

ADMINISTRATIVE ACTION  
TYPE 2 CATEGORICAL EXCLUSION

Florida Department of Transportation  
In cooperation with the US Coast Guard

SR-A1A OVER SEBASTIAN INLET- BRIDGE REPLACEMENT

District: FDOT District 4

County: Indian River County

ETDM Number: 14433

Financial Management Number: 445618-1-21-01

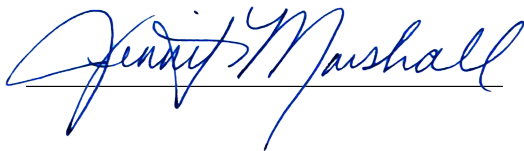
Federal-Aid Project Number: D420-075-B

Project Manager: Binod Basnet

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.

This action has been determined to be a Categorical Exclusion, which meets the definition contained in 40 CFR 1508.4, 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:

A handwritten signature in blue ink that reads "Jenny Marshall". The signature is written in a cursive style and is positioned above a horizontal line.

May 23, 2023

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 01/30/2020 the State of Florida determined that this project is consistent with the Florida Coastal Zone Management Program.

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## PROJECT LOCATION

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY  
 SR-A1 A OVER SEBASTIAN INLET - BRIDGE 880005 - BRIDGE  
 REPLACEMENT INDIAN RIVER COUNTY AND BREVARD COUNTY,  
 FLORIDA

FIGURE  
 1

## 1. Project Information

### 1.1 Project Description

The Sebastian Inlet Bridge (bridge), also known as the James H. Pruitt Memorial Bridge (Bridge # 880005), is a 1,548-foot long concrete structure constructed in 1964 to carry State Road (SR) A1A over the Sebastian Inlet (Inlet). The Inlet was created from privately owned lands. In 1919 the Sebastian Inlet District (SID) was formed to maintain the Inlet and owns the submerged lands under the bridge. The fixed bridge is located within FDOT and SID right-of-way (ROW) and is adjacent to the Sebastian Inlet State Park (Park). The project limits extend approximately one mile along SR A1A from Mile Post (MP) 21.945 north to MP 22.665 of Roadway ID 88070000 in Indian River County continuing north from MP 0.00 north to MP 0.307 of Roadway ID 70060000 in Brevard County.

The bridge vertical clearance is 39-feet and horizontal clearance is 150-feet between the bridge fenders. The navigable Inlet provides access for vessels between the Indian River and the Atlantic Ocean and is approximately 525-feet wide at the bridge.

The existing bridge has two 12-foot travel lanes and 2-foot shoulders. Within the project limits, SR A1A has two 12-foot travel lanes. North and south of the bridge, paved shoulders are 2 to 4-feet wide. South of the bridge, shoulders are marked as designated bicycle lanes. There are currently no pedestrian or bicycle facilities located within the bridge approaches or on the bridge, creating a gap in the multimodal network along SR A1A. An 8-foot shared use path is located on the west side of SR A1A north and south of the bridge.

The Preferred Alternative typical section includes:

- Two 12-foot travel lanes
- Two 8-foot shoulders
- Two 12-foot shared use paths

South of the bridge, the Preferred Alternative improvements include:

- Reconfiguration of the south Park entrance including the addition of an exit right turn lane
- A southbound acceleration lane from the south Park entrance
- Lengthened storage of the southbound right turn lane into the Park

The shared use path will be continued on the west side of the bridge and roadway:

- Addition of a shared use path on the east side of the bridge and roadway that extends to the public parking lot located on the east side of SR A1A
- Addition of a crosswalk crossing SR A1A at the south Park entrance

North of the bridge, the Preferred Alternative improvements include:

- Reconfiguration of the north Park entrance including the addition of an exit right turn lane
- Lengthened storage of the southbound right turn lane into the Park
- Continuation of the shared use path on the west side of the bridge and roadway
- Addition of a shared use path on the east side of the bridge and roadway terminating at the north Park entrance
- Addition of a crosswalk crossing SR A1A at the north Park entrance
- Reconfiguration of the SID Access Road

## 1.2 Purpose and Need

### **PROJECT PURPOSE**

The James H. Pruitt Memorial Bridge which was constructed in 1964 to carry State Route A1A across the Sebastian Inlet is approximately 1,500 feet long with 19 spans, the longest of which is approximately 180 feet long. The posted speed limit is 45 miles per hour. The primary purpose of this project is to address the structural and functional deficiencies of the existing James h. Pruitt Memorial Bridge (Bridge # 880005) over the Sebastian Inlet. A replacement option, along with the No-Build/rehabilitation option for the bridge, will be evaluated through a Project Development and Environment (PD&E) Study. The project will also address the gap in system linkage for bicyclists and pedestrians.

### **PROJECT NEED**

The bridge was inspected by FDOT District Four on November 14, 2018, following Hurricane Florence. Based on this evaluation the bridge was rated as structurally deficient with a sufficiency rating of 51.6 and a health index of 79.8. FDOT's work program requires that structurally deficient bridges, once identified, have corrective actions (repair or replacement) initiated within six years. Bridges with a health index of less than 85 require repairs or replacement.

#### *Modal Interrelationships*

There are currently no pedestrian or bicycle facilities across the bridge, creating a gap in the multimodal network along SR A1A. North and south of the bridge, SR A1A includes a separated 8-foot shared use path on the west side of the roadway. South of the Inlet, 4-foot bike lanes are marked on both sides of the roadway. North of the Inlet, shoulders are 2 to 4-feet wide with no designated bike lanes.

The *Indian River County Bicycle and Pedestrian Plan* (IRCMPO, 2015) recommends sidewalks be added on both sides of SR A1A from Windsor Boulevard to the County Line at the Inlet to supplement the existing marked bike lanes. In addition, SR A1A has been designated as a segment of the East Coast Greenway which provides a multimodal connection from Maine to Florida along the east coast of the United States. The Florida Greenway Trails System Plan (FDEP, 2018) states that the East Coast Greenway strives to provide a "high quality, safe, and motor vehicle free trail experience" for the users along the route.

### **PROJECT STATUS**

The IRC MPO 2045 Long Range Transportation Plan (LRTP) *Connecting IRC 2045* was adopted on December 9, 2020. Because the project originated as a bridge maintenance project, is funded as an operation and maintenance project, and is not a capacity improvement project it is not individually listed in the LRTP. The project is listed in the IRC MPO *Transportation Improvement Plan (TIP) 2021/22 - 2025/26* as an investment priority.

Because the project is also located within Brevard County, it is listed in the Space Coast Transportation Planning Organization's (SCTPO) *TIP FY 2023 -2027*. Additional information is provided in the Planning Consistency section of this document.

### **PLANNING CONSISTENCY**

The project is consistent with *Goal 5 of Connecting IRC 2045*. *Goal 5 - Preserving and maintaining the transportation system and transportation infrastructure* includes evaluating the structural integrity of bridges on major roads and coordination with FDOT for improvements. The project is not a capacity improvement project and, therefore, is not individually listed in the LRTP. The project originated as a bridge maintenance project and is funded as an operation and maintenance project.

Coordination with the SCTPO to include the project in the TIP by reference only is complete. An amendment to the SCTPO TIP was approved on September 8, 2022.

The project is currently funded through design and construction.

### 1.3 Planning Consistency

Currently Adopted LRTP-CFP	COMMENTS
Yes	<p>The project is consistent with Goal 5 (Preserving and maintaining the transportation system and transportation infrastructure) Objective 5.02 of the Indian River County 2045 Long Range Transportation Plan (see LRTP pages 2-6, 6-3, and 6-9). The project is not a capacity improvement project and, therefore, is not individually listed in the LRTP. The project originated as a bridge maintenance project and is funded as an operation and maintenance project before any revenues are allocated for capacity improvement projects (see LRTP page 4-5). The LRTP estimated more than \$9B in revenue for operation and maintenance activities on the D4 State Highway System between 2025 and 2045 (see LRTP page 4-5).</p> <p>The project is also within Brevard County and was coordinated with the Space Coast TPO to be included in the TIP by reference only. The request to amend the SCTPO TIP was on the agenda for September 8, 2022. The agenda, board meeting packet, and Space Coast TIP can be found in the Statewide Environmental Project Tracker (SWEPT) project file.</p>

	Currently Approved	\$	FY	COMMENTS
<b>PE (Final Design)</b>				
<b>TIP</b>	Y	300,000 139,647	2022/23 2023/24	Approved FY 2022/23 - FY 2026/27 TIP The Design Phase was previously approved and overlaps with PD&E. The Design Phase is consistent between the TIP and the STIP.
<b>STIP</b>	Y	597,322 139,647	2023 2024	Approved STIP The Design Phase was previously approved and overlaps with PD&E. The Design Phase is consistent between the TIP and the STIP.
<b>R/W</b>				
<b>TIP</b>	Y	6,154,884	2023/24	Approved FY 2022/23 - FY 2026/27 TIP R/W funding in the TIP is expected to be updated to match the Current STIP in the spring of 2023 as part of the annual FY planning cycle updates.
<b>STIP</b>	Y	6,154,884	2024	Approved STIP
<b>Construction</b>				
<b>TIP</b>	Y	69,145,844	2025/26	Approved FY 2022/23 - FY 2026/27 TIP CST funding in the TIP is expected to be updated to match the Current STIP in the spring of 2023 as part of the annual FY planning cycle updates.
<b>STIP</b>	Y	69,145,844	2026	The figures shown reflect the Current STIP, not the Approved STIP



## 2. Environmental Analysis Summary

Issues/Resources	Significant Impacts?*			
	Yes	No	Enhance	NoInv
<b>3. Social and Economic</b>				
1. Social	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Relocation Potential	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Farmland Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>4. Cultural Resources</b>				
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	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5. Natural Resources</b>				
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6. Physical Resources</b>				
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

Demographic information for the study area was obtained from the United States Census Bureau, 2016 - 2020 American Community Survey (ACS) 5-Year Estimates for census blocks within a 1,320-foot buffer. It should be noted that the proposed project area primarily consists of recreational and conservation land uses, and no residential areas are located within the quarter mile buffer. Relevant population data are referenced in the tables below and can also be found in the Sociocultural Data Report (SDR) included in the project file. According to the SDR, the block group analysis for project analysis areas does not always correspond precisely to block group boundaries. For this reason, the SDR analysis adjusts the geographic area and data of affected block groups using the following methodology:

- Delete overlapping census blocks with populations of 2 or fewer people
- Remove the portion of the block group that lies outside of the analysis area
- Recalculate the demographics assuming an equal area distribution of the population

Per the SDR, demographic data for Indian River County is 12.53% Hispanic, 8.32% Black or African American and 84.30% White. For Brevard County, the demographic data is 10.62% Hispanic, 9.87% Black or African American and 80.92% White. The study area has a higher white population (97.32%) and a lower population of Black or African American (0%) and Hispanic (0%) residents compared to both Indian River and Brevard County demographics. The remaining study area population is comprised of residents identifying as Other (0.89%) and Minority (2.68%). The median age for the population within the study area is 65, which is higher than the overall median age for Indian River County (54) and Brevard County (47.2).

<b>Race</b>	<b>Study Area Population (Percentage)</b>	<b>Indian River County Population (Percentage)</b>	<b>Brevard County Population (Percentage)</b>
White	109 (97.32%)	132,324 (84.30%)	480,662 (80.92%)
Hispanic or Latino	0 (0%)	19,675 (12.53%)	63,063 (10.62%)
Black or African American	0 (0%)	13,056 (8.32%)	58,641 (9.87%)
Native Hawaiian and Other Pacific Islander	0 (0%)	120 (0.08%)	559 (0.09%)
Asian	0 (0%)	2,230 (1.42%)	24,160 (2.38%)
American Indian or Alaska Native	0 (0%)	408 (0.26%)	1,630 (0.27%)
Other*	1 (0.89%)	8,826 (5.63%)	38,349 (6.46%)
Minority**	3 (2.68%)	39,329 (25.06%)	155,687 (26.21%)

\*Population includes individuals identified as Some Other Race and/or Two or More Races.

\*\*Combines Race and Ethnicity to identify the total population that is a member of either a racial or ethnic minority.

Compared to the Indian River and Brevard County population percentages, the study area has lower percentages of minority populations, individuals with limited English proficiency (LEP), populations below the poverty level, individuals aged 20-64 years with a disability, populations with less than a high school education, and housing units with no vehicle available in the project area (see Table 1-2). The study area has a higher percentage of the population age 65 and over compared to the Indian River and Brevard County percentages. According to the ACS 2016-2020 data, Indian River County has a median household income of \$57,945 compared to Brevard County, which has a median income of \$59,359. The median household income for the study area is \$144,073, which is substantially higher than the Indian River and Brevard County median household incomes. Within the study area, there are zero occupied housing units with no vehicle available. There are also no residential land uses within the immediate vicinity of the project.

According to the United States Environmental Protection Agency's (USEPA) environmental justice screening and mapping tool (EJSCREEN), the population in the study area is 0% minority compared to the state average of 46%, and 0% of the study area population is low income compared to 34% of the state's population. In addition, the EJSCREEN documents that 0% of the study area population is linguistically isolated, compared to 7% of the state's population.

Demographic information concerning education and age indicate that use of primarily electronic/internet communication, such as a project website or on-line survey, may not be appropriate for some members of the community. Therefore, traditional and non-traditional outreach efforts have been utilized to produce more effective tools to reach out to communities and encourage participation. Project information is being distributed to businesses on the corridor through mailers as well as through social media. Public outreach has been occurring at the City of Sebastian Community Center, as well as through newspaper advertisements, various meetings, and radio announcements in both Indian River and Brevard Counties. In addition, the public meetings, workshop, and hearing use a hybrid model that provides both in-person and virtual opportunities for the public to receive information and provide input.

<b>Description</b>	<b>Study Area (Percentage)</b>	<b>Indian River County (Percentage)</b>	<b>Brevard County (Percentage)</b>
Population Below Poverty Level	3.57%	10.28%	11.18%
Population Age 65 and over	47.32%	32.94%	23.71%
Population Age 20-64 Years with a Disability	3.92%	11.84%	12.59%
Population With Less Than a High School Education	2.97%	9.91%	7.81%
Population With Limited English Proficiency	0.00%	4.85%	3.25%
Housing Units with No Vehicle Available	0.00%	4.72%	4.61%

The scope of work includes a new bridge alignment that is shifted to the east of the centerline of the existing bridge. There are currently no pedestrian or bicycle facilities across the bridge, creating a gap in the multimodal network along SR A1A. The project is anticipated to provide system linkage for bicyclists and pedestrians through addition of 12-foot shared use paths on both sides of the bridge and approaches, along with 8-foot shoulders that may be used as bicycle lanes. The shared use paths continue north and south of the bridge, and crosswalks will be provided at the Park entrances.

These pedestrian and bicycle enhancements will provide improved multimodal facilities for the non-driving public, including minorities, low income populations, and other potentially underrepresented population groups. There are no

existing transit routes, truck routes, or railroads located within or along the project limits, and no transit service improvements are proposed as part of this project.

Community services located within the project area consist of the Park, which includes the main and secondary entrances, main beach access, Beach Access #8, and campground; Sebastian Fishing Museum, and the East Coast Greenway. Based on the improvements proposed in the Preferred Alternative, no adverse impacts to community facilities and services are anticipated. Construction will be conducted in phases and a traffic control plan will be developed during the design phase to consider measures to minimize travel disruptions and access impacts to community services in the area. See the Preliminary Engineering Report (PER), found in the project file, for more details.

The project improvements are proposed along the existing SR A1A roadway and bridge within Indian River and Brevard Counties. Anticipated ROW impacts are limited to land required for offsite wet detention ponds, as well as clips and strips along SR A1A to meet current design standards. No relocations are needed, and there are no residential or commercial land uses present within the project area. As such, the project will not divide neighborhoods or create social/cultural isolation. The project is not anticipated to have any negative effects on community cohesion, nor will the proposed improvements create isolated areas, disrupt social relationships and patterns, or disrupt connectivity to community activity centers or recreation areas.

The proposed project will include improved pavement conditions, drainage systems, signalization, access management, and pedestrian and bicycle features which will enhance safety along the corridor. In addition, the project will enhance connectivity and accessibility to major arterials on the state evacuation route.

Based on the demographic assessment above, no minority or low-income populations are identified or affected. This project complies with Executive Order 12898 and FHWA 6640.23A. Overall, there are no adverse impacts to community resources or social issues associated with the Preferred Alternative. There is minimal impact on businesses, residents or any social resources as a result of the anticipated ROW acquisition, which is limited to land required for offsite wet detention ponds, as well as clips and strips along SR A1A for clear zone and maintenance.

The Preferred Alternative is expected to enhance social resources within the project area by improving safety and intermodal connectivity throughout the corridor.

### **3.2 Economic**

There are no residential or commercial land uses within the quarter-mile project buffer of the Preferred Alternative and the area is not designated as an enterprise zone. The project has little to no potential to attract new development or create additional long-term employment opportunities. In addition, the proposed project is likely to result in minimal economic impacts and area destinations/attractions may be temporarily impacted during project construction.

However, the bridge improvements are anticipated to maintain and enhance safe access for residents of Indian River and Brevard counties, as well as visitors to the Park. Improved traffic flow and enhanced bicycle and pedestrian facilities will improve long-term access to recreational and conservation land uses from one side of the bridge to the other. Therefore, the Preferred Alternative is expected to have no significant impact on the economics of the project corridor.

### 3.3 Land Use Changes

The project is located at the Indian River County and Brevard County boundary in an area comprised primarily of recreational and conservation land uses. The future land use adjacent to and surrounding the project area also consists of recreational and conservation land uses associated with the Park. Indian River County classifies the adjacent and surrounding area land uses as recreation and Brevard County classifies the same area as recreation and public conservation. See the attached Current and Future Land Use Maps for more details.

The project improvements will not increase capacity along SR A1A. Anticipated ROW impacts are limited to land required for offsite wet detention ponds, as well as clips and strips along SR A1A that are needed to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, and shared use path improvements. Effects and changes to surrounding land uses are anticipated to be limited, and the project could provide some benefit to proximate land uses in the future by improving multimodal traffic flow and access from one side of the bridge to the other. The character of the area will remain unchanged and will continue to support the existing and future land uses. For these reasons, the Preferred Alternative is expected to have no significant impact on land use along the Sebastian Inlet Bridge corridor.

### 3.4 Mobility

The proposed two-lane, 51-foot vertical clearance fixed span bridge with separated pedestrian and bicycle facilities connects Indian River and Brevard Counties and provides access to a recreational tourist destination, the Sebastian Inlet State Park. The replacement bridge will address the gap in system linkage for bicyclists and pedestrians, as well as improving access to the Park.

The current bridge intersects one multi-use trail. The project corridor is a designated evacuation route which facilitates a connection between Indian River and Brevard Counties. Access to existing facilities, including the Park, will be maintained with minimal disruption during construction, and the project construction contractors will be required per FDOT's Standard Specifications for Road and Bridge Construction, to maintain access for emergency services to all adjacent properties throughout construction. Furthermore, FDOT is committed to keeping the bridge open during construction to minimize impacts to the traveling public and emergency services. Accelerated bridge construction techniques may require temporary, short-term lane closures during off peak hours. FDOT will evaluate the need and impact of temporary, short-term lane closures during the design phase and coordinate any required lane closures with the public, Park, and emergency services prior to implementation.

The Preferred Alternative is expected to enhance mobility within the project area.

### 3.5 Aesthetic Effects

The area surrounding the project consists primarily of recreational and conservation land uses. Several community features are present within the quarter-mile project buffer including the Park, Sebastian Fishing Museum, and the East Coast Greenway.

There are no residences in the area and Sebastian Inlet State Park visitors are accustomed to the aesthetics of the existing bridge which has an existing vertical clearance of 39 feet. Based on coordination with the US Coast Guard, the proposed bridge will have a 51-foot vertical clearance, an increase of 12-feet more than the existing bridge structure. The

viewsheds of the beach, bay, lagoons, and the Atlantic Ocean within this coastal area will be maintained or enhanced with the construction of the new bridge. Adding to the visual character is the Park, which encompasses the immediately adjacent and surrounding area of the study area, providing scenic views of natural resources including vegetation and wildlife.

During the Design phase, features such as shapes, colors, and textures will be selected for the bridge and approaches to enhance the aesthetic design of the new bridge. Proposed bridge aesthetics include two hammerhead piers placed side-by-side to form an arch with strut at the bottom to support the observation/fishing pier.

The proposed project improvements associated with the Preferred Alternative are consistent with the existing and future land use vision, and steps are being taken to work with the community to ensure that the bridge design is aesthetically pleasing. Therefore, the Preferred Alternative is expected to enhance the aesthetics of the bridge that carries the existing SR A1A corridor over Sebastian Inlet.

### **3.6 Relocation Potential**

No residential or commercial land uses are present within the project area. Therefore, no residences or businesses will be relocated. The Preferred Alternative is expected to have no involvement related to relocation potential within the corridor.

The proposed project, as presently conceived, will not displace any residences or businesses within the community. Should this change over the course of the project, a Right of Way and Relocation Assistance Program will be carried out in accordance with Florida Statute 421.55, 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 not subject to the provisions of the Farmland Protection Policy Act of 1981 because the project consists of improvements to an existing bridge over Sebastian Inlet, project construction will be primarily within existing ROW, and lands within the project vicinity do not meet the definition of farmland as defined in 7 Code of Federal Regulations (CFR) Part 658.

## 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

The proposed project will result in unavoidable adverse effects to the resource(s) listed below, which is eligible for listing in the National Register of Historic Places (NRHP). FDOT and the State Historic Preservation Officer (SHPO) have executed a Memorandum of Agreement (MOA), which outlined conditions to minimize and mitigate the adverse effects resulting from the project. Consequently, FDOT commits to the stipulations provided below as outlined in the MOA.

A Cultural Resources Assessment Survey (CRAS) of the project area was conducted to locate and evaluate potential archaeological and historic resources within the Area of Potential Effect (APE) and to assess eligibility for inclusion in the National Register of Historic Places (National Register) according to criteria set forth in 36 CFR Section 60.4.

One previously recorded archaeological site and one archaeological occurrence were identified within the project APE. One previously recorded archaeological site could not be relocated. Seventy-two (72) shovel tests were excavated within the archaeological APE, six of which identified an expansion of the Micco Beach Site (8BR125) and one of which was considered an archaeological occurrence. Some portions of the archaeological APE, including the recorded location of an unnamed archaeological site (8IR34), could not be subjected to subsurface testing due to the presence of existing roadways, berms, pavement, sidewalks, swamps or marshes with standing water, and buried utilities. There is insufficient information to evaluate the National Register eligibility of the Micco Beach Site (8BR125), most of which is outside of the archaeological APE. There is also insufficient information to evaluate the National Register eligibility of Site 8IR34 due to the paucity of the available information and the inability to conduct archaeological testing in the area.

Historical research and field survey resulted in the identification and evaluation of four resources comprised of one previously identified historic bridge (James H. Pruitt Memorial Bridge, 8BR3148/8IR1493), one previously identified historic roadway (SR A1A, 8BR2544/8IR1500) and two newly identified historic landscapes (Sebastian Inlet State Park, 8BR4206/8IR1877; and Swimming Lagoon, 8BR4433). The James H. Pruitt Memorial Bridge (8BR3148/8IR1493) was constructed in 1964 and was determined individually National Register-eligible in 2012 by the Florida SHPO as a result of the 2010 Historic Highway Bridges of Florida Study (2010). The James H. Pruitt Memorial Bridge was determined National Register-eligible under Criterion C for its Engineering. The bridge is an early example of the use of prestressed concrete in Florida. The current study finds that the bridge remains eligible for the National Register.

A portion of SR A1A (8IR1500) in Indian River County south of the current project was determined ineligible by the SHPO in 2010. A portion of the Brevard County section of SR A1A north of the project area was determined ineligible by the SHPO in October 2020. The portion of the resource within the current project APE is similar to the portions determined ineligible in 2010 and 2020. Historical research and field survey has not revealed any additional information to suggest the resource is eligible for the National Register, therefore, the portion of SR A1A within the current project area is considered National Register ineligible.

The newly identified Sebastian Inlet State Park (8BR4206/8IR1877) and Swimming Lagoon (8BR4433) are associated with the post-World War II development of publicly-owned recreational areas that occurred throughout the state of Florida. These resources, along with several other state parks and infrastructure, were part of a rapid expansion of the state park

system that occurred in the mid to late twentieth century. The landscape at the Park is not human-designed or unique. In addition, the only historic-aged historic structure, the McClarty Treasure Museum (ca. 1969) is located outside of the current project APE. The Swimming Lagoon, located within the Park, is also typical of other swimming lagoons in the state and is not a unique or significant design. Based on the lack of historical associations, both the Park and the Swimming Lagoon are considered ineligible for the National Register both individually and as contributing resources to a historic district.

An updated FMSF form was not completed for the James H. Pruitt Memorial Bridge (8BR3148/8IR1493) as its eligibility has not changed and it has not been altered since its most recent recordation. Updated FMSF forms for SR A1A (8BR2544/8IR1500) were completed since the current segments have not been previously evaluated. FMSF forms were completed for the two newly-identified resources.

Since the Preferred Alternative will require the demolition of the National Register eligible James H. Pruitt Memorial Bridge (8BR3148/8IR1493), it was determined that the proposed project will have an adverse effect to historic properties. The remaining resources are ineligible for the National Register. As a result of this adverse effect, further consultation with the SHPO and project stakeholders to minimize and mitigate the adverse effect has occurred. Through a Cultural Resource Committee (CRC) FDOT consulted with multiple local, state, and federal agencies as well as local and state government organizations regarding the effects of the project on the historic bridge. The CRC assisted with developing ideas on how to address potential impacts to the historic aspect resulting from bridge construction. An Advisory Council on Historic Preservation (ACHP) e106 submission was made notifying the ACHP of adverse effect to the historic bridge inviting them to participate in Section 106 Consultation. Based on e106, the ACHP did not participate in consultation.

The FDOT submitted the CRAS report to the SHPO on February 9, 2022, along with the District's determination that the proposed project will have an adverse effect on the NRHP-eligible historic bridge. The SHPO concurrence was received on March 30, 2022 and can be found as an attachment to this document. An MOA between FDOT and SHPO was executed on April 21, 2023. The MOA outlines conditions to minimize and mitigate the adverse effects resulting from the project, including Historic American Engineering Record (HAER) Level II documentation for the historic bridge, development and funding of State Historic Markers and educational interpretive panels, and archaeological monitoring. Please refer to the Cultural Resources commitments for more information regarding the MOA stipulations that have been committed to by FDOT District 4. Since the bridge is NRHP-eligible, it has also been evaluated as a Section 4(f) resource and is discussed in the Section 4(f) section below.

## **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.

In compliance with the Department of Transportation Act of 1966, the project was evaluated for potential Section 4(f) use impacts.

### **Recreational Resources**

One publicly owned park/recreational resource, the Sebastian Inlet State Park, is located adjacent to and surrounding the project study area and was identified for potential Section 4(f) involvement. The Park is comprised of 971 acres along SR A1A in Indian River and Brevard Counties, and is divided north and south by the manmade Sebastian Inlet. The Florida Department of Environmental Protection (FDEP) manages the Park. Recreational opportunities include fishing, boating,



camping, swimming, surfing, hiking, and mountain biking. Amenities include campgrounds, concessions, fishing museum, boat ramp, and restrooms.

Access to the Park is from SR A1A. One Park entrance is on the south side of the Inlet and the other is on the north side. Park activities are concentrated around the beach, jetty, fishing museum, under bridge fishing pier, campground, and boat launch on the south side of the bridge and the swimming cove, beach, jetty, concession/restaurant, and under bridge fishing pier on the north side of the bridge. Several hiking/biking trails are located on the north and south sides of the bridge within the Park.

An approximate total of 3.46 acres (0.38%) of park property is required by FDOT for necessary ROW to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, park entrances, shared use path improvements and stormwater management (one pond site is required for the south basin and one for the north basin). The final *de minimis* request for concurrence on Sebastian Inlet State Park was submitted to the Official with Jurisdiction (OWJ), FDEP, on January 17, 2023. The request for concurrence includes the following recreational mitigation measures that have been incorporated into the project commitments:

- Replacement of the existing perimeter fence around the bridge on the north side of the park
- Repaving of both the south and north parking lots within the FDOT ROW under the bridge
- Providing the funding through a Joint Participation Agreement (JPA) for installation of electronic gates at both the south and north park entrances

OWJ concurrence was received on May 9, 2023. A *de minimis* Section 4(f) Evaluation form was submitted to OEM for use of the existing Park property for project-related improvements on May 10, 2023. Please see the Section 4(f) Resources Attachment for additional information regarding the Section 4(f) analysis for recreational resources.

### **Historic Resources**

One Section 4(f) historic resource, the NRHP-eligible Bridge, is identified for potential Section 4(f) and Section 106 involvement for effects to historic resources. The SHPO concurred with the adverse effect to the historic bridge on March 30, 2022. FDOT consulted with multiple local, state, and federal agencies as well as local and state governments and organizations regarding the effects of the project on the historic bridge through a Cultural Resource Committee (CRC). The CRC assisted with developing ideas on how to address potential impacts to the historic aspect resulting from the future bridge construction. Through a Memorandum of Agreement executed on April 21, 2023 between the FDOT and the SHPO, measures have been identified to document the historic resource and to educate the public through historic markers or educational resources. Please refer to Section 4.1 Section 106 of the National Historic Preservation Act for more information regarding the MOA.

A Programmatic Section 4(f) Evaluation form was submitted to OEM for the replacement of the historic bridge on May 10, 2023. Please see the Section 4(f) Resources Attachment for additional information regarding the Section 4(f) analysis for historic resources.

### **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**

The Sebastian Inlet State Park is a state-owned conservation land subject to review and approval by the Acquisition and Restoration Council (ARC). Coordination with FDEP Parks and Recreation (the officials with jurisdiction) and the FDEP Division of State Lands is ongoing and will lead to review and approval through the ARC, which will occur during the project Design Phase. FDOT commits to continuing coordination with FDEP Parks and Recreation, FDEP Division of State Lands, and ARC for mitigating all unavoidable impacts to state-owned conservation land subject to ARC approval during the design phase. FDOT is also committed to continuing coordination with FDEP Parks and Recreation, FDEP Division of State Lands, and ARC regarding updated parking lot layouts under the bridge if the layouts increase the number of parking spaces for Sebastian Inlet State Park. See the above Section 4(f) Section for more information regarding the Park.

## 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) was completed in August 2022 to identify and evaluate potential impacts to federal and state listed species with the potential to occur within the project area. Potential project impacts to listed species' habitat were also evaluated. This project has potential involvement with species under the jurisdictional purview of both the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS).

A benthic survey was conducted in June 2021 to characterize the benthic habitats and presence of federal and state listed species in the marine environment. In September 2021, project biologists conducted pedestrian surveys of the study area to identify and assess the wetland and terrestrial habitats in the area. The presence/absence of any evidence of listed species utilization was also identified as part of these terrestrial habitat assessments.

The proposed project occurs within the USFWS designated Consultation Areas for the West Indian manatee, Atlantic salt marsh snake, piping plover, southeastern beach mouse, and Florida scrub jay. The project is within the USFWS designated critical habitat for the West Indian manatee and adjacent to an area of reproductive critical habitat for the loggerhead sea turtle. West Indian manatees were observed within the Inlet during the benthic survey and are known to frequent the area. The Core Foraging Areas (CFA) of five wood stork colonies are also present within the project area, and a wood stork was observed foraging in the shallows of the swimming lagoon during one of the field surveys conducted for the project. No other protected species were observed during field surveys. Tables 5-1 and 5-2 summarize the names, protected status and occurrence potential of the 19 federally listed and 13 state listed species evaluated in the NRE:

<b>Table 5-1: Federally Listed Species Potentially Occurring within the Project Area</b>				
<b>Common Name</b>	<b>Scientific Name</b>	<b>Listing</b>	<b>Occurrence Potential</b>	<b>Effect Determination</b>
<b>Birds</b>				
Florida scrub jay	<i>Aphelocoma coerulescens</i>	FT	Low	NE
Audubon's crested caracara	<i>Polyborus plancus</i>	FT	Low	NE
wood stork	<i>Mycteria americana</i>	FT	High	MANLAA
piping plover	<i>Charadrius melodus</i>	FT	Low	NE
red knot	<i>Calidris canutus rufa</i>	FT	Low	NE
Eastern black rail	<i>Laterallus jamaicensis</i>	FT	Low	NE
<b>Reptiles</b>				
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	FE	Low	MANLAA
green sea turtle	<i>Chelonia mydas</i>	FT	High	MANLAA
loggerhead sea turtle	<i>Caretta caretta</i>	FT	High	MANLAA
leatherback sea turtle	<i>Dermochelys coriacea</i>	FE	Low	NE

hawksbill sea turtle	<i>Eretmochelys imbricata</i>	FE	Low	NE
Atlantic salt marsh snake	<i>Nerodia clarkii taeniata</i>	FT	Low	MANLAA
Eastern indigo snake	<i>Drymarchon corais couperi</i>	FT	Low	NE
<b>Mammals</b>				
Florida panther	<i>Puma concolor coryi</i>	FE	Low	NE
West Indian manatee	<i>Trichechus manatus</i>	FT	High	MANLAA
Southeastern beach mouse	<i>Peromyscus polionotus niveiventris</i>	FT	Moderate	MANLAA
North Atlantic right whale*	<i>Eubalaena glacialis</i>	FE	Low	MANLAA
<b>Fish</b>				
smalltooth sawfish	<i>Pristis pectinata</i>	FE	Moderate	MANLAA
giant manta ray	<i>Manta birostris</i>	FE	Low	MANLAA
*Evaluated in February 2023 under separate cover in response to NMFS NRE review comments. <b>FT=Federally Threatened, FE=Federally Endangered, CS=Candidate Species, NE=No Effect, MANLAA=May Affect not Likely to Adversely Affect</b>				

<b>Table 5-2: State Listed Species Potentially Occurring within the Project Area</b>				
<b>Common Name</b>	<b>Scientific Name</b>	<b>Listing</b>	<b>Occurrence Potential</b>	<b>Effect Determination</b>
<b>Birds</b>				
black skimmer	<i>Rynchops niger</i>	ST	Low	NE
little blue heron	<i>Egretta caerulea</i>	ST	Moderate	NAE
reddish egret	<i>Egretta rufescens</i>	ST	Moderate	NAE
roseate spoonbill	<i>Platalea ajaja</i>	ST	Moderate	NAE
tricolor heron	<i>Egretta tricolor</i>	ST	Moderate	NAE
<b>Reptiles</b>				
gopher tortoise	<i>Gopherus polyphemus</i>	ST	High	NAE
<b>Plants</b>				
West Coast prickly apple	<i>Harrisia gracilis</i>	SE	Low	NE
red stopper	<i>Eugenia rhombia</i>	SE	Low	NE
beach star	<i>Remirea maritima</i>	SE	Low	NE
inkberry	<i>Scaevola plumeri</i>	ST	Low	NE
Curtiss' hoary pea	<i>Tephrosia angustissima</i>	SE	Low	NE
sea lavender	<i>Tournefortia gnaphalodes</i>	SE	Low	NE
coastal vervain	<i>Verbena maritima</i>	SE	Low	NE
<b>ST=State Threatened, SE=State Endangered, FT=Federally Threatened, NE=No Effect, NAE=No Adverse Effect</b>				

Effect determinations were made based on an analysis of the potential impacts of the proposed project on each species and their habitat. The federally protected Kemp's Ridley sea turtle, green sea turtle, loggerhead sea turtle, smalltooth sawfish, giant manta ray, West Indian manatee, wood stork, Southeastern beach mouse, and Atlantic salt marsh snake were given effect determinations of "May Affect not Likely to Adversely Affect". See Table 5-3 for more information regarding the MANLAA justifications for species with the potential to occur in the project area. The Manatee and Wood

Stork Effect Determination Keys with highlighted pathways are also attached.

<b>Table 5-3: MANLAA Justifications for Species Potentially Occurring within the Project Area</b>		
<b>Common Name</b>	<b>Scientific Name</b>	<b>MANLAA Justification</b>
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	No potential nesting beaches are anticipated to be impacted and sea turtles are only expected to occur in the project area while temporarily passing through the Inlet. The project proposes to install only turtle safe and approved lighting for the bridge, fishing pier, and any areas where pedestrian lighting is required.
green sea turtle	<i>Chelonia mydas</i>	
loggerhead sea turtle	<i>Caretta caretta</i>	
smalltooth sawfish	<i>Pristis pectinata</i>	Since the smalltooth sawfish prefers sandy or muddy substrates, it is not likely to be present in the immediate project study area where the bottom is mostly rocky.
giant manta ray	<i>Manta birostris</i>	Protected Species Construction Conditions will be followed for this project.
West Indian manatee	<i>Trichechus manatus</i>	West Indian manatees were observed within the Inlet during the benthic survey and are known to frequent the area. The USACE Manatee Effect Determination Key was used, resulting in the following pathway (A>B>C>D>G>N>O>P>MANLAA).
wood stork	<i>Mycteria americana</i>	A wood stork was observed foraging in the shallows of the swimming lagoon during one of the field surveys conducted for the project. The USFWS Wood Stork Effect Determination Key was used, resulting in the following pathway (A>B>C>D>MANLAA).
Southeastern beach mouse	<i>Peromyscus polionotus niveiventris</i>	Although beach mice have been documented anecdotally within the limits of the Park south of the Inlet, no impacts are proposed within the dune system or other potential areas of habitat.

Atlantic salt marsh snake	<i>Nerodia clarkii taeniata</i>	Although some potential suitable habitat exists within the project study area, no saltmarshes, tidal flats, or areas of black mangrove monoculture are present. The probability of encountering this snake in the project area is low.
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The remaining ten federally protected species were given "No Effect" determinations due to a lack of suitable habitat. No adverse effects are anticipated for any of the state protected animals or plants with the potential to occur within the study area.

The project is near, but not within, designated loggerhead sea turtle critical habitat. The project will have No Effect on loggerhead critical habitat. Although the bridge is located within designated manatee critical habitat, the only impacts will likely come from the substructure and fender system. The project area does not support foraging habitat (seagrasses) for the manatee. The USACE Manatee Effect Determination Key was used to make an effect determination for manatee critical habitat, resulting in the following pathway (A>B>C>D>G>N>O>P>MANLAA). Construction techniques will be required to follow the Standard Manatee Conditions for In-Water Work and the NOAA Fisheries Southeast Regional Office (SERO) Protected Species Construction Conditions and Vessel Strike Avoidance Measures. Impacts to suitable foraging habitat for wood storks will be offset within the proposed mitigation for wetland impacts. The project is not anticipated to result in any significant impacts to suitable or critical habitat for listed species.

Indirect/secondary impacts from the project may include turbidity and sedimentation resulting from existing bridge demolition, pile driving, and bridge construction. However, these temporary impacts would be limited to the construction phase and minimized to the greatest extent utilizing Best Management Practices (BMPs). FDOT is committed to implementing the following avoidance and minimization measures:

- Adhere to the USFWS and FWC Standard Manatee Conditions for In-Water Work
- Adhere to the Protected Species Construction Conditions, NOAA Fisheries SERO during construction.
- Utilize the ramp up or vibratory installation methodology for pile driving to warn and allow any listed species to vacate the area.
- Utilize sound diminishing measures (such as wood blocks) to minimize potential noise impacts from pile driving.
- Continue to review prudent avoidance and minimization measures during final design, permitting and project construction.

The bridge currently has bird flight diverters installed to deter birds in flight from vehicles traveling over the bridge. After coordination with resource agencies, the bridge replacement project is proposing the inclusion of flight diverters on the new bridge. Agency correspondence regarding the diverter pole specifications is included in the project file.

The NRE was transmitted to USFWS and NMFS on August 11, 2022 with a request to initiate informal Section 7 consultation under the ESA. The NRE was transmitted to FWC on August 18, 2022. USFWS concurred with FDOT's effect determinations on August 12, 2022. The USFWS concurrence letter is attached to this document.

NMFS responded on September 19, 2022 that additional information was required to complete informal Section 7 consultation. FDOT transmitted additional pile driving details to NMFS via a letter dated February 7, 2023, to which NMFS responded requesting the inclusion of the North Atlantic right whale to the ESA Section 7 analysis for the project. On February 8, 2023, FDOT provided NMFS with an analysis of potential project impacts to the North Atlantic right whale, along with an associated effect determination of "May Affect not Likely to Adversely Affect" based upon the proposed

work, the conditions within the Sebastian Inlet, the potential for vessel strikes or entanglements, and the likelihood of encountering the whale. On February 23, 2023, FDOT submitted to NMFS a request to complete consultation during the design phase, since pertinent design details, such as those for the temporary trestle, are not yet available. FDOT will reinitiate informal Section 7 consultation with NMFS during the design and permitting phase for any changes in NMFS-listed species impacts, including but not limited to, design changes, temporary trestle impacts, temporary cofferdam impacts, and barge spudding details since these details are not yet available. NMFS agreed in a letter dated February 24, 2023, that consultation for the project will be completed prior to construction, the project is not anticipated to result in a jeopardy opinion, and that requirements will be fulfilled consistent with 23 CFR 771.133. NMFS requested that FDOT commit to performing in-water pile driving activities during daylight hours only. FDOT will evaluate the feasibility of this request during the design phase and coordinate the pile driving approach with NMFS prior to construction. The NMFS letter is attached.

No response has been received from FWC.

FDOT will notify the Florida Department of Agriculture and Consumer Services (FDACS) and the Endangered Plant Advisory Council when bids for project construction are advertised.

Additional information regarding protected species and habitat is documented in the NRE and agency correspondence is included in the project file.

## **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.

As part of the NRE, a wetland evaluation was conducted to identify and describe existing wetlands and surface waters within and adjacent to the project limits, as well as to assess potential impacts and evaluate potential avoidance, minimization and mitigation options.

A wetland field review of the project study area was completed in September 2021 by biologists familiar with South Florida animals and plants and all documented wetland boundaries were delineated in accordance with the U.S. Army Corps of Engineers Wetland Delineation Manual (Technical Report Y-87-1), Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plan Region (ERDC/ED TR-10-20) and Chapter 62-340 of the Florida Administrative Code, Delineation of the Landward Extent of Wetlands and Surface Waters.

Two wetland types were identified within the project study area: Bays and Estuaries and Mangrove Swamp. The Sebastian Inlet was created from privately owned lands and connects to the Indian River Lagoon system to the west. This area also includes a swimming lagoon on the west side of the Inlet. The Inlet is salt water and there is an extremely heavy current present. Due to the current and hard bottom conditions, there is no benthic vegetation present. Mangrove swamps are located along the western side of SR A1A throughout the project study area.

Engineering and design principles have been utilized during alternatives development to avoid or minimize wetland impacts to the greatest extent possible. Proposed impacts to wetlands are from the project for the realignment of the SID access road to the haul site for dredged sand, at the two preferred pond sites, and reconfiguration of the north and south Park entrances. Impacts to the Inlet are also anticipated although they are generally minor and not subject to mitigation

since the bridge is elevated well above the water level and the pilings and fender system have a very small footprint. The proposed improvements include impacts to approximately 0.81 acres of surface waters for bridge construction and 0.11 acres of mangroves for roadway improvements north and south of the bridge.

The mangroves are of high quality and perform an important functional role for the ecosystem. The Uniform Mitigation Assessment Method (UMAM) functional analysis score reflects this high quality, and the 0.11 acres of mangrove impacts estimated a functional loss of 0.096 UMAM units. Appropriate mitigation to offset these impacts will be provided via credits from an approved mitigation bank serving Basin 22 such as CGW or Basin 22 Mitigation Bank which both currently have credits, or via projects providing restoration at the Park or the Indian River Lagoon Preserve State Park, in which the Department has participated in the past to offset impacts.

Indirect/secondary impacts from the Preferred Alternative may include turbidity and sedimentation resulting from existing bridge demolition, pile driving, and bridge construction. However, these temporary impacts would be limited to the construction phase and minimized to the greatest extent utilizing BMPs. The following avoidance and minimization measures will be implemented for this project:

- Implement BMPs to control project generated turbidity and sedimentation in accordance with the current edition of FDOT's Standard Specifications for Road and Bridge Construction.
- Continue to review prudent avoidance and minimization measures during final design, permitting and project construction.

In accordance with the State of Florida's established cumulative impact requirements (subsections 373.414(8)(a), F.S., 40C-4.301 (3), F.A.C., and 12.28, ERP A.H.) the wetland impacts associated with this project will be offset within the same regulatory mitigation basin (Indian River Basin - 22) therefore meeting cumulative impact criteria.

The proposed project was evaluated for potential wetland impacts in accordance with Executive Order 11990, Protection of Wetlands. There are no practicable alternatives to the proposed impacts due to the need to address the structural and functional deficiencies of the existing bridge. All wetland impacts will be avoided and minimized to the greatest extent practicable during design, and wetland impacts resulting from this project will be mitigated pursuant to Section 373.4137, F.S., to satisfy all mitigation requirements of Part IV of Chapter 373, F.S., and 33 U.S.C. 1344.

The project is within the jurisdiction of the St. Johns River Water Management District (SJRWMD). Because a portion of the project is seaward of the Coastal Construction Control Line (CCCL), the FDEP Central District will be the lead agency for project stormwater permitting per an existing operating agreement with SJRWMD. The FDEP Southeast District, which includes Indian River County, has agreed to defer to FDEP Central District for project permitting. Continued coordination with both FDEP and USACE will also occur during the permitting process for this project. Therefore, the Preferred Alternative is expected to have no significant impact on wetlands and surface waters. Additional information regarding wetlands can be found in the NRE in the project file.

### **5.3 Essential Fish Habitat (EFH)**

Based on coordination with the National Marine Fisheries Service to comply with Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), FDOT commits to reinitiate consultation and provide information necessary to complete consultation on the documented EFH for species within several Fishery Management Plans (FMPs), including spiny lobster, snapper and grouper, migratory pelagics, red drum, and penaeid shrimp, prior to advancing the project to construction. The letter from National Marine Fisheries Service is intended to provide reasonable



assurance, per 23 CFR § 771.133, that requirements of the MSFCMA are able to and will be met prior to construction. The status of this commitment will be updated in any subsequent project re-evaluations.

An assessment for EFH was conducted as part of the NRE, which was transmitted to NMFS to initiate MSFCMA consultation on August 11, 2022. The proposed project is within the South Atlantic Fishery Management Council's (SAFMC) area of jurisdiction. EFH occurs within the project footprint in the form of both open water and mangroves. As the project has the potential to impact protected marine resources and EFH, a benthic resource survey was conducted in 2021 to identify existing EFH and the presence/absence of any Habitat Areas of Particular Concern (HAPCs) within the study area.

No mangroves are present within the Inlet adjacent to the existing bridge, though mangroves occur throughout the Park. Benthic resources are limited to sponge colonization on the hardbottom substrate throughout the Inlet and those colonizing the large rip-rap boulders. No listed species of coral was observed as only one smooth star coral (*Solenastrea bournoni*) was identified on the rip-rap shoreline to the northwest of the existing bridge. No seagrasses were documented within the project study area as the primarily rocky hardbottom substrate, coupled with the high velocity current, likely precludes seagrasses from colonizing and establishing this area. The rip-rap, rocky-hardbottom, and bare sand substrates documented in the survey area provide EFH for species within several FMPs, including spiny lobster, snapper and grouper, migratory pelagics, red drum, and penaeid shrimp.

Minor impacts/disturbance to existing EFH and marine resources, mainly encrusting sponges and algae, may occur from the construction of the project which includes the removal of the existing bridge (and associated in-water structures). However, the existing rip-rap shoreline is not anticipated to be impacted and is to remain. Additionally, any proposed replacement bridge will include similar in-water structures that would be anticipated to provide analogous marine habitat post construction. The biota along the rip-rap shoreline would be largely unimpacted by this project and are expected to subsist and provide for continued natural recruitment. As such, a similar benthic community would be anticipated to naturally re-establish in the project area post construction.

The project will impact 0.11 acres of mangroves. These impacted mangroves are adjacent to existing roads and, as such, provide suboptimal habitat for the larval and juvenile stages of managed species that would use them. Mitigation to offset impacts to mangroves is proposed according to the functional analysis conducted assessing the wetland qualities (UMAM score of 0.096). For these reasons, FDOT has determined that potential adverse effects to EFH are minimal.

Indirect/secondary impacts from the project may include turbidity and sedimentation resulting from existing bridge demolition, pile driving, and bridge construction. However, these temporary impacts would be limited to the construction phase and minimized to the greatest extent utilizing BMPs. The following avoidance and minimization measures will be implemented for this project:

- Implement BMPs to control project generated turbidity and sedimentation in accordance with the current edition of FDOT's Standard Specifications for Road and Bridge Construction.
- FDOT will coordinate with the County's Artificial Reef Program to explore potential opportunities to donate existing bridge materials to an artificial reef site.
- Continue to review prudent avoidance and minimization measures during final design, permitting and project construction.

On February 23, 2023, FDOT submitted to NMFS a request to complete consultation during design, since pertinent design details, such as those for the temporary trestle, are not yet available. FDOT's request for can be found in the project file. FDOT will reinitiate consultation with NMFS during the design and permitting phase for any changes in impacts to EFH,

including but not limited to, design changes, temporary trestle impacts, temporary cofferdam impacts, and barge spudding details since these details are not yet available. NMFS agreed in a letter dated February 24, 2023 (attached), that consultation for the project will be completed prior to construction. The Preferred Alternative is expected to have no significant impact on EFH. Additional information regarding EFH is documented in the NRE and agency correspondence is included in the project file.

## 5.4 Floodplains

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

The Federal Emergency Management Agency (FEMA) has developed Flood Insurance Rate Maps (FIRM) for Brevard County and Indian River County. According to FEMA Map Nos. 12009C0802H and 12061C0102H, the northern and southern portions of the project are within Zone AE and the central portion of the project is within Zone VE. The Zone AE elevation north of the bridge ranges from 5-feet to 6-feet North American Vertical Datum (NAVD). The Zone AE elevation south of the bridge ranges from 7-feet to 8-feet NAVD. The project is also located almost entirely within the 100- and 500-year floodplains.

The proposed drainage structures will perform hydraulically in a manner equal to or greater than the existing structure, and backwater surface elevations are not expected to increase. Drainage will be enhanced for the bridge, which does not currently have any stormwater management facilities. Thus, there will be no significant adverse impacts on natural and beneficial floodplain values and an overall improvement in the drainage is anticipated. 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 emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant. Since the impacts to the floodplain are considered *de minimis* and traversable, floodplain compensation is not required. This project is not anticipated to have any significant impact on floodplains, and water quality in the area will be improved as a result of the proposed stormwater management system.

The FEMA Flood Insurance Rate Maps and Bridge Hydraulics Report for the project can be found in the project file.

## 5.5 Sole Source Aquifer

There is no Sole Source Aquifer associated with this project.

## 5.6 Water Resources

The northern and southern portions of the Preferred Alternative are located within the Sebastian Inlet State Recreation Area, which is classified as an Outstanding Florida Water (OFW). The project is located within the watershed of the South Indian River (Near St. Sebastian River) [WBID 5003D1], which is verified impaired for fecal coliform. The Indian River Above Sebastian Inlet watershed [WBID 2963A] is just north of the project and has a state adopted and EPA approved Total Maximum Daily Load (TMDL) for nitrogen and phosphorous. Both WBID 5003D1 and WBID 2963A are included in the Central Indian River Lagoon Basin Management Action Plan (BMAP). The Indian River Lagoon, which is designated as an Aquatic Preserve, is also located to the west of the Sebastian Inlet and the Park. However, the preserve is not within the project study area.

There are currently no stormwater management facilities on the bridge or roadway within the project study limits. The bridge discharges stormwater runoff directly to the Sebastian Inlet through bridge scuppers. Stormwater runoff for the north and south bridge approaches is collected in two sets of inlets that discharge via existing cross drains to small ponds located west of and adjacent to SR A1A. South and north of the bridge, stormwater runoff from the roadway is collected by shallow roadside swales that flow towards existing cross drains before discharging to the Indian River.

Because a portion of the project is seaward of the CCCL, the FDEP Central District will be the lead agency for project stormwater permitting per an existing operating agreement with SJRWMD. The FDEP Southeast District, which includes Indian River County, has agreed to defer to FDEP Central District for project permitting. Coordination with FDEP for the Environmental Resource Permit (ERP) has resulted in the following project-specific criteria, which supplements the design criteria outlined in the Pond Siting Report included in the project file:

1. An additional 50% of the runoff volume will be treated due to the proximity of a designated OFW.
2. The shared use path is exempt from treatment.
3. Attenuation is not required as long as nutrient loading requirements are met and no discharge occurs east of the CCCL.
4. Floodplain compensation is not required due to *de minimis* floodplain impacts.

Following construction of the Preferred Alternative, stormwater runoff from both the new and existing impervious areas will be collected by storm sewer systems and roadside ditches. Water quality treatment will be achieved through construction of offsite ponds, which will require acquisition of additional ROW on the north and south sides of the bridge. The south pond size is approximately 1.48 acres and the north is 1.39 acres. The proposed ponds will outfall to spreader swales that overflow west into the adjacent wetlands and discharge to the Indian River Lagoon or Sebastian Inlet before ultimately discharging to the Atlantic Ocean.

As part of the alternatives evaluation process for the PD&E Study, a Value Engineering (VE) Study was conducted May 2 through May 10, 2022. The VE Study recommended a swale along the east side of SR A1A south of the Bridge for treatment and attenuation for Basin 1. This recommendation was accepted and FDOT is committed to evaluating the swale for treatment and attenuation of Basin 1, south of the bridge.

The SR A1A RRR project (FM 445618-2) extends from the bridge replacement project south to Sand Dollar Lane in Indian River County. Preliminary calculations show that Pond 1A (south) can be reduced by approximately fifty (50) percent utilizing offsite treatment swales. Potential treatment swale locations and preliminary calculations are included in the *Pond Siting Report* (August 2022). Following further geotechnical investigation and completion of percolation tests during the design phase, suitable soils and locations for exfiltration trenches within or immediately adjacent to the project area may be identified. The treatment swales are anticipated to reduce overall nutrient loading into the OFW. FDOT is committed to continuing the evaluation of treatment swales during the design phase.

The proposed stormwater management system will comply with stormwater pollution abatement criteria. In accordance with Section 403.0885, F.S., a National Pollutant Discharge Elimination System (NPDES) construction permit will be acquired for the project and a Stormwater Pollution Prevention Plan will be developed and implemented. An ERP will also be acquired prior to construction. The project will meet the criteria in the SJRWMD Environmental Resource Permit Applicant's Handbook Volumes I and II, including an additional 50% of water quality treatment volume prior to discharge since the project crosses a designated OFW.

The latest edition of the FDOT Standard Specifications for Road and Bridge Construction will be adhered to, and Best Management Practices (BMPs) will be followed to reduce or eliminate impacts from sedimentation and runoff during construction. Indirect/secondary impacts from the project may include generated turbidity and sedimentation resulting from existing bridge demolition, pile driving, and bridge construction. However, these temporary impacts would be limited to the construction phase and minimized to the greatest extent possible through the use of BMPs, including the installation and regular maintenance of erosion control structures. FDOT will continue to coordinate water resource impacts and stormwater management with the appropriate regulatory agencies as required throughout all remaining phases of the project. Therefore, the Preferred Alternative is expected to have no significant impact on water resources.

A Water Quality Impact Evaluation (WQIE) and Pond Siting Report (PSR) were completed for the project and can be found in the project file.

### **5.7 Aquatic Preserves**

There are no aquatic preserves in the project area.

### **5.8 Outstanding Florida Waters**

The northern and southern portions of the Preferred Alternative are located within the Sebastian Inlet State Recreation Area, which is classified as an OFW. However, the project improvements will not increase capacity along SR A1A. Anticipated ROW impacts are limited to land required for offsite wet detention ponds, as well as clips and strips along SR A1A that are needed to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, shared use path improvements, and stormwater management.

The project will be designed to meet state criteria for stormwater discharge, and best management practices will be utilized during construction to prevent impacts to OFWs. Section 404, Environmental Resource, and NPDES permits will also be acquired for the project. Therefore, the Preferred Alternative is anticipated to have no significant impacts on OFWs. For more detail, please refer to the attached map showing OFW limits within 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**

The following evaluation was conducted pursuant to the Coastal Barrier Resources Act of 1982 and the Coastal Barrier Act of 1990.

Per the USFWS Coastal Barrier Resources System (CBRS) Mapper, the Preferred Alternative is located within CBRS Unit P10P (Vero Beach), which is designated as an Otherwise Protected Area (OPA) and, as such, does not require consultation with USFWS.

## 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.

This project qualifies as a Type I project. The prediction of existing and future traffic noise levels with and without the recommended Preferred Alternative was performed using the FHWA Traffic Noise Model 2.5 (TNM 2.5). A Noise Study Report was prepared for the project and can be found in the project file.

