ENVIRONMENTAL SETTING

Environmental and ecological factors through time are used to reconstruct past conditions that influence early human occupation of the project area. Information regarding the environmental setting was discussed in the previous reports within the same corridor but was updated during this study.

Paleo-Environment and Macro-Vegetational Change

Since the termination of the Pleistocene Epoch at the end of the Wisconsin glaciation, roughly 11,550 BC, Florida has undergone significant climatic and environmental change. Notable changes in climate and subsequently in flora and fauna required human groups to adapt to their surroundings. These adaptations resulted in cultural changes in their hunting/foraging strategies and seasonal migration patterns. Within the archaeological record, these changes can be observed by differences in settlement patterns, midden composition, refuse disposal patterns, and the kinds of stone tools or pottery made.

Paleobotanical evidence suggests that between 31,050 and 11,550 BC, Florida was dry, windy, and cool (Whitehead 1973). By the early Holocene, roughly 11,550 BC, the climate in west-central Florida had warmed and it is likely that precipitation increased; as a result, the shallow, perched lake levels rose. At about 3,050 BC, sea levels had risen to within a few meters of their current levels (Griffin 1988). Increased rainfall resulted in the formation of Lake Okeechobee, the Everglades, and other modern ecosystems (Watts and Stuiver 1980; Brooks 1984:38; Gleason et al. 1984:311). The relative sea level stability combined with freshwater discharge allowed for the development of coastal estuaries (Widmer 1988). Around 750 BC, the rising sea level had slowed to the point that some modern beach ridges in southern Florida, like Cape Sable, began to form. Increased precipitation in the interior made cypress common in many areas, including the Big Cypress Swamp, and made droughts in the Everglades less common (Griffin 1988). The southern rim of Lake Okeechobee reached its maximum height about this time (Brooks 1984:38). Vegetation reached its present distributional patterning and estuaries were fully formed and supplied by enough freshwater drainage to become highly productive (Widmer 1988; Griffin 1988).

The climatic fluctuations that have occurred over the past 13,000 years have affected the way human groups were able to exploit resources. The Paleoindian and Early Archaic inhabitants would have found the area drier and access to water restricted, possibly only seasonally available at perched water ponds, or in solution lakes (sinkholes). The Florida peninsula was wider as sea level was as much as 49 m (160 ft.) lower than present level (Milanich 1994:38). The continental shelf was exposed in what is now the Gulf of Mexico. Mixed forests of oak and pine probably dominated the lower, riparian areas and the higher, arid locations were covered with rosemary scrub and grass species.

By Late Archaic times, the environment of the region approached present conditions. With the incipient development of the Everglades, Lake Okeechobee, Lake Kissimmee, swamps, wetlands, and other drainages, water was no longer the limiting factor to site and resource location. The

choice of site location was probably more a matter of finding a reasonably dry spot rather than a nearby water supply (Almy 1976, 1978; Grange et al. 1979). Sea levels were still fluctuating but were within one meter of current levels (Mörner 1969; Widmer 1988). Woodland Period culture groups exploited microhabitats that existed until modern logging, ranching, and land drainage practices were instituted.

Regional Environment

The majority of the project APE is located within the Atlantic Coastal Ridge physiographic region (White 1970:Plate 1-C), known in Miami-Dade County, as the Miami Ridge. The Ridge consists of a narrow, gently sloping limestone ridge that extends from Hollywood south to Homestead. A wave-cut cliff, known as the Silver Bluff Scarp, is located along the southeastern edge of the ridge. Features associated with the Miami Ridge include the Atlantic Ocean to the east, the Everglades to the west, and the Southern Slope to the south. A portion of the southern slope extends northeastward along the western shore of Biscayne Bay, terminating across from Key Biscayne. Elevation along the Atlantic Coastal Ridge averages approximately 3 to 4.5 meters (10 to 15 feet) with elevations in the Coconut Grove area of South Miami reaching 6 to 7 meters (20 to 24 feet).

The northernmost mile of the project APE, north of SW 8th Street, is located in the Everglades physiographic region (White 1970:Plate 1-C). The Everglades region is characterized by low, poorly drained flatland that represents the shallow, flat bottoms of Pleistocene seas. Elevations range from sea level along Florida Bay to approximately 10 feet in the northern end of the Everglades. Peat and organic-rich soils that have accumulated on a bedrock floor that consists of Miami Oolite cover this region. Miami Oolite, a Pleistocene era deposit, consists of a soft, white to yellow limestone that varies from a sandy limestone to calcium carbonate. This bedrock floor rises to the east and west where it lies very near the surface and where elevations tend to be somewhat higher. The Miami Oolite gradually thickens to the east where it eventually forms the Atlantic Coastal Ridge. It is also important to note that modern human attempts to drain, ditch, or divert water have severely altered much of the Everglades.

Limestone and dolostone dominate the sediments of Miami-Dade County. This formation is a soft, oolitic limestone that is generally less than 40 feet thick (Puri and Vernon 1964). It characteristically contains large quantities of ooliths, which are small, spherical particles formed when calcite or aragonite was deposited in concentric layers around a nucleus of some type (United States Department of Agriculture [USDA] 1996:3–4). Outcrops of silicified limestone, or chert, which was often sought out by precontact peoples as raw material sources for the manufacture of stone tools do not occur in this area (Lane et al. 1980). The closest known outcrops lie to the west along the Peace River in the central part of the state (Scott 1978; Upchurch et al. 1982). Shell was the material of choice for the manufacture of precontact tools, and large univalve and bivalve shells occur in abundance along nearby Biscayne Bay.

Water resources consist of both ground and surface water. The surficial aquifer, known as the Biscayne Aquifer, consists of sediments from the Anastasia formation, Miami and Key Largo limestone, and the Fort Thompson formation (Scott 1992:53). The surficial aquifer is recharged through local rainfall. Because of low hydraulic gradients, movement of water within this zone is

very slow. Water is discharged from the aquifer through lateral seepage into streams or lakes, or through evapotranspiration. Drainage ditches have allowed for more rapid drainage of inland areas. The ground water aquifer in southern Florida, known as the Floridian Aquifer, underlies the surficial Biscayne Aquifer. The Floridian Aquifer is presently non-potable due to saltwater intrusion caused by excessive pumping.

Physical Environment of the Project Corridor

Modern drainage and development have drastically changed the drainage patterns and overall environment of the area during the past century. The modified nature of the project area makes it difficult to determine the original vegetative communities located in and around the survey area as no native vegetation remains.

A review of the General Land Office (GLO) historic plat maps (Florida Department of Environmental Protection [FDEP] 1845a, 1918) and surveyors' field notes (FDEP 1845b, 1846) was conducted to look at past environmental conditions in the vicinity of the APE. The surveyors' notes describe the APE as open rocky pine and prairie interspersed with areas of wet prairie. The historic plat maps show the Everglades to the west. Although the 1918 historic plat map depicts a hammock adjacent to the northern end of the APE, the 1845 surveyors' notes describe this area as a dry myrtle hammock, which would not be indicative of increased site potential. No other hammocks or tree islands are shown on the plat maps or described in the surveyors' notes.

Aerial photographs from 1938, 1951, 1952, and 1968 (FDOT, Surveying and Mapping Office 1996–2019; University of Florida, George A. Smathers Libraries 1999–2016) were reviewed to identify hammocks in the APE and examine land use in the area during the 20th century. No hammock vegetation is visible within the APE on any of the aerial photographs. The FEC Railway is evident on the 1938 aerial photograph. At this date, the surrounding area is undergoing drainage and development but still appears low and wet in many places. Platted roads, agricultural fields, and a few scatted buildings are visible adjacent to the APE. Natural vegetation is also evident adjacent to the APE though the FEC Railway corridor has been entirely cleared. The 1951 and 1952 aerial photographs show increased urban development adjacent to the APE as evidenced by a greater number of structures and platted roads. An area of mining is visible on the east side of the northern end of the APE and large retention ponds associated with mining operations are visible on the west side of the APE between SW 44th Street and SW 56th Street. The 1968 photographs show a level of dense development surrounding the APE similar to current conditions.

Soils can also provide information about environmental conditions prior to development. A review of the 1947 *Soil Survey Detailed-Reconnaissance, Dade County, Florida* (USDA 1958) and Soil *Survey of Dade County Area, Florida* (USDA 1996) was conducted to look at pre-development soil drainage characteristics and environmental associations within the archaeological APE. The 1947 soil survey reconnaissance indicated that prior to development, the APE was located within eight detailed soil types (Table 1). The northern segment of the APE, most of which is located within the Everglades physiographic region, contains poorly to very poorly drained soils. The southern segment of the APE, located on the Atlantic Coastal Ridge, contains mostly excessively to well drained soils, whereas the northern segment contains poorly to very poorly drained soil.

Drainage Characteristics	Soil Type	Environmental Association	
Excessively to Well Drained	Dade fine sand	Nearly level to gently sloping sandy pine land with natu vegetation consisting of secondary growth slash pin sawpalmetto, cyads, coonties, and grasses. Hammoor consisting of live oak, cabbage palm, gumbo-limbo, a other hardwoods are scattered throughout portions of t soil type.	
Well Drained	Rockdale fine sand, level phase – Limestone substratum	Low ridge from Miami Shores to near Princeton. Natural vegetation consists of slash pine, saw palmetto, and other subtropical plants; scattered hammocks support live oak, palm, and other subtropical trees.	
Poorly to Very Poorly Drained	Davie fine sand	Flat areas or small depressions within sandy prairie originally covered with a layer of peat or muck. The organic material has been destroyed by excessive drainage, oxidation, shrinkage, and fires. Natural vegetation originally consisted of sawgrass prior to being drained.	
	Davie mucky fine sand	Flat areas or small depressions on the edges of sandy prairie. Unlike Davie fine sand, the original layer of peat or muck have not yet been completely destroyed by excessive drainage, oxidation, shrinkage, and fires. Natural vegetation originally consisted of sawgrass prior to being drained.	
	Perrine marl very shallow phase	Marl glades mostly east of the rocky pinelands from Miami south of Florida City. The marl is derived from calcareous sediments originating in fresh water and is underlain by limestone at a depth of 12 inches from the surface. Natural vegetation consists of sedges and tall grasses, mainly switchgrass, reedgrass, needlegrass, and sawgrass.	
Very Poorly Drained	Everglades peat, over shallow marl	Predominantly flat areas of peat within the Everglades bas that has developed from the remains of sawgrass, lily, sedg and myrtle. Some slight depressions and rises are prese within areas of this soil type. The marl seals the water abo the permeable rocks below and areas of this soil type may be covered with water during many months of the year.	
N/A	Mine, pits, and dumps	Areas from which the Miami oolite limestone has been quarried.	
	Rockland	This detailed soil type consists of Miami oolite or Tamiam limestone covered by a thin layer of unconsolidated so material. It is found primarily in the southeastern part of the Everglades basin. Natural vegetation in the eastern part of the county consist of grasses as sedges, whereas the western part may also contain slash pine and cypress.	

