CULTURAL RESOURCE ASSESSMENT SURVEY OF THE LARRY KIKER AND HIDDEN CYPRESS PRESERVES, LEE COUNTY, FLORIDA

Prepared for:

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Florida's First Choice in Cultural Resource Management

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March 2022

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March 2022

EXECUTIVE SUMMARY

Archaeological Consultants, Inc. (ACI) conducted a Cultural Resource Assessment Survey (CRAS) of the ±3922 acre Larry Kiker Preserve and the ±428 acre Hidden Cypress Preserve in Lee County, Florida for Kimley-Horn and Associates, Inc. The property is on the east side of I-75, south of Corkscrew Road. The project will involve the development of passive recreation facilities within the preserves. This will include interior looped vehicular roadways, fishing piers, interpretive center, campground, restrooms, parking lots, pavilions/shade structures, site amenities (e.g., benches, bike racks, kiosks, picnic tables, etc.), signage, and a multi-use trail network consisting of improved/unimproved trails and boardwalks. The survey, completed in February 2022, was conducted in anticipation of permitting requirements.

The purpose of this 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). As defined in *36 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 scale and nature of the activities, the project has a limited potential for any indirect (visual or audible) or cumulative effects outside the immediate footprint of construction. The APE is defined as the entire parcel. The survey was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966,* as amended, and its implementing regulations in *36 CRF Part 800: Protection of Historic Properties*. It also complies with the provisions contained in Chapter 267 and 373, *Florida Statutes (FS)*. It was conducted in conformity with the standards contained in the Florida Division of Historical Resources' (FDHR) *Cultural Resource Management Standards and Operational Manual* (FDHR 2003). In addition, this study meets the specifications set forth in Chapter 1A-46, *Florida Administrative Code*. The Principal Investigators meet the *Secretary of the Interior's Professional Qualification Standards* (48 FR 44716) for archaeology, history, architecture, architectural history, or historic architecture.

Background research and a review of the Florida Master Site File (FMSF) and the NRHP indicated that there are no recorded archaeological sites within the APE; four have been recorded within two miles. The APE was considered to have a low archaeological potential for archaeological sites based on the environmental setting. Field investigations included surface reconnaissance and the excavation of 523 shovel tests; no archaeological sites were identified.

Background research, including a review of the FMSF and the NRHP, revealed no previously recorded historic resources (50 years of age or more) within the APE. A review of the Lee County Property Appraiser's web site indicated that no historic resources are located within the parcel (Caldwell 2022). The historic aerial photographs and the quad maps revealed no structures within the APE (USDA 1944, 1953a, 1953b; USGS 1958a, 1958b). The absence of historic resources was confirmed by the field investigations.

Given the results of background research and field survey, including the excavation of 523 shovel tests, no archaeological sites or historic resources were discovered within the APE. As such, no cultural 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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1.0 INTRODUCTION

Archaeological Consultants, Inc. (ACI) conducted a Cultural Resource Assessment Survey (CRAS) of the ±3922 acre Larry Kiker Preserve the ±428 acre Hidden Cypress Preserve in Lee County, Florida for Kimley-Horn and Associates, Inc. The property is on the east side of I-75, south of Corkscrew Road (**Figure 1.1**). The project will involve the development of passive recreation facilities within the preserves. This will include interior looped vehicular roadways, fishing piers, interpretive center, campground, restrooms, parking lots, pavilions/shade structures, site amenities (e.g., benches, bike racks, kiosks, picnic tables, etc.), signage, and a multi-use trail network consisting of improved/unimproved trails and boardwalks. The survey, completed in February 2022, was conducted in anticipation of permitting requirements.

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Fieldwork was preceded by background research, which provided an informed set of expectations as to what types of resources might be present within the APE, as well as a regional reference in which to assess the potential significance of any sites discovered.

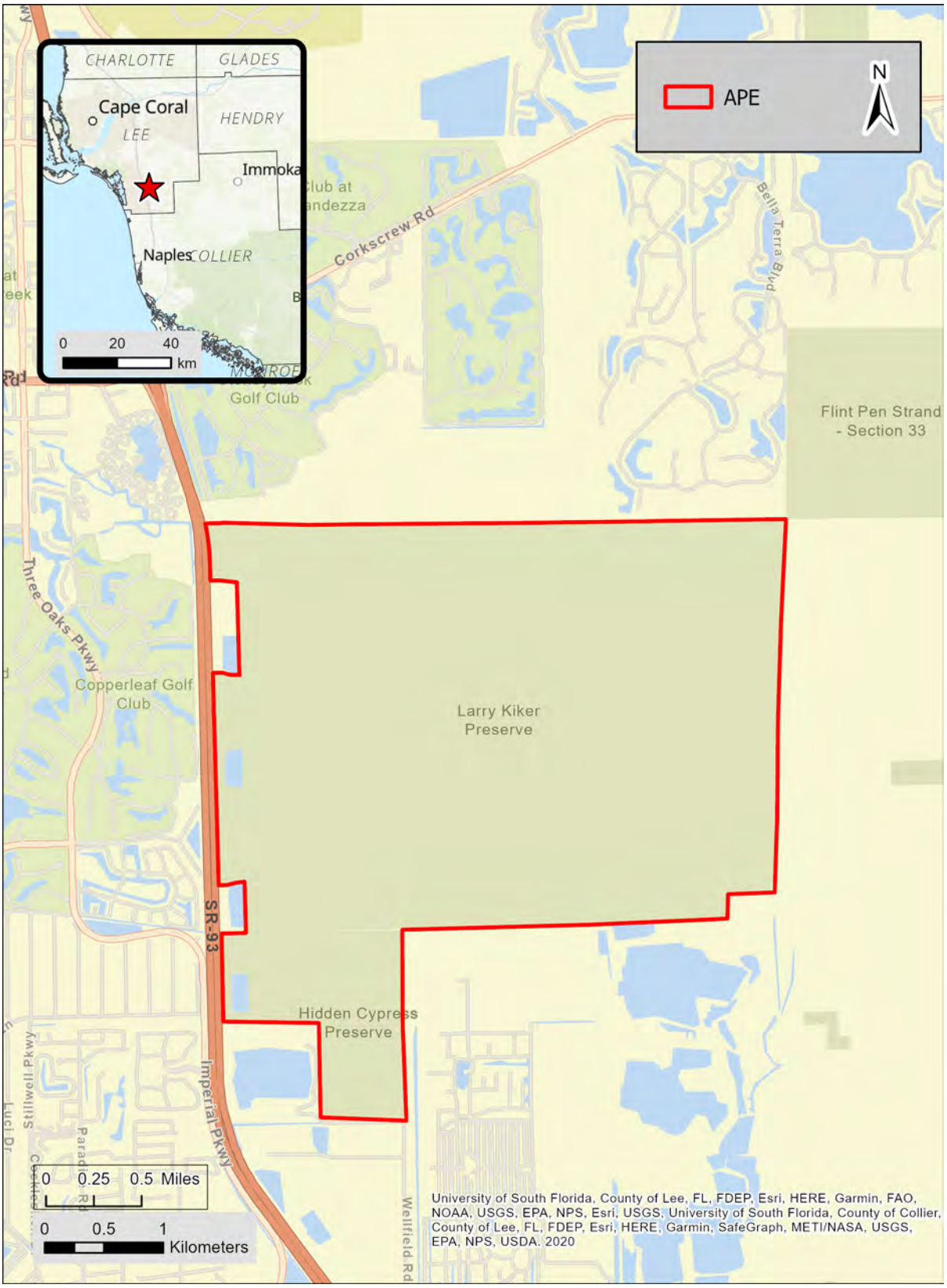

Figure 1.1. Location of the APE, Lee County.

2.0 ENVIRONMENTAL OVERVIEW

Environmental factors such as geology, topography, relative elevation, soils, vegetation, and water resources are important in determining where precontact and historic period archaeological sites are likely to be located. These variables influenced what types of resources were available for utilization in an area. This, in turn, influenced decisions regarding settlement location and land use patterns. Because of the influence of the local environmental factors upon the precontact period populations, a discussion of the effective environment is included.

2.1 Location and Setting

The APE is in Sections 1, 12, and 13 of Township 47 South, Range 25 East and Sections 5 and 8 of Township 47 South, Range 26 East (United States Geological Survey [USGS] Corkscrew NW and Estero 2013). The combined ±4350 acre Larry Kiker and Hidden Cypress Preserves are east of I-75 and south of Corkscrew Road (**Figure 2.1**). The Hidden Cypress Preserve portion of the APE is within the boundaries of the City of Bonita Springs. Some areas of the APE have been cleared for pasture (**Photo 2.1)**. Areas not cleared are commonly vegetated with cypress, pine, and/or melaleuca (**Photos 2.2 and 2.3**). Additionally, there are areas of pine and palmetto flats, and scattered areas of cabbage palm and hardwoods (**Photo 2.4**). Ponds (**Photo 2.5**) and areas flooded in the wet season are present. Disturbances include a powerline corridor and adjacent drainage areas, unpaved vehicle trails, and excavated ponds (**Photo 2.6**). Photo locations are shown on **Figure 2.2**.

Photo 2.1. Looking southeast at cattle pasture within APE.

