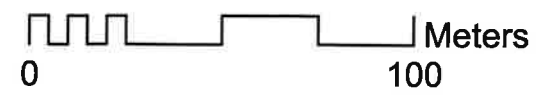


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 Minor ticks: 10m Interval

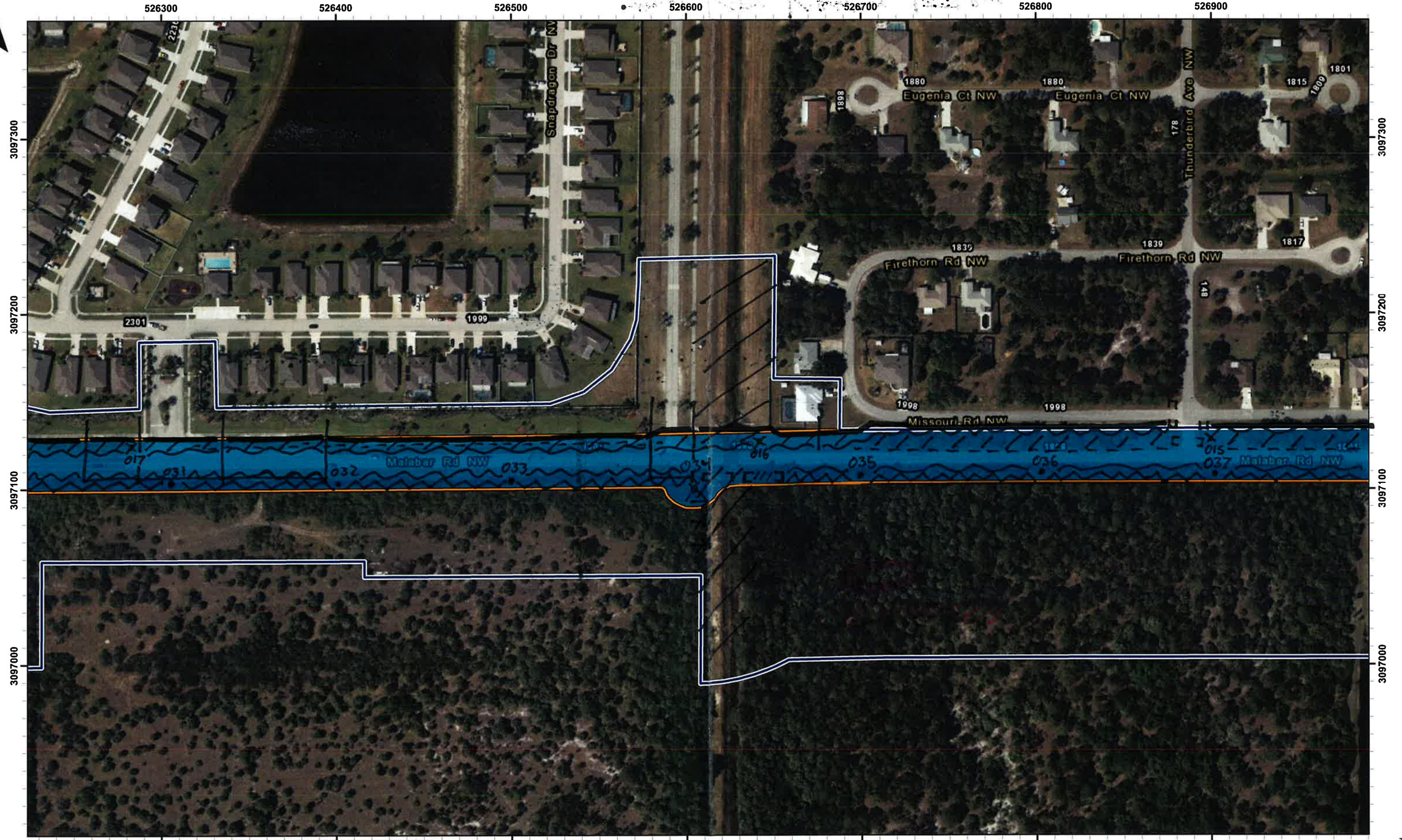
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

|               |                       |                    |             |
|---------------|-----------------------|--------------------|-------------|
| • - Neg. ST   | - - - FOC             | - - - Barbed Wire  | - Bees      |
| X - No dig ST | - - - Buried Electric | - Ditch/Canal      | E - Culvert |
| - Utility Box | - - - Water/Sewer     | ~ ~ ~ - Ditch-Berm | - Sidewalk  |
|               |                       | ~ ~ ~ - Ditch-Berm |             |



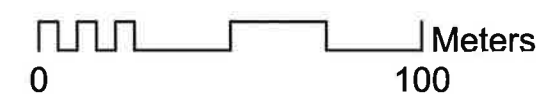




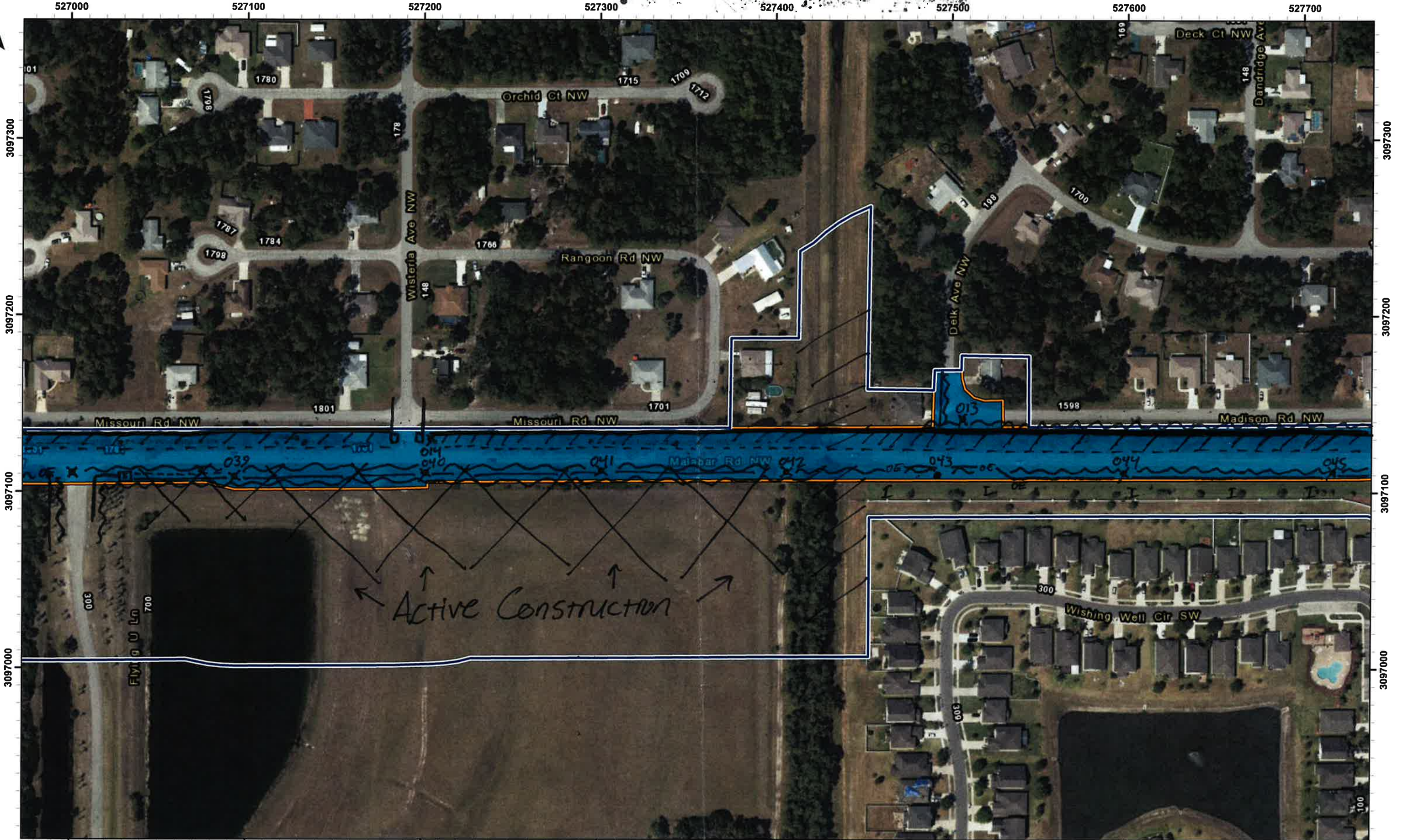
Grid UTM WGS 84 17N  
 Major ticks: 100m interval;  
 Minor ticks: 10m Interval

- Malabar Road APE
- Poorly Drained Soil
- Malabar Road Archaeological APE

- X - No dig ST
- o - Neg. ST
- E - Culvert
- - - Dotted Electric
- - - Wavy Sewer
- - - FOC
- NN - Ditch - Berm
- ||| - Canal/ditch
- - - Slope
- - - Sidewalk





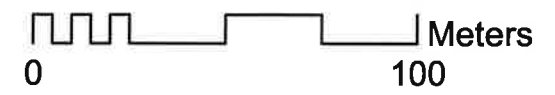


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Minor ticks: 10m Interval

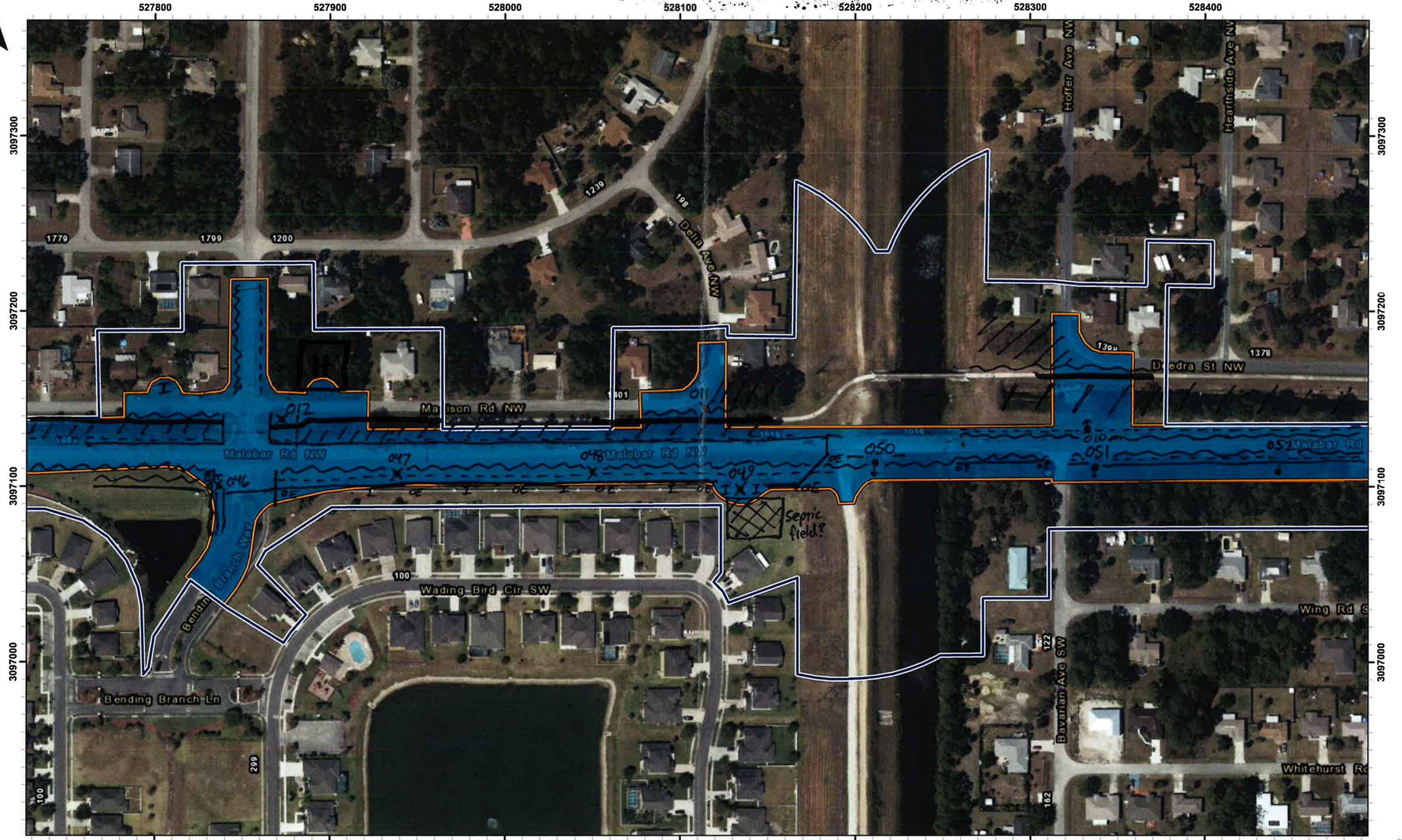
Malabar Road APE  
Malabar Road Archaeological APE

Poorly Drained Soil

- Neg ST  
 X - No dig ST  
 OE - Overhead Electric  
 - Burial Electric  
 FOC  
 Water/Sewer  
 - Utility box  
 IJ - Culvert  
 IIII - Canal/ditch  
 I - Buried irrigation  
 - Sidewalk







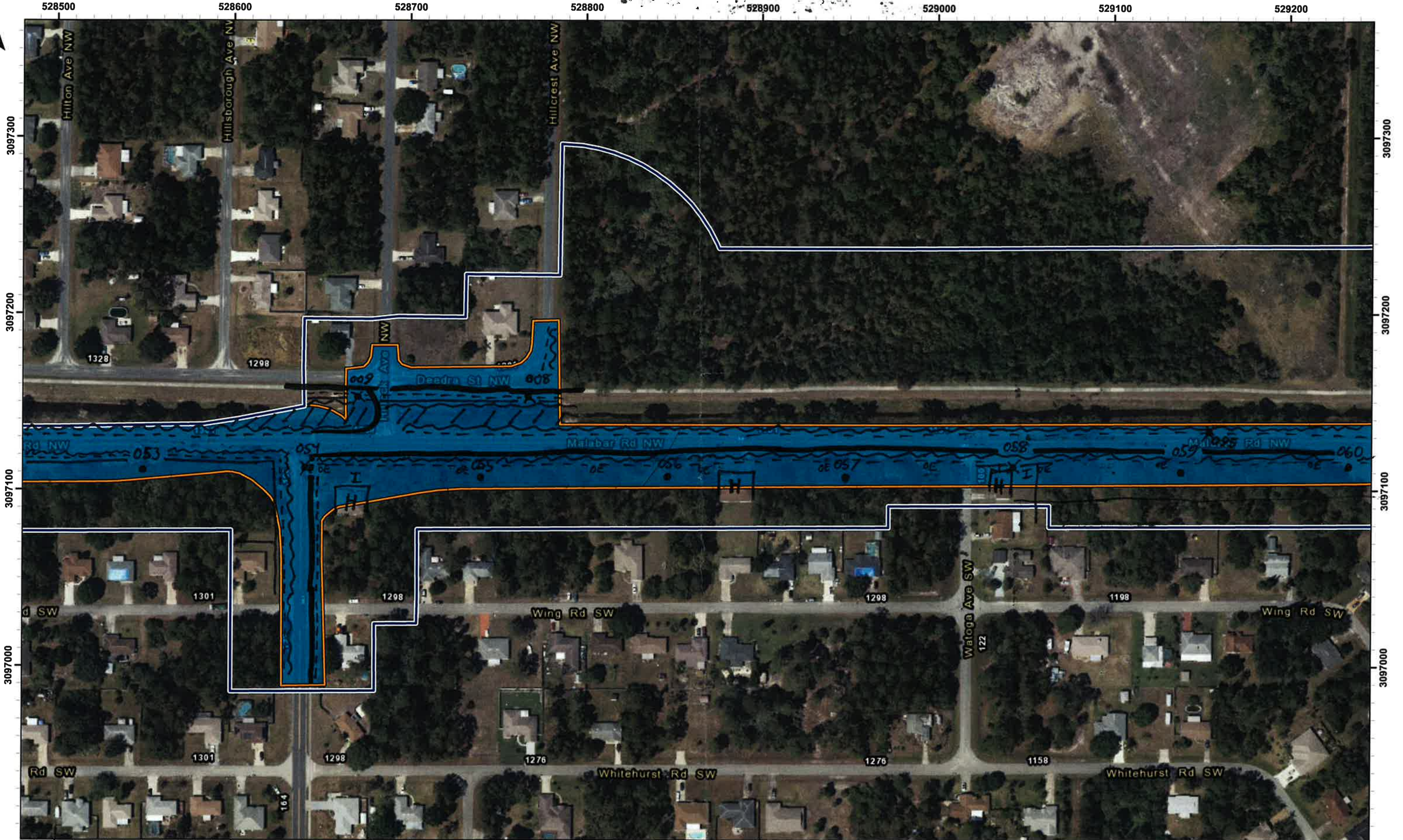
Grid UTM WGS 84 17N  
 Major ticks: 100m interval;  
 Minor ticks: 10m Interval

- Malabar Road APE
- Malabar Road Archaeological APE
- Poorly Drained Soil

- - Neg. ST
- ✕ - No dig ST
- ↓ - Moved slightly
- - - Buried electric
- - - FOC
- ~ ~ ~ water/sewer
- — — electric
- ☐ - utility box
- I - Buried Irrigation
- OE - overhead electric
- ⊞ - New lounge
- — — Sidewalk
- /// - Canal/ditch





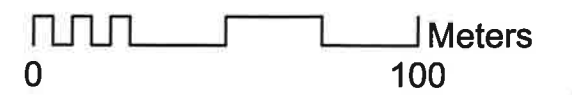


Grid UTM WGS 84 17N  
Major ticks: 100m interval;  
Minor ticks: 10m Interval

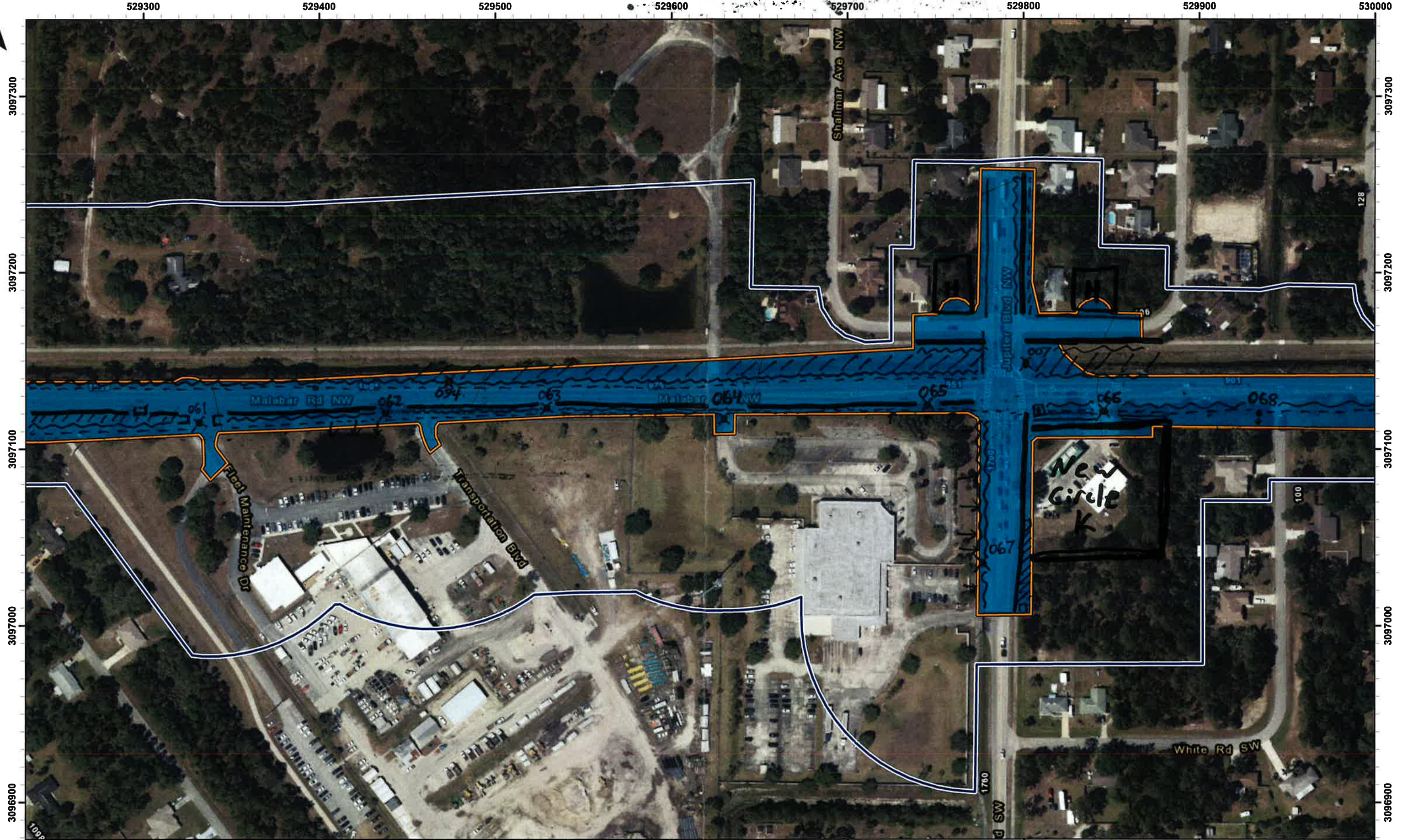
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

o - Noy ST  
 X - No dig ST  
 [H] - house  
 --- Buried electric  
 - - - FOC  
 --- Water/sewer  
 / - Sidewalk  
 OE - overhead electric  
 I - Buried irrigation  
 ||| - Canal/ditch



