CULTURAL RESOURCE ASSESSMENT SURVEY
PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY

SR 45 (US 41) AT BONITA BEACH ROAD

LEE COUNTY, FLORIDA

Financial Project ID No.: 444321-1-22-01
ETDM No.: 6291

Florida Department of Transportation
District One
801 North Broadway Avenue
Bartow, Florida 33830

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 Federal Highway Administration and FDOT.

January 2024

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Financial Project ID No.: 444321-1-22-01
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Prepared for:

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January 2024

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SECRETARY

January 29, 2024

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

Attn: Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey Update
Project Development and Environment (PD&E) Study
SR 45 (US 41) at Bonita Beach Road
Lee County, Florida
Financial Management Number: 444321-1-22-01
Federal Aid Project No.: TBD

Dear Ms. Lotane:

Enclosed please find one copy of the report titled *Cultural Resource Assessment Survey Project Development and Environment (PD&E) Study SR 45 (US 41) at Bonita Beach Road Lee County, Florida.* The Florida Department of Transportation (FDOT), District One, is conducting a PD&E Study for SR 45 (US 41) at Bonita Beach Road, in the City of Bonita Springs, Florida. The study area limits extend along US 41 from Foley Road to just south of the Imperial River bridge a distance of approximately 0.9 miles. Additionally, the study area extends along Bonita Beach Road from Windsor Road to Spanish Wells Boulevard a distance of approximately 0.8 miles. The PD&E study provides information from which FDOT District One can evaluate capacity, safety, and multi-modal improvements at the SR 45 (US 41) and Bonita Beach Road intersection.

The purpose of this project is to address the deficient operational capacity of the US 41 and Bonita Beach Road intersection to relieve existing congestion and accommodate projected future traffic demand. The proposed improvements will modify the signalized configuration of the US 41 and Bonita Beach Road intersection to be a partial displaced left turn (PDLT), with the northbound and southbound left turn movements to crossover and be located outside of the opposing traffic flow. To accommodate the partial displaced left turn configuration and facilitate the relocation of northbound and southbound turning vehicles, two new signalized "crossover" intersections will be added along US 41. The southbound and eastbound left turn movements are proposed to have three lanes each, and the eastbound and westbound right turn movements are proposed to have two lanes each. Other improvements include a six-foot (ft) sidewalk, a 12-ft shared-use path, and signalized marked crosswalks. In addition, the City of Bonita Springs is designing and building a two-lane quadrant roadway connecting Bonita Beach Road at Windsor Road to US 41 at the Center of Bonita Springs. This Northwest Quadrant Roadway is currently in design by the City and anticipated to be built ahead of the US 41 and Bonita Beach Road intersection improvements. The proposed improvements of the Northwest Quadrant Roadway as part of this PD&E Study includes the US 41 and the Center of Bonita Springs intersection to be changed from a standard signalized intersection to a "thru-cut" intersection. A thru-cut intersection restricts through movements from the minor

street typically due to operational and/or geometric conditions. As such, the west leg is being widened from two lanes to five lanes (four eastbound approach lanes and one westbound receiving lane) and the east leg is being widened from two lanes to four lanes (two westbound approach lanes and two eastbound receiving lanes). This creates skew issues for any east/west through movements and creates operational constraints that are alleviated by the thru-cut intersection configuration. Tying into the new east leg is a Northeast Quadrant Roadway proposed between US 41 and Arroyal Road, northeast of the US 41 and Bonita Beach Road intersection. This will be a new three-lane roadway with two lanes eastbound and one lane westbound. This is a federally funded project.

Based on the project type and location of the proposed work, the archaeological APE is limited to the footprint of construction. The historical/architectural APE included the footprint of construction as well as resources within immediately adjacent parcels where proposed road widening will occur and new roadways are expected to be constructed.

This CRAS was conducted in accordance with the requirements set forth in the National Historic Preservation Act of 1966 (as amended), which are implemented by the procedures contained in 36 CFR, Part 800, as well as the provisions contained in the revised Chapter 267, *Florida Statutes*. The investigations were carried out in accordance with Part 2, Chapter 8 (Archaeological and Historical Resources) of the FDOT's PD&E Manual, FDOT's Cultural Resources Manual, and the standards contained in the Florida Division of Historical Resources (FDHR) Cultural Resource Management Standards and Operations Manual. In addition, this survey meets the specifications set forth in Chapter 1A-46, Florida Administrative Code.

Archaeological background research and a review of the Florida Master Site File (FMSF) indicated that no archaeological sites are recorded within or adjacent to the APE but five sites are recorded within one mile. These consisted of various types of mounds, only one of which has been evaluated by the State Historic Preservation Officer (SHPO). A review of relevant site locational information for environmentally similar areas within Lee County and the surrounding region indicated that the APE was considered to have a low to moderate potential for archaeological sites. As a result of field investigation, no archaeological sites were discovered.

Historic background research, including a review of the FMSF and the NRHP databases, indicated that two historic resources (8LL01426 and 8LL02543) were previously recorded within the APE. The circa (ca.) 1920 Frame Vernacular style building, located at 27750 Arroyal Road, was evaluated as ineligible for listing in the NRHP by the SHPO in 2001. Following the development of an enlarged pond site, the building was demolished and documented as such within the FMSF. Similarly, the Angler's Paradise Clubhouse (8LL02543), a ca. 1958 Masonry Vernacular style building, located at 27711 Windsor Road, was not evaluated by the SHPO for NRHP eligibility. In 2022 the FMSF was notified that the building was no longer extant. Historical/architectural field survey resulted in the identification and evaluation of four historic resources (8LL02984, 8LL02985, 8LL02986, and 8LL02987) within the APE. These include three buildings (8LL02984, 8LL02985, and 8LL02986), constructed between ca. 1945 and 1975, and one linear resource (8LL02987). The buildings consist of two Commercial style buildings (8LL02984 and 8LL02985) and one Masonry Vernacular style building (8LL02986) that have been altered, lack sufficient architectural features, and are not significant embodiments of a type, period, or method of construction. The linear resource is an unnamed drainage ditch (8LL02987) that is a common example of a drainage canal found throughout Lee County and Florida and does not possess any unique engineering features. Background research did not reveal any historic associations with significant persons and/or events. Thus, these four historic resources do not appear eligible for listing in the NRHP, either individually or as a part of a historic district.

Based on the results of this study, it is the opinion of the District that the proposed undertaking will result in *no historic properties affected.*

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

The CRAS is provided for your review and comment. If you have any questions, please do not hesitate to call me at (954) 336-3625 or email at matthew.marino@dot.state.fl.us.

Matt Marino, M.A., RPA
Cultural Resource Coordinator
Florida Department of Transportation, District One

Enclosures: One original copy of the CRAS Report (January 2024), Four (4) FMSF forms, One Completed Survey Log

CC: Jack Freeman, Kittelson
Maranda Kles, ACI

The Florida State Historic Preservation Officer (SHPO) finds the attached Cultural Resources 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 202400467. Or, the SHPO finds the attached document contains _____ insufficient information.

SHPO Comments:

Kelly L Chase for

Alissa S. Lotane, Director
State Historic Preservation Officer
Florida Division of Historical Resources

2.22.2024
Date

EXECUTIVE SUMMARY

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) Study for SR 45 (US 41) at Bonita Beach Road, in the City of Bonita Springs, Florida. The study area limits extend along US 41 from Foley Road to just south of the Imperial River bridge, a distance of approximately 0.9 miles. Additionally, the study area extends along Bonita Beach Road from Windsor Road to Spanish Wells Boulevard, a distance of approximately 0.8 miles. The PD&E study provides information from which FDOT District One can evaluate capacity, safety, and multi-modal improvements at the US 41 and Bonita Beach Road intersection. The project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project No. 6291. This is a federally funded project.

The purpose of this project is to address the deficient operational capacity of the US 41 and Bonita Beach Road intersection to relieve existing congestion and accommodate projected future traffic demand. The proposed improvements will modify the signalized configuration of the US 41 and Bonita Beach Road intersection to be a partial displaced left turn (PDLT), with the northbound and southbound left turn movements to crossover and be located outside of the opposing traffic flow. To accommodate the partial displaced left turn configuration and facilitate the relocation of northbound and southbound turning vehicles, two new signalized "crossover" intersections will be added along US 41. The southbound and eastbound left turn movements are proposed to have three lanes each, and the eastbound and westbound right turn movements are proposed to have two lanes each. Other improvements include a six-foot (ft) sidewalk, a 12-ft shared-use path, and signalized marked crosswalks.

In addition, the City of Bonita Springs is designing and building a two-lane quadrant roadway connecting Bonita Beach Road at Windsor Road to US 41 at the Center of Bonita Springs. This Northwest Quadrant Roadway is currently in design by the City and anticipated to be built ahead of the US 41 and Bonita Beach Road intersection improvements. The proposed improvements of the Northwest Quadrant Roadway as part of this PD&E Study includes the US 41 and the Center of Bonita Springs intersection to be changed from a standard signalized intersection to a "thru-cut" intersection. A thru-cut intersection restricts through movements from the minor street typically due to operational and/or geometric conditions. As such, the west leg is being widened from two lanes to five lanes (four eastbound approach lanes and one westbound receiving lane) and the east leg is being widened from two lanes to four lanes (two westbound approach lanes and two eastbound receiving lanes). This creates skew issues for any east/west through movements and creates operational constraints that are alleviated by the thru-cut intersection configuration. Tying into the new east leg is a Northeast Quadrant Roadway proposed between US 41 and Arroyal Road, northeast of the US 41 and Bonita Beach Road intersection. This will be a new three-lane roadway with two lanes eastbound and one lane westbound (Kittelson 2023a). See **Appendix A** for the partial displaced left turn alternative plan board.

The purpose of the Cultural Resource Assessment Survey (CRAS) was to locate and identify any archaeological sites and historic resources within the project area of potential effect (APE) and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). As defined in *36 Code of Federal Regulations [CFR] Part § 800.16(d)*, the APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Based on the project type and location of the proposed work, the archaeological APE is limited to the footprint of construction. The historical/architectural APE included the footprint of construction as well as resources within immediately adjacent parcels where proposed road widening will occur and new roadways are expected to be constructed. The archaeological and historical field surveys were completed in September 2023.

This CRAS was initiated in consideration of Section 106 of the *National Historic Preservation Act* of 1966, as amended by Public Law 89-665; the *Archaeological and Historic Preservation Act*, as amended by Public Law 93-291; Executive Order 11593; and Chapter 267, *Florida Statutes (FS)*. All work was carried out in conformity with Part 2, Chapter 8 ("Archaeological and Historical Resources") of the Florida Department of Transportation's *PD&E Manual* (FDOT 2023), and the Florida Division of Historical Resources' (FDHR) standards contained in the *Cultural Resource Management Standards and Operational Manual* (FDHR 2003), as well as with the provisions contained in the Chapter 1A-46, *Florida Administrative Code* (*FAC*). Principal Investigators meet the *Secretary of the Interior's Professional Qualification Standards* (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture.

Archaeological background research and a review of the Florida Master Site File (FMSF) indicated that no archaeological sites are recorded within or adjacent to the APE but five sites are recorded within one mile. These consisted of various types of mounds, only one of which has been evaluated by the State Historic Preservation Officer (SHPO). A review of relevant site locational information for environmentally similar areas within Lee County and the surrounding region indicated that the APE was considered to have a low to moderate potential for archaeological sites although the ETDM report 6291 indicated a minimal impact to cultural resources. As a result of field investigation, including the excavation of 35 shovel tests, no archaeological sites were discovered.

Historic background research, including a review of the FMSF and the NRHP databases, indicated that two historic resources (8LL01426 and 8LL02543) were previously recorded within the APE. The circa (ca.) 1920 Frame Vernacular style building, located at 27750 Arroyal Road, was evaluated as ineligible for listing in the NRHP by the SHPO in 2001. Following the development of an enlarged pond site, the building was demolished and documented as such within the FMSF. Similarly, the Angler's Paradise Clubhouse (8LL02543), a ca. 1958 Masonry Vernacular style building, located at 27711 Windsor Road, was not evaluated by the SHPO for NRHP eligibility. In 2022 the FMSF was notified that the building was no longer extant. A review of relevant historic United States Geological Survey (USGS) quadrangle maps, historic aerial photographs, and the Lee County property appraiser's website data revealed the potential for four new historic resources 45 years of age or older (constructed in 1978 or earlier) within the APE (Caldwell 2023).

Historical/architectural field survey resulted in the identification and evaluation of four historic resources (8LL02984, 8LL02985, 8LL02986, and 8LL02987) within the APE. These include three buildings (8LL02984, 8LL02985, and 8LL02986), constructed between ca. 1945 and 1975, and one linear resource (8LL02987). The buildings consist of two Commercial style buildings (8LL02984 and 8LL02985) and one Masonry Vernacular style building (8LL02986) that have been altered, lack sufficient architectural features, and are not significant embodiments of a type, period, or method of construction. The linear resource is an unnamed drainage ditch (8LL02987) that is a common example of a drainage canal found throughout Lee County and Florida and does not possess any unique engineering features. Background research did not reveal any historic associations with significant persons and/or events. Thus, these five historic resources do not appear eligible for listing in the NRHP, either individually or as a part of a historic district.

Based on the results of the background research and field investigations, no archaeological sites or historic resources that are listed, determined eligible, or that appear potentially eligible for listing in the NRHP were located within the APE. Therefore, it is the professional opinion of ACI that the proposed undertaking will result in no historic properties affected.

TABLE OF CONTENTS

1.0 INTRODUCTION 1-1
1.1 Project Description 1-1
1.2 Purpose and Need 1-3
1.2.1 Transportation Demand/Capacity 1-3
1.2.2 Safety 1-4
1.2.3 Modal Interrelationships 1-4
1.2.4 System Linkage 1-5
1.3 Alternatives Analysis Summary 1-5
1.3.1 Prior Grade Separated Alternative 1-5
1.3.2 Intersection Alternatives 1-5
1.3.3 Other US 41 Improvements (Outside of Main Intersection 1-8
1.4 Description of Preferred Alternative 1-10
1.4.1 Preferred Intersection Control Alternative 1-10
1.4.2 Preferred Alternative Features 1-11
1.5 Report Purpose 1-16
1.6 Area of Potential Effects (APE) 1-16

2.0 ENVIRONMENTAL SETTING 2-1
2.1 Location and Setting 2-1
2.2 Physiography and Geology 2-6
2.3 Soils and Vegetation 2-6
2.4 Paleoenvironmental Considerations 2-8

3.0 CULTURE HISTORY 3-1
3.1 Paleoindian 3-2
3.2 Archaic 3-3
3.3 Caloosahatchee 3-4
3.4 Colonialism 3-6
3.5 Territorial and Statehood 3-7
3.6 Civil War and Aftermath 3-12
3.7 Twentieth Century 3-16
3.8 Project Area Specifics 3-18

4.0 RESEARCH CONSIDERATIONS AND METHODOLOGIES 4-1
4.1 Background Research and Literature Review 4-1
4.2 Archaeological Considerations 4-1
4.3 Historical Considerations 4-4
4.4 Field Methodology 4-5
4.5 Laboratory Methods and Curation 4-6
4.6 Inadvertent/Unexpected Discoveries 4-6

5.0 SURVEY RESULTS AND CONCLUSIONS 5-1
5.1 Archaeological 5-1
5.2 Historical/Architectural 5-3
5.3 Conclusions 5-8

6.0 BIBLIOGRAPHY 6-1

APPENDICES
Appendix A: Proposed Plan Board
Appendix B: Florida Master Site File Forms
Appendix C: Survey Log

LIST OF FIGURES, TABLES, AND PHOTOS

Page

Figure

Figure 1.1. Location of US 41 at Bonita Beach Road project, Lee County. 1-2
Figure 1.2. Alternative A – Enhanced Traffic Signal. 1-6
Figure 1.3. Alternative B – Partial Displaced Left Turn. 1-7
Figure 1.4. Alternative A US 41 roadway features. 1-8
Figure 1.5. Alternative B US 41 roadway features. 1-10
Figure 1.6. US 41/Center of Bonita Springs "Thru-Cut" Intersection. 1-12
Figure 1.7. Northwest Quadrant Roadway – Proposed City Alignment 1-14
Figure 1.8. Northwest Quadrant Roadway – West Leg at US 41. 1-15
Figure 1.9. Northeast Quadrant Roadway – East Leg at US 41. 1-15
Figure 2.1. Environmental setting of the US 41 at Bonita Beach Road project, Lee County. 2-2
Figure 2.2. Soil types in the US 41 at Bonita Beach Road project, Lee County 2-7
Figure 3.1. Florida Archaeological Regions. 3-1
Figure 3.2. Military map of the Peninsula of Florida, south of Tampa Bay. 3-9
Figure 3.3. Map of the Seat of War in Florida. 3-10
Figure 3.4. Army forts of SW Florida during the Second and Third Seminole War 3-11
Figure 3.5. 1874 plat showing the US 41 at Bonita Beach Road project location. 3-14
Figure 3.6. 1944 and 1962 aerial photographs of the of the US 41 at Bonita Beach Road project location. 3-19
Figure 4.1. Previously recorded cultural resources within one mile of the US 41 and Bonita Beach Road intersection improvements, Lee County 4-2
Figure 5.1. Location of the shovel tests within the archaeological APE. 5-2
Figure 5.2. Location of extant historic resources within the historic APE. 5-4

Table

Table 2.1. Soil types, drainage characteristics, and setting within the APE. 2-6
Table 4.1. Previously recorded archaeological sites within one mile of the US 41 and Bonita Beach Road project, Lee County. 4-3
Table 4.2. Previous surveys within one mile of the US 41 and Bonita Beach Road project, Lee County. 4-3
Table 5.1. Newly recorded historic resources within the Bonita Beach Road APE. 5-5

Photo

Photo 2.1. Conditions of US 41 south of intersection with Bonita Beach Road facing north. 2-1
Photo 2.2. Utilities on the northbound ROW of US 41 north of Bonita Beach Road intersection facing south. 2-3
Photo 2.3. Utilities on eastbound ROW of Bonita Beach Road on southeast corner of intersection facing east. 2-3
Photo 2.4. View of Pond East Alt. 1 with utilities disturbance on Bonita Beach Road facing west. 2-3
Photo 2.5. View of Pond East Alt. 2 conditions from Bonita Beach Road facing south. 2-4

Photo

Photo 2.6. View of eastern extent of the Carolina Street extension from Arroyal Road, facing west. 2-4
Photo 2.7. View of western extent of the Carolina Street extension with Advanced Auto Parts overlapping in the left frame, facing east. 2-4
Photo 2.8. Conditions of the Pond North expansion from US 41 facing southeast. 2-5
Photo 2.9. Interior conditions of the Pond North expansion facing north. 2-5
Photo 2.10. Building conditions within Pond West facing northwest. 2-5
Photo 2.11. Conditions of existing Pond North from Arroyal Road facing southwest. 2-6
Photo 5.1. Example of stratigraphy facing north in Pond East Alt. 1 and 2 5-1
Photo 5.2. Example of stratigraphy in the Pond north Expansion with water intrusion at approximately 50 cm, facing north. 5-3
Photo 5.3. Example of stratigraphy along the US41/Bonita Beach Road ROW, facing north. 5-3
Photo 5.4. 8951 Bonita Beach Road SE (Bldg 1) (8LL02984), looking south. 5-5
Photo 5.5. 8951 Bonita Beach Road SE (Bldg 2) (8LL02985), looking south. 5-6
Photo 5.6. 27720 Arroyal Road (8LL02986), looking west. 5-7
Photo 5.7. Unnamed Drainage Canal (8LL02987), looking south. 5-8

1.0 INTRODUCTION

The Florida Department of Transportation (FDOT), District One, is conducting a Project Development and Environment (PD&E) Study for SR 45 (US 41) at Bonita Beach Road, in the City of Bonita Springs, Florida (**Figure 1.1**). The study area limits extend along US 41 from Foley Road to just south of the Imperial River bridge, a distance of approximately 0.9 miles. Additionally, the study area extends along Bonita Beach Road from Windsor Road to Spanish Wells Boulevard, a distance of approximately 0.8 miles. The PD&E study provides information from which FDOT District One can evaluate capacity, safety, and multi-modal improvements at the SR 45 (US 41) and Bonita Beach Road intersection. This is a federally funded project.

Initiated in November 2019, this PD&E Study has been conducted to assess various intersection alternatives for US 41 at Bonita Beach Road. The supporting data discussed below is extracted from the Preliminary Engineering Report (PER) documents prepared in December 2023 by Kittleson & Associates explaining 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 (Kittleson 2023b).

1.1 Project Description

US 41 is a north-south principal arterial roadway running parallel to Interstate 75 (I-75) and facilitates movement of regional and local traffic (including truck traffic) along Florida's west coast. Bonita Beach Road is an east-west minor arterial roadway providing a connection to I-75 and is one of two east-west connections between the Lee County mainland and coastal communities and barrier island tourist destinations and beaches to the west. US 41 is a state roadway maintained by the FDOT District 1, while Bonita Beach Road is maintained by Lee County. Both US 41 and Bonita Beach Road are designated as emergency evacuation routes.

US 41 within the project limits is a six-lane divided roadway with five-foot (ft) on-street bicycle lanes and five-ft sidewalks on both sides of the roadway. Bonita Beach Road is a four-lane divided roadway with five-ft sidewalks on both sides but no on-street bicycle facilities.

The US 41 at Bonita Beach Road intersection is currently a signalized intersection with two exclusive left turn lanes and an exclusive right turn lane in each approach. Aside from the main intersection, there is currently one other signalized intersection along US 41 at the Center of Bonita Springs (Tuffy Auto/Advanced Auto Parts). There are three additional signalized intersections along Bonita Beach Road at the Center of Bonita Springs, Arroyal Road, and Spanish Wells Boulevard.

The existing US 41 and Bonita Beach Road intersection has two high volume left turn movements, those being eastbound to northbound and southbound to eastbound. To partially address these heavy movements, the City of Bonita Springs conducted the "Network Enhancement Alignment Study – Quadrant Plan" in May 2017. From this, the City will be designing and building a two-lane quadrant roadway connecting Bonita Beach Road at Windsor Road to US 41 at the Center of Bonita Springs. This Northwest Quadrant Roadway is currently in design by the City and anticipated to be built ahead of the US 41 and Bonita Beach Road intersection improvements. This is depicted on **Figure 1.1** as "Outside Project Location."

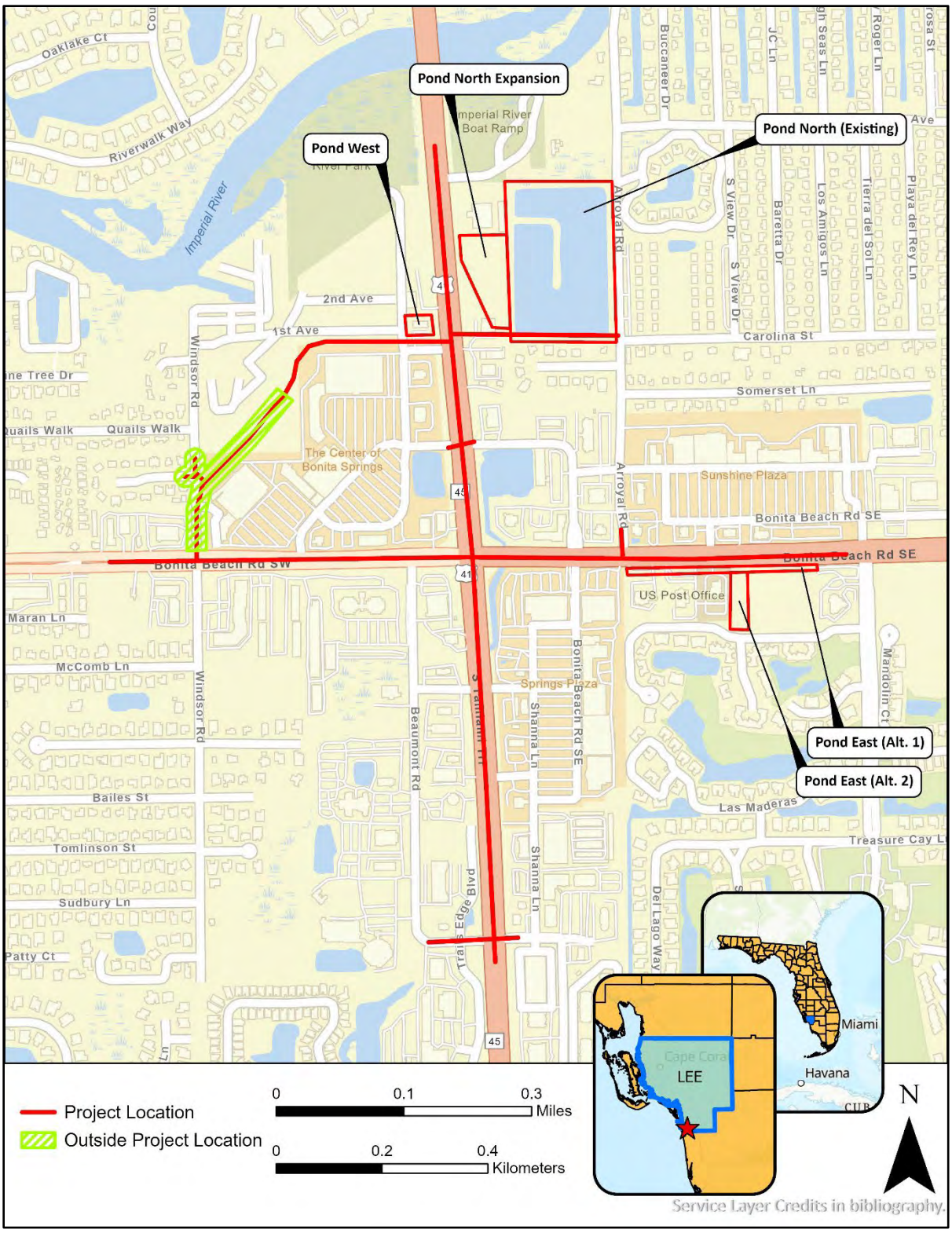

Figure 1.1. Location of US 41 at Bonita Beach Road project, Lee County.

The proposed improvements will modify the signalized configuration of the US 41 and Bonita Beach Road intersection to be a partial displaced left turn (PDLT), with the northbound and southbound left turn movements to crossover and be located outside of the opposing traffic flow. This configuration will allow the northbound and southbound left turning movements to operate in the same signal phase or simultaneously as the northbound and southbound through movements. To accommodate the partial displaced left turn configuration and facilitate the relocation of northbound and southbound turning vehicles, two new signalized "crossover" intersections will be added along US 41 approximately 675-ft south and 460-ft north of Bonita Beach Road. The southbound and eastbound left turn movements are proposed to have three lanes each, and the eastbound and westbound right turn movements are proposed to have two lanes each.

As noted above, a Northwest Quadrant Roadway is being constructed by the City of Bonita Springs. As part of the PD&E study's proposed improvements, the US 41 and the Center of Bonita Springs intersection is proposed to be changed from a standard signalized intersection to a "thru-cut" intersection. A thru-cut intersection restricts through movements from the minor street typically due to operational and/or geometric conditions. In this case, the west leg is being widened from two lanes to five lanes (four eastbound approach lanes and one westbound receiving lane) and the east leg is being widened from two lanes to four lanes (two westbound approach lanes and two eastbound receiving lanes). This creates skew issues for any east/west through movements and creates operational constraints that are alleviated by the thru-cut intersection configuration. Tying into the new east leg is a Northeast Quadrant Roadway proposed between US 41 and Arroyal Road, northeast of the US 41 and Bonita Beach Road intersection. This will be a new three-lane roadway with two lanes eastbound and one lane westbound.

Along US 41 in the northbound direction, a six-ft sidewalk is proposed from Foley Road to Springs Plaza (Sta. 232+50) and a 12-ft shared-use path is proposed from Springs Plaza to just north of the Imperial River Boat Ramp (Sta. 271+00). In the southbound direction, a 12-ft shared-use path is proposed from just north of the Imperial River Boat Ramp (Sta. 271+00) to Bonita Funeral Home (Sta. 231+00) and a six-ft sidewalk is proposed from Bonita Funeral Home to Foley Road. Along both sides of Bonita Beach Road, the sidewalks will be widened to 12-ft shared-use paths from the Center of Bonita Springs to Arroyal Road. Signalized marked crosswalks will be maintained on every leg of the PDLT, including the channelized right turn lanes. Signalized marked crosswalks will also be provided on every leg of each signalized intersection along US 41 and Bonita Beach Road within the study area.

1.2 Purpose and Need

The purpose of this project is to address the deficient operational capacity of the US 41 and Bonita Beach Road intersection to relieve existing congestion and accommodate projected future traffic demand. The project's secondary goals are to 1) Enhance regional and local mobility; 2) Enhance safety conditions; and 3) Improve multi-modal access. The need for these improvements is described in this section.

1.2.1 Transportation Demand/Capacity

The US 41 at Bonita Beach Road intersection experiences chronic congestion. As population and employment growth are expected to continue within this area of Lee County, the intersection's congestion is anticipated to increase. Based on 2019 traffic counts taken, the existing Annual Average Daily Traffic (AADT) ranges from 39,000 to 53,000 along US 41 and was 30,000 along Bonita Beach Road. Based on future growth projections to a 2050 design year, the AADTs are forecast to range from 60,000 to 78,000 along US 41. The future 2050 AADT forecast along Bonita Beach Road is 39,000.

The existing (2019) mid-day traffic analysis for the US 41 at Bonita Beach Road intersection shows that six of the 12 movements operate at Level of Service (LOS) of F, with one of those being overcapacity (volume-to-capacity >1.0). The existing (2019) PM traffic analysis for the intersection shows that seven of the 12 movements operate at Level of Service (LOS) of F, with two of those being overcapacity. In the future 2050 condition, the no-build intersection operates at LOS F with an overall average vehicle delay between 85 and 92 seconds. While there are a similar number of LOS F movements between the existing and future no-build, latent demand is expected to increase by nearly 30 percent. The future no-build intersection is serving approximately the same amount of traffic volume as the existing condition but with the increased volumes, there are more vehicles in the overall network not being served.