Table 1. Characteri	stics of Detailed Soil Typ	pes within the Archaeological A	PE
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USDA 1958:15–18, 23–29

The review of the 1996 soil survey reflected the developed and modified nature of the APE, noting that the APE is located entirely within the Urban land and Udorthents detailed soil types. The Urban land soil type generally consists of parking lots, streets, sidewalks, buildings, and other structures where natural soil cannot be observed and very little natural vegetation remains (USDA 1996:21). Open areas of this soil type typically contain udorthents that have usually been altered by grading, shaping, and/or the addition of up to 18 inches of stony fill material (USDA 1996:22). The Udorthents, limestone substratum-Urban land complex is described as predominantly open spaces of Udorthents consisting of fill material underlain by limestone at a depth of approximately 55 inches below the surface. The remaining areas are urban land covered by hardscape and structures (USDA 1996:19). The Udorthents-Water complex is described as open water and udorthents comprised of unconsolidated geological material removed during the excavation of ditches, canals, lakes, ponds, and quarries (USDA 1996:19).

Currently, the APE is located primarily within a former railroad corridor that has been disturbed by the construction and maintenance of the railroad facility as well as the development of the surrounding area. The APE contains grass and other secondary growth, remnant of the abandoned railroad.

PRECONTACT OVERVIEW

Native peoples have inhabited Florida for at least 14,000 years. The earliest cultural stages are pan-Florida in extent, while later cultures exhibited unique cultural traits. The following discussion of the precontact time period in the vicinity of the APE is included in order to provide a framework within which the local archaeological record can be understood.

Paleoindian Period (12,000-7500 BC)

The earliest inhabitants of Florida are known archaeologically as Paleoindians. The prevailing view of the Paleoindian culture, a view based on the uniformity of the known tool assemblage and the small size of most of the known sites, is that of a nomadic hunting and gathering existence, in which now-extinct Pleistocene megafauna were exploited. Settlement patterns were restricted by availability of fresh water and access to high-quality stone from which the specialized Paleoindian tool assemblages were made. Waller and Dunbar (1977) and Dunbar and Waller (1983), from their studies of the distribution of known Paleoindian sites and artifact occurrences, have shown that most sites of this time period are found near karst sinkholes or spring caverns.

The majority of Paleoindian sites in Florida consist of surface finds. The most widely recognized Paleoindian tool in Florida is the Suwannee point, typically found along the springs and rivers of northern Florida. Other points, including Simpson and Clovis points, are found in lesser numbers. Other Paleoindian stone tools tend to be unifacial and plano-convex, with steeply flaked, worked edges (Purdy and Beach 1980:114–118 and Purdy 1981), bifacial and "hump-backed" unifacial scrapers, blade tools, and retouched flakes, including spokeshaves (Purdy 1981; Daniel and Wisenbaker 1987:62–81, 86–87). Some tools are little more than flakes or blades that were struck from cores, used, and discarded (Milanich 1994:51).

By the end of the Paleoindian period, the climate had become warmer and wetter. It is possible that at this time the modern wetlands of southern Florida began to emerge. Sea levels began a fairly rapid rise, shrinking the available land mass through coastal inundation. These dramatic climate changes, and possible pressure from Paleoindian hunters, led to the extinction of the Pleistocene megafauna and other species.

Archaic Period (7500-500 BC)

During the Archaic period, climate and sea levels gradually stabilized and southern Florida began to take on its current appearance. The Archaic period is known for the adaptations made by Florida's earliest inhabitants to the modernizing climate and landscape. At the beginning of the Archaic, lifeways in Florida were quite similar to those of the preceding Paleoindian period. However, by the end of the Archaic, Florida's native people had developed more sedentary lifestyles, made many technological innovations, the most important of which was the invention of pottery, and began to differentiate themselves into distinct regional subcultures. Florida's Archaic is divided into an Early, Middle, and Late sub-periods, each of which have recognized horizons that are limited to restricted geographic areas and/or times.

Early Archaic (7500-5000 BC)

By the beginning of the Early Archaic sub-period, the Pleistocene megafauna and other characteristic fauna had become extinct. The settlement patterns and tools of Early Archaic people in Florida were initially very similar to those of the preceding Paleoindian period. As the Early Archaic progressed, more wetland habitats within southern Florida began to emerge.

By the end of the Early Archaic, local environments were becoming more subtropical. Additionally, interior ponds had begun to form (Carr 2002:194–195; Wheeler 2004:7). Sea levels throughout the Early Archaic were also still lower than modern levels.

Most of what is known about Early Archaic subsistence comes from highly preserved materials recovered from the anaerobic muck of the Windover Pond site in Brevard County. The Windover analysis (Andrews et al. 2002) indicates that Early Archaic peoples utilized the fibers of sabal palm, saw palmetto, and other plants in the weaving of baskets and textiles. Windover also illustrates that at least some Early Archaic populations had developed an intensive exploitation strategy focused on inland aquatic resources supplemented by terrestrial game (Dickel and Doran 2002:54). Within southern Florida, sites dating to this time period are rare. The Cutler Fossil site (8DA2001) in the Deering Estate, Miami-Dade County, is one definite Early Archaic site (Carr 1986). Other possible Early Archaic sites in southern Florida include Sunset Lakes (8BD3176), Blue Cow (8BD2150) (Davis and Carr 1993), and Silver Lakes (8BD1873) (Carr et al. 1991).

Middle Archaic Period (5000-3000 BC)

During the Middle Archaic period, the environment of southern Florida approached that of modern times, becoming less arid and supportive of a broader range of animal and plant resources. Broad wetlands, lakes and rivers began to develop and sea levels began to stabilize (Dixon 1999; Littman 2000). The human populations began to develop distinct regional adaptations to the changing environmental conditions. For the first time, such distinct regional adaptations and cultures appeared across all of Florida, including the southern portion of the peninsula. Along the southwest coast, populations developed year-round adaptations to the developing estuaries, producing large shell middens and constructing shell mounds in the process. Within southern Florida, Middle Archaic populations began to adapt to the developing Everglades ecosystem as well as the more dispersed wetland resources to the north of what is now Lake Okeechobee. The unique adaptation to the interior marshlands of southern Florida that can be seen developing during the Middle Archaic has been labeled the Glades or Everglades Archaic (Pepe 2000:32; Pepe and Jester 1995:19; Wheeler 2004; Wheeler et al. 2002:143-144).

Large coastal shell middens dating to the Middle Archaic are known for the southwestern coast of Florida, providing ample evidence of fully developed estuaries there during these times (Russo 1991; Torrence 1996). Within the interior, peat formation became widespread toward the end of this period, eventually giving rise to the Everglades ecosystem. The Middle Archaic artifact assemblage is not well documented but includes Florida Archaic Stemmed (FAS) and related points. Thonotosassa points, related to FAS points but larger, thicker, and more crudely made, have also been found in southern Florida at sites dating to the Middle Archaic (David Dickel, personal communication with James Pepe 2007; Farr 2006:91). Within southern Florida, an example of this point was noted at Ryder Pond (8LL1850). Wooden artifacts known from the

Middle Archaic include dugout canoes and a variety of wooden stakes and other tools recovered from wet sites. Although a variety of shell tool types are known from Middle Archaic sites, the main shell tool type known for southern Florida during this time is the *Strombus* celt (Wheeler 1994).

Several Middle Archaic sites have been identified on sandy ridges along the eastern edge of the Everglades. Sites such as Ranch Ridge (8BD1119) and Hiatus #2 (8BD3283) consist of scatters of lithic artifacts, including Middle Archaic point types and lithic debitage. Other probable Middle Archaic sites located in the Everglades, such as Bass Creek/Blockbuster #1 (8BD2878) and Cheetum (8DA1058), may represent early manifestations of the aforementioned Glades Archaic culture. All are, or were, hammock tree island sites surrounded by what would have been marshlands before modern drainage and other disturbances.

Late Archaic Period (3000-500 BC)

By the beginning of the Late Archaic, all of the modern physiographic regions and ecosystems of southern Florida were present in essentially their modern forms, including the entire Kissimmee-Lake Okeechobee-Everglades drainage system. Although the environment of southern Florida had achieved some sense of stability, the archaeological record of this period is much more dynamic. As a result, there is a great deal of variability between Late Archaic sites in southern Florida. Until recently, variations of Bullen's chronology for the Late Archaic Orange culture in northeastern Florida were generally used for the Late Archaic in southern Florida. Using this scheme, fibertempered pottery, the earliest pottery type known for all of North America, was considered to be a marker for the pottery of the Late Archaic. The generally accepted chronological sequence for the Late Archaic was expressly unilineal, with plain (undecorated) fiber-tempered pottery, followed by decorated fiber-tempered pottery, replaced finally by plain pottery that was not tempered with fibers (Bullen 1954, 1955, 1972). It was also understood that sand was eventually added as a tempering agent to fiber-tempered pottery. Orange pottery tempered with both fiber and sand is sometimes referred to as "semi-fiber tempered." The application of this chronology to southern Florida seemed to indicate that most of the area, especially the Everglades, was sparsely settled during the Late Archaic due to the general absence of Orange pottery at sites (Griffin 2002:146-149; Widmer 1988:201-201).

Investigations have questioned the use of the "standard" fiber-tempered sequence for the Late Archaic in southern Florida and suggest that, at some sites or in some areas, the earliest pottery present may be Sand-tempered Plain or thick, chalky wares. Investigations of a Late Archaic period site in Jupiter, the Joseph Reed Shell Ring, resulted in a tentative new chronology for the Late Archaic in southeastern Florida (Russo and Heide 2002). The proposed Late Archaic I is marked by fiber-tempered and/or semi-fiber tempered plain pottery. During the next proposed period, Late Archaic II, only chalky ware pottery, possibly early St. Johns Plain, is predicted to occur. The Late Archaic III, is distinguished by the presence of plain sand-tempered pottery along with the chalky pottery. Pepe and Jester (1995:19) propose that there are two, distinct Archaic traditions in southeastern Florida. In this model, the fiber-tempered pottery tradition is largely a coastal phenomenon associated with shell mound building, while the aceramic Archaic or "Glades Archaic" is a more widespread tradition, perhaps giving rise to the distinctive regional culture of

the Tequesta and their ancestors (see also Pepe 2000:29-32; Russo and Heide 2002:80; and Wheeler et al. 2002:143-144).

