Draft Individual Section 4(f) Evaluation

Florida Department of Transportation

SR 994/SW 200 ST/QUAIL ROOST DR FR W OF SW 137 AVE TO E OF SW 127 AVE

District: FDOT District 6

County: Miami-Dade County

ETDM Number: 14429

Financial Management Number: 445804-1-22-01

Federal-Aid Project Number: N/A

Project Manager: Raul Quintela

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT. Submitted pursuant 49 U.S.C. § 303.

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1.0 INTRODUCTION

The Section 4(f) legislation as established under the Department of Transportation Act of 1966 (49 USC 303, 23 USC 138) provides protection for publicly owned parks, recreation areas, historic sites, wildlife, and/or waterfowl refuges from conversion to a transportation use. The Federal Highway Administration (FHWA) has delegated responsibility for Section 4(f) analysis to FDOT. Consistent with the responsibilities of FHWA, FDOT may not approve the use of land from a significant publicly owned park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

- There is no feasible and prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use (23 CFR 774.3).

or that:

- A determination is made that the use of the property will have a *de minimis* impact (23 CFR 774.3 (b)).

Additional protection is provided for outdoor recreational lands under the Section 6(f) legislation (16 USC 4602-8(f) (3)) where Land and Water Conservation funds were used for the planning, acquisition, or development of the property. These properties may be converted to a non-outdoor recreational use only if replacement land of at least the same fair market value and reasonably equivalent usefulness and location is assured.

The purpose of this Section 4(f) Evaluation is to provide the information required by the Secretary of Transportation to make the decision regarding the use of properties protected by Section 4(f) and Section 6(f) legislation under the preferred alternative selected in the Preliminary Engineering Report. There are no Section 6(f) properties affected by this project, therefore this document will not further address Section 6(f) issues or processes.

This Section 4(f) Evaluation describes all identified Section 4(f) properties that are proposed to be "used" by the preferred alternative, potential impacts on those properties, and possible mitigation measures to minimize impacts. A "use" occurs (1) when land from a Section 4(f) site is acquired for a transportation project, (2) when there is occupancy of land that is adverse in terms of the statute's preservationist purposes, or (3) when the proximity impacts of the transportation project on the Section 4(f) sites, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired (normally referred to as a constructive use).

The Section 4(f) process requires that any impacts from the use of a park, recreation area, historic site, or wildlife or waterfowl refuge for highway purposes be evaluated in context with the proposed highway construction/reconstruction activity. An inventory of these types of properties

was completed based on a review of the design concept drawings and the project's impacts on these properties were assessed. The Section 4(f) properties that may be impacted by the proposed project are described in detail in Section 5.0.

2.0 PROJECT DESCRIPTION AND LOCATION

A Project Development and Environment (PD&E) Study is being conducted by the Florida Department of Transportation (FDOT) to evaluate the potential impacts of widening State Road (SR) 994/SW 200th Street/Quail Roost Drive from west of SW 137th Avenue to east of SW 127th Avenue from two lanes to four lanes. The project is located in southwest Miami-Dade County at SR 994/SW 200th Street/Quail Roost Drive, from west of SW 137th Avenue to east of SW 127th Avenue. The project corridor is approximately 1.67 miles in length. Within the project limits, the roadway is locally known as Quail Roost Drive. See **Figures 2-1** and **2-2** for details.

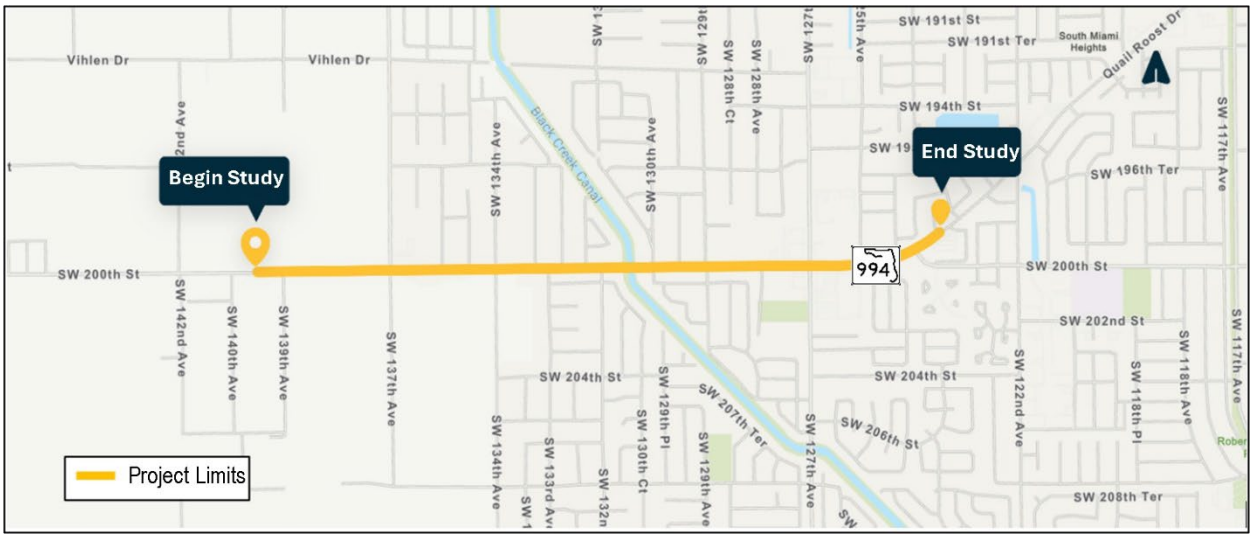

Figure 2-1 Project Location Map

In addition to the potential widening, the proposed roadway improvements may include operational enhancements at the existing intersections, removal and replacement of the bridge structure (#870633) over Black Creek Canal (C-1W), access management measures, and stormwater management facilities. The PD&E Study will evaluate typical section alternatives based on design criteria, safety, and operational needs, and the minimization of environmental effects and right-of-way (ROW) needs. The PD&E Study will evaluate the provision of Americans with Disabilities Act (ADA) compliant facilities as well as new/enhanced pedestrian and bicycle infrastructure, including paved shoulders/designated bicycle lanes, sidewalks, and/or a shared-use path connection to the existing Black Creek Trail. Improvements at four intersections/cross streets are also proposed as part of this project:

- SR 994 and SW 137th Avenue
- SR 994 and SW 134th Avenue
- SR 994 and SW 132nd Avenue
- SR 994 and SW 127th Avenue

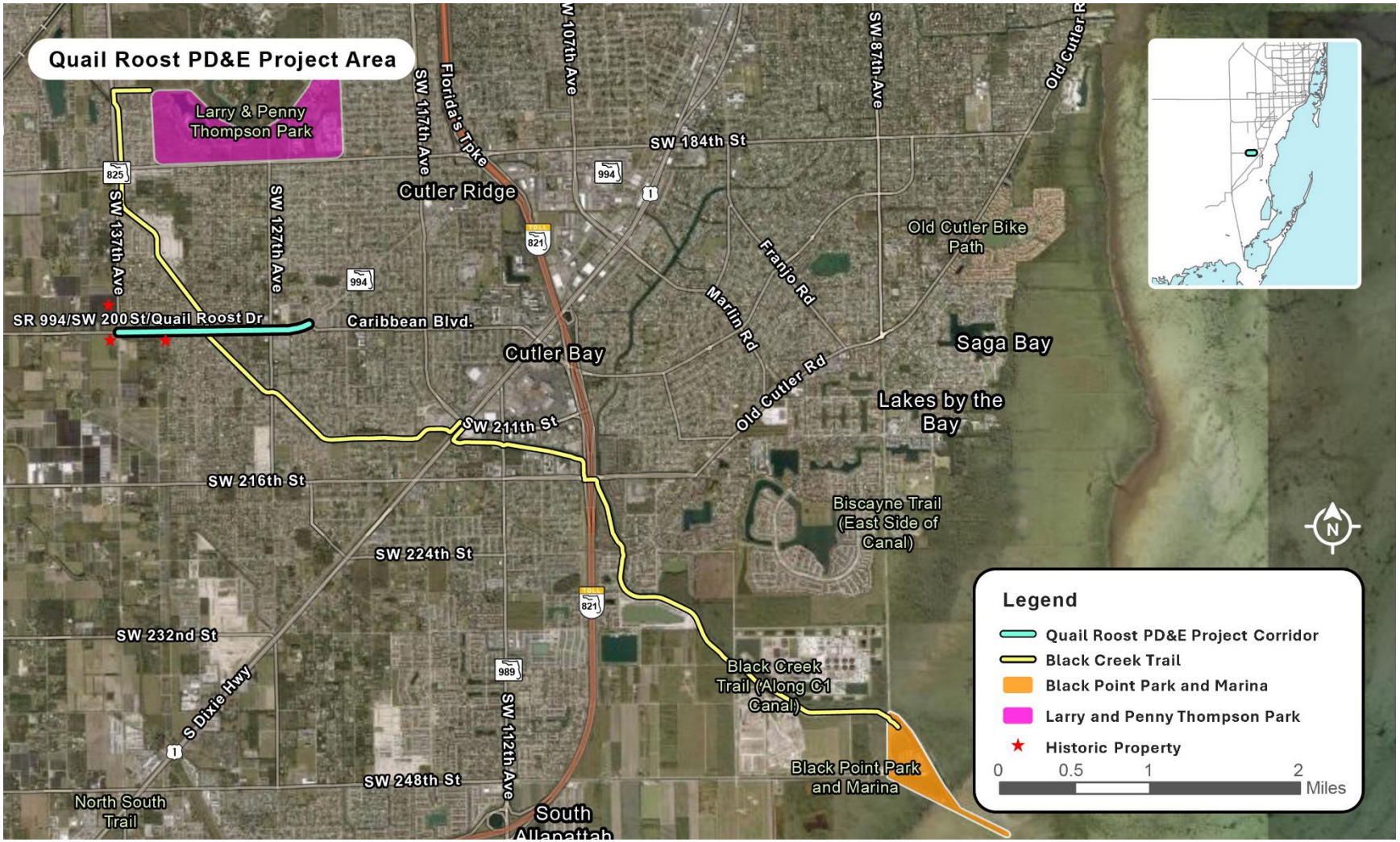

Figure 2-2 Project Area Map

The project is located in southwest unincorporated Miami-Dade County and occurs within the Miami Urbanized Area (as defined by the Miami-Dade County 2015 Urban Development Boundary). The project corridor primarily serves existing residential land uses and provides local east-west access and connectivity. Outside of the project limits, SR 994 connects directly to two Strategic Intermodal System (SIS) Highway Corridors at SR 997/Krome Avenue (west of study limits) and SR 821/HEFT (east of study limits).

Within the project limits, SR 994 is classified as a rural major collector to the west of SW 137th Avenue and an urban minor arterial to the east of SW 137th Avenue. The corridor primarily has a C3R Suburban Residential Context Classification and a posted speed of 40 miles per hour, which will be maintained. Four major intersections are located along the project corridor, including two signalized intersections (SW 137th Avenue and SW 127th Avenue) and two unsignalized intersections (SW 134th Avenue and SW 132nd Avenue). Eight other minor (unsignalized) intersections are located within the study corridor. The project location map is shown in **Figure 2-1.**

Currently, SR 994 is a two-lane roadway (one lane in each direction) from west of 137th Avenue to west of 127th Avenue. From west of SW 127th Avenue to SR 821/HEFT, SR 994 is a four-lane roadway. The existing SR 994 typical section consists of two undivided 11.5-foot travel lanes with unpaved shoulders and open drainage. Curb and gutter exist at the SR 994/SW 134th Avenue intersection and east of SW 127th Avenue within the study limits. Sidewalks, varying in width, are noncontinuous and generally located at residential subdivisions along the study corridor. There are no existing designated bicycle lanes on SR 994 within the study limits. There is one unrecorded historic bridge within the study limits that spans over the Black Creek Canal (C-1W). There is a pedestrian crossing just east of the bridge for access to the Black Creek Trail, which intersects SR 994.

3.0 PROJECT PURPOSE AND NEED

The purpose of this project is to address traffic operations and capacity constraints on SR 994 from west of SW 137th Avenue to east of SW 127th Avenue in unincorporated Miami-Dade County (**see Figure 2-1**) to accommodate future travel demand projected as a result of population and employment growth along the corridor. Other goals of the project are to improve safety conditions along the corridor, including emergency evacuation and response times, and enhance mobility options and multimodal access.

3.1 Capacity/Transportation Demand

This project is anticipated to improve traffic operations along SR 994 by increasing the capacity to meet projected travel demand as a result of Miami-Dade County population and employment growth. Miami-Dade County is the most populous county in Florida with over 2.6 million residents in 2022. By 2045, the county's population is expected to grow by over 33% to over 3.5 million residents. Employment growth in the county is expected to increase from 960,000 workers in 2021 to more than 1.8 million workers by 2045.

Between SW 137th Avenue and SW 127th Avenue, the corridor has experienced a 7% increase in Annual Average Daily Traffic (AADT) from 2015 to 2019 with traffic volumes growing from 17,900 to 19,200 vehicles per day. Traffic is anticipated to continue to increase due to population growth and residential development in the area.

A traffic Level of Service (LOS) analysis was conducted for Year 2021 and Future Year 2045. The analysis determined that some intersections along the corridor and several intersecting roads that are operating at acceptable LOS D or better in Year 2021, are expected to operate at LOS F during the AM and PM Peak periods in 2045, if no improvements are implemented.

3.2 Safety

A crash analysis was conducted from west of SW 137th Avenue to east of SW 127th Avenue. The crash data for the five-year period January 2014 to December 2018 was downloaded from the FDOT's Crash Analysis Reporting System (CARS) and summarized for the project segment. A total of 390 crashes were documented for the five-year period (average of 78 crashes per year) within the project limits. The leading types of crashes along the corridor were rear-end (with 187 crashes), angle (with 77 crashes), and sideswipe (with 43 crashes). Based on crash severity, 65% (254 crashes) were property-damage-only crashes, 35% (135 crashes) were injury crashes, and <1% (1 crash) was a fatal crash. Based on FDOT's 2014–2018 High Crash Lists, the following locations were considered high-crash spots/segments:

Spots
- SR 994 at SW 137th Avenue
- SR 994 at SW 134th Avenue
- SR 994 at SW 132nd Avenue

Segment
- SR 994 from SW 137th Avenue to west of SW 127th Avenue

According to the safety review, congestion/lack of capacity and lack of left-turn lanes serve as the probable causes of the safety issues within the corridor. Providing additional multimodal capacity and improving intersections along the corridor are anticipated to result in reduced crashes and safety benefits. Improved traffic operations due to increased capacity are also anticipated to decrease emergency response times for emergency response vehicles.

3.3 Modal Interrelationships

There are no existing designated bicycle lanes within the project limits. Sidewalks are noncontinuous and generally located at residential subdivisions along the project corridor. The Black Creek Trail intersects the project corridor just east of the Black Creek Canal (C-1W). The trail is a 17-mile-long greenway corridor that connects the Everglades Levee (L-31N Canal) with Black Point Park and Marina in Homestead. There is a pedestrian crossing equipped with Rectangular Rapid Flashing Beacons (RRFBs) and pavement markings to facilitate pedestrian/bicycle crossing and alert drivers of the pedestrian traffic, just east of the bridge for access to the Black Creek Trail.

Based on the 2020 United States Census Data, approximately 2% of the housing units within the project study area (below 3.3% average for Miami-Dade County) are transit-dependent (no vehicle available); in addition, approximately 96 housing units identified within the 2021 census tracts located within the project study area use public transportation for work. This noted transit-dependent population has a higher propensity to walk, bike, or take transit to access essential services. The project is anticipated to improve multi-modal connectivity and mobility options for the transit-dependent population and the overall residential population within the project area by providing continuous bicycle and pedestrian facilities along the entire corridor and improving access to the Black Creek Trail.

4.0 REQUIREMENTS AND APPLICABILITY OF SECTION 4(f)

The purpose of this document is to provide a Section 4(f) evaluation as part of the overall PD&E study of proposed transportation improvements along SR 994/SW 200th Street/Quail Roost Drive from west of SW 137th Avenue to east of SW 127th Avenue in Miami-Dade County, Florida. The present Section 4(f) Evaluation is prepared in compliance with the US Department of Transportation (DOT) Act of 1966 (FHWA 2018), codified at 23 U.S.C. § 138 and 49 U.S.C. § 303, which declares that "[i]t is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public parks and recreation lands, wildlife and waterfowl refuges, and historic sites" and the FDOT PD&E Manual, Part 2, Chapter 7. Section 4(f) requires that projects undertaken by agencies of the USDOT may not use land from significant public parks and recreation resources, wildlife, and waterfowl refuges, and from historic sites unless there is no feasible and prudent alternative that avoids use of land from the resources and that the project includes all possible planning to minimize harm to such sites.

In addition, the project included a Cultural Resources Assessment Survey (CRAS) (incorporated by reference and located in the project file) in compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, Public Law 113-287, 54 U.S.C. § 306108, as implemented by 36 CFR Part 800 (CFR 2019b). As required by Section 4(f), historic properties are considered significant for the purposes of Section 4(f) when they are National Register of Historic Places (National Register) listed or determined eligible.

The purpose of the CRAS was to locate and evaluate archaeological and historic resources within the Area of Potential Effect (APE) and to assess their eligibility for inclusion in the National Register according to the criteria set forth in 36 CFR Section 60.4. The 2022 CRAS resulted in the identification of three National Register-eligible resources: The Talbott Estate (8DA2789); the MacDonell Residence (8DA20712); and the building at 20000 SW 137th Avenue (8DA20713). The State Historic Preservation Officer (SHPO) concurred with the 2022 CRAS in a letter dated January 30, 2023 (see **Attachment A**).

FDOT's findings on adverse effects on historic properties for the various alternatives developed have all received concurrence from SHPO (see **Attachment B**). Effects to the historic properties are described in Section 7.0.

The following Section 4(f) **recreational** resource was identified within the project limits:

<u>Black Creek Trail- Segment of Route 7</u>
The Black Creek Trail Segment of Route 7 is a publicly owned park located adjacent to the project corridor, along the east side of the South Florida Water Management District (SFWMD) Black

Creek Canal (C-1W). The trail qualifies for an exception to the requirement for Section 4(f) in compliance with 23 CFR 774.13(f)(3). Exceptions identified by FHWA include, but are not limited to "Trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, so long as the continuity of the trail, path, bikeway, or sidewalk is maintained." Continuity of the trail is maintained in all the alternatives analyzed. Refer to Section **6.1.4** for details.

As the Official with Jurisdiction (OWJ), Miami-Dade County Parks, Recreation, and Open Spaces (MDPROS) Department issued a Statement of Significance for the Black Creek Trail-Segment of Route 7 in a letter dated June 3, 2022 (see **Attachment C**). A description of the trail is provided in Section 6.0.

5.0 DESCRIPTION OF SECTION 4(f) PROPERTIES – HISTORIC

The three National Register-eligible properties identified in the CRAS are shown in **Figure 5-1** and summarized in **Table 5-1** below. Details are provided in the Determination of Applicability (DOA), incorporated by reference and located in the project file.

Figure 5-1 Historic Properties

Table 5-1 Section 4(f) Historic Properties

Florida Master Site File (FMSF) No.	Site Name/ Address	Resource Type/Style	Year Built	National Register Evaluation
8DA2789	Talbott Estate/ 13390 SW 200th Street	Masonry Vernacular (Residential)	1929	Eligible and Locally Designated
8DA20712	MacDonell Residence/ 13701 SW 200th Street	Masonry Vernacular (Residential)	1936	Eligible and Locally Designated
8DA20713	20000 SW 137th Avenue	Masonry Vernacular (Residential)	1932	Eligible

5.1 Section 4(f) Property: Talbott Estate (FMSF No. 8DA2789)

5.1.1 Map and Location

The Talbott Estate is located at 13390 SW 200th Street/Quail Roost Drive, at the SE corner of the roadway's intersection with SW 134th Avenue/Talbot Drive, in Section 11 of Township 56 South, Range 39 East in the Goulds (1988) USGS quadrangle map, Miami-Dade County. Based on the information retrieved from the Miami-Dade County Property appraiser website, the size of the property is 289,238.4 square feet (SF) / 6.64 acres (AC) (**Figure 5-2)**.