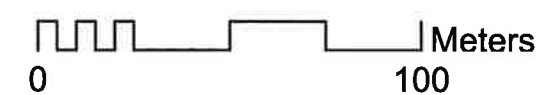




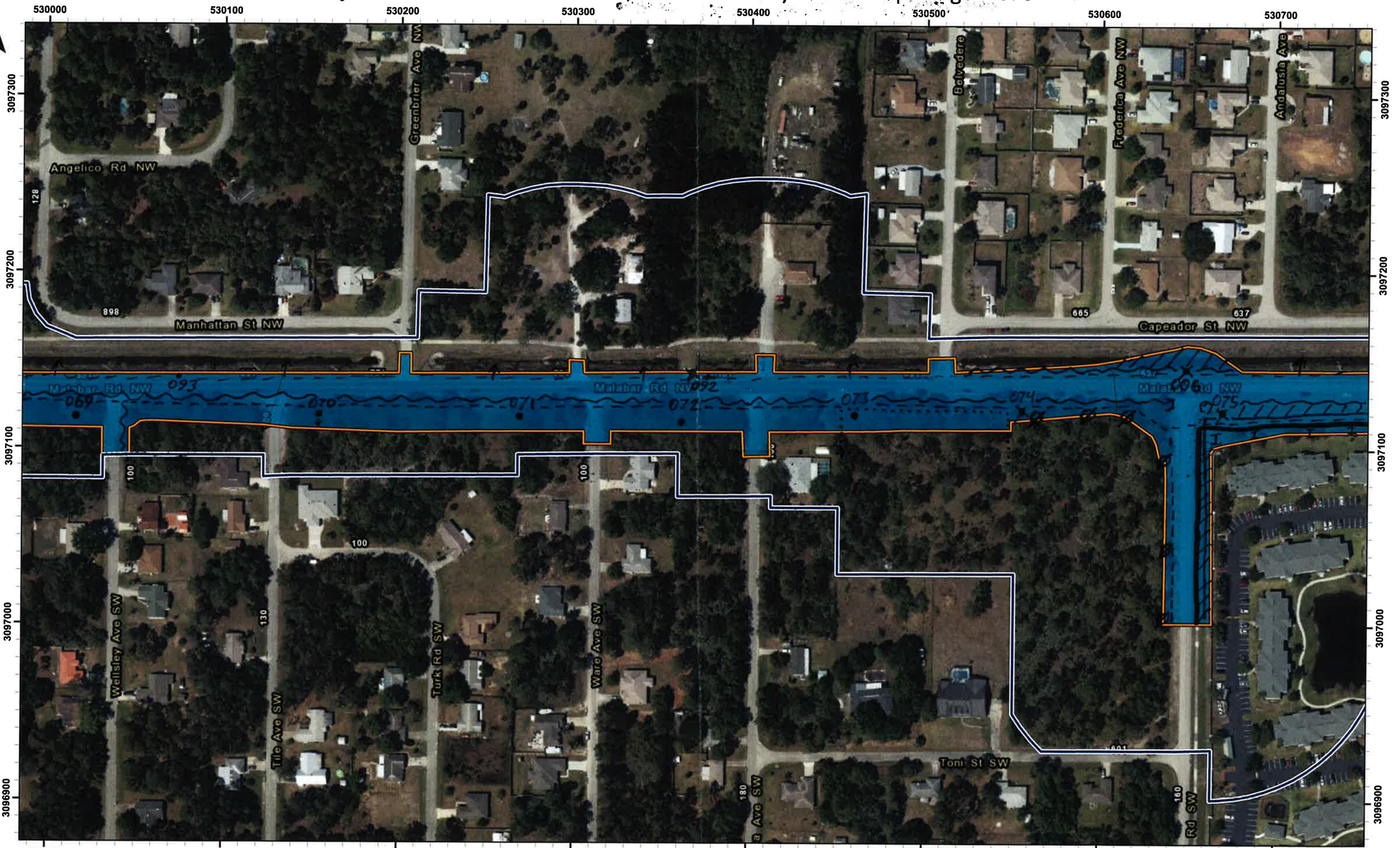
Grid UTM WGS 84 17N  
 Major ticks: 100m interval;  
 Minor ticks: 10m Interval

- Malabar Road APE
- Malabar Road Archaeological APE
- Poorly Drained Soil

- Neg. ST
- No dig ST
- Culvert
- Buried Electric
- FOC
- Water/sewer
- Slope
- Sidewalk
- Canal/ditch
- Utility Box
- Adjust point
- New House





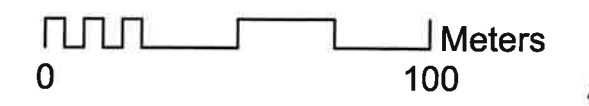


Grid UTM WGS 84 17N  
Major ticks: 100m interval;  
Minor ticks: 10m Interval

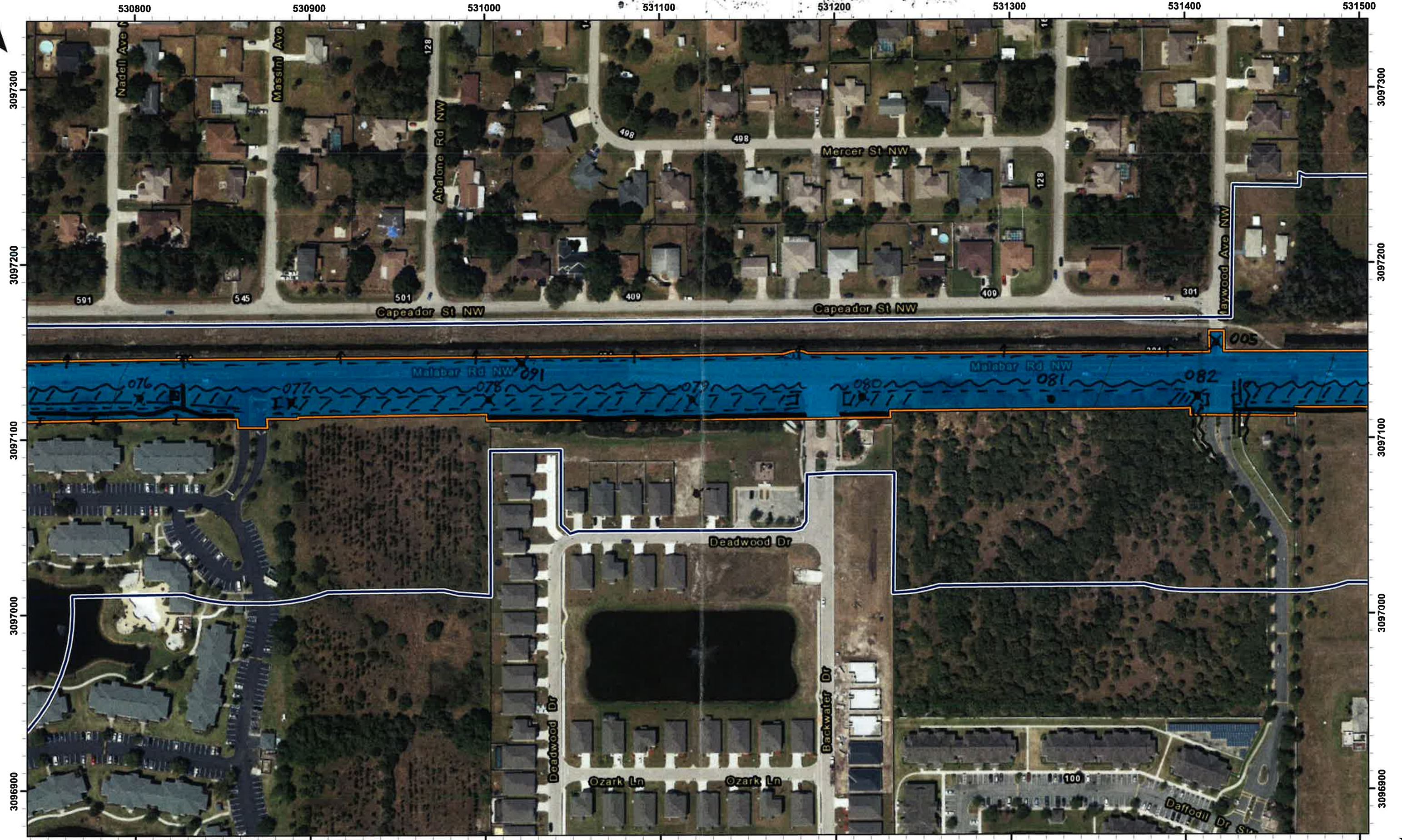
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

○ - Ney ST  
 X - No dig ST  
 ∅ - No trespass signage  
 --- Buried electric  
 ... Buried wire  
 - - - FOC  
 / - sidewalk  
 ||| - Canal/ditch  
 I - Buried Irrigation  
 ~ - water/sewer  
 ↗ - Slope





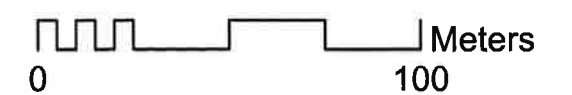


Grid UTM WGS 84 17N  
Major ticks: 100m interval;  
Minor ticks: 10m Interval

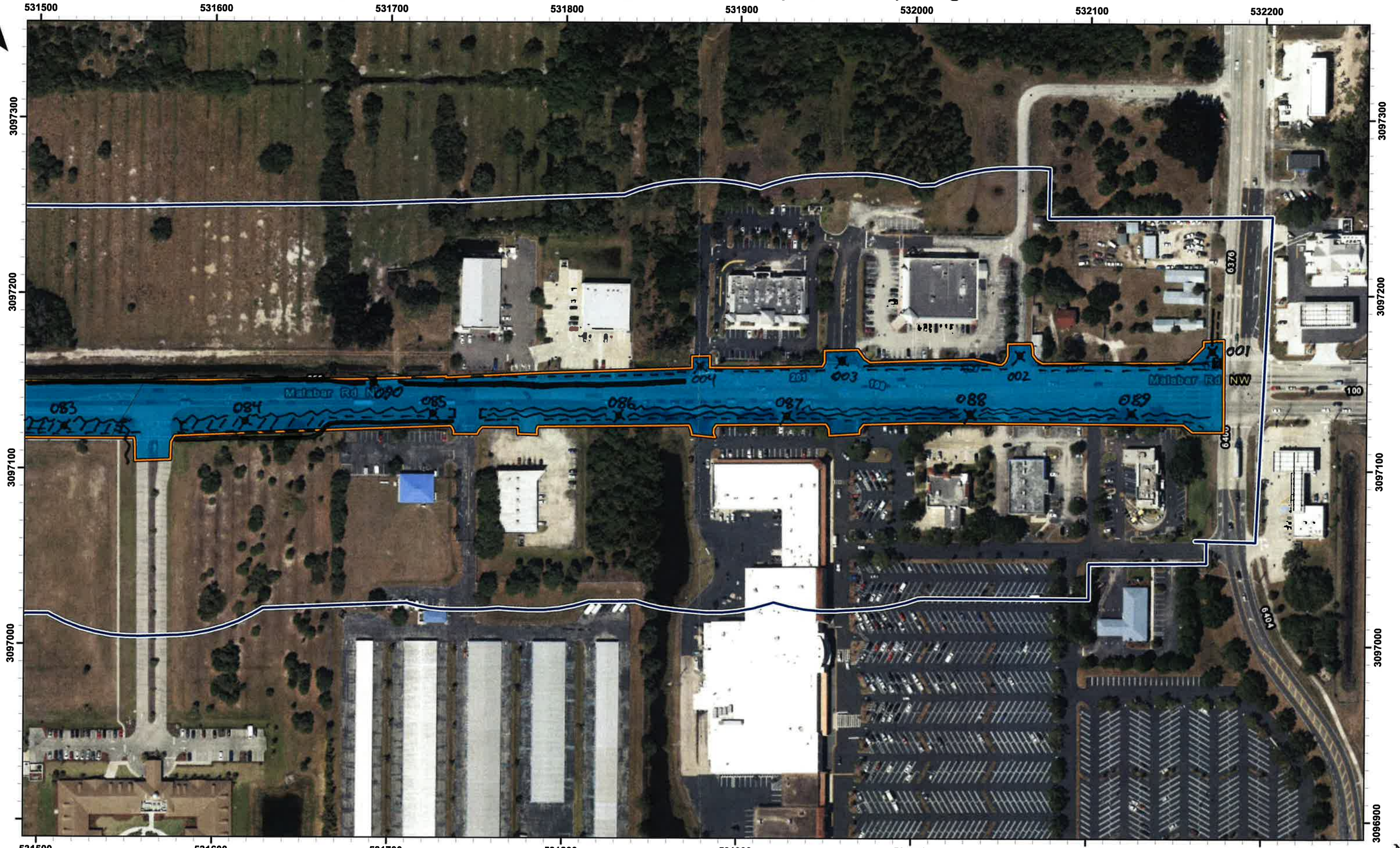
Malabar Road APE  
 Malabar Road Archaeological APE

Poorly Drained Soil

- Ney ST  
 - No dig ST  
 - Buried Irrigation  
 - utility Box  
 - culvert  
 - Ditch  
 - Slope  
 - Water/sewer  
 - FOC  
 - Buried electric  
 - Sidewalk

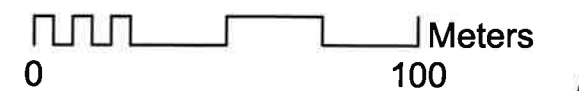






Grid UTM WGS 84 17N  
Major ticks: 100m interval;  
Minor ticks: 10m Interval

-  Malabar Road APE
-  Poorly Drained Soil
-  Malabar Road Archaeological APE









**APPENDIX B.**

**FMSF RESOURCE FORM**





Original  
 Update



**RESOURCE GROUP FORM**  
**FLORIDA MASTER SITE FILE**  
**Version 5.0 3/19**

Site #8 BR03535  
 Field Date 4-26-2021  
 Form Date 4-29-2021  
 Recorder# \_\_\_\_\_

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 20 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

**LOCATION & MAPPING**

Address: 

| Street Number | Direction | Street Name | Street Type | Suffix Direction |
|---------------|-----------|-------------|-------------|------------------|
|               |           |             |             |                  |

  
 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 34 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 28S Range 36E Section 36 ¼ section:  NW  SW  SE  NE  
 3) Township 29S Range 36E Section 1-3 ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name \_\_\_\_\_ USGS Date \_\_\_\_\_  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  
 Within the APE, 8BR03535 runs W-E for approx. 2.46 mi (3.96 km), beginning at Resource 8BR04377 and running E.

| DHR USE ONLY                                                       | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |

HISTORY & DESCRIPTION

Construction Year: 1928 [X]approximately [ ]year listed or earlier [ ]year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR03535 was constructed ca. 1928 as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is owned by the Melbourne-Tillman Water Control District and is partially dried up.

RESEARCH METHODS (check all that apply)

- [X]FMSF record search (sites/surveys) [ ]library research [ ]building permits [ ]Sanborn maps
[ ]FL State Archives/photo collection [ ]city directory [ ]occupant/owner interview [ ]plat maps
[X]property appraiser / tax records [ ]newspaper files [ ]neighbor interview [ ]Public Lands Survey (DEP)
[X]cultural resource survey [X]historic photos [ ]interior inspection [ ]HABS/HAER record search
[X]other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ]yes [X]no [ ]insufficient information
Potentially eligible as contributor to a National Register district? [ ]yes [X]no [ ]insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Resource 8BR03535 was determined ineligible for the NRHP by the SHPO in 2017. It has not gained significance or distinction since that evaluation and remains ineligible for listing in the NRHP.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR03535\_a Facing Southwest**