Project study area land uses fall under the following FHWA NAC land use activity categories: residential units (Category B), other noise sensitive areas including parks, picnic areas, recreational areas, Section 4(f) sites (Category C) and certain commercial properties (Category E). Noise sensitive sites within the project study area are all associated with the Park (see attached Noise Receptors Map). These include outdoor park areas such as beaches, picnic tables, benches, and fishing areas. Other areas include interior areas of the Sebastian Fishing Museum (fishing museum), and outdoor eating areas at the Inlet Grill restaurant. Vacant, undeveloped lands (Activity Category G) that do not have any specific outdoor uses make up the remainder of the project study area. Sixteen areas within the Park that have the highest potential to be impacted by the proposed improvements were identified along SR A1A within the project study area. Under the existing conditions, the primary source of noise at the nearby noise sensitive sites is traffic on SR A1A.

Existing noise levels were measured at three sites along the project corridor during nine, 10-minute-long sampling periods. Traffic noise levels were found to range from 53.7 to 65.2 dB(A) at the near meter locations and 49.6 to 61.1 dB(A) at the far meter locations. In all cases, traffic noise from SR A1A was the predominant source of noise at the monitoring sites.

Site conditions and traffic data gathered during the field measurements were used to develop inputs to the FHWA's TNM 2.5 for computer models representative of the existing conditions. Models were then developed for the existing year (2019) conditions, and the design year (2045) No Build Alternative and Preferred Alternative. The weekend peak-hour traffic volumes were predicted to be the overall worst-case condition and the roadway was expected to operate at well below its LOS C capacity.

Representative receptor sites were used in the TNM model inputs to estimate noise levels associated with existing and future conditions within the project study area (refer to the attached Sebastian Inlet Bridge Noise Receptors Map for more information). Existing worst-case traffic noise levels along this segment of SR A1A are predicted by TNM to range from 35.7 dB(A) inside the fishing museum to 55.8 dB(A) at the beach along the south side of the inlet west of SR A1A. Design year worst-case traffic noise levels with the No Build Alternative are predicted to range from 35.2 dB(A) inside the fishing museum to the same beach. These levels are lower than existing levels due to slightly lower peak-hour traffic volumes, 12-foot increased bridge vertical clearance, and Preferred Alternative alignment shift further east of the existing bridge. Design year worst-case traffic noise levels with the preferred Build Alternative are predicted to range from 26.3 dB(A) inside the fishing museum to 47.8 dB(A) at the patio at the Inlet Grill. These levels are also predicted to be lower than the

existing worst-case noise levels.

The proposed improvements do not result in any substantial noise increases [i.e., greater than 15 dB(A) over existing levels] at any of the nearby sites and the project improvements will not increase capacity along SR A1A. Therefore, based on the FHWA and FDOT methodologies used to evaluate traffic noise levels for this study, proposed project improvements were determined to not generate noise impacts at any of the nearby noise sensitive sites within the project study area and consideration of noise abatement is not required.

## 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 not change the Level of Service (LOS) and not change delay and congestion on all facilities within the study area.

## 6.3 Contamination

A Contamination Screening Evaluation Report (CSER) was completed for the proposed project. The contamination screening evaluation of SR A1A was conducted to identify and evaluate properties with known or potential contamination issues within or adjacent to the project area using a 500-foot buffer. The CSER can be found in the project file.

As part of the contamination screening evaluation to identify any potential contamination sources within or adjacent to the project area, the following activities were completed: review of regulatory files; review of historic and current aerial photography; and field survey. This contamination screening evaluation revealed zero **No** risk sites, one **Low** risk site, zero **Medium** risk sites and zero **High** risk sites (refer to the attached Sebastian Inlet Bridge Potential Contamination Site Map for more information).

Only one potential contamination site, a maintenance yard for the Park, was identified within the study area as a potential contamination concern (see Table 6-1). An investigation of site history, which included a review of agency regulatory files, was performed for the identified site to determine its potential degree of risk for contamination involvement with the proposed project. Although the parcel boundary for this site encroaches into the project area and hazardous waste and petroleum products are actively handled onsite, there have been no reported spills and the area of concern is located approximately 650 feet west of the project area. Therefore, groundwater/soil contamination and contamination impacts during construction are unlikely and this site was assigned a Low risk rating for potential contamination concerns.

<b>Site ID</b>	<b>Site name (Facility ID)</b>	<b>Address</b>	<b>Risk Type</b>	<b>Risk Rating</b>	<b>Soil/ Ground-water</b>	<b>Contamination Type</b>	<b>Distance from Improvements</b>

1	Sebastian Inlet State Park (87434859)	9700 South A1A Melbourne Beach Florida 32951	Hazardous Waste and Petroleum Storage	Low	N/A	N/A	Park maintenance yard 650 feet west of south Park entrance
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Anticipated ROW impacts are limited to land required for offsite wet detention ponds, as well as clips and strips along SR A1A that are needed to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, and shared use path improvements. Based on the distance from the locations of required ROW to the Low risk maintenance yard, the need for Level II Contamination testing is not anticipated at this time.

Previous surveys for asbestos containing materials (ACM) were completed by FDOT in 2012 and 2014. None of the materials sampled were defined as ACM. The bridge is reported as a concrete-only structure in the FDOT database, therefore no issues with heavy metals in the steel coating system are anticipated. However, an evaluation for Lead Based Paint (LBP) or Metal Based Coatings (MBC) will be completed during the project's design phase. The fishing pier bridge located under Bridge No. 880005 has metal components and was tested in 2013 and 2014 for lead, heavy metals and Toxicity Characteristic Leaching Procedure (TCLP) analysis. Although heavy metals were detected above EPA reporting limits, the TCLP analysis indicated that the waste stream associated with the painted surfaces sampled was not classified as hazardous.

If dewatering will be necessary during construction, a SJRWMD Water Use Permit and a NPDES General Permit for Discharge of Groundwater will be required. All permits will be obtained in accordance with Federal, State, and local laws and regulations, and in coordination with the District Contamination Impact Coordinator.

Additionally, Section 120 Excavation and Embankment - Subarticle 120-1.2 Unidentified Areas of Contamination of the Standard Specifications for Road and Bridge Construction will be provided in the project's construction contract documents. This specification requires that in the event that any material or suspected contamination is encountered during construction, or if any spills caused by construction-related activities should occur, the contractor shall be instructed to stop work immediately and notify the FDOT District Contamination Impact Coordinator (DCIC) as well as the appropriate regulatory agencies for assistance.

## 6.4 Utilities and Railroads

### Utilities

Existing utilities within the project study area were identified through Sunshine State One-Call of Florida, Inc (SSOCOF). Eight Utility Agency Owners (UAO) were identified with five UAOs indicating they have no facilities within the project limits including: Comcast, Florida Power and Light - Transmission, Indian River Utilities, Indian River Traffic, and Uniti Fiber. The three UAOs operating within the project limits include AT&T Distribution Florida, Florida Power & Light Distribution, and the Park. Descriptions of these existing utilities are provided in Table 6-2.

<b>TABLE 6-2: Existing Utilities</b>	
<b>Utility Type Agency/Owner/Contact</b>	<b>Description</b>

Telephone - AT&T Distribution	South of the Sebastian Inlet, an existing buried telephone (BT) 25-pair copper with 1/4" to 1/3" diameter cables cross the Park's south parking lot and continues north on the west side of SR A1A as a BT 25-pair copper cable and BT 50-pair copper cable to the end of the project limits. North of the Sebastian Inlet, a BT 25-pair copper cable splits off to the west along the north Park entrance.
Electric - Florida Power & Light (Distribution)	South of the Sebastian Inlet Bridge, FPL has 1-phase 7.6kV overhead electric (OE) along the west side of SR A1A that continues north to the bridge. Electric utility service extends west into the Park via OE. North of the bridge, a 1-phase 7.6kV buried electric (BE) runs along the parking lot east to the Inlet Grill restaurant. The buried electric transitions to 1-phase 7.6kV OE that crosses SR A1A and continues north along the west side of SR A1A to the project limits.
Sebastian Inlet State Park Facilities	A well water pump station that houses pumps, holding tanks, and an aerator supplies water to the north side of the Park . The well house is located on north of the Sebastian Inlet on the east side of SR A1A. The water supply line extends south from the pump station to an existing well head where a supply lateral extends east to the Inlet Grill restaurant and public restrooms. At the restaurant, a second supply line extends west under the bridge and then north to the north Park ranger station. The north well water pump station, water main, and well head may be impacted due to new bridge alignment and foundations. Sanitary sewer is currently accommodated by septic systems with the Park north and south of the Sebastian Inlet.

The Preferred Alternative will require the relocation of existing utilities within the project limits. Potential utility impacts include relocation of overhead electric, Park well and sanitary utilities, and fiber.

The extent of utility impacts and the need for temporary services for Park operations will be determined during the design phase of the project and further coordination with utility owners will be required. Potential utility impacts for the Preferred Alternative are summarized in Table 6-3 and are included in the Utility Assessment Package in the project file.

Utility Agency Owner	Description	Source of Conflict	Quantity
AT&T	BT-COP-50	Roadway Widening	
	BT-COP-25	New Bridge Alignment	1,600 Linear Feet
Sebastian Inlet State Park	Water Main	Roadway Widening	
		New Bridge Alignment	1,600 Linear Feet
Sebastian Inlet State Park	North Well House	Roadway Widening	
		New Bridge Alignment	1 Lump Sum
FPL - Distribution	1-Phase OH 7.6 kV	Roadway Widening	8 Poles
		New Bridge Alignment	2,600 Linear Feet
FPL - Distribution	1-Phase BE 7.6 kV	Roadway Widening	
		New Bridge Alignment	300 Linear Feet



## **Railroads**

There are no existing railroads located within or along the project limits.

## **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.

Construction noise and vibration impacts to the project corridor will be minimized by adherence to the controls listed in the latest edition of the FDOT's Standard Specifications for Road and Bridge Construction. Based on the limited project geotechnical data, 60-inch diameter drilled shafts are proposed, including low vibration casing installation, to avoid disturbing existing piles. The proposed approach piers have been located as far away as possible from existing foundations. This minimizes the potential for vibration impacts from installation of bridge pilings and avoids potential conflicts with the existing piles. The contractor will be instructed to coordinate with the project engineer and the Department Noise Specialist should unanticipated noise or vibration issues arise during project construction.

Due to the project's proximity to Sebastian Inlet and the Atlantic Ocean, water quality protection measures will be included for erosion and sedimentation control, as well as to reduce turbidity during construction. Standard in-water work practices and applicable construction conditions applicable for manatees, sea turtles, and smalltooth sawfish will also be followed.

If dewatering will be necessary during construction, a SJRWMD Water Use Permit and a NPDES Construction General Permit for Discharge of Groundwater will be required, and a Stormwater Pollution Prevention Plan will be developed during design. Additionally, Section 120 Excavation and Embankment - Subarticle 120-1.2 Unidentified Areas of Contamination of the Standard Specifications for Road and Bridge Construction will be provided in the project's construction contract documents. This specification requires that in the event that any material or suspected contamination is encountered during construction, or if any spills caused by construction-related activities should occur, the contractor shall be instructed to stop work immediately and notify the FDOT DCIC as well as the appropriate regulatory agencies for assistance.

Traffic flow and travel patterns will be temporarily impacted during construction activities. Maintenance of traffic and the sequence of construction will be planned and scheduled to minimize pedestrian, bicycle, and vehicular traffic delays throughout the project area. Signs will be used to provide notice of access to local businesses and other pertinent information to the traveling public. The latest edition of FDOT's Standard Specifications for Road and Bridge Construction will be followed during construction activities, and BMPs will be employed to minimize potential construction impacts.

## **7. Engineering Analysis Support**

The engineering analysis supporting this environmental document is contained within the Preliminary Engineering Report.

## 8. Permits

The following environmental permits are anticipated for this project:

### Federal Permit(s)

USACE Section 10 or Section 404 Permit  
USACE Section 408 Permit  
USCG Bridge Permit

### Status

To be acquired  
To be acquired  
To be acquired

### State Permit(s)

DEP or WMD Environmental Resource Permit (ERP)  
DEP Coastal Construction Control Line Permit  
DEP National Pollutant Discharge Elimination System Permit  
FWC Gopher Tortoise Relocation Permit  
WMD Right of Way Permit

### Status

To be acquired  
To be acquired  
To be acquired  
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

A Public Involvement Plan (PIP) was initiated as part of this PD&E Study. This plan complies with Section 339.155, F.S.; Council of Environmental Quality (CEQ) Regulations for implementing the procedural provisions of the NEPA and 23 CFR 771. The purpose of the PIP is to identify various approaches to provide information to and obtain input from concerned citizens, agencies, private groups, regulatory agencies, and governmental entities. The overall goal of the PIP is to help ensure that the study reflects the values and needs of the communities it is designed to benefit. Additional details are provided in the PIP in the project file.

The outreach activities and public involvement efforts are summarized below. Additional details are provided in the Public Involvement Summary Report and Comments and Coordination Report found in the SWEPT project file.

### Agency/Stakeholder Coordination

FDOT has identified federal, state, regional and local agencies and has coordinated with them through the Advance Notification (AN) process during the Programming Screening event of the ETDM process. A contact list was developed including the Environmental Technical Advisory Team (ETAT) Members and federally recognized Native American Tribes.

Local and state interest groups or organizations having a direct or expressed interest in the project study were also identified and contacted by FDOT. As other concerned public interest organizations were identified throughout the study process, they also were listed and contacted.

During the PD&E Study, the project team met and discussed the project and issues with the following agencies, cities, committees, and stakeholders:

- U.S. Coast Guard
- Florida Inland Navigation District
- Florida Department of Environmental Protection, Division of State Lands
- Florida Department of Environmental Protection, Florida Park Service
- Sebastian Inlet District Commission
- Indian River County Metropolitan Planning Organization
- Indian River County
- Space Coast Transportation Planning Organization
- Brevard County
- St Johns River Water Management District
- Boating/Marina Communities

### Cooperating Agency Coordination

Coordination with the U.S. Coast Guard, a cooperating agency, has been ongoing throughout the PD&E Study. Coordination included the completion of a Navigation Impact Needs Memorandum followed by a Vertical Clearance Evaluation Memorandum in order to establish a U.S. Coast Guard Preliminary Clearance Determination for the new bridge. The U.S. Coast Guard was provided a copy of the Type 2 CE document for review. The U.S. Coast Guard replied on March 23, 2023 stating the Type 2 CE document contains a majority of what will be required for bridge permitting noting that any additional clarification can be completed at that time.

### **Outreach Activities**

Several measures were taken to ensure that the public was informed of the project issues, upcoming meetings, and had a way to communicate their comments to the department. These measures included:

- Newspaper Ads, as required
- Invitational/Information Letters
- Newsletters/Factsheets
- Press Releases
- Public Notices
- Project Website [www.fdot.gov/projects/SebastianInletBridge](http://www.fdot.gov/projects/SebastianInletBridge)
- Agency/Stakeholder Coordination
- FDOT District Four Press Release
- Florida Administrative Register (FAR)
- FDOT District Four Communication's office social media posts on Facebook

Meeting documents were made available for review prior to the public meetings by posting on the project website. Handouts and display boards developed for the in-person meetings were also uploaded to the project website. A Comment Form was made available for the public to provide comments during the in-person meetings and on the project website.

Opportunities to provide comments were made available during all public meetings/hearing, and any time during the PD&E Study via the project website, by email to the FDOT Project Manager, or by mail. The purpose of the public meetings/hearing is not only to share project information with stakeholders, but to also collect feedback which was considered during the alternatives evaluation process.

### **Public Kickoff Meeting**

Due to the Covid-19 pandemic, and in compliance with FDOT requirements at the time of the meeting, the Public Kickoff Meeting was conducted in a "virtual" format. A Virtual Public Kickoff meeting, via the GoTo Webinar platform, was held on Tuesday, May 11, 2021, in accordance with the PIP. The meeting consisted of a virtual PowerPoint presentation and overview of the project followed by a question-and-answer session. A recording of the meeting was uploaded to the project website on May 12, 2021.

The purpose of the meeting was to introduce the study and give local, state, and federal officials, agencies, and the public an opportunity to comment and provide initial input on the future transportation improvements.

Based on information gathered from GoTo Webinar, 140 individuals registered for the Virtual Public Kickoff Meeting and 84 attended the meeting. Five elected and agency officials attended the Virtual Public Kickoff meeting. Thirteen FDOT Staff were in attendance from FDOT District Four and District Five.

Prior to the Virtual Public Kickoff meeting a total of 22 questions/comments were received through the registration link and 30 questions/comments were made during the virtual meeting. All questions and comments submitted via the GoTo Webinar question box were addressed during the meeting.

The questions and comments related to issues such as: bicycle and pedestrian accommodations on the bridge; traffic maintenance patterns during construction; bridge closure; bridge design; bridge vertical clearance; bridge demolition; review of environmental studies; bridge design; bird diversion poles; concerns regarding widening of SR A1A outside the

project limits.

More detailed discussion of the Public Kickoff Meeting is included in the *Public Kickoff Meeting Summary Report* (June 2021) in the project file.

### **Alternatives Public Workshop**

A Hybrid Alternatives Public Workshop was conducted in accordance with the PIP. A Virtual Alternatives Public Workshop was held on Tuesday, January 11, 2022, via the GoTo Webinar platform and an in-person Alternatives Public Workshop was held on Thursday, January 13, 2022 at the City of Sebastian Community Center, 1805 N. Central Avenue, Sebastian, Florida 32958. The project website was updated to reflect all documentation shown at both Alternative Public Workshops.

#### Virtual Alternative Public Workshop

The Virtual Alternatives Public Workshop began at 6:00 p.m. with a live presentation and overview followed by a question-and-answer session. The presentation included the project location, FDOT Transportation Delivery and FDOT PD&E Study Processes, project background, project purpose and need, agency coordination, engineering and environmental analyses, alternatives evaluated, schedule, and costs. A recording of the meeting was uploaded to the project website on May 12, 2021.

Based on information gathered from GoTo Webinar, 142 individuals registered for the Virtual Alternatives Public Workshop. The Virtual Workshop attendance included one elected and 18 agency officials, nine FDOT Staff from FDOT District Four and District Five, and 73 public attendees.

Prior to the Virtual Alternatives Public Workshop, a total of 16 questions/comments were received through the registration link and 27 questions/comments were asked during the virtual meeting. All questions and comments submitted via the GoTo Webinar question box were addressed during the meeting. The questions and comments regarded issues such as: bike/pedestrian accommodation on the bridge, traffic maintenance/patterns during construction, lane/bridge closure, environmental safeguards, disruptions/limitations to the bridge during construction, bridge design plan, safety for cyclists and pedestrians, consideration of bridge removal, buffered bike lanes, concerns on widening SR A1A, and schedule.

#### In-Person Alternatives Public Workshop

The In-Person Alternatives Public Workshop began at 5:30 pm with an open house where the project team spoke with attendees as they viewed the project display boards. The Alternatives Public Workshop presentation played on a loop for the duration of the workshop.

Based on information gathered from the Alternatives Public Workshop registration, nine individuals registered online for the In-person Alternatives Public Workshop and 26 individuals attend the Workshop. The Workshop attendance included one agency official, one FDOT Staff, and 22 public attendees.

Three written comments were received at the meeting. Two additional comments were received through the registration link from attendees registered for the in-person meeting. The comments and questions submitted through the registration link and during the virtual and in-person meeting regarded issues such as: bicycle and pedestrian accommodations north and south of the bridge; measures to control speed on SR A1A; safety for bicyclists and pedestrians; maintenance of debris on the bridge; concern over widening improvements beyond the bridge project limits and impacts it may have on the environment; height of barriers and visibility; design and aesthetics of bridge features; and costs.

More detailed discussion of the Alternatives Public Workshop is included in the *Public Alternatives Workshop Summary Report* (June 2021) in the Project File.

**Date of Public Hearing:** 12/15/2022

### **Summary of Public Hearing**

A Hybrid Public Hearing was conducted in accordance with the PIP. A Virtual Public Hearing was held on Tuesday, December 13, 2022, via the GoTo Webinar platform and an in-person Public Hearing was held on Thursday, December 15, 2022 at the City of Sebastian Community Center, 1805 N. Central Avenue, Sebastian, Florida 32958. Both hearings began with an open house at 5:30 p.m. followed by a formal presentation at 6:00 p.m. and public comment period.

Because the project involves the historic bridge and is adjacent to the Park, a Section 4(f) protected property under 23 CFR 774.17, the public was given an opportunity to participate and provide input on the effects to the historic bridge and the Section 4(f) recreation impacts as part of the public hearing.

Draft documents were available for public review at the City of Sebastian City Hall, 1225 Main Street, Sebastian, FL 32958 from November 22, 2022 through December 27, 2022.

### **Virtual Public Hearing**

The virtual public hearing began at 5:30 pm with a virtual open house where the project team took attendees through the project display boards that were presented as slides and made available for download in the "Handouts Pane" of the GoTo Webinar Control Plane. The project area, Preferred Alternative, project schedule, and options for reviewing the public hearing materials were reviewed. A pre-recorded voiceover presentation was played at 6:00 p.m. for the formal Public Hearing. The formal presentation included the project location, FDOT Transportation Delivery and FDOT PD&E Study Processes, project background, project Purpose and Need, agency coordination, engineering and environmental analyses, the Preferred Alternative, schedule, and costs. The presentation was followed by a formal comment period.

Based on information gathered from GoTo Webinar, 43 individuals registered for the Virtual Public Hearing. The Virtual Public Hearing attendance included three agency officials, five FDOT Staff from District Four, and 28 public attendees. A court reporter was present at the Virtual Public Hearing.

Prior to the Virtual Public Hearing, a total of 4 questions/comments were asked through the registration link and 5 questions/comments asked during the open house portion of the hearing.

The questions and comments regarded issues such as: impacts to navigation during demolition of the old bridge; construction start date; impacts to vehicular traffic; potential detours to the mainland; and the separation of bicycles and pedestrians from traffic.

During the Public Hearing registration, a total of 4 attendees requested to make a statement during the formal comment period. Most provided their statements during the Open House portion of the hearing. One person made a statement congratulating the team on a great design that incorporated the needs and safety of those who use the bridge.

The Virtual Public Hearing ended at 7:01 p.m. More detailed discussion of the Public Hearing is included in the *Public Hearing Summary Report* (January 2023) in the Project File.

### **In-Person Public Hearing**

The In-Person Public Hearing began at 5:30 pm with an open house where the project team spoke with attendees as they viewed the project display boards. A pre-recorded voiceover presentation was played at 6:00 p.m. for the formal Public Hearing. The formal presentation included the project location, FDOT Transportation Delivery and FDOT PD&E Study Processes, project background, project Purpose and Need, agency coordination, engineering and environmental analyses, the Preferred Alternative, schedule, and costs. The presentation was followed by a formal comment period.

Based on information gathered from GoTo Webinar, one individual registered for the In-Person Public Hearing. Attendance included one agency official, five FDOT Staff from District Four, and 10 public attendees. A court reporter was present at the In-Person Public Hearing.

A total of one question/comment was asked through the GoTo Webinar registration link from an individual who registered for the In-Person Public Hearing. One written comment was received during the In-Person Public Hearing. During the open house portion, questions and comments regarded issues such as: maintenance of traffic and bridge closure; bicycle/pedestrian access during construction; potential park closure; and construction phasing. Several asked about the PD&E process. One attendee asked what the most challenging part of the project was. They also asked about the dump trucks used for beach renourishment and the safety of using the bridge to get to the beach areas farther north. An attendee asked if a suspension bridge was considered for the replacement. Another attendee asked about wetland mitigation.

Four verbal statements were made during the formal comment period of the In-Person Public Hearing. Statements supported the overall project with two comments specifically stating the improved bicycle and pedestrian facilities. One statement indicated concern for 12-foot wide shared use paths extending south along SR A1A outside the project area, and another questioned why the bridge vertical clearance is not being increased to 65-feet.

The In-Person Public Hearing ended at 6:56 p.m. More detailed discussion of the Public Hearing is included in the Public Hearing Summary Report (January 2023) in the project file.



## 10. Commitments Summary

1. FDOT is committed to keeping the bridge open during construction to minimize impacts to the traveling public and emergency services. Accelerated bridge construction techniques may require temporary, short-term lane closures during off peak hours. FDOT will evaluate the need and impact of temporary, short-term lane closures during the design phase and coordinate any required lane closures with the public, Park, and emergency services prior to implementation.
2. The FDOT will adhere to the stipulations included in the 2023 Memorandum of Agreement between the FDOT and the State Historic Preservation Office.
3. The FDOT will provide a qualified archaeological monitor access to the specified site during any ground disturbing activities and said monitor will have the authority to halt the ground disturbing activities as needed and appropriate to conduct and document the monitoring efforts in accordance with the monitoring plan developed in coordination with SHPO. A qualified archaeological monitor is one who meets the Secretary of the Interior's Professional Qualification Standards and Guidelines for Archaeology and Historic Preservation as set forth in 36 CFR Parts 61 and 62 and published in the Federal Register 33708-33723, June 20, 1997.
4. FDOT will reinitiate consultation with NMFS during the design and permitting phase for any changes in impacts to EFH, including but not limited to, design changes, temporary trestle impacts, temporary cofferdam impacts, and barge spudding details since those details are not available during the PD&E Study Phase.
5. FDOT will install flight diverters on the replacement bridge to protect birds and provide a safer bridge crossing for motorists and pedestrians. Diverter poles should be a minimum of 10 feet tall and spaced 12 feet apart over the water. USFWS suggested considerations to make the poles more visible to birds without harming the birds. Agency correspondence regarding the bird diverters is in the project file.
6. FDOT will ensure that mitigation proposed for wetland impacts within wood stork Suitable Foraging Habitat will adhere to the requirements of the USACE and USFWS.
7. FDOT will reinitiate informal Section 7 consultation with NMFS during the design and permitting phase for any changes in NMFS-listed species impacts, including but not limited to, design changes, temporary trestle impacts, temporary cofferdam impacts, and barge spudding details since those details are not available during the PD&E Study Phase.
8. To minimize adverse effects to gopher tortoises, a survey is needed prior to the start of construction. Surveys should be conducted within the existing and proposed right of way, dry swales, and area underneath the proposed underpass service road. Any gopher tortoises located within 25 feet of proposed construction will be relocated by a Florida Fish and Wildlife Conservation Commission (FWC) Authorized Gopher Tortoise Agent within the boundaries of Sebastian Inlet State Park.
9. FDOT will coordinate with the County's Artificial Reef Program to explore potential opportunities to donate existing bridge materials to an artificial reef site.
10. FDOT is committed to evaluating the creation of a swale along the east side of SR A1A south of the bridge for treatment and attenuation of Basin 1 during the design phase.
11. In the February 24, 2023 letter, NMFS requested that FDOT commit to performing in-water pile driving activities during daylight hours only. FDOT will evaluate the feasibility of this request during the design phase and coordinate the pile driving approach with NMFS prior to construction.

12. Adhere to the Standard Manatee Conditions for In-Water Work. Adhere to the Protected Species Construction Conditions, NOAA Fisheries Southeast Regional Office. Utilize the ramp up or vibratory installation methodology for pile driving to warn and allow any listed species to vacate the area. Utilize sound diminishing measures (such as wood blocks) to minimize potential noise impacts from pile driving. Continue to review prudent avoidance and minimization measures during final design, permitting and project construction.
13. FDOT commits to continuing coordination with FDEP Parks and Recreation, FDEP Division of State Lands, and ARC for mitigating all unavoidable impacts to state-owned conservation land subject to ARC approval during the design phase.
14. FDOT is committed to continuing coordination with FDEP Parks and Recreation, FDEP Division of State Lands, and ARC regarding updated parking lot layouts under the bridge if the layouts increase the number of parking spaces for Sebastian Inlet State Park.

## 11. Technical Materials

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

FDOTRequestforSpaceCoastTIPAmendment  
SCTPO Governing Board Agenda-2022-0908  
SCTPO Governing Board Packet 2022-0908  
SpaceCoastTIP  
Sociocultural Data Report - 1320 ft buffer  
EJScreen Report  
EJScreen ACS 2015-2019 Demographic Summary Report  
Final Sebastian Inlet CRAS 2-15-2022  
Sebastian Inlet Bridge Benthic Survey Technical Memo\_pkg  
SR A1A Sebastian Inlet Bridge Natural Resource Evaluation  
NMFS Letter NARW\_A1A Sebastian\_445618-1-22-02\_Revised  
445618-1 Sebastian Inlet PD&E CBRS Mapper  
Pond Siting Report (PSR)  
Water Quality Impact Evaluation (WQIE)  
Bridge Hydraulic Report (BHR)  
2021 Sebastian Inlet Bridge PD&E Benthic Survey Memo  
2019 Pre-Work Benthic Survey  
Sebastian Inlet Bridge Navigational Impact Needs Memo  
445618-CE2-D4-SR A1A Seb Inlet Bridge\_UAP\_4-18-22\_all  
Noise Study Report (NSR)  
Contamination Screening Evaluation Report (CSER)  
445618.1.A1A.PD&E.Typical.Section.Executed  
Draft\_1\_VE Study\_Report  
Rec Target Speed Memo  
44561812202-Project\_Traffic\_Analysis\_Report\_2022-0317  
Safety\_Analysis\_Report  
Preliminary Engineering Report  
44561812202-CE2-D4-PI\_Summary\_Report\_Final  
44561812202-CE2-D4-PIP\_Final

## **Attachments**

### **Project Information**

445618-CE2-D4-USCG Review CE2 Doc-2023-0323

### **Planning Consistency**

445618-1 Planning Consistency Package\_2023-0523

### **Social and Economic**

445618-1 Sebastian Inlet Land Use Map

445618-1 Sebastian Inlet Future Land Use Map

### **Cultural Resources**

ACHP\_e106

ACHP no response

Memorandum of Agreement for the Sebastian Inlet Bridge PDE Study final signed

Signed SHPO letter Sebastian Inlet Bridge (FM 445618-1)\_MKW\_KLC

Section 4(f) Report

### **Natural Resources**

NMFS Letter NARW\_A1A Sebastian\_445618-1-22-02\_ Revised

20220812\_USFWS\_signed concurrence sticker\_2022-0073640 SRA1A bridge over sebastian inlet

445618-1 OFW Map

NMFS Reasonable Assurance letter

445618-1 Sebastian Inlet Floodplains Map 12009C0802H

445618-1 Sebastian Inlet Floodplains Map 12061C0102H

### **Physical Resources**

Sebastian Inlet Bridge Noise Receptors Map

Sebastian Inlet Bridge Potential Contamination Site Map

### **Public Involvement**

Public Hearing Certification

Public Hearing Certification

Virtual Public Hearing Transcript

In-Person Public Hearing Transcript

## **Project Information Appendix**

### **Contents:**

445618-CE2-D4-USCG Review CE2 Doc-2023-0323

**From:** [Bridges, Martin A CIV DHS \(USA\)](#)  
**To:** [Castro, Joy](#)  
**Cc:** [Beam, Beth](#); [Basnet, Binod](#); [Davis, Shandra](#); [Overton, Randall D CIV USCG D7 \(USA\)](#); [Broadwell, Ann L](#); [Wolfe, Brook](#)  
**Subject:** RE: For Review - 445618-1 SEBASTIAN INLET BRIDGE PD&E CE2  
**Date:** Thursday, March 23, 2023 2:07:20 PM

---

Hello Ms. Castro,

I have reviewed the draft CE and believe it contains the vast majority of what a USCG permit will require. As permitting nears the USCG may require further clarification on a few items that I didn't see in the draft.

An example: Sec. 5-10 Coastal Barrier Resources, mentions Coastal Barriers, but not anything about the Coastal Zone Management Act (CZM). The SWEPT may address this, but I didn't read it in the draft. There are a few other areas that will have to be addressed specifically. I feel any further questions/concerns will be easily answered.

Thank you for the opportunity to review the draft CE. Please let me know if there are any questions for me. Have a pleasant day.

R,  
Marty

Marty Bridges  
Bridge Management Specialist  
Coast Guard Seventh District  
Office: (305) 415-6766  
Cell: (954) 661-7144

---

**From:** Castro, Joy <Joy.Castro@stantec.com>  
**Sent:** Wednesday, March 22, 2023 4:09 PM  
**To:** Bridges, Martin A CIV DHS (USA) <Martin.A.Bridges@uscg.mil>  
**Cc:** Beam, Beth <Beth.Beam@stantec.com>; Basnet, Binod <binod.basnet@dot.state.fl.us>; Davis, Shandra <shandra.davis@dot.state.fl.us>; Broadwell, Ann L <ann.broadwell@dot.state.fl.us>; Wolfe, Brook <brook.wolfe@stantec.com>  
**Subject:** [Non-DoD Source] For Review - 445618-1 SEBASTIAN INLET BRIDGE PD&E CE2

[Good afternoon Martin,](#)

[As requested, please use the log-in information highlighted below to access the draft Sebastian Inlet Bridge PD&E CE 2 for your review.](#)

## Login Information

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**Login name:** s0329133725

**Password:** 3435224

**Expiry Date:** 3/29/2023

If you require a one-time one-week extension, please click [here](#).

Thank you,

### Joy Castro, MPH

Senior Environmental Scientist

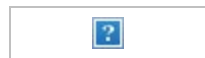
Direct: (305) 984-8743

[joy.castro@stantec.com](mailto:joy.castro@stantec.com)

Stantec

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**From:** [donotreply@secureftp.stantec.com](mailto:donotreply@secureftp.stantec.com) <[donotreply@secureftp.stantec.com](mailto:donotreply@secureftp.stantec.com)>

**Sent:** Wednesday, March 22, 2023 3:37 PM

**To:** Castro, Joy <[Joy.Castro@stantec.com](mailto:Joy.Castro@stantec.com)>

**Subject:** Stantec FTP Confirmation - 445618-1 SEBASTIAN INLET BRIDGE PD&E CE2

### Your directory has successfully been created!

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## **Planning Consistency Appendix**

### **Contents:**

445618-1 Planning Consistency Package\_2023-0523

HIGHWAYS								
<b>Project Description:</b> SR-A1A OVER SEBASTIAN INLET- BRIDGE REPLACEMENT <b>Item Number:</b> 445618 1 <b>District:</b> 04 <b>County:</b> INDIAN RIVER <b>Type of Work:</b> BRIDGE REPLACEMENT <b>Project Length:</b> 1.115MI <b>Extra Description:</b> ALSO INCLUDES WORK IN BREVARD COUNTY R/W IS NEEDED; GAME PH5A NEXT CYCLE (FOR FY28) G/W 445618-2								
		<b>Fiscal Year</b>						
<b>Phase / Responsible Agency</b>		<b>&lt;2023</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>&gt;2026</b>	<b>All Years</b>
<b>P D &amp; E / MANAGED BY FDOT</b>								
<b>Fund Code:</b>	ACBR-ADVANCE CONSTRUCTION (BRT)	1,768,466	47,929					1,816,395
	BRP-STATE BRIDGE REPLACEMENT	221,648						221,648
	DIH-STATE IN-HOUSE PRODUCT SUPPORT	93,975	4,462					98,437
	SA-STP, ANY AREA	107,639						107,639
	<b>Phase: P D &amp; E Totals</b>	<b>2,191,728</b>	<b>52,391</b>					<b>2,244,119</b>
<b>PRELIMINARY ENGINEERING / MANAGED BY FDOT</b>								
<b>Fund Code:</b>	ACBR-ADVANCE CONSTRUCTION (BRT)	4,937,603	597,322	139,647				5,674,572
<b>RIGHT OF WAY / MANAGED BY FDOT</b>								
<b>Fund Code:</b>	ACBR-ADVANCE CONSTRUCTION (BRT)			6,154,884				6,154,884
<b>CONSTRUCTION / MANAGED BY FDOT</b>								
<b>Fund Code:</b>	ACBR-ADVANCE CONSTRUCTION (BRT)					69,145,844		69,145,844
<b>ENVIRONMENTAL / MANAGED BY FDOT</b>								
<b>Fund Code:</b>	ACBR-ADVANCE CONSTRUCTION (BRT)		550,000	2,020,000				2,570,000
	<b>Item: 445618 1 Totals</b>	<b>7,129,331</b>	<b>1,199,713</b>	<b>8,314,531</b>		<b>69,145,844</b>		<b>85,789,419</b>



# Transportation Improvement Program

FY 2022/23 — FY 2026/27

Approved June 8, 2022



Roadway	From	To	Work Description	Phase(s)	FY(s)	Funding Amt. (5 Yr Total)	FM#	L RTP Page/ Table #	TIP Page #
	US 1	17th St	Resurface	CST	24/25	\$2,746,368	4442691	2-1	B-5
	N of Canal Bridge	W of Merrill Barber Bridge	Intersection Improvement	CST	23/24	\$2,157,686	4493231	2-1	B-6
<b>Oslo Rd</b>	82nd Ave	58th Ave	Widen to 4 lanes	ROW RRU CST	2/23 – 25/26 22/23 22/23	\$51,496,392	4315211	4-8	A-8
<b>SR 60</b>	W of 44th Ave	E of 39th Ave	Resurface	CST	22/23	\$1,155,983	4461081	2-1	B-2
	CR 512	I-95	Resurface	CST	23/24 – 24/25	\$9,018,580	4476471	4-8	B-3
	N of Fort Drum Wildlife Entrance	CR 512	Resurface	PE CST	22/23 – 23/24 25/26 – 26/27	\$12,614,646	4484441	4-8	B-3
<b>SR A1A</b>	Causeway		Bridge replacement	PE CST	22/23 25/26	\$78,310,375	4456181	2-1	B-8
	Sebastian Inlet Bridge	Sand Dollar Way	Resurface	PE CST	22/23 25/26	\$5,309,429	4456182	2-1	B-8
<b>Turnpike Mainline</b>	MP 173	MP 178.3	Resurface	PE CST	23/24	\$13,203,545	4444031	2-1	B-4
	MP 173	MP 178.3	Guardrail	PDE CST	23/24	\$1,579,587	4444032	2-1	B-4
<b>Trans-Florida Railway Trail</b>	Fellsmere	W of I-95	Bike Path/Trail	CST	22/23	\$564,279	4460731	4-9	D-2
	Fellsmere	W of I-95	Bike Path/Trail	PE CST	21/22 23/24	\$535,910	4467032	4-9	D-2
	Broadway St	Grant Ave	Bike Path/Trail	PE CST	22/23 24/25	\$532,698	4489951	4-9	D-2
<b>US 1</b>	@ Aviation Blvd		Intersection improvements	PE	24/25	\$1,803,603	4416931	4-8	A-10
	45th St	53rd St	Sidewalk	PE CST	22/23 24/25	\$591,590	4480231	4-8	D-3
	Central Ave	S End of Bridge	Resurface	PE CST	22/23 22/23 - 23/24	\$3,502,037	4476461	2-1	B-10
	N of 12th St	N pf 20th PL	Resurface	CST	24/25	\$2,422,635	4476481	2-1	B-10

The current 2045 Long Range Transportation Plan (LRTP) incorporated the regional Transportation Systems Management and Operations (TSM&O) Plan and evaluated projects based on that plan to determine performance measures.

### Investment Priorities in the TIP

The TIP includes specific investment priorities that were identified through a prioritization and project selection process established in the LRTP and which prioritizes crash and fatality reduction. Collectively, the projects in the TIP serve the Goals of the LRTP and enhance safety in the transportation system, helping the MPO meet its performance measures. Some of the more notable individual safety projects include:

- CR 510 Widening (FM#s 4056063, 4056064, 4056065, 4056066, 4056067, 4056068 and 4416921), which includes, a roundabout, buffered bike lanes and sidewalks;
- US 1 @ Aviation Blvd. Intersection Improvements (FM# 4416931), which will improve a dangerous intersection with limited right-of-way and possible grade separation along the Florida East Coast Railroad in a major transportation corridor;
- SR A1A Bridge Replacement (FM# 4456181) over the Sebastian Inlet, which will replace the existing bridge adding bicycle and pedestrian facilities to improve safety for all users;
- Indian River Blvd. Intersection Improvements at the Merrill Barber Bridge (FM# 4419191), which will include safety improvements;
- SR 60 @ 43<sup>rd</sup> Avenue Intersection Improvements (FM# 4317591), which is currently underway, improves a dangerous intersection by adding storage to turn lanes, new pavement, traffic signal mast arms, and new bike and pedestrian infrastructure;
- US 1 Sidewalk (FM#4480231), which will fill a sidewalk gap between 45th Street and 53rd Street; and
- Numerous resurfacing projects that will incorporate safety improvements, including for 17<sup>th</sup> St. (FM# 4461061), Indian River Blvd. (FM#s 4419191 and 4442691), FL Turnpike (FM#s 4444031 and 4444032), SR 60 (FM# 4461081, 4484441 and 4476471), US 1 (FM#s 446171, 44766481, 44776461, and 4323251) and SR A1A (FM# 4456182).

In addition to identifying the procedures for inventorying and rating the condition of pavement and bridges in the state, the Florida Transportation Asset Management Plan also sets forth the following overarching asset management objectives:

- Achieve and maintain a state of good repair for transportation assets;
- Reduce the vulnerability and increase the resilience of critical infrastructure to the impacts of extreme weather and events; and
- Minimize damage to infrastructure from transportation vehicles.

*“Preserving and maintaining the transportation system and transportation infrastructure”* is one of 5 Major Goals of the 2045 LRTP. In addition, the LRTP sets forth numerous objectives and policies that promote infrastructure condition and system reliability.



#### Investment Priorities in the TIP

The Indian River County TIP reflects investment priorities established in the 2045 LRTP and enhance infrastructure condition in the transportation system, helping the MPO meet its performance measures. Some of the more notable individual projects enhancing bridge and pavement condition include:

- 8th Street Bridge Replacement (FM# 437171), which will ensure the safety of all bridges in the state inventory system;
- SR A1A Bridge Replacement (FM# 4456181) over the Sebastian Inlet, which will replace the existing bridge adding bicycle and pedestrian facilities to improve safety of all bridges in the state inventory system;
- Numerous resurfacing projects that will improve pavement condition, including for 17<sup>th</sup> St. (FM# 4461061), 43rd Ave. (FM#

Phase	Fund Source	2022/23	2023/24	2024/25	2025/26	2026/27	Total
<b>SR A1A FROM S of Sebastian Inlet Bridge TO Sand Dollar Lane - FM# 4456182</b>					Length: 6.550 miles	*Non-SIS*	
<b>Type of Work: RESURFACING</b>					Lead Agency: FDOT		
					L RTP#: Table 2-1		
Resurfacing of SR A1A between Sebastian Inlet Bridge to Sand Dollar Lane. Preliminary engineering programmed for FY 2022/23, and construction programmed for FY 2025/26. Project length 6.969 miles.							
PE	DIH	34,522	0	0	0	0	34,522
PE	DS	649,833	0	0	0	0	649,833
CST	DIH	0	0	0	51,128	0	51,128
CST	SL	0	0	0	2,004,939	0	2,004,939
CST	DDR	0	0	0	713,529	0	713,529
CST	ACNR	0	0	0	2,539,833	0	2,539,833
<b>Total</b>		<b>684,355</b>	<b>0</b>	<b>0</b>	<b>5,309,429</b>	<b>0</b>	<b>5,993,784</b>
<i>Prior Years Cost</i>		0	<i>Future Years Cost</i>		0	<i>Total Project Cost</i>	5,993,784
<b>SR A1A OVER Sebastian Inlet Bridge Replacement - FM# 4456181</b>					Length: 1.115 miles	*Non-SIS*	
<b>Type of Work: BRIDGE REPLACEMENT</b>					Lead Agency: FDOT		
					L RTP#: Table 2-1		
Replace Bridge 880005/SR A1A over Sebastian Inlet. PD&E is currently underway. Preliminary engineering, and environmental are programmed for FY 2022/23 and 2023/24. Right-of-way programmed for FY 2023/24. Construction of new bridge programmed for FY 2025/26. Project length is .915 miles.							
PE	ACBR	300,000	139,647	0	0	0	439,647
ENV	ACBR	550,000	2,020,000	0	0	0	2,570,000
ROW	ACBR	0	6,154,884	0	0	0	6,154,884
CST	ACBR	0	0	0	69,145,844	0	69,145,844
<b>Total</b>		<b>850,000</b>	<b>8,314,531</b>	<b>0</b>	<b>69,145,844</b>	<b>0</b>	<b>78,310,375</b>
<i>Prior Years Cost</i>		8,461,294	<i>Future Years Cost</i>		0	<i>Total Project Cost</i>	86,771,669
<b>Traffic Monitoring System - FM# 4416971</b>						*SIS*	
<b>Type of Work: TRAFFIC SIGNAL UPDATE</b>					Lead Agency: Indian River Co.		
					L RTP#: Table 2-1		
Technology upgrades to Indian River County's traffic signals.							
CST	DDR	225,000	0	0	0	0	225,000
<b>Total</b>		<b>225,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>225,000</b>
<i>Prior Years Cost</i>		0	<i>Future Years Cost</i>		0	<i>Total Project Cost</i>	225,000





► Goal 5: Preserving and maintaining the transportation system and transportation infrastructure.

Objectives	Policies	Performance Measures (PM) and Indicators (PI)
Objective 5.01 <sup>PM</sup> - Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT.	Policy 5.01.1 – Evaluate the structural integrity of pavement on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.01.1.1 – FDOT Pavement Condition Rating
Objective 5.02 <sup>PM</sup> - Ensure that over 50% of the bridge deck area on the National Highway System (NHS) are rated "Good" by FDOT while less than 10% are rated "Poor" by FDOT.	Policy 5.02.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.02.1.1 – FDOT Bridge Condition Rating.
Objective 5.03 - Provide adequate funding to maintain and operate the non-state highway system and multimodal infrastructure.	Policy 5.03.1 – Program on an annual basis appropriate funding for maintenance and operations.	PI 5.03.1.1 - Funding included for maintenance and operations.

PM - Indicates FAST Act System Performance Report Adopted Performance Measure



FDOT, with the understanding that zero fatalities/serious injuries is unable to be achieved within the 2018 Highway safety Plan (HSP), developed statistical data models to forecast the number of fatalities and serious injuries. Based on the forecasts of these statistical models, FDOT established targets and programmed projects that they expect will reduce the number of fatalities and serious injuries. The five federally-mandated Safety Performance Measures targets for 2019 for FDOT and the Indian River County MPO are presented below in **Table 2-4**.

Safety Performance Measure targets are required to be adopted on a yearly basis. In August of the current year, FDOT will report the following year's targets in the HSIP Annual Report to the Federal Highway Administration. After FDOT adopts the targets, the MPO is required to either adopt FDOT's targets or establish its own within six months (or the following February).

**Table 2-4: Performance Measure 1 (PM1) - Safety Performance Measure Targets**

Safety Performance Measure	FDOT Statewide Targets	Indian River MPO Safety Targets
Number of Fatalities	0	0
Number of Serious Injuries	0	0
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	0	0
Rate of Serious Injuries per 100 Million Vehicle Miles Traveled (VMT)	0	0
Total Number of Non-motorized Fatalities and Non-motorized Serious Injuries	0	0

## Performance Measure 2 - Bridge, Pavement, and System Performance Measures

The second of the performance measures rules issued by Federal Highway Administration (FHWA) became effective on May 20, 2017, establishing measures to assess pavement and bridge condition on the National Highway System (NHS). Requirements involve measuring the condition of these facilities and reporting conditions that are considered "Good" and those considered "Poor." Facilities rated as Good suggest that no major investments are needed. Facilities rated as Poor indicate major investments will be needed in the near term.

FDOT has the capability to collect and maintain data regarding bridge and pavement condition. In October 2018, the MPO adopted pavement and bridge condition performance targets in support of the measures and targets set by FDOT (**Table 2-5**).

**Table 2-5: Performance Measure 2 (PM2) - Bridge and Pavement Performance Targets**

Bridge and Pavement Performance Measure	Florida 2 year Targets 1/1/2018 to 12/31/2019	Florida 4 year Targets 1/1/2018 to 12/31/2021
Percent of Interstate NHS Pavement in Good Condition	Not Required	≥ 60%
Percent of Interstate NHS Pavement in Poor Condition	Not Required	≤ 5%
Percent of Non-Interstate NHS Pavement in Good Condition	≥ 40%	≥ 40%
Percent of Non-Interstate NHS Pavement in Poor Condition	≤ 5%	≤ 5%
Percent of NHS Bridges by Deck Area in Good Condition	≥ 50%	≥ 50%
Percent of NHS Bridges by Deck Area in Poor Condition	≤ 10%	≤ 10%

**Maintain and preserve the transportation system** is one of five major goals of the 2045 LRTP. In addition, the LRTP sets forth numerous objectives and policies that promote infrastructure condition and system reliability.

With the adoption of MAP-21, MPOs are now required to establish performance targets for the management of transit assets. On September 12, 2018, the Indian River County MPO established the transit asset targets shown in **Table 2-7** and **Table 2-8** for the MPO's planning area. Table 7 summarizes the required performance targets for transit vehicles and equipment as well as the current status of each performance measure. Transit vehicles have a useful life benchmark of 4-12 years, based on the vehicle type. The performance measure for vehicles is the percent of vehicles that are within their respective useful life benchmark.

**Table 2-8** summarizes the required performance targets for transit facilities as well as the current status of each performance measure. Transit facilities are rated using the Transit Economic Requirements Model (TERM) Scale. The TERM scale has a range of 1 to 5, with 5 representing facilities in the best condition. A TERM rating of 3.0 represents a facility in adequate condition. Each facility is assigned a rating based on its condition.

**Table 2-8: Performance Targets for Transit Facilities and Current Status**

Asset Category	Asset Class	Individual Assets	Condition Assessment	FY 21 Target (% Under TERM 3.0)	Current Status	Notes
			TERM Rating			
Facilities	Administrative / Maintenance	Transit Administration & Maintenance Facility	5.0	0%	0%	Constructed in 2012
	Passenger	Main Transit Hub	5.0	0%	0%	Constructed in 2017

The Indian River County TIP was developed and is managed in cooperation with Senior Resource Association, which operates Indian River County's public transportation system. It reflects the investment priorities established in the previously adopted 2040 LRTP. Transit asset condition and state of good repair is a consideration in the methodology the MPO uses to select projects for inclusion in the TIP. The TIP includes specific investment priorities that support all of the MPO's goals, including transit state of good repair, using a prioritization and project selection process established in the LRTP. This process evaluates projects that, once implemented, are anticipated to improve transit state of good repair in the MPO's planning area. The MPO's goal of improving transit asset condition is linked to this investment plan, and the process used to prioritize the projects within the TIP is consistent with federal requirements.

**Enhance mobility for people and freight and provide travel alternatives** is one of 5 Major Goals of the 2045 LRTP. To this end, the LRTP identifies numerous objectives and policies that promote alternative modes of mobility, including that capital and operational improvements be consistent with the MPO's Transit Development Plan (TDP). By October 1, 2018, transit agencies were required to adopt Transit Asset Management (TAM) plans. In Indian River County, the TAM plan is required to include an inventory of assets, a condition assessment of inventoried assets, a description of decision support tools, and a prioritized list of investments. By following the Transit Asset Management plan, agencies can maintain transit systems in a state of good repair. The transit asset performance targets identified previously are consistent with Indian River County's TAM plan.

## Revenue Estimates for Roadway Operations and Maintenance Projects

Operations and Maintenance (O&M) includes activities that support and maintain transportation infrastructure once it is constructed. As directed by FDOT policy, the Department places primary emphasis on safety and preservation of the transportation system by providing adequate funding in the Revenue Forecast to meet established maintenance performance standards. As such, funding for O&M on the State Highway System (SHS) are allocated before revenues are subsequently allocated for capacity improvement projects. Indian River County also allocates local resources for ensuring acceptable operating conditions on the county major roadway network. **Table 4-2** provides a summary of the estimated revenues for O&M on the SHS and local roadways.

**Table 4-2: Total Revenue for Roadway Operations and Maintenance (2025-2045) (Year of Expenditure)**

	<b>Category</b>	<b>Total Projected Revenues 2025-2045</b>
<b>State and Federal</b>	Districtwide SHS	\$9,131,600,000
<b>Local</b>	County Fuel Tax	\$20,938,000
	Constitutional Fuel Tax	\$46,967,000
	First Local Option Fuel Tax	\$63,623,000
	9th Cent Fuel Tax	\$2,554,000
	General Fund for Transportation	\$44,985,000
	<b>Local Subtotal</b>	<b>\$179,067,000</b>

**Table 6-2: FAST Act Performance Measures  
Performance Measure 2 (PM2) - Pavement and Bridge**

<b>Connecting IRC Goal</b>	<b>Performance Measure</b>	<b>Target</b>	<b>2045 Forecast</b>	<b>Comments</b>
Goal 5: Preserving and maintaining the transportation system and transportation infrastructure	Percent of Interstate pavements in good condition	≥ 60%	Maintained or Improved	The 2045 Revenue Forecast for the Indian River County MPO developed by FDOT includes a commitment to non-capacity programs designed to support, operate, and maintain the state transportation system.  The MPO supports and has adopted FDOT's statewide targets/thresholds for pavement and bridge conditions.
	Percent of Interstate pavements in poor condition	≤ 5%	Maintained or Improved	
	Percent of non-Interstate NHS pavements in good condition	≥ 40%	Maintained or Improved	
	Percent of non-Interstate NHS pavements in poor condition	≤ 5%	Maintained or Improved	
	Percent of NHS bridges by deck area in good condition	≥ 50%	Maintained or Improved	
	Percent of NHS bridges by deck area in poor condition	≤ 10%	Maintained or Improved	

**Table 6-3: FAST Act Performance Measures  
Performance Measure 3 (PM3) - System Performance and Freight**

<b>Connecting IRC Goals</b>	<b>Performance Measure</b>	<b>Target</b>	<b>2045 Forecast</b>	<b>Comments</b>
Goal 1: Providing an efficient transportation system that is connected, responsive, aesthetically pleasing and meets the needs of all users.  Goal 2: Enhancing mobility for people and freight and provide travel alternatives.	Percent of person-miles on the Interstate system that are reliable – Level of Travel Time Reliability (Interstate LOTTR)	≥ 70%	Maintained or Improved	N/A
	Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR)	≥ 50%	Maintained or Improved	
	Freight travel time reliability	2.00	Maintained or Improved	

Table 6-8: Connecting IRC Performance Evaluation - Goal 5

<b>Goal 5: Preserving and maintaining the transportation system and transportation infrastructure.</b>				
<b>Objectives</b>	<b>Policies</b>	<b>Performance Measures (PM) and Indicators (PI)</b>	<b>2045 Forecast</b>	<b>Comments</b>
Objective 5.01 <sup>PM</sup> - Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT	Policy 5.01.1 – Evaluate the structural integrity of pavement on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.01.1.1 – FDOT Pavement Condition Rating	Maintained or Improved	The 2045 Revenue Forecast for the Indian River County MPO developed by FDOT includes a commitment to non-capacity programs designed to support, operate, and maintain the state transportation system. The MPO supports and has adopted FDOT's statewide targets/thresholds for pavement and bridge conditions.
Objective 5.02 <sup>PM</sup> - Ensure that over 50% of the bridge deck area on the National Highway System (NHS) are rated "Good" by FDOT while less than 10% are rated "Poor" by FDOT	Policy 5.02.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.	PM 5.02.1.1 – FDOT Bridge Condition Rating.	Maintained or Improved	
Objective 5.03 - Provide adequate funding to maintain and operate the non-state highway system and multimodal infrastructure.	Policy 5.03.1 – Program on an annual basis appropriate funding for maintenance and operations.	PI 5.03.1.1 - Funding included for maintenance and operations.	Maintained or Improved	

PM - Indicates FAST Act System Performance Report Adopted Performance Measure

## Network Performance

### Travel Demand Model Results

As previously discussed, the TCRPM was utilized to identify the current and projected transportation demand of persons and goods in the planning area. The model was also used to evaluate the performance of Connecting IRC against identified performance targets and indicators, as well as the forecasted performance of the roadway network. The travel demand model provides an indication of how effective the Cost Feasible Plan network is in managing congestion and travel delay. An overall analysis of volume/capacity (V/C) ratios for the roadway network was conducted to demonstrate the level of congestion expected in 2045. Maps depicting the 2045 roadway network are included on the following pages, including the number of directional lanes (**Figure 6-1**), V/C ratios (**Figure 6-2**), and annual average daily traffic (**Figure 6-3**).

## 3 - PAVEMENT AND BRIDGE CONDITION MEASURES (PM2)

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### Pavement and Bridge Condition Performance Measures and Targets Overview

In January 2017, USDOT published the Pavement and Bridge Condition Performance Measures Final Rule, which is also referred to as the PM2 rule. This rule establishes the following six performance measures:

1. Percent of Interstate pavements in good condition;
2. Percent of Interstate pavements in poor condition;
3. Percent of non-Interstate National Highway System (NHS) pavements in good condition;
4. Percent of non-Interstate NHS pavements in poor condition;
5. Percent of NHS bridges (by deck area) classified as in good condition; and
6. Percent of NHS bridges (by deck area) classified as in poor condition.