Figure 5-2 Talbott Estate

An oolitic limestone wall (**Figure 5-3 through Figure 5-5**) is located along the northern edge of the property and continues south along the western edge of the property until the driveway entrance. From the street corner, the wall extends approximately 130 ft both east and south. The northwest corner of the wall has been significantly damaged. On the south side of the driveway entrance to the property, there is a small matching oolitic limestone wall that does not extend further south. This wall is contributing to the significance of the overall Talbott Estate.

The northernmost building in the parcel (**Figure 5-6**) is the main house on the property, a 1929 one-and-a-half-story Masonry Vernacular building notable for the use of oolitic limestone in its construction. The house has an L-shaped plan and has had several additions throughout the

building's history, with the most significant occurring in 1965. The building has a gabled shingle roof, with dormers facing east and west. The house's first floor along its northern and western elevations is primarily constructed of oolitic limestone, with modern three-pane sets of sliding windows. The partial second floor is covered in wood shingles. The first floor has two entrances visible from the public ROW. The northern elevation, along SW 200th Street/Quail Roost Drive, features a double doorway flanked by thin decorative oolitic limestone Doric columns, and is accessed by three brick steps. This entrance is not centrally located on the elevation, instead skewed slightly to the west of the center. On each side of the doorway is a three-pane sliding window. The western elevation, which is closer to the driveway entrance, features a porch covered by an extension of the roofline, supported by a wooden column (**Figure 5-7**).

South of the Talbott Estate's main house is a gable-roofed former shed building, originally built in 1940, (**Figure 5-8**), which has been enclosed since the historic period. While the Miami-Dade County designation report for the Talbott Estate noted that the shed as of 1983 had corrugated metal and oolitic limestone facing, none of these features were now visible on the building from the public ROW (Metropolitan Dade County Historic Preservation Board 1983). The one-story shingle-roofed wood-frame L-shaped outbuilding, which has been given the address 20001 SW 134th Avenue/Talbot Road, now has wood-facing and jalousie windows. It has been entirely converted from its original shed use into a habitable building. This conversion occurred in 1987 after the Talbott Estate was locally designated by Miami-Dade County. The total conversion of the shed has rendered it non-contributing to the Talbott Estate resource.

South of the former shed building is a gable-roofed stucco cottage (**Figure 5-9**), built in 1959. While the building does not feature much ornamentation along its northern elevation (**Figure 5-10**), the western elevation is a facing of brickwork laid in a diagonal pattern. The cottage has a recessed screened porch entrance. The cottage has not experienced significant alterations since it was locally designated in 1983. This building is contributing to the significance of the overall Talbott Estate.

Figure 5-3 Oolitic limestone exterior wall, located at the northeastern corner of the National register–eligible and locally designated Talbott Estate (8DA2789), facing west

Figure 5-4 Damaged segment of oolitic limestone exterior wall, located at the northwestern corner of the National Register–eligible and locally designated Talbott Estate (8DA2789), at the intersection of SW 134th Avenue/Talbot Road and SW 200th Street/Quail Roost

Figure 5-5 Oolitic limestone exterior wall, located at the western driveway entrance to the National Register–eligible and locally designated Talbott Estate (8DA2789). At this entrance, multiple mailboxes are incorporated into the wall, facing south

Figure 5-6 Northern elevation of the main house of the National Register–eligible and locally designated Talbott Estate (8DA2789). The doorway features thin oolitic limestone columns flanking the entrance, facing south

Figure 5-7 Western elevation of the main house of the National Register–eligible and locally designated Talbott Estate (8DA2789). This entrance features a covered porch supported by a wooden column, facing east

Figure 5-8 Enclosed shed building south of the main house on the National Register–eligible and locally designated Talbott Estate (8DA2789), facing east

Figure 5-9 Northwestern corner of the cottage outbuilding south of the converted shed on he National Register–eligible and locally designated Talbott Estate (8DA2789), facing southeast

Figure 5-10 Western elevation of the cottage outbuilding south of the converted shed on the National Register–eligible and locally designated Talbott Estate (8DA2789). The decorative brickwork on the western wall of this building is visible in this photograph, facing east

5.1.2 Ownership and type of Section 4(f) property

The Talbott Estate is a privately owned Masonry Vernacular building according to the Miami-Dade Property Appraiser website.

In 1908, a retired insurance executive named Isaac Fenton Talbott first purchased a homestead along Quail Roost Drive, in the unincorporated community of Silver Palm. Talbott was the president of the Farmers Alliance Insurance Company of McPherson, Kansas, and the 55-year-old executive quickly began to establish himself within the South Dade agricultural community. Arriving in the wake of the expansion of the Florida East Coast Railway to Homestead, the stage had been set for enterprising individuals with access to capital to make a profit, or at least to become influential voices within a community made up of ambitious homesteaders. While Talbott did not permanently move down to South Florida from Kansas (instead remaining in Kansas and even serving as Mayor of McPherson from 1909-1910), many members of his family ended up moving to Silver Palm (Connelley 1918). Talbott himself, like many others, was initially a winter resident of South Florida. By 1934, after the Talbott Estate had been built, Talbott's brother and children had settled in or around the Talbott Estate, centering in the community of Goulds (Miami Herald 1938).

Once settled in Dade County, the Talbotts specialized in the cultivation of flowers, which were sold at local markets (Metropolitan Dade County Historic Preservation Board 1983). Isaac Fenton Talbott frequently bought and sold land and houses in the Silver Palm, Goulds, and Redlands communities throughout the 1910s-1930s. By 1912, he had acquired 350 acres of land in the Redlands area, believing that it would one day become one of the greatest centers of fruit agriculture in the United States. Each winter visit, he would purchase more land in Dade County (Miami News 1912).

The significance of the Talbotts to their community is evidenced by the 1924 renaming of SW 134th Avenue, which was then known as Eureka Road, to Talbott Road (Miami News 1924). Today, the road is called Talbot Road, but, despite the change in spelling, it still shows the impact and influence that the Talbott's had.

The main house of the Talbott Estate was built in 1929, over two decades after Talbott first began doing business in South Florida. The house represented the culmination of Talbott's efforts to start a homestead and create a legacy for his family. Built at the corner of Talbott Road and Quail Roost Drive, which itself was a major artery for agricultural trade, the Talbott Estate's main house shows in its design and materials the ways in which the Talbotts had embraced the surrounding community.

The Talbott Estate was locally designated by the Metropolitan Dade County Historic Preservation Board on July 14, 1983. The designation report mentions that the main house interior used pecky cypress wood paneling taken from the demolished Harvey Firestone estate in Miami Beach. For this reason, the draft resolution contained within the report stated that "the Talbott Home retains its rural character, while containing a unique interior environment." (Metropolitan Dade County Historic Preservation Board 1983).

The Bungalow-influenced design of the Masonry Vernacular Talbott Estate is significant for its heavy use of oolitic limestone throughout the entire first floor, as well as the exterior wall along the northern and western sides of the property. The locally sourced oolitic rock was a commonly used building material in the early development of Miami-Dade County, among individuals with access to the material (or funds to acquire it) and the ability to incorporate it into their home design. During the time period in which the Talbott Estate was constructed, oolitic limestone walls were characteristic markers for important intersections in rural Dade County (Miami-Dade County Historic Preservation Board 2000). The limestone walls of the main house were longer-lasting and more stable than the Frame Vernacular buildings that had been prominent in the area in previous decades. The Talbott Estate was a distinctive and impressive house, for its materials and design, during its era. Its surrounding oolitic limestone wall marked the boundaries of the estate, and its matching material to the house complemented the overall design.

The Talbott Estate retains overall very high historic integrity. The alterations that have occurred to the main house and cottage outbuilding have not significantly detracted from their integrity. The oolitic rock perimeter wall, while having been damaged in portions, retains its distinctive materials and spatial relationship to the buildings and street. The shed outbuilding has not retained historic integrity due to its enclosure and conversion into a habitable building.

For these reasons, the Talbott Estate is eligible for the National Register–eligible under Criterion C in the area of Architecture. The resource is eligible under Criterion B in the area of Community Planning and Development for its association with Isaac Fenton Talbott.

5.1.3 Function of property and available activities

The Talbott Estate remains a residential property.

5.2 Section 4(f) Property: MacDonell Residence (FMSF No. 8DA20712)

5.2.1 Map and Location

The MacDonell Residence is located at 13701 SW 200th Street/Quail Roost Drive, at the NW corner of the roadway's intersection with SR 825/SW 137th Avenue/Lindgren Road, in Section 3

of Township 56 South, Range 39 East in the Goulds (1988) USGS quadrangle map, Miami-Dade County. Based on the information retrieved from the Miami-Dade County Property appraiser website, the size of the property is 218,104.92 SF / 5.007 AC (**Figure 5-11**).

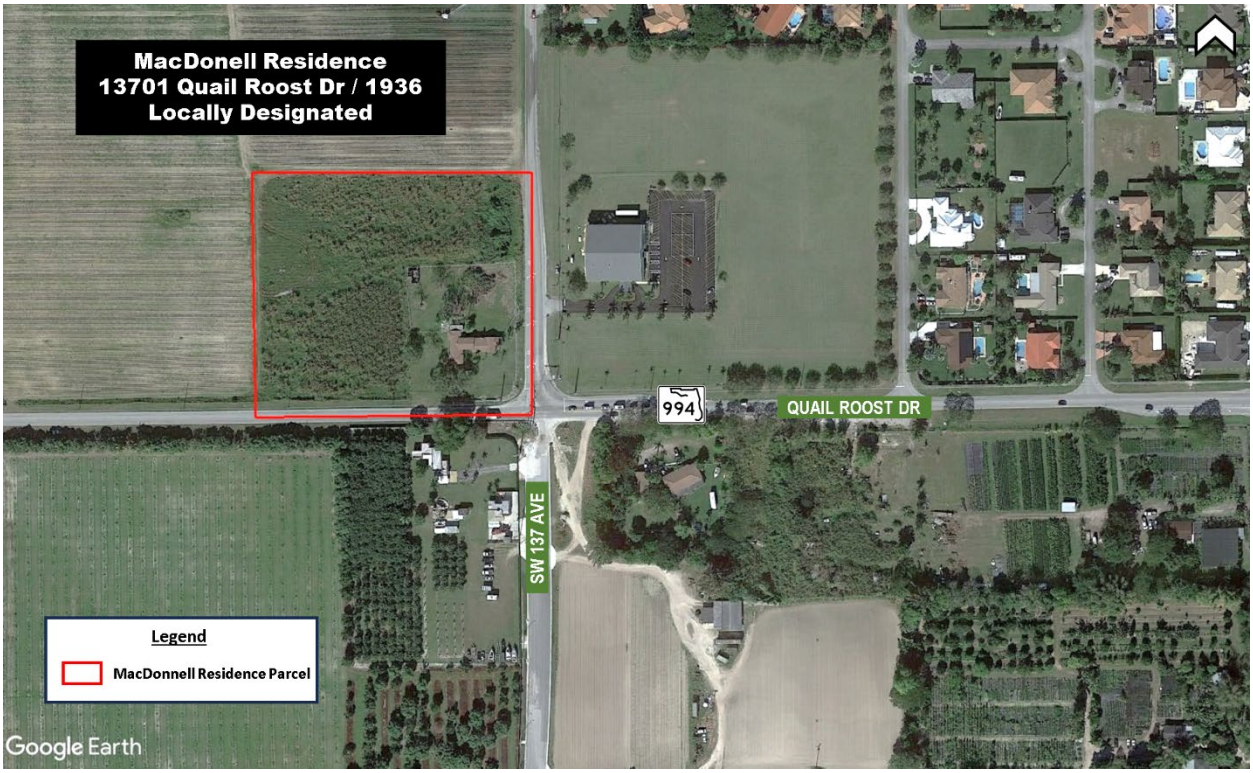

Figure 5-11 MacDonell Residence

The Masonry Vernacular house (**Figures 5-12 and 5-13**), built in 1936, is the only building within its parcel. A one-story concrete block building primarily clad in stucco in a T-shaped form, the building is primarily oriented east-west. A small section of the building along the southern elevation is constructed of oolitic limestone. Two additions were constructed at the western end of the MacDonell Residence in the 1940s, one to the north and one to the south. Along the building's east-west section, there are four interlocking gable roofs. Each of the additions at the western end is topped by hip roofs. All of the roof segments on the MacDonell residence are composed of asphalt shingles. At the center of the southern elevation is a screened porch, which was originally the building's main entrance. The windows along all elevations visible from the public ROW consist of six-over-six single-hung, and nine-light sliding, as well as a single fixed window flanked by two six-over-six single-hung. The current windows are replacements of the original wood-frame windows within the same fenestration.

An oolitic limestone wall (**Figures 5-14 through 5-16**) extends along the southern and eastern ends of the property. From the street corner, the wall extends approximately 130 ft both north and west. The southeast corner of the wall, as well as a section along the southern wall, have been

significantly damaged. The wall is punctuated by piers marking breaks along its southern and eastern sides.

Figure 5-12 Southern elevation of the National Register–eligible MacDonell Residence (8DA20712), with a damaged segment of the parcel's oolitic limestone wall in the foreground, facing northwest

Figure 5-13 Western elevation of the National Register–eligible MacDonell Residence (8DA20712), facing northeast

Figure 5-14 Damaged segment of oolitic limestone exterior wall, located at the southwestern corner of the National Register–eligible MacDonell Residence (8DA20712), facing northeast

Figure 5-15 Damaged segment of oolitic limestone exterior wall, located at the southwestern corner of the National Register–eligible MacDonell Residence (8DA20712), facing northeast

Figure 5-16 Segment of oolitic limestone exterior wall, located along the eastern edge of the National Register–eligible MacDonell Residence (8DA20712), facing south

5.2.2 Ownership and type of Section 4(f) property

The MacDonell Residence is a Masonry Vernacular building currently owned by descendants of original owner Robert C. MacDonell according to the Miami-Dade Property Appraiser website. The residence was built by Robert MacDonell, beginning in 1936. MacDonell, who had been born in 1910 in Atlanta, Georgia, moved with his parents to Miami in 1926. Settling with his parents in Coconut Grove, one of the County's earliest communities, Robert became interested in local construction practices from a young age, especially the use of oolitic limestone in construction. After attending college at Emory University, Robert returned to Miami in 1932. He purchased the parcel containing the MacDonell Residence in 1934, which was located south of the locally notable Lindgren Farm. Alvin Lindgren had invented a scarifying tractor plow that helped make the rocky soil characteristic of the area more arable (Miami-Dade County Historic Preservation Board 2000).

When Robert purchased the MacDonell Residence parcel, it was full of Dade County pines, some as high as sixty feet. Most of these trees were felled, and their wood was sold or incorporated into the construction of the MacDonell Residence and infrastructure for the lime grove business Robert was beginning to develop. Robert worked with Alvin Lindgren to remove the oolitic limestone from the ground within his parcel, and much of this limestone was incorporated into the MacDonell Residence and the wall surrounding the parcel (Miami-Dade County Historic Preservation Board 2000). Through this use of local wood and stone, the MacDonell Residence is truly a locally sourced construction.

After the land had been cleared, and MacDonell's Persian Lime groves had gone into business, MacDonell began constructing his own home on the property. He based the floor plan of the house on his parents' home in Coconut Grove, which they had called "Villa Vigilancia," though it was not built of the same materials. Villa Vigilancia has since been demolished, and no direct records of its architecture remain. It had been built in the Mediterranean Revival style characteristic of Miami architecture of the 1920s, but the MacDonell Residence based upon its floor plan utilized the local materials of the Redlands area.

Robert MacDonell was married in 1938 and as his family continued to grow, he expanded the MacDonell Residence through the 1940s. During this same period, MacDonell's business grew as well, and the "Robert C. MacDonell and Sons" Persian Lime company successfully operated until 1958. Despite managing an agricultural business, Robert continued to do a bit of construction, building the limestone rock walls around his property in 1940, and later building other walls in the neighborhood, none of which are still extant (Miami-Dade County Historic Preservation Board 2000).

On July 19, 2000, the MacDonell Residence was locally designated by the Miami-Dade County Historic Preservation Board, with the house and oolitic rock perimeter wall, as well as an oak tree at the southwest corner of the parcel, a free-standing oolitic rock barbecue area north of the house, and the packing area from the MacDonell Persian Lime business as contributing resources to the designation. The tree is not considered contributing to the MacDonell Residence resource, and the other two features were not visible from the public right-of-way. The local designation and the incorporated Miami-Dade County Historic Preservation Board resolution indicate that the resource was considered locally significant for its materials and design, as well as how it reflects the local building practices of the Redland community.

For these reasons, the MacDonell Residence, including the house itself and the surrounding perimeter wall, is eligible for the National Register–eligible under Criterion C in the area of Architecture. The MacDonell Residence, as the most significant surviving resource associated with Robert MacDonell, is also eligible under Criterion B in the area of Agriculture, as he was a locally significant citrus farmer and business owner. However, as it does not appear that any of the elements on the property related to lime production are still extant within the area recorded as part of this building resource, the property is not eligible under Criterion A.

5.2.3 Function of property and available activities

The MacDonell Residence remains a residential property.

5.3 Section 4(f) Property: 20000 SW 137th Avenue (FMSF No. 8DA20713)

5.3.1 Map and Location

The building at 20000 SW 137th Avenue is at the SW corner of the intersection of SR 825/SW 137th Avenue/Lindgren Road with SR 994/SW 200th Street/Quail Roost Drive, in Section 10 of Township 56 South, Range 39 East in the Goulds (1988) USGS quadrangle map, Miami-Dade County. Based on the information retrieved from the Miami-Dade County Property appraiser website, the size of the property is 136,604.16 SF / 3.136 AC (**Figure 5-17**).

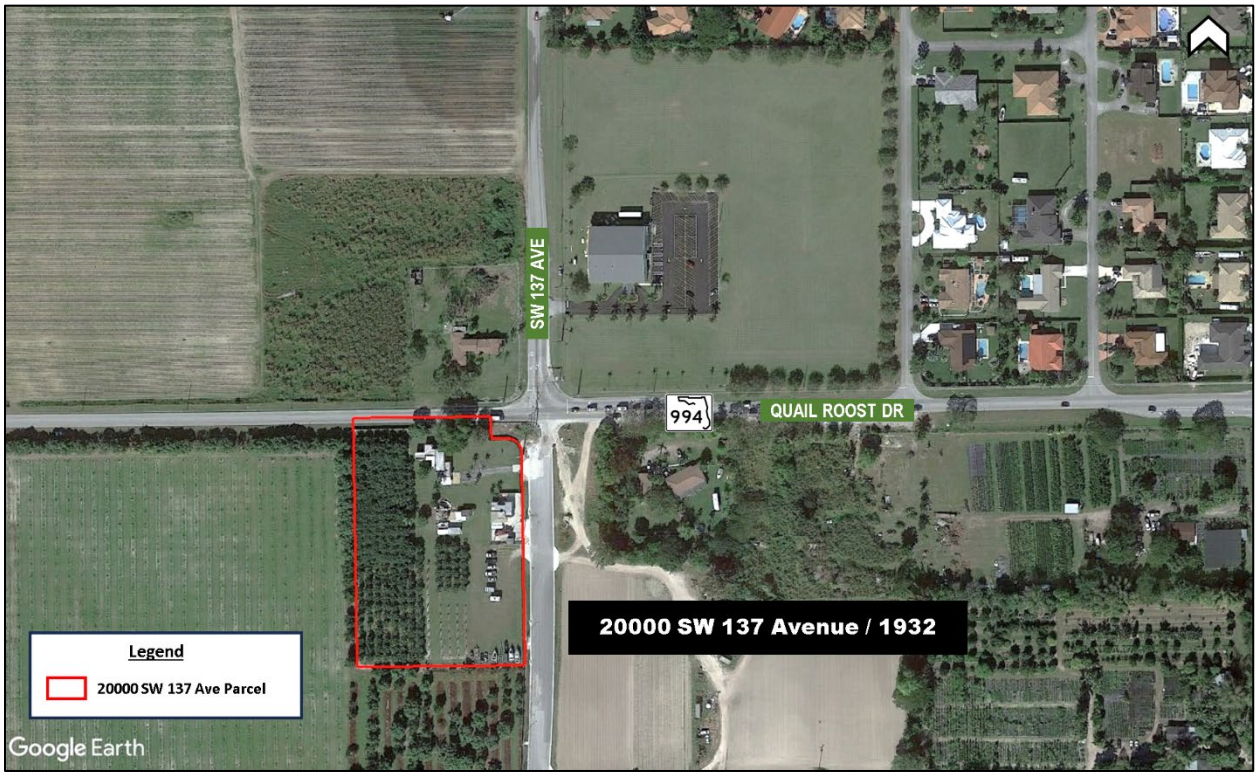

Figure 5-17 20000 SW 137 Avenue

The Masonry Vernacular house, located at the northern end of the parcel, which was built in 1932, is accompanied on the parcel by two other outbuildings, built in 1932-1933. Each of the buildings in the parcel is primarily built of oolitic limestone rock, with flat roofs and with the rooflines clad in a single layer of Spanish tile.