**8BR03535\_b Facing South**



**8BR03535\_c Facing Southeast**



**8BR03535\_d Facing Southwest**



**8BR03535\_e Facing South**



**8BR03535\_f Facing Southeast**





**8BR03535\_g Facing North**

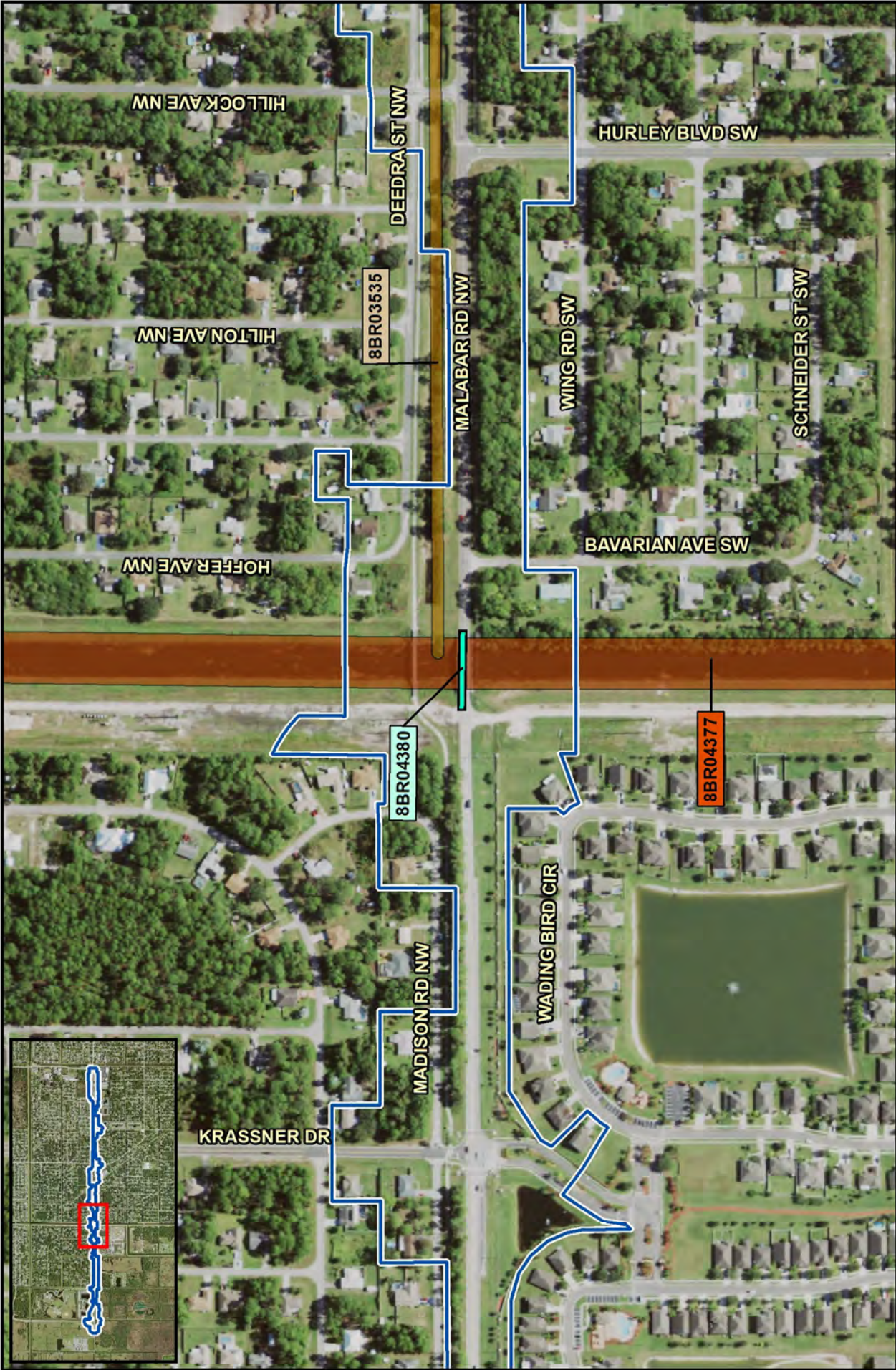


**8BR03535\_h Facing Northwest**



**8BR03535\_i Facing Northeast**





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

N

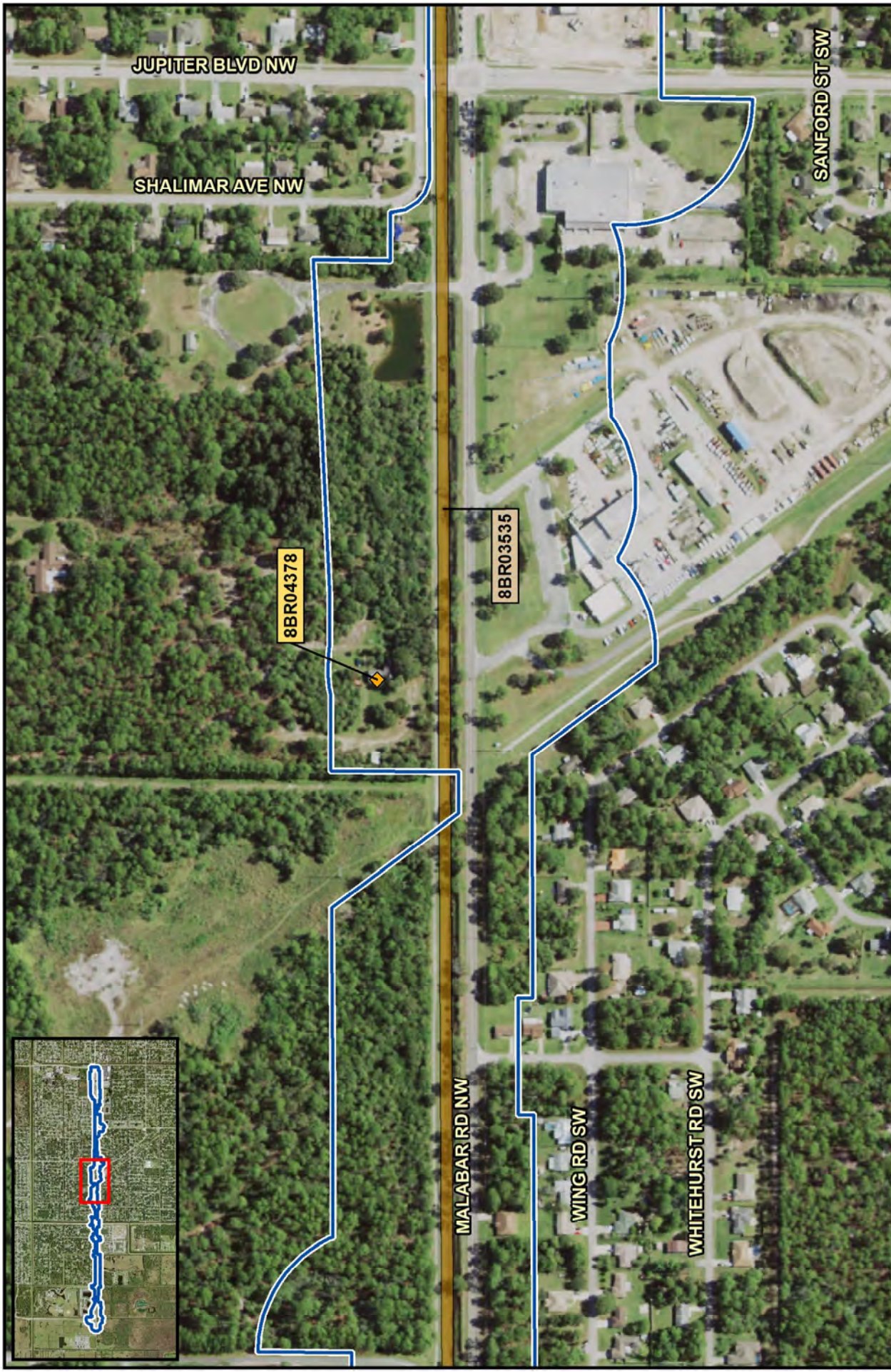
Malabar Road APE

Newly Recorded Linear Resource

Previously Recorded Linear Resource

Newly Recorded Historic Bridge





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

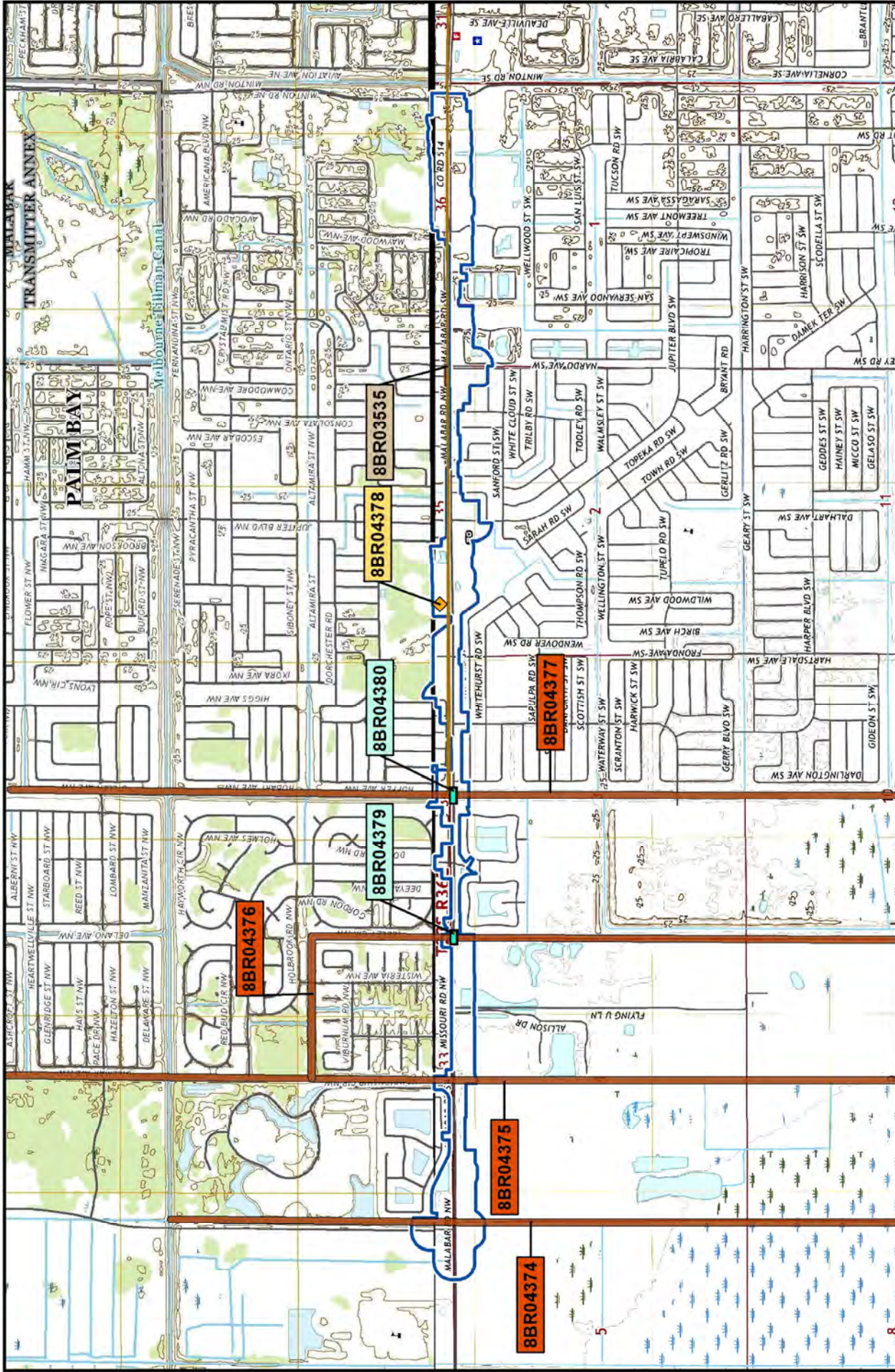
N

Malabar Road APE

Previously Recorded Linear Resource

Newly Recorded Historic Structure





Malabar Road APE  
◆ Newly Recorded Historic Structure  
 Newly Recorded Historic Bridge

Newly Recorded Linear Resource  
 Previously Recorded Linear Resource

0 500 0 2,000  
 Meters Feet  
 N  
 USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)







HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04374 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is channeled beneath Malabar Rd via a non-historic culvert.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04374 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR04374\_a Facing Northeast**



**8BR04374\_b Facing North**



**8BR04374\_c Facing Northwest**



**8BR04374\_d Facing South**

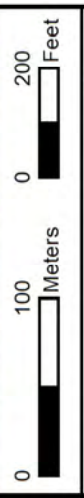
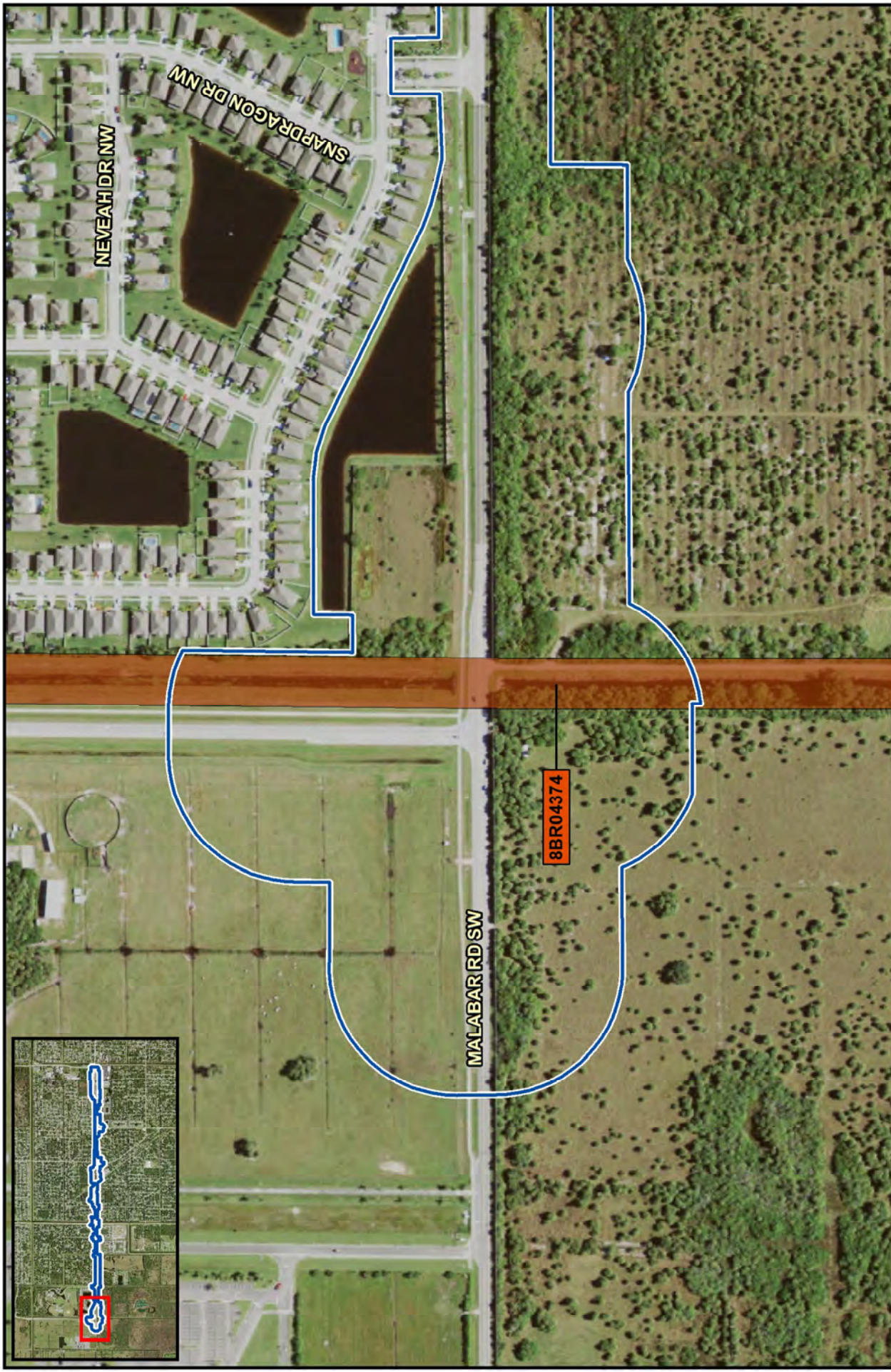


**8BR04374\_e Facing West**



**8BR04374\_f Facing Northwest**



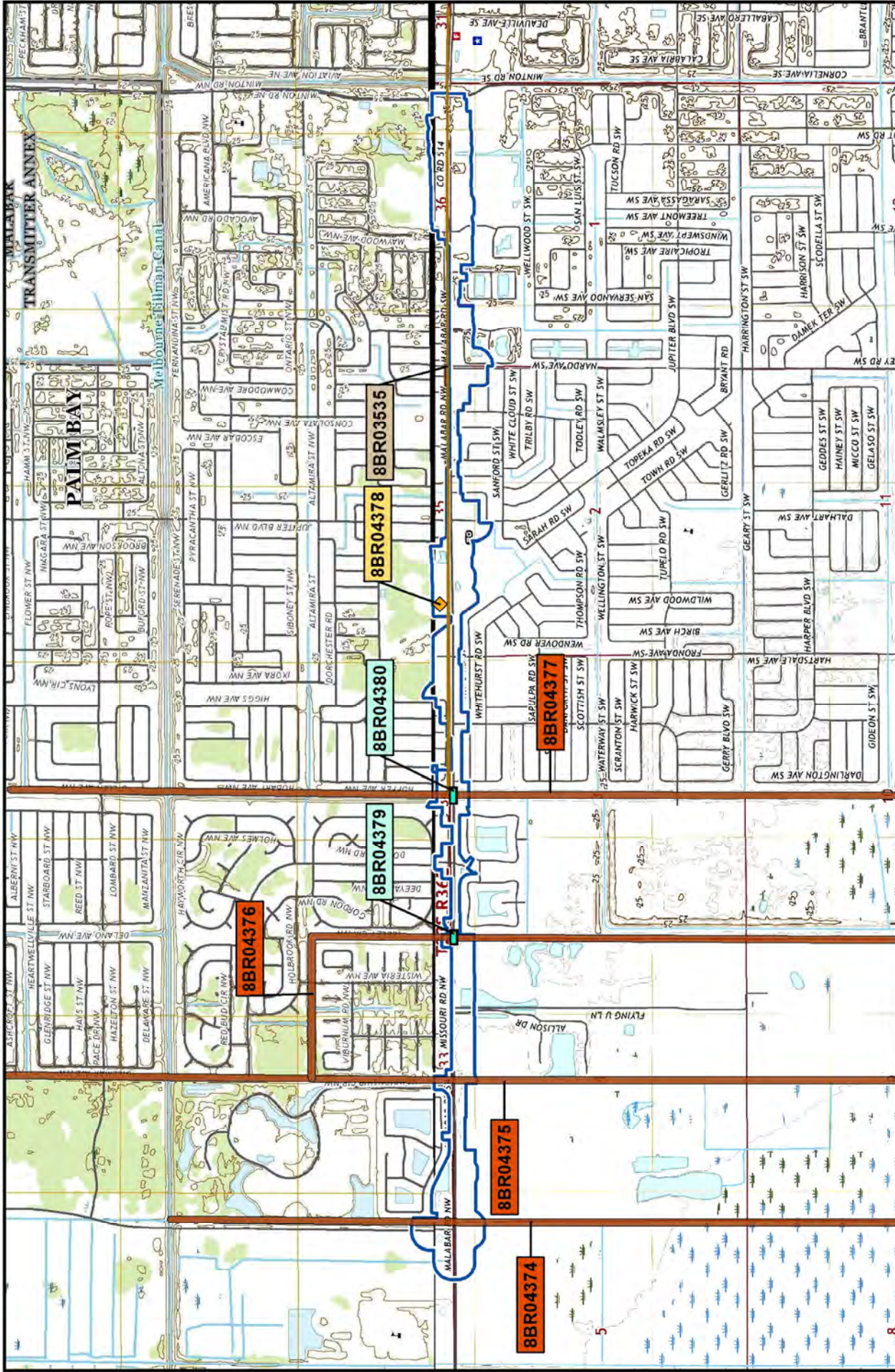


USDA-FSA-APFO Orthophoto Mosaic (2019)

Malabar Road APE Newly Recorded Linear Resource







Malabar Road APE  
◆ Newly Recorded Historic Structure  
 Newly Recorded Historic Bridge

Newly Recorded Linear Resource  
 Previously Recorded Linear Resource

0 500 0 2,000  
 Meters Feet  
 N  
 USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)







# RESOURCE GROUP FORM FLORIDA MASTER SITE FILE Version 5.0 3/19

Site #8 BR04375  
Field Date 4-26-2021  
Form Date 4-30-2021  
Recorder# \_\_\_\_\_

Original  
 Update

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 8 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

## LOCATION & MAPPING

Address: 

|                      |                  |                    |                    |                         |
|----------------------|------------------|--------------------|--------------------|-------------------------|
| <u>Street Number</u> | <u>Direction</u> | <u>Street Name</u> | <u>Street Type</u> | <u>Suffix Direction</u> |
|                      |                  |                    |                    |                         |

  
 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 33 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 29S Range 36E Section 4 ¼ section:  NW  SW  SE  NE  
 3) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name MELBOURNE WEST USGS Date 2021  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  

Within the APE, 8BR04375 runs N-S for approx. 793.29 ft (241.80 m), beginning approx. 314.70 ft (95.92 m) N of Malabar Rd and continuing S. It is 16.85 ft (5.13 m) wide.

| DHR USE ONLY                                                       | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |

HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04375 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is largely dried up and runs beneath Malabar Rd via a non-historic culvert.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04375 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





8BR04375\_a Facing North



8BR04375\_b Facing Northeast



8BR04375\_c Facing South



8BR04375\_d Facing Northwest



8BR04375\_e Facing South



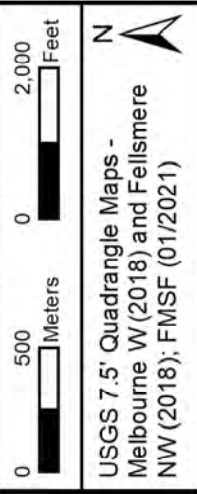
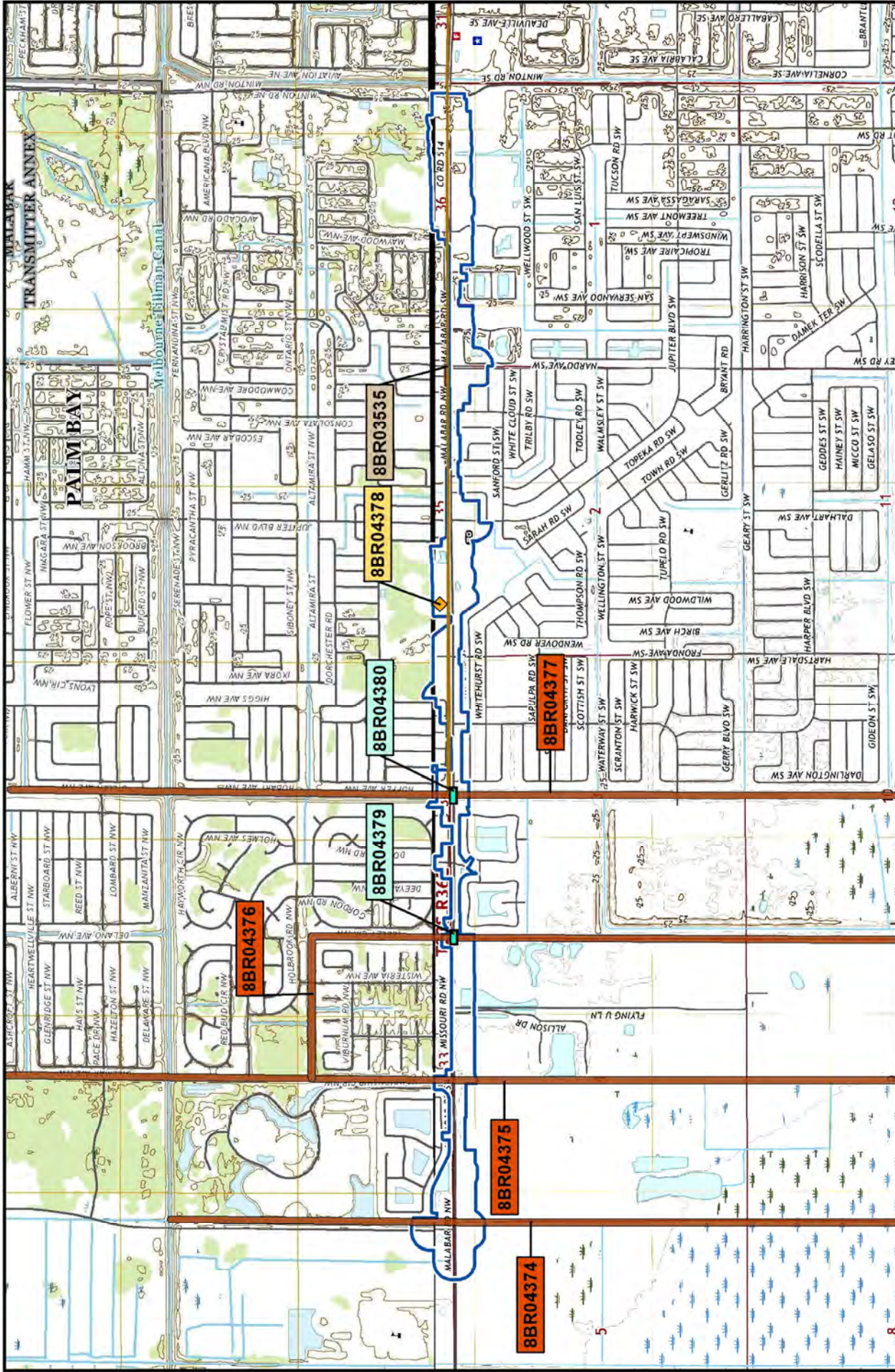


- Malabar Road APE
- Newly Recorded Linear Resource
- Newly Recorded Historic Bridge



USDA-FSA-APFO Orthophoto Mosaic (2019)





USGS 7.5' Quadrangle Maps -  
Melbourne W (2018) and Fellsmere  
NW (2018); FMSF (01/2021)