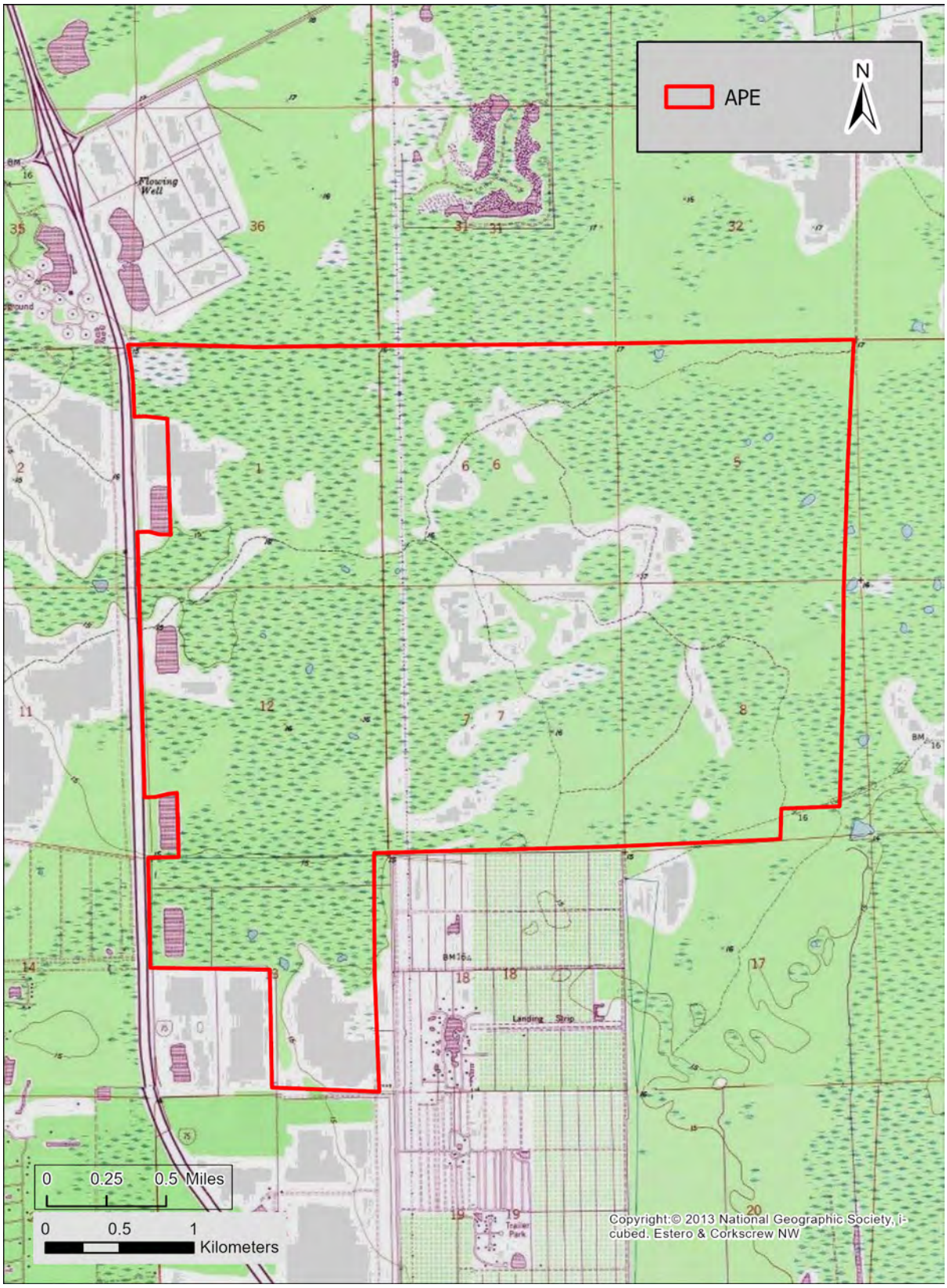

Figure 2.1. Environmental setting of the APE.

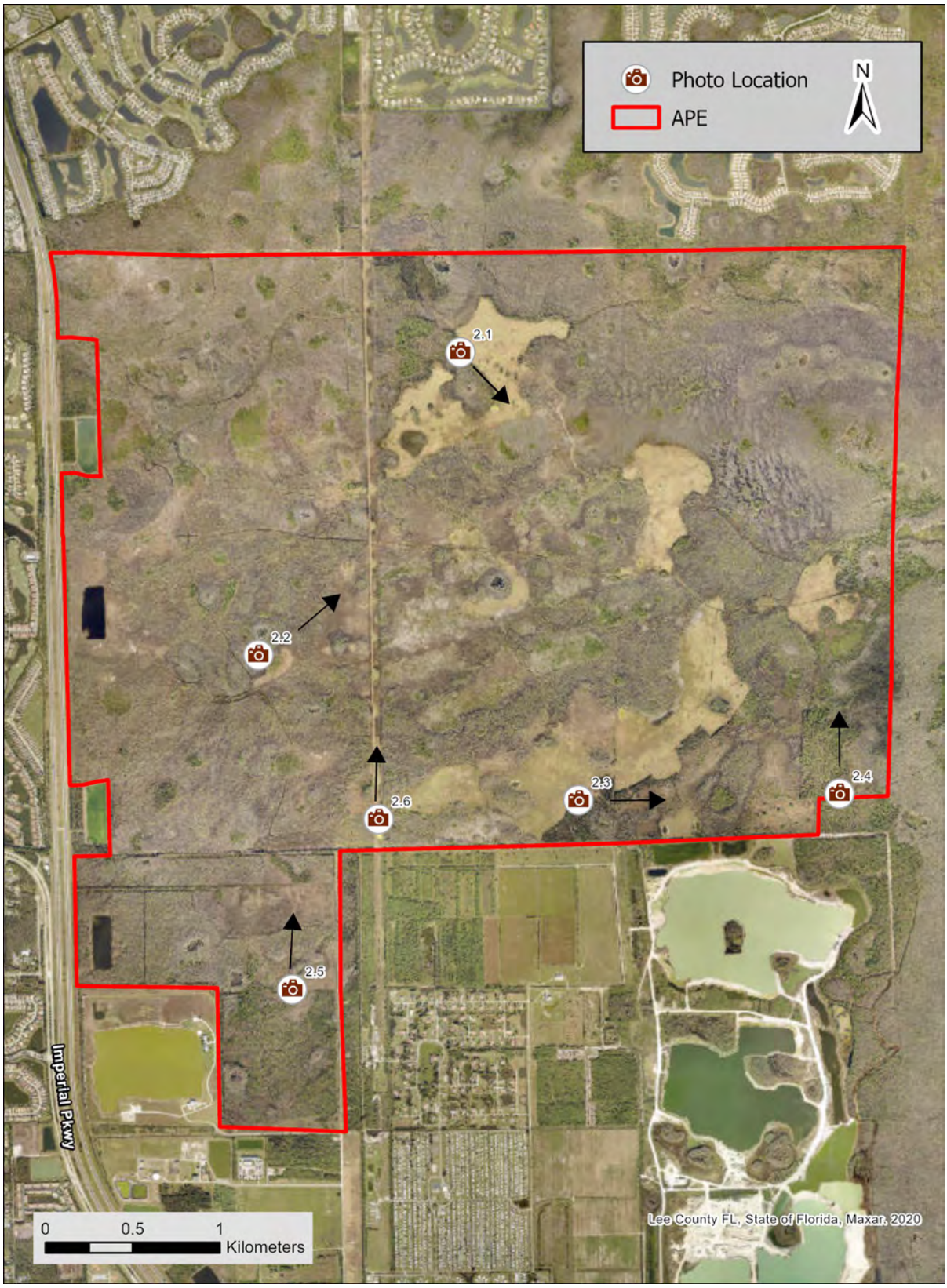

Figure 2.2. Photo locations within APE.

Photo 2.2. Looking northeast at area within APE with cypress and scattered pine.

Photo 2.3. Looking east at area of Melaleuca in the southern portion of the APE.

Photo 2.4. Looking north at area of pine, palmetto, and some melaleuca.

Photo 2.5. Looking north at pond in the east central portion of the southern parcel.

Photo 2.6. Looking north at powerline from southern portion of the APE.

2.2 Geology and Geomorphology

The project area falls within the Southwest Slope physiographic region (White 1970). The area is covered by a relatively thin veneer of sand over clayey, shelly, or limestone units (Lane 1980). The general topography of the APE is low and nearly level with an elevation of five meters (m) (15 feet [ft]) above mean sea level (amsl). The area is underlain by shelly sediments of the Plio-Pleistocene, which are surficially evidenced by shelly sand and clay (Florida Department of Environmental Protection [FDEP] 2001a, 2001b).

2.3 Soils and Vegetation

A review of the United States Department of Agriculture (USDA) Lee County soil survey indicates that the APE is within the Immokalee-Pompano, Hallandale-Boca, Isles-Boca-Pompano soil associations (Henderson 1984). The Immokalee-Pompano association is characterized by nearly level, poorly drained, deep sandy soils that occur on flatwoods and in sloughs interspersed with depressions and marshes. The native vegetation is South Florida slash pine, saw palmetto, and pineland threeawn; the wetter areas support cypress and maidencane. The Hallandale-Boca soil association consists of nearly level, poorly drained sandy soils of flatwoods that are interspersed with depressions, sloughs, and drainageways. The same vegetation is supported as the prior association. The Isles-Boca-Pompano association is characterized by nearly level, poorly drained sandy soils of sloughs and depressions. The native vegetation consists of cypress in the depressions and South Florida slash pine, maidencane, and sparse saw palmetto in the sloughs. Pineland threeawn is common on the higher positions in the sloughs, Soil locations are depicted on **Figures 2.3 and 2.4** and **Table 2.1** provides a list of the soils within the APE.

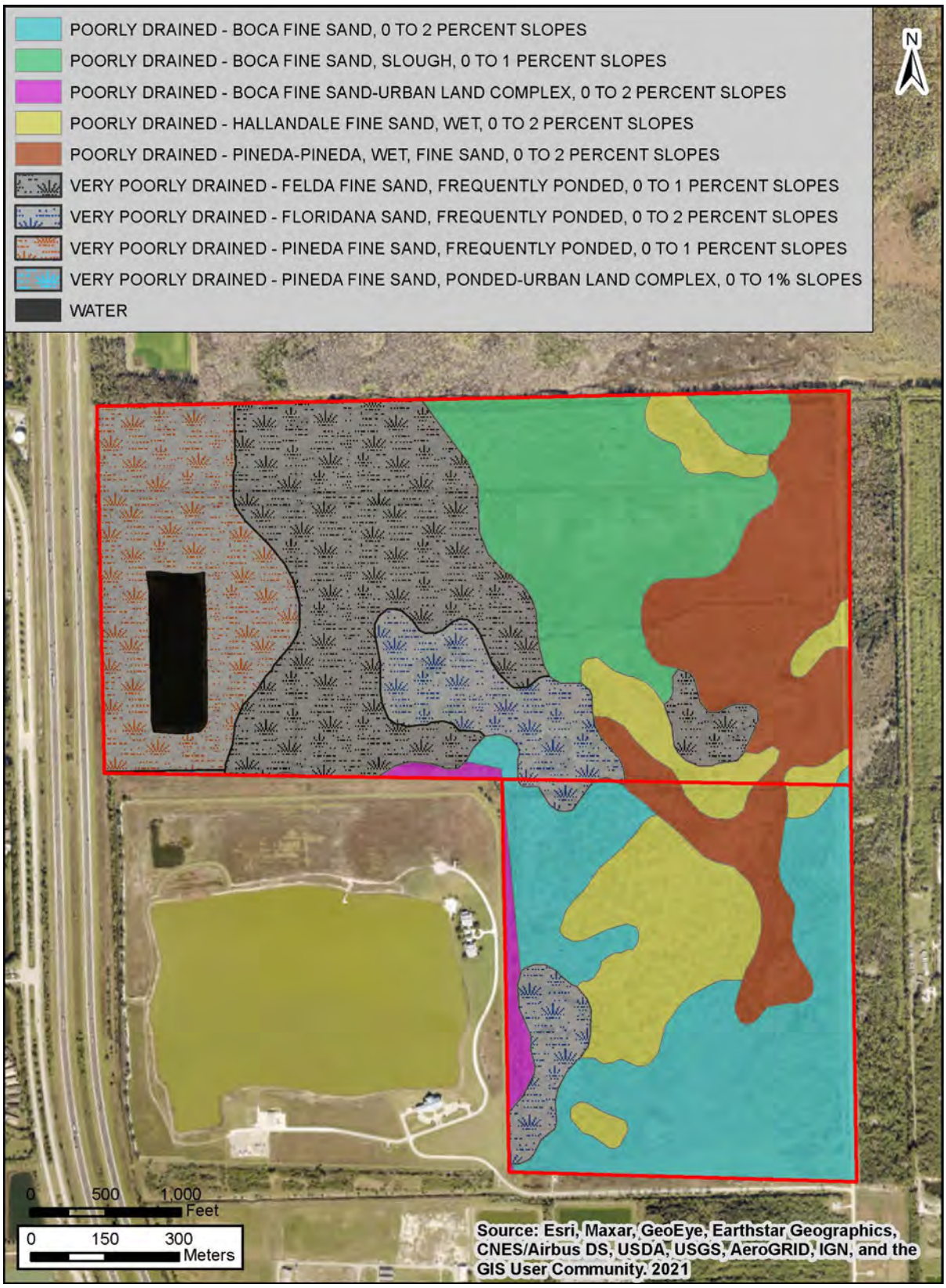

Figure 2.3. Soil types within the APE (Hidden Cypress Preserve).