According to the Miami-Dade County Property Appraiser (Miami-Dade County Property Appraiser 2022), none of the buildings on the parcel have received significant alterations. The recent installation of privacy fences significantly obstructs the view of the buildings from the public right of-way, but a combination of fieldwork photos and Google Street View images from

previous years provide a good idea of the appearance of the buildings and contributing elements on the parcel.

The main building on the parcel (**Figures 5-18 and 5-19**), located at the northern end, has its main entrance on the eastern elevation, at the end of a driveway. The single entrance door on this elevation is covered by a small projecting canopy. Along all of the other elevations of the building, are regularly placed one-over-one single-hung windows. The entrance room of the house is of a smaller scale than the rooms to its west. The entire building is built of oolitic limestone, with small scuppers along several of the walls to relieve water build-up on the building's flat roofs. The edge of the roofline is consistently clad in single Spanish tiles. A small inclined covered area extends from the southern elevation of the building.

The outbuilding at the southeast corner of the parcel (**Figures 5-20 and 5-21**) is very similar in design and form to the main house at the northern end of the parcel but is slightly smaller in scale. Like the neighboring main house, the building is made of oolitic limestone with small scuppers along the northern elevation and is covered by a projecting canopy. The windows on the outbuilding generally match those of the main house, but there are several that are different, including a twelve-light fixed window and several four-over-four single-hung.

The outbuilding at the southwest corner of the property was not visible from the public right-of-way due to the privacy fence, but a March 2021 Google Streetview photograph (**Figure 5-22**) shows the outbuilding to be in a ruinous state, though clearly made of the same oolitic limestone as the other elements of the parcel.

At the northern end of the parcel, north of the main house, remains two small segments of oolitic rock wall (**Figure 5-23**), which would have marked the boundaries of the property during the historic period. These wall segments were not visible from the public right-of-way during fieldwork, but Google Street View shows the location of these elements, right behind the privacy fence. The small segment to the west is topped by a gabled shingle element, and the segment to the east is slightly collapsed.

Figure 5-18 Northern elevation of the National Register–eligible building at 20000 SW 137th Avenue (8DA20713). The gabled topper of the parcel's oolitic limestone wall is visible in the foreground, behind the privacy fence, facing south

Figure 5-19 Eastern elevation of the National Register–eligible building at 20000 SW 137th Avenue (8DA20713). March 2021 Google Streetview photograph, facing west

Figure 5-20 Eastern elevation of the southeastern outbuilding on the property containing the National Register–eligible building at 20000 SW 137th Avenue (8DA20713), facing west

Figure 5-21 Northern elevation of the southeastern outbuilding on the property containing the National Register–eligible building at 20000 SW 137th Avenue (8DA20713). March 2021 Google Streetview photograph, facing southwest

Figure 5-22 Southwestern outbuilding on the property containing the National Register–eligible building at 20000 SW 137th Avenue (8DA20713). This outbuilding is in a ruinous state. March 2021 Google Streetview photograph, facing southwest

Figure 5-23 Surviving material from historic oolitic rock perimeter walls on the property containing the National Register–eligible building at 20000 SW 137th Avenue (8DA20713). The walls are located north of the main house on the property, near the parcel boundary. April 2022 Google Streetview photograph, facing south

5.3.2 Ownership and type of Section 4(f) property

The building at 20000 SW 137th Avenue is a privately owned Masonry Vernacular residential building according to the Miami-Dade Property Appraiser website.

The building is significant for its extensive use of oolitic limestone material for the main house and two outbuildings on the parcel, as well as the remaining segments of the perimeter wall. Oolitic rock was the distinctive building material in Miami-Dade County's Redland area, with the soil having originally been comprised of a great deal of the rock at the surface level. Alvin Lindgren, a farmer who lived north along SW 137th Avenue/Lindgren Road from the building at 20000 SW

137th Avenue, had invented a scarifying tractor plow that helped make the rocky soil characteristic of the area more arable (Miami-Dade County Historic Preservation Board 2000). The use of this plow also provided local homesteaders access to the oolitic rock as a building material. The buildings on this parcel are not constructed of a distinctive style, but their use of a locally significant building material in great quantities, as part of a vernacular design, represents the parcel's preservation of Redland's historic built forms of the 1930s. Despite the original oolitic perimeter wall having been mostly lost, the small remaining portions also represent a locally significant built form, as walls of this nature were characteristic of the major rural intersections in southern Miami-Dade County. The surviving wall across the street to the north from this parcel within the National Register – eligible MacDonell Residence (8DA20712) represents this fact.

For these reasons, the building at 20000 SW 137th Avenue, including the main house itself, its surviving outbuildings, and the remnants of the surrounding perimeter wall, are eligible for the National Register–eligible under Criterion C in the area of Architecture.

5.3.3 Function of property and available activities

The building at 20000 SW 137th Avenue remains a residential property.

6.0 DESCRIPTION OF SECTION 4(F) PROPERTIES- RECREATIONAL

6.1 Section 4(f) Property: Black Creek Trail- Segment 7

6.1.1 Map and Location

Black Creek Trail- Segment of Route 7 is an 8.7-mile-long greenway corridor that begins at Black Point Park and Marina located at 24775 SW 87th Ave. in South Miami-Dade County and ends at Larry and Penny Thompson Park located at 12451 SW 184th St. in South Miami-Dade County **(Figure 6-1 through Figure 6-5).**

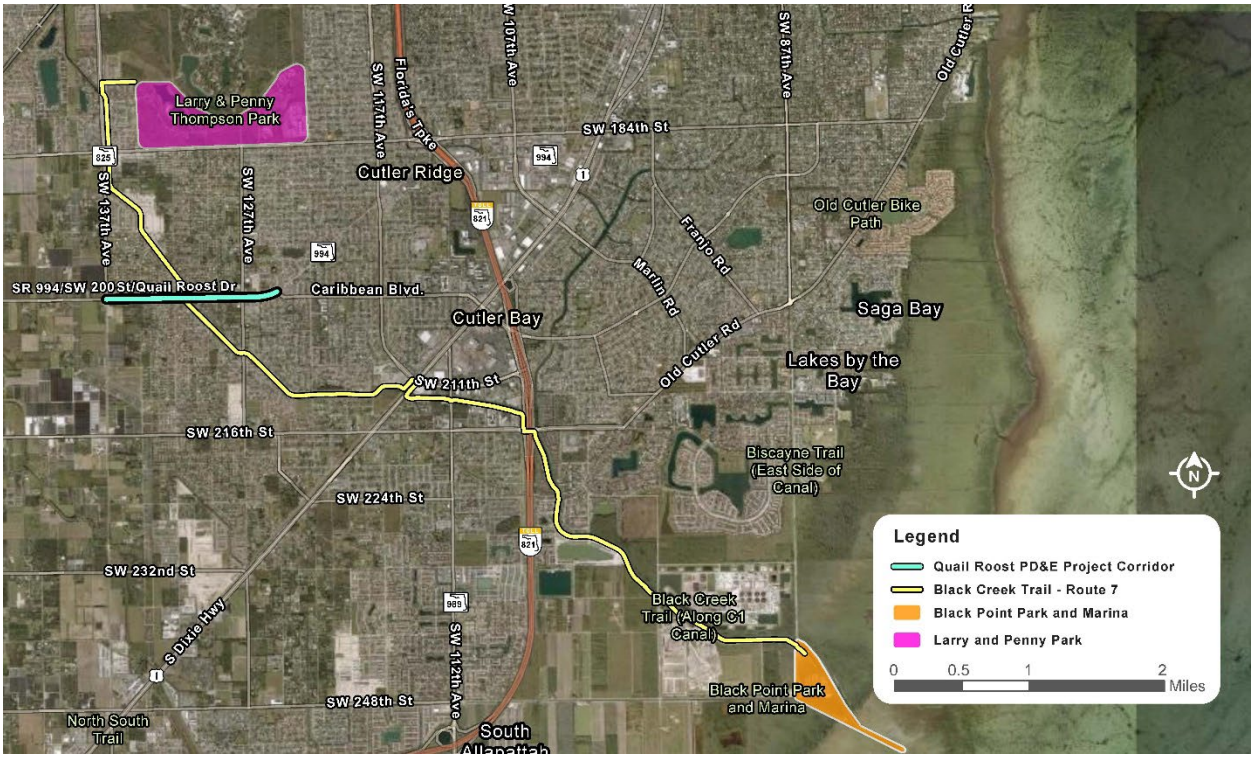

Figure 6-1 Black Creek Trail-Segment of Route 7 from Black Point Park and Marina to Larry and Penny Thompson Park

Figure 6-2 Black Creek Trail at Quail Roost Drive

Figure 6-3 Black Creek Trail- Facing north

Figure 6-4 Black Creek Trail- Facing south

Figure 6-5 Black Creek Trail Aerial view facing north

6.1.2 Ownership and type of Section 4(f) property

Black Creek Trail- Segment of Route 7 is owned by the Miami-Dade County, Parks, Recreation, and Open Spaces (MDPROS) and is located along the SFWMD Black Creek Canal (C-1W).

6.1.3 Function of property and available activities

The Black Creek Trail serves an important role in the South Miami-Dade Community. It is a moderately trafficked point-to-point trail adjacent to a canal and is good for all skill levels. The trail is primarily used for walking, running, bird watching, and road biking and is accessible year-round. Dogs are also able to use this trail but must be kept on a leash.

This trail is also accessible for most wheelchairs/mobility equipment or stroller users. There are 5 designated accessible spaces in the paved parking lot off SW 87th Avenue at the southeast end of the trail, near Black Point Park and Marina. All of them are van-accessible with striped access aisles. The trail surface is paved asphalt or concrete and smooth. There are painted dividing lines and metal bollards along most of the trail that reduce the width and prevent unauthorized vehicles from using the trail. The entire trail is estimated to be in the flat grade category (1% or less). There are benches and picnic tables along the route for resting. There are wheelchair-accessible bathrooms at the southeast end of the trail near Black Point Park and Marina.

6.1.4 Description and location of all existing and planned facilities

Features of the Black Creek Trail include benches and picnic tables found throughout the trail and wheelchair-accessible bathrooms at the southeast end of the trail. The project is not proposing to include any new facilities within the project study area. However, the following improvements to the trail are being considered for the intersection of SR 994/Quail Roost Drive with the Black Creek Trail, located just west of SW 130th Avenue.

The scope of work consists of widening the road from two lanes to four lanes, including removal and replacement of the bridge over the Black Creek Canal (C-1W). Black Creek Trail- Segment of Route 7 is within the limits of this project and two alternatives are being evaluated for improvements to the Black Creek Trail- Segment of Route 7.

At-grade Crossing: This option (**Figure 6-6**) allows for a lower roadway profile and minimizes impacts to SFWMD access, adjacent properties, traffic control plan, and water main crossing. However, the at-grade crossing presents conflicts between motor vehicles and bicyclists/pedestrians, which is a safety concern. In addition, traffic delays are expected to increase due to vehicles stopping for pedestrians and bicyclists that will be crossing a longer distance. In the existing condition, pedestrians and bicyclists cross a two-lane undivided section.

In the future condition, depending on the alternative selected, pedestrians and bicyclists would need to cross either a two-lane divided section or a four-lane divided section.

Figure 6-6 Rendering of the At-grade crossing facing south

Underpass Crossing: This option (**Figure 6-7**) relocates the trail under the proposed new bridge over the Black Creek Canal. The advantages of this option include improved safety and traffic operations due to the elimination of conflicts between motor vehicles and bicyclists/pedestrians. In addition, this option provides improved overall bridge vertical clearance. Disadvantages of this option include a higher roadway profile, impacts to adjacent properties, utilities, and SFWMD access driveway. In addition, it requires a more complex traffic control plan since a higher bridge results in a greater difference in elevation between the existing and proposed roadway profile, creating the need for temporary retaining walls and temporary connections to side streets.

Figure 6-7 Rendering of the Underpass Crossing for the Black Creek Trail, facing south

Both options (at-grade and underpass crossing) maintain the continuity of the trail across SR 994/Quail Roost Drive. The proposed alternatives to the trail are intended to enhance trail accessibility while improving safety for pedestrians and bicyclists using the trail and preserving existing trail functions. As previously mentioned in Section 4.0, the trail qualifies for an exception to the requirement for Section 4(f) in compliance with 23 CFR 774.13(f)(3).

6.1.5 Access

The Black Creek Trail-Segment of Route 7 is accessible to pedestrians and bicyclists. The trail has multiple points of entry and are listed below and shown in **Figure 6-8**. Access to the trail will be maintained at all times throughout construction.

- Black Point Park and Marina
- SW 97th Avenue
- Ingraham Avenue
- SW 216th Street
- SW 112th Avenue
- US-1/South Dixie Highway
- SW 122nd Avenue
- SW 127th Avenue
- SW 203rd Street
- SR 994/SW 200th Street/Quail Roost Drive
- SW 184th Street

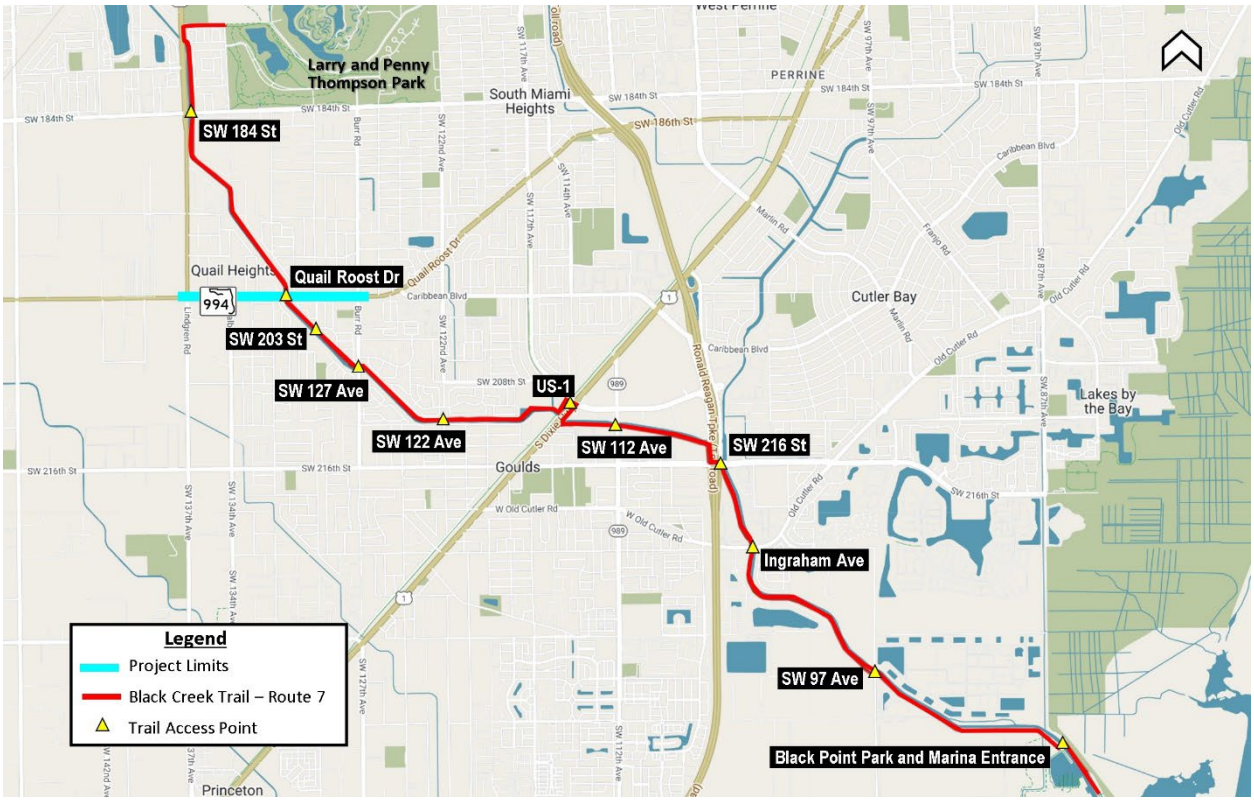

Figure 6-8 Black Creek Trail-Segment of Route 7 Access Points

7.0 ALTERNATIVES

A no-build alternative and three build alternatives were evaluated throughout the project development as described below.

7.1 No-Build (No-Action) Alternative

The No-Build Alternative proposes to keep the existing configuration of Quail Roost Drive throughout the corridor without further improvements. No operational, safety, or traffic capacity improvements would be implemented throughout the project limits. The No-Build Alternative has a number of positive aspects since it would not require the expenditure of public funds for design, construction, right of way, and/or utility relocation. Traffic would not be temporarily disrupted due to construction, avoiding disruptions to local residents and businesses. Also, there would be no direct or secondary impacts to the environment, the socio-economic characteristics, community cohesion, or system linkage of the area. However, this alternative does not address existing and future congested traffic conditions or existing safety deficiencies. Travel demand and truck traffic will increase significantly over time, given the continued growth expected in this area of Miami-Dade County and future adjacent projects further connecting the corridor with high-volume roadways nearby. Furthermore, this alternative does not address safety concerns and multimodal deficiencies along the corridor.

The No-Build Alternative is considered a viable alternative through the public hearing and final selection phase to serve as a comparison to the study proposed alternatives. However, the No-Build Alternative fails to fulfill the Purpose and Need of the project.

The No-Build roadway typical section within the study limits, is the same as the existing typical section. SR 994, between SW 137 Avenue and SW 127 Avenue, consists of two 11.5-ft wide general-use lanes (one lane in the westbound direction and one lane in the eastbound direction). Sidewalk sections are scattered throughout the project limits and are mostly present near residential areas adjacent to the corridor. See **Figure 7-1** for details.

