

ADMINISTRATIVE ACTION
TYPE 2 CATEGORICAL EXCLUSION

Florida Department of Transportation

SR 524 FROM FRIDAY ROAD TO INDUSTRY ROAD

District: FDOT District 5

County: Brevard County

ETDM Number: 14321

Financial Management Number: 437983-1-21-01

Federal-Aid Project Number: D518-034-B

Project Manager: Maria Serrano-Acosta

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 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.

This action has been determined to be a Categorical Exclusion, which meets the definition contained in 23 CFR 771.115(b), and based on past experience with similar actions and supported by this analysis, does not involve significant environmental impacts.

Signature below constitutes Location and Design Concept Acceptance:

Director Office of Environmental Management
Florida Department of Transportation

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This document was prepared in accordance with the FDOT PD&E Manual.

This project has been developed without regard to race, color or national origin, age, sex, religion, disability or family status (Title VI of the Civil Rights Act of 1964, as amended).

On 06/20/2019 the State of Florida determined that this project is consistent with the Florida Coastal Zone Management Program.

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1. Project Information

1.1 Project Description

This project involves the two-lane to four-lane widening of the approximately 3.15 mile segment of State Road (SR) 524 from Friday Road (South) to Industry Road in Brevard County, in addition to the modifications of the existing interchange at I-95 and SR 524 (see location map in **Figure 1-1**).

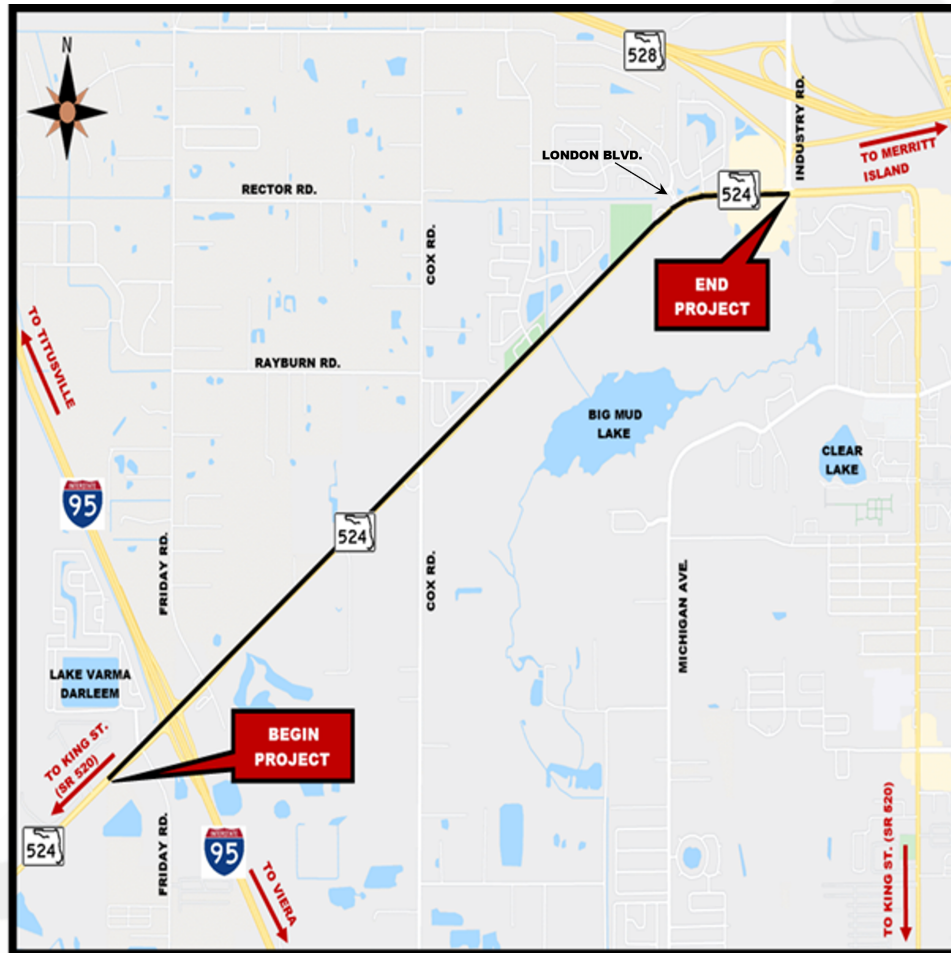


Figure 1-1: Project Location Map

Existing Conditions

Within the project limits, SR 524 exists as a two-lane urban minor arterial comprised of one 12-foot lane in each direction with 10-foot shoulders (4-foot paved). Intermittent sidewalks are located along the north side of SR 524 between Cox Road and Industry Road and along the south side from the Cirrus Drive intersection to Industry Road, while the existing paved shoulders serve as undesignated bike lanes. Stormwater flows off the roadway into roadside ditches.

The existing roadway corridor is offset from the center of a typical 200-foot right-of-way (ROW). The ROW varies through the horizontal curve located near the London Boulevard intersection and widens to 230 foot to the intersection at Industry Road. The SR 524 corridor contains an interchange with I-95 between Friday Road (South) and Friday Road (North) and eight signalized intersections.

Preferred Alternative

The Preferred Alternative includes widening SR 524 to a four-lane divided urban arterial generally with a 22-foot wide median. The lane width will include a combination of 11 and 12-foot wide lanes throughout the corridor. Curb and gutter with a 14-ft wide shared use path will be included on both sides of the roadway. Intersection improvements include converting the existing Interstate 95 (I-95) interchange to a Diverging Diamond Interchange (DDI) type, roundabouts at Cox Road and London Boulevard and signalized intersections at Friday Road (South), Friday Road (North), Walmart Distribution, Cirrus Drive, and Industry Road. The proposed DDI at the I-95 interchange will require replacement of the I-95 bridges over SR 524. Three noise barriers are proposed to mitigate noise impacts along the corridor. The proposed improvements include construction of two new off-site ponds and two ponds within FDOT ROW.

The project corridor was separated into four segments as depicted in **Figure 1-2**.

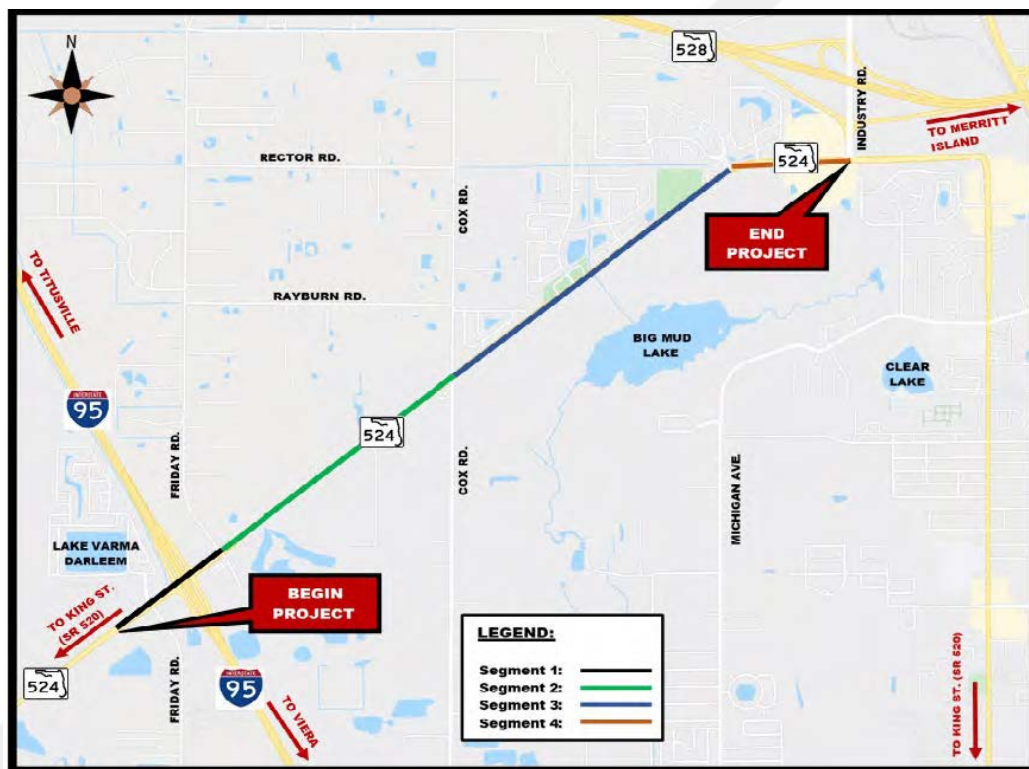


Figure 1-2: Project Segment Map

The segments are labeled numerically from west to east, separated by intersections. Segment 1 starts at the beginning of the project at the Friday Road (South) intersection and goes through the I-95 interchange, ending at the Friday Road (North) intersection. Segment 2 starts at the Friday Road (North) intersection and ends at the Cox Road intersection. Segment 3 starts at the Cox Road intersection and ends at the London Boulevard intersection. Segment 4 starts at the London Boulevard intersection and ends at the end of the project, Industry Road.

The preferred alternative for each corridor segment is identified below based on engineering and environmental factors and public and agency input.

Segment 1

Segment 1 will be a four-lane divided section that runs between Friday Road (South) and Friday Road (North) with a DDI at I-95. The typical section outside the DDI has 12-foot travel lanes, Type F outside curb and gutter, Type E inside curb and gutter, 14-foot shared-use paths on either side of the corridor, and a varying median (22 - 80 feet). The travel lanes widen to 14-foot within the DDI limits and include an additional 14-foot left-turn lane. The I-95 overhead bridge will be replaced. This typical section is shown in **Figure 1-3**.

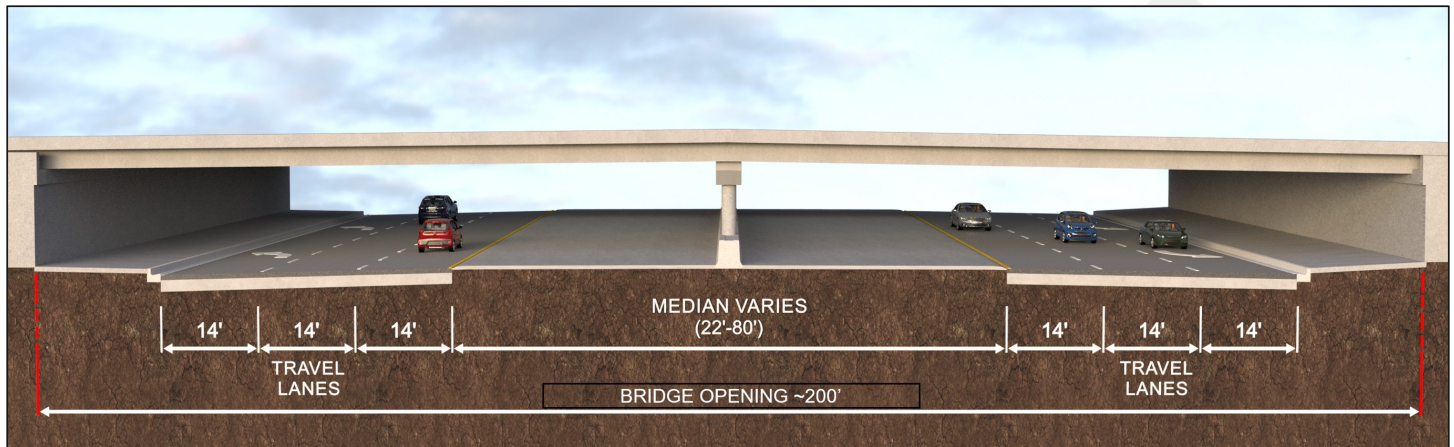


Figure 1-3: Preferred Alternative Typical Section Segment 1

Segment 2

Segment 2 will be a four-lane divided section that runs from Friday Road (North) to Cox Road. This section has Type F outside curb and gutter, 12-foot outside lanes, 11-foot inside lanes, Type E inside curb and gutter, and a 22-foot median. Each side of the corridor has 14-foot shared-use paths 2-foot from the existing ROW. Drainage swales with 1:4 front and back slopes will be placed between the shared-use path and the outside curb and gutter. This typical section is shown in **Figure 1-4**.

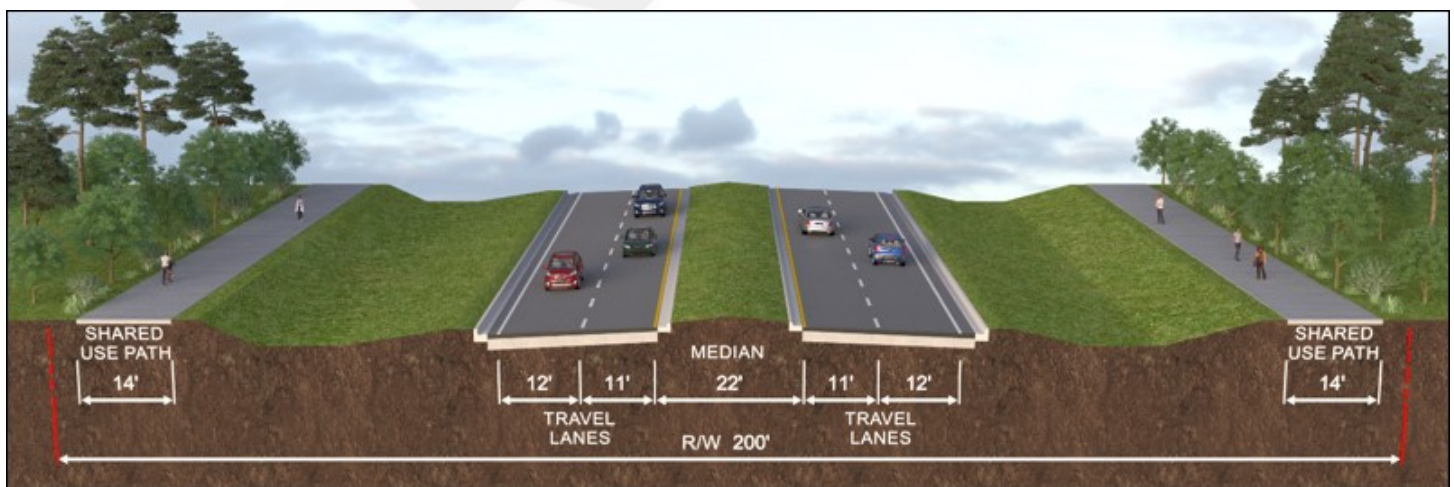


Figure 1-4: Preferred Alternative Typical Section Segment 2

Segment 3

Segment 3 will be a four-lane divided section that runs from Cox Road to London Boulevard. This section has Type F outside curb and gutter, 11-foot travel lanes, Type E inside curb and gutter, and a varying median (22 - 60 feet). Each side

of the corridor has 14-foot shared-use paths 2-foot from the existing ROW. Drainage swales with 1:4 front and back slopes will be placed between the shared-use path and the outside curb and gutter. This typical section is shown in **Figure 1-5**.

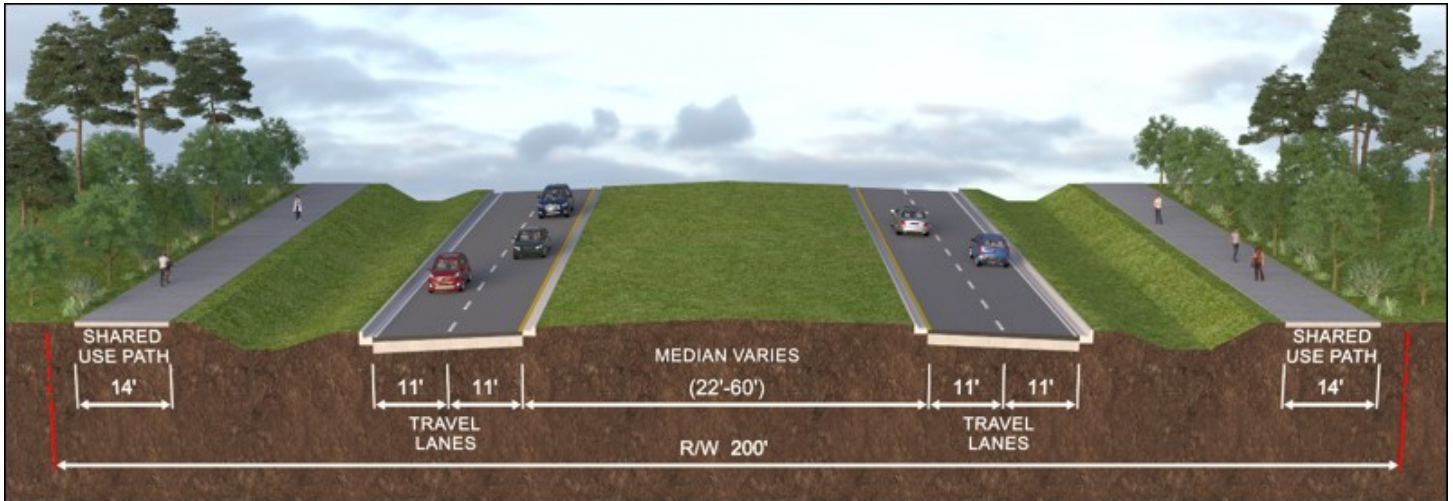


Figure 1-5: Preferred Alternative Typical Section Segment 3

Segment 4

Segment 4 will be a four-lane divided section that runs from London Boulevard to Industry Blvd. This section with Type F outside curb and gutter, 11-foot travel lanes, Type E inside curb and gutter, and a 22-foot median. Each side of the corridor has 14-foot shared-use paths. The existing ROW widens on the north side, but the horizontal alignment will be at the same offset from the centerline as in segments 2 and 3 (50-foot). Drainage swales with 1:4 front and back slopes will be placed between the shared-use path and the outside curb and gutter except where the shared-use path comes in closer to the road at a cross drain at station 527+00 and to tie back into the existing curb ramp configuration at Industry Road. This typical section is shown in **Figure 1-6**.

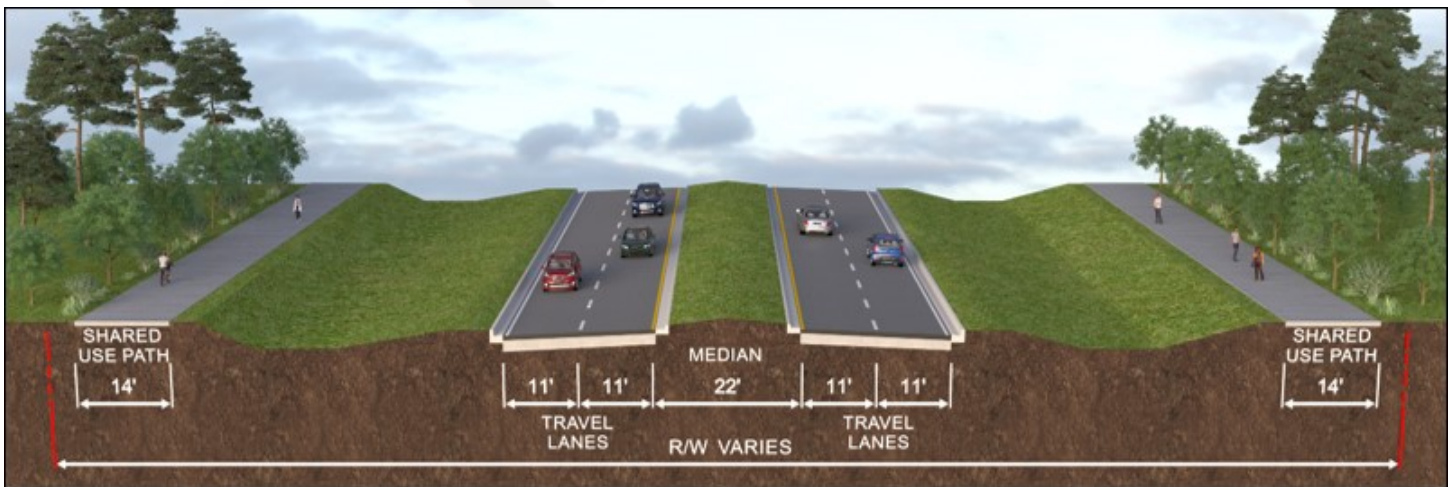


Figure 1-6: Preferred Alternative Typical Section Segment 4

Recommended intersection improvements include a DDI at I-95 (**Figure 1-7**), roundabouts at Cox Road (**Figure 1-8**) and London Boulevard (**Figure 1-9**), and the signalized intersection will continue to be signalized at Friday Road (South),

Friday Road (North), Walmart Distribution, Cirrus Drive, and Industry Road.

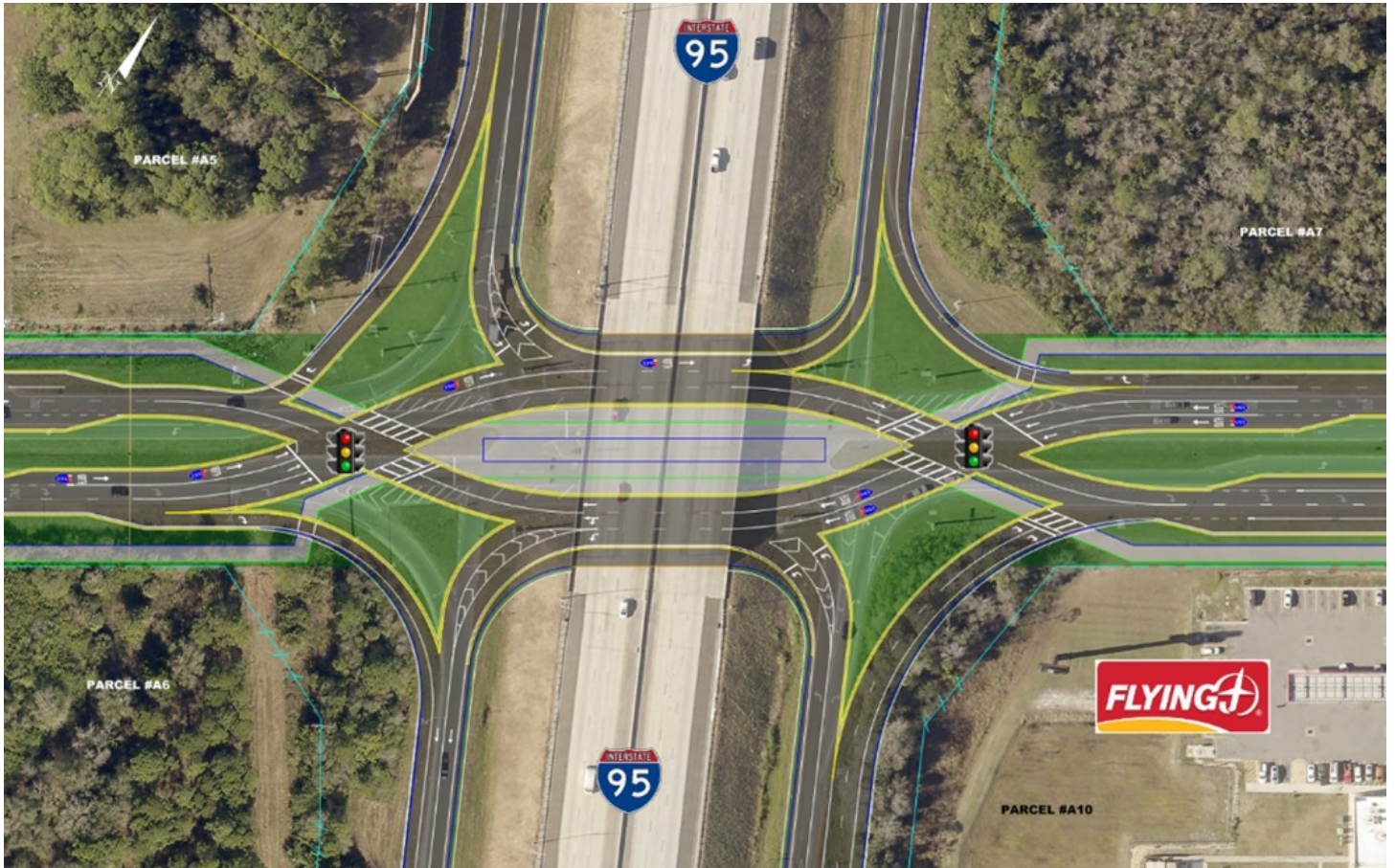


Figure 1-7: Preferred Alternative I-95 Diverging Diamond Interchange



Figure 1-8: Preferred Alternative Roundabout at Cox Road

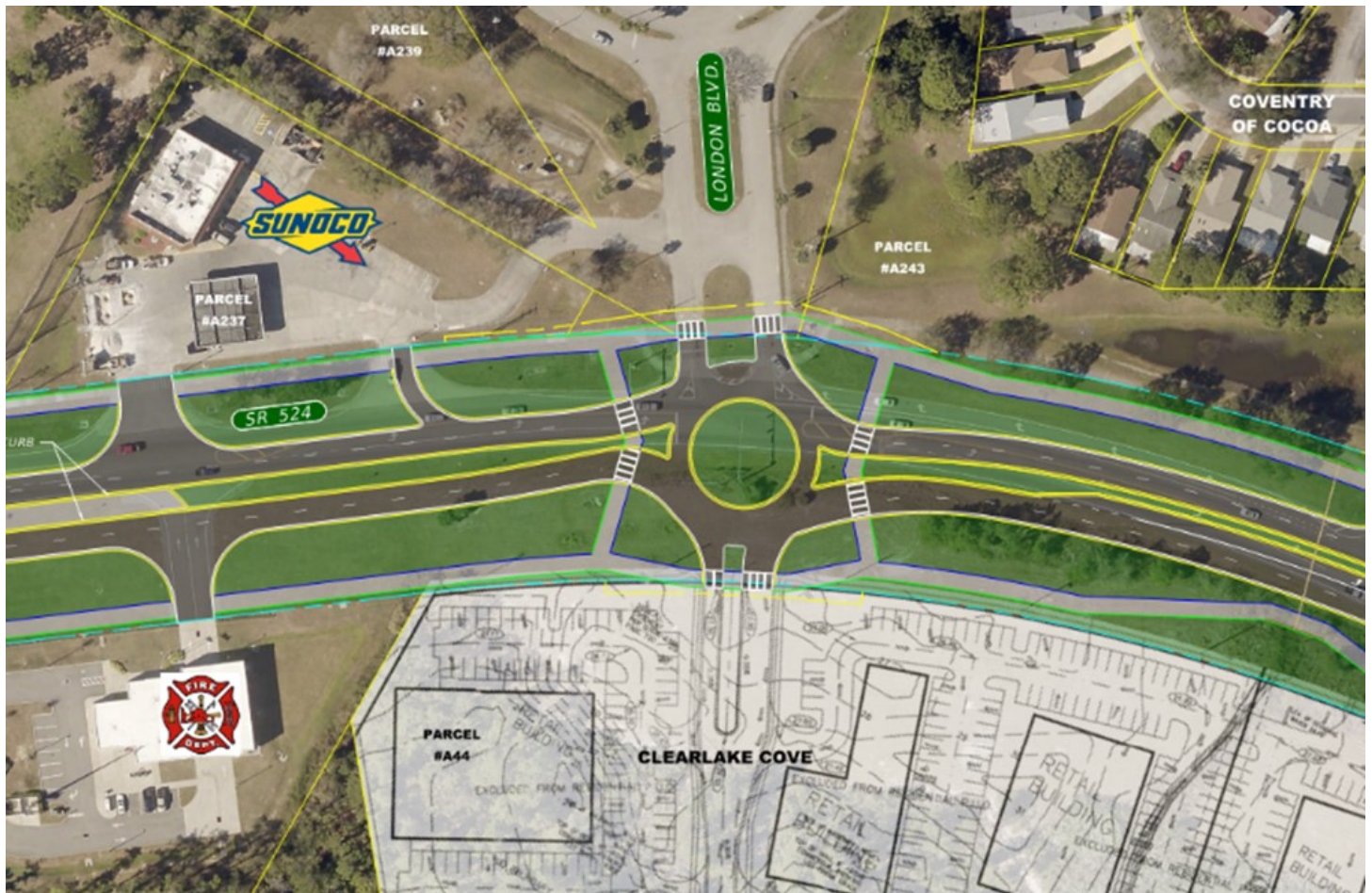


Figure 1-9: Preferred Alternative Roundabout at London Boulevard

The Preferred Alternative also includes four proposed stormwater pond sites 1A, 2F, 3A and 3B. Sites 1A and 2F will require the acquisition of additional right of way, while sites 3A and 3B are within FDOT ROW. Full or partial ROW acquisition of 13 parcels (approximately 8.2 acres) are anticipated for the roadway widening, roundabouts and the pond sites.