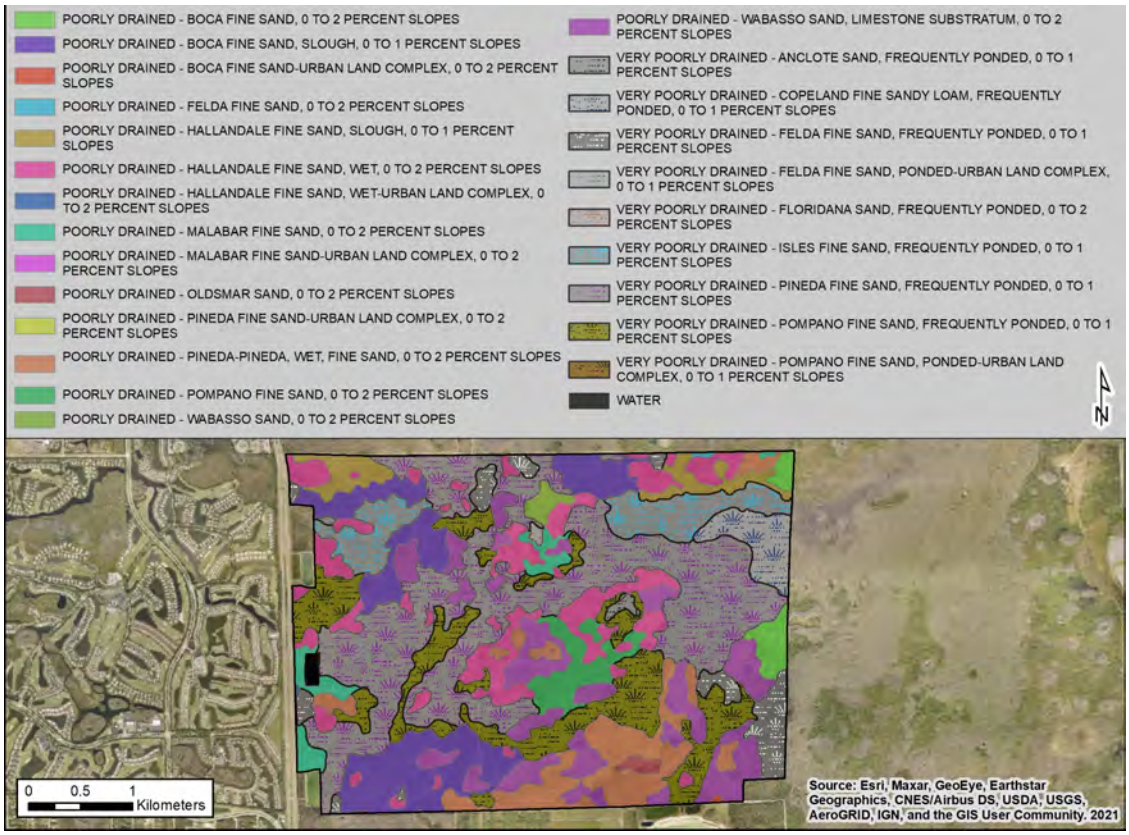

Figure 2.4. Soil types within the APE (Kiker Preserve).

Table 2.1. Soil types within the APE.

Soil Type, % slopes	Drainage	Natural Setting
Anclote sand, frequently ponded, 0 to 1%	Very poor	Isolated depressions
Boca fine sand, 0 to 2%	Poor	Flatwoods
Boca fine sand, slough, 0 to 1%	Poor	Sloughs
Boca fine sand-urban land complex, 0 to 2%	Poor	Flatwoods
Copeland fine sandy loam, frequently ponded, 0 to 1%	Very poor	Depressions
Felda fine sand, 0 to 2%	Poor	Broad, nearly level sloughs
Felda fine sand, frequently ponded, 0 to 1%	Poor	Depressions
Felda fine sand, ponded-urban land complex, 0 to 1%	Poor	Depressions
Floridana sand, frequently ponded, 0 to 2%	Very poor	Depressions
Hallandale fine sand, slough, 0 to 1%	Poor	Sloughs
Hallandale fine sand, wet, 0 to 2%	Poor	Low, broad flatwoods
Hallandale fine sand, wet-urban land complex, 0 to 2%	Poor	Low, broad flatwoods
Isles fine sand, frequently ponded, 0 to 1%	Very poor	Depressions
Malabar fine sand, 0 to 2%	Poor	Sloughs
Malabar fine sand-urban land complex, 0 to 2%	Poor	Sloughs
Oldsmar sand, 0 to 2%	Poor	Low, broad flatwoods
Pineda fine sand, frequently ponded, 0 to 1%	Very poor	Depressions
Pineda-Pineda, wet, fine sand, 0 to 2%	Poor	Sloughs

Soil Type, % slopes	Drainage	Natural Setting
Pineda fine sand, ponded, urban land complex, 0-1%	Very poor	-
Pompano fine sand, 0 to 2%	Poor	Sloughs
Pompano fine sand, frequently ponded, 0 to 1%	Poor	Depressions
Pompano fine sand, ponded-urban land complex, 0 to 1%	Poor	Depressions
Wabasso sand, 0 to 2%	Poor	Flatwoods
Wabasso sand, limestone substratum, 0 to 2%	Poor	Broad flatwoods

Soils play a key role in determining what plant and animal species are available in the region. The soil survey of the county provides information on the soil's ability to support various wildlife habitats (Henderson 1984: Table 9). These include openland, woodland, and wetland. Openland consists of cropland, pasture, meadows, and areas overgrown with grasses, herbs, shrubs, and vines. This area attracts bobwhite quail, dove, meadowlark, field sparrow, cottontail, and sandhill cranes. Felda, Oldsmar, and Pineda sands are rated fair for openland habitats. The woodland wildlife habitat consists of areas of deciduous and/or coniferous plants with associated legumes, grasses, and herbaceous plants. Wildlife attracted to these areas includes turkey, thrushes, woodpeckers, squirrels, gray fox, raccoon, deer, and bobcat. Oldsmar and Wabasso sands are rated fair for woodlands. The wetland habitats are open, marshy, or swampy shallow water areas. Wildlife associated with these locales includes ducks, geese, herons, egrets, shore birds, otter, mink, alligator, and beaver. Anclote sand is well suited for wetlands. All but Oldsmar and Wabasso sands are rated fair or good for wetland habitats.

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. Indigenous inhabitants would have developed cultural adaptations in response to the environmental changes taking place, which were then reflected 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. Palynological studies conducted in Florida and Georgia suggest that between 13,000 and 5,000 years ago, this area was covered with an upland vegetation community of scrub oak and prairie (Watts 1969, 1971, 1975). The rise of sea level reduced xeric habitats over the next several millennia.

Around 5000 years ago, a climatic event marking a brief return to Pleistocene climatic conditions induced a change toward more open vegetation. Southern pine forests replaced the oak savannas. 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, wax myrtle and pine dominated the 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). By about 3500 BCE (Before Common Era), surface water was plentiful in karst terrains and the level of the Floridan aquifer rose to 1.5 m (5 ft) above present levels. After this time, modern floral, climatic, and environmental conditions began to be established.

3.0 CULTURAL OVERVIEW

A discussion of the culture history of a region provides a framework within which the local archaeological and historic records can be examined. Archaeological and historic sites are not individual entities but are the remains of once dynamic cultural systems. As a result, they cannot be adequately examined or interpreted without reference to other sites and resources within the area. Archaeologists summarize the culture history of an area (i.e., an archaeological region) by outlining the sequence of archaeological cultures through time. These cultures are defined largely in geographical terms but also reflect shared environmental and cultural factors. The APE is situated within the Caloosahatchee region, which extends from Charlotte Harbor on the north to the northern border of the Ten Thousand Islands on the south and inland about 54 miles (Carr and Beriault 1984:4, 12; Griffin 1988; Milanich 1994) (**Figure 3.1**).

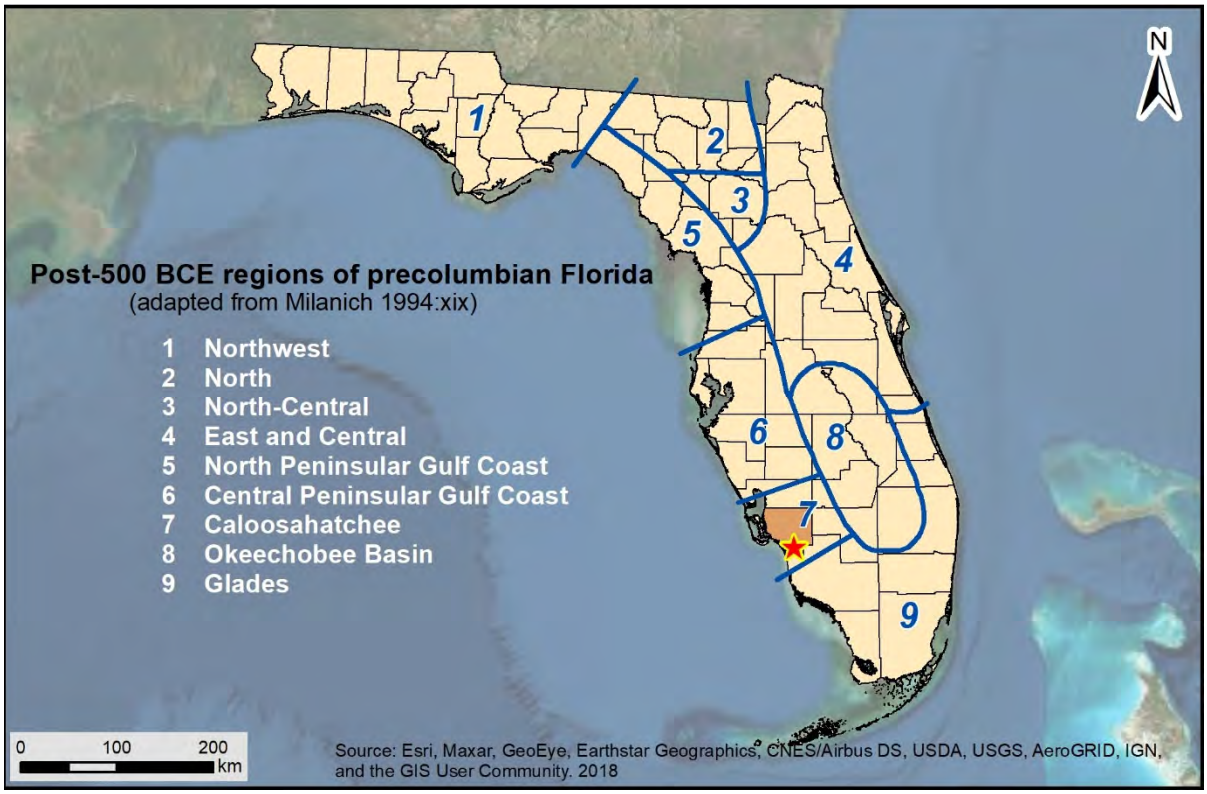

Figure 3.1. Florida Archaeological Regions.