- Malabar Road APE
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource







**RESOURCE GROUP FORM**  
**FLORIDA MASTER SITE FILE**  
**Version 5.0 3/19**

Site #8 BR04376  
 Field Date 4-26-2021  
 Form Date 4-30-2021  
 Recorder# \_\_\_\_\_

Original  
 Update

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only: NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only: NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
- Building complex** (NR category usually "building(s)"): multiple buildings in close spatial and functional association
- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 9 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

**LOCATION & MAPPING**

Address: 

| Street Number | Direction | Street Name | Street Type | Suffix Direction |
|---------------|-----------|-------------|-------------|------------------|
|               |           |             |             |                  |

  
 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 33, 34 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 29S Range 36E Section 3, 4 ¼ section:  NW  SW  SE  NE  
 3) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name \_\_\_\_\_ USGS Date \_\_\_\_\_  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  
 Within the APE, 8BR04376 runs N-S for approx. 797.90 ft (243.20 m), beginning approx. 415.12 ft (126.53 m) N of Malabar Rd and continuing S. It is 14.08 ft (4.29 m) wide.

| DHR USE ONLY                                                   | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |

HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04376 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is channeled beneath Malabar Rd via Resource 8BR04379.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)
Due to lack of sufficient historic significance and engineering distinction, 8BR04376 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.
Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR04376\_a Facing North**



**8BR04376\_b Facing Northwest**



**8BR04376\_c Facing Northeast**



**8BR04376\_d Facing Northeast**



**8BR04376\_e Facing West**



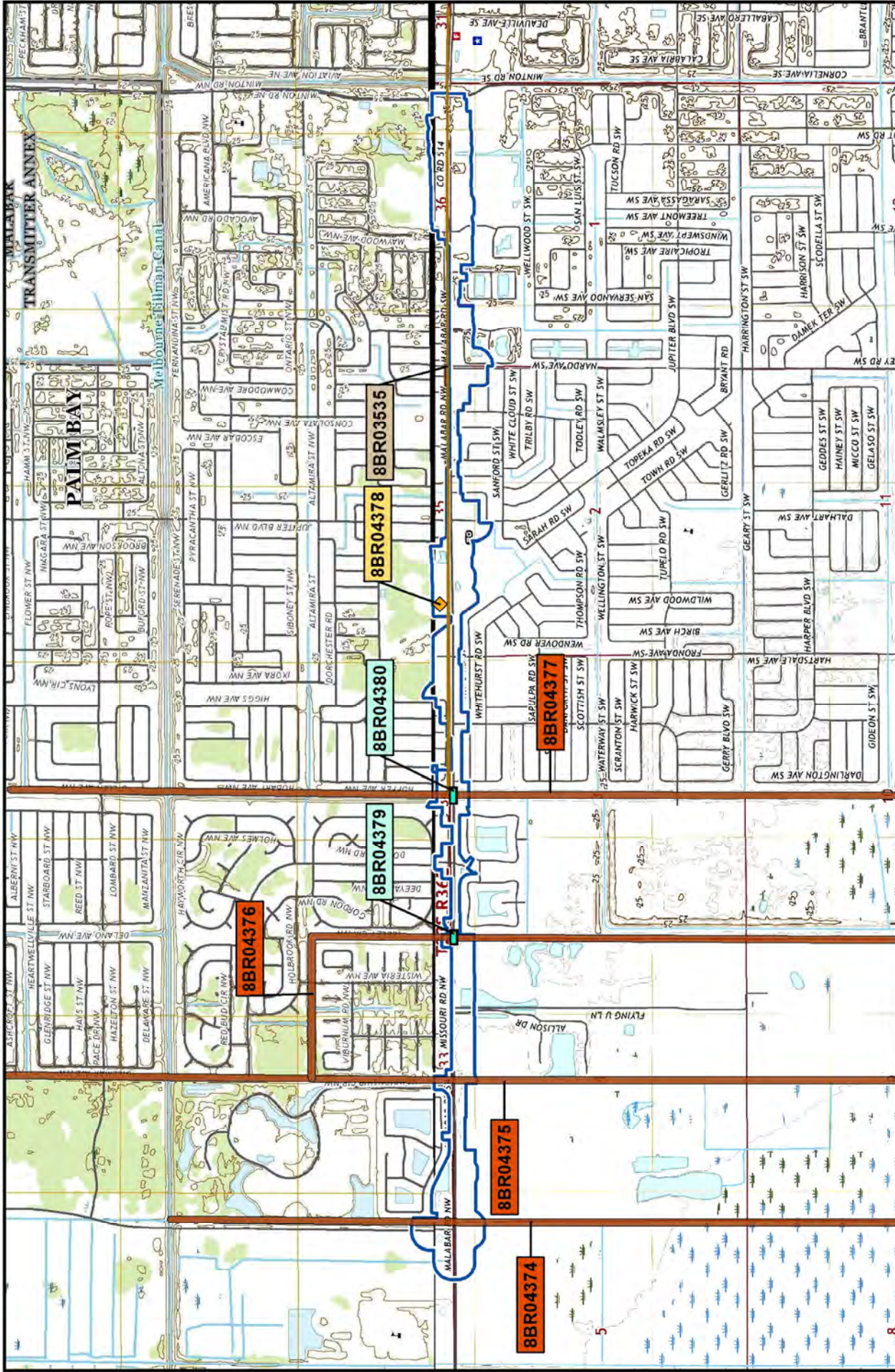


- Malabar Road APE
- Newly Recorded Linear Resource
- Newly Recorded Historic Bridge



USDA-FSA-APFO Orthophoto Mosaic (2019)





Malabar Road APE  
◆ Newly Recorded Historic Structure  
 Newly Recorded Historic Bridge

Newly Recorded Linear Resource  
 Previously Recorded Linear Resource

0 500 0 2,000  
 Meters Feet  
 N  
 USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)







**RESOURCE GROUP FORM  
FLORIDA MASTER SITE FILE  
Version 5.0 3/19**

Site #8 BR04377  
Field Date 4-26-2021  
Form Date 4-30-2021  
Recorder# \_\_\_\_\_

Original  
 Update

Consult the *Guide to the Resource Group Form* for additional instructions

**NOTE: Use this form to document districts, landscapes, building complexes and linear resources** as described in the box below. Cultural resources contributing to the Resource Group should also be documented individually at the Site File. **Do not use this form for National Register multiple property submissions (MPSs).** National Register MPSs are treated as Site File manuscripts and are associated with the individual resources included under the MPS cover using the Site File manuscript number.

**Check ONE box that best describes the Resource Group:**

- Historic district** (NR category "district"): buildings and NR structures only; NO archaeological sites
- Archaeological district** (NR category "district"): archaeological sites only; NO buildings or NR structures
- Mixed district** (NR category "district"): includes more than one type of cultural resource (example: archaeological sites and buildings)
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- Designed historic landscape** (NR category usually "district" or "site"): can include multiple resources (see *National Register Bulletin #18*, page 2 for more detailed definition and examples: e.g. parks, golf courses, campuses, resorts, etc.)
- Rural historic landscape** (NR category usually "district" or "site"): can include multiple resources and resources not formally designed (see *National Register Bulletin #30, Guidelines for Evaluating and Documenting Rural Historic Landscapes* for more detailed definition and examples: e.g. farmsteads, fish camps, lumber camps, traditional ceremonial sites, etc.)
- Linear resource** (NR category usually "structure"): Linear resources are a special type of structure or historic landscape and can include canals, railways, roads, etc.

Resource Group Name Melbourne-Tillman Canal No. 10 Multiple Listing [DHR only] \_\_\_\_\_  
 Project Name Malabar Road Corridor FMSF Survey # \_\_\_\_\_  
 National Register Category (please check one):  building(s)  structure  district  site  object  
 Linear Resource Type (if applicable):  canal  railway  road  other (describe): \_\_\_\_\_  
 Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

**LOCATION & MAPPING**

Address: 

|                             |                             |                             |                             |                             |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <u>Street Number</u>        | <u>Direction</u>            | <u>Street Name</u>          | <u>Street Type</u>          | <u>Suffix Direction</u>     |
| <u>                    </u> | <u>                    </u> | <u>                    </u> | <u>                    </u> | <u>                    </u> |

  
 City/Town (within 3 miles) Palm Bay In Current City Limits?  yes  no  unknown  
 County or Counties (do not abbreviate) Brevard  
 Name of Public Tract (e.g., park) \_\_\_\_\_  
 1) Township 28S Range 36E Section 34 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
 2) Township 29S Range 36E Section 3 ¼ section:  NW  SW  SE  NE  
 3) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 4) Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
 USGS 7.5' Map(s) 1) Name FELLSMERE NW USGS Date 2021  
 2) Name \_\_\_\_\_ USGS Date \_\_\_\_\_  
 Plat, Aerial, or Other Map (map's name, originating office with location) \_\_\_\_\_  
 Landgrant \_\_\_\_\_  
 Verbal Description of Boundaries (description does not replace required map)  
 Within the APE, 8BR04377 runs N-S for approx. 880.40 ft (268.35 m), beginning approx. 445.00 ft (135.64 m) N of Malabar Rd and continuing S. It is 93.64 ft (28.54 m) wide.

| DHR USE ONLY                                                       | OFFICIAL EVALUATION                                                                                                                                                                                                                                                                                                                                                                                                                        | DHR USE ONLY                         |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| NR List Date _____<br><br><input type="checkbox"/> Owner Objection | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info<br>KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no<br>NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) | Date _____ Init. _____<br>Date _____ |

HISTORY & DESCRIPTION

Construction Year: 1943 [ ] approximately [x] year listed or earlier [ ] year listed or later
Architect/Designer: Builder:
Total number of individual resources included in this Resource Group: # of contributing 0 # of non-contributing 1
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. 1895-1925)
1. 3.
2. 4.

Narrative Description (National Register Bulletin 16A pp. 33-34; attach supplementary sheets if needed)
Resource 8BR04377 was constructed in 1943 or earlier as part of a network of dug-out drainage canals which drained the wetlands from St. Johns River to Turkey Creek. Today, it is channeled beneath Malabar Rd via Resource 8BR04380.

RESEARCH METHODS (check all that apply)

- [x] FMSF record search (sites/surveys) [ ] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey [x] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (specify) Pedestrian/windshield survey

Bibliographic References (give FMSF Manuscript # if relevant)

OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places? [ ] yes [x] no [ ] insufficient information
Potentially eligible as contributor to a National Register district? [ ] yes [x] no [ ] insufficient information
Explanation of Evaluation (required, see National Register Bulletin 16A p. 48-49. Attach longer statement, if needed, on separate sheet.)

Due to lack of sufficient historic significance and engineering distinction, 8BR04377 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
1. 3. 5.
2. 4. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents
1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments

- 1 PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
3 TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
4 PHOTOS OF GENERAL STREETScape OR VIEWS (Optional: aerial photos, views of typical resources)
When submitting images, they must be included in digital AND hard copy format (plain paper grayscale acceptable).
Digital images must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR04377\_a Facing North**



**8BR04377\_b Facing Northwest**



**8BR04377\_c Facing Northeast**

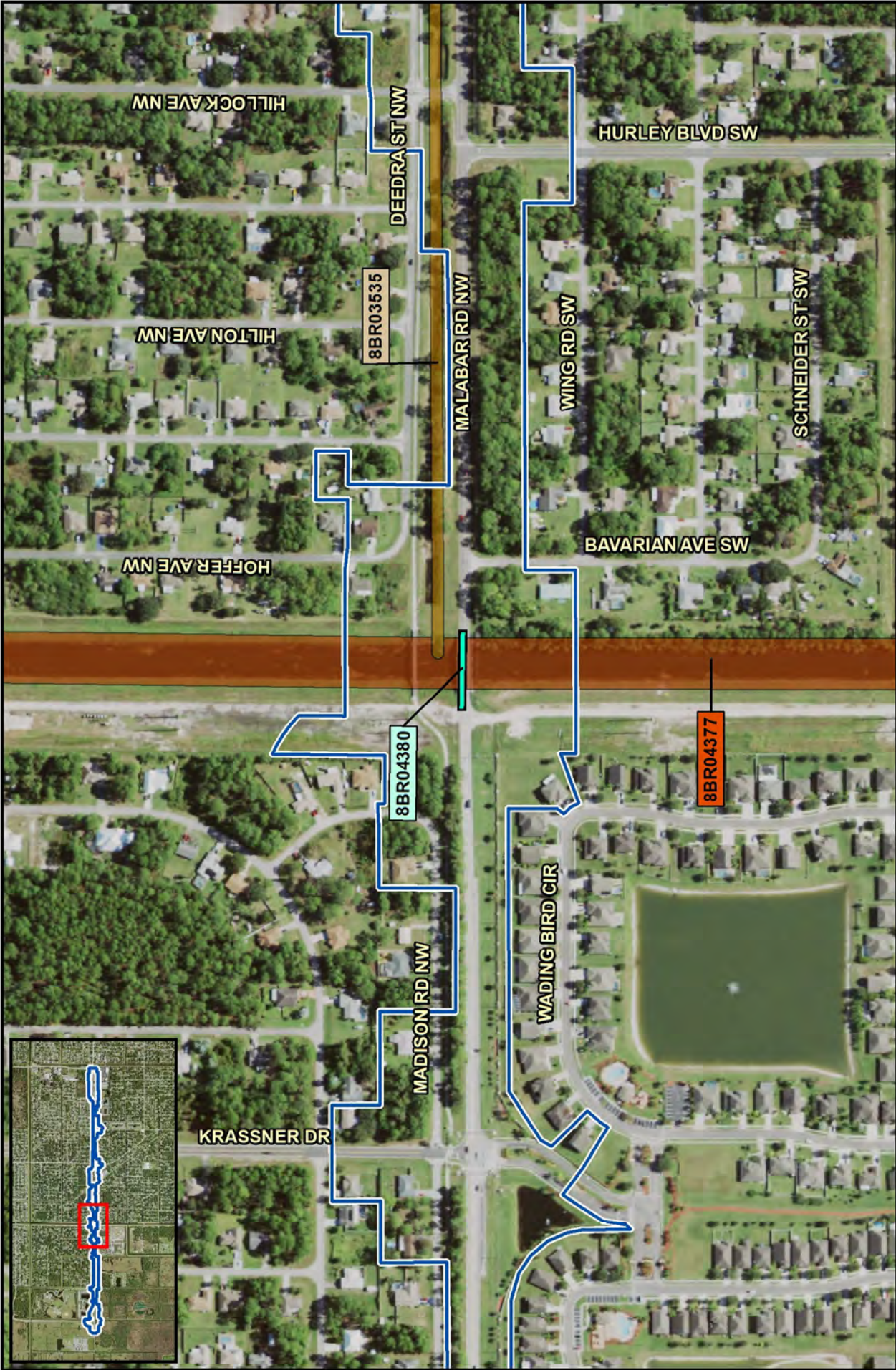


**8BR04377\_d Facing East**



**8BR04377\_e Facing Southeast**





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

N

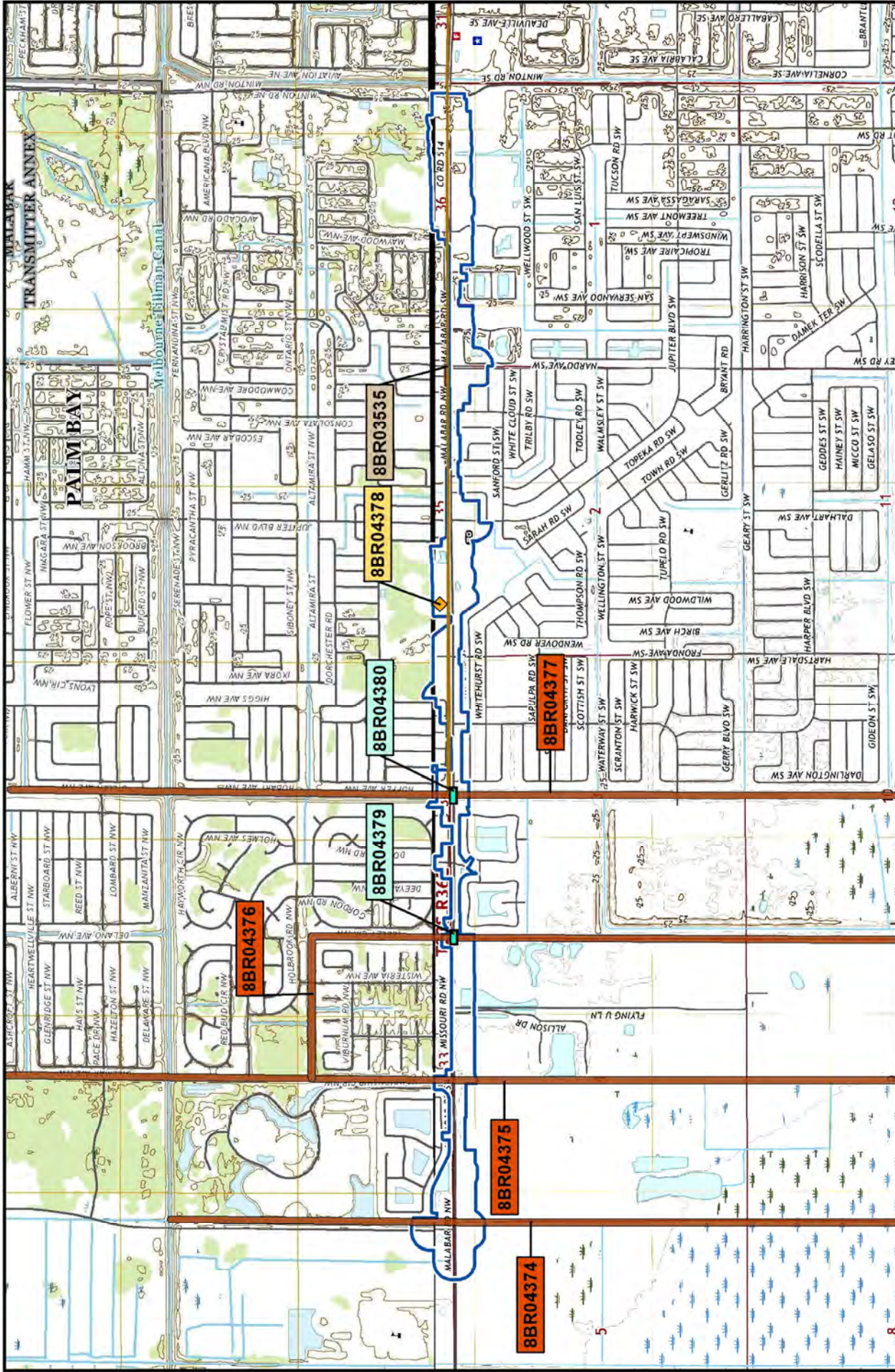
Malabar Road APE

Newly Recorded Linear Resource

Previously Recorded Linear Resource

Newly Recorded Historic Bridge





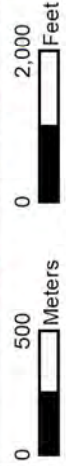
Malabar Road APE

Newly Recorded Linear Resource

Newly Recorded Historic Structure

Previously Recorded Linear Resource

Newly Recorded Historic Bridge



USGS 7.5' Quadrangle Maps -  
Melbourne W (2018) and Fellsmere  
NW (2018); FMSF (01/2021)







HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 5.0 3/19

Site#8 BR04378
Field Date 4-26-2021
Form Date 4-29-2021
Recorder #

[X] Original
[ ] Update

Shaded Fields represent the minimum acceptable level of documentation.
Consult the Guide to Historical Structure Forms for detailed instructions.

Site Name(s) (address if none) 1099 Malabar Road Northwest Multiple Listing (DHR only)
Survey Project Name Malabar Road Corridor Survey # (DHR only)
National Register Category (please check one) [X]building [ ]structure [ ]district [ ]site [ ]object
Ownership: [ ]private-profit [ ]private-nonprofit [X]private-individual [ ]private-nonspecific [ ]city [ ]county [ ]state [ ]federal [ ]Native American [ ]foreign [ ]unknown

LOCATION & MAPPING

Address: Street Number 1099 Direction Street Name Malabar Street Type Road Suffix Direction NW
Cross Streets (nearest / between) Shalimar Ave NW & Hillcrest Ave
USGS 7.5 Map Name FELLSMERE NW USGS Date 2021 Plat or Other Map
City / Town (within 3 miles) Palm Bay In City Limits? [X]yes [ ]no [ ]unknown County Brevard
Township 28S Range 36E Section 35 1/4 section: [ ]NW [ ]SW [ ]SE [ ]NE Irregular-name:
Tax Parcel # 28-36-35-00-503 Landgrant
Subdivision Name N/A Block N/A Lot N/A
UTM Coordinates: Zone [ ]16 [ ]17 Easting Northing
Other Coordinates: X: Y: Coordinate System & Datum
Name of Public Tract (e.g., park)

HISTORY

Construction Year: 1947 [X]approximately [ ]year listed or earlier [ ]year listed or later
Original Use Private Residence (House/Cottage/Ca From (year): 1947 To (year): 2021
Current Use Private Residence (House/Cottage/Ca From (year): 1947 To (year): 2021
Other Use From (year): To (year):
Moves: [ ]yes [X]no [ ]unknown Date: Original address
Alterations: [ ]yes [ ]no [X]unknown Date: Nature Porch poss. enclosed
Additions: [ ]yes [X]no [ ]unknown Date: Nature
Architect (last name first): Builder (last name first):
Ownership History (especially original owner, dates, profession, etc.)
Current owner, Clara L. Ison, purchased 2009.