Many of the ubiquitous faunal bone middens located in the interior wetlands of southern Florida date to Late Archaic times, despite the fact that many of them lack pottery of any kind. These sites are notoriously difficult to date because, not only do they often lack chronologically diagnostic artifacts, but most of the faunal bone at the sites lacks collagen, the datable material in bone samples sent to radiocarbon labs. Nevertheless, many sites clearly have aceramic components that underlie pottery-bearing strata, logically indicating that these aceramic components most likely date at least as far back as the Late Archaic. Ongoing research by the National Park Service in the Big Cypress National Preserve and Everglades National Park has identified dense aceramic faunal bone middens yielding radiocarbon dates between 2850 and 1550 BC (Michael Russo, personal communication with James Pepe 2007; Schwadron 2006).

Formative Period (500 BC-AD 1513)

The Formative Period represents a time when changes in pottery and technology occurred throughout Florida. The specific changes in pottery traditionally used by archaeologists to mark the beginning of this period include the replacement of fiber-tempered pottery with sand-tempered, limestone-tempered, and chalky-paste ceramics. Three different projectile point styles (basally notched, corner-notched, and stemmed) also occur in some areas in contexts contemporaneous with these new ceramic types. This profusion of ceramic and tool traditions suggests population movement and social interaction between culture areas. The earliest known major occupations of southern Florida date to this period (Bullen et al. 1968; Sears 1982). The regional diversity that marked this period has been primarily attributed to local adaptation to varied ecological conditions within the state. The ceramic tradition for southern Florida, characterized by sand tempered bowls with incurvate rims, is known as the Glades or Everglades cultural tradition.

The project area is located in the Glades (Milanich 1994:301). As defined by Milanich (1994:298), the Glades cultural region (Figure 5) includes all of south Florida "east and south of the Caloosahatchee and Okeechobee regions. It includes most of St. Lucie County, "the Everglades, a largely sawgrass marsh in Hendry, Palm Beach, Broward, Dade, and Monroe counties; the Big Cypress Swamp west of the Everglades in Collier County; and extensive saltwater marshes and mangrove forests ounce found along both coasts, now almost totally destroyed in Broward and Dade counties."

Glades Culture

Environmentally, the interior portions of the Everglades area are dominated by inundated or formerly inundated humic or peat soils which are drained by massive sheet-flow instead of river channeling. The Atlantic coast, which has developed from beach dune deposition, has a few rivers cutting through the Atlantic Coastal Ridge and a coast-parallel lagoon system.



Figure 5: Glades Cultural Region.

John Goggin established a ceramic sequence for the Glades region on the basis of work he conducted from the 1930s to early 1950s (Goggin n.d.). Subsequent research has refined his basic chronological framework (Griffin 1988; Griffin et al. 1982). Table 2 is based on Griffin's 1988 work and presents the most thorough chronological framework for southern Florida. Summaries of the ceramic markers associated with each period are provided, as well. It is important to note that the information provided in this table is most applicable to the heartland of the Glades archaeological area: the Big Cypress Swamp, Everglades, and coastal portions of southern Florida to the south of Lake Okeechobee.

Glades period sites include those at Gordon's Pass (Goggin 1939), Goodland Point (Goggin 1950), Marco Island (Van Beck and Van Beck 1965), Useppa Island (Milanich et al. 1984), Horr's Island (McMichael 1982), Sanibel Island (Fradkin 1976), and the Turner River site (Sears 1956). An interesting feature of these large coastal sites is the progressive movement of habitation areas toward the water (Cushing 1896; Goggin 1950; Sears 1956), and indications are that dwellings may have been built to extend out over the water. Inland sites consist of shell and dirt middens along major watercourses (Laxson 1966) and small dirt middens containing animal bone and ceramic sherds in oak/palm hammocks or palm islands associated with freshwater marshes. The coastal Glades subsistence pattern is typified by the exploitation of fish and shellfish, wild plant food, and inland game, while Glades sites in the Big Cypress Swamp show a greater, if not exclusive, reliance on interior resources.

Period	Dates	Distinguishing Characteristics
Glades I early	500 BC-AD 500	First appearance of sand-tempered pottery; no decoration
Glades I late	AD 500–750	First appearance of decorated pottery: Fort Drum Incised, Fort Drum Punctated, Cane Patch Incised, Gordon's Pass Incised, Opa Locka Incised, Sanibel Incised; sand-tempered plain persists
Glades IIa	AD 750–900	Appearance of Key Largo Incised and Miami Incised; sand- tempered plain and Opa Locka Incised persist; none of the earlier decorated types are present
Glades IIb	AD 900–1100	Sand-tempered plain and Key Largo Incised persist; Matecumbe Incised appears; none of the earlier decorated types are present; certain rim modifications (incised lip arcs and lip crimping and grooving) also appear for the first time
Glades IIc	AD 1100–1200	Almost no decorated ceramics; some grooved lips but no more lip arcs or crimped rims; Plantation Pinched appears
Glades Illa	AD 1200–1400	Plantation Pinched is no longer present; Sand-tempered plain and grooved lips persist; appearance of Surfside Incised and St. Johns Check Stamped
Glades IIIb	AD 1400–1513	Glades Tooled, sand-tempered plain and St. Johns Check Stamped are present, Surfside Incised and grooved lips are not present
Glades IIIc	AD 1513–ca.1700	Same as previous period with the addition of historic artifacts

Table 2. Glades Cultural Sequence

Griffin 1988: 124-142

HISTORICAL OVERVIEW

The following overview traces the historical development of the general project area from the European settlement through the twentieth century. The intent of this historical overview is to serve as a guide to field investigations by identifying the possible locations of any resources within the project APE and to provide expectations regarding the potential historic significance of any such resources. It also provides a context with which to interpret any historic resources encountered during the CRAS.

European Contact and Colonial Period (c. 1513–1821)

Official credit for the discovery of Florida belongs to Juan Ponce de León, whose voyage of 1513 took him along the eastern coast of the peninsula (Tebeau 1971:21). He is believed to have sailed as far north as the mouth of the St. Johns River before turning south, stopping in the Cape Canaveral area and possibly at Biscayne Bay. The expedition then continued southward, following the Florida Keys, making contact with the local Tequesta people en route before turning to the northwest, where they encountered the Calusa along the southwestern Gulf Coast.

Other Spanish explorers followed Juan Ponce de León, and over the next 50 years the Spanish government and private individuals financed expeditions hoping to establish a colony in "La Florida." In 1565, King Philip II of Spain licensed Pedro Menéndez de Avilés to establish a settlement in St. Augustine, Florida. Settlements with associated missions were established at St. Augustine, San Mateo (Ft. Caroline) and Santa Elena, and smaller outposts and missions were located in Ais, Tequesta, Calusa, and Tocobaga territory (Gannon 1965:29). Despite zealous attempts, the native groups in Florida continued to resist conversion, and in 1572 Jesuit authorities decided to abandon their missionary efforts in Florida.

Another attempt to build a mission in southeastern Florida took place nearly 150 years after the establishment of St. Augustine. Because it was in Spain's best interest to maintain control along the Florida coastline and alliances with the native groups inhabiting the coast, a missionary effort was supported in the Biscayne Bay area (Parks 1982:55–65). Father Joseph María Monaco and Joseph Xavier Alaña were sent from Cuba in 1743 and arrived at a Native American village located at the mouth of the Miami River. The village did not appear any more receptive towards accepting Christianity than before. After Joseph Xavier Alaña conveyed this to the Governor of Cuba, the mission was closed, and the fort they had erected was destroyed to prevent its fall into hostile hands (Parks 1982:55–65). Although the Spanish were resigned to the fact that missionization and settlement of South Florida came at too high a price, they did strive to maintain good relations with the various native people who lived in the area.

By the beginning of the eighteenth century, the Native American population of South Florida had declined considerably as a result of disease, slave raids, intertribal warfare, and attacks from a new group of Native Americans, the Seminoles. The Seminoles, descendants of Creek Indians, moved into Florida during the early eighteenth century to escape the political and population pressures of the expanding American colonies to the north (Wright 1986:218).

By the end of the eighteenth century, the Seminoles had become the dominant Native American group in the state. Groups of fugitive African American slaves also had settled among the Seminoles by the early nineteenth century (Brown 1991:5–19). Armed conflict with pioneers, homesteaders, and eventually the United States Army resulted in the removal of most of the Seminoles from Florida. This action forced the withdrawal of the remaining Seminole population to the harsh environment of the Everglades and Big Cypress Swamp by the late nineteenth century.

Territorial and Statehood Period (1821–1860)

In 1821, after several years of negotiations with Spain, the U.S. acquired Florida as a territory. The population of the territory at that time was still centered in the northern areas around Pensacola, St. Augustine, and Tallahassee. As more European-American settlers moved into the region, conflicts arose with the Seminole people over available land. Pressure began to bear upon the government to remove the Seminoles from northern Florida and relocate them farther south. The Treaty of Moultrie Creek (1823) restricted the Seminole people to approximately four million acres of land in the middle of the state, running south from Micanopy to just north of the Peace River (Mahon 1967: Rear foldout map). The Seminoles did not approve of this treaty because they were reluctant to move from their established homes to an area that they felt could not be cultivated. Other treaties soon followed such as Payne's Landing (1832) and Fort Gibson (1833), which called for Seminole emigration to the western territories (Mahon 1967:75–76, 82–83). These treaties fostered Seminole resentment of settlers that would culminate in the Second Seminole War in 1835.

At the beginning of the Second Seminole War, the conflict was centered near the Withlacoochee region. In 1838, U.S. troops moved south to pursue the retreating Seminoles into the Lake Okeechobee and Everglades regions. Colonel Zachary Taylor was sent to the area between the Kissimmee River and Peace Creek. Colonel Persifor Smith and his volunteers were dispatched to the Caloosahatchee River, and U.S. Navy Lt. Levi N. Powell was assigned the task of penetrating the Everglades (Mahon 1967:219–220). Powell's detachment had several skirmishes with Seminole people near Jupiter Inlet. Powell established a depot on the Miami River and erected Fort Dallas in the approximate location of present-day downtown Miami. For three months, Fort Dallas was a base of operations as Powell led his men into the Everglades in search of the Seminoles (Gaby 1993:47).

The Second Seminole War had a deleterious effect on new settlement in Florida. To encourage settlement in the middle portion of the territory after the war, the Armed Occupation Act of 1842 offered settlers 160 acres of land at no cost, provided they built a house, cleared five acres, planted crops, and resided on the land for five years. Any head of a family, or single man over 18 years of age and able to bear arms, was eligible to receive a homestead. This act, plus the end of the Second Seminole War, created a small wave of immigration by Anglo-American pioneers to central Florida. Most of these immigrants were Anglo-American farmers and cattle ranchers, or "crackers," from the southeastern United States (Gaby 1993). During the latter years of the Territorial Period, South Florida represented a frontier with few European-American settlers who were primarily involved in the milling of lumber and arrowroot.