The Caloosahatchee region is better understood after the introduction of pottery (ca. 500 BCE). Prior to this, regional characteristics of native populations are not easily identified, as malleable materials such as textiles and basketry, which lend themselves to cultural expression, are typically destroyed by environmental processes. With the arrival of pottery, the clay medium provided both a means of cultural expression and an archaeologically durable artifact. Thus, the use of pottery as a marker of cultural diversity probably postdates the inception of distinct Florida cultures by many centuries. The aceramic Paleoindian and Archaic periods are followed by the Caloosahatchee cultural sequence (500 BCE to 1500 CE [Common Era]) at which point the bearers of the Caloosahatchee culture enter into the ethnographic record as the Calusa Indians. The following overview is based on data from Griffin (1988, 2002), Widmer (1988), and Milanich (1994).

The local history of the region is divided into four broad periods based initially upon the major governmental powers. The **Colonial Period** 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 United States and 21 years later became a State (**Territory and Statehood**). The **Civil War and Aftermath** (1861-1900) period deals with the American 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** has subperiods defined by important historic events such as the two World Wars, the Real Estate Boom of the 1920s, and the Great Depression. Each of these periods evidenced differential development and utilization of the region, thus effecting the historic archeological site distribution.

3.1 Paleoindian

The Paleoindian stage is the earliest known cultural manifestation in Florida, dating from roughly 12,000 to 7500 BCE (Milanich 1994). 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 being the most common (Milanich 1994:40). When human populations were arriving in Florida, the sea levels were still as much as 40 to 60 m (130-200 ft) below present levels, and coastal regions extended miles beyond present-day shorelines (Faught 2004). Thus, many of these sites have been inundated (cf., Faught and Donoghue 1997).

The Paleoindian period has been subdivided into three horizons based upon characteristic tool forms (Austin 2001). Traditionally, it is believed that the Clovis Horizon (10,500-9000 BCE) represents the initial occupation of Florida and is defined by the presence of the fluted Clovis points; these are somewhat more common in north Florida. However, recent work may indicate that Suwannee and Simpson points are contemporary with or predate Clovis (Dunbar 2006a, 2016; Stanford et al. 2005). The Suwannee Horizon (9000-8500 BCE) is the best known of the Paleoindian horizons; the lanceolate-shaped, unfluted Simpson and Suwannee projectile points are diagnostic of this period (Bullen 1975; Daniel and Wisenbaker 1987; Purdy 1981). The Suwannee tool kit includes a variety of scrapers, adzes, spokeshaves, unifacially retouched flakes, flakes with beaked projections, 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 (8500-8000 BCE); the smaller Tallahassee, Santa Fe, and Beaver Lake projectile points have traditionally been attributed to this horizon (Milanich 1994), although many of these points have been recovered stratigraphically from late Archaic and early Woodland period components and 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 they have not been recovered from datable contexts, and their temporal placement remains uncertain (Dunbar 2006a:410).

Archaeologists hypothesize that Paleoindians lived in migratory bands and subsisted by hunting and gathering, including the now-extinct Pleistocene megafauna. Since it was cooler and drier, it is likely that these nomadic hunters traveled between permanent and semipermanent sources of water such as artesian springs, exploiting the available resources. These watering holes would have attracted the animals that the native peoples hunted, thus providing both food and drink. In addition to being tied to water sources, most Paleoindian sites are proximate to good quality lithic resources. This settlement pattern is considered logistical (i.e., the establishment of semipermanent 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), while 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 indigenous 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 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 megafaunal 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 tool kit and the introduction of chipped stone woodworking implements.

Due to 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 the previous period, 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).

By approximately 6500 years ago marked environmental changes occurred which had profound influence upon human settlement and subsistence practices, with adaptation to these changing environmental, regional, and local differences 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, with at least three ceremonial mounds accompanying 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 indigenous 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 (10 hectares [ha] (25 acres [ac]) in size with about 400 people), small villages (3-4 ha [9 ac] / 50 people), and fishing hamlets and/or collection stations (< 1 ha [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, 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 paramount meat source, with whelks and conchs being the primary shellfish food. Botanical materials utilized include chenopod, panic grass, talinum, mallow, red mangrove, wax myrtle, pine, buttonwood, and sea grape (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) has 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 appear (Widmer 1988:93), though 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 during this period (cf. Milanich 1995:44). It had been postulated that sea levels were higher during Caloosahatchee II than Caloosahatchee I, 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 of 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 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 village sites continued to accumulate midden-mounds and the dead were interred in sand burial mounds (Marquardt 2013).

3.4 Colonial Period

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 indigenous artifacts. It was also at this time that metal pendants were being manufactured by indigenous 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 Native Americans 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 groups living in 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 Old World diseases such as bubonic plague, dysentery, influenza, and smallpox, epidemics to which they had no immunity, the 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 Wars and customs control closed the fisheries.

During the political machinations from 1763 to 1819 among the British, Spanish, French, and the United States, Native Americans continued to move into the unchartered lands of Florida. These migrating groups became known as the Seminole. They had an agriculturally based society, focused on horticulture and the raising of horses and cattle. The material culture of the Seminole remained like the Creeks; the dominant indigenous 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 Seminole formed at various times loose confederacies for mutual protection against the new American nation to the north (Tebeau 1980:72). The Seminole 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 Territory and Statehood

The bloody conflict between the Americans and the Seminole over Florida first came to a head in 1818 and was subsequently known as the First Seminole War. Due in part to both the war and the signing of the Adams-Onis Treaty in 1819, Florida became a U.S. 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. Native peoples were displaced, and the white settlers and their homesteads took over. As a result, the Seminole 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 unsuccessfully 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 Seminole 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 native population nor the settlers. The inadequacy of the reservation and desperate situation of the Seminole 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 formidable force of American soldiers, commanded by Colonel Persifer F. Smith, left Fort Basinger in January 1838, entered Seminole territory south of the Caloosahatchee River, and traveled to Punta Rassa. During the 1837-38 campaign, Smith's objective was to take his troops up the Caloosahatchee and reconnoiter with three other columns to push the Seminole into the Everglades where it was hoped that they would either surrender or die (Knetsch 2003:100). 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 primary 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, settlers 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). On March 3, 1845, Florida was admitted to the Union as the 27th state with Tallahassee as its capital.

In 1850, renewed problems with the Seminole 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 Seminole 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 due to pressure placed on Native Americans remaining in Florida to emigrate west (Covington 1982). The war began when 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 elimination of the Seminole from Florida, and several regional military posts were established (Covington 1982).

Military action was not decisive, so in 1858 the United States resorted to monetary persuasion to entice the Seminole into relocating. 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 aboard. Stopping at Egmont Key, 41 captives and a female guide were added to the group. On May 8, 1858, the Third Seminole War was declared officially over. The modern Florida Seminole descended from this meager group, thought to number less than 200. The remaining bands lived in relative isolation until the late 1870s and the 1880s when the government sent observers among them (Covington 1982).

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.

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" Seminole. As the Seminole 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 Southwest 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

On January 10, 1861, Florida followed both South Carolina and Mississippi and seceded from the Union in a prelude to the American Civil War. Fort Myers was reactivated and slowly garrisoned by federal troops in 1863 & 1864 under the command of General D. P. Woodbury. Woodbury, who arrived with 20 men of the 47th Regiment of Pennsylvania Volunteers as well as two companies of the newly formed 2nd Florida Cavalry (U.S.) under the command of Captain Henry A. Crane, a former secessionist and 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, important to both the Confederates and the Federals (Peters 1984:7). Florida cattlemen drove their herds to Punta Rassa for shipment to Cuba at a considerable profit. Among the most successful were James McKay and Jacob Summerlin, who formed a partnership in 1863. While Summerlin 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 referred to as "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 from Tampa in early February, reaching the fort on February 29. Ten men under the command by Lieutenant William M. Hendry captured four pickets of the 2nd Florida Cavalry (U.S.). 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 staffed 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 soldiers 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 troops garrisoned at Fort Myers 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, with some of the remaining buildings renovated or rebuilt for local use.

The Homestead Act, enacted by Congress in 1862, allowed settlers to obtain title to 160 acres by residing on and improving the land. Major James Evans of Virginia returned to Fort Myers in 1873 with a homestead claim for the land in the old fort area. He 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. The plat was recorded in Key West, county seat for Monroe County, in December 1876 (Monroe County n.d.:450). It was later corrected and refiled 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, with the streets laid out to conform to the property they were occupying, explaining 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).

In 1872 and 1874, Township 47 South, Ranges 25 and 26 East were surveyed by W.L. Apthorp and T.S. Stearns (Apthorp 1872; Stearns 1874). No historic features were noted the APE (Apthorp et al. 1874; Apthorp and Stearns 1874) (**Figure 3.2**). The lands near the APE were described as 3rd rate flats with cypress and pine (Apthorp 1872:41-42, 46-47; Stearns 1874:684, 686, 697-701, 709-712).

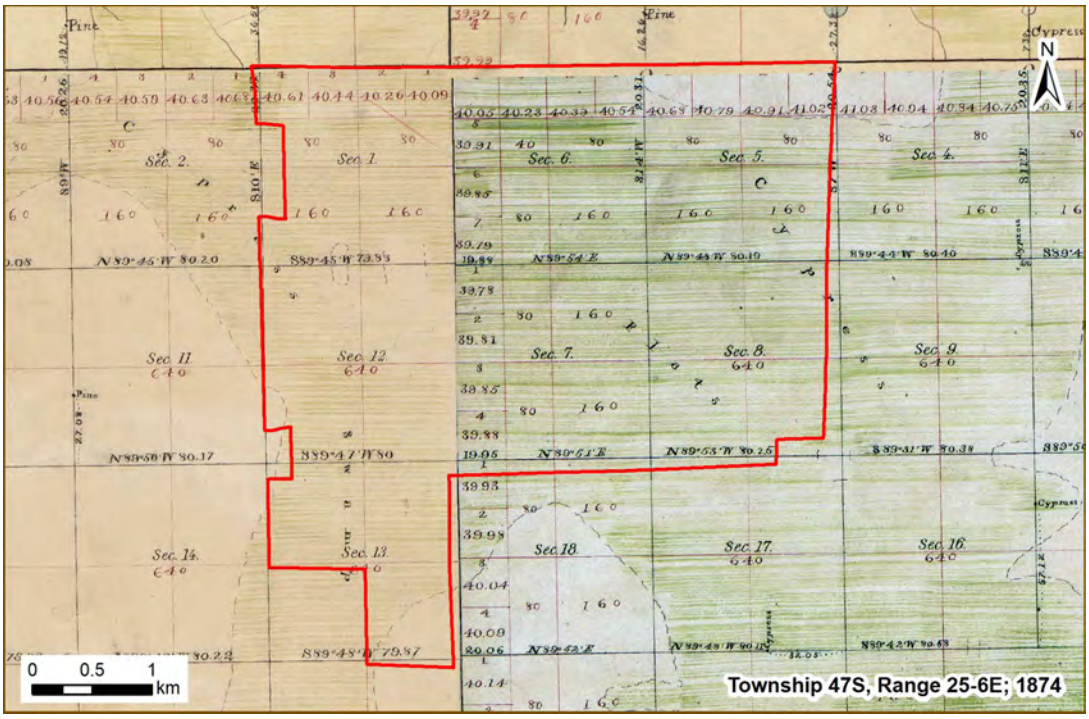

Figure 3.2. 1872 & 1874 plat showing the APE.