1.2.2 Safety

Crash records were obtained for both US 41 and Bonita Beach Road within the study area, as described below:

- US 41 from Woods Edge Parkway (MP 0.130) to the Imperial River bridge (MP 1.482); and
- Bonita Beach Road from 400' west of Windsor Road to 450' east of Spanish Wells Boulevard.

Crash data was obtained for the most recent five-year period on record (2018 through 2022). The crash data was obtained from the University of Florida's Signal Four (S4) Analytics crash database for US 41 and Bonita Beach Road. The safety analysis was performed for the most recent five years of crash data (January 1, 2018 – December 31, 2022). Supplemental crash data from previous years (2014 to 2017) and January 1, 2023 to June 30, 2023 were also analyzed to verify crash trends and patterns.

US 41 and Bonita Beach Road are designated emergency evacuation routes for both the Florida Division of Emergency Management and Lee County. Providing parallel service to I-75, US 41 plays an important role in facilitating north-south traffic during incidences and emergency evacuation periods (particularly within southwest Florida). Bonita Beach Road also serves a critical role during emergency evacuation periods as it connects US 41 and I-75 (facilities of the state evacuation route network) and provides one of two connections for residents and tourists between the barrier islands/tourist destinations to the west and mainland of Lee County.

1.2.3 Modal Interrelationships

While sidewalks are present on both sides of US 41 and Bonita Beach Road, the only bicycle facilities present in the study area are 5-ft marked bicycle lanes along both sides of US 41. Two LeeTran bus routes (Routes 150 and 600) operate along US 41 and Bonita Beach Road. In addition to the two bus routes, LeeTran has partnered with Uber to provide ULTRA On-Demand Transit service in the Bonita Springs area. LeeTran's ULTRA On-Demand Transit service is a deluxe mini-bus available seven days a week from 7:00 AM to 6:00 PM. ULTRA On-Demand Transit allows riders to request a ride as needed, with curb-to-curb service.

Due to the presence of these facilities/services and the surrounding urban environment, heavy pedestrian and bicycle traffic exists in the area (as observed during field reviews conducted for the project).

The Office of Greenways and Trails (OGT) and the Lee County Metropolitan Planning Organization (MPO) have identified trail opportunities in the vicinity of the US 41 and Bonita Beach Road study intersection. The Coastal Loop Trail is a spur loop from the Southwest Coastal Regional Trail, which is part of the larger Shared-Use Nonmotorized (SUN) Trail Program. This is a planned

loop trail that begins at the Southwest Coastal Regional Trail in Bonita Springs, travels along Bonita Beach Road to the barrier islands, then travels through Fort Myers Beach and southern Fort Myers before connecting back to the Southwest Coastal Regional Trail east of US 41 in Fort Myers. Through discussions with Lee County MPO, no future funding has been dedicated for Coastal Loop Trail improvements in the vicinity of the US 41 and Bonita Beach Road intersection as per the date of this report.

1.2.4 System Linkage

US 41 serves as a critical arterial in facilitating the north-south movement of regional and local traffic (including truck traffic) as it runs parallel to I-75 along Florida's west coast. Similarly, Bonita Beach Road serves as a major east-west local roadway within Lee County, linking US 41 and I-75 and providing access (as one of two connections) between the mainland of Lee County and coastal communities/tourist destinations to the west (i.e., barrier islands and beaches).

The City of Bonita Springs performed the Network Enhancement Alignment Study, also known as the "Quadrant Plan", in May 2017. The purpose of the Quadrant Plan is to develop an expanded roadway network between Bonita Beach Road with US 41 that improves the area's mobility, maintains a high-quality environment for the community, and minimizes impacts to the natural environment. The City is moving forward with design and construction for a northwest quadrant roadway.

1.3 Alternatives Analysis Summary

1.3.1 Prior Grade Separated Alternative

During the preliminary alternatives analysis efforts in 2020, a single point diamond interchange (SPDI) was one of two alternatives being considered (along with the PDLT). The SPDI alternative assumes the northbound and southbound through lanes on US 41 are elevated over Bonita Beach Road. Turning movements for US 41 and Bonita Beach Road occur at a single intersection underneath the US 41 overpass. To allow access to local businesses through, movements on the US 41 ramps were allowed. The US 41 overpass begins between the two access points for Springs Plaza on the south side of Bonita Beach Road and ends north of the Crown Lake Boulevard intersection to the north. Access to any minor streets along the US 41 ramps are maintained as intersections with the US 41 ramps only.

The SPDI alternative was reviewed as part of the Stage 1 Intersection Control Evaluation. During this evaluation, a new development was approved with their primary access to US 41 occurring at the Center of Bonita Springs signalized intersection via the northwest quadrant roadway. The overpass' ramps would tie-in to US 41 north of this location and convert the Center of Bonita Springs intersection into a right-in/right-out configuration. With this new development needing full access to US 41 at the Center of Bonita Springs, the SPDI alternative was removed from consideration and an enhanced at-grade traffic signal was reviewed (as discussed in the next section).

1.3.2 Intersection Alternatives

Two intersection alternatives were developed to support the US 41 at Bonita Beach Road purpose and need:

- Alternative A – Enhanced Traffic Signal (**Figure 1.2**)
    - Widens US 41 to eight lanes from Foley Road to the southern end of the Imperial River bridge.

- Provides additional turn lane improvements to the existing signalized intersection.

- Alternative B – Partial Displaced Left Turn (**Figure 1.3**)
  - Northbound and southbound left turn movements are relocated to the outside of the opposing flow of traffic, allowing the northbound and southbound left turning movements to operate in the same signal phase as the northbound and southbound through movements.
  - Two new signalized "crossover" intersections are proposed along US 41 approximately 675' south and 460' north of Bonita Beach Road to allow left turning vehicles to cross to the other side of the opposing flow.
  - The southbound and eastbound left turn movements are proposed to have three lanes each.
  - The eastbound and westbound right turn movements are proposed to have two lanes each.

The intersection alternatives were developed using design provisions from the FDOT Design Manual (FDM). Each of the proposed intersection alternatives were applied along US 41 from Sta. 221+19 to Sta. 271+81 and along Bonita Beach Road from Sta. 254+57 to Sta. 300+33.

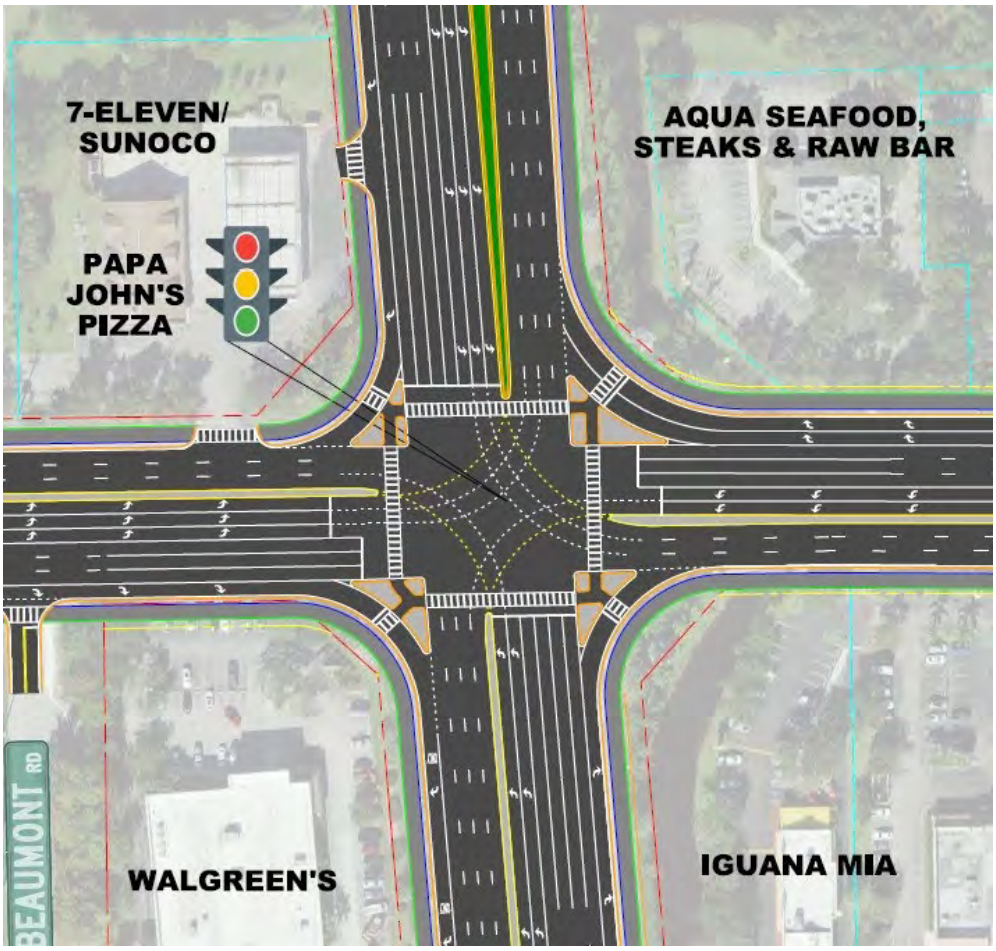

Figure 1.2. Alternative A – Enhanced Traffic Signal.

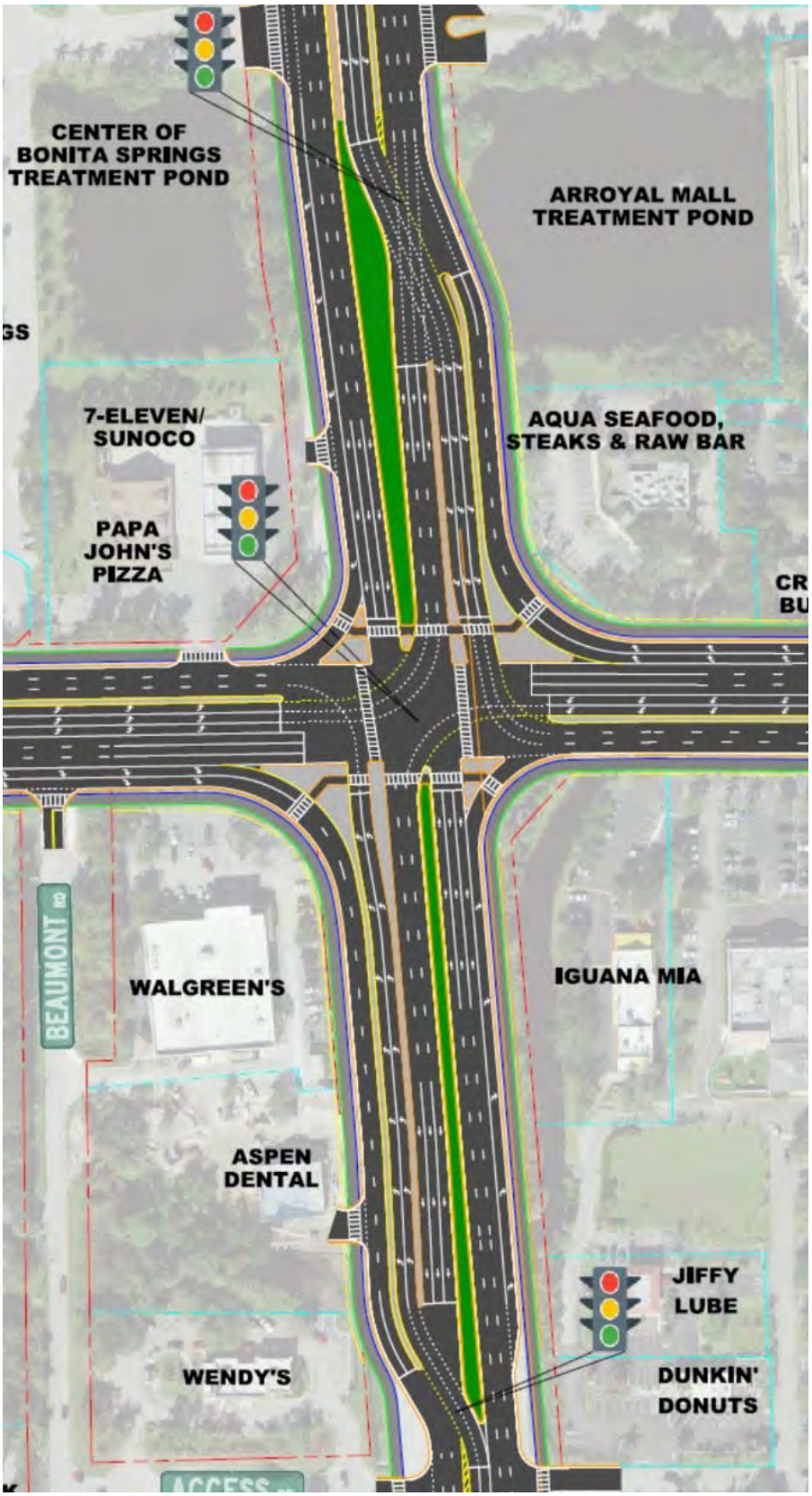

Figure 1.3. Alternative B – Partial Displaced Left Turn.

1.3.3 Other US 41 Improvements (Outside of Main Intersection

1.3.3.1 Alternative A – Enhanced Traffic Signal

For Alternative A, US 41 is proposed to be modified based on the following:

- Adding a fourth travel lane in each direction and reducing the lane widths to 11-ft:
  - Additional northbound travel lane will start just north of Foley Road (Sta. 223+50) and end at the driveway for the Imperial River Boat Ramp (Sta. 270+00).
  - The additional southbound travel lane will start at Sta. 265+00 (halfway between the Imperial River Boat Ramp driveway (Sta. 270+00) and the US 41/Center of Bonita Springs intersection (Sta. 260+00)) and end at the Foley Road intersection (Sta. 222+75).
- A 12-ft shared-use path is proposed on both sides of US 41 in lieu of the on-street bicycle facilities:
  - In the northbound direction from Springs Plaza (Sta. 232+50) to just north of the Imperial River Boat Ramp (Sta. 271+00).
  - In the southbound direction from just north of the Imperial River Boat Ramp (Sta. 271+00) to Bonita Funeral Home (Sta. 231+00).
- A 7-ft on-street buffered bicycle lane is proposed on the south end of the corridor:
  - In the northbound direction from Foley Road (Sta. 222+75) to just north of Springs Plaza (Sta. 234+50).
  - In the southbound direction from Bonita Funeral Home (Sta. 231+00) to Foley Road (Sta. 222+75).
- A 6-ft sidewalk is proposed on the south end of the corridor:
  - In the northbound direction from Foley Road (Sta. 222+75) to Springs Plaza (Sta. 232+50).
  - In the southbound direction from Bonita Funeral Home (Sta. 231+00) to Foley Road (Sta. 222+75).

A graphic depiction of the roadway features for Alternative A is shown in **1.4** below.

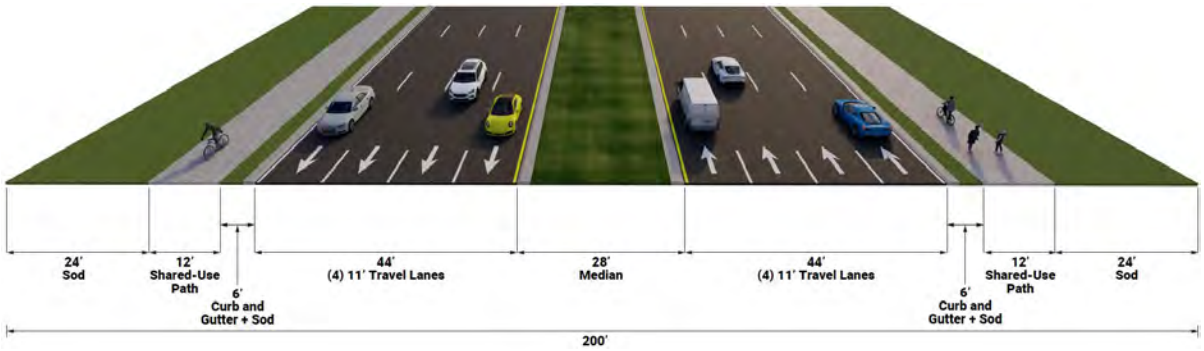

Figure 1.4. Alternative A US 41 roadway features.

1.3.3.2 Alternative B – Partial Displaced Left Turn

For Alternative B, the northbound and southbound left turn movements will be relocated outside of the opposing flow of traffic. This configuration will allow the northbound and southbound left turning movements to operate in the same signal phase as the northbound and southbound through movements. To accommodate the Alternative B configuration and facilitate the relocation of northbound and southbound turning vehicles, two new signalized "crossover" intersections will be added along US 41 approximately 675' south and 460' north of Bonita Beach Road (as shown in **Figure 1.3**). The following features detail the improvements proposed as part of the new "crossover" intersections:

- Between Foley Road (Sta. 222+75) and southern "crossover" intersection (Sta. 239+00):
  - Three 11-ft northbound and southbound through lanes.
- Between southern "crossover" intersection (Sta. 239+00) and US 41 and Bonita Beach Road intersection (Sta. 246+00) (described from right side to left side across US 41 and shown in **1.5**):
  - Exclusive 11-ft northbound right turn lane.
  - Three 11-ft northbound and southbound through lanes.
  - Dual 11-ft northbound exclusive left turn lanes positioned outside of the southbound through lanes.
  - Dual 11-ft eastbound to southbound exclusive right turn lanes positioned outside of the northbound left turn lanes.
- Between US 41/Bonita Beach Road intersection (Sta. 246+00) and northern "crossover" intersection (Sta. 251+00) and (described from right side to left side across US 41):
  - Dual 11-ft westbound to northbound exclusive right turn lanes positioned outside of the southbound left turn lanes.
  - Triple 11-ft southbound exclusive left turn lanes positioned outside of the northbound through lanes.
  - Three 11-ft northbound and southbound through lanes.
  - Exclusive 11-ft southbound right turn lane.
- Between northern "crossover" intersection (Sta. 251+00) and US 41/Center of Bonita Springs intersection (Sta. 260+00):
  - Four 11-ft northbound through lanes.
  - Three 11-ft southbound through lanes.
- Between US 41 and Center of Bonita Springs intersection (Sta. 260+00) and the Imperial River Boat Ramp (Sta. 266+50):
  - Four 11-ft northbound through lanes (outside lane drops at the Imperial River Boat Ramp).
  - Three 11-ft southbound through lanes (a fourth "auxiliary" lane begins at Sta. 265+00 that drops into the triple southbound left turn lanes).
- A 12-ft shared-use path is proposed on both sides of US 41 in lieu of the on-street bicycle facilities:
  - In the northbound direction from Springs Plaza (Sta. 232+50) to just north of the Imperial River Boat Ramp (Sta. 271+00).
  - In the southbound direction from just north of the Imperial River Boat Ramp (Sta. 271+00) to just south of Access Road (Sta. 237+00).

- A 7-ft on-street buffered bicycle lane is proposed on the south end of the corridor:
    - In the northbound direction from Foley Road (Sta. 222+75) to just north of Springs Plaza (Sta. 234+50).
    - In the southbound direction from just south of Access Road (Sta. 237+00) to Foley Road (Sta. 222+75).
- A 6-ft sidewalk is proposed on the south end of the corridor:
    - In the northbound direction from Foley Road (Sta. 222+75) to Springs Plaza (Sta. 232+50).
    - In the southbound direction from just south of Access Road (Sta. 237+00) to Foley Road (Sta. 222+75).

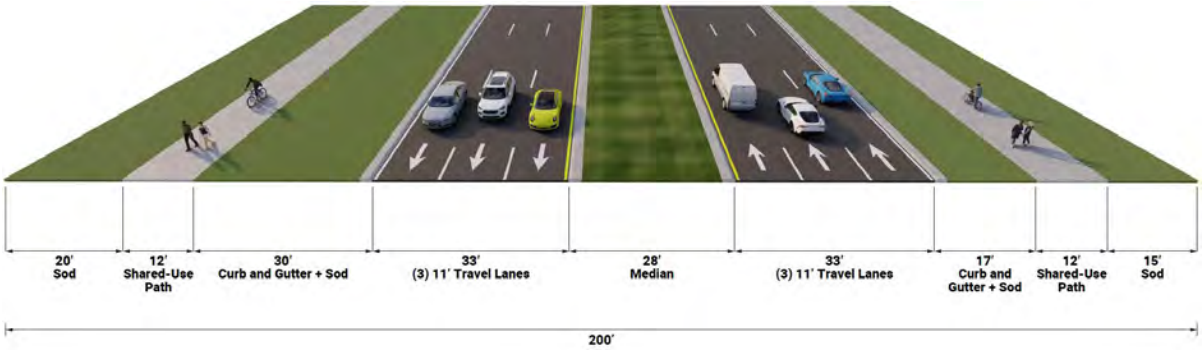

Figure 1.5. Alternative B US 41 roadway features.

1.4 Description of Preferred Alternative

1.4.1 Preferred Intersection Control Alternative

The purpose of this project is to address the deficient operational capacity of the US 41 and Bonita Beach Road intersection to relieve existing congestion and accommodate projected future traffic demand. The project's secondary goals are to 1) Enhance regional and local mobility; 2) Enhance safety conditions; and 3) Improve multi-modal access.

Alternatives A (Enhanced Traffic Signal) and B (PDLT) were presented at the Alternatives Public Workshop conducted virtually on Monday April 3 and in-person on Tuesday April 4, 2023. Following the workshop, feedback was gathered from members of the public for both alternatives. The majority of public comments received expressing support for Alternative B, PDLT. Alternative B was favored as it does not add through lanes along US 41, was viewed as being more operationally efficient, and provided better pedestrian and bicyclist safety. These alternatives were also presented to the Lee County MPO on June 16, 2023 and the public support for the PDLT alternative was documented with the MPO Board.

Discussions were held with FDOT District 1 after the Alternatives Public Workshop and it was determined Alternative B – Partial Displaced Left Turn best aligns with the purpose and need of the project and was selected as the preferred alternative. The following bullets summarize how the PDLT recommendation meets the primary and secondary purpose and need goals noted above:

- Transportation Demand/Capacity
    - In the 2050 future build condition, the average network delay for vehicles traveling through the PDLT is approximately 50 percent less than the No-Build Alternative.

- The number of vehicles served by the PDLT in 2050 is approximately 20 percent higher than the No-Build Alternative.
- The PDLT is anticipated to improve average vehicle delay by over 45 seconds in both the 2050 mid-day and PM peak hours when compared to the No-Build Alternative.

- Safety
  - Using the predictive safety analysis methods provided in the FDOT Safety Performance for Intersection Control Evaluation (SPICE) Tool, the PDLT intersection is predicted to decrease total and fatal/injury crashes by over 10 percent vs the No-Build Alternative over the 20 year life cycle from 2030 to 2050.
  - Increase the volume of residents and tourists from coastal communities that can be evacuated during an emergency event by improving intersection operations of two major evacuation routes.
  - Enhance access to facilities of the state evacuation route network.
  - Improve response times (due to enhanced access) to emergency events and incidences.

- Modal Interrelationships
  - Sidewalks in the study area are proposed to be widened to 12' shared-use paths along both sides of US 41 and Bonita Beach Road.
  - These shared-use paths will improve pedestrian/bicycle access and circulation by modifying/limiting opportunities for conflicts between automobiles and pedestrians/bicyclists.
  - The 12' shared-use path improvements proposed as part of the PDLT would help further enhance the future vision of the Coastal Loop Trail in the study area.
  - Additional median and concrete traffic separators are included in the PDLT concept to provide pedestrian refuge areas and better facilitate non-motorist crossings.
  - The PDLT will also enhance the performance and reliability of transit service operating along US 41 and Bonita Beach Road by reducing delays at the intersection.

- System Linkage
  - Improve the viability of US 41 as a regional alternative facility to I-75 by reducing travel delay.
  - Enhance east-west access between two primary north-south transportation corridors (US 41 and I-75) as well as between the mainland of Lee County and coastal communities/tourist destinations to the west.
  - Enhance freight mobility and access within the area as US 41 is designated as regional freight mobility corridor (Tier 1 Regional Freight Corridor) in the Lee County 2045 Long Range Transportation Plan.
  - The proposed PDLT improvements will support local system linkage planning efforts by providing a Northeast Quadrant Roadway connecting US 41 to Arroyal Road.

The preferred partial displaced left turn alternative plan board can be found in **Appendix A**.

1.4.2 Preferred Alternative Features

The following highlights the key improvement elements within the US 41 at Bonita Beach Road intersection area for Alternative B:

1.4.2.1 US 41

The proposed roadway/intersection improvements discussed in **Section 1.3.1** and **1.3.3.2** were brought forward as part of the preferred alternative design. Outside of the main US 41 and Bonita Beach Road intersection and "crossover" locations, additional intersection improvements are included as part of the preferred alternative:

- Signalization and turn lane improvements at the intersection of US 41 and Foley Road (Sta. 222+75).
- Modified "thru-cut" signalized intersection at US 41 and Center of Bonita Springs (Sta. 260+00) as shown in **Figure 1.6**:
    - A thru-cut intersection restricts through movements from the minor street typically due to operational and/or geometric conditions. In this case, the west leg is being widened from two lanes to five lanes (four eastbound approach lanes and one westbound receiving lane) and the east leg is being widened from two lanes to four lanes (two westbound approach lanes and two eastbound receiving lanes).
    - Dual southbound left turn lanes are also proposed in the new thru-cut configuration.

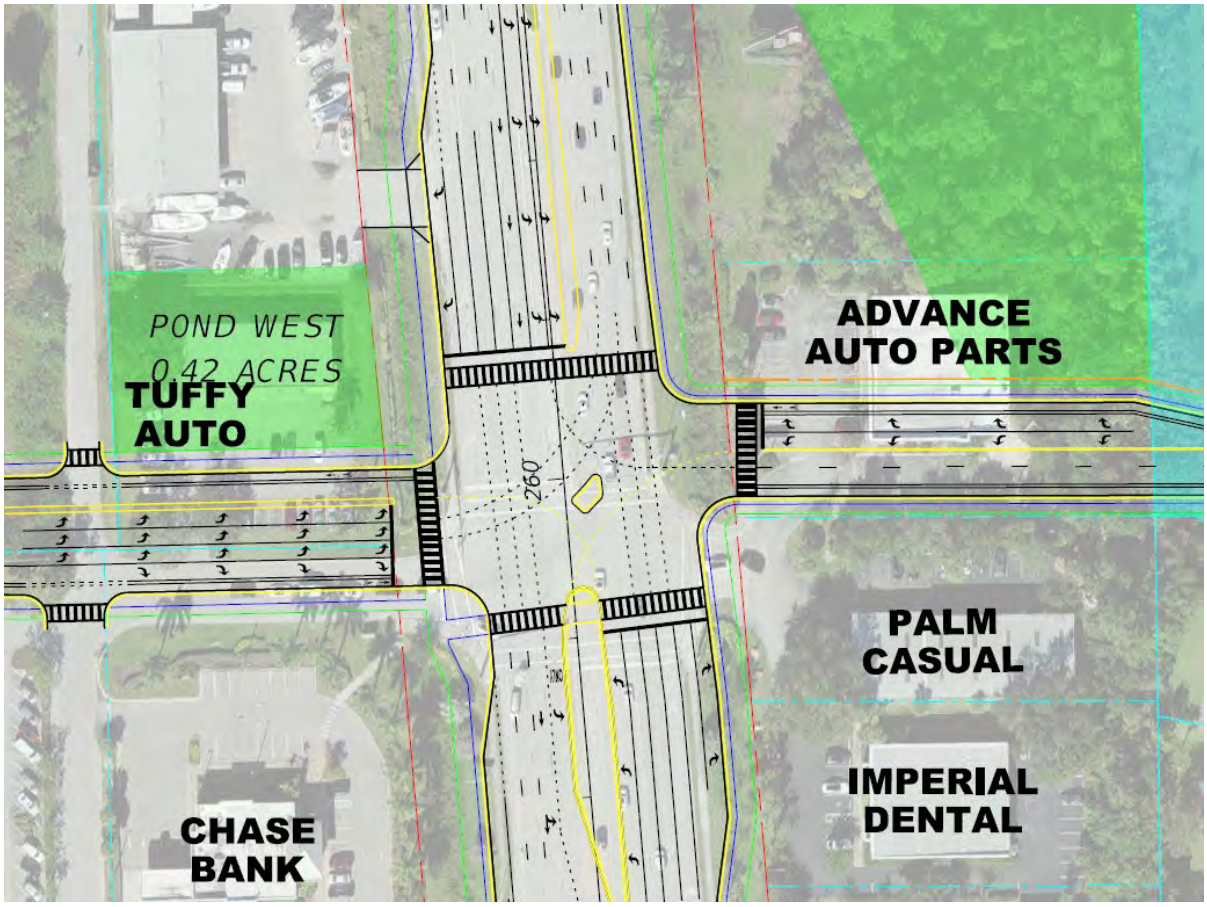

Figure 1.6. US 41/Center of Bonita Springs "Thru-Cut" Intersection.

1.4.2.2 Bonita Beach Road

The following roadway improvements are proposed along Bonita Beach Road as part of the preferred alternative:

- Three 11-ft travel lanes in each direction from the Center of Bonita Springs (Sta. 266+50) to Arroyal Road (Sta. 286+25). The third eastbound through lane drops at the Spanish Wells Boulevard signal.
- Widening the sidewalk to be a 12-ft shared-use path on both sides from the Center of Bonita Springs (Sta. 266+50) to Arroyal Road (Sta. 286+25).

At intersections along Bonita Beach Road, the following features are included are part of the preferred alternative:

- Bonita Beach Road at Center of Bonita Springs (Sta. 266+50):
  - Develop a third 11-ft eastbound travel lane departing intersection.
- Bonita Beach Road at Arroyal Road (Sta. 286+25):
  - One additional 11-ft eastbound through lane (will be a shared through/right configuration).
  - Develop a third 11-ft westbound travel lane departing intersection.
  - The southbound approach will be modified to include two southbound left turn lanes and one southbound shared through/right turn lane.