During the latter years of the Territorial Period, South Florida was a frontier with few European-American settlers. In 1842, William F. English established a plantation and platted the "Town of Miami" on land he had purchased south of the Miami River. Few settlers were attracted to the area and English abandoned his property when the Third Seminole War began in 1855. The Army reactivated Fort Dallas during the war, completing its stone buildings and adding new wooden structures. Military engineers also constructed the region's first road, connecting Fort Dallas with the military outpost at Fort Lauderdale. The Miami Post Office opened in December 1856, receiving mail once a month by boat from Key West. When the Third Seminole War ended, many soldiers settled in the area and Fort Dallas became the nucleus of a permanent community (Patricios 1994:12, 19).

Civil War and Post War Period (1860–1898)

With the beginning of the Civil War, cattle were needed to help feed the Confederate Army. Herds from as far south as central Florida were driven to railheads near the Georgia border. However, cattle ranchers discovered they could sell their herds in Cuba for a greater profit and began dealing with blockade-runners. The Union attempted to stop all shipping from Florida ports, but blockade-runners were too abundant. Cattle ranchers from all over Florida drove their cattle to Punta Rassa to be shipped to Cuba for payment in Spanish gold. It is not known how many cattle were shipped from the port during the Civil War. However, after the war as cattle continued to be shipped, it is reported that in the decade between 1870 and 1879 over 165,000 head were shipped (Grismer 1949).

In the 1880s, interest in the resources of South Florida increased due in large part to people like Hamilton Disston and Henry B. Plant. By 1881, the State of Florida faced a financial crisis involving a title to public lands. On the eve of the Civil War, land had been pledged by the Internal Improvement Fund to underwrite railroad bonds. After the War, when the railroads failed, the land reverted to the State. Almost \$1 million was needed by the state to pay off the principal and accumulated interest on the debt, thereby giving clear title.

Hamilton Disston, son of a wealthy Philadelphia industrialist, contracted with the State of Florida in two large land deals: the Disston Drainage Contract and the Disston Land Purchase. The Drainage Contract was an agreement between Disston and the State in which Disston and his associates agreed to drain and reclaim all overflow lands south of present-day Orlando and east of the Peace River in exchange for one-half the acreage that could be reclaimed and made fit for cultivation.

The Disston Land Purchase was an agreement between Disston and the State in which Disston agreed to purchase Internal Improvement Fund Lands at \$1.25 an acre to satisfy the indebtedness of the fund. A contract was signed on June 1, 1881 for the sale of 4,000,000 acres for the sum of \$1 million, the estimated debt owed by the Improvement Fund. Disston was allowed to select tracts of land in lots of 10,000 acres, up to 3,500,000 acres. The remainder was to be selected in tracts of 640 acres (Davis 1938:206–207). Before he could fulfill his obligation, Disston sold half of this contract to a British concern, the Florida Land and Mortgage Company, headed by Sir Edward James Reed (Tischendorf 1954:123).

Disston changed Florida from a wilderness of swamps, heat, and mosquitoes into an area ripe for investment. This enabled Henry B. Plant to move forward with his plans to open the west coast of Florida with a railroad-steamship operation called the Jacksonville, Tampa & Key West Railway. Through the Plant Investment Company, he bought up defunct rail lines such as the Silver Springs, Ocala & Gulf Railroad, Florida Transit and Peninsular Railroad, South Florida Railroad, and Florida Southern Railroad to establish his operation (Mann 1983:68; Harner 1973:18–23). In 1902, Henry Plant sold all of his Florida holdings to the Atlantic Coast Line, which would become the backbone of the southeast (Mann 1983:68).

In 1874, George M. Thew established the Biscayne Bay Company to purchase several of the original land claims and market the property. Julia Sturtevant Tuttle, a resident of Cleveland, Ohio, moved to Florida in 1891, and was so taken with the old Fort Dallas property that she purchased it from the Biscayne Bay Company for \$2,000.00. She also recognized the importance of transportation if the region was ever to progress. Consequently, she negotiated with railroad magnate Henry Flagler to transfer to him half of her acreage along the Miami River in exchange for bringing the FEC Railway to Miami. Flagler agreed, and by 1896 the railroad arrived. Flagler used some of the land he received from Julia Tuttle to build the Royal Palm Hotel on the north bank of the river across from Brickell's Point. The City of Miami was incorporated three months after the construction of the railroad, with a population of 502 voters. Flagler extended his railway to Homestead, completing the line by 1903 (Mann 1983).

The Florida Coast Line Canal and Transportation Company (FCLCTC) was chartered in 1881 to construct a series of canals connecting existing lakes and rivers between St. Augustine and Lake Worth, Florida. In 1893, railroad mogul Henry Flagler became associated with the company in order to help extend his railroad to the south of the state (Wiggins 1995). A review of the Florida Department of Environmental Protections (FDEP) Tract Book Records (n.d.) indicates that settlement in the region began in the late nineteenth century. Land apportionment within the project area is listed in Table 3 below.

Section	Portion Owned Owner		Date of Deed or Sale			
Township 54 South, Range 40 East						
2	All	Florida Coast Line Canal and Transportation Company	September 24, 1890			
11	NE 1⁄4	Heirs of Henry S. Arnold	January 20, 1903			
	NW 1⁄4	Florida Coast Line Canal and Transportation Company	September 24, 1890			
	N ½ of SW ¼ and N ½ of SE ¼	David A. Smith	December 30, 1905			
	S ½ of SW ¼ and S ½ of SE ¼	Andrew W. Salokar	April 8, 1910			

Table 3. Land Apportionment in the Vicinity of the Project Area

Section	Portion Owned	Owner	Date of Deed or Sale
14	All	Florida Coast Line Canal and Transportation Company	September 24, 1890
23	All	Florida Coast Line Canal and Transportation Company	September 24, 1890
	NE ¼ of NE ¼	Charles Walton	November 21, 1912
26	S ¹ / ₂ of NE ¹ / ₄ and E ¹ / ₂ of SE ¹ / ₄	Joseph Oliver	June 3, 1913
	NW ¼ of NE ¼; N ½ of NW ¼ and SE ¼ of NW ¼	Frank Hobbs	July 6, 1908
	SW ¼ of NW ¼	William J. Cole	December 26, 1907
	W 1/2 of SW 1/4	Everett H. Herndon	July 11, 1903
	E ½ of SW ¼ and W ½ of SE ¼	Walter Addison	May 11, 1908
35	All	Florida Coast Line Canal and Transportation Company	September 24, 1890

FDEP: n.d.

Spanish-American War Period/Turn-of-the-Century (1898–1916)

At the turn-of-the-century, Florida's history was marked by the outbreak of the Spanish-American War in 1898. As Florida is the closest state to Cuba, American troops were stationed and deployed from the state's coastal cities. Harbors in Tampa, Pensacola, and Key West were improved as more ships were launched with troops and supplies. "The Splendid Little War" was short in duration, but evidence of the conflict remained in the form of improved harbors, expanded railroads, and military installations (Miller 1990).

Rapid and widespread growth was the theme of this period in Florida history. Thousands of miles of railroad tracks were laid, including the FEC, Atlantic Coast Line, and Seaboard Air Line railroads. While agriculture, especially the citrus industry, had become the backbone of Florida's economy, manufacturing and industry began growing during the beginning of the century. Fertilizer production, boat building, and lumber and timber products were strong secondary industries (Weaver et al. 1996:3).

In 1904, Governor Napoleon Bonaparte Broward initiated significant reforms in Florida's politics. Several of Broward's major issues included the Everglades drainage project, railroad regulation, and the construction of roads. During this time, railroads were constructed throughout the state and automobile use became more prevalent. Improved transportation in the state opened the lines to export Florida's agricultural and industrial products (Miller 1990). As various products such as fruits and vegetables were leaving the state, people were arriving in Florida. Some entered as new residents and others as tourists. Between 1900 and 1910, the state population increased from

528,542 residents to 752,619. At this time, St. Lucie and Palm Beach counties were established, indicative of the increasing numbers of people moving to the east coast of the state.

In 1909, the construction of the Miami Canal began for the expressed purpose of controlling flooding in western Miami-Dade County and draining the Everglades for agriculture and development (Gaby 1993). Prior to the building of the canal, most of the land west of present-day NW 27th Avenue was flooded sawgrass prairie with isolated hammocks. By the time of its completion in 1912, the Miami Canal had drained most of the eastern portion of the Everglades and opened up land for settlement and development. Consequently, land to the east of the former wetlands became available for development. Much of this "new" land consisted primarily of scrub growth of palmetto, Florida pine, and coconut palms, with mangrove and sawgrass where water was once present (Sessa 1950:2).

By 1912, several agricultural and residential communities, which were initially settled in the 1800s and eventually, would become part of metropolitan Miami, existed to the north and south of Miami. Some of the settlements to the north consisted of Little River, an agricultural area of fruit groves and vegetable fields; Lemon City, a residential neighborhood; and Buena Vista, which included both residences and groves where citrus, avocadoes, mangoes, sapodillas, papayas, and bananas were grown (Sessa 1950:13–14). To the south of Miami was Coconut Grove, a small settlement established in the late 1800s (Sessa 1950:13–14).

World War I and Aftermath Period (1917–1919)

The World War I and Aftermath period of Florida's history begins with the United States' entry into World War I in 1917. Wartime activity required the development of several training facilities in the state, and protecting the coastlines was a priority at this time. Although the conflict only lasted until November 1918, the economy was boosted greatly by the war. For example, the war brought industrialization to port cities such as Tampa and Jacksonville, where shipbuilding accelerated. These cities also functioned as supply depots and embarkation points. An indirect economic benefit of the war was an increase in agricultural production, as beef, vegetables, and cotton were in great demand (Miller 1990).

While Florida industrialization and agriculture flourished, immigration and housing development slowed during the war. Tourism increased as a result of the war in Europe, which forced Americans to vacation domestically. Tycoons such as Henry Plant were building the hotels and railroads for people desiring winter vacations in sunny Florida. These magnates took an interest in the improvements and promotion of Florida in an effort to bring in more tourist dollars. The end of the war marked a slight increase in population, and Flagler and Okeechobee counties were created at this time.