The Preferred Alternative meets the purpose and need of the project by providing additional capacity through the expansion to a four-lane section. Operational improvements at the intersections will reduce congestion and provide less delay than the No-Build Alternative. The introduction of a divided median with directional and full openings, conversion of the I-95 interchange to a DDI, and roundabouts at two intersections will reduce vehicle conflicts throughout the project limits and at the intersection locations and hence improve safety along the corridor. The addition of 14-foot wide shared-use paths on both sides of the widened roadway will provide continuous and safer mobility for pedestrians and bicyclists.

The overall cost of the build alternative with design, ROW acquisition, construction engineering & inspection, utilities relocation and construction is approximately \$179.1 million. The conceptual plans for the preferred alternative are shown in Appendix C of the Preliminary Engineering Report (PER-June 2025) which is available in the project file.

1.2 Purpose and Need

Purpose

The purpose of this project is to accommodate year 2045 future travel demand, improve traffic flow and improve safety for vehicles, bicycles and pedestrians.

Need

The need for the project is based on transportation demand/capacity and safety.

Project Status

The project lies within the jurisdictions of the Space Coast Transportation Planning Organization (SCTPO), Brevard County, and the city of Cocoa. The SCTPO governing board adopted the 2045 Long Range Transportation Plan (LRTP) on September 20, 2020. An amendment was adopted on December 15, 2023 which added all phases of this project to the cost feasible plan. The project is also listed in the Fiscal Year (FY) 2024/25-2028/29 Transportation Improvement Plan (TIP). Currently the Preliminary Engineering (design) phase is fully funded in the FY 2024/2025 FDOT Work Program and State Transportation Improvement Plan (STIP). Neither the right of way phase nor the construction phases are currently funded the TIP nor the STIP.

Roadway Capacity

Along SR 524 within the project limits, the existing Annual Average Daily Traffic (AADT) ranges from 9,400 to 17,000 vehicles per day in 2022 and is expected to grow to a range of 16,000 to 27,000 vehicles per day by year 2045. The following segments are projected to operate below the target level of service (LOS) D within future No-Build conditions.

Year 2025: Eastbound SR 524 between I-95 northbound (NB) Ramps and Friday Road (North), eastbound SR 524 between Cirrus Drive and Industry Road, and westbound SR 524 between Friday Road (South) and I-95 Southbound (SB) ramps.

Year 2035: Eastbound SR 524 between I-95 NB Ramps and Friday Road (North), eastbound SR 524 between Cirrus Drive and Industry Road, and westbound SR 524 between Friday Road (South) and I-95 SB ramps.

Year 2045:

AM - Eastbound SR 524 between I-95 NB Ramps and Friday Road (North), between Walmart and Cox Road, and between London Boulevard and Industry Road. Westbound SR 524 between the Cirrus Drive and Industry Road.

PM - Eastbound and westbound SR 524 between I-95 SB Ramps and Walmart and between Cirrus Drive and Industry Road.

Additionally, the Florida Division of Emergency Management's State Emergency Response Team (SERT) maps for Brevard County identify multiple areas within and surrounding the project project limits, including Merritt Island, Cocoa Beach, and Cape Canaveral, designated as hurricane evacuation Zone A. The designated evacuation routes for this area include I-95, SR 528, SR 520, US 1, and SR 524. Constructed in 2018, Fire Station No. 3 is located along the southeast side of SR 524, just west of the London Boulevard intersection. Capacity improvements to the SR 524 corridor can save valuable time for the evacuation of residents during emergencies and response times for the fire station.

Safety

Five years of crash data (from January 1, 2019, to December 31, 2023) along SR 524 were obtained from the Signal Four Analytics (S4) and supplemented with data from the FDOT Crash Analysis Reporting System (CARS). A total of 297 crashes occurred within the study limits, with approximately 60 crashes per year. Nearly 82% (243) of the crashes were located at the seven signalized intersections and more than 31% of crashes at intersections resulted in injuries. The most common crash types involved rear ends (31.0%), left-turns (20.2%), and head on (18.2%). A total of 54 crashes within the

5 year period were head-on crashes that typically involve more severe results. The existing two-lane undivided roadway plays a major factor in this type of crash. Overall, the total number of crashes accounted for three fatalities and 164 injuries. Within the study limits, the calculated crash rate in millions vehicle miles traveled is 3.71, more than 185% higher than the statewide average of 1.29 for a similar roadway type.

1.3 Planning Consistency

Currently Adopted LRTP-CFP	COMMENTS			
Yes	Space Coast TPO 2024 LRTP, Amendment #5 adopted December 15, 2023, Table 11.2 (LRTP page 171), Project Number T2.6, Present day costs (\$86,990,000 total) - Phases: Design \$7,400,000 (Years 2021-2025), ROW \$48,310,000 (Years 2036-2040), Construction \$38,280,000 (Years 2041-2045). All phases of the project are funded entirely in the LRTP. See attached Project Plan Consistency Documentation.			
	Currently Approved	\$	FY	COMMENTS
PE (Final Design)				
TIP	Y	7,402,342	2025	Project listed in latest Amended TIP - Page 64 as of 12/17/2024
STIP	Y	7,413,145	2025	STIP as of 12/17/2024. PE funds show \$10,803 of District in-house support funds. Without those in-house support funds, STIP amount is \$7,402,342
R/W				
TIP	N			
STIP	N			
Construction				
TIP	N			
STIP	N			

2. Environmental Analysis Summary

Issues/Resources	Significant Impacts?*			
	Yes	No	Enhance	NoInv
3. Social and Economic				
1. Social	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Economic	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Land Use Changes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Mobility	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Aesthetic Effects	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Relocation Potential	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Farmland Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Cultural Resources				
1. Section 106 of the National Historic Preservation Act	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Section 4(f) of the USDOT Act of 1966, as amended	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Section 6(f) of the Land and Water Conservation Fund	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Recreational Areas and Protected Lands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Natural Resources				
1. Protected Species and Habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Wetlands and Other Surface Waters	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Essential Fish Habitat (EFH)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Floodplains	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Sole Source Aquifer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Water Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Aquatic Preserves	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Outstanding Florida Waters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Wild and Scenic Rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10. Coastal Barrier Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. Physical Resources				
1. Highway Traffic Noise	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Contamination	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Utilities and Railroads	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Construction	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

USCG Permit

- ☒ A USCG Permit IS NOT required.
- ☐ A USCG Permit IS required.

* **Impact Determination:** Yes = Significant; No = No Significant Impact; Enhance = Enhancement; NoInv = Issue absent, no involvement. Basis of decision is documented in the following sections.

3. Social and Economic

The project will not have significant social and economic impacts. Below is a summary of the evaluation performed.

3.1 Social

The study area, located in the incorporated City of Cocoa in Brevard County, is mostly developed consisting of commercial with scattered residential and several areas of undeveloped land. The Sociocultural Data Report (SDR, February 2025), included in the project file, identified demographics within the 500-foot project buffer and within Brevard County from the 2020 census and 2019-23 American Community Survey (ACS). The ACS data identified the study area's population is 763 people residing in 305 households. **Table 3-1** provides a comparison of demographic data between the project area and Brevard County.

Demographic Item	Project Area	Brevard County
Total Population	763	620,533
Minority Population (Race and Ethnicity)	30.28%	28.74%
Median Age (years)	50	47
Population Under Age 5	4.85%	4.41%
Population Age 65 and Over	23.85%	24.20%
Median Household Income	\$48,765	\$75,817
Population Below Poverty Level	12.19%	9.90%
Households with Public Assistance Income	1.31%	2.10%
Population Ages 20-64 with a Disability	10.50%	12.61%
Owner-Occupied Units	75.07%	65.80%
Occupied Units with No Vehicle	0.65%	4.61%
Source: SDR, ACS 2019-23		

Table 3-1: Demographic Comparison - Project Area vs. Brevard County

The minority population with 231 people, makes up 30.28% of the total population comprising "Black or African American Alone" with 89 people (11.66%) "Hispanic or Latino of Any Race (Ethnicity)" with 112 people (14.68%), "American Indian or Alaska Native Alone" with 10 people (1.31%), and "Claimed 2 or More Races" with 100 people (13.11%). The minority population is slightly higher in the project area than in Brevard County (28.74%).

The percent of the total population within Brevard County who reported that they speak English "less than very well" within the project area is 0.55% based on the 2019-23 ACS. This includes people who speak Spanish, Indo-European languages, Asian and Pacific Island languages, and "Other" languages. Based on an evaluation of the four Limited English Proficiency (LEP) factors outlined in accordance with the U.S. Department of Transportation Policy Guidance Concerning Recipients' Responsibility to LEP Persons, it was determined that bilingual translation and distribution of materials will be available upon request.

There are three 2010 Census Blocks with a minority population greater than 40% within the 500-ft. buffer of the project. In the Preferred Alternative, there are thirteen parcels (partial acquisition of nine parcels for intersection improvements and four parcels for pond sites) which could be impacted, none of which require residential relocation. There is one potential business relocations (gas station) that has been identified for one of the preferred pond sites and is documented in the Conceptual Stage Relocation Plan (CSRP-October 2024), available in the project file. A majority of the comments received at the Alternatives Public Meeting were in support of the project.

As shown in **Table 3-1**, the demographics of the project area generally exhibit a lower percentage of traditionally underserved populations compared to Brevard County. The Preferred Alternative will result in minimal impacts to properties, property access and relocations. Therefore, the Preferred Alternative does not cause disproportionately impact distinct communities.

There are no barriers, retaining walls, or elevated structures in the Preferred Alternative that would impact, divide, or result in decreased connections to communities or activity centers. The Preferred Alternative's proposed shared use path on both sides of SR 524 will maintain community cohesion by allowing bicyclist and pedestrians safe access along SR 524 by filling gaps in existing sidewalks. The proposed improvements will also maintain access for Emergency Services to respond, as needed, in a timely manner. Emergency response times are anticipated to be reduced as a result of the added capacity along the project corridor.

No direct impacts to community centers are anticipated from the proposed improvements. Temporary, indirect impacts from construction activities may occur; however, no adverse impacts are anticipated.

3.2 Economic

The relocation of one business as documented in the CSRP, prepared October 2024 and in the project file, is anticipated with the proposed improvements for constructing a pond site through the acquisition a parcel that is the current site of a gas station. The parcel is owned by a landlord and located along the south side of SR 524.

Aside from one business relocation, there are no changes to business access. The proposed project has the potential to generate additional employment opportunities by providing connectivity to local and regional employers, and improve LOS to increase access to these areas. The addition of multi-modal accommodations in the form of shared use paths on both sides of the roadway throughout the project limits will also provide improved access to businesses for non-motorized users within the study area. Therefore, there would be no adverse economic impacts from the proposed improvements.

3.3 Land Use Changes

The existing land use map for the portion of Brevard County that encompasses the project area is attached as **Figure 3-1**. The study area, located in incorporated City of Cocoa and adjacent to several parcels in unincorporated Brevard County, is mostly developed consisting of rangeland, residential, commercial, upland forests, wetlands, urban and built up. Florida Land Use Cover and Forms Classification System (FLUCCS) data, SDR data, and aerial photographs were utilized to determine current land use within the corridor. The future land use maps for the City of Cocoa and Brevard County are attached as **Figure 3-2** and **Figure 3-3** respectively. The land uses within the project corridor were subsequently ground-truthed during field visits in April 2019 and February 2020. For evaluating land use within the study area, a 500-ft buffer was created from the existing centerline of SR 524 from Friday Road (South) to Industry Road. The predominant land uses within the 500-ft buffer of the study area are vacant non-residential, acreage not zoned for agriculture, residential and retail/office, as shown on **Table 3-2**.

Description	Acres	Percentage
Acreage not zoned for Agriculture	60.94	21.11%
Agricultural	0.00	0.00%
Industrial	0.40	0.14%
Institutional	2.10	0.73%

Parcels with No Values	1.39	0.48%
Public/Semi-Public	9.06	3.14%
Residential	56.82	19.68%
Retail/Office	34.01	11.78%
Vacant Non Residential	116.97	40.50%
Vacant Residential	7.05	2.44%
Totals	288.74	100.00%

Table 3-2: Existing Land Use

The Preferred Alternative will require additional ROW at the Cox Road and London Boulevard intersections for construction of proposed roundabouts at those locations and at two off-site pond sites 1A and 2F. The project is consistent with the Brevard County future land use map and will not change the existing land use patterns. The project will not induce secondary development or change existing land use patterns. The roadway improvements are anticipated to accommodate increased travel demand from population and employment growth of the area.

The proposed project is compatible with the 1988 Brevard County Comprehensive Plan, updated February 2022 and the City of Cocoa Comprehensive Plan 2020-2030 adopted February 26, 2020, and is included in the SCTPO's 2045 LRTP.

3.4 Mobility

As documented in the Project Traffic Analysis Report (PTAR-July 2019) and the PTAR Reevaluation Memo (April 2024) located in the project files, the project will enhance mobility along SR 524 as well as at the I-95 interchange ramp terminals and at intersection of Industry Road which connects to both SR 528 to the north and SR 501 to the east through reducing congestion and improving traffic operations. The proposed capacity improvements will improve vehicular mobility along the corridor. The addition of 14-foot shared-use paths on each side of SR 524 will enhance bicycle and pedestrian connectivity. Capacity improvements along SR 524 will support emergency evacuation, and may provide improved emergency response within the study area.

A Conceptual Transportation Management Plan that will include traffic control and potential work zone management strategies will be developed during the design phase which will include a temporary traffic control plan, transportation operations plan and public information plan. The Temporary Traffic Control Plan will be developed during final design of this project following current FDOT Design Manual and Standard Plans criteria and will address:

- Lane closure analysis identifying restrictions for SR 524 and I-95 travel lane closures during work hours, holidays, and special events
- Temporary overnight detour traffic routing may be needed for SR 524 traffic under the I-95 or along I-95 during removal of overhead elements of the existing bridge and setting of bridge beams for the new bridges. A detour routing plan will be developed during the final design of this project.
- Detailed traffic control schemes addressing construction of I-95 SR 524 DDI, Cox Road and London Boulevard roundabouts, bridge demolition and new bridge construction

SR 524 is important to local and regional transportation as it provides access between I-95 and SR 528 in Brevard County, and it is utilized to connect to hurricane evacuation routes. SR 524 is essential in the movement of residents and goods within the study area. The Space Coast Area Transit (SCAT) operates two bus routes (6 and 11) which serve the project's east limits at Industry Road. There is a transfer point at Cocoa Commons for these two routes. SCAT does not operate any bus stops along SR 524, therefore the Preferred Alternative will not impact access to public transit.

SR 524 is an existing undivided roadway and existing side streets are provided full access. The Preferred Alternative includes widening the roadway to 4-lane roadway and installation of a raised divided median along with intersection improvements. A DDI is proposed at the I-95 interchange to optimize traffic operations and enhance safety through the interchange, including the ramp terminals. Roundabouts are proposed at the Cox Road and London Boulevard intersections to facilitate u-turn movements and traffic flows from side streets. Full and directional median openings are proposed at other existing unsignalized intersections along SR 524 as shown in the Concept Plans in the PER located in the project file.

The Preferred Alternative will enhance mobility in the study area.

3.5 Aesthetic Effects

The viewshed within the study area is not expected to change since the proposed improvements are located within or adjacent to the existing ROW. The proposed off-site ponds will not alter aesthetics. There are no historic resources that are identified as eligible for listing in the National Register of Historic Places (NRHP) that would experience viewshed impacts. Median landscaping is included in the Preferred Alternative to enhance the aesthetics of the corridor and provide traffic calming measures along the corridor, specifically between Cox Road and London Boulevard. In addition to the landscaping, proposed roundabouts at Cox Road and London Boulevard will enhance the overall aesthetics and viewshed.

3.6 Relocation Potential

The roadway improvements in the Preferred Alternative can be built within the existing ROW for most of the project except at the proposed roundabouts at Cox Road and London Boulevard. Partial acquisition of nine parcels (0.38 acres of ROW) will be required for the roadway improvements. The Concept Plans of the Preferred Alternative, in Appendix C of the PER (June 2025) in the project file, show the properties where ROW acquisition is proposed.

Two preferred pond sites will require acquisition of 7.86 acres of ROW from 4 parcels. One business relocation, a gas station at the intersection of SR 524/Cox Road, is required for preferred pond site 2F. A CSRP (October 2024) was prepared and is included in the project file. The one business relocatee did not appear to present unusual conditions that would prevent their successful relocation. There are an adequate number of commercial properties (1 gas station) and vacant lands for sale (9) as potential replacement sites within 10 miles of the project corridor.

In order to minimize the unavoidable effects of Right of Way acquisition and displacement of people, a Right of Way and Relocation Assistance Program will be carried out in accordance with Section 421.55, Florida Statutes, Relocation of displaced persons, and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646 as amended by Public Law 100-17).

3.7 Farmland Resources

This project is within the Palm Bay-Melbourne Urbanized Area, the geographic information system (GIS) analysis data indicates that some of this land is undeveloped and therefore, may be subject to the Farmland Protection Policy Act (FPPA). The Preferred Alternative includes 2 off-site pond sites 1A and 2F which will require the acquisition of 7.86 acres of additional ROW.

Additional coordination was conducted with US Department of Agriculture Natural Resources Conservation Service (NRCS) to verify that no adverse effects to Farmland of Unique Importance will occur. A farmland involvement determination was submitted to the NRCS in December 2024 that included a map of the Preferred Alternative and pond sites, Farmland Conversion Impact Rating for Corridor Type Projects (NRCS-CPA-106) with Parts I and III completed and GIS shapefiles for the Preferred Alternative. NRCS responded on December 16, 2024 updating the NRCS-CPA-106 form. There are approximately 48 acres of prime and unique farmland within the study area, with 0 acres to be converted as a result of the Preferred Alternative. The transmittal to NRCS, response from NRCS are included in the project file and form NRCS-CPA-106 (December 2024) is attached. Based on the scoring in the NRCS-CPA-106 form, no further coordination was needed and no additional corridors or alternatives need to be evaluated.

4. Cultural Resources

The project will not have significant impacts to cultural resources. Below is a summary of the evaluation performed.

4.1 Section 106 of the National Historic Preservation Act

A Cultural Resource Assessment Survey (CRAS), conducted in accordance with 36 CFR Part 800, was performed for the project, and the resources listed below were identified within the project Area of Potential Effect (APE). FDOT found that these resources do not meet the eligibility criteria for inclusion in the National Register of Historic Places (NRHP), and State Historic Preservation Officer (SHPO) concurred with this determination on 10/02/2020. Therefore, FDOT, in consultation with SHPO has determined that the proposed project will result in No Historic Properties Affected.

A CRAS was conducted in July 2020 and is included in the project file. The archaeological survey consisted of pedestrian survey and systematic shovel testing within the existing and proposed ROW. The historic APE includes the archaeological APE and adjacent parcels along the mainline for up to 200 ft (61 meters [m]) from the centerline of the road, and a 100-ft (30.5-m) visual buffer around the pond site parcels.

The archaeological field survey resulted in the identification of one newly recorded prehistoric archaeological site, Cocoa Hill (8BR04221). It was determined that 8BR04221, as it is expressed within the APE, does not meet the minimum criteria for listing in the NRHP. No other sites or occurrences were identified, and no further archaeological work is recommended. SHPO indicated in their 10/02/2020 concurrence with the CRAS that if alternative pond site Pond 2B is selected, SHPO requests additional close-interval testing in the east corner of the pond site to determine whether 8BR04221 extends into that area.

The architectural survey resulted in the identification and evaluation of six historic resources within the APE, including one previously recorded resource and five newly recorded resources.

The previously recorded historic resource is a structure, 2921 Slippery Rock Drive (8BR03331). The newly recorded historic resources include one resource group (8BR04195) and four structures (8BR04196-8BR04198 and 8BR04214). The historic structure at 2921 Slippery Rock Drive (8BR03331) was determined ineligible for the NRHP by the SHPO on November 23, 2015. Based on the current survey, FDOT determined that 8BR03331 remains ineligible for listing in the NRHP due to a lack of significant historic associations and architectural distinction. Furthermore, it was determined that the remaining five historic resources were ineligible for the NRHP due to a lack of significant historic associations and architectural distinction. No further architectural work is recommended.

Given the results of the CRAS (July 2020), construction of the Preferred Alternative will pose no effect to cultural resources listed, eligible or potentially eligible for listing in the NRHP. Pond 2F was selected in the Preferred Alternative, not Pond 2B. No additional investigation within the APE is necessary.

The SHPO concurrence letter is attached and the CRAS (July 2020) is part of the project file.

4.2 Section 4(f) of the USDOT Act of 1966, as amended

The following evaluation was conducted pursuant to Section 4(f) of the U.S. Department of Transportation Act of 1966, as amended, and 23 CFR Part 774.

A Section 4(f) Document (November 2024) was prepared for two recreational resources located along the north side of SR 524 within the project limits and is attached.

Junny Rios Martinez Park

The Junny Rios Martinez Park (referred to as the Park) is approximately 6 acres in overall size, separated into two areas on either side of Westminster Drive. The west area is approximately 3.46 acres and the east area is approximately 2.5 acres. The southern boundaries of both the west and east areas abut the north ROW line of SR 524. The Park provides recreation for local and Brevard County residents. Amenities for the west area include a walking path, tennis court, volleyball court, basketball court, covered shelter/pavilion.

The proposed SR 524 northern roadway edge of pavement will not move closer to the Park than the existing edge of pavement. The existing 6-foot sidewalk along the north ROW line of SR 524 will be replaced with a wider 14-foot-wide shared use path with the same connections to the west and east areas of the Park. Neither west nor east area receptors are predicted to exceed the Noise Abatement Criteria (Category C, which is 67.0 dB[A]) after the project is built. There are no noise impacts predicted for the Park receptors; therefore, abatement consideration is not required.

The SR 524 improvements associated with the Preferred Alternative will not directly impact any element within the Park property. No acquisition or occupation of land from the protected property, on either a temporary or permanent basis, will occur. Additionally, there are no meaningful proximity impacts to the protected property, and there will be no impacts to the access and usage of the protected property. Therefore, the project will have No Use of this recreational Section 4(f) resource. FDOT approved this No Use finding on November 19, 2024.