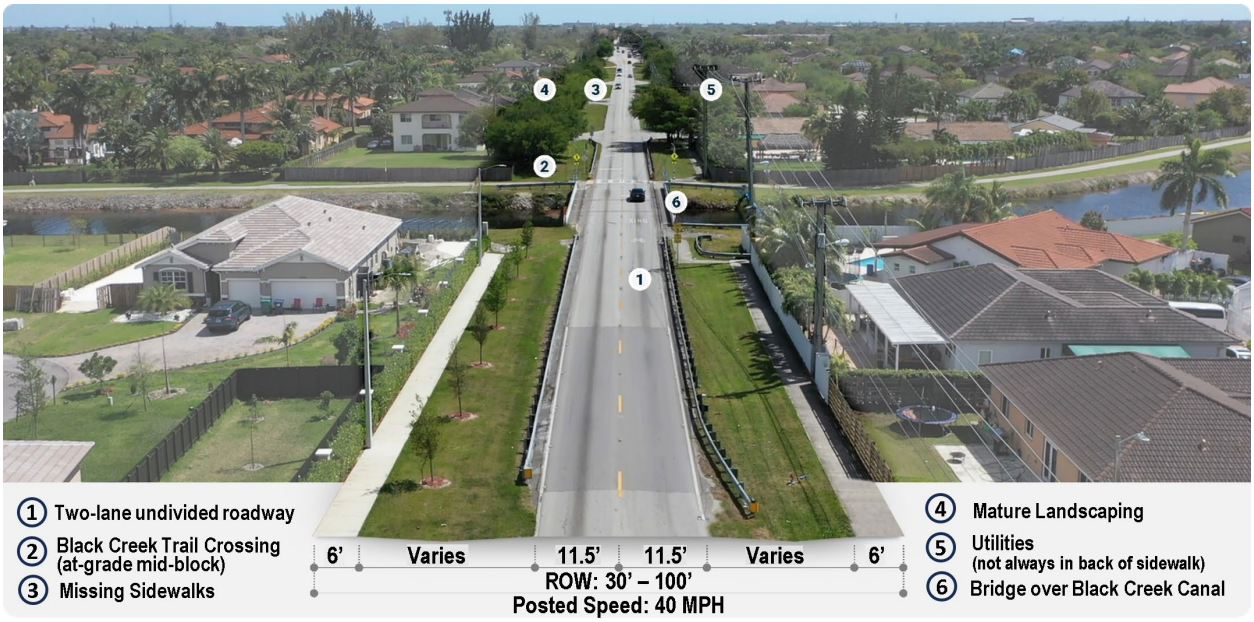

Figure 7-1 Existing Typical Section

The No-Build Alternative has the following advantages and disadvantages:

Advantages:

- No construction cost
- No right-of-way acquisition
- No Adverse Effects to historic resources
- No temporary construction impacts
- No disruption to travel patterns

Disadvantages:

- Does not meet Purpose and Need of the project
- Congestion will worsen as population and traffic volumes increase
- No bicycle and pedestrian connectivity
- Safety will not be improved. Additional crashes are anticipated as traffic volumes increase.
- Rehabilitation (RRR, Safety, etc.) will be needed in the near future at different locations along the corridor.

Recommendation

The No-Build Alternative fails to fulfill the Purpose and Need of the project. It is, therefore, not recommended for the project.

7.2 Build Alternative 1

This alternative maintains one lane of traffic in each direction, while adding a 16.5-ft median with exclusive left turn lanes along SR 994. Curb and Gutter Type F is being proposed on the outside of the travel lanes while Type B curb is the typical condition on the inside to maximize the available landscaping area within the raised islands. This alternative proposes sidewalk level separated bicycle lanes (sidewalk level SBLs) along both sides of the corridor, that are intended to be utilized by pedestrians as well as bicyclists. A minimum 4.5-ft buffer is proposed from the back of curb to the front of the sidewalk level SBLs and a 2-ft buffer is proposed between the sidewalk and the bicycle lane. A traffic signal is proposed at the intersection of SR 994/Quail Roost Drive and SW 134th Avenue. See **Figure 7-2** Build Alternative 1 Typical Section for typical section details.

Figure 7-2 Build Alternative 1 Typical Section

7.2.1 Impacts to Section 4(f) Historic Resources

Build Alternative 1 will result in adverse effects to the following three National Register–eligible historic properties.

- Talbott Estate (8DA2789) (SE corner of SW 134th Ave intersection)
- MacDonell Residence (8DA20712) (NW corner of SW 137th Ave intersection)
- 20000 SW 137 Avenue (8DA20713) (SW corner of SW 137th Ave intersection)

This alternative presents the least physical impact and encroachment of the historic buildings, walls, and properties. Below is a summary of the anticipated impacts. **Figures 7-3 through 7-5** depict the proposed areas of ROW acquisition for Build Alternative 1 from the three parcels containing National Register–eligible properties.

Talbott Estate (8DA2789) (SE corner of SW 134th Ave intersection)	
Build Alternative 1 Impacts	
Property Address	13390 SW 200th Street
Parcel Area	289,238.4 square feet (SF) / 6.640 Acres (AC)
Parcel Impact Area	21,775 SF / 0.5 acres AC
% of Parcel Impact	7.53%
Distance from Resource to Proposed ROW	42′ on the north and; 56′ on the west side of the parcel

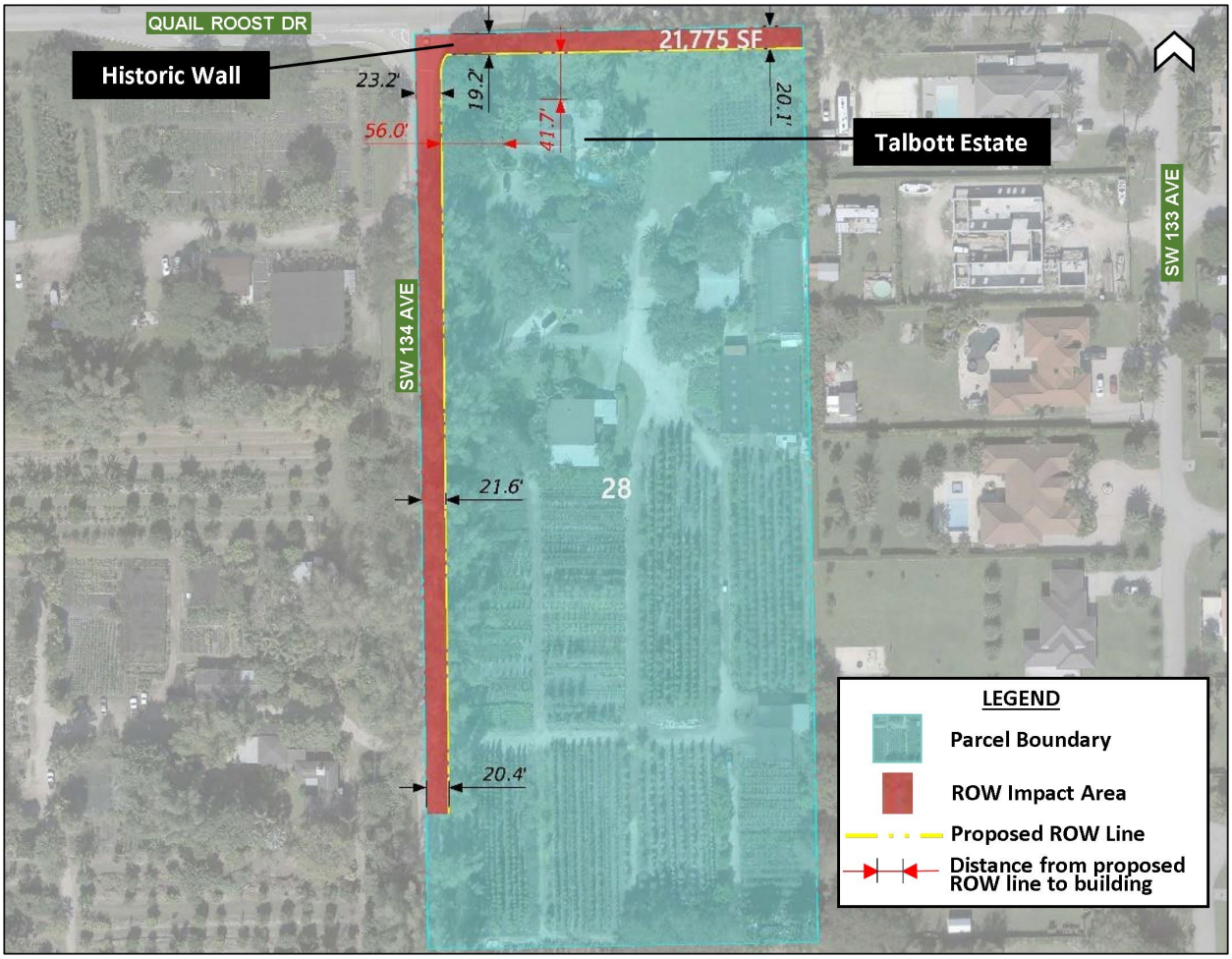

Figure 7-3 Proposed area of ROW acquisition for Build Alternative 1 within the parcel containing the National Register–eligible Talbott Estate (8DA2789)

MacDonell Residence (8DA20712) (NW corner of SW 137th Ave intersection)	
Build Alternative 1 Impacts	
Property Address	13701 SW 200th Street
Parcel Area	218,104.92 SF / 5.007 AC
Parcel Impact Area	17,223 SF / 0.395 AC
% of Parcel Impact	7.90%
Distance from Resource to Proposed ROW	60′ on the south and; 14.5′ on the east side of the parcel

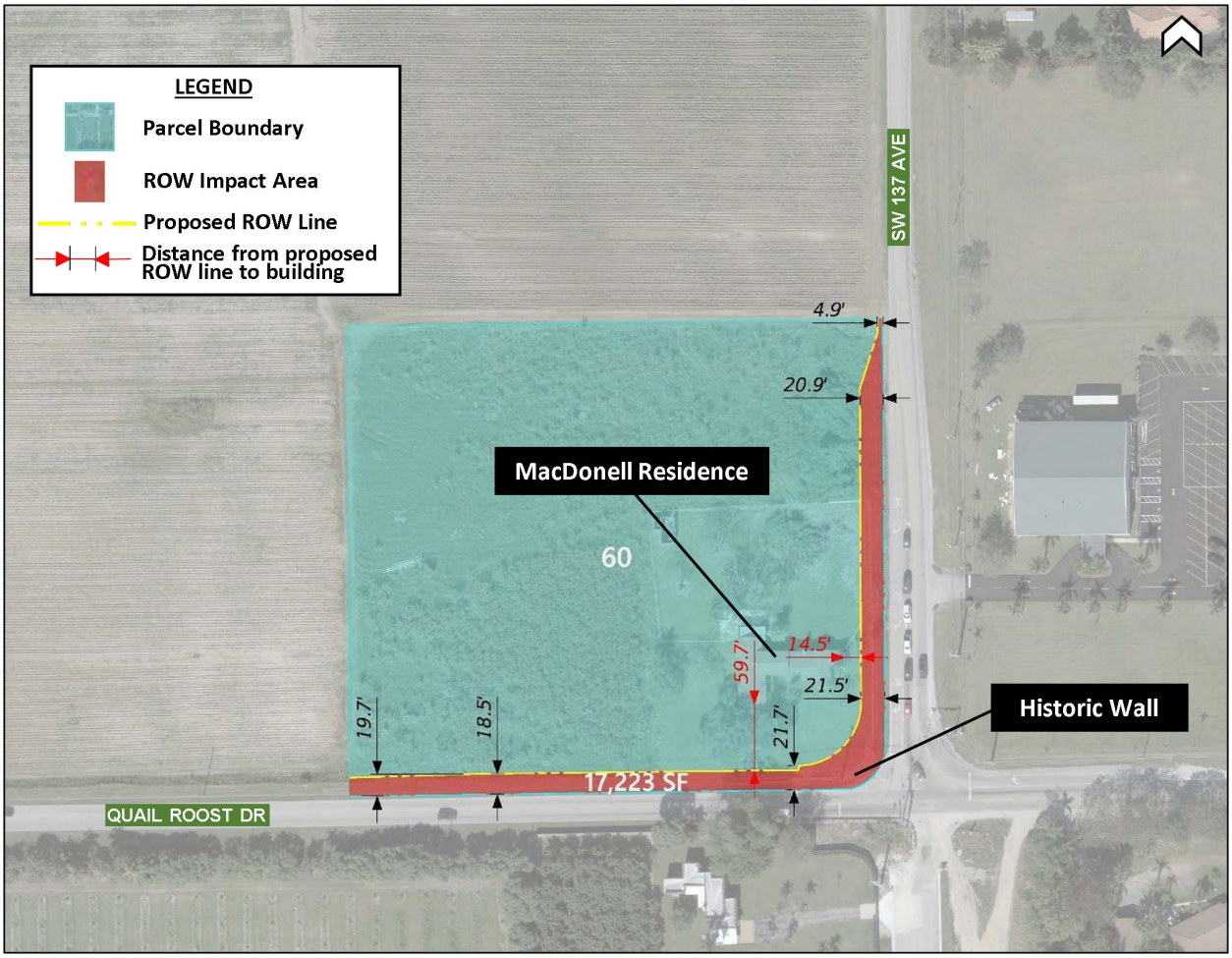

Figure 7-4 Proposed area of ROW acquisition for Build Alternative 1 within the parcel containing the National Register–eligible MacDonell Residence (8DA201712)

20000 SW 137th Avenue (8DA20713) (SW corner of SW 137th Ave intersection)	
Build Alternative 1 Impacts	
Property Address	20000 SW 137th Avenue
Parcel Area	136,604.16 SF / 3.136 AC
Parcel Impact Area	2,957 SF / 0.068 AC
% of Parcel Impact	2.16%
Distance from Resource to Proposed ROW	22′ on the north side of the parcel

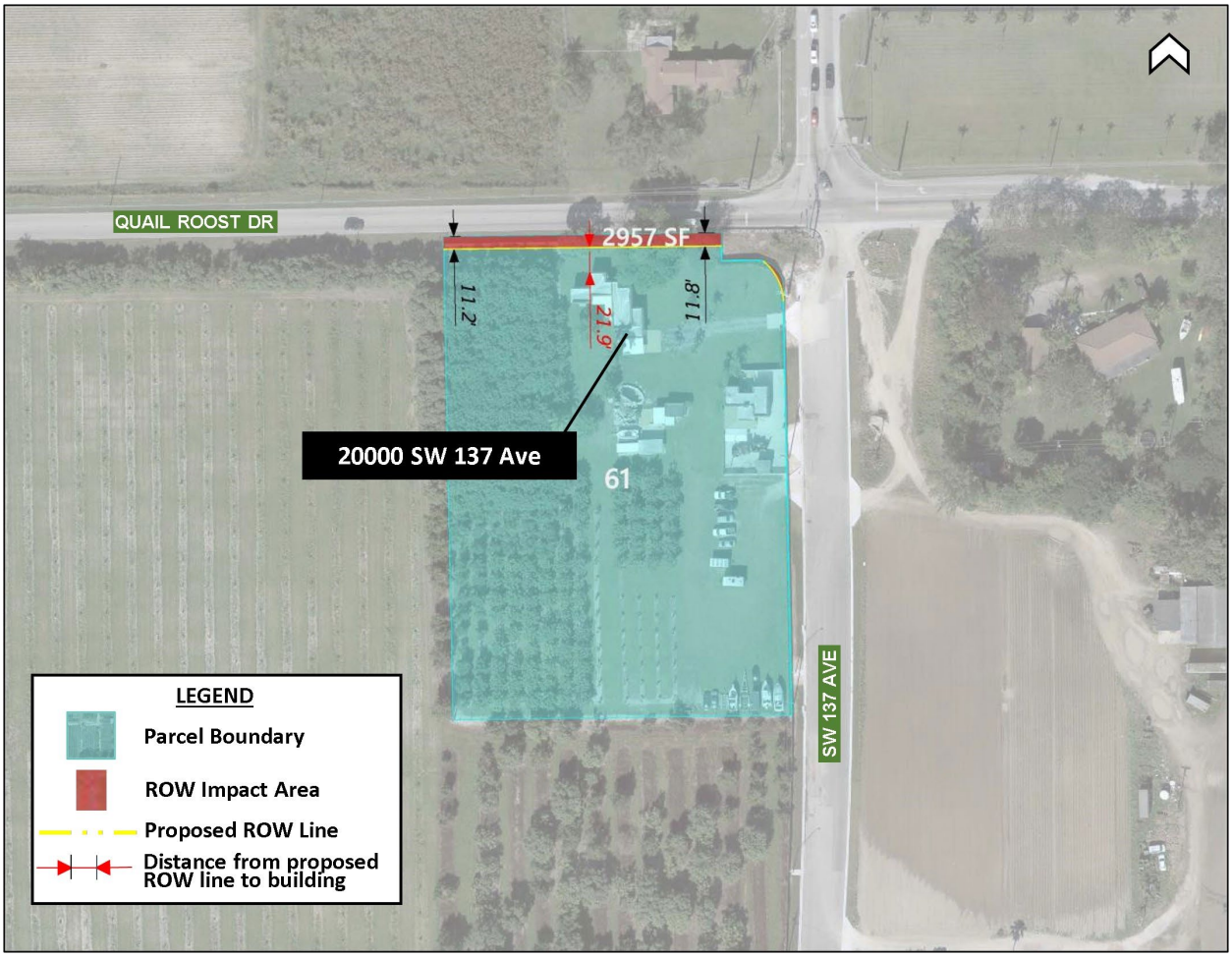

Figure 7-5 Proposed area of ROW acquisition for Build Alternative 1 within the parcel containing the National Register–eligible building at 20000 SW 137th Avenue (8DA201713)

Build Alternative 1 has the following advantages and disadvantages:

Advantages:

- Reduces delay by adding auxiliary lanes at the signalized intersections
- Improves safety when compared to the No-Build alternative
- Less construction time than other build alternatives
- Less right-of-way acquisition compared to the other Build alternatives
- Adverse Effects to historic resources are less in terms of total impact area (0.963 AC) compared to Build Alternative 2 (1.412 AC) and Build Alternative 3 (1.402 AC). However, it should be noted that all three build alternatives result in the same impacts to the historic walls at the MacDonell Residence and Talbott Estate.
- Overall, the Quail Roost Drive corridor is expected to operate at LOS D or better within the study limits in the future condition
- Provides bicycle and pedestrian facilities

Disadvantages:

- Expenditure of public funds for design, construction, right of way and utility relocation
- Temporary construction impacts and disruption to travel patterns
- Low impacts to environmental resources
- Adverse Effects to all historic resources (least severe of all three build alternatives)
- No continuous capacity improvement – maintains current condition of one lane of traffic in each direction
- Increased traffic congestion (more than with other build alternatives). Multiple critical movements from the side streets are expected to operate below the standard LOS D for highways on the State Highway System in the future condition. Northbound left turn movements at the signalized intersections of SW 134 Avenue and SW 127 Avenue are expected to operate at LOS E, while most of the northbound and southbound through movements are expected to operate at failing conditions (LOS F), with much greater delays than Build Alternatives 2 & 3.
- Median width is substandard (design variation required).
- Right turn maneuvers from the side streets can't be completed by trucks due to the limited pavement width of the receiving lane (one-lane in each direction with a raised median).
- U-turn movements would need to be restricted for all vehicles due to the limited pavement width of the receiving lane (one-lane in each direction with a raised median).
- Fewer safety improvements when compared to other Build Alternatives (related to congestion)
- Expected crash reduction rate is lower (20 crashes per year) than Build Alternatives 2 and 3 (27 crashes per year).

Recommendation

Build Alternative 1 provides limited capacity improvements at the signalized intersections but not throughout the entire project limits. These improvements, however, are not enough to achieve acceptable traffic operations in the future condition. Additionally, the expected crash rate for Build Alternative 1 is higher than for Build Alternatives 2 and 3. In summary, Build Alternative 1 does not address the capacity/transportation demand goal of the project and still impacts all three historic resources. For these reasons, Build Alternative 1 does not meet the Purpose and Need of the project.

7.3 Build Alternative 2

This alternative proposes one additional travel lane in each direction, for a total of two 11-ft lanes on each bound, and a 16.5-ft median with exclusive left turn lanes along SR 994. Curb and Gutter Type F is proposed on the outside of the travel lanes while Type B curb is the typical condition on the inside to maximize the available landscaping area within the raised islands. This alternative also proposes sidewalk level separated bicycle lanes (sidewalk level SBLs) along both sides of the corridor, that are intended to be utilized by pedestrians as well as bicyclists. A minimum 4.5-ft buffer is proposed from the back of curb to the front of the sidewalk level SBLs and a 2-ft buffer is proposed between the sidewalk and the bicycle lane. A traffic signal is proposed at the intersection of SR 994/Quail Roost Drive and SW 134th Avenue. See **Figure 7-6** for typical section details.