The idea of constructing the Tamiami Trail, a highway across the Everglades, which would link the Gulf and Atlantic coasts in southern Florida, was first promoted by James Franklin Jaudon in 1915. Jaudon, a former Miami-Dade County tax assessor, wanted to develop property he owned in the western Everglades and around Chevalier Bay in northern Monroe County, and believed that construction of the Tamiami Trail would make this feasible (Burnett 1988). Apparently with this scheme in mind, Jaudon, L. T. Highleyman, eventual Supervisor of the Southern Drainage District, and R. E. McDonald purchased 20,000 acres of land in the Everglades from the Trustees of the Internal Improvement Board in 1917 (Jaudon 1924). Jaudon and a promotion group then convinced Lee, Miami-Dade, and Monroe county officials of the value and feasibility of a road and canal through his landholdings. At the time, there was even serious talk of the construction of a railroad alongside the Tamiami Trail and Canal (Jaudon 1917–1934). Consequently, Miami-Dade County raised \$125,000 and graded a rough road from the eastern part of the county to the edge of the Everglades, while Lee County worked on the western end of the highway. Work on the project temporarily stopped during World War I, when the war and problems connecting the Miami-Dade and Lee County portions delayed the road's completion.

Miami-Dade County experienced a tremendous amount of growth and development in the years following World War I. Since many areas of South Florida were low-lying and therefore prone to flooding during the rainy season, it was necessary to fill these areas to make them suitable for living (Sessa 1950:6). Another option used by developers to create livable land was to purchase bay bottom from the State Internal Improvement Fund, apply for permits from the U.S. Army Corps of Engineers to dredge, and then pump their claims in order to create islands. Some of the islands created by this practice of dredging and filling, which began in 1918, included Palm Island, Hibiscus Island, La Gorce Island, Sunset Islands, and Venetian Islands.

By 1917, Miami had a population of 30,000 and two new skyscrapers, the Ralston Building and McAllister Hotel. Eighty-seven new storefronts were added in one year. Miami now had one car for every 13 people, partly a result of the opening of the Dixie Highway promoted by Miami Beach developer Carl Fisher in 1915. Miami also had a new trolley system that ran all the way to Buena Vista, pushing development northward.

Florida Land Boom Period (1920–1929)

After World War I, Florida experienced unprecedented growth. Many people relocated to Florida during the war to work in wartime industries or were stationed in the state as soldiers. Bank deposits increased, real estate companies opened in many cities, and state and county road systems expanded quickly. Earlier land reclamation projects created thousands of new acres of land to be developed. Real estate activity increased steadily after the war's end and drove up property values. Prices on lots were inflated to appear more enticing to out-of-state buyers. Every city and town in Florida had new subdivisions platted and lots were selling and reselling for quick profits. Southeastern Florida, including cities such as Miami and Palm Beach, experienced the most activity, although the boom affected most communities in central and South Florida (Weaver et al. 1996:3).

Road building became a statewide concern as it shifted from a local to a state function. These roads made even remote areas of the state accessible and allowed the boom to spread. On a daily basis up to 20,000 people were arriving in the state. Besides the inexpensive property, Florida's legislative prohibition on income and inheritance taxes also encouraged more people to move into the state.

Work on the Tamiami Trail resumed after the war ended. However, by 1921, Lee County had run out of funds, and work again halted (Burnett 1988:41–44). In the meantime, Jaudon surveyed and staked out the most feasible route. In the spring of 1923, a group of Lee County promoters organized a motorcade to attract public interest and demonstrate that automobile travel across the Everglades was possible. On April 4, 1923, these motorists, called the "Trail Blazers," left Fort Myers to drive across the flooded and rock-bottomed prairies of the Everglades. The expedition, which consisted of ten cars, 23 men, and two Seminole-Miccosukee guides, took 23 days to reach Miami and captured the attention of the nation as daily reports were wired to the press (Federal Writers' Project 1984:406; Covington 1993:202; Gaby 1993:163).

This trip stimulated interest in building the highway and also demonstrated the viability of overland automobile traffic across the Everglades. Following this journey, Barron G. Collier, a millionaire tycoon with more than one million acres in southern Lee County, guaranteed completion of the highway. Collier's guarantee to complete the Tamiami Trail was contingent on the establishment of a new county, to be called Collier County, in what was then southern Lee County. It also required the re-routing of the road across Collier's holdings in this new county, thereby bypassing Monroe County and Jaudon's original Chevalier Bay tract.

Collier County officially came into being in 1923 (Tebeau 1966:108). The newly created Collier County issued \$350,000 in bonds to pay for the Tamiami Trail and work began again in 1923. By 1924, Jaudon reported that 42 or 34 miles of the Trail in Miami-Dade County had been completed by the J. B. McCrary Company (Jaudon n.d.). Collier's financing was depleted by 1926, when the State Road Department took over the final 12 miles of the Everglades section of the road, the most difficult, in order to link it with the Miami-Dade County portion, as well as the work from Naples to the Lee County line. When the 143-mile-long Tamiami Trail officially opened on April 25, 1928, it had taken thirteen years to build at a cost of \$13 million (Tebeau 1966:220–232; Burnett 1988:41–44).

In 1923, the President of Seaboard Air Line Railroads, Mr. S. Davies Warfield, initiated a move to extend a line from the existing Coleman station in Sumter County, Florida to West Palm Beach, with the ultimate goal of connecting the line to Miami. After Warfield organized the quick purchase of over 160,000 acres, construction began on the West Palm Beach branch in the summer of 1924. Over 204 miles of nearly straight track from Coleman to West Palm Beach were completed the following fall of 1925. Immediately following this expeditious construction, work on the line connecting West Palm Beach and Miami was initiated, and by the end of the year the line was extended from Miami to Homestead.

The boom of the 1920s transformed the small southern resort town of Miami into a metropolis. As a resort destination, Miami had a "season" that began in December and ended in early April. The real estate boom was created in part by the desirable sub-tropical climate of the area, the abundance of available land created by the draining of the Everglades, and the visions and schemes of promoters and developers. The boom brought Miami into the national spotlight as investors, speculators, and hopeful new residents poured into town from all over the United States (Parks 1991:107). Nationally known architectural firms like Schultze and Weaver and Kiehnel and Elliott

opened Miami offices and designed major new buildings. Several of the historic buildings that remain in downtown Miami are legacies of the boom era.

In October 1920, the "Chaille Plan" of renaming streets was adopted. Chaille, then a Miami City Council member, proposed a system that would divide Miami into four quadrants. The dividing line separating north from south was Flagler Street (formerly 12th Street), and Miami Avenue (formerly Avenue "D") separated the east from west quadrants (Kleinberg 1989:106). Bayfront Park and Biscayne Boulevard (formerly Biscayne Drive) were developed on land pumped up from Biscayne Bay that dramatically increased the availability of waterfront land. Before long, scaffolding for new skyscrapers would rise, creating Miami's first skyline. The suburbs were pushed out in all directions, freeing up more and more central city property for commercial development. The growing popularity of the automobile fueled Miami's growth in the 1920s. The increased mobility of the population, their disposable income and the availability of leisure time resulted in the migration of all classes of people who responded to the marketing of Miami's sub-tropical delights (CMPD 1987:8).

Between 1920 and 1925, the population of Miami more than doubled and large-scale massive efforts were underway to replace the buildings constructed during the city's pioneer days with "modern" ones. During the height of the boom, land prices could double or triple in just one day. Front-page stories in major newspapers replaced paid advertisements as the means of promoting South Florida.

During this period, the city demolished the old docks in order to create new land for a bayfront park and wide boulevards. Several small communities developed throughout Miami-Dade County as new land was acquired and former agricultural areas gave way to subdivisions. Opa-Locka, Miami Springs, Hialeah, Buena Vista, Shorecrest, Allapattah, and Flagami were just a few of the new place names in Miami-Dade County. In 1925, the City annexed Buena Vista, Lemon City, Allapattah, Little River, Silver Bluff, and Coconut Grove thereby creating Greater Miami (Parks 1991:118). The largest of these new subdivisions included Miami Shores, Miami Beach, and Coral Gables.

By the end of 1925, over-speculation and over-development threatened the Miami region's vigorous and unprecedented growth. Housing was scarce, more lots were for sale than could be sold, more acreage was available than could be portioned into subdivisions, and prices were out of proportion to the value (Parks 1991:118; Sessa 1950:353). Then, in August of 1925, the FEC Railway announced an embargo on all carload freight except fuel, petroleum, livestock and perishable goods (Sessa 1950:264–265). Soon after, steamship companies followed suit and refused to bring in any additional goods until buyers cleared out the backlog of goods that existed in warehouses, freight cars, and steamships in Miami. This embargo threatened the economy of the area by delaying or cutting off the arrival of supplies for building contractors and forcing them to lay off workers. Compounding the problems posed by the embargo was an active anti-Florida campaign in the northern states. Major magazines did exposés on the often unscrupulous practices of Florida developers and warned of the dangers of speculating in Florida real estate. Finally, the capsizing of the *Prinz Valdemar*, a World War I era brigantine undergoing renovations, in the

middle of the shipping channel in January 1925 prevented the use of the Miami Harbor for 25 days (Parks 1991:120).

Another blow to the boom came with the hurricane in 1926. Despite the warnings that the area was extremely vulnerable to tropical storms and hurricanes, development of the Miami area continued uninterrupted until the hurricane of September 19, 1926. Because there had not been a major storm in Miami-Dade County for 16 years, the 1926 hurricane took the area completely by surprise (Tebeau 1980:387). Before South Florida could completely recover from the storm of 1926, another more powerful hurricane struck the coast near West Palm Beach. Considerably more powerful than its 1926 counterpart, the September 16, 1928 storm washed out a great portion of the Okeechobee dike (Tebeau 1980:388). Damage to the coastal areas was staggering, and Florida's land boom turned to bust.

By the time the stock market collapsed in 1929, Florida was suffering from an economic depression. Construction activity had halted and industry dramatically declined. Subdivisions platted several years earlier remained empty and buildings stood on lots partially-finished and vacant. The 1929 Mediterranean fruit fly infestation that devastated citrus groves throughout the state only worsened the recession (Weaver et al. 1996).

Depression and New Deal Period (1930–1940)

This era of Florida's history begins with the stock market crash of 1929. As previously discussed, there were several causes for the economic depression in Florida, including the grossly inflated real estate market, the hurricanes, and fruit fly infestation. During the Great Depression, Florida suffered significantly. Between 1929 and 1933, 148 state and national banks collapsed, more than half of the state's teachers were owed back pay, and a quarter of the residents were receiving public relief (Miller 1990).