Is the Resource Affected by a Local Preservation Ordinance? [ ]yes [ ]no [X]unknown Describe

DESCRIPTION

Style Masonry Vernacular Exterior Plan Irregular Number of Stories 1
Exterior Fabric(s) 1. Stucco 2. 3.
Roof Type(s) 1. Hip 2. Other 3.
Roof Material(s) 1. Composition shingles 2. Metal shingles 3.
Roof secondary strucs. (dormers etc.) 1. Shed extension 2.

Windows (types, materials, etc.)
Casement, metal-frame, paired and groups of 4, 4-light

Distinguishing Architectural Features (exterior or interior ornaments)
Jerkinhead hip roof; intersecting hip roof; foundation obscured by foliage; wood faux window shutters; concrete windowsills

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)
Rect. outbuildings to NE of bldg; plank fence S of bldg; large trees to S/N of bldg

Table with 3 columns: DHR USE ONLY, OFFICIAL EVALUATION, DHR USE ONLY. Contains fields for NR List Date, SHPO listing criteria, Keeper determination, and NR Criteria for Evaluation.

DESCRIPTION (continued)

Chimney: No. 1 Chimney Material(s): 1. Concrete block 2.
Structural System(s): 1. Masonry - General 2. 3.
Foundation Type(s): 1. Unknown 2.
Foundation Material(s): 1. Obscured 2.

Main Entrance (stylistic details)

S façade cen., single door obscured by metal-frame screen storm door

Porch Descriptions (types, locations, roof types, etc.)

Closed partial-width porch S façade cen., largely obscured by foliage, gable roof supported by masonry walls

Condition (overall resource condition): [ ] excellent [x] good [ ] fair [ ] deteriorated [ ] ruinous

Narrative Description of Resource

Resource 8BR04378 is a 1-story Masonry Vernacular house with an irregular plan set at grade on a foundation obscured by foliage. Composition shingles and flat tile cover the jerkinhead and intersecting hip roofs, and stucco clads the walls.

Archaeological Remains [ ] Check if Archaeological Form Completed

RESEARCH METHODS (select all that apply)

- [x] FMSF record search (sites/surveys) [x] library research [ ] building permits [ ] Sanborn maps
[ ] FL State Archives/photo collection [ ] city directory [ ] occupant/owner interview [ ] plat maps
[x] property appraiser / tax records [ ] newspaper files [ ] neighbor interview [ ] Public Lands Survey (DEP)
[x] cultural resource survey (CRAS) [ ] historic photos [ ] interior inspection [ ] HABS/HAER record search
[x] other methods (describe) Pedestrian/Windshield Survey

Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)

[Empty box for bibliographic references]

OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually? [ ] yes [x] no [ ] insufficient information
Appears to meet the criteria for National Register listing as part of a district? [ ] yes [x] no [ ] insufficient information

Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)

Due to lack of sufficient historic significance and architectural distinction, 8BR04378 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of Historical Significance (see National Register Bulletin 15, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. 2. 3. 4. 5. 6.

DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field notes, analysis notes, photos, plans and other important documents

- 1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research
Document description Photos, Maps, Field Notes, Aerial File or accession #'s T20003
2) Document type Maintaining organization
Document description File or accession #'s

RECORDER INFORMATION

Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research
Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@
(address / phone / fax / e-mail)

Required Attachments
1 USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
2 LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
3 PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE
When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable). Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





8BR04378\_a Facing Northwest



8BR04378\_b Facing North



8BR04378\_c Facing North



8BR04378\_d Facing North



8BR04378\_e Facing North



8BR04378\_f Facing Northeast





8BR04378\_g Facing Northeast



8BR04378\_h Facing Northeast

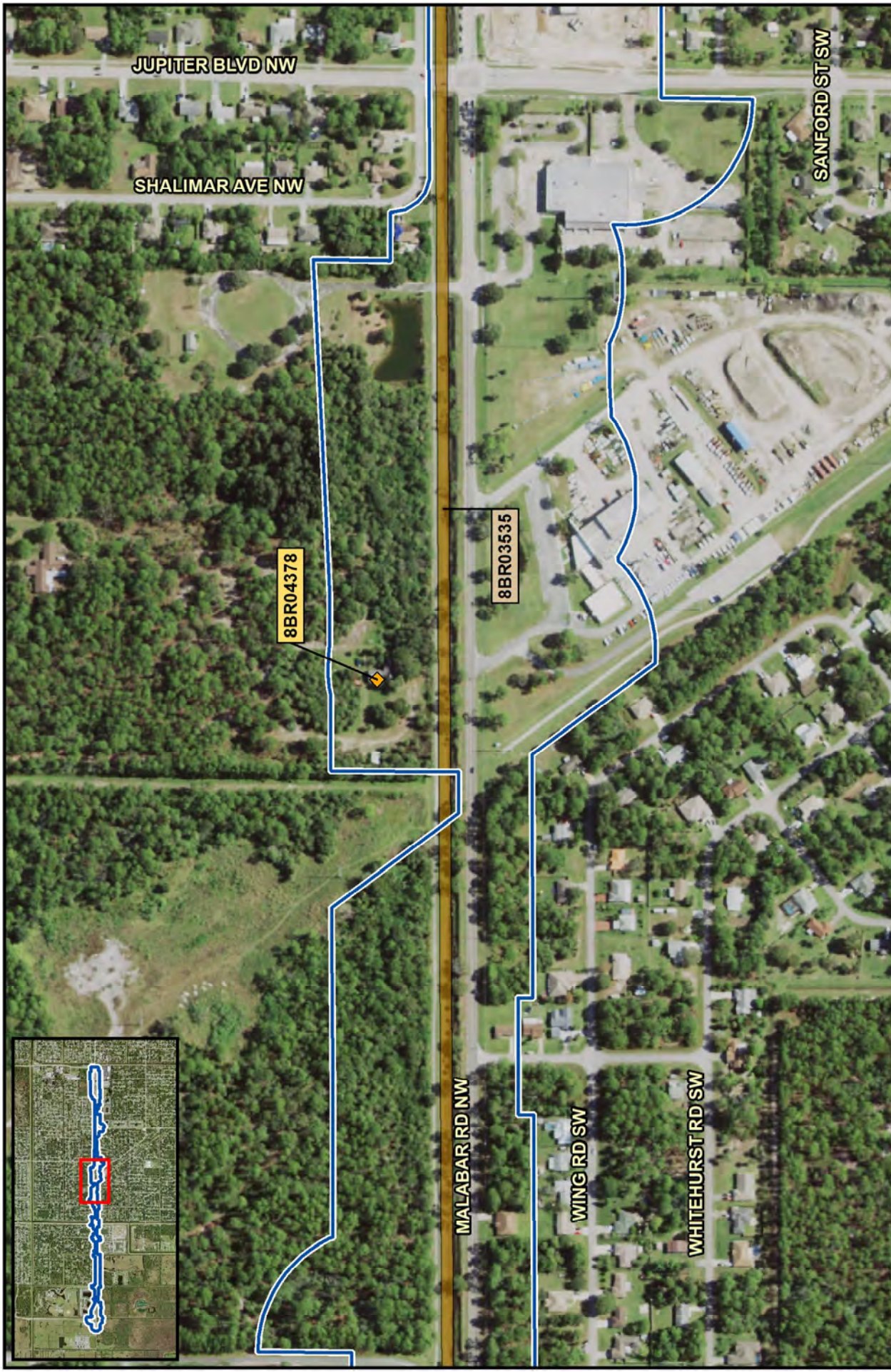


8BR04378\_i Facing Northeast



8BR04378\_j Facing Northeast





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

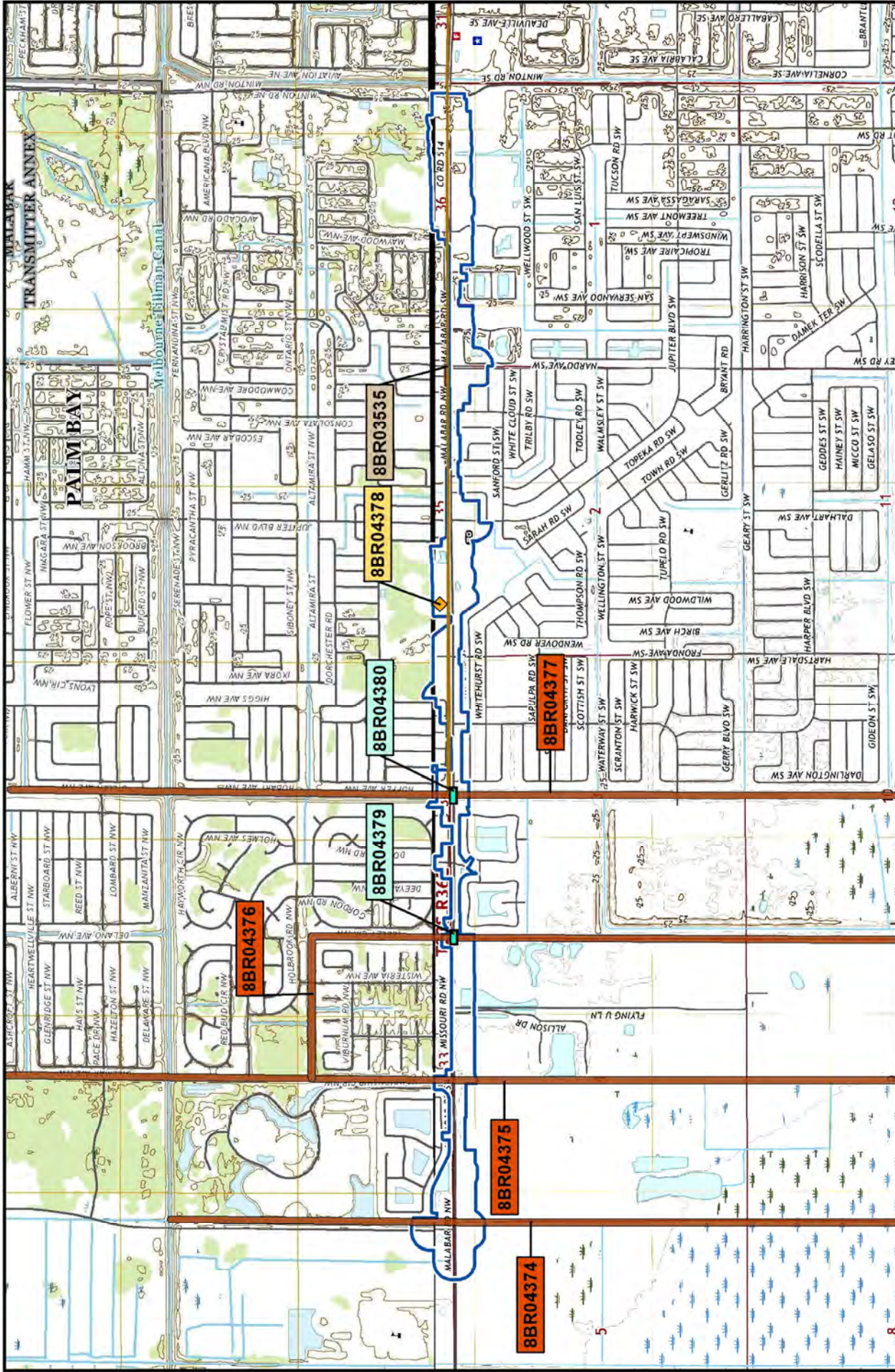
N

Malabar Road APE

Previously Recorded Linear Resource

Newly Recorded Historic Structure





**Legend**

- Malabar Road APE
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource

0 500 2,000  
 Meters Feet

N

USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)





# HISTORICAL BRIDGE FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 **BR04379**  
Field Date 4-26-2021  
Form Date 4-29-2021  
Recorder # \_\_\_\_\_  
FDOT Bridge # \_\_\_\_\_

Original  
 Update

Consult *Guide to the Historical Bridge Form* for detailed instructions

Bridge Name(s) Melbourne-Tillman Canal No. 9 Culvert Multiple Listing (DHR only) \_\_\_\_\_  
Project Name Malabar Road Corridor Survey # (DHR only) \_\_\_\_\_  
Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Route(s) Carried/Feature(s) Crossed Melbourne-Tillman Canal No. 9/Melbourne Rd  
USGS 7.5 Map Name FELLSMERE NW USGS Date 2021 Plat or Other Map \_\_\_\_\_  
City/Town (within 3 miles) Palm Bay In City Limits?  yes  no  unknown County Brevard  
Township 29S Range 36E Section 4 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
Landgrant \_\_\_\_\_ Tax Parcel # \_\_\_\_\_  
UTM Coordinates: Zone  16  17 Easting  Northing   
Other Coordinates: X: \_\_\_\_\_ Y: \_\_\_\_\_ Coordinate System & Datum \_\_\_\_\_  
Name of Public Tract (e.g., park) \_\_\_\_\_

### HISTORY

Year Built 1943  approximately  year listed or earlier  year listed or later  
Still in use?  yes  no  restricted use (describe) \_\_\_\_\_  
Prior Fords, Ferries, or Bridges at this Location

Original culvert possibly replaced with concrete pipe culvert at an unknown later date

Bridge Use: original and current with dates (standard descriptions: auto, railway, pedestrian, fishing pier, abandoned)  
Original and current (1943-2021): Culvert with road

Ownership history  
Owned by Brevard County via Melbourne-Tillman Water Control District

Designers/Engineers \_\_\_\_\_  
Builders/Contractors \_\_\_\_\_  
Text of Plaque or Inscription  
\_\_\_\_\_  
\_\_\_\_\_

Narrative History (How did bridge come to be built? How was it financed?, etc.)  
Resource 8BR04379 is a ca. 1943 or later concrete pipe culvert with no distinguishing details. It channels the Melbourne-Tillman Canal No. 9 (8BR04376) under Melbourne Road.

### DESCRIPTION

#### GENERAL

Overall Bridge Design 1. Culvert 2. \_\_\_\_\_

Overall Condition  excellent  good  fair  deteriorated  ruinous

#### Style and Decorative Details

Resource 8BR04379 is a ca. 1943 or later concrete pipe culvert with an earthen and grout-filled bag abutment. The culvert features no decorative details or identifying characteristics.

#### Tender Station Description

N/A

#### Alterations: Dates and Descriptions

N/A

| DHR USE ONLY                             |                                                                                                                                                                                           | OFFICIAL EVALUATION |       | DHR USE ONLY |       |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|--------------|-------|
| NR List Date                             | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date                | _____ | Init.        | _____ |
| <input type="checkbox"/> Owner Objection | KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date                | _____ |              |       |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                     |       |              |       |

## DESCRIPTION (continued)

## SUPERSTRUCTURE

Spans: Total Number 1 Total Length(ft) 58Main Spans: Number 1 Length(ft) 58 Width(ft) 32 Roadway width(ft) 23Main Span Design CulvertMain Span Materials 1. Concrete 2. \_\_\_\_\_

Approach Spans: Number \_\_\_\_\_ Length(ft) \_\_\_\_\_ Width(ft) \_\_\_\_\_ Roadway width(ft) \_\_\_\_\_

Approach Span Design \_\_\_\_\_

Approach Span Materials 1. \_\_\_\_\_ 2. \_\_\_\_\_

Deck Materials 1. Not Applicable 2. \_\_\_\_\_

## SUBSTRUCTURE

Abutment Materials 1. Stone 2. OtherAbutment Description Overgrown grout-filled bag and earthen full abutmentPier Materials 1. Not Applicable 2. \_\_\_\_\_

Pier Description \_\_\_\_\_

## RESEARCH METHODS (check all that apply)

- |                                                                                                 |                                                           |                                                    |                                                              |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------|
| <input checked="" type="checkbox"/> FDOT database search                                        | <input type="checkbox"/> Fla. Archives / photo collection | <input type="checkbox"/> newspaper files           | <input type="checkbox"/> informal archaeological inspection  |
| <input type="checkbox"/> HABS/HAER record search                                                | <input type="checkbox"/> property appraiser / tax records | <input type="checkbox"/> city directory            | <input type="checkbox"/> formal archaeological survey        |
| <input checked="" type="checkbox"/> FMSF record search (sites/surveys)                          | <input type="checkbox"/> library research                 | <input type="checkbox"/> Public Lands Survey (DEP) | <input checked="" type="checkbox"/> cultural resource survey |
| <input checked="" type="checkbox"/> Other methods (specify) <u>Pedestrian/windshield survey</u> |                                                           |                                                    |                                                              |

Bibliographic References (give FMSF manuscript # if relevant, use separate sheet if needed)

## OPINION OF RESOURCE SIGNIFICANCE

Potentially eligible individually for National Register of Historic Places?  yes  no  insufficient informationPotentially eligible as contributor to a National Register district?  yes  no  insufficient information

Explanation of Evaluation (required, use separate sheet if needed)

Due to lack of sufficient historic significance and architectural distinction, 8BR04379 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of historical significance (See *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)
 1. \_\_\_\_\_ 3. \_\_\_\_\_ 5. \_\_\_\_\_  
 2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

## DOCUMENTATION

Accessible Documentation Not Filed with the Site File - including field &amp; analysis notes, photos, plans, other important documents

- 1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research  
 Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
- 2) Document type \_\_\_\_\_ Maintaining organization \_\_\_\_\_  
 Document description \_\_\_\_\_ File or accession #'s \_\_\_\_\_

## RECORDER INFORMATION

 Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological Research  
 Recorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@  
 (address / phone / fax / e-mail)

## Required Attachments

- ① USGS 7.5' TOPO MAP WITH BRIDGE LOCATION CLEARLY MARKED
- ② PHOTO OF BRIDGE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable).  
 Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





**8BR04379\_a Facing Southeast**



**8BR04379\_b Facing South**



**8BR04379\_c Facing South**



**8BR04379\_d Facing Southwest**



**8BR04379\_e Facing Southwest**



**8BR04379\_f Facing West**





0 100 200 Meters

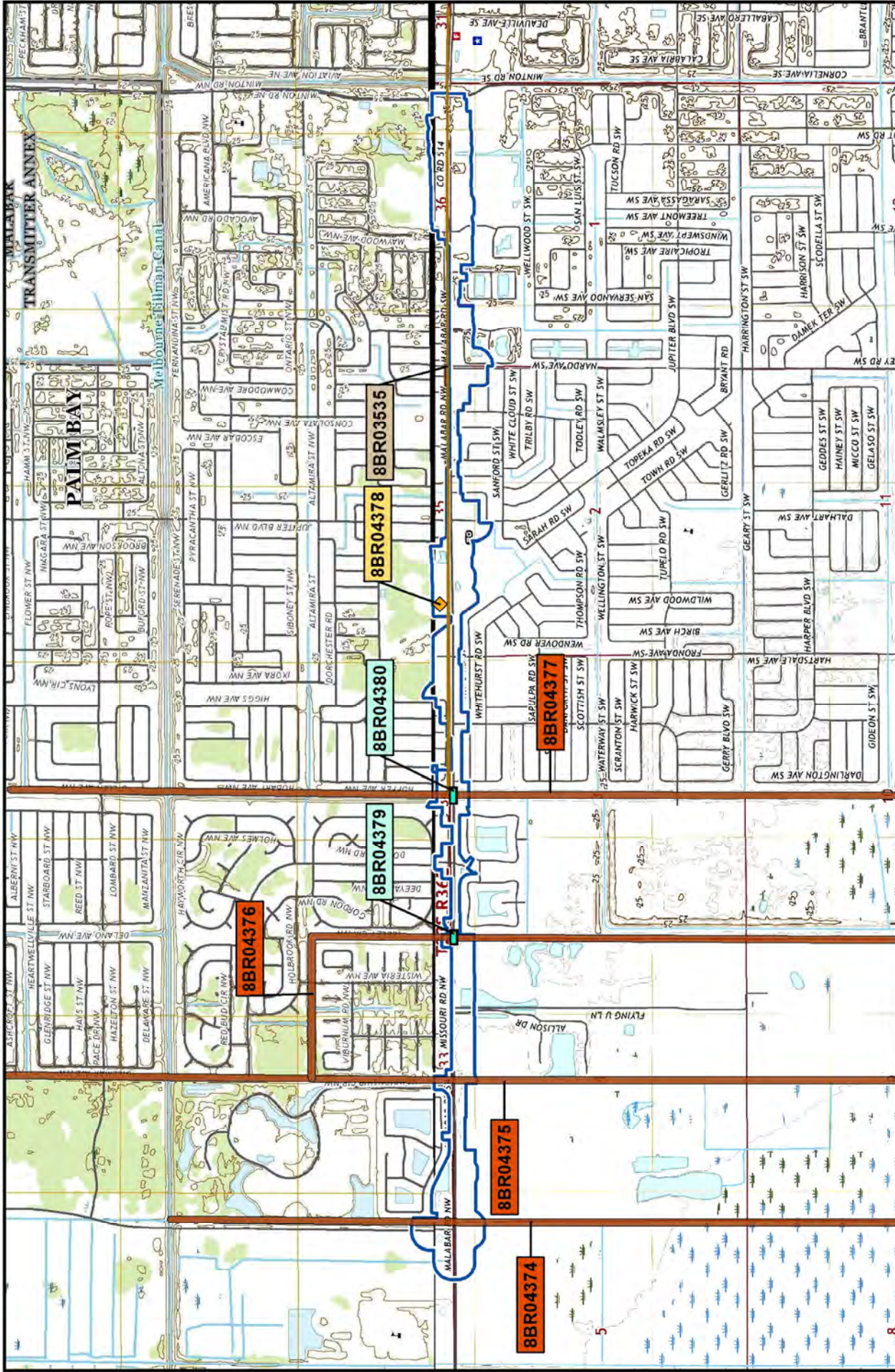
0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