1.4.2.3 Quadrant Roadway System

A new Northwest Quadrant Roadway from Bonita Beach Road at Windsor Road (Bonita Beach Road Sta. 260+00) to US 41 at the Center of Bonita Springs (US 41 Sta. 260+00) will be constructed by the City of Bonita Springs before the preferred alternative is planned to be constructed at the US 41 and Bonita Beach Road intersection. The following features describe the Northwest Quadrant Roadway improvements as shown in **Figure 1.7**:

- Intersection of Bonita Beach Road and Windsor Road (Bonita Beach Road Sta. 260+00):
  - An eastbound displaced left turn to the Northwest Quadrant Roadway with a new crossover intersection just west of Windsor Road.
  - The southbound approach from Windsor Road will be widened to two lanes.
  - An exclusive westbound right turn lane will be added.
- Along Windsor Road:
  - Two southbound lanes and one northbound lane.
  - 6-ft sidewalk on the west side and 12’ shared-use path on the east side of the roadway.
- Along New Roadway between Windsor Road and the Northwest Corner of the Center of Bonita Springs Shopping Plaza:
  - One 11-ft travel lane in each direction.
  - 4-ft paved shoulders in each direction.
  - 6-ft sidewalk on the west side and 12-ft shared-use path on the east side of the roadway.

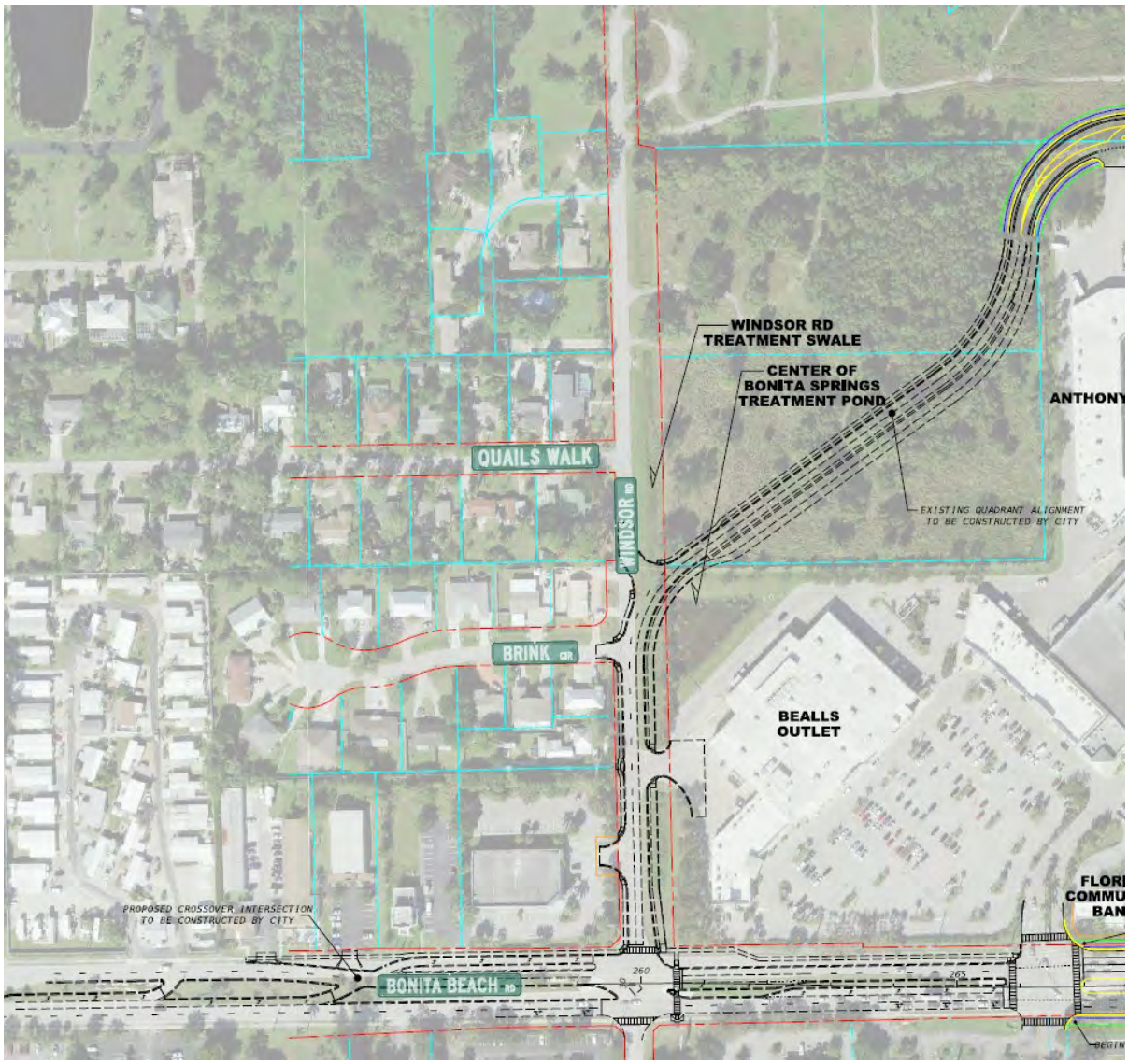

Figure 1.7. Northwest Quadrant Roadway – Proposed City Alignment. Not included as part of the CRAS.

The design concept for the City's Northwest Quadrant Roadway ties in at the existing US 41/Center of Bonita Springs intersection and is not making any improvements to this intersection. In the future condition, this intersection will not have enough capacity to accommodate the forecasted traffic demand, necessitating additional turn lane improvements on the intersection's west leg. As part of the preferred alternative, the Northwest Quadrant Roadway is being modified from the northwest corner of the Center of Bonita Springs Shopping Plaza to US 41. These changes are described below and shown in **Figure 1.8**:

- Northwest Corner of the Center of Bonita Springs Shopping Plaza to US 41:
  - Roadway is widened to develop a center median with varying width.
  - One 11-ft travel lane in each direction.
  - 6-ft sidewalks on each side of the roadway.
  - 7-ft buffered bicycle lanes in each direction.
  - New 11-ft westbound left turn lane into Center of Bonita Springs behind the Old Time Pottery building.

- West Leg at US 41 Intersection:
    - One 11-ft eastbound right turn lane.
    - Three 11-ft eastbound left turn lanes.
    - One 11-ft westbound receiving lane.

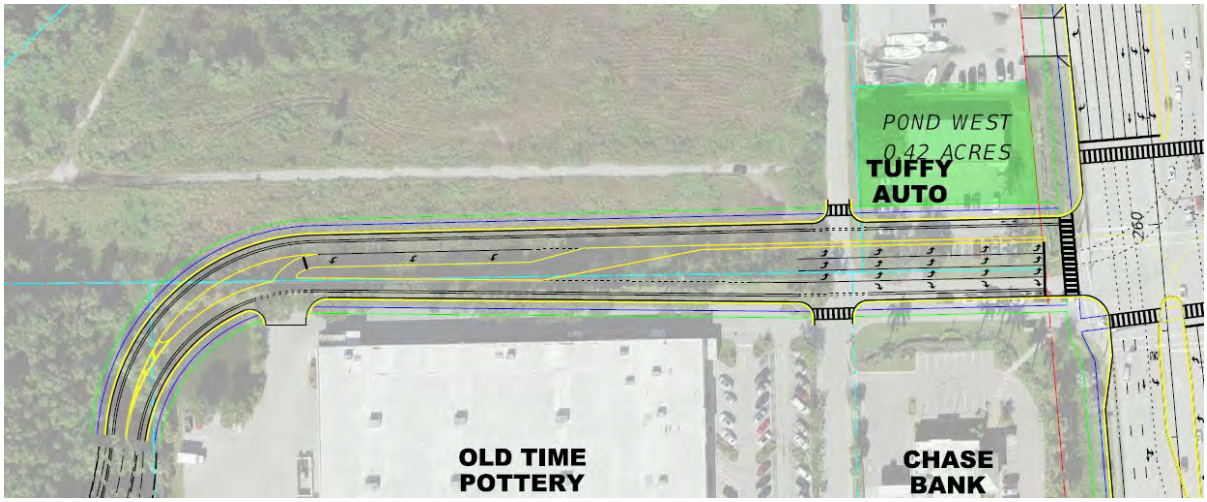

Figure 1.8. Northwest Quadrant Roadway – West Leg at US 41.

Tying into the east leg of this intersection is a Northeast Quadrant Roadway proposed between US 41 and Arroyal Road, intersecting at Arroyal Road and Carolina Street. This will be a new three-lane roadway with two lanes eastbound and one lane westbound, as shown in **Figure 1.9**. The lane configuration at the US 41 intersection is discussed below:

- One 11-ft westbound left turn lane.
- One 11-ft westbound right turn lane.
- Two 11-ft eastbound receiving lanes.

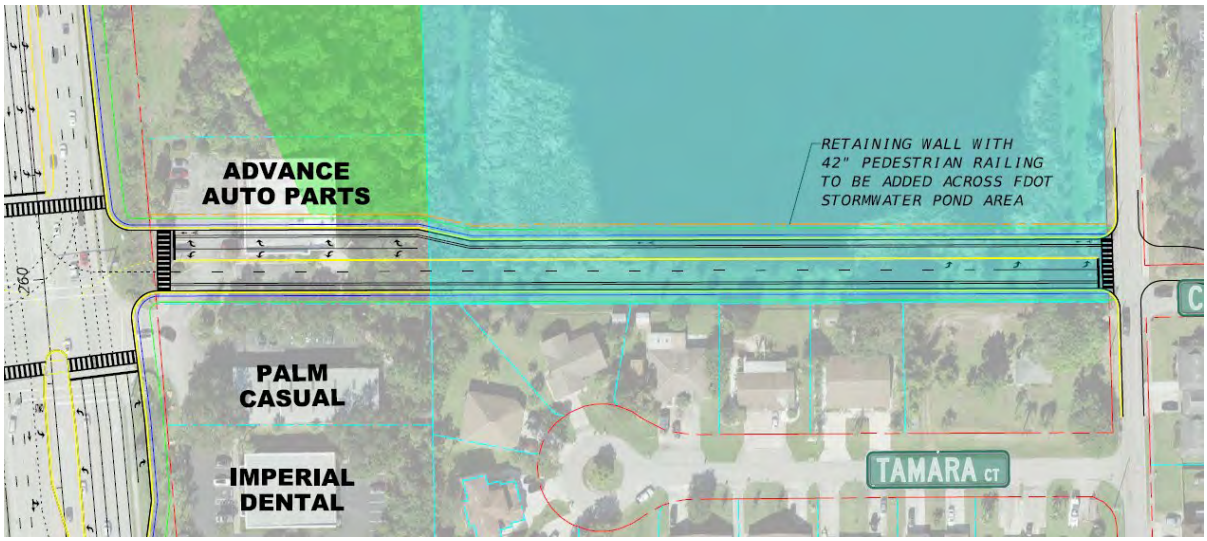

Figure 1.9. Northeast Quadrant Roadway – East Leg at US 41.

1.5 Report Purpose

The purpose of this Cultural Resource Assessment Survey (CRAS) was to locate and identify any cultural resources within the Area of Potential Effects (APE), and to assess their significance in terms of eligibility for listing in the National Register of Historic Places (NRHP). This CRAS was initiated in consideration of Section 106 of the *National Historic Preservation Act* of 1966, as amended by Public Law 89-665; the *Archaeological and Historic Preservation Act*, as amended by Public Law 93-291; Executive Order 11593; and Chapter 267, *Florida Statutes (FS)*. All work was carried out in conformity with Part 2, Chapter 8 ("Archaeological and Historical Resources") of the FDOT's *PD&E Manual* (FDOT 2023), and the Florida Division of Historical Resources' (FDHR) standards contained in the *Cultural Resource Management Standards and Operational Manual* (FDHR 2003), as well as with the provisions contained in the Chapter 1A-46, *Florida Administrative Code* (*FAC*). Principal Investigators meet the *Secretary of the Interior's Professional Qualification Standards* (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture.

1.6 Area of Potential Effects (APE)

As defined in *36 Code of Federal Regulations [CFR] Part § 800.16(d)*, the APE is the "geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." Based on the project type and location of the proposed work, the archaeological APE is limited to the footprint of construction. The historical/architectural APE included the footprint of construction as well as resources within immediately adjacent parcels where proposed road widening will occur and new roadways are expected to be constructed. The archaeological and historical field surveys were completed in September 2023.

2.0 ENVIRONMENTAL SETTING

It has long been realized that archaeological sites are not randomly distributed across the landscape. Rather, many environmental factors had a direct influence on site location selection. Among these variables are soil drainage, distance to water, relative topography, and proximity to food and other resources. To develop an archaeological site location predictive model, an understanding of the prominent physiographic features and the distribution of natural vegetation communities must be obtained.

2.1 Location and Setting

The project is located in Sections 3 and 4 of Township 47 South, Range 25 East and in Sections 33 and 34 of Township 48 South, Range 25 East in southern Lee County (United States Geological Survey [USGS] Bonita Springs 1973, 2021) (**Figure 2.1**). The overall terrain is generally level and consists of urban land complex, covered in an array of paved surfaces (e.g., highways, sidewalks, parking lots, culverts, and other related infrastructure), urban landscaping, and assorted utilities, both buried and above ground (**Photos 2.1-2.11**). The proposed intersection improvements overlap the concentrated urban retail and residential quarters of US 41 and Bonita Beach Road (**Photos 2.6, 2.7, 2.11**). Subsurface conditions are mostly characterized by gravelly fill sand with assorted buried utilities, swales, culverts, mixed pavement, and urban landscaping extending from within to beyond the right-of-way (ROW) limits.

Photo 2.1. Conditions of US 41 south of intersection with Bonita Beach Road facing north.

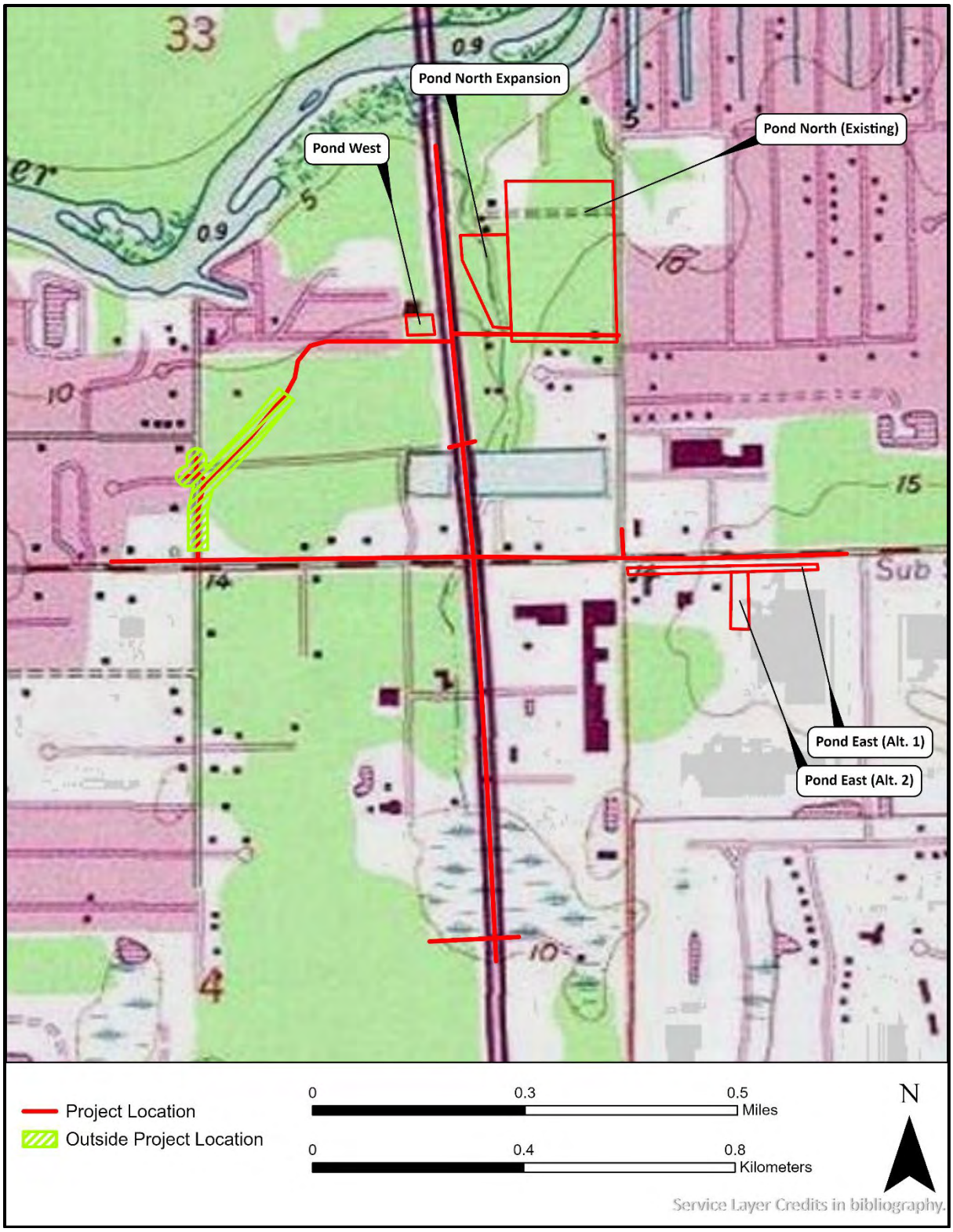

Figure 2.1. Environmental setting of the US 41 at Bonita Beach Road project, Lee County.

Photo 2.2. Utilities on the northbound ROW of US 41 north of Bonita Beach Road intersection facing south.

Photo 2.3. Utilities on eastbound ROW of Bonita Beach Road on southeast corner of intersection facing east.

Photo 2.4. View of Pond East Alt. 1 with utilities disturbance on Bonita Beach Road facing west.

Photo 2.5. View of Pond East Alt. 2 conditions from Bonita Beach Road facing south.

Photo 2.6. View of eastern extent of the Carolina Street extension from Arroyal Road, facing west.

Photo 2.7. View of western extent of the Carolina Street extension with Advanced Auto Parts overlapping in the left frame, facing east.

Photo 2.8. Conditions of the Pond North expansion from US 41 facing southeast.

Photo 2.9. Interior conditions of the Pond North expansion facing north.

Photo 2.10. Building conditions within Pond West facing northwest.

Photo 2.11. Conditions of existing Pond North from Arroyal Road facing southwest.

2.2 Physiography and Geology

The project is in the Mid-peninsular physiographic zone, and more specifically within the Southwestern Slope (White 1970). The area's surface lithology consists of shelly sand and clay (Scott 1978). Geologically, sediments of the Plio-Pleistocene underlay the APE with surrounding vegetation of sand pine scrub forests or pine flatwoods (Scott 2001; Scott et al. 2001). The elevation is between five- and 15-ft above mean sea level (amsl).

2.3 Soils and Vegetation

The project is underlain by the Immokalee-Myakka soil association, which consists of nearly level, poorly drained, deep, sandy soils that have a sandy, organic-stained subsoil (USGS 1984). Native vegetation supported by these soils consists of South Florida slash pine. The wetter areas have willow and cypress, while waxmyrtle, sawpalmetto, and pineland threeawn are common on the flatwoods. The specific soil types found within the APE, and their characteristics and setting, are listed in **Table 2.1** and shown in **Figure 2.2**.

Table 2.1. Soil types, drainage characteristics, and setting within the APE.

Soil Type & slope	Drainage	Topographic Setting
Daytona sand-Urban land complex, 0-5%	Moderately well	Rises, knolls, and ridges of mesic uplands and areas of Urban Land
Gator muck, ponded-Urban land complex, 0-1%	Moderately well	Narrow to broad, moderately low ridges
Immokalee sand-Urban land complex, 0-2%		Areas of Urban Land
Myakka fine sand, ponded-Urban land complex, 0-1%	Poor	Depressions covered by streets and buildings
Myakka-Urban land complex	Poor	Altered for use as building sites or covered by streets and buildings.
Pompano fine sand-Urban land complex, 0-2%	Poor	Sloughs covered by streets and buildings
Satellite fine sand-Urban land complex, 0-2%	Somewhat poor	Low knolls and ridges covered by streets and buildings
Valkaria fine sand-Urban land complex, 0-2%	Poor	Sloughs covered by streets and buildings
Wabasso sand, limestone substrate-Urban land complex, 0-2%	Poor	Flatwoods covered by streets and buildings

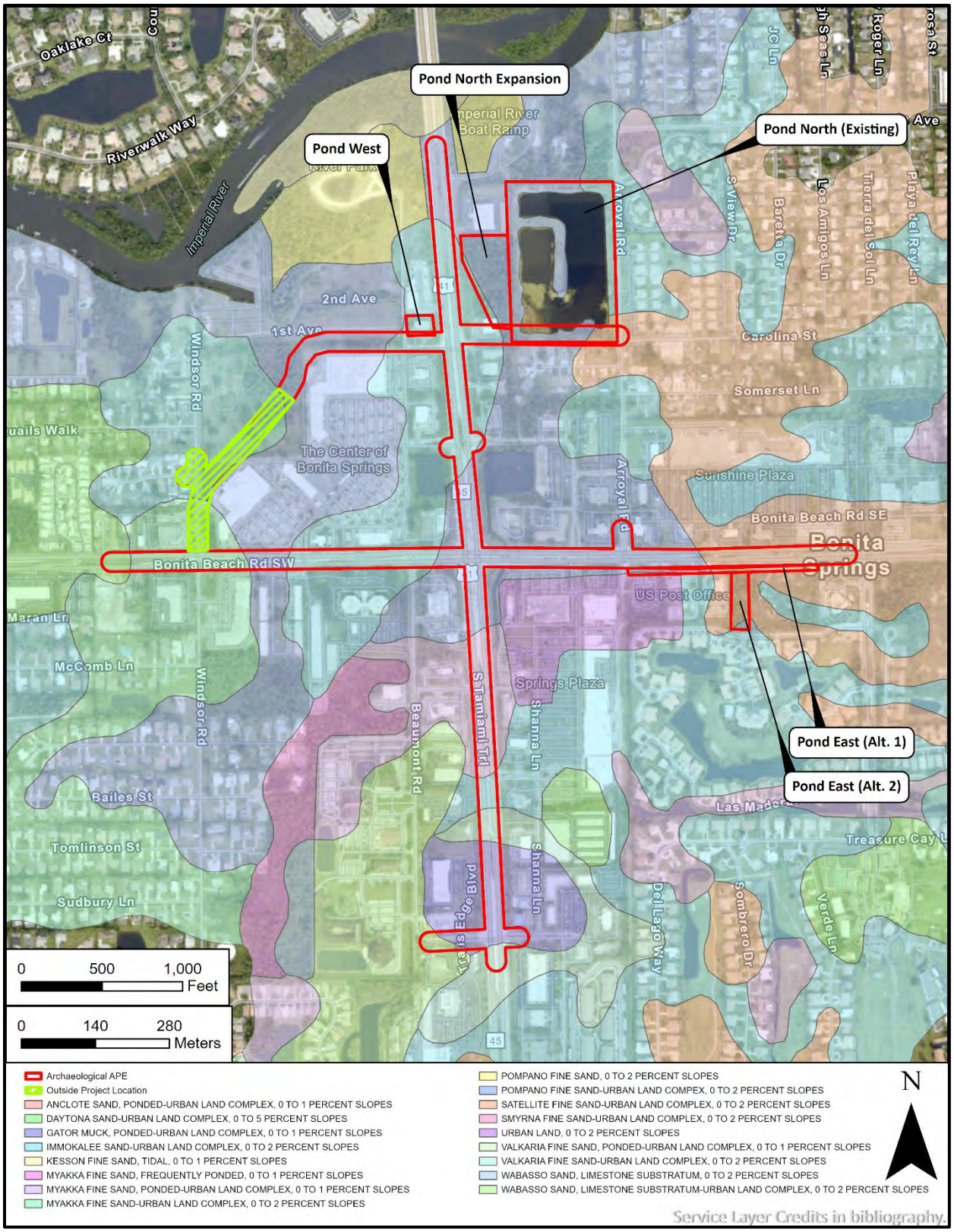

Figure 2.2. Soil types in the US 41 at Bonita Beach Road project, Lee County.

2.4 Paleoenvironmental Considerations

The early environment of the region was different from that seen today. Sea levels were lower, the climate was arid, and fresh water was scarce. An understanding of human ecology during the earliest periods of human occupation in Florida cannot be based on observations of the modern environment because of changes in water availability, botanical communities, and faunal resources. Aboriginal inhabitants adapted to the environmental changes taking place, as reflected by changes in settlement patterns, site types, artifact forms, and subsistence economies.

Due to the arid conditions between 16,500 and 12,500 years ago, the perched water aquifer and potable water supplies were absent (Dunbar 1981:95). Palynological studies conducted in Florida and Georgia suggest that between 13,000 and 5000 years ago, this area was covered with an upland vegetation community of scrub oak and prairie (Watts 1969, 1971, 1975). However, the environment was not static. Evidence recovered from the inundated Page-Ladson Site in north Florida has clearly demonstrated that there were two periods of low water tables and dry climatic conditions and two episodes of elevated water tables and wet conditions (Dunbar 2006c). The rise of sea level reduced xeric habitats over the next several millennia.

By 5000 years ago, a climatic event marking a brief return to Pleistocene conditions induced a change toward more open vegetation. Southern pine forests replaced the oak savannahs. Extensive marshes and swamps developed along the coasts and subtropical hardwood forests became established along the southern tip of Florida (Delcourt and Delcourt 1981). Northern Florida saw an increase in oak species, grasses, and sedges (Carbone 1983). At Lake Annie, in south central Florida, waxmyrtle and pine dominated pollen cores. The assemblage suggests that by this time, a forest dominated by longleaf pine along with cypress swamps and bayheads existed in the area (Watts 1971, 1975). Surface water was plentiful in karst terrains and the level of the Floridan aquifer rose to 5 ft above present levels. With the establishment of warmer winters and cooler summers than in the preceding early Holocene, the fire-adapted pine communities prevailed. These depend on the high summer precipitation caused by the thunderstorms and the accompanying lightning strikes to spark the fires (Watts et al. 1996; Watts and Hansen 1994). The increased precipitation also resulted in the formation of the large swamp systems such as the Okefenokee and Everglades (Gleason and Stone 1994). After this time, modern floral, climatic, and environmental conditions began to be established.

3.0 CULTURE HISTORY

A discussion of the regional culture history is included to provide a framework within which to examine the local archaeological and historical record. Archaeological and historic sites are not individual entities but were once part of a dynamic cultural system. Thus, individual sites cannot be adequately examined or interpreted without reference to other sites and resources in the area. The culture history of an area (i.e. the archaeological region) outlines the sequence of archaeological and historical cultures through time. These are defined largely in geographical terms, but also reflect shared environmental and cultural traits. The APE is within the East and Central archaeological region (Milanich 1994) (**Figure 3.1**). The Paleoindian, Archaic, Formative, and Mississippian stages have been defined based on material culture traits such as stone tool forms and ceramics, as well as subsistence, settlement, and burial patterns.

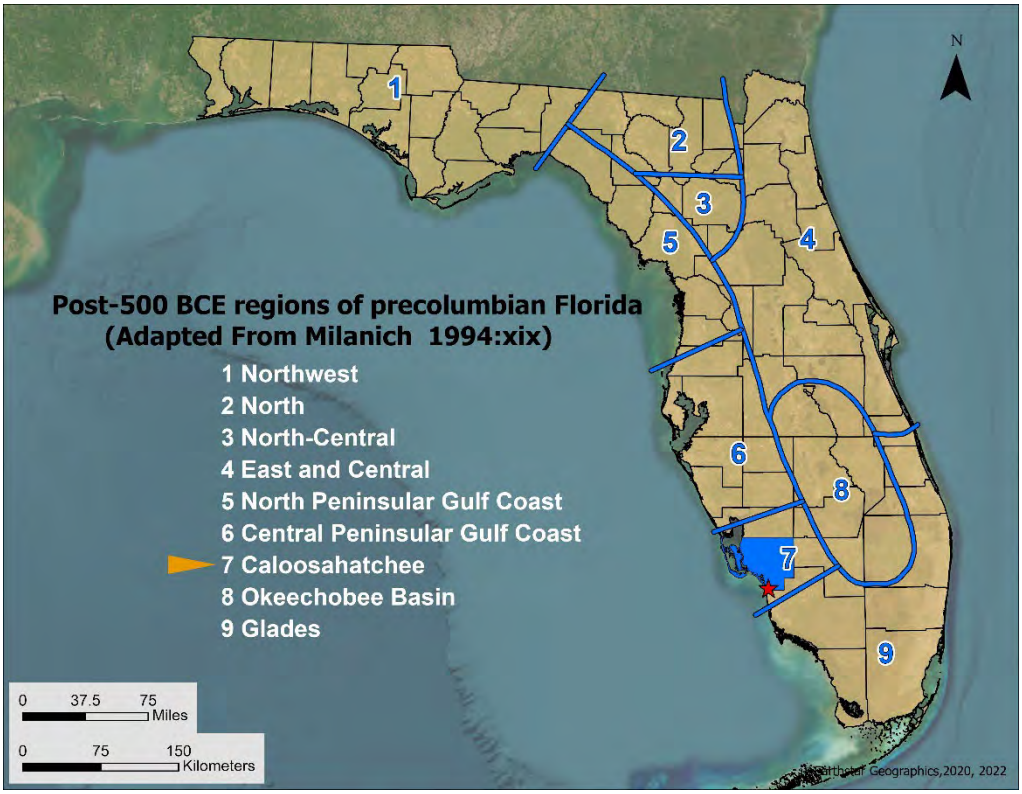

Figure 3.1. Florida Archaeological Regions.