The four pavement condition measures represent the percentage of lane-miles on the Interstate and non-Interstate NHS that are in good condition or poor condition. The PM2 rule defines NHS pavement types as asphalt, jointed concrete, or continuous concrete. Five metrics are used to assess pavement condition:

- International Roughness Index (IRI) - an indicator of roughness; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Cracking percent - percentage of the pavement surface exhibiting cracking; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Rutting - extent of surface depressions; applicable to asphalt pavements only;
- Faulting - vertical misalignment of pavement joints; applicable to jointed concrete pavements only; and
- Present Serviceability Rating (PSR) – a quality rating applicable only to NHS roads with posted speed limits of less than 40 miles per hour (e.g., toll plazas, border crossings). States may choose to collect and report PSR for applicable segments as an alternative to the other four metrics.

For each pavement metric, a threshold is used to establish good, fair, or poor condition. Using these metrics and thresholds, pavement condition is assessed for each 0.1 mile section of the through travel lanes of mainline highways on the Interstate or the non-Interstate NHS. Asphalt pavement is assessed using the IRI, cracking, and rutting metrics, while jointed concrete is assessed using IRI, cracking, and faulting. For these two pavement types, a pavement section is rated good if the rating for all three metrics are good, and poor if the ratings for two or more metrics are poor.

Continuous concrete pavement is assessed using the IRI and cracking metrics. For this pavement type, a pavement section is rated good if both metrics are rated good, and poor if both metrics are rated poor.

If a state collects and reports PSR for any applicable segments, those segments are rated according to the PSR scale. For all three pavement types, sections that are not good or poor are rated fair.

The good/poor measures are expressed as a percentage and are determined by summing the total lane-miles of good or poor highway segments and dividing by the total lane-miles of all highway segments on the applicable system. Pavement in good condition suggests that no major investment is needed and should be considered for preservation treatment. Pavement in poor condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

The bridge condition measures refer to the percentage of bridges by deck area on the NHS that are in good condition or poor condition. The measures assess the condition of four bridge components: deck, superstructure, substructure, and culverts. Each component has a metric rating threshold to establish good, fair, or poor condition. Each bridge on the NHS is evaluated using these ratings. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

The bridge measures are expressed as the percent of NHS bridges in good or poor condition. The percent is determined by summing the total deck area of good or poor NHS bridges and dividing by the total deck area of the bridges carrying the NHS. Deck area is computed using structure length and either deck width or approach roadway width.

A bridge in good condition suggests that no major investment is needed. A bridge in poor condition is safe to drive on; however, it is nearing a point where substantial reconstruction or replacement is needed.

Federal rules require state DOTs and MPOs to coordinate when setting pavement and bridge condition performance targets and monitor progress towards achieving the targets. States must establish:

- Four-year statewide targets for the percent of Interstate pavements in good and poor condition;
- Two-year and four-year targets for the percent of non-Interstate NHS pavements in good and poor condition; and
- Two-year and four-year targets for the percent of NHS bridges (by deck area) in good and poor condition.

MPOs must establish four-year targets for all six measures. MPOs can either agree to program projects that will support the statewide targets or establish their own quantifiable targets for the MPO's planning area.

The two-year and four-year targets represent pavement and bridge condition at the end of calendar years 2019 and 2021, respectively.

### **Pavement and Bridge Condition Baseline Performance and Established Targets**

This System Performance Report discusses the condition and performance of the transportation system for each applicable target as well as the progress achieved by the MPO in meeting targets in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and targets have only recently been established. Accordingly, this first Indian River County MPO LRTP System Performance Report highlights performance for the baseline period, which is 2017. FDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the targets since this initial baseline report.

Table 3.1 presents baseline performance for each PM2 measure for the State and for the MPO planning area as well as the two-year and four-year targets established by FDOT for the State.



**Table 3.1. Pavement and Bridge Condition (PM2) Performance and Targets**

<b>Performance Measures</b>	<b>Statewide (2017 Baseline)</b>	<b>Statewide 2019 Actual</b>	<b>Statewide 2-year Target (2019)</b>	<b>Statewide 4-year Target (2021)</b>	<b>Indian River County MPO (2017 Baseline)</b>	<b>Indian River County MPO 2019 Actual</b>
Percent of Interstate pavements in good condition	66.0%	68.5%	n/a	≥60%	98.4%	84.3%
Percent of Interstate pavements in poor condition	0.1%	0.2%	n/a	<5%	0.0%	0.0%
Percent of non-Interstate NHS pavements in good condition	76.4%	41.0%	≥40%	≥40%	51.5%	53.9%
Percent of non-Interstate NHS pavements in poor condition	3.6%	0.2%	<5%	<5%	1.0%	0.2%
Percent of NHS bridges (by deck area) in good condition	67.7%	74.19%	≥50%	≥50%	TBD	TBD
Percent of NHS bridges (by deck area) in poor condition	1.2%	0.40%	<10%	<10%	TBD	TBD

FDOT established the statewide PM2 targets on May 18, 2018. In determining its approach to establishing performance targets for the federal pavement and bridge condition performance measures, FDOT considered many factors. FDOT is mandated by Florida Statute 334.046 to preserve the state's pavement and bridges to specific standards. To adhere to the statutory guidelines, FDOT prioritizes funding allocations to ensure the current transportation system is adequately preserved and maintained before funding is allocated for capacity improvements. These statutory guidelines envelope the statewide federal targets that have been established for pavements and bridges.

In addition, MAP-21 requires FDOT to develop a Transportation Asset Management Plan (TAMP) for all NHS pavements and bridges within the state. The TAMP must include investment strategies leading to a program of projects that would make progress toward achievement of the state DOT targets for asset condition and performance of the NHS. FDOT's TAMP was updated to reflect MAP-21 requirements in 2018 and the final TAMP was approved on June 28, 2019.

Further, the federal pavement condition measures require a new methodology that is a departure from the methods currently used by FDOT and uses different ratings and pavement segment lengths. For bridge condition, the performance is measured in deck area under the federal measure, while the FDOT programs its bridge repair or replacement work on a bridge by bridge basis. As such, the federal measures are not directly comparable to the methods that are most familiar to FDOT.

In consideration of these differences, as well as the unfamiliarity associated with the new required processes, FDOT took a conservative approach when setting its initial pavement and bridge condition targets.

The Indian River County MPO agreed to support FDOT's pavement and bridge condition performance targets in October 2018. By adopting FDOT's targets, the Indian River County MPO agrees to plan and program projects that help FDOT achieve these targets.

The Indian River County MPO recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Indian River County MPO 2045 LRTP reflects the goals, objectives, performance measures, and targets as they are described in other state and public transportation plans and processes, including the Florida Transportation Plan (FTP) and the Florida Transportation Asset Management Plan.

- The FTP is the single overarching statewide plan guiding Florida's transportation future. It defines the state's long-range transportation vision, goals, and objectives and establishes the policy framework for the expenditure of state and federal funds flowing through FDOT's work program. One of the seven goals defined in the FTP is Agile, Resilient, and Quality Infrastructure.
- The Florida Transportation Asset Management Plan (TAMP) explains the processes and policies affecting pavement and bridge condition and performance in the state. It presents a strategic and systematic process of operating, maintaining, and improving these assets effectively throughout their life cycle.

The Indian River County 2045 LRTP seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. Goal 5 of the 2045 LRTP is "Preserving and maintaining the transportation system and transportation infrastructure", which includes the following objectives and policies:

- Ensure that over 60% of the pavement area on the National Highway System (NHS) are rated "Good" by FDOT while less than 5% are rated "Poor" by FDOT
  - Policy 5.01.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.
- Ensure that over 50% of the bridge deck area on the National Highway System (NHS) are rated "Good" by FDOT while less than 10% are rated "Poor" by FDOT
  - Policy 5.02.1 – Evaluate the structural integrity of bridges on the major road network and implement rehabilitation projects as appropriate in coordination with FDOT.

On or before October 1, 2020, FDOT will provide FHWA and the Indian River County MPO a detailed report of pavement and bridge condition performance covering the period of January 1, 2018 to December 31, 2019. FDOT and the Indian River County MPO also will have the opportunity at that time to revisit the four-year PM2 targets.

## **Social and Economic Appendix**

### Contents:

445618-1 Sebastian Inlet Land Use Map

445618-1 Sebastian Inlet Future Land Use Map



Habit and Land Use Within R/W	Acres
181: Swimming Beach	0.13
185: Parks and Zoos	2.29
322: Coastal Shrub/Back Dune/Coastal Strand	2.06
322: Coastal Shrub/Front Dune/Beach Dune	0.31
426: Tropical Hardwood/ Maritime Hammock	4.42
428: Cabbage Palm Hammock	4.26
540: Bays and Estuaries	3.16
612: Mangroves Swamps	1.07
730: Exposed Rock	0.23
814: Roads and Highways	8.82
8146: Primitive Trail	0.005
818: Parking Lot	1.49

SEBASTIAN INLET STATE PARK

Atlantic Ocean

Sebastian Inlet

BREVARD COUNTY  
INDIAN RIVER COUNTY

SEBASTIAN INLET STATE PARK

**Legend**

- Proposed Project Limits
- Project Study Area (300-Foot Buffer)

**Existing Land Use and Habitat**

- 181: Swimming Beach (6.04 ac)
- 185: Parks and Zoos (6.51 ac)
- 186: Community Recreation Facilities (0.50 ac)
- 322: Coastal Shrub/Back Dune/Coastal Strand (18.95 ac)
- 322: Coastal Shrub/Front Dune/Beach Dune (18.78 ac)
- 426: Topical Hardwoods/Maritime Hammock (13.44 ac)
- 428: Cabbage Palm Hammock (8.66 ac)
- 540: Bays and Estuaries (13.13 ac)
- 543: Saltwater Ponds (0.40 ac)
- 612: Mangrove Swamps (40.84 ac)
- 730: Exposed Rock (0.78 ac)
- 8146: Primitive Trail (0.23 ac)
- 814: Roads and Highways (9.78 ac)
- 818: Parking Lot (6.85 ac)
- 834: Sewage Treatment (0.71 ac)

Pond 2B

State Park North Entrance

State Park South Entrance

Pond 1A





**Legend**

- Project Study Area (300-Foot Buffer)
- Proposed Project Limits
- Brevard County Future Land Use**
- Public Conservation (PUB-CONS)
- Recreation (REC)
- Indian River County Future Land Use**
- Recreation (REC)

Atlantic Ocean

SEBASTIAN INLET STATE PARK

REC

BREVARD COUNTY  
INDIAN RIVER COUNTY

Indian River

SEBASTIAN INLET STATE PARK

REC



## **Cultural Resources Appendix**

### **Contents:**

ACHP\_e106

ACHP no response

Memorandum of Agreement for the Sebastian Inlet Bridge PDE Study final signed

Signed SHPO letter Sebastian Inlet Bridge (FM 445618-1)\_MKW\_KLC

Section 4(f) Report

**From:** [Amy Streelman](#)  
**To:** [lynn.kelley@dot.state.fl.us](mailto:lynn.kelley@dot.state.fl.us)  
**Cc:** [Beam, Beth](#)  
**Subject:** FW: [External] e form and supporting documents for Sebastian Inlet Bridge  
**Date:** Tuesday, August 16, 2022 11:53:36 AM

---

It says below they have 15 days to respond, and that time frame has passed, so it appears that they do not want to participate in consultation -

Amy Streelman  
Janus Research  
1107 N. Ward Street  
Tampa, Florida 33607  
Cell: 727-560-9963  
Office: 813-636-8200

---

**From:** e106 <[e106@achp.gov](mailto:e106@achp.gov)>  
**Sent:** Monday, July 18, 2022 11:53 AM  
**To:** Amy Streelman <[amy\\_streelman@janus-research.com](mailto:amy_streelman@janus-research.com)>  
**Subject:** Automatic reply: [External] e form and supporting documents for Sebastian Inlet Bridge

The ACHP has received your submission to [e106@achp.gov](mailto:e106@achp.gov). If your submission is to:

- notify the ACHP of a finding that an undertaking may adversely affect historic properties, or
- invite the ACHP to participate in a section 106 consultation, and/or
- propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings, or
- file an executed MOA or PA with the ACHP in accordance with Section 800.6(b)(iv) (where the ACHP did not participate in consultation); or
- provide documentation regarding any other situation.

If this is a notification of an adverse effect, this is your official dated receipt of your submission (in accordance with 36 CFR Part 800.6(1) if this is an adverse effect notification). The ACHP has 15 calendar days to determine if it will participate in consultation to resolve adverse effects to historic properties.

If this is a notification for any other reason, this is your official dated receipt of your submission. The time in which the ACHP responds is dependent on the nature of the notification.

\*\*\*\*\*Please note that the [e106@achp.gov](mailto:e106@achp.gov) address is intended solely for the submission of documentation and official notifications to the ACHP regarding new/ongoing consultations and existing agreement documents. This address is not intended for case specific communication,

correspondence, or scheduling. Such communications should be directed to the assigned ACHP staff member using their ACHP email address.\*\*\*\*\*



## Kelley, Lynn

---

**From:** Amy Streelman <amy\_streelman@janus-research.com>  
**Sent:** Tuesday, August 16, 2022 9:27 PM  
**To:** Kelley, Lynn  
**Cc:** Beth.Beam@stantec.com  
**Subject:** RE: [External] e form and supporting documents for Sebastian Inlet Bridge

We note this for the file and we will also be able to incorporate this statement into the MOA -

Amy Streelman  
Janus Research  
1107 N. Ward Street  
Tampa, Florida 33607  
Cell: 727-560-9963  
Office: 813-636-8200

---

**From:** Kelley, Lynn <Lynn.Kelley@dot.state.fl.us>  
**Sent:** Tuesday, August 16, 2022 5:13 PM  
**To:** Amy Streelman <amy\_streelman@janus-research.com>  
**Cc:** Beth.Beam@stantec.com  
**Subject:** RE: [External] e form and supporting documents for Sebastian Inlet Bridge

Ok what's next?

*Lynn Kelley*

Senior Environmental Specialist  
FDOT District 4 Planning & Environmental Management  
(954) 777-4334  
[lynn.kelley@dot.state.fl.us](mailto:lynn.kelley@dot.state.fl.us)

Work hours are 8:30 am to 5:30 PM. You can reach me on my cell phone: 954-914-3313.

---

**From:** Amy Streelman <[amy\\_streelman@janus-research.com](mailto:amy_streelman@janus-research.com)>  
**Sent:** Tuesday, August 16, 2022 11:53 AM  
**To:** Kelley, Lynn <[Lynn.Kelley@dot.state.fl.us](mailto:Lynn.Kelley@dot.state.fl.us)>  
**Cc:** [Beth.Beam@stantec.com](mailto:Beth.Beam@stantec.com)  
**Subject:** FW: [External] e form and supporting documents for Sebastian Inlet Bridge

**EXTERNAL SENDER:** Use caution with links and attachments.

It says below they have 15 days to respond, and that time frame has passed, so it appears that they do not want to participate in consultation -

Amy Streelman  
Janus Research  
1107 N. Ward Street  
Tampa, Florida 33607  
Cell: 727-560-9963  
Office: 813-636-8200

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**To:** Amy Streelman <[amy\\_streelman@janus-research.com](mailto:amy_streelman@janus-research.com)>  
**Subject:** Automatic reply: [External] e form and supporting documents for Sebastian Inlet Bridge

The ACHP has received your submission to [e106@achp.gov](mailto:e106@achp.gov). If your submission is to:

- notify the ACHP of a finding that an undertaking may adversely affect historic properties, or
- invite the ACHP to participate in a section 106 consultation, and/or
- propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings, or
- file an executed MOA or PA with the ACHP in accordance with Section 800.6(b)(iv) (where the ACHP did not participate in consultation); or
- provide documentation regarding any other situation.

If this is a notification of an adverse effect, this is your official dated receipt of your submission (in accordance with 36 CFR Part 800.6(1) if this is an adverse effect notification). The ACHP has 15 calendar days to determine if it will participate in consultation to resolve adverse effects to historic properties.

If this is a notification for any other reason, this is your official dated receipt of your submission. The time in which the ACHP responds is dependent on the nature of the notification.

\*\*\*\*\*Please note that the [e106@achp.gov](mailto:e106@achp.gov) address is intended solely for the submission of documentation and official notifications to the ACHP regarding new/ongoing consultations and existing agreement documents. This address is not intended for case specific communication, correspondence, or scheduling. Such communications should be directed to the assigned ACHP staff member using their ACHP email address.\*\*\*\*\*

**MEMORANDUM OF AGREEMENT  
BETWEEN THE FLORIDA DEPARTMENT OF TRANSPORTATION AND  
THE FLORIDA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE STATE ROAD A1A SEBASTIAN INLET BRIDGE  
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY,  
INDIAN RIVER COUNTY AND BREVARD COUNTY, FLORIDA**

**WHEREAS**, Pursuant to 23 United States Code (U.S.C.) § 327 and the implementing Memorandum of Understanding (MOU) executed on May 26, 2022, the Florida Department of Transportation (FDOT) has assumed Federal Highway Administration's (FHWA) responsibilities under the National Environmental Policy Act (NEPA) for highway projects on the State Highway System (SHS) and Local Agency Program (LAP) projects off the SHS; and

**WHEREAS**, in accordance with the MOU, FDOT's assumption of FHWA's responsibilities under NEPA for highway projects includes assumption of responsibilities for compliance with 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108); and

**WHEREAS**, FDOT proposes to provide federal financial assistance for the State Road (SR) A1A Project Development and Environment Study (PD&E) to address the structural and functional deficiencies of the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) over the Sebastian Inlet (Financial Project Identification Number 445618-1-22-01; Federal Aid Number D420-075-B) (**the Project**); and

**WHEREAS**, FDOT has determined that **the Project** represents an undertaking in accordance with 36 CFR § 800.3(a); and

**WHEREAS**, FDOT has defined **the Project's** area of potential effects (APE) for historic resources to include all historic properties immediately adjacent to the proposed improvements, for a distance of up to 200 feet. The APE for the proposed ponds includes all adjacent historic properties up to 100 feet from the proposed pond right-of-way (ROW). The archaeological APE focuses upon identifying and evaluating resources within the geographic limits of the proposed action and its associated ground disturbing activities; and

**WHEREAS**, FDOT has consulted with the Florida State Historic Preservation Officer (SHPO) pursuant to the requirements of 36 CFR Part 800 and has determined that **the Project** will have an adverse effect on the James H. Pruitt Memorial Bridge (Florida Master Site File [FMSF] Numbers 8BR03148/8IR01493), which is eligible for listing in the National Register of Historic Places (NRHP); and

**WHEREAS**, FDOT has consulted with the United States Coast Guard (USCG), United States Army Corps of Engineers, National Oceanic and Atmospheric Administration (National Marine Fisheries Service), Florida Department of Environmental Protection (FDEP), Sebastian Inlet State Park, St. Johns River Water Management District, Indian River County, Indian River County Metropolitan Planning Organization, Brevard County, Space Coast Transportation

Planning Organization, Sebastian Inlet District, Indian River Lagoon Council, and the Indian River Scenic Byway Council, regarding the effects of **the Project** on historic properties; and

**WHEREAS**, FDOT has provided opportunities for public review and comment regarding the effects of **the Project** on historic properties; and

**WHEREAS**, in accordance with 36 CFR § 800.6(a)(1) FDOT has notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect determination with specified documentation and has invited the ACHP to comment and participate in consultation, and the ACHP has chosen not to participate pursuant to 36 CFR § 800.6(a)(1)(iii); and

**NOW, THEREFORE**, FDOT and the SHPO agree that **the Project** shall be implemented in accordance with the following stipulations to take into account the effect of **the Project** on historic properties.

### STIPULATIONS

Prior to initiating any ground disturbing or demolition work associated with **the Project**, FDOT shall ensure that the following measures are carried out:

#### I. Documentation of the James H. Pruitt Memorial Bridge (8BR03148/8IR01493)

A. Prior to bridge demolition and per guidance provided by the National Park Service (NPS), FDOT will prepare Historic American Engineering Record (HAER) Level II documentation for the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) as follows:

1. Written historical and descriptive data prepared in accordance with outline format guidelines containing a construction history of the bridge including the history of the bridge type, an architectural description of the resource including alterations, a description of the site and changes, any historical photographs in the supplementary materials section, and a site plan; and
2. Reproduction of existing “as built” and existing drawings on vellum; and
3. Large-format (4” x 5” or larger negative size) photographs processed for archival permanence in accordance with HAER photographic specifications; and
4. At least one color digital photograph of the resource and its setting; and
5. Photo locations keyed to the site plan and included with the “Index to Photographs.”

B. FDOT shall provide draft HAER documentation (non-archival format, electronic version) to the NPS and SHPO for concurrent review. Both agencies shall have 30 days, after receipt of the draft documentation, for review, as per Stipulation VII.

C. FDOT shall make requested edits and provide final copies of the HAER documentation, completed in accordance with Stipulation I.A, as follows:

1. An archival copy to the NPS Southeast Regional Office for review and approval prior to salvage and demolition of the structure, per HAER guidelines; and
2. An archival copy to the SHPO for inclusion in the Florida Master Site File and the State Archives of Florida; and
3. Non-archival copies and electronic copies to the Indian River County Historical Society and the Sebastian Inlet District.

D. The HAER documentation cannot be considered complete, and bridge demolition cannot take place, until accepted by NPS.

## **II. Public Education**

A. FDOT will assist with the development and funding of two State Historic Markers (Markers) with one to be placed in proximity to the north side and the other to be placed in proximity to the south side of the bridge location. The Markers will be located in areas that are safe and accessible to the public. The draft Marker text and location will be coordinated with the SHPO for review, as described in Stipulation VII.

B. FDOT will assist with the development and funding of two educational interpretive panels to be placed within the boundaries of the Sebastian Inlet State Park with one to be placed in proximity to the north side and the other to be placed in proximity to the south side of the bridge location. The panels (design, text, and locations) will be coordinated with the SHPO for review, as described in Stipulation VII.

## **III. Documentation of State Road (SR) A1A (8BR02544/8IR01500)**

A. FDOT will assist with the documentation of an approximate 25-mile portion of State Road (SR) A1A. from Wabasso Beach (Indian River County) to Indialantic (Brevard County).

1. Field survey of the 25-mile linear resource will include a survey of the historic linear resource as well as the historic resources within the roadway right-of-way. The survey, subsequent documentation, and NRHP evaluations will not include any archaeological resources.
2. A historic context will be developed for the approximate 25-mile portion of SR A1A. The historic context will address the unique historic development of this isolated stretch of the roadway and its association with the construction of the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) and the multiple federal and state-owned recreational facilities along the roadway. A historical context will also be developed, or the above-mentioned context will be expanded/augmented, to contextualize any historical resources documented during the field survey should they fall outside the developed historic context, as appropriate.

3. A Survey Document will be compiled in accordance with guidance from Florida Division of Historical Resources (FDHR)/SHPO and Florida Administrative Code Chapters 1A-32 and 1A-46. Content will include, but is not limited to, the purpose of the survey, survey methodology, aforementioned historic context, and survey results sections. In addition, National Register evaluations will be made for the historic resources documented in the survey area (except for the James H. Pruitt Memorial Bridge/FDOT Bridge No. 880005).

4. Florida Master Site File (FMSF) resource forms will be completed for this length of SR A1A (one for Brevard County and one for Indian River County) and any historic resources identified in the roadway right-of-way (excluding the James H. Pruitt Memorial Bridge/ FDOT Bridge No. 880005). A FMSF Survey Log will be completed for the historic architectural survey. Appropriate maps, photographs, and GIS data will be generated to accompany the FMSF forms, per FMSF submission guidance.

B. FDOT will submit the Survey Document and FMSF package, as detailed above, to SHPO for review per Stipulation VII. SHPO will for review the Survey Document for completeness and sufficiency in accordance with Florida Administrative Code Chapter 1A-46 and will review the FMSF resource forms to provide concurrence with NRHP determination recommendations.

#### **IV. PROFESSIONAL STANDARDS**

All archaeological and historic preservation work carried out pursuant to this Agreement shall be conducted by, or under the direct supervision of, a person or persons meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology and Historic Preservation as set forth at 62 FR 33708-33723 (June 20, 1997).

#### **V. DURATION**

This Memorandum of Agreement (MOA) will expire if its terms are not carried out within 5 years from the date of execution or project acceptance, whichever should come first. Prior to expiration, the parties will agree to extend the timeframe for fulfillment of the terms by letter agreement.

#### **VI. POST-REVIEW DISCOVERIES**

In accordance with 36 CFR § 800.13, FDOT will take the following actions if a post-review discovery is made:

A. If previously unidentified historic properties are discovered, or if the potential to affect previously identified historic properties changes after FDOT has completed their appropriate reviews under this Agreement, but before construction has started, FDOT shall reinstate consultation under Section 106 of the National Historic Preservation Act and Chapter 267, Fla. Stat.

**B. If previously unidentified historic properties are discovered during construction or if unanticipated impacts to known or previously unidentified historic properties occur during construction, the following procedures shall be followed:**

**1. All construction-related activity in the vicinity of the discovery shall stop and the contractor shall immediately notify the Project Engineer and the FDOT District 4 Cultural Resources Coordinator of the discovery. Necessary security measures will be taken to protect the discovery as appropriate.**

**2. FDOT will notify the SHPO of the discovery and invite them to accompany FDOT staff (or consultants) to the location within forty-eight (48) hours of the discovery.**

**3. FDOT will immediately notify any Indian tribe that might attach religious and cultural significance to the affected property within forty-eight (48) hours of the discovery.**

**4. FDOT shall consult with the SHPO/THPO and appropriate consulting parties to document and evaluate the project effects and the need, if any, for further investigation within forty-eight (48) hours of the SHPO/THPO receipt of notification.**

**5. If FDOT determines that the discovery does not warrant further investigation, FDOT will provide written notification to the SHPO outlining FDOT's reasons and requesting their concurrence within two (2) business days of the visit to the discovery location. The SHPO/THPO and Indian tribes will have two (2) business days after receipt to respond. If no comments are received within this period, concurrence will be assumed, and project construction may resume.**

**6. If FDOT determines that the site warrants further investigation, a scope of work will be developed within forty-eight (48) hours of the site visit. The scope of work will be submitted to the SHPO and, as appropriate, the tribes. The SHPO/THPO and tribes will have two (2) business days after receipt to review and comment. If no comments are received within this period, concurrence will be assumed and work will be implemented in accordance with the scope. If comments are received, FDOT shall take them into account and carry out the scope of work. Upon completion and acceptance of the work, construction may proceed as planned. A report of the investigations will be completed within the time frame established by the scope of work and copies provided to all consulting parties. Should any party object to the proposed work plan or results, FDOT will proceed in accordance with Stipulation VIII.**

**7. When the discovery consists of human remains, graves, or grave-associated artifacts or other properties that federally recognized tribes with ancestral ties to Florida may ascribe with a traditional cultural or religious significance, FDOT-OEM will notify the tribes. FDOT will comply with Section 1.6 of the current version of the FDOT Standard Specifications for Road and Bridge Construction**

and the procedures for inadvertent discovery of human remains contained in Section 872.05, F.S. and Rule 1A-44 of the Florida Administrative Code.

## **VII. REVIEW STIPULATION**

FDOT shall afford the SHPO and other consulting parties, including the federally-recognized tribes affiliated with Florida, as appropriate, a 30-day period for review and comment following the receipt of delivery of those submittals and reviews described above. If no comments are received by FDOT at the end of these 30 days, FDOT will presume there are no objections. Any objections to the findings or plans proposed in these submittals will be addressed in accordance with Stipulation VIII, below.

## **VIII. DISPUTE RESOLUTION**

Should any signatory to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FDOT shall consult with such party to resolve the objection. If FDOT determines that such objection cannot be resolved, FDOT will:

A. Forward all documentation relevant to the dispute, including FDOT's proposed resolution, to the ACHP. The ACHP shall provide FDOT with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FDOT shall prepare a written response that considers any timely advice or comments regarding the dispute from the ACHP, signatories, and concurring parties, and provide them with a copy of this written response. FDOT will then proceed according to its final decision.

B. Make a final decision on the dispute and proceed accordingly if the ACHP does not provide its advice regarding the dispute within thirty (30) days. Prior to reaching such a final decision, FDOT shall prepare a written response that considers any timely comments regarding the dispute from the signatories to the MOA, and provide them and the ACHP with a copy of the written response.

C. Fulfill its responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

## **IX. AMENDMENTS**

This MOA may be amended when such an amendment is agreed to in writing by all signatories. All signatories must signify their acceptance of the proposed changes to the MOA in writing within 30 days of their receipt. The amendment will be effective on the date a copy signed by all signatories is filed with the ACHP. In accordance with 36 CFR § 800.6(b)(7), if the ACHP was not a signatory to the original agreement and the signatories execute an amended agreement, FDOT shall file the amended agreement with the ACHP.

## **X. TERMINATION**

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories in an effort to amend the MOA per Stipulation



IX, above. If within thirty (30) days (or another time agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on **the Project**, FDOT must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. FDOT shall notify the signatories as to the course of action it will pursue.


*Execution of this MOA by FDOT and SHPO and implementation of its terms is evidence that FDOT has taken into account the effects of this undertaking on historic properties per the requirements of Section 106 (Public Law 113-287 [Title 54 U.S.C. 306108]), and 36 CFR Part 800 (Protection of Historic Properties).*

**SIGNATORIES:**

FLORIDA STATE HISTORIC PRESERVATION OFFICER


 Date 4/6/23  
Alissa S. Lotane  
Director, Division of Historical Resources  
State Historic Preservation Officer

FLORIDA DEPARTMENT OF TRANSPORTATION

DocuSigned by:  
 Date 04/21/2023 | 3:41 PM EDT  
D881D38487C64B2  
Jennifer Marshall, P.E.  
Director, Office of Environmental Management

**CONCURRING PARTIES:**

FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT 4

 Date 4/21/2023  
Steven C. Braun, P.E.  
Director of Transportation Development



*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309

KEVIN J. THIBAUT, P.E.  
SECRETARY

February 9, 2022

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

Attn: Marsha K. Welch, Transportation Compliance Review Program

Re: Cultural Resource Assessment Survey (CRAS) and Effects Finding: State Road (SR) A1A  
Sebastian Inlet Bridge (FDOT Bridge No. 880005) Project Development and Environment  
(PD&E) Study  
FM No. 445618-1-22-02  
ETDM No. 14433  
Brevard County and Indian River County, Florida

Dear Ms. Welch,

The *Cultural Resource Assessment Survey (CRAS) of the State Road (SR) A1A Sebastian Inlet Bridge (FDOT Bridge No. 880005) Project Development and Environment (PD&E) Study, Brevard and Indian River counties, Florida* was undertaken by Janus Research at the request of the Florida Department of Transportation (FDOT), District 4. This survey and report were also prepared under 1A-32 Archaeological Research Permit No. 2021.50, issued by the Bureau of Archaeological Research (BAR) on May 5, 2021. The project limits are approximately one mile long. The purpose of the CRAS of the SR A1A Sebastian Inlet Bridge was to locate and evaluate potential archaeological and historic resources within the Area of Potential Effect (APE) and to assess eligibility for inclusion in the *National Register of Historic Places* (National Register) according to criteria set forth in 36 CFR Section 60.4.

All work was conducted in accordance with Section 106 of the *National Historic Preservation Act (NHPA) of 1966* (Public Law 89-665, as amended), as implemented by 36 CFR 800 -- *Protection of Historic Properties* (incorporating amendments effective August 5, 2004); Stipulation VII of the *Programmatic Agreement among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation (ACHP), the Florida Division of Historical Resources (FDHR),*

*SR A1A Sebastian Inlet Bridge PD&E Study  
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*the State Historic Preservation Officer (SHPO), and the FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida (Section 106 Programmatic Agreement, effective March 2016, amended June 7, 2017); Section 102 of the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.), as implemented by the regulations of the Council on Environmental Quality (CEQ) (40 CFR Parts 1500–1508); Section 4(f) of the Department of Transportation Act of 1966, as amended (49 USC 303 and 23 USC 138); the revised Chapters 267 and 373, Florida Statutes (F.S.); and the standards embodied in the FDHR’s Cultural Resource Management Standards and Operational Manual (February 2003), Chapter 1A-46 (Archaeological and Historical Report Standards and Guidelines), Florida Administrative Code (FAC), and Rule 1A-32 (Archaeological Research), FAC. In addition, this report was prepared in conformity with standards set forth in Part 2, Chapter 8 (Archaeological and Historical Resources) of the FDOT PD&E Manual (effective July 1, 2020). All work also conforms to professional guidelines set forth in the Secretary of Interior’s Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, as amended and annotated).*

The FDOT District 4 is conducting a PD&E Study to evaluate the replacement of the Sebastian Inlet Bridge (FDOT Bridge No. 880005) crossing the Sebastian Inlet located at the Indian River County and Brevard County boundary. The Sebastian Inlet Bridge, also known as the James H. Pruitt Memorial Bridge, was constructed in 1964 to carry SR A1A across the Sebastian Inlet. The bridge is approximately 1,500 feet long with 19 spans, the longest of which is approximately 180 feet long. The bridge vertical clearance is 39 feet and horizontal clearance is 150 feet between the bridge fenders. The Inlet provides access for vessels between the Indian River Lagoon and the Atlantic Ocean and is approximately 525 feet wide at the bridge. The bridge is located within FDOT and Sebastian Inlet District (SID) right-of-way (ROW) and is adjacent to the Sebastian Inlet State Park. The Inlet was created from privately owned uplands. In 1919 the SID was formed to maintain the Inlet and owns the submerged lands under the bridge.

The existing bridge has two 12-foot travel lanes and 2-foot shoulders. The approach roadway has two 12-foot travel lanes. North and south of the bridge, paved shoulders are 2- to 4-foot wide. South of the bridge, shoulders are marked as designated bicycle lanes. There are currently no pedestrian or bicycle facilities located within the bridge approaches or on the bridge, creating a gap in the multimodal network along SR A1A. An 8-foot shared use path, separated from SR A1A, is located on the west side of the roadway north and south of the bridge.

This project was evaluated through FDOT’s Efficient Transportation Decision Making (ETDM) process as project No. 14433. An ETDM Programming Screen Summary Report containing comments from the Environmental Technical Advisory Team (ETAT) was published on June 3, 2020. The ETAT evaluated the project’s effects on natural, physical, cultural, social, and economic resources.

Two archaeological sites, 8IR34 and the Micco Beach Site (8BR125), have been recorded within the archaeological area of potential effect (APE) for the project, which encompasses all areas of potential ground disturbing improvements for each project alternative, as well as areas proposed for ROW acquisition. The SHPO has not previously evaluated these sites for their National

*SR A1A Sebastian Inlet Bridge PD&E Study  
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Register eligibility. Additionally, one archaeological occurrence was identified during the field review.

The field review identified no remnants of previously recorded 8IR34 archaeological site, a pre-Columbian midden, within the archaeological APE. However, due to the presence of a paved parking lot, a paved park road, bridge berms, and underground utilities serving a guard house, no subsurface testing was possible within the vicinity of this site. Therefore, there is insufficient information to determine the National Register eligibility of 8IR34.

A small part of the previously recorded Micco Beach Site (8BR125), a pre-Columbian midden that potentially contains Archaic, Malabar I/St. Johns I, and Malabar II/St. Johns II components, was relocated within the archaeological APE in seven (7) shovel tests. The portion of the site within the archaeological APE lacks intact midden or features and contains a sparse artifact assemblage. Much of it is disturbed and potentially redistributed from the main part of the site to the east, closer to the beach. Previous research on the main portion of the site outside the current archaeological APE has identified more extensive archaeological material and intact human burials. Because of the limited testing of the site for this project, there is insufficient information to assess the eligibility of the larger Micco Beach Site (8BR125). However, if the site were to be determined National Register-eligible in the future, the small portion of the site contained within the current archaeological APE would not contribute to its significance.

Due to the archaeological sensitivity of the area, the previous identification of human remains at the Micco Beach site (8BR125), and the inability to test portions of the APE with elevated archaeological potential, such as within the 8IR34 archaeological site, a professional Archaeologist will conduct monitoring of this project during construction. The resultant report will be provided to your office once it is available.

Historical research and field survey resulted in the identification and evaluation of four resources comprised of one previously identified historic bridge (James H. Pruitt Memorial Bridge, 8BR3148/8IR1493), one previously identified historic roadway (SR A1A, 8BR2544/8IR1500) and two newly identified historic landscapes (Sebastian Inlet State Park, 8BR4206/8IR1877; and Swimming Lagoon, 8BR4433). The James H. Pruitt Memorial Bridge (8BR3148/8IR1493) was constructed in 1964 and was determined individually National Register-eligible in 2012 by the Florida SHPO as a result of the 2010 *Historic Highway Bridges of Florida* study conducted by Archaeological Consultants, Incorporated (ACI) on behalf of the FDOT Office of Environmental Management. The James H. Pruitt Memorial Bridge was determined National Register-eligible under Criterion C for its Engineering. The bridge is an early example of the use of prestressed concrete in Florida. The current study finds that the bridge remains eligible for the National Register.

The portion of SR A1A (8BR2544/8IR1500) within the current project area is similar to other portions determined ineligible in 2010 and 2020. Historical research and field survey did not revealed any additional information to suggest the resource is eligible for the National Register, therefore, the portion of SR A1A within the current project area is considered National Register ineligible.

*SR A1A Sebastian Inlet Bridge PD&E Study  
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The newly identified Sebastian Inlet State Park (8BR4206/8IR1877) and Swimming Lagoon (8BR4433) are associated with the post-World War II development of publicly owned recreational areas that occurred throughout the state of Florida. Based on the lack of significant historical associations, both the Sebastian Inlet State Park and the Swimming Lagoon are considered ineligible for the National Register both individually and as contributing resources to a historic district.

**Effects Discussion:**

The Criteria of Effects established by Section 106 of the NHPA in 36 CFR 800.5 was applied to the project. The current PD&E included evaluation of Build and Rehabilitation alternatives for the bridge and the No-Action (No-Build) alternative, replacement of the existing under deck observation/fishing piers, and the addition of bicycle and pedestrian facilities across the bridge. The underdeck observation/ fishing piers are located under the north and south portions of the bridge. Build alternatives will include evaluation of the bridge vertical clearance as required by the US Coast Guard (USCG). A navigation needs analysis memorandum was submitted to the USCG and a preliminary clearance determination was received which stated a desired minimum vertical clearance of 65-feet above mean high water (MHW) for a fixed bridge and 125-foot minimum horizontal clearance.

The alternatives analysis resulted in the conclusion that the rehabilitation option did not meet the purpose and need for the project and the bridge remains structurally and functionally deficient. Based on the results of the rehabilitation alternative analysis, this alternative was removed from further consideration.


The three build alternatives considered alignments in the current bridge location (Build Alternative 1), an alignment east of the current bridge (Build Alternative 2), and an alignment to the west of the current bridge (Build Alternative 3). All of the build alternatives require the demolition of the current bridge. There currently is not a chosen Preferred Alternative.

Since all of the build alternatives will require the demolition of the National Register eligible James H. Pruitt Memorial Bridge (8BR3148/8IR1493) it was determined that the proposed project will have an adverse effect to historic properties. The remaining resources are ineligible for the National Register. As a result of this adverse effect, further consultation with your office and project stakeholders to minimize and mitigate the adverse effect will occur.

We kindly request that this letter be reviewed, and concurrence provided by your office. This information is provided in accordance with the provisions contained in 36 CFR, Part 800, as well as the provisions contained in the revised Chapter 267, *F.S.* If you have any questions regarding the subject project, please contact me at [ann.broadwell@dot.state.fl.us](mailto:ann.broadwell@dot.state.fl.us) or Lynn Kelley at [lynn.kelley@dot.state.fl.us](mailto:lynn.kelley@dot.state.fl.us).

SR A1A Sebastian Inlet Bridge PD&E Study  
Brevard County and Indian River County, Florida  
Page 5

Sincerely,

DocuSigned by:  


1942EE83B10D4E7...  
Ann Broadwell  
Environmental Administrator  
FDOT District 4 Planning & Environmental  
Management

The Florida State Historic Preservation Officer <input checked="" type="checkbox"/> concurs/ <input type="checkbox"/> does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number <u>2019-8223C</u> . Or, the SHPO finds the attached document contains _____ insufficient information.	
SHPO Comments:	
Kelly L. Chase, DSHPO	Digitally signed by Kelly L. Chase, DSHPO <small>DN: cn=Kelly L. Chase, DSHPO, o=doc, email=kelly.chase@doc.myflorida.com, c=US</small> <small>Date: 2022.03.30 09:55:53 -0400</small>
Timothy A. Parsons, Director, and State Historic Preservation Officer Florida Division of Historical Resources	3/30/2022  [DATE]

Section 4(f) Resources

Florida Department of Transportation

SR-A1A OVER SEBASTIAN INLET- BRIDGE REPLACEMENT

District: FDOT District 4

County: Indian River County

ETDM Number: 14433

Financial Management Number: 445618-1-21-01

Federal-Aid Project Number: D420-075-B

Project Manager: Binod Basnet

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.

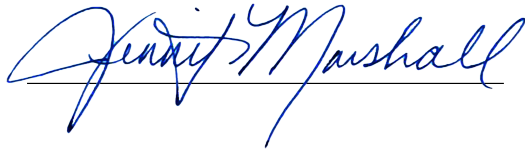
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### Summary and Approval

Resource Name	Facility Type	Property Classification	Owner/Official with Jurisdiction	Recommended Outcome	OEM SME Action
Sebastian Inlet State Park	Park/Rec Area	Park/Rec Area	Florida Department of Environmental Protection	<i>de minimis</i>	Concurrence 05-16-2023
Sebastian Inlet District	Non-Section 4(f)		Sebastian Inlet District	Not Applicable	Determination 12-09-2022
FDOT Transportation Easement	Transportation Easement		FDOT	Not Applicable	Determination 12-19-2022
Sebastian Inlet Bridge (Historic)	Fixed Bridge	Historic Site	FDOT and SHPO	Programmatic	Concurrence 05-16-2023



May 23, 2023

Director of the Office of Environmental Management  
Florida Department of Transportation

## Sebastian Inlet State Park

**Facility Type:** Park/Rec Area

**Property Classification:** Park/Rec Area

**Address and Coordinates:**

Address: 900 SR-A1A, Melbourne Beach, FL, 32951, USA

Latitude: 28.06937 Longitude: -80.56085

**Description of Property:**

The Sebastian Inlet State Park (SISP) is owned by the State of Florida Trustees of the Internal Improvement Trust Fund (TIITF) and managed by the Florida Department of Environmental Protection (FDEP). Based on the park Approved Unit Management Plan dated 2008, the park is a public outdoor recreation single use property, which contains 971.01 acres.

The following are the existing functions/facilities of the part of the park which is located within Indian River County:

McLarty Treasure Museum with dune boardwalk and parking lot (28 spaces); Camp Registration Building/Office; Sebastian Fishing Museum/Fish Cleaning Table; campsite areas; playground and picnic pavilions; restrooms/showers (bathhouses); snack bars; boat ramp; main parking lot (60 spaces); beach areas (including beach access) east of SR A1A; paved bicycle path within FDOT ROW through the park; and South Jetty.

The following are the existing facilities of the segment of the park within Brevard County: Bait and tackle/concessions; Ranger Station; nature trail; marina office/store; Storage building; administrative office/Spanish House area.

Available recreational use includes saltwater fishing, surfing, swimming, sunbathing, camping, hiking, picnicking, shelling, snorkeling, scuba diving, boating, canoeing/kayaking, bird watching, and interpretive programs. Several major surfing competitions are held within the park every year. There are other documented cultural resources including 13 recorded archaeological sites, an unknown number or unrecorded sites, and recovered artifacts on display at the McLarty Museum. There are also a number of natural resources including beach dunes, coastal hammocks, and mangrove shorelines along the Indian River Lagoon which provide wildlife habitat for various species of birds, sea turtles, manatees, and other protected species including the federally listed beach mouse.

Usage of the park is very heavy as 600,000 to 800,000 people visit the park every year. The park also is open 24 a day to allow fishing access to the jetties.

Access to the park is by pedestrians and automobiles utilizing the south and north entrances to the park.

**Owner/Official with Jurisdiction:** Florida Department of Environmental Protection

**Recommended Outcome:** *de minimis*

**Yes No**

Was there coordination with the Official(s) with Jurisdiction to identify an opportunity for a *de minimis* finding?

Was the OWJ informed by the District of FDOT s intent to pursue a *de minimis* approval option?

Was the OWJ informed in writing that their concurrence with a no adverse effect finding to the activities, features or attributes which qualify the property for protection may result in FDOT making a *de minimis* approval under Section 4(f)?

Did the OWJ concur that the proposed project, including any enhancement, mitigation and minimization of harm measures, will result in no adverse effects to the activities features or attributes of the property?

**Basis on Which the Determination was Made**

An approximate total of 3.46 acres (0.38%) of park property is required by FDOT for necessary ROW to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, park entrances, shared use path improvements and stormwater management (one pond site is required for the south basin and one for the north basin). Coordination with the FDEP and Park staff has been ongoing throughout the PD&E Study.

The FDOT has or will incorporate the following mitigation measures (measures to minimize harm) within the proposed project:

- Replacement of the existing perimeter fence around the bridge on the north side of the park.
- Repaving of both the south and north parking lots within the FDOT right of way (ROW) under the bridge.
- Providing the funding through a Joint Participation Agreement (JPA) for installation of electronic gates at both the south and north park entrances.
- Continue efforts to further reduce, and not increase, the total amount of park acreage needed to be converted to FDOT ROW for inclusion as stormwater management facilities during the final design phase from the estimated 2.87 acres shown in the proposed Pond Reduction Alternative Matrix.

**Public Involvement Activities:**

The Public Hearing was held on both December 13, 2022 (Virtual), and on December 15, 2022 (Sebastian Community Center). The public did not submit any comments regarding the impacts/use of the park property during the public comment period. The Public Hearing Transcripts and Public Hearing Summary documents have been uploaded to the SWEPT File.

**OEM SME Concurrence Date:** 05-16-2023

## Sebastian Inlet District

**Facility Type:** Non-Section 4(f)

**Property Classification:**

**Address and Coordinates:**

Address: 114 6th Ave, Indialantic, FL, 32903, USA

Latitude: 28.09078 Longitude: -80.56742

**Description of Property:**

By special act of the Florida Legislature in 1919, the SID was created as an independent special taxing district and chartered to maintain the navigational channel between between the Indian River and the Atlantic Ocean. The SID is responsible for bypassing sand that migrates into the inlet system to other beaches downstream. To accomplish these tasks, SID conducts periodic dredging, channel maintenance, sand bypass, and beach renourishment projects for the main purpose of maintaining the channel. Other critical functions include erosion control, emergency beach and dune repair, shoreline stabilization and inlet infrastructure maintenance, public safety in navigation, and environmental monitoring and protection.

Because of these responsibilities, the SID holds fee simple title to the land that is now submerged where the barrier island previously existed. The current location of the Sebastian Inlet Bridge spans the District's fee simple land and in 1963, the District granted an easement to the State Road Department, now FDOT, providing access over its property for the construction and maintenance of the bridge.

Based on this information, the SID's main function for their land is for maintenance of the navigational channel between the Indian River and Atlantic Ocean. The maintenance of the inlet requires periodic dredging. Dredging is not considered to be an activity that is protected under Section 4(f). There are some secondary recreational benefits/uses of their land, but those activities are considered to be incidental, secondary, occasional or dispersed activities similar to park, recreational or refuge activities but these activities do not constitute a primary purpose within the context of Section 4(f).

**Owner/Official with Jurisdiction:** Sebastian Inlet District

**Recommended Outcome:** Not Applicable

**Rationale:**

SID's primary purpose is for maintenance of the Sebastian Inlet, and therefore not subject to Section 4(f) protection based on the Federal Highway Administration (FHWA)'s 2012 Policy Paper, Question 1A, Page 23.

**OEM SME Determination Date:** 12-09-2022

## FDOT Transportation Easement

**Facility Type:** Transportation Easement

**Property Classification:**

**Address and Coordinates:**

Address:

Latitude: Longitude:

**Description of Property:**

Based on the July 22, 1963 Sebastian Inlet District (SID) Warranty Deed 99-279 with the State Road Department [(now known as the Florida Department of Transportation (FDOT))], the SID granted the FDOT an easement, an excerpt as follows: "for the purposes of constructing a bridge with all appurtenant facilities, across Sebastian Inlet District, which said bridge when completed will become part of State Road A1A for use by the general public. Said appurtenant facilities consist of (a) fenders for said bridge; (b) pedestrian walkways beneath said bridge deck, and (c) access roads to the lands and easements of said District and private property abutting the proposed State Road right of way as shown on the construction plans of said bridge."

The area of FDOT's 120 feet of ROW within the SID easement contains the existing bridge and the existing pedestrian walkway (or catwalk).

Because the ROW is utilized by FDOT primarily for transportation purposes, and is maintained by the FDOT for transportation purposes, Section 4(f) does not apply. In addition, the pedestrian walkway, or catwalk has some recreational functions as currently visitors to the park utilize this walkway for fishing activities. However, the location of the walkway is provided generally within the existing transportation ROW, rather than as a recreational feature requiring a specific location within the ROW, and therefore, the walkway is not subject to Section 4(f) applicability.

**Owner/Official with Jurisdiction:** FDOT

**Recommended Outcome:** Not Applicable

**Rationale:**

Based on the above referenced language of the warranty deed, the Official With Jurisdiction is the FDOT, and the area of FDOT's ROW easement's major purpose is for transportation. Recreational activities within the FDOT Transportation Easement are secondary in nature and do not constitute a primary purpose within the context of Section 4(f) and are therefore not subject to Section 4(f) protection (2012 FHWA Policy Paper Question 1A, Page 23).

**OEM SME Determination Date:** 12-19-2022

## Sebastian Inlet Bridge (Historic)

**Facility Type:** Fixed Bridge

**Property Classification:** Historic Site

**Address and Coordinates:**

Address: Bridge #880005 at Sebastian Inlet, Indian River and Brevard Counties, FL

Latitude: 28.06937 Longitude: -80.56085

**Description of Property:**

The Sebastian Inlet Bridge (Bridge # 880005) crosses the Sebastian Inlet at the Indian River County and Brevard County boundary. Sebastian Inlet Bridge (bridge) (Florida Master Site File [FMSF] Numbers 8BR3148/8IR1493), is also known as the James H. Pruitt Memorial Bridge. The **Purpose and Need** for the project is to address the structural and functional deficiencies of the existing bridge and address the gap in system linkage for bicyclists and pedestrians.

The bridge has been determined NRHP-eligible under Criterion C in the area of Engineering for its "high-integrity embodiment of a prestressed concrete bridge in Florida". The State Historic Preservation Officer (SHPO) concurred and determined the Sebastian Inlet Bridge National Register-eligible in 2010.

A Cultural Resource Assessment Survey was completed in February 2022, and in consideration of the structural deficiencies identified in the November 2020 FDOT *Bridge Inspection Report*, this project will require bridge replacement (all alternatives are discussed below). Since a bridge replacement will require the demolition of the National Register eligible James H. Pruitt Memorial Bridge, it was determined that the proposed project will have an adverse effect to historic properties. The SHPO concurred with the adverse effects determination March 30, 2022.

The bridge is a 1,548-foot long concrete structure constructed in 1964 to carry State Road (SR) A1A over the Sebastian Inlet (Inlet). The Inlet is manmade, being created in 1919 from privately owned lands and reopened in 1923. In 1919 the Sebastian Inlet District (SID) was formed to maintain the Inlet and the submerged lands under the bridge. The fixed bridge is located within FDOT and SID right-of-way (ROW) and is adjacent to the Sebastian Inlet State Park (Park). The bridge structure and portions of the bridge approaches are located within an easement granted from the SID to the then Florida State Road Department (FSRD), now FDOT. The easement provided for construction of the bridge and all appurtenant facilities which, when constructed, became part of SR A1A for use by the public. Review of historical FSRD ROW maps, U.S. Geological Survey (USGS) maps, and SID historical documents and photographs shows SR A1A in Indian River County was acquired by the FSRD around 1961 and constructed prior to completion of the bridge. SR A1A in Brevard County was constructed with FSRD ROW between 1951 and 1956.

The bridge vertical clearance is 39-feet and horizontal clearance is 150-feet between the bridge fenders. The Inlet provides access for vessels between the Indian River Lagoon and the Atlantic Ocean and is approximately 525-feet wide at the bridge. The 19-span bridge features lightweight concrete prestressed beam and girder design with cast-in-place reinforced concrete support piers. The main span is 180-feet. During construction, the contractor made use of special provisions that permitted changing the prestressing of the variable depth members from the post-tensioned design to pretensioned.

The existing bridge has two 12-foot travel lanes and 2-foot shoulders (**Figure 1**). Within the project limits, SR A1A has two 12-foot travel lanes. North and south of the bridge, paved shoulders are 2 to 4-feet wide. South of the bridge, shoulders

are marked as designated bicycle lanes. There are currently no pedestrian or bicycle facilities located within the bridge approaches or on the bridge, creating a gap in the multimodal network along SR A1A.

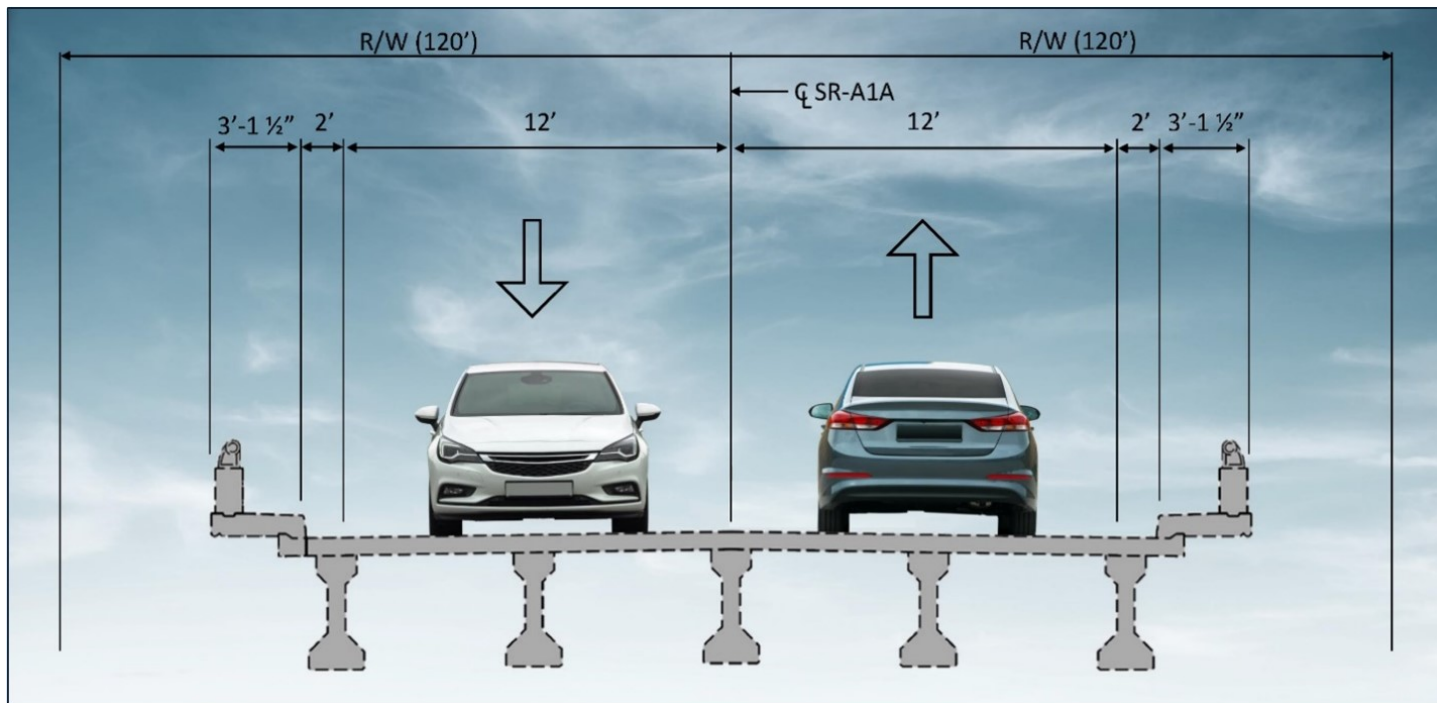


FIGURE 1: EXISTING SR A1A BRIDGE TYPICAL SECTION

FDOT performs biannual inspections and evaluations of all fixed bridge structures under its jurisdiction, as part of the FHWA National Bridge Inventory (NBI) and Structural Inventory and Appraisal Program which rates a bridge deck, superstructure, substructure, or culvert. The bridge was inspected by FDOT District Four on November 14, 2018, following Hurricane Florence. Based on this evaluation the bridge was rated as structurally deficient with a sufficiency rating of 51.6 and a health index of 79.8. Additional information related to the condition of the bridge was obtained from the November 17, 2020, bridge inspection report prepared by FDOT. FDOT's work program requires that structurally deficient bridges, once identified, have corrective actions (repair or replacement) initiated within six years. Structurally deficient bridges are not considered unsafe for public use unless the bridge is also closed.