Pine Island was uninhabited until 1873 when Captain John Smith arrived after having survived a hurricane on nearby Punta Rassa. He decided that Pine Island would be a safer 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 living off the substantial bounty of the sea while beginning development (Lincoln 2016). William M. Hendry moved to Ft. Myers in the summer of 1873 and opened a general store in 1875 (Grismer 1949:279). Mail service was started August 22, 1876, with a post office located 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, fewer than ten families lived in the frontier town of Fort Myers, but more settlers continued to move into the area. By 1885, there were approximately 50 families living within the expanded town limits. The need for public improvements and better law enforcement led the residents to incorporate the settlement as a township, accomplished August 12, 1885, when a mayor and the council were elected (Grismer 1949:255). By 1890, the population had increased to 575.

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 inventor Thomas A. Edison, who built a winter home there in 1886; his friend Henry Ford later purchased the property next to him in 1916. Regular boat service to the area started in the 1870s and, while Henry Plant extended his railroad from Tampa south to Punta Gorda in 1887 it did not reach Fort Myers until several years later, slowing the growth of the area but allowing for more overland travel.

Although the local economy flourished, the state faced a fiscal crisis due to prewar railroad bond indebtedness. This led Governor William Bloxham to search for a buyer for an immense amount of state land. His 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 personal friend of Bloxham's, 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 Coast Canal and Okeechobee Land Company was formed on July 20, 1881, to help fulfill the drainage contracts; the Florida Land Improvement Company and the Kissimmee Land Company were formed to develop Disston's lands, with all of the APE deeded to the Pensacola and Atlantic Railroad in 1888 (State of Florida n.d.-a:126, n.d.-b:89).

Lee County, named for Confederate General Robert E. Lee, was carved out of Monroe County and created by the state legislature in May 1887. 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 1414 inhabitants in 1890. Many settlers moved to Lee County to grow produce including cabbage, eggplant, and squash, shipping their products to places such as Key West and Cuba. Others experimented with coconuts, pineapples, and sugar; cattle continued to play a part in the local economy (FPS 1986:24). By the mid-1880s, pineapples were a major commercial crop, retaining their importance as a crop until the early 20th century when Caribbean growers claimed 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 the First World War when

new roads and rail lines facilitated overland transportation (FPS 1986:32). The town of Fort Myers, incorporated in 1888, was growing rapidly. 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). 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 in the state in search of better protected land, ushered in a second period of homesteading in Lee County (FPS 1986:22). In 1895, Robert Gilbert received a homestead grant that included Mound House, an indigenous shell mound and the highest point of Fort Myers Beach (Town of Fort Myers Beach [TFMB] 2006-2016). 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.

3.7 Twentieth Century

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, and allowed crops to be easily shipped to other parts of the country. 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). 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 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 two-story public school was opened. Also, in 1911, William Case was living on Mound House and developing the first subdivision and cottage rental industry on the island. By 1914, all the island property was homesteaded with little industry beyond fishing, gardening, a sawmill operated by the millenialist group Koreshan Unity, and a hotel (TFMB 2006-2015).

Development on Estero Island, then named Crescent Beach, was slow until the 1920s when Florida gained national attention as a vacation destination. By 1921, a toll bridge was opened connecting San Carlos Island and Estero Island, followed closely by the construction of two casinos, hotels, a pier, and the island's first canal. Several subdivisions were platted, and many lots were sold, but few were developed (FPS 1986; TFMB 2006-2015; Weant and Nickerson 1992). In April 1924, the San Carlos Corporation was formed to develop a coastal wetlands area of mainland Lee County that was about 730 acres in size. Two-hundred and fifty acres on San Carlos Island were surveyed and platted the following year. Plans for the development also called for lighting, sewers, sidewalks, a 200-

room hotel and a central boulevard (FMSF:8LL00105). The land boom was short lived as the hurricanes of 1921 and 1926 challenged idyllic notions of southwest Florida and slowed further development.

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 the First World War halted any construction, and the engineering problems faced in taking the road across the Everglades became a major obstacle (FPS 1986:37). The connection, a wooden bridge across the Caloosahatchee River between Fort Myers and Punta Gorda, was completed in 1924, 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 the war, but new residents continued to settle in the area, and construction of residences and commercial buildings continued (Grismer 1949:207).

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).

The Second World War brought the construction of two 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. The 1950s brought modernization and tourist development to Fort Myers Beach with new hotels including the Rancho del Mar with the first swimming pool and the electrification of the swing bridge to facilitate traffic. The discovery of “pink gold” (shrimp) in the Dry Tortugas sparked not only the shrimping industry but also the ancillary businesses to support it (TFMB 2006-2015). Fort Myers Beach became one of the largest shrimp ports in the world (Brown and Brown 1965), and the population increased by fifty percent from 1940 to 1950. Numerous civic organizations, churches, local newspapers, weather and US Coast Guard stations, the Beach Library, and the annual Shrimp Festival were all initiated or expanded during this second land boom. The 1958 Estero and Corkscrew NW quads shows no development within the APE other than a few trails; the white areas may indicate that these areas had been cleared (**Figure 3.3**).

The construction of suburbs and malls, such as the Edison Mall in Fort Myers in 1965, changed the character of Florida cities by creating a string of development along coastal areas (Board and Bartlett 1985:28). Development and settlement patterns over the latter half of the twentieth century pushed outward along coastal areas and through the center of the state along the I-4 corridor. Construction, some of which was necessary because of the result of devastating Hurricane Donna, boomed in Lee County. Afterwards, millions of insurance dollars and an abundance of work revitalized a sluggish economy (Dean 1991).

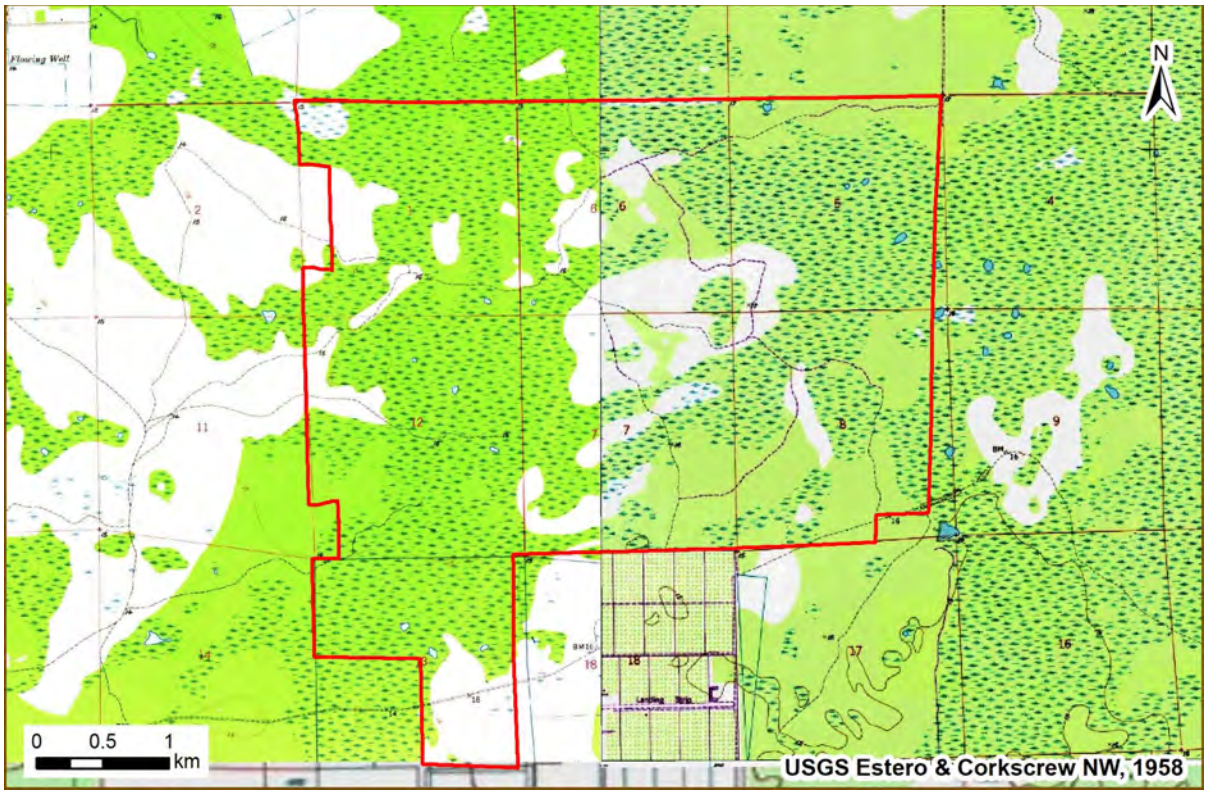

Figure 3.3. 1958 Estero and Corkscrew NW quads showing the APE.

Private and commercial traffic into Lee County was enhanced with the construction of the Southwest Florida International Airport in the 1980s. Serving Fort Myers, the airport was built in a previously agricultural area. The completion of I-75 in the 1980s generated sustained activity that has continued into the 1990s (Board and Colcord 1992; Purdum 1994). Except for Fort Myers and a few small towns, the rest of Lee County was devoted to citrus groves, vegetable farms, and cattle ranches.

3.8 APE Specifics

The aerial photos of the project area available from the Publication of Archival, Library, and Museum Materials (PALMM) and the Florida Department of Transportation (FDOT) were examined (FDOT 1986a, 1986b; USDA 1944, 1953a, 1953b). Other than trails and two modern FDOT stormwater ponds, the property does not appear to have been developed (**Figure 3.4**). A powerline corridor had been cut through the APE by 1953 and had been significantly cleared and widened by 1986.

Figure 3.4. 1944 and 1986 aerials showing the APE.

4.0 RESEARCH CONSIDERATIONS AND FIELD METHODOLOGY

4.1 Background Research and Literature Review

A review of archaeological and historical literature, records and other documents and data pertaining to the project area was conducted. The focus of this research was to ascertain the types of cultural resources known in the project vicinity, their temporal/cultural affiliations, site location information, and other relevant data. This included a review of sites listed in the NRHP and FMSF, CRAS reports, published books and articles, unpublished manuscripts, maps, and the files of ACI. The FMSF data used in this report were obtained in January 2022. During background research, no individuals knowledgeable about cultural resources specific to the project area were identified. In addition, no such individuals were encountered during field survey.