Fred Gay Golf Academy

The Fred Gay Golf Academy (referred to as the Golf Academy) is approximately 13.47 acres in size. The southern boundary abuts the northerly ROW line of SR 524 between Lance Boulevard to the west and London Boulevard to the east. The Golf Academy provides recreation for local residents and Eastern Florida State College students. The facility includes a public tee (100 yards long by 12 yards wide), a 6,500-square-foot putting green, two short-game areas with a practice bunker, a full-size classroom for college students, and a team room for members of the Eastern Florida State College men's and women's golf teams.

The proposed SR 524 northern roadway edge of pavement will not move closer to the Golf Academy than the existing edge of pavement. The existing sidewalk along the north ROW line of SR 524 will be replaced with a wider 14-foot-wide shared use path. The shared use path will be connected to the Golf Academy entrance at the same location as the existing SR 524 sidewalk connection. With the proposed improvements, the predicted noise level is 58.3 dB(A), a 1.5 dB(A) decrease from existing condition. There are no noise impacts predicted for the Golf Academy receptor; therefore, abatement consideration is not required.

The SR 524 improvements associated with the Preferred Alternative will not directly impact any element within the Golf Academy property. No acquisition or occupation of land from the protected property, on either a temporary or permanent basis, will occur. Additionally, there are no meaningful proximity impacts to the protected property, and there will be no impacts to the access and usage of the protected property. Therefore, the project will have No Use of this recreational Section 4(f) resource. FDOT approved this No Use finding on November 19, 2024.

4.3 Section 6(f) of the Land and Water Conservation Fund Act of 1965

There are no properties in the project area that are protected pursuant to Section 6(f) of the Land and Water Conservation Fund of 1965.

4.4 Recreational Areas and Protected Lands

There are no other protected public lands in the project area

5. Natural Resources

The project will not have significant impacts to natural resources. Below is a summary of the evaluation performed:

5.1 Protected Species and Habitat

The following evaluation was conducted pursuant to Section 7 of the Endangered Species Act of 1973 as amended as well as other applicable federal and state laws protecting wildlife and habitat.

A Natural Resources Evaluation (NRE) (March 2024) has been prepared and is included in the project file. A Preliminary Florida Scrub-Jay and Caracara Survey and Evaluation (November 2019) was prepared and submitted to USFWS on November 13, 2019 to document a habitat assessment for these two species as the project falls within the consultation area for both. This documentation is included in the NRE. A Preliminary Eastern Black Rail Habitat Suitability Evaluation (October 2024) was prepared and submitted to USFWS to address the Eastern black rail and is in the project file. All three of these documents contain species and habitat maps and an analysis of protected species potentially occurring within the project area.

Field surveys were performed in April 2019, February 2020, and September 2024 to evaluate proposed alternatives and address the occurrence, or potential occurrence, of wildlife and plant species listed as Threatened, Endangered, Species of Special Concern, or otherwise protected (protected species). Field surveys were conducted in accordance with the methodologies outlined by the United States Fish and Wildlife Service (USFWS) and Florida Fish and Wildlife Conservation Commission (FWC). The Florida Natural Areas Inventory (FNAI), USFWS, and FWC databases were consulted regarding current state and federally listed wildlife species, Species of Special Concern and other protected species that are known or have the potential to occur within certain habitats found in the region.

A summary of protected federal wildlife and their potential for occurrence within the project corridor and surrounding area is provided in **Table 5-1**. A summary of protected state wildlife and their potential for occurrence within the project corridor and surrounding area is provided in **Table 5-2**. Federally listed plant species identified using the USFWS's IPaC tool and State of Florida listed species through the Florida Department of Agriculture & Consumer Services (FDACS) identified by the FNAI Biodiversity Matrix as having the potential to occur along the project corridor are included in **Table 5-1** and **Table 5-2** respectively.

Federal Listed Species

The FDOT has made effect determinations for federal endangered (E) and threatened (T) species listed in **Table 5-1**. One proposed endangered (PE) species is also listed with the probabilities of occurrence for all species.

Scientific Name	Common Name	Listing Status	Probability of Occurrence	Effect Determination
Reptiles				
<i>Drymarchon corais couperi</i>	Eastern indigo snake	T	Moderate	MANLAA
Birds				
<i>Aphelocoma coerulescens</i>	Florida scrub jay	T	None	No effect
<i>Haliaeetus leucocephalus</i>	Bald eagle (1)	--	High	--
<i>Laterallus jamaicensis jamaicensis</i>	Eastern black rail	T	Low	No effect

Mycteria americana	Wood stork	T	Low	MANLAA
Polyborus plancus audubonii	Audubon's crested caracara	T	Low	No effect
Plants				
Conradina brevifolia	Short-leaved rosemary	E	Low	No effect
Asimina pulchella	Beautiful pawpaw	E	Low	No effect
Polygala lewtonii	Lewton's polygala	E	Low	No effect
Warea carteri	Carter's mustard	E	Low	No effect
Mammals				
Perimyotis subflavus	Tricolored bat	PE	Low	--
Insects				
Danaus plexippus	Monarch butterfly	C	Low	--
MANLAA = May Affect, Not Likely to Adversely Affect				
T = Threatened, E = Endangered, C = Candidate Species				
PE = Proposed Endangered, -- = Not Listed				
(1) Protected under the Bald and Golden Eagles Protection Act (16 U.S.C. 668-668c)				

Table 5-1: Federal Listed Species Effect Determinations

The findings for federal threatened (T) and endangered (E) species are based on project's NRE Report, 2019 and 2024 Evaluations Documented noted above, and no federal listed species observations during the April 2019, February 2020, and September 2024 field reviews.

There are eleven federally listed faunal and plant species identified in the project species evaluation with a probability of occurrence within the project area. The threatened Audubon's crested caracara, and endangered short-leaved rosemary, beautiful pawpaw, Lewton's polygala and Carter's mustard have a low probability of occurrence due to lack of suitable habitat within the project area. The threatened Florida scrub jay has no probability of occurrence. Therefore, a determination of *no effect* was made for these species.

The eastern indigo snake is listed by both the USFWS and FWC as Threatened. They are known to winter in gopher tortoise burrows. Eastern indigo snakes require large tracts of natural land to survive, typically foraging in more hydric habitats. No Eastern indigo snakes were observed during the field review of the corridor. No gopher tortoise burrows were identified within the project area and less than 25 acres of xeric habitat will be impacted by the construction of the project. The FDOT commits to implement the USFWS Standard Protection Measures for the during site preparation and construction. Using the most recent version of the USFWS Eastern Indigo Snake Programmatic Effect Determination Key (key pathway: A>B>C>D>E> "MANLAA") the FDOT has determined the project *may affect, not likely to adversely affect* the eastern indigo snake.

The wood stork is listed by both USFWS and FWC as Threatened. The project right of way is located within a USFWS designated wood stork Core Foraging Area (CFA). The nearest active wood stork nesting colony (SR 524/520) is located approximately 0.55 miles southwest of the project ROW. No wood storks were observed during survey days within the project area. However, minimal impacts to wood stork foraging habitat are anticipated. If applicable, replacement foraging habitat will be provided onsite as part of the stormwater management system or through the purchase of herbaceous wetland mitigation credits at a mitigation bank within the same core foraging area. Using the most recent version of the USFWS's Wood Stork Programmatic Concurrence Key (key pathway: A>B>C>D>E> "MANLAA") the FDOT has determined the project *may affect, not likely to adversely affect* the wood stork.

The eastern black rail is listed by both USFWS and FWC as Threatened. The project is located within the USFWS designated consultation area. The onsite survey in September 2024 was specifically focused on identifying and assessing potential eastern black rail foraging or nesting habitats, which include a variety of salt, brackish, and freshwater marsh habitats as well as wet prairie habitats. No eastern black rail were observed during the survey days within the project area.

Of the twelve wetlands areas identified within the study area, only four of them contain potential eastern black rail habitat. No suitable habitat was observed within the footprint of the proposed impacts of the Preferred Alternative or within 25 feet of the proposed impacts. Eastern black rail habitat was limited to Wetland 1 located near the western extent of the project area within Pond 1A. This suitability of this habitat is low, due to the absence of appropriate vegetation structure, density and height. Based on the assessment, the proposed project is not anticipated to result in adverse effects on the eastern black rail or their habitat. Therefore FDOT has determined the project *may affect, not likely to adversely affect* the eastern black rail.

The bald eagle has been delisted by the USFWS from the list of Threatened and Endangered species because the population has recovered in the lower 48 states, threats to the species have been reduced or eliminated, and reproductive success has significantly increased. However, the bald eagle will continue to be managed and protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. In addition, the bald eagle is protected in Florida through F.A.C. 68A-16.002. The Audubon Florida Eagle Watch bald eagle nest database identifies bald eagle nest (BE082) located approximately 600 feet south of the project corridor as documented in the NRE. The location of nest and the 660 foot buffer zone will be depicted on the project plans and modified special provisions will be provided to the contractor that will require them to coordinate with the USFWS to provide monitoring of the nest if work is required within the protective buffer zone during the nesting season (October 1 to May 15). Based on this assessment and provisions for coordination during permitting and construction, no adverse impacts are anticipated for the bald eagle.

USFWS Critical Habitat

The study area was assessed for Critical Habitat designated by Congress in 50 CFR Part 17. The project area does not include USFWS designated Critical Habitat for any species. Therefore, the project will have no adverse modifications of Critical Habitat.

State Listed Species

The FDOT has made effect determinations for state endangered (SE) and threatened (ST) species listed in **Table 5-2**.

Scientific Name	Common Name	Listing Status	Probability of Occurrence	Effect Determination
Reptiles				
Gopherus polyphemus	Gopher tortoise	ST	Low	No Adverse Effect Anticipated
Pituophis melanoleucus	Florida pine snake	ST	Low	No Adverse Effect Anticipated
Birds				
Antigone canadensis pratensis	Florida sandhill crane	ST	Low	No Adverse Effect Anticipated
Athene cunicularia floridana	Florida burrowing owl	ST	Low	No Adverse Effect Anticipated
Egretta caerulea	Little blue heron	ST	Moderate	No Adverse Effect Anticipated
Egretta tricolor	Tricolored heron	ST	Moderate	No Adverse Effect Anticipated
Falco sparverius paulus	Southeastern American kestrel	ST	Low	No Adverse Effect Anticipated
Platea Ajaja	Roseate spoonbill	ST	Moderate	No Adverse Effect Anticipated
Mammals				
Ursus americanus floridanus	Florida black bear (2)	--	Low	--
Plants				
Calopogon multiflorus	Many-flowered grass- pink	ST	Low	No Adverse Effect Anticipated
Carex tenax	Chapman's sedge	ST	Low	No Effect Anticipated
Centrosema arenicola	Sand butterfly pea	SE	Low	No Effect Anticipated
Cheiroglossa palmata	Handfern	SE	Low	No Effect Anticipated
Coelorachis tuberculosa	Piedmont joint grass	ST	Low	No Adverse Effect Anticipated
Coleataenia abscissa	Cutthroat grass	SE	Low	No Effect Anticipated
Conradina grandiflora	Large-flowered rosemary	ST	Low	No Effect Anticipated
Dicerandra thiniicola	Titusville balm	SE	Low	No Effect Anticipated
Euphorbia cumulicola	Sand-dune spurge	SE	Low	No Effect Anticipated

Glandularia maritima	Coastal vervain	SE	Low	No Effect Anticipated
Glandularia tampensis	Tampa vervain	SE	Low	No Adverse Effect Anticipated
Spiranthes laciniata	Lace-lip Ladies'-tresses	ST	Low	No Adverse Effect Anticipated
Lechea cernua	Nodding pinweed	ST	Low	No Effect Anticipated
Lechea divaricata	Pine pinweed	SE	Low	No Effect Anticipated
Lilium caresbyi	Pine Lily	ST	Low	No Adverse Effect Anticipated
Linum carteri var. smallii	Small's flax	SE	Low	No Adverse Effect Anticipated
Nemastylis floridana	Celestial lily	SE	Low	No Adverse Effect Anticipated
Nolina atopocarpa	Florida beargrass	ST	Low	No Effect Anticipated
Orthochilus ecristata	Giant orchid	ST	Low	No Effect Anticipated
Pinguicula caerulea	Blueflower butterwort	ST	Low	No Adverse Effect Anticipated
Pinguicula lutea	Yellow flowered butterwort	ST	Low	No Adverse Effect Anticipated
Sarracenia minor	Hooded pitcherplant	ST	Low	No Adverse Effect Anticipated
Sporobolus vaseyi	Curtiss' sandgrass	ST	Low	No Effect Anticipated
ST = State Threatened, SE = State Endangered				
(2) Protected under the Florida Black Bear Conservation Rule (68A-4.009, F.A.C.)				

Table 5-2: State Listed Species Effect Determinations

Below is a summary of findings for state-designated endangered (SE) and threatened (ST) species consistent with the project's NRE, and no state listed species observations were made during the April 2019 and February 2020 field reviews.

The gopher tortoise is listed by the FWC as threatened and are a candidate species for listing by the USFWS. No gopher tortoises or their burrows have been observed during the field survey, and little suitable habitat for this species occurs within the project study area. However, a gopher tortoise survey will also be performed during the permitting phase of the project. Based on this assessment, the FDOT determined the potential for the gopher tortoise to occur within the project corridor is low with *no adverse effect anticipated* to the species due to the project.

The Florida pine snake is listed by the FWC as Threatened. No pine snakes have been observed during field review and little suitable habitat exists within the project area. Therefore, the FDOT determined the potential occurrence of the pine snake is low with *no adverse effect anticipated* to the species due to the project.

The Florida burrowing owl is listed as Threatened by the FWC. No burrowing owls were observed during the field surveys, and little suitable habitat for this species occurs within the project study area. Therefore, the FDOT determined the potential for occurrence for the burrowing owl is low with *no adverse effect anticipated* to the species due to the project.

Wading birds as a group are common to wetlands where they forage for small fish and invertebrates. Species that could be found in wetlands within the corridor includes species such as little blue heron and tricolored heron which are listed as Threatened by the FWC. Review of the FWC Waterbird Colony Locator indicated that there are no known active wading bird colonies near the project corridor. However, minimal temporary impacts to wading bird foraging habitat are anticipated. If applicable, replacement foraging habitat will be provided onsite as part of the stormwater management system or through the purchase of herbaceous wetland mitigation. Therefore, FDOT determined this project to have *no adverse effect anticipated* on these species.

The Southeastern American kestrel, a resident subspecies of the kestrel listed as Threatened by the FWC, can be distinguished from its cousin, the American kestrel, a winter migrant, by its smaller size. The Southeastern kestrel requires three components for optimal habitat: large, open fields for foraging, snags for nesting, and snags, fence lines or telephone poles as perching sites from which to hunt. No kestrels were observed along the project corridor or within any pond sites and there is minimal habitat within the project area. Therefore, the FDOT determined the potential occurrence of the Southeastern kestrel is low with *no adverse effect anticipated* to the species due to the project.

The Florida sandhill crane typically nests in shallow freshwater marshes and forages on agricultural lands. They are listed as Threatened by FWC. No sandhill cranes were observed during field surveys and little appropriate habitat exists within the project study area. Therefore, the FDOT determined the potential occurrence of the sandhill crane is low with *no adverse effect anticipated* to the species due to the project.

The roseate spoonbill is primarily a coastal species listed by the FWC as Threatened but can also be seen far inland. Brevard County lies within the summer range of this species. Prime nesting habitat is mangrove-dominated islands (and Brazilian pepper stands), but to a lesser extent, also in freshwater willow swamps. Feeding areas encompass most marine tidal systems, plus freshwater marshes, ponds and impoundments. The diet of the roseate spoonbill primarily consists of crayfish, shrimp, crabs, and small fish. No roseate spoonbills, their nests or roosting sites were observed during the survey. However, minimal temporary impacts to roseate spoonbill foraging habitat are anticipated. If applicable, replacement foraging habitat will be provided onsite as part of the stormwater management system or through the purchase of herbaceous wetland mitigation. Therefore, the FDOT determined this project was determined to have *no adverse effect anticipated* on this species.

Many-flowered grass-pink is a wetland orchid that is listed as Threatened by the State of Florida. It is characterized by 4-inch grass like leaves and leafless flower stalks that reach 16-inches in height with up to 15 dark pink flowers crowded at the top. Typical habitat includes longleaf pine flatwoods with wiregrass and saw palmetto. Some pine flatwood habitat exists along the project corridor and within some of the pond site alternatives but no manyflowered grass pink was observed during the listed species surveys. Therefore, the FDOT determined this project to have *no adverse effect anticipated* on this species.

Piedmont Jointgrass is a perennial grass that is listed as Threatened by the State of Florida. It is found in ephemeral ponds and margins of sandhill upland lakes or depression marshes. Some marsh habitat exists along the project corridor and one of the preferred pond alternatives, but no Piedmont Jointgrass was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* on this species.

Tampa vervain is listed as Endangered by the State of Florida. Typical habitat includes live oak - cabbage palm hammocks and pine - palmetto flatwoods. Some pine flatwood habitat exists along the project corridor and within some of the pond site alternatives but no Tampa vervain was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* for this species.

Lace-lip Ladies'-tresses is a perennial herb in the orchid family that is listed as Threatened by the State of Florida. It is often found in disturbed habitats, marshes, meadows, swamps, and woodlands. Freshwater marsh covers most of pond site 1A, but no Lace-lip ladies'-tresses were observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* on this species.

Pine Lily is a perennial wildflower that is listed as Threatened by the State of Florida. It blooms in summer to late fall and is found in mesic to wet flatwoods, wet prairies, and savannas. Some wet prairie and pine flatwoods habitat exist along the project corridor and one of the preferred pond alternatives, but no Pine lily was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* on this species.

Small's flax is a wetland, annual herb that is listed as Endangered by the State of Florida. Typical habitat consists of pine-rocklands, pine flatwoods and adjacent disturbed areas. Some pine flatwood habitat exists along the project corridor and within some of the pond site alternatives but no Small's flax was observed during the listed species surveys. Therefore,

the FDOT determined the project to have *no adverse effect anticipated* for this species.

Celestial lily is a perennial herb typically found in wetlands that is listed as Endangered by the State of Florida. Typical habitat includes wet flatwoods, wet prairies, marshes and cabbage palm hammocks. Some marsh habitat exists along the project corridor and one of the pond site alternatives but no Celestial lily was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* for this species.

Blueflower butterwort is an insectivorous wildflower that is listed as Threatened by the State of Florida. It is mostly found in pine flatwoods and wet prairies. Some wet prairie and pine flatwoods habitat exist along the project corridor and many of the pond sites, but no Blueflower butterwort was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* on this species.

Yellow Flowered Butterwort is a perennial carnivorous herb that is listed as Threatened by the State of Florida. It is mostly found in pine flatwoods and wet prairies. Some wet prairie and pine flatwoods habitat exist along the project corridor and some of the pond sites, but no Yellow flowered butterwort was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* on this species.

Hooded pitcherplant is a carnivorous clumping plant that is listed as Threatened by the State of Florida. It is found in mesic and wet flatwoods, bogs, marsh ecotones, and wet ditches. Some pine flatwoods habitat exists along the project corridor and freshwater marsh covers most of pond site 1A, but no Hooded pitcherplant was observed during the listed species surveys. Therefore, the FDOT determined the project to have *no adverse effect anticipated* on this species.

Other evaluated plants listed as Threatened by the State of Florida include: Curtiss' sandgrass, Chapman's sedge, Large-flowered rosemary, Nodding pinweed, Florida beargrass, Giant orchid; and as Endangered include: Sand butterfly pea, Sand-dune spurge, Short-leaved rosemary, Beautiful pawpaw, Titusville balm, Coastal vervain, Pine pinweed, Cutthroat grass, Lewton's Polygala, Carter's Mustard, and Handfern. During the field surveys, no listed plant species were observed within the project corridor. Additionally, no critical habitat has been designated for any of the species with the potential to occur. The probability of occurrence of these species is low. Therefore, the FDOT determined this project to have *no adverse effect anticipated* on this species.

Areas to be impacted by the roadway and the proposed stormwater ponds will be re-evaluated for the presence of any federally listed plant species during permitting in the design phase of the project.

Agency Coordination

On December 11, 2019, USFWS concurred with the effect determinations outlined in the Preliminary Florida Scrub-Jay and Caracara Survey and Evaluation, that no other survey effort will be require, and consultation is complete. The December 11, 2019 USFWS concurrence letter is attached.

USFWS concurred with the Preliminary Eastern Black Rail Habitat Suitability Evaluation on December 2, 2024 effect determination and no additional surveys will be required for this species during the design phase of the project and consultation is complete. The December 2, 2024 USFWS concurrence letter is attached.

Based on the effect determinations and USFWS consultation keys, no additional consultation with USFWS is required.

On April 24, 2025, FWC agreed with the effect determinations in the updated NRE and supports the project implementation measures and commitments. The April 24, 2025 FWC letter is attached.

5.2 Wetlands and Other Surface Waters

The following evaluation was conducted pursuant to Presidential Executive Order 11990 of 1977 as amended, Protection of Wetlands and the USDOT Order 5660.1A, Preservation of the Nation's Wetlands.

The project was evaluated for impacts to wetlands and other surface waters and the findings are documented in the NRE (March 2025) which contains the associated habitat and wetland maps and is included in the project file.

In accordance with EO 11990, the proposed project will have no significant short-term or long-term adverse impacts to wetlands; there is no practicable alternative to construction in wetlands; and measures have been taken to minimize harm to wetlands.

The jurisdictional extent of wetland and other surface water systems within the study corridor was approximated through the review of aerial photography, National Wetlands Inventory (NWI) data, U.S. Geological Survey Topographic Maps, Soils Maps, Land Use Maps, and field observations made during the April 2019 and February 2020 site visits. The wetland limits were identified in general accordance with federal and state regulations. In the event wetland boundaries differed between the two methods, the more landward extent was used to define that wetland system's boundary. Photographic documentation was used to capture the current condition of each wetland system and the Uniform Mitigation Assessment Method (UMAM, Chapter 62-345 F.A.C.) was used to quantify each system's condition.

The NRE (March 2025) identified 13 wetlands located within the study area that consist of Mixed Wetland Hardwoods, Wetland Forested Mixed, Freshwater Marsh, Wet Prairie, and Emergent Aquatic Vegetation. Wetland and other surface water impacts is estimated at approximately 7.36 acres with the proposed improvements of the Preferred Alternative and preferred stormwater pond sites.

The Preferred Alternative has the potential to impact existing wetlands and surface waters within the project limits. **Table 5-3** provides a summary of the wetland impacts for the Preferred Alternative. **Table 5-4** provides a summary of the wetland impacts including their FLUCCS code, NWI classification, size, and UMAM functional loss for the Preferred Alternative.

Roadway Elements & Pond Sites	Forested Wetland Impacts (acres)	Herbaceous Wetland Impacts (acres)	Total Wetland Impacts (acres)
Roadway Widening	0.17	1.43	1.6
I-95 Diverging Diamond Interchange	0	0	0
Cox Road Roundabout	0	0	0
London Boulevard Roundabout	0	0	0
Pond Site 1A	0	3.87	3.87
Pond Site 2F	1.89	0	1.89
Pond Site 3A	0	0	0
Pond Site 3B	0	0	0
Total Impacts	2.06	5.30	7.36

Table 5-3: Potential Wetland Impacts of the Preferred Alternative

Roadway Elements & Pond Sites	Wetland Number	FLUCCS	NWI Code	Impact (acres)	Functional Loss
Preferred Alternative - SR 524	W-3	643	PEM1C	0.27	0.16
	W-10	617	PFO1/4C	0.17	0.12
	W-11	643	PEM1F	1.16	0.66
I-95 Diverging Diamond Interchange	W-1	641	PEM1C	0	0
	W-12	630	PFO1C	0	0
Cox Road Roundabout	N/A	N/A	N/A	0	0
London Boulevard Roundabout	N/A	N/A	N/A	0	0
Pond Site 1A	W-1	641	PEM1C	3.87	2.59
Pond Site 2F	W-10	617	PFO1/4C	1.89	1.38
Pond Site 3A	N/A	N/A	N/A	0	0
Pond Site 3B	N/A	N/A	N/A	0	0
Totals				7.36	4.91

Table 5-4: Preferred Alternative Wetland Impacts & UMAM Summary

Secondary wetland impacts for the roadway improvements are limited, since most of the area within the existing ROW had previously been cleared. Secondary wetland impacts that may result from the construction of the proposed pond sites will be addressed in the design phase by creating onsite upland buffers averaging 25 feet in width along the wetland boundary. In areas where buffers are not feasible, secondary impacts will be calculated and mitigation will be provided in accordance with Section 373.4137 F.S. Cumulative impacts are not anticipated because of this project due to the wetland mitigation occurring within the same drainage/mitigation basin as the proposed wetland impacts.

Except for pond improvements, the Preferred Alternative of an urban roadway typical section combined with a 200-ft. ROW corridor will have minimal impacts on existing wetlands. Specific wetlands impacts are approximately 1.6 acres for the roadway improvements in the Preferred Alternative, while wetland and surface water impacts are approximately 5.76 acres for pond sites. Potential impacts to wetlands were assessed using UMAM to determine mitigation needs. To provide reasonable assurances that direct, indirect, or cumulative impacts from construction, alteration and intended or reasonably expected uses of the proposed alternatives will not contribute to violations of water quality standards or adverse impacts to the functions of wetlands or other surface waters. The appropriate mitigation will be calculated during the design and permitting phase of the project to satisfy the requirements of 33 U.S.C. Section 1344 and Part IV of Chapter 373, F.S.