The "health Index" is a tool that measures the overall condition of a bridge; a lower health index indicates more work is needed in order to improve the bridge to an ideal condition. Bridges with a health index of less than 85 require repair or replacement.

The sufficiency rating is used to determine whether a bridge that is structurally or functionally deficient should be repaired or replaced. The sufficiency rating considers several factors, only about half of which relate to the condition of the bridge itself.

Bridge Condition is determined by the lowest rating of NBI condition ratings. If the lowest rating is greater than or equal to 7, the bridge is classified as Good; if less than or equal to 4, it is Poor; and 5 or 6 are Fair. The structurally deficient condition is given to any bridge when any component: deck, superstructure, substructure, or culvert is in Poor condition (rated 4). The November 2020 bridge inspection report, summarized below, indicated the following bridge conditions.

- Structurally deficient
- Substructure Rating: 4 (Poor)
- Sufficiency rating = 51.6
  - Health index = 79.8
  - Scour vulnerability rating of 3 SC, "scour critical", indicating that the bridge foundations were determined to be unstable for assessed or calculated scour conditions.

Bridge scour is the lowering of the streambed at bridge foundation (piers and abutments). Bridge scour is the largest cause of bridge failure in the United States and a major factor that contributes to the total construction and maintenance costs of bridges in the United States (FDOT *Bridge Scour Manual*, June 2022).

The term functionally deficient or functionally obsolete means that the bridge does not meet current roadway design standards for features such as lane width, shoulder width, or bicycle and/or pedestrian facilities. Although the bridge does have 12-foot travel lanes, it has deficient shoulder widths at 2-feet wide and deficient bicycle and pedestrian facilities with none present across the bridge.

The following supporting documentation is attached to the Programmatic Section 4(f) Evaluation:

- SHPO Concurrence with the CRAS, March 30, 2022
- SHPO Concurrence with Adverse Effects, March 30, 2022
- Cultural Resource Committee (CRC) Meeting Notes, April 27, 2022
- ACHP Correspondence regarding Section 106 Consultation, July 2022
- Memorandum of Agreement between the FDOT and the SHPO executed April 21, 2023

The Section 4(f) Programmatic Alternatives Analysis is included in the following section *Describe in detail how the Section 4(f) property will be used*.

Technical studies prepared to support the evaluation of conditions related to the historic bridge include the following and are incorporated by reference:

- Typical Section Package
- Concept Plans - Preferred Alternative
- Navigation Needs Memorandum
- Vertical Clearance Evaluation Memorandum
- Traffic Analysis Methodology Memorandum
- Project Traffic Analysis Report
- Pond Siting Report
- Geotechnical Report
- Bridge Hydraulic Report
- Utilities Assessment Package Value Engineering Report Sociocultural Effects Evaluation
- Noise Study Technical Memorandum Level I Contamination Assessment Report Water Quality Impact Evaluation
- Final Cultural Resource Assessment Survey (CRAS), SR A1A/Sebastian Inlet Bridge (#880005) PD&E Study, February 2022
- Natural Resource Evaluation
- Cultural Resource Assessment Report
- Planning Consistency Form



- Alternatives Public Meeting Summary

**Owner/Official with Jurisdiction:** FDOT and SHPO

**Recommended Outcome:** Programmatic (Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges)

**Describe in detail how the Section 4(f) property will be used.**

The *Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges* is being applied to this project based on a determination that there are no feasible and prudent alternatives to the use this historic bridge.

In consideration of the critical need to maintain this regional route over the Inlet, the structural deficiencies identified in previous bridge inspections, the results of the CRAS, and other environmental evaluations, it was determined that this project will require demolition (use) of the National Register-eligible James H. Pruitt Memorial Bridge for a bridge replacement within the existing FDOT ROW at this location.

**AVOIDANCE ALTERNATIVES**

As required under the terms of the Programmatic Section 4(f) for historic bridges, the purpose of this section is to examine alternatives that would avoid the "use" of a Section 4(f) resource, and to determine whether such avoidance alternatives are prudent and feasible.

**1. No Action (No Build) Alternative**

In order for this Programmatic Section 4(f) evaluation to be applied to the project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

A determination of whether the No Build Alternative can remain to an acceptable level in a feasible and prudent manner is a function of its ability to perform adequately in both structural and functional areas. The No Action Alternative consists of leaving the existing bridge in place and is an alternative solution that assumes the retainment of existing conditions within the projects limits. The existing bridge would continue to provide a 39-foot vertical clearance and 150-foot horizontal clearance. Previous studies and inspections indicate the existing bridge condition continues to decline with structural conditions significantly decreasing following Hurricane Florence.

For evaluation purposes, routine maintenance and repair options were only considered viable for 5 years before bridge replacement is needed. Cost estimates for the No Action Alternative considered continued maintenance and repair of the existing bridge; however, these short-term solutions alone will not improve the existing bridge structural or functional deficiencies and will not improve safety. Normal maintenance includes repair of:

- Concrete spalling of bridge deck, columns, girders/beams
- Concrete delamination of bridge cap, pier cap
- Steel corrosion - exposed strands, rebar, bearing cantilevered section, girders/beams

The No Action Alternative would preserve the historic eligibility of the bridge and does not have an adverse effect to the resource under Section 106. These deficiencies can lead to structural failure and normal maintenance is not considered adequate to address these deficiencies. The bridge remains:

- structurally deficient
- scour critical
- functionally deficient

Eventually the existing bridge needs to be replaced due to its age and importance in maintaining a critically needed regional coastal route used by travelers (multiple modes) for daily travel, Sebastian Inlet State Park access, hurricane evacuation, and emergency vehicle access. Regionally available alternative routes are limited and are considerable distances from the bridge. The closest alternate routes are via SR A1A north from the bridge to the Melbourne Causeway bridge to US 1 south or south from the bridge to the Wabasso bridge to US 1 and north. The detours are approximately 70 miles. The bridge is significant to the local economy as it provides access to the Sebastian Inlet State Park along with businesses and residences north and south along SR A1A. The bridge is used by residents, tourists, delivery trucks, emergency services, pedestrians, and bicyclists

The No Action Alternative was determined to be neither feasible nor prudent. The No Action Alternative does not correct the conditions that cause the bridge to be considered structurally and functionally deficient. Nor does it extend the service life of the bridge which implies continued risk of safety hazards to the traveling public including bicyclists and/or pedestrians. The No Action Alternative ignores the basic transportation need and does not meet the purpose and need for the project.

For the following reasons, this alternative is determined to fail the Section 4(f) prudent and feasible standard and is not recommended.:

- a. Purpose and Need - The No Action Alternative does not meet the purpose and need for the project.
- b. Maintenance - The No Action Alternative does not correct the situation that causes the bridge to be considered structurally deficient or extend the service life of the bridge resulting in continued maintenance. Normal maintenance does not correct the critical scour condition of the bridge foundation. These deficiencies can lead to sudden collapse and potential injury or loss of life. Normal maintenance is not considered adequate to address the situation.
- c. Safety - The No Action Alternative poses serious and unacceptable safety hazards to the traveling public or places intolerable restriction on transport and travel.

## **2. Build on New Location Alternative (parallel construction/conversion to one-way pair)**

SR A1A and the Sebastian Inlet Bridge are a critically needed regional coastal route used by travelers for daily travel, Sebastian Inlet State Park access, hurricane evacuation, and emergency vehicle access. Regionally available alternative routes are limited and are considerable distances from the existing bridge.

The following criteria were evaluated to determine if the New Location Alternative met the Section 4(f) prudent and feasible standard.

1. *Terrain*
2. *Adverse Social , Economic, or Environmental Effects*
3. *Engineering and Economy*
4. *Preservation of Old Bridge*

The **Build on New Location Alternative** would correct all structural and functional deficiencies. Evaluation of the criteria listed above results in an alternative that is not feasible and prudent:

1. The existing bridge has been constructed along SR A1A crossing the Sebastian Inlet at the most feasible and prudent location. The project location is surrounded by the Sebastian Inlet State Park with the Atlantic Ocean to the immediate east beyond the dunes and the Indian River to the west (**Figure 2**).
2. Constructing a bridge on a new location would cause significant impacts to natural and Section 4(f) resources and the surrounding coastal habitat and species. The length of a bridge on new location would substantially increase construction costs, result in expanded agency permitting, and effect navigation.
3. Constructing a bridge on new location would result in the need to acquire additional right-of-way, extraordinary bridge and approach engineering, construction difficulty, costs, and disruption to established travel patterns. Impacts to natural and Section 4(f) resources would be significant to surrounding coastal habitat and species. Meeting the requirements of various permitting agencies including the environment and navigation would be substantially more difficult. Any deviation in bridge alignment would require improvements to access roads leading to this new bridge resulting in increased environmental impact and cost.
4. Preservation of the existing bridge is not feasible or prudent even if a new bridge were constructed on new location. The bridge would remain structurally deficient for a transportation or alternative use and would contribute to continued maintenance costs and ultimate cost for demolition in the future.

The Build on New Location Alternative is determined to fail the Section 4(f) feasible and prudent standard.

The **Parallel Bridge/Couplet Alternative** would not correct all structural and functional deficiencies and the existing bridge would remain structurally and functionally deficient.

1. The existing bridge has been constructed along SR A1A crossing the Sebastian Inlet at the most feasible and prudent location. The project location is surrounded by the Sebastian Inlet State Park with the Atlantic Ocean to the immediate east beyond the dunes and the Indian River to the west (**Figure 2**).
2. Constructing a parallel bridge would not correct the conditions that cause the existing bridge structural and functional deficiencies. These deficiencies can lead to structural failure and safety hazards to the traveling public and are unacceptable for bicyclists and/or pedestrians. Normal maintenance is not considered adequate to address these deficiencies for the existing bridge and previous studies and inspections indicate the existing bridge condition continues to decline.
3. Constructing a parallel bridge would not correct the structural and functional deficiencies of the existing bridge. The bridge would remain structurally deficient for a transportation or alternative use and would contribute to continued maintenance costs and ultimate cost for demolition in the future.
4. Preservation of the existing bridge is not feasible or prudent even if a new bridge were constructed parallel to the existing. The bridge would remain structurally deficient for a transportation or alternative use and would contribute to continued maintenance costs and ultimate cost for demolition in the future.



**FIGURE 2. PROJECT LOCATION**

Based on the evaluation of the following criteria: Terrain; Adverse Social, Economic, or Environmental Effects; Engineering and Economy; and Preservation of Old Bridge and for the following reasons, this alternative was determined to fail the Section 4(f) prudent and feasible standard and was removed from further consideration.

- a. Purpose and Need - The New Location Alternative does not meet the purpose and need for the project.
- b. Maintenance - The New Location Alternative - Parallel Alternative does not correct the situation that causes the bridge to be considered structurally deficient or extend the service life of the bridge resulting in continued maintenance. Normal

maintenance does not correct the critical scour condition of the bridge foundation. These deficiencies can lead to sudden collapse and potential injury or loss of life. Normal maintenance is not considered adequate to address the situation.

c. Safety - The New Location Alternative - Parallel Alternative poses serious and unacceptable safety hazards to the traveling public or places intolerable restriction on transport and travel.

### **Rehabilitation Alternative Without Affecting the Historic Integrity of the Bridge**

Because the bridge is determined an eligible historic resource under Section 106 of the National Historic Preservation Act, a Rehabilitation Alternative was considered. A determination of whether rehabilitation can be completed to an acceptable level in a feasible and prudent manner is a function of its ability to perform adequately in both structural and functional areas. The Rehabilitation Alternative consists of leaving the existing bridge in place.

Bridge rehabilitation activities may include the following:

- Temporarily reinforce the bridge substructure/foundation  
Use of crutch bents is not a long-term solution in Florida
- Remove and replace bridge deck
- Replace and/or repair bridge approach slabs
- Remove existing paint from all structural steel
- Paint all structural steel
- Remove and replace damaged beams
- Relocate utilities
- Work within constraints of ROW limits
- Complete approach roadway work

Rehabilitation to the original condition without changing the existing bridge design features such as lane widths, deficient shoulder widths, and lack of bicycle and pedestrian facilities was one form of rehabilitation considered. Keeping the existing bridge in service as part of the transportation network could avoid any adverse effects. However, to remain in service, the bridge deficiencies related to its age and design must be addressed. Bridge rehabilitation can be considered an avoidance alternative that satisfies Section 4(f) requirements only if both of the following conditions can be met:

1. The elements that make the bridge historically significant are preserved; and
2. Structural and functional deficiencies are addressed.

At the federal level, FHWA's goal is bridge design with a service life of 100 years. FDOT bridge design expects a 75 year service life (Structures Manual Volume 1 - Structures Design Guidelines, Section 1.1.) For evaluation purposes, the Rehabilitation Alternative would expand the life-cycle of the existing bridge 10 years beyond the No Action Alternative; however, rehabilitation alone will not improve the existing bridge deficiencies. As noted above, previous studies and inspections indicate the existing bridge condition continues to decline. This alternative was only considered viable for 15 years before replacement is needed; therefore, the total project cost estimate and summary of environmental impacts for this alternative considers the need to replace the existing bridge.

Rehabilitation would continue to provide a 39-foot vertical bridge clearance and 150-foot horizontal clearance.

Rehabilitation that maintains the existing bridge would not sufficiently address structural and functional deficiencies of the bridge. Correction of structural and functional deficiencies would entail removal or replacement of the existing bridge components in order to meet current FDOT roadway and bridge design criteria. If the bridge is rehabilitated to meet the

purpose and need for the project, at minimum, it must:

- Meet current FDOT Design Standard  
Widening to add 8-foot minimum shoulders and bicycle/pedestrian facilities
- Provide a 75-Year service life
- Maintains existing vertical and horizontal clearances
- Maintain traffic during construction
- Minimize impacts to the natural, cultural, and physical environments

Whether the bridge is rehabilitated to its existing condition or not, this option does not meet the purpose and need for the project and the bridge remains structurally and functionally deficient. Based on the results of the Rehabilitation Alternative analysis, the Rehabilitation Alternative does not correct the conditions that cause the structural deficiencies. These deficiencies can lead to structural failure and normal maintenance is not considered adequate to address these deficiencies. The Rehabilitation Alternative does not correct the conditions that cause the bridge to be considered functionally or geometrically deficient. These deficiencies can lead to safety hazards to the traveling public and are unacceptable for bicyclists and/or pedestrians.

The Rehabilitation Alternative would not address the immediate need to improve the existing bridge structural deficiencies. Geometrically, the bridge cannot be widened to meet current design standards without affecting the historic integrity of the bridge because the widened structure would be constructed with prestressed I girders, steel plate girders, or post-tensioned girders which are all modern superstructure types. Because the bridge and SR A1A are critical to regional travel, continued disruption to traffic for maintenance and construction activities associated with the bridge would have a major social and economic impact to the travelers.

Based on the results of the Rehabilitation Alternative analysis and for the following reasons, this alternative was determined to fail the Section 4(f) prudent and feasible standard.

- a. Purpose and Need - The Rehabilitation Alternative does not meet the purpose and need for the project.
- b. Maintenance - The Rehabilitation Alternative does not correct the situation that causes the bridge to be considered structurally and functionally deficient. The Rehabilitation Alternative does not meet the 75 year life span. These deficiencies can lead to sudden collapse and potential injury or loss of life. Normal maintenance is not considered adequate to address the situation.
- c. The bridge is seriously deficient geometrically and cannot be widened to meet the design requirements of the highway system including shoulder width and bicycle and pedestrian facilities.
- d. This bridge has a history of random spalling of piers, beams, and deck with debris falling into public use areas including the under bridge observation/fishing piers. Maintenance is ongoing for these issues. In addition, bridge rehabilitation to remove the structural deficiencies and meet current FDM standards will not address this ongoing safety issue with the bridge and fails the feasible standard.

The Rehabilitation Alternative was determined to fail the Section 4(f) prudent and feasible standard and was removed from further consideration.

## Summary

Based on the above discussion, the avoidance alternatives 1) do nothing (no build); 2) build a new structure on a different alignment without affecting the historic bridge, and 3) rehabilitation would not meet the purpose and need for the project and fail the Section 4(f) prudent and feasible standards.

## BUILD ALTERNATIVES

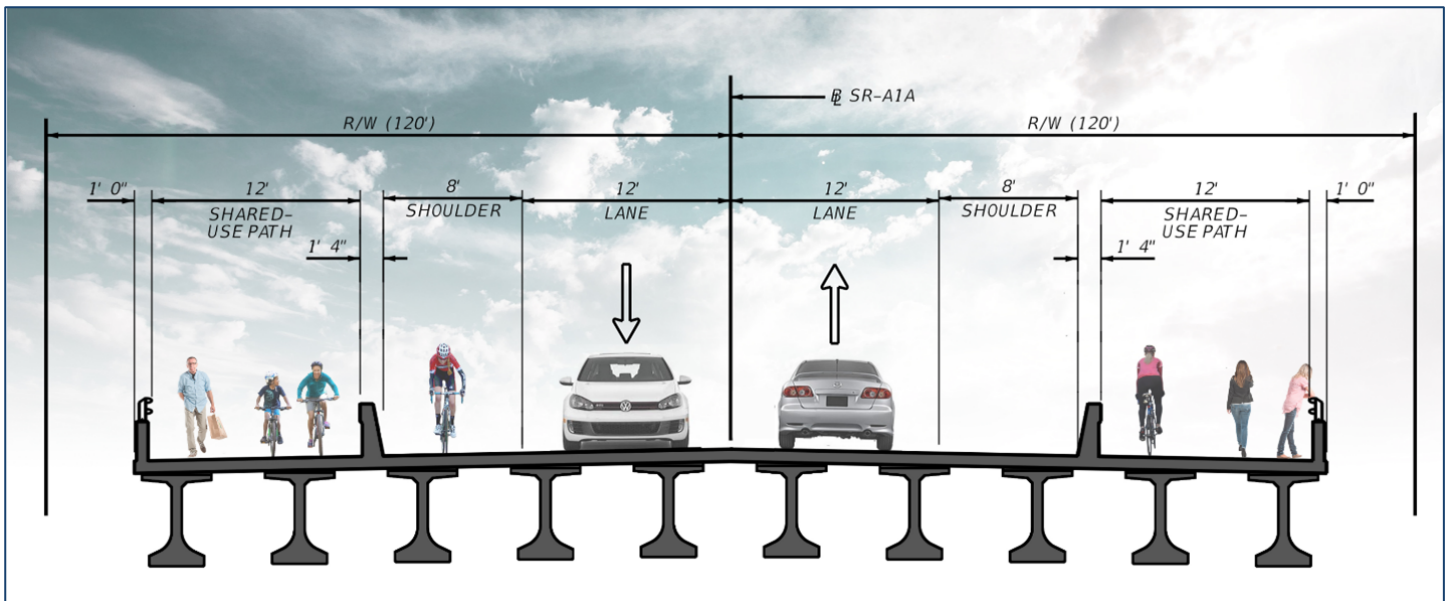
During the PD&E Study, three Build Alternatives were considered and evaluated for a fixed span bridge. A key criterion for the Alternatives development is the vertical and horizontal clearances of the bridge. Based on coordination with the USCG, a preliminary clearance determination was received from the in November 2021 which stated a minimum vertical clearance of 51-feet above mean high water (MHW) for a fixed bridge and 125-feet minimum horizontal clearance will meet the reasonable needs of navigation for a bridge crossing the Sebastian Inlet.

Build Alternatives were developed and evaluated based on the following criteria:

- Ability to satisfy the purpose and need for the project
- Vertical and horizontal navigational clearances
- Bridge, roadway, and Park entrance geometry
- Natural, social, cultural and physical environment impacts
- Section 4(f) impacts
- Section 106 criteria of the National Historic Preservation Act (NHPA)
- Required ROW
- Avoidance of bridge closure during construction
- Project costs

Each Build Alternative would replace the two-lane bridge over the Sebastian Inlet and correct the bridge structural and functional deficiencies by meeting current design standards and a 75-year service life. The bridge typical section is shown in **Figure 3** and includes:

- Two 12-foot travel lanes
- Two 8-foot shoulders
- Two 12-foot shared use paths



**FIGURE 3. PROPOSED BRIDGE TYPICAL SECTION**

**Build Alternative 1**

Build Alternative 1 includes a new bridge on the existing alignment. This alternative requires the installation of a temporary bridge to maintain traffic and avoid bridge closing or lengthy detours.

South of the bridge, proposed Build Alternative 1 improvements include:

- The beginning of the temporary bridge
- Reconfiguration of the south Park entrance including the addition of an exit right turn lane
- A southbound acceleration lane from the south Park entrance
- Lengthened storage of the southbound right turn lane into the Park
- Continuation of the shared use path on the west side of the bridge and roadway
- Addition of a shared use path on the east side of the bridge and roadway that extends to the public parking lot located on the east side of SR A1A
- Addition of a crosswalk crossing SR A1A at the south Park entrance

North of the bridge, proposed Build Alternative 1 improvements include:

- The end of the temporary bridge
- Reconfiguration of the north Park entrance including the addition of an exit right turn lane
- Lengthened storage of the southbound right turn lane into the Park
- Continuation of the shared use path on the west side of the bridge and roadway
- Addition of a shared use path on the east side of the bridge and roadway terminating at the north Park entrance
- Addition of a crosswalk crossing SR A1A at the north Park entrance
- Reconfiguration of the SID Access Road

All bridge improvements are located within existing FDOT ROW. Approximately 4.90 acres of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, shared use path improvements and stormwater management.



## **Build Alternative 2**

Build Alternative 2 includes a new bridge alignment that is shifted to the east of the centerline of the existing bridge. South and north of the bridge, the proposed Build Alternative 2 improvements are the same as Build Alternative 1 except that a temporary bridge is not required.

All bridge improvements are located within existing FDOT ROW. Approximately 3.46 acres of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, shared use path improvements, and stormwater management.

## **Build Alternative 3**

Build Alternative 3 includes a new bridge on alignment that is shifted to the west of the centerline of the existing bridge. South and north of the bridge, the proposed Build Alternative 3 improvements are the same as Build Alternative 1 except that a temporary bridge is not required.

All bridge improvements are located within existing FDOT ROW. Approximately 4.09 acres of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, shared use path improvements, and stormwater management.

## **PREFERRED ALTERNATIVE**

Following the January 11 and 13, 2022 Alternatives Public Workshop and as a result of comprehensive resource evaluation, environmental and engineering studies, costs, and involvement of the public, local officials, and federal and state resource agencies, sufficient information exists to identify Alternative 2 (East) as the Preferred Alternative.

The Build Alternative would correct the conditions that cause the bridge to be determined structurally and functionally deficient. The Build Alternative would improve conditions for the traveling public including bicyclists and pedestrians and meet the purpose and need for the project. In addition, the replacement alternative would include changes to the existing vertical navigational clearances at the bridge. This alternative does not require significant yearly maintenance, addresses all functional deficiencies, and has a service life of 75 years.

The Preferred Alternative avoided where possible and minimized overall impacts, to the greatest extent practicable, while meeting the stated purpose and need to address the structural and functional deficiencies of the existing bridge and the gap in system linkage for bicyclists and pedestrians.

The Preferred Alternative includes a new bridge alignment that is shifted to the east of the of the existing bridge and includes 12-foot shared use paths on both sides of the bridge and approaches along with 8-foot shoulders that may be used as bicycle lanes. The shared use paths continue north and south of the bridge. On the west side of SR A1A, the shared use path connects to the existing shared use path located along SR A1A. On the east side, the shared use path terminates at the north and south Park entrances. Crosswalks at the Park entrances are provided.

South of the bridge, the Preferred Alternative improvements include:

- Reconfiguration of the south Park entrance including the addition of an exit right turn lane
- A southbound acceleration lane from the south Park entrance
- Lengthened storage of the southbound right turn lane into the Park
- Continuation of the shared use path on the west side of the bridge and roadway
- Addition of a shared use path on the east side of the bridge and roadway that extends to the public parking lot located on the east side of SR A1A

- Addition of a crosswalk crossing SR A1A at the south Park entrance

North of the bridge, the Preferred Alternative improvements include:

- Reconfiguration of the north Park entrance including the addition of an exit right turn lane
- Lengthened storage of the southbound right turn lane into the Park
- Continuation of the shared use path on the west side of the bridge and roadway
- Addition of a shared use path on the east side of the bridge and roadway terminating at the north Park entrance
- Addition of a crosswalk crossing SR A1A at the north Park entrance
- Reconfiguration of the SID Access Road
- All bridge improvements are located within existing FDOT ROW.

Approximately 3.46 acres of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, shared use path improvements, and stormwater management.

The Preferred Alternative is determined to meet the Section 4(f) prudent and feasible standard.

## **SUMMARY**

The need to replace the Sebastian Inlet Bridge was determined after applying the Programmatic Section 4(f) criteria and review of the following:

- Project purpose and need
- The existing bridge's structural deficiencies
- The existing bridge's functional deficiencies
- The importance of this critically needed regional coastal route which is used by travelers (multiple modes) for daily travel, Sebastian Inlet State Park access, hurricane evacuation, and emergency vehicle access.
- Public safety
- Maintenance of the transportation system continuity and integrity

All possible planning to minimize harm resulting from such use has been considered. For the purpose of this Programmatic Section 4(f) evaluation, the proposed action will "use" a bridge that is eligible for inclusion on the NRHP and will impair the historic integrity of the bridge either by rehabilitation or demolition.

Following evaluation of Build Alternatives that meet purpose and need, this evaluation determined Alternative 2 (East) as the Preferred Alternative.

The Preferred Alternative:

- Satisfies the purpose and need for the project
- Includes improvements that accommodate vehicular, bicycle, and pedestrian traffic
- Was developed within FDOT and FHWA policies and standards
- Has the lowest wetland and surface water impacts
- Requires the least amount of wetland and Section 4(f) mitigation
- Has the lowest Section 4(f) recreational impacts
- Has the lowest archaeological resource impacts
- Has the lowest impacts to species and habitat

- Requires the least amount of ROW
- Has the lowest cost

This Preferred Alternative is determined to meet the Section 4(f) prudent and feasible standard.

**Applicability**

**Yes No**

Does the project meet all of the following criteria?

1. The bridge is to be replaced or rehabilitated with Federal funds.
2. The project will require the use of a historic bridge structure which is on or is eligible for listing on the National Register of Historic Places.
3. The bridge is not a National Historic Landmark.
4. FDOT has determined that the facts of the project match those set forth in the sections below labeled Alternatives, Findings, and Measures to Minimize Harm.
5. Agreement among FDOT, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP), if participating, has been reached through procedures pursuant to Section 106 of the NHPA.

**Alternatives and Findings**

1. No Build: The No Build Alternative has been studied and does not meet the Section 4(f) prudent and feasible standard. The No Build Alternative is not recommended based on the following:
  - **Structural Deficiencies:** The No Build Alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.
  - **Functional/Geometric Deficiencies:** The No Build Alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.
2. Build on New Location Without Using the Old Bridge: This alternative has been studied and does not meet the Section 4(f) prudent and feasible standard. The New Location Alternative is not recommended based on the following:
  - **Structural Deficiencies:** The New Location Alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.
  - **Functional/Geometric Deficiencies:** The New Location Alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.
3. Rehabilitation Without Affecting the Historic Integrity of the Bridge: This alternative has been studied and does not meet the Section 4(f) prudent and feasible standard. The Rehabilitation Alternative is not recommended based on the following:
  - **Structural Deficiencies:** The Rehabilitation Alternative does not correct the situation that causes the bridge to be considered structurally deficient or significantly deteriorated. These deficiencies can lead to eventual structural failure/collapse. Normal maintenance is not considered adequate to address these deficiencies.

- **Functional/Geometric Deficiencies:**The Rehabilitation Alternative does not correct the situation that causes the bridge to be considered functionally/geometrically deficient. These deficiencies can lead to safety hazards to the traveling public or place unacceptable restrictions on transport and travel.
4. Replacement: The Replacement Alternative has been studied and is determined to meet the Section 4(f) prudent and feasible standard. The Replacement Alternative is recommended based on the following:
- **Structural Deficiencies:**The Replacement Alternative corrects the situation that causes the bridge to be considered structurally deficient or significantly deteriorated.
  - **Functional/Geometric Deficiencies:**The Replacement Alternative corrects the situation that causes the bridge to be considered functionally/geometrically deficient.

#### Measures to Minimize Harm

- For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved, to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements;
- For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be moved or demolished, FDOT ensures that, in accordance with the Historic American Engineering Record (HAER) standards, or other suitable means developed through consultation, fully adequate records are made of the bridge;
- For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge; and
- For bridges that are adversely affected, agreement among the SHPO, FDOT, and ACHP (if participating in consultation) is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project. This programmatic Section 4(f) evaluation does not apply to projects where such an agreement cannot be reached.

The proposed project meets all the applicable criteria set forth by the Federal Highway Administration's (FHWA) Guidance on Programmatic Section 4(f) Evaluation and Approval for FHWA Projects Which Necessitate the Use of Historic Bridges (23 CFR Part 774). All alternatives set forth in the subject programmatic evaluation were fully analyzed and the findings made are clearly applicable to this project. There are no feasible and prudent alternatives to the use of the historic bridge, and the project includes all possible planning to minimize harm.

#### Public Involvement Activities:

Throughout the course of the study, and as part of the Section 106 process, public involvement has been ongoing with appropriate agencies, organizations, and interested individuals. For each public meeting, the historic eligibility of the bridge and the reasons why is determined eligible were presented. Opportunities to comment were available during the public meetings/hearing, and any time via the project website, by email to the FDOT Project Manager, or by mail. The purpose of these meetings was not only to share project information with stakeholders, but to also collect feedback which was considered during the alternatives development and evaluation process.

Multiple coordination meetings were held with the Sebastian Inlet State Park and the Sebastian Inlet District. The project team established a Cultural Resource Committee (CRC) to conduct and document good faith consultation with affected parties in compliance with Section 106. Coordination with the CRC continued through development of the Memorandum of Agreement. Because the public is considered a Section 106 consulting party, the public hearing was designated as an additional point of Section 106 consultation. The public was given an opportunity to participate and provide input on the effect to the historic bridge. No comments were received regarding the effects to the historic bridge.

Coordination with the Advisory Council on Historic Preservation (ACHP) was initiated through the e106@achp.gov process. The ACHP has determined it will not participate in consultation to resolve adverse effects to the historic bridge.

Below is a list of public involvement activities:

<b>Date</b>	<b>Location</b>	<b>Topic</b>
Feb 26, 2021	Virtual	Sebastian Inlet State Park Coordination Meeting
Mar 3, 2021	Virtual	US Coast Guard Coordination Meeting
Mar 17, 2021	Virtual	Progress Meeting #3
Apr 2021	On-Line	Public Navigation Survey
May 11, 2021	Virtual	Public Kickoff Meeting
June 21, 2021	Virtual	Agency Coordination Meeting - FIND/SID/IRC MPO
Sept 29, 2021	In-Person	D4 Field Review - Sebastian Inlet State Park
Oct 12, 2021	Virtual	USCG Vertical Alternatives Evaluation Coordination Meeting
Nov 23, 2021	Virtual	Coordination Meeting SID and SISP
Dec 8, 2021	In-Person	Sebastian Inlet District (SID) Presentation
Dec 8, 2021	In-Person	Indian River MPO Presentation
Dec 10, 2021	Virtual	Pond Alternatives Coordination Meeting
Jan 11, 2022	Virtual	Virtual Alternatives Public Workshop
Jan 13, 2022	In-Person	Alternatives Public Workshop
Jan 27, 2022	Virtual	FDEP ARC Meeting
Feb 10, 2022	Virtual	Coordination Meeting with SID - Access Easement
Feb 18, 2022	Virtual	District 5 Coordination Meeting
Mar 3, 2022	Virtual	Sebastian Inlet State Park Improvements Meeting
Mar 7, 2022	In-Person	SCTPO TAC Meeting Presentation
Mar 10, 2022	In-Person	SCTPO Board Meeting Presentation
Apr 27, 2022	Virtual	Cultural Resource Committee Meeting #1
May 2, 2022	In-Person	Value Engineering Site Visit with Sebastian Inlet State Park
May 19, 2022	Virtual	SID Coordination Meeting - Access Road Relocation
May 27, 2022	In-Person	OEM Site Visit
June 6, 2022	Virtual	FDEP-SJRWMD Coordination Meeting #1
June 16, 2022	Virtual	FDEP Coordination Meeting #2
July 6, 2022	Virtual	FDEP ERP Coordination Meeting #3
July 7, 2022	Virtual	ETAT Meeting
August 10, 2022	Virtual	FDEP Sebastian Inlet State Park Coordination Meeting
Oct 24, 2022	Virtual	FDEP Sebastian Inlet State Park Coordination Meeting
Dec 13, 2022	Virtual	Virtual Public Hearing
Dec 15, 2022	In-Person	Public Hearing

### MEASURES TO MINIMIZE HARM

The No Build, New Location, Parallel Location, and Rehabilitation alternatives, which would either avoid or minimize harm to the bridge, were considered, evaluated, and determined to fail the Section 4(f) feasible and prudent standard. These alternatives do not meet the purpose and need for the project. If one of these avoidance alternatives were feasible and met the purpose and need, it would not be prudent to make the historic bridge available for alternate use due to potential

safety concerns for bridge users and navigation below. Routine maintenance by FDOT or another party is insufficient to correct the structural deficiencies that will eventually lead to bridge failure.

A Memorandum of Agreement (MOA) between the SHPO and FDOT, executed April 21, 2023, stipulates that prior to initiating any ground disturbing or demolition work associated with the Project, FDOT shall ensure that the following measures are carried out:

I. Documentation of the James H. Pruitt Memorial Bridge (8BR03148/8IR01493)

A. Prior to bridge demolition and per guidance provided by the National Park Service (NPS), FDOT will prepare Historic American Engineering Record (HAER) Level II documentation for the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) as follows:

1. Written historical and descriptive data prepared in accordance with outline format guidelines containing a construction history of the bridge including the history of the bridge type, an architectural description of the resource including alterations, a description of the site and changes, any historical photographs in the supplementary materials section, and a site plan; and
2. Reproduction of existing "as built" and existing drawings on vellum; and
3. Large-format (4" x 5" or larger negative size) photographs processed for archival permanence in accordance with HAER photographic specifications; and
4. At least one color digital photograph of the resource and its setting; and
5. Photo locations keyed to the site plan and included with the "Index to Photographs."

B. FDOT shall provide draft HAER documentation (non-archival format, electronic version) to the NPS and SHPO for concurrent review. Both agencies shall have 30 days, after receipt of the draft documentation for review, as per Stipulation VII.

C. FDOT shall make requested edits and provide final copies of the HAER documentation, completed in accordance with Stipulation I.A, as follows:

1. An archival copy to the NPS Southeast Regional Office for review and approval prior to salvage and demolition of the structure, per HAER guidelines; and
2. An archival copy to the SHPO for inclusion in the Florida Master Site File and the State Archives of Florida; and
3. Non-archival copies and electronic copies to the Indian River County Historical Society and the Sebastian Inlet District.

D. The HAER documentation cannot be considered complete, and bridge demolition cannot take place, until accepted by NPS.

**II. Public Education**

A. FDOT will assist with the development and funding of two State Historic Markers with one to be placed in proximity to the north side and the other to be placed in proximity to the south side of the bridge location. The Markers will be located in areas that are safe and accessible to the public. The draft Marker text and location will be coordinated with the SHPO for review, as described in Stipulation VII

B. FDOT will assist with the development and funding of two educational interpretive panels to be placed within the boundaries of the Sebastian Inlet State Park with one to be placed in proximity to the north side and the other to be placed in proximity to the south side of the bridge location. The panels (design, text, and locations) will be coordinated with the SHPO for review, as described in Stipulation VII.

**III. Documentation of State Road (SR) A1A (8BR02544/8IR01500)**

1. A. FDOT will assist with the documentation of State Road (SR) A1A. A historic context will be developed for an approximate 25-mile portion of SR A1A from Wabasso Beach (Indian River County) to Indialantic (Brevard County). The historic context will address the unique historic development of this isolated stretch of the roadway and its association with the construction of the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) and the multiple

federal and state-owned recreational facilities along the roadway. The field survey of the resource will include a survey of historic resources within the roadway right-of-way. Florida Master Site File forms will be completed for this length of SR A1A (one for Brevard County and one for Indian River County) and any historic resources identified in the roadway right-of-way (excluding the James H. Pruitt Memorial Bridge/ FDOT Bridge No. 880005). National Register evaluations will be made for the historic resources within the survey area (except for the James H. Pruitt Memorial Bridge/FDOT Bridge No. 880005). The survey and evaluations will not include any archaeological resources.

- A. FDOT will assist with the documentation of State Road (SR) A1A. A historic context will be developed for an approximate 25-mile portion of SR A1A from Wabasso Beach (Indian River County) to Indialantic (Brevard County).
1. Field survey of the 25-mile linear resource will include a survey of historic linear resources as well as the historic resources within the roadway right-of-way. The survey, subsequent documentation, and NRHP evaluations will not include any archaeological resources.
  2. A historic context will be developed for the approximate 25-mile portion of SR A1A. The historic context will address the unique historic development of this isolated stretch of the roadway and its association with the construction of the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) and the multiple federal and state-owned recreational facilities along the roadway. A historical context will also be developed, or the above-mentioned context will be expanded/augmented, to contextualize any historical resources documented during the field survey should the fall outside the developed historic context, as appropriate.
  3. A Survey Document will be compiled in accordance with guidance from the Florida Division of Historical Resources (FDHR)/SHPO and Florida Administrative Code Chapters 1A-32 and 1A-46. Content will include, but is not limited to, the purpose of the survey, survey methodology, aforementioned historic context, and survey results sections. In addition, National Register evaluations will be made for the historic resources documented in the survey area (except for the James H. Pruitt Memorial Bridge/FDOT Bridge No. 880005).
  4. Florida Master Site File (FMSF) resource forms will be completed for this length of SR A1A (one for Brevard County and one for Indian River County) and any historic resources identified in the roadway right-of-way (excluding the James H. Pruitt Memorial Bridge/ FDOT Bridge No. 880005). A FMSF Survey Log will be completed for the historic architectural survey. Appropriate maps, photographs, and GIS data will be generated to accompany the FMSF forms, per FMSF submission guidance.
- B. FDOT will submit the Survey Document and FMSF package, as detailed above, to SHPO for review per Stipulation VII. SHPO will review the Survey Document for completeness and sufficiency in accordance with Florida Administrative Code Chapter 1A-46 and will review the FMSF resource forms to provide concurrence with the NRHP determination recommendations.

**OEM SME Concurrence Date:** 05-16-2023

## Project-Level Attachments

None



## Resource Attachments

### Sebastian Inlet State Park

Section 4(f) Figures SISP

2008\_Sebastian\_Inlet\_State\_Park\_Unit\_Management\_Plan

Signed\_FDOT-FDEP\_Park\_de minimis letter\_445618\_1

FM\_445618\_1\_FDEP\_AFAs Letter

FDOT\_Notification of De minimus \_Letter\_to\_FDEP\_445618\_1\_Signed

445618\_1 FDEP Response Letter

Project Location Map\_445618\_1

### Sebastian Inlet District

8-4-22 SID Easement Presentation to OEM

Sebastian Inlet District Submerged Land Parcel

### FDOT Transportation Easement

FDOT\_ROW\_Map

Sebastian\_Inlet\_District Warranty\_Deed\_99\_279\_to FDOT

### Sebastian Inlet Bridge (Historic)

ACHP\_e106

Cult\_Res\_Com\_Mtg\_No.1\_Notes

SHPO\_Concurrence\_Effects\_Determination

Executed\_Section\_106 MOA

## **Sebastian Inlet State Park**

### **Contents:**

Section 4(f) Figures SISP

2008\_Sebastian\_Inlet\_State\_Park\_Unit\_Management\_Plan

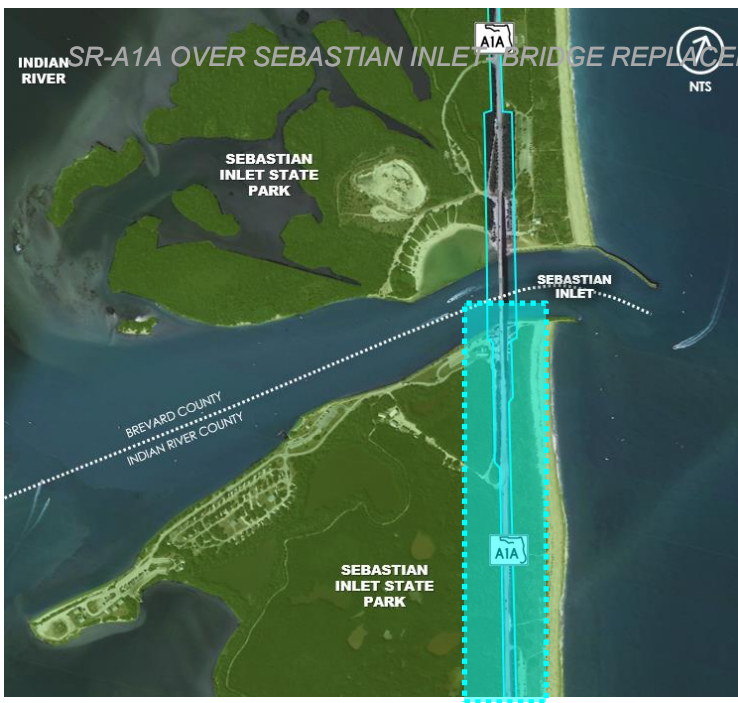
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FM\_445618\_1\_FDEP\_AFAs Letter

FDOT\_Notification of De minimus \_Letter\_to\_FDEP\_445618\_1\_Signed

445618\_1 FDEP Response Letter

Project Location Map\_445618\_1

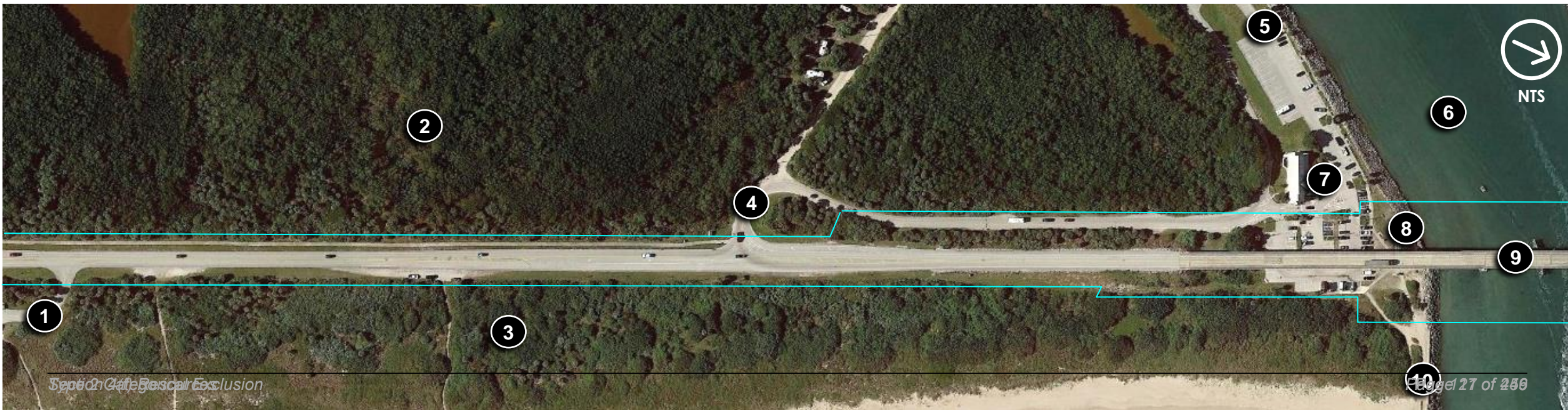


SR-A1A OVER SEBASTIAN INLET BRIDGE REPLACEMENT // 445618-1-21-01

## HIGHLIGHTS OF SECTION 4(F)

### Existing Conditions South of Bridge (Indian River County)

- 1 To Parking and Restrooms
- 2 Sebastian Inlet State Park (Wetland Areas, Mangroves)
- 3 Sebastian Inlet State Park (Dunes)
- 4 Park Entrance/Exit
- 5 To Campground and Boat Ramp
- 6 Sebastian Inlet
- 7 Sebastian Inlet Fishing Museum & Parking
- 8 Under Bridge Deck Observation/Fishing Pier
- 9 James H. Pruitt Memorial Bridge
- 10 To South Jetty





## HIGHLIGHTS OF SECTION 4(F) & SECTION 106 IMPACTS PREFERRED ALTERNATIVE South of Bridge (Indian River County)

- 1 South Stormwater Pond – 0.74 Acres
- 2 Clear Zone and Maintenance for Shared Use Path – 0.33 Acres
- 3 Right Turn Lane from Park Entrance – 0.08 Acres
- 4 Demolition of James H. Pruitt Memorial Bridge





## HIGHLIGHTS OF SECTION 4(F)

### Existing Conditions North of Bridge (Brevard County)

- 1 Sebastian Inlet
- 2 James H. Pruitt Memorial Bridge
- 3 Swimming Cove
- 4 Under Bridge Deck Observation/Fishing Pier
- 5 To North Jetty
- 6 Sebastian Inlet State Park  
(Parking, Inlet Grill Restaurant, Inlet Bait and Tackle Shop, Restrooms)
- 7 Parking
- 8 Sebastian Inlet District Access Road
- 9 Hiking/Biking Trail
- 10 Sebastian Inlet State Park – North Entrance
- 11 Utilities





## HIGHLIGHTS OF SECTION 4(F) & SECTION 106 IMPACTS PREFERRED ALTERNATIVE North of Bridge (Brevard County)

- 1 North Stormwater Pond – 1.39 Acres
- 2 Clear Zone and Maintenance for Shared Use Path – 0.26 Acres
- 3 Right Turn Lane from Park Entrance – 0.04 Acres
- 4 Demolition of James H. Pruitt Memorial Bridge



**PREFERRED ALTERNATIVE**

**SEBASTIAN INLET STATE PARK ACCESS ROAD  
PAVED SHOULDERS - BICYCLE LANES**

LENTH (Feet)	WIDTH (Feet)	AREA		LOCATION	DESCRIPTION
		SF	ACRES		
<b>SOUTH ENTRANCE</b>					
940	4	7520	0.17	South Entrance	Paved
940	2	3760	0.09	South Entrance	Unpaved
<b>TOTAL</b>	<b>6</b>	<b>11280</b>	<b>0.26</b>	<b>South Entrance</b>	<b>Both Paved &amp; Unpaved</b>
<b>NORTH ENTRANCE</b>					
710	4	5680	0.13	North Entrance	Paved
710	2	2840	0.07	North Entrance	Unpaved
<b>TOTAL</b>	<b>6</b>	<b>8520</b>	<b>0.20</b>	<b>North Entrance</b>	<b>Both Paved &amp; Unpaved</b>

Project Development and Environment Study  
 SR A1A over Sebastian Inlet Bridge 880005 - Bridge Replacement  
 Indian River County and Brevard County  
 FM No. 445618-1-22-02

# **SEBASTIAN INLET STATE PARK**

## **Unit Management Plan**

**APPROVED**

**STATE OF FLORIDA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**Division of Recreation and Parks**  
**DECEMBER 12, 2008**



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## **INTRODUCTION**

Sebastian Inlet State Park is located in Brevard and Indian River counties (see Vicinity Map) on a barrier island between the Atlantic Ocean and the Indian River Lagoon. Access to the park is from State Road A1A, 12 miles north of Vero Beach or 18 miles south of Melbourne (see Reference Map).

Acquisition of the park began in 1966, with a donation from Robert P. McLarty and Dodo W. McLarty. The State of Florida acquired Sebastian Inlet State Park to protect, develop, operate and maintain the property for public outdoor recreational, park, conservation, historic and related purposes.

At Sebastian Inlet State Park, public outdoor recreation is the designated single use of the property (see Addendum 1). There are no legislative or executive directives that constrain the use of this property. The park contains 971.01 acres, as reflected on the current Properties under Jurisdiction of the Division of Recreation and Parks (Division) report.

### **PURPOSE AND SCOPE OF THE PLAN**

This plan serves as the basic statement of policy and direction for the management of Sebastian Inlet State Park as a unit of Florida's state park system. It identifies the objectives, criteria and standards that guide each aspect of park administration, and sets forth the specific measures that will be implemented to meet management objectives. The plan is intended to meet the requirements of Sections 253.034 and 259.032, Florida Statutes, Chapter 18-2, Florida Administrative Code, and intended to be consistent with the State Lands Management Plan. With approval, this management plan will replace the January 25, 2001 approved plan. All development and resource alteration encompassed in this plan is subject to the granting of appropriate permits; easements, licenses, and other required legal instruments. Approval of the management plan does not constitute an exemption from complying with the appropriate local, state or federal agencies. This plan is also intended to meet the requirements for beach and shore preservation, as defined in Chapter 161, Florida Statutes and Chapters 62B-33, 62B-36 and 62R-49, Florida Administrative Code.

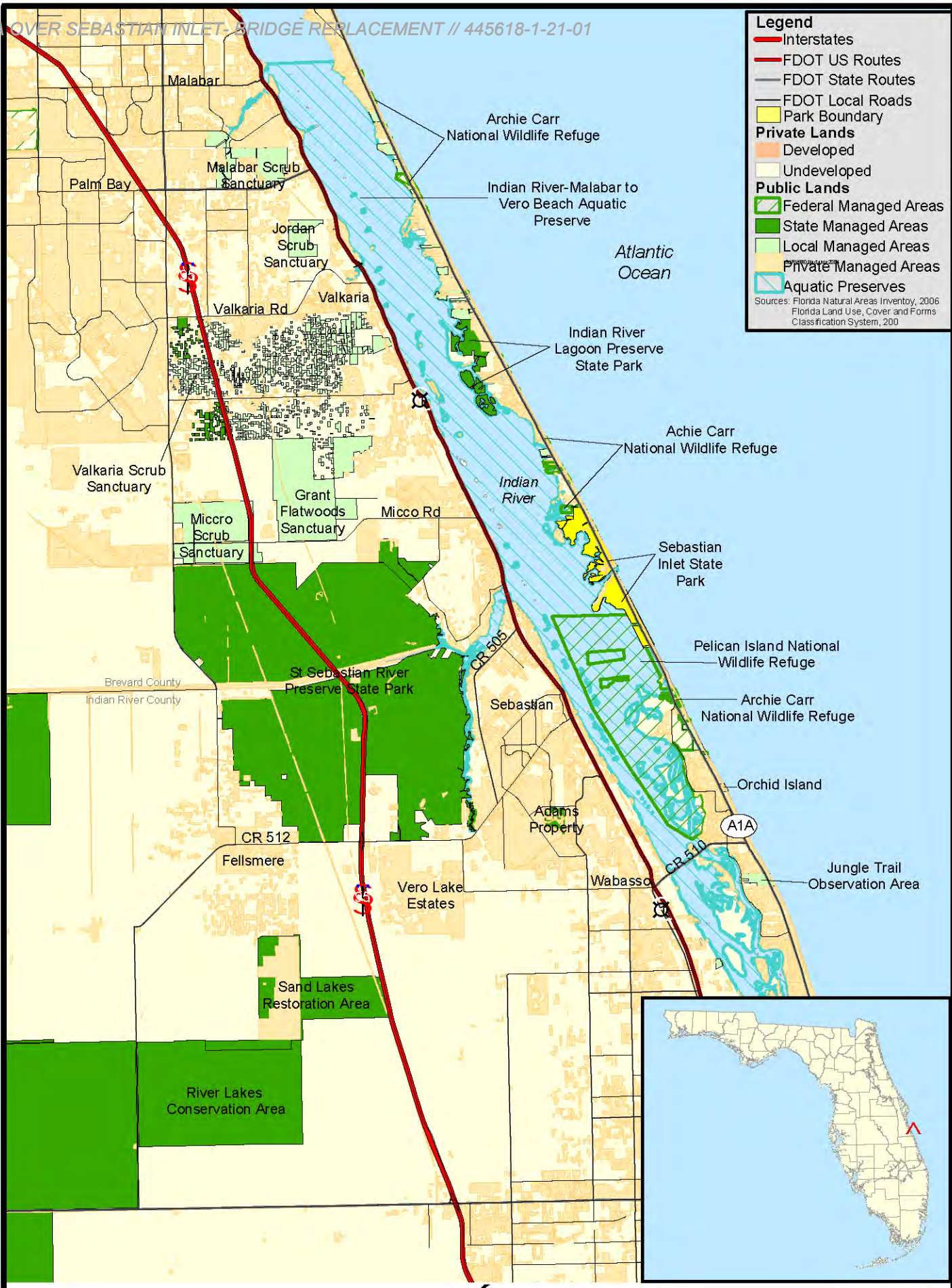
The plan consists of two interrelated components. Each component corresponds to a particular aspect of the administration of the park. The resource management component provides a detailed inventory and assessment of the natural and cultural resources of the park. Resource management problems and needs are identified, and specific management objectives are established for each resource type. This component provides guidance on the application of such measures as prescribed burning, exotic species removal and restoration of natural conditions.

The land use component is the recreational resource allocation plan for the unit. Based

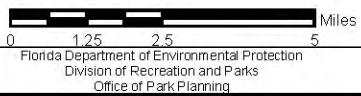
**Legend**

- Interstates
- FDOT US Routes
- FDOT State Routes
- FDOT Local Roads
- Park Boundary
- Private Lands**
- Developed
- Undeveloped
- Public Lands**
- Federal Managed Areas
- State Managed Areas
- Local Managed Areas
- Private Managed Areas
- Aquatic Preserves

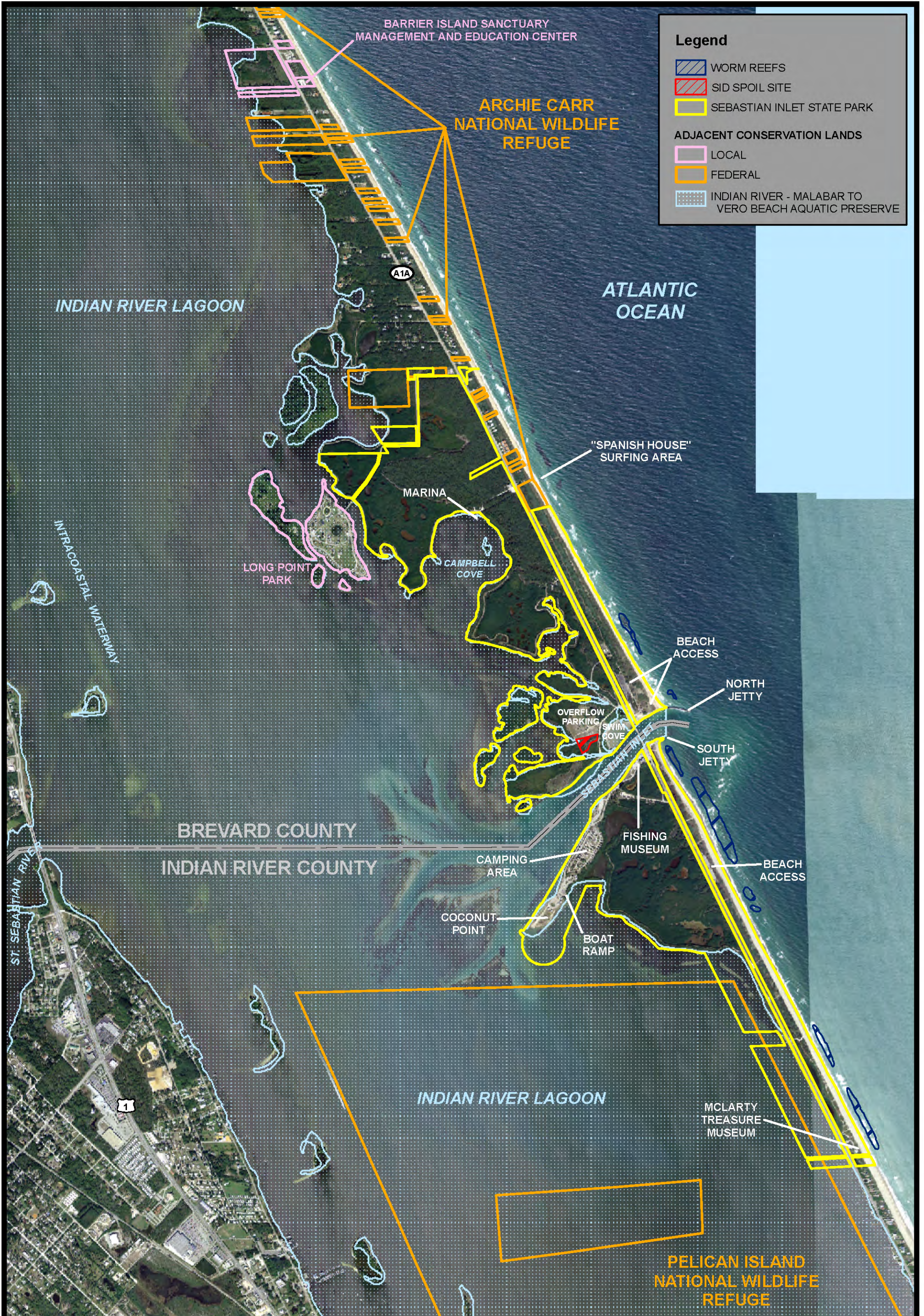
Sources: Florida Natural Areas Inventory, 2006  
Florida Land Use, Cover and Forms Classification System, 200



SEBASTIAN INLET  
STATE PARK



VICINITY  
MAP



on considerations such as access, population and adjacent land uses, an optimum allocation of the physical space of the park is made, locating use areas and proposing types of facilities and volume of use to be provided.