The local history of the region is divided into four broad periods based initially upon the major governmental powers. The first period, Colonialism, occurred during the exploration and control of Florida by the Spanish and British from around 1513 until 1821. At that time, Florida became a territory of the U.S. and 21 years later became a State (Territorial and Statehood). The Civil War and Aftermath (1861-1899) period deals with the Civil War, the period of Reconstruction following the war, and the late 1800s, when the transportation systems were dramatically increased and development throughout the state expanded. The Twentieth Century period includes sub-periods defined by important historic events such as the World Wars, the Boom of the 1920s, and the Depression. Each of these periods evidenced differential development and utilization of the region, thus effecting historic site distribution.

3.1 Paleoindian

The Paleoindian stage is the earliest known cultural manifestation in Florida, dating from roughly 16,250-11,700 calibrated years before present (cal yr BP) (Anderson et al. 2019:258). Archaeological evidence for Paleoindians consists primarily of scattered finds of diagnostic lanceolate-shaped projectile points. The Florida peninsula at that time was quite different than today. In general, the climate was cooler and drier with vegetation typified by xerophytic species with scrub oak, pine, open grassy prairies, and savannas (Milanich 1994:40). When human populations were arriving in Florida, the sea levels were still as much as 130-200 ft below present levels and coastal regions of Florida extended miles beyond present-day shorelines (Faught 2004). Thus, many sites have been inundated (Dunbar and Thulman 2019; Faught and Donoghue 1997).

The Paleoindian period has been sub-divided into three horizons based upon characteristic tool forms (Anderson et al. 2019). Traditionally, it is believed that the Clovis Horizon the fluted Clovis points. These are somewhat more common in north Florida. Research suggests that Suwannee and Simpson points may be contemporary with or predate Clovis (Dunbar 2006a, 2016; Stanford et al. 2005). Research at the Page-Ladson site, in the Aucilla River, has provided evidence of a pre-Clovis occupation as early as 16,250 cal yr BP, with the latest dated level from 4100 to 3400 years ago (Halligan et al. 2016; Webb and Dunbar 2006). Pre-Clovis materials were also reported from the Sloth Hole site, also within the Aucilla River (Hemmings 1999). The Suwannee Horizon (12,500-12,100 cal yr BP) is the best known of the three Paleoindian horizons. The lanceolate-shaped, unfluted Simpson and Suwannee projectile points are diagnostic of this time (Bullen 1975; Daniel and Wisenbaker 1987; Purdy 1981). The Suwannee tool kit includes a variety of scrapers, adzes, spokeshaves, unifacially retouched flakes, and blade-like flakes as well as bone and ivory foreshafts, pins, awls, daggers, anvils, and abraders (Austin 2001:23).

Following the Suwannee Horizon is the Late Paleoindian Horizon (12,1000-11,700 cal yr BP). The smaller Tallahassee, Santa Fe, and Beaver Lake projectile points have traditionally been attributed to this horizon (Milanich 1994). However, many of these points have been recovered stratigraphically from Late Archaic and Early Woodland period components and thus, may not date to this period at all (Austin 2001; Farr 2006). Florida notched or pseudo-notched points, including the Union, Greenbriar, and Hardaway-like points may represent late Paleoindian types, but these types have not been recovered from datable contexts and their temporal placement remains uncertain, although Anderson and colleagues place them in the Late Paleoindian period (Anderson et al. 2019; Dunbar 2006a).

Archaeologists hypothesize that Paleoindians lived in migratory bands and subsisted by gathering and hunting, including the now-extinct Pleistocene megafauna (Marrinan and Peres 2019). In addition, they likely trapped smaller animals such as mink, muskrat, and rabbit for their fur and medium sized mammal such as deer for food as well as raw materials for bone tools (Dunbar 2016; Dunbar and Vojnovski 2007). It is likely that these nomadic hunters traveled between permanent and semi-permanent sources of water, such as artesian springs, exploiting the available resources. These watering holes would have attracted the animals, thus providing food and drink. In addition to being tied to water sources, most of the Paleoindian sites are close to good quality lithic resources. The settlement pattern consisted of the establishment of semi-permanent habitation areas and the movement of the resources from their sources of procurement to the residential locale by specialized task groups (Austin 2001:25).

Although the Paleoindian period is generally considered to have been cooler and drier, there were major variations in the inland water tables resulting from large-scale environmental fluctuations. There have been two major theories as to why most Paleoindian materials have been recovered from inundated sites. The Oasis theory posits that due to low water tables and scarcity of potable water, the

Paleoindians and game animals upon which they depended clustered around the few available water holes that were associated with sinkholes (Neill 1964). Waller postulated that the Paleoindians gathered around river-crossings to ambush the large Pleistocene animals as they crossed the rivers (Waller 1970). This implies periods of elevated water levels. Based on the research along the Aucilla and Wacissa Rivers, it appears that both theories are correct, depending upon what the local environmental conditions were at that time (Dunbar 2006b). As such, during the wetter periods, populations became more dispersed because the water resources were abundant and the animals that they relied on could roam over a wider range.

Some of the information about this period has been derived from the underwater excavations at two inland spring sites in Sarasota County: Little Salt Spring and Warm Mineral Springs (Clausen et al. 1979). Excavation at the Harney Flats Site in Hillsborough County has provided a rich body of data concerning Paleoindian life ways. Analysis indicates that this site was used as a quarry-related base camp with special use activity areas (Daniel and Wisenbaker 1987). It has been suggested that Paleoindian settlement may not have been related as much to seasonal changes as generally postulated for the succeeding Archaic period, but instead movement was perhaps related to the scheduling of tool-kit replacement, social needs, and the availability of water, among other factors (Daniel and Wisenbaker 1987:175). Investigations along the Aucilla and Wacissa Rivers, as well as other sites within north Florida rivers, have provided valuable information on the Paleoindian period and the aboriginal adaptation to their environment (Webb 2006). Studies of the Pleistocene faunal remains from these sites clearly demonstrate the importance of these animals not for food alone, but as the raw material for their bone tool industry (Dunbar and Webb 1996).

3.2 Archaic

As the Paleoindian period gradually ended, climatic changes occurred, and the Pleistocene megafauna disappeared. The disappearance of the mammoths and mastodons resulted in a reduction of open grazing lands, and thus, the subsequent disappearance of grazers such as horse, bison, and camels. With the reduction of open habitat, the herd animals were replaced by the more solitary, woodland browser: the white-tailed deer (Dunbar 2006a:426). The intertwined data of megafauna extinction and cultural change suggests a rapid and significant disruption in both faunal and floral assemblages and the Bolen people represent the first culture adapted to the Holocene environment (Carter and Dunbar 2006). This included a more specialized toolkit, and the introduction of chipped-stone woodworking implements.

However, because of a lack of excavated collections and the poor preservation of bone and other organic materials in the upland sites, our knowledge of the Early Archaic tool assemblage is limited (Carter and Dunbar 2006; Milanich 1994). Discoveries at the Page-Ladson, Little Salt Spring, and Windover sites indicate that bone and wood tools were used (Clausen et al. 1979; Doran 2002; Webb 2006). The archaeological record suggests a diffuse, yet well-scheduled, pattern of exploiting both coastal and interior resources. Because water sources were much more numerous and larger than previously, it was possible to sustain larger populations, occupy sites for longer periods, and perform activities that required longer occupation at specific locales (Milanich 1994:67).

Approximately 6500 years ago marked environmental changes, which had profound influence upon human settlement and subsistence practices, occurred. Humans adapted to this changing environment and regional and local differences are reflected in the archaeological record (Russo 1994a, 1994b; Sassaman 2008). Among the landscape alterations were rises in sea and water table levels that resulted in the creation of more available surface water. It was during this period that Lake Okeechobee, the Everglades, the Big Cypress, and the Caloosahatchee and Peace Rivers developed. This period is

characterized by the spread of mesic forests and the beginnings of modern vegetation communities including pine forests and cypress swamps (Griffin 1988; Widmer 1988).

The archaeological record for the Middle Archaic is better understood than the Early Archaic. Among the material culture inventory are several varieties of stemmed, broad blade projectile points including those of the Newnan, Levy, Marion, and Putnam types (Bullen 1975). At sites where preservation is good, such as sinkholes and ponds, an elaborate bone tool assemblage, shell tools, and complicated weaving have been identified (Beriault et al. 1981; Wheeler 1994). In addition, artifacts have been found in the surrounding upland areas. Along the coast, excavations on both Horr's Island in Collier County and Useppa Island in Lee County (Milanich et al. 1984; Russo 1991) have uncovered pre-ceramic shell middens that date to the Middle Archaic period. At least three ceremonial mounds accompany the Horr's Island shell ring. Large architectural features such as these were designed to divide, separate, and elevate above other physical positions within the settlement as a reflection and reinforcement of the society's social segmentation (Russo 2008:21).

Mortuary sites, characterized by interments in shallow ponds and sloughs as discovered at the Little Salt Springs Site in Sarasota County (Clausen et al. 1979) and the Bay West Site in Collier County (Beriault et al. 1981), are also distinctive of the Middle Archaic. Population growth, as evidenced by the increased number of Middle Archaic sites and accompanied by increased socio-cultural complexity, is also assumed (Russo 1994b, 2008; Widmer 1988).

The beginning of the Late (or Ceramic) Archaic is similar in many respects to the Middle Archaic but includes the addition of ceramics. The earliest pottery was fiber-tempered (Orange Plain and Orange Incised). Orange series ceramics have been recovered from several sites in southwest Florida (Bullen and Bullen 1956; Cockrell 1970; Luer 1989c, 1999; Marquardt 1992b, 1999; Russo 1991; Widmer 1974). Although semi-fiber-tempered wares are generally attributed to the late Orange period, analysis of such sherds from a number of sites indicates that this type of ceramic occurred throughout the Orange period (Cordell 2004). Projectile points of the Late Archaic are primarily stemmed and corner-notched, and include those of the Culbreath, Clay, and Lafayette types (Bullen 1975). Other lithic tools of the Late Archaic include hafted scrapers and ovate and triangular-shaped knives (Milanich and Fairbanks 1980). Archaeological evidence indicates that South Florida was sparsely settled during this time.

3.3 Caloosahatchee

The termination of the Late or Ceramic Archaic corresponds to a time of environmental change. The maturing of productive estuarine systems was accompanied by cultural changes leading to the establishment of what John Goggin defined as the "Glades Tradition" (Griffin 1988:133). It was characterized by "the exploitation of the food resources of the tropical coastal waters, with secondary dependence on game and some use of wild plant foods. Agriculture was apparently never practiced, but pottery was extensively used" (Goggin 1949:28). Unlike much of peninsular Florida, the region does not contain deposits of chert, and as such stone artifacts are rare. Instead of stone, shell and bone were used as raw materials for tools (Milanich 1994:302).

Most information concerning the post-500 BCE (Before Common Era) aboriginal populations is derived from coastal sites where the subsistence patterns are typified by the extensive exploitation of fish and shellfish, wild plants, and inland game, like deer. Although Widmer postulated environmental stability for the Calusa, this was far from the truth based upon the recent environmental reconstructions (Walker 2013; Widmer 1988). Inland sites show a greater, if not exclusive reliance on interior resources. Known inland sites often consist of sand burial mounds and shell and dirt middens along

major water courses, and small dirt middens containing animal bone and ceramic sherds in oak/palm hammocks, or palm tree islands associated with freshwater marshes (Griffin 1988). These islands of dry ground provided space for settlements (Carr 2002).

The settlement pattern of the Caloosahatchee people at this time consisted of large villages (25-ac with about 400 people), small villages (9-ac / 50 people), and fishing hamlets and/or collection stations (2.5-ac, temporary, task specific site) (Widmer 1988). The larger sites are located in the coastal areas, whereas most of the interior sites are seen as short-term hunting stations occupied by special task groups from the permanent coastal villages (Widmer 1988:226).

Caloosahatchee I, ca. 500 BCE to 500 CE (Common Era), is characterized by thick, sand-tempered plain sherds with rounded lips, some St. Johns Plain ceramics, the appearance of Pineland Plain ceramics (tempered with sponge spicules and medium to fine quartz sand), and the absence of Belle Glade ceramics (Marquardt 1999:85). Based on the faunal analysis from Useppa Island and Pineland, fish was the primary meat source with whelks and conchs being the primary shellfish food. Botanical materials utilized include chenopod, panic grass, talinum, mallow, red mangrove, waxmyrtle, pine, buttonwood, and seagrape (Marquardt 1999:87). Data on burial customs for this time are unknown; on Pineland, the use of burial mounds began around 1000 CE (Marquardt and Walker 2013). Small discrete shell middens located along the coast may have represented clustered habitation areas for extended kin groups or lineages, and through time, the lower lying areas were filled in to make a larger elongated shell work (Schober 2014).

A dramatic increase of Belle Glade ceramics marks the Caloosahatchee II period (500-1200 CE). Cordell (1992) divided the Caloosahatchee II period into IIA and IIB based on the appearance of Belle Glade Red ceramics at about 800 CE. In addition, the IIA and IIB time ranges roughly correlate with two contrasting climate/sea-level episodes (Walker 2013). These changes in ceramics may also indicate the resurgence of ceremonial mound use, a characteristic of the period. Shell from other locales at these large ceremonial centers (e.g., Mound Key, Pineland) and villages sites (Estero) were used to increase the size of many of the shell mounds. Burials occurred in sand mounds and in natural sand ridges with both primary flexed and secondary bundle burials. The number of shell middens or village sites increased (Milanich 1994:319) and evidence of ranked societies appears (Widmer 1988:93). However, Schober notes there was an apparent abandonment of many sites in inland bays and on barrier islands (Schober 2014). The Wightman Site has three non-mortuary ceremonial mounds connected by shell causeways (Fradkin 1976). In addition, the large Pineland Canal appears to have been constructed at this time (Luer 1989a, 1989b). It is possible that the large Pineland complex served as the center of Calusa society at this time (cf. Milanich 1995:44). During this time, it had been postulated that sea levels were higher than during the Caloosahatchee I period, or that the coastal area was under greater influence from nearby ocean inlets. This is based on the higher diversity of faunal remains and the increased number higher salinity-based food stuffs (Walker 1992). The number of shell midden or village sites increased, and shell tools (hafted shell hammers and cutting edged tools) became more diverse (Marquardt 1992a:429; Milanich 1994:319).

The Caloosahatchee III period (1200 to 1350 CE) is identified by the appearance of St. Johns Check Stamped and Pinellas Plain ceramics (Cordell 1992). Belle Glade Plain ceramics continue to be the dominant type, with sand tempered plain and Pineland Plain also occurring. Marquardt (1992a:430) notes that no obvious changes in the settlement and subsistence patterns based upon the archaeological evidence even though this is the beginning of the Little Ice Age (Marquardt 2013). The accumulation and/or build-up of midden-mounds continued in a constricted spatial pattern, as in the IB period (Marquardt and Walker 2012). Sand burial mounds continued to be utilized, often containing Englewood and Safety Harbor vessels. A number of mounds from this period have had radially placed extended burials within the mounds (Luer and Almy 1987).

The Caloosahatchee IV period (1400-1513 CE) is characterized by the appearance of numerous trade wares from the adjoining regions (Widmer 1988:86). These types include Glades Tooled and pottery of the Safety Harbor series. There was also a decrease in popularity of Belle Glade Plain ceramics (Milanich 1994:321). Sand tempered plain pottery, with square and flattened lips, is the most common (Cordell 1992:168). There is also an increase in Pineland Plain ceramics. Around 1400 CE, the use of incising on ceramics in the Glades and Caloosahatchee regions ceased and the ceramic assemblages of the two areas were very homogeneous (Marquardt 1992a:431). Some have suggested that this represents an expansion of the Calusa within this area (Griffin 1988; McGregor 1974). Large villages sites continued to accumulate midden-mounds and the dead were interred in sand burial mounds (Marquardt 2013).

3.4 Colonialism

The Caloosahatchee V period, ca. 1513 to 1750 CE, is coterminous with the period of European contact. The only difference between Caloosahatchee III and IV is the presence of European artifacts. The Caloosahatchee area was the home territory of the Calusa, a sedentary, non-agricultural, highly stratified, and politically complex chiefdom (Milanich 1998). Calusa villages along the coast are marked by extensive shellworks and earthworks. Sites are marked by the appearance of European artifacts in association with aboriginal artifacts. It was also at this time that metal pendants were being manufactured by aboriginal metal smiths (Allerton et al. 1984). In addition, cultural materials from the Leon-Jefferson Mission Period in north Florida have also been recovered (Widmer 1988:86). This may be evidence of Indians fleeing Spanish missionaries and moving into southwest Florida. Spanish missionaries and European explorers found areas of large population on the southwest Florida coast, through there were interior occupations as well (Hann 1991). During the historic period, there was no reason to doubt that the Indians of southwest Florida continued to subsist mainly on resources of the sea, though they are said to have been fond of Spanish food and drink (Marquardt 1992a:431). Burial patterns also remained like the earlier periods but included some European goods. The most striking feature of the Caloosahatchee mortuary pattern is its continuity through time and general lack of grave goods (Walker et al. 1996:23).

Between 1513 and 1558, Spain launched several expeditions of exploration and colonization of *La Florida*. Archaeological evidence of contact can be found in the form of European trade goods such as glass beads, bells, and trinkets recovered from village sites. Prior to the settlement of St. Augustine in 1565, European contact with the indigenous peoples was sporadic and brief; however, the repercussions were devastating. The southeastern Native American population of 1500 has been estimated at 1.5 to 2 million (Dobyns 1983). Following exposure to European diseases such as bubonic plague, dysentery, influenza, and smallpox, epidemics to which they had no immunity, the Native American population was reduced by as much as 90% (Ramenofsky 1987). The social consequences of such a swift and merciless depopulation were staggering. Within 87 years of Ponce de Leon's landing, the Mississippian cultures of the Southeast collapsed (Smith 1987). In 1708, the Spanish government reported that 300 refugees were all that remained of the original population (Mulroy 1993).

Along the Gulf Coast between Charlotte Harbor and Tampa Bay, Spanish and Cuban fisherfolk established communities, or "ranchos," with the earliest being at Useppa Island and San Carlos Bay (Hammond 1973; Palov 1999). There is growing archaeological evidence that the surviving Native Americans of the region were assimilated into these mixed communities (Almy 2001; Hann 1991; Neill 1968; Palov 1999). These west coast ranchos supplied dried fish to Cuban and northern markets until the mid-1830s, when the Seminole Indian Wars and customs control closed the fisheries.

During the political machinations from 1763 to 1819 among the English, Spanish, French, and United States, Native Americans continued to move into the unchartered lands of Florida. These migrating groups became known as the Seminoles. They had an agriculturally based society, focused on horticulture and the raising of horses and cattle. The material culture of the Seminoles remained like the Creeks; the dominant aboriginal pottery type being Chattahoochee Brushed. European trade goods, especially British, were common. The Creek settlement pattern included large villages located near rich agricultural fields and grazing lands.

Their early history can be divided into two basic periods: *colonization* (1716-1767) when the initial movement of Creek towns into Florida occurred and *enterprise* (1767-1821) which was an era of prosperity under the British and Spanish rule (Mahon and Weisman 1996). The Seminoles formed at various times loose confederacies for mutual protection against the new American Nation to the north (Tebeau 1980:72). The Seminoles crossed back and forth into Georgia and Alabama conducting raids and welcoming escaped slaves. This resulted in General Andrew Jackson's invasion of Florida in 1818, which became known as the First Seminole War.

3.5 Territorial and Statehood

The bloody conflict between the Americans and the Seminoles over Florida first came to a head in 1818 and was subsequently known as the First Seminole War. As a result of the war and the Adams-Onis Treaty in 1819, Florida became a United States Territory in 1821. Andrew Jackson, named provisional governor, divided the territory into St. Johns and Escambia counties. At the time, St. Johns County included all of Florida lying east of the Suwannee River; Escambia County included the land lying to the west. During this period, settlement was largely concentrated in the northern part of the state where Seminole Indians were displaced as settlers and their homesteads took over the land. As a result, the Seminoles were pushed southward. In the first territorial census in 1825, some 317 persons reportedly lived in South Florida; by 1830 that number had risen to 517 (Tebeau 1980:134). The earliest American attempts to settle Lee County occurred 1833 when William Hackley of Tampa and a group of New York investors tried to establish the town of Sanibel on Sanibel Island.

Even though the First Seminole War was fought in north Florida, the Treaty of Moultrie Creek in 1823, at the end of the war, was to affect the settlement of all south Florida. The Seminoles relinquished their claim to the whole peninsula in return for an approximately four-million-acre reservation south of Ocala and north of Charlotte Harbor (Covington 1958; Mahon 1985:50). The treaty satisfied neither the Indians nor the settlers. The inadequacy of the reservation and desperate situation of the Seminoles living there, plus the mounting demand of the settlers for their removal, soon produced another conflict.

By 1836, the Second Seminole War in Florida had escalated with attacks on isolated settlers and communities. A strong force of American soldiers, commanded by Colonel Persifer F. Smith, left Fort Basinger in January 1838, and entered Indian Territory south of the Caloosahatchee River and traveled to Punta Rassa. During the 1837-38 campaign, Smith was to take his troops up the Caloosahatchee and in theory meet up with three other columns to push the Seminoles into the Everglades where it was hoped that they would either surrender or die. Two supply depots, Fort Adams and Fort Denaud, were established at river crossings along the way; Fort Dulaney was established in 1838 at Punta Rassa. These forts were little more than small blockhouses with a warehouse for the storage of supplies, and all were abandoned when the rainy season set in. Fort Dulaney was used as the principal base and was expanded to include large barracks, warehouses, and a hospital until October 19, 1841, when it was destroyed by a hurricane (Grismer 1949).

After the destruction of Fort Dulaney, Captain H. McKavit was sent to establish a location for a new fort to be built in an area less prone to flooding. He traveled up the Caloosahatchee River and came upon an elevated hammock. It was here that he built Fort Harvie, at the present location of Fort Myers (ACI 1993; Grismer 1949). Fort Harvie, named for Lieutenant John H. Harvie, 8th Infantry, was the Army's "principal depot" established November 1, 1841, for operations in Southwest Florida during the Second Seminole War. It remained active until March of 1842 (Sprague 1964:348).

Encouraged by the passage of the Armed Occupation Act in 1842, which was designed to promote settlement and protect the Florida frontier, Anglo-American pioneers moved south through Florida. The Armed Occupation Act stipulated that any family or single man over 18 years of age able to bear arms could earn title to 160 acres by erecting a habitable dwelling, cultivating at least five acres of land, and living on it for five years. During the nine-month period, the law was in effect, 1184 permits were issued totaling some 189,440 acres (Covington 1961:48). Finally, in 1845, the Union admitted the State of Florida with Tallahassee as the state capital.

In 1850, renewed problems with the Seminoles saw the development of a new post, Fort Myers, on the site of the earlier Fort Harvie. The post was named for Colonel Abraham C. Myers, soon to marry the daughter of Major General David E. Twiggs, commander of Fort Brooke (Tampa). Within a few years, the post consisted of some 57 buildings including a large supply depot, numerous barracks, and a two-and-one-half story hospital. The facility also featured shell streets, a parade ground, a 1,000-foot wharf, and vegetable gardens. Eventually to become the site for the town of Fort Myers, the fort site fronted the river, roughly bound by what is now Hough Street on the east, Dean Street on the west, and Second Street on the south. Fort Myers served as the final embarkation site for the last group of Seminoles who were transported west at the conclusion of the Third Seminole War (City of Fort Myers 1990:10; Florida Preservation Services [FPS] 1986:14; Peters 1984:7).

In December of 1855, the Third Seminole War or the Billy Bowlegs War (1855-1858) began because of pressure placed on Native Americans remaining in Florida to emigrate to the west (Covington 1982). The war began when Seminole Chief Billy Bowlegs and 30 warriors attacked an army camp killing four soldiers and wounding four others. The attack was in retaliation for damage done by several artillerymen to property belonging to Billy Bowlegs. This hostile action renewed state and federal interest in the final elimination of the Seminoles from Florida and several regional military posts were established (Covington 1982).

Military action was not decisive, so in 1858 the U.S. Government resorted to monetary persuasion to induce the remnant of Seminoles to migrate west. Chief Billy Bowlegs accepted $5000 for himself and $2500 for his lost cattle; each warrior received $500, and each woman and child were given $100. On May 4, 1858, the ship *Grey Cloud* set sail from Fort Myers with 123 Seminoles. Stopping at Egmont Key, 41 captives and a Seminole woman guide were added to the group. On May 8, 1858, the Third Seminole War was declared officially over. The modern Florida Seminoles descended from this meager remaining population, thought to number less than 200 Indians. The remaining bands lived in relative isolation until the late 1870s and the 1880s when the government sent observers among them (Covington 1982). There were no Seminole camps or military forts and trails in the current project area (**Figures 3.2-3.4).**

During the latter part of the Third Seminole War and the years immediately following, non-military settlers began to trickle down into the southern third of the peninsula, specifically into the Kissimmee River Valley. In general, these pioneers were cattle ranchers who had become aware of the lands and their potential to provide grazing ranges for their herds.

Figure 3.2. Military map of the Peninsula of Florida, south of Tampa Bay (Ives 1856).

Figure 3.3. Map of the Seat of War in Florida (MacKay and Blake 1839).

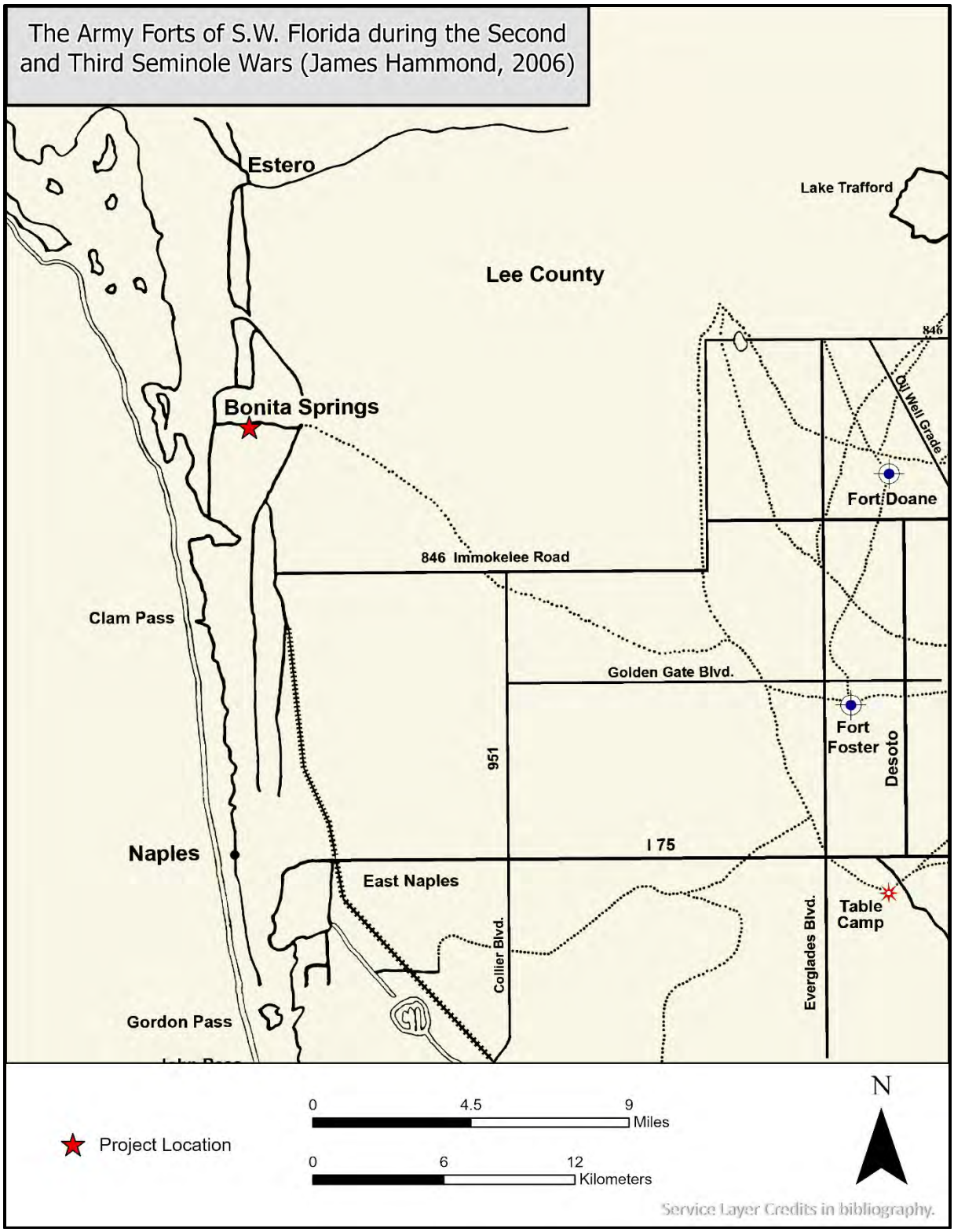

Figure 3.4. Army forts of SW Florida during the Second and Third Seminole War (Hammonds, revised 2006).

Cattle ranching served as one of the earliest important economic activities reported in the region. Mavericks left by early Spanish explorers provided the stock for the herds raised by the mid-eighteenth century "Cowkeeper" Seminoles. As the Seminoles were pushed further south during the Seminole Wars and their cattle were sold or left to roam, settlers captured or bought the cattle. By the late 1850s, the cattle industry of southwestern Florida was developing on a significant scale. The ford situated near Fort Thompson was used by the cattlemen to drive their herds to holding pens in Punta Rassa for shipment to Cuba, at a considerable profit. During this period, Jacob Summerlin became the first cattle baron of southwestern Florida. Known as the "King of the Crackers," Summerlin herds ranged from Ft. Meade to Ft. Myers (Covington 1957).

3.6 Civil War and Aftermath

In 1861, Florida followed South Carolina's lead and seceded from the Union in a prelude to the American Civil War. Fort Myers was re-occupied by Federal troops during the Civil War. General D. P. Woodbury, U.S. Navy, reactivated Fort Myers by reoccupying it in January of 1864. He arrived with 20 men of the 47th Regiment of Pennsylvania Volunteers, and another officer, Henry A. Crane, a Unionist and former newspaper editor from Tampa. Woodbury's initial force was joined by a second detachment of the 47th, together with some refugee families. The fort was soon occupied by "a motley assortment of over 400 'civilian lay-outs' including Union refugees, Union sympathizers, Confederate Army deserters, conscription resisters, and escaped slaves" (Solomon 1993:136).