Options for impacts that will result from the construction of this project include mitigation provided pursuant to Section 373.4137 F.S. to satisfy all mitigation requirements of Part IV, Chapter 373, F.S. and 33 U.S.C.s. 1344. Under the provisions of Section 373.4137 F.S., the St. Johns River Water Management District (SJRWMD) is funded to provide for specific FDOT project impacts through a corresponding mitigation project within the SJRWMD's overall approved regional mitigation plan.

If the SJRWMD is unable to provide appropriate mitigation, mitigation credits from a permitted wetland mitigation bank are available. The southern half of the SR 524 project falls within Mitigation Basin 18, St. Johns River (Canaveral Marshes to Wekiva) and the northern half of the project is in Mitigation Basin 20, Southern St. Johns River. Mitigation banks with available credits located within Mitigation Basin 18 include Lake Monroe, Tosohatchee, Farmton, Colbert- Cameron, and TM Econ. Mitigation banks with available credits located within Mitigation Basin 20 include Mary A. Ranch, Farmton, and Lake Washington.

Any surface water impacts which will result from the construction of this project will be mitigated through onsite in-kind replacement. The proposed stormwater treatment and conveyance system will maintain existing surface water function. Temporary functional loss will occur during construction, but no permanent direct, secondary, or cumulative impacts are anticipated.

A final mitigation plan for the project will be developed during the design and permitting phase with input from FDOT, SJRWMD, and US Army Corps of Engineers (USACE).

5.3 Essential Fish Habitat (EFH)

There is no Essential Fish Habitat (EFH) in the project area.

5.4 Floodplains

Floodplain impacts resulting from the project were evaluated pursuant to Executive Order 11988 of 1977, Floodplain Management.

A Location Hydraulics Report (LHR-May 2023) was prepared for this project and is included in the project file. The LHR provides a detailed discussion of the potential floodplain encroachments and preliminary cross-drain evaluation. It was concluded the project will impact approximately 0.11 acre-feet of the 100-year floodplain and 2.49 acre-feet of the 10-year floodplain based on the Preferred Alternative. These impacts are minimal compared to the overall extent of the floodplain; therefore, it was determined the floodplain encroachment is classified as "minimal." Minimal encroachments on a floodplain occur when there is a floodplain involvement, but the impacts on human life, transportation facilities, and natural and beneficial floodplain values are not significant and can be resolved with minimal efforts.

Floodplain Finding: The proposed cross drains and floodplain compensation areas will perform hydraulically in a manner equal to or greater than the existing condition, and backwater surface elevations are not expected to increase. As a result, there will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency service or in emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

5.5 Sole Source Aquifer

There is no Sole Source Aquifer associated with this project.

5.6 Water Resources

A Pond Siting Report (May 2023), LHR (May 2023) and Water Quality Impact Evaluation (WQIE-December 2024) were prepared as part of the PD&E Study and are included in the project file.

Water Body Identification (WBID) 28935 is listed as impaired for silver and fecal coliform. WBID 3056 is not listed as impaired. There are currently no adopted Total Maximum Daily Load levels for WBID 28935, but one is under development by the Florida Department of Environmental Protection (FDEP). Since Mud Lake Outlet flows to the St. Johns River above Puzzle Lake (South Segment) the proposed stormwater ponds will require nutrient loading calculations

to show a net improvement for nutrients. The stormwater ponds in the Preferred Alternative will be designed to meet state water quality and quantity requirements. Proposed stormwater management systems will be designed to meet these requirements in the design phase. In addition, all relevant agency coordination will occur, and permits will be obtained for the design of the stormwater systems in accordance with the SJRWMD criteria for attenuation/flood control and treatment.

Water quality impacts from construction will be minimized through the use of Best Management Practices (BMP) including, but not limited to, construction phasing, sediment barriers, silt fences, and other techniques identified during design and permitting by the regulatory agencies and later during construction by the selected contractor. An Environmental Resource Permit will be acquired through SJRWMD during Design. A National Pollution Discharge Elimination System (NPDES) permit will be acquired along with development of the required Stormwater Runoff Control Concept during Design.

5.7 Aquatic Preserves

There are no aquatic preserves in the project area.

5.8 Outstanding Florida Waters

There are no Outstanding Florida Waters (OFW) in the project area.

5.9 Wild and Scenic Rivers

There are no designated Wild and Scenic Rivers or other protected rivers in the project area.

5.10 Coastal Barrier Resources

It has been determined that this project is neither in the vicinity of, nor leads directly to a designated coastal barrier resource unit pursuant to the Coastal Barrier Resources Act of 1982 (CBRA) and the Coastal Barrier Improvement Act of 1990 (CBIA).

6. Physical Resources

The project will not have significant impacts to physical resources. Below is a summary of the evaluation performed for these resources.

6.1 Highway Traffic Noise

The following evaluation was conducted pursuant to 23 CFR 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise, and Section 335.17, F.S., State highway construction; means of noise abatement.

The project is identified as a Type I project pursuant to 23 CFR Part 772 and 335.17, F.S. A Noise Study Report (NSR-September 2024) was prepared for this project and is included in the project file. The NSR analyzed 149 noise-sensitive sites representing 246 residential and seven non-residential special land uses. The analysis predicted that under the Preferred Alternative, 63 sites would meet or exceed the 66.0 dB(A) Noise Abatement Criterion. Overall, noise levels increase an average of 0.7 decibel A-weighted [dB(A)]; none of the increases are considered substantial (i.e., 15 or more dB(A) over existing conditions).

Noise abatement consideration was given to all 63 sites impacted by the Preferred Alternative. Traffic management measures, modifications to the roadway alignment, and buffer zones were considered as abatement measures, but determined to not be reasonable or feasible methods to provide noise abatement. Three noise barrier systems were evaluated to provide abatement for the impacts. Optimizing the barrier height includes consideration of insertion loss, cost, and community context/aesthetics. A barrier height of 22-ft. is recommended for barrier systems at Integra Trails (EB1) and a 14-foot height at Cocoa Pines (WB1) and Cocoa North Villas (WB2). The barrier analysis and preliminary barrier locations are included in the NSR. The proposed barriers provide abatement for 51 of the 63 impacted residences as well as 34 non-impacted residences.

Based on the existing land use within the limits of this project, the construction of the proposed roadway improvements will have temporary noise and vibration impacts. Construction noise sensitive sites include all noise sensitive sites detailed in the NSR. Vibration-sensitive sites on the project include residences and medical offices. Trucks, compaction equipment, earth-moving equipment, pumps, and generators are sources of construction noise and vibration. During the construction phase of the proposed project, short-term noise and vibration may be generated by stationary and mobile construction equipment. The construction noise and vibration will be temporary at any location and controlled by adherence to the most recent edition of the FDOT *Standard Specifications for Road and Bridge Construction*.

The FDOT is committed to the construction of feasible and reasonable noise abatement measures at the noise impacted locations identified as EB1, WB1 and WB2 contingent upon the following conditions:

1. Final recommendations on the construction of abatement measures are determined during the project's final design and through the public involvement process;
2. Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement;
3. Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion;

4. Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and
5. Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.

6.2 Air Quality

This project is not expected to create adverse impacts on air quality because the project area is in attainment for all National Ambient Air Quality Standards (NAAQS) and because the project is expected to **improve** the Level of Service (LOS) and **reduce** delay and congestion on all facilities within the study area.

Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction.

6.3 Contamination

A Contamination Screening Evaluation Report (CSER, October 2024), included in the project file, was prepared to assess the risk of encountering petroleum or hazardous substance contamination of soil, groundwater, surface water, or sediment that could adversely affect this project. Based on the review of the Environmental Database Reports (EDR) Radius Map Report, site reconnaissance, aerial photograph review, city directory review, interviews, and file review conducted on the FDEP's online database, a total of 15 sites with potential for hazardous material or petroleum impact to the soil and/or groundwater were identified and documented in the CSER. Of the 15 potential sites identified, three were rated No Risk, five Low Risk, four Medium Risk, and three High Risk. **Table 6-1** provides a listing of Low, Medium and High risk sites. The remaining site numbers 2, 5 & 8 were rated No Risk.

Site Number	Name	Address	Risk Rating
3	Mobil Oil Corp.	5555 SR 524, Cocoa, FL	High
4	Sunrise Food Mart	5550 SR 524, Cocoa, FL	High
7	Sunshine Food Mart	4900 SR 524, Cocoa, FL	High
6	Flying J	1101 Friday Road, Cocoa, FL	Medium
9	Sunrise Food Mart	4301 SR 524, Cocoa, FL	Medium
10	7-Eleven	3500 SR 524, Cocoa, FL	Medium
15	7-Eleven	2201 SR 524, Cocoa, FL	Medium
1	Days Inn	5600 SR 524, Cocoa, FL	Low
11	CVS Pharmacy	2324 SR 524, Cocoa, FL	Low
12	Pinch A Penny	2311 SR 524, Cocoa, FL	Low
13	Publix Super Market	2301 SR 524, Cocoa, FL	Low
14	The Home Depot	2300 SR 524, Cocoa, FL	Low

Table 6-1: Potential Contamination Sites by Site Rating

The roadway improvements were developed to maximize the use of existing ROW which minimize the impacts to adjacent potential contamination sites. Pond site 1A was selected in basin 1 to avoid impacts to site 7. A portion of Pond site 2F is located on the same parcel as potential contamination site number 9 which is rated as medium risk. This parcel is identified as a business relocation. Pond sites 3A and 3B were selected due to being situated within FDOT ROW.

Based on an investigation of the properties for evidence of potential contamination issues and other environmental issues, further assessment may be required to determine the absence or presence and/or levels of soil and/or groundwater impact within the roadway expansion area at the sites identified as medium and high risk. Depending on the time frame of construction activities, an updated Public Records review may be warranted prior to construction activities to determine current conditions. Sites having a High Risk of contamination potential should have a Public Records review update prior to construction activities. Should dewatering activities be anticipated along the study corridor, then additional assessment activities may be warranted at the above-mentioned sites to obtain information about the current quality of groundwater before the dewatering activities. For those locations with a risk rating of "Medium" or "high", including preferred pond sites, a Level II field screening will be conducted during the design phase.

6.4 Utilities and Railroads

A Utility Assessment Report (UAR) was prepared in February 2023 and is included in the project file to document the presence of existing utilities within the SR 524 corridor. Overhead facilities are located at or near the ROW line, which reduces the potential impact for these facilities. Typical impacts are anticipated for underground facilities due to proposed improvements associated with drainage, signalization, lighting, etc.

Sunshine One Call combined with preliminary utility coordination efforts have identified 11 potential Utility Owner Agencies (UAOs) along the corridor as shown in **Table 6-2**. Preliminary utility coordination and investigation effort was conducted through written and verbal communications with the existing utility owners. A Sunshine 811 Florida Design Ticket System listing of existing utility owners was acquired on October 12, 2021. Coordination with each UAO will continue in future phases of project development.

Utility Agency	Utility Type	E-Mail Address
AT&T	Communication	LF3290@att.com
Charter Communication	Communication	paul.rymer@charter.com
City of Cocoa (Water)	Water & Reclaimed Water	kennis@cocoafl.org
City of Cocoa (Sewer)	Sewer	kennis@cocoafl.org
Crown Castle	Communication	christopher.perkis@crowncastle.com
Florida Gas Transmission (FGT)	Gas Transmission	joseph.e.sanchez@energytransfer.com
Florida City Gas	Gas	holly.coombs@nexteraenergy.com
Florida Power and Light	Electric	andrew.zicker@fpl.com
Verizon (f/k/a MCI)	Communication	timothy.cole@verizon.com
Florida Turnpike Traffic (FTE)	Communication	deanna.campbell@dot.state.fl.us
Uniti Fiber, LLC	Communication	bob.mensching@uniti.com

Table 6-2: Existing Utilities

There are no railroads on this project.

6.5 Construction

Construction activities may cause short-term air quality impacts in the form of dust from earthwork and unpaved roads. These impacts will be minimized by adherence to applicable state regulations and to applicable FDOT Standard Specifications for Road and Bridge Construction. An NPDES permit will be acquired along with development of the required Stormwater Runoff Control Concept during the design phase.

Construction activities for the Preferred Alternative will have temporary noise, water quality, traffic flow, and visual effects for the travelers within the immediate vicinity of the project. These effects will be minimized through application of the FDOT Standard Specifications for Road and Bridge Construction.

The Preferred Alternative is anticipated to have no substantial impact to residents, business owners and road users during construction.

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7. Engineering Analysis Support

The engineering analysis supporting this environmental document is contained within the [Draft Preliminary Engineering Report \(June 2025\)](#) .

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8. Permits

The following environmental permits are anticipated for this project:

Federal Permit(s)

USACE Section 10 or Section 404 Permit

Status

To be acquired

State Permit(s)

DEP or WMD Environmental Resource Permit (ERP)

DEP National Pollutant Discharge Elimination System Permit

Status

To be acquired

To be acquired

9. Public Involvement

The following is a summary of public involvement activities conducted for this project:

Summary of Activities Other than the Public Hearing

Public involvement activities have been integrated into the PD&E Study process, allowing property owners, residents, businesses, government entities, and agencies to share their ideas and concerns with the study team. The Efficient Transportation Decision Making (ETDM) process was used to obtain environmental agencies comments on the project's potential impacts. Additional coordination was conducted through meetings with stakeholders, SCTPO, Brevard County, and the City of Cocoa. Multiple meetings were held with each stakeholder to identify their specific concerns regarding potential alternative improvements evaluated in this PD&E Study. Input gained from the ETDM process, public meetings, and stakeholder meetings was used to inform the decision-making process, develop alternative concepts, and reach final recommendations.

A Public Involvement Plan (PIP-December 2018) was developed at the beginning of the PD&E Study that defined the approach for engaging and informing stakeholder and the community about this project and is included in the project file. Affected stakeholders, elected and public officials, state and federal environmental resource agencies, and local businesses and communities were identified. Newsletters were distributed and an alternatives public meeting was held during the study process to seek and gather valuable information from individuals who use the roadway corridor the most. All project activities complied with Title VI of the 1964 Civil Rights Act and related statutes, as referenced in FDOT's Non-Discrimination Policy, Topic Number 001-275-006, and implemented procedure Topic Number 275-010-010. Comments from the public meetings are recorded in the Comments and Coordination Report in the project file which will be finalized after the public hearing.

Advance Notification

An Advance Notification Package was forwarded to the Florida State Clearinghouse at the FDEP, as well as local and Federal agencies on December 8, 2017, in accordance with Executive Order 95-359. The package specified that the project had been screened through the ETDM process. FDEP provided no comments and the USACE responded with no issues and concurred with the initial assessment of Wetlands and Surface Water and Navigation issues.

Public Website

At the start of the PD&E Study, project details, including contact information and study documents, were made available at: https://www.cflroads.com/project/437983-1/SR_524_Corridor_Planning_Study.

Project Kickoff Notification Letter

A kickoff newsletter was mailed to 698 citizens (elected and appointed officials, residents and property owners, and interested parties identified during the planning phase) on March 29, 2019.

Alternatives Public Meeting

The alternatives public meeting was held on Tuesday, May 4, 2021, from 5:30 p.m. to 7:30 p.m. at the Cocoa Civic Center, 430 Delannoy Avenue, Cocoa, FL. This was a hybrid public meeting, offering two options for the community to participate in. Interested persons could either join the Virtual Public Meeting (VPM) from a computer, tablet, or cell phone or participate in person by going to the Cocoa Civic Center. Regardless of the platform they chose, all participants were provided the same display materials and presentation.

The meeting was advertised through several methods, including:

- Advertisement in the Florida Administrative Register, Vol 47/79 on April 23, 2021
- Direct mail notification to approximately 720 property owners/tenants
- Notification letters and emails to approximately 120 state and local elected and appointed public officials and other agencies (including Environmental Technical Advisory Team [ETAT] members and Tribal contacts)
- Display advertisement in the Friday, April 23, 2021, edition of the Florida Today
- Press releases to local media outlets
- Announcement of the FDOT website
- Announcement on the project website: <https://www.cflroads.com/project/437983-1>
- Coordination with local homeowner's associations and communities.

The meeting was conducted in an open house format, with a looping presentation provided for in-person citizen viewing at any time. The public was invited to attend in person between 5:30 pm and 7:30 pm. The VPM opened at 5:30 pm, and the presentation began at 5:45 pm. A handout with project information and details was prepared and distributed to all attendees.

Twenty citizens (including City and County representatives) and 16 project team members signed in at the in person public hearing. Project team in-person attendees included the FDOT Project Manager, ROW, EMO, and the project consultants. While 51 people registered to attend the VPM, 37 people were in attendance during all or part of the virtual option.

Thirty-six comments were received through May 18, 2021:

- 12 comments were received during the public meeting
- 4 written comment forms from in-person attendees
- 8 written comments/questions from virtual attendees
- 24 emailed comments were received after the meeting

Comments provided both support and opposition to specific typical section alternatives and intersection improvement options presented. No opposition to the SR 524 widening was expressed during the public meeting or comment period. All comments received were taken into account in the development of the project alternatives.

Local Agency Coordination Meetings

Individual meetings were conducted with the stakeholders involved along the corridor, including FDOT, SCTPO, Brevard County, and the City of Cocoa. Four design meetings were held with FDOT to analyze corridor typical sections, alignments, and intersection improvements. Design team meetings with FDOT were conducted on June 21, 2019, August 12, 2019, January 27, 2021, and September 14, 2021, to analyze the advantages and disadvantages of multiple potential alternative alignments. Meetings with the SCTPO, Brevard County, and City of Cocoa were conducted on January 31, 2019 (Project Kick-Off) and February 19, 2020 (Update Meeting #1). Additional in person presentations were provided to the SCTPO Citizen's Advisory Committee/Technical Advisory Committee (CAC/TAC) and the SCTPO Board on September 8, 2021, and September 9, 2021.

A Comments and Coordination Report will be finalized after the Public Hearing which will document all agency coordination, public involvement activities and public comments.

Date of Public Hearing:

Summary of Public Hearing

The Public Hearing is scheduled to be held in Spring 2025 both in-person and online.

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10. Commitments Summary

1. One recorded prehistoric archaeological site, Cocoa Hill (8BR04221) was identified in proximity to alternative Pond site 2B and an access road leading to Pond site 2A. The Preferred Alternative includes Pond site 2F as a preferred pond site in basin 2. If there are changes during the design phase that render Pond sites 2A or 2B under further consideration, coordination with SHPO and additional close-interval testing will take place to determine the extent of Cocoa Hill (8BR04221). In addition, as the site could be not fully delineated, the Seminole Tribe of Florida recommended avoidance of 8BR04221 by all proposed project activities.
2. The most recent USFWS *Standard Protection Measures for the Eastern Indigo Snake* will be adhered to during the construction.
3. Coordination with USFWS will be initiated if construction within the 660-foot protection buffer is proposed for nest BE082 during the nesting season (October 1 to May 15). If required FDOT or their representative will monitor the nest according to the most recent USFWS *Bald Eagle Monitoring Guidelines*.
4. FDOT commits to reinitiating consultation during design and permitting with USFWS for the eastern black rail and providing the information necessary to determine the type, degree, and extent of impacts to listed species potentially adversely impacted by the proposed project. FDOT will develop mitigation measures in consultation with the USFWS to offset unavoidable impacts. Completion of consultation and documentation of the project's compliance with the avoidance, minimization and mitigation requirements for the impacted resources will be provided by FDOT in a subsequent project re-evaluation prior to each segment.
5. If the listing status of the tricolored bat is elevated by the USFWS to Threatened or Endangered and the Preferred Alternative contains suitable habitat, the FDOT commits to no tree clearing or bridge/culvert work when day-time high temperatures are below 45 degrees, nor during maternity season (May 1st through July 15th). If tree clearing or bridge/culvert work is required during these months, consultation will be reinitiated.
6. If the listing status of the monarch butterfly is elevated by the USFWS to Threatened or Endangered prior to construction and the Preferred Alternative is located within the consultation area, FDOT commits to initiating consultation with the USFWS to determine the appropriate survey methodology and to address USFWS regulations regarding the protection of the monarch butterfly.
7. The FDOT is committed to the construction of feasible and reasonable noise abatement measures at the noise impacted locations identified as EB1, WB1 and WB2 contingent upon the following conditions:
Final recommendations on the construction of abatement measures are determined during the project's final design and through the public involvement process; Detailed noise analyses during the final design process support the need, feasibility and reasonableness of providing abatement; Cost analysis indicates that the cost of the noise barrier(s) will not exceed the cost reasonable criterion; Community input supporting types, heights, and locations of the noise barrier(s) is provided to the District Office; and Safety and engineering aspects as related to the roadway user and the adjacent property owner have been reviewed and any conflicts or issues resolved.
8. If there are additional project commitments, they will be included after the Public Hearing.

11. Technical Materials

The following technical materials have been prepared to support this Environmental Document and are included in the Project File.

Conceptual Stage Relocation Plan (October 2024)
NRCS Coordination Documentation (December 2024)
Sociocultural Data Report (February 2025)
Farmland Conversion Impact Rating Form (NRCS-CPA-106) (December 2024)
Cultural Resources Assessment Survey (July 2020)
Natural Resources Evaluation (March 2025)
NRE Eastern Black Rail Evaluation Memo (October 2024)
Location Hydraulic Report (May 2023)
Pond Siting Report (May 2023)
Natural Resources Evaluation Update Memo (April 2024)
Water Quality Impact Evaluation (December 2024)
Contamination Screening Evaluation Report (October 2024)
Noise Study Report (September 2024)
Utility Assessment Report (February 2023)
Value Engineering Study Report (November 2021)
Value Engineering Study Resolution Memo (November 2021)
Project Traffic Analysis Report (July 2019)
Project Traffic Analysis Report Reevaluation Memo (April 2024)
Interchange Modification Report (February 2022)
Intersection Control Evaluation (December 2024)
Draft Preliminary Engineering Report (June 2025)
Public Involvement Plan (December 2018)

Attachments

Planning Consistency

Project Plan Consistency Documentation (December 2024)

Social and Economic

Figure 3-1: Existing Land Use Map

Figure 3-2: Future Land Use Map - City of Cocoa

Figure 3-3: Future Land Use Map - Brevard County

USDA Farmlands Form Response (December 2024)

Cultural Resources

SHPO Concurrence (October 2020)

Section 4(f) Report

Natural Resources

FWC Letter on NRE Effect Determinations (April 2025)

USFWS Concurrence on Eastern Black Rail Evaluation (December 2024)

USFWS Concurrence on Scrub-jay and Caracara Survey (December 2019)

Planning Consistency Appendix

Contents:

Project Plan Consistency Documentation (December 2024)

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Space Coast Transportation Planning Organization

RESOLUTION # 24-10

2045 Long Range Transportation Plan Amendment No. 5

A RESOLUTION, adopting the Space Coast Transportation Planning Organization's 2045 Long Range Transportation Plan (LRTP) for the Palm Bay-Melbourne and Titusville Urbanized Areas.

WHEREAS, the Space Coast Transportation Planning Organization is the designated and constituted body responsible for the urban transportation planning and programming process for the Palm Bay-Melbourne and Titusville Urbanized Areas; and

WHEREAS, Federal regulations 23 C.F.R. 450.322, 450.324, 450.306 and FL State Statute 339.175 outline the requirements for MPOs to develop LRTPs through a performance-driven, outcome-based approach to planning for metropolitan areas of the State. The metropolitan transportation planning process shall be continuous, cooperative, and comprehensive; it should also provide for the consideration and implementation of projects, strategies, and services that will address all required factors; and

WHEREAS, the Long Range Transportation Plan (LRTP) was developed with local, regional, state, multi-modal and environmental agencies that depicts an accurate representation of the areas priorities as developed through the planning process carried on cooperatively in accordance with the provisions of 23 U.S.C. 134; and

WHEREAS, waiting for the next regularly scheduled Governing Board meeting for approval will cause unnecessary delay in FDOT operations; and

WHEREAS, this Amendment is being approved in compliance with Policy PLC-3, Budget and Finance Section 7.0(C)(1) SCTPO Executive Director Approval Authority, to ensure planning consistency with the SCTPO LRTP; and

WHEREAS, this Amendment will be presented to the full TPO Governing Board at their next regularly scheduled meeting.

NOW THEREFORE, BE IT RESOLVED, The Space Coast Transportation Planning Organization amends the 2045 Long Range Transportation Plan, Amendment No. 5, as detailed in Attachment "A".




Space Coast Transportation Planning Organization

Passed and duly adopted by the Space Coast Transportation Planning Organization Governing Board's Chair on the 15th day of December, 2023.

Certificate

The undersigned duly qualified as Chair of the Space Coast Transportation Planning Organization Governing Board certifies that the foregoing is a true and correct copy of a Resolution adopted at a legally convened meeting of the Space Coast Transportation Planning Organization Governing Board.