In the development of this plan, the potential of the park to accommodate secondary management purposes (“multiple uses”) was analyzed. These secondary purposes were considered within the context of the Division’s statutory responsibilities and an analysis of the resource needs and values of the park. This analysis considered the park natural and cultural resources, management needs, aesthetic values, visitation and visitor experiences.

For this park, it was determined that no secondary purposes could be accommodated in a manner that would not interfere with the primary purpose of resource-based outdoor recreation and conservation. Uses such as water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan.

The potential for generating revenue to enhance management was also analyzed. Visitor fees and charges are the principal source of revenue generated by the park. It was determined that multiple-use management activities would not be appropriate as a means of generating revenues for land management. Instead, techniques such as entrance fees, concessions and similar measures will be employed on a case-by-case basis as a means of supplementing park management funding.

## **MANAGEMENT PROGRAM OVERVIEW**

### **Management Authority and Responsibility**

In accordance with Chapter 258, Florida Statutes and Chapter 62D-2, Florida Administrative Code, the Division is charged with the responsibility of developing and operating Florida's recreation and parks system. These are administered in accordance with the following policy:

**It shall be the policy of the Division of Recreation and Parks to promote the state park system for the use, enjoyment, and benefit of the people of Florida and visitors; to acquire typical portions of the original domain of the state which will be accessible to all of the people, and of such character as to emblemize the state's natural values; conserve these natural values for all time; administer the development, use and maintenance of these lands and render such public service in so doing, in such a manner as to enable the people of Florida and visitors to enjoy these values without depleting them; to contribute materially to the development of a strong mental, moral, and physical fiber in the people; to provide for perpetual preservation of historic sites and memorials of statewide significance and interpretation of their history to the people; to contribute to the tourist appeal of Florida.**

The Trustees have also granted management authority of certain sovereign submerged lands to the Division under Management Agreement MA 68-086 (as amended January 19, 1988). The management area includes a 400-foot zone from the edge of mean high water where a park boundary borders sovereign submerged lands fronting beaches, bays, estuarine areas, rivers or streams. Where emergent wetland vegetation exists, the zone extends waterward 400 feet beyond the vegetation. The agreement is intended to provide additional protection to resources of the park and nearshore areas and to provide authority to manage activities that could adversely impact public recreational uses. In addition, the park borders the Indian River Aquatic Preserve. Therefore, the management authority is jointly shared within the boundary of the aquatic preserve.

Many operating procedures are standard system wide and are set by policy. These procedures are outlined in the Division's Operations Manual (OM) and cover such areas as personnel management, uniforms and personal appearance, training, signs, communications, fiscal procedures, interpretation, concessions, camping regulations, resource management, law enforcement, protection, safety and maintenance.

In the management of Sebastian Inlet State Park, a balance is sought between the goals of maintaining and enhancing natural conditions and providing various recreational opportunities. Natural resource management activities are aimed at management of natural systems. Development in the park is directed toward providing public access to and within the park, and to providing recreational facilities, in a balance, that are both convenient and safe. Depletion of a resource by any recreational activity is not permitted. Program emphasis is on interpretation on the park's natural, aesthetic and educational attributes.

### **Park Goals and Objectives**

The following park goals and objectives express the Division's long-term intent in managing the state park. At the beginning of the process to update this management plan, the Division reviewed the goals and objectives of the previous plan to determine if they remain meaningful and practical and should be included in the updated plan. This process ensures that the goals and objectives for the park remain relevant over time.

Estimates are developed for the funding and staff resources needed to implement the management plan based on these goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division's legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers and partnerships with agencies, local governments and the private sector, for supplementing normal legislative appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined



by the availability of funding resources for these purposes.

### **Natural Resources**

- 1.** Conserve, protect and manage natural communities, significant habitat and ecological systems.
  - A.** Survey for exotic plant and animal species and continue the exotic species removal program.
  - B.** Continue and expand the prescribed fire program to maintain fire as an ecosystem process with emphasis on maintaining the current condition of the coastal strand and beach dune habitats south of the inlet while restoring these communities to the north of the inlet.
  - C.** Seek funding for additional staff to aid in the preparation, implementation and evaluation of resource management.
  - D.** Monitor natural community restoration projects to adaptively manage habitats
  - E.** Close unauthorized footpaths that occur throughout the beach dune and coastal strand habitat to the north and south of the inlet and replant with native herbaceous vegetation.
  - F.** Control unauthorized access and prevent additional erosion.
  - G.** Educate visitors on all projects and changes to the park to promote the park and park programs.
- 2.** Restore, monitor and protect the hydrology of the park to the greatest extent practicable.
  - A.** Work with St. Johns River Water Management District to obtain ground and surface water quality and quantity data.
  - B.** Determine the feasibility of restoring the original hydroperiod to the tidal swamps by working with local mosquito control districts.
  - C.** Control and limit stormwater runoff into adjacent wetlands along State Road A1A, park drives, easements and other areas.
- 3.** Maintain or increase populations of listed plant and animal species occurring on the park.
  - A.** Explore opportunities for reintroducing the southeastern beach mouse to the north side of the inlet.
  - B.** Expand and restore beach mouse habitat.
  - C.** Survey and monitor for wintering and nesting shorebirds and establish protected resting, loafing and nesting areas where needed throughout the year. Work with FWC and local agencies on shorebird protection issues.
  - D.** Prohibit pets from all park beach areas.
  - E.** Control access to Coconut Point during shorebird breeding season and after enhancement.
  - F.** Work with SID to encourage more appropriate timing and frequency for future renourishment projects that allow for successful sea turtle nesting and to protect sensitive beach mouse and shorebird habitat
  - G.** Survey and monitor populations of gopher tortoises.

- H. Protect gopher tortoises in the field west of the cove by controlling access and developing a plan for this area.
- I. Continue flora and fauna surveys.
- 4. Restore highly altered or severely impacted natural communities.
  - A. Mechanically treat severely overgrown, fire suppressed coastal strand communities to the north of the inlet. A narrow buffer may be needed to control unauthorized access.
  - B. Seek funding to initiate the enhancement of the Coconut Point protected zone for beach-nesting birds according to the developed plan.
  - C. Develop a written plan for the field west of the cove that takes into consideration all demands for this parcel.
  - D. Restore the area around the cove by removing exotics and replanting with natives to give a more natural appearance for visitors to enjoy.
- 5. Provide environmental education and enhance public appreciation for elements of natural and cultural diversity.
  - A. Continue to operate both the McLarty Treasure Museum and the Sebastian Fishing Museum
  - B. Expand interpretive programs and field trips for the public and school groups to raise awareness of the local flora and fauna, including what is needed for management.
  - C. Train additional volunteers as tour guides.
  - D. Universal Trail Assessment Process (UTAP) designated park trails and update interpretive signage as appropriate.

### **Cultural Resources**

- 1. Develop and implement an archaeological site condition-monitoring program.
  - A. Establish a reasonable site visit schedule.
  - B. Train staff or volunteers to conduct condition assessments.
  - C. Adopt a standardized condition assessment form to ensure data collection consistency.
  - D. Maintain permanent files for each site for condition data, and other documentation related to the physical change or treatment of sites.
- 2. Protect recorded and unrecorded archaeological sites.
  - A. Prioritize avoiding or minimizing site disturbance during improvement and resource management projects.
  - B. Reduce or eliminate other threats to the extent possible.
  - C. Apply approved treatment to preserve or stabilize sites.
- 3. Conduct archaeological surveys in order to locate sites, determine boundaries, document condition, assess significance, evaluate the archaeological sensitivity of the coast and distinguish between historic and non-historic surface remains.
  - A. Prioritize archaeological survey needs.
  - B. Identify what can be accomplished in-house.
  - C. Pursue grant funding for additional professional work.

- D.** Solicit volunteer support where appropriate.
- 4.** Coordinate preservation, research and interpretation efforts for archaeological sites with local entities.
  - A.** Encourage permitted research by accredited regional universities and colleges.
  - B.** Encourage volunteer work by local chapters of the Florida Anthropological Society.
  - C.** Foster a relationship with the new regional office of the Florida Public Archaeology Network.
  - D.** Solicit support from Brevard and Indian River Counties for archaeological surveys and pursuit of grant money.
- 5.** Develop a Museum Manual for the Sebastian Inlet Fishing Museum.
  - A.** Clarify roles and responsibilities of the park and the Citizens Support Organization.
  - B.** Clarify operational procedures.
  - C.** Clarify collection management arrangements.
- 6.** Develop an Interpretive Plan and Scope of Collection Statement for the Sebastian Inlet Fishing Museum.
  - A.** Revisit the purpose of the museum and identify additional interpretive goals.
  - B.** Consult with individuals with ties to the local commercial fishing industry.
  - C.** Evaluate current exhibits based on the new interpretive plan.
  - D.** Evaluate current museum collection, and identify collecting priorities based on the new interpretive plan.
- 7.** Address preservation, conservation and interpretation issues at the McLarty Museum
  - A.** Purchase equipment to produce a continuous record of temperature and humidity, and evaluate and remedy significant fluctuations.
  - B.** Replace UV-protective sleeves on lights; reconfigure or replace current lighting as needed to protect photographic material.
  - C.** Consult with Department Of State, Division of Historical Resources for permission to and instructions on touching up conserved metal artifacts.
  - D.** Secure funds for a general conservation assessment, via the Conservation Assessment Program or a private conservator, to assess the collection and museum environment, and for specific evaluation of the paintings.
  - E.** Develop a written security plan for the museum.
- 8.** Recognize and interpret the significance of the park's cultural resource and stewardship activities.
  - A.** Solicit the involvement of associated living communities in the development of related preservation and interpretive projects.
  - B.** Post protective signage near heavily trafficked archaeological sites if useful.
  - C.** Nominate significant sites to the National Register of Historic Places.
  - D.** Keep permanent park history files on the park's development and history of surfing, fishing and other traditional uses; Park Interpretive plans should be updated to promote public education of these activities, the park's history and

prehistory, archaeological research of the peninsula, and preservation issues.

### **Recreational Goals**

1. Continue to provide quality resource based outdoor recreational and interpretive programs and facilities at the state park.
  - A. Provide facilities and use areas to support beach recreation, fishing, surfing, camping, picnicking, hiking, biking, boating, kayaking and birding.
  - B. Regularly monitor impacts to park resources and the visitor experience and address through appropriate management action.
  - C. Provide controlled public access to the beach.
  - D. Deliver ranger led interpretive programs and provide static interpretive displays and educational materials to educate visitors and encourage responsible use of park resources.
2. Seek funding to expand recreational and interpretive opportunities through the improvement of programs and the development of new use areas and facilities, as outlined in this management plan.
  - A. Expand and enhance the “Spanish House” parking area.
  - B. Evaluate and renovate the entire marina area.
  - C. Evaluate and redesign the concession area at the north jetty beach use area.
  - D. Enhance the swimming cove area and provide stabilized parking.
  - E. Add a primitive group camp.
  - F. Explore the feasibility of developing a cabin area along the north inlet shoreline.
  - G. Replace the fishing dock along the inlet’s south shoreline.
  - H. Improve and expand the camping area.
  - I. Improve and control beach access areas south of the inlet.
  - J. Evaluate the McLarty Treasure Museum for possible renovations.
  - K. Explore ability to extend paved bike paths along park roads.

### **Park Administration/Operations**

1. Provide efficient and effective management of park resources and facilities while maintaining a high level of visitor service.
  - A. Pursue funding to acquire additional FTE positions as the parks operation grows in complexity.
  - B. Seek funding to accomplish goals and objectives set forth in this management plan.
  - C. Assure compliance with Division, state and federal safety guidelines and training requirements by providing training to all staff in visitor services, park information and emergency services.
  - D. Maintain high maintenance standards and conduct routine safety inspections to provide clean safe facilities and use areas.
  - E. Seek funding to meet staff residence needs and construct/upgrade support facilities.

- F.** Recruit and maintain volunteer support to assist park staff with the maintenance of park facilities, protection of park resources and implementation of park programs.
- G.** Establish and maintain effective park boundaries through fencing and posting of signs.
- H.** Work with Florida Park Police and other state and local Law Enforcement Agencies to protect natural and cultural resources while protecting park visitors.
- I.** Maintain and expand an active public relations program that increases public awareness and support for the park including resource management activities such as prescribed burning, exotic removal, listed species protection.

### **Management Coordination**

The park is managed in accordance with all applicable Florida Statutes and administrative rules. Agencies having a major or direct role in the management of the park are discussed in this plan.

The Department of Agriculture and Consumer Services, Division of Forestry (DOF), assists Division staff in the development of wildfire emergency plans and provides the authorization required for prescribed burning. The Florida Fish and Wildlife Conservation Commission (FFWCC), assists staff in the enforcement of state laws pertaining to wildlife, freshwater fish and other aquatic life existing within park boundaries. In addition, the FFWCC aids the Division with wildlife management programs, including the development and management of Watchable Wildlife programs. The Department of State, Division of Historical Resources (DHR) assists staff to assure protection of archaeological and historical sites. The Department of Environmental Protection (DEP), Office of Coastal and Aquatic Managed Areas (CAMA) aids staff in aquatic preserves management programs and advises staff of Environmental Resource Permitting (ERP) requirements and mitigation options. The DEP, Bureau of Beaches and Wetland Resources aids staff in planning and construction activities seaward of the Coastal Construction Line. In addition, the Bureau of Beaches and Wetland Resources aid the staff in the development of erosion control projects. Emphasis is placed on protection of existing resources as well as the promotion of compatible outdoor recreational uses.

Sebastian Inlet State Park is closely related to management issues and activities by the Sebastian Inlet District (SID), Indian River and Brevard County governments, CAMA, local water management districts, and the U.S. Fish and Wildlife Service's Archie Carr National Wildlife Refuge. The park is also involved in local initiatives to designate State Road A1A as a Florida Scenic Highway and to designate portions of the barrier island as a National Historic District. Division staff will continue its involvement with each of these groups to insure that management activities within the state park are consistent with the goals, objectives and activities of the other programs, as necessary

and appropriate.

Division staff will encourage staff of the Florida Forever acquisition program to evaluate those areas the Indian River Blueways project to identify important shorebird nesting habitats within the project boundary, and recommend that important habitat areas be given priority for acquisition.

Division of Recreation and Parks staff has reviewed the SID's management plan for the Sebastian Inlet. Staff considers the goals and objectives of that plan to be generally consistent with the Division's interests in management of the state park. Erosion of the Atlantic beach shoreline south of the Sebastian Inlet has been a resource management problem for decades, and will continue to be in the future. The development of a sand transfer system at Sebastian Inlet is suggested as a primary measure to address this ongoing problem. Division staff agrees that a sand transfer system should continue to be considered as a part of the solution to the problem, with the understanding that decisions on beach renourishment and sand transfer must be based on a comprehensive understanding of the options and their relative impacts to the physical, biological and recreational resources and operation of the state park. The Division will continue to work with the SID, Indian River and Brevard Counties and the DEP Bureau of Beaches and Coastal Systems to evaluate all options available to address beach erosion and renourishment south of the inlet.

### **Public Participation**

The Division provided an opportunity for public input by conducting a public meeting and an advisory group meeting to present the draft management plan to the public. A public meeting was held on May 13, 2008. An Advisory Group meeting was held May 14, 2008. The purpose of this meeting was to provide the Advisory Group members an opportunity to discuss the draft management plan.

### **Other Designations**

Sebastian Inlet State Park has not been designated as an Area of Critical State Concern as defined in section 380.05, Florida Statutes. Currently it is not under study for such designation. The park is a component of the Florida Greenways and Trails System.

This unit is adjacent to the Indian River Aquatic Preserve, which was designated under provision of the Florida Aquatic Preserve Act of 1975 (section 258.35, Florida Statutes). All waters within the unit have been designated as Outstanding Florida Waters, pursuant to Chapter 62-302 Florida Administrative Code. Administered by the Department of Environmental Protection, this program was created by Section 403.061, Florida Statutes, and protects lakes, rivers and streams against degradation of existing ambient water quality. Surface waters in this unit are also classified as Class III waters by DEP.



## **RESOURCE MANAGEMENT COMPONENT**

### **INTRODUCTION**

The Division of Recreation and Parks has implemented resource management programs for preserving for all time the representative examples of natural and cultural resources of statewide significance under its administration. This component of the unit plan describes the natural and cultural resources of the park and identifies the methods that will be used to manage them. The stated management measures in this plan are consistent with the Department's overall mission in ecosystem management. Cited references are contained in Addendum 2.

The Division's philosophy of resource management is natural systems management. Primary emphasis is on restoring and maintaining, to the degree practicable, the natural processes that shape the structure, function and species composition of Florida's diverse natural communities as they occurred in the original domain. Single species management may be implemented when the recovery or persistence of a species is problematic provided it is compatible with natural systems management.

The management goal of cultural resources is to preserve sites and objects that represent all of Florida's cultural periods as well as significant historic events or persons. This goal may entail active measures to stabilize, reconstruct or restore resources, or to rehabilitate them for appropriate public use.

Because park units are often components of larger ecosystems, their proper management is often affected by conditions and occurrences beyond park boundaries. Ecosystem management is implemented through a resource management evaluation program (to assess resource conditions, evaluate management activities and refine management actions), review of local comprehensive plans and review of permit applications for park/ecosystem impacts.

### **RESOURCE DESCRIPTION AND ASSESSMENT**

#### **Natural Resources**

##### **Topography**

Sebastian Inlet State Park is located on the Atlantic coast of Florida on a barrier island, which is bounded on the east by the Atlantic Ocean, and on the west by the Indian River Lagoon. Elevations at the unit range from sea level along the coast to approximately 5 feet above mean sea level.

This unit is found within the Eastern Flatwoods District (Brooks 1981a). Within this district, the park lies along the Central Atlantic Coastal Strip physiographic division, which was created or modified by shoreline processes during the Late Pleistocene when



sea levels were at about 18 feet (12 to 15 feet above its present level). In this division, the park lies along the Cocoa-Sebastian Ridge (Brooks 1981b); in addition, this unit is situated along the Silver Bluff Terrace, which formed during the Pleistocene. During the formation of this terrace, sea level was approximately 8 to 10 feet higher than the current level (Healy 1975).

### **Geology**

This unit is underlain by at least two different geological deposits (Wettstein et al. 1987). The majority of the park consists of Hawthorn Group deposits of interbedded limestone, dolomite, sand and clay, laid down in the Miocene (25 to 13 million years before the present). The Anastasia Formation, which overlies the Hawthorn Group, is composed of quartz sand and shell material; it was laid during the Pleistocene, 1.6 to 0.1 million years before the present.

### **Soils**

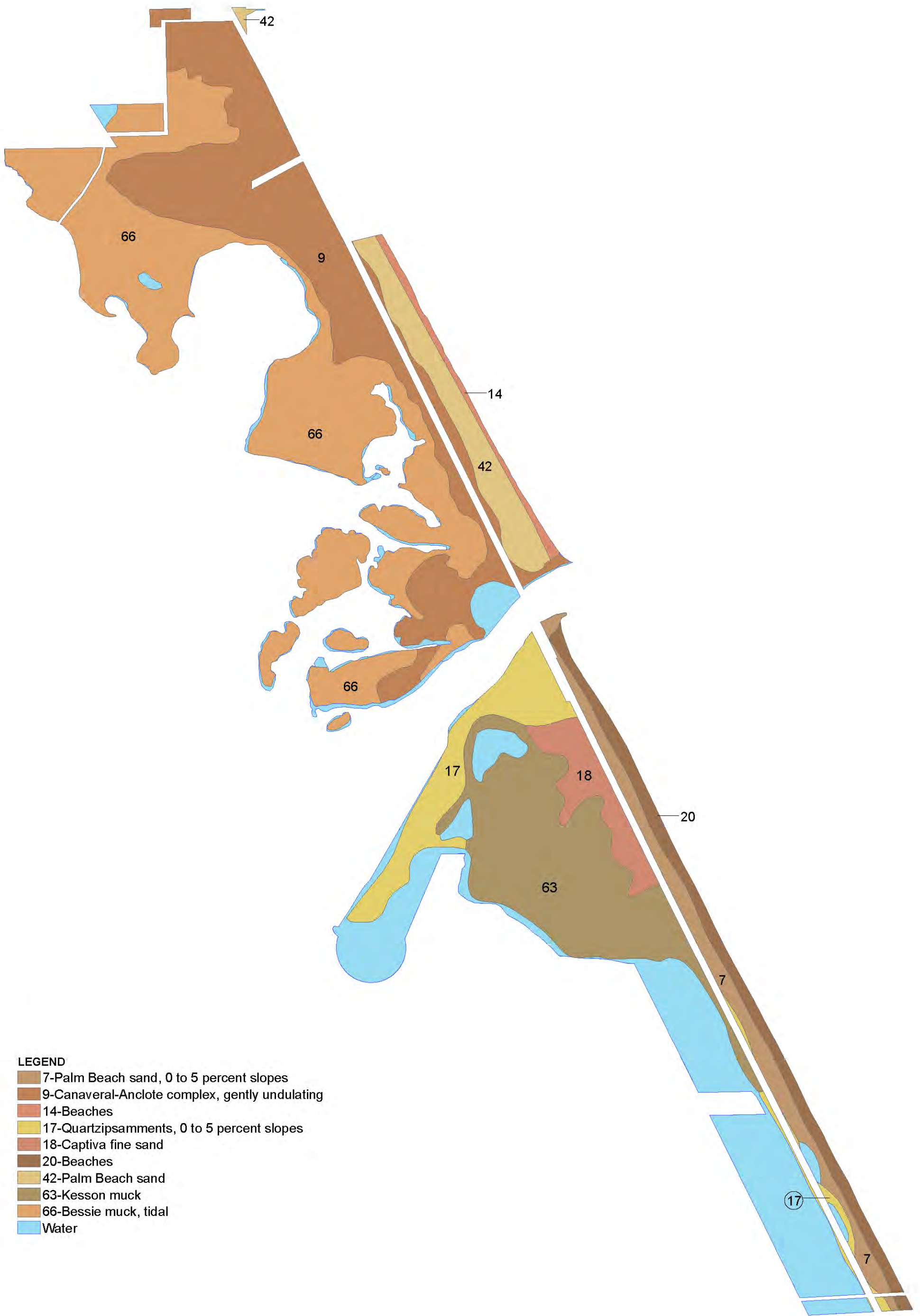
There are nine different soil types in addition to spoil banks occurring in Sebastian Inlet State Park (see Soils Map). This soil survey was compiled by the U. S. Department of Agriculture, Soil Conservation Service (SCS) in the soil surveys of Brevard County (Huckle et al. 1974) and Indian River County (Wettstein et al. 1987). Management activities will follow generally accepted best management practices to prevent soil erosion and conserve soil and water resources on site. Addendum 3 contains complete descriptions of park soil types.

Soil erosion occurs primarily in two areas of the park: 1) along the shoreline of the Atlantic Ocean 2) and in the beach dune community, south of inlet. Along the shoreline of the Atlantic, the erosion is caused by seasonal storms; the inlet exacerbates erosion in the southern part of the park. Beach renourishment projects have occurred south of the inlet on a periodic basis; in recent years, the frequency of the projects has increased. Following these projects, moderate to severe escarpments (3-6 feet or higher) has formed; on some occasions, the contractor has removed the escarpment. Numerous footpaths exist south of inlet which transverse the coastal strand and beach dune communities. These areas are devoid of vegetation because they are heavily used by visitors to access the beach. Over time, sand has been dispersed, leaving a trench like gully through the dune. Closing these foot paths and redirecting visitors to the designated parking areas will correct these issues before the paths can be restored.

In 1975, riprap was placed seaward of the McLarty Museum to protect the building and the historic site from beach erosion. This has stabilized the shoreline and does not appear to be negatively affecting sea turtle nesting and erosion in the immediate vicinity of the Museum.

### **Minerals**

No deposits of commercially valuable minerals are evident.



**LEGEND**

- 7-Palm Beach sand, 0 to 5 percent slopes
- 9-Canaveral-Anclote complex, gently undulating
- 14-Beaches
- 17-Quartzipsamments, 0 to 5 percent slopes
- 18-Captiva fine sand
- 20-Beaches
- 42-Palm Beach sand
- 63-Kesson muck
- 66-Bessie muck, tidal
- Water

## **Hydrology**

The principal drainage from this unit is to the Atlantic Ocean and the Indian River, a shallow estuarine lagoon separating the barrier island from the mainland.

Groundwater is available from the shallow surficial aquifer and the upper Floridan aquifer (Hyde 1975). Average annual rainfall at the park is approximately 52 inches. Though much of the rain filters into the shallow aquifer, some remains on the surface, adding to the Indian River Lagoon system.

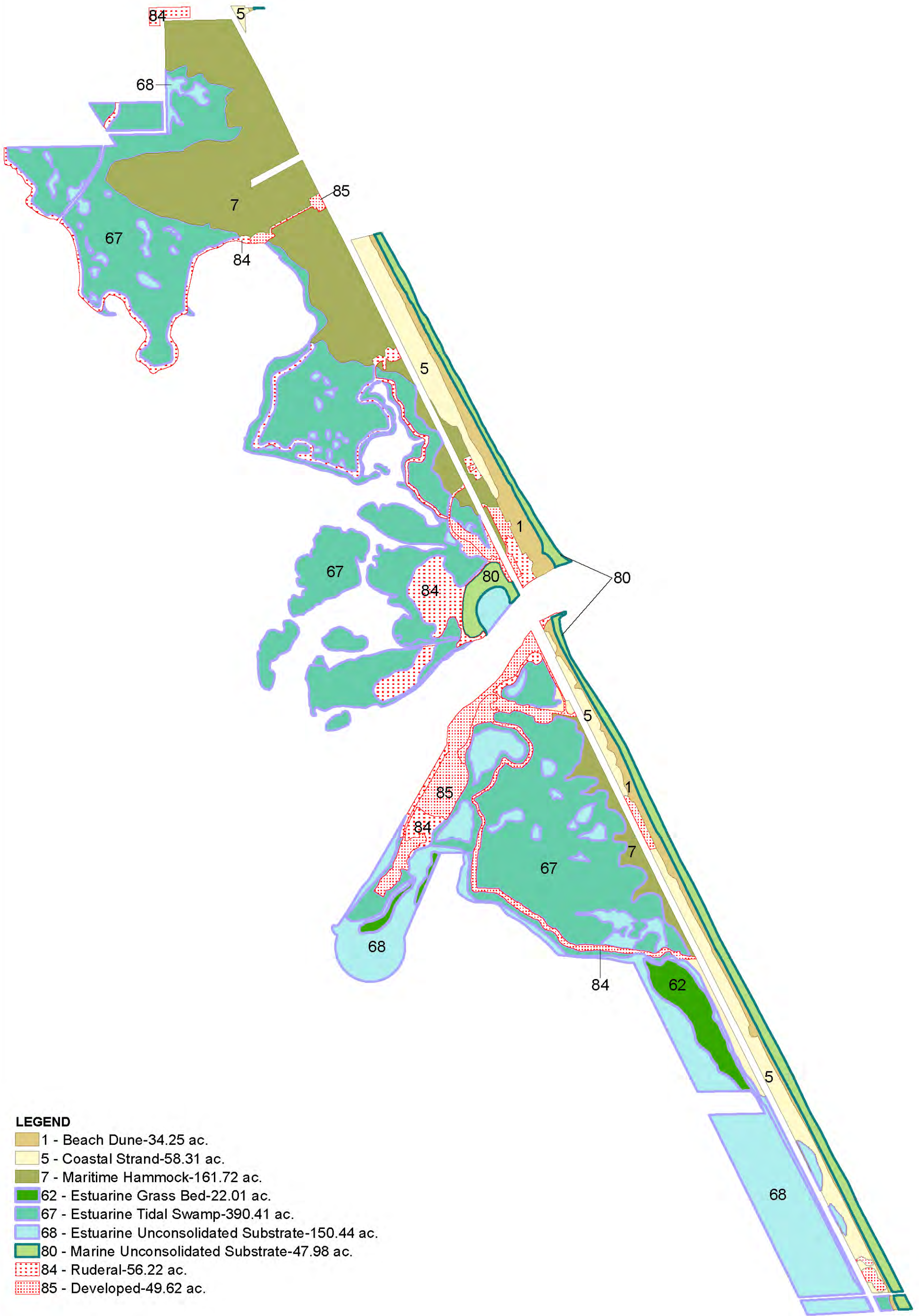
Past mosquito ditching practices along the western side of the park have altered the historical hydrologic flow. Studies should be conducted to determine the feasibility of backfilling mosquito ditches and removing the levees to restore the altered hydrology and near shore communities along the Indian River Lagoon. Most of the Indian River, including that portion adjacent to this unit, has been designated as an aquatic preserve and has received a Class II water quality designation by the Department. The waters of the aquatic preserve and the park are designated as Outstanding Florida Waters.

## **Natural Communities**

The system of classifying natural communities employed in this plan was developed by the Florida Natural Areas Inventory (FNAI). The premise of this system is that physical factors, such as climate, geology, soil, hydrology and fire frequency generally determine the species composition of an area, and that areas which are similar with respect to these factors will tend to have natural communities with similar species compositions. Obvious differences in species composition can occur, despite similar physical conditions. In other instances, physical factors are substantially different, yet the species compositions are quite similar. For example, coastal strand and scrub--two communities with similar species compositions--generally have quite different climatic environments, and these necessitate different management programs.

The park contains eight distinct natural communities (see Natural Communities Map—marine worm reef is not mapped) in addition to ruderal and developed areas. The Natural Communities Map is a graphic representation of the existing vegetative conditions in the park at the time this management plan was developed. Park specific assessments of the existing natural communities are provided in the narrative below. A list of plants and animals occurring in the unit is contained in Addendum 4.

**Beach dune.** This community exists as a strip of land along the eastern border of the unit between the beach and the coastal strand communities. The condition of this community varies along its length. North and immediately south of the inlet, the community is generally in fair to good condition; erosion is minimal, and vegetative cover is largely intact. The dominant vegetation on the foredunes is sea oats (*Uniola paniculata*); other plants include railroad vine (*Ipomoea pes-caprae*), beach morning glory (*Ipomoea imperati*), east coast dune sunflower (*Helianthus debilis* var. *debilis*), baybean



**LEGEND**

- 1 - Beach Dune-34.25 ac.
- 5 - Coastal Strand-58.31 ac.
- 7 - Maritime Hammock-161.72 ac.
- 62 - Estuarine Grass Bed-22.01 ac.
- 67 - Estuarine Tidal Swamp-390.41 ac.
- 68 - Estuarine Unconsolidated Substrate-150.44 ac.
- 80 - Marine Unconsolidated Substrate-47.98 ac.
- 84 - Ruderal-56.22 ac.
- 85 - Developed-49.62 ac.

(*Canavalia rosea*), bitter panicgrass (*Panicum amarum*) with scattered sea grape (*Coccoloba uvifera*) encroaching from the coastal strand community in areas of infrequent fire.

South of the day-use area, to the southern end of the park, the beach dune community is in poor to fair condition. The community has been negatively impacted by recent beach renourishment projects: several vehicular access ramps were constructed to allow dump trucks to deposit fill material on the beach, and many areas of the community were covered by the fill. To date, the ramps have not been completely revegetated; they are regularly used by visitors for access to the beach. These areas are more susceptible to blowouts and erosion due to the lack of vegetative cover. The park has obtained ownership of one of the access ramps and has begun to mitigate for the impacts caused by foot traffic. There is a high amount of erosion along this area; in some cases, very little of the original foredune still exists. Where vegetation occurs, sea oats are dominant. Numerous footpaths and access ramps are used by visitors to access the beach. Vegetation is being trampled, leaving large areas of foredune devoid of vegetation leading to erosion and possible blowouts. Access to the beach should be controlled by directing visitors to the parking areas, allowing restoration of the footpaths to begin. With the exception of revegetation of the ramp areas and footpaths, no special management actions are needed at this time.

**Coastal strand.** Coastal strand exists inland of the beach dune community. North of the inlet, this community grades into maritime hammock. Several boardwalks have been constructed through this community north of the inlet for access to the beach. In this area of the park, the community is in fair condition. The dominant vegetation consists primarily of shrubs and trees consisting of saw palmetto (*Serenoa repens*), sea grape, cabbage palm (*Sabal palmetto*), coralbean, and beachberry (*Scaevola plumieri*). Areas devoid of shrubs are dominated by sea oats, marshhay cordgrass (*Spartina patens*), bitter panicgrass, seacoast marshelder (*Iva imbricata*), erect pricklypear (*Opuntia stricta*), gulf croton (*Croton punctatus*), and east coast dune sunflower.

South of the inlet, the community is in good condition and is highly fragmented; beach facilities, a boardwalk, footpaths, a staff residence, a museum, and State Road A1A were sited in the coastal strand. While grasses predominate, sea grape, wax myrtle (*Myrica cerifera*), saw palmetto and cabbage palm are present. Several vehicular access roads for beach renourishment projects (also referenced above) were constructed through this community; to date, the roads have not been revegetated. They are regularly used by visitors for access to the beach. These areas are more susceptible to blowouts and erosion due to the lack of vegetative cover. In 1997, a prescribed burning program was initiated in this area of the park to reduce the amount of hardwood encroachment and increase the coverage of grasses to benefit a population of southeastern beach mice (*Peromyscus polionotus niveiventris*). Additional prescribed burning, mowing and periodic exotic removal efforts will be necessary to maintain this community.

**Maritime hammock.** At this unit, the maritime hammock community is considered to be in good to excellent condition. It is composed of a mixture of temperate and subtropical plant species, such as sand live oak (*Quercus geminata*), red bay (*Persea borbonia* var. *borbonia*), marlberry (*Ardisia escallonioides*), Florida swamp-privet (*Forestiera segregata*), wild lime (*Zanthoxylum fagara*), twinberry (*Myrcianthes fragrans*), white stopper (*Eugenia axillaris*), Spanish stopper (*Eugenia foetida*), strangler fig (*Ficus aurea*), wild coffee (*Psychotria nervosa*), shortleaf wild coffee (*Psychotria sulzneri*), and gumbo-limbo (*Bursera simaruba*).

In some areas of the park, this community has been invaded by exotic plant species, including Brazilian pepper (*Schinus terebinthifolius*) and Australian pines (*Casuarina equisetifolia*). An aggressive exotic control effort, which has been underway for the past several years, has resulted in a significant reduction in the coverage of these and other exotic plants within the maritime hammock.

This community type is considered by the Florida Natural Areas Inventory (FNAI) to be imperiled due to its rarity of because of vulnerability to extinction due to natural or human-caused factors. It should be protected from future development to the greatest extent practicable. This community is essentially self-maintaining; with the exception of exotic removal efforts, no special management actions are needed at this time.

**Estuarine tidal swamp.** The condition of this community varies within the park from excellent to good to fair. Historically, some of this community was likely estuarine tidal marsh before extensive ditching and impoundment for mosquito control. Over time, the marshes dried out and the community succeeded to estuarine and marine tidal swamp. In submerged areas, red mangrove (*Rhizophora mangle*) became dominant, while Brazilian pepper and Australian pine are dominant along the dikes. In other areas of the park, exotic encroachment is minimal. Many of these areas are dominated by red mangrove, black mangrove (*Avicennia germinans*), white mangrove (*Laguncularia racemosa*), and buttonwood (*Conocarpus erectus*). This community is essentially self-maintaining; with the exception of exotic removal efforts, no special management actions are needed at this time.

**Estuarine unconsolidated substrate.** The often-unvegetated portion of sand lying along the lagoon side of the park that is categorized as estuarine unconsolidated substrate. This community is tidally inundated on a daily basis, and is largely devoid of plant species; however, in areas where the substrate has been disturbed, grass and weedy species dominate. Estuarine unconsolidated substrate is utilized by shorebirds for resting, loafing and feeding, along with other invertebrate species like crabs and mollusks.

**Marine unconsolidated substrate.** The portion of the beach, which lies seaward of the beach dune community, is categorized as marine unconsolidated substrate. This

community is tidally inundated on a daily basis, and is largely devoid of plant species. Marine unconsolidated substrate is utilized by shorebirds for resting, loafing and feeding, and sea turtles traverse this community during nesting and emergence events. With the exception of periodic beach renourishment projects (once or twice every decade) that use sand dredged from the inlet sand trap, no other renourishment projects may be warranted. Additional actions to improve the quality of the material placed in this community should be implemented.

**Estuarine grass beds.** This offshore natural community is one of the smallest within the boundaries of the park but does exist outside of park within CAMA lands. Dominant species are turtle grass (*Thalassia testudinum*), shoal grass (*Halodule wrightii*), and manatee grass (*Syringodium filiforme*). Johnson's seagrass (*Halophila johnsonii*) can also be found within the park, but due to its rarity, it often not detectable. Ecologically, grass beds are important components of the estuary: they stabilize sediments and provide nurseries, food and shelter to many estuarine organisms. Grass beds are sensitive to changes in salinity and to disturbance caused by boats such as propeller scars. Due to their location within the park near the boat ramp facility, impacts caused by boats will increase as ramp becomes more heavily used. The park should continue to educate boaters on the proper protection measures to protect this valuable resource.

**Marine worm reef (not mapped).** This community is located just offshore of the park and is faunal-based where it is dependent on a *sabellariid polychaete*, *Phragmatopoma lapidosa*. This marine invertebrate cements sand grains together to form large colonial structures of worm tubes. The community grows as larvae attach to the substrate created by the adults. In order for the community to become established, a hard substrate must be present, such as the granitic rocks of the jetties as well as on the coquina-limestone outcrop of the Anastasia Formation south of the inlet. South of the inlet, the worm reef is covered by sand following storms and beach renourishment projects; this can result in the death of portions of the reef. At this time, the condition of the reef is unknown; no management actions are proposed at this time. Future considerations should include an initial assessment of reef conditions followed by periodic monitoring to determine if beach renourishment projects are having a negative impact on the reef systems.

**Ruderal areas.** These areas are characterized by having the natural substrate or the natural community overwhelmingly altered because of human activity. Native vegetation is sparse and is often replaced by weedy or exotic species. These areas require restoration efforts.

**Developed areas.** These areas consist of natural biological communities that have been replaced or nearly replaced by structures or permanently cleared areas such as roads, visitor facilities, campgrounds, recreation areas, parking lots or concessions.

## **Designated Species**

Designated species are those that are listed by the Florida Natural Areas Inventory (FNAI), U.S. Fish and Wildlife Service (USFWS), Florida Fish and Wildlife Conservation Commission (FFWCC), and the Florida Department of Agriculture and Consumer Services (FDA) as endangered, threatened or of special concern. Addendum 5 contains a list of the designated species and their designated status for this park. Management measures will be addressed later in this plan.

**Marine turtles.** As noted previously, Sebastian Inlet State Park is located within the Archie Carr National Wildlife Refuge, which is a critical area for the nesting of loggerhead sea turtles (*Caretta caretta*). The beaches of the ACNWR support the largest nesting colony of loggerhead turtles in the western hemisphere, the second largest in the world. The park also provides important nesting habitat for green and leatherback sea turtles (*Chelonia mydas* and *Dermochelys coriacea*, respectively). In addition, hawksbills (*Eretmochelys imbricata*) have occasionally been seen at the park. In 2006, the totals were as follows: 619 loggerhead nests, 74 green turtle nests, and 1 leatherback nest. The park participates in nest surveys and monitoring as part of the index nesting beach program administered by the Florida Fish and Wildlife Conservation Commission. The park participates in nest monitoring as an index beach. The Federal recovery plan for the respective sea turtle species (loggerhead and green turtle: National Marine Fisheries Service and U.S. Fish and Wildlife Service 1991; leatherback: National Marine Fisheries Service and U.S. Fish and Wildlife Service 1992) will be closely adhered to by staff.

The greatest threat to sea turtles at this unit involves the beach renourishment projects that use sand brought in from inland sources. According to Ehrhart and Herren (1998), nesting success was reduced by 60 percent on the portion of the beach that received inland material in 1997. Reproductive success was also significantly reduced; many eggs died early in development. The smaller grain sizes, higher moisture content, lower temperatures, and higher shears resistance of the material contributed to these results. Too much material has also been placed on the beach in some areas during the past renourishment projects. Often, this leads to the formation of numerous scarps along the beach. Once escarpment occurs, a tall wall of material is created (3-6 or more feet); which can create a situation where sea turtles are unable to pull themselves up the beach to nest. The excessive amount of material placed on the beach has also covered the primary dune community in some areas, destroying habitat for beach mice and obscuring nesting cues for sea turtles. On several occasions, after the escarpment was removed by the renourishment contractor, sea turtles continued west, fell over the back of the original primary dune and were trapped. In one instance, a turtle continued heading west and was killed by an automobile on State Road A1A. The timing of the projects will likely prove detrimental to sea turtles. According to Ehrhart (pers. comm.), renourished beaches require a minimal resting period of three years before they become



optimal for sea turtle nesting. The current renourishment schedule proposed by the Sebastian Inlet District (SID) has projects occurring every year. FPS should pursue a less frequent schedule for future renourishment projects to help encourage sea turtle nesting as well as to protect sensitive beach mouse and shorebird habitat. This would also be favorable for the protection of the worm rock reef communities located just offshore.

**Beach mice.** The beach dune community south of the inlet supports one of the last populations of the southeastern beach mouse in the southern half of its range. Monitoring has revealed that the population is very small, but persistent. Continued habitat fragmentation and destruction by beach renourishment projects may jeopardize the continued existence of this federally threatened species at the park. Prescribed burning was initiated in beach mouse habitat south of the inlet in 1997; due to the favorable response by beach mice, burning has continued since then on a periodic basis to reduce hardwood encroachment and to increase the coverage and vigor of grasses.

Beach mice historically occurred north of the inlet, but due to predation, habitat fragmentation and habitat succession, the population no longer is present. In the late 1990s, the Florida Park Service began ongoing discussions with the United States Fish and Wildlife Service (USFWS) and university researchers of the possibility of reintroducing the species back into the northern side of the park. It was determined that habitat modification was needed to restore the beach dune and coastal strand communities before a reintroduction could be attempted. The condition of both communities at the time was determined to be fair to poor, with overgrown vegetation, exotic plant infestations and inflated native and non-native predator populations. Habitat restoration of the coastal strand community began in 2006. The goal was to mechanically treat the vegetation with mowing and follow with a prescribed fire. Mowing was completed in 2006 and a burn was conducted in February 2007. Herbaceous ground cover has already responded and exotic species have been treated and removed. Continued mowing and burning of both the coastal strand and beach dune communities will continue until all areas are managed and have reached a maintenance condition where prescribed fire and exotic removal alone will be able to maintain the natural communities in a favorable condition. The feasibility of a reintroduction of the southeastern beach mouse will be evaluated upon the response of the habitat to restoration.

Feral cats are removed as soon as they are detected. Other nuisance wildlife that are determined to be a threat to beach mouse populations will be removed on an as needed basis upon the recommendation from the park/district biologist. A Federal recovery plan for the southeastern beach mouse (U.S. Fish and Wildlife Service 1993) will be referenced and followed by staff.

**Shorebirds and wading birds.** The park provides important resting, feeding, and

nesting habitat for many state and federally listed shorebirds and wading birds, including but not limited to Roseate Spoonbill (*Ajaia ajaja*), Little Blue Heron (*Egretta caerulea*), Reddish Egret (*E. rufescens*), Snowy Egret (*E. thula*), Tricolored Heron (*E. tricolor*), Wood Stork, White Ibis (*Eudocimus albus*), Least Tern (*Sterna antillarum*), Black Skimmer (*Rynchops niger*), Wilson's Plover (*Charadrius wilsonia*), and the Piping Plover (*Charadrius melodus*). Standard Resource Management Procedure Number 13 and Resource Management Guideline Number 3, concerning the protection of colonial breeding birds, will continue to be followed by park staff. These procedures are currently being revised to include protection of loafing and resting birds year round along with nesting birds. The current and new procedures and guidelines will be strictly followed.

With over 3 miles of beach habitat within a sea of development, Sebastian Inlet State Park should be a magnet for beach-nesting birds, but unfortunately, no nesting activity has been observed on the beach itself within the last few years. The only nesting activity that has been documented on the park has occurred on a spoil deposition area west of the campground. This lack of bird nesting activity on relatively untouched, natural beach can be attributed to: 1) heavy use by visitors 2) presence of predators 3) presence of dogs 4) beach renourishment activities. To date, no areas have been closed to public access for the purpose of protecting and encouraging nesting of shorebirds. The beach is restricted to pets year round; however, dogs are frequently seen. Dogs can run through congregations of resting birds and destroy nests of nesting birds. Research studies have shown that shorebirds can detect an animal on the beach from a distance of 500 ft and greater, depending on the species. Beach renourishment projects occur yearly and cause considerable disturbance to the birds during crucial periods prior to nesting. Sand is pumped onto shorebird habitat at the toe of the primary dune where most nesting shorebirds nest.

A population of least terns historically nested on Coconut Point, west of the campground. In 1978, a use agreement for a portion of this area was granted to the SITD for the placement of non-beach quality fill dredged from the inlet. Following the placement of material in this area and the resultant erosion, least tern nesting ceased. In spring 2000, park staff scraped ruderal vegetation off the westernmost portion of Coconut Point; following this, tern nesting was observed, and the area was temporarily closed to public access. Additional habitat enhancement and seasonal restrictions of visitor access (March 15 to September 1) to this area will be necessary to protect future nesting of least terns and other beach-nesting birds. Future facility or campground development on Coconut Point will need to be planned with consideration of sensitive area. The tip of the point (1.5 ac) has been set aside for protection and enhancement will begin when funds are secured. Other areas throughout the park should be investigated for the possibility of being potential nesting sites for beach-nesting birds. Areas that are determined to be suitable nesting/resting areas may be temporarily closed.

In response to high numbers of road-killed birds, especially royal terns (*Sterna maxima*) on the State Road A1A bridge over Sebastian Inlet, bird mortality reduction structures were installed on the bridge in 1994 (Egensteiner, pers. comm.). These structures consisted of 10-foot poles erected vertically and placed 12 feet apart on both sides of the bridge. The intent of this action was to direct the birds up and away from the bridge, thus reducing road-kill. To date, the structures appear to be successful in reducing bird mortality on the bridge.

**Gopher tortoise.** A population of gopher tortoises (*Gopherus polyphemus*) can be found in several of the upland communities of the park. Currently, a marking program exists to allow for long-term monitoring of the population. Continued prescribed fire activities will benefit the tortoise population at the park as well. A population occurs in a field on the north side of the inlet, west of the cove. The field is often used as an overflow parking area during peak visitation that creates a problem with protection of tortoises. A plan for this area should be developed to take into account all visitor and wildlife uses for this area. This topic will be discussed in the management measures section.

**Diamondback terrapin.** The Indian River Lagoon historically supported a large population of diamondback terrapins (*Malaclemys terrapin*). Due to habitat loss, overharvesting, mortality in crab traps, predation, and stochastic factors, populations of diamondback terrapins have declined throughout the species' range (Roosenburg et al. 1997; Forstner, pers. comm. 1998). Although terrapin sightings in the area surrounding the park were numerous until the mid-1980s, few have been seen in recent years.

### **Special Natural Features**

The park is located within the Archie Carr National Wildlife Refuge, which is recognized as the most important region of nesting beaches for the loggerhead sea turtle within the Western Hemisphere.

### **Cultural Resources**

Evaluating the condition of cultural resources is accomplished using a three part evaluative scale, expressed as good, fair, and poor. These terms describe the present state of affairs, rather than comparing what exists against the ideal, a newly constructed component. Good describes a condition of structural stability and physical wholeness, where no obvious deterioration other than normal occurs. Fair describes a condition in which there is a discernible decline in condition between inspections, and the wholeness or physical integrity is and continues to be threatened by factors other than normal wear. A fair judgment is cause for concern. Poor describe an unstable condition where there is palpable, accelerating decline, and physical integrity is being compromised quickly. A resource in poor condition suffers obvious declines in physical integrity from year to year. A poor condition suggests immediate action to reestablish physical stability.

The Florida Master Site File (FMSF) lists 13-recorded sites within the unit.

Sebastian Inlet State Park contains many cultural resources, and many types, remnants of the daily life of the area's former inhabitants, or representative of typical activities specific to this locale, from the prehistoric period to the mid-20<sup>th</sup> century. For several millennia, people have inhabited this narrow peninsula seasonally and permanently, drawn by the area's unique natural resources that make it an ideal place to harvest marine and riverine resources and to recreate. The park also contains the exceptional material associated with survivors and salvagers of the Spanish Plate Fleet destroyed just offshore by a hurricane in 1715. Archaeological sites and artifacts; historic objects, archives and photographs; oral histories, and works of art document and illuminate the peninsula's rich and varied history. Additionally, the park has ties to living communities, including fishers and surfers, for whom park lands figure strongly into their sense of identity or (past) way of life; thus its cultural resources also include associated peoples and related ethnographic material.

**Archaeological resources.** Sebastian Inlet State Park's archaeological resources include thirteen recorded sites, four in the northern half of the peninsula in Brevard County and nine in the southern half in Indian River; an unknown number of unrecorded sites; and recovered artifacts on display at the park's McLarty Museum. Additionally, there are eight recorded sites, similar and related, just off shore and to the north and south of the park, and artifacts excavated from sites now in the park in storage at other institutions in Florida and elsewhere. The park's archaeological resources represent many facets of the larger area's history, including the Indian River Lagoon's pre-contact and proto-historic native population, the 1715 Spanish Plate Fleet wreck and salvage operations, French colonial activity on Florida's northern Atlantic seaboard, and the inlet's 19<sup>th</sup> and 20<sup>th</sup> century fish camps.

All thirteen of the recorded sites represent Sebastian Inlet's lengthiest yet least well-understood history –that of the peoples who lived here before European arrival. Eleven of the thirteen sites are prehistoric, shell middens and one sand mound, while the two historic sites also contain shell middens. Archaeological evidence suggests cultural continuity in the area, from the Orange Period (circa 2000 – 500 B.C.) through the Malabar 1 and 2 Periods (circa 500 B.C. to 800 A.D. and 800 A.D. to 1763 A.D.), including the colonial-period Ais Indians. The Malabar tradition ceramics include both the chalky, plain and decorated St. Johns pottery found to the north, and the plain sand-tempered Glades pottery to the south, reflecting an area of transition or interaction between the neighboring Glades and St. Johns cultures (Milanich 1994). Shell middens that run the length of the peninsula indicate that inhabitants of the Indian River Lagoon were foragers, unlike the St. Johns agriculturalists to the north, living in larger villages near wetlands while harvesting marine and riverine resources from single-use or seasonal campsites in the surrounding area. Sand mounds and human burials reflect some degree of ceremonialism and ritualism, although not as elaborate as found in

South Florida. Excavated sites in and nearby the park have contained shellfish and other faunal remains, hearths, ceramics, human remains, and utilitarian and decorative worked shell and bone. Four of the five terrestrial sites just outside park boundaries are prehistoric sites.

According to the Florida Master Site File, ten of the thirteen prehistoric sites lay along the coastline in the beach dune, coastal strand and maritime hammock natural communities. Highway realignment since original recordation of the sites makes their exact location uncertain. The other three-recorded sites lie along coves on the Indian River Lagoon coastline. The park also contains known but unrecorded sites, and additional sites in unsurveyed areas are suspected. It is unknown how representative this site distribution pattern is given the lack of a systematic archaeological survey of the area. Known sites may simply correlate with areas that have already been examined, or represent chance discoveries encountered during other activities. A predictive model of archaeological site location developed for Brevard County determined that the entire peninsula possessed a high probability for containing archaeological sites and furthermore, that every type of physiographic environment in the peninsula, except the surf zone, possessed this probability (Bense and Phillips 1990). The swampy nature of the Indian River Lagoon shoreline may have dissuaded investigators to date; however, one of the oldest known sites in the Indian River area is located along the lagoon just outside the park, dating to the Orange Period with its fiber-tempered ceramics, now partially inundated by higher sea levels. According to State Archaeologists, the high numbers of sites on the peninsula indicate a concentrated pre-Columbian occupation (CARL 2003).

Two of the park's thirteen recorded sites are historic sites with prehistoric components. One is a tentatively identified homestead or mosquito control ditch located near the Indian River Lagoon, and the other is the renowned 1715 Spanish survivors' camp that stretches across a narrow portion of the peninsula near the park's southern boundary. The park's McLarty Museum is located on-site, interpreting the catastrophe and recovery efforts, and the larger historical and political context, including Native American and European interactions evidenced by the mix of historic and aboriginal archaeological material. There are three underwater shipwreck sites just offshore, not under Division management; two are remnants of wrecked Spanish Plate Fleet ships, and one an early 20<sup>th</sup> century vessel. The park also contains structural remains and debris associated with late 19<sup>th</sup> through mid 20<sup>th</sup> century fishing camps and squatter habitations. It is uncertain at this time which qualify as historic, or what significance any possess. See Addendum 6 for basic site information.

Many of the prehistoric sites along the peninsula, including ones now within park boundaries, were documented by Irving Rouse during his 1944 "survey of Indian River archaeology," sponsored by the Yale Peabody Museum (Rouse 1951). Rouse compiled all available data on known sites, based largely on local informants, and from his own

limited reconnaissance survey, site visits and study of private and museum collections. Of the nine sites in the park that Rouse recorded, two were brought to his attention by Albert T. Anderson, a local landowner, and five by Charles D. Higgs, a winter resident of the area. Both men had conducted amateur excavations of a number of these sites, as had other amateurs from the late 19<sup>th</sup> century on, the type, extent and documentation of which are unknown. Several artifact collections associated with these early investigations are housed at the Florida Museum of Natural History in Gainesville, Florida, (formerly the Florida State Museum); a collection may also exist at the Museum of Natural History as well, associated with Charles S. Allen's excavations of 8BR124 in 1893. Archaeologists Rouse, John Goggin, and Hale Smith, a student field crew, and local amateurs visited several of the park sites during the mid to late 1940s in connection with the Indian River survey, documenting sites' observable extent and conducting very limited subsurface testing, with the exception of the more substantial trenching of a shell midden north of the inlet (8BR125). The information from this survey comprises the bulk of what we know to this day about most of the sites in the park.

Three sites received greater attention in the late 1960s. In 1966, midden and human remains eroding from a beach deposit exposed by low tides prompted excavations by individuals associated with the company that held salvage rights to the area. In 1967, the Central Florida Archaeological Society, a local branch of the Florida Anthropological Society, systematically excavated a large shell midden (8BR125) north of the inlet to sterile ground with permission from then owner Jack Foote (CFAS 1969). The site revealed evidence of habitation, including a possible hearth, postholes and *in situ* deposits of ceramic sherds dating to the Malabar 2 period. Also in 1966 – 1967, State Archaeologist Carl Clausen excavated the 1715 Spanish Fleet Survivors and Salvagers Camp, donated to the state by local landowner Robert McLarty, recovering artifacts and data from this and nearby sites and shipwrecks to develop interpretive exhibits for the park's new treasure museum.

There has not been an intensive, systematic archaeological survey of the Indian River Lagoon. In the half century since Rouse's seminal work, amateur and professional archaeologists, as well as treasure hunters, have identified more sites and excavated a few, counties have developed predictive site location models, CRM firms have surveyed sites slated for development, and state archaeologists have helped public land managers protect sites. The Division has conducted or sponsored no further research, survey or excavation in the park since Clausen in the late 1960s, with the exception of limited shovel testing during archaeological monitoring of park improvements. Eleven of the park's thirteen recorded archaeological sites were recorded before the state park was established; the two since were recorded in the 1990s by agency staff who encountered them while in the field on other business.

With the exception of the National Historic Landmark 1715 Survivors' and Salvagers'

Camp, the significance of sites in the park is mostly unknown. The 2003 CARL (Conservation and Recreational Land) Survey of the Archie Carr Sea Turtle Refuge just to the north of the park found that the prehistoric sites in the refuge, and other similar sites nearby, appeared to “form a settlement complex strategic to exploiting resources from the Atlantic and the Indian River.” State Archaeologists stated that this complex of sites is likely eligible for listing on the National Register of Historic Places (Glowacki, Newman and Gensler 2003).