By this time, the area had achieved importance as a cattle-raising center and "was important to both Confederate and Union forces" (Peters 1984:7). Cattlemen from all over Florida drove their herds to Punta Rassa for shipment to Cuba, at a considerable profit. Among the most successful cattlemen were James McKay and Jacob Summerlin, who formed a partnership in 1863. Summerlin originally had a contract with the Confederate government to market thousands of head a year at eight dollars per head. By driving his cattle to Punta Rassa and shipping them to Cuba, he received 25 dollars per head (Grismer 1949:43).

Reoccupation of the fort was also aimed at establishing a Union presence among the cattle herding grounds of Southwest Florida where isolated, distant cattle ranges supplied beef to Confederate troops in distant states (Solomon 1993). On April 20, 1864, Companies D and I of the United States Colored Troops (USCT) arrived from Key West. Raids from Fort Myers involving men from these Companies occurred in May at Tampa, Rialls Creek in August, and later at Fort Meade. Following these, an attack by the Confederate personnel assigned to cattle driving, popularly called the Cow Cavalry, moved to attack Fort Myers. Under Officers Francis A. Hendry, John T. Lesley, and James McKay Jr., a force of approximately 275 moved, in early February, from Tampa. Arriving near the Fort on February 29, ten men, commanded by Lieutenant William M. Hendry captured four pickets of the 2nd Florida Cavalry. Approaching nearer the post, the Confederates surprised "a laundry detail at a small pond frequented by the Fort's inhabitants . . . killing a black private" and capturing five others (Solomon 1993:148). An ensuing attack of the fort found the Confederates badly under armed, facing two brass six-pounder cannons manned by the 2nd USCT. Before the Confederates retreated, an estimated 40 of their number were killed. While four Union losses were "all members of the black troops," additional blacks outside the fort were captured, and a former slave who became a Florida legislator, John Wallace, was seriously wounded (Solomon 1993:150). Fort Myers pioneer Francis A. Hendry later summed up the Confederate experience . . .

> Two hundred and seventy-five men, poorly armed, with one field piece, attacking five companies of well-armed men with block houses, breastworks and three field pieces.

could not be expected to succeed. While the Confederates could not hurt the enemy much, they gave it a terrible fight (Solomon 1993:151).

By March 14 of 1865, the last of Fort Myer's troops abandoned the fort, departing for Punta Rassa (Solomon 1993:151). After the war, a profitable cattle industry continued to attract settlers to the area. Due to the scarcity of construction materials, many of the fort buildings were dismantled and lumber reused elsewhere. Some of the buildings were renovated or rebuilt for local use.

The Homestead Act, created by Congress in 1862, allowed settlers to obtain title to 160 acres by residing on and working the land. The property first had to be surveyed. In 1872, W. L. Apthorp surveyed the exterior lines of Township 47 and 48 South, Range 25 East. He described the area as Bay Swamp and Pine woods (State of Florida 1872, 220:53). In 1874, T.S. Stearns surveyed the subdivisions of Township 47 and 48 South, Range 25 East in Sections 3, 4, 33, and 34. He described the area as having Cypress and 3rd Rate Pine with Blackjack as well as 3rd rate low scrub and mangrove flats (State of Florida 1874, 225:722; 225:748). No historic features are shown within the APE on the 1874 Plat (State of Florida 1873b) (**Figure 3.5**).

Major James Evans, of Nonsemond County, Virginia, returned to Fort Myers in 1873 with a homestead claim for all the land in the old fort area. He had first arrived with the original survey crew and remained until the outbreak of the Third Seminole War, thus substantiating his claim to the land as the first homesteader (ACI 1993; Grismer 1949; Peters 1984). Major Evans platted the original town of Fort Myers in the fall of 1876 on the site of the fort. This plat was recorded in Key West, county seat for Monroe County, in December 1876 (Monroe County n.d.:450). It was later corrected and re-filed in Fort Myers, then county seat of Lee County, on January 9, 1898 and December 17, 1902 (Lee County n.d.:23). "Much of the land in the original town was deeded by Evans to pioneers who had settled there and the streets were laid out to conform to the property they were occupying. This explains the irregularity of the street plan" (Grismer 1949:255). The remainder of the city was later platted on a north-south and east-west grid (Peters 1984:9).

Pine Island was uninhabited until 1873 when Captain John Smith, a Russian sailor, arrived after having survived a hurricane on nearby Punta Rassa. He decided that Pine Island would be a safe haven against future storms since it was protected from the Gulf of Mexico by the outer islands of Sanibel, Captiva, and Cayo Costa. Other settlers followed and they, too, lived off the substantial bounty of the sea, while beginning to develop the beautiful, island paradise (Lincoln 2005). William M. Hendry moved to Ft. Myers in the summer of 1873 and opened a general store in 1875 (Grismer 1949:279). In 1876, Mail service was started August 22 with a post office in W. M. Hendry's store. It was called "Myers" by the United States Post Office, supposedly to avoid confusion with Fort Myer, Virginia. The local people continued to refer to their town as "Fort Myers," which finally became the legal name on November 9, 1901 (City of Fort Myers 1990:11; Grismer 1949:262).

In 1876, there were no more than ten families living in the new town of Fort Myers, then a frontier cow town, but families continued to move into the area. By 1885, there were approximately fifty families living within the town limits that had been expanded by Major Evans. The need for public improvements and better law enforcement led the residents to incorporate the settlement as a town, accomplished August 12, 1885 (Grismer 1949:255). A mayor and the council were elected. By 1890, the population had increased to 575.

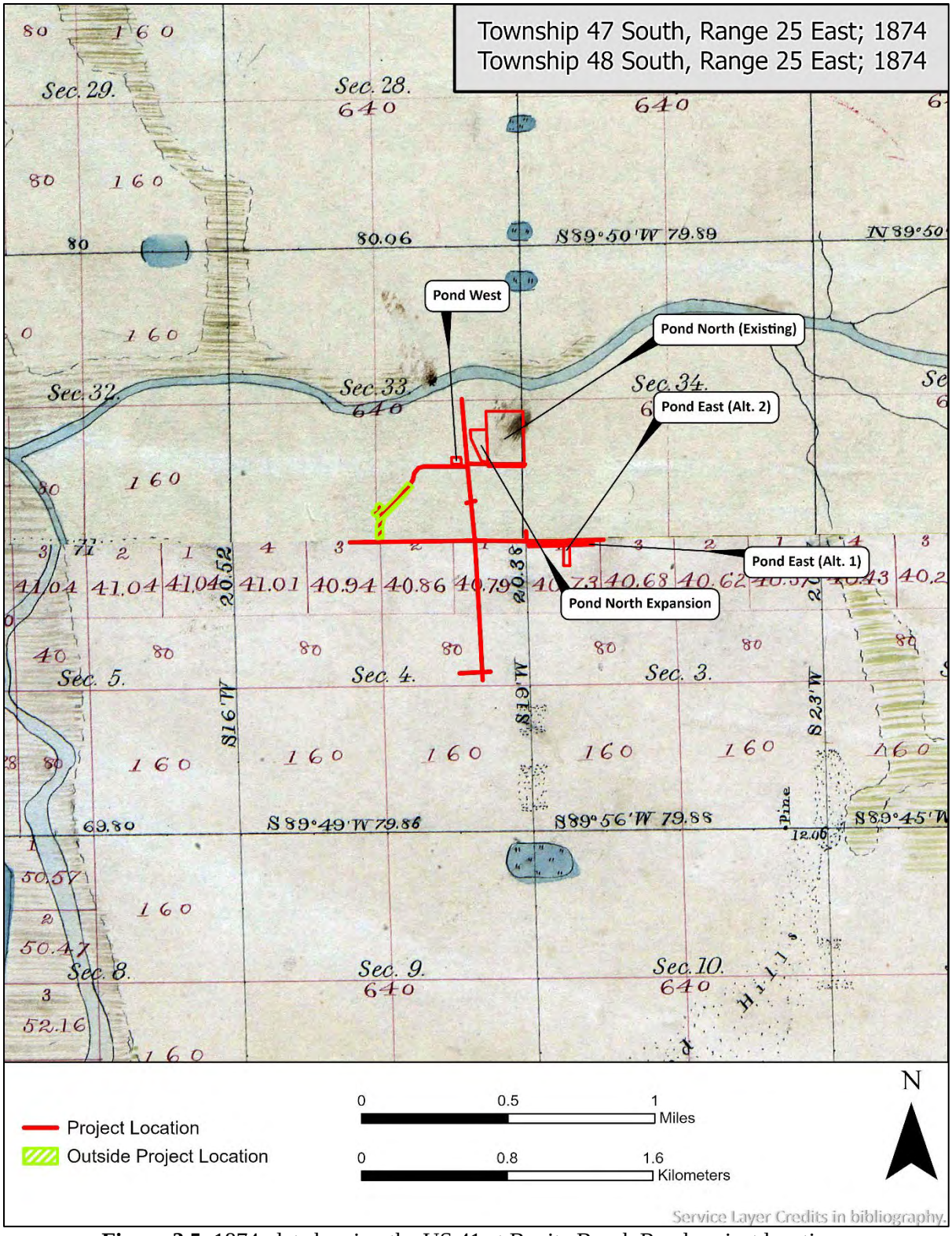

Figure 3.5. 1874 plat showing the US 41 at Bonita Beach Road project location.

During the 1880s, the local economy boomed with the increase of winter visitors seeking the favorable subtropical climate and the introduction of pineapple growing and truck farming. Many of the visitors chose to stay or build their own winter residences in Fort Myers. These included famous people such as Thomas A. Edison who built a winter home there in 1886. His friend Henry Ford later purchased the property next to him in 1916.

> Most of the communities which exist today in the county were settled in this period. . . . Settlers came to the area by one of three routes. A few came overland from Central Florida through Fort Meade and Fort Winder to the river [over well used cattle trails] and settled inland. Many came by way of Key West on one of several schooners and steamers connecting Punta Rassa and that town. Others came by steamer from Cedar Keys where they came either by rail from Jacksonville or boat from Pensacola, Mobile or New Orleans (FPS 1986:19-20).

Regular boat service to the area started in the 1870s. Henry Plant extended his railroad from Tampa south to Punta Gorda in 1887 but not to Fort Myers until several years later. This slowed the growth of the area but allowed for more overland travel.

Although the local economy flourished, the state faced a financial crisis due to pre-war railroad bonded indebtedness. This led Governor William Bloxham to search for a buyer for an immense amount of state lands. Bloxham's task was to raise adequate capital in one sale to free from litigation the remainder of state lands for desperately needed revenue. In 1881, Hamilton Disston, a Philadelphia investor, and friend of the Governor, purchased four million acres of swamp and overflow land for one million dollars from the State of Florida to clear the state's debt. His promotion of land sales and subsequent canal operations attracted settlers into the area. The Atlantic and Gulf Coastal Canal and Okeechobee Land Company was formed on July 20, 1881 to help fulfill the drainage contracts; the Florida Land Improvement Company (FLIC) and Kissimmee Land Company were formed to develop Disston's lands. In 1883, land within the APE was acquired by the Florida Land and Improvement Company (State of Florida n.d.).

Lee County, named for General Robert E. Lee, was created by the State Legislature in May 1887, and was carved out of Monroe County. At the time, it was one of the largest in the state, consisting of most of southwest Florida. The population for the entire county was recorded as 1,414 inhabitants in 1890. Many settlers moved to Lee County to grow produce such as cabbage, eggplant, and squash and ship their products to places such as Key West and Cuba. Others experimented with coconuts, pineapples, and sugar, while cattle continued to play a part in the local economy (FPS 1986:24). By the mid-1880s pineapples had become an important commercial crop in the area, retaining their importance as a crop until the early 20th century when Caribbean growers took over the market by lowering production costs (Grismer 1949; Peters 1984).

Regularly scheduled steamboat travel on the Caloosahatchee River was initiated in 1888 by Captain J. Fred Menge, who purchased two workboats from the Disston operations. The Menge Brothers Steamboat Line grew and continued operations along the river until World War I when new roads and rail lines facilitated overland transportation (FPS 1986:32).

The town of Fort Myers, newly incorporated in 1888, was growing rapidly. In an effort to expand the downtown area and provide a better road system, the city advertised for proposals to remove the burials found along the newly laid-out Fowler Street that passed through the abandoned Fort Myers Cemetery. In January of 1888, "the Secretary of War ordered the removal . . . of the soldiers remains . . . in the Old Fort Myers Cemetery to the Barrancas National Cemetery," and the Deputy Quarter Master General authorized, on January 11, 1888, the Office of National Cemeteries to do so "at such time as

conditions of temperature and climate will permit" (Sawtelle 1888). Proposals for the project were accepted in Washington D.C. until February 14, 1888. In March, the Fort Myers Press reported a Pensacola firm had been awarded the contract. A total of 52 exhumations were conducted in the cemetery in 1888 (ACI 1994:19). Captain W. H. Fowler, for whom Fowler Street was named, was among these. Fowler had been a member of 1st Artillery and a veteran of the Seminole Wars.

The "Big Freeze of 1895," which drove investors and settlers further south into the state searching for better protected land, ushered in a second period of homesteading in Lee County (FPS 1986:22). Pine Island became the center for citrus and tropical fruits at the turn of the century. Other citrus and agricultural operations were established upriver from Fort Myers in the early part of the 20th century, extending throughout most of the county by 1910. Land development increased during the early 20th century as farmers platted small parcels of land in East Fort Myers, Alva, Estero, Buckingham, and Boca Grande to attract settlers (FPS 1986:24).

3.7 Twentieth Century

In 1901, a post office was established in the community of "Survey" – the original name for Bonita Springs (City of Bonita Springs 2021). On February 20, 1904, the Atlantic Coastline Railroad reached Fort Myers from Punta Gorda, crossing the Caloosahatchee River between Samville and Tice. This brought more visitors and the construction of additional accommodations. It also allowed crops to be easily shipped to other parts of the country. By 1906, the Bank of Fort Myers had opened to accommodate business expansion brought on, in part, as a product of the railroad. Prior to this accomplishment, a 1901 Army Corps of Engineers report describes the importance of the Caloosahatchee River to the local economy, "Owning to the absence of railways, the inhabitants of the Caloosahatchee River Valley are entirely dependent on the river for the carriage of all heavy freight and bulky products" (Army Corps of Engineers 1901).

In April 1911, Fort Myers was incorporated as a city by the State Legislature. This brought improvements such as city sewers and water mains. The first public pier was erected at the foot of Fowler Street, built by W. P. Henley, and completed in 1913. A year later, a new two-story public school was opened. The Dixie Highway, completed in 1922, became the first northbound route out of Lee County (FPS 1986; Fritz 1963; Grismer 1949; Scupholm 1997). The Lee County portion of the Tamiami Trail from Fort Myers south to Naples was originally conceived in 1915. The beginning of World War I halted any construction and the engineering problems faced in taking the road across the Everglades became a major obstacle (FPS 1986:37). The connection between Fort Myers and Punta Gorda, a wooden bridge across the Caloosahatchee River, was completed in 1924, thus finally linking Fort Myers to the north. The extension of the Tamiami Trail to the south was not completed until 1926 (FPS 1986:37; Fritz 1963:122-124). Other civic improvements were also delayed until after World War I, although new residents continued to settle in the area during the war. Construction of residences and commercial buildings continued (Grismer 1949:207).

Fort Myers Beach, formerly known as Crescent Beach, became connected to the mainland in 1921 with the construction of a bridge spanning from San Carlos on the Gulf to Estero Island. Tom Phillip's San Carlos on the Gulf was one of the largest developments proposed in the Fort Myers Beach area during the Florida Land Boom of the 1920s (Schell 1980). The development plan included features such as street lighting, sewers, sidewalks, a 200-room hotel, and a central Boulevard. Stone arches were constructed in association with the development entrance. The arches were made of local rock and consisted of at least two arches for vehicular traffic, as well as pedestrian passage on San Carlos Boulevard just north of Matanzas Pass on San Carlos Island. The stone arches were demolished between 1978 and 1979 to accommodate the realignment of SR 865 during the Matanzas Pass Bridge project.

Despite Phillip's intentions, San Carlos on the Gulf remained largely undeveloped until the mid-twentieth century due to the destruction of the hurricane of 1926 and the onset of the Great Depression in 1929 (Florida Master Site File [FMSF] 8LL00105). The hurricane of 1926 transformed San Carlos on the Gulf, a subdivision formerly on the mainland, into San Carlos Island with an opening of a pass north of the development (Schell 1980).

During the early 1900s in Fort Myers and prior to the discovery of "pink gold" in the Gulf of Mexico, the commercial fishing industry mainly relied on scallops, clams, oysters, mullet, and snapper. Fisherman unloaded their catch at fish houses along the southern coast of San Carlos Island, including the area now referred to as Fisherman's Wharf beneath the Matanzas Pass Bridge (Dixie Fish Co., n.d.). Pink shrimp, referred to as "pink gold" and is one of only twenty commercially relevant species of shrimp, were discovered off the coast of Fort Myers Beach in 1949. As a result, San Carlos Island became a vital location providing shrimp fleets with equipment such as food, ice, nets, and repairs and a base for docking and processing plants necessary for offloading and shipment. San Carlos Island's working waterfront continues to supply the industry with shrimp as the largest commercial fishing fleet in the Gulf of Mexico (Ostego Bay Foundation n.d.).

Government funded construction projects in Fort Myers during the Depression years included the concrete Edison Bridge (1930) which replaced the earlier wooden bridge, the Federal Post Office building (1933), the Waterfront Park and Yacht Basin (1937) and the City of Fort Myers Water Treatment Plant (1937). In the spring of 1937, a waterway across southern Florida, between Fort Myers and Stuart, was finally completed. Two Work Projects Administration projects continued into the early 1940s: the airport improvements in 1940 and the new Lee Memorial Hospital completed in 1943 (Grismer 1949). During the 1940s, Lee County became the site of a growing commercial fishing industry (Dovell 1952).

World War II brought the construction of air bases in the area: Buckingham and Page Fields. Many of the service members stationed there remained with their families to make Fort Myers their home after the war, even though the bases were soon closed. This contributed to the continued, steady growth of Fort Myers. After the war, Fort Myers and Lee County continued to grow along with the rest of southwest Florida; however, residential development within the APE remained relatively slow (**Figure 3.6**).

In 1957, a 103 square mile tract of land was purchased by Leonard and Jack Rosen. They formed the Gulf American Corporation and began to develop the land that was to become Cape Coral. In 1958, the first residents moved to the town. Through a successful advertising campaign that included radio, television, and print media, potential buyers were flown to the area in small planes that landed on what today is 47th Terrace. In 1964, the two-lane Cape Coral Bridge was completed and in 1970, the City of Cape Coral was incorporated. By 1970, Cape Coral was the 3rd largest city in land mass in Florida (City of Cape Coral 2014). In 1975 the Bonita Bypass (US 41) was constructed through southern Lee County, crossing the Imperial River through the area to the west of Bonita Springs and the route officially opened in early 1976 (Smith 1976). In 1999, Bonita Springs was incorporated for the second time – having been briefly incorporated during the 1920s (City of Bonita Springs 2021).

The population of Lee County has continued to grow with an increase of 271% since 1980 (OEDR 2023). As of 2020, Lee County was the 8th most populous county in Florida with 760,822 residents (OEDR 2023). In 2021, professional and business services made up a total of 22.6% of all industry in the county (OEDR 2023). Development throughout the county has increased significantly within the past few decades, especially around Fort Myers and Bonita Springs, and is focused primarily around Interstate 75 and US 41 (Google Earth 2023). Several large hurricanes have affected Lee County over the years, including Hurricane Charley in 2004, Hurricane Irma in 2017, and most recently,

Hurricane Ian in 2022. Hurricane Ian resulted in an enormous storm surge into Fort Myers Beach, Sanibel, and Bonita Springs, resulting in 72 deaths throughout the county and damage to over 50,000 homes (Florida Department of Law Enforcement 2023; Masters 2022; Noah 2022).

3.8 Project Area Specifics

A review of historic aerial photographs reveals that the APE and surrounding area were undeveloped wetlands with minimal agricultural land as late as ca. 1944 (USDA 1944) (**Figure 3.6**). At this time, the only roads within the vicinity were Bonita Beach Road, Arroyal Road to the east, and Windsor Road to the west. The roads appeared to be minor and unpaved. By ca. 1958, Bonita Beach Road appeared to have been improved (e.g., paved and widened) and additional minor roadways had been constructed (USDA 1958). Residential development was sparse, and a large, rectangular retention pond was constructed to the north of Bonita Beach Road and west of Arroyal Road. Development had increased slightly by ca. 1962 with the creation of subdivisions along the east side of Arroyal Road and a mobile home park along the bank of the Imperial River at the north end of Windsor Road by ca. 1968 (USDA 1962; FDOT 1968) (**Figure 3.6**). No major alterations occurred within the APE until ca. 1975 with the construction of the Bonita Bypass (US 41) (FDOT 1975). The roadway passed over the rectangular retention pond to the north of Bonita Beach Road and through wetlands to the south of Bonita Beach Road where a canal was constructed to control water. A shopping center was constructed in the southeast quadrant of the US 41 and Bonita Beach Road intersection by this time. Commercial development continued and by ca. 1986 multiple shopping centers were located within the vicinity of the US 41-Bonita Beach Road intersection (FDOT 1986). In addition, residential development had expanded rapidly with the majority of the land in the area being developed. The remaining open land at this time was located west of US 41 and north of Bonita Beach Road. A large shopping center was constructed on the aforementioned lot during the early 1990s and the area reached its current configuration by the early 2000s (Google Earth 2023).

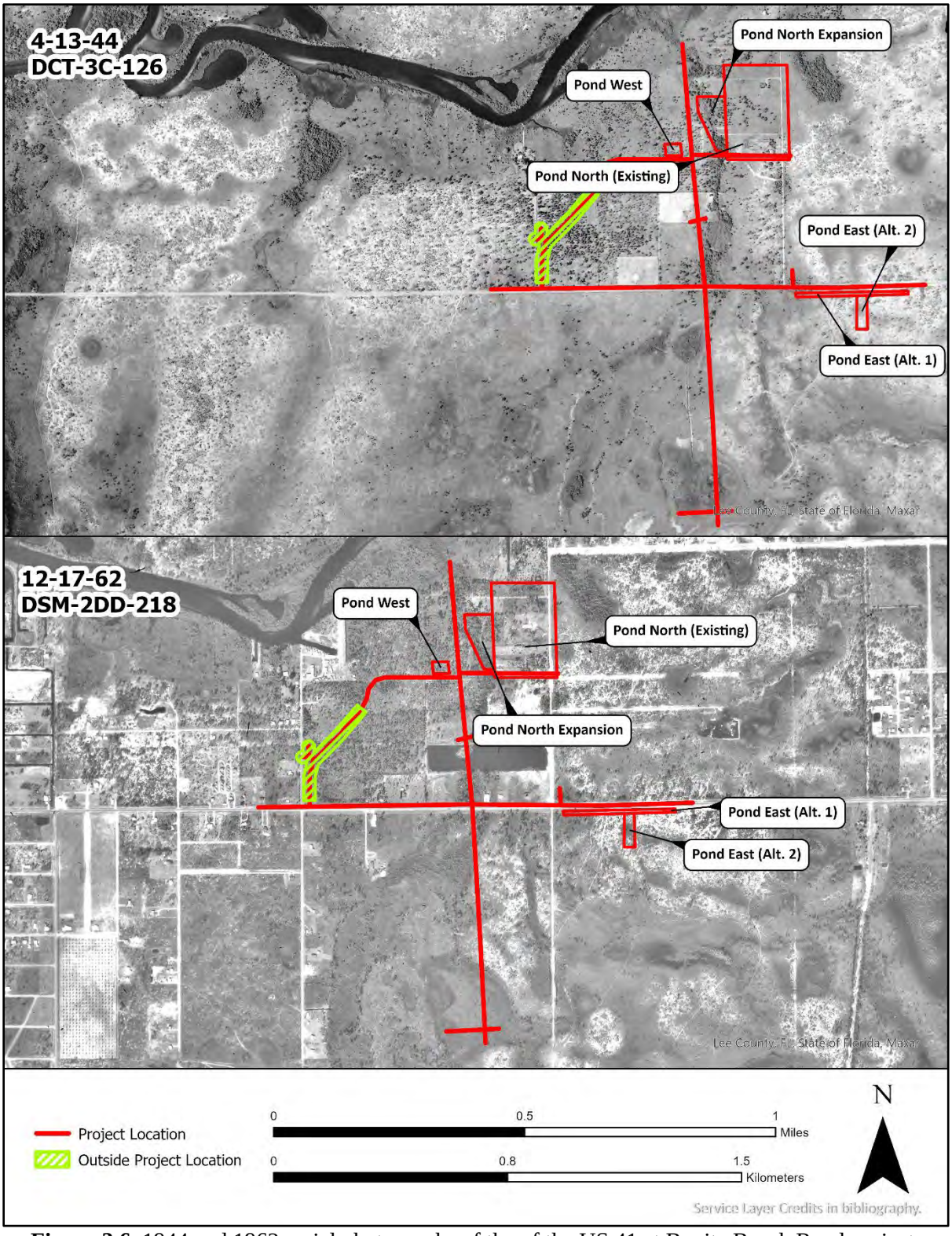

Figure 3.6. 1944 and 1962 aerial photographs of the of the US 41 at Bonita Beach Road project location (USDA 1944, 1962).

4.0 RESEARCH CONSIDERATIONS AND METHODOLOGIES

4.1 Background Research and Literature Review

A review of archaeological and historical literature, records and other documents and data pertaining to the APE was conducted. The focus of this research was to ascertain the types of cultural resources known in the APE and vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP, the Florida Master Site File (FMSF), cultural resource survey reports, published books and articles, unpublished manuscripts, maps, interviews, and the FDOT's ETDM process as project No. 6291. The FMSF information in this report was obtained in September 2023, which is the most recent edition. However, according to FMSF staff, input may be a month or more behind receipt of reports and site. No individuals familiar with the APE were available for interview.

4.2 Archaeological Considerations

Background research revealed that no sites are recorded with or adjacent to the project, but five sites have been recorded within one mile (**Figure 4.1**). Sites 8CR00222 and 8LL00708 are both part of the same mound group that is intersected by the Lee and Collier County lines dating to the Glades period (County Line Sand Mound Group). Site 8LL00708/CR00222 originally consisted of three circular sand mounds, one of which was destroyed by a borrow pit in Collier County, and one platform mound; all three mounds have been moderately disturbed by looting (FMSF). One of these mounds is in Lee County (8LL00708), one is bisected by the county line with Collier County (8LL00708/8CR00222), and one is south of the county line in Collier County (8CR00222). These mound sites were recorded during a private survey, with only 8LL00708 determined eligible for NRHP listing, while 8CR00222 has not been evaluated by the State Historic Preservation Officer (SHPO). Site 8LL00759 (Imperial River) is a Glades period mound that was initially recorded during an informant interview conducted by Piper Archaeology in 1987, and then included in a CRAS of Arroyal Place conducted by ACI (2005b). No evidence of this site was recovered, and it has not been evaluated by the SHPO. Site 8LL01850 (Ryder Pond) is an Archaic period burial site that was disturbed during development events in 1995, which revealed human remains that were promptly reburied in Ryder Pond (Davis and Steele 1994; FMSF). This site was originally not recorded in 1994 since it was a lake at this time. 8LL01850 has not been evaluated by the SHPO. Site 8LL01987 (Riverview Site) is a Glades period artifact scatter that may have been a procurement and/or habitation site (Beriault and Carr 1999). This site was recorded during a CRAS for development, which recovered marine shell debris and one sand tempered body sherd was recovered. Site 8LL01987 has not been evaluated by the SHPO.

In addition to the surveys noted above, 17 others have been conducted within one mile of the project (**Table 4.1**). These include surveys for development projects (ACI 1996, 1999, 2002, 2005a, 2012; Almy and Deming 1987; Ambrosino 2006; Beriault and Carr 2001; Beriault et al. 2007; Beriault et al. 2009), historic surveys (Janus Research 2004; Nickerson and Weant 1992), a PD&E study (ACI 1997), cell tower surveys (Campbell et al. 2018; Geidel 2013), a ponds survey (ACI 2001), and a R&R water main survey (ACI 2019). As a result of these investigations, no sites were found within or adjacent to the project.