By: 
Andrea Young
Space Coast TPO Governing Board Chair


By: 
Georganna Gillette
Space Coast TPO Executive Director

TABLE 11.2: OTHER ARTERIAL (STATE/FEDERAL FUNDS) PROJECTS in millions YOE \$s						2021-2025				2026-2030				2031-2035				2036-2040				2041-2045				2021-2045
Table ID	FACILITY	FROM	TO	PROJECT	SOURCE	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	PD&E	PE	ROW	CST	TOTAL
T2.1	SR 46	I-95	US 1	Widen to 4 Lanes	Other Arterial													\$ 0.67	\$ 2.68							\$ 3.35
T2.2	SR 406 (Garden St.) at Singleton Ave.	N/A	N/A	Operational Analysis	Other Arterial						\$ 0.40									\$ 3.17	\$ 3.73					\$ 7.31
T2.3	Space Coast Trail	MINWR Park Entrance	Playalinda Parking Lot	Bike Path/Trail	DDR, DIH				\$ 6.84																	\$ 6.84
					TALT				\$ 1.86																	\$ 1.86
T2.4	FL Coast to Coast Parrish Park Trailhead	N/A	N/A	Bike Path/Trail	DIH, PLH				\$ 2.02																	\$ 2.02
T2.5	SR 405 (South St.)	SR 50	Rock Pit Rd.	Widen to 4 Lanes	Other Arterial									\$ 1.73	\$ 6.92					\$ 63.54				\$ 50.34	\$ 122.53	
T2.6	SR 524	S Friday Rd.	Industry Rd.	Widen to 4 Lanes	TMA (SU)		\$ 0.40													\$ 48.31				\$ 38.28	\$ 86.99	
					ACSU, CARU		\$ 1.39																			
					TALU		\$ 0.61																			
					Local Funds		\$ 5.00																			
T2.7	SR 501 (Clearlake Rd.)	Michigan Ave.	Industry Rd.	Widen to 4 Lanes	Other Arterial											\$ 24.83				\$ 24.64					\$ 49.47	
T2.8	SR 520	Orange County Line	West of SR 524	Resurfacing	DDR, DIH, DS				\$ 4.81																	\$ 4.81
T2.9	SR 520	Aurora Rd.	Hubert Humphrey Cswy.	Resurfacing	DDR, DIH		\$ 1.55		\$ 7.32																	\$ 8.87
					TMA (SU)				\$ 1.78																	\$ 1.78
T2.10	SR 520	Lake Dr.	Varr Ave.	Safety Project	ACSS, DDR		\$ 1.08		\$ 4.60																	\$ 5.68
T2.11	SR 520	E of Milford Point Dr.	E of Cape Canaveral Hospital	Resurfacing	DDR, DIH				\$ 3.95																	\$ 3.95
T2.12	SR 519/Fiske Blvd.	Prosperity Pl.	I-95 NB Ramps/Barnes Blvd.	Add Left Turn Lane(s)	ACFP				\$ 9.27																	\$ 9.27
T2.13	SR 519/Fiske Blvd.	I-95	SR 520	Resurfacing	DDR, DIH, DS				\$ 8.60																	\$ 8.60
T2.14	SR 3/N Courtenay Pkwy. at Mustang Way	N/A	N/A	Misc. Construction	ACSS, DDR			\$ 0.77	\$ 0.84																	\$ 1.61
T2.15	SR 3/N Courtenay Pkwy.	SR 528	Kennedy Space Center Gate	Resurfacing	DDR, DIH, SA				\$ 9.11																	\$ 9.11
T2.16	SR A1A at N Atlantic Ave./International Dr.	International Dr.	Long Point Rd.	Misc. Construction	TMA (SU)			\$ 2.64																		\$ 2.64
				Intersection Realignment/New 2 Lane Road	Other Arterial				\$ 5.40																	\$ 5.40
T2.17	SR A1A	Long Point Rd.	Just S. of the George King Blvd. On/Off Ramps	Roadway Improvements (Adding Curb/Gutter)	Other Arterial							\$ 18.00	\$ 12.45													\$ 30.45
T2.18	SR A1A	Cocoa Isle Blvd.	St. Lucie Ln.	Safety Project	ACSS				\$ 0.55																	\$ 0.55
T2.19	NB & SB SR A1A	Crescent Beach Dr.	Just S. of Minuteman Cswy.	Safety Project	ACSS		\$ 0.21		\$ 1.11																	\$ 1.32
T2.20	SR A1A	N 2nd St.	Sunflower St.	Roadway Improvements (Adding Curb/Gutter)	Other Arterial										\$ 0.49		\$ 3.01									\$ 3.51
T2.21	SR A1A	SR 518	Volunteer Way	Sidewalk	TMA (SU)			\$ 0.81																		\$ 0.81
					TALU			\$ 0.61																		\$ 0.61
T2.22	SR A1A at SR 518/East Eau Gallie Boulevard	N/A	N/A	Traffic Signals	ACSS		\$ 0.26		\$ 1.22																	\$ 1.48
T2.23	SR 518/West Eau Gallie Blvd.	East of I-95 NB Off Ramps	West of Intersection at Sarno Rd.	Traffic Ops Improvement	ACNP				\$ 2.83																	\$ 2.83
T2.24	SR 518/West Eau Gallie Blvd.	Jones Rd.	200' East of I-95 Interchange Ramps	Traffic Ops Improvement	ACNP, DDR				\$ 4.95																	\$ 4.95
T2.25	SR 5054 (Sarno Rd.) at SR 518 (Eau Gallie Blvd.)	N/A	N/A	Operational Improvements	Other Arterial					\$ 0.40							\$ 13.18									\$ 13.58
T2.26	SR 5054 at Wickham Rd.	N/A	N/A	Traffic Signal Update	DDR, DIH				\$ 0.54																	\$ 0.54
T2.27	SR 518/Eau Gallie Blvd. at Turtle Mound Rd.	N/A	N/A	Traffic Signals	DIH, DS				\$ 0.71																	\$ 0.71
T2.28	Wickham Rd. at SR 518 (Eau Gallie Blvd.)	N/A	N/A	Operational Improvements	Other Arterial								\$ 6.60													\$ 6.60
T2.29	SR 518/Eau Gallie Blvd. at Wickham Rd.	N/A	N/A	Traffic Signals	ACSS, DDR		\$ 0.51		\$ 0.67																	\$ 1.18
					TMA (SU)			\$ 0.25																		
T2.30	SR 518/Eau Gallie Blvd. at Croton Rd.	N/A	N/A	Traffic Signals	ACSS, DDR		\$ 0.43		\$ 0.39																\$ 0.82	
					TMA (SU)			\$ 0.30																	\$ 0.30	
T2.31	SR 518	US 1	Pineapple Ave.	Resurfacing	DDR, DIH, SA				\$ 1.29																\$ 1.29	
T2.32	US 192	Osceola County Line	Brandywine Rd./Columbia Ln.	Resurfacing	DDR, DIH, SA				\$ 12.79																	\$ 12.79
T2.33	US 192 at McClain	N/A	N/A	Traffic Signal Update	DIH, DS				\$ 0.52																	\$ 0.52
T2.34	US 192	Wickham Rd.	Dairy Rd.	Widen to 6 Lanes	Other Arterial					\$ 0.72					\$ 3.24				\$ 29.75				\$ 23.57			\$ 57.29
T2.35	US 192	Dairy Rd.	SR 507 (Babcock St.)	Widen to 6 Lanes	Other Arterial					\$ 0.34					\$ 1.55							\$ 16.88	\$ 11.25			\$ 30.02
T2.36	US 1 at Hibiscus Blvd. and US 192 Intersections	N/A	N/A	Traffic Signal Update	DDR				\$ 0.01																	\$ 0.01
T2.37	US 192 at Hollywood Blvd.	N/A	N/A	Add Turn Lane(s)	ACSU, DDR			\$ 1.82																		\$ 1.82
					TMA (SU)		\$ 1.04	\$ 3.34																	\$ 4.38	
T2.38	US 192	Riverside Pl.	SR A1A/Miramar Ave.	Resurfacing	DDR, DIH				\$ 2.13																	\$ 2.13
				Landscaping	DS		\$ 0.23																		\$ 0.23	
T2.39	SR 514 (Malabar Rd.)	Weber Rd.	Corey Rd.	Add Left Turn Lane(s)	DDR			\$ 0.50	\$ 0.06																	\$ 0.56

Space Coast Transportation Planning Organization

Transportation Improvement Program FY 25 - 29

Adopted by the Space Coast TPO Board on July 12, 2024

Roll Forward Amendment Sept. 12, 2024, Emergency TIP Amendment October 8, 2024



Space Coast TPO - TIP
Latest Amended TIP 10/8/24

Space Coast Transportation Planning Organization

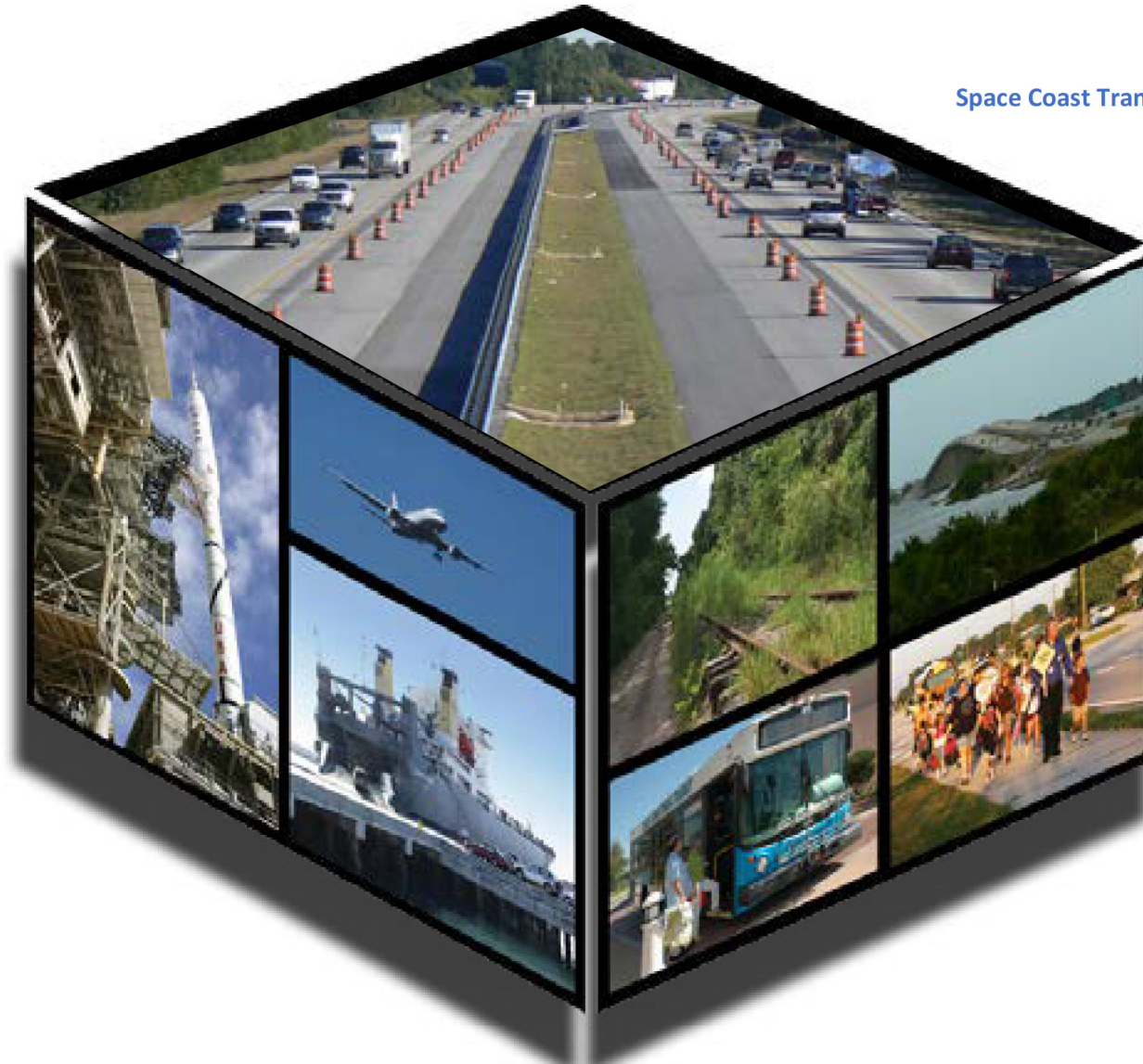
2725 Judge Fran Jamieson Way

Building B, Room 105

Melbourne, Florida 32940

Phone: 321-690-6890

Fax: 321-690-6827



Space Coast TPO - LRTP
Amendment #5 - adopted 12/15/23

The preparation of this report has been financed in part through grant(s) from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program,

Space Coast TPO Transportation Improvement Program - FY 2025 - 2029

Section A - Highway & Bridge Capacity

Phase	Fund Source	2025	2026	2027	2028	2029	Total
Proj# 4372101	MALABAR RD FROM ST JOHNS HERITAGE PKWY TO MINTON RD				Length: 3.97 MI	*Non-SIS*	
Type of Work:	PD&E/EMO STUDY				Lead Agency: MANAGED BY CITY OF PALM BAY		
					LRTP #: Page 215 & 216		
Description:	Off State Highway System						
PE	LF	7,000,000	0	0	0	0	7,000,000
PE	ACSU	1,942,634	0	0	0	0	1,942,634
PE	TALU	476,000	0	0	0	0	476,000
PE	CARU	292,012	0	0	0	0	292,012
PE	SU	180,969	0	0	0	0	180,969
PE	TALT	147,385	0	0	0	0	147,385
Total		10,039,000	0	0	0	0	10,039,000
	Prior Years Cost	1,374,667	Future Years Cost			Total Project Cost	11,413,667
Proj# 4379831	SR 524 FROM FRIDAY ROAD TO INDUSTRY ROAD				Length: 3.141 MI	*Non-SIS*	
Type of Work:	PD&E/EMO STUDY				Lead Agency: MANAGED BY FDOT		
					LRTP #: Page 171		
Description:	Widening 2 to 4 lanes						
PE	LF	5,000,000	0	0	0	0	5,000,000
PE	CARU	990,018	0	0	0	0	990,018
PE	TALU	608,949	0	0	0	0	608,949
PE	SU	404,320	0	0	0	0	404,320
PE	ACSU	399,055	0	0	0	0	399,055
Total		7,402,342	0	0	0	0	7,402,342
	Prior Years Cost	2,058,913	Future Years Cost			Total Project Cost	9,461,255
Proj# 4404241	NASA CAUSEWAY BRIDGE				Length: 3.593 MI	*SIS*	
Type of Work:	BRIDGE REPLACEMENT				Lead Agency: MANAGED BY FDOT		
					LRTP #: Page 142		
Description:							
INC	GMR	2,000,000	0	0	0	0	2,000,000
Total		2,000,000	0	0	0	0	2,000,000
	Prior Years Cost	148,310,746	Future Years Cost			Total Project Cost	150,310,746



Florida Department of

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Web Application

Federal Aid Management Sabrina Aubery - Manager

STIP Project Detail and Summaries Online Report

** Repayment Phases are not included in the Totals **

Selection Criteria	
Current STIP Financial Project: 437983 1 As Of: 12/17/2024	Detail Related Items Shown

HIGHWAYS								
Item Number: 437983 1		Project Description: SR 524 FROM FRIDAY ROAD TO INDUSTRY ROAD						
District: 05		County: BREVARD		Type of Work: PD&E/EMO STUDY			Project Length: 3.141MI	
				Fiscal Year				
Phase / Responsible Agency		<2025	2025	2026	2027	2028	>2028	All Years
PLANNING / MANAGED BY FDOT								
Fund Code:	DS-STATE PRIMARY HIGHWAYS & PTO	181,559						181,559
P D & E / MANAGED BY FDOT								
Fund Code:	DDR-DISTRICT DEDICATED REVENUE	733,264						733,264
	DIH-STATE IN-HOUSE PRODUCT SUPPORT	92,092	7,500					99,592
	DS-STATE PRIMARY HIGHWAYS & PTO	153,584						153,584
	SU-STP, URBAN AREAS > 200K	941,762	1,674					943,436
Phase: P D & E Totals		1,920,702	9,174					1,929,876
PRELIMINARY ENGINEERING / MANAGED BY FDOT								
Fund Code:	ACSU-ADVANCE CONSTRUCTION (SU)		808,375					808,375
	CARU-CARB FOR URB. AREA > THAN 200K		991,375					991,375

SR 524 FROM FRIDAY ROAD TO INDUSTRY ROAD // 437983-1-21-01

DIH-STATE IN-HOUSE PRODUCT SUPPORT	197	10,803					11,000
DS-STATE PRIMARY HIGHWAYS & PTO	1,989						1,989
LF-LOCAL FUNDS		4,289,942					4,289,942
SU-STP, URBAN AREAS > 200K		177,788					177,788
TALU-TRANSPORTATION ALTS->200K		1,134,862					1,134,862
Phase: PRELIMINARY ENGINEERING Totals	2,186	7,413,145					7,415,331
Item: 437983 1 Totals	2,104,447	7,422,319					9,526,766
Project Totals	2,104,447	7,422,319					9,526,766
Grand Total	2,104,447	7,422,319					9,526,766

\$10,803 of District in-house support funds

\$7,413,145
- 10,803 (Dist In-house support funds)

\$7,402,342

This site is maintained by the Office of Work Program and Budget, located at 605 Suwannee Street, MS 21, Tallahassee, Florida 32399.

For additional information please e-mail questions or comments to:
Federal Aid Management
Sabrina Aubery: Sabrina.Aubery@dot.state.fl.us Or call 850-414-4449
Or
Denise Strickland: Denise.Strickland@dot.state.fl.us Or call 850-414-4491

[Reload STIP Selection Page](#)

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Florida Department of Transportation

Consistent, Predictable, Repeatable

Social and Economic Appendix

Contents:

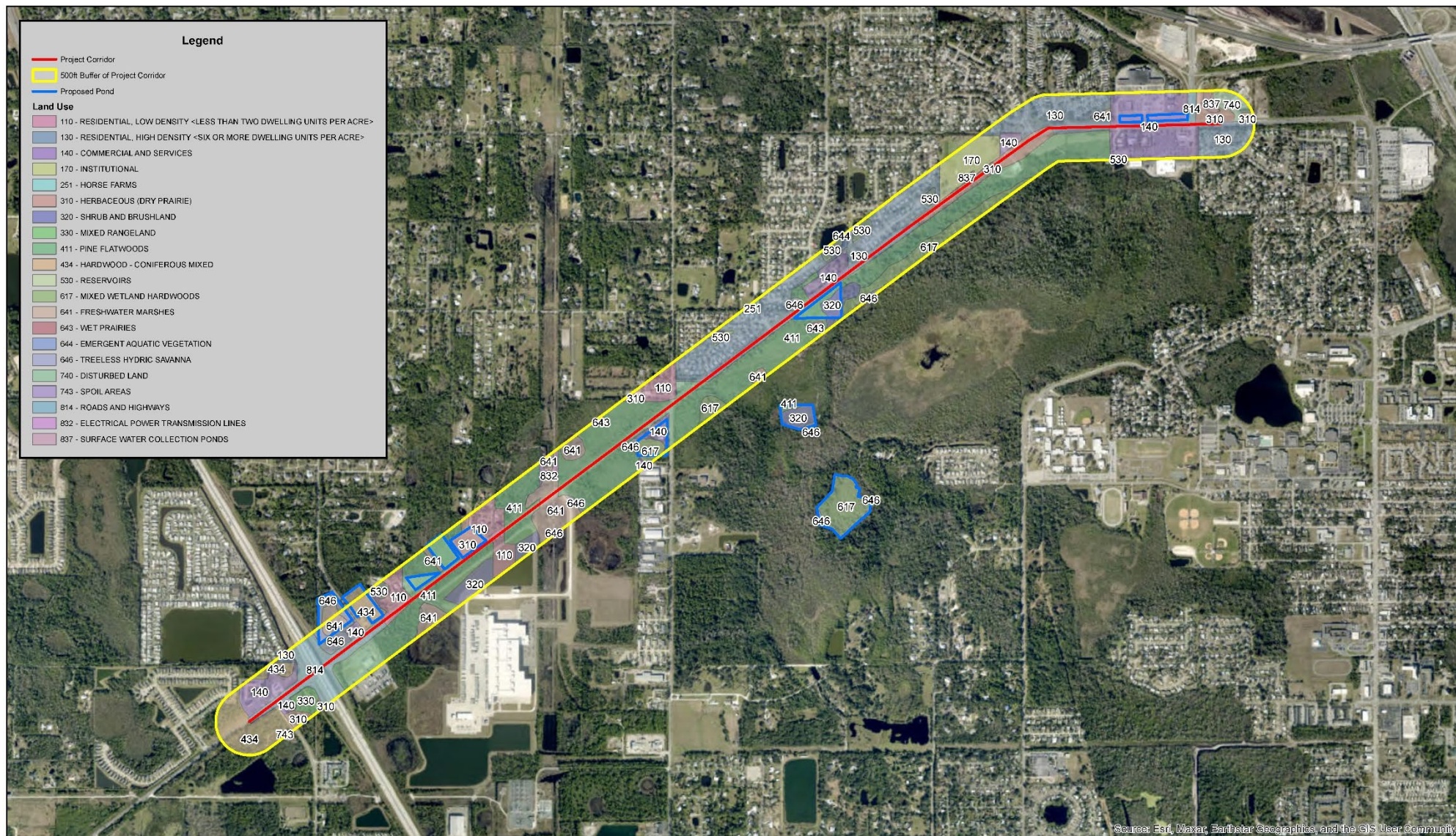
Figure 3-1: Existing Land Use Map

Figure 3-2: Future Land Use Map - City of Cocoa

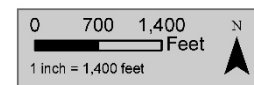
Figure 3-3: Future Land Use Map - Brevard County

USDA Farmlands Form Response (December 2024)

DRAFT



REFERENCE: THE 2018 AERIAL PHOTOGRAPH WAS OBTAINED FROM ESRI. THE LAND USE DATA WAS OBTAINED FROM THE SURVMD. THE PRESENTED DATA IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. PSI ASSUMES NO RESPONSIBILITY FOR ANY DECISIONS MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED FROM THE ABOVE DATA.