Figure 7-6 Build Alternative 2 Typical Section

7.3.1 Impacts to Section 4(f) Historic Resources

Build Alternative 2 will also result in adverse effects to the following three National Register–eligible historic properties: 8DA2789, 8DA20712, and 8DA20713.

This alternative presents a comparable physical impact to Build Alternative 1 in terms of the encroachment of the historic buildings, walls, and properties. Below is a summary of the anticipated impacts. **Figures 7-7 through 7-9** depict the proposed areas of ROW acquisition for Build Alternative 2 from the three parcels containing National Register–eligible properties.

Talbott Estate (8DA2789) (SE corner of SW 134th Ave intersection)	
Build Alternative 2 Impacts	
Property Address	13390 SW 200th Street
Parcel Area	289,238.4 SF / 6.640 AC
Parcel Impact Area	28,935 SF / 0.664 AC
% Parcel Impact	10.00%
Distance from Resource to Proposed ROW	21.4′ on the north and; 58′ on the west side of the parcel

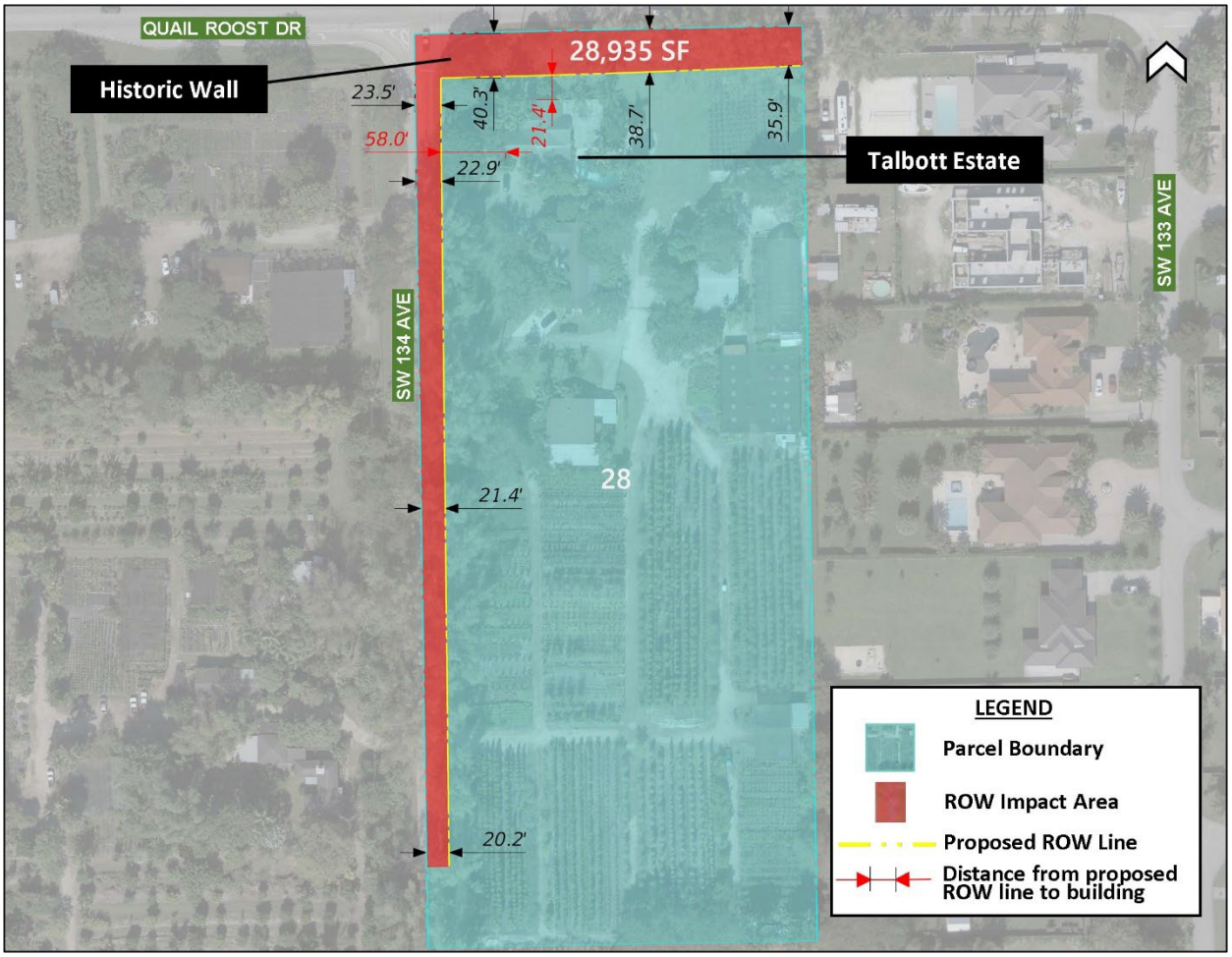

Figure 7-7 Proposed area of ROW acquisition for Build Alternative 2 within the parcel containing the National Register–eligible Talbott Estate (8DA2789)

MacDonell Residence (8DA20712) (NW corner of SW 137th Ave intersection)	
Build Alternative 2 Impacts	
Property Address	13701 SW 200th Street
Parcel Area	218,104.92 SF / 5.007 AC
Parcel Impact Area	24,742 SF / 0.568 AC
% Parcel Impact	11.34%
Distance from Resource to Proposed ROW	42.3′ on the south and; 14.7′ on the east side of the parcel

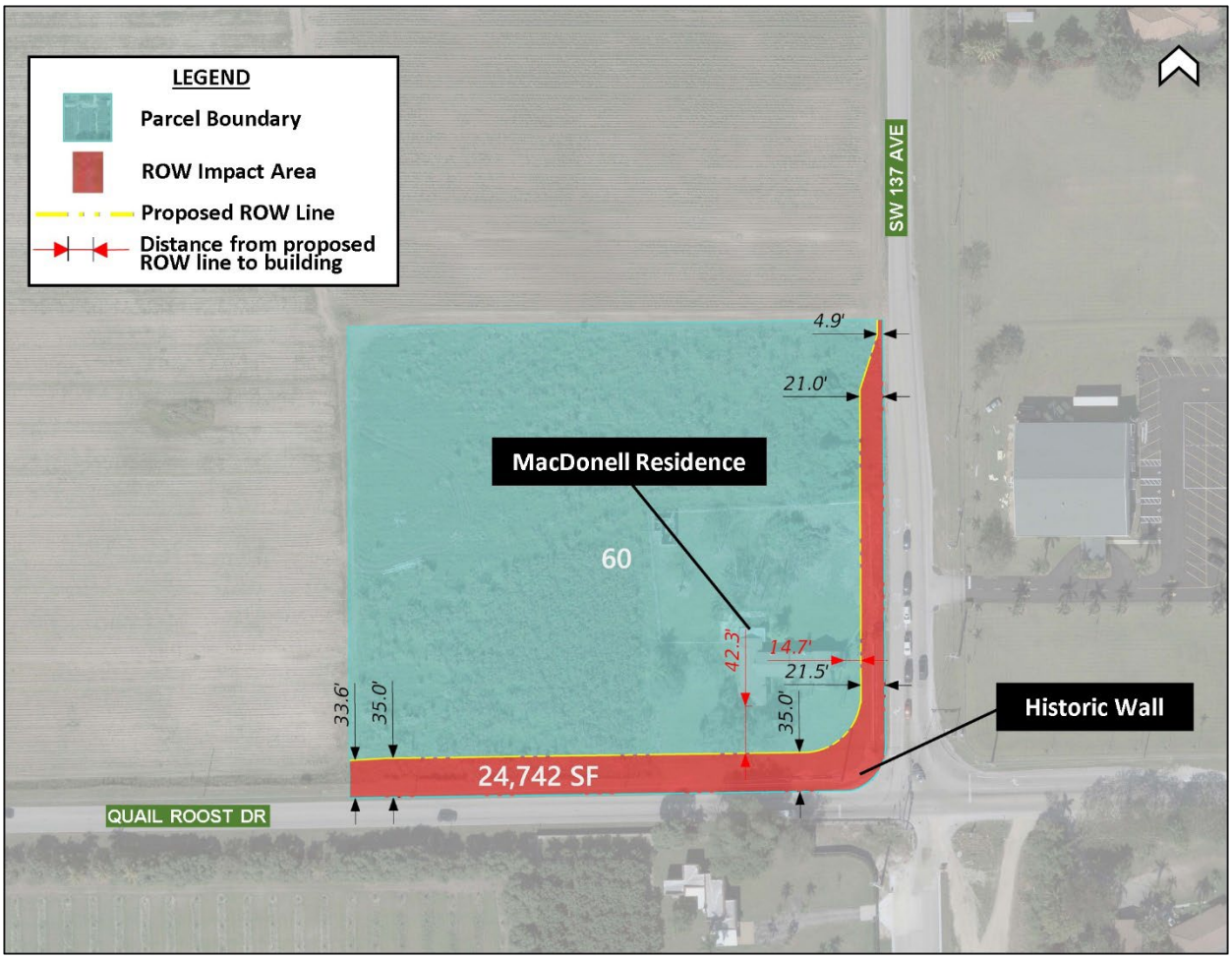

Figure 7-8 Proposed area of ROW acquisition for Build Alternative 2 within the parcel containing the National Register–eligible MacDonell Residence (8DA201712)

20000 SW 137th Avenue (8DA20713) (SW corner of SW 137th Ave intersection)	
Build Alternative 2 Impacts	
Property Address	20000 SW 137th Avenue
Parcel Area	136,604.16 SF / 3.136 AC
Parcel Impact Area	7,811 SF / 0.179 AC
% Parcel Impact	5.72%
Distance from Resource to Proposed ROW	4.4′ on the north side of the parcel

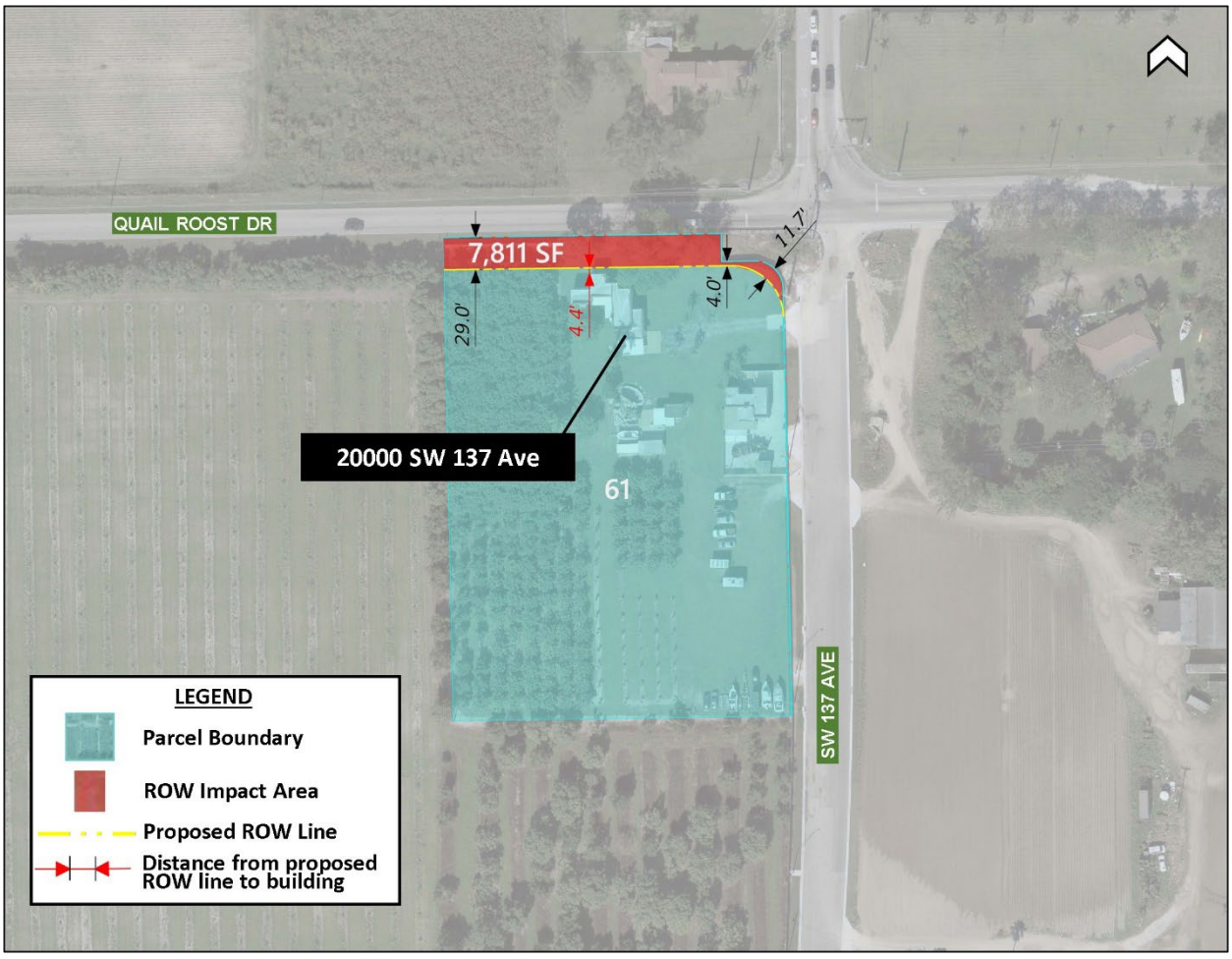

Figure 7-9 Proposed area of ROW acquisition for Build Alternative 2 within the parcel containing the National Register–eligible building at 20000 SW 137th Avenue (8DA201713)

Build Alternative 2 has the following advantages and disadvantages:

Advantages:

- Meets Purpose and Need of the project
- Reduces delay by adding an additional through lane and auxiliary lanes in each direction
- Improves safety (compared to Build Alternative 1)
- Provides additional capacity (additional through lanes)
- Access management improvements
- Provides bicycle and pedestrian facilities
- Overall, the Quail Roost Drive corridor is expected to operate at LOS D or better within the study limits in the future condition. Northbound left turn movements at the signalized intersections of SW 134 Avenue and SW 127 Avenue are expected to operate at LOS D.
- Expected crash reduction rate is higher (27 crashes per year) than Build Alternative 1 (20 crashes per year) and the same as Build Alternative 3.

Disadvantages:

- Expenditure of public funds for design, construction, right of way and utility relocation
- Temporary construction impacts and disruption to travel patterns
- Low impacts to environmental resources
- Adverse Effects to historic resources are greater in terms of total impact area (1.412 AC) compared to Build Alternative 1 (0.963 AC) and Build Alternative 3 (1.402 AC)
- Higher ROW impacts than Build Alternatives 1
- Higher construction cost than Build Alternative 1
- Median width is substandard (design variation required)

Recommendation

Build Alternative 2 addresses the Purpose and Need of the project and therefore remains under consideration for further analysis.

7.4 Build Alternative 3

Similar to Build Alternative 2, this alternative proposes adding one travel lane in each direction along SR 994 for a total of two 11-ft lanes on each bound. A 22-ft-wide raised median with exclusive left turn lanes is provided along the corridor, restricting access to the minor roads and driveways connecting to SR 994. At the intersections, a striped buffer is proposed between the left turn lanes and the through traffic. Curb and Gutter Type F is being proposed on the outside of the roadway while Type B curb is the typical condition on the inside to maximize the available landscaping area within the raised median when present. This alternative also proposes sidewalk level separated bicycle lanes (sidewalk level SBLs) along both sides of the corridor, that are intended to be utilized by pedestrians as well as bicyclists. A minimum 4.5-ft buffer is proposed

from the back of curb to the front of the sidewalk level SBLs and a 2-ft buffer is proposed between the sidewalk and the bicycle lane. A traffic signal is proposed at the intersection of SR 994/Quail Roost Drive and SW 134th Avenue. This alternative has the greatest impact to the existing right-of-way and also the most access management restrictions. See **Figure 7-10** for typical section details.

Figure 7-10 Build Alternative 3 Typical Section

7.4.1 Impacts to Section 4(f) Historic Resources

Build Alternative 3 will also result in adverse effects to the following three National Register–eligible: 8DA2789, 8DA20712, and 8DA20713.

This alternative presents the most physical impact and encroachment of the historic buildings, walls, and properties. Below is a summary of the anticipated impacts. **Figures 7-11 through 7-13** depict the proposed areas of ROW acquisition for Build Alternative 3 from the three parcels containing National Register–eligible properties.

Talbott Estate (8DA2789) (SE corner of SW 134th Ave intersection)	
Build Alternative 3 Impacts	
Property Address	13390 SW 200th Street
Parcel Area	289,238.4 SF / 6.640 AC
Parcel Impact Area	31,186 SF / 0.716 AC
% Parcel Impact	10.78%
Distance from Resource to Proposed ROW	14′ on the north and; 57′ on the west side of the parcel

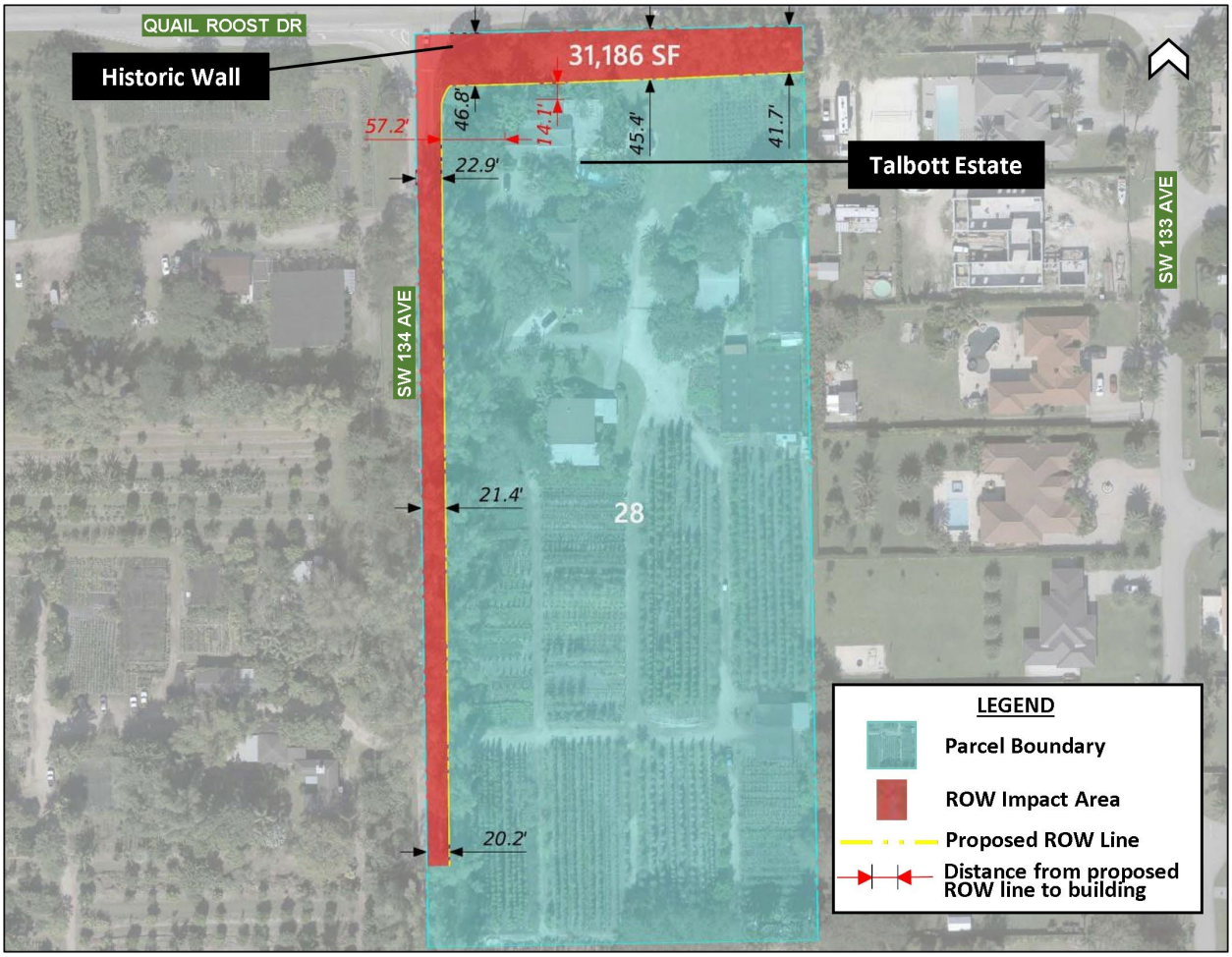

Figure 7-11 Proposed area of ROW acquisition for Build Alternative 3 within the parcel containing the National Register–eligible Talbott Estate (8DA2789)