4.2 Archaeological Considerations

A review of the data obtained from the FMSF indicated that only four archaeological sites have been recorded within 3.2 km (2 miles); none of which is in the APE (**Table 4.1, Figure 4.1**). Three of the sites are middens that produced sand tempered plain (STP) pottery, marine shell, and faunal bone and the other is a sand mound, which has the potential for being a burial mound (Beriault et al. 2006; Carr et al. 2008). Two of the sites have been determined potentially eligible for listing in the NRHP by the State Historic Preservation Office (SHPO). There was insufficient information recovered on the other two for the SHPO to make an assessment. There have been 22 CRAS projects conducted within 1.6 km (1 mi) of the APE, some of which cover hundreds of acres, and no archaeological sites have been recorded. 8LL01989, located slightly over a mile north of the northwest corner of Section 32, was documented in 1999 as the Persimmon site, a Glades period artifact scatter with STP pottery and charcoal (Beriault and Carr 1999). However, it has not been plotted in the database because a FMSF form was not submitted. These surveys were completed for development properties, transportation projects, and a cell tower (**Table 4.2**).

Table 4.1. Previously recorded archaeological sites near the APE.

FMSF #	SITE NAME	SITE TYPE	CULTURE	REFERENCE	SHPO EVAL
8LL02401	Critter	Campsite, midden, procurement	Glades	Beriault et al. 2006	Potentially Eligible
8LL02402	Cactus	Campsite, midden, procurement	Glades	Beriault et al. 2006	Potentially Eligible
8LL02528	Old Camp	Campsite, midden, procurement	Late Archaic, Glades	Carr et al. 2008	Insufficient Information
8LL02529	Flint Pen Mound	Sand mound	Glades	Carr et al. 2008	Insufficient Information

Based on these data, regional site location predictive models (ACI 1992, 1999, 2014a, 2014b; Austin 1987; Bellomo and Fuhrmeister 1991; Dickel 1991; Smith 2008), and informed expectations concerning the types of sites likely to occur within the project APE, as well as their probable environmental settings was generated. As archaeologists have long realized, indigenous populations did not select their habitation sites and activity areas in a random fashion; rather, many environmental factors had a direct influence upon site location selection, including soil drainage, distance to water, topography, and proximity to resources. It should be noted that the settlement pattern noted below cannot be applied to sites of the Paleoindian and Early Archaic periods, which precede the onset of modern environmental conditions.

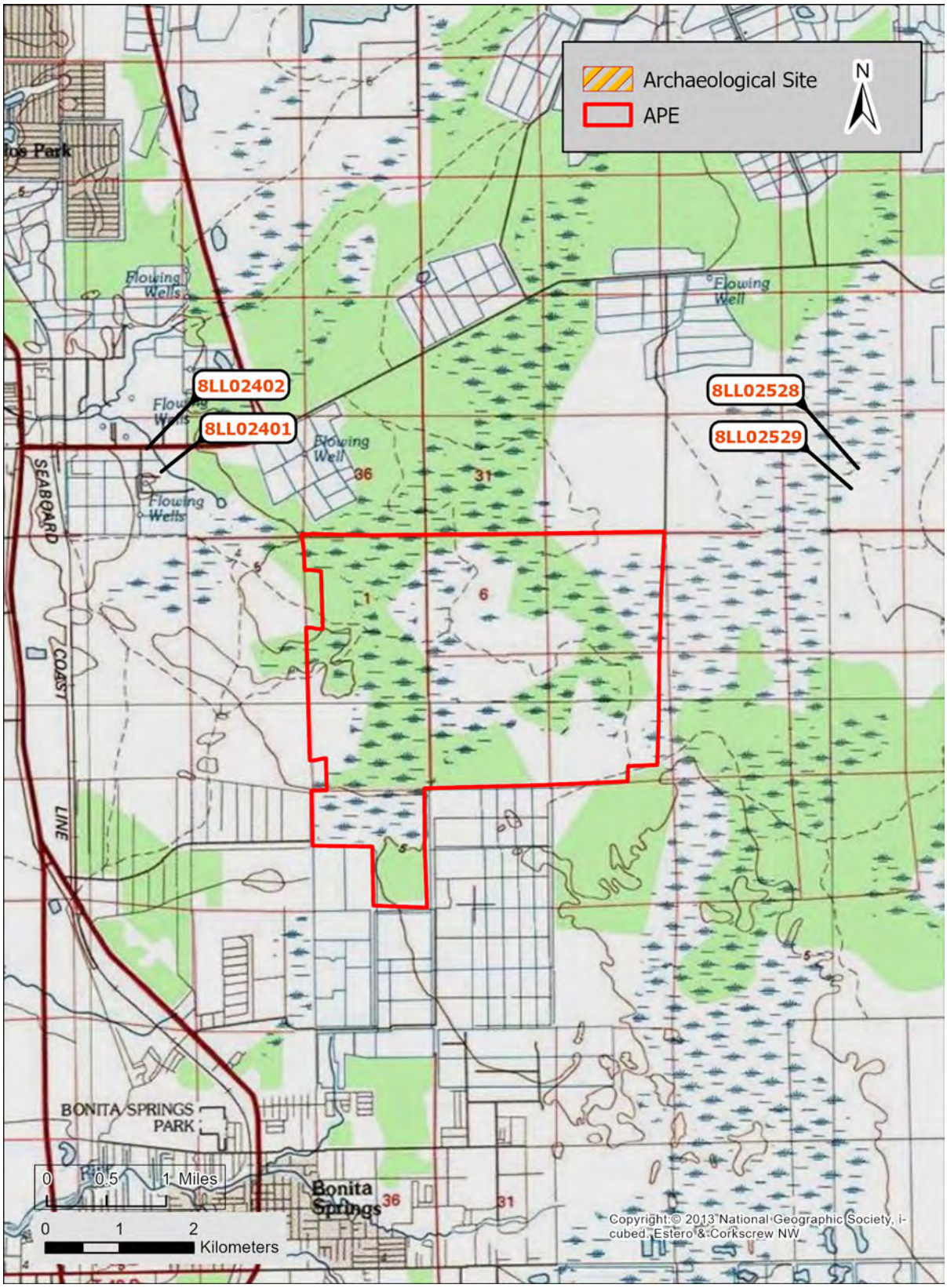

Figure 4.1. Location of the cultural resources proximate to the APE.

Table 4.2. CRAS projects conducted proximate to the APE.

FMSF Manuscript # / Reference	PROJECT	# of newly recorded resources	# of previously recorded resources
4042 / Jones 1975	Annual Progress Report of the Cooperative Agreement for the Archaeological Salvage Program Between the Florida Department of Transportation and the Division of Archives, History, and Records Management, Florida Department of State, 1975	0	0
4661 / Carr and Steele 1995	An Archaeological Report of the Bonita Bay Purchase, Lee County, Florida	0	0
7155 / ACI 2002a	A CRAS I-75 from South of Bonita Beach Road to North of SR 78 Lee County, Florida	0	0
8626 / ACI 2002b	Cultural Resource Assessment Survey Three Oaks Parkway Extension, Lee County, Florida	0	0
8868 / ACI 2003a	Cultural Resource Assessment Survey, Estero Towncenter C.P.D. Lee County, Florida	0	0
8952 / Ambrosino 2003	An Archaeological and Historical Survey of the Proposed Woodchuck-Bonita Springs Utilities Tower Location in Lee County, Florida	0	0
9112 / ACI 2003b	Cultural Resource Assessment Survey Cypress Shadows Lee County, Florida	0	0
10704 / Janus Research 2004	Historic Resources Survey of Bonita Springs	243	55
10824 / HDR Engineering 2004	Attachment G Cultural Resource Assessment Survey for Interstate 75 (SR 93) from South of Bonita Beach Road to South of Corkscrew Road, Lee County, Florida	0	0
11044 / ACI 2005c	CRAS Bella Terra Property, Lee County, Florida	0	0
11763 / Beriault and Crump 2005	A Phase One Archaeological Assessment of the Bonita 120 RPD Parcel, Lee County, Florida	0	0
12175 / ACI 2005b	CRAS Proposed Pond Sites Technical Memorandum, SR 93 (I-75) from South of Corkscrew Road to South of Daniels Parkway in Lee County, Florida	0	0
12848 / Beriault and Crump 2006	A Phase 1 Archaeological Assessment of the Liberty Youth Ranch Parcel, Lee County, Florida	0	0
13637 / Altes and Carr 2006	A Phase I Archaeological Assessment of the Midtown Estero Village East Parcel, Lee County, Florida	0	0
14852 / ACI 2006	CRAS CR 951 from Immokalee Road to Alico Road Lee and Collier County, Florida	0	0
15047 / Wharton 2008	CRAS of Proposed Stormwater Pond and Floodplain Compensation Sites Third Addendum Technical Memorandum I-75 from South of Bonita Beach Road to South of Corkscrew Road, Lee County, Florida	0	0
18252 / Keel 2010	CRAS Technical Memorandum Pond Site 3 I-75 (SR 93) from South of Corkscrew Road to North of Corkscrew Road Lee County, Florida	0	0
20814 / Hoffman 2014	CRAS of the Proposed Lee County Streets Initiative (LCCSI), a Local Agency Project in Lee County, FL	0	1
21039 / Beazley and Fields 2014	Section 106 Review. Proposed 145-Foot Stealth-Monopole Telecommunications Structure (149-Foot Overall Height with Appurtenances. American Towers, LLC - 278246 (Coconut Rd FL), 24000 Golden Eagle Lane, Estero, Lee County, Florida	0	0

FMSF Manuscript # / Reference	PROJECT	# of newly recorded resources	# of previously recorded resources
21289 / ACI 2005a	Cultural Resource Assessment Survey Monte Cristo Property, Lee County, Florida	0	0
21894 / Beriault and Carr 1999	An Archaeological Survey of the Habitat Parcel, Lee County, Fl	1	0
27496 / Carr et al. 2020	A Phase I Cultural Resource Assessment of the Saphira Parcels, Lee County, Florida	0	0

Tan color represents a previous survey conducted within APE.

Analysis of the April 2020 data for the 71 indigenous archaeological sites with known locations in the Southwestern Slope physiographic region of Lee County was conducted. Historic archaeological sites and indigenous archaeological sites that were plotted "per vague verbal description" were deleted from this analysis. Although this is just a moderate sample size, it can give us clues as to which areas were preferred. As more survey work is conducted in the region, the model can be updated.

Proximity to water is an important site location feature. Almost 88% of the sites are located within 100 m (328 ft) of a water source, and only five are greater than 200 m (656 ft) from a water source (**Table 4.3**). Five sites are located along the bay, and the other 66 sites are evenly divided between swamp/wetland or creek as a water source.

Table 4.3. Distribution of sites by water type and distance.

Type	≤100 m (356 ft)		≤200 m (656 ft)		>200 m (656 ft)		Total	
	Cnt	%	Cnt	%	Cnt	%	Cnt	%
Bay	5	7.04%		0.00%		0.00%	5	7.04%
Creek	30	42.25%	1	1.41%	2	2.82%	33	46.48%
Swamp/wetland	27	38.03%	3	4.23%	3	4.23%	33	46.48%
Total	**62**	**87.32%**	**4**	**5.63%**	**5**	**7.04%**	**71**	**100.00**

Soil types and their drainage characteristics can also be used to assess the likelihood for indigenous site occurrence (Almy 1978). There are 52 soil types within this study area; of which 22 have recorded archaeological sites (**Table 4.4**). Those soils within the APE are shaded in lilac on the table. Several of the "soil types" are not predictive as they consist of made land or water. These are included in the OTHER category. Matlacha soils are formed from filling and earthmoving activities. St. Augustine sand is also formed from earth moving activities associated with the infilling of sloughs, depressions, and low-lying areas. Urban land is land that is covered to such an extent by roads, parking lots, buildings, etc. that the original soil types cannot be ascertained. Those soils with an urban land component were subsumed by the parent soil type.