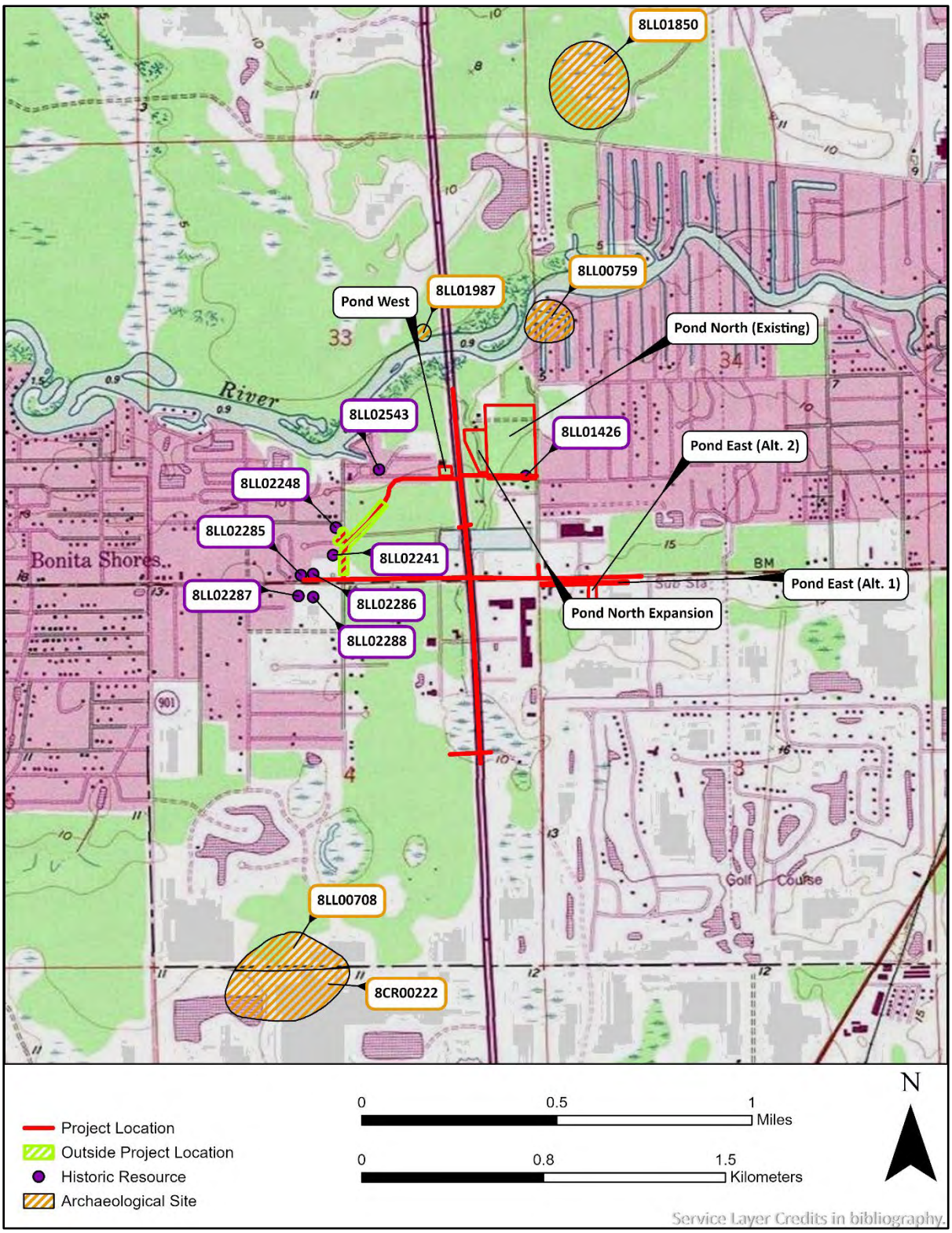

Figure 4.1. Previously recorded cultural resources within one mile of the US 41 and Bonita Beach Road intersection improvements, Lee County.

Table 4.1. Previously recorded archaeological sites within one mile of the US 41 and Bonita Beach Road project, Lee County.

FMSF #	SITE NAME	SITE TYPE	CULTURE	SHPO EVAL
8CR00222	County Line Sand Mound Group	Pre-Contact burial mound(s)	Glades, 1000 BCE-1700 CE; Glades III, CE 1000-1700	Not evaluated
8LL00708	County Line Sand Mound Group	Pre-Contact burial mound(s)	Glades, 1000 BCE-1700 CE; Glades II, 750 CE-1200 CE; Glades III, 1000 CE-1700 CE	Eligible for NRHP listing
8LL00759	Imperial River	Pre-Contact mound(s)	Glades, 1000 BCE-1700 CE	Not evaluated
8LL01850	Ryder Pond	Pre-Contact burial(s)	Archaic, 8500 BCE-1000 BCE	Not evaluated
8LL01987	Riverview Site	Pre-Contact habitation; specialized procurement site; artifact scatter	Glades, 1000 BCE-1700 CE	Not evaluated

Table 4.2. Previous surveys within one mile of the US 41 and Bonita Beach Road project, Lee County.

FMSF SURVEY NO.	TITLE	DATE	AUTHOR
1487	A CRAS of the Audubon Country Club Tract in Northwest Collier County, Florida	1987	Almy and Deming
3144	Historical Report and Survey Supplement for Lee County, Florida	1992	Nickerson and Weant
4226	An Archaeological Survey of the Ryder Club Tract, Lee County, Florida	1994	Davis and Steele
4494	A CRAS of Bay Landing, Lee County, Florida	1996	ACI
5215	Final CRAS Report, U.S. 41 from North of C.R. 887 to San Carlos Boulevard, Collier and Lee Counties, Florida	1997	ACI
5770	A CRAS of Riverview Center, Lee County, Florida	1999	ACI
6668	CRAS Technical Memorandum Addendum US 41 from the Collier County Line to CR 887 One Enlarged Pond Site Lee County, Florida	2001	ACI
6815	An Archaeological Survey of the Riverwood Parcel, Bonita Springs, Lee County, Florida	2001	Beriault and Carr
8638	Cultural Resource Assessment Survey North Naples Research and Technology Park PUD, Collier County, Florida	2002	ACI
10704	Historic Resources Survey of Bonita Springs	2004	Janus Research
11828	CRAS, Two Lakes Plaza, Collier County, Florida	2005a	ACI
13682	An Archaeological and Historical Survey of the Bonita Riverwalk Project Area in Lee County, Florida	2006	Ambrosino
16452	A Phase One CRAS of the Angler's Paradise Parcel, Lee County, FL	2009	Beriault et al.
19473	CRAS, Lakehurst at Spanish Wells, Lee County, Florida	2012	ACI
20536	Phase 1 Archaeology Survey Letter for Trileaf Corporation, Project # 606823 (Gulf Harbor)	2013	Geidel
21899	A Phase One CRAS of the Bonita Springs River Park Parcel, Lee Co	2007	Beriault et al.
21901	An Archaeological and Historical Survey of the Riverview Center Parcel, Lee County, Florida	1999	Beriault and Carr
23016	CRAS of the Arroyal Place, Lee County, Florida	2005b	ACI
25254	Section 106 Review, FCC Form 620, Proposed 154-Foot-Tall Monopole Tower, Bonita Storage Inn Site (TTH024), 8841 West Terry Street, Bonita Springs, Lee County, Florida DEA No. 21805051.	2018	Campbell et al.
26204	CRAS Bonita Springs Utilities Water Main R&R, Priority 1 Phase 3, Bonita Springs, Lee County, Florida	2019	ACI

In applying the known site location predictive factors to the APE, it was concluded that the APE had a low to moderate potential for aboriginal site occurrence although a review of the ETDM report 6291 indicated minimal cultural issues. The types of sites expected include small artifact or lithic scatter type-sites, which would be representative of special-use activity sites established to utilize the locally available resources, and/or a mound. The discovery of large habitation and/or ceremonial sites was considered unlikely. Although Lee County falls within the Comprehensive Everglades Restoration Plan (CERP) model (Smith 2008), the part of Lee County where the project is located has nothing within those environmental perimeters. Therefore, the CERP model was not used.

In addition to aboriginal archaeological sites, the potential for yet unrecorded historic period archaeological sites were assessed. Historical documents and literature, including the nineteenth century federal surveyor's plats and field notes, were reviewed. Given the results of the historic research, no nineteenth or twentieth century homesteads, forts, military trails, or Indian encampments were expected.

4.3 Historical Considerations

A review of the FMSF and NRHP databases revealed that two historic resources (8LL01426 and 8LL02543) have been previously recorded within the APE (**Figure 4.1**). The ca. 1920 Frame Vernacular style Codwise House (8LL01426) was first recorded in 1988 by the Lee County Planning Division and later updated during the *Cultural Resource Assessment Survey Technical Memorandum Addendum US 41 (South Tamiami Trail) from the Collier County Line to CR 887 One Enlarged Pond Site, Lee County, Florida* conducted by ACI in 2001 (Survey No. 6668). As a result of the 2001 survey, the SHPO determined the resource was ineligible for listing in the NRHP. Following the development of the enlarged pond site, the resource was destroyed and documented as such within the FMSF. The Angler's Paradise Clubhouse (8LL02543), a ca. 1958 Masonry Vernacular style building, was recorded during the *Cultural Resource Assessment of the Angler's Paradise Parcel* conducted by Archaeological and Historical Conservancy, Inc. in 2009 and has not been evaluated by the SHPO (Beriault et al. 2009; Survey No. 16452). The resource was documented as destroyed in the FMSF by the FDHR in 2022.

In addition, six historic resources (8LL02241, 8LL02248, 8LL02285, 8LL02286, 8LL02287, and 8LL02288) have been recorded in close proximity to, but outside of, the APE. These resources were recorded during the *Historic Resources Survey of Bonita Springs* conducted by Janus Research in 2004 (Survey No. 10704). These include four Masonry Vernacular style buildings (8LL02241, 8LL02248, 8LL02285, 8LL02286), one Contemporary style building (8LL02287), and one Frame Vernacular style (8LL02288) building, constructed between ca. 1950 and 1953. The resources have not been evaluated by the SHPO.

A review of relevant historic USGS quadrangle maps, historic aerial photographs, and the Lee County property appraiser's website data revealed the potential for four new historic resources 45 years of age or older (constructed in 1978 or earlier) within the APE (Caldwell 2023). Two culverts, constructed in ca. 1975, are located within the US 41 and Bonita Beach Road APE. These are common examples of post-1945 concrete box culverts. Per the ordinance with the Advisory Council on Historic Preservation (ACHP) *Program Comment for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued in November 2012, these culverts are exempt from individual consideration under Section 106 of the National Historic Preservation Act (Federal Register 2012:68793). As such, the two culverts will not be recorded or evaluated as part of this survey. Similarly, a segment of US 41/Tamiami Trail and Bonita Beach Road are located in the APE. In accordance with the *Historic Roads and Trails Multiple Property Submission* and the *Historic Linear Resource Guide*, these segments do not meet any of the suggested parameters beyond their historic age

and as such will not be recorded as historic linear resources (Johnston 2008, FDHR 2022). The segment of US 41/Tamiami Trail was constructed in ca. 1975 and is not an original segment of the Tamiami Trail, and the segment of Bonita Beach Road has been altered over the years, no longer retaining historic physical integrity.

A review of the Veteran's Grave Registration compiled in 1940-1941, did not record any graves or cemeteries in the sections where the APE is located (Work Progress Administration [WPA] 1941).

4.4 Field Methodology

The FDHR's Module Three, *Guidelines for Use by Historic Professionals*, indicates that the first stage of archaeological field survey is a reconnaissance of the project area to "ground truth," or ascertain the validity of the predictive model (FDHR 2003). During this part of the survey, the researcher assesses whether the initial predictive model needs adjustment based on disturbance or conditions such as constructed features (i.e., parking lots, buildings, etc.), underground utilities, landscape alterations (i.e., ditches and swales, mined land, dredged and filled land, agricultural fields), or other constraints that may affect the archaeological potential. Additionally, these Guidelines indicate that non-systematic "judgmental" testing may be appropriate in urbanized environments where pavement, utilities, and constructed features make systematic testing unfeasible; in geographically restricted areas such as proposed pond sites; or within project areas that have limited high and moderate probability zones, but where a larger subsurface testing sample may be desired. While predictive models are useful in determining preliminary testing strategies in a broad context, it is understood that testing intervals may be altered due to conditions encountered by the field crew at the time of survey.

Archaeological field survey methods consisted of surface reconnaissance combined with systematic and judgmental subsurface testing. Shovel tests were placed at 50 meter (m) and 100 m intervals as well as judgmentally. Shovel tests were circular and measured approximately 50 centimeter (cm) in diameter by at least 1 m in depth unless precluded by groundwater intrusion, utilities, and fill. Several areas no tests were placed due to impervious surfaces. All soil removed from the shovel tests was screened through a 0.64 cm mesh hardware cloth to maximize the recovery of artifacts. The locations of all shovel tests were recorded with a Samsung S23 Ultra with the Field Maps (ESRI) mobile phone application and following the recording of relevant data such as stratigraphic profile and artifact finds, all shovel tests were refilled.

Historic/architectural field methodology consisted of a field survey of the APE to determine and verify the location of all buildings and other historic resources (i.e., bridges, roads, cemeteries) that are 45 years of age or older (constructed in or prior to 1978), and to establish if any such resources could be determined eligible for listing in the NRHP. The field survey focused on the assessment of existing conditions for all previously recorded historic resources located within the project APE, and the presence of unrecorded historic resources within the project area. For each property, photographs were taken, and information needed for the completion of FMSF forms was gathered. In addition to architectural descriptions, each historic resource was reviewed to assess style, historic context, condition, and potential NRHP eligibility. Also, informant interviews would have been conducted, if possible, with knowledgeable persons to obtain site-specific building construction dates and/or possible associations with individuals or events significant to local or regional history.

4.5 Laboratory Methods and Curation

No artifacts were recovered; thus, no laboratory methods were utilized. All project-related records, including artifacts, maps, field notes, and photos, will be maintained at ACI in Sarasota (P20011) unless the client requests otherwise.

4.6 Inadvertent/Unexpected Discoveries

Occasionally, archaeological deposits, subsurface features or unmarked human remains are encountered during development, even though the project area may have previously received a thorough and professionally adequate cultural resources assessment. Such events are rare, but they do occur. In the event pre-contact or historic period artifacts, such as pottery or ceramics, projectile points, shell or bone tools, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered or observed during development activities at any time within the project site, the permitted project shall cease all activities involving subsurface disturbance in the immediate vicinity of the discovery and a professional archaeologist will be contacted to evaluate the importance of the discovery. The area will be examined by the archaeologist, who, in consultation with the staff of the Florida SHPO, will determine if the discovery is significant or potentially significant.

In the event the discovery is found to be not significant, the work may immediately resume. If, on the other hand, the discovery is found to be significant or potentially significant, then development activities in the immediate vicinity of the discovery will continue to be suspended until a mitigation plan, acceptable to the SHPO, is developed and implemented. Development activities may then resume within the discovery area, but only when conducted in accordance with the guidelines and conditions of the approved mitigation plan. If human remains are encountered during development, the procedures outlined in Chapter 872.05 FS must be followed, all activities in the vicinity of the discovery must cease and the local Medical Examiner and State Archaeologist should be notified.

5.0 SURVEY RESULTS AND CONCLUSIONS

5.1 Archaeological

Archaeological field survey included both surface reconnaissance and the excavation of 35 shovel tests within the APE placed at 50 m and 100 m intervals as well as judgmentally. Shovel tests were circular and measured approximately 50 cm in diameter by at least 1 m in depth unless precluded by groundwater intrusion, utilities, and fill. Several areas within the APE, no tests were placed due to impervious surfaces (particularly east and west of Windsor Road) (**Figure 5.1**). In addition, no shovel tests were placed within the stormwater retention pond area Pond North or the portion of the pond adjacent to Carolina Street, due to the land being previously disturbed with the digging of the pond. A reasonable and good faith effort was made per the regulations laid out in 36 CFR § 800.4(b)(1) (Advisory Council on Historic Preservation n.d.) to test all areas of the project APE. No artifacts were recovered from any of the shovel tests. Thus, no archaeological sites are located within the APE.

The soil profiles were varied between some of the ponds and the US 41 and Bonita Beach Road ROW. Sample stratigraphy consisted of the following:

- Pond East Alt. 1 and 2 (**Photo 5.1**): 0-20 cmbs gray sand; 20-100 cmbs very light gray sand
- Pond north Expansion (**Photo 5.2**): 0-20 cmbs dark gray sand; 20-100 cmbs light gray sand; water at 60-80 cmbs
- US 41/Bonita Beach Road ROW (**Photo 5.3**): 0-100 cmbs grayish-brown gravelly sand

Photo 5.1. Example of stratigraphy facing north in Pond East Alt. 1 and 2

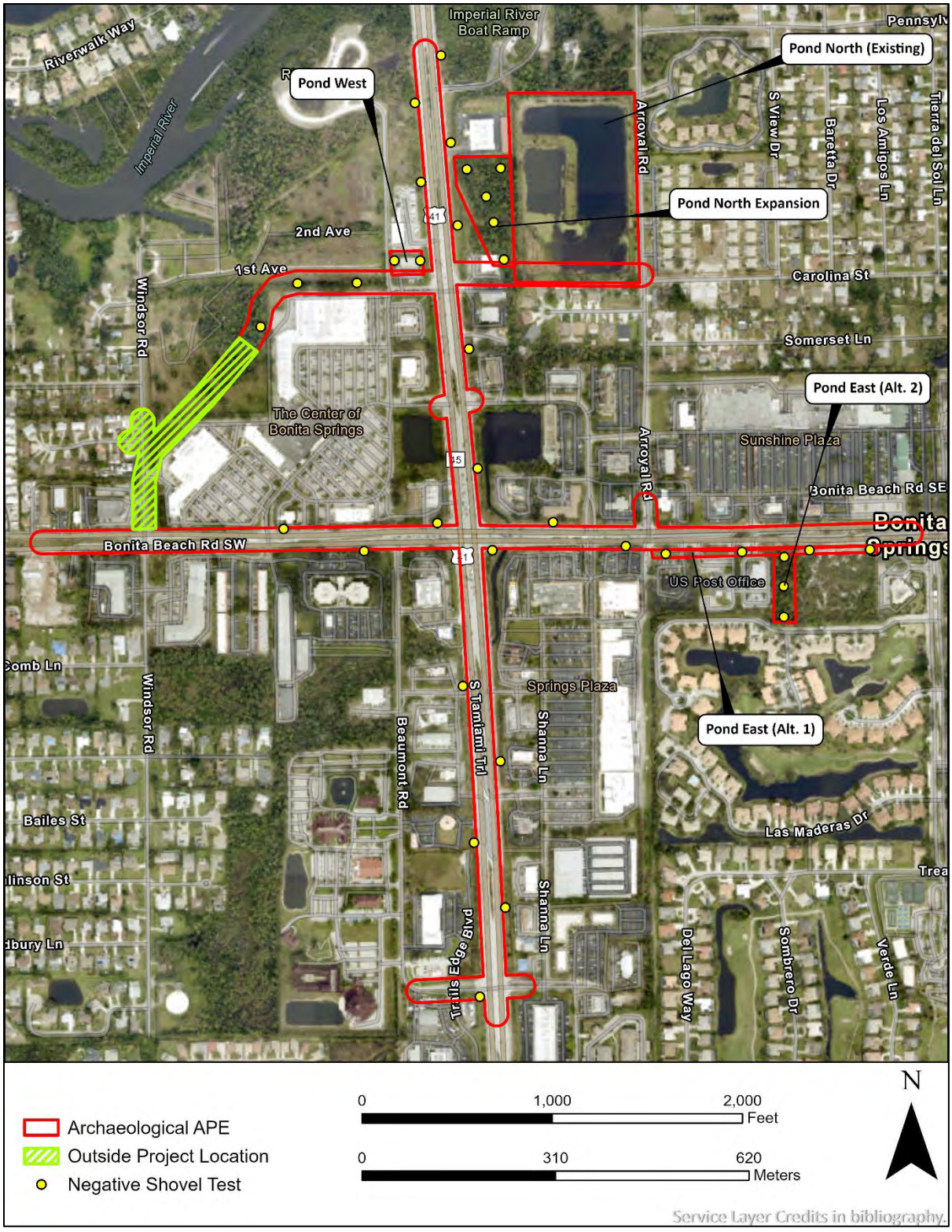

Figure 5.1. Location of the shovel tests within the archaeological APE.

Photo 5.2. Example of stratigraphy in the Pond north Expansion with water intrusion at approximately 50 cm, facing north.

Photo 5.3. Example of stratigraphy along the US41/Bonita Beach Road ROW, facing north.

5.2 Historical/Architectural

Background research revealed that two historic resources (8LL01426 and 8LL02543) were previously recorded within the APE; however, both resources have been documented as destroyed within the FMSF. As a result of the historical/architectural field survey, four historic resources (8LL02984, 8LL02985, 8LL02986, 8LL02987) were newly identified, recorded, and evaluated within the APE (**Figure 5.2; Table 5.1**). These include three buildings (8LL02984, 8LL02985, and 8LL02986), constructed between ca. 1945 and 1975, and one linear resource (8LL02987). The buildings consist of two Commercial style buildings (8LL02984 and 8LL02985) and one Masonry Vernacular style building (8LL02986) that have been altered, lack sufficient architectural features, and

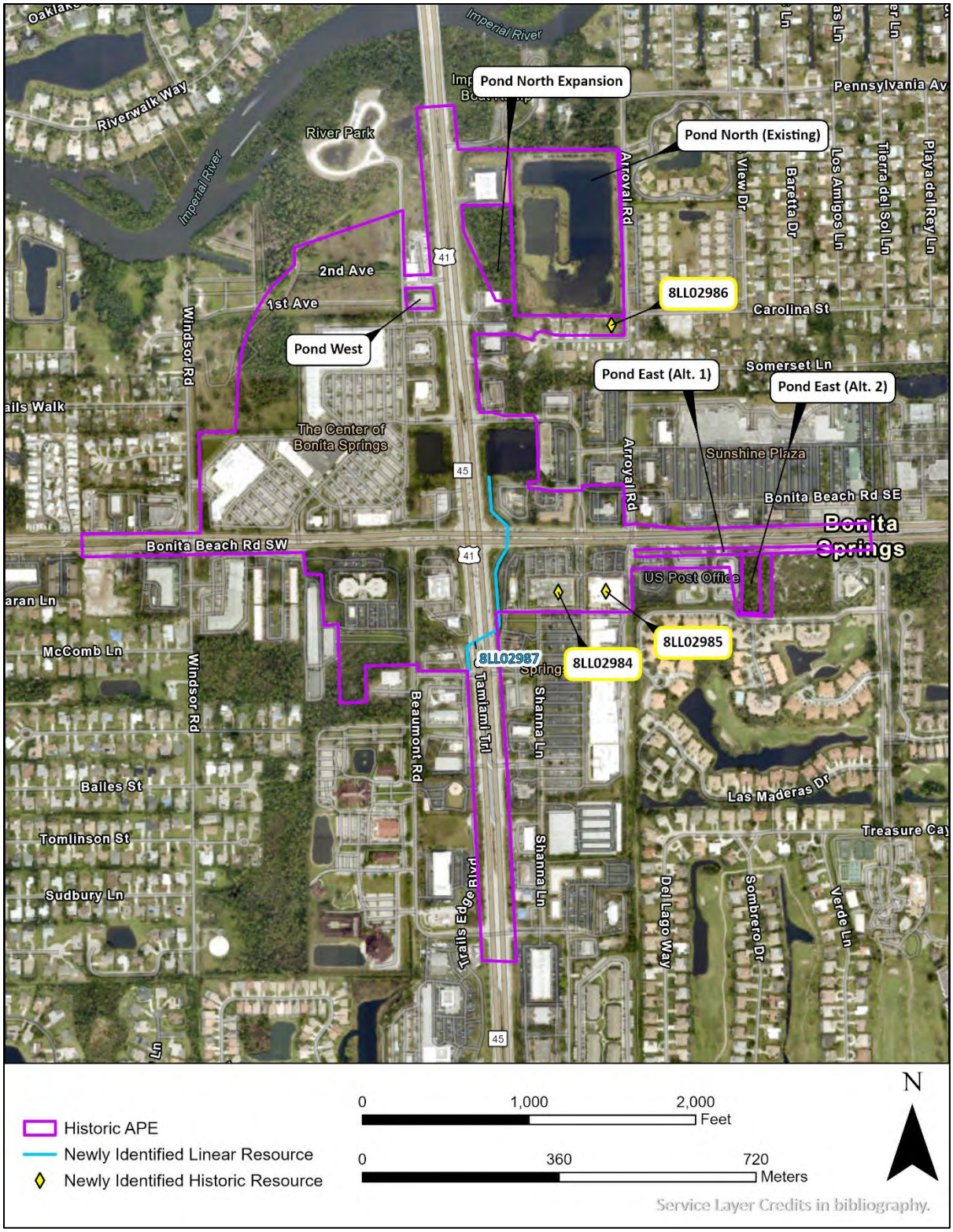

Figure 5.2. Location of extant historic resources within the historic APE.

are not significant embodiments of a type, period, or method of construction. The linear resource is an unnamed drainage ditch (8LL02987) that is a common example of a drainage canal found throughout Lee County and Florida and does not possess any unique engineering features. Background research did not reveal any historic associations with significant persons and/or events. Thus, these five historic resources do not appear eligible for listing in the NRHP, either individually or as a part of a historic district.

Descriptions and photographs of the newly identified historic resources follow, and copies of the FMSF forms are included in **Appendix B**. A reasonable and good faith effort was made per the regulations laid out in 36 CFR § 800.4(b)(1) (Advisory Council on Historic Preservation n.d.) to survey all areas of the APE.

Table 5.1. Newly recorded historic resources within the Bonita Beach Road APE.

FMSF No.	Address/Site Name	Year Built	Style/Type	NRHP Eligibility Recommendation
Structures				
8LL02984	8951 Bonita Beach Road SE (Bldg 1)	ca. 1973	Commercial	Ineligible
8LL02985	8951 Bonita Beach Road SE (Bldg 2)	ca. 1974	Commercial	Ineligible
8LL02986	27720 Arroyal Road	ca. 1945	Masonry Vernacular	Ineligible
Linear Resources				
8LL02987	Unnamed Drainage Canal	ca. 1975	Linear Resource	Ineligible

Photo 5.4. 8951 Bonita Beach Road SE (Bldg 1) (8LL02984), looking south.

8LL02984: The Commercial style building at 8951 Bonita Beach Road SE was constructed in ca. 1973 (**Photo 5.4**). The one-story, irregular plan building rests on a concrete slab foundation and has a concrete block structural system clad in stucco. The flat roof is covered with built-up roofing membrane, while a pyramidal projection is covered with Spanish tile. The main entryways are on the north, south, and east elevations through a single metal frame full view door with sidelights per retail unit and recessed beneath the principal roof. Visible windows include paired two-light metal fixed

units. Distinguishing architectural features include non-structural faux-mansard style Spanish tile parapets, arched fenestrations, stucco paneling, affixed signage, a parapet wall, and gooseneck lamps. The ca. 1973 building was originally attached to the adjacent building (8LL02985) which was an addition; however, the two buildings were separated during a ca. 1980s remodel. The central portion of the building was demolished to construct the roadway between the two resources. The remodel included the Mediterranean influences such as the Spanish tile parapet, pyramidal projection, and arched fenestrations. A flat roof addition was also constructed on the south elevation. Overall, the building has been altered, lacks sufficient architectural features, and is not a significant embodiment of a type, period, or method of construction. In addition, background research did not reveal any historic associations with significant persons and/or events. As a result, 8LL02984 does not appear eligible for listing in the NRHP, either individually or as part of a historic district.

Photo 5.5. 8951 Bonita Beach Road SE (Bldg 2) (8LL02985), looking south.

8LL02985: The Commercial style building at 8951 Bonita Beach Road SE was constructed in ca. 1974 (**Photo 5.5**). The one-story, irregular plan building rests on a concrete slab foundation and has a concrete block structural system clad in stucco. The flat roof is covered with built-up roofing membrane, while the pyramidal roofs and shed roof segments are covered with Spanish tile. The main entryways are on the north and west elevation through single and double metal frame full view doors with sidelights per retail unit and located beneath the shed roof. Visible windows include a mixture of paired and grouped (3), two-light metal fixed units. Distinguishing architectural features include decorative stucco parapets with affixed signage, a faux bell tower with eave brackets and arched openings, canvas awnings, and stucco paneling. The ca. 1974 building was originally an addition to the adjacent building (8LL02984); however, the two buildings were separated during a ca. 1980s remodel. The central portion of the building was demolished to construct the roadway between the two resources. The remodel included the Mediterranean influences such as the parapets, pyramidal roofs, faux bell tower with eave brackets and arched openings, Spanish tile, and stucco paneling. Overall, the building has been altered, lacks sufficient architectural features, and is not a significant embodiment of a type, period, or method of construction. In addition, background research did not reveal any historic associations with significant persons and/or events. As a result, 8LL02985 does not appear eligible for listing in the NRHP, either individually or as part of a historic district.

Photo 5.6. 27720 Arroyal Road (8LL02986), looking west.

8LL02986: The Masonry Vernacular style building at 27720 Arroyal Road was constructed in ca. 1945 (**Photo 5.6**). The one-story, irregular plan building rests on a continuous concrete block foundation and has a concrete block structural system clad in stucco and board and batten style wood siding. The hip roof is covered with composition shingles, as is the shed roof addition. The main entryway is on the north elevation; however, it is not visible from the public ROW. A partial width incised porch beneath the principal roof is located on the northeast corner of the building and is lined with jalousie windows and knee walls covered with board and batten style siding. Visible windows include a mixture of paired three-stacked and four-stacked metal awning units; paired two-light metal casement units; grouped (6) 10-stacked metal jalousie units. Distinguishing architectural features include minimal eave overhang with boxed rafter tails. Alterations include replacement roofing, siding, and windows. A shed roof addition is located on the south end of the west elevation. A non-historic utility shed is located to the west of the building. The north and east elevations of the resource are obscured by vegetation. Overall, the building has been altered, lacks sufficient architectural features, and is not a significant embodiment of a type, period, or method of construction. In addition, background research did not reveal any historic associations with significant persons and/or events. As a result, 8LL02986 does not appear eligible for listing in the NRHP, either individually or as part of a historic district.

Photo 5.7. Unnamed Drainage Canal (8LL02987), looking south.

8LL02987: The Unnamed Drainage Canal is located within Section 33 of Township 47 South, Range 25 East and Section 4 of Township 48S, Range 25 East (USGS 1958) (**Photo 5.7**). The segment is approximately 0.25 miles long and spans from a retention pond in the northeast quadrant of the US 41 and Bonita Beach Road intersection, under Bonita Beach Road into the southeast quadrant, and under US 41 into the southwest quadrant. The Unnamed Drainage Canal was constructed in ca. 1975 during the construction of the Bonita Bypass (US 41) which was built upon a segment of undeveloped wetlands in this location (FDOT 1975). At the widest point the canal is approximately 38 ft wide. The shallow earthen banking is covered with grass and landscaped. Overall, the linear resource is a common example of a drainage canal found throughout Lee County and Florida as a whole, lacks unique design and engineering features, and background research did not reveal any historic associations with significant persons and/or events. As a result, 8LL02987 does not appear eligible for listing in the NRHP, either individually or as part of a historic district.