N

- Malabar Road APE
- Newly Recorded Linear Resource
- Newly Recorded Historic Bridge





Malabar Road APE  
◆ Newly Recorded Historic Structure  
 Newly Recorded Historic Bridge

Newly Recorded Linear Resource  
 Previously Recorded Linear Resource

0 500 0 2,000  
 Meters Feet  
 N  
 USGS 7.5' Quadrangle Maps -  
 Melbourne W (2018) and Fellsmere  
 NW (2018); FMSF (01/2021)







# HISTORICAL BRIDGE FORM

## FLORIDA MASTER SITE FILE

Version 5.0 3/19

Site #8 BR04380  
Field Date 4-26-2021  
Form Date 4-29-2021  
Recorder # \_\_\_\_\_  
FDOT Bridge # 704004

Consult *Guide to the Historical Bridge Form* for detailed instructions

Original  
 Update

Bridge Name(s) FDOT Bridge No. 704004 Multiple Listing (DHR only) \_\_\_\_\_  
Project Name Malabar Road Corridor Survey # (DHR only) \_\_\_\_\_  
Ownership:  private-profit  private-nonprofit  private-individual  private-nonspecific  city  county  state  federal  Native American  foreign  unknown

### LOCATION & MAPPING

Route(s) Carried/Feature(s) Crossed Malabar Road/Melbourne-Tillman Canal No. 10  
USGS 7.5 Map Name FELLSMERE NW USGS Date 2021 Plat or Other Map \_\_\_\_\_  
City/Town (within 3 miles) Palm Bay In City Limits?  yes  no  unknown County Brevard  
Township 28S Range 36E Section 3 ¼ section:  NW  SW  SE  NE Irregular-name: \_\_\_\_\_  
Township \_\_\_\_\_ Range \_\_\_\_\_ Section \_\_\_\_\_ ¼ section:  NW  SW  SE  NE  
Landgrant \_\_\_\_\_ Tax Parcel # \_\_\_\_\_  
UTM Coordinates: Zone  16  17 Easting       Northing        
Other Coordinates: X: \_\_\_\_\_ Y: \_\_\_\_\_ Coordinate System & Datum \_\_\_\_\_  
Name of Public Tract (e.g., park) \_\_\_\_\_

### HISTORY

Year Built 1972  approximately  year listed or earlier  year listed or later  
Still in use?  yes  no  restricted use (describe) \_\_\_\_\_  
Prior Fords, Ferries, or Bridges at this Location  
Previous bridge replaced in 1972  
Bridge Use: original and current with dates (standard descriptions: auto, railway, pedestrian, fishing pier, abandoned)

Ownership history  
Owned by Brevard County

Designers/Engineers \_\_\_\_\_  
Builders/Contractors \_\_\_\_\_  
Text of Plaque or Inscription  
"1972" inscribed on S railing W end

Narrative History (How did bridge come to be built? How was it financed?, etc.)  
Resource 8BR04380 is a common post-1945 concrete slab bridge. It was constructed in 1972 and carries Malabar Road W-E over the Melbourne-Tillman Canal No. 10 (8BR04377).

### DESCRIPTION

**GENERAL**  
Overall Bridge Design 1. Slab 2. \_\_\_\_\_  
Overall Condition  excellent  good  fair  deteriorated  ruinous  
Style and Decorative Details  
Resource 8BR04380 is a common post-1945 concrete slab bridge. It has concrete barriers on the N and S sides. It features minimal ornamentation.  
Tender Station Description  
N/A  
Alterations: Dates and Descriptions  
N/A

| DHR USE ONLY                             |                                                                                                                                                                                           | OFFICIAL EVALUATION | DHR USE ONLY |  |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------|--|
| NR List Date                             | SHPO – Appears to meet criteria for NR listing: <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> insufficient info                                       | Date _____          | Init. _____  |  |
| <input type="checkbox"/> Owner Objection | KEEPER – Determined eligible: <input type="checkbox"/> yes <input type="checkbox"/> no                                                                                                    | Date _____          |              |  |
|                                          | NR Criteria for Evaluation: <input type="checkbox"/> a <input type="checkbox"/> b <input type="checkbox"/> c <input type="checkbox"/> d (see <i>National Register Bulletin 15</i> , p. 2) |                     |              |  |

**DESCRIPTION (continued)****SUPERSTRUCTURE**Spans: Total Number 5 Total Length(ft) 140Main Spans: Number 5 Length(ft) 28 Width(ft) 37 Roadway width(ft) 28Main Span Design slabMain Span Materials 1. Concrete 2. \_\_\_\_\_

Approach Spans: Number \_\_\_\_\_ Length(ft) \_\_\_\_\_ Width(ft) \_\_\_\_\_ Roadway width(ft) \_\_\_\_\_

Approach Span Design \_\_\_\_\_

Approach Span Materials 1. \_\_\_\_\_ 2. \_\_\_\_\_

Deck Materials 1. Asphalt 2. \_\_\_\_\_**SUBSTRUCTURE**Abutment Materials 1. Concrete 2. \_\_\_\_\_Abutment Description Full concrete abutmentPier Materials 1. Concrete 2. \_\_\_\_\_Pier Description Concrete pile bent piers**RESEARCH METHODS (check all that apply)**

- |                                                             |                                                           |                                                    |                                                             |
|-------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> FDOT database search               | <input type="checkbox"/> Fla. Archives / photo collection | <input type="checkbox"/> newspaper files           | <input type="checkbox"/> informal archaeological inspection |
| <input type="checkbox"/> HABS/HAER record search            | <input type="checkbox"/> property appraiser / tax records | <input type="checkbox"/> city directory            | <input type="checkbox"/> formal archaeological survey       |
| <input type="checkbox"/> FMSF record search (sites/surveys) | <input type="checkbox"/> library research                 | <input type="checkbox"/> Public Lands Survey (DEP) | <input type="checkbox"/> cultural resource survey           |
| <input type="checkbox"/> Other methods (specify) _____      |                                                           |                                                    |                                                             |

Bibliographic References (give FMSF manuscript # if relevant, use separate sheet if needed)

**OPINION OF RESOURCE SIGNIFICANCE**Potentially eligible individually for National Register of Historic Places?  yes  no  insufficient informationPotentially eligible as contributor to a National Register district?  yes  no  insufficient information

Explanation of Evaluation (required, use separate sheet if needed)

Due to lack of sufficient historic significance and architectural and/or engineering distinction, 8BR04380 is ineligible for listing in the NRHP, either individually or as a contributing resource within a potential or existing historic district.

Area(s) of historical significance (See *National Register Bulletin 15*, p. 8 for categories: e.g. "architecture", "ethnic heritage", "community planning & development", etc.)

1. \_\_\_\_\_ 3. \_\_\_\_\_ 5. \_\_\_\_\_  
 2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

**DOCUMENTATION**

Accessible Documentation Not Filed with the Site File - including field &amp; analysis notes, photos, plans, other important documents

- 1) Document type All materials at one location Maintaining organization Southeastern Archaeological Research  
 Document description Photos, Maps, Field Notes, Aerials File or accession #'s T20003
- 2) Document type \_\_\_\_\_ Maintaining organization \_\_\_\_\_  
 Document description \_\_\_\_\_ File or accession #'s \_\_\_\_\_

**RECORDER INFORMATION**Recorder Name Guerrieri, Kelly Affiliation Southeastern Archaeological ResearchRecorder Contact Information 3117 Edgewater Dr., Orlando, FL 32804/4072367711/4076032425/kelly.guerrieri@  
 (address / phone / fax / e-mail)**Required Attachments**

- ➊ USGS 7.5' TOPO MAP WITH BRIDGE LOCATION CLEARLY MARKED
- ➋ PHOTO OF BRIDGE

When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable).  
 Digital image must be at least 1600 x 1200 pixels, 24-bit color, jpeg or tiff.





8BR04380\_a Facing South



8BR04380\_b Facing South



8BR04380\_c Facing Southeast



8BR04380\_d Facing Southwest



8BR04380\_e Facing Southeast



8BR04380\_f Facing East





8BR04380\_g Facing Southeast

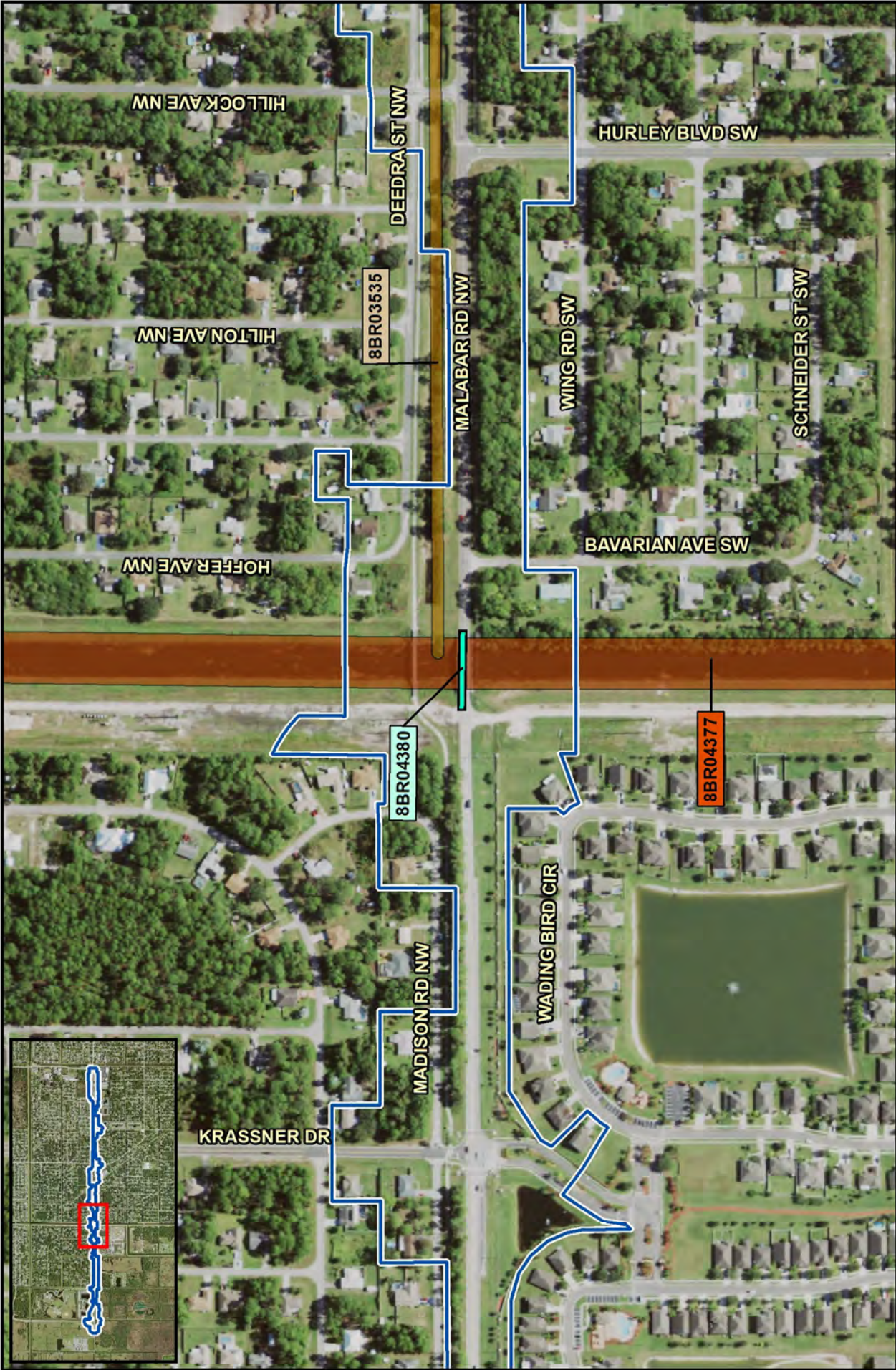


8BR04380\_h Facing East



8BR04380\_i Facing East





0 100 200 Meters

0 100 200 Feet

USDA-FSA-APFO Orthophoto Mosaic (2019)

N

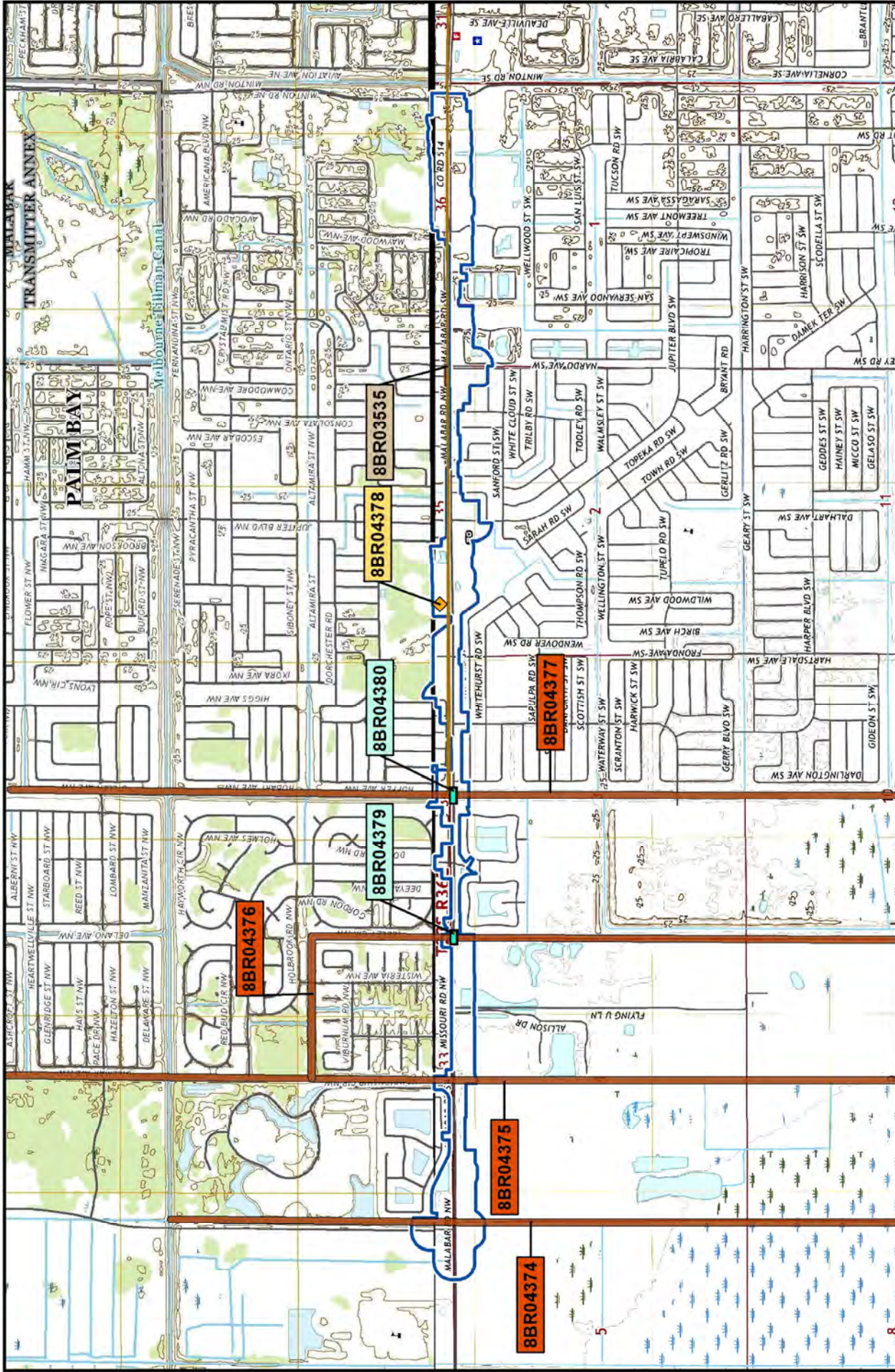
Malabar Road APE

Newly Recorded Linear Resource

Previously Recorded Linear Resource

Newly Recorded Historic Bridge





**Legend**

- Malabar Road APE
- Newly Recorded Historic Structure
- Newly Recorded Historic Bridge
- Newly Recorded Linear Resource
- Previously Recorded Linear Resource

0 500 0 2,000  
Meters Feet

N

USGS 7.5' Quadrangle Maps -  
Melbourne W (2018) and Fellsmere  
NW (2018); FMSF (01/2021)



**APPENDIX C.**

**FDHR SURVEY LOG SHEET**





Ent D (FMSF only) \_\_\_\_\_



# Survey Log Sheet

Florida Master Site File  
Version 5.0 3/19

Survey # (FMSF only) \_\_\_\_\_

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

## Manuscript Information

### Survey Project (name and project phase)

Phase I Malabar Road Improvements CRAS

### Report Title (exactly as on title page)

Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida

### Report Authors (as on title page)

1. Dave Boschi

3. Allen Kent

2. Kelly Guerrieri

4. Jessica Fish, Mikel Travisano

Publication Year 2021Number of Pages in Report (do not include site forms) 78

### Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)

Report on file at SEARCH, Newberry, Florida. SEARCH Project No. T20003. Financial Management No. 437210-1.

### 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. Malabar Road 3. \_\_\_\_\_ 5. \_\_\_\_\_ 7. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_ 8. \_\_\_\_\_

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

Name Kittleson and Associates

Organization \_\_\_\_\_

Address/Phone/E-mail \_\_\_\_\_

Recorder of Log Sheet Dave BoschiDate Log Sheet Completed 5-10-2021Is this survey or project a continuation of a previous project?  No  Yes: Previous survey #s (FMSF only)

## Project Area Mapping

### Counties (select every county in which field survey was done; attach additional sheet if necessary)

1. Brevard 3. \_\_\_\_\_ 5. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

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

1. Name MELBOURNE WEST Year 2018 4. Name \_\_\_\_\_ Year \_\_\_\_\_  
2. Name FELLSMERE NW Year 2018 5. Name \_\_\_\_\_ Year \_\_\_\_\_  
3. Name \_\_\_\_\_ Year \_\_\_\_\_ 6. Name \_\_\_\_\_ Year \_\_\_\_\_

## Field Dates and Project Area Description

Fieldwork Dates: Start 3-1-2021 End 3-5-2021 Total Area Surveyed (fill in one) \_\_\_\_\_ hectares \_\_\_\_\_ acresNumber of Distinct Tracts or Areas Surveyed 1If Corridor (fill in one for each) Width: 30 meters 100 feet Length: 6.37 kilometers 3.96 miles

Research and Field Methods

Types of Survey (select all that apply): [X]archaeological [X]architectural [ ]historical/archival [ ]underwater [ ]damage assessment [ ]monitoring report [ ]other(describe): \_\_\_\_\_

Scope/Intensity/Procedures

Archaeological testing at 50- and 100- meter intervals. Recording buildings 45 years and older.

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

[ ]Florida Archives (Gray Building) [ ]library research- local public [ ]local property or tax records [X]other historic maps [ ]LIDAR [ ]Florida Photo Archives (Gray Building) [ ]library-special collection [ ]newspaper files [X]soils maps or data [ ]other remote sensing [X]Site File property search [ ]Public Lands Survey (maps at DEP) [ ]literature search [ ]windshield survey [X]Site File survey search [ ]local informant(s) [ ]Sanborn Insurance maps [X]aerial photography [ ]other (describe): \_\_\_\_\_

Archaeological Methods (select 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) [ ]metal detector [ ]surface collection, uncontrolled [ ]water screen [ ]soil resistivity [ ]other remote sensing [X]shovel test-1/4" screen [ ]posthole tests [ ]magnetometer [X]pedestrian survey [ ]shovel test-1/8" screen [ ]auger tests [ ]side scan sonar [ ]unknown [ ]shovel test 1/16" screen [ ]coring [ ]ground penetrating radar (GPR) [ ]shovel test-unscreened [ ]test excavation (at least 1x2 m) [ ]LIDAR [ ]other (describe): \_\_\_\_\_

Historical/Architectural Methods (select 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 [X]windshield survey [ ]occupant interview [X]tax records [ ]interior documentation [X]local property records [ ]occupation permits [ ]unknown [ ]other (describe): \_\_\_\_\_

Survey Results

Resource Significance Evaluated? [X]Yes [ ]No

Count of Previously Recorded Resources 1 Count of Newly Recorded Resources 7

List Previously Recorded Site ID#s with Site File Forms Completed (attach additional pages if necessary)

BR03535

List Newly Recorded Site ID#s (attach additional pages if necessary)

BR04374, BR04375, BR04376, BR04377, BR04378, BR04379, BR04380

Site Forms Used: [ ]Site File Paper Forms [X]Site File PDF Forms

REQUIRED: Attach Map of Survey or Project Area Boundary

SHPO USE ONLY SHPO USE ONLY SHPO USE ONLY Origin of Report: [ ]872 [ ]Public Lands [ ]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 [ ]Desktop Analysis [ ]MPS [ ]MRA [ ]TG [ ]Other: \_\_\_\_\_ Document Destination: Plottable Projects Plotability: \_\_\_\_\_









*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

719 S. Woodland Blvd.  
DeLand, FL 32720

JARED W. PERDUE, P.E.  
SECRETARY

July 6, 2023

Alissa S. Lotane,  
Director and State Historic Preservation Officer  
Florida Division of Historical Resources  
Florida Department of State  
R.A. Gray Building  
500 South Bronough Street  
Tallahassee, Florida 32399-0250

Attn: Mr. Benjamin Stewart, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey  
Malabar Road Improvements Pond Addendum (C-7 Alt 3)  
Brevard County, Florida  
Financial Management No.: 437210-1

Dear Ms. Lotane,

Enclosed please find one copy of the report titled *Cultural Resource Assessment Survey Addendum in Support of the Malabar Road Pond C-7 Alt 3, Brevard County, Florida*. This report presents the findings of a cultural resource assessment survey (CRAS) conducted in support of the proposed improvements to the Malabar Road from east of St. Johns Heritage Parkway to Minton Road in Brevard County, Florida. The City of Palm Bay is proposing to widen Malabar Road to accommodate additional lanes and traffic control intersections, and to construct associated ponds, swales, and floodplain compensation areas (FPCAs). The current report is limited to survey of one new pond and FPCA, Pond C-7 Alt 3. This report serves as an addendum to the 2021 SEARCH surveys titled *Cultural Resource Assessment Survey for the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida* (Florida Master Site File [FMSF] Survey No. 28025, Boschi et al., 2021) and *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida* (FMSF Survey No. 28024, Fish et al. 2021). The current project was limited to 2.23 hectares (5.52 acres) of previously unsurveyed pond and FPCA. This is a Local Area Program (LAP) project being conducted by the City of Palm Bay using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

The project area of potential effects (APE) was defined to include the Pond C-7 Alt 3 footprint, easement, and FPCA. A 30.5-meter (100-foot) buffer was used to evaluate the potential to affect any adjacent historic buildings or structures. The archaeological survey was limited to the construction footprint.