The Depression affected most areas of the state's economy. Beef and citrus production declined, manufacturing slowed, and development projects were stopped. Even the railroad industry felt the pressures of the 1930s and had to reduce service and let go some personnel. In addition, the increasing use of the automobile lessened the demand for travel by rail. Despite the Depression, tourism remained an integral part of the Florida economy during this period. New highways made automobile travel to Florida easy and affordable and more middle-class families were able to vacation in the "Sunshine State" (Miller 1990).

During the Great Depression, the Miami region fared better than many areas, as tourism helped keep the local economy alive. The city really regained its vigor when it was rebuilt through the policies of President Franklin D. Roosevelt's New Deal (Sessa 1950:350). Federal Emergency Relief Agency (FERA) funds were released to the unemployed, and the Civilian Conservation Corps (CCC) was started to build parks, such as Matheson Hammock and Greynolds Park, which became the nucleus of Miami's future park system. By 1935, the Works Progress Administration (WPA) was in Miami and new public buildings were constructed. These WPA projects gave jobs to construction workers, and the WPA also hired unemployed artists, writers, and teachers to teach art to the disadvantaged children, prepare guidebooks to Miami, and develop theater and music

projects. During the 1930s, Miami continued to attract the working middle class tourist who could escape the gloom of the Great Depression. By the late 1930s, Miami was experiencing a financial recovery, ahead of most of the rest of the nation.

World War II and the Post-War Period (1941–1949)

From the end of the Great Depression until after the close of the post-war era, Florida's history was inextricably bound with World War II and its aftermath. It became one of the nation's major training grounds for the various military branches including the Army, Navy, and Air Force. Prior to this time, tourism had been the state's major industry and it was brought to a halt as tourist and civilian facilities, such as hotels and private homes, were placed into wartime service. The influx of thousands of servicemen and their families increased industrial and agricultural production in Florida, and also introduced these new residents to the warm weather and tropical beauty of Florida.

Railroads once again profited, since servicemen, military goods and materials needed to be transported. However, airplanes were now becoming the new form of transportation, and Florida became a major airline destination. The highway system was also being expanded at this time. The State Road Department constructed 1,560 miles of highway during the war era (Miller 1990).

Following the outbreak of World War II, Miami and Miami Beach became war camps and major training centers for the Armed Forces. By the end of 1942, many of the area's once empty hotels had become barracks for the Army Air Force Officers Candidate School, an Officers Training School and a basic training center. Other hotels were turned into hospitals, golf courses were transformed into drill fields, fancy restaurants and clubs became mess halls, and churches and synagogues were used for classrooms.

War agencies tripled the income of the entire state and the population increased by roughly 25 percent. After the war, there was a huge influx of cash from federal agencies. The Federal Security Administration built roads, bridges and public improvements. The Veterans Administration began to disburse millions of dollars in benefits to ex-GIs. The Federal Housing Authority guaranteed the financing of 15,000 new homes each year (Safford 1950:58).

At the conclusion of World War II, Florida's economy was almost fully recovered. Tourism quickly rebounded and once again became a major source of the state's economy. The end of the war also brought an influx of new residents to the area, as former soldiers who had trained in Miami decided to settle there. Consequently, Miami experienced a post-war boom. Between 1940 and 1950, the population nearly doubled, and new subdivisions of small concrete block homes dotted what had once been the outskirts of Miami (Parks 1991:168–170).

Modern Period (1950 to present)

By 1950 the population of the City of Miami had reached 172,000 residents while the county had reached 495,000 people. During the 1950s, the incorporation of several municipalities in Miami-Dade County signaled that the population was indeed swelling. By 1955, the county population

was up to 715,000 residents. The growing population was also becoming increasingly diverse at this point in time. In 1956, the Miami NAACP chapter demanded an end to segregation in Miami-Dade County buses and a federal suit was filed to end segregation in public Florida schools. The first Black police station was constructed in a few years earlier in 1951. In 1959, The Miami-Dade County school board accepted four black students at Orchard Villa Elementary, becoming the first integrated public school in Florida. In 1960 Downtown Miami was the first place in Florida to integrate lunch counters and integration was ordered at the Miami police training school.

One of the most significant developments in Miami's history during the second half of the twentieth century was the influx of tens of thousands of Cuban immigrants to the United States. Fidel Castro's rise to power in Cuba led to the exodus of over 800,000 Cubans over the course of a 35-year span. The most dramatic impact came from the periods shortly before and after the ousting of Cuban dictator Fulgencio Batista in 1959. "The first emigres who came in 1958 were, according to the history of the time, followers of General Fulgencio Batista, the dictator who had taken power in a 1952 military coup" (Wasem 2009). Predicting the political shift, many of Batista's followers began fleeing to Miami leading the way for many to follow.

After Fidel Castro took power in 1959 the exodus escalated, peaking at approximately 78,000 refugees in 1962. Cuba's elites and middle classes were those most likely to suffer from Castro's communist reign and were the first group to flee in large quantities. This exodus lead to a general 'brain drain' from Cuba. As many of these refugees had formal education, training and business experience, many with international business experience coming from cosmopolitan Havana, these early immigrants found South Florida a natural fit and immediately began relocating businesses and practices to South Florida.

This wave of immigration made Miami one of the nation's largest immigration ports in the latter half of the twentieth century. Cuban immigrants created their own ethnic communities within Miami, particularly in areas such as Hialeah and Little Havana (formerly known as Riverside/Shenandoah). Because many of those arriving in the first wave of immigration possessed professional and business backgrounds, the economies of these ethnic communities boomed, creating jobs and industry for Spanish speakers in the area. The Cuban Refugee Program and Refugee Emergency Center were established in 1960 by the federal government, in cooperation with social service organizations and religious groups, notably the Catholic Archdiocese of Miami. The emergency center was established in the Miami Daily News Tower in downtown. When it reopened, the building was renamed the Freedom Tower. The Freedom Tower quickly became a symbol of the refuge immigration for Miami's Cuban community. Over the years the port of Miami has become the new Ellis Island and the Freedom Tower has become Miami's Statue of Liberty.

The Cuban population in the United States grew almost six-fold within a decade, from 79,000 in 1960 to 439,000 in 1970. Many thousands of these immigrants were resettled elsewhere in the United States but many returned to Miami. At the time of the 1960 census, over 40% of Florida's foreign-born population resided in Miami-Dade County. Nearly 60% of all Cubans in the United States resided in Miami thirty years after the immigration wave began (Gannon 1996: 404-406).

The third wave of Cuban immigration occurred during what is now referred to as "The Mariel Boatlift." Castro's communist regime generally prohibited emigration but on several major occasions he allowed people to leave without repercussion. The largest instance was the 1980 Mariel Boatlift during which approximately 124,800 Cubans fled to Florida by boat (Batalova and Zong 2017; Nolin 2016; Wasem 2009). Immigrants of this time period were referred to in Spanish as "Marielitos."

Once immigrants reached the United States, they were eligible to become lawful permanent residents after one year under the Cuban Adjustment Act of 1966. However, mounting costs of accepting so many immigrants from the Mariel Boatlifts forced Congress to establish the "Immigration Emergency Fund" in the 1986 Immigration Reform and Control Act. This Fund provided federal aid to "regions and communities facing more general health and safety problems due to overcrowded and unsuitable living conditions that rise when mass migration occurs" (Wasem 2009).

In the latter half of the twentieth century, Hurricane Andrew was the single event having the greatest impact on south Miami-Dade County. On August 24, 1992, the category four storm struck the area; Florida City and Homestead were among the communities hit hardest by the hurricane. With winds over 150 mph, Andrew destroyed approximately 85 percent of Florida City's buildings and more than 50 percent of its historic architecture. The hurricane's effects are still evident, with numerous vacant lots and bare foundations throughout the community. In Homestead, more than 99 percent (1,167 of 1,176) of all mobile homes were completely destroyed (Mayfield et al. 1994). The category four storm damaged 75 percent of Homestead Air Force Base, prompting Defense officials to close the active duty base and move military units and families. Since then, the base has been divided, with about 75 percent turned over to the base closure agency and the remainder serving as an Air Force reserve station (*Mobile* 1999).

FLORIDA MASTER SITE FILE SEARCH AND LITERATURE REVIEW

An archaeological and historical literature and background information search pertinent to the project APE was conducted to determine the types, chronological placement, and location patterning of cultural resources within the project APE. A review of FMSF data, previous surveys, property appraiser records, and historical research material was conducted to determine the potential for cultural resources within the project APE that are listed, eligible, or considered eligible for listing in the National Register, or that have potential or confirmed human remains.

The FMSF serves as an archive of information about Florida's recorded cultural resources. It represents an inventory of resources for which available information exists and describes their condition at a point in time. Because the inventory is not all-inclusive on a statewide basis, gaps in data may exist. The FMSF is only as accurate and as comprehensive as the information that is submitted, and users should be aware of the sometimes-uneven quality of the information. The FMSF is an important planning tool that assists in identifying potential cultural resources issues and resources that may warrant further investigation and protection. It can be used as a guide but should not be used to determine the official position of the FDHR or the SHPO regarding the significance of a resource.

Previously Conducted Cultural Resource Surveys

The work of previous investigators was reviewed to gather information about the types of precontact and early historic period sites that could be expected to occur within the project APE. A search of pertinent literature and records was conducted to determine the locations of significant and potentially significant resources within the APE, as well as any archaeological and historical assessments of tracts of land within the APE.

A search of FMSF and in-house data identified seven previously conducted cultural resource surveys that contain or partially contain the project APE (Table 4). Three of these surveys are County-wide (FMSF Manuscript No. 340, 620, and 2127). One survey conducted by Janus Research in 2016 covered the northernmost 1.21 miles of the APE and is summarized below. One additional survey conducted by Janus Research in 2018 covered the southernmost 4.4 miles of the APE. This report, which is not available at the FMSF, is also summarized below. The current project APE has been comprehensively surveyed for historic resources. Whereas the southern segment of the APE has been comprehensively surveyed for archaeological resources, the northern segment has not.

The 1.21-mile northern segment of the APE was surveyed during the *CRAS and Effects Determination for the Florida East Coast Railway, LLC Abandonment Exemption in Miami-Dade County, Florida* (Janus Research 2016; FMSF Manuscript No. 23080) at the request of the Florida East Coast (FEC) Railway. This survey consisted of an archaeological desktop analysis and a historic resources reconnaissance survey. No subsurface testing was conducted in 2016 due to safety concerns as the FEC Railway corridor had not yet formally been abandoned. Archaeological testing was conducted during the 2019 survey and is discussed in the *Results* section of this report.