Many of the sites occurred on more than one soil type. This analysis only includes the four types covering the greatest acreage for each site, which totaled 13 soil type occurrences. The column "1" indicates that this soil type had the greatest area of the site, and so on down the line, so that the "4" column had the smallest site acreage. However, this analysis may not prove an accurate representation of the site distribution. While we know the percentage of sites on the various soil types, we do not have an accurate assessment as to how much of each soil type has been surveyed for archaeological sites. Given the small sample size, the numbers are really skewed towards those soil types where sites have been found.

Table 4.4. Distribution of sites by drainage and soil types.

DRAINAGE/Soil Type, % slopes	% of Area	1	2	3	4	Total	% of Sites	difference
MODERATELY WELL DRAINED								
Caloosa fine sand	0.02%					0	0.00%	-0.02%
Cocoa fine sand	1.19%	8	2			10	9.80%	8.61%
Daytona sand	0.85%	10	1	1		12	11.76%	10.91%
Orsino fine sand	0.76%		2			2	1.96%	1.20%
Total	**2.83%**	**18**	**5**	**1**	**0**	**24**	**23.53%**	**20.70%**
POORLY DRAINED								
Boca fine sand, 0-2%	5.08%					0	0.00%	-5.08%
Boca fine sand, slough	2.29%					0	0.00%	-2.29%
EauGallie sand, 0-2%	0.03%					0	0.00%	-0.03%
Felda fine sand, 0-2%	0.78%	1				1	0.98%	0.20%
Hallandale fine sand, slough	1.66%					0	0.00%	-1.66%
Hallandale fine sand, wet, 0-2%	8.64%	2	1			3	2.94%	-5.70%
Immokalee sand, 0-2%	11.85%	17	7	1		25	24.51%	12.66%
Malabar fine sand, 0-2%	4.17%					0	0.00%	-4.17%
Malabar fine sand, high, 0-2%	0.04%					0	0.00%	-0.04%
Myakka fine sand, 0-2%	2.15%	2	3			5	4.90%	2.76%
Oldsmar fine sand, limestone substratum (ls)	0.04%					0	0.00%	-0.04%
Oldsmar sand, 0-2%	6.16%		1			1	0.98%	-5.18%
Pineda fine sand, 0-2%	8.81%	1				1	0.98%	-7.83%
Pineda fine sand, ls, 0-2%	0.72%					0	0.00%	-0.72%
Pompano fine sand, 0-2%	4.07%	2	1			3	2.94%	-1.13%
Smyrna fine sand, 0-2%	0.73%					0	0.00%	-0.73%
Valkaria fine sand, 0-2%	2.26%					0	0.00%	-2.26%
Wabasso sand, 0-2%	0.49%	2				2	1.96%	1.47%
Wabasso sand, ls, 0-2%	1.13%	1	1			2	1.96%	0.83%
Total	**61.11%**	**28**	**14**	**1**	**0**	**43**	**42.16%**	**-18.95%**
SOMEWHAT POORLY DRAINED								
Canaveral fine sand	0.01%					0	0.00%	-0.05%
Satellite fine sand, 0-2%	1.35%	7	3	1		11	10.78%	9.44%
Total	**1.40%**	**7**	**3**	**1**	**0**	**11**	**10.78%**	**9.38%**
VERY POORLY DRAINED								
Anclote sand, frequently ponded, 0-1%	0.47%	2		2		4	3.92%	3.45%
Copeland sandy loam, depressional	2.34%	1	1			2	1.96%	-0.38%
Estero muck	0.10%					0	0.00%	-0.10%
Felda fine sand, frequently ponded (fp), 0-1%	4.63%					0	0.00%	-4.63%
Floridana sand, fp, 0-1%	0.39%					0	0.00%	-0.39%
Gator muck, fp, 0-1%	0.02%					0	0.00%	-0.02%
Isles fine sand, depressional	5.47%					0	0.00%	-5.47%
Isles muck	0.03%					0	0.00%	-0.03%
Kesson fine sand	0.41%	6	1			7	6.86%	6.45%
Malabar fine sand, fp, 0-1%	0.74%					0	0.00%	-0.74%
Myakka fine sand, fp, 0-1%	0.71%					0	0.00%	-0.71%
Peckish mucky fine sand	0.34%	2	1			3	2.94%	2.60%
Pineda fine sand, fp, 0-1%	5.05%	1				1	0.98%	-4.07%
Pompano fine sand, fp, 0-1%	4.63%	2				2	1.96%	-2.67%
Valkaria fine sand, depressional	0.15%					0	0.00%	-0.15%

DRAINAGE/Soil Type, % slopes	% of Area	1	2	3	4	Total	% of Sites	difference
Winder sand, depressional	0.10%					0	0.00%	-0.10%
Wulfert muck	2.34%	2				2	1.96%	-0.38%
Total	**27.96%**	**16**	**3**	**2**	**0**	**21**	**20.59%**	**-7.37%**
OTHER								
Matlacha gravelly fine sand, 0-2%	1.74%	2				2	1.96%	0.22%
Matlacha gravelly fine sand, ls	0.01%					0	0.00%	-0.01%
Matlacha-Urban land complex	0.35%					0	0.00%	-0.35%
St. Augustine, organic substratum-Urban land complex	0.07%		1			1	0.98%	0.91%
Urban land	0.30%					0	0.00%	-0.30%
Water	3.50%					0	0.00%	-3.50%
Waters of the Gulf of Mexico	0.73%					0	0.00%	-0.73%
Total	**6.70%**	**2**	**1**	**0**	**0**	**3**	**2.94%**	**-3.76%**
Grand Total	**100.00%**	**71**	**26**	**5**	**0**	**102**	**100.00%**	**0.00%**

This portion of Lee County is damp and soggy as evidenced by the fact that 61% of the soils are poorly drained and another 28% of the soils are very poorly drained. The moderately well drained soils make up 2.8% of the area, the somewhat poorly drained soils cover 1.4% of the areas, and the Other category covers 6.7% of the area. Overall, the moderately well and somewhat poorly drained soils have a high correlation with sites, while the poorly and very poorly drained soils have a negative correlation. The moderately well drained soils account for 2.8% of the area, but have 24% of the sites, while the somewhat poorly drained soils cover 1.4% of the area but have 11% of the sites. However, there is a wide range of preference within each drainage category.

Those soils that have a higher percentage of sites as compared to area (2% or greater) are marked in red on the table, while those that seem less likely to be used (-2% or less) are marked in blue. There are eight preferred soil types; in order of preference, they are: Immokalee sand, 0-2%; Daytona sand; Satellite fine sand, 0-2%; Cocoa fine sand; Kesson fine sand; Anclote sand, fp, 0-1%; Myakka fine sand, 0-2%; and Peckish mucky fine sand. Kesson and Peckish sands are located along the coast, which has a high correlation with sites, even though the soils are very poorly drained. There are seven soils that appear to have been avoided. In order of avoidance, they are Pineda fine sand, 0-2%; Hallandale fine sand, wet, 0-2%; Oldsmar sand, 0-2%; Boca fine sand, 0-2%; Malabar fine sand, 0-2%; Boca fine sand slough; and Valkaria fine sand, 0-2%.

The APE was considered to have a low archaeological potential. Almost all of the soil types have a negative correlation with sites, although the frequently ponded Anclote sand does have a positive correlation. There are abundant water sources. Given the results of the historic research, no 19th or 20th century homesteads, forts, military trails, or Indian encampments were expected within the APE, although evidence of the timber and naval stores industries that were present across the region in the early 20th century might be encountered.

4.3 Historical Considerations

Background research, including a review of the FMSF and the NRHP, revealed no previously recorded historic resources (50 years of age or more) within the APE. A review of the Lee County Property Appraiser's web site indicated that no historic resources are located within the parcel (Caldwell 2022). The historic aerial photographs and the quad maps revealed no structures within the APE (USDA 1944, 1953a, 1953b; USGS 1958a, 1958b).

4.4 Field Methodology

The FDHR's Module Three, *Guidelines for Use by Historic Professionals*, indicates that the initial stage of archaeological field survey is a reconnaissance of the APE 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 APEs 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 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. A reasonable and good faith effort was made to locate the historic properties within the APE (Advisory Council on Historic Preservation n.d.).

Archaeological field methodology consisted of surface reconnaissance combined with systematic and judgmental subsurface testing. Testing was conducted at 50 m (164 ft) intervals around the wetlands in the soils with a neutral correlation with sites and at 100 m (328 ft) intervals in soils with a negative correlation. The remainder of the APE was tested at 200 m (656 ft) intervals or judgmentally. Shovel tests were circular and measured approximately 50 centimeters (cm) (20 inches [in]) in diameter by 1 m (3.3 ft) in depth unless impeded by impenetrable limerock, clay, or groundwater intrusion. All soil removed from the tests was screened through 0.64 cm (0.25 in) mesh hardware cloth to maximize the recovery of artifacts. The locations of tests were recorded using a Juno 5 Series, Geo 7S Trimble, and ESRI Collector. Following the recording of relevant data such as stratigraphic profile and artifact finds, the shovel tests were refilled.

Historical/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 50 years of age or older (constructed in or prior to 1972), 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 Inadvertent/Unexpected Discovery of Cultural Materials

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. If human burial sites such as mounds, lost indigenous and historic cemeteries, or other unmarked burials or associated artifacts are found, then the provisions and guidelines set forth in Chapter 872.05, *FS* (Florida's Unmarked Burial Law) are to be followed.

In the event such discoveries are made during the development process, all activities in the immediate vicinity of the discovery will be suspended, 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.

4.6 Laboratory Methods/Curation

No cultural materials were recorded; thus, no laboratory methods were utilized.

All project related records (maps, field notes, photographs, digital data) are being stored at Archaeological Consultants, Inc. (P21078C) in Sarasota unless the client wishes otherwise.

5.0 RESULTS AND CONCLUSIONS

5.1 Archaeological

Archaeological field methodology consisted of surface reconnaissance combined with systematic and judgmental subsurface testing. Testing was conducted at 50 m (164 ft) intervals around the wetlands in the soils with a neutral correlation with sites (N=121) and at 100 m (328 ft) intervals in soils with a negative correlation (N=291). The remainder of the APE was tested at 200 m (656 ft) intervals or judgmentally (N=111). (**Figure 5.1**). In total, 523 shovel tests were excavated, all of which were negative. As a result of these efforts, no archaeological sites were discovered. Some shovel tests were terminated prior to 100 cm (39 in) due to impenetrable limerock, clay, or groundwater intrusion (**Photos 5.1 and 5.2**). In general, the stratigraphy varied depending on environmental location (see below).

North and south central region of APE

- 0-20 centimeters below surface (cmbs) (0-8 in) of dark gray sand; 20-50 cmbs (8-20 in) of tan sand; 50-70 cmbs (20-28 in) of yellow-brown sand; and 70-80 cmbs (28-31 in) of yellow-brown sandy clay.

Northwest region of APE

- 0-10 cmbs (0-4 in) of gray-brown sand; 10-30 cmbs (4-12 in) of yellow-tan sand; and 30-60 cmbs (12-24 in) of orange sand. Water intrusion at 40 cmbs (16 in).