MacDonell Residence (8DA20712) (NW corner of SW 137th Ave intersection)	
Build Alternative 3 Impacts	
Property Address	13701 SW 200th Street
Parcel Area	218,104.92 SF / 5.007 AC
Parcel Impact Area	23,103 SF / 0.530 AC
% Parcel Impact	10.59%
Distance from Resource to Proposed ROW	46′ on the south and; 14′ on the east sides of the parcel

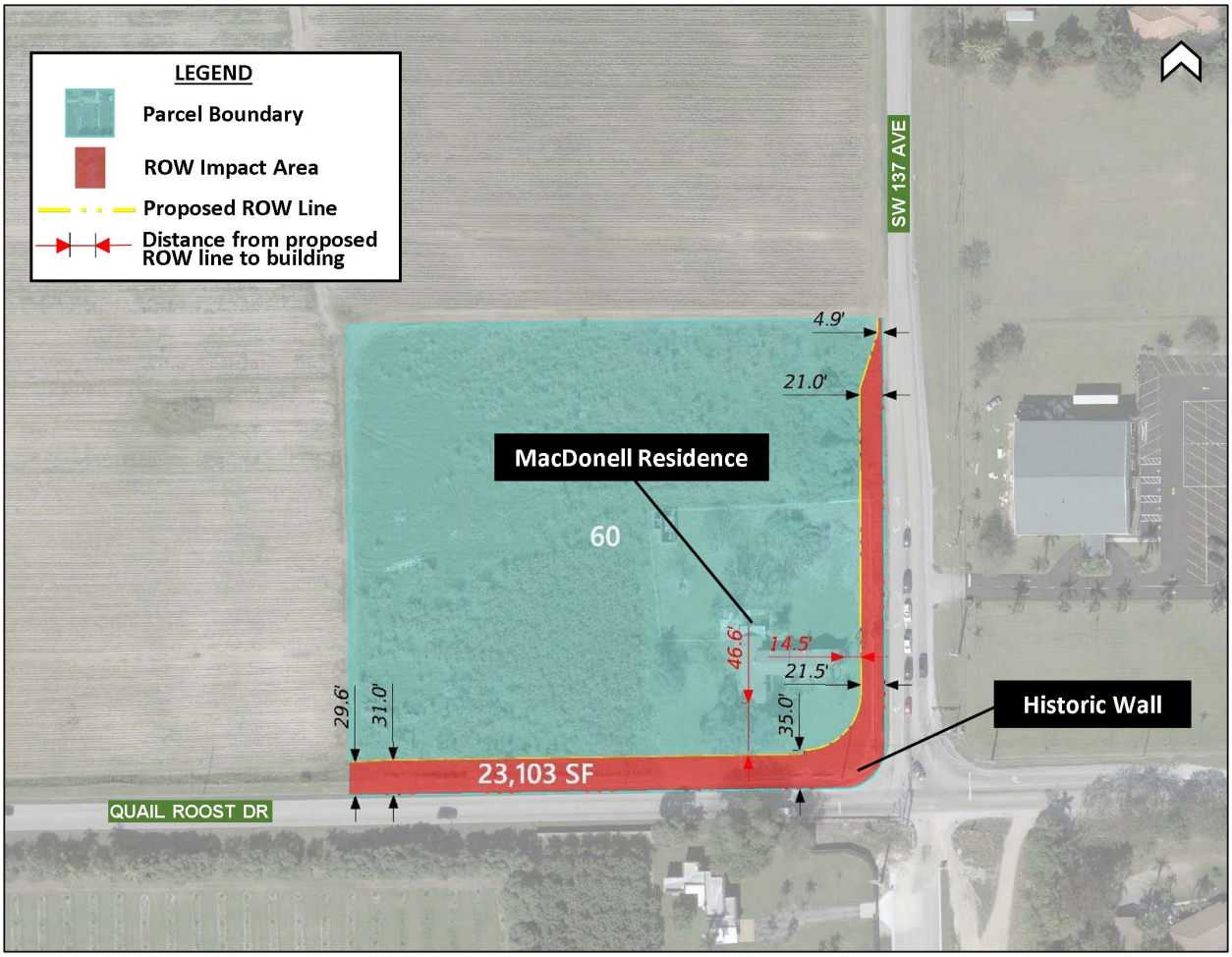

Figure 7-12 Proposed area of ROW acquisition for Build Alternative 3 within the parcel containing the National Register–eligible MacDonell Residence (8DA201712)

20000 SW 137th Avenue (8DA20713) (SW corner of SW 137th Ave intersection)	
Build Alternative 3 Impacts	
Property Address	20000 SW 137th Avenue
Parcel Area	136,604.16 SF / 3.136 AC
Parcel Impact Area	6,778 SF / 0.156 AC
% Parcel Impact	4.96%
Distance from Resource to Proposed ROW	8′ on the north side of the parcel

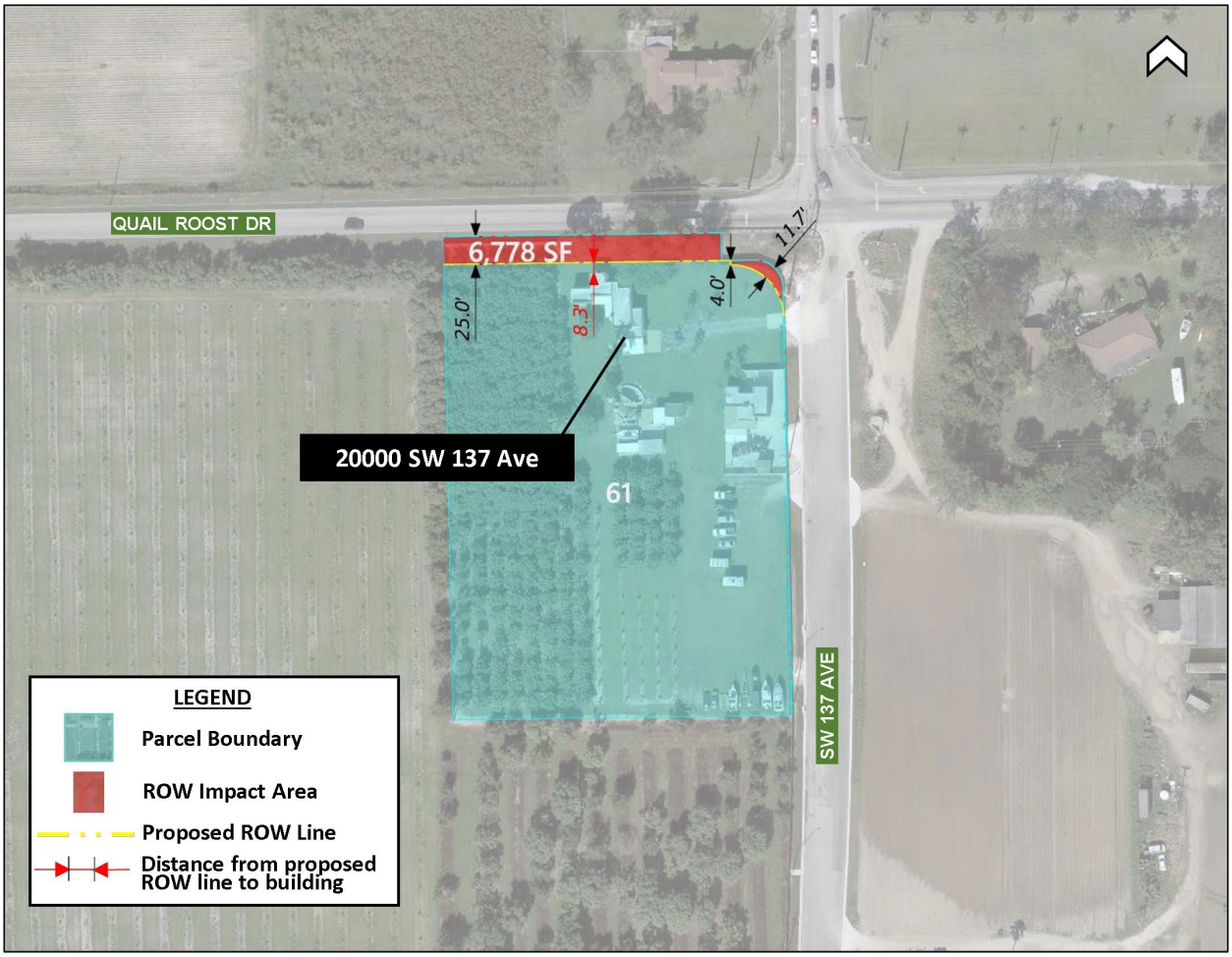

Figure 7-13 Proposed area of ROW acquisition for Build Alternative 3 within the parcel containing the National Register–eligible building at 20000 SW 137th Avenue (8DA201713)

Build Alternative 3 has the following advantages and disadvantages:

Advantages:

- Meets Purpose and Need of the project
- Reduces delay by adding an additional through lane and auxiliary lanes in each direction
- Overall, the Quail Roost Drive corridor is expected to operate at LOS D or better within the study limits in the future condition. Northbound left turn movements at the signalized intersections of SW 134 Avenue and SW 127 Avenue are expected to operate at LOS D.
- Expected crash reduction rate is higher (27 crashes per year) than Build Alternative 1 (20 crashes per year) and the same as Build Alternative 2.
- Improves safety (more than all other alternatives)
- Meets access management standards for median openings
- Standard Median Width
- Provides additional capacity when compared to the Build 1 Alternative
- Provides bicycle and pedestrian facilities

Disadvantages:

- Expenditure of public funds for design, construction, right of way and utility relocation
- Temporary construction impacts and disruption to travel patterns
- Low impacts to environmental resources
- Adverse Effects to historic resources greater than Build Alternative 1 for all three resources and Build Alternative 2 for the resource located at SW 134th Avenue
- Significant ROW acquisition (most severe of all three build alternatives)
- Higher construction cost than all the other alternatives

Recommendation

Build Alternative 3 addresses the Purpose and Need of the project and therefore remains under consideration for further analysis.

8.0 SUMMARY OF SECTION 4(f) USE

A summary of the Section 4(f) Use for each alternative is presented below.

Table 8-1 Summary of Section 4(f) Use

Historic Resources	Build Alternative 1 (2-Lane with 16.5-ft median)	Build Alternative 2 (4-Lane with 16.5-ft median)	Build Alternative 3 (4-Lane with 22-ft median)
Talbott Estate (8DA2789)	• Parcel Area = 289,238.4 SF / 6.640 AC • Parcel Impact Area = 21,775 SF/ 0.5 AC • %Parcel Impact = 7.53% • Distance from resource to Proposed ROW ○ 42' on north side of parcel ○ 56' on west side of parcel • ROW Cost = $227,544	• Parcel Area = 289,238.4 SF / 6.640 AC • Parcel Impact Area = 28,935 SF/ 0.664 AC • %Parcel Impact = 10.00% • Distance from resource to Proposed ROW ○ 21.4' on north side of parcel ○ 58' on west side of parcel • ROW Cost = $302,371	• Parcel Area = 289,238.4 SF / 6.640 AC • Parcel Impact Area = 31,186 SF/ 0.716 AC • %Parcel Impact = 10.78% • Distance from resource to Proposed ROW ○ 14' on north side of parcel ○ 57' on west side of parcel • ROW Cost = $325,892
MacDonell House (8DA20712)	• Parcel Area = 218,104.92 SF / 5.007 AC • Parcel Impact Area = 17,223 SF/ 0.395 AC • %Parcel Impact = 7.90% • Distance from resource to Proposed ROW ○ 60' on south side of parcel ○ 14.5' on east side of parcel • ROW Cost = $179,981	• Parcel Area = 218,104.92 SF / 5.007 AC • Parcel Impact Area = 24,742 SF/ 0.568 AC • %Parcel Impact = 11.34% • Distance from resource to Proposed ROW ○ 42.3' on south side of parcel ○ 14.7' on east side of parcel • ROW Cost = $258,554	• Parcel Area = 218,104.92 SF / 5.007 AC • Parcel Impact Area = 23,103 SF / 0.530 AC • %Parcel Impact = 10.59% • Distance from resource to Proposed ROW ○ 46' on south side of parcel ○ 14' on east side of parcel • ROW Cost = $241,430
20000 SW 137 Ave (8DA20713)	• Parcel Area = 136,604.16 SF / 3.136 AC • Parcel Impact Area = 2,957 SF/ 0.068 AC • %Parcel Impact = 2.16% • Distance from resource to Proposed ROW ○ 22' on north side of parcel • ROW Cost = $30,897	• Parcel Area = 136,604.16 SF / 3.136 AC • Parcel Impact Area = 7,811 SF/ 0.179 AC • %Parcel Impact = 5.72% • Distance from resource to Proposed ROW ○ 4.4' on north side of parcel • ROW Cost = $81,625	• Parcel Area = 136,604.16 SF / 3.136 AC • Parcel Impact Area = 6,778 SF/ 0.156 AC • %Parcel Impact = 4.96% • Distance from resource to Proposed ROW ○ 8' on north side of parcel • ROW Cost = $70,836
Total Impact Area	41,955 SF / 0.963 AC	61,488 SF / 1.412 AC	61,067 SF / 1.402 AC
Total ROW Cost	$438,422	$642,550	$638,158

In terms of Section 4(f) Use, Build Alternative 1 results in the least impacts to the historic resources. However, as previously noted in Section 7.0, Build Alternative 1 does not meet the Purpose and Need of the project and it is therefore not considered for further analysis.

9.0 AVOIDANCE ALTERNATIVES EVALUATED

An avoidance alternative is any alternative that would not require the use of any Section 4(f) property. A feasible and prudent avoidance alternative does not cause other severe problems of such a magnitude that substantially outweigh the importance of protecting Section 4(f) properties.

Three avoidance alternatives were developed to determine if the impacts to the Section 4(f) resources could be avoided while meeting the project's Purpose and Need.

The following section includes a brief description of each of the Avoidance Alternatives developed to avoid impacting the three Historic Properties as well as a summary of the evaluation.

9.1 Avoidance Alternative 1

Avoidance Alternative 1 proposes the following modifications:

- To avoid impacts to the MacDonell Residence (8DA20712) and the house located at 20000 SW 137 Avenue (8DA20713), this alternative considered maintaining the existing pavement width along Quail Roost Drive, west of SW 137th Avenue, and milling and resurfacing the roadway, with no widening. An alignment shift is not possible in this area because the right-of-way lines are close to the road on both sides of Quail Roost Drive. Shifting the alignment either north or south would result in impacts to one of the two parcels. See **Figure 9-1** for details.

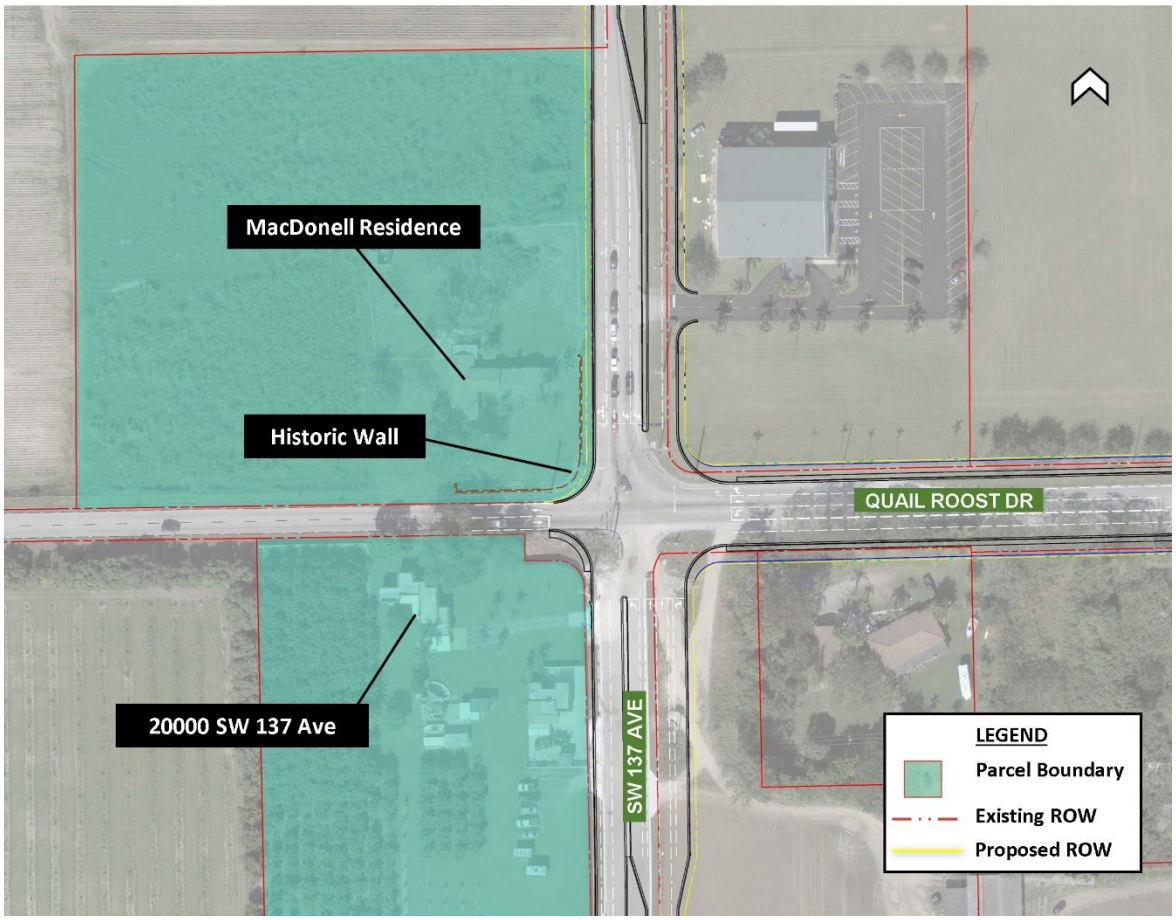

Figure 9-1 Avoidance Alternative 1 at SW 137th Avenue Intersection

- To avoid encroachment into the Talbott Estate parcel (8DA2789), this alternative proposes shifting the road alignment 36.5 feet to the north in the vicinity of the parcel. In order to safely accomplish the alignment shift, a series of reverse curves were incorporated into the design. These curves extend approximately 800 feet in both directions from the Talbott Estate parcel. See **Figure 9-2** for details.