FMSF Manuscrip t No.	Title	Author(s)	Publication Date	Segment
340	Dade County Archaeological Survey Interim Report	Carr, Robert S.	1980	Northern Southern
602	Dade County Historic Survey	Carr, Robert S., and Ivan Rodriquez	1981	Northern Southern
2127	Dade County Historic Survey, Phase II: Final Report	Metropolitan Dade County	1989	Northern Southern
4551	A Cultural Assessment Survey for State Road 90/SW 8 th Street from State Road 826/Palmetto Expressway to SW 27 th Avenue, Volume 1: Report, Volume 2: Appendices	Janus Research	1996	Northern
7923	Charlie's Body Shop/MD 1132-C	Carr, Robert S.	2001	Northern Southern
8227	Cultural Resource Assessment of the FGHG Tower Location in Miami-Dade County, Florida	Ambrosino, Meghan L.	2003	Northern
23080	Cultural Resource Assessment Survey (CRAS) for the Florida East Coast Railway, LLC Abandonment Exemption in Miami Dade County, Florida	Janus Research	2016	Northern

Table 4. Surveys Containing or Partially Containing the Project APE

The reconnaissance survey identified four historic resources within the historic resources APE: the Tamiami Canal (8DA6453), the Seaboard Air Line (CSX) Railroad (8DA10753), the Little River Spur of the FEC Railway (8DA11416), and the FEC Railroad Bridge at Tamiami Canal (8DA14821). On a letter dated August 4, 2016, the SHPO concurred with the eligibility of these resources and that the proposed project would have an adverse effect on the Little River Spur of the FEC Railway (8DA11416) and the FEC Railroad Bridge at Tamiami Canal (8DA14821) (Appendix A). A MOA was executed by the Surface Transportation Board, SHPO, and FECR LLC in 2018 (Appendix B). HAER documentation for the railroad and the bridge was stipulated in the MOA as well as two State Historical Markers. The HAER documentation was completed and accepted by the National Park Service as complete and sufficient on April 19, 2019. The markers were installed on January 9, 2020, at the locations that were outlined in the application and approved by the State Historic Marker Committee.

However, since that time the Little River Spur portion of the railroad closest to this bridge has been removed as part of the FEC Abandonment action and in anticipation of the Ludlam Trail Corridor project. The Little River Spur of the FEC Railroad is no longer extant or eligible in the area surrounding the FEC Railroad Bridge at Tamiami Canal. Due to the removal of the railroad spur and its historic fabric, the associations and context of the FEC Railroad Bridge at Tamiami Canal have been altered and the bridge no longer retains its significance. Therefore, the FEC Railroad Bridge at Tamiami Canal is not considered eligible as a contributing resource to the Little River Spur of the FEC Railroad, and its eligibility finding has changed. An updated form for the FEC Railroad Bridge at Tamiami Canal (8DA14821) has been prepared to reflect the change in eligibility.

The southern 4.4-mile segment of the current APE was surveyed in 2018 during the *CRAS for the Ludlam Trail Project in Miami-Dade County, Florida* at the request of MDPROS Department. This effort included a pedestrian survey and subsurface testing of the archaeological APE as well as historic resources reconnaissance survey of the historic resources APE. No newly or previously recorded archaeological sites were identified within the archaeological APE. The survey identified three historic resources within the historic resources APE: the Little River Spur of the FEC Railway (8DA11416), the FEC Railway Bridge at C-3 Canal (8DA15696), and the Coral Gables (C-3) Canal (8DA15697). The results of the 2018 subsurface testing and historic reconnaissance survey are discussed in further detail in the *Results* section of this this report.

Previously Recorded Archaeological Resources

A search of the FMSF data did not identify any previously recorded archaeological sites within the archaeological APE. Three previously recorded archaeological sites are located within one mile to the northwest of the archaeological APE (Table 5; Figure 6). 8DA1053 is within the Flagami Miami-Dade County Archaeological Zone. In addition, a review of in-house and local cultural resources data identified no Miami-Dade County-designated archaeological sites or zones, or City of Miami Archaeological Conservation Areas or Environmental Preservation Districts within the APE.

FMSF #	Site Name	Site Type	National Register Evaluation*
8DA36**	Flagami Mound	Glades period burial mound	Not Evaluated
8DA1053**	Flagami South	Precontact period midden and historic refuse	Ineligible
8DA1073**	Flagami Midden 2	Glades period midden	Not Evaluated

Table 5. Previously Recorded Archaeological Sites within One Mile of the Archaeological APE

* As recorded in the FMSF; may require re-evaluation

** Listed in the FMSF as having potential or confirmed human remains

Previously Recorded Historic Resources

The 2016 historic reconnaissance survey of the northern 1.21-mile segment of the APE identified four historic resources within the historic resources APE. The Tamiami Canal (8DA6453) was evaluated by the SHPO as National Register–ineligible and non-contributing to the larger National Register–eligible resource. The Seaboard Air Line (CSX) Railroad (8DA10753), the Little River Spur of the FEC Railway (8DA11416), and the FEC Railroad Bridge at Tamiami Canal (8DA14821) have been evaluated by the SHPO as National Register–eligible. As no features associated with the Seaboard Air Line (CSX) Railroad (8DA10753) would be affected by the proposed abandonment, no adverse effect to the resource would result from the project. The SHPO

CRAS for the Ludlam Trail Corridor Project PD&E Study Miami-Dade County August 2020



determined that the proposed project would have an adverse effect on the Little River Spur of the FEC Railway (8DA11416) and the FEC Railroad Bridge at Tamiami Canal (8DA14821) (Appendix A). As required in the MOA, the adverse effect would be mitigated via the installation of two historic markers (Appendix B). The Little River Spur of the FEC Railroad is no longer extant or eligible in the area surrounding the FEC Railroad Bridge at Tamiami Canal and the bridge is now considered ineligible for inclusion in the National Register based on the removal of the spur surrounding the bridge.

The 2016 survey also identified two historic roads that intersect the project corridor: Flagler Street (8DA10448) and Calle Ocho Historic Highway (8DA4586). These two historic roadways are adjacent to but outside of the project APE, and were therefore, not evaluated as part of this CRAS. Additionally, Calle Ocho adjacent to the current APE was designated a state historic highway in 1986 (House Bill No. 1104, Session Law 86-308). This legislation affords the Calle Ocho State Historic Highway certain protections prohibiting the use of state funds for select physical changes on or near the roadway. Pertinent sections of the legislation state that no state funds are to be spent to "alter the physical dimensions or location of Calle Ocho" or to "erect, demolish, or significantly alter the appearance of any structure" with the exception of "erection, demolitions, alterations, and restorations undertaken for the purpose of preserving or enhancing the historic or scenic value of the road and its surroundings." The legislation limits alterations to the road, except for "ordinary maintenance and repair [or]…work that is necessary for the public health or safety as determined by the agency and local government having jurisdiction over the portion." Based on the proposed project scope, the road surface will not be impacted and the appearance of the Calle Ocho State Historic Highway will not be significantly altered.

The 2018 historic reconnaissance survey of the northern 4.4-mile segment of the APE identified an unevaluated segment of the previously recorded Little River Spur of the FEC Railway (8DA11416) from south of SW 12th Street to SW 80th Street. Three historic roads were also identified intersecting the APE. Coral Way/SW 24th Street (8DA11932), Bird Road (8DA4584), and Sunset Drive (8DA6486) were not evaluated as the proposed improvements would not impact these resources.

Additionally, Sunset Drive adjacent to the current APE was designated a state historic highway in 1983 (House Bill No. 563, Session Law 83-365). This legislation prohibits the use of state funds for select physical changes on or near the Sunset Drive Historic Highway. Pertinent sections of the legislation state that no state funds are to be spent to "erect, demolish, or significantly alter the appearance of any structure, including but not limited to, walls, fences, sidewalks, and curbing, within 100 feet of either side of the paved surface of Sunset Drive" unless the improvements are part of "ordinary maintenance and repair [or]…work that is necessary for the public health or safety as determined by the agency and local government having jurisdiction over the portion of Sunset Drive involved." Furthermore, the legislation states that "no signs may be erected within 300 feet of either side of the paved surface of Sunset Drive" unless they met certain conditions such as being "official road signs." Based on the proposed project scope, the road surface will not be impacted and the appearance of the Sunset Drive State Historic Highway will not be significantly altered.

Potential Historic Resources

The Miami-Dade County Property Appraiser and GIS information did not identify any parcels with actual year built (AYRB) dates of 1971 or earlier indicative of potentially containing unrecorded structures. The review of a 1968 aerial photograph (FDOT, Surveying and Mapping Office 1996–2019) identified two historic resources within the APE that have been recorded. The Coral Gables (C-3) Canal intersects the APE in an east-west direction adjacent to the north of A.D. Barnes Park and Preserve. The FEC Railway Bridge at C-3 Canal runs at the northeast edge of A.D. Barnes Park and Preserve over the Coral Gables (C-3) Canal.

METHODS

Archaeological Survey Methods

The archaeological field survey included a surface inspection that consisted of a visual inspection of exposed ground to look for evidence of archaeological sites within the APE. Additionally, a careful surface inspection was undertaken in areas of minimal vegetation and/or upturned soil. Subsurface testing employed conventional shovel testing throughout the investigation. Shovel tests were circular and roughly 20 inches (50 centimeters) in diameter. They were excavated to a minimum depth of 39 inches (1 meter), subsurface conditions permitting. All excavated soil was dry screened through ¹/₄-inch hardware cloth suspended from portable wooden frames.

Standard archaeological methods for recording field data was followed throughout the project. The identification number, location, stratigraphic profile, and soil descriptions were recorded for every shovel test excavated. The locations of all tests were plotted on field aerial maps of the project APE (Appendix D) and recorded with Wide Area Augmentation System (WAAS)-enabled handheld Global Positioning System (GPS) units (UTM-NAD83).

Historic Resources Survey Methods

An architectural historian and one technical assistant conducted a historic resources survey to ensure that each resource built during 1971 or earlier within the APE was identified, properly mapped, and photographed. The historic resources survey used standard field methods to identify and record historic resources. All resources within the APE received a preliminary visual reconnaissance. Any resource with features indicative of 1971 or earlier construction materials, building methods, or architectural styles was noted on aerial photographs.

For each resource identified, FMSF forms were filled out with field data, including notes from site observations (Appendix C). The estimated date of construction, distinctive features, and architectural style were noted. Photographs were taken with a high resolution digital camera. A log was kept to record the resource's physical location and compass direction of each photograph. It should be noted that previously recorded historic resources did not receive updated FMSF forms unless notable changes to the resource since their previous recordation was observed or there was a change in their National Register eligibility.

Each resource's individual significance was then evaluated for its potential eligibility for inclusion in the National Register. Historic physical integrity was determined from site observations, field data, and photographic documentation. Concentrations of historic resources within the APE for the project were noted in terms of the potential for inclusion in a historic district. Each resource's present condition, location relative to other resources, and distinguishing neighborhood characteristics were noted and photographed for accurate assessment of National Register Historic District eligibility.