Northeastern boundary and southeastern portion of APE

- 0-10 cmbs (0-4 in) of dark gray sand; 10-30 cmbs 10-12 in) of light gray-brown sand; and 30-50 cmbs (12-20 in) of dark brown sand. Limestone at 50 cmbs (20 in) and water at 40 cmbs (16 in).

Southwest region of APE

- 0-10 cmbs (0-4 in) of gray sand; 10-40 cmbs (4-16 in) of light gray-tan sand; 40-90 cmbs (16 to 35 in) of light yellowish-brown sand; and 90-100 cmbs (35-39 in) of yellow gray, sandy clay. Water at 90 cmbs (29 in).

Photo 5.1. Shovel test with water near surface.

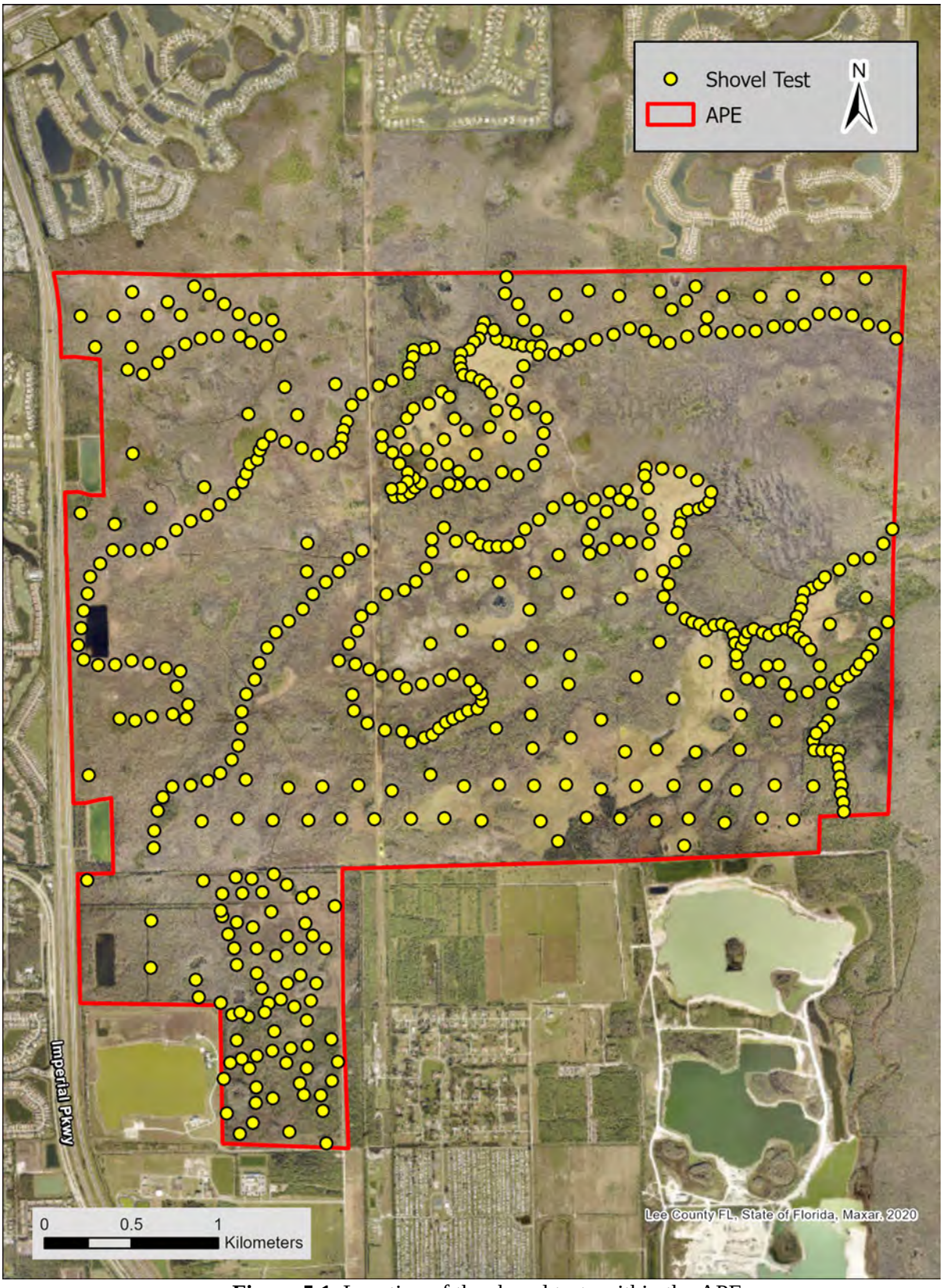

Figure 5.1. Location of the shovel tests within the APE.

Photo 5.2. Example of impenetrable limerock in shovel test.

5.2 Historical/Architectural

Background research, including a review of the FMSF and the NRHP, revealed no previously recorded historic resources (50 years of age or more) within the APE. A review of the Lee County Property Appraiser's web site indicated that no historic resources are located within the parcel (Caldwell 2022). The historic aerial photographs and the quad maps revealed no structures within the APE (USDA 1944, 1953a, 1953b; USGS 1958a, 1958b). The absence of historic resources was confirmed by the field investigations.

5.3 Conclusions

Given the results of background research and field survey, including the excavation of 523 shovel tests, no archaeological sites or historic resources were discovered. As such, no cultural 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

Survey log

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 Larry Kiker and Hidden Cypress Preserves, LL Co.- Phase I

Report Title (exactly as on title page)

Cultural Resource Assessment Survey of the Larry Kiker and Hidden Cypress Preserves, Lee County, Florida

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

Publication Year 2022 **Number of Pages in Report** (do not include site forms) 53

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

ACI (2022) Cultural Resource Assessment Survey of the Larry Kiker and Hidden Cypress Preserves, Lee County, Florida. Conducted for Kimley-Horn & Associates, Inc., Fort Myers by ACI, Sarasota. P21078C

Supervisors of Fieldwork (even if same as author) Names Almy, Marion; Horvath, Elizabeth A.

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. _____ 3. _____ 5. _____ 7. _____
2. _____ 4. _____ 6. _____ 8. _____

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

Name Kimley-Horn Organization Kimley-Horn and Associates

Address/Phone/E-mail 1412 Jackson St, Ste.2, Ft. Myers, FL 33901

Recorder of Log Sheet Horvath, Elizabeth A. **Date Log Sheet Completed** 3-1-2022

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 CORKSCREW NW Year 2013
2. Name ESTERO Year 2013
3. Name _____ Year _____
4. Name _____ Year _____
5. Name _____ Year _____
6. Name _____ Year _____

Field Dates and Project Area Description

Fieldwork Dates: Start 1-10-2022 End 2-23-2022 **Total Area Surveyed** (fill in one) _____ hectares 4350.00 acres

Number of Distinct Tracts or Areas Surveyed 1

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

background research, surface reconnaissance; systematic and judgmental subsurface testing (50, 100, 200 m) N=523; 50 cm diameter, 1 m deep, 1/4" screen; historic resources reconnaissance

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** 0

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

NA

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

NA

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:** _____

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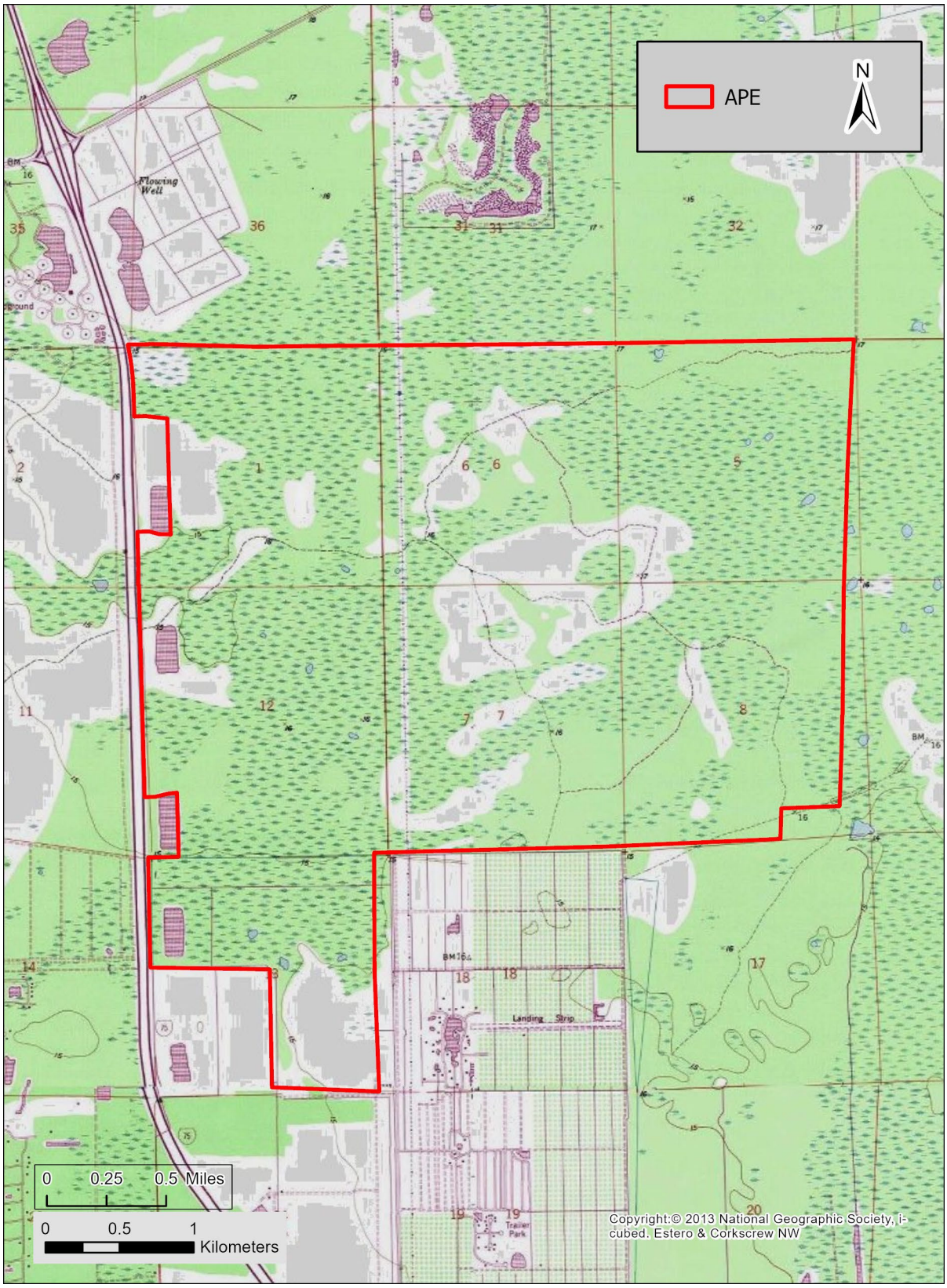

Larry Kikker and Hidden Cypress Preserves
Township 47 South, Range 25 East, Sections 01, 12-13; and
Township 47 South, Range 26 East, Sections 05-08
USGS Estero and Corkscrew NW. Lee County, Florida