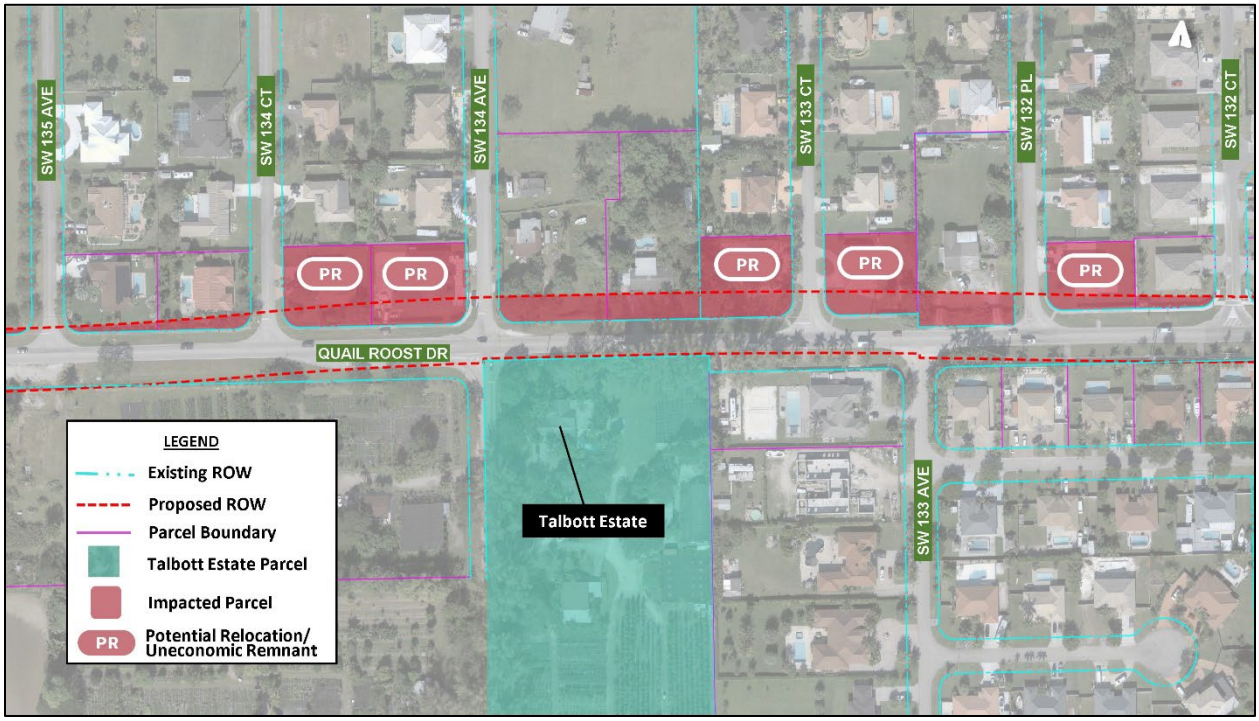

Figure 9-2 Avoidance Alternative 1 at SW 134th Avenue Intersection

Although feasible, the modifications proposed by Avoidance Alternative 1 are not prudent. As shown in **Figure 9-2**, the alignment shift results in greater impacts to 11 properties on the north side of the corridor, significantly increasing the project right-of-way costs and disrupting the community with parcel acquisitions and/or relocations (see **Table 9-1** for details).

Table 9-1 Avoidance Alternative 1 Additional ROW Impacts

Type of Impact	Type of Parcels	Number of Parcels Impacted	Impact Area (SF/AC)	Estimated ROW Cost (includes demolition and potential relocation cost)
Uneconomic Remnant[1]	Single Family Residential	5	17,554 SF/ 0.403 AC	$3,482,775
Partial Take[2]	Single Family Residential	6	15,183 SF/ 0.349 AC	$1,480,170
Total		11	32,737 SF/ 0.752 AC	$4,962,946

1-Uneconomic remnant is a parcel of real property in which the owner is left with an interest after the partial acquisition of the owner's property, and which the Agency has determined has little or no value or utility to the owner (49 CFR Part 24). This remainder parcel is either too small to be developed, or the configuration of the property is such that does not allow for development.
2-Partial take refers to the taking of part of a property under power of eminent domain for public use.

Furthermore, as shown in **Table 9-2**, with the anticipated traffic increase in 2045, the LOS at the SW 137th Avenue intersection is expected to operate at LOS F for the eastbound movements during both the AM and PM Peak periods and the southbound through + right movement in the PM Peak period. The intersection would experience long delays during the PM Peak period. Signal timing improvements alone would not be sufficient to achieve an acceptable LOS. The improvements proposed by the Build Alternative 2 to the west of SW 137th Avenue are necessary to address the anticipated operational deficiencies in 2045 at the SW 137th Avenue intersection.

Table 9-2 Avoidance Alternative 1 Traffic Impacts at SW 137th Avenue (2045)

Peak Period	Scenario	Eastbound SR 994		Westbound SR 994			Northbound SW 137 Ave			Southbound SW 137 Ave		Avg Delay per Vehicle (sec)	Intersec-tion LOS
		Left	Thru + Right	Left	Thru	Right	Left	Thru	Right	Left	Thru + Right		
AM Peak	**Avoidance**	F	F	D	C	A	C	D	C	E	D	53 sec	D
PM Peak	**Avoidance**	F	F	F	C	A	C	C	C	E	F	2 min	F

In summary, Avoidance Alternative 1 fails to effectively address the traffic operations and capacity deficiencies due to future travel demand projected as a result of population and employment growth along the study corridor. The proposed changes are not deemed prudent as they involve significant disruption to an established community as well as substantial right-of-way costs. Lastly, socio-economic impacts associated with Avoidance Alternative 1 include delayed emergency response as well as safety concerns due to increased traffic congestion. Consequently, Avoidance Alternative 1 is not a viable solution as it fails to meet the Purpose and Need of the project.

9.2 Avoidance Alternative 2

Location Alternatives: Two alternate roadway corridors, one north and one south of Quail Roost Drive, were considered but were deemed to be not viable, prudent, or feasible. The north alternate corridor would be along SW 184th Street/Eureka Drive located approximately 1.1 miles to the north while the southern alternate corridor would be along SW 216th Street located approximately 1.0 miles to the south (**see Figure 9-3**). SW 184th Street/ Eureka Drive is currently a five-lane undivided roadway while SW 216th Street is currently a two-lane undivided roadway within the limits of this study.

Both alternate corridors currently serve different travel markets due to their distance from the study corridor and due to the limited intermediate roadway network, which is incomplete. Major improvements to either of these alternate corridors would not serve to improve existing safety deficiencies, traffic operations, and multimodal use along the study corridor. As such, they fail to meet the Purpose and Need of the project.

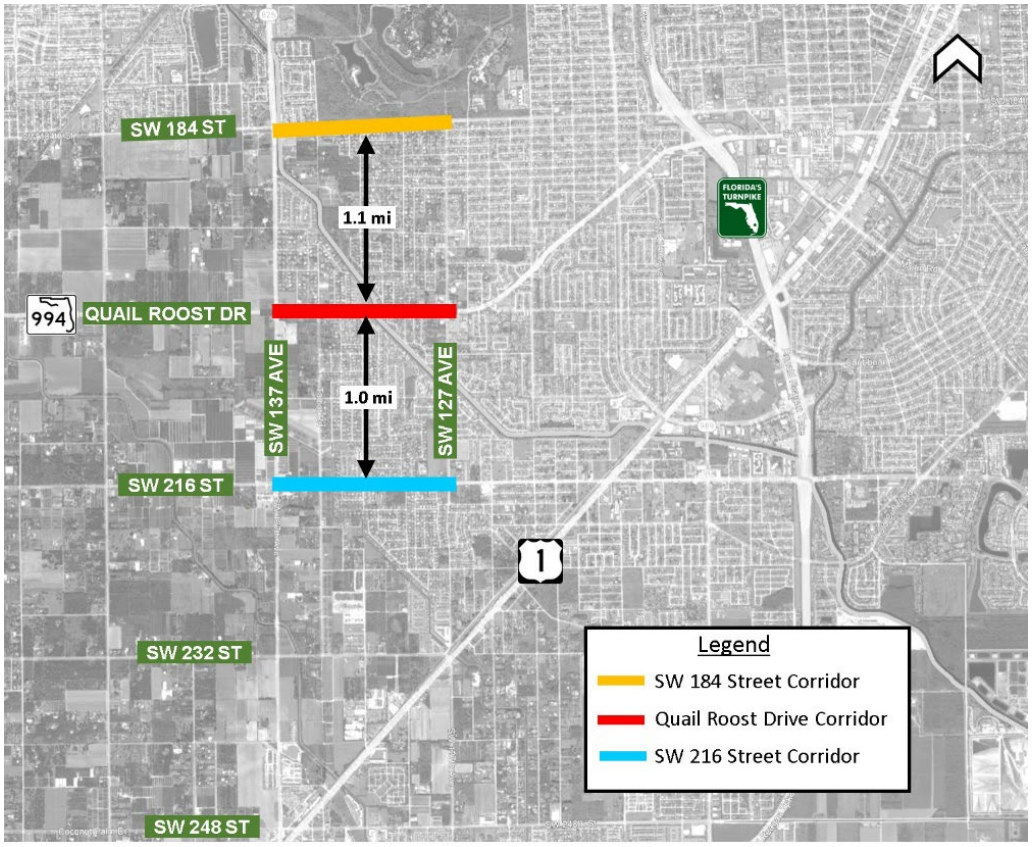

Figure 9-3 Alternate Corridors

9.3 Avoidance Alternative 3

Other Modes of Transportation: Other modes of transportation, such as bus service, were considered along Quail Roost Drive but were determined to be not viable, prudent, or feasible as stand-alone improvements. The build alternatives proposed along Quail Roost Drive would improve pedestrian and cyclist infrastructure providing significant opportunities to increase usage by these other non-motorized modes. The build alternatives proposed along Quail Roost Drive would improve conditions for local bus service due to the enhanced pedestrian-cyclist infrastructure as well as roadside space that could accommodate bus shelters for transit users. However, no bus service is being proposed by the Miami-Dade Department of Transportation and Public Works (DTPW) in the near future along this roadway segment due to a lack of demand. Even if bus service were to be provided, the anticipated number of transit users would not serve to improve traffic operations along the study corridor with or without roadway widening along Quail Roost Drive. Also, new bus service alone would not serve to improve safety deficiencies and could actually make safety conditions worse without substantial improvements to pedestrian and cyclist infrastructure necessary to support transit usage.

9.4 Avoidance Conclusion

Based on the assessment detailed above, there appears to be no prudent and feasible alternative that avoids the use of a Section 4(f) resource while meeting the Purpose and Need of the project. Since avoidance of adverse effects to historic properties is not possible, FDOT has consulted with the SHPO, locally affected, and interested parties, and the public to develop mitigation measures that resolve the adverse effect. Coordination with these parties will continue throughout the development of the project.

10.0 MEASURES TO MINIMIZE HARM

After determining that there does not appear to be a feasible and prudent alternative to avoid the use of a Section 4(f) property, consideration of all possible planning to minimize harm to Section 4(f) properties is required. Minimization of harm may entail both alternative design modifications that reduce the amount of the Section 4(f) property used and mitigation measures that compensate for residual impacts. As such, the following design modifications and possible mitigation strategies were developed.

10.1 MacDonell Residence (FMSF No. 8DA20712) and 20000 SW 137th Avenue (FMSF No. 8DA20713)

Each of the build alternatives will require the use of three Section 4(f) properties. The two alternatives require encroachment into the MacDonell Residence (FMSF No. 8DA20712) and the residence at 20000 SW 137th Avenue (FMSF No. 8DA20713) given that these properties are

located on opposite sides of Quail Roost Dr., to the west of SW 137th Ave. A realignment of the road to minimize the impact to one parcel would generate additional impacts to the other. As a result, an option to minimize harm entails a reduction of the roadway footprint in front of both parcels.

During the Traffic Analysis, the PD&E team considered a recent system linkage/capacity improvement project led by Miami-Dade County that was under construction. The project extended along SW 137 Avenue to the south, connecting to US-1. Traffic patterns as a result of the adjacent project were estimated based on available data. However, once the new SW 137th Avenue connection was opened to traffic, the team collected additional traffic data to assess the capacity needs of the intersections of Quail Roost Drive and SW 137 Ave and Quail Roost Drive and SW 134 Ave using actual traffic patterns. The newly acquired data resulted in modifications to the previously proposed alternatives to reduce the number of turn lanes at the intersection of SW 137 Ave. On the west leg of the intersection, the lane configuration was modified from two left turn lanes to one left turn lane, resulting in a reduction of the roadway footprint of 12-ft. Additionally, the design was modified from an open (flush) shoulder to a closed (curb and gutter) drainage system in front of the two parcels, which reduced the footprint by an additional 8-ft. The design modifications resulted in a reduction of impacts of 4-ft at the MacDonell Residence parcel and 16-ft at the 20000 SW 137th Avenue parcel. On the north leg of the intersection, the lane configuration was modified from one exclusive right turn lane to a shared lane for right and through movements in the southbound direction, resulting in a reduction of the roadway footprint of 11-ft, which translated into a reduction of impacts to the MacDonell Residence. Overall impact reduction for both the MacDonell Residence and the property located at 20000 SW 137 Avenue are summarized in **Figure 10-1** and **Table 10-1** for Build Alternative 2 and in **Figure 10-2** and **Table 10-2** for Build Alternative 3.

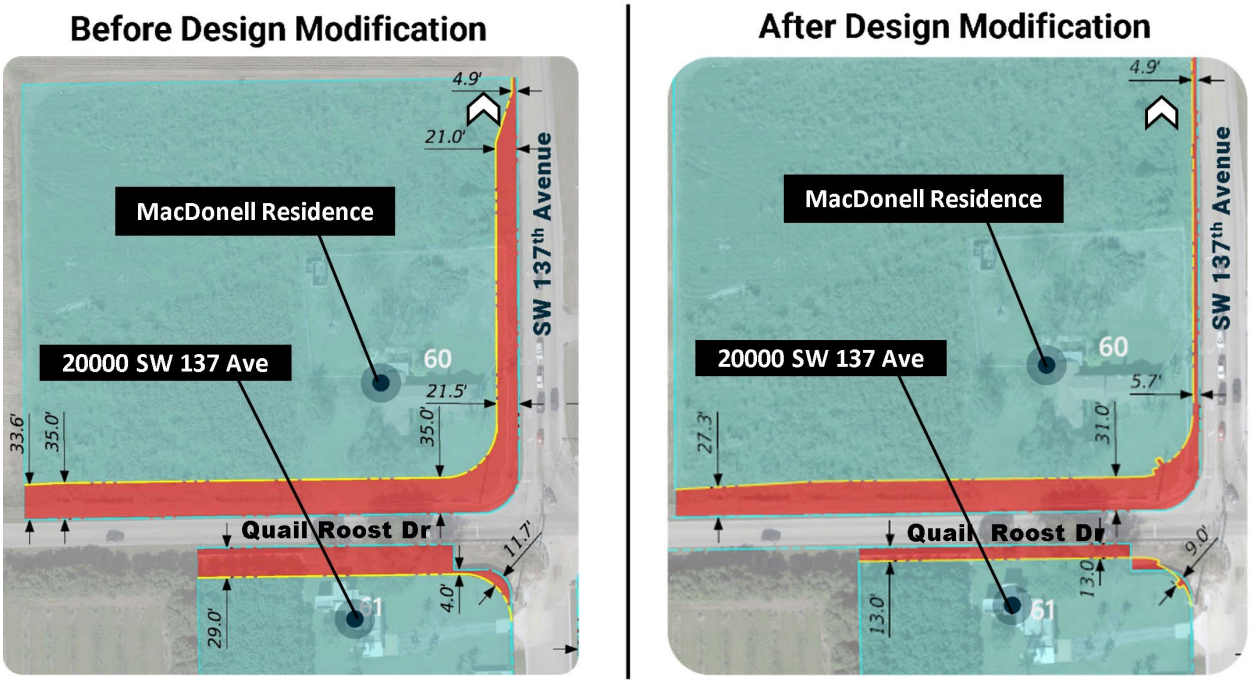

Figure 10-1 Build Alternative 2 Impact Minimization at SW 137th Avenue Intersection

Table 10-1 Build Alternative 2 Impacts Reduction - MacDonell Residence and 20000 SW 137 Ave

Section 4(f) Property	Impact Area Before Design Modification	Impact Area After Design Modification	Impact Area Reduction
MacDonell Residence	24,742 SF / 0.568 AC	17,165 SF / 0.394 AC	7,577 SF / 0.174 AC
20000 SW 137 Ave	7,811 SF / 0.179 AC	3,375 SF / 0.077 AC	4,436 SF / 0.102 AC

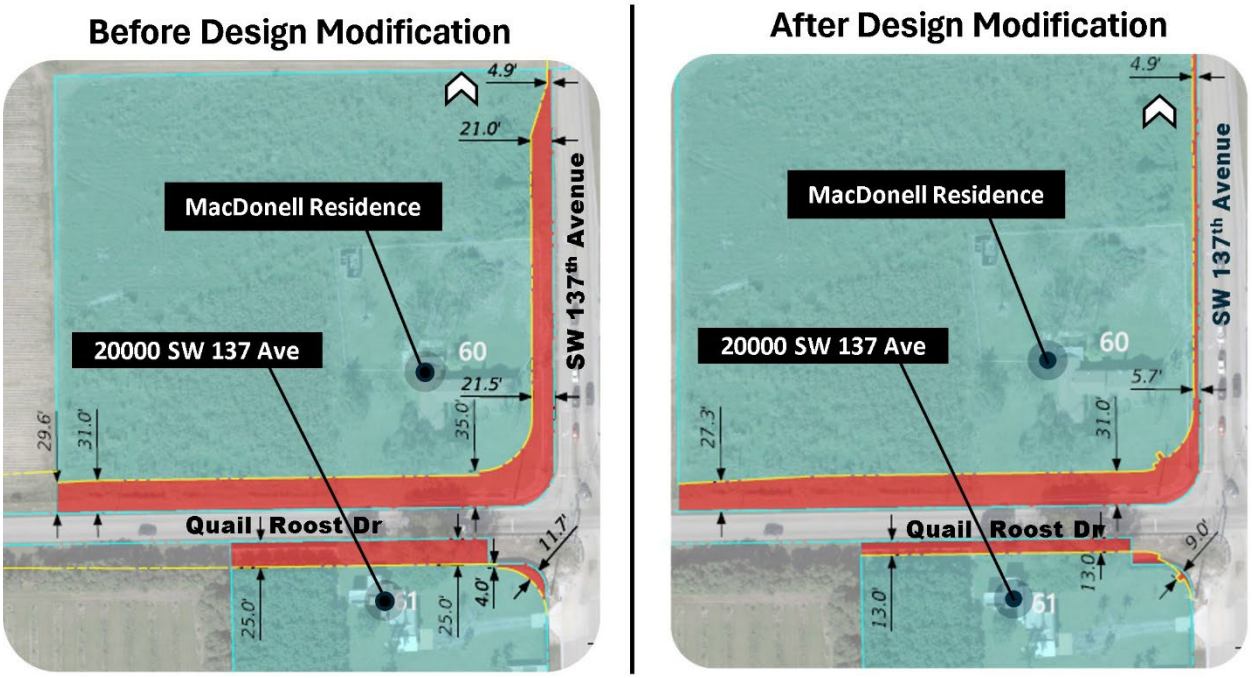

Figure 10-2 Build Alternative 3 Impact Minimization at SW 137th Avenue Intersection

Table 10-2 Build Alternative 3 Impacts Reduction - MacDonell Residence and 20000 SW 137 Ave

Section 4(f) Property	Impact Area Before Design Modification	Impact Area After Design Modification	Impact Area Reduction
MacDonell Residence	23,103 SF / 0.530 AC	17,165 SF / 0.394 AC	5,938 SF / 0.136 AC
20000 SW 137 Ave	6,778 SF / 0.156 AC	3,375 SF/ 0.077 AC	3,403 SF / 0.078 AC

10.2 Talbott Estate (FMSF No. 8DA2789)

Similar to the other two parcels, any minimization of harm to Talbott Estate has to be achieved by reducing the roadway footprint. Shifts on the alignment to minimize impacts to the parcel would result in significant additional impacts to parcels along the north side of the road, as described in Section 9.1. As such, based on traffic refinements using the most recent traffic data collected after the extension of SW 137 Avenue, the east leg of the intersection was modified from having an exclusive right-turn lane to a shared right-through lane in the westbound direction. Additionally, it was proposed that a design variation be implemented to reduce the footprint of one of the proposed Sidewalk Level Separated Bicycle Lanes (SLSBL) on the south side from 16.5 ft to 10 ft. The design modification consisted of omitting a 4.5-ft buffer in front of the bicycle lane and a

2-ft buffer between the bicycle lane and the sidewalk in the area adjacent to Talbott Estate. This change required a Design Variation for SLSBL criteria per FDM 223.2.4.2, but the impacts to bicycles and pedestrians are expected to be minimal since the width reduction only occurs for a small segment and only on one side of the road. The roadway was slightly realigned to the north to further reduce the impacts on Talbott Estate by a total of 6.7 ft. Modifications to other roadway features, such as reducing lane widths and removing the traffic separator, were not considered due to safety concerns, specifically at this intersection, which is a high crash location. The overall impact reduction for Talbott Estate is summarized in **Figure 10-3** and **Table 10-3** for Build Alternative 2 and in **Figure 10-4** and **Table 10-4** for Build Alternative 3.