5.3 Conclusions

Given the results of background research and field survey, including the excavation of 35 shovel tests, no prehistoric or historic archaeological sites were discovered. As a result of the historical/architectural field survey, four historic resources (8LL02984, 8LL02985, 8LL02986, 8LL02987) were newly identified, recorded, and evaluated within the APE. Overall, the newly identified historic resources have been altered, lack sufficient architectural or engineering features, and are not significant embodiments of a type, period, or method of construction. The linear resource is a common example of a drainage canal found throughout Lee County and Florida. Thus, the resources do not appear eligible for listing in the NRHP, either individually or as a part of a historic district. Based on the results of the background research and field investigations, no archaeological sites or historic resources that are listed, determined eligible, or that appear potentially eligible for listing in the NRHP were located within the APE. Therefore, it is the professional opinion of ACI that the proposed undertaking will result in no historic properties affected.

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APPENDIX A

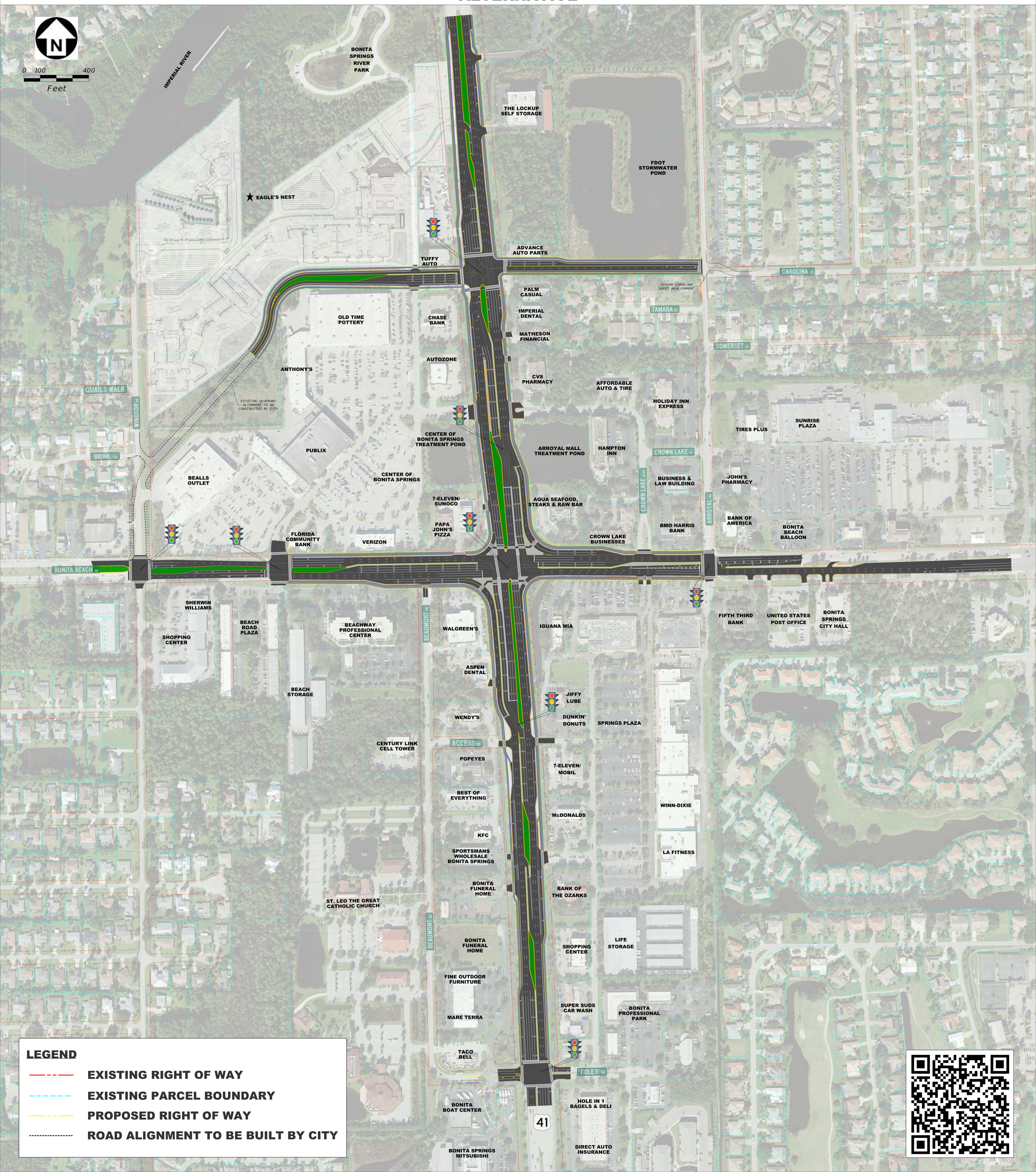
Proposed Plan Board

US 41 at the Intersection of Bonita Beach Road (CR 865)

PROJECT DEVELOPMENT & ENVIRONMENT (PD&E) STUDY
Bonita Springs, Florida

Financial Project ID: 444321-1

PARTIAL DISPLACED LEFT TURN ALTERNATIVE



APPENDIX B

Florida Master Site File Forms

☒ Original
☐ Update

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 5.0 3/19

Site#8 LL02984
Field Date 9-21-2023
Form Date 10-10-2023
Recorder # _____

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) 8951 Bonita Beach Road SE (Bldg 1) Multiple Listing (DHR only) _____
Survey Project Name CRAS US 41 at Bonita Beach Road PD&E, Lee County 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

Street Number	Direction	Street Name	Street Type	Suffix Direction
8951		Bonita Beach	Road	SE

Address:
Cross Streets (nearest / between) _____
USGS 7.5 Map Name BONITA SPRINGS USGS Date 1958 Plat or Other Map _____
City / Town (within 3 miles) Bonita Springs In City Limits? ☐yes ☐no ☒unknown County Lee
Township 48S Range 25E Section 4 ¼ section: ☐NW ☐SW ☐SE ☐NE Irregular-name: _____
Tax Parcel # 04-48-25-B2-37000.0050 Landgrant _____
Subdivision Name _____ Block _____ Lot _____
UTM Coordinates: Zone ☐16 ☒17 Easting 419729 Northing 2912453
Other Coordinates: X: _____ Y: _____ Coordinate System & Datum _____
Name of Public Tract (e.g., park) _____

HISTORY

Construction Year: 1973 ☐approximately ☐year listed or earlier ☒year listed or later
Original Use Shopping center/Mall From (year): 1973 To (year): CURR
Current Use _____ From (year): _____ To (year): _____
Other Use _____ From (year): _____ To (year): _____
Moves: ☐yes ☒no ☐unknown Date: _____ Original address _____
Alterations: ☒yes ☐no ☐unknown Date: _____ Nature Roofing, siding, windows, remodel
Additions: ☒yes ☐no ☐unknown Date: _____ Nature See narrative description.
Architect (last name first): _____ Builder (last name first): _____
Ownership History (especially original owner, dates, profession, etc.)

G&I VIII Springs Plaza LLC (2014); Springs Plaza Assoc. (1985); Charles Johnson (1980); Shelly & R.A. Lawhon

Is the Resource Affected by a Local Preservation Ordinance? ☐yes ☐no ☒unknown Describe _____

DESCRIPTION

Style Commercial Exterior Plan Irregular Number of Stories 1
Exterior Fabric(s) 1. Stucco 2. _____ 3. _____
Roof Type(s) 1. Flat 2. Pyramid 3. _____
Roof Material(s) 1. Built-up 2. Spanish tile 3. _____
Roof secondary strucs. (dormers etc.) 1. _____ 2. _____
Windows (types, materials, etc.)

Fixed, metal, paired, 2-light

Distinguishing Architectural Features (exterior or interior ornaments)

Non-structural faux-mansard style Spanish tile parapet, arched fenestrations, stucco paneling, affixed signage, parapet wall, gooseneck lamps

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)

ca. 1974 Commercial building (8LL02985) that was originally an addition to 8LL02984 but separated during ca. 1980s remodel

DHR USE ONLY	OFFICIAL EVALUATION	DHR USE ONLY
NR List Date _____ ☐Owner Objection	SHPO – Appears to meet criteria for NR listing: ☐yes ☐no ☐insufficient info Date _____ Init._____ KEEPER – Determined eligible: ☐yes ☐no Date _____ NR Criteria for Evaluation: ☐a ☐b ☐c ☐d (see *National Register Bulletin 15*, p. 2)	

Florida Master Site File / Div. of Historical Resources / R. A. Gray Bldg / 500 S Bronough St., Tallahassee, FL 32399-0250
Phone 850.245.6440 / Fax 850.245.6439 / E-mail SiteFile@dos.myflorida.com

HISTORICAL STRUCTURE FORM

Site # 8 LL02984

DESCRIPTION (continued)

Chimney: No.____ Chimney Material(s): 1. _____ 2. _____
Structural System(s): 1. Concrete block 2. _____ 3. _____
Foundation Type(s): 1. Slab 2. _____
Foundation Material(s): 1. Concrete, Generic 2. _____
Main Entrance (stylistic details)

N, S, & E ELEV: single metal frame full view door w/ sidelights (per retail unit), recessed beneath the principal roof

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

Condition (overall resource condition): ☐excellent ☒good ☐fair ☐deteriorated ☐ruinous
Narrative Description of Resource

A one-story Commercial style shopping center that was remodeled w/ a Mediterranean influence during the ca. 1980s. 8LL02985 was an addition to the resource but the central portion of the bldg was demolished for a roadway & is now a separate bldg.

Archaeological Remains _____ ☐Check if Archaeological Form Completed

RESEARCH METHODS (select all that apply)

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

☒other methods (describe) USDA historic aerial photographs (PALMM)
Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)

Publication of Archival Library and Museum Materials (PALMM), accessible online at: http://palmm.fcla.edu/

OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually? ☐yes ☒no ☐insufficient information
Appears to meet the criteria for National Register listing as part of a district? ☐yes ☒no ☐insufficient information
Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)

The building is not a significant embodiment of a type, period, or method of construction; and has no known significant historic associations.

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 Archaeological Consultants Inc
Document description Files, photos, research, documen File or accession #'s P20011

2) Document type _____ Maintaining organization _____
Document description _____ File or accession #'s _____

RECORDER INFORMATION

Recorder Name Savannah Y. Finch Affiliation Archaeological Consultants Inc
Recorder Contact Information 8110 Blaikie Court, Ste. A / Sarasota, FL/ 34240 /aciflorida@comcast.net
(address / phone / fax / e-mail)

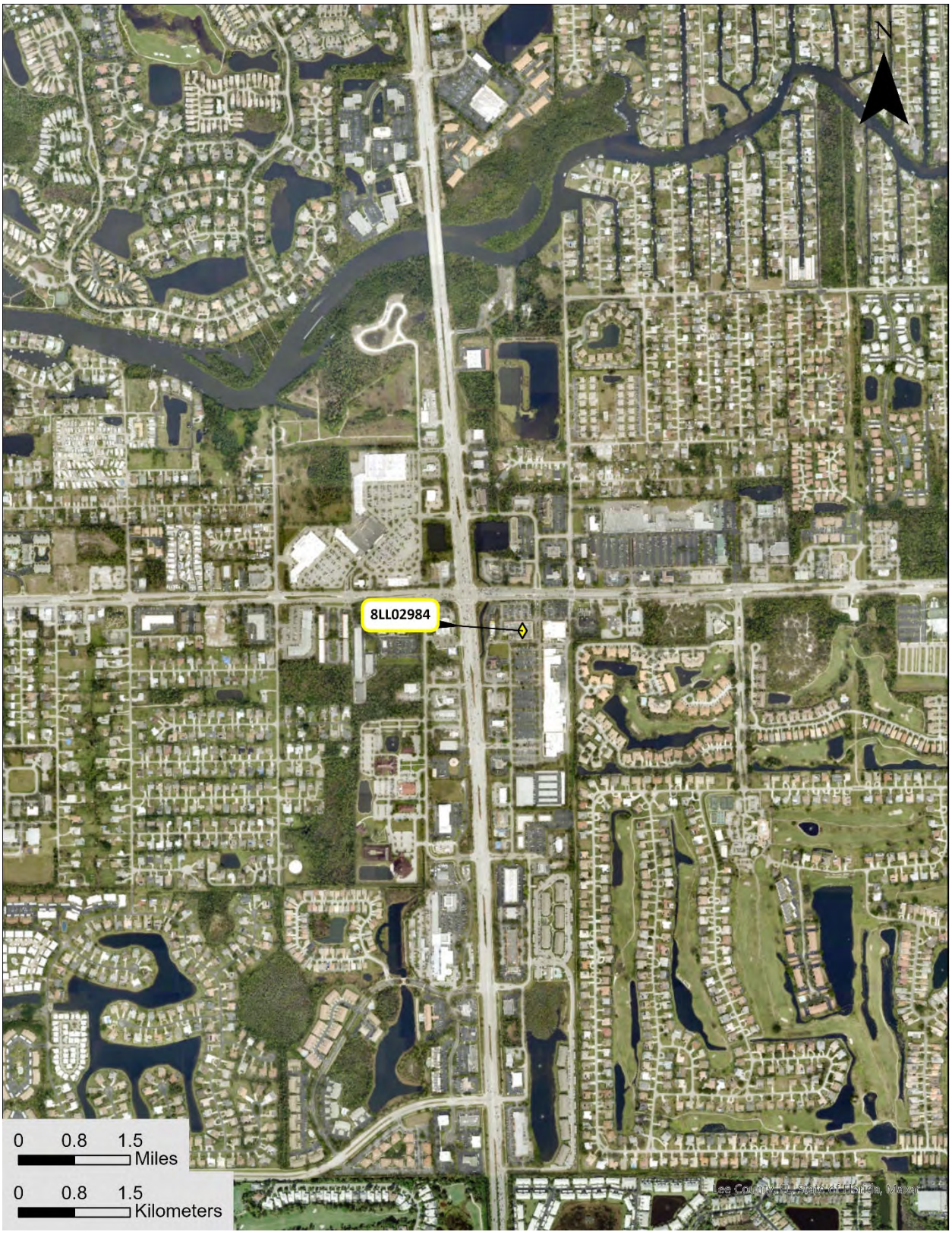
Required Attachments

❶ USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
❷ LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
❸ 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.

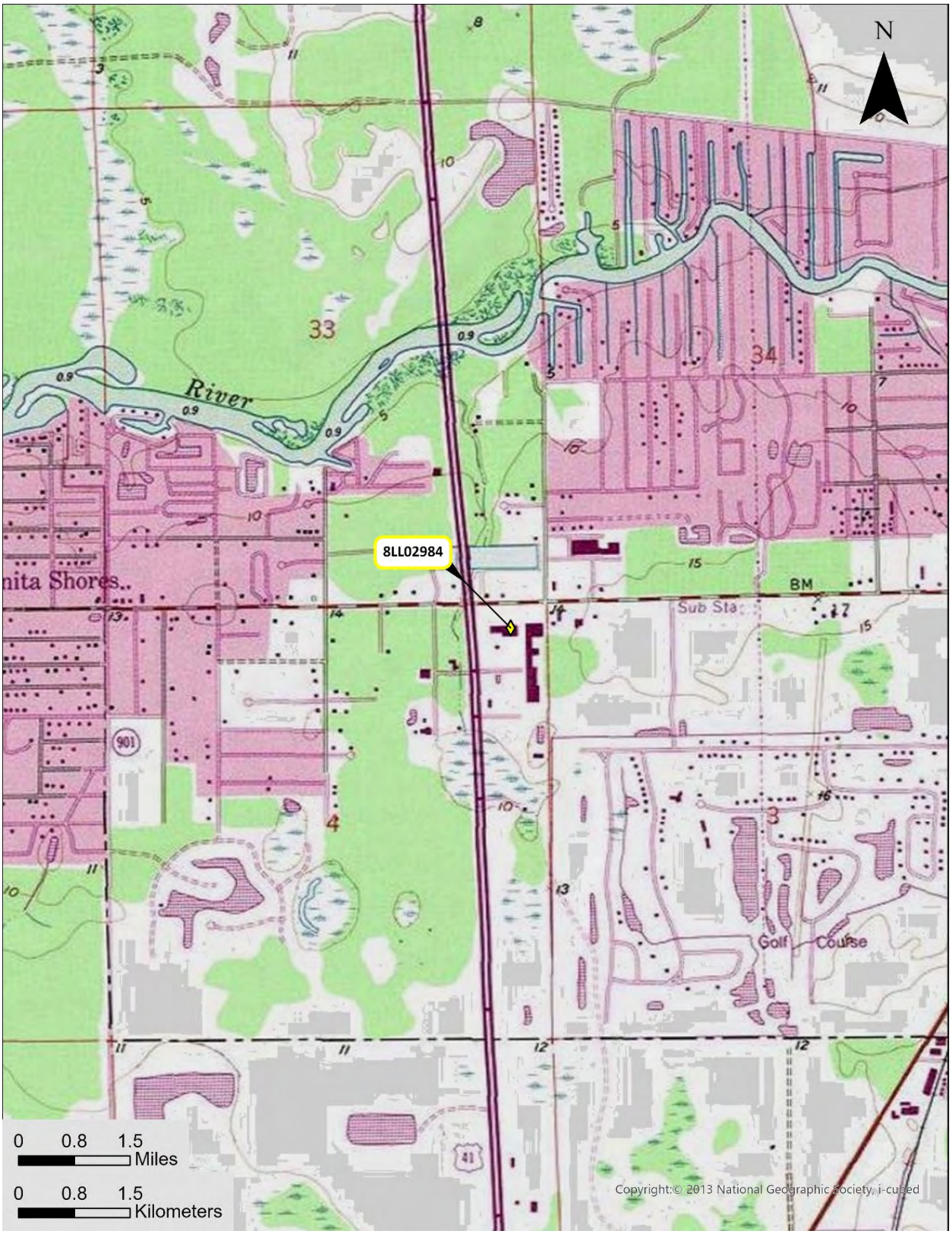
PHOTOGRAPHS


HAIR

AERIAL MAP



USGS Bonita Springs
Township 48 South, Range 25 East, Section 4



☒ Original
☐ Update

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 5.0 3/19

Site#8 LL02985
Field Date 9-21-2023
Form Date 10-10-2023
Recorder # _____

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) 8951 Bonita Beach Road SE (Bldg 2) Multiple Listing (DHR only) _____
Survey Project Name CRAS US 41 at Bonita Beach Road PD&E, Lee County 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

Street Number	Direction	Street Name	Street Type	Suffix Direction
8951		Bonita Beach	Road	SE

Address:
Cross Streets (nearest / between) _____
USGS 7.5 Map Name BONITA SPRINGS USGS Date 1958 Plat or Other Map _____
City / Town (within 3 miles) Bonita Springs In City Limits? ☐yes ☐no ☒unknown County Lee
Township 48S Range 25E Section 4 ¼ section: ☐NW ☐SW ☐SE ☐NE Irregular-name: _____
Tax Parcel # 04-48-25-B2-37000.0050 Landgrant _____
Subdivision Name _____ Block _____ Lot _____
UTM Coordinates: Zone ☐16 ☒17 Easting 419816 Northing 2912454
Other Coordinates: X: _____ Y: _____ Coordinate System & Datum _____
Name of Public Tract (e.g., park) _____

HISTORY

Construction Year: 1974 ☐approximately ☐year listed or earlier ☒year listed or later
Original Use Shopping center/Mall From (year): 1974 To (year): CURR
Current Use _____ From (year): _____ To (year): _____
Other Use _____ From (year): _____ To (year): _____
Moves: ☐yes ☒no ☐unknown Date: _____ Original address _____
Alterations: ☒yes ☐no ☐unknown Date: _____ Nature Roofing, siding, windows, remodel
Additions: ☐yes ☒no ☐unknown Date: _____ Nature _____
Architect (last name first): _____ Builder (last name first): _____
Ownership History (especially original owner, dates, profession, etc.)

G&I VIII Springs Plaza LLC (2014); Springs Plaza Assoc. (1985); Charles Johnson (1980); Shelly & R.A. Lawhon

Is the Resource Affected by a Local Preservation Ordinance? ☐yes ☐no ☒unknown Describe _____

DESCRIPTION

Style Commercial Exterior Plan Irregular Number of Stories 1
Exterior Fabric(s) 1. Stucco 2. _____ 3. _____
Roof Type(s) 1. Flat 2. Pyramid 3. Shed
Roof Material(s) 1. Built-up 2. Spanish tile 3. _____
Roof secondary strucs. (dormers etc.) 1. _____ 2. _____
Windows (types, materials, etc.)

Fixed, metal, paired, grouped (3), 2-light

Distinguishing Architectural Features (exterior or interior ornaments)

Decorative stucco parapets w/ affixed signage, faux bell tower w/ eave brackets and arched openings, canvas awnings, stucco paneling

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)

ca. 1973 Commercial building (8LL02984) that was originally attached to 8LL02985 but separated during ca. 1980s remodel

DHR USE ONLY	OFFICIAL EVALUATION	DHR USE ONLY
NR List Date _____ ☐Owner Objection	SHPO – Appears to meet criteria for NR listing: ☐yes ☐no ☐insufficient info Date _____ Init._____ KEEPER – Determined eligible: ☐yes ☐no Date _____ NR Criteria for Evaluation: ☐a ☐b ☐c ☐d (see *National Register Bulletin 15*, p. 2)	

Florida Master Site File / Div. of Historical Resources / R. A. Gray Bldg / 500 S Bronough St., Tallahassee, FL 32399-0250
Phone 850.245.6440 / Fax 850.245.6439 / E-mail SiteFile@dos.myflorida.com

HISTORICAL STRUCTURE FORM

Site # 8 LL02985

DESCRIPTION (continued)

Chimney: No. 0 Chimney Material(s): 1. _____ 2. _____
Structural System(s): 1. Concrete block 2. _____ 3. _____
Foundation Type(s): 1. Slab 2. _____
Foundation Material(s): 1. Concrete, Generic 2. _____
Main Entrance (stylistic details)

N & W ELEV: single or double metal frame full view doors w/ sidelights (per retail unit), beneath a shed roof

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

Condition (overall resource condition): ☐excellent ☒good ☐fair ☐deteriorated ☐ruinous
Narrative Description of Resource

A one-story Commercial style shopping center that was remodeled w/ a Mediterranean influence during the ca. 1980s. The building was originally part of 8LL02984 but the central portion of the bldg was demolished for a roadway.

Archaeological Remains _____ ☐Check if Archaeological Form Completed

RESEARCH METHODS (select all that apply)

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

☒other methods (describe) USDA historic aerial photographs (PALMM)
Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)

Publication of Archival Library and Museum Materials (PALMM), accessible online at: http://palmm.fcla.edu/

OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually? ☐yes ☒no ☐insufficient information
Appears to meet the criteria for National Register listing as part of a district? ☐yes ☒no ☐insufficient information
Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)

The building is not a significant embodiment of a type, period, or method of construction; and has no known significant historic associations.

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 Archaeological Consultants Inc
Document description Files, photos, research, documen File or accession #'s P20011

2) Document type _____ Maintaining organization _____
Document description _____ File or accession #'s _____

RECORDER INFORMATION

Recorder Name Savannah Y. Finch Affiliation Archaeological Consultants Inc
Recorder Contact Information 8110 Blaikie Court, Ste. A / Sarasota, FL/ 34240 /aciflorida@comcast.net
(address / phone / fax / e-mail)

Required Attachments

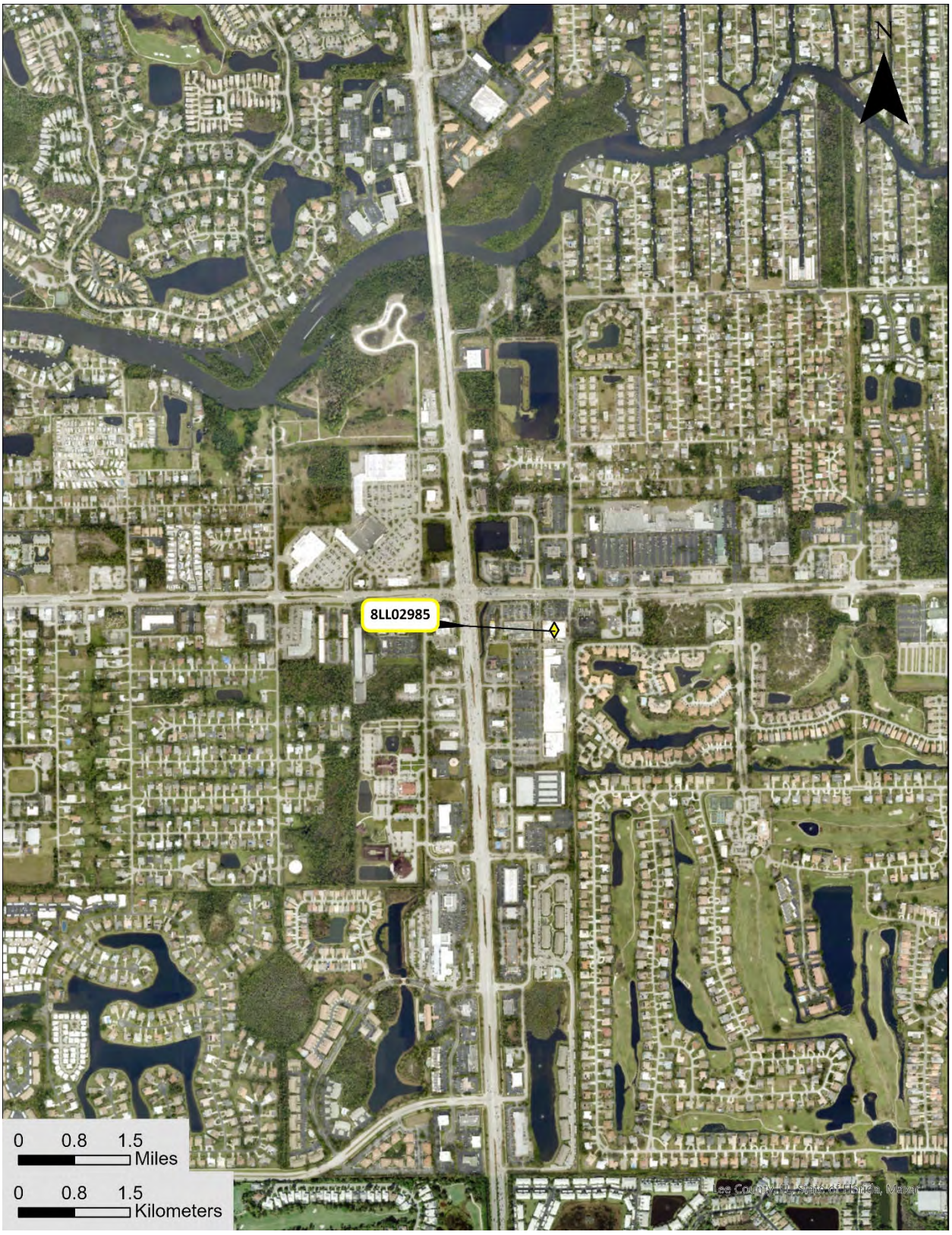
❶ USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
❷ LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
❸ PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE
When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable).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

PHOTOGRAPHS

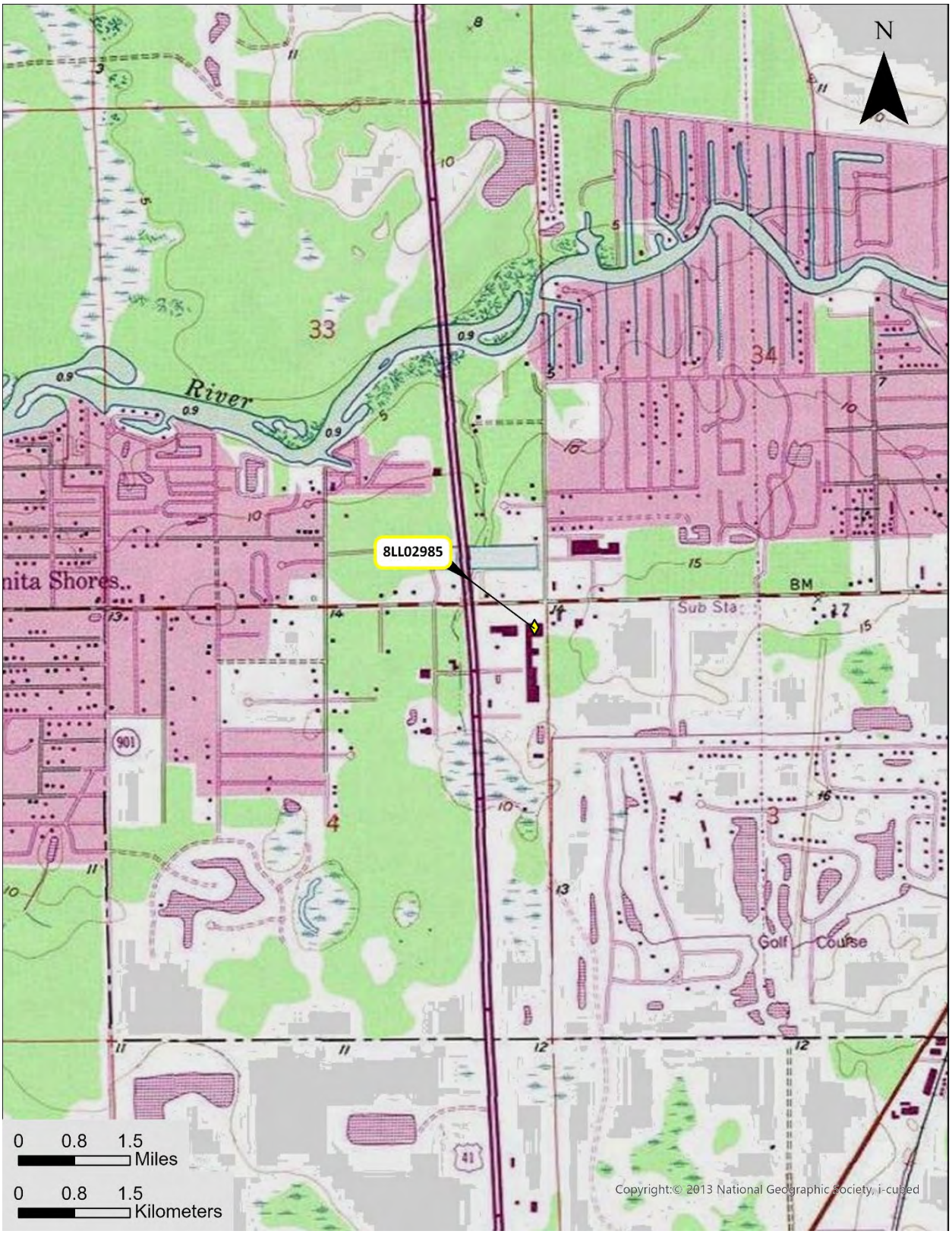

ALDI
The UPS Store


The UPS Store
UPS Store

AERIAL MAP



USGS Bonita Springs
Township 48 South, Range 25 East, Section 4



☒ Original
☐ Update

HISTORICAL STRUCTURE FORM
FLORIDA MASTER SITE FILE
Version 5.0 3/19

Site#8 LL02986
Field Date 9-21-2023
Form Date 10-10-2023
Recorder # _____

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) 27720 Arroyal Road Multiple Listing (DHR only) _____
Survey Project Name CRAS US 41 at Bonita Beach Road PD&E, Lee County 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

Street Number	Direction	Street Name	Street Type	Suffix Direction
27720		Arroyal	Road	

Address:
Cross Streets (nearest / between) _____
USGS 7.5 Map Name BONITA SPRINGS USGS Date 1958 Plat or Other Map PB 3 / PG 80
City / Town (within 3 miles) Bonita Springs In City Limits? ☐yes ☐no ☒unknown County Lee
Township 47S Range 25E Section 34 ¼ section: ☐NW ☐SW ☐SE ☐NE Irregular-name: _____
Tax Parcel # 33-47-25-B3-00272.0010 Landgrant _____
Subdivision Name Arroyal Block _____ Lot _____
UTM Coordinates: Zone ☐16 ☒17 Easting 419821 Northing 2912939
Other Coordinates: X: _____ Y: _____ Coordinate System & Datum _____
Name of Public Tract (e.g., park) _____

HISTORY

Construction Year: 1945 ☐approximately ☐year listed or earlier ☒year listed or later
Original Use Residence, private From (year): 1945 To (year): CURR
Current Use _____ From (year): _____ To (year): _____
Other Use _____ From (year): _____ To (year): _____
Moves: ☐yes ☒no ☐unknown Date: _____ Original address _____
Alterations: ☒yes ☐no ☐unknown Date: _____ Nature Roofing, siding, windows
Additions: ☒yes ☐no ☐unknown Date: _____ Nature Shed roof
Architect (last name first): _____ Builder (last name first): _____
Ownership History (especially original owner, dates, profession, etc.)