The size and current condition are also unknown for most sites, and for a few, their location too. During a 1997 assessment of recorded sites, park staff relocated as many sites as possible, updated location and condition information, identified observable threats, and noted recent activity in the area. At that point, some sites were vegetated while others had recently been cleared of exotics; sites to the south of the inlet were eroding along their coastal edge, while areas to the north were accreting; some had long ago been impacted by road and parking lot construction; and one had recently been looted after being covered in a local newspaper article. It is unknown, however, how seriously the park’s archaeological sites have been impacted by these various phenomena and how much decline, if any, sites have suffered over the years.

In addition to archaeological sites, the park also possesses artifacts excavated from sites in the park, related nearby sites, and sites further afield along Florida’s Atlantic coast. Almost all of the park’s archaeological artifacts are located in interpretive exhibits in the McLarty Treasure Museum. The artifact collection is primarily related to the 1715 Spanish Plate Fleet, recovered from nearby underwater shipwreck sites, the park’s Survivors and Salvagers Camp (8IR26), and the Higgs site (8IR24) just south of the park. Many of these artifacts are on loan to the park from the Division of Historic Resources (DHR), Florida Department of State. Loan renewal is based on conducting periodic inventory and condition assessment, and ensuring the safety of artifacts via sufficient security and housekeeping measures. Other artifacts are on loan from private collectors, or have been donated to the museum by such. The artifacts are in a climate-controlled environment, and are in relatively stable condition. An exception is a large anchor conserved years ago by DHR, whose protective coating is starting to fail. See the Museum Collection sections for related information.

Metal detecting is a popular sport in the area. The public is presently permitted to metal detect in the park between the high water mark and the toe of the dune along the coast. Two issues associated with metal detecting in the park are the unknown archaeological sensitivity of the coastline and conflicts between metal detectors and offshore treasure salvagers. As permitted by Division policy, park management has banned metal detecting in coastal areas with known archaeological sites, including the Cato Site and the 1715 Spanish Shipwreck and Salvagers Camp. The park’s coast has never been surveyed to assess its archaeological sensitivity, however; future survey, which should be prioritized, may support restricting the activity in even more areas of

the park. This stretch of Florida is known as the Treasure Coast because of the Spanish shipwrecks just offshore; however, the park does not promote metal detecting in the park for historic artifacts. Per state law, any artifacts found on state lands belong to the State of Florida and cannot be removed from the park, including those located by metal detectors in areas where the activity is permitted. Three state-issued, offshore treasure salvage contracts are presently held by private entities that each extend to the park's mean high water mark. In the past, metal detectors have inadvertently trespassed over this line into areas that these companies hold exclusive salvage rights. Some mechanism is needed to inform metal detectors of restrictions in regards to archaeological sites, and salvage companies' control of certain areas.

**Ethnographic resources.** Sebastian Inlet is renowned as a top fishing location. In addition to attracting sport and local fisherman, park lands have an historic association with a once thriving commercial fishing industry. This history and these lands have cultural significance for still living local communities. With construction of the Sebastian Inlet Fishing Museum in 2000, the park formally assumed a role in the preservation and interpretation of this history. In the process of developing interpretive displays for the museum, the park established or strengthened relationships with local families with ties to the industry, conducted oral history interviews, and collected objects and photographs that illuminate various aspects of the industry. The park manages the tangible material related to this history and culture as part of its museum collections, including oral history tapes and transcripts, fishing poles and other equipment, photographs and miscellaneous memorabilia. Museum staff actively collects additional material to round out its collection and augment its interpretation, and routinely interacts with individuals who have connections to this past.

Sebastian Inlet is also renowned as a top surfing location. The north jetty creates breaks that draw surfers from around the world; the park hosts an annual surf competition. While a much newer phenomenon in the area than fishing, surfing predates creation of the park, as does the sometimes contentious relationship between surfers and fishers. The park does not formally recognize surfing as a cultural or historical resource; in another decade or so, however, use of the area for this activity by this subculture will segue way into the historic, worthy of consideration as a candidate for preservation efforts.

**Historic structures.** The park does not presently contain any historic structures. While not historic yet, the McLarty Treasure Museum is unique for its 'starfish' design, with finger-like projections from a central hub. Preservation of this character-defining design should be considered during the planning of any new additions or alterations. Sebastian Inlet's jetties date to the first half of the 20<sup>th</sup> century, qualifying as historic structures whose significance, particularly as an example of engineering, is unknown. Because the Division's jurisdiction does not include them, however, responsibility for compliance lies elsewhere.



**Museum collections.** The park contains two museums –the McLarty Treasure Museum and the Sebastian Inlet Fishing Museum. The McLarty Museum was built in 1969 on land donated by Robert McLarty, on a portion of the site whose history it interprets, the 1715 Spanish Plate Fleet Survivors and Salvagers’ Camp. It was the donor’s intent that this facility be used to exhibit a certain percentage of the State’s share of treasure recovered from local Florida waters by permitted salvage companies. Security concerns have tempered the scale of the original endeavor. The museum still exhibits representative artifacts from the string of such camps and shipwrecks along the peninsula, however, as well as artifacts related to Florida’s French colonial activity that are displayed in separate cases, donated and loaned to the park by private collectors. Members of the museum’s Citizen Support Organization have donated some of this material, and embellished some displays with interpretive props. Artifact displays, narrative text and illustrations, paintings, an acclaimed documentary, and special event presentations are used to tell the story of the Treasure Coast. The park directly manages and oversees development of the museum building, collection and interpretative programming. Dedicated staff handles collection care, including loan and donation transfers and paperwork, the collection catalog and the cyclical cleaning of artifact cases and exhibit areas.

The Sebastian Inlet Fishing Museum was built in 2000 with sponsorship by Representative Sembler to commemorate, preserve and interpret the history of commercial fishing in the area. Because this history is of the recent past, this museum has the extra dynamic of being staffed and visited by people connected specifically to this local history and seafaring generally. Interpretation is largely accomplished through signage and reproduced historic images and industrial settings and equipment. Several exhibits incorporate authentic objects whose historical and cultural value differentiates them from interpretive props. These museum collection objects are mostly owned and managed by the museum’s Citizen Support Organization, who handle new acquisitions and donor stipulations. This museum, unlike the McLarty Museum, is directly overseen, operated and staffed by volunteers. Volunteer staff has augmented interpretive programming by new tours, exhibit cases, displays and hands-on activities.

## **RESOURCE MANAGEMENT PROGRAM**

### **Special Management Considerations**

#### **Timber Management Analysis**

Chapters 253 and 259, Florida Statutes, require an assessment of the feasibility of managing timber in land management plans for parcels greater than 1,000 acres if the lead agency determines that timber management is not in conflict with the primary management objectives of the land. The feasibility of harvesting timber at this park during the period covered by this plan was considered in context of the Division’s statutory responsibilities, and an analysis of the park’s resource needs and values. The

long-term management goal for forest communities in the state park system is to maintain or re-establish old-growth characteristics to the degree practicable, with the exception of early successional communities such as sand pine scrub and coastal strand.

A timber management analysis was not conducted for this park. The total acreage for the park is below the 1,000-acre threshold established by Florida Statutes.

### **Additional Considerations**

Since Sebastian Inlet State Park represents one of the last remaining populations of southeastern beach mice (SEBM), monitoring will continue, and all suitable habitats for this endemic subspecies should be burned periodically. This would include both the beach dune and coastal strand communities. The opportunities to reintroduce beach mice north of the inlet should be investigated for feasibility and desirability. In 2006, discussions occurred with USFWS about a possible reintroduction of mice, north of the park on USFWS property and on park property. In order for the reintroduction to be successful, habitat at the park is needed. A number of recommendations were made: 1) continue to control possible predators and feral cats, 2) increase herbaceous ground cover through mechanical treatment and prescribed fire and 3) improve suitable habitats, which would include both the beach dune and coastal strand communities where possible. The park follows all USFWS procedures for beach mice outlined in the Federal recovery plan for SEBM.

Increased protection and management for threatened and endangered shorebird species should continue and should expand into other areas of the park where habitat is available. Cooperation with local, state and federal agencies along with law enforcement is needed to ensure that resting, loafing and nesting birds are protected on the beaches within the park, especially in the cove west of the bridge, on the north side of the inlet, and on Coconut Point. The beach is heavily used by visitors for fishing, swimming, sunbathing, surfing and fitness. Often visitors will bring their pets to the beach with them even though pets are prohibited on the beach. Enforcement of the no pets on the beach policy is necessary in order to have successful shorebird nesting.

Enhancement of the protected zone at the tip of Coconut Point should begin as soon as possible since this area has proven to be a suitable area for beach-nesting birds. A plan has been written for this area and can be put into action when funds are secured. In order for the project to be a success, visitor access to the site will need to be restricted and enforced.

Biotically diverse Sabellariid worm reefs occur east of the park boundary, within the 400-foot sovereign submerged areas. Juvenile green turtles are known to use these reefs for protection and foraging. Research to determine faunal composition has been conducted and additional research should be encouraged. The condition of the reefs is not well known; however, they do appear to be affected by beach renourishment

projects. Following beach renourishment projects and storms, sand has covered them; this may result in death to some portions of the reef. With respect to beach renourishment projects, measures should be taken to insure that beach quality sand with a minimum of fine material is used; in addition, the amount of material placed on the beach and its slope should be minimized. The park needs to stress the importance of monitoring the reefs during renourishment projects. The best reefs within the vicinity of the park should be protected and are shown on the Reference Map.

**Protection of archeological resources.** The spit of land that Sebastian Inlet bisects is heavily impacted by natural forces, including tidal action and inclement weather. The resulting flooding, accretion, and erosion pose some of the most serious threats to archaeological sites given the coastal location of most. Three areas of active erosion have been identified in the park, including the Coconut Point area west of the campground, the entire Atlantic shoreline and the beach dune community south of the inlet. Archaeological sites in these areas require closer monitoring than more sheltered sites. The park's dynamic natural conditions routinely precipitate substantial beach renourishment projects that entail the addition of sand, heavy vehicle traffic, and occasional earth moving. As with any anticipated potential impact to archaeological sites, coordination with the Division of Historical Resources regarding compliance requirements is needed. Other potential impacts to monitor and mitigate as needed include erosive foot and ATV traffic across areas with known sites, vegetation removal and prescribed burns.

### **Management Needs and Problems**

1. The interaction between gopher tortoises and vehicles in the overflow parking area west of the cove will continue to be a problem with the demand for additional parking to meet the high recreational demands. Vehicles should be prohibited in portions of the field where tortoises are present according to FWC protection guidelines. A plan will need to be written for this area outlining all demands for this area such as species protection, groundcover enhancement and visitor use in the area.
2. Unauthorized access to the beaches along A1A south of the inlet continues to be a problem and may be a problem on the north side of the inlet following habitat restoration efforts. Access must be controlled by closing the numerous footpaths and directing visitors to authorized parking areas and park entrances. Fencing may be needed to control access and to allow restoration of the eroded footpaths to take place. Signage along State Road A1A and the primary dune may be necessary. The use of ATVs on park beaches is proving to be a problem. Those needing access to the beach using ATVs should receive permission from the park manager beforehand.
3. Funding needs to be secured in order to begin enhancement of the protected area at tip of Coconut Point for beach-nesting birds. Ruderal and exotic vegetation needs to be removed and access controlled. This may require fences, native

- plantings and public education.
4. The cove west of the bridge and north of inlet is a swimming beach; therefore, pets should be restricted from this area for public health and safety, water quality, and listed species protection. Law enforcement will be necessary in order to restrict pets from the area.
  5. Areas on the beach, around the cove, and on Coconut Point may be occasionally closed if the areas prove to be possible nesting and resting areas for listed shorebird species. The recreational demands at the park are so great that birds may not have the opportunity to begin to nest. Birds and visitors can both be in or on these areas if done according to FWC, USFWS, and the Florida Park Service's rules and guidelines.
  6. A professional archaeological survey is needed to re-locate previously recorded sites, identify not yet recorded sites and determine site boundaries, so that the park can know what to protect. Priority areas for this kind of archaeological survey work are the areas most impacted by erosion, exotic vegetation removal and beach renourishment projects.
  7. Regularly scheduled site visits to archeological sites are needed to monitor site condition, track condition changes over time and generate data useful for planning any needed preservation treatment. Baseline condition information should be compiled for the park's archaeological sites so that site decline can be measured and detected.
  8. Impacts to sea grass beds within the park boundaries should be limited to the extent possible due to their sensitive nature and rarity and the habitat for which they provide to wildlife. The park should work with CAMA to determine the appropriate protection measures that would take into consideration current and future visitor use.
  9. An interpretive plan is needed for the fishing museum to evaluate current exhibits and to guide future improvements.

### **Management Objectives**

The resources administered by the Division are divided into two principal categories: natural resources and cultural resources. The Division primary objective in natural resource management is to maintain and restore, to the extent possible, to the conditions that existed before the ecological disruptions caused by man. The objective for managing cultural resources is to protect these resources from human-related and natural threats. This will arrest deterioration and help preserve the cultural resources for future generations to enjoy.

#### **Natural Resources**

1. Conserve, protect and manage natural communities, significant habitat and ecological systems.
  - A. Survey for exotic plant and animal species and continue the exotic species removal program

- B.** Continue and expand the prescribed fire program to maintain fire as an ecosystem process with emphasis on maintaining the current condition of the coastal strand and beach dune habitats south of the inlet while restoring these communities to the north of the inlet
  - C.** Seek funding for additional staff to aid in the preparation, implementation, and evaluation of resource management
  - D.** Monitor natural community restoration projects to adaptively manage habitats
  - E.** Close unauthorized foot paths which occur throughout the beach dune and coastal strand habitat to the north and south of the inlet and replant with native herbaceous vegetation
  - F.** Control unauthorized access and prevent additional erosion
  - G.** Educate visitors on all projects and changes to the park to promote the park and it's programs
- 2.** Restore, monitor and protect the hydrology of the park to the greatest extent practicable.
- A.** Work with SJRWMD to obtain ground and surface water quality and quantity data
  - B.** Determine the feasibility of restoring the original hydroperiod to the tidal swamps by working with local mosquito control districts
  - C.** Control and limit stormwater runoff into adjacent wetlands along A1A, park drives, easements, and other areas
- 3.** Maintain or increase populations of listed plant and animal species occurring on the park.
- A.** Explore opportunities for reintroducing the southeastern beach mouse to the north side of the inlet
  - B.** Expand and restore beach mouse habitat
  - C.** Survey and monitor for wintering and nesting shorebirds and establish protected resting, loafing and nesting areas where needed throughout the year. Work with FWC and local agencies on shorebird protection issues.
  - D.** Prohibit pets from all park beach areas
  - E.** Control access to Coconut Point during shorebird breeding season and after enhancement
  - F.** Work with SID to encourage more appropriate timing and frequency for future renourishment projects that allow for successful sea turtle nesting and to protect sensitive beach mouse and shorebird habitat
  - G.** Survey and monitor populations of gopher tortoises
  - H.** Protect gopher tortoises in the field west of the cove by controlling access and developing a plan for this area
  - I.** Continue flora and fauna surveys
- 4.** Restore highly altered or severely impacted natural communities.
- A.** Mechanically treat severely overgrown, fire suppressed coastal strand communities to the north of the inlet. A narrow buffer may be needed to control unauthorized access

- B. Seek funding to initiate the enhancement of the Coconut Point protected zone for beach-nesting birds according to the developed plan
  - C. Develop a written plan for the field west of the cove that takes into consideration all demands for this parcel
  - D. Restore the area around the cove by removing exotics and replanting with natives to give a more natural appearance for visitors to enjoy
5. Provide environmental education and enhance public appreciation for elements of natural and cultural diversity.
- A. Continue to operate both the McLarty Treasure Museum and the Sebastian Fishing Museum
  - B. Expand interpretive programs and field trips for the general public and school groups to raise awareness of the local flora and fauna, including what is needed for management
  - C. Train additional volunteers as tour guides
  - D. UTAP designated park trails and update interpretive signage as appropriate

**Cultural Resources**

1. Develop and implement an archaeological site condition-monitoring program.
  - A. Establish a reasonable site visit schedule
  - B. Train staff or volunteers to conduct condition assessments
  - C. Adopt a standardized condition assessment form to ensure data collection consistency
  - D. Maintain permanent files for each site for condition data, and other documentation related to the physical change or treatment of sites.
2. Protect recorded and unrecorded archaeological sites.
  - A. Prioritize avoiding or minimizing site disturbance during improvement and resource management projects
  - B. Reduce or eliminate other threats to the extent possible
  - C. Apply approved treatment to preserve or stabilize sites
3. Conduct archaeological surveys in order to locate sites, determine boundaries, document condition, assess significance, evaluate the archaeological sensitivity of the coast and distinguish between historic and non-historic surface remains.
  - A. Prioritize archaeological survey needs
  - B. Identify what can be accomplished in-house
  - C. Pursue grant funding for additional professional work
  - D. Solicit volunteer support where appropriate
4. Coordinate preservation, research and interpretation efforts for archaeological sites with local entities.
  - A. Encourage permitted research by accredited regional universities and colleges
  - B. Encourage volunteer work by local chapters of the Florida Anthropological Society, as appropriate
  - C. Foster a relationship with the new regional office of the Florida Public Archaeology Network

- D. Solicit support from Brevard and Indian River Counties for archaeological surveys and pursuit of grant money
- 5. Develop a Museum Manual for the Sebastian Inlet Fishing Museum.
  - A. Clarify roles and responsibilities of the park and the CSO
  - B. Clarify operational procedures
  - C. Clarify collection management arrangements
- 6. Develop an Interpretive Plan and Scope of Collection Statement for the Sebastian Inlet Fishing Museum.
  - A. Revisit the purpose of the museum and identify additional interpretive goals
  - B. Consult with individuals with ties to the local commercial fishing industry
  - C. Evaluate current exhibits based on the new interpretive plan
  - D. Evaluate current museum collection, and identify collecting priorities based on the new interpretive plan
- 7. Address preservation, conservation and interpretation issues at the McLarty Museum.
  - A. Purchase equipment to produce a continuous record of temperature and humidity, and evaluate and remedy significant fluctuations
  - B. Replace UV-protective sleeves on lights; reconfigure or replace current lighting as needed to protect photographic material
  - C. Consult with DHR for permission to and instructions on touching up conserved metal artifacts
  - D. Secure funds for a general conservation assessment, via the Conservation Assessment Program or a private conservator, to assess the collection and museum environment, and for specific evaluation of the paintings.
  - E. Develop a written security plan for the museum
- 8. Recognize and interpret the significance of the park's cultural resource and stewardship activities.
  - A. Solicit the involvement of associated living communities in the development of related preservation and interpretive projects
  - B. Post protective signage near heavily trafficked archaeological sites if useful.
  - C. Nominate significant sites to the National Register of Historic Places
  - D. Keep permanent park history files on the park's development and history of surfing, fishing and other traditional uses; Park Interpretive plans should be updated to promote public education of these activities, the park's history and prehistory, archaeological research of the peninsula, and preservation issues

### **Management Measures for Natural Resources**

#### **Hydrology**

The St. Johns River Water Management District (SJRWMD) is responsible for water control in the unit as well as in the surrounding drainage basin. SJRWMD monitors quality and quantity of ground water in the park. Management will comply with best management practices to maintain and improve the existing water quality on site and

will take measures to prevent soil erosion and other impacts to water resources.

Discussions with the local mosquito control districts should be initiated to address the altered hydroperiod for the tidal swamp caused by the levees. The tidal swamps are not influenced by the natural tidal influx, possibly affecting water quality, flora and fauna, and other unknown aspects of the park. A feasibility study should be done to determine if any of the mosquito ditches and levees could be removed to restore hydrologic conditions to near shore communities.

### **Prescribed Burning**

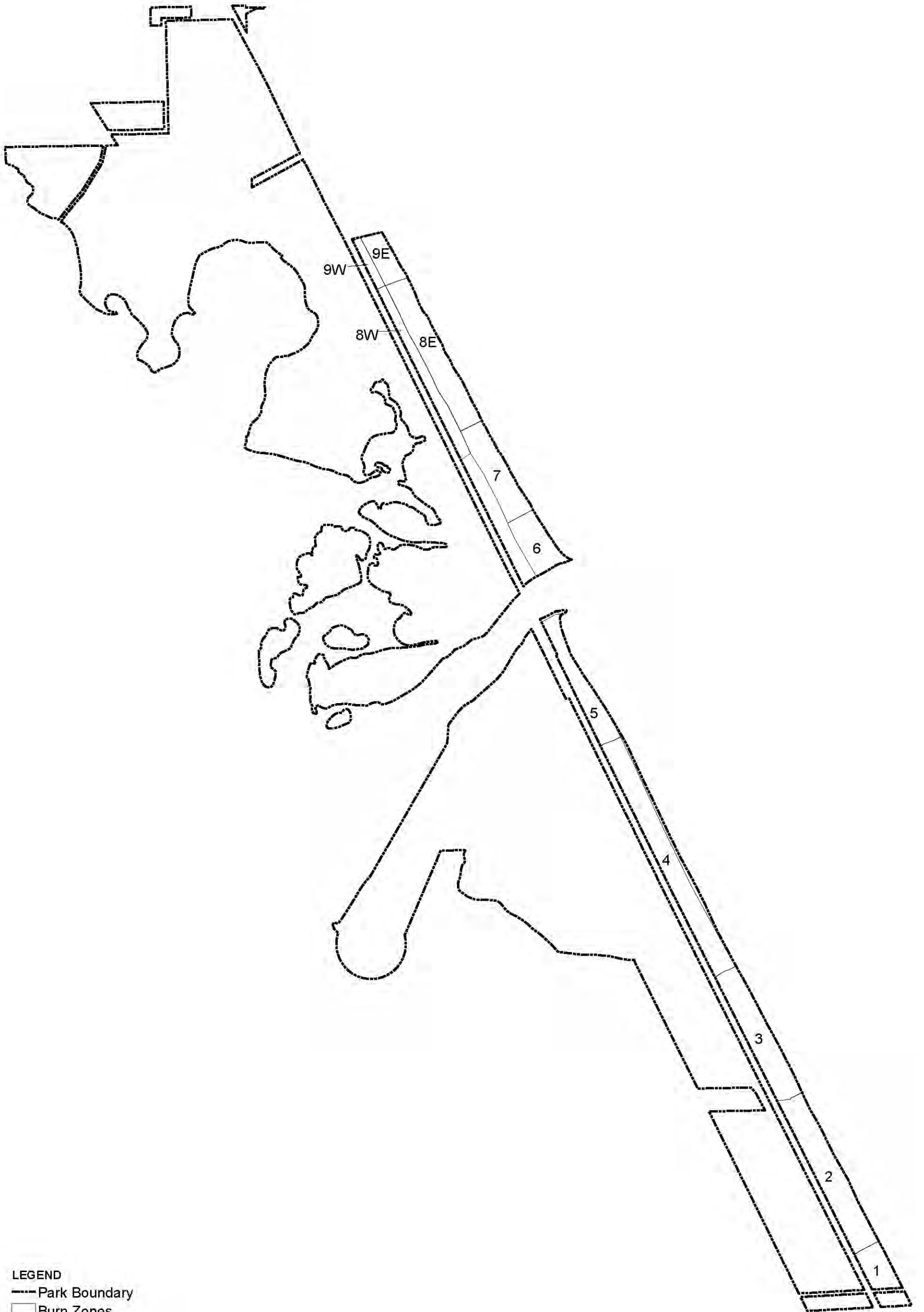
The objectives of prescribed burning are to create those conditions that are most natural for a particular community, and to maintain ecological diversity within the unit's natural communities. To meet these objectives, the park is partitioned into burn zones, and burn prescriptions are implemented for each zone. The park burn plan is updated annually to meet current conditions. All prescribed burns are conducted with authorization from the Department of Agriculture and Consumer Services, Division of Forestry (DOF). Wildfire suppression activities will be coordinated between the Division and the DOF.

There are 92 total burn acres at this unit divided into 11 burn zones (see Burn Zone Map). Both fuel reduction and restoration burns are necessary. Since a majority of the burn acres is dominated by coastal strand and beach dune, all zones will have a target fire return interval of five to seven years. Shorter intervals may be necessary to help restore overgrown zones to a more natural state based on desired herbaceous cover and densities. Fire will be the main restoration tool, but mechanical removal of hardwoods and palmettos and the use of herbicides will be used when needed. These issues will be addressed in the annual burn proposal developed by the park manager and biologist.

Restoration of the coastal strand community north of the concession building on the north side of the inlet began in January 2007. Only a portion of the habitat was mowed in preparation of a prescribed fire and for a possible reintroduction of the southeastern beach mouse. A burn was performed a month later and the results were impressive. This had been the first time that this zone had ever been burned and fuel loading was a concern as well as vertical structures of the habitat. The vertical structure before mowing was on average 6 to 15 ft but after mowing, the average height was 18 in with a few unmowed patches. When other zones north of the inlet are treated, unauthorized access will be a concern. It may be necessary to leave a visual barrier and/or fence along A1A to prevent access.

The USFWS manages a small portion of habitat directly north of the park, west of A1A, located within the Archie Carr National Wildlife Refuge. Due to budget cutbacks and staff reductions, it has been difficult for the Service to find resources to restore this portion of coastal strand and dune to its historic condition. As the park continues to





LEGEND  
--- Park Boundary  
□ Burn Zones

restore portions of habitat immediately adjacent to the USFWS, it will become more and more difficult to conduct prescribed burns. The Park Service and the USFWS have begun to discuss the possibilities of how the park can aid in the management of this parcel.

Restoration has been ongoing on the south side of the inlet in the coastal strand community. Numerous burns have been conducted with the vegetation responding favorably. Sea grape is dense around the base of the bridge and in some areas south of the day use parking area. Mowing may be needed to reduce the height of the sea grape and encourage the reproduction of grasses and forbs as long as the removal of the vegetation does not cause disorientation of nesting sea turtles.

Future development and placement of facilities should consider the prescribed fire program. The existing concession building and restrooms are located within burn zones and that may be difficult to burn around. Resource management would be much improved if future facilities were placed within existing footprints or in disturbed areas.

### **Designated Species Protection**

The welfare of designated species is an important concern of the Division. In many cases, these species will benefit most from proper management of their natural communities. At times, however, additional management measures are needed because of the poor condition of some communities, or because of unusual circumstances that aggravate the particular problems of a species. To avoid duplication of efforts and conserve staff resources, the Division will consult and coordinate with appropriate federal, state and local agencies for management of designated species. Specifically, data collected by the FWC and USFWS as part of their ongoing research and monitoring programs will be reviewed periodically to inform management of decisions that may have an impact on designated species at the park.

Surveys to monitor the distribution and abundance of the southeastern beach mouse at Sebastian Inlet will continue. At this time, the population appears to be concentrated in the most recently burned areas of coastal strand habitat on the southern part of the park.

Surveys to monitor the population of gopher tortoises should also continue, as should road kill surveys to document the impact of roads on wildlife, particularly State Road A1A that bisects the park going from north to south and is known to be a significant source of wildlife mortality in the park.

Sea turtle nest monitoring and index nesting beach surveys will also be continued following the statewide protocols established by the FWC. Additionally, predator removal projects will be implemented if it is determined that excessive predator populations are having negative impacts on sea turtles and their nests as well as other

listed species such as beach mice and shorebirds.

Shorebird surveys will also be conducted. Staff will continue to follow Standard Resource Management Procedure Number 13 and Resource Management Guideline Number 3, concerning the protection of colonial breeding birds. Under this procedure and guideline, recommended setback distances from colonies will be implemented, boundary signs will be posted and the area will be monitored. The recommended setback distance for least tern colonies is 180 meters (590 feet) from the perimeter of the outermost nests or individual birds. Important bird resting areas may also be protected under this resource management procedure and guideline. Fencing to exclude visitors may be necessary during the nesting season. On Coconut Point, mechanical removal of vegetation may be required before shorebird nesting season. Where nesting occurs on spoil areas, both the resource management procedure and guideline allow for the deposition of new spoil if necessary, well in advance of the expected onset of breeding.

### **Exotic Species Control**

Exotic species are those plants or animals that are not native to Florida, but were introduced because of human-related activities. Exotics have fewer natural enemies and may have a higher survival rate than do native species, as well. They may also harbor diseases or parasites that significantly affect non-resistant native species. Consequently, it is the strategy of the Division to remove exotic species from native natural communities.

**Plants.** All exotic species pose real or potential threats to the integrity of the unit's natural communities and are in conflict with the Division goal of preserving and maintaining examples of the natural Florida. Brazilian pepper is the invasive exotic plant species that currently poses the greatest threat to the resources of this unit. Other invasive exotics, such as Australian pine, simpleleaf chastetree (*Vitex trifolia*), golden pothos (*Epipremnum pinnatum*), chandelier plant (*Kalanchoe tubiflora*), castorbean (*Ricinus communis*), creeping oxeye (*Wedelia trilobata*), papaya (*Carica papaya*), mother-in-law's tongue (*Sansevieria hyacinthoides*), and balsampear (*Momordica charanita*) also occur at this unit and should be removed to prevent further infestations. Brazilian pepper and Australian pine are the main priorities for removal activities; an exotic removal plan is updated annually and is actively carried out by park staff. Grants and other sources of funding must be sought to hire contractors in order to aid in the control of exotic plant infestations. Staff time is limited so the park often relies on seasonal employees to scout for and to treat infestation in difficult locations.

**Animals.** Several exotic animal species are found at this unit, including black rat (*Rattus rattus*), nine-banded armadillo (*Dasypus novemcinctus*), brown anole (*Anolis sagrei*), Indo-pacific gecko (*Hemidactylus garnotii*), and northern curlytail lizard (*Leiocephalus carinatus armouri*). Of these, the black rat is the most widespread. It occurs in and around buildings, the jetties and the coastal strand habitat, primarily where

Brazilian pepper has been established. Black rats could compete with southeastern beach mice and eastern wood rats for similar food sources; therefore, rats should be removed whenever possible. Feral cats are occasionally a problem and are removed immediately upon detection. It may prove beneficial to the park to hire private contractors to deal with hard to capture species when funds are available to do so.

### **Problem Species**

Problem species are defined as native species whose habits create specific management problems or concerns. Occasionally, problem species are also a designated species, such as alligators. The Division will consult and coordinate with appropriate federal, state and local agencies for management of designated species that are considered a threat or problem.

Raccoons (*Procyon lotor*) are problem species during sea turtle and shorebird nesting season when they predate nests and destroy eggs, nestlings and hatchlings. They are also problematic in the campground where they scavenge for food from campers. Education of the park visitor about the consequences of feeding wildlife should continue. Periodically, the least cautious and most destructive raccoons may need to be removed from the beach dune areas and the campground.

### **Management Measures for Cultural Resources**

The management of cultural resources is often complicated because these resources are irreplaceable and extremely vulnerable to disturbances. The advice of historical and archaeological experts is required in this effort. Managers of state lands must coordinate any land clearing or ground disturbing activities with the Division to allow for review and comment on the proposed project. Recommendations may include, but are not limited to approval of the project as submitted, pre-testing of the project site by a certified archaeological monitor, cultural resource assessment survey by a qualified professional archaeologist, modifications to the proposed project to avoid or mitigate potential adverse effects.

Projects such as additions, exterior alteration or related new construction regarding historic structures must also be submitted to the Division of Historical Resources for review and comment by the Division's architects. Projects involving structures fifty years of age or older, must be submitted to this agency for a significance determination. In rare cases, structures under fifty years of age may be deemed historically significant. These must be evaluated on a case-by-case basis.

Adverse impacts to significant sites, either archaeological sites or historic buildings, must be avoided. Furthermore, managers of state property should prepare for locating and evaluating historic resources, both archaeological sites and historic structures.

The significance of most archaeological sites in the park is unknown. Evaluation of

significance enables a park to know the cultural and historical value, and research potential, of the archaeological resources in its charge. As relates to the practical matter of site protection, the park is unable to prioritize and concentrate its protection efforts to sites of known significance versus those with no remaining integrity. As relates to the role of preserving and interpreting Florida's heritage, the park possesses a largely unevaluated and untapped resource.

Many of the archaeological artifacts on display are metal objects, much of which has undergone conservation treatment in the past. Protective coatings have a life span, and may require periodic touch-up. Other collection-related concerns related to archaeological artifacts are included in the Museum Collection section.

**Ethnographic resources.** The park is, to some extent, a steward of a living group's heritage. The Sebastian Inlet Fishing Museum is the primary mechanism through which the park researches, preserves and interprets the area's commercial fishing history, and maintains connection to the local fishing community. Development of new interpretive displays tends to drive the collection of historic and ethnographic objects, photographs and other material. At present, the museum does not possess a plan to guide interpretive program development beyond the original exhibits installed for its grand opening. These exhibits were based, in part, on the contributions of families that had once been prominent in the local industry. An interpretive plan is needed to evaluate current exhibits, and to guide future improvements. The planning process should identify what other aspects of this history are significant to the local community and warrant interpretation, and what additional museum collections are needed for effective interpretation. This process can honor the park's associated communities by calling on them not just to contribute content, but participate in design.

The park should consider broadening its scope of collection to include material related to the history of surfing in the area. The park does not presently interpret this history to the public, nor does it have available interpretive facilities to do so. While collecting objects may be beyond the interpretive plans and resource management capacity of the park, collecting archival material can preserve record of this long-time recreational use of the area and distinct subculture.

**Museum collections.** The McLarty Museum's artifact collection is at the museum's core, and in addition to the direct care regime, is affected by interpretive and structural issues. Interpretation, which makes artifacts meaningful to visitors, needs further development for subsets of the collection. This includes additional research, consideration of rotating displays and living history events, refurbishment and correction of existing signage and displays, and installation of new interpretive media. The building itself, its envelope, systems and displays, also directly affect the physical wellbeing of artifacts. While the interior is climate controlled, summers are extremely hot and humid. The door from the main gallery to the boardwalk overlooking the site

is opened frequently during business hours, having an unknown affect on the desired temperature and humidity inside the museum. Some mechanism is needed to produce a continuous record of temperature and humidity fluctuations in order to assess the impact of the door on the gallery, and the functioning of the HVAC generally. If indicated by monitoring results, corrective action should be taken to stabilize the environment inside to protect artifacts. Other environmental threats to the collection are mold and UV light. Visible patches of mold on the ceiling, and reports of carpenter ants, indicate possible moisture problems with the roof that need identification and remedy. Displayed artwork requires examination by a conservator, particularly the large rendition of a hurricane-tossed ship, as it has been treated for mold in the past and may be molding again. Fading of displayed historic photographs signifies the need to assess and remedy the harmful affects of light, and/or replace the original photos with copies.

The Sebastian Inlet Fishing Museum is newer and less well established, and its collection is smaller. From its start, the museum has been dependent on FPS collaboration with locals and volunteers, both for interpretive program development and for staffing. Volunteers from the museum's Citizen Support Organization (CSO) handle the day-to-day operation of the gallery, and have expanded the scope of its interpretation and collection via the addition of new displays and narrative. The CSO accepts, owns and manages most of the museum's historic object collection. The museum is where the CSO and the park's purview overlap; no formal agreement exists, however, between the park and CSO regarding the museum. A Museum Manual is needed that clarifies the roles and responsibilities of each, and delineates procedures, in regards to different aspects of the museum's operation and development. Additionally, an interpretive plan is needed to identify and prioritize the museum's goals; its development can honor and bring together the input and contributions of volunteers and associated local communities with the park's preservation and interpretive goals. Both of these documents will have a direct bearing on museum collections management and care, and are necessary to proceed in development of a Scope of Collection Statement.

## **Research Needs**

### **Natural Resources**

Any research or other activity that involves the collection of plant or animal species on park property requires a collecting permit from the Department of Environmental Protection. Additional permits from the Florida Fish and Wildlife Conservation Commission, the Department of Agriculture and Consumer Services, or the U.S. Fish and Wildlife Service may also be required.

Research on sea turtles and sea turtle nesting has been ongoing at the park for many years; due to the importance of this area to nesting sea turtles, current and future

research should be encouraged. Monitoring of the physical attributes of nourished and natural beaches has been conducted since the mid-1990s; this information continues to yield valuable information for management purposes. Some limited geological research has also been conducted; more should be encouraged. Research on marine invertebrates, seagrass and worm reefs has been ongoing, in some cases since the late 1980s. Further research should be done to document the effects of beach renourishment on the worm rock reefs. A feasibility study should be done to determine if any of the mosquito ditches and levees could be removed to restore hydrologic conditions and nearshore communities. Some recent research on mangrove planting techniques within the park may prove to be valuable for mangrove community restoration. Research has also been conducted on royal tern migration based on band recoveries.

Surveys to monitor gopher tortoise population size and status should continue, as should monitoring of the southeastern beach mouse, shorebirds, and marine turtles. Additional surveys to determine the presence and population size of diamondback terrapin and eastern wood rat should be conducted when possible.

### **Cultural Resources**

In the past, there have been several very limited or narrowly focused cultural resource research projects at the park. There are no current or ongoing cultural resource research projects. Further research and survey opportunities should be pursued when possible, especially if the recommended combined Level I and Level II archaeological survey locates any prehistoric or historic sites.

Staff should draft a proposal for a combined Level I and Level II archaeological survey to identify, protect and preserve currently unknown prehistoric and historic cultural resources at the park and to resurvey the known recorded archaeological sites, utilizing GPS to fix locations.

Research is needed on the cultural periods that occupied the park or the surrounding area throughout prehistory and history: Archaic, perhaps Mount Taylor, Orange, Transitional, St. Johns and Glades, First Spanish, British, Second Spanish, Territorial, and Seminole.

Research is also needed on the history of the Spanish treasure fleets, the 1715 shipwreck, the survivors and salvors camp, the settlement of the Indian River Lagoon and the Sebastian area, the development and decline of the commercial fishing industry, and the various inlet projects.

Research is also needed to document the history of land acquisition, development and operation of the park and its two unique museums.

### **Resource Management Schedule**

A priority schedule for conducting all management activities that is based on the purposes for which these lands were acquired, and to enhance the resource values, is contained in Addendum 7. Cost estimates for conducting priority management activities are based on the most cost effective methods and recommendations currently available.

### **Land Management Review**

Section 259.036, Florida Statutes, established land management review teams to determine whether conservation, preservation, and recreation lands titled in the name of the Board of Trustees of the Internal Improvement Trust Fund (board) are being managed for the purposes for which they were acquired and in accordance with a land management plan adopted pursuant to s. 259.032, the board of trustees, acting through the Department of Environmental Protection (department). The managing agency shall consider the findings and recommendations of the land management review team in finalizing the required update of its management plan.

This park was subject to a land management review on April 27, 2006. The review team made the following determinations:

1. The land is being managed for the purpose for which it was acquired.
2. The actual management practices, including public access, complied with the management plan for the park.





## LAND USE COMPONENT

### INTRODUCTION

Land use planning and park development decisions for the park system are based on the dual responsibilities of the Division of Recreation and Parks. These responsibilities are to preserve representative examples of original natural Florida and its cultural resources, and to provide outdoor recreation opportunities for Florida's citizens and visitors.

The general planning and design process begins with an analysis of the natural and cultural resources of the unit, and then proceeds through the creation of a conceptual land use plan that culminates in the actual design and construction of park facilities. Input to the plan is provided by experts in environmental sciences, cultural resources, park operation and management, through public workshops, and environmental groups. With this approach, the Division objective is to provide quality development for resource-based recreation throughout the state with a high level of sensitivity to the natural and cultural resources at each park.

This component of the unit plan includes a brief inventory of the external conditions and the recreational potential of the unit. Existing uses, facilities, special conditions on use, and specific areas within the park that will be given special protection, are identified. The land use component then summarizes the current conceptual land use plan for the park, identifying the existing or proposed activities suited to the resource base of the park. Any new facilities needed to support the proposed activities are described and located in general terms.

### EXTERNAL CONDITIONS

An assessment of the conditions that exist beyond the boundaries of the unit can identify any special development problems or opportunities that exist because of the unit's unique setting or environment. This also provides an opportunity to deal systematically with various planning issues such as location, regional demographics, adjacent land uses and park interaction with other facilities.

#### Existing Use of Adjacent Lands

The lands north and south of Sebastian Inlet State Park include a mix of single family residential and condominium developments, a few commercial areas, and numerous conservation lands. The Atlantic coastal area of east-central Florida has been a focus of conservation land acquisition programs for many years. The Archie Carr National Wildlife Refuge, which is composed of multiple units along a twenty-mile stretch of coast north and south of the park, was established to protect sea turtles that nest here. South of the park is the country's first national wildlife refuge, Pelican Island National Wildlife Refuge. This refuge was created in 1903 by Theodore Roosevelt to protect its bird rookeries. To the west of the park is the Indian River – Malabar to Vero Beach

Aquatic Preserve that was established to protect the living waters of the Indian River Lagoon, a shallow lagoon estuary. Also near the park are various protected lands acquired and managed by Brevard and Indian River Counties, some of which provide public beach access. Of note, Brevard County opened the Barrier Island Sanctuary Management and Education Center in 2008 that is located less than two miles north of the park. This new educational facility will focus on the habitats of the barrier island, sustainable living and the sea turtles found in the Archie Carr Refuge. Brevard County also operates a large camping area at Long Point Park on an island in the Indian River Lagoon adjacent to the northwest corner of the park.

Collectively, these managed areas protect a significant range of natural communities and habitats and support an important sample of Florida's natural biodiversity. In addition to their importance to the protection of natural habitat, the Division of Recreation and Parks recognizes the importance of these diverse natural and cultural resource areas as assets to the growing success of nature and heritage based tourism in this area of the state.

### **Planned Use of Adjacent Lands**

Continued development of residential and commercial properties north and south of the park is expected, to a limited extent. Future development will likely result in additional traffic along State Road A1A, increased threat of exotic species invading the park, additional constraints on the prescribed burning program within the park, and higher demand for the park's recreational resources. Generally, the growth management regulations now in place in both Brevard and Indian River Counties will serve to protect the natural resources and surface and ground water systems of the park.

In recent years, a paved bicycle path along State Road A1A was completed that connects to the park entrances from both the north and south. An increase in bicycle and pedestrian activities has resulted. Division staff will advocate for a safe bike/pedestrian crossing when the Florida Department of Transportation designs a replacement bridge scheduled for 2015. In addition, as part of the recent Scenic Highway designation, signage along the state road within the park may need to be altered to comply with guidelines adopted with the Scenic Highway management plan. Staff will coordinate these activities with the appropriate parties, as needed.

### **PROPERTY ANALYSIS**

Effective planning requires a thorough understanding of the unit's natural and cultural resources. This section describes the resource characteristics and existing uses of the property. The unit's recreation resource elements are examined to identify the opportunities and constraints they present for recreational development. Past and present uses are assessed for their effects on the property, compatibility with the site, and relation to the unit's classification.

## **Recreation Resource Elements**

This section assesses the unit's recreation resource elements those physical qualities that, either singly or in certain combinations, supports the various resource-based recreation activities. Breaking down the property into such elements provides a means for measuring the property's capability to support individual recreation activities. This process also analyzes the existing spatial factors that either favor or limit the provision of each activity.

### **Land Area**

Sebastian Inlet State Park provides the typical recreational resources of Florida's coastal barrier islands with beach frontage on the Atlantic Ocean. The primary recreational activities of fishing, surfing, swimming and boating occur along the shoreline and within the surrounding waters. The upland communities of the park consist of beach dune, coastal strand, maritime hammock and estuarine tidal swamp. These areas provide numerous opportunities for land-based recreation including camping, hiking, biking, picnicking, bird watching and interpretive programs.

### **Water and Shoreline Area**

The waters bordering the park include three miles of shoreline on the Atlantic Ocean, the Indian River Lagoon along its western boundary, and the Sebastian Inlet that bisects the park. The beach shoreline is extremely popular for surfing. The north jetty creates breaks that draw surfers from around the world. The beach is also popular for swimming, sunbathing, shoreline fishing, snorkeling and strolling. Bordering the lagoon side of the park is mangrove tidal swamp. The marina and boat ramp area provide access to this water body that is used by fishermen, pleasure boaters and canoe/kayakers. Along the 500-foot wide inlet, the park's shoreline is heavily used by fishermen. In particular, the jetties at the mouth of inlet that extend into the ocean have produced many impressive catches.

### **Natural Scenery**

The outstanding natural scenery of the park includes views from the beach, the jetties north and south of the inlet, and the bridge that crosses the inlet.

### **Significant Wildlife Habitat**

The beach dunes, coastal hammock community and the mangrove shoreline along the Indian River Lagoon provide excellent wildlife habitat. In winter, thousands of birds gather to feed on the wide tidal flats. In summer, sea turtles nest along the park beach, and on adjacent beachfronts. Manatees can be seen feeding in the Indian River. In addition, rare worm reefs can be found in certain areas just off the beach. Interpretive programs in the park attempt to capitalize on these recreational resources, while protecting the animal species through visitor management and education.

### **Archaeological and Historical Features**

Sebastian Inlet State Park is also a significant cultural resource site, with prehistoric

components and the site of the salvage camp from the hurricane wreck of the 1715 Spanish treasure fleet. The McLarty Treasure Museum provides an exceptional collection of artifacts from the Spanish wreck site, and interprets both the wreck and the subsequent salvage operation. In addition, the Sebastian Fishing Museum is devoted to the rich cultural history of the local fishing industry.

### **Assessment of Use**

All legal boundaries, significant natural features, structures, facilities, roads and trails existing in the unit are delineated on the base map (see Base Map). Specific uses made of the unit are briefly described in the following sections.

#### **Past Uses**

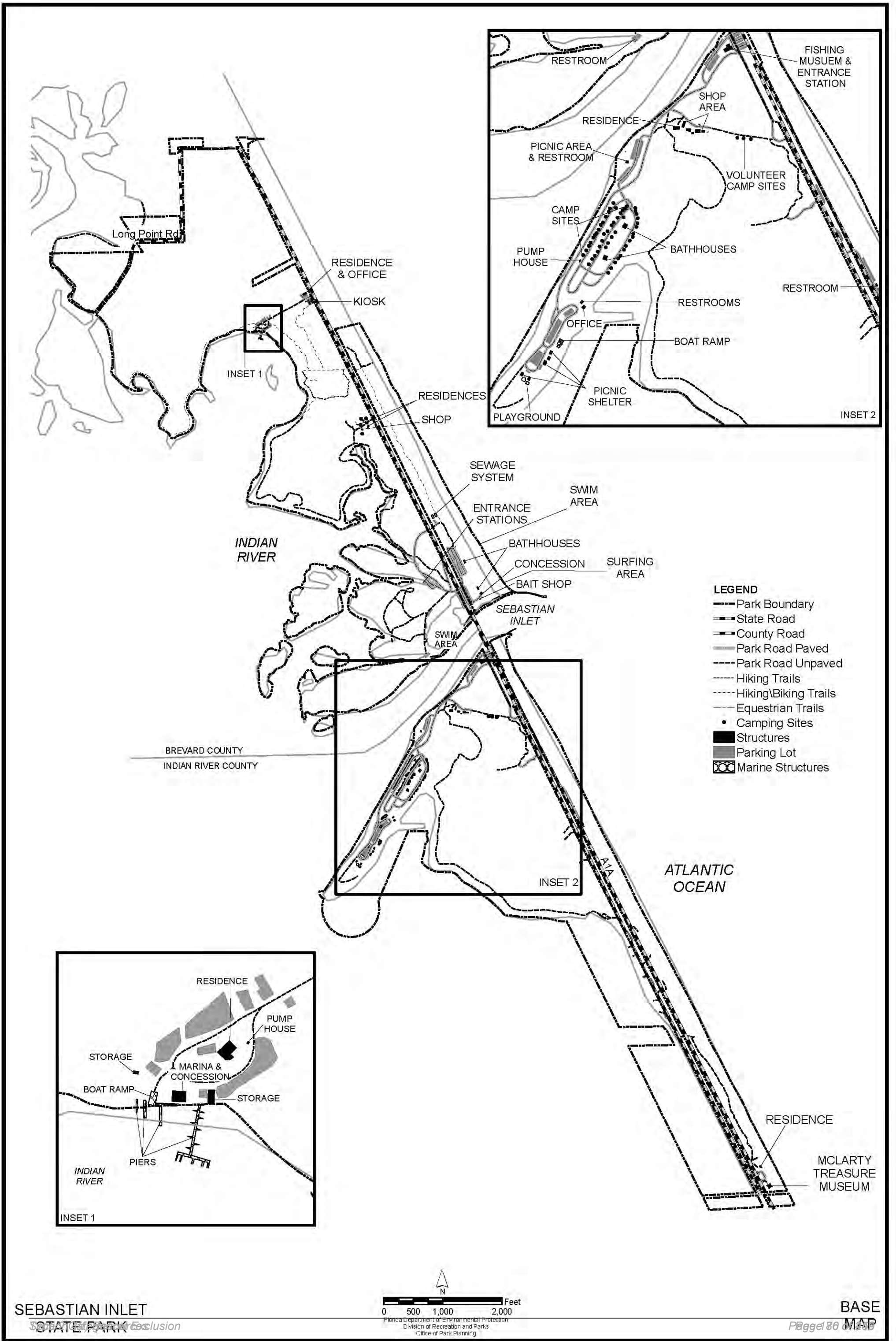
Before state acquisition, portions of the park were private lots used for mobile home sites. Indian River County managed a camping area at the same location currently developed for that purpose before the inception of the park.

#### **Future Land Use and Zoning**

The Division works with local governments to establish designations that provide both consistency between comprehensive plans and zoning codes and permit typical park uses and facilities necessary for the provision of resource-based recreation opportunities.

The Future Land Use designations for the park property within Brevard County include Recreation, Public Conservation and Residential 1 (Brevard County, 2005). The zoning classifications for the park property within Brevard County include Government Managed Lands (GML), General Use (GU) and Environmental Areas (EA). The permitted uses within the GML – Parks and Conservation designation allows active and passive recreation as well as temporary or permanent conservation uses. The areas of the park designated as GML include the administration office area, marina area, and beach concession area. The estuarine tidal swamp areas of the park are classified EA. The purpose of this classification is to conserve natural resource functions and features by retaining lands and waters in their pristine character and condition, but permit uses which are compatible with or which shall enhance or restore the functions and features of such natural resources. The remainder of the park within Brevard County is classified as GU. This zoning classification encompasses rural single-family residential development, or unimproved lands for which there is no definite current proposal for development, or land in areas lacking specific development trends. Parks and public recreational facilities are permitted uses in both GML and GU.

The park property within Indian River County is designated Recreation on the Future Land Use Map (Indian River County, 2007). The local zoning for almost all of the park property within Indian River County, RS-1, allows public parks as an administrative permit use and retreats and camps as a special exception. At the extreme southern end of the park, there are a few parcels including the McLarty Treasure Museum zoned as

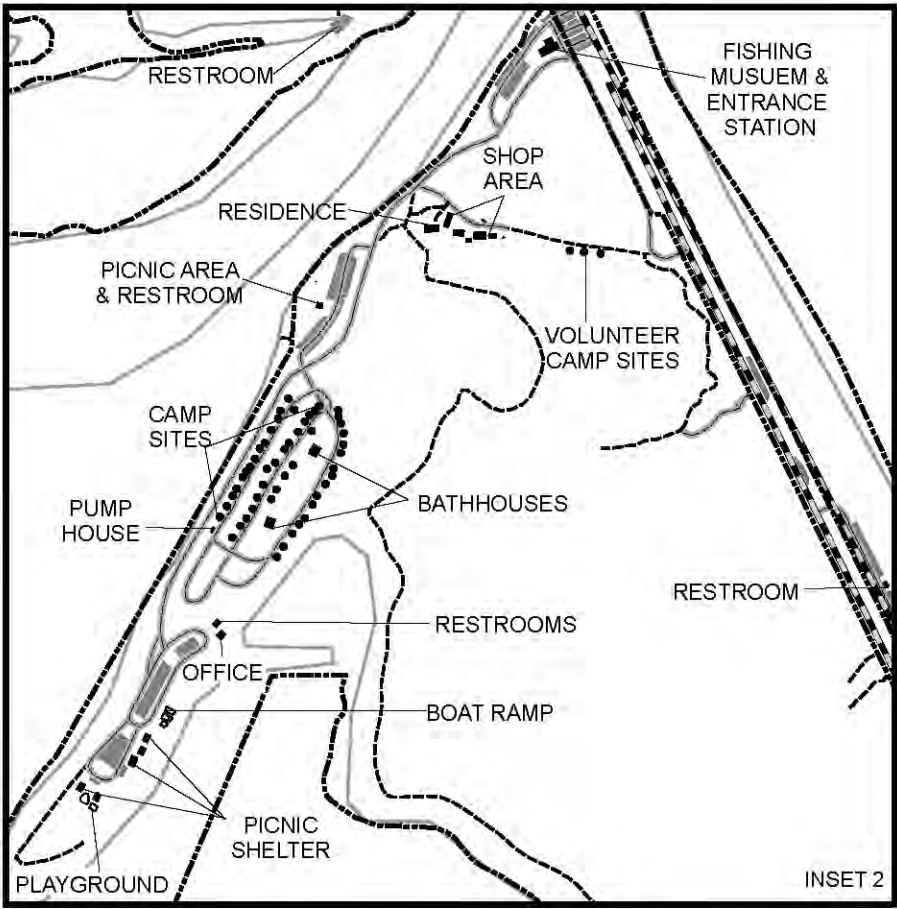


Long Point Rd

INSET 1

RESIDENCE & OFFICE  
KIOSK

RESIDENCES  
SHOP



INSET 2

INDIAN RIVER

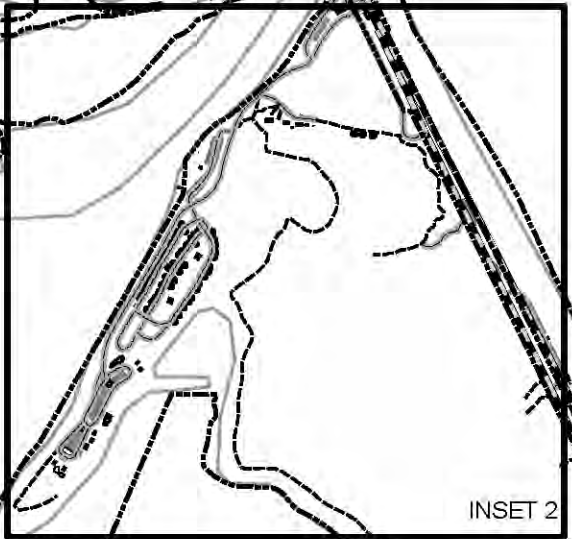
SEWAGE SYSTEM  
ENTRANCE STATIONS  
BATHHOUSES  
CONCESSION  
BAIT SHOP

- LEGEND**
- Park Boundary
  - == State Road
  - == County Road
  - == Park Road Paved
  - Park Road Unpaved
  - Hiking Trails
  - Hiking\Biking Trails
  - Equestrian Trails
  - Camping Sites
  - Structures
  - Parking Lot
  - Marine Structures

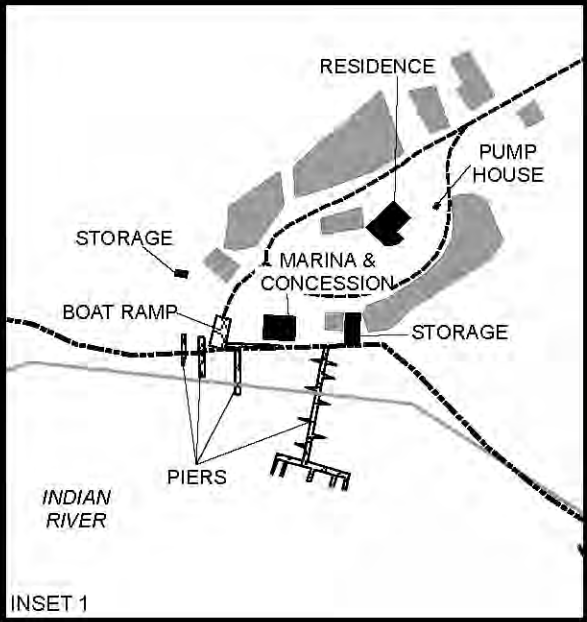
BREVARD COUNTY  
INDIAN RIVER COUNTY

SEBASTIAN INLET

ATLANTIC OCEAN



INSET 2



INSET 1

RESIDENCE

MCLARTY TREASURE MUSEUM

RS-3 and A-1 which also allow public parks as an administrative permit use.

### **Current Recreational Use and Visitor Programs**

Sebastian Inlet State Park is an extremely popular location for saltwater fishing and surfing. Since the area directly north of the north jetty is favored by both fishermen and surfers, conflicts do arise on occasion. Other available recreational uses at the park include swimming, sunbathing, camping, hiking, biking, picnicking, shelling, snorkeling, scuba diving, boating, canoe/kayaking, bird watching, and interpretive programs. The park also contains two museums, the McLarty Treasure Museum and the Sebastian Fishing Museum. In addition, several major surfing competitions are held here every year.