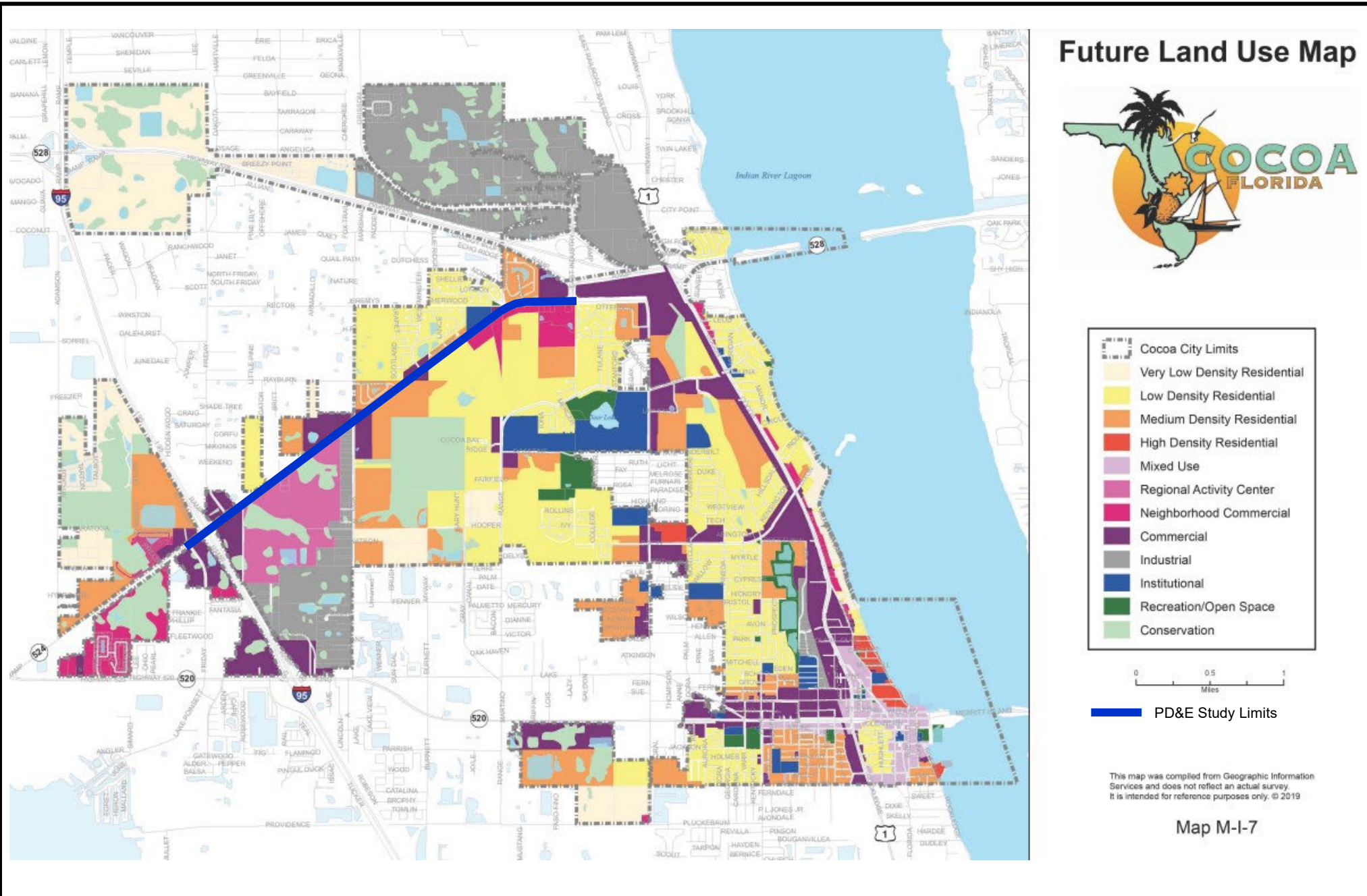
SR 524 PD&E Study
From Friday Road (South) to Industry Road
 FPID No. 437983-1
 Brevard County

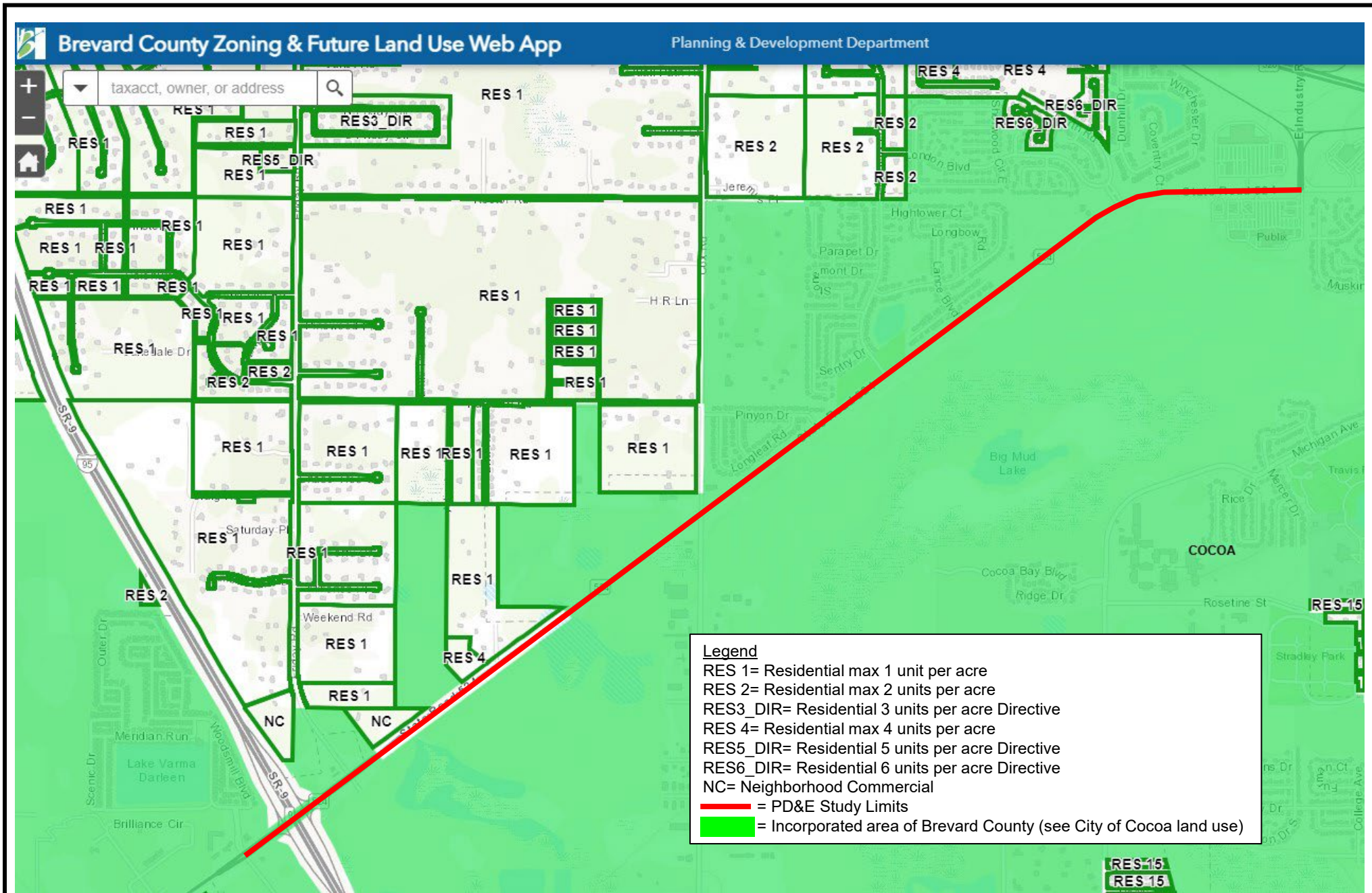
Existing Land Use Map

Figure

3-1

Page 30 of 96





Jeffrey Novotny

From: AceitunoDiaz, Josue - FPAC-NRCS, FL <Josue.AceitunoDiaz@usda.gov>
Sent: Monday, December 16, 2024 11:40 AM
To: edward.northey@dot.state.fl.us
Cc: Jeffrey Novotny; joseph.fontanelli@dot.state.fl.us; maria.serrano-acosta@dot.state.fl.us; Giuliani, Isabelle - FPAC-NRCS, FL; Townsend, Stephanie - FPAC-NRCS, FL
Subject: RE: [External Email]FM 437983-1; SR 524 Widening PD&E, Farmlands Concurrence
Attachments: CPA-106.pdf

You don't often get email from josue.aceitunodiaz@usda.gov. [Learn why this is important](#)

Edward,

Good Afternoon Happy Monday to you as well,

Please see attached to this email the NRCS Farmland Conversion Impact Rating with NRCS portion completed based on the information that was provided.

If you have any questions please reach out,

Best regards,

Josué Aceituno-Díaz

Resource Soil Scientist (Area 3 & 4)

Sebring Field Office

USDA-NRCS

4505 George Blvd

Sebring, FL 33875

Office: (863) 451-3421

Mobile: (863) 464-3969

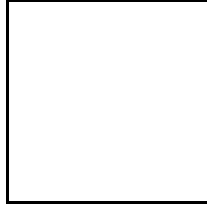
josue.aceitunodiaz@usda.gov

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From: Northey, Edward <edward.northey@dot.state.fl.us>
Sent: Monday, December 16, 2024 9:42 AM
To: AceitunoDiaz, Josue - FPAC-NRCS, FL <Josue.AceitunoDiaz@usda.gov>
Cc: jeffrey.novotny@consoreng.com; joseph.fontanelli@dot.state.fl.us; maria.serrano-acosta@dot.state.fl.us
Subject: [External Email]FM 437983-1; SR 524 Widening PD&E, Farmlands Concurrence

[External Email]

If this message comes from an **unexpected sender** or references a **vague/unexpected topic**;
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Please send any concerns or suspicious messages to: Spam.Abuse@usda.gov



Northey, Edward sent you a secure message

[Access message](#)

Josue,

Good Morning - Happy Monday.

Please see attached the requested information for your review. The Department appreciates your help in this matter and looks forward to your concurrency post review. If you have any questions, please do not hesitate to contact me.

Respectfully,
/E.

Edward D. Northey, FCCM
Environmental Management Supervisor
Planning & Environmental Management Office
Florida Department of Transportation – District Five
719 S. Woodland Blvd.
DeLand FL, 32720
Office: (386) 943 - 5047



Attachments expire on Dec 30, 2024



4 compressed files

4_Ponds.shp.zip, Project_ROW.zip, USA SSURGO - Farmland Class1.tif.vat.zip,
USA_SSURGO_FL_Impacts.zip



1 PDF

FM 437983-1, SR 524 Widening email chain_EN.pdf

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DRAFT

U.S. DEPARTMENT OF AGRICULTURE
Natural Resources Conservation Service

NRCS-CPA-106

(Rev. 1-91)

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	4. Sheet 1 of _____	
1. Name of Project		5. Federal Agency Involved		
2. Type of Project		6. County and State		
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form). YES <input type="checkbox"/> NO <input type="checkbox"/>		4. Acres Irrigated Average Farm Size		
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: _____ % _____		7. Amount of Farmland As Defined in FPPA Acres: _____ % _____	
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System		10. Date Land Evaluation Returned by NRCS	
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment		
		Corridor A	Corridor B	Corridor C
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Corridor				
PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)				
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points		
1. Area in Nonurban Use		15		
2. Perimeter in Nonurban Use		10		
3. Percent Of Corridor Being Farmed		20		
4. Protection Provided By State And Local Government		20		
5. Size of Present Farm Unit Compared To Average		10		
6. Creation Of Nonfarmable Farmland		25		
7. Availability Of Farm Support Services		5		
8. On-Farm Investments		20		
9. Effects Of Conversion On Farm Support Services		25		
10. Compatibility With Existing Agricultural Use		10		
TOTAL CORRIDOR ASSESSMENT POINTS		160		
PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)		100		
Total Corridor Assessment (From Part VI above or a local site assessment)		160		
TOTAL POINTS (Total of above 2 lines)		260		
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>	
5. Reason For Selection:				

Signature of Person Completing this Part:

DATE

NOTE: Complete a form for each segment with more than one Alternate Corridor

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?

More than 90 percent - 15 points
 90 to 20 percent - 14 to 1 point(s)
 Less than 20 percent - 0 points

- (2) How much of the perimeter of the site borders on land in nonurban use?

More than 90 percent - 10 points
 90 to 20 percent - 9 to 1 point(s)
 Less than 20 percent - 0 points

- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?

More than 90 percent - 20 points
 90 to 20 percent - 19 to 1 point(s)
 Less than 20 percent - 0 points

- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?

Site is protected - 20 points
 Site is not protected - 0 points

- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ?

(Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
 As large or larger - 10 points
 Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?

Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
 Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
 Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?

All required services are available - 5 points
 Some required services are available - 4 to 1 point(s)
 No required services are available - 0 points

- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?

High amount of on-farm investment - 20 points
 Moderate amount of on-farm investment - 19 to 1 point(s)
 No on-farm investment - 0 points

- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?

Substantial reduction in demand for support services if the site is converted - 25 points
 Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
 No significant reduction in demand for support services if the site is converted - 0 points

- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?

Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
 Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
 Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

Cultural Resources Appendix

Contents:

SHPO Concurrence (October 2020)

Section 4(f) Report

DRAFT



Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. Woodland Blvd.
DeLand, FL 32720

KEVIN J. THIBAUT, P.E.
SECRETARY

September 15, 2020

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

Attn: Dr. Adrienne Daggett, Transportation Compliance Review Program

RE: Cultural Resource Assessment Survey (revised)
State Road 524 Improvements
Project Development and Environment (PD&E) Study
North Friday Road to Industry Road
Brevard County, Florida
FPID No.: 437983-1-22-01

Dear Dr. Parsons,

Enclosed please find one copy of the revised report titled *Cultural Resource Assessment Survey for the State Road 524 Improvements Project Development and Environment Study from North Friday Road to Industry Road, Brevard County, Florida*. This report presents the findings of a Phase I cultural resource assessment survey (CRAS) conducted in support of a Project Development and Environment (PD&E) study for improvements of State Road (SR) 524 in Brevard County, Florida. The Florida Department of Transportation (FDOT), District 5, is investigating the expansion of the two-lane rural roadway to a four-lane divided facility to increase the capacity of SR 524 along an approximately 3.4-mile (5.5-kilometer) segment from North Friday Road northeast to Industry Road. The project also will improve safety, provide multi-modal facilities for pedestrian and bicyclists, and evaluate improvements to the Interstate 95 (I-95) interchange. Additionally, 14 potential pond locations were surveyed in conjunction with the SR 524 improvements.

The project Area of Potential Effects (APE) for the roadway corridor was defined as the maximum SR 524 right-of-way incorporating all potential alternatives, extended to the back or side property lines of parcels adjacent to proposed new right-of-way, or a distance of no more than 328 feet (100 meters) from the maximum right-of-way line. For the proposed ponds, the APE was defined as the pond footprint with an additional 100-foot (30.5-meter) buffer. The archaeological survey was conducted within the existing and proposed right-of-way, as well as

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Dr. Parsons, SHPO
FPID 437983-1-22-01
September 15, 2020
Page 2

within the pond footprints. The historic structure survey was conducted within the entire SR 524 Improvements APE and SR 524 Improvements Ponds APE.

This CRAS was conducted to comply with Chapter 267 of the Florida Statutes and Rule Chapter 1A-46, Florida Administrative Code. All work was performed in accordance with Part 2, Chapter 8 of the FDOT's PD&E Manual (revised July 2020), as well as the Florida Division of Historical Resources' (FDHR) recommendations for such projects, as stipulated in the FDHR's *Cultural Resource Management Standards & Operations Manual, Module Three: Guidelines for Use by Historic Preservation Professionals*. The Principal Investigator for this project meets the Secretary of the Interior's *Standards and Guidelines for Archeology and Historic Preservation* (48 FR 44716-42). This study complies with Public Law 113-287 (Title 54 U.S.C.), which incorporates the provisions of the National Historic Preservation Act (NHPA) of 1966, as amended, and the Archeological and Historic Preservation Act of 1979, as amended. The study also complies with the regulations for implementing NHPA Section 106 found in 36 CFR Part 800 (*Protection of Historic Properties*).

The archaeological field survey included visual reconnaissance and intensive systematic subsurface examination of the project right-of-way and pond footprints. A total of 75 shovel tests were excavated, with three shovel tests positive for cultural material, resulting in the identification of one newly recorded prehistoric archaeological site, Cocoa Hill (8BR04221). This site was identified along a proposed access road to Ponds 2B and 2A; the narrow footprint limited delineation of the site to a single transect of shovel tests. As testing outside of the right-of-way is beyond the scope of this project, insufficient information is available to evaluate 8BR04221 for listing on the National Register of Historic Places (NRHP). Although the density of prehistoric cultural materials was moderate to high, the nature of the artifact assemblage is unexceptional. Considering the limited artifact assemblage, and the lack of diagnostic artifacts and subsurface features, it does not appear that the Cocoa Hill site (8BR04221), as expressed within the current project limits, has the potential to yield further information important in the prehistory of the region. In the opinion of SEARCH, insufficient information is available to evaluate 8BR04221 in its entirety; however, the portion of 8BR04221 located within the SR 524 Improvements project limits is recommended ineligible for the NRHP.

A discussion was initiated with the Project Engineer regarding the proposed work in the vicinity of the newly-recorded archaeological site. First, Ponds 2A and 2B, proposed along the access road where Cocoa Hill (8BR04221) is located, are only two of seven ponds (2A-2F) associated with the drainage area defined as "Basin 2." Second, for Basin 2 (Ponds 2A-2F), it is anticipated that only two of the seven proposed ponds will be selected and constructed (one for stormwater management and the other for floodplain compensation). Third, Pond 2A is the least favorable pond due to other contributing factors such as location, hydraulics, and conservation. The access road would only need to be extended through the newly recorded site should Pond 2A be selected.

In terms of the access road, it is proposed to be 12-foot-wide within a 30-foot drainage easement. The access road will be mostly in-fill with a 12-inch stabilized (no asphalt) base. The

Dr. Parsons, SHPO
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stabilization will not be cut into the ground as it will be part of the fill material. Also, should Pond 2B be selected and not Pond 2A, the access road will end before reaching the boundary of the Cocoa Hill (8BR04221) site.

As discussed above, shovel testing revealed a moderate to high density of prehistoric cultural materials within the recorded boundary of the Cocoa Hill (8BR04221) site but the nature of the artifact assemblage is unexceptional exhibiting a lack of stone tools, diagnostic artifacts, and subsurface features. Due to the limits of delineation, the density of recovered artifacts, and the potential for the site to extend beyond the limits of the archaeological APE, if additional work is proposed outside of the current right-of-way and pond footprints within 100 meters of 8BR04221, additional archaeological survey will be required.

No other sites or occurrences were identified as part of the archaeological survey. No further archaeological work is recommended for the SR 524 Improvements project.

The architectural survey resulted in the identification and evaluation of six historic resources within the SR 524 Improvements APE, including one previously recorded resource and five newly recorded resources. SEARCH recommends that the six historic resources (8BR03331, 8BR04195-8BR4198, and 8BR04214) are ineligible for the NRHP due to a lack of the significant historic associations and architectural distinction. No further architectural work is recommended.

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

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

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

Sincerely,



William G. Walsh
Environmental Manager
FDOT, District Five

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The Florida Division of Historical Resources finds the attached Cultural Resource Assessment Report complete and sufficient and ☐ concurs / ☐ does not concur with the determinations of historic significance provided in this cover letter and ☐ does / ☐ does not find applicable the determinations of effects provided in this cover letter for SHPO/FDHR Project File Number _____.

FDHR Comments:

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

October 2, 2020

Date

Section 4(f) Resources

Florida Department of Transportation

SR 524 FROM FRIDAY ROAD TO INDUSTRY ROAD

District: FDOT District 5

County: Brevard County

ETDM Number: 14321

Financial Management Number: 437983-1-21-01

Federal-Aid Project Number: D518-034-B

Project Manager: Maria Serrano-Acosta

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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DRAFT

Summary and Approval

Resource Name	Facility Type	Property Classification	Owner/Official with Jurisdiction	Recommended Outcome	OEM SME Action
Junny Rios Martinez Park	County Park	Park/Rec Area	City of Cocoa/Brevard County Parks and Recreation Department	No Use	Determination 11-19-2024
Eastern Florida State College Fred Gay Golf Academy	Golf Training Facility	Park/Rec Area	Eastern Florida State College	No Use	Determination 11-19-2024

Junny Rios Martinez Park

Facility Type: County Park

Property Classification: Park/Rec Area

Address and Coordinates:

Address: 2100 Westminster Dr, Cocoa, FL, 32926, USA

Latitude: 28.39010 Longitude: -80.78160

Description of Property:

Resource Location and Size of Property

The Junny Rios Martinez Park (referred to as the Park) is approximately 6 acres in overall size, separated into two areas on either side of Westminster Drive. The west area is approximately 3.46 acres and the east area is approximately 2.5 acres. The southern boundaries of both the west and east areas about the north right of way (ROW) line of SR 524. See **Figure 1-1** for property information for the west and east areas from Brevard County Property Appraiser's office. The Park was named after the memory of a local youth Junny Rios-Martinez as shown on memorial marker at Park in **Figure 1-2**. The property was sold to the City of Cocoa in 1996. The project location map showing the location of the Park is included in the Project-Level Attachments as well as the deed showing property ownership from the County Clerk's website.



Figure 1-1: Brevard County Property Appraiser Information



Figure 1-2: Memorial Marker at Park

Park Property Access

Vehicle access to both the west and east areas of the Park are from driveway entrances located along either side of Westminster Drive, approximately 150 feet north of the northern ROW line of SR 524. Street level photos along Westminster Drive of the vehicle access points are shown on **Figure 1-3**. There are parking areas on both west and east areas. Concrete walking paths within both west and east areas of the Park connect to the existing sidewalk (approx. 6-foot width) along the north ROW line of SR 524. Street level photos of the sidewalk connection points along SR 524 are shown on **Figure 1-4**.

West Vehicle Entrance



East Vehicle Entrance

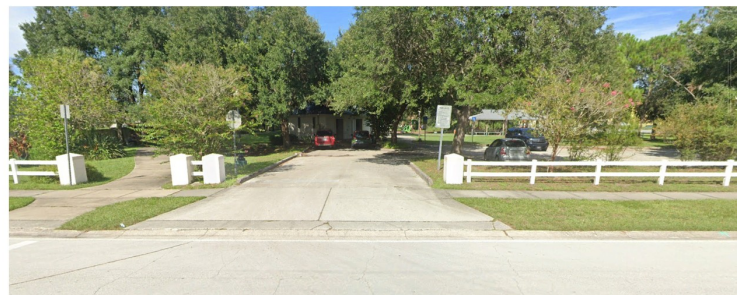


Figure 1-3: Vehicle Entrances to Park

SR 524 Sidewalk Access - West Area



SR 524 Sidewalk Access - East Area



Figure 1-4: Sidewalk Access Points to Park

Park Amenities

The Park provides recreation for local and Brevard County residents. Amenities for the west area include a walking path, tennis court, volleyball court, basketball court, covered shelter/pavilion. Amenities for the east area include a playground, covered shelter/pavilion and restrooms. The west pavilion is 100 square feet with 2 tables. The east pavilion is 1,200 square feet with 8 tables, 2 grills, water and electricity. Patrons rent and reserve use of the pavilions through the Brevard County website. The western portion of the west area is wooded. The eastern portion of the east area is open partially shaded green space. See **Figure 1-5** for location of Park entrances and amenities within the west and east areas. The Park sign located in the northeast corner of the SR 524 intersection with Westminster Drive is shown on **Figure 1-6**.



Figure 1-5: Park Amenities and Access Points Map



Figure 1-6: Park Sign Located at Northwest Corner of SR 524 at Westminster Drive

Owner/Official with Jurisdiction: City of Cocoa/Brevard County Parks and Recreation Department

Relationship Between the Property and the Project

Preferred Alternative Improvements at Park location

See **Figure 1-7** for the proposed SR 524 improvements in relation to the Park property from the Concept Plans. The entrances to the west and east areas of the Park are not located along SR 524 and are located along Westminster Drive. The Park entrances will remain as existing. The SR 524 intersection with Westminster Drive is currently unsignalized and will remain unsignalized with the Preferred Alternative. The Preferred Alternative provides a full median opening at the Westminster Drive location, so full vehicle access to and from SR 524 at Westminster Drive will remain as existing. An eastbound left turn lane and a westbound right turn lane will be provided along SR 524 at the Westminster Drive intersection.

The proposed SR 524 northern roadway edge of pavement will not move closer to the Park than the existing edge of pavement. The existing 6-foot sidewalk along the north ROW line of SR 524 will be replaced with a wider 14-foot-wide shared use path with the same connections to the west and east areas of the Park.

Concept Plan Sheet 9

Concept Plan Sheet 10

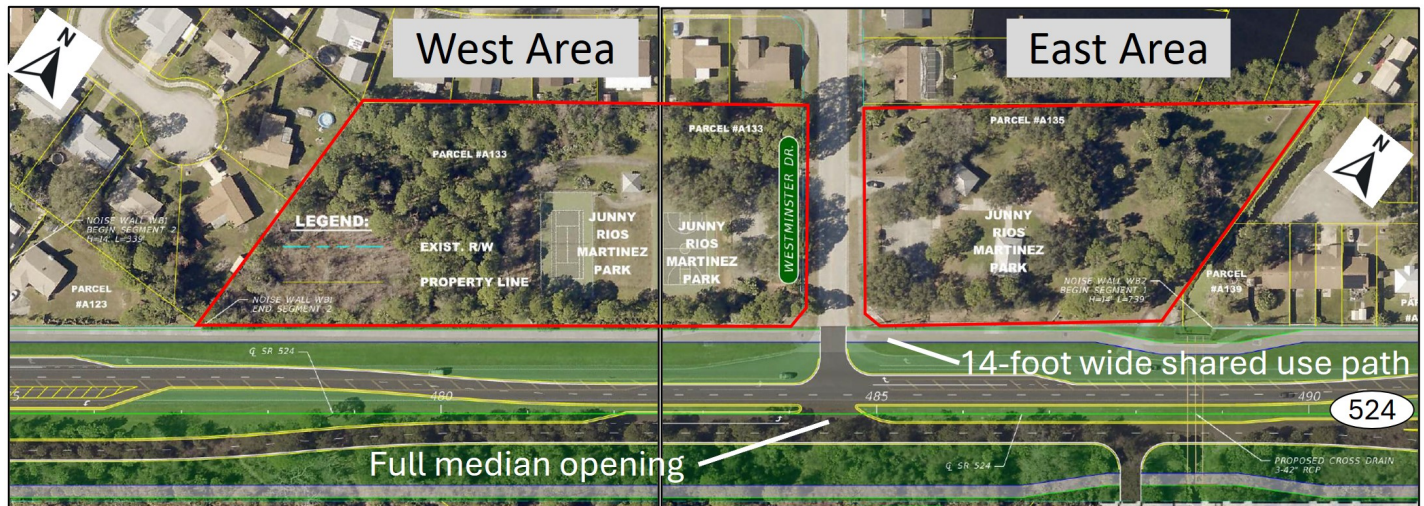


Figure 1-7: Concept Plans Showing Project Improvements Adjacent to Park

Impact Evaluation

The SR 524 improvements will not directly impact any element or amenity within the west or east areas of the Park property, nor obstruct the existing Park sign. There are no off-site stormwater management ponds proposed within or adjacent to the limits of the Park. There will be no temporary occupancy for grading or to provide staging or access areas for the project.

A *Noise Study Report* was prepared for this project. The projected noise level for the west and east areas of the Park does not exceed the relevant threshold in paragraph f(2) of CFR 774.15(f). The existing average noise level for the west and east Park areas is 64.7 A-weighted decibels (dB[A]). With the proposed improvements, the traffic noise for both sites will decrease to an average of 63.6 dB(A). At 63.7 and 63.5 dB(A). Neither west nor east area receptors are predicted to exceed the Noise Abatement Criteria (Category C, which is 67.0 dB[A]) after the project is built. There are no noise impacts predicted for the Park receptors; therefore, abatement consideration is not required.

No acquisition or occupation of land from the protected properties, on either a temporary or permanent basis, will occur. Additionally, there are no meaningful proximity impacts to the protected properties, and there will be no impacts to the access and usage of the protected properties.

Yes No

☐ ☒ Will the property be "used" within the meaning of Section 4(f)?