Daniel & Betsy Spearman (1999); Premier Exchange Corp. (1999); Valerie Nichols (1998); Charles & Patricia Adams (1977); Monique Laplante

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. Board and batten 3. _____
Roof Type(s) 1. Hip 2. _____ 3. _____
Roof Material(s) 1. Composition shingles 2. _____ 3. _____
Roof secondary strucs. (dormers etc.) 1. _____ 2. _____
Windows (types, materials, etc.)

Awning, metal, paired, 3-, 4-stacked; Casement, metal, paired, 2-light; Jalousie, metal, grouped (6), 10+ stacked

Distinguishing Architectural Features (exterior or interior ornaments)

Minimal eave overhang w/ boxed rafter tails

Ancillary Features / Outbuildings (record outbuildings, major landscape features; use continuation sheet if needed.)

Non-historic utility shed

DHR USE ONLY	OFFICIAL EVALUATION	DHR USE ONLY
NR List Date _____ ☐Owner Objection	SHPO – Appears to meet criteria for NR listing: ☐yes ☐no ☐insufficient info Date _____ Init._____ KEEPER – Determined eligible: ☐yes ☐no Date _____ NR Criteria for Evaluation: ☐a ☐b ☐c ☐d (see *National Register Bulletin 15*, p. 2)	

Florida Master Site File / Div. of Historical Resources / R. A. Gray Bldg / 500 S Bronough St., Tallahassee, FL 32399-0250
Phone 850.245.6440 / Fax 850.245.6439 / E-mail SiteFile@dos.myflorida.com

HISTORICAL STRUCTURE FORM

Site # 8 LL02986

DESCRIPTION (continued)

Chimney: No. 0 Chimney Material(s): 1. _____ 2. _____
Structural System(s): 1. Concrete block 2. _____ 3. _____
Foundation Type(s): 1. Continuous 2. _____
Foundation Material(s): 1. Concrete Block 2. _____
Main Entrance (stylistic details)

N ELEV: not visible from public R.O.W.

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

NE corner: incised, partial width, enclosed w/ jalousie windows and knee walls w/ board & batten style siding

Condition (overall resource condition): ☐excellent ☒good ☐fair ☐deteriorated ☐ruinous
Narrative Description of Resource

A one-story Masonry Vernacular style building w/ a shed roof addition on the W ELEV. The E & N ELEVs of the building are obscured by vegetation.

Archaeological Remains _____ ☐Check if Archaeological Form Completed

RESEARCH METHODS (select all that apply)

☒FMSF record search (sites/surveys) ☐library research ☐building permits ☐Sanborn maps
☐FL State Archives/photo collection ☐city directory ☐occupant/owner interview ☐plat maps
☒property appraiser / tax records ☐newspaper files ☐neighbor interview ☐Public Lands Survey (DEP)
☐cultural resource survey (CRAS) ☐historic photos ☐interior inspection ☐HABS/HAER record search
☒other methods (describe) USDA historic aerial photographs (PALMM)
Bibliographic References (give FMSF manuscript # if relevant, use continuation sheet if needed)

Publication of Archival Library and Museum Materials (PALMM), accessible online at: http://palmm.fcla.edu/

OPINION OF RESOURCE SIGNIFICANCE

Appears to meet the criteria for National Register listing individually? ☐yes ☒no ☐insufficient information
Appears to meet the criteria for National Register listing as part of a district? ☐yes ☒no ☐insufficient information
Explanation of Evaluation (required, whether significant or not; use separate sheet if needed)

The building is not a significant embodiment of a type, period, or method of construction; and has no known significant historic associations.

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 Archaeological Consultants Inc
Document description Files, photos, research, documen File or accession #'s P20011

2) Document type _____ Maintaining organization _____
Document description _____ File or accession #'s _____

RECORDER INFORMATION

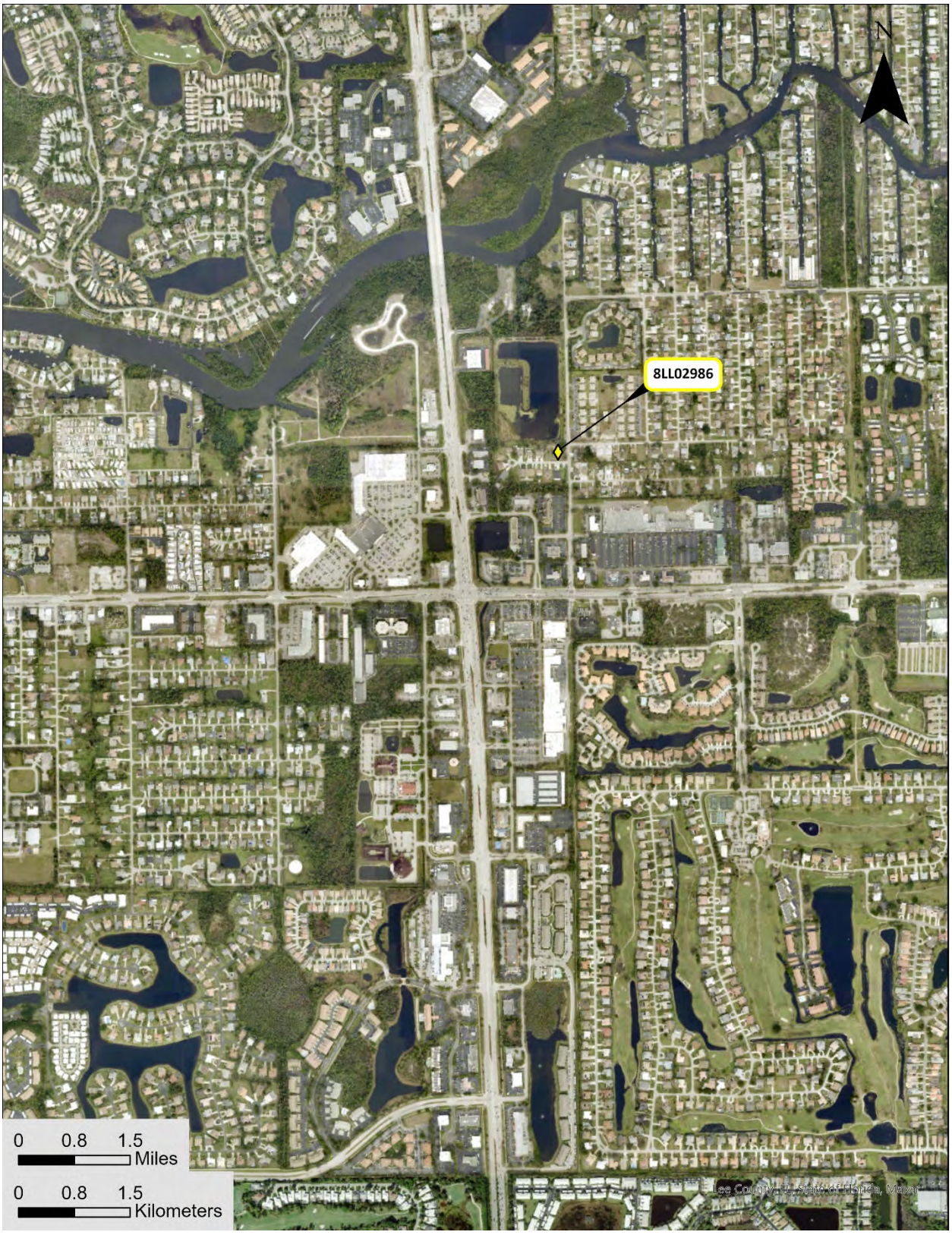
Recorder Name Savannah Y. Finch Affiliation Archaeological Consultants Inc
Recorder Contact Information 8110 Blaikie Court, Ste. A / Sarasota, FL/ 34240 /aciflorida@comcast.net
(address / phone / fax / e-mail)

Required Attachments

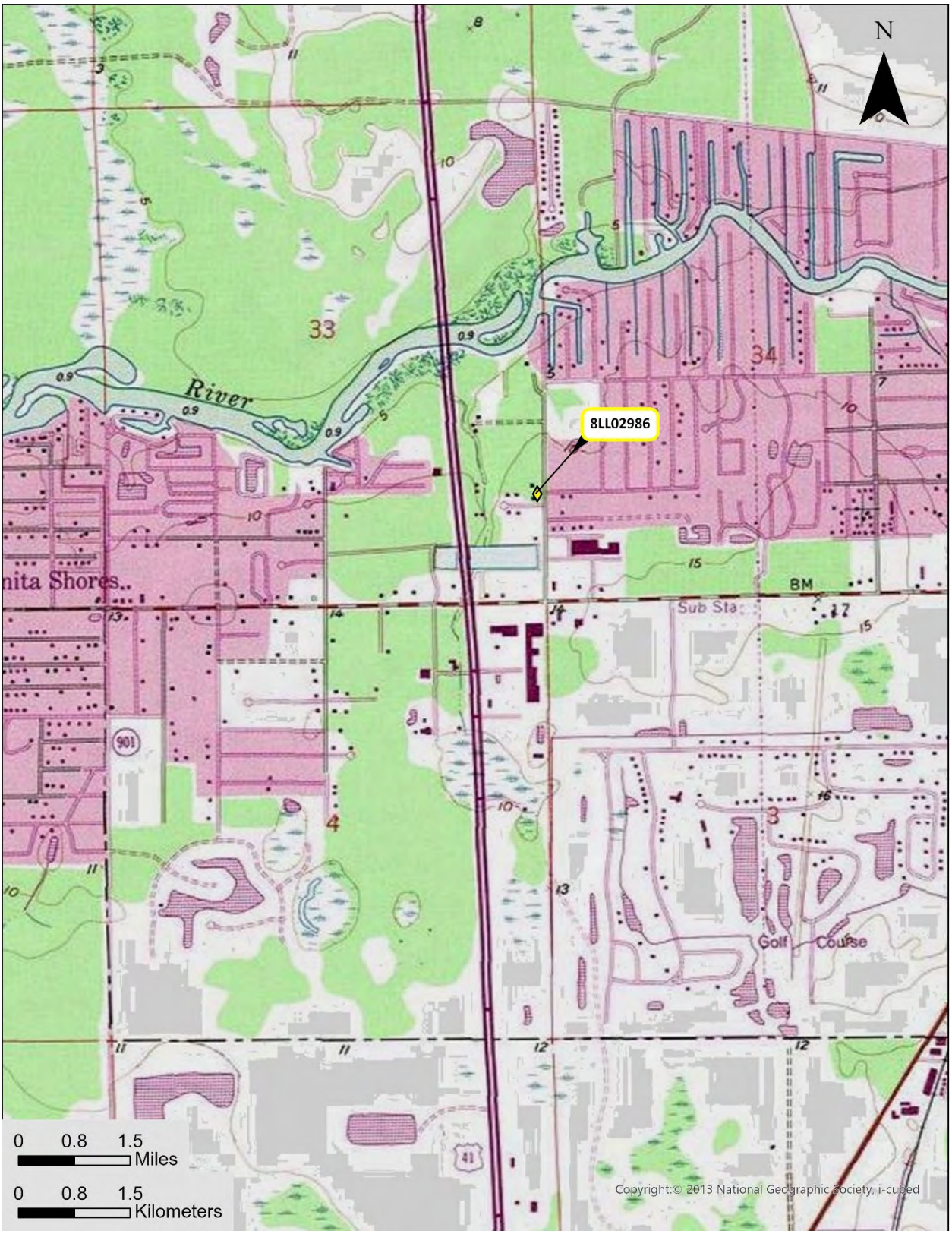
❶ USGS 7.5' MAP WITH STRUCTURE LOCATION CLEARLY INDICATED
❷ LARGE SCALE STREET, PLAT OR PARCEL MAP (available from most property appraiser web sites)
❸ PHOTO OF MAIN FACADE, DIGITAL IMAGE FILE
When submitting an image, it must be included in digital AND hard copy format (plain paper grayscale acceptable).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

PHOTOGRAPHS

AERIAL MAP



USGS Bonita Springs
Township 47 South, Range 25 East, Section 34



☒Original
☐Update

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

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

Site #8 LL02987
Field Date 9-21-2023
Form Date 10-10-2023
Recorder# _____

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 Unnamed Drainage Canal Multiple Listing [DHR only] _____
Project Name CRAS US 41 at Bonita Beach Road PD&E, Lee County 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) Bonita Springs In Current City Limits? ☐yes ☐no ☒unknown
County or Counties (do not abbreviate) Lee
Name of Public Tract (e.g., park)_____
1) Township 47S Range 25E Section 33 ¼ section: ☐NW ☐SW ☐SE ☐NE Irregular-name: _____
2) Township 48S Range 25E 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 BONITA SPRINGS USGS Date 1958
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)

A segment approximately 0.25 miles (1,329 feet) long spanning from a retention pond in the NE quadrant of the US 41 & Bonita Beach Road intersection, under Bonita Beach Road into the SE quadrant, and under US 41 into the SW quadrant.

DHR USE ONLY	OFFICIAL EVALUATION	DHR USE ONLY
NR List Date _____ ☐Owner Objection	SHPO – Appears to meet criteria for NR listing: ☐yes ☐no ☐insufficient info Date _____ Init._____ KEEPER – Determined eligible: ☐yes ☐no Date _____ NR Criteria for Evaluation: ☐a ☐b ☐c ☐d (see *National Register Bulletin 15*, p. 2)	

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Phone 850.245.6440 / Fax 850.245.6439 / E-mail SiteFile@dos.myflorida.com

RESOURCE GROUP FORM

Site #8 LL02987

HISTORY & DESCRIPTION

Construction Year: 1975 ☒approximately ☐year listed or earlier ☐year listed or later
Architect/Designer: _____ Builder: _____
Total number of individual resources included in this Resource Group: # of contributing _____ # of non-contributing _____
Time period(s) of significance (choose a period from the list or type in date range(s), e.g. *1895-1925*)
1. Modern (Post 1950) 3. _____
2. _____ 4. _____
Narrative Description (*National Register Bulletin 16A* pp. 33-34; attach supplementary sheets if needed)

The Unnamed Drainage Canal was constructed in ca. 1975 during the construction of the Bonita Bypass (US 41) which was built upon a segment of undeveloped wetlands (FDOT 1975). At the widest point, the canal is approx. 38 ft wide.

RESEARCH METHODS (check all that apply)

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

☒other methods (specify) USDA historic aerial photographs (PALMM)
Bibliographic References (give FMSF Manuscript # if relevant)

Publication of Archival Library and Museum Materials (PALMM), accessible online at: http://palmm.fcla.edu/; FDOT Aerial Photograph: 11-14-75, DOR-1771-15-02. APLUS, Tallahassee.

OPINION OF RESOURCE SIGNIFICANCE

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

The linear resource is a common example of a drainage canal found throughout FL and Lee County and it is not a significant embodiment of a type, period, or method of construction; and has no known significant historic associations.

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 Archaeological Consultants Inc
Document description Files, photos, research, documen File or accession #'s P20011

2) Document type _____ Maintaining organization _____
Document description _____ File or accession #'s _____

RECORDER INFORMATION

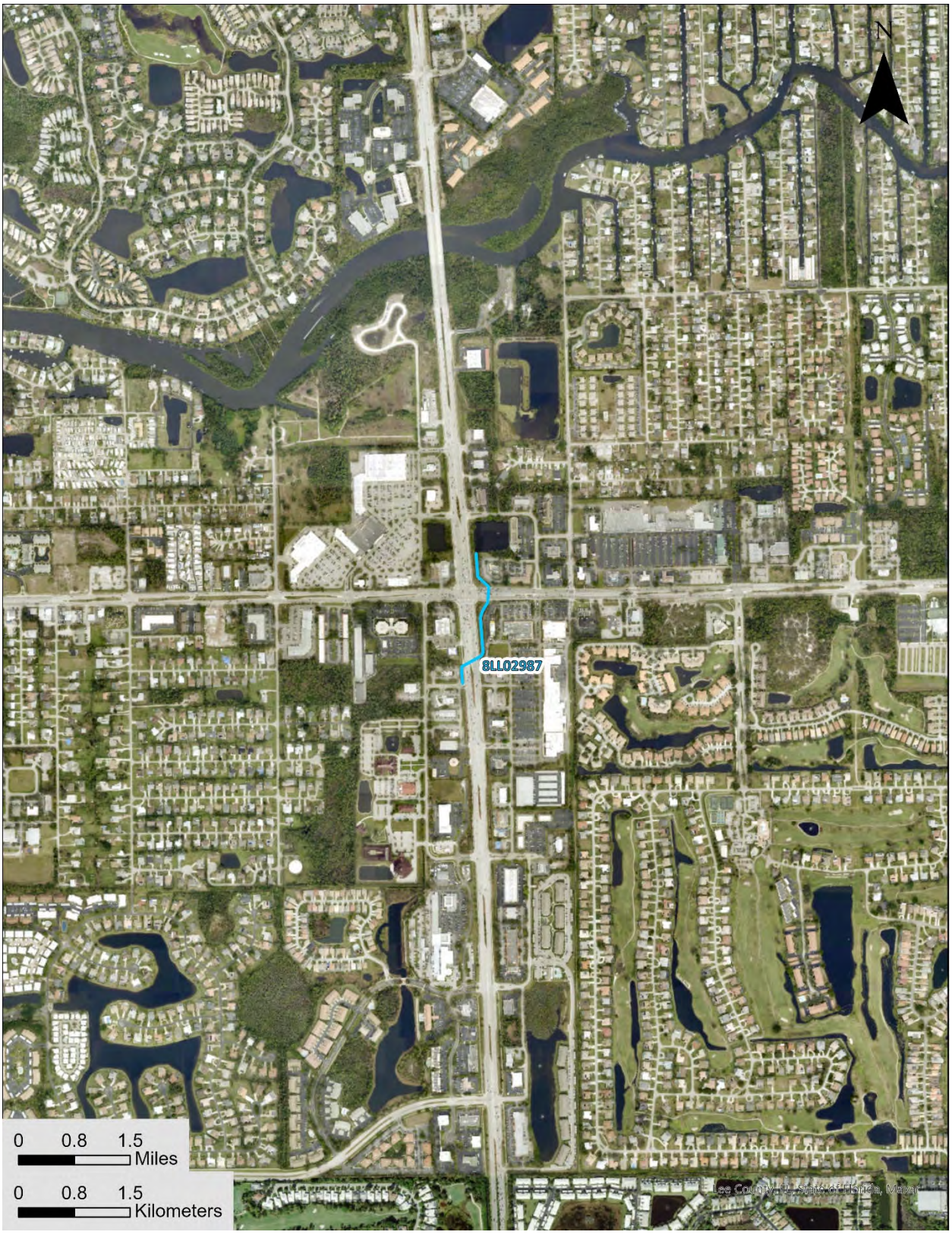
Recorder Name Savannah Y. Finch Affiliation Archaeological Consultants Inc
Recorder Contact Information 8110 Blaikie Court, Ste. A / Sarasota, FL/ 34240 /aciflorida@comcast.net
(address / phone / fax / e-mail)

Required Attachments

❶ PHOTOCOPY OF USGS 7.5' MAP WITH DISTRICT BOUNDARY CLEARLY MARKED
❷ LARGE SCALE STREET, PLAT OR PARCEL MAP WITH RESOURCES MAPPED & LABELED
❸ TABULATION OF ALL INCLUDED RESOURCES - Include name, FMSF #, contributing? Y/N, resource category, street address or other location information if no address.
❹ 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.

PHOTOGRAPHS

AERIAL MAP



USGS Bonita Springs
Township 47 South, Range 25 East, Section 33
Township 48 South, Range 25 East, Section 4

APPENDIX C

Survey Log Form

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)
CRAS, PD&E, US 41/CR 865 (Bonita Beach Road), Lee County

Report Title (exactly as on title page)
Cultural Resource Assessment Survey Project Development and Environment (PD&E) Study, US 41 at CR 865 (Bonita Beach Road) Intersection Improvement, Lee County, Florida; FPID No.: 444321-1-22-01 ETDM No.: 6291

Report Authors (as on title page) 1. ACI 3. _____ 2. _____ 4. _____

Publication Year 2023 **Number of Pages in Report** (do not include site forms) 76

Publication Information (Give series, number in series, publisher and city. For article or chapter, cite page numbers. Use the style of *American Antiquity*.)
ACI, Sarasota P20011 (2023)

Supervisors of Fieldwork (even if same as author) Names Lee Hutchinson

Affiliation of Fieldworkers: Organization Archaeological Consultants Inc City Sarasota

Key Words/Phrases (Don't use county name, or common words like *archaeology*, *structure*, *survey, architecture, etc.*)
1. ponds 3. _____ 5. _____ 7. _____
2. _____ 4. _____ 6. _____ 8. _____

Survey Sponsors (corporation, government unit, organization, or person funding fieldwork)
Name _____ Organization Florida Dept of Transportation - District 1
Address/Phone/E-mail 801 North Broadway Avenue Bartow, Florida 33830

Recorder of Log Sheet Crystal Perrelli **Date Log Sheet Completed** 10-6-2023

Is 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. Lee 3. _____ 5. _____
2. _____ 4. _____ 6. _____

USGS 1:24,000 Map Names/Year of Latest Revision (attach additional sheet if necessary)
1. Name BONITA SPRINGS Year 1973 4. Name _____ Year _____
2. Name _____ Year _____ 5. Name _____ Year _____
3. Name _____ Year _____ 6. Name _____ Year _____

Field Dates and Project Area Description

Fieldwork Dates: Start 9-19-2023 End 9-21-2023 **Total Area Surveyed** (fill in one) _____ hectares 59.40 acres
Number of Distinct Tracts or Areas Surveyed 1
If Corridor (fill in one for each) **Width:** _____ meters _____ feet **Length:** _____ kilometers 2.70 miles

Florida Master Site File / Div. of Historical Resources / R.A. Gray Bldg / 500 S Bronough St., Tallahassee, Florida 32399-0250
Phone 850.245.6440, Fax 850.245.6439, Email: SiteFile@dos.myflorida.com

Survey Log Sheet

Survey #_____

Research and Field Methods

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

Scope/Intensity/Procedures

Phase I, low to moderate probability,32 STs, STs at 100 m throughout the APE and Pond East Alt 1.; STs 50m in the remaining ponds, and judgmental in Pond West. Some STs precluded by water intrusion. STs 50 cm diameter X 100 cm deep. 1/4" screen

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	☒other historic maps	☐LIDAR
☐Florida Photo Archives (Gray Building)	☐library-special collection	☒newspaper files	☒soils maps or data	☐other remote sensing
☒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 (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, **un**controlled	☐water screen	☐soil resistivity	☐other remote sensing
☒shovel test-1/4"screen	☐posthole tests	☐magnetometer	☒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	☒windshield survey	☐occupant interview	☒tax records
☐interior documentation	☒local property records	☒occupation permits	☐unknown

☐other (describe): _____

Survey Results

Resource Significance Evaluated? ☒Yes ☐No

Count of Previously Recorded Resources 0 **Count of Newly Recorded Resources** 4

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

LL02984, LL02985, LL02986, LL02987

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

Site Forms Used: ☐Site File Paper Forms ☒Site File PDF Forms

REQUIRED: Attach Map of Survey or Project Area Boundary

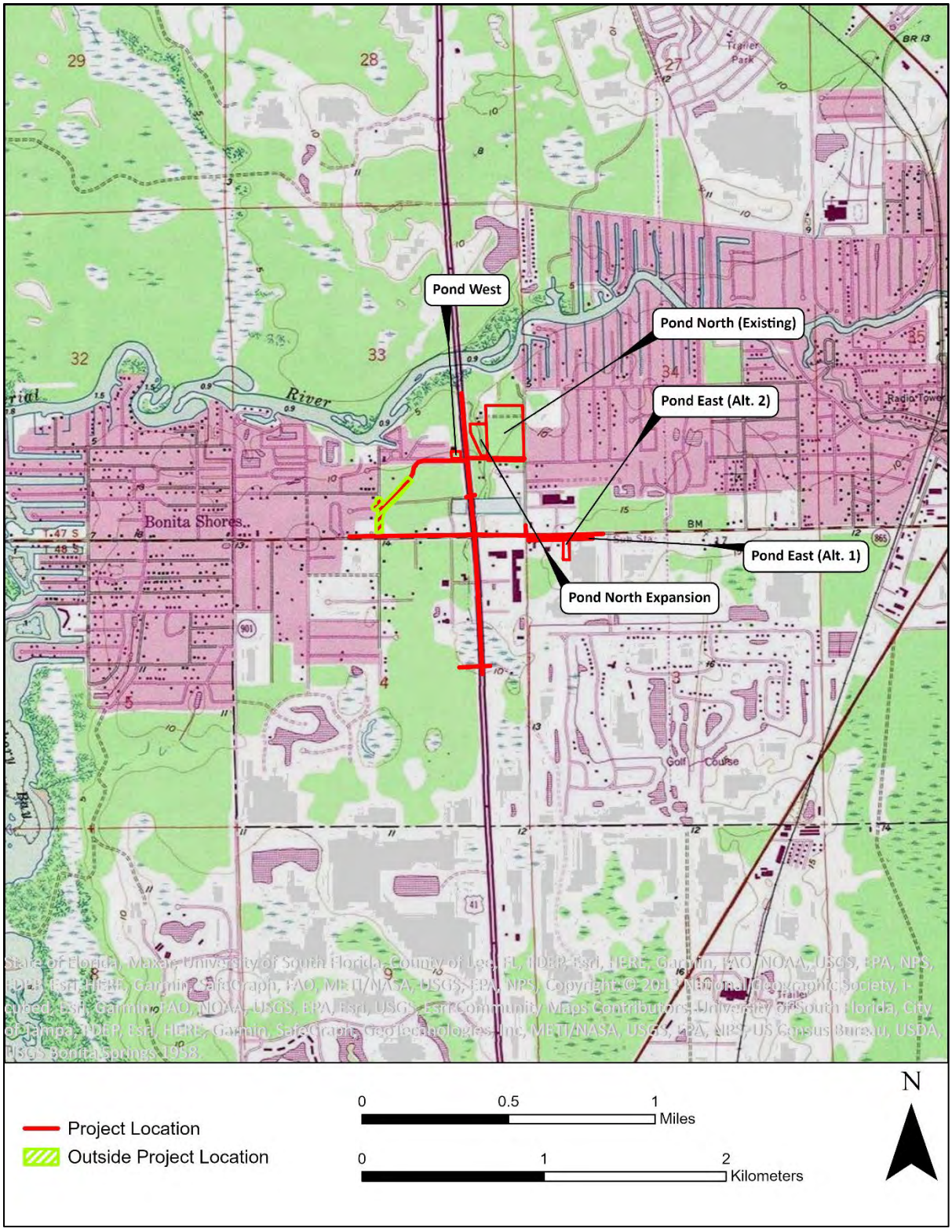
SHPO USE ONLY **SHPO USE ONLY** **SHPO USE ONLY**

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 Master Site File / Div. of Historical Resources / R.A. Gray Bldg / 500 S Bronough St., Tallahassee, Florida 32399-0250
Phone 850.245.6440, Fax 850.245.6439, Email: SiteFile@dos.myflorida.com



Cultural Resource Assessment Survey Township 47 South, Range 25 East, Sections 33 and 34 Township 48 South, Range 25 East, Sections 3 and 4 USGS Bonita Springs (1958)	**US 41 at CR 865 (Bonita Beach Road)** Intersection Improvements Lee County, Florida FPID No: 444321-1-22-01