The park recorded 712,256 visitors in fiscal year 2006/2007 ranking it sixth among all the parks in Florida. Visitation remains heavy throughout the year but peaks March through July. This park is unique in that it remains open 24 hours a day to allow fishing access to the jetties. By Division estimates, the FY 2006/2007 visitors contributed \$32.3 million in direct economic impact and the equivalent of 645 jobs to the local economy (Florida Department of Environmental Protection, 2007).

### **Other Uses**

The original Sebastian Inlet was dug by hand between 1886 and 1895, but closed by a storm soon after. A permanent inlet was opened in 1924, allowed to close during World War II and reopened after the war. Today, the inlet is maintained by the Sebastian Inlet District (SID). The two jetties, which are very popular with fishermen and other park visitors, are managed under agreements between the Division and the SID. Spoil and pipeline easements are in place to support the periodic dredging operations necessary to maintain the inlet. Division staff meets with the SID frequently to coordinate inlet work with the resource management and visitor service responsibilities of the park.

State Road A1A traverses the full length of the park, and a paved bicycle path has been constructed within the state road right-of-way through the park.

During the summer, an overnight surf camp for children utilizes the volunteer campsites adjacent to the maintenance area on the south side of the inlet. The remainder of the year the campsites are reserved for park volunteers.

### **Protected Zones**

A protected zone is an area of high sensitivity or outstanding character from which most types of development are excluded as a protective measure. Generally, facilities requiring extensive land alteration or resulting in intensive resource use, such as parking lots, camping areas, shops or maintenance areas, are not permitted in protected zones. Facilities with minimal resource impacts, such as trails, interpretive signs and boardwalks are generally allowed. All decisions involving the use of protected zones are made on a case-by-case basis after careful site planning and analysis.

At Sebastian Inlet State Park, the beach dunes, marine unconsolidated substrate, coastal strand, maritime hammock, tidal swamp and offshore worm reef communities have been designated as protected zones. The western portion of Coconut Point is an additional protected zone established for nesting shorebirds (see the Conceptual Land Use Plan).

### Existing Facilities

Most of the facilities at this park are 20 to 35 years old and require considerable maintenance due to heavy use and the harsh coastal environment. Ongoing maintenance and repair budgets sufficient to deal with these factors are needed to provide a quality park experience for visitors. The following is a list of existing facilities.

#### Recreation Facilities

##### **Administrative Office/"Spanish House" Area**

Administrative office	Portable toilet
Interpretive kiosk	Stabilized parking (48 spaces)

##### **Sebastian Inlet Marina**

Marina office/store	Storage building
Boat slips (22)	Stabilized parking (14 spaces)
Boat ramp	

##### **North Jetty/Beach Use Area**

Ranger station	Bait and tackle store
Beach restrooms (2)	Medium shelter
Dune boardwalks (3)	Scattered picnic tables
Snack bar/gift shop building	Parking (226 spaces)

##### **Swimming Cove/Overflow Area**

Swimming area	Unimproved parking (approximately 40 spaces)
Portable toilets (2)	Overflow parking field (approximately 200 spaces)

##### **South Inlet Shoreline**

Sebastian Fishing Museum	Fish cleaning table
Camper registration office	Scattered picnic tables
Fishing dock	Restroom
	Parking (190 spaces)

##### **Camping Area**

Standard campsites (51)	Bathhouses (2)
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**Coconut Point Area**

Boat ramp (3 lanes)	Playground
Non-motorized watercraft launching beach	Restrooms (2)
Large picnic shelters (4)	Office
	Parking (66 spaces)

**South Beach Use Area**

Bathhouse	Parking (80 spaces)
Dune boardwalk	

**McLarty Treasure Museum**

Museum building	Parking (28)
Dune boardwalk w/overlook	

**Trails**

Hammock Nature Trail (1 mi.)	Bike trail (4 miles)
------------------------------	----------------------

**Support Facilities**

**North Maintenance Area**

Equipment storage building

**South Maintenance Area**

Shop building	Sheds (2)
Equipment storage buildings (3)	Greenhouse

**Residences (6)**

**Miscellaneous**

Sewage treatment plant

**Park Roads**

Paved (1.25 mile)	Unpaved (0.5 mile)
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**CONCEPTUAL LAND USE PLAN**





The following narrative represents the current conceptual land use proposal for this park. As new information is provided regarding the environment of the park, cultural resources, recreational use, and as new land is acquired, the conceptual land use plan may be amended to address the new conditions (see Conceptual Land Use Plan). A detailed development plan for the park and a site plan for specific facilities will be developed based on this conceptual land use plan, as funding becomes available.

**Site Planning and Design Process**

During the development of the unit management plan, the Division assesses potential impacts of proposed uses on the resources of the property. Uses that could result in



**Legend**

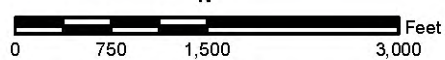
-  PROPOSED FACILITIES
-  DEVELOPMENT AREAS
-  PARK BOUNDARY
-  PROTECTED ZONE

INDIAN RIVER LAGOON

SEBASTIAN INLET

CAMPBELL COVE

- EXPAND PARKING & ADD RESTROOM
- REDEVELOP MARINA AREA
- REPLACE STORAGE BUILDING & ADD 2 RESIDENCES
- REDEVELOP CONCESSION AREA & REPLACE DUNE BOARDWALKS
- REPLACE SHOP & MAINTENANCE FACILITIES
- RENOVATE RESTROOM & BOARDWALK
- EVALUATE MUSEUM FOR POSSIBLE RENOVATIONS
- POTENTIAL BEACH ACCESS - PARKING (40 CARS MAX)
- REPLACE FISHING DOCK
- CAMPING AREA IMPROVEMENTS
  - RENOVATE EXISTING CAMPSITES (51)
  - ADD NEW STANDARD CAMPSITES (20)
  - ADD TENT ONLY CAMPSITES (5)
  - ADD BATHHOUSE
- FUTURE USE AREA
  - PRIMITIVE GROUP CAMP
  - CABIN DEVELOPMENT (6)
- SWIMMING COVE IMPROVEMENTS
  - ADD PICNIC SHELTERS (8)
  - ADD RESTROOMS (2)
  - STABILIZED PARKING (100 CARS)
- ENHANCE OVERFLOW PARKING FIELD
- SID SPOIL EASEMENT - PROPOSED TO BE ABANDONED
- SID SPOIL EASEMENT - PROPOSED TO BE GRANTED



unacceptable impacts are not included in the conceptual land use plan. Potential impacts are more thoroughly identified and assessed through the site planning process once funding is available for the development project. At that stage, design elements, such as sewage disposal and stormwater management, and design constraints, such as designated species or cultural site locations, are more thoroughly investigated. Advanced wastewater treatment or best available technology systems are applied for on-site sewage disposal. Stormwater management systems are designed to minimize impervious surfaces to the greatest extent feasible, and all facilities are designed and constructed using best management practices to avoid impacts and to mitigate those that cannot be avoided. Federal, state and local permit and regulatory requirements are met by the final design of the projects. This includes the design of all new park facilities consistent with the universal access requirements of the Americans with Disabilities Act (ADA). After new facilities are constructed, the park staff monitors conditions to ensure that impacts remain within acceptable levels.

### **Potential Uses and Proposed Facilities**

The existing recreational activities provided to the public at Sebastian Inlet State Park are appropriate and should be continued. As with all of the older units of the park system, improvements to park facilities and infrastructure are needed for the Division to fulfill its responsibilities to provide outdoor recreation, protect, and enhance the natural and cultural resources of the park. Renovations, replacements and other improvements of the facilities and use areas are recommended by this plan to enhance visitor experience. In addition, this plan also recommends the expansion of certain use areas, as described below.

#### **Recreation Facilities**

**Administrative Office/"Spanish House" area.** Across State Road A1A from the park's administrative office is a very popular and well-known surfing destination called "Spanish House." Surfers park their vehicles in the stabilized parking area adjacent to the administrative office and walk across the highway to the beach. As discussed in the Optimum Boundary section, this particular stretch of beach is not within the park boundary, but instead, is part of the Archie Carr National Wildlife Refuge. The Division will work towards establishing a Memorandum of Understanding with the U.S. Fish and Wildlife Service to manage this property. If such a management arrangement is established, this plan recommends creating a new beach access a short distance to the south of the existing foot trail, expanding and redesigning the parking area to accommodate up to 100 vehicles, constructing a restroom with outdoor shower, and providing scattered picnic tables adjacent to the parking area. Coordination with the Florida Department of Transportation is also needed to provide flashing signals, a marked pedestrian crosswalk and reduced speed limit on State Road A1A at this location for visitor safety.

**Sebastian Inlet Marina.** The facilities at Sebastian Inlet Marina are in disrepair and in

need of a complete overhaul. In addition, this area has not reached its potential for visitor use. Future planning and design should determine how best to improve this area to support its intended recreational use. A site plan is recommended.

Consideration should be given to revamping the marina buildings, docking facilities, seawall, boat ramp, residence, road, septic system and increasing the capacity of the boating facilities and parking area. The possibility of providing a marine pump-out station, establishing some tent camping in this area and providing dockage for a rescue/law enforcement vessel will also be explored. Ideally, the marina structures should be constructed in a vernacular architectural style in keeping with the rustic character associated with the many small “fish camps” that once flourished along the Indian River. The services to be offered in the marina area should include expanded boat and kayak rentals, snacks and sales area, a designated area for fishing and manatee observation, and possible boat tours and fishing trips. Commercial uses of the marina should be limited to those related to the recreational programs of the park. Long-term slip rentals and boat storage are not uses appropriate to this facility.

Several factors will influence the new design of the docking facilities, including the lack of a dredged channel and draft limitations within Campbell Cove, the hard coquina surface bottom and the desire to analyze the needs of park visitors.

**North Jetty/Beach use area.** The beach use area at the north jetty is the most popular location in the park. This area is attractive to surfers, fishermen, and beach goers. The park’s main concession operation is located here, consisting of a small snack bar/gift shop and bait and tackle store. These concession buildings are showing serious signs of aging and are no longer adequate to accommodate customer growth and serve their expanding needs. This plan recommends developing a site plan for this area and replacing these structures with new, expanded facilities. Services to be provided in this area should continue to offer food service with a dining area, retail sales, beach equipment rentals and fishing supplies.

A complete redesign of the boardwalk system including outdoor shower stations should be incorporated into the site plan for the area. The two beach restrooms in this area of the park also require some attention; appropriate renovations are recommended.

**Swimming Cove/overflow parking area.** The small swimming cove on the north shoreline of the inlet is very popular and should be improved for public access to enhance its use as a sheltered swimming area suitable for families with small children. Recommended facilities include up to eight small and medium-sized picnic shelters, two restrooms with outdoor showers, universal access to the picnic facilities and the shoreline, and native landscaping. The road leading to the cove swimming area should be either stabilized or paved and parking should be established along the road shoulder for up to 100 vehicles.

The overflow-parking field, north of the swimming cove, is used regularly during weekends and holidays. During large special events, nearly the entire field can be full of vehicles. The organization and efficiency of this parking area could be greatly improved if sections were stabilized, circulation route established, and wheel stops added. Barriers for vehicles should also be placed around gopher tortoise burrows that occupy this area. Improvement of this area should follow the recommendations of the proposed plan discussed in the Resource Management Component that will evaluate all the demands for this specific area such as species protection, groundcover enhancement, SID easements and visitor use.

**South Inlet shoreline.** In recent years, many amenities have been added along the south inlet shoreline to enhance the visitors' fishing experience. This plan recommends replacing the small, L-shaped fishing dock with a longer dock that parallels this portion of the inlet shoreline. The existing, adjacent parking lot is currently underutilized and could accommodate the increased use of the dock. Potential also exists for providing a park store near this fishing facility and the adjacent camping area. This location could service fishermen, campers and other day-use visitors. A decision on the park store requires further market analysis.

**Camping area.** Complete renovation of the existing 51-site camping area is recommended to bring the infrastructure up to modern standards, enhance the size and slope of each site, and improve the buffer between the sites. In addition, this plan recommends expanding the campground to the southwest into a previously disturbed area to provide an additional 20 to 25 campsites and a bathhouse. Approximately five of these new sites should be designed for tent camping only. This area had contained campsites in the past but those sites were relocated in preparation to construct rental cabins, a concept approved in the previous management plan. The Division has since decided not to proceed with cabin development at this location and believes camping expansion would result in greater public benefit for this area. As part of the camping area renovations and expansion, landscaping is recommended, where possible, to provide better separation, privacy and shade for each campsite.

**North Inlet Shoreline/new use area.** In the previous approved management plan, cabins were proposed for the western end of the existing camping area. During the planning process for this management plan, a location that is better suited for cabin development was identified within an old spoil deposition site along the north inlet shoreline. This new location is preferable because it is located within a previously disturbed area that would not affect an established use area while still providing scenic views of the inlet. An engineering study is recommended to determine the feasibility of building on this site and providing vehicular access. If feasible, six rental cabins are proposed along with the necessary utilities and access. Since development of the cabins is not likely in the near future, this plan recommends making the site available to serve as a primitive group camp in the interim. This group camp should be able to

accommodate organized groups of up to 30 campers. Recommended facilities include a campfire circle, designated tent area, large shelter, restroom facilities and boardwalk access.

**Coconut Point area.** The shoreline north of the picnic area on Coconut Point provides a stabilized beach for launching non-motorized watercraft. This shoreline area is currently being repaired following hurricane damage. As part of future concession operations, this location would be ideal for renting catamarans and other non-motorized vessels.

**South Beach use areas.** Proposed improvements to the existing beach use area south of the inlet include replacing the beach restroom and dune crossover as well as formalizing the two existing footpaths at the corner of the parking lot. The remaining informal footpaths in the vicinity will be eliminated.

Despite the availability of this 80-vehicle beach parking lot, many visitors choose to park along State Road A1A south of the inlet and access the beach through numerous, unauthorized foot paths that cross over the dunes. Consequently, these areas are more susceptible to blowouts and erosion due to the lack of vegetative cover. In an effort to discourage the use of these unauthorized paths, fencing and signage is proposed to control beach access and direct visitors to established parking areas. In addition, one new beach parking area is recommended south of the inlet with parking for up to 40 vehicles. This new beach access area should utilize one of the more popular footpaths located between the existing beach parking lot and the McLarty Museum.

**McLarty Treasure Museum.** The museum should be evaluated for possible upgrades and renovations. Consideration should be given to exhibit content, ADA compliance, improving the gift shop area and dedicating space for revolving exhibits and guest lectures.

**Miscellaneous.** As noted above, a paved bicycle path along State Road A1A now connects to the park entrances from both the north and south thus resulting in an increase in bicycle and pedestrian activity around the park. Unfortunately, the bike path ends at the park gates. This plan recommends exploring the ability to provide a separate bike path along the park roads at both park entrances to deliver bikes/pedestrians to each use area within the park.

### **Support Facilities**

**Administrative office area.** A 3-bay equipment storage building is recommended within the fenced compound adjacent to the administrative office.

**North maintenance area.** The 2-bay equipment storage building located in the maintenance area north of the inlet needs to be replaced.

**South maintenance area.** Most of the structures within the large maintenance area located south of the inlet need replacement. The list of proposed structures includes a 6-bay equipment storage building, 4-bay shop building, and another 4-bay equipment storage building.

**Residences.** Either two additional permanent residences or one duplex residence is needed at the north residence area to replace existing mobile homes.

**Miscellaneous.** Water and sewage collection systems are available both north and south of the park. Engineering studies are needed to determine the feasibility of connecting the park to these systems, and to determine the costs involved. A long-term goal of the park is to shift these infrastructure needs to off-site systems to reduce maintenance responsibilities and discontinue operation of the existing water wells, a sewage treatment plant and septic tank/drainfield disposal systems.

### **Facilities Development**

Preliminary cost estimates for the following list of proposed facilities are provided in Addendum 7. These cost estimates are based on the most cost-effective construction standards available at this time. The preliminary estimates are provided to assist the Division in budgeting future park improvements, and may be revised as more information is collected through the planning and design processes.

The following is a summary of facilities needed to implement the conceptual land use plan for Sebastian Inlet State Park:

**Administrative Office/“Spanish House” Area**

Medium restroom w/ outdoor showers	Stabilized parking expansion (up to 50 additional spaces)
Scattered picnic tables (8)	
Crosswalk and signs	

**Sebastian Inlet Marina**

Site plan	Evaluate boat ramp
Renovate/replace marina buildings	Evaluate residence
Repair seawall	Evaluate septic system
Replace docking facility	Parking expansion
	Road paving (0.25 mile)

**North Jetty/Beach Use Area**

Site plan	Redesign dune boardwalk system
Renovate/replace concessions buildings	Renovate beach restrooms (2)

**Swimming Cove/Overflow Parking Area**

Small picnic shelters (4)	Medium picnic shelters (4)
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**Swimming Cove/Overflow Parking Area**

Small restrooms (2)  
 Boardwalks (3)  
 Stabilized parking (up to 100 spaces)

Road stabilize/paving (0.25 mile)  
 Native landscaping  
 Overflow parking field enhancements

**North Inlet Shoreline/New Use Area**

Primitive group camp w/ pedestrian access

Cabin development (6) w/ vehicular access

**South Inlet Shoreline**

Replace fishing dock

**Camping Area**

Renovate camping area (51 sites)  
 Upgrade electric/ water/ sewer connections  
 New full-facility campsites (approximately 20 sites)

New tent sites (approximately 5)  
 New bathhouse  
 Native landscaping

**Coconut Point Area**

Potential non-motorized watercraft rental station

**South Beach Use Areas**

Replace restroom  
 Replace dune crossover

New stabilized beach parking area (40 cars)  
 Fencing (as needed)

**McLarty Treasure Museum**

Evaluate exhibit area

**Miscellaneous**

Bike paths (0.5 mile)

**Support Facilities**

3-bay equipment shelter  
 2-bay equipment shelter  
 4-bay shop building  
 6-bay equipment shelter

4-bay equipment shelter  
 Ranger residences (2)  
 Engineering study (water & sewer systems)

**Existing Use and Recreational Carrying Capacity**

Carrying capacity is an estimate of the number of users a recreation resource or facility can accommodate and still provide a high quality recreational experience and preserve the natural values of the site. The carrying capacity of a unit is determined by identifying the land and water requirements for each recreation activity at the unit, and then applying these requirements to the unit's land and water base. Next, guidelines are applied which estimate the physical capacity of the unit's natural communities to



withstand recreational uses without significant degradation. This analysis identifies a range within which the carrying capacity most appropriate to the specific activity, the activity site and the unit's classification is selected (see Table 1).

The recreational carrying capacity for this park is a preliminary estimate of the number of users the unit could accommodate after the current conceptual development program has been implemented. When developed, the proposed new facilities would approximately increase the unit's carrying capacity.

**Table 1--Existing Use And Recreational Carrying Capacity**

Activity/Facility	Existing Capacity		Proposed Additional Capacity		Estimated Recreational Capacity	
	One Time	Daily	One Time	Daily	One Time	Daily
<b>Beach Use</b>						
Swim, Sunbath, etc.	800	1600	80	160	880	1760
Surfing	300	600	100	200	400	800
<b>Fishing</b>	352	704			352	704
<b>Camping</b>						
Standard	408	408	200	200	608	608
Group Camp			30	30	30	30
<b>Picnicking</b>	220	440			220	440
<b>Trails</b>						
Hiking	10	40			10	40
Biking	32	64			32	64
<b>Boating</b>						
Motorized Vessels	242	242			242	242
Non-Motorized	80	160			80	160
<b>McLarty Museum</b>	60	240			60	240
<b>Fishing Museum</b>	60	240			60	240
<b>Cabins</b>			36	36	36	36
<b>TOTAL</b>	<b>2564</b>	<b>4738</b>	<b>446</b>	<b>626</b>	<b>3010</b>	<b>5364</b>

**Note:** Under the Beach Use category, the "Swim, Sunbath, etc." capacity includes swimming, sunbathing, beachcombing, snorkeling, and other beach related activities. For the two boating categories, the capacity figures refer to the number of people, not boats. In addition, occasional special events can draw large crowds in excess of 6,000 people.

## Optimum Boundary

As additional needs are identified through park use, development, research, and as adjacent land uses change on private properties, modification of the unit's optimum boundary may occur for the enhancement of natural and cultural resources, recreational values and management efficiency.

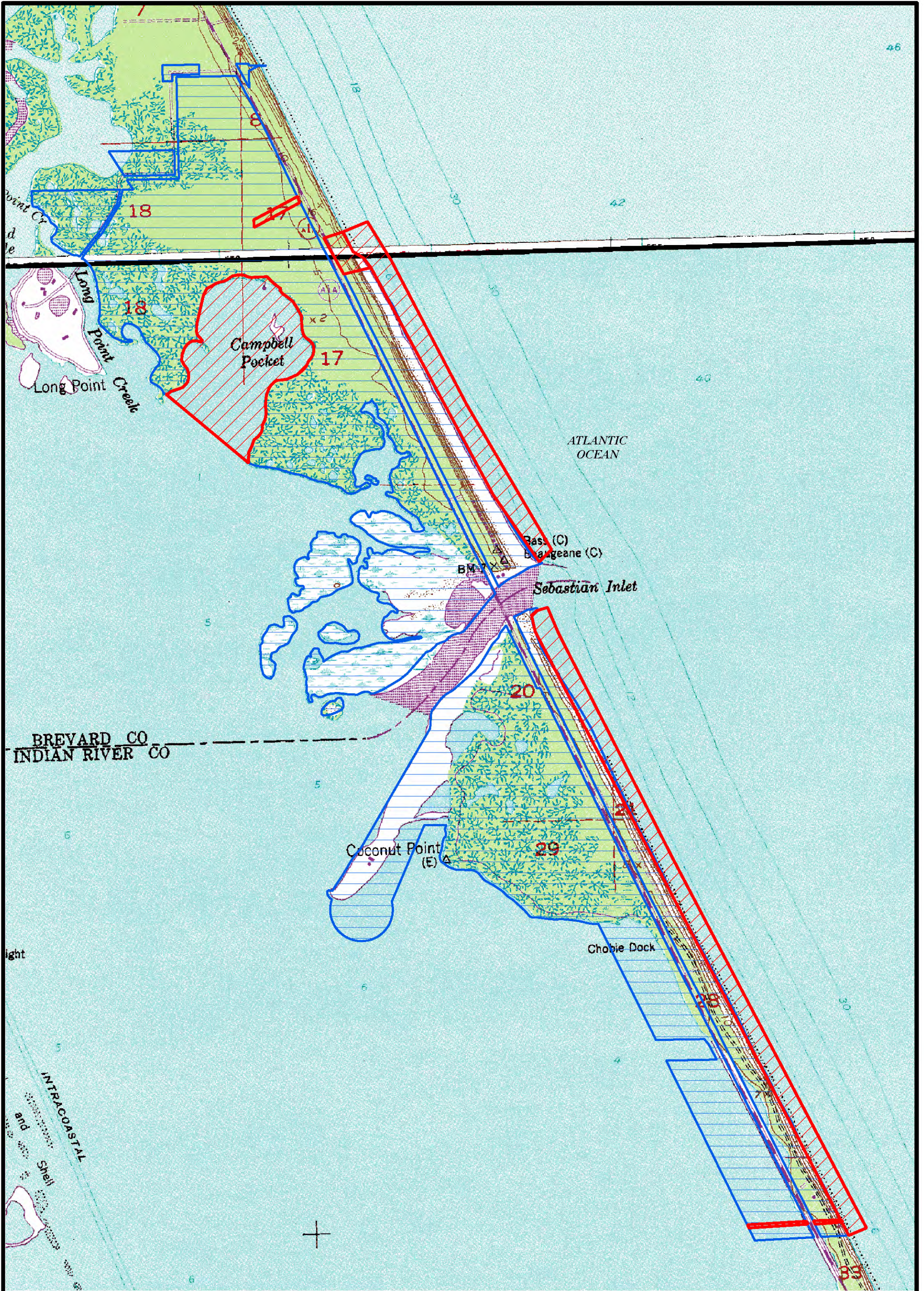
Identification of lands on the optimum boundary map is solely for planning purposes and not for regulatory purposes. A property's identification on the optimum boundary recreational activities.

The submerged land within Campbell Pocket is recommended for addition to the park boundary. This cove is home to the park's marina and supports ongoing recreational use such as boating, canoe/kayaking, fishing and manatee observation. The Optimum Boundary Map also identifies two, small out parcels for addition to the park.

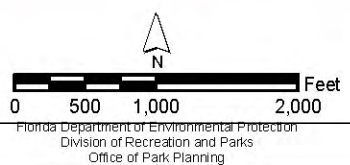
The beachfront property north of the current boundary, which is a non-contiguous parcel of the Archie Carr National Wildlife Refuge, should be considered for cooperative management through the implementation of a Memorandum of Understanding between the two agencies. As discussed under *Potential Uses and Proposed Facilities*, this section of beach is a popular destination for surfers and having management authority for this area would allow the Division to enhance its recreational use as well as coordinate resource management efforts.

The submerged lands along the Atlantic Ocean shoreline are recommended for including in the park boundary. The placement of these submerged lands within the boundaries of the park would allow park staff to enforce Florida Administrative Code 62D-2 within this new boundary that is proposed to stretch approximately 400 feet waterward of the mean high water line.

And, consideration may be given to releasing the two, small disjunct parcels at the north end of the park near the intersection of Long Point Road and State Road A1A. Due to their remoteness, these parcels might be better served under the management of another agency or entity, such as Brevard County or the USFWS.



SEBASTIAN INLET  
STATE PARK  
Special Use Parcel Exclusion



LEGEND  
 [Blue outline] Park Boundary  
 [Red outline] Optimum Boundary  
 OPTIMUM BOUNDARY MAP

**Addendum 1 – Acquisition History and Advisory Group Staff Report**



## Sebastian Inlet State Park Acquisition History

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**Purpose of Acquisition.** The State of Florida acquired Sebastian Inlet State Park to restore, conserve, protect and develop the property for the greatest good and benefit of the citizens of the state.

**Sequence of Acquisition.** On February 14, 1969, the Board of Trustees of the Internal Improvement Trust Fund (Trustees) obtained title to a 7-acre property constituting the initial area of Sebastian Inlet State Park. This property was donated to the State by Robert P. McLarty and his wife Dodo W. McLarty. Since this initial acquisition, the Trustees have acquired several individual parcels through a lease as well as through different land acquisition programs such as EEL, LATF, SOC and P2000 and added them to Sebastian Inlet State Park. Currently, the park is comprises 971.01 acres.

On September 4, 1970, the Trustees leased Sebastian Inlet State Park to the Florida Department of Environmental Protection, Division of Recreation and Parks (Division), under Lease Number 2457. Lease Number 2457 is a ninety-nine (99)-year lease and will expire on September 3, 2069.

According to Lease Number 2457, the Division manages Sebastian Inlet State Park for the purpose of preserving, developing, operating, and maintaining said lands and property for outdoor recreational, park, conservation and related purposes.

**Title Interest.** The Trustees holds fee simple title to Sebastian Inlet State Park.

**Special Conditions on Use.** Sebastian Inlet State Park is designated single-use to provide public recreation and other related uses. Uses such as water resource development projects, water supply projects, stormwater management projects, linear facilities and sustainable agriculture and forestry (other than those forest management activities specifically identified in this plan) are not consistent with this plan.

**Outstanding Reservations.** The Division's lease from the Trustees stipulates that all the property shall be used for public outdoor recreation and related purposes. Following is a listing of outstanding rights, reservations and encumbrances that apply to Sebastian Inlet State Park.

**Sebastian Inlet State Park Acquisition History**

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**Instrument:** .....Amended and Restated Memorandum of Agreement

**Instrument Holder:** .....Sebastian Inlet Tax District

**Beginning Date:**.....December 21, 2000

**Ending Date:**.....There is no specific ending date given.

**Outstanding Rights, Uses, Etc.:** .....The memorandum of agreement summarizes and restates all easements including, but not limited to, maintenance, construction, ingress and egress, and spoil disposal granted to Sebastian Inlet Tax District to use certain portions of Sebastian Inlet State Park.

**Instrument:** .....Lease Agreement (Right-of-way lands along State Road A-1-A and beneath the Sebastian Inlet Bridge)

**Instrument Holder:** .....State of Florida Department of Transportation

**Beginning Date:**.....April 23, 1976

**Ending Date:**.....April 22, 2071

**Outstanding Rights, Uses, Etc.:** .....The lease is subject to the rights of the owners and operators of utility lines existed within the leased premises at the time of the lease agreement.

**Instrument:** .....Special Warranty Deed

**Instrument Holder:** .....Indian River County

**Beginning Date:**.....November 4, 1970

**Ending Date:**.....No specific ending date given.

**Outstanding Rights, Uses, Etc.:** .....The special warranty deed is subject to that :

- (1) The property in question be used forever and continuously used and maintained for a public park for recreational purposes and no part of this property is confined or used as a restricted campground or other restricted area.
- (2) The South shoreline of the Sebastian Inlet, the fishing pier, under the Sebastian Inlet Bridge and the South Jetty of the Sebastian Inlet shall be accessed by all people day or night at no specific charge.

**Sebastian Inlet State Park Advisory Group Members**

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The Honorable Truman Scarborough  
Chairperson  
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The Honorable Sandra Bowden  
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**Sebastian Inlet State Park Advisory Group Members**

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## Sebastian Inlet State Park Advisory Group Staff Report

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The Advisory Group meeting to review the proposed land management plan for Sebastian Inlet State Park was held in the park's conference room on May 14, 2008 at 9am. Commissioner Chuck Nelson (Brevard County), Bud Crisafulli (Brevard Soil and Water Conservation District), David Gunter (Indian River Soil and Water Conservation District) and Rob Varley (Brevard County Tourism Development Council) did not attend. Alex Pries (Florida Fish and Wildlife Conservation Commission) and Dale Armstrong (Florida Division of Forestry) sent written comments in lieu of attending. All other appointed Advisory Group members were present. Attending staff from the Division of Recreation and Parks included Larry Fooks, Clif Maxwell, Ron Johns, Terry Coulliette, Jason DePue, Phil Rand and Brian Burket.

Mr. Burket began the meeting by explaining the purpose of the Advisory Group and reviewing the meeting agenda. He provided a brief overview of the Division's planning process and summarized public comments received during the previous evening's public workshop. He then asked each member of the advisory group to express his or her comments on the plan.

### Summary of Advisory Group Comments

Richard Baker (Pelican Island Audubon Society) recommended that more effort be made to get local citizens active in the park. He encouraged the park to provide more birding and kayak trips and suggested that they be free. He initiated a discussion about recent efforts to protect sea grass beds around the park. He commented that the Audubon Society contributed to the Eagle Scout project at the tip of Coconut Point to enhance and interpret this shorebird nesting area. He recommended a more proactive exotic plant removal effort.

Chairman Sandra Bowden (Indian River County Board of County Commissioners) suggested that the park may become more popular with local citizens as a consequence of the slumping economy. She commented that the park is a glorious place and she would like to invite Park Manager Terry Coulliette to an upcoming BOCC meeting to recognize and help raise support for the park. She also offered her support to publicize the park to local citizens.

Jenny Lawton-Seal (Sebastian Inlet District) recommended including language in the management plan about the current SID proposal. The SID has requested exchanging their existing spoil deposit site for a larger, previously disturbed area. In compensation, the SID has offered to dredge the boat ramp, replace the L-dock, provide a new canoe/kayak launch area and maintain the channel markers to the boat ramp. She offered the assistance of the SID to help advertise and market the park. She mentioned that SID has recently developed a touch-screen kiosk that needs a secure home and suggested that an appropriate area might be found in the park.

## Sebastian Inlet State Park Advisory Group Staff Report

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Jon Bates (Indian River County Tourist Development Council) remarked that the plan was an interesting read. He commented that more effective methods are needed to inform residents and tourists about the park. He requested that park staff provide brochures to local hotels to help encourage visitation. He inquired about where revenue generated at the park goes and how the park is funded. He suggested that park staff work with the TDC to develop a marketing plan.

“Sachi” Sachidanandan (Turtle Coast Sierra Club) expressed appreciation for the staff and their work put into the development of the management plan. He commented that the plan is ambitious and will require additional staffing and volunteers. He suggested that the management plan clarify that the bike trail is for bicycles and not motorized bikes. He recommended that all beach access areas include a restroom and shower. He commented that the existing beach concession buildings are not attractive and requested that the future concession building be aesthetically pleasing.

He later sent written comments where he suggested that water conservation be considered in the renovation or construction of new restrooms and shower facilities. He recommended installing waterless urinals and water conserving showerheads in an effort to minimize water usage at the park.

Justin Stovall (Whitey’s Bait & Tackle) commented that he talked with many local boaters and fishermen to hear their comments about the park. He shared that many are concerned about the conflict between boaters navigating the inlet and fishermen who cast in their path. He commented that boats moving through the inlet have the right-of-way. He suggested that the creation of an offshore, artificial reef could lure some boaters away from fishing at the congested, north jetty. He requested more law enforcement at the jetties due to indecent behavior by some park visitors and the taking of illegal fish. He suggested that all park visitors who pay taxes to the SID should be allowed into the park at no cost. He congratulated the SID for the new seagrass signage around the inlet. He requested that the channel markers for the marina be extended to the inlet channel and to Long Point Park. He commented that closing the unauthorized footpaths to the beach will be difficult to enforce since each path leads to a popular fishing hole. After the meeting, he suggested that 10-20 tent campsites with a restroom and showers be considered for the marina area to support this use of this area by boaters and surfers.

Blair Witherington (Floridana Beach Homeowner’s Association) commented that the plan was well written. He recommended that the plan recognize the draft limitations within the marina channel. He commented that the plan provides a good discussion of the natural resource impacts of sand bypass and beach renourishment. A discussion followed about the impacts of the most recent beach renourishment project. He questioned whether the SID’s management plan for the inlet was consistent with the Division’s interests in management of the state park. A compromise was reached that

## Sebastian Inlet State Park Advisory Group Staff Report

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the plan is “generally consistent.” He encouraged the park staff to strengthen their relationship with the SID and improve coordination of SID projects that could result in impacts to the park resources and visitor experience. He requested that the management plan reinforce the need for park staff to be involved in decision making process regarding SID projects. He commented that the dog policy for the park is confusing and suggested identifying specific areas where dogs are allowed rather than providing signage everywhere dogs are not allowed. He commented that the Coconut Point shorebird protection area is rather small and recommended exploring the potential to establish/enhance other areas of the park for shorebird habitat. He recommended increasing the volume of parking at the existing beach parking lot south of the inlet rather than establishing a new beach access area. He voiced support for closing all unauthorized footpaths to the beach. He remarked that a stable and well-managed sand footpath to the beach is better than a boardwalk. He commented that future boat tours from the marina should be encouraged. He commented that the area suggested for a kayak launch by the SID is a destination for paddlers and therefore should not be an access point. He suggested the development of a marked kayak trail from the marina to this area. He provided a few recommendations for the species list.

Steven Webster (Citizens for Florida’s Waterways) asked about the proposed budget for the marina redevelopment and requested that this be a priority project. He commented that the county is lacking a sufficient number of boat ramps and boat trailer parking spaces so therefore requested that consideration be given to expanding the boating capacity at the marina as part of the redevelopment project. He suggested that the Division look into establishing boat trips between the park and the City of Sebastian across the lagoon. He asked for clarification of the carrying capacity table regarding the number of motorized boaters the park is able to support now and in the future following the marina redevelopment.

Jim Egan (Marine Resources Council) commented that funding sources are available for establishing boat tours to and from the park. He encouraged the Division staff to include a list of all potential projects, studies, research, etc. in the management plan to increase the likelihood of them being supported and funded. He suggested lobbying for a bicycle path to be included on the bridge once FDOT begins planning its replacement. He commented that Scenic Highway grants may be available to improve destination areas within the park.

David Barney (Surfrider Foundation, Indian River Chapter) recommended that the management plan mention the legal obligation of the SID to transfer a certain volume of sand on Indian River beaches each year. He recommended that smaller beach renourishment projects be pursued that build-up the dunes instead of larger projects that impact hard bottom. He commented that recent studies indicate that Sebastian Inlet is becoming a mature inlet and that some sand is beginning to naturally bypass the inlet. He suggested that the park manager and/or biologist attend the monthly

## Sebastian Inlet State Park Advisory Group Staff Report

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meetings of the Indian River Beach and Shore Preservation Advisory Committee. He commented that the park has amazing resources and acknowledged the hard work and dedication of outgoing Park Manager Ron Johns and Archie Carr NWR Manager Paul Tritaik. He asked about the relationship between park visitation and funding for the park. He commented that many tourists know more about the park than local citizens and recommended that the Division aggressively promote the park locally. He remarked that the desire for free beach access is a big issue at the park. He suggested creating a new beach access area at "Monster Hole." He commented that surfers/beachgoers recently lost a beach access near Long Point Road due to the elimination of roadside parking there. He requested that the Division consider providing a beach access parking lot at the north end of the park adjacent to Long Point Road in exchange for scaling down the proposed improvements at the "Spanish House" parking area. He commented that the Surfrider Foundation can be a huge resource for volunteer recruitment especially for surf competitions and other special events. He suggested that the park staff attend the FDOT workgroup meetings. He identified the need to enforce the separation of surfers and jet skis at "Monster Hole" for safety reasons.

Sharon Tyson (Indian River-Malabar to Vero Beach Aquatic Preserve) suggested that a committee of experts be established to review SID projects before the permitting phase. She commented that recent studies indicate that beach renourishment projects around the state are linked to the increasing frequency of red-tide blooms around Florida. She mentioned that FWC is researching least terns in Brevard County and are working to establish Critical Wildlife Areas. She recommended that the Division inquire about the park's CWA status. She commented that her office has a tremendous relationship with the park staff and complimented the management plan. She requested that the plan clarify that CAMA shares management authority for all submerged lands within the park boundary and within the 400 foot zone waterward of MHW. She mentioned that CAMA might be able to assist with native plantings around the swim cove area, including mangroves. She recommended that the tidal connection near the south maintenance area should be improved. She requested that the Division coordinate any projects with CAMA that take place within submerged lands around the park, such as the proposed fishing dock replacement. She requested that seagrass beds around the park be identified on a map in the plan. She commented that healthy seagrass beds are located in the area of the proposed dock replacement within the inlet. She recommended including a small rescue/law enforcement boat at the proposed fishing dock. She commented that CAMA has been actively surveying for diamondback terrapins around the park.

She also provided the following additional comments in written form. She recommended a management objective to prepare a plan for the occurrence of aquatic invasive species. She recommended an objective to encourage permitted research by universities and institutions. She recommended an objective to limit disturbance (trails)

## Sebastian Inlet State Park Advisory Group Staff Report

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through tidal wetlands on the north side of the park adjacent to the inlet. In addition to controlling access to the shorebird protection area at Coconut Point, she requested that waterward access to seagrass beds and shoreline habitat also be limited. She suggested the use of Island designations and Universal Island signage be adopted. She recommended the surveying of submerged archaeological sites. She proposed that park staff comment on State and Federal treasure requests and re-authorizations. She commented that the camping area is surrounded by tidal wetlands so the proposed improvements will probably require ERP permitting. She recommended implementing educational signage allowances for the protection of dolphin, manatee, woodstorks, etc. She provided some language about CAMA to include under the Management Coordination section. She commented that the Natural Communities Map does not reflect all tidal habitats near developed areas or natural mangrove fringe habitat. She provided a description of seagrass habitat for possible inclusion in the plan. She suggested coordinating with utility companies about any future placement of electrical poles and wires which could result in bird fatalities. She recommended that the Management Needs and Problems section mention seagrass impacts by boats, sand removal and construction. She requested that shorebird data be reported on the FWC website.

Bob Bruce (adjacent landowner) commented that the inlet is manmade and has deleterious impacts; however, the inlet is also what makes this area so special and popular. He remarked that a lot of work was put into getting the Scenic Highway designation so the park and others could benefit from this funding source which could be used for beach access improvements.

Paul Tritaik (Archie Carr National Wildlife Refuge) highlighted the benefits of establishing a disposal site for material dredged from the inlet, i.e. identifying an area for material not suitable for the beach but useable for the creation of shorebird habitat. He commented that a boardwalk to the beach can be problematic for prescribed burns and is not necessary if the sand footpath is stable and not prone to dune blowout. He thanked Ron Johns and his staff for their support and hard work over the years and complimented the management plan. He expressed appreciation for the commitment to sea turtle surveys and attention to shorebirds, gopher tortoises, beach mice and diamondback terrapins. He recommended the plan include a discussion of land crabs occurring in the park. He commented that the USFWS is interested in establishing a management agreement with the Division for their property at "Spanish House." He identified one small beach parcel at the north end of the park that he believes is owned by the State and not USFWS. He provided a couple of suggestions for the exotic species list. He expressed appreciation for the coordination of efforts pertaining to the beach mice. He suggested that a management agreement between the park and USFWS be established to share management resources.

Dave Pasley (Friends of Sebastian Inlet State Park, Inc.) suggested a mulch and sand

**Sebastian Inlet State Park Advisory Group Staff Report**

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footpath for the new beach access at “Spanish House” instead of a boardwalk structure. He strongly recommended that the management plan include a comprehensive “wish list” of potential projects likely to be funded and approved.

He also provided the following additional comments in written form. In regards to channel dredging and beach renourishment projects, he recommended that the management plan focus on the Division’s advisory role and allow the process to work in resolving permitting issues, etc. He stated that the management of these issues is both political and beyond the scope of this management plan. He recommended that the plan address the Division’s role in working with SID, ACOE, FIND, DEP, etc. in managing the wetlands, shorelines, beaches, etc. He pointed out that it would be inaccurate to identify “restoration” plans for Coconut Point and the overflow parking field since these areas didn’t exist prior to the creation of the inlet. He recommended that pictures and documents of local historical significance that have been collected by SID Commissioner Jim Culbertson be directed to state archives. He suggested that park volunteers also help with park operations and security. He recommended that the paragraphs regarding the impact of beach renourishment projects on park resources be removed from the plan. He recommended that a comprehensive plan, funding, etc. be provided for Coconut Point to help establish a shorebird nesting area. He questioned whether there exists a Document of Understanding that outlines who owns which collection items at the Sebastian Fishing Museum and what items can be displayed, etc. He commented that the issue of the worm reef and beach renourishment is highly controversial and suggested removing some of the text in the plan regarding this topic. He requested that the SID proposal to develop the fill area west of the swim cove and overflow parking field be reviewed and incorporated into the management plan. He also supported the SID’s proposal to develop a kayak launch in the old inlet channel area. He recommended that a brief description of the SID/Park agreements be included in the management plan. He recommended that the plan also acknowledge the various agencies and research groups that are managing land and collecting important data in and around the park. He commented that expanding the use at “Spanish House” will result in a variety of issues including liability, security and inability to collect fees. He recommended that the existing marina buildings should be demolished and seawall replaced. He recommended adding more boat slips, parking and boat ramps at the marina. He recommended that the beach concession building should also be demolished and suggested that it be replaced with a structure that the community can use for weddings and other functions in addition to hosting surfing events, etc. He requested that serious consideration be given to the SID proposal to replace the inlet fishing dock with a larger structure that can be used for emergency/law enforcement vessels and mooring of a 60 foot barge for inlet construction and dredging activities. He stated his strong support for upgrading and expanding the camping area. He requested consideration for expanding the gift shop at the McLarty Treasure Museum in any remodeling plans. He commented that much of the ongoing boardwalk renovation at the north jetty beach use area is being funded by the CSO. He commented that the

## Sebastian Inlet State Park Advisory Group Staff Report

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swim cove is highly susceptible to storm damage; therefore, investing in anything but the barest essentials here will be futile. He requested permission to open a small gift counter in the Sebastian Fishing Museum. He mentioned that the majority of the park's 225 picnic tables were built by volunteers and funded by the CSO.

### Summary of Written Comments

Dale Armstrong (Florida Division of Forestry) stated that due to the location of the park, timber management is not a consideration. He commented that beach renourishment projects have greatly impacted the worm reefs from Sebastian Inlet down to MacArthur Beach. He offered the assistance of DOF staff for prescribed burns at the park. He stated that park staff does a commendable job in balancing natural resource management with intensive recreation. He commented that over the last eleven years he has seen the park improve both naturally and recreationally.

Alex Pries (Florida Fish & Wildlife Conservation Commission) stated that overall the management plan provides adequate consideration for wildlife and wildlife needs on-site. He commented that the discussion of using prescribed fire in dune habitats was confusing since fire is not typically needed in dune communities. However, he stated prescribed fire is useful in the coastal strand community and should continue to enhance habitat for beach mice and bird species. He stated support for the closing of unauthorized footpaths to the beach and recommended planting a mixture of native coastal vegetation when attempting to rebuild the dunes. He recommended keeping FWC informed of any improvements in beach mouse habitat or potential for translocation. He suggested coordinating survey and monitoring actions for nesting shorebirds with FWC personnel. He strongly recommended coordination with SID to develop beach nourishment projects that minimize impacts to nesting sea turtles/beach mouse habitat. He encouraged the removal of feral cats and educating surrounding landowners on being responsible pet owners. He suggested that FWC staff could help with closing shorebird nesting areas. He expressed support for actions to protect the population of gopher tortoise within the overflow parking field. He commented that the monitoring efforts for listed species discussed in the plan are appropriate. He suggested alternative methods to determining the relative abundance of beach mice.

### Staff Recommendations

The staff recommends approval of the proposed management plan for Sebastian Inlet State Park as presented with a few minor edits and clarifications as well as the changes below. Some of the other suggestions voiced at the meeting are not appropriate for inclusion in the management plan but are appreciated and will be taken into consideration as it affects park operations.



## Sebastian Inlet State Park Advisory Group Staff Report

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- In regards to the recent SID request to exchange their spoil easement site, the Division is carefully considering their proposal. The specifics of their proposal do not need to be included in the management plan since it is part of the regular coordination between the Division and the SID.
- In addition to Coconut Point, the Division will explore the potential to establish/enhance shorebird habitat elsewhere in the park.
- Consideration for potential seagrass impacts will be evaluated when determining appropriate recreational activities in these areas.
- The request for an offshore, artificial reef is not within the jurisdiction of the Division and, therefore, will not be included in the management plan.
- The Natural Communities Map will be evaluated for possible improvements, including the identification of seagrass beds within the park boundary.
- Staff agrees that a boardwalk to provide beach access may not always be necessary and will pursue the best available management option for providing beach access in the future.
- As part of the site planning for the marina redevelopment project, consideration will be given to expanding the boating capacity, providing a marine pump-out station, exploring the possibility of establishing some tent camping, and providing dockage for a rescue/law enforcement vessel.
- The Division does not support the recommendation to establish a new beach access area at the north end of the park adjacent to Long Point Road. This area is composed of maritime hammock which is included in the park's protected zone due to its rarity in the state. In addition, Sebastian Inlet State Park already provides multiple beach access points along its shoreline.
- The carrying capacity table will be edited to clarify the number of motorized boaters (people) the park is currently able to support.
- Park staff has identified the need for an additional 3-bay equipment storage building within the fenced area adjacent to the Administrative Office.

## **Addendum 2 – References Cited**



## Sebastian Inlet State Park References Cited

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### **Addendum 3 – Soils Descriptions**





## Sebastian Inlet State Park Soils Descriptions

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**(Ca) Canaveral complex, gently undulating** - This complex consists of nearly level and gently sloping soils that are mixtures of sand and shell fragments. It is along the Atlantic Coast on narrow ridges interspersed with parallel narrow sloughs. The water table is between depths of 10 and 40 inches for 2 to 4 months of the year; in dry seasons it is below a depth of 60 inches.

**(Ck) Coastal beaches** - This soil type consists of narrow strips of nearly level or gently sloping sand, along the Atlantic Ocean, that is covered with salt water at daily high tides and of low dunes adjacent to the tide-washed sands. This material is a mixture of quartz sand and fragments of sea shells. It is subject to movement by the wind and the tide and is bare of vegetation.

**(7) Palm Beach sand, 0 to 5 percent slopes** - This soil type is nearly level to gently sloping and well-drained to excessively drained. It occurs on dunelike ridges that are parallel to the coastline. This map unit is adjacent to the beach. Slopes are mainly 0 to 5 percent but can range from 0 to 8 percent.

Typically, the surface layer is very dark gray sand about 4 inches thick. The underlying material to a depth of 65 inches is sand that has stratified layers of shell fragments throughout. The upper 16 inches of the underlying material is grayish brown sand, and the lower 45 inches is pale brown sand. Below that to a depth of 80 inches or more is very pale brown sand.

This soil is low in organic matter content; it is moderately alkaline throughout. Permeability is very rapid, and the available water capacity is very low. It has no water table within a depth of 80 inches.

**(Pb) Palm Beach sand** - This is a nearly level and gently sloping, excessively drained soil on dunelike ridges that roughly parallel the Atlantic Ocean. It consists of mixed sand and shell fragments. Slopes are mostly 2 to 5 percent. The water table is at a depth of more than 10 feet.

**(17) Quartzipsamments, 0 to 5 percent slopes** - This soil type is nearly level to gently sloping and moderately well-drained to somewhat poorly drained. It consists of thick deposits of sand and of mixed sand and shell fragments.

One of the most common profiles has a surface layer of light yellowish brown fine sand that has brownish yellow mottles about 17 inches thick. The next layer, to a depth of about 30 inches, is yellowish-brown fine sand that has very dark grayish-brown mottles. Below that, to a depth of about 60 inches, is dark grayish-brown fine sand that has very dark gray streaks and yellowish-brown splotches and is mixed with 10 percent shell fragments. The underlying material to a depth of 80 inches or more is gray sand.

## Sebastian Inlet State Park Soils Descriptions

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Permeability is very rapid, and the available water capacity is very low. Reaction is slightly acid to alkaline. The content of shell fragments ranges from about 5 to 50 percent.

**(18) Captiva fine sand** - This soil is nearly level and poorly drained. It is in narrow, elongated sloughs that are between low, dunelike ridges and mangrove swamps. Slopes are smooth and range from 0 to 1 percent.

Typically, the surface layer is very dark gray fine sand mixed with about 2 percent shell fragments. It is about 8 inches thick. The underlying material to a depth of 80 inches or more is grayish-brown, olive gray, and greenish-gray fine sand mixed with about 2 to 15 percent shell fragments. In most years, under natural conditions, the water table is at a depth of 10 to 40 inches for 6 to 9 months or more and within a depth of 10 inches of the surface for 1 to 3 months during the wet season. In some years, the soil is covered by standing water for about 1 month.

Permeability is rapid in the surface layer and very rapid in the underlying layers. The available water capacity is medium in the surface layer and low to very low in the subsurface layer.

**(20) Beaches** - This map unit consists of nearly level to sloping, narrow strips of tide and surf-washed sands and shell fragments. Beaches occur along the Atlantic Ocean shoreline. They commonly are a mixture of moderately alkaline sand and fine shell fragments. Beaches are generally devoid of vegetation, although some sparse growth of sea oats, railroad vine, or other salt-tolerant plants occurs near the inland edges.

Depth to the water table is highly variable depending on distance from the shore, elevation of the beach, and the tidal condition. Commonly, the water table ranges from a depth of 0 to 6 feet.

**(63) Kesson muck** - This soil is nearly level and very poorly drained and is frequently flooded. It occurs in tidal swamps and marshes. This soil formed in thick marine deposits of sand and shell fragments. These swamps and marshes are at or near sea level and are adjacent to the Indian River. Tidal water inundates most of these areas at high tide.

Typically, the surface layer is about 6 inches thick; it is a dark reddish-brown muck that is about 30 percent unrubbed fiber and less than 5 percent rubbed. The underlying material is grayish-brown and dark greenish-gray fine sand mixed with about 15 to 25 percent sand-sized shell fragments to a depth of 80 inches or more.

Under natural conditions, this soil is flooded during normal high tides. Permeability is moderately rapid. The available water capacity is high in the surface layer and low in

## Sebastian Inlet State Park Soils Descriptions

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the underlying materials. The native vegetation consists of red, black, and white mangroves; searocket, saltwort, perennial glasswort, seashore saltgrass, and seashore paspalum occur in some areas.

**(Tm) Tidal marsh** - Tidal marsh consists of nearly level areas of soils that are regularly covered with salt water or brackish water at high tide. It occurs along the edge of salt water in several places. Many areas are isolated by deep, wide canals. The soils are highly variable; some are shallow mucky sands over marl or limestone, some are irregularly stratified mixed sand and shell fragments, some are silty or clayey layers over sand sand shells, and some are deep organic material. Any one area of tidal marsh can be one kind of soil material or a mixture.

**(Ts) Tidal swamp** - This soil type consists of nearly level areas at about mean sea level that are covered with a dense, tangled growth of mangrove trees and roots. It occurs along the edge of the Banana and Indian rivers and in smaller areas adjacent to salt water. The soil material ranges from mixed sand and shells to organic materials.