Recommended Outcome: No Use

OEM SME Determination Date: 11-19-2024

Eastern Florida State College Fred Gay Golf Academy

Facility Type: Golf Training Facility

Property Classification: Park/Rec Area

Address and Coordinates:

Address: 3570 State Road 524, Cocoa, FL, 32926, USA

Latitude: 28.39550 Longitude: -80.77419

Description of Property:

Location and Size of Property

The Fred Gay Golf Academy (referred to as the Golf Academy) is approximately 13.47 acres in size. The southern boundary abuts the northerly right of way (ROW) line of SR 524 between Lance Boulevard to the west and London Boulevard to the east. See **Figure 2-1** for property information from Brevard County Property Appraiser's office. The property was sold to the Brevard Community College, now named Eastern Florida State College, in 1976. The golf academy was named for businessman Fred Gay in 2008, who was a longtime supporter of the college's athletic programs. The project location map showing the location of the Golf Academy is in the Project-Level Attachments.



Figure 2-1: Property Information from Brevard County Property Appraiser Website

Park Property Access

Vehicle access to the Golf Academy is from a driveway entrance located along the north side of SR 524 approximately 875 feet east of Lance Boulevard. A street level photo along SR 524 showing the Golf Academy access point is shown on **Figure 2-2**. There is a gate which restricts access outside of operating hours. The Eastern Florida State College website

indicates the hours of operation are seven days a week from 9 a.m. to 5:15 p.m. Pedestrian access utilizes the same driveway entrance as vehicles. A chain link fence separates the Golf Academy facilities from SR 524 and adjacent properties.

Vehicle Entrance along North Side of SR 524



Figure 2-2: Vehicle Access to Golf Academy from SR 524

Golf Academy Amenities

The Golf Academy provides recreation for local residents and Eastern Florida State College students. The facility includes a public tee (100 yards long by 12 yards wide), a 6,500-square-foot putting green, two short-game areas with a practice bunker, a full-size classroom for college students, and a team room for members of the Eastern Florida State College men's and women's golf teams. See **Figure 2-3** for map showing the location of the Golf Academy entrance and amenities. The Golf Academy's sign located along the north side of SR 524 on Golf Academy property is shown on **Figure 2-4**.



Figure 2-3: Golf Academy Entrance and Amenities



Figure 2-4: Golf Academy Sign

Owner/Official with Jurisdiction: Eastern Florida State College

Relationship Between the Property and the Project

Preferred Alternative Improvements in Relation to Golf Academy

See **Figure 2-5** for the proposed SR 524 improvements in relation to the Resource property from the Concept Plans. The unsignalized entrance to the Golf Academy is located along the north side of SR 524. The existing entrance will remain. Vehicle access to and from the Golf Academy with the Preferred Build Alternative is shown on **Figure 2-6**. The ingress from the east and egress to the west will remain as in the existing condition. A directional median opening providing a dedicated left turn lane for vehicles along SR 524 is proposed which will provide ingress access to the Golf Academy from the west. Egress from the Golf Academy to the east will require vehicles to turn right onto SR 524, travel approximately 800-feet to the west and make a u-turn at the proposed median opening at Lance Boulevard to head east on SR 524.

The proposed SR 524 northern roadway edge of pavement will not move closer to the Golf Academy than the existing edge of pavement. The existing sidewalk along the north ROW line of SR 524 will be replaced with a wider 14-foot-wide shared use path. The shared use path will be connected to the Golf Academy entrance at the same location as the existing SR 524 sidewalk connection.

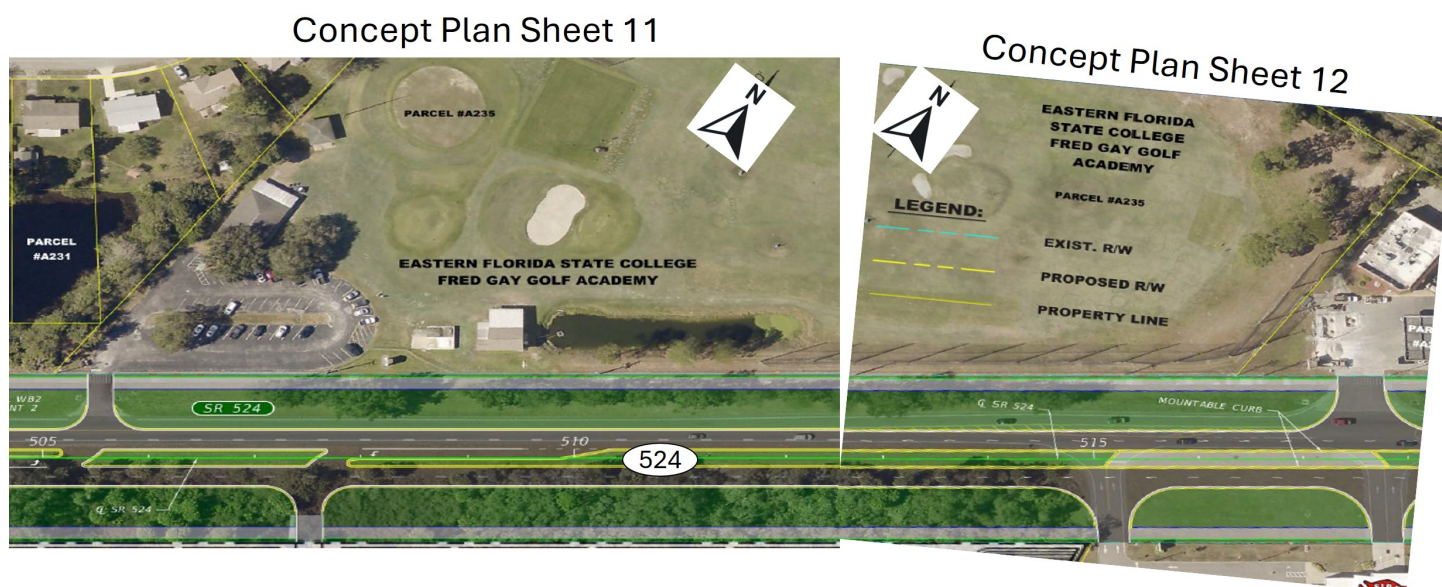


Figure 2-5: Concept Plans Showing Project Improvements Adjacent to Golf Academy

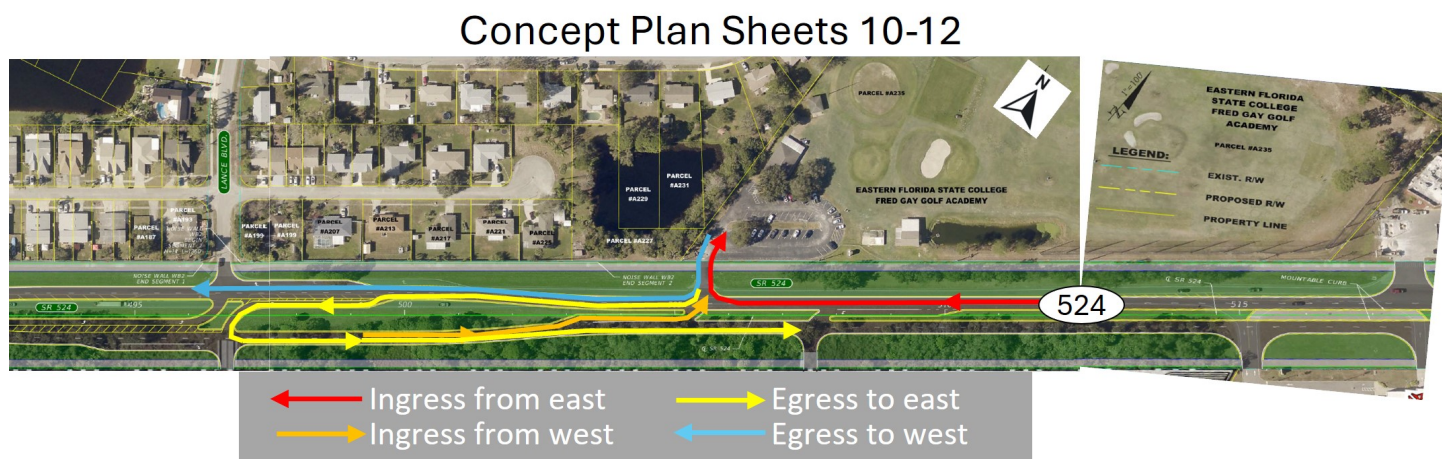


Figure 2-6: Proposed Access to and from the Golf Academy

Impact Evaluation

The SR 524 improvements will not directly impact any element or amenity within the Golf Academy, nor obstruct the existing Golf Academy sign. There are no off-site stormwater management ponds proposed within the limits of the Golf Academy. There will be no temporary occupancy for grading or to provide staging or access areas for the project.

A *Noise Study Report* was prepared for this project. The projected noise level for the Golf Academy does not exceed the relevant threshold in paragraph f(2) of CFR 774.15(f). The existing and no-build noise levels for the Golf Academy are 59.8 and 60.6 dB[A] respectively. With the proposed improvements, the predicted noise level is 58.3 dB(A), a 1.5 dB(A) decrease from existing condition. There are no noise impacts predicted for the Golf Academy receptor; therefore, abatement consideration is not required.

No acquisition or occupation of land from the protected properties, on either a temporary or permanent basis, will occur. Additionally, there are no meaningful proximity impacts to the protected properties, and there will be no impacts to the access and usage of the protected properties. Therefore, the project will have No Use of this recreational Section 4(f) resource.

Yes No

☐
☒

Will the property be "used" within the meaning of Section 4(f)?

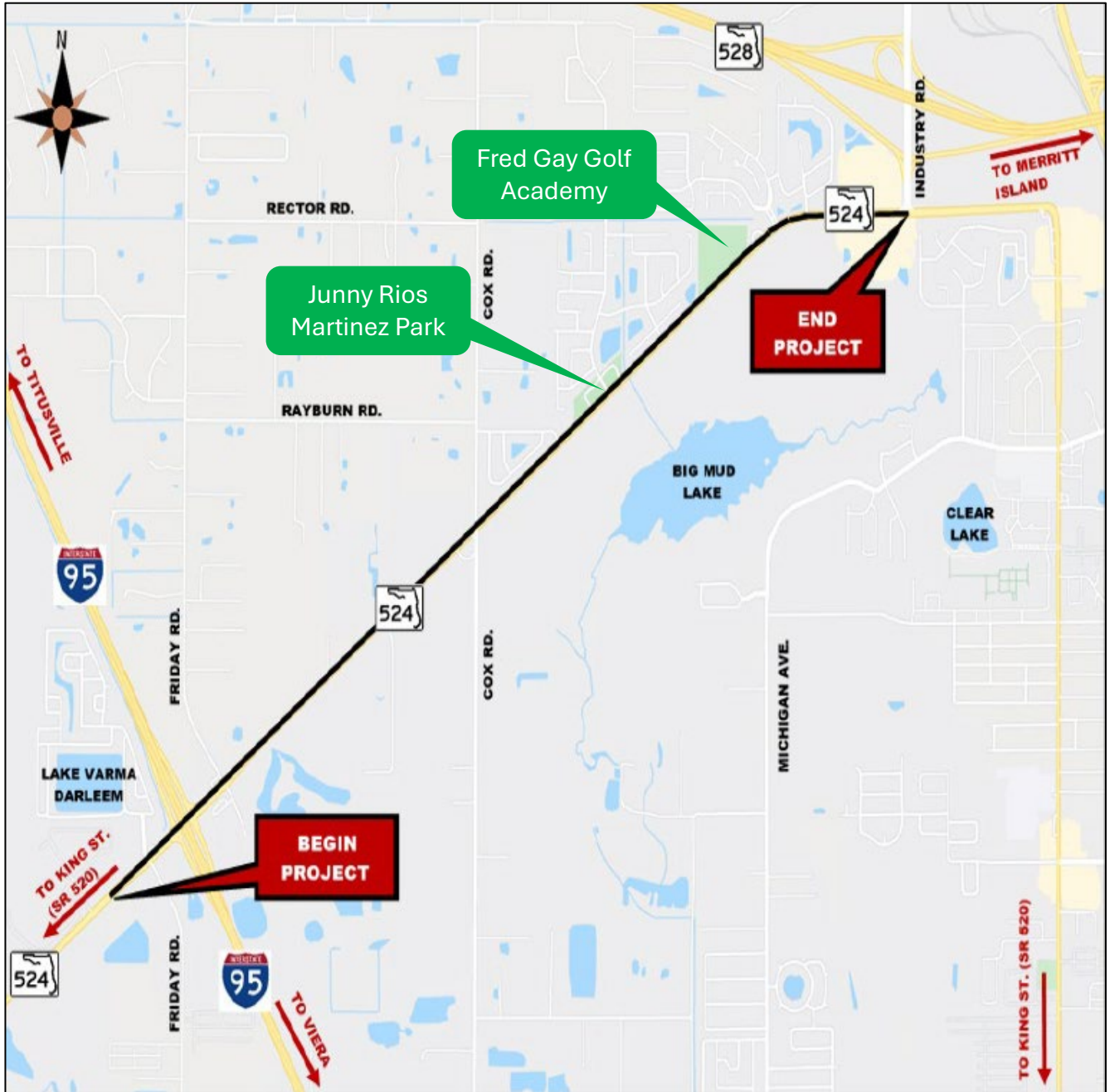
Recommended Outcome: No Use

OEM SME Determination Date: 11-19-2024

Project-Level Attachments

Location Map with Section 4(f) Resources

DRAFT



SR 524 PD&E Study
From N. Friday Road to Industry Road
FPID No. 437983-1-22-01
Brevard County

Project Location Map Showing Section 4(f) Resources

Resource Attachments

Junny Rios Martinez Park

Location Map Junny Rios Martinez Park

Junny Rios Martinez Park - Ownership Deed to City of Cocoa

Eastern Florida State College Fred Gay Golf Academy

Location Map Fred Gay Golf Academy

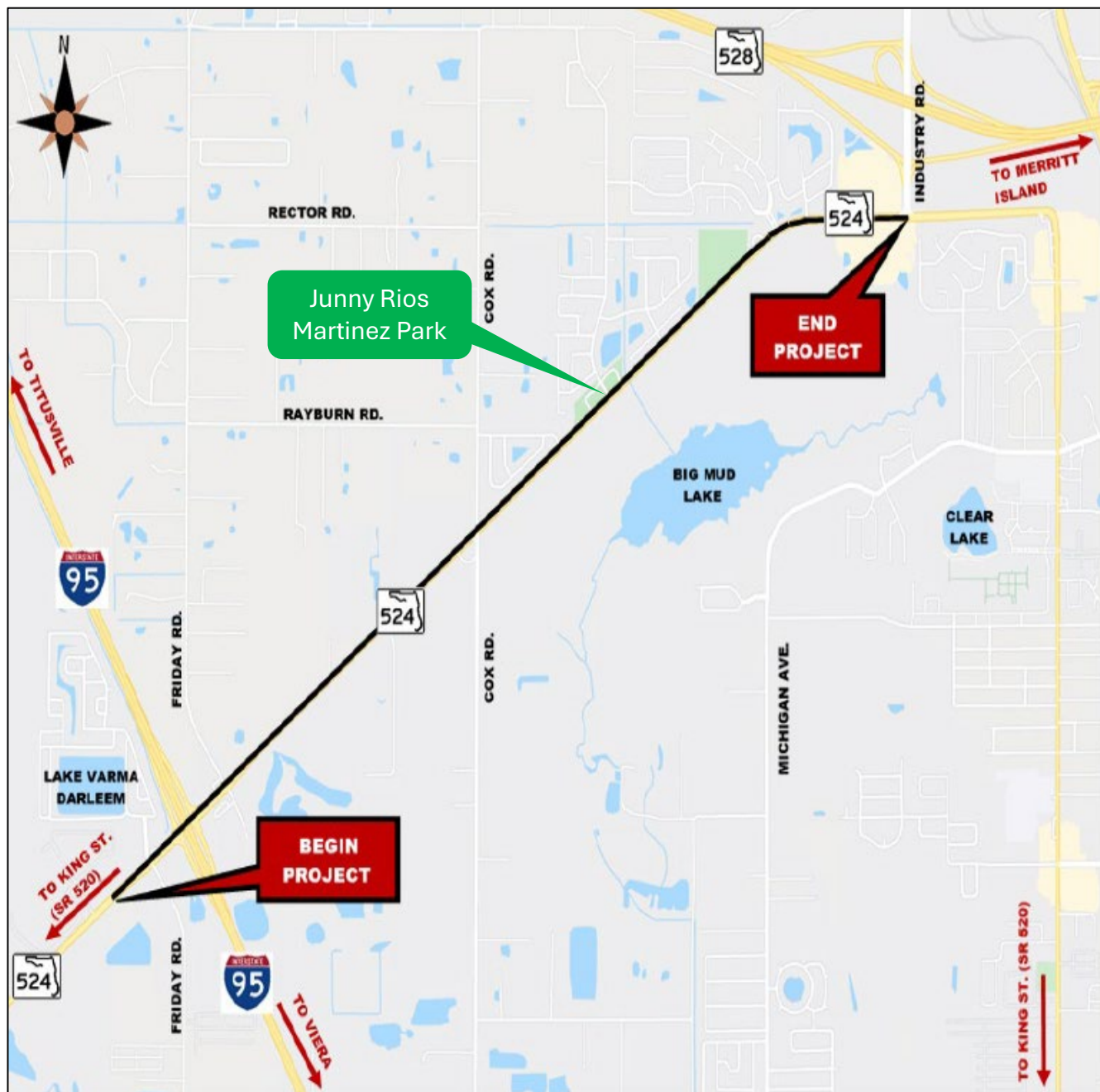
Junny Rios Martinez Park

Contents:

Location Map Junny Rios Martinez Park

Junny Rios Martinez Park - Ownership Deed to City of Cocoa

DRAFT



SR 524 PD&E Study
From N. Friday Road to Industry Road
FPID No. 437983-1-22-01
Brevard County

Project Location Map Junny Rios Martinez Park

This Document Prepared By:

MICHAEL M. M. WALLIS, ESQUIRE
MOSLEY, WALLIS & WHITEHEAD, P.A.
1221 E. NEW HAVEN AVENUE
MILBOURNE, FL 32901



CFN 96117493 07-08-96 02:05 pm
OR Book/Page. 3586/ 4043

Parcel ID Number: 24-35-13-00-525/24-35-13-00-521
Grantee #1 ITN:

Warranty Deed

This Indenture, Made this 28th day of June, 1996 A.D., Between
FIRST FEDERAL SAVINGS AND LOAN ASSOCIATION OF OSCEOLA COUNTY, a corporation existing
under the laws of the United States of America

of the County of OSCEOLA, State of Florida, grantor, and
CITY OF COCOA, FLORIDA, A FLORIDA MUNICIPAL CORPORATION,

whose address is: 603 BREVARD AVENUE, COCOA, Florida 32926

of the County of BREVARD, State of Florida, grantee.

Witnesseth that the GRANTOR, for and in consideration of the sum of
TEN & NO/100(\$10.00) DOLLARS,
and other good and valuable consideration to GRANTOR in hand paid by GRANTEE, the receipt whereof is hereby acknowledged, has
granted, bargained and sold to the said GRANTEE and GRANTEE'S successors and assigns forever, the following described land,
situate, lying and being in the County of BREVARD State of Florida to wit:

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF.

Subject to: comprehensive land use plans, zoning, restrictions,
prohibitions and other requirements imposed by governmental
authority; restrictions and matters appearing on the plat or
otherwise common to the subdivision; public utility easements of
record; taxes for the year 1996 and subsequent years.

Sandy Crawford

Clerk Of Courts, Brevard County

#Pgs 1 #Names 2
Trust 1 00 Rec 5 00 Serv 0 00
Deed 735 00 Excise 0 00
Mtg 0 00 Int Tax 0 00

and the grantor does hereby fully warrant the title to said land, and will defend the same against lawful claims of all persons whomsoever.

In Witness Whereof, the grantor has hereunto set his hand and seal the day and year first above written.
Signed, sealed and delivered in our presence:

Printed Name:

Witness

Printed Name:

Witness

By:

JAMES W. BURNS, VICE-PRESIDENT

P.O. Address 200 E. BROADWAY, KISSIMMEE, FL 34741

(Corporate Seal)

STATE OF FLORIDA
COUNTY OF BREVARD

The foregoing instrument was acknowledged before me this 28 day of June, 1996 by
JAMES W. BURNS, VICE-PRESIDENT of FIRST FEDERAL SAVINGS AND LOAN ASSOCIATION OF OSCEOLA
COUNTY,
on behalf of the corporation. He is personally known to me.

Printed Name:

NOTARY PUBLIC

My Commission Expires

MICHAEL M. M. WALLIS
My Commission Expires 11/27/99
June 15, 1997
Notary Public
850-422-1885

LEGAL DESCRIPTION**Parcel A**

Beginning at the Southeast corner of Cocoa North 7, as recorded in P.B. 30, Pages 33 & 34, of the Public Records of the City of Cocoa, Brevard County, Florida. Thence S.53°01'12"W 529.80 feet to the Northeasterly R.O.W. of Westminster Drive; thence S36°58'48"E along said R.O.W. 225.01 feet to a curve concave to the North; thence along said curve having a radius of 25.00 feet, a central angle of 90°00'00" and a length of 39.27' to the Northwest R.O.W. of S.R. 524; thence N53°01'12"E, along said R.O.W. 318.57 feet to the East line of the Southwest ¼ of Section 13, Township 24 South, Range 35 East, thence N00°17'11"W, along said Section 311.79 feet to the Point of Beginning for this description.

Parcel B

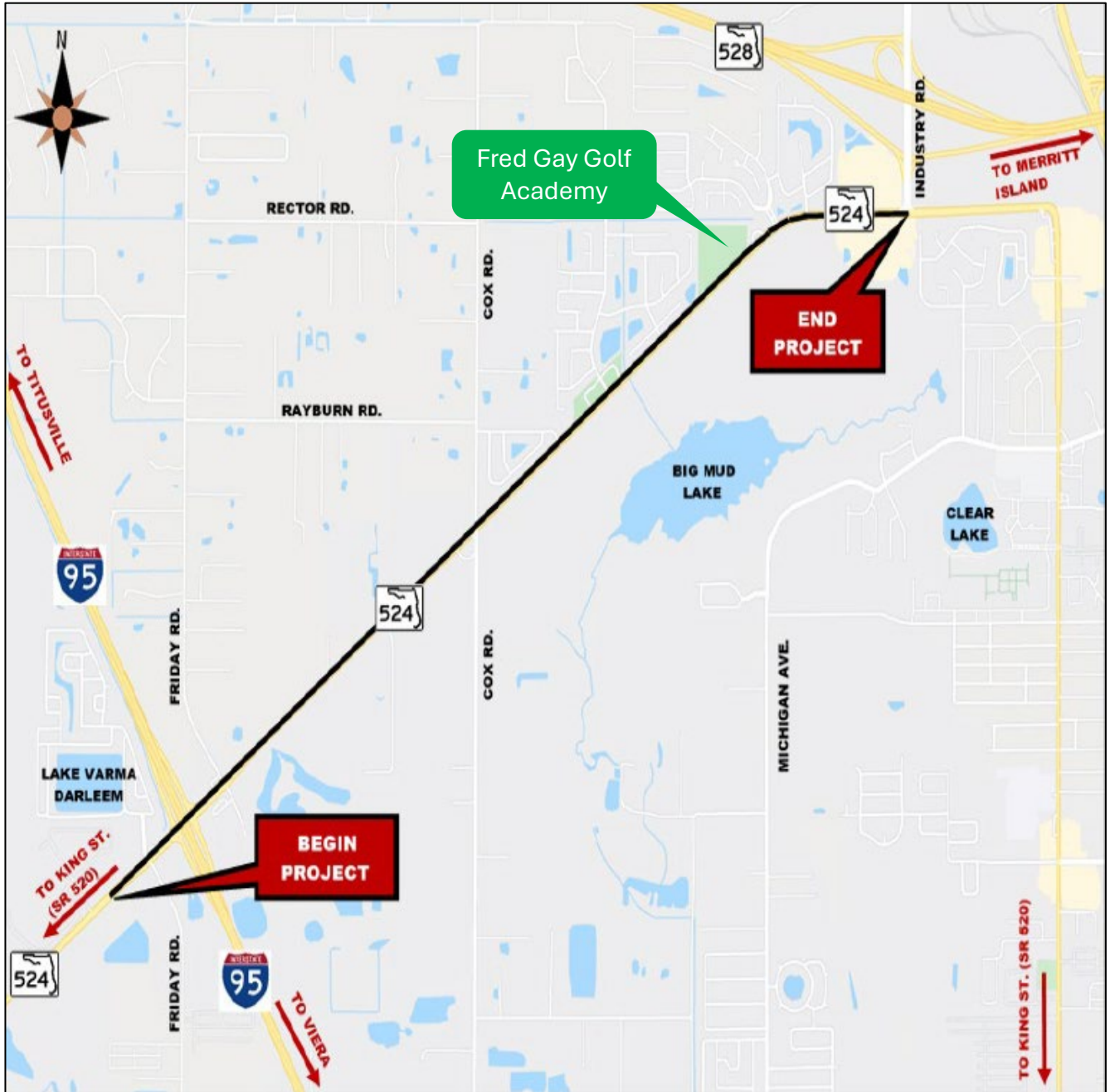
Commence at the South ¼ corner of Section 13, Township 24 South, Range 35 East, Brevard County, Florida; thence run N.00 degrees 18'01"W, along said section 664.40 feet to the North right-of-way line of State Road No. 524; thence run S.53 degrees 01'12"W along said right-of-way 440.00 feet to the POB; thence continue S.53 degrees 01'12"W 670.33 feet; thence run N.00 degrees 08'28"W., 312.38 feet; thence run N.53 degrees 01'12"E., 508.04 feet; thence run S.36 degrees 58'48"E., 225.00 feet; thence run along the arc of a curve concave Southwesterly, having it's elements a radius of 25.00 feet, a central angle of 90 degrees 00'00" and an arc distance of 39.27 feet to the POINT OF BEGINNING. Said parcel containing 3.4502 acres, more or less.