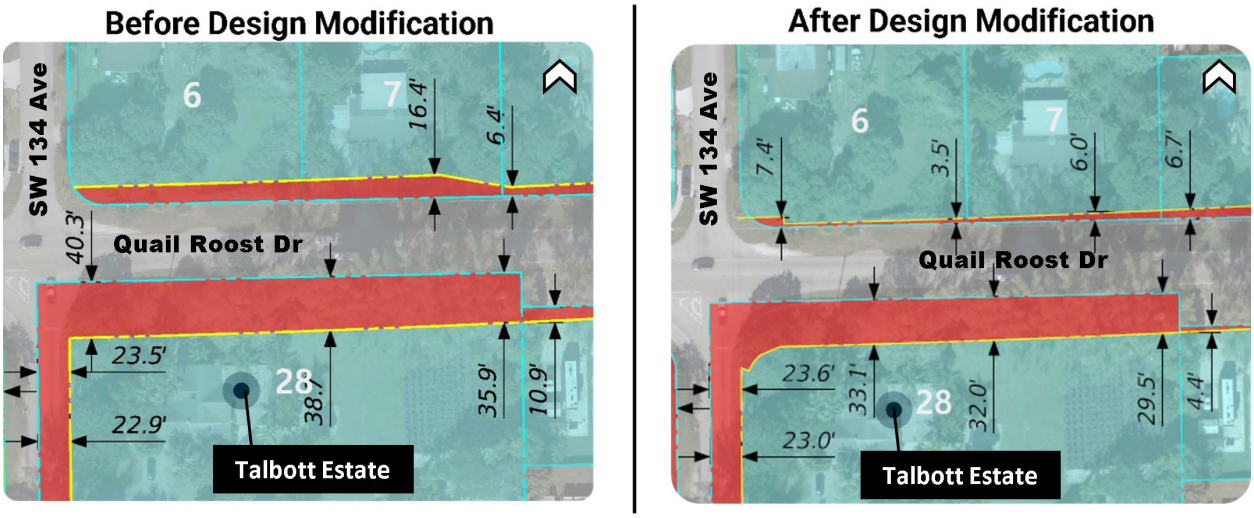

Figure 10-3 Build Alternative 2 Impact Minimization at SW 134th Avenue Intersection

Table 10-3 Build Alternative 2 Impact Reduction - Talbott Estate

Section 4(f) Property	Impact Area Before Design Modification	Impact Area After Design Modification	Impact Area Reduction
Talbott Estate	28,935 SF / 0.664 AC	23,359 SF / 0.536 AC	5,576 SF / 0.128 AC

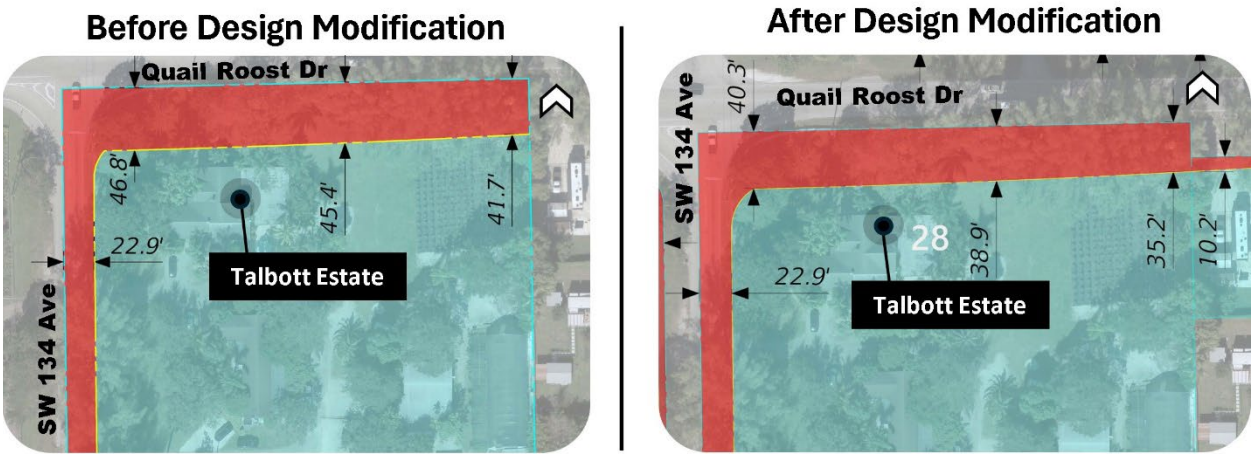

Figure 10-4 Build Alternative 3 Impact Minimization at SW 134th Avenue Intersection

Table 10-4 Build Alternative 3 Impact Reduction - Talbott Estate

Section 4(f) Property	Impact Area Before Design Modification	Impact Area After Design Modification	Impact Area Reduction
Talbott Estate	31,186 SF / 0.716 AC	29,136 SF / 0.669 AC	2,050 SF / 0.047 AC

A summary of the Section 4(f) Use after implementation of impact minimization strategies for both alternatives is presented in **Table 10-5** below.

Table 10-5 Summary of Section 4(f) Use After Impact Minimization

Historic Resources	Build Alternative 2 (4-Lane with 16.5-ft median)	Build Alternative 3 (4-Lane with 22-ft median)

Talbott Estate (8DA2789)	• Parcel Area = 289,238.4 SF / 6.640 AC
	• Parcel Impact Area = 23,359 SF/ 0.536 AC
	• %Parcel Impact = 8.08%
	• Impact Area Reduction = 5,576SF / 0.128 AC
	• Distance from resource to Proposed ROW
	  ○ 28' on north side of parcel
	  ○ 58' on west side of parcel
	• ROW Cost = $244,102
		• Parcel Area = 289,238.4 SF / 6.640 AC
		• Parcel Impact Area = 29,136 SF / 0.669 AC
		• %Parcel Impact = 10.07%
		• Impact Area Reduction = 2,050 SF / 0.047 AC
		• Distance from resource to Proposed ROW
		  ○ 20' on north side of parcel
		  ○ 57' on west side of parcel
		• ROW Cost = $304,476

MacDonell House (8DA20712)	• Parcel Area = 218,104.92 SF / 5.007 AC
	• Parcel Impact Area = 17,165 SF / 0.394 AC
	• %Parcel Impact = 7.87%
	• Impact Area Reduction = 7,577 SF / 0.174 AC
	• Distance from resource to Proposed ROW
	  ○ 46.3' on south side of parcel
	  ○ 30.8' on east side of parcel
	• ROW Cost = $179,374
		• Parcel Area = 218,104.92 SF / 5.007 AC
		• Parcel Impact Area = 17,165 SF / 0.394 AC
		• %Parcel Impact = 7.87%
		• Impact Area Reduction = 5,938 SF / 0.136 AC
		• Distance from resource to Proposed ROW
		  ○ 46.3' on south side of parcel
		  ○ 30.8' on east side of parcel
		• ROW Cost = $179,374

20000 SW 137 Ave (8DA20713)	• Parcel Area = 136,604.16 SF / 3.136 AC
	• Parcel Impact Area = 3,375 SF / 0.077 AC
	• %Parcel Impact = 2.47%
	• Impact Area Reduction = 4,436 SF / 0.102 AC
	• Distance from resource to Proposed ROW
	  ○ 20.4' on north side of parcel
	• ROW Cost = $35,269
		• Parcel Area = 136,604.16 SF / 3.136 AC
		• Parcel Impact Area = 3,375 SF/ 0.077 AC
		• %Parcel Impact = 2.47%
		• Impact Area Reduction = 3,403 SF / 0.078 AC
		• Distance from resource to Proposed ROW
		  ○ 20.4' on north side of parcel
		• ROW Cost = $35,269

Total Impact Area	43,899 SF / 1.008 AC	49,676 SF / 1.140 AC
Total ROW Cost	$458,744	$519,119

11.0 LEAST OVERALL HARM ANALYSIS

The analysis in Section 9.0 supports the conclusion that there is no feasible and prudent avoidance alternative. To determine which of the alternatives described in Section 7.0 would cause the least overall harm, seven factors need to be compared as set forth in 23 CFR 774.3©(1) concerning the alternatives under consideration.

The least overall harm is determined by balancing the following factors:

1. The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);
2. The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;
3. The relative significance of each Section 4(f) property;
4. The views of the official(s) with jurisdiction over each Section 4(f) property;
5. The degree to which each alternative meets the Purpose and Need of the project;
6. After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and
7. Substantial differences in costs among the alternatives.

Because it does not appear that a feasible and prudent avoidance alternative exists, the alternative that causes the least overall harm in light of the Section 4(f) preservationist purpose must be selected. Only two alternatives (Build Alternative 2 and Build Alternative 3) that use Section 4(f) resources remain under consideration.

11.1 Net Harm

For historic sites, measures to minimize harm normally serve to preserve the historic activities, features, or attributes of the site as agreed to within the Section 106 consultation process.

The following sections describe the net harm that Build Alternatives 2 and 3 would cause to the Section 4(f) resources as well as the measures to mitigate the adverse effects. Build Alternative 3 results in greater impacts than Build Alternative 2 in terms of right of way, relocation potential, adverse effects to historic resources and noise.

11.1.1 Ability to mitigate adverse impacts

Through extensive coordination and consultation, mitigation measures were developed through a series of Affected Parties Consultation meetings. Measures to mitigate the adverse effects on the three National Register-eligible historic properties were then memorialized within a Draft Memorandum of Agreement (MOA) to be signed by the FDOT District 6, FDOT Office of Environmental Management (OEM), and SHPO. The measures included within the MOA

(**Attachment D**) will also be identified as commitments in the Environmental Document and FDOT will ensure they are completed before construction. These measures include the following.

- Historic American Buildings Survey (HABS) documentation for the Talbott Estate (8DA2789), MacDonell Residence (8DA20712), and the building at 20000 SW 137th Avenue (8DA20713).
- Development and funding of one State Historic Marker (Marker).
- Preparation of a historic context addressing the use of oolitic limestone as a character-defining historic building material in Miami-Dade County in the early years of South Florida development.

Other mitigation measures that were discussed in the course of the coordination with FDOT, SHPO, and historic property owners included relocating the historic walls and/or compensating the owners for the impacts to the historic walls and landscaping. These measures, if considered, would be implemented as part of the regular right-of-way acquisition process and not under the Section 106 process; therefore, the measures were not included in the MOA.

11.1.2 Severity of remaining harm after mitigation

The adverse effects to the three National Register-eligible historic properties are related to the roadway moving closer to each property requiring the acquisition of property, altering their setting, and the removal of contributing historic features, such as oolitic limestone walls. Based on the mitigation stipulated in the MOA, the severity of harm to the historic properties will not change.

11.1.3 Significance of Section 4(f) properties

The Talbott Estate was determined National Register–eligible under Criterion C in the area of Architecture. The Bungalow-influenced design of the Masonry Vernacular Talbott Estate is significant for its heavy use of oolitic limestone throughout the entire first floor, as well as the exterior wall along the northern and western sides of the property. Its surrounding oolitic limestone wall marked the boundaries of the estate, and its matching material to the house complemented the overall design. The resource is also eligible under Criterion B in the area of Community Planning and Development for its association with Isaac Fenton Talbott.

The MacDonell Residence, including the house itself and the surrounding perimeter wall, was determined National Register–eligible under Criterion C in the area of Architecture. The MacDonell Residence, as the most significant surviving resource associated with Robert MacDonell, is also eligible under Criterion B in the area of Agriculture, as he was a locally significant citrus farmer and business owner.

The building at 20000 SW 137th Avenue, including the main house itself, its surviving outbuildings, and the remnants of the surrounding perimeter wall, were determined eligible for the National Register–eligible under Criterion C in the area of Architecture. The building at 20000 SW 137th Avenue is significant for its extensive use of oolitic limestone material for the main house and two outbuildings on the parcel, as well as the remaining segments of the perimeter wall.

11.1.4 Views of Officials with Jurisdiction

All mitigation measures require appropriate documentation and coordination between OEM, the state transportation agency, the project sponsor (if applicable), and the official(s) with jurisdiction, including the State Historic Preservation Officer (SHPO), or Department of Interior (DOI) representative in certain situations, when historic sites are involved.

The SHPO serves as the OWJ, and the agency was involved throughout the coordination and consultation process. On January 30, 2023, the SHPO concurred with the findings of the CRAS report finding the three historic properties eligible for inclusion in the National Register. The SHPO also concurred with the findings of the Section 106 Determination of Effects Case Study Report on July 28, 2023, in which the Transportation System Management & Operations (TSM&O) Alternative and Build Alternatives 1, 2, and 3 will have an adverse effect on the Talbott Estate (8DA2789), the MacDonell Residence (8DA20712), and 20000 SW 137th Avenue (8DA20713). This adverse effect finding is primarily due to the roadway widening that will require the acquisition of property from each historic property, will require the removal or relocation of contributing elements of the properties, will bring the ROW and improvements closer to each historic building, and will notably compromise the setting of each historic resource.

Affected Parties Consultation meetings were held and SHPO was a participant at each meeting, where the adverse effects to the three significant historic properties were discussed. The MOA was developed in consultation with the SHPO and is currently under review by the SHPO.

11.1.5 Purpose and Need

Table 11-1 qualitatively addresses the extent to which the alternatives meet the individual components of the project's Purpose and Need. Each alternative was assigned a score from 1 to 3 representing the degree to which they meet the Purpose and Need. 1 represents the lowest degree, while 3 represents the highest.

In terms of capacity/demand, Build Alternatives 2 and 3 have similar scores because they both provide the same number of lanes (two lanes in each direction). In terms of safety, Build Alternative 3 scores higher than Build Alternative 2 due to the wider median that provides a larger refuge area for two-step left-turn movements from the side streets, and due to additional access

management restrictions (fewer median openings). Both alternatives provide sidewalk level SBLs and are therefore comparable in terms of multimodal improvements. The crossing distance for Build Alternative 3 is slightly longer than Build Alternative 2 (due to the wider median), but it doesn't justify a difference in score.

Table 11-1 Degree to Which Alternatives Meet Project Purpose and Need

Alternatives	Capacity/ Demand	Safety	Multimodal Improvements
Build Alternative 2	3	2	3
Build Alternative 3	3	3	3

11.1.6 Magnitude of impacts to other resources

Table 11-2 addresses the magnitude of impacts on the social, cultural, natural, and physical environmental parameters. These determinations are based on the issues identified previously in the Section 4(f) Alternatives Evaluation presented in Section 7.0. As the project's impacts to the natural and physical environment are very minor, the least overall harm analysis of the project centers primarily upon balancing the harm and benefits to the human environment while still addressing the transportation needs identified for the proposed action.

Table 11-2 Magnitude of Impacts to Other Resources

Evaluation Criteria	Build Alternative 2 (4-Lane with 16.5-ft median)	Build Alternative 3 (4-Lane with 22-ft median)
Right of Way Parcel Impacts	Potential impacts to 60 parcels (9 commercial, 12 agricultural, 39 residential)	Potential impacts to 66 parcels (9 commercial, 12 agricultural, 45 residential)
Socio-Cultural Effects/ Relocation Potential	6 potential relocations (6 personal property)	8 potential relocations (1 residential + 7 personal property)
Right of Way Total Impact Area	233,475 SF / 5.36 AC (Total Impact Area)	278,278 / 6.39 AC (Total Impact Area)

Evaluation Criteria	Build Alternative 2 (4-Lane with 16.5-ft median)	Build Alternative 3 (4-Lane with 22-ft median)
Wetlands	Same for both alternatives. Surface water impacts are 0.13 acres and are limited to the bridge reconstruction.	Same for both alternatives. Surface water impacts are 0.13 acres and are limited to the bridge reconstruction.
Wildlife and Habitat	Same for both alternatives. Five (5) federally listed and three (3) state listed species were evaluated in the study area. The project would have *no effect* to the Florida bonneted bat, American crocodile and the wood stork. The project *may affect, not likely to adversely affect* the West Indian manatee and the Eastern indigo snake. *No effect anticipated* for all three (3) state listed species.	Same for both alternatives. Five (5) federally listed and three (3) state listed species were evaluated in the study area. The project would have *no effect* to the Florida bonneted bat, American crocodile and the wood stork. The project *may affect, not likely to adversely affect* the West Indian manatee and the Eastern indigo snake. *No effect anticipated* for all three (3) state listed species.
Noise	As the traffic speed improves to a free flow condition there will be an increase in sound levels. In addition, the new lane in each direction will move the noise source (roadway traffic volume) 11 ft closer to the residences, when compared to the Build Alternative 1. This may result in an increase in sound levels.	Same condition as Build Alternative 2, except the outside lane is shifted 5 ft closer to the residences than Alternative 2.
Air Quality	Same for both alternatives. Project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion	Same for both alternatives. Project is located within an attainment area. No significant air quality impacts are anticipated. Project is anticipated to decrease congestion
Contamination	Same for both alternatives. One High Risk Site One Medium Risk Site	Same for both alternatives. One High Risk Site One Medium Risk Site
Overall Impact	**Low to Moderate**	**Moderate**

Green – Low Impact Yellow – Moderate Impact Pink – High Impact

11.1.7 Cost differences

Analyzing the cost differences of Build Alternative 2 and Build Alternative 3, the cost does not vary substantially, therefore cost is not a determining factor in the least overall harm analysis. **Table 11-3** shown below compares both alternatives in terms of cost.

Table 11-3 Alternative Cost Comparison

Cost Factor	Build Alternative 2	Build Alternative 3
Construction cost	$ 29.47 M	$ 31.73 M
ROW Costs	$ 5.36 M	$ 7.00 M
Design (10% of construction cost)	$ 2.95 M	$ 3.17 M
Construction Engineering & Inspection (10% of construction cost)	$ 2.95 M	$ 3.17 M
Total	$ 40.73 M	$ 45.07 M

11.2 Least Overall Harm Finding

Out of the alternatives that meet the Purpose and Need of the project, Build Alternative 2 is found to cause the least overall harm to Section 4(f) resources.

12.0 COORDINATION

Throughout the project development, extensive coordination has taken place with SHPO, FDOT District 6, FDOT OEM, the Dade Heritage Trust, affected parties, and local residents.

To address the overall Section 106 and 4(f) processes and potential adverse effects to the significant properties, Affected Parties Consultation meetings were held on the following dates:

- October 12, 2022
- May 15, 2023
- September 11, 2023
- September 12, 2023

Participants in the consultation process included the property owners of the three significant properties, SHPO, FDOT District 6, FDOT OEM, and the Dade Heritage Trust. Throughout the coordination, discussions focused on the effects and developing mitigation through consultation with all parties, in particular, the immediately affected property owners. Measures to mitigate the adverse effects to the three National Register-eligible historic properties were documented in a draft MOA to be signed by the FDOT District 6, FDOT OEM, and SHPO, and described in Section 11.1.1 of this document. Minutes for these meetings that include public comments on the affected resources and responses are included in **Attachment E**. The DOI and SHPO will review the Draft Individual Section 4(f) Evaluation, including the Draft MOA, prior to the Public Hearing.

Other public meetings held during the development of the study include the following:

- Elected Official/Agency Meeting – January 27, 2022
- Public Kick-off Meeting – January 27, 2022
- Alternatives Public Workshop – October 18, 2022
- Public Hearing – tentatively scheduled for August 2024

13.0 CONCLUSION

Upon final alternative selection the provision of Section 4(f) and 36 CFR Part 800 will be fully satisfied.