Local Informants and Certified Local Government Coordination

Local informants may often provide valuable information which is otherwise not available through official records or library collections. Miami-Dade County is listed on the September 16, 2019 list of Certified Local Governments (CLG) posted on the Florida Division of Historical Resources' website (FDHR 2019). Mr. Jeff Ransom, Miami-Dade County Archaeologist; Ms. Kathleen Slesnick Kauffman, former Historic Preservation Chief for Miami-Dade County; and Ms. Megan Schmitt, former City of Miami Preservation Officer were first contacted via email on March 24, 2016 regarding the northern portion of the proposed project. Mr. Ransom responded on the same date that there were no Miami-Dade County designated historic or archaeological resources within the project corridor and concurred that the archaeological APE exhibited low archaeological probability. He also stated that he and Ms. Slesnick had no concerns regarding the proposed scope of work. No comment from Ms. Schmitt has been received.

Mr. Jeff Ransom, Miami-Dade County Archaeologist; Ms. Sarah Cody, Historic Preservation Chief for Miami-Dade County, and Mr. Warren Adams, City of Miami Historic Preservation Officer were again contacted via email on November 1, 2018, for input regarding the southern portion of the proposed project. Mr. Ransom, Ms. Cody, and Mr. Adams were again contacted on November 19, 2019. As of the submittal of this report, Mr. Ransom, Ms. Cody, and Mr. Adams have not expressed any concern regarding this project. However, Alissa Turtletaub, Miami-Dade County Park Planning Section Supervisor, has reviewed and commented on the results of this document.

PROJECT RESEARCH DESIGN AND SITE LOCATION MODEL

The background research and literature review, along with pertinent environmental variables, contributed to project-specific methods designed to locate and evaluate previously unrecorded archaeological sites and historic structures within the project APE. An archaeological site potential analysis provides information regarding which areas of a project have the highest probability of containing archaeological sites. Zones of archaeological site probability were designated based on previous research conducted within the Glades cultural region and the four environmental factors that are typically used to predict site potential: distance to fresh water, relative elevation, soil type (drainage), and distance to hardwood hammocks.

Fresh water is an important resource, as the need for water is universal. This variable would have been of greater importance during the Paleoindian and Early Archaic periods (12,000–5000 BC) when the perched water system was more restricted. No freshwater ponds were identified within or adjacent to the APE during the review of historic plat maps and associated surveyors' notes, or aerial photographs. Wet prairies were identified within and adjacent to the APE and would have provided ample resources. Drainage efforts during the 20th century have altered the Everglades and surrounding area. A 1938 historic aerial (University of Florida, George A. Smathers Libraries 1999–2018) depicts a low wet area near the northern terminus of the APE.

The APE is located across the border of the Everglades and the Atlantic Coastal Ridge physiographic regions (White 1970:Plate 1-C). The Everglades are characterized by low, poorly drained flatlands, while the Atlantic Coastal Ridge consists of a narrow, gently sloping limestone ridge. The archaeological APE is located on the very gradual slope down from the ridge to the Everglades and is generally level compared to the surrounding area. Elevations with the APE range between 6.5–10 feet above sea level.

The characteristics of soils have been used successfully by researchers to formulate predictive models for precontact site location. In general, soils with an organic pan, with underlying marl or clays, and with slow to moderate internal drainage tend to retain water or be inundated. Areas with a low elevation relative to perched water systems tend to be wet or inundated. Although wet areas can contain abundant wildlife and plant resources, they make poorer habitation areas when better-drained locations are available. The majority of the predevelopment soils within the APE were associated with a low ridge or sandy prairies and areas of peat associated with the Everglades. Post-development soils are indicative of disturbance associated with land modification associated with urban development and are consistent with the current nature of the archaeological APE.

The presence of tree islands or hardwood hammocks also serve as reliable indicators of site location in southern Florida. Their use by precontact, Seminole and modern hunters, campers and permanent residents is well documented. One obvious reason for their use is that they are not prone to flooding, except during episodes of very high water. Yet, hammocks are moist enough to retard the development and spread of fires. The thick foliage of hammocks also provides a great deal of shade as well as serving to moderate temperatures year-round. The thick canopies of hammocks also provide good shelter during periods of heavy weather. Mature hammocks are noted for a lack of ground cover vegetation due to the closed canopy above shading out younger trees, herbs and

shrubs. Thus, mature hammocks offer enough open space for habitation and activity areas. Many fruits, nuts and tubers are available in hammocks that are important as human food sources as well as for their ability to attract game animals. While the historic plat maps, surveyors' notes, and predevelopment soils suggested the potential for hammock vegetation in the vicinity of the archaeological APE, no hammock vegetation is visible within or adjacent to the archaeological APE on any of the historic aerials.

In southern Florida, historic period sites frequently co-occur with precontact archaeological sites. This is often the result of environmental conditions found desirable by both groups: better-drained uplands near transportation routes (i.e., historic trails and major rivers). Because so little of the pre-urban environment remains, government survey plat maps and surveyor's notes were used to identify pre-development environmental features that could contain or be associated with precontact or historic period sites. The review of historic plat maps and surveyor's notes did not identify any military forts, roads, encampments, battlefields, or historic Native American villages or trails within or adjacent to the APE.

Currently, the proposed project is located entirely within existing railroad ROW. Research conducted for past projects located outside the current APE, but within the FEC Railway corridor, including the *All Aboard Florida – Miami to Orlando Passenger Rail Service Final Environmental Impact Statement* (Federal Railroad Administration 2015), have noted significant levels of disturbance associated with the construction and maintenance of the FEC Railway corridor in Miami-Dade County including multiple occurrences of ballast, rail, and tie installation, removal, and reinstallation; tree and stump removal; land modification including grading, grubbing, and leveling; and utility installation, repair, and maintenance. Based on the nature of the proposed improvements, the analysis of environmental variables, and the level of modification within the project corridor, the archaeological APE was determined to have a low probability of containing intact archaeological sites.

RESULTS

Archaeological Results

The pedestrian survey of the entire corridor was conducted. Several portions of the APE were observed to have low-lying areas. Others had obviously been graded and/or paved. Additionally, concrete pads were present at several locations.

A total of nine shovel tests were excavated along the APE between 2016 and 2019. No archaeological sites were identified within the APE. Six shovel tests were excavated within the southern 4.4-mile segment of the APE in 2016. No archaeological material was recovered. Soil profiles generally consisted of disturbed soils with gravel fill between the surface and 40 centimeters below the surface (cmbs). Five of the shovel tests were terminated before reaching a meter in depth due to the presence of compact fill impenetrable by hand-digging.

Archaeological testing along the northern 1.21-mile segment of the APE took place in 2019 after the railway corridor was formally abandoned. A total of three shovel tests were excavated and no archaeological material was recovered. The soil profile generally consisted of grayish brown sand from the surface to between 11 and 25 cmbs underlain by either limestone (Shovel Tests [ST] 7 and 9) or dark brown sand and yellowish brown sand (ST 8) followed by limestone. All shovel tests were terminated prior to reaching a meter in depth due to the presence of limestone. Representative photographs of the APE and soil profiles are included in Figures 7–11. The locations of excavated shovel tests and the current conditions of the archaeological APE are included in Appendix D.



Figure 7: Archaeological APE from SW 72nd Street, Facing North



Figure 8: Archaeological APE Between SW 47th Street and SW 48th Street, Facing South-Southeast



Figure 9: Northern End of Archaeological APE at the NW7th Street Overpass, Facing South



Figure 10: Soil Profile of ST 3, Facing North



Figure 11: Soil Profile of ST 8, Facing North

Historic Resources Survey Results

A total of six historic resources were identified during reconnaissance surveys in 2016 and 2018 (Table 6, Figures 12a–12e). The 2016 survey identified four historic resources within the historic resources APE. The Tamiami Canal (8DA6453) was evaluated as National Register–ineligible. The Seaboard Air Line (CSX) Railroad (8DA10753) and the FEC Railroad Bridge at Tamiami Canal (8DA14821) were evaluated by the SHPO as National Register–eligible. Although the Little River Spur of the FEC Railway (8DA11416) was evaluated in 2016 as National Register–eligible, the railroad tracks have since been removed. Therefore, it was evaluated again as part of this study. The Little River Spur of the FEC Railway is no longer extant or eligible in the area surrounding the FEC Railroad Bridge at Tamiami Canal, and the aforementioned bridge is now also considered ineligible at this time due to the loss of associations and context.

FMSF No.	Name / Address	Year Built	Resource Type	SHPO National Register Evaluation
8DA6453	Tamiami Canal	c. 1916- 1928	Historic Canal	Determined Ineligible
8DA10753	Seaboard Air Line (CSX) Railroad	c. 1949	Historic Railroad	Determined Eligible
8DA11416	Little River Spur of the FEC Railway	c. 1932	Historic Railroad	Determined Eligible in 2016 but no longer extant
8DA14821	FEC Railroad Bridge at Tamiami Canal	c. 1954	Historic Bridge	Determined Eligible in 2016 but now Considered Ineligible
8DA15696	FEC Railway Bridge at C-3 Canal	c. 1932	Historic Bridge	Considered Ineligible
8DA15697	Coral Gables (C-3) Canal	c. 1915	Historic Canal	Considered Ineligible

Table 6. Previously Recorded Historic Resources Within the Project APE

The 1.2-mile long segment of the Little River Spur of the FEC Railway (8DA11416) within the 2016 survey limits was located between milepost LR 11+3989 (Station 620+73.15) and milepost LR 13+0000 (Station 686+43.0) in Sections 2 and 11 of Township 54 South, Range 40 East on the Hialeah (1988 Photorevised [PR] 1994) United States Geological Survey (USGS) quadrangle map. The segment was approximately 100 feet wide along the entire length, except for two 40-foot wide road crossings located at W Flagler Street and SW 8th Street (US 41). The Little River Spur of the FEC Railroad (8DA11416) was part of the Little River Spur that connected the railyard located in Hialeah to the FEC main line. It was determined to be National Register–eligible as it still retained its original alignment and occupied the original FEC Railway ROW. The proposed abandonment of the 1.21-mile northern segment of the Little River Spur of the FEC Railway (8DA11416) was found to constitute an adverse effect on this resource due to the loss of integrity resulting from the proposed removal of the existing rail, crossties, and upper layer of ballast. The adverse effect was mitigated, as required in the MOA through the HAER documentation and the installation of State Historical Markers commemorating the bridge and Little River Spur of the FEC Railroad. The markers were installed on January 9, 2020, at the locations that were outlined in the application