Ms. Lotane, SHPO  
FM # 437210-1  
July 6, 2023  
Page 2

This CRAS was conducted in accordance with the requirements set forth in Section 106 of the *National Historic Preservation Act* of 1966, as amended, found in 36 CFR Part 800 (*Protection of Historic Properties*). The studies also comply with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code and Section 267.12, Florida Statutes, Chapter 1A-32. All work was performed in accordance with Part 2, Chapter 8 of FDOT's PD&E Manual (revised July 2020), FDOT's Cultural Resources Management Handbook, and the standards stipulated in the Florida Division of Historical Resources' (FDHR) *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). This study also complies with Public Law 113-287 (Title 54 U.S.C.), 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 archaeological survey included the excavation of nine shovel tests, all of which were negative for artifacts. No archaeological sites, occurrences, or features were recorded, and no further work is recommended.

No architectural survey was conducted as no buildings of historic age (45 years or older) are located within or adjacent to the proposed pond footprint.

Based on the results of this study, it is the opinion of the District that the proposed undertaking will have no effect on NRHP-listed or -eligible historic properties. No further work is recommended.

I respectfully request your concurrence with the findings of the enclosed report.

If you have any questions or need further assistance, please contact Catherine Owen, District Cultural Resource Coordinator, at (386) 943-5383 or me at (386) 943-5436.

Sincerely,



Casey Lyon, M.S.  
Environmental Manager  
FDOT, District Five

---

The Florida State Historic Preservation Officer finds the attached Cultural Resource Assessment Survey Report complete and sufficient and  concurs /  does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number 202304091. Or, the SHPO finds the attached document contains \_\_\_\_\_ insufficient information.

In accordance with the Programmatic Agreement among the ACHP, SHPO and FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida, if providing concurrence with a finding of No Historic Properties Affected for a project as a whole, or to No Adverse Effect on a specific historic property, SHPO shall presume that FDOT may approve the project as de minimis use under Section 4(f) under 23 CFR 774.

SHPO Comments:



Alissa S. Lotane, Director

Florida Division of Historical Resources

8.1.2023

Date





**CULTURAL RESOURCE ASSESSMENT SURVEY ADDENDUM  
IN SUPPORT OF THE MALABAR ROAD POND C-7 ALT 3  
BREVARD COUNTY, FLORIDA**

**FINANCIAL MANAGEMENT No. 437210-1  
SEARCH PROJECT No. T20003**

**PREPARED FOR**

**KITTELSON & ASSOCIATES  
AND  
THE CITY OF PALM BAY, FLORIDA**

**BY**

**SEARCH**

**JUNE 2023**

**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 (FHWA) AND FDOT.**





**CULTURAL RESOURCE ASSESSMENT SURVEY ADDENDUM  
IN SUPPORT OF THE MALABAR ROAD POND C-7 ALT 3  
BREVARD COUNTY, FLORIDA**

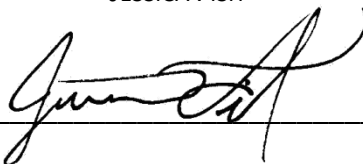
**FINANCIAL MANAGEMENT No. 437210-1  
SEARCH PROJECT No. T20003**

**PREPARED FOR**

**KITTELSON & ASSOCIATES  
AND  
THE CITY OF PALM BAY, FLORIDA**

**PREPARED BY**

**SEARCH  
JESSICA FISH**

A handwritten signature in black ink, appearing to read 'Jessica Fish', is written over a horizontal line.

**JESSICA FISH, MST, RPA  
PRINCIPAL INVESTIGATOR, ARCHAEOLOGY**

**WWW.SEARCHINC.COM**

**JUNE 2023**





## EXECUTIVE SUMMARY

This report presents the findings of a Phase I cultural resource assessment survey addendum conducted in support of the proposed C-7 Alt 3 pond location in Brevard County, Florida, which is associated with improvements to Malabar Road. The City of Palm Bay, Florida, is proposing to widen Malabar Road from Minton Road to east of St. Johns Heritage Parkway in Brevard County, Florida, and to construct associated ponds, swales, and floodplain compensation areas. The current report is an addendum to the 2021 SEARCH surveys titled *Cultural Resource Assessment Survey for the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida* (Florida Master Site File Survey No. 28025, Boschi et al. 2021) and *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida* (Florida Master Site File Survey No. 28024, Fish et al. 2021). The current survey was limited to the relocated footprint of Pond C-7 Alt 3, along with an associated easement and floodplain compensation area. For the current survey, SEARCH tested 2.23 hectares (5.52 acres) total. The discussions of regional context, historic map review, research design, and laboratory methods provided in the previous report apply to the current cultural resource assessment survey and are not repeated in this report (Boschi et al. 2021). The City of Palm Bay is conducting this Local Area Program project using federal funds administered by the Florida Department of Transportation, District 5.

To encompass potential improvements, the area of potential effects (APE) was defined to include the proposed C-7 Alt 3 pond, easement, and floodplain compensation area footprint. A 30.5-meter (100-foot) buffer was used to evaluate the potential to affect any adjacent historic buildings or structures. SEARCH conducted the archaeological survey within the proposed construction footprint.

The archaeological survey consisted of the excavation of nine shovel tests. No artifacts or archaeological sites or occurrences were identified within the APE. SEARCH recommends no further archaeological survey in support of the proposed Malabar Road improvements.

No historic buildings or structures are within or adjacent to the area of potential effects. SEARCH conducted no architectural survey for the current survey and recommends no further architectural work.

No NRHP-listed or -eligible cultural resources were identified within the project APE. No further cultural resources work is recommended.



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## INTRODUCTION

This report presents the findings of a Phase I cultural resource assessment survey (CRAS) addendum conducted in support of the proposed pond C-7 Alt 3 location in Brevard County, Florida, which is associated with improvements to Malabar Road (**Figure 1**). The City of Palm Bay, Florida, is proposing to widen Malabar Road from Minton Road to east of St. Johns Heritage Parkway in Brevard County, Florida, and to construct associated ponds, swales, and floodplain compensation areas. The current report is an addendum to the 2021 SEARCH surveys titled *Cultural Resource Assessment Survey for the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida* (Florida Master Site File [FMSF] Survey No. 28025) and *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida* (FMSF Survey No. 28024). The current survey was limited to the relocated footprint of Pond C-7 Alt 3, along with an associated easement and floodplain compensation area (FPCA). For the current survey, SEARCH tested 2.23 hectares (ha) (5.52 acres [ac]) total. The discussions of regional context, research design, and laboratory methods provided in the previous report apply to the current CRAS and are not repeated in this report. The City of Palm Bay is conducting this Local Area Program project using federal funds administered by the Florida Department of Transportation (FDOT), District 5.

The project's area of potential effects (APE) was developed to consider visual, audible, and atmospheric effects the project may have on historic resources. The APE was defined to include the proposed C-7 Alt 3 pond, easement, and FPCA footprint (**Figure 2**). A 30.5-meter (m) (100-foot [ft]) buffer was used to evaluate the potential to affect any adjacent historic buildings or structures. SEARCH conducted the archaeological survey within the proposed construction footprint.

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). SEARCH conducted this study 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. SEARCH performed all work 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 investigator for this project meets the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Federal Register 44716-42).

Jessica Fish MSt, RPA, served as the principal investigator. Ms. Fish wrote the report. Kaleb Wells, BA, and Brianna Jean-Baptiste, BA, conducted the fieldwork. Angelica Costa, BA, produced the field maps and report figures. Varna Boyd, MA, RPA, conducted the quality-control review, and Charles Sterchi, MFA, edited and produced the document.



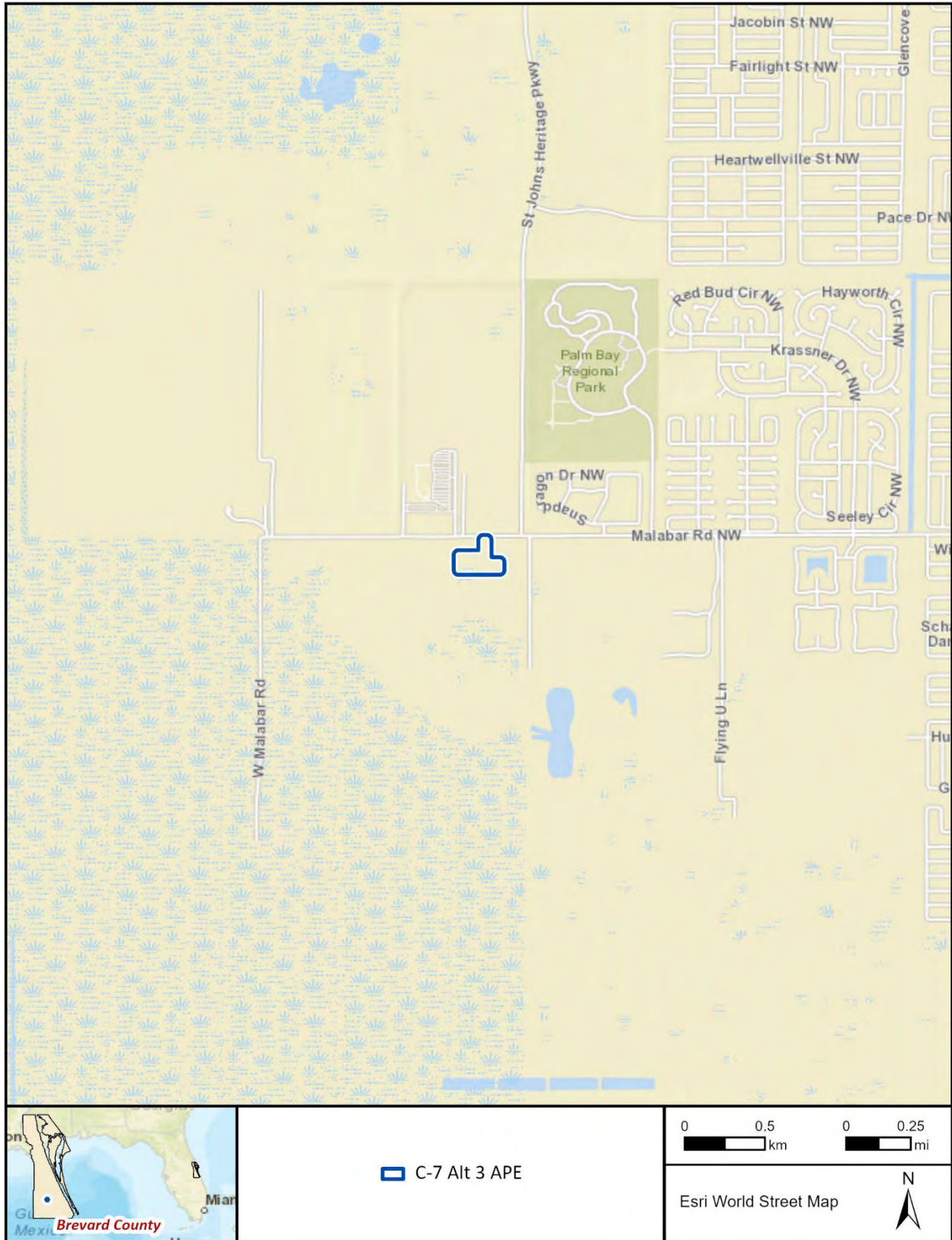


Figure 1. APE location in Brevard County, Florida.



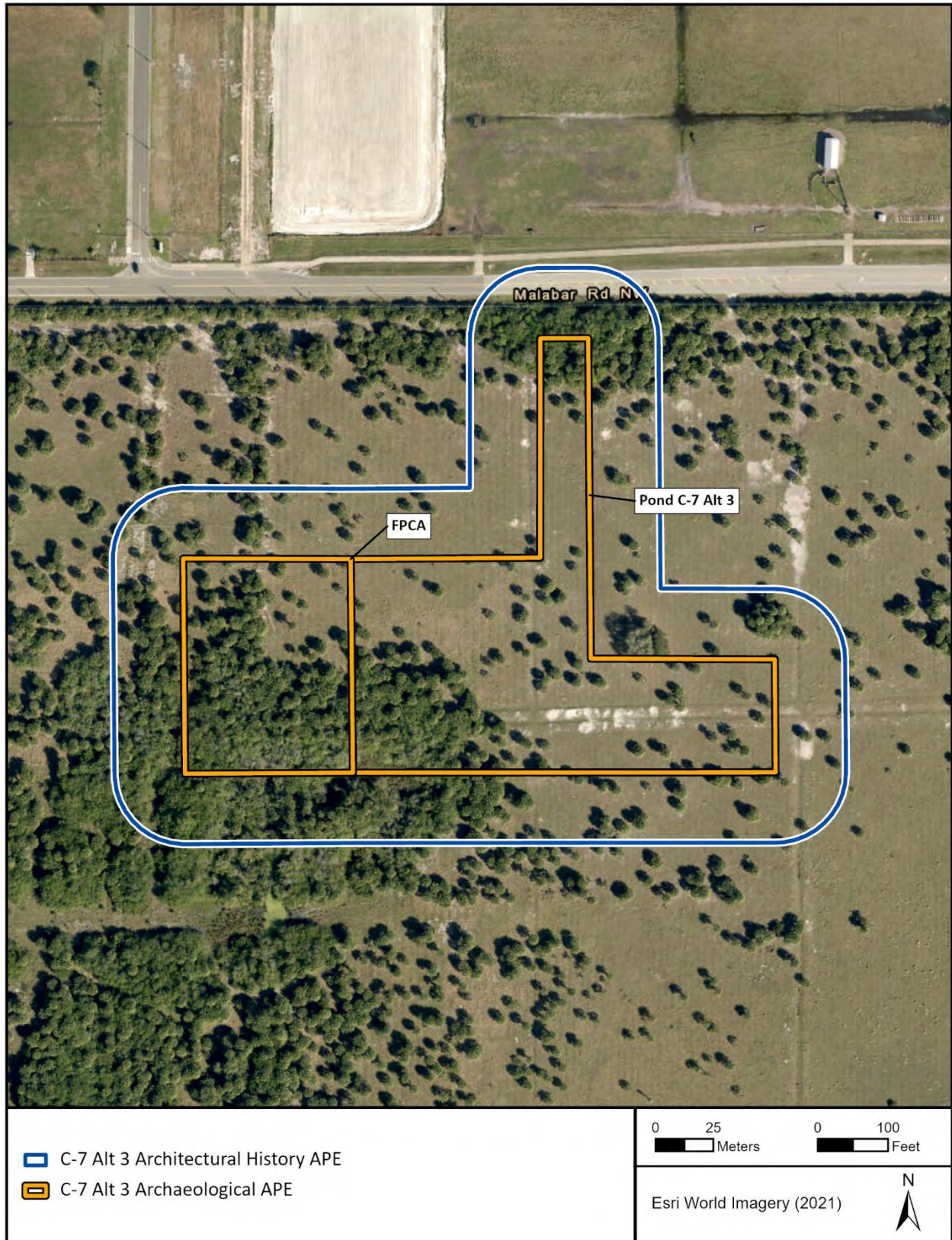


Figure 2. The C-7 Alt 3 APE.



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## PROJECT LOCATION AND ENVIRONMENT

### LOCATION AND MODERN CONDITIONS

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The current project area is south of Malabar Road in the City of Palm Bay, Brevard County, Florida, within Section 5 of Township 29 South, Range 36 East. The APE is on a partially forested parcel northeast of a small natural pond. Elevation is flat and 5.5 m (18 ft) above mean sea level throughout the APE.

Geologically, the APE is within the St. Johns Marsh province, a part of the larger Eastern Flatwoods District (Brooks 1981). This area is characterized by marshes and grass prairies with seasonal flooding. Soils within the APE consist of poorly drained Eaugallie sand (**Figure 3**). There are many man-made ponds and canals in the vicinity, and the St. Johns River is 3.2 kilometers (2.0 miles) southwest of the proposed pond location.





Figure 3. Soil drainage in the C-7 Alt 3 APE.

## BACKGROUND RESEARCH

### FLORIDA MASTER SITE FILE REVIEW

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SEARCH reviewed FMSF data from April 2023 to identify previously recorded cultural resources within the APE. The FMSF review indicates that two previous cultural resource surveys have been conducted within the APE (**Table 1; Figure 4**). FMSF Survey No. 28025 is the 2021 CRAS for which this survey is an addendum (Boschi et al. 2021). The survey consisted of systematic survey of the Malabar Road project corridor according to current Module Three standards. No shovel tests associated with this study fall within the current APE. FMSF Survey No. 14219 is a 2006 study completed by SEARCH for a proposed development (Endonino 2006). This survey also did not include testing within the current APE.

**Table 1. Cultural Resource Surveys within the Pond C-7 Alt 3 APE.**

| FMSF No. | Title                                                                                                                                           | Year | Author/Consultant |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|
| 14219    | <i>A Phase I Cultural Resource Survey of the Lennar South Development Property, Brevard County, Florida.</i>                                    | 2006 | Endonino, Jon     |
| 28025    | <i>Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida.</i> | 2021 | Boschi et al.     |

The FMSF review also indicates that no cultural resources have been recorded within the current project APE (see **Figure 4**). The nearest resources are an unevaluated precontact shell midden (8BR00024) located on the north side of Malabar Road, approximately 200 m (700 ft) north of the APE, and the Melbourne-Tillman Canal No. 7 (8BR04374), which is approximately 150 m (500 ft) east of the APE and has been recommended ineligible for the NRHP by the State Historic Preservation Officer.



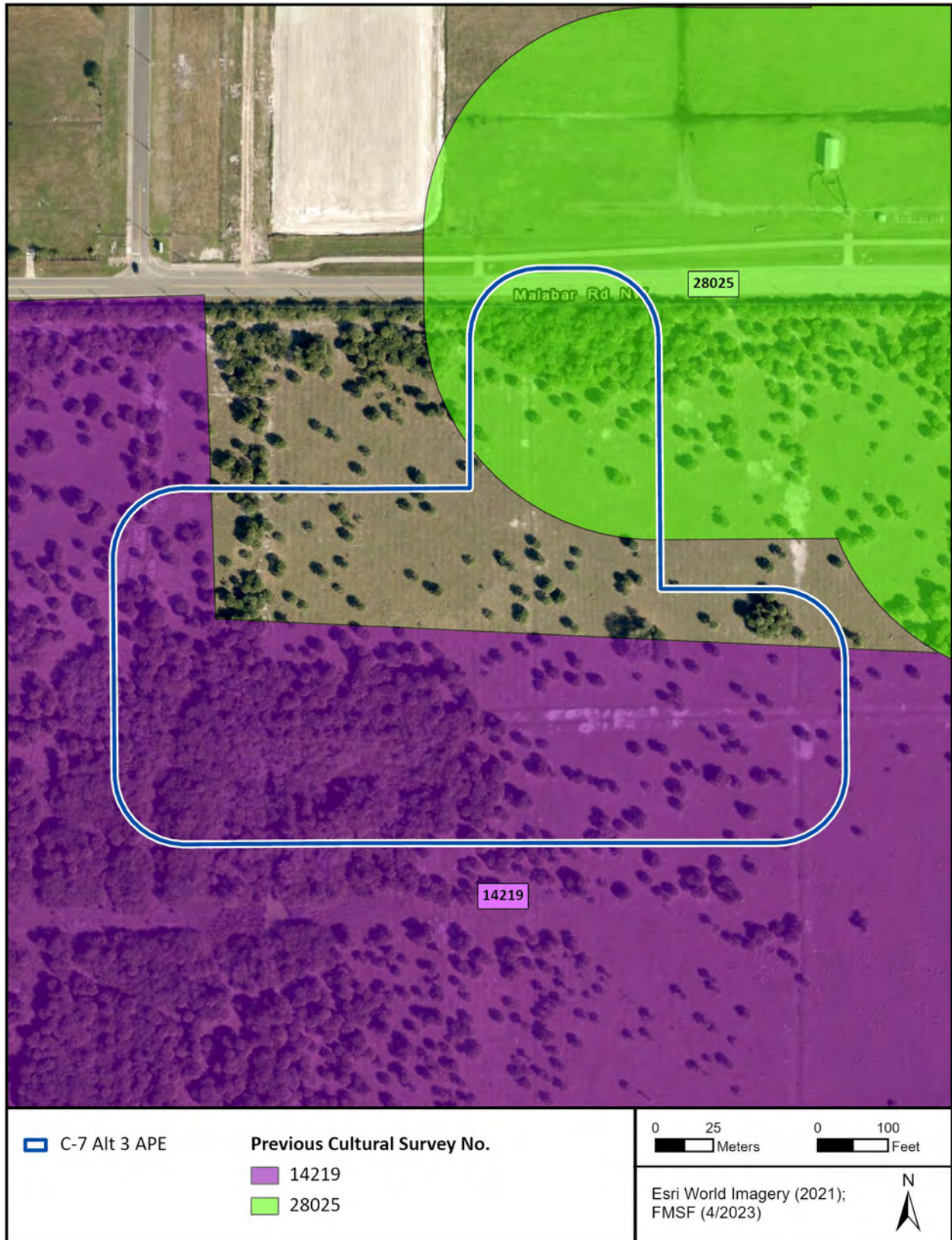


Figure 4. Previous cultural resource surveys in the APE.