**Sebastian Inlet State Park Soils Descriptions**

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**Addendum 4-Plants And Animals List**



## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Spiny redweed.....	<i>Acanthophora</i> sp.	
Mermaid's wine glass.....	<i>Acetabularia crenulata</i>	
Giant leather fern.....	<i>Acrostichum danaeifolium</i>	
False sisal.....	<i>Agave decipiens</i>	
Wild century plant* .....	<i>Agave sisalana</i>	
Silktree*.....	<i>Albizia julibrissin</i>	
Aloe*.....	<i>Aloe vera</i>	
Yellow joyweed.....	<i>Alternanthera flavescens</i>	
Common ragweed.....	<i>Ambrosia artemisiifolia</i>	
Bastard indigobush.....	<i>Amorpha fruticosa</i>	
Sea torchwood.....	<i>Amyris elemifera</i>	
Marlberry.....	<i>Ardisia escallonioides</i>	
Bluestem.....	<i>Andropogon</i> sp.	
Red algae.....	<i>Anotrichium tenue</i>	
Sprenger's asparagus-fern*.....	<i>Asparagus densiflorus</i>	
White oldfield aster.....	<i>Aster pilosus</i>	
Crested saltbush.....	<i>Atriplex cristata</i>	
Algae.....	<i>Audounella</i> sp.	
Algae.....	<i>Audouinella</i> sp.	
Black mangrove.....	<i>Avicennia germinans</i>	
Groundsel tree.....	<i>Baccharis halimifolia</i>	
Herb-of-grace.....	<i>Bacopa monnieri</i>	
Saltwort.....	<i>Batis maritima</i>	
Beggarticks.....	<i>Bidens alba</i> var. <i>radiata</i>	
Bushy seaside oxeye.....	<i>Borrichia frutescens</i>	
Algae.....	<i>Botyrocledia occidentalis</i>	
Bouganvillea*.....	<i>Bouganvillea spectabilis</i>	
Red algae.....	<i>Bryocledia cuspidata</i>	
Red algae.....	<i>Bryothamnium seaforthii</i>	
Fungus.....	<i>Buellia lauricassiae</i>	
Fungus.....	<i>Buellia rappii</i>	
Fungus.....	<i>Buellia</i> sp.	
Gumbo-limbo.....	<i>Bursera simaruba</i>	
Gray nicker.....	<i>Caesalpinia bonduc</i>	
American beautyberry.....	<i>Callicarpa americana</i>	
Algae.....	<i>Caloglossa leprieurii</i>	
Santa Maria*.....	<i>Calophyllum antillanum</i>	
Fungus.....	<i>Caloplaca</i> sp.	
Baybean.....	<i>Canavalia rosea</i>	
Garden canna*.....	<i>Canna x generalis</i>	
Lichen.....	<i>Canoparmelia amazonica</i>	

\* Non-native Species



## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Lichen.....	<i>Canoparmelia cryptochlorophaea</i>	
Jamaican capertree .....	<i>Capparis cynophallophora</i>	
Papaya* .....	<i>Carica papaya</i>	
Natal plum* .....	<i>Carissa macrocarpa</i>	
Chaffhead .....	<i>Carphephorus</i> sp.	
Australian-pine* .....	<i>Casuarina equisetifolia</i>	
Madagascar periwinkle* .....	<i>Catharanthus roseus</i>	
Green algae .....	<i>Caulerpa cupressoides</i>	
Green algae .....	<i>Caulerpa mexicana</i>	
Green algae .....	<i>Caulerpa prolifera</i>	
Green algae .....	<i>Caulerpa racemosa</i> var. <i>macrophyssa</i>	
Green algae .....	<i>Caulerpa vickersiae</i>	
Southern sandbur.....	<i>Cenchrus echinatus</i>	
Coast sandbur.....	<i>Cenchrus incertus</i>	
Sanddune sandbur .....	<i>Cenchrus tribuloides</i>	
Sandbur .....	<i>Cenchrus</i> sp.	
Algae .....	<i>Centroceras clavulatum</i>	
Spurred butterfly pea .....	<i>Centrosema virginianum</i>	
Algae .....	<i>Ceramium fastigiatum</i>	
Green algae .....	<i>Chaetomorpha aerea</i>	
Partridge pea.....	<i>Chamaecrista fasciculata</i>	
Pillpod sandmat .....	<i>Chamaesyce hirta</i>	
Hyssopleaf sandmat .....	<i>Chamaesyce hyssopifolia</i>	
Spotted sandmat.....	<i>Chamaesyce maculata</i>	
Coastal beach sandmat.....	<i>Chamaesyce mesembryanthemifolia</i>	
Snowberry .....	<i>Chiococca alba</i>	
Algae .....	<i>Chondra collinsiana</i>	
Red algae .....	<i>Chondra</i> sp.	
Coco plum.....	<i>Chrysobalanus icaco</i>	
Lichen.....	<i>Chrysothrix candelaris</i>	
Sorrelvine .....	<i>Cissus trifoliata</i>	
Florida fiddlewood .....	<i>Citharexylum spinosum</i>	
Sour orange* .....	<i>Citrus aurantium</i>	
Lemon*.....	<i>Citrus limon</i>	
Lime* .....	<i>Citrus</i> sp.	
Green algae .....	<i>Cladophora</i> sp.	
Tread-softly .....	<i>Cnidioscolus stimulosus</i>	
Lichen.....	<i>Coccocarpia palmicola</i>	
Seagrape .....	<i>Coccoloba uvifera</i>	
Domestic croton* .....	<i>Codiaeum variegatum</i>	
Green algae .....	<i>Codium decortcatum</i>	

\* Non-native Species

Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Algae .....	<i>Colopomenia sinuosa</i>	
Whitemouth dayflower .....	<i>Commelina erecta</i>	
Buttonwood .....	<i>Conocarpus erectus</i>	
Canadian horseweed .....	<i>Conyza canadensis</i> var. <i>pusilla</i>	
Showy rattlebox* .....	<i>Crotalaria spectabilis</i>	
Gulf croton .....	<i>Croton punctatus</i>	
Red algae .....	<i>Cryptonemia</i> sp.	
Lichen.....	<i>Cryptothecia striata</i>	
Christmas lichen.....	<i>Cryptothecia rubrocincta</i>	
Dodder.....	<i>Cuscuta</i> sp.	
Sago palm* .....	<i>Cycas circinalis</i>	
Leafless swallowwort .....	<i>Cynanchum scoparium</i>	
Flatsedge.....	<i>Cyperus</i> sp.	
Beach star .....	<i>Cyperus pedunculatus</i>	
Flatleaf flatsedge .....	<i>Cyperus planifolius</i>	
Pinebarren flatsedge .....	<i>Cyperus retrorsus</i>	
Durban crowfootgrass* .....	<i>Dactyloctenium aegyptium</i>	
Coinvine .....	<i>Dalbergia ecastophyllum</i>	
Algae .....	<i>Dasya collinsiana</i>	
Ticktrefoil .....	<i>Desmodium incanum</i>	
Witchgrass.....	<i>Dichantherium</i> sp.	
Sixangle foldwing .....	<i>Dicliptera sexangularis</i>	
Algae .....	<i>Dictyopteris delicatula</i>	
Algae .....	<i>Dictyota dichotoma</i>	
Brown algae .....	<i>Dictyota</i> spp.	
Algae .....	<i>Dilophus guineensis</i>	
Air potato*.....	<i>Dioscorea bulbifera</i>	
Lichen.....	<i>Dirinaria applanata</i>	
Lichen.....	<i>Dirinaria picta</i>	
Lichen.....	<i>Dirinaria purpurascens</i>	
Twinflower.....	<i>Dyschoriste</i> sp.	
Devil's potato.....	<i>Echites umbellata</i>	
Florida butterfly orchid.....	<i>Encyclia tampensis</i> .....	7
Hair algae .....	<i>Enteromorpha</i> spp.	
Golden pothos* .....	<i>Epipremnum pinnatum</i>	
Coralbean .....	<i>Erythrina herbacea</i>	
White stopper .....	<i>Eugenia axillaris</i>	
Spanish stopper .....	<i>Eugenia foetida</i>	
Dogfennel.....	<i>Eupatorium capillifolium</i>	
Throughwort.....	<i>Eupatorium</i> sp.	
Crown-of-thorns* .....	<i>Euphorbia milii</i>	

\* Non-native Species

## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Pinewoods fingergrass .....	<i>Eustachys petraea</i>	
Marshgentian.....	<i>Eustoma exaltatum</i>	
Strangler fig.....	<i>Ficus aurea</i>	
Hurricanegrass .....	<i>Fimbristylis cymosa</i>	
Narrowleaf yellowtops .....	<i>Flaveria linearis</i>	
Florida swampprivet .....	<i>Forestiera segregata</i>	
Firewheel.....	<i>Gaillardia pulchella</i>	
Downy milkpea.....	<i>Galactia volubilis</i>	
Southern beeblossom.....	<i>Gaura angustifolia</i>	
Algae .....	<i>Gelidopsis gracilis</i>	
Red algae .....	<i>Gigartina acicularis</i>	
Rose mock vervain.....	<i>Glandularia canadensis</i>	
Mock vervain.....	<i>Glandularia sp.</i>	
Globe amaranth* .....	<i>Gomphrena serrata</i>	
Red algae .....	<i>Gracilaria cervicornis</i>	
Red algae .....	<i>Gracilaria mammillaris</i>	
Red algae .....	<i>Gracilaria sp.</i>	
Lichen.....	<i>Graphis sp</i>	
Lichen.....	<i>Graphis striatula</i>	
Algae .....	<i>Gratelupia filicina</i>	
Red algae .....	<i>Griffithsia sp.</i>	
Beef tree .....	<i>Guapira discolor</i>	
Lichen.....	<i>Haematomma accolens</i>	
Lichen.....	<i>Haematomma persoonii</i>	
Bloodstain lichen.....	<i>Hafellia bahiana</i>	
Red algae .....	<i>Haliptilon cubense</i>	
Shoalweed .....	<i>Halodule wrightii</i>	
Johnson's seagrass.....	<i>Halophila johnsonii</i>	
Algae .....	<i>Halymenia sp.</i>	
Simpson's applecactus.....	<i>Harrisia simpsonii</i>	
Clustered mille graine .....	<i>Hedyotis uniflora</i>	
East coast dune sunflower .....	<i>Helianthus debilis ssp. debilis</i>	
Seaside heliotrope .....	<i>Heliotropium curassavicum</i>	
Heliotrope .....	<i>Heliotropium sp.</i>	
Algae .....	<i>Helminthocladia calvadosii</i>	
Algae .....	<i>Herposiphonia secunda</i>	
Camphorweed .....	<i>Heterotheca subaxillaris</i>	
Rosemallow* .....	<i>Hibiscus rosa-sinensis var. rosa-sinensis</i>	
Mangrove spiderlily .....	<i>Hymenocallis latifolia</i>	
St. John's wort.....	<i>Hypericum sp.</i>	
Algae .....	<i>Hypnea musciformis</i>	

\* Non-native Species

## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Algae .....	<i>Hypnea</i> sp.	
Moonflowers.....	<i>Ipomoea alba</i>	
Tievine .....	<i>Ipomoea cordatotriloba</i>	
Beach morningglory .....	<i>Ipomoea imperati</i>	
Railroad vine.....	<i>Ipomoea pes-caprae</i>	
Saltmarsh morningglory .....	<i>Ipomoea sagittata</i>	
Ornamental iris* .....	<i>Iris</i> sp.	
Seacoast marshelder .....	<i>Iva imbricata</i>	
Algae .....	<i>Jania rubens</i>	
Star jasmine* .....	<i>Jasminum multiflorum</i>	
Chandelier plant* .....	<i>Kalanchoe tubiflora</i>	
Virginia saltmarsh mallow .....	<i>Kosteletskya virginica</i>	
Black ironwood .....	<i>Krugiodendron ferreum</i>	
Crapemyrtle* .....	<i>Lagerstroemia indica</i>	
White mangrove.....	<i>Laguncularia racemosa</i>	
Lantana*.....	<i>Lantana camara</i>	
Buttonsage.....	<i>Lantana involucrata</i>	
Lichen.....	<i>Lecanora hybocarpa</i>	
Lichen.....	<i>Lecanora</i> sp.	
Lichen.....	<i>Lecanora strobilina</i>	
Duckweed .....	<i>Lemna</i> sp.	
Lichen.....	<i>Leptogium austroamericanum</i>	
Algae .....	<i>Liagora ceranoides</i>	
Algae .....	<i>Liagora</i> sp.	
Gopher apple .....	<i>Licania michauxii</i>	
Carolina sealavender .....	<i>Limonium carolinianum</i>	
Creeping cucumber.....	<i>Melothria pendula</i>	
Poorman's patch.....	<i>Mentzelia floridana</i>	
Climbing hempvine .....	<i>Mikania scandens</i>	
Indian chickweed* .....	<i>Mollugo verticillata</i>	
Balsampear* .....	<i>Momordica charantia</i>	
Spotted beebalm.....	<i>Monarda punctata</i>	
Red mulberry .....	<i>Morus rubra</i>	
Common banana*.....	<i>Musa x paradisiaca</i>	
Twinberry .....	<i>Myrcianthes fragrans</i>	
Southern bayberry .....	<i>Myrica cerifera</i>	
Tuberous sword fern* .....	<i>Nephrolepis cordifolia</i>	
Oleander* .....	<i>Nerium oleander</i>	
Lancewood.....	<i>Ocotea coriacea</i>	
Seabeach eveningprimrose .....	<i>Oenothera humifusa</i>	
Clustered mille graine .....	<i>Oldenlandia uniflora</i>	

\* Non-native Species

## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Erect pricklypear .....	<i>Opuntia stricta</i>	
Algae .....	<i>Padina gymnosperma</i>	
Algae .....	<i>Padina jamaicensis</i>	
Algae .....	<i>Padina sanctae-crucis</i>	
Algae .....	<i>Padina spp.</i>	
Bitter panicgrass .....	<i>Panicum amarum</i>	
Panic grass.....	<i>Panicum spp.</i>	
Lichen.....	<i>Parmotrema dilatatum</i>	
Lichen.....	<i>Parmotrema gardneri</i>	
Lichen.....	<i>Parmotrema michauxianum</i>	
Lichen.....	<i>Parmotrema perforatum</i>	
Lichen.....	<i>Parmotrema praesorediosum</i>	
Lichen.....	<i>Parmotrema rigidum</i>	
Virginia creeper .....	<i>Parthenocissus quinquefolia</i>	
Purple passionflower.....	<i>Passiflora incarnata</i>	
Corkstem passionflower .....	<i>Passiflora suberosa</i>	
Redbay .....	<i>Persea borbonia var. borbonia</i>	
Volcano wart lichen .....	<i>Pertusaria xanthodes</i>	
Red algae .....	<i>Peyssonnelia inamoena</i>	
Lichen.....	<i>Phaeographis sp.</i>	
Lichen.....	<i>Phaeographis subfulgurata</i>	
Tree philodendron* .....	<i>Philodendron selloum</i>	
Golden polypody .....	<i>Phlebodium aureum</i>	
Turkey tangle fogfruit .....	<i>Phyllanthus nodiflora</i>	
Chamber-bitter* .....	<i>Phyllanthus urinaria</i>	
Groundcherry .....	<i>Physalis sp.</i>	
Walter's groundcherry .....	<i>Physalis walteri</i>	
American rosette lichen.....	<i>Physcia americana</i>	
Rosette lichen.....	<i>Physcia atrostriata</i>	
Rosette lichen.....	<i>Physcia neogaea</i>	
American pokeweed.....	<i>Phytolacca americana</i>	
Resurrection fern.....	<i>Pleopeltis polypodioides var. michauxiana</i>	
Camphorweed .....	<i>Pluchea sp.</i>	
Paintedleaf.....	<i>Poinsettia cyathophora</i>	
Rustweed.....	<i>Polypremum procumbens</i>	
Little hogweed.....	<i>Portulaca oleracea</i>	
Pink purslane .....	<i>Portulaca pilosa</i>	
Purselane .....	<i>Portulaca sp.</i>	
Black cherry .....	<i>Prunus serotina var. serotina</i>	
Wild coffee .....	<i>Psychotria nervosa</i>	
Shortleaf wild coffee .....	<i>Psychotria sulzneri</i>	

\* Non-native Species

## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Red algae .....	<i>Pterocladia bartletti</i>	
Red algae .....	<i>Pterocladia sp.</i>	
Wart lichen .....	<i>Pyrenula cruenta</i>	
Wart lichen.....	<i>Pyrenula microcarpa</i>	
Wart lichen.....	<i>Pyrenula ochaceoflava</i>	
Wart lichen.....	<i>Pyrenula ochaceoflavens</i>	
Wart lichen.....	<i>Pyrenula sp.</i>	
Wart lichen.....	<i>Pyrenula thelomorpha</i>	
Sand live oak.....	<i>Quercus geminata</i>	
Lichen.....	<i>Ramalina complanata</i>	
Lichen.....	<i>Ramalina montagnei</i>	
Lichen.....	<i>Ramalina paludosa</i>	
Lichen.....	<i>Ramalina peruviana</i>	
Lichen.....	<i>Ramalina stenospora</i>	
Lichen.....	<i>Ramalina willeyi</i>	
White indigoberry.....	<i>Randia aculeata</i>	
Myrsine.....	<i>Rapanea punctata</i>	
Rubbervine.....	<i>Rhabdadenia biflora</i>	
Red mangrove .....	<i>Rhizophora mangle</i>	
Winged sumac .....	<i>Rhus copallinum</i>	
Rose natalgrass* .....	<i>Rhynchelytrum repens</i>	
Castorbean* .....	<i>Ricinus communis</i>	
Rougeplant.....	<i>Rivina humilis</i>	
Britton's wild petunia* .....	<i>Ruellia tweediana</i>	
Curly dock* .....	<i>Rumex crispus</i>	
Wedgeleaf dock* .....	<i>Rumex frutescens</i>	
Cabbage palm.....	<i>Sabal palmetto</i>	
Annual glasswort.....	<i>Salicornia bigelovii</i>	
Carolina willow .....	<i>Salix caroliniana</i>	
Tropical sage.....	<i>Salvia coccinea</i>	
American elder.....	<i>Sambucus canadensis</i>	
Bowstring hemp*.....	<i>Sansevieria hyacinthoides</i>	
Sargassum weed.....	<i>Sargassum sp.</i>	
Beachberry.....	<i>Scaevola plumieri</i>	
Australian umbrella tree* .....	<i>Schefflera actinophylla</i>	
Brazilian pepper* .....	<i>Schinus terebinthifolius</i>	
Algae .....	<i>Scinaia sp.</i>	
Saw palmetto .....	<i>Serenoa repens</i>	
Shoreline seapurslane.....	<i>Sesuvium portulacastrum</i>	
Common wireweed .....	<i>Sida acuta</i>	
Fanpetals .....	<i>Sida sp.</i>	

\* Non-native Species

## Sebastian Inlet State Park Plants

Common Name	Scientific Name	Primary Habitat Codes (for designated species)
Saffron plum .....	<i>Sideroxylon celastrinum</i>	
Tough bully .....	<i>Sideroxylon tenax</i>	
False mastic .....	<i>Sideroxylon foetidissimum</i>	
Earleaf greenbrier .....	<i>Smilax auriculata</i>	
Seaside goldenrod .....	<i>Solidago sempervirens</i>	
Algae .....	<i>Solieriacae sp.</i>	
Common sowthistle* .....	<i>Sonchus oleraceus</i>	
Yellow necklacepod .....	<i>Sophora tomentosa</i>	
Marshhay cordgrass .....	<i>Spartina patens</i>	
Algae .....	<i>Spatoglossum schroederi</i>	
Creeping oxeye* .....	<i>Sphagneticola trilobata</i>	
Coral dropseed .....	<i>Sporobolus domingensis</i>	
Smutgrass* .....	<i>Sporobolus indicus</i>	
Seashore dropseed .....	<i>Sporobolus virginicus</i>	
Red algae .....	<i>Sporolithon spp.</i>	
White oldfield aster .....	<i>Symphotrichum pilosum</i>	
Manateegrass .....	<i>Syringodium filiforme</i>	
Turtlegrass .....	<i>Thalassia testudinum</i>	
Spanish moss .....	<i>Tillandsia usneoides</i>	
Red algae .....	<i>Titanoderma sp.</i>	
Eastern poison ivy .....	<i>Toxicodendron radicans</i>	
Purple queen* .....	<i>Tradescantia pallida</i>	
Oyster-plant* .....	<i>Tradescantia spathacea</i>	
Wandering-jew* .....	<i>Tradescantia zebrina</i>	
Burrnut* .....	<i>Tribulus cistoides</i>	
Forked bluecurls .....	<i>Trichostema dichotomum</i>	
Southern cattail .....	<i>Typha domingensis</i>	
Algae .....	<i>Ulva lactuca</i>	
Algae .....	<i>Ulva rigida</i>	
Seaoats .....	<i>Uniola paniculata</i>	
Sandpaper vervain .....	<i>Verbena scabra</i>	
White crownbeard .....	<i>Verbesina virginica</i>	
Giant ironweed .....	<i>Vernonia gigantea</i>	
Ironweed .....	<i>Vernonia sp.</i>	
Hairy pod cowpea .....	<i>Vigna luteola</i>	
Simpleleaf chastetree* .....	<i>Vitex trifolia</i>	
Summer grape .....	<i>Vitis aestivalis</i>	
Muscadine .....	<i>Vitis rotundifolia</i>	
Shoestring fern .....	<i>Vittaria lineata</i>	
Tallow wood .....	<i>Ximenia americana</i>	
Spanish bayonet* .....	<i>Yucca aloifolia</i>	

\* Non-native Species

Sebastian Inlet State Park Plants

Common Name	<i>Scientific Name</i>	Primary Habitat Codes (for designated species)
Florida arrowroot.....	<i>Zamia pumila</i> .....	7,82
Hercules' -club.....	<i>Zanthoxylum clava-herculis</i>	
Wild lime.....	<i>Zanthoxylum fagara</i>	



Sebastian Inlet State Park Plants

<b>Common Name</b>	<i>Scientific Name</i>	<b>Primary Habitat Codes (for designated species)</b>
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Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
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INVERTEBRATES

Lepidoptera

Gulf fritillary.....	<i>Dione vanillae nigrior</i> .....	1,5,81
Common sulphur.....	<i>Colias philodice</i> .....	1,5,81
Great southern white.....	<i>Ascia monuste phileta</i> .....	1,5,81
Zebra long wing.....	<i>Heliconius charitonius tuckeri</i> .....	1,5,81
Composia moth.....	<i>Composia fidelissima</i> .....	5,81,82
Cecropia moth.....	<i>Hyalophora cecropia</i> .....	5,81,82
Luna moth.....	<i>Actias luna</i> .....	5,81,82
Io moth.....	<i>Automeris io io</i> .....	5,7,81,82
Imperial moth.....	<i>Eacles imperialis imperialis</i> .....	5,7,81,82
Bella moth.....	<i>Utetheisa bella</i> .....	5,81
Palamedes swallowtail.....	<i>Papilio palamedes</i>	
Cloudless sulfur butterfly.....	<i>Phoebis sennae eubule</i>	
Oak hairstreak.....	<i>Satyrium liparops</i>	

Porifera

Sponge.....	<i>Callyspongia vaginalis</i> .....	66/78
Sponge.....	<i>Cinachyra alloclada</i> .....	66/78
Sponge.....	<i>Cliona caribbea</i> .....	66/78
Sponge.....	<i>Cliona celata</i> .....	66/78
Sponge.....	<i>Cliona lampa</i> .....	66/78
Sponge.....	<i>Halichondria</i> sp. ....	66/78,81
Sponge.....	<i>Hymeniacidon</i> sp.....	66/78
Sponge.....	<i>Leucetta floridana</i> .....	66/78
Sponge.....	<i>Lissodendoryx</i> sp.....	66/78,81
Sponge.....	<i>Microciona prolifera</i> .....	66/78,81
Sponge.....	<i>Microciona spinosa</i> .....	66/78
Sponge.....	<i>Mycale</i> sp.....	66/78
Sponge.....	<i>Tethya</i> sp.....	66/78

Cnidaria

Hydroid.....	<i>Obelia hyalina</i> .....	66/78
Hydroid.....	<i>Sertularia amplexans</i> .....	66/78
Hydroid.....	<i>Sertularia exigua</i> .....	66/78
Hydroid.....	<i>Sertularia flowersi</i> .....	66/78
Hydroid.....	<i>Sertularia inflata</i> .....	66/78

\* Non-native Species

Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Hydroid	<i>Sertularia mayersi</i>	66/78
Hydroid	<i>Sertularia stookeyi</i>	66/78
Hydroid	<i>Telmactis</i> sp.	66/78,81
<b>Ctenophora</b>		
Comb jellies	<i>Mnemiopsis leadyi</i>	59/71
<b>Chordata</b>		
	<i>Botryllus</i> sp.	66/78,81
<b>Bryozoa</b>		
Bryozoan	<i>Amathia alternata</i>	66/78
Bryozoan	<i>Amathia vidivici</i>	66/78
Bryozoan	<i>Beania hirtissima</i>	66/78
Bryozoan	<i>Bugula</i> sp.	66/78,81
Bryozoan	<i>Bugula stolonifera</i>	66/78
Bryozoan	<i>Bugula turrita</i>	66/78
Bryozoan	<i>Cryptosula pallasiana</i>	66/78
Bryozoan	<i>Exechonella antillea</i>	66/78
Bryozoan	<i>Membranipora arborescens</i>	66/78
Bryozoan	<i>Membranipora savartii</i>	66/78
Bryozoan	<i>Membranipora</i> sp.	66/78,81
Bryozoan	<i>Pasythea tulipifera</i>	66/78
Bryozoan	<i>Schizoporella unicornis</i>	66/78
Bryozoan	<i>Thalamoporella floridana</i>	66/78
Bryozoan	<i>Watersipora subovoidea</i>	66/78
<b>Polychaeta</b>		
Polychaete	<i>Cirriformia</i> sp.	66/78
Polychaete	<i>Dialychone</i> sp.	66/78
Polychaete	<i>Dodecaceria</i> sp.	66/78
Polychaete	<i>Eulalia</i> sp.	66/78
Polychaete	<i>Eunice websteri</i>	66/78
Polychaete	<i>Filograna</i> sp.	66/78
Polychaete	<i>Hermenia</i> sp.	66/78,81
Polychaete	<i>Hermodice carunculata</i>	66/78,81
Polychaete	<i>Hesione</i> sp.	66/78

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Polychaete	<i>Hydroides dianthus</i>	66/78
Polychaete	<i>Hydroides protulicola</i>	66/78
Polychaete	<i>Lepidonotus</i> sp.	66/78
Polychaete	<i>Loimia medusa</i>	66/78,81
Polychaete	<i>Lumbrinereis inflata</i>	66/78
Polychaete	<i>Marphysa</i> sp.	66/78
Polychaete	<i>Megalomma bioculatum</i>	66/78
Polychaete	<i>Mystides</i> sp.	66/78
Polychaete	<i>Naineris</i> sp.	66/78
Polychaete	<i>Nereiphylla</i> sp.	66/78
Polychaete	<i>Nereis</i> sp.	66/78
Polychaete	<i>Nothria</i> sp.	66/78
Polychaete	<i>Onuphis</i> sp.	66/78,81
Polychaete	<i>Ophiodromus</i> sp.	66/78
Polychaete	<i>Phragmatopoma lapidosa</i>	66/78
Polychaete	<i>Phyllodoce</i> sp.	66/78
Polychaete	<i>Platynereis</i> sp.	66/78
Polychaete	<i>Polydorella</i> sp.	66/78
Polychaete	<i>Pseudovermillia occidentalis</i>	66/78
Polychaete	<i>Pseudovermiliopsis</i> sp.	66/78
Polychaete	<i>Pterocirrus</i> sp.	66/78
Polychaete	<i>Pycnogonum littorale</i>	66/78
Polychaete	<i>Rhynchospio</i> sp.	66/78
Polychaete	<i>Sabella</i> sp.	66/78,81
Polychaete	<i>Sabellaria</i> sp.	66/78
Polychaete	<i>Sabellastarte</i> sp.	66/78,81
Polychaete	<i>Syllides</i> sp.	66/78
Polychaete	<i>Syllis</i> sp.	66/78
Polychaete	<i>Trypanosyllis</i> sp.	66/78
<b>Pycnogonida</b>		
Sea spider	<i>Achelia spinosa</i>	66/78
Sea spider	<i>Anoplodactylus parvus</i>	66/78
Sea spider	<i>Pycnogonum</i> sp.	66/78,81
Sea spider	<i>Tanystylum orbiculare</i>	66/78
<b>Cirripedia</b>		
Barnacle	<i>Balanus amphitrite amphitrite</i>	66/78
Barnacle	<i>Balanus</i> sp.	66/78,81
Barnacle	<i>Balanus trigonus</i>	66/78
Barnacle	<i>Balanus venustus</i>	66/78

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Barnacle	<i>Chthamalus</i> sp.	66/78,81
<b>Cumacea</b>		
	<i>Cyclaspis pustulata</i>	66/78
	<i>Oxyurostylis smithi</i>	66/78
<b>Isopoda</b>		
Isopod	<i>Bagatus bermudensis</i>	66/78
Isopod	<i>Cirolana gracilis</i>	
Isopod	<i>Cirolana parva</i>	66/78
Isopod	<i>Cleantis planicauda</i>	66/78
Isopod	<i>Dynamella quadripunctata</i>	66/78
Isopod	<i>Dynamella</i> sp.	66/78
Isopod	<i>Erichsonella filiformis</i>	66/78
Isopod	<i>Excorallana sexticornis</i>	66/78
Isopod	<i>Excorallana tricornis</i>	66/78
Isopod	<i>Exosphaeroma</i> sp.	66/78
Isopod	<i>Janira minuta</i>	66/78
Isopod	<i>Jaeropsis rathbunae</i>	66/78
Isopod	<i>Jaeropsis</i> sp.	66/78
Isopod	<i>Laeropsis</i> sp.	
Isopod	<i>Mesanthura decorata</i>	66/78
Isopod	<i>Paracerceis caudata</i>	66/78
Isopod	<i>Sphaeroma destructor</i>	66/78
Isopod	<i>Sphaeroma quadridentatum</i>	66/78
Isopod	<i>Sphaeroma</i> sp.	66/78,81
Isopod	<i>Sphaeroma walkeri</i>	66/78
<b>Amphipoda</b>		
Amphipod	<i>Acanthohaustorius shoemakei</i>	66/78
Amphipod	<i>Ampelisca agassizi</i>	66/78
Amphipod	<i>Ampithoe marcuzzii</i>	66/78
Amphipod	<i>Ampithoe pollex</i>	66/78
Amphipod	<i>Ampithoe</i> sp.	66/78
Amphipod	<i>Caprella equilibra</i>	66/78
Amphipod	<i>Caprella penantis</i>	66/78
Amphipod	<i>Cerapus tubularis</i>	66/78
Amphipod	<i>Corophium acherusicum</i>	66/78
Amphipod	<i>Corophium acutum</i>	66/78
Amphipod	<i>Corophium tuberculatum</i>	66/78
Amphipod	<i>Elasmopus levis</i>	66/78

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Amphipod	<i>Elasmopus pectinicus</i>	66/78
Amphipod	<i>Elasmopus rapax</i>	66/78
Amphipod	<i>Elasmopus</i> sp.	66/78
Amphipod	<i>Erichthonius brasiliensis</i>	66/78
Amphipod	<i>Gammaropsis</i> sp.	66/78
Amphipod	<i>Gammarus</i> sp.	66/78,81
Amphipod	<i>Gitanopsis tortugae</i>	66/78
Amphipod	<i>Hyale</i> sp.	66/78
Amphipod	<i>Jassa falcata</i>	66/78
Amphipod	<i>Lembos</i> sp.	66/78
Amphipod	<i>Listriella</i> sp.	66/78
Amphipod	<i>Lysianassa</i> sp.	66/78
Amphipod	<i>Lysianopsis</i> sp.	66/78,81
Amphipod	<i>Microdeutopus myersi</i>	66/78
Amphipod	<i>Microprotopus raneyi</i>	66/78
Amphipod	<i>Milita nitida</i>	66/78
Amphipod	<i>Orchestia</i> sp.	66/78,81
Amphipod	<i>Podocerus brasiliensis</i>	66/78
Amphipod	<i>Stenothoe</i> spp.	66/78
<b>Crustacea</b>		
Speckled crab	<i>Arenaeus cribrarius</i>	1,65/77
Crab	<i>Clibanarius</i> sp.	66/78,81
Brown shrimp	<i>Farfantepenaeus aztecus</i>	66/78
Crab	<i>Homola</i> sp.	66/78
Crab	<i>Libinia</i> sp.	66/78,81
Crab	<i>Macrocoeloma subparallelum</i>	66/78,81
Crab	<i>Menippe mercenaria</i>	66/78,81
Crab	<i>Microphrys bicornutus</i>	66/78,81
Crab	<i>Neopanope sayi</i>	66/78
Ghost crab	<i>Ocypode quadrata</i>	1,65/77
Mottled shore crab	<i>Pachygrapsus transversus</i>	66/78
Crab	<i>Panopeus herbstii</i>	66/78,81
Crab	<i>Panopeus occidentalis</i>	66/78
Spiny lobster	<i>Panulirus argus</i>	66/78
Spanish lobster	<i>Panulirus guttata</i>	66/78
Crab	<i>Percnon gibbesi</i>	66/78,81
Crab	<i>Pelia mutica</i>	66/78
Crab	<i>Petrolisthes galathinus</i>	66/78,81
Crab	<i>Pilumnus dasypodus</i>	66/78

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Crab.....	<i>Pilumnus floridanus</i> .....	66/78
Crab.....	<i>Speleophorus pontifer</i> .....	66/78
Florida shovelnose.....	<i>Scyllarus americanus</i> .....	66/78
<b>Mollusca</b>		
Mollusk.....	<i>Abra aequalis</i> .....	66/78
Mollusk.....	<i>Anomia antillensis</i> .....	66/78,81
Mollusk.....	<i>Anomia simplex</i> .....	66/78,81
Mollusk.....	<i>Barbatia domingensis</i> .....	66/78,81
Mollusk.....	<i>Barbatia candida</i> .....	66/78,81
Mollusk.....	<i>Barleeia</i> sp.....	66/78
Mollusk.....	<i>Bittium varium</i> .....	66/78,81
Mollusk.....	<i>Brachidontes exustus</i> .....	66/78,81
Mollusk.....	<i>Bulla striata</i> .....	66/78,81
Mollusk.....	<i>Caecum pulchellum</i> .....	66/78,81
Mollusk.....	<i>Caecum nitidum</i> .....	66/78,81
Mollusk.....	<i>Cerithiopsis greeni</i> .....	66/78
Mollusk.....	<i>Cerithiopsis subulata</i> .....	66/78,81
Mollusk.....	<i>Cerithium atratum</i> .....	66/78,81
Mollusk.....	<i>Cerithium eburneum</i> .....	66/78,81
Mollusk.....	<i>Chama congregata</i> .....	66/78,81
Mollusk.....	<i>Chama macerophylla</i> .....	66/78,81
Mollusk.....	<i>Chione grus</i> .....	66/78,81
Mollusk.....	<i>Costoanachis avara</i> .....	66/78,81
Mollusk.....	<i>Costoanachis floridana</i> .....	66/78,81
Mollusk.....	<i>Crassispira leucocyma</i> .....	66/78,81
Mollusk.....	<i>Crepidula aculeata</i> .....	66/78,81
Mollusk.....	<i>Crepidula fornicata</i> .....	66/78,81
Mollusk.....	<i>Cylindrobulla beauii</i> .....	66/78
Mollusk.....	<i>Dendrodoris krebsi</i> .....	66/78,81
Mollusk.....	<i>Diodora cayenensis</i> .....	66/78,81
Mollusk.....	<i>Diodora listeri</i> .....	66/78,81
Mollusk.....	<i>Diplothyra smithi</i> .....	66/78
Mollusk.....	<i>Epitonium multistriatum</i> .....	66/78
Mollusk.....	<i>Epitonium</i> sp.....	66/78,81
Mollusk.....	<i>Fargoa bartschi</i> .....	66/78,81
Mollusk.....	<i>Fargoa bushiana</i> .....	66/78,81
Mollusk.....	<i>Fargoa dianthophila</i> .....	66/78,81
Mollusk.....	<i>Haminoea antillarum</i> .....	66/78,81
Mollusk.....	<i>Haminoe succinea</i> .....	66/78

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Mollusk	<i>Isognomon alatus</i>	66/78,81
Mollusk	<i>Isognomon bicolor</i>	66/78
Mollusk	<i>Lithophaga bisulcata</i>	66/78
Mollusk	<i>Littorina melagris</i>	66/78
Mollusk	<i>Littorina ziczac</i>	66/78,81
Mollusk	<i>Marginella lavalleana</i>	66/78,81
Mollusk	<i>Meioceras nitidum</i>	66/78,81
Mollusk	<i>Microphrys bicornutus</i>	66/78,81
Mollusk	<i>Mitrella lunata</i>	66/78
Mollusk	<i>Modulus modulus</i>	66/78,81
Mollusk	<i>Modiulus</i> sp.	66/78
Mollusk	<i>Musculus lateralis</i>	66/78
Mollusk	<i>Nassarius albus</i>	66/78,81
Mollusk	<i>Nerita fulgurans</i>	66/78,81
Mollusk	<i>Noetia ponderosa</i>	66/78
Mollusk	<i>Odostoma</i> sp.	66/78
Mollusk	<i>Odostomia babylonica</i>	66/78,81
Mollusk	<i>Odostomia</i> sp.	
Mollusk	<i>Ostrea equestris</i>	66/78,81
Mollusk	<i>Ostreola equestris</i>	66/78
Mollusk	<i>Parviturboides interruptus</i>	66/78,81
Mollusk	<i>Peristicha agria</i>	66/78,81
Mollusk	<i>Pteria colymbus</i>	66/78
Mollusk	<i>Rissoina bryerea</i>	66/78,81
Mollusk	<i>Rissoina catesbyana</i>	66/78,81
Mollusk	<i>Seila adamsi</i>	66/78,81
Mollusk	<i>Selia pectinata</i>	
Mollusk	<i>Siphonaria pectinata</i>	66/78,81
Mollusk	<i>Sphenia antillensis</i>	66/78,81
Mollusk	<i>Thais haemastoma</i>	66/78,81
Mollusk	<i>Tricolia affinis</i>	66/78,81
Mollusk	<i>Triphora decorata</i>	66/78,81
Mollusk	<i>Triphora nigrocincta</i>	66/78,81
Mollusk	<i>Triphora</i> sp.	66/78
Mollusk	<i>Turbonilla</i> sp.	66/78,81
Mollusk	<i>Turitella</i> sp.	66/78
Mollusk	<i>Vermicularia</i> sp.	66/78
Mollusk	<i>Vermicularia spirata</i>	66/78,81
Mollusk	<i>Vitrinella floridana</i>	66/78,81

## Echinodermata

\* Non-native Species



## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Sea urchin.....	<i>Echinometra lacunter</i> .....	66/78
Sea urchin.....	<i>Holothuria</i> sp.....	66/78,81
Sea urchin.....	<i>Ophiothrix</i> sp. ....	66/78,81
<b>Tunicata</b>		
Tunicate.....	<i>Aplidium</i> sp.....	66/78
Sea squirt.....	<i>Didemnum candidum</i> .....	66/78
Tunicate.....	<i>Diplosoma macdonaldi</i> .....	66/78
Tunicate.....	<i>Distaplia bermudensis</i> .....	66/78
Tunicate.....	<i>Distaplia bermudia</i> .....	66/78
Tunicate.....	<i>Ecteinascidea turbinata</i> .....	66/78
Tunicate.....	<i>Eudistoma capsilatam</i> .....	66/78
Tunicate.....	<i>Eudistoma carolinense</i> .....	66/78
Tunicate.....	<i>Perophora bermudensis</i> .....	66/78
Tunicate.....	<i>Perophora viridis</i> .....	66/78
Sea squirt.....	<i>Trididemnum orbiculatum</i> .....	66/78
Sea squirt.....	<i>Trididemnum savignii</i> .....	66/78
<b>FISH</b>		
Nurse shark.....	<i>Ginglymostoma cirratum</i> .....	59/71
Bonnethead .....	<i>Sphyrna tiburo</i> .....	59/71
Spinner shark.....	<i>Carcharhinus falciformis</i> .....	59/71
Bull shark.....	<i>Carcharhinus leucas</i> .....	59/71
Blacktip shark.....	<i>Carcharhinus limbatus</i> .....	59/71
Tiger shark .....	<i>Galeocerdo cuvier</i> .....	59/71
Lemon shark .....	<i>Negaprion brevirostris</i> .....	59/71
Atlantic sharpnose shark .....	<i>Rhizoprionodon terraenovae</i> .....	59/71
Scalloped hammerhead.....	<i>Sphyrna lewini</i> .....	59/71
Great hammerhead .....	<i>Sphyrna mokarran</i> .....	59/71
Smalltooth sawfish.....	<i>Pristis pectinata</i> .....	59/71,64/76
Lesser electric ray.....	<i>Narcine brasiliensis</i> .....	59/71,64/76
Atlantic torpedo .....	<i>Torpedo nobiliana</i> .....	59/71,64/76
Atlantic guitarfish .....	<i>Rhinobatos lentiginosus</i> .....	59/71,64/76
Clearnose skate.....	<i>Raja eglanteria</i> .....	59/71
Southern stingray.....	<i>Dasyatis americana</i> .....	59/71
Roughtail stingray .....	<i>Dasyatis centroura</i> .....	59/71
Atlantic stingray.....	<i>Dasyatis sabina</i> .....	59/71
Bluntnose stingray .....	<i>Dasyatis say</i> .....	59/71

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Smooth butterfly ray.....	<i>Gymnura micrura</i> .....	59/71
Spotted eagle ray.....	<i>Aetobatis narinari</i> .....	59/71
Cownose ray.....	<i>Rhinoptera bonasus</i> .....	59/71
Manta.....	<i>Manta birostris</i> .....	59/71
Ladyfish.....	<i>Elops saurus</i> .....	59/71,64/76
Tarpon.....	<i>Megalops atlanticus</i> .....	59/71,64/76
Bonefish.....	<i>Albula vulpes</i> .....	59/71,64/76
American eel.....	<i>Anguilla rostrata</i> .....	59/71,66/78
Green moray.....	<i>Gymnothorax funebris</i> .....	66/78
Spotted moray.....	<i>Gymnothorax moringa</i> .....	66/78
Atlantic menhaden.....	<i>Brevoortia tyrannus</i> .....	59/71,64/76
False pilchard.....	<i>Harengula clupeola</i> .....	59/71
Scaled sardine.....	<i>Harengula jaguarana</i> .....	59/71,64/76
Spanish sardine.....	<i>Sardinella aurita</i>	
Atlantic thread herring.....	<i>Opisthonema oglinum</i> .....	59/71,64/76
Striped anchovy.....	<i>Anchoa hepsetus</i> .....	59/71,64/76
Bigeye anchovy.....	<i>Anchoa lamprotaenia</i> .....	59/71,64/76
Bay anchovy.....	<i>Anchoa mitchilli</i> .....	59/71,64/76
Hardhead catfish.....	<i>Arius felis</i> .....	64/76
Gafftopsail catfish.....	<i>Bagre marinus</i> .....	64/76
Inshore lizardfish.....	<i>Synodus foetens</i> .....	59/71
Oyster toadfish.....	<i>Opsanus tau</i> .....	59/71
Ballyhoo.....	<i>Hemiramphus brasiliensis</i> .....	59/71
Silverstripe halfbeak.....	<i>Hyporhamphus unifasciatus</i> .....	59/71
Atlantic needlefish.....	<i>Strongylura marina</i> .....	59/71
Redfin needlefish.....	<i>Strongylura notata</i> .....	59/71,64/76
Timucu.....	<i>Strongylura timucu</i> .....	59/71,64/76
Houndfish.....	<i>Tylosurus crocodilus</i> .....	59/71,64/76
Sheepshead minnow.....	<i>Cyprinodon variegatus variegatus</i> .....	59/71,64/76
Goldspotted killifish.....	<i>Floridichthys carpio</i> .....	64/76
Gulf killifish.....	<i>Fundulus grandis</i> .....	64/76
Striped/longnose killifish.....	<i>Fundulus majalis</i> .....	64/76
Rainwater killifish.....	<i>Lucania parva</i> .....	59/71,64/76
Eastern mosquitofish.....	<i>Gambusia holbrooki</i> .....	64/76
Sailfin molly.....	<i>Poecilia latipinna</i> .....	59/71,64/76
Tidewater silverside.....	<i>Menidia peninsulae</i>	
Silverside.....	<i>Menidia spp.</i> .....	59/71,64/76
Lined seahorse.....	<i>Hippocampus erectus</i> .....	66/78
Chain pipefish.....	<i>Syngnathus louisianae</i> .....	59/71
Gulf pipefish.....	<i>Syngnathus scovelli</i> .....	59/71
Spotted scorpionfish.....	<i>Scorpaena plumier</i> .....	59/71

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Leopard searobin .....	<i>Prionotus scitulus</i> .....	59/71,66/78
Bighead searobin.....	<i>Prionotus tribulus</i> .....	59/71,66/78
Swordspine snook.....	<i>Centropomus ensiferus</i> .....	59/71
Fat snook .....	<i>Centropomus paralelus</i> .....	59/71
Tarpon snook.....	<i>Centropomus pectinatus</i> .....	59/71
Common snook .....	<i>Centropomus undecimalis</i> .....	59/71
Black sea bass.....	<i>Centropristis striata</i> .....	59/71,64/76
Jewfish .....	<i>Epinephelus itajara</i> .....	59/71,64/76
Red grouper .....	<i>Epinephelus morio</i> .....	59/71
Black grouper.....	<i>Mycteroperca bonaci</i> .....	59/71,64/76
Gag .....	<i>Mycteroperca microlepis</i> .....	59/71,64/76
Bluefish .....	<i>Pomatomus saltatrix</i> .....	59/71,64/76
Cobia .....	<i>Rachycentron canadum</i> .....	59/71,64/76
Blue runner .....	<i>Caranx crysos</i> .....	59/71,64/76
Crevalle jack.....	<i>Caranx hippos</i> .....	59/71,66/78
Horse-eye jack .....	<i>Caranx latus</i> .....	59/71,66/78
Leatherjack .....	<i>Oligoplites saurus</i> .....	59/71,66/78
Atlantic moonfish.....	<i>Selene setapinnis</i> .....	59/71,66/78
Lookdown.....	<i>Selene vomer</i> .....	59/71,66/78
Florida pompano.....	<i>Trachinotus carolinus</i> .....	59/71,66/78
Permit.....	<i>Trachinotus falcatus</i> .....	59/71,66/78
Mutton snapper.....	<i>Lutjanus analis</i> .....	59/71
Schoolmaster.....	<i>Lutjanus apodus</i> .....	59/71
Gray snapper .....	<i>Lutjanus griseus</i> .....	59/71,64/76
Lane snapper.....	<i>Lutjanus synagris</i> .....	59/71,64/76
Tripletail .....	<i>Lobotes surinamensis</i> .....	59/71,64/76
Irish pompano .....	<i>Diapterus auratus</i> .....	59/71,66/78
Striped mojarra.....	<i>Diapterus plumieri</i> .....	59/71,66/78
Silver jenny.....	<i>Eucinostomus gula</i> .....	59/71,64/76
Tidewater mojarra.....	<i>Eucinostomus harengulus</i> .....	59/71,64/76
Slender mojarra .....	<i>Eucinostomus jonesi</i>	
Mojarra .....	<i>Eucinostomus spp.</i> .....	59/71,64/76
Black margate .....	<i>Anisotremus surinamensis</i> .....	59/71,64/76
Porkfish.....	<i>Anisotremus virginicus</i> .....	59/71,64/76
Tomtate.....	<i>Haemulon aurolineatum</i> .....	59/71,64/76
Sailor's choice .....	<i>Haemulon parra</i>	
Pigfish .....	<i>Orthopristis chrysoptera</i> .....	59/71
Sheepshead.....	<i>Archosargus probatocephalus</i> .....	59/71
Sea bream .....	<i>Archosargus rhomboidalis</i> .....	59/71
Grass porgy.....	<i>Calamus arctifrons</i> .....	59/71
Spottail pinfish.....	<i>Diplodus holbrooki</i> .....	59/71,64/76

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Pinfish .....	<i>Lagodon rhomboides</i> .....	59/71,64/76
Silver perch .....	<i>Bairdiella chrysoura</i> .....	59/71,64/76
Spotted seatrout .....	<i>Cynoscion nebulosus</i> .....	59/71,64/76
Spotted drum.....	<i>Equetus punctatus</i> .....	59/71,64/76
Spot.....	<i>Leiostomus xanthurus</i> .....	59/71,64/76
Southern kingfish.....	<i>Menticirrhus americanus</i> .....	59/71,65/77
Gulf kingfish .....	<i>Menticirrhus littoralis</i> .....	59/71,65/77
Atlantic croaker .....	<i>Micropogonias undulatus</i> .....	59/71,65/77
Red drum.....	<i>Sciaenops ocellatus</i> .....	59/71,64/76
Star drum.....	<i>Stellifer lanceolatus</i> .....	59/71,64/76
Atlantic spadefish .....	<i>Chaetodipterus faber</i> .....	59/71,65/77
Blackchin tilapia .....	<i>Tilapia melanotheron</i> .....	64/76,65/77
Sargeant major.....	<i>Abudefduf saxatilis</i> .....	59/71,64/76
Night sargeant .....	<i>Abudefduf taurus</i> .....	59/71,64/76
Dusky damsselfish.....	<i>Pomacentrus fuscus</i> .....	59/71,64/76
Beaugregory.....	<i>Pomacentrus leucostictus</i> .....	59/71,64/76
Striped mullet .....	<i>Mugil cephalus</i> .....	59/71,64/76
White mullet .....	<i>Mugil curema</i> .....	59/71,64/76
Mullet.....	<i>Mugil sp.</i> .....	59/71,64/76
Great barracuda.....	<i>Sphyraena barracuda</i> .....	65/77,66/78
Southern sennet.....	<i>Sphyraena picudilla</i> .....	65/77,66/78
Dwarf wrasse .....	<i>Doratonotus megalepis</i> .....	59/71,64/76
Emerald parrotfish.....	<i>Nicholsina usta</i> .....	65/77,66/78
Southern stargazer .....	<i>Astroscopus y-graecum</i> .....	65/77,66/78
Hairy blenny .....	<i>Labrisomus nuchipinnis</i> .....	59/71,64/76
Striped blenny .....	<i>Chasmodes bosquianus</i> .....	59/71,64/76
Florida blenny.....	<i>Chasmodes saburrae</i> .....	59/71,64/76
Frillfin goby.....	<i>Bathygobius soporator</i> .....	59/71,64/76
Violet goby .....	<i>Gobioides broussoneti</i> .....	59/71,64/76
Darter goby .....	<i>Gobionellus boleosoma</i> .....	59/71,64/76
Naked goby.....	<i>Gobiosoma bosc</i> .....	59/71,64/76
Code goby .....	<i>Gobiosoma robustum</i> .....	59/71,64/76
Clown goby.....	<i>Microgobius gulosus</i> .....	59/71,64/76
Atlantic cutlassfish.....	<i>Trichiurus lepturus</i> .....	59/71,64/76
King mackerel.....	<i>Scomberomorus cavalla</i> .....	59/71,64/76
Spanish mackerel .....	<i>Scomberomorus maculatus</i> .....	59/71,64/76
Cero .....	<i>Scomberomorus regalis</i> .....	59/71,64/76
Spotted whiff .....	<i>Citharichthys macrops</i> .....	
Bay whiff .....	<i>Citharichthys spilopterus</i> .....	59/71,64/76
Fringed flounder .....	<i>Etropus crossotus</i> .....	59/71,66/77
Gulf flounder .....	<i>Paralichthys albígutta</i> .....	59/71,65/77

\* Non-native Species

Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Summer flounder .....	<i>Paralichthys dentatus</i> .....	59/71,65/77
Southern flounder .....	<i>Paralichthys lethostigma</i> .....	59/71,65/77
Lined sole .....	<i>Achirus lineatus</i> .....	59/71,65/77
Blackcheek tonguefish.....	<i>Symphurus plagiusa</i> .....	59/71,64/76
Hogchoker.....	<i>Trinectes maculatus</i> .....	59/71,64/76
Fringed filefish.....	<i>Monacanthus ciliatus</i> .....	59/71,64/76
Planehead filefish.....	<i>Monacanthus hispidus</i> .....	59/71,64/76
Spotted trunkfish .....	<i>Lactophrys bicaudalis</i> .....	59/71,64/76
Striped burrfish .....	<i>Chilomycterus schoepfi</i> .....	59/71,65/77
Southern puffer .....	<i>Sphoeroides nephelus</i> .....	59/71,65/77
Bandtail puffer.....	<i>Sphoeroides spengleri</i> .....	59/71,65/77
Checkered puffer.....	<i>Sphoeroides testudineus</i> .....	59/71,65/77
Ocean sunfish .....	<i>Mola mola</i> .....	66/78
Dolphin.....	<i>Coryphaena hippurus</i>	
Lyre gobi.....	<i>Evorthodus lyricus</i>	
Sargassumfish.....	<i>Histrion histrio</i>	

REPTILES

Leatherback.....	<i>Dermochelys coriacea coriacea</i> .....	1,66/78
Common snapping turtle.....	<i>Chelydra serpentina serpentina</i> .....	64/76,65/77
Striped mud turtle.....	<i>Kinosternon bauri</i> .....	7
Florida mud turtle.....	<i>Kinosternon subrubrum steindachneri</i> .....	64/76,65/77
Common musk turtle .....	<i>Sternotherus odoratus</i>	
Loggerhead musk turtle.....	<i>Sternotherus minor minor</i>	
Eastern chicken turtle .....	<i>Deirochelys reticularia reticularia</i>	
Carolina diamondback terrapin....	<i>Malaclemys terrapin centrata</i> .....	59/71,64/76
Florida box turtle.....	<i>Terrapene carolina bauri</i> .....	5,7
Florida cooter.....	<i>Pseudemys floridana floridana</i>	
Florida redbelly turtle .....	<i>Pseudemys nelsoni</i>	
Gopher tortoise.....	<i>Gopherus polyphemus</i> .....	5,81
Loggerhead .....	<i>Caretta caretta</i> .....	1,66/78
Green turtle .....	<i>Chelonia mydas</i> .....	1,66/78
Hawksbill .....	<i>Eretmochelys imbricata</i> .....	1,66/78
Atlantic ridley .....	<i>Lepidochelys kempii</i> .....	1,66/78
Florida softshell.....	<i>Apalone ferox</i> .....	65/77
American alligator .....	<i>Alligator mississippiensis</i> .....	64/78
American crocodile.....	<i>Crocodylus acutus</i>	
Indo-Pacific gecko* .....	<i>Hemidactylus garnotii</i> .....	82
Green anole .....	<i>Anolis carolinensis carolinensis</i> .....	5,7
Brown anole* .....	<i>Anolis sagrei</i> .....	7,81,82

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Brown Basilisk*	<i>Basiliscus vittatus</i>	82
Northern curlytail lizard*	<i>Leiocephalus carinatus armouri</i>	82
Eastern slender glass lizard	<i>Ophisaurus attenuatus longicaudus</i>	
Island glass lizard	<i>Ophisaurus compressus</i>	5,7
Eastern glass lizard	<i>Ophisaurus ventralis</i>	5
Six-lined racerunner	<i>Cnemidophorus sexlineatus sexlineatus</i>	5,7,81
Southeastern five-lined skink	<i>Eumeces inexpectatus</i>	5,7
Broad-headed skink	<i>Eumeces laticeps</i>	7
Ground skink	<i>Scincella lateralis</i>	7
Red-tailed Boa*	<i>Boa constrictor</i>	82
Florida scarlet snake	<i>Cemophora coccinea coccinea</i>	5,7
Southern black racer	<i>Coluber constrictor priapus</i>	5,7,81
Southern ringneck snake	<i>Diadophis punctatus punctatus</i>	7
Eastern indigo snake	<i>Drymarchon corais couperi</i>	5,7
Corn snake	<i>Elaphe guttata guttata</i>	5,7
Yellow rat snake	<i>Elaphe obsoleta quadrivittata</i>	7
Florida kingsnake	<i>Lampropeltis getula floridana</i>	7
Eastern kingsnake	<i>Lampropeltis getula getula</i>	
Scarlet kingsnake	<i>Lampropeltis triangulum elapsoides</i>	7
Eastern mud snake	<i>Farancia abacura abacura</i>	
Eastern coachwhip	<i>Masticophis flagellum flagellum</i>	5
Atlantic salt marsh snake	<i>Nerodia clarkii taeniata</i>	64/76
Florida brown snake	<i>Storeria dekayi victa</i>	
Banded water snake	<i>Nerodia fasciata fasciata</i>	64/76
Brown water snake	<i>Nerodia taxispilota</i>	64/76
Striped crayfish snake	<i>Regina alleni</i>	
Rough green snake	<i>Opheodrys aestivus</i>	7,64/76
Florida pine snake	<i>Pituophis melanoleucus mugitus</i>	5
Pine woods snake	<i>Rhadinaea flavilata</i>	
Southeastern crowned snake	<i>Tantilla coronata</i>	7
Eastern ribbon snake	<i>Thamnophis sauritus sauritus</i>	
Eastern garter snake	<i>Thamnophis sirtalis sirtalis</i>	
Eastern hognose snake	<i>Heterodon platyrhinos</i>	
Southeastern hognose snake	<i>Heterodon simus</i>	
Eastern coral snake	<i>Micrurus fulvius fulvius</i>	7
Eastern diamondback rattlesnake	<i>Crotalus adamanteus</i>	1,5,7,81
Dusky pigmy rattlesnake	<i>Sistrurus miliarius barbouri</i>	5,81
Eastern cottonmouth	<i>Agkistrodon piscivorus</i>	

## BIRDS

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Red-throated Loon.....	<i>Gavia stellata</i> .....	59/71
Common Loon.....	<i>Gavia immer</i> .....	59/71
Pied-billed Grebe.....	<i>Podilymbus podiceps</i> .....	59/71
Horned Grebe .....	<i>Podiceps auritus</i> .....	59/71
Sooty Shearwater .....	<i>Puffinus griseus</i> .....	Open ocean
Wilson's Storm-Petrel .....	<i>Oceanites oceanicus</i> .....	Open ocean
Leach's Storm-Petrel .....	<i>Oceanodroma leucorhoa</i> .....	Open ocean
Band-rumped Storm-Petrel .....	<i>Oceanodroma castro</i> .....	Open ocean
White-tailed Tropicbird.....	<i>Phaethon lepturus</i> .....	Open ocean
Masked Booby .....	<i>Sula dactylatra</i> .....	Open ocean
Brown Booby .....	<i>Sula leucogaster</i> .....	Open ocean
Northern Gannet.....	<i>Morus bassanus</i> .....	Open water
American White Pelican.....	<i>Pelecanus erythrorhynchos</i> .....	Flyover/open water
Brown Pelican.....	<i>Pelecanus occidentalis</i> .....	Flyover/open water
Double-crested Cormorant.....	<i>Phalacrocorax auritus</i> .....	59/71,64/76
Anhinga .....	<i>Anhinga anhinga</i> .....	59/71,64/76
Magnificent Frigatebird .....	<i>Fregata magnificens</i> .....	Flyover
Least Bittern .....	<i>Ixobrychus exilis</i> .....	59/71,64/76
Great Blue Heron .....	<i>Ardea herodias</i> .....	59/71,64/76
Great White Heron (pop).....	<i>Ardea herodias occidentalis (pop)</i> .....	59/71,64/76
Great Egret .....	<i>Ardea alba</i> .....	59/71,64/76
Snowy Egret.....	<i>Egretta thula</i> .....	59/71,64/76
Little Blue Heron.....	<i>Egretta caerulea</i> .....	59/71,64/76
Tricolored Heron.....	<i>Egretta tricolor</i> .....	59/71,64/76
Reddish Egret .....	<i>Egretta rufescens</i> .....	59/71,64/76
Cattle Egret* .....	<i>Bubulcus ibis</i> .....	59/71,64/76
Green Heron .....	<i>Butorides virescens</i> .....	59/71,64/76
Black-crowned Night-Heron.....	<i>Nycticorax nycticorax</i> .....	59/71,64/76
Yellow-crowned Night-Heron.....	<i>Nyctanassa violacea</i> .....	59/71,64/76
White Ibis .....	<i>Eudocimus albus</i> .....	59/71,64/76
Glossy Ibis .....	<i>Plegadis falcinellus</