Eastern Florida State College Fred Gay Golf Academy

Contents:

Location Map Fred Gay Golf Academy

DRAFT



SR 524 PD&E Study
From N. Friday Road to Industry Road
FPID No. 437983-1-22-01
Brevard County

Project Location Map Fred Gay Golf Academy

Natural Resources Appendix

Contents:

FWC Letter on NRE Effect Determinations (April 2025)

USFWS Concurrence on Eastern Black Rail Evaluation (December 2024)

USFWS Concurrence on Scrub-jay and Caracara Survey (December 2019)

DRAFT



Florida Fish and Wildlife Conservation Commission

Commissioners
Rodney Barreto
Chairman
Coral Gables

Steven Hudson
Vice Chairman
Fort Lauderdale

Preston Farrior
Tampa

Gary Lester
Oxford

Albert Maury
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Gary Nicklaus
Jupiter

Sonya Rood
St. Augustine

Office of the
Executive Director
Roger A. Young
Executive Director

Charles "Rett" Boyd
Assistant Executive Director

George Warthen
Chief Conservation Officer

Jessica Crawford
Chief of Staff

Division of Habitat and
Species Conservation
Melissa Tucker
Director

850-488-3831

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resources for their long-term
well-being and the benefit
of people.*

620 South Meridian Street
Tallahassee, Florida
32399-1600
Voice: 850-488-4676

Hearing/speech-impaired:
800-955-8771 (T)
800 955-8770 (V)

MyFWC.com

April 24, 2025

Edward Northey
Florida Department of Transportation District 5
719 S Woodland Boulevard
Deland, FL 32720
edward.northey@dot.state.fl.us

Re: SR 524 Natural Resource Evaluation (Updated March 2025), Brevard County

Dear Mr. Northey:

Florida Fish and Wildlife Conservation Commission (FWC) staff reviewed the above-referenced Natural Resources Evaluation (NRE) report in accordance with FWC's authorities under Chapter 379, Florida Statutes, and Chapter 68A-27, Florida Administrative Code.

The Florida Department of Transportation (FDOT) District 5 is conducting a Project Development and Environment (PD&E) study (Efficient Transportation Decision Making Project # 14321) on an approximately 3.15-mile segment of State Road (SR) 524 from west of Friday Road to Industry Road in Brevard County. The PD&E study is analyzing design alternatives that widen SR 524 from two lanes to four lanes to provide additional capacity, add bicycle and pedestrian facilities, and address transit needs. New right-of-way (ROW) may be required for offsite ponds as part of the stormwater management facilities. The roadway construction itself will occur within the existing FDOT ROW.

The NRE report was prepared as part of the PD&E study to document wetlands, surface waters, protected species, critical habitat, and essential fish habitat within the project's corridor; evaluate potential impacts associated with the proposed project; provide effect determinations for protected species; identify mitigation needs, and coordinate with federal and state regulatory and resource agencies. FWC staff reviewed and commented on the original NRE dated September 2023. FWC staff agrees with the effect determinations and supports the project implementation measures and commitments for protected species included in the updated NRE. Further coordination could be required during future species-specific surveys and project permitting.

For specific technical questions regarding the content of this letter, please contact Kristee Booth at (850) 363-6298 or Kristee.Booth@MyFWC.com. All other inquiries may be directed to ConservationPlanningServices@MyFWC.com.

Sincerely,

A handwritten signature in purple ink that reads "Laura DiGruttolo".

Laura DiGruttolo
Land Use Planning Supervisor
Office of Conservation Planning Services

ld/kb
SR 524 Updated NRE_61531_04242025



Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. W
DeLand,

October 25, 2024

Zakia Williams
U.S. Fish & Wildlife Service
North Florida Ecological Services Office
7615 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517



Florida Ecological Services Field Office

Service Project
Code No. **25-I-0021408**

The U.S. Fish and Wildlife Service has reviewed the information provided and finds that the proposed action is not likely to adversely affect any federally listed species or designated critical habitat protected by the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 et. seq.). A record of this consultation is on file at the Florida Ecological Services Field Office.

This fulfills the requirements of section 7 of the Act and further action is not required. If modifications are made to the project, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

CATRINA MARTIN

Digitally signed by CATRINA
MARTIN

Supervisor

Date: 2024.12.02 14:47:47 -06'00'

Re: Preliminary Eastern Black Rail Habitat Suitability Evaluation
SR 524 Widening from Friday Road to Industry Road
Brevard County, Florida
FDOT FM 437983-1-22-01

Ms. Williams:

The Florida Department of Transportation (FDOT) District 5 is conducting a Project Development and Environmental Study (PD&E) to widen SR 524 from two lanes to four lanes in the City of Cocoa, Florida (Sections 13, 23, and 24; Township 24 South; Range 35 East and Section 18; Township 24 South; Range 36 East). The project length is approximately 3.22 miles, extending from west of Friday Road to Industry Road and includes four preferred pond sites (**Figures 1 – 5**).

The project is located within the United States Fish & Wildlife Service (USFWS) consultation area (CA) for the Eastern black rail (*Laterallus jamaicensis*). As a result, FDOT consultants conducted a desktop Geographic Information System (GIS) review and subsequent onsite survey to assess the suitability of potential habitat within the four preferred pond sites and the project right of way.

Methods

Prior to conducting an onsite habitat assessment, the following GIS data was used to evaluate potential habitat for the Eastern black rail.

- USFWS Consultation Area GIS data layer;
- St. Johns River Water Management District 2020 Florida Land Use, Cover and Forms Classification System (FLUCCS) data;
- United States Geological Survey 1-Meter Digital Elevation Model.

Ms. Williams, USFWS
FDOT FM # 437983-1-22-01
Page 2 of 5

Following the GIS desktop review, an onsite survey of the project corridor including the four preferred pond site alternatives (**Figure 1**) was conducted on September 19, 2024. A scientist with previous Eastern black rail survey experience led the survey (see **Surveyor Resume**). The onsite survey was specifically focused on identifying and assessing potential Eastern black rail foraging or nesting habitats, which includes a variety of salt, brackish, and freshwater marsh habitats as well as wet prairie habitats. The two major factors for consideration in suitable Eastern black rail habitat are vegetation structure and hydrology. According to the USFWS, plant structure is considered more important than plant species composition in predicting habitat suitability. Ideal vegetation height is around three to four feet above land surface, but if shrub densities are too high, the habitat becomes less suitable. The soils of suitable habitat are moist to saturated, occasionally dry, and adjacent to very shallow water of one to two inches.

Site Descriptions and Results

The project right of way consists mainly of periodically mowed; open land (see **Photolog**) adjacent to multiple land uses (**Figures 4A-D**). The topography of the project area and the soil types within the project area are described in **Figure 2** and **Figures 3A-3D**. The areas of right of way adjacent to potential Eastern black rail habitat were field reviewed for suitability. Of the twelve wetlands identified, only wetlands 1, 3, 10 and 11 contain potential Eastern black rail habitat. No suitable habitat for the Eastern black rail was observed within the footprint of proposed impacts or within approximately 25 feet of proposed impacts.

Pond 1A is located within Wetland 1, that is mapped as a Freshwater Marsh (FLUCCS 641) community; however, the system appears to be transitioning to a mixed scrub-shrub wetland based on the current vegetative structure. Proposed impacts to Wetland 1 include 3.87 acres of impact (**Figure 5A**). Trees within the wetland consist of scattered red maple (*Acer rubrum*), slash pine (*Pinus elliottii*), and punktree (*Melaleuca quinquenervia*). Punktree is encroaching on the remaining areas dominated solely by herbaceous groundcover. Other trees and shrubs along the perimeter include Brazilian pepper (*Schinus terebinthifolia*), Carolina willow (*Salix caroliniana*), cabbage palm (*Sabal palmetto*), dahoon holly (*Ilex cassine*), and wax myrtle (*Morella cerifera*). Herbaceous vegetation is dominated by sawgrass (*Cladium jamaicense*), softrush (*Juncus effusus*), spikerush (*Eleocharis spp.*), and whitetop sedge (*Rhynchospora colorata*). Eastern black rail habitat of very low suitability occurs within this preferred pond site. This species was not observed during the assessment. Representative photos of this preferred pond site are identified as **Photos 1 – 20** in the attached photolog.

The low suitability of Eastern black rail habitat within Pond 1A was assessed based on the following onsite observations. The herbaceous groundcover as the sole vegetative stratum occupies approximately 200 square meters of the 3.5 acres of wetland. Herbaceous groundcover contains grasses, rushes, and sedges but this groundcover does not exhibit the stem density or interspersed vegetation structure preferred by the Eastern black rail. Observations assessing the height of herbaceous vegetation demonstrated that the preferred height of 1 meter is rarely met. At the time of inspection, standing water was approximately 4-5 inches above land surface, higher than the preferred water levels for this species,

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although water levels may decrease to optimal levels during the dry season. The system is bordered by major highways and roads to the south, east, and west. A high berm and adjacent ditches to the north have likely impacted hydrology by reducing the wetland hydroperiod, which could be contributing to the encroachment of invasive exotic species.

Pond 2F is located within Wetland 10, that is mapped as a Mixed Wetland Hardwoods (FLUCCS 617) and Freshwater Marsh (FLUCCS 641). Proposed impacts to Wetland 10 include 1.89 acres of impact within the preferred pond site and 0.17 acres within the right of way (**Figure 5B**). Trees in this community include bald cypress (*Taxodium distichum*), red maple, swamp bay (*Persea palustris*), red bay (*Persea borbonia*), and cabbage palm. Other vegetation included royal fern (*Osmunda regalis*), arrowhead (*Sagittaria lancifolia*), buttonbush (*Cephalanthus occidentalis*), sawgrass, and Virginia chainfern (*Woodwardia virginica*). No appropriate Eastern black rail habitat occurs within or around this preferred pond site nor within approximately 25 feet waterward of the proposed impact to Wetland 10 within the right of way. This species was not observed during the onsite survey. Representative photos of this preferred pond site are identified as **Photos 21 – 27** in the attached photolog.

Pond 3A is mapped as Commercial and Services (FLUCCS 140). This pond site is currently undeveloped open land that is maintained with periodic mowing. The habitat consists exclusively of uplands and herbaceous vegetation dominated by ragweed (*Ambrosia artemisiifolia*), Mexican clover (*Richardia brasiliensis*), and pasture grasses including bahiagrass (*Paspalum notatum*) and Bermudagrass (*Cynodon dactylon*). There are no trees or shrubs within the limits of this preferred pond site. No appropriate Eastern black rail habitat occurs within or around the extent of this preferred pond site and this species was not observed during the onsite survey. Representative photos of this pond site are identified as **Photos 28 – 31** in the attached photolog.

Pond 3B is mapped as Commercial and Services (FLUCCS 140). This pond site is currently undeveloped open land that is maintained with periodic mowing. The habitat consists exclusively of uplands and herbaceous vegetation that is dominated by ragweed, Mexican clover, and pasture grasses including bahiagrass and Bermudagrass. No appropriate Eastern black rail habitat occurs within or around the extent of this preferred pond site and this species was not observed during the onsite survey. Representative photos of this pond site are identified as **Photos 32 – 35** in the attached photolog.

Wetland 3 is located on the north side of the project corridor and abuts the SR 524 right of way. Wetland 3 is part of a larger wet prairie (FLUCCS 643) community that extends offsite. Herbaceous vegetation includes yellow-eyed grass (*Xyris spp.*), beaksedge (*Rhynchospora spp.*), cattail (*Typha spp.*), and bushy bluestem (*Andropogon glomeratus*). Additional vegetation observed in this wetland as it abuts the SR 524 right of way includes Carolina willow, primrose willow (*Ludwigia peruviana*), and salt bush (*Baccharis halimifolia*). While Wetland 3 does include a small emergent wetland, this community type is much further offsite and would not be impacted by this project. The proposed road widening project would only impact 0.27 acres of roadside habitat consisting of mowed vegetation and the immediately adjacent

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woody wetland fringe (**Figure 5A**). No appropriate Eastern black rail habitat occurs within this proposed impact area, nor within approximately 25 feet waterward of the proposed impact, where vegetation is dominated by arrowhead. The Eastern black rail was not observed during the onsite survey. Representative photos of this wetland site are identified as **Photos 36 – 37** in the attached photolog.

Wetland 11 is located on the south side of the project corridor and abuts the SR 524 right of way. Wetland 11 is part of a larger wet prairie community that extends offsite and is bisected by a powerline easement. Herbaceous vegetation includes yellow-eyed grass, beaksedge, cattail, and bushy bluestem. Vegetation that covers the fringe of this community as it abuts the SR 524 right of way includes Carolina willow, primrose willow, and salt bush. While Wetland 11 does support a wetland prairie community of approximately 4 acres in its interior, the proposed road widening project would only impact 1.16 acres of roadside habitat consisting of mowed vegetation and the immediately adjacent woody wetland fringe (**Figure 5A**). The impact area does not extend more than approximately 25 feet from the existing paved road surface. No appropriate Eastern black rail habitat occurs within this proposed impact area, nor within approximately 25 feet waterward of the proposed impact, where vegetation is dominated by maidencane (*Panicum hemitomom*) and the water level was over one foot above land surface. The hydrology of this wetland appears to be historically impacted by the construction of multiple roads, ditches, berms and the powerline corridor, likely increasing the hydroperiod of the wetland and decreasing the suitability of potentially available habitat. The Eastern black rail was not observed during the onsite survey. Representative photos of this wetland site are identified as **Photos 38 – 39** in the attached photolog.

Wetlands 2, 5, and 12 did not contain any suitable Eastern black rail habitat adjacent to the right of way due to the presence of trees and shrubs, and lack of emergent marsh vegetation. Representative photos of these sites are identified as **Photos 40 – 46** in the attached photolog.


Conclusions

Based on the above assessment, the proposed SR 524 project is not anticipated to result in adverse effects on the Eastern black rail or their habitat. Eastern black rail habitat was limited to Wetland 1 located near the western extent of the project area within Pond 1A. The suitability of this habitat is low, due to the absence of appropriate vegetation structure, density, and height. No appropriate Eastern black rail habitat was observed in any other wetlands within the project limits, nor within approximately 25 feet waterward of the proposed wetland impacts. Therefore, a “May Affect, Not Likely to Adversely Affect” determination has been made for the Eastern black rail for this project and no additional surveys will be required for this species during the design phase of the project.

The FDOT respectfully requests your concurrence with the conclusions of our findings and that no other Eastern black rail survey effort will be required for this road widening project. If you have any questions or need any additional information, please do not hesitate to contact me at casey.lyon@dot.state.fl.us or via phone at (386) 943-5436.

Ms. Williams, USFWS
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Sincerely,

DocuSigned by:

3B9B80E4828F45B...
Casey Lyon, M.S.

Environmental Manager
Florida Department of Transportation – District 5

Attachments:

Figure 1. Project Overview Map
Figure 2. USGS Topographic Map
Figures 3A-3D. Soils Map
Figures 4A-4D. Land Use Map
Figures 5A-C. Eastern black rail Habitat Assessment Map
Photolog
Surveyor Resume



Florida Department of Transportation

RON DESANTIS
GOVERNOR

719 S. W
DeLand,

KEVIN J. THIRALL, P.E.

November 13, 2019

Zakia Williams
U.S. Fish & Wildlife Service
North Florida Ecological Services Office
7615 Baymeadows Way, Suite 200
Jacksonville, FL 32256-7517



FWS Log No 2020-TA-0218

The Service concurs with your effect determination(s) for resources protected by the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This finding fulfills the requirements of the Act.

Jay B. Herrington
Field Supervisor

12/10/19
Date

Re: Preliminary Florida Scrub-Jay & Caracara Survey and Evaluation
SR 524 Widening from Friday Rd to Industry Rd
Brevard County, Florida
FDOT FM 437983-1-22-01

Ms. Williams:

The Florida Department of Transportation (FDOT) District 5 is conducting a Project Development and Environmental Study (PD&E) to widen SR 524 from two lanes to four lanes in the City of Cocoa, Florida (Sections 13, 23 and 24; Township 24 South; Range 35 East and Section 18; Township 24 South; Range 36 East). The project length is approximately 3.22 miles, extending from west of Friday Road to Industry Road and includes nine (9) potential pond site alternatives (**Figures 1 - 5**).

The project is located within the United States Fish & Wildlife Service (USFWS) consultation areas (CA) for the Florida scrub-jay (*Aphelocoma coerulescens*) and the Audubon's crested caracara (*Polyborus plancus audubonii*). As a result, FDOT consultants conducted a desktop Geographic Information System (GIS) review and subsequent onsite surveys to assess the available habitat within the project right-of-way and 9 potential pond site alternatives.

Methods

Prior to conducting an onsite habitat assessment, the following GIS data was used to evaluate potential habitat for the Florida scrub-jay and the Audubon's crested caracara.

- USFWS Consultation Area GIS data layers;
- Florida Fish & Wildlife Conservation Commission (FWC) Wildlife Observations: FWC Wildlife Occurrence System, (2016) data;

www.fdot.gov

- FWC Fish and Wildlife Research Institute Florida Scrub-jay Locations (1992-1993, updated 2015) data
- Brevard County's Natural Resources Florida Scrub-jay GIS data
- St. Johns River Water Management District 2014 Florida Land Use, Cover and Forms Classification System (FLUCCS) data.

Following the GIS desktop review, an onsite survey of the project corridor including the 9 potential pond site alternatives (**Figure 5**) was conducted on April 12 and April 25, 2019. The onsite surveys were specifically focused on identifying potential Audubon's crested caracara foraging or nesting habitat (improved/unimproved pastures and/or wet/dry prairies with cabbage palms) and Florida scrub-jay habitat (Types I, II and III). The onsite surveys used pedestrian transects and a playback of high quality recordings of typical Florida scrub-jay territorial scold calls in an attempt to attract scrub-jays.

Site Descriptions and Results

The project right-of-way consists mainly of periodically mowed; open land adjacent to multiple land uses (**Figure 4**). The areas of ROW adjacent to potential scrub-jay and caracara habitat were field reviewed and a tape of scrub-jay vocalizations was played. No scrub-jays, caracara or suitable habitat were observed.

Pond 1 is mapped as Hardwood Coniferous Mixed (FLUCCS 434). There was evidence of inundation due to water staining on trees. The site contains dense vegetation consisting of Brazilian pepper (*Schinus terebinthifolia*), punktree (*Melaleuca quinquenervia*), cabbage palm (*Sabal palmetto*), salt bush (*Baccharis halimifolia*), laurel oak (*Quercus laurifolia*), red maple (*Acer rubrum*), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), wax myrtle (*Morella cerifera*), and leather fern (*Acrostichum danaeifolium*). No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 1 – 4 in the attached photolog.

Pond 2 is mapped as Pine Flatwoods (FLUCCS 411). During the site review the site was actively being cleared and likely recently burned. The remaining vegetation included slash pine (*Pinus elliottii*), cabbage palm and punktree in the adjacent off-site area. No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 5 – 6 in the attached photolog.

Pond 3 is mapped as Pine Flatwoods (FLUCCS 411). The northern half of the site appears to be a wetland area containing gallberry, shiny lyonia (*Lyonia lucida*), Virginia chain fern (*Woodwardia virginica*), sphagnum moss (*Sphagnum* sp.), wiregrass (*Aristida stricta*), and red maple with a canopy of slash pine. Saw palmetto (*Serenoa repens*) was observed throughout the pond site with other vegetation including St. John's Wort (*Hypericum* sp.), wax myrtle, punktree, pond pine (*Pinus serotina*) and rusty lyonia (*Lyonia ferruginea*). Evidence of seasonal inundation was observed on some of the wetter portions of the pond

site. No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 7 – 10 in the attached photolog.

Pond 4 is mapped as Herbaceous (Dry Prairie) (FLUCCS 310). The site is maintained with periodic mowing with scattered slash pine and contains an excavated surface water in the northwest corner. The pond is vegetated with white waterlily (*Nymphaea odorata*) and the banks are vegetated with cabbage palm, dog fennel (*Eupatorium capillifolium*), slash pine, and Virginia chain fern. The western border of the site contains wax myrtle, button bush (*Cephalanthus occidentalis*), red maple, and St. John's wort. No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 11 – 14 in the attached photolog.

Pond 5 is mapped as shrub and brushland (FLUCCS 320). The site is dominated by a canopy of pines near SR 524 and they occur more sporadically at the south end of the site. There was evidence of clearing activities along the perimeter and center of the site. Dominant vegetation included gallberry, saw palmetto, wiregrass, muscadine grapevine (*Vitis rotundifolia*), shiny blueberry (*Vaccinium myrsinites*), cabbage palm, and live oak. The eastern portion of the site is mapped as having potential scrub-jay habitat by the FWC. However, a review of Brevard County's Natural Resources GIS data shows no known Florida scrub-jay areas near this pond site. In addition, no appropriate Florida scrub-jay habitat was observed within this potential pond site and this species was not observed during the onsite surveys. Additionally, no appropriate Audubon's crested caracara habitat occurs within this potential pond site and this species was not observed during the onsite surveys. Representative photos of this pond site are identified as Photos 15 – 18 in the attached photolog.

Pond 6 is mapped as commercial and services (FLUCCS 140). This pond site is currently undeveloped open land that is maintained with periodic mowing. The habitat consists exclusively of uplands and herbaceous vegetation is dominated by pasture grasses including bahiagrass (*Paspalum notatum*), Bermudagrass (*Cynodon dactylon*), ragweed (*Ambrosia artemisiifolia*) and Mexican clover (*Richardia brasiliensis*). There are no trees or shrubs within the limits of this potential pond site. No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 19 – 20 in the attached photolog.

Pond 7 is mapped as commercial and services (FLUCCS 140). This pond site is currently undeveloped open land that is maintained with periodic mowing. The habitat consists exclusively of uplands and herbaceous vegetation that is dominated by pasture grasses including bahiagrass, Bermudagrass, ragweed and Mexican clover. There are no trees or shrubs within the limits of this potential pond site. No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 21 – 22 in the attached photolog.

Pond 8 is mapped as Herbaceous (Dry Prairie) (FLUCCS 310) and Pine Flatwoods (FLUCCS 411). Most of this site is dominated by saw palmetto and rusty lyonia with live oak and scattered sand live oak (*Quercus geminata*). Other vegetation observed included muscadine grapevine, earleaf greenbrier (*Smilax auriculata*), pawpaw (*Asimina* sp.) and American beautyberry (*Callicarpa americana*). No canopy exists over most of this site and evidence of the historic pine canopy (circa 2010) is limited to scattered snags. Because of the lack of fire maintenance, the shrub component is very dense with minimal herbaceous ground cover species and no observed areas of open sand. This site is mapped as having potential scrub-jay habitat by the FWC and plant species typical of scrub habitat were observed. However, a review of Brevard County's Natural Resources GIS data shows no known Florida scrub-jay areas near this pond site. In addition, the lack of fire management and subsequent density of the shrub layer resulted in no appropriate Florida scrub-jay habitat being observed within this potential pond site and this species was not observed during the onsite surveys. Additionally, no appropriate Audubon's crested caracara habitat occurs within this potential pond site and this species was not observed during the onsite surveys. Representative photos of this pond site are identified as Photos 23 – 26 in the attached photolog.

Pond 9 is mapped as Mixed Wetland Hardwoods (FLUCCS 617) and Vegetated Non-forested wetland (FLUCCS 640). The only available uplands consist of the northern and eastern fringes of the ponds site that are vegetated with live oak, water oak (*Quercus nigra*) and slash pine. The majority of the site consists of wetlands with the central portion consisting of an inundated stand of Carolina willow (*Salix caroliniana*). Other vegetation found throughout this pond site includes red maple, sweetgum (*Liquidambar styraciflua*) Virginia chain fern, leather fern, swamp fern (*Telmatoblechnum serrulatum*), royal fern (*Osmunda regalis*), muscadine grapevine, and lizard's tail (*Saururus cernuus*). No appropriate Florida scrub-jay or Audubon's crested caracara habitat occurs within this potential pond site and neither of these species were observed during the onsite surveys. Representative photos of this pond site are identified as Photos 27 – 30 in the attached photolog.

Conclusions

The FDOT respectfully requests your concurrence with the conclusions of our findings and that no other scrub-jay or Audubon's crested caracara survey effort will be required for this road widening project. If you have any questions or need any additional information, please do not hesitate to contact me at heather.chasez@dot.state.fl.us or via phone at (386) 943-5393

Sincerely,

Heather Chasez
Environmental Specialist IV
Project Compliance Coordinator

Attachments:

Figure 1. Project Overview Map

Figure 2. USGS Topographic Map

Figure 3. Soils Map

Figure 4. Land Use Map

Figure 5. Scrub-Jay Habitat & Playback Station Map

Photolog

DRAFT