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## NRHP CRITERIA

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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 prehistory or 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.

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## CULTURAL RESOURCE POTENTIAL

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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 No. 28025, Boschi et al. 2021), the potential for precontact archaeological sites was moderate to low. Based on the results of the FMSF review and the previously conducted historic map review of the original survey, SEARCH judged the APE to have a low potential for historic archaeological sites and historic buildings or structures.

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## SURVEY METHODS

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### Archaeological Field Methods

The Phase I field survey consisted of systematic shovel testing consistent with the low archaeological potential. Shovel tests were excavated at 50 and 100 m (164 and 328 ft) intervals, supplemented by pedestrian survey. Shovel tests measured approximately 50 centimeters (cm) (19.7 inches [in]) in diameter and were excavated to a minimum depth of 100 cm (39.4 in) below surface, subsurface conditions permitting. Excavated sediments were screened through 6.4-millimeter (0.25 in) mesh hardware cloth. The location of each shovel test was marked on an



aerial photograph and recorded with a Wide Area Augmentation System-enabled handheld GPS unit.

## **Architectural Field Methods**

SEARCH included an architectural survey in the original 2021 survey (FMSF Survey No. 28025, Boschi et al. 2021). Due to the negative results of the previous survey and absence of historic resources (recorded or unrecorded) in proximity to proposed pond C-7 Alt 3, SEARCH did not conduct an architectural survey as a part of the current survey.

## **Curation**

The original maps and field notes are housed at SEARCH's Newberry office. The original maps and field notes will be turned over to the City of Palm Bay upon project completion; SEARCH will retain copies.

## **Procedures to Deal with Unexpected Discoveries**

Every reasonable effort has been 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 yet be encountered within the project limits. Should any 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 SURVEY

The APE includes 2.23 ha (5.52 ac) of undeveloped property in an area of open field and forest along the south side of Malabar Road. Soils are recorded as poorly drained, and a small pond or wetland is near the southwest corner of the project (**Figure 5**). Marked field maps are included in **Appendix A**. An FDHR Survey Log is included in **Appendix B**.

Nine shovel tests were excavated (**Figure 6**); none contained artifacts. Natural soil stratigraphy consisted of dark grayish brown (10YR 4/2) sand from approximately 0 to 30 cm below surface (cmbs; 0 to 11.8 in below surface [inbs], Stratum I), very pale brown or gray (10YR 7/3 or 10YR 6/1) sand from approximately 30 to 45 cmbs (11.8 to 17.7 inbs, Stratum II), very pale brown (10YR 7/3 or 10YR 7/4) sand from approximately 45 to 70 cmbs (17.7 to 27.6 inbs, Stratum III), and terminated in brown (10YR 4/3) wet sand or sandy clay at 100 cmbs (39.3 inbs, Stratum IV) (see **Figure 5**). Spodic soils reflected the naturally wet conditions of this area.

No archaeological sites or archaeological occurrences were identified.



**Figure 5. Conditions in the C-7 Alt 3 APE. Top left: overview of the eastern half of the APE. Bottom left: overview of the western half of the APE. Right: sample soil stratigraphy.**



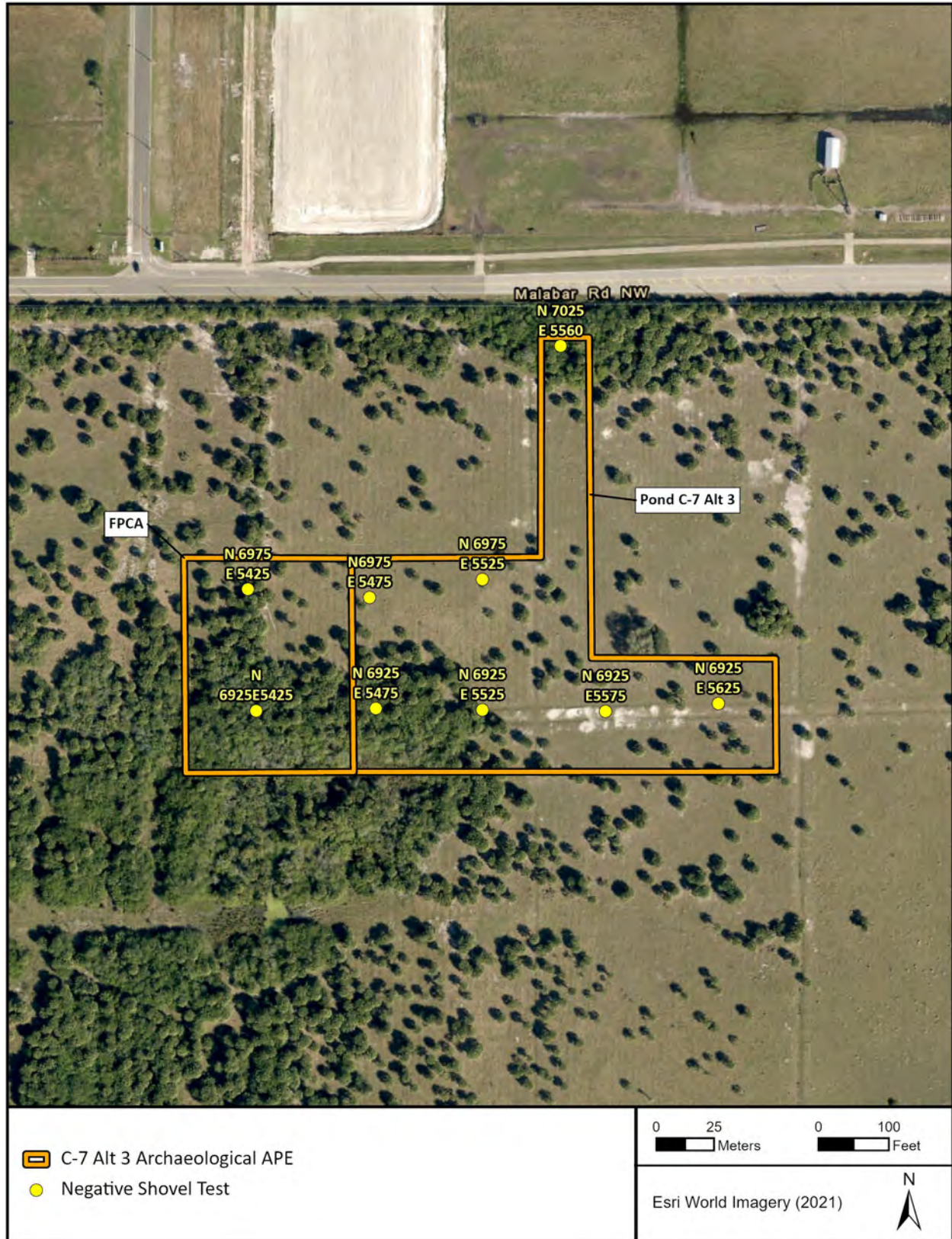


Figure 6. Results of archaeological testing in the APE.

## CONCLUSION AND RECOMMENDATIONS

This report presents the findings of a Phase I CRAS addendum conducted in support of the proposed C-7 Alt 3 pond location in Brevard County, Florida, which is associated with improvements to Malabar Road. The City of Palm Bay, Florida, is proposing to widen Malabar Road from Minton Road to east of St. Johns Heritage Parkway in Brevard County, Florida, and construct associated ponds, swales, and floodplain compensation areas. The current report is an addendum to the 2021 SEARCH surveys titled *Cultural Resource Assessment Survey for the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida* (FMSF Survey No. 28025) and *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida* (FMSF Survey No. 28024). The current survey was limited to the relocated footprint of Pond C-7 Alt 3. For the current survey, SEARCH tested a total of 2.23 ha (5.52 ac). The City of Palm Bay is conducting this Local Area Program project using federal funds administered by the FDOT, District 5.

The archaeological survey consisted of the excavation of nine shovel tests. No artifacts or archaeological sites or occurrences were identified. SEARCH recommends no further archaeological survey in support of the proposed Malabar Road improvements.

No architectural survey was conducted as part of the current survey because no existing or potential historic resources were identified in the vicinity. SEARCH recommends no further architectural history survey.

No NRHP-listed or -eligible cultural resources were identified within the project APE. No further cultural resources work is recommended.



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## REFERENCES CITED

Boschi, Dave, Kelly Guerrieri, Allen Kent, Jessica Fish, and Mikel Travisano

2021 *Cultural Resource Assessment Survey of the Malabar Road Improvements Project Development and Environment Study, Brevard County, Florida*. Florida Master Site File Survey No. 28025. 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.

Endonino, Jon

2006 *A Phase I Cultural Resource Survey of the Lennar South Development Property, Brevard County, Florida*. Florida Master Site File Survey No. 14219. On file, Florida Division of Historical Resources, Tallahassee.

Fish, Jessica, Mikel Travisano, Dave Boschi, and Kelly Guerrieri

2021 *Technical Memorandum: Cultural Resource Assessment Survey in Support of Malabar Road Improvements Ponds, Brevard County, Florida*. Florida Master Site File Survey No. 28024. On file, Florida Division of Historical Resources, Tallahassee.



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**APPENDIX A.**

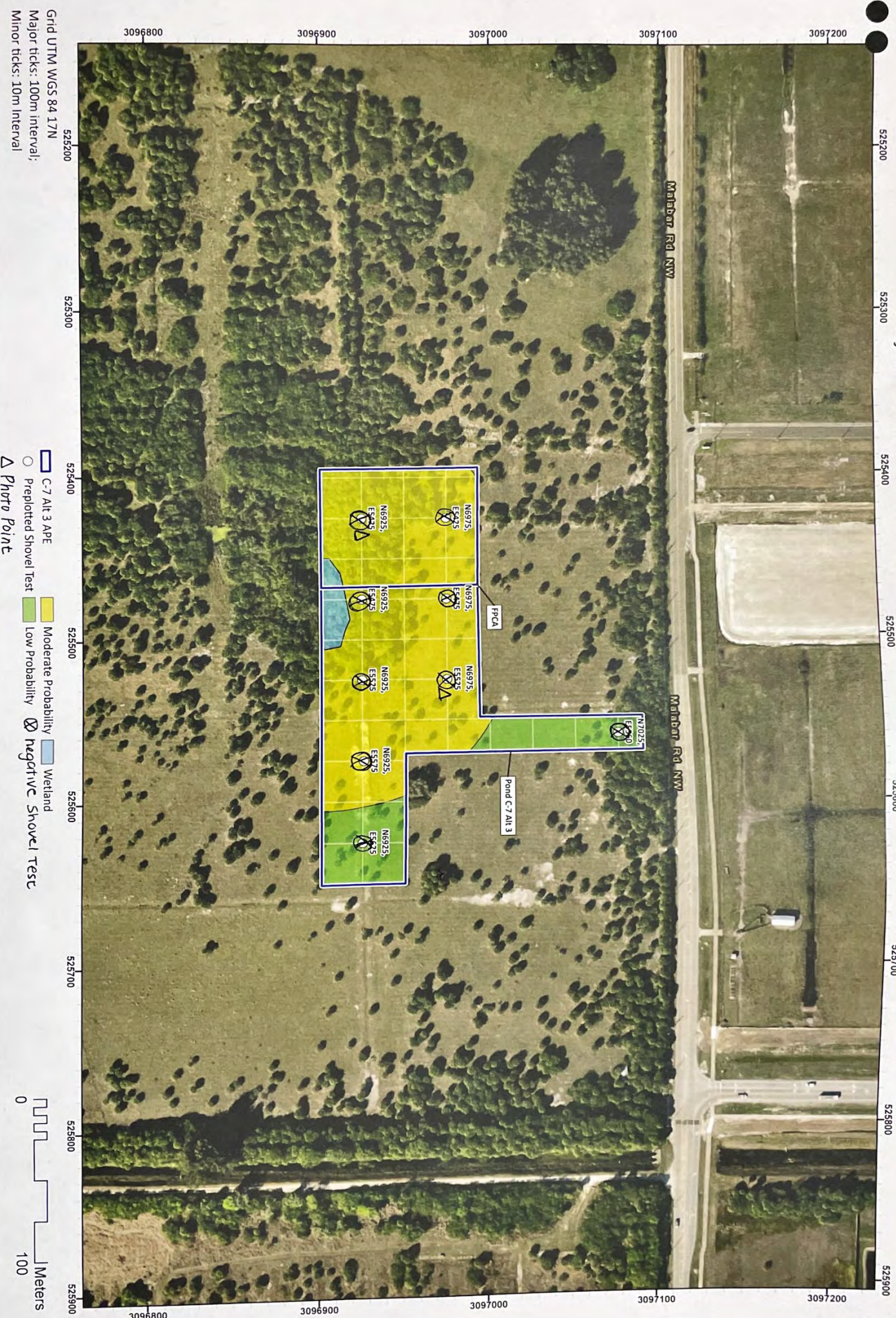
**MARKED FIELD MAPS**





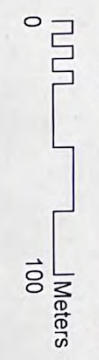


# Project #T20003 - Pond C-7 Alt 3 Addendum, Brevard County - Field Map



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

- C-7 Alt 3 APE
- Preplotted Shovel Test
- Moderate Probability
- Low Probability
- Wetland
- negative Shovel Test
- Photo Point





# Project #T20003 - Pond C-7 Alt 3 Addendum, Brevard County - Field Map



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

- C-7 Alt 3 APE
- Preplotted Shovel Test
- Photo Point
- Negative Shovel Test





**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) Phase I CRAS Addendum for the Malabar Road Pond C-7 Alt 3, Brevard County, Florida

Report Title (exactly as on title page) Cultural Resource Assessment Survey Addendum in Support of the Malabar Road Pond C-7 Alt 3, Brevard County, Florida

Report Authors (as on title page, last names first) 1. Fish, Jessica 3. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_

Publication Date (year) 2032 Total Number of Pages in Report (count text, figures, tables, not site forms) 16

Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)  
Financial Management No. 437210-1; SEARCH Project No. T20003

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

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

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

1. Pond 3. \_\_\_\_\_ 5. \_\_\_\_\_ 7. \_\_\_\_\_  
2. Malabar Road 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 719 S. Woodland Blvd, DeLand, FL 32720

Recorder of Log Sheet Jessica Fish Date Log Sheet Completed 6-2-2023

Is this survey or project a continuation of a previous project?  No  Yes: Previous survey #s (FMSF only) 28025, 28024

## Mapping

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

1. Brevard 3. \_\_\_\_\_ 5. \_\_\_\_\_  
2. \_\_\_\_\_ 4. \_\_\_\_\_ 6. \_\_\_\_\_

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

1. Name FELLSMERE Year 2018 4. Name \_\_\_\_\_ Year \_\_\_\_\_  
2. Name MELBOURNE WEST Year 2018 5. Name \_\_\_\_\_ Year \_\_\_\_\_  
3. Name \_\_\_\_\_ Year \_\_\_\_\_ 6. Name \_\_\_\_\_ Year \_\_\_\_\_

## Description of Survey Area

Dates for Fieldwork: Start 5-26-2023 End 5-26-2023 Total Area Surveyed (fill in one) 2.23 hectares \_\_\_\_\_ 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 archaeological testing at 50- and 100-m intervals. no historic buildings in APE

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)

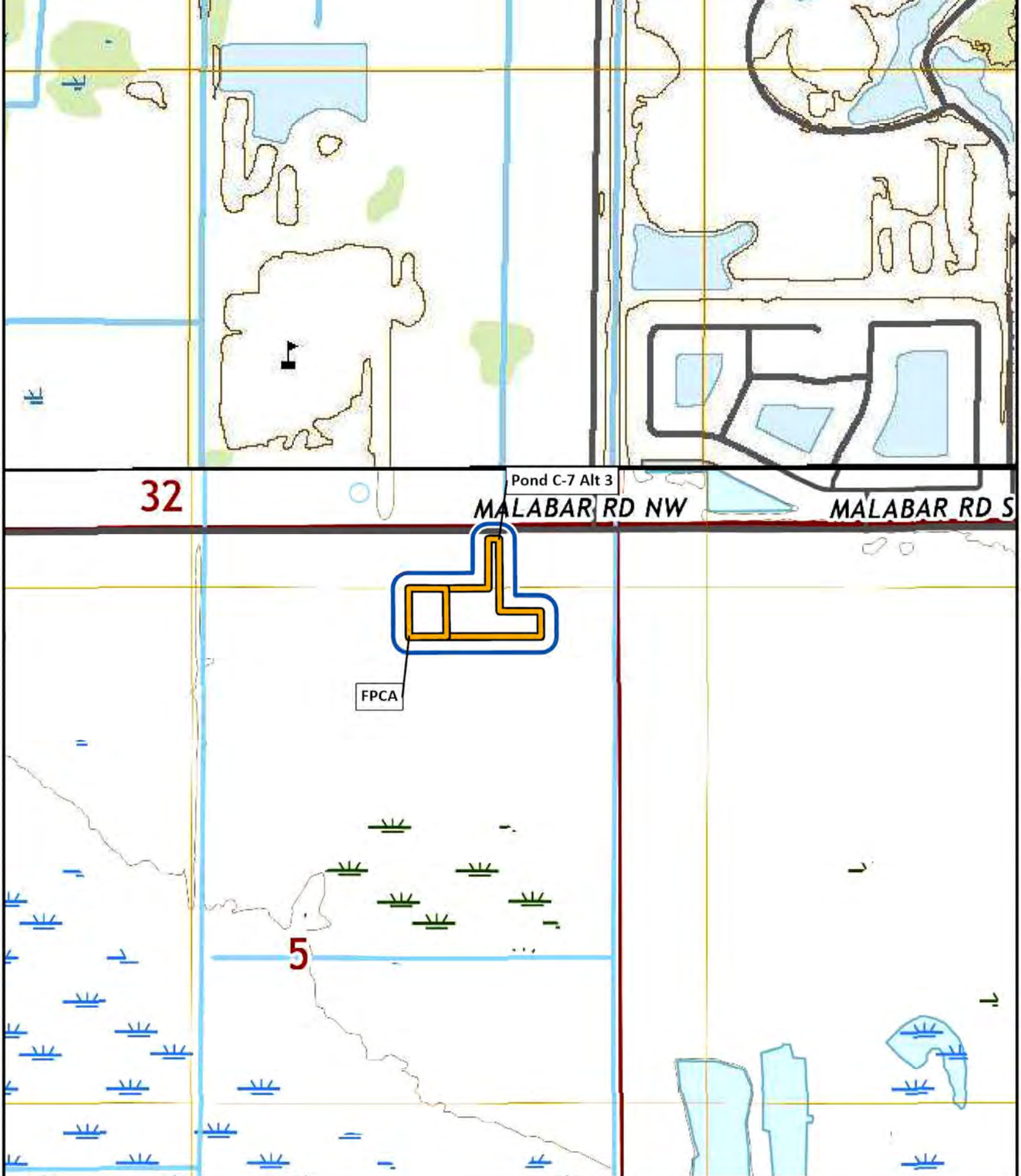
Site Significance Evaluated? Yes No
Count of Previously Recorded Sites 0 Count of Newly Recorded Sites 0
Previously Recorded Site #'s with Site File Update Forms (List site #'s without "8". Attach additional pages if necessary.) \_\_\_\_\_

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: \_\_\_\_\_



32


Pond C-7 Alt 3

MALABAR RD NW

MALABAR RD S

FPCA

5

 C-7 Alt 3 Architectural History APE

 C-7 Alt 3 Archaeological APE



USGS 7.5' Quadrangle Maps:  
Fellsmere NW (2018) and  
Melbourne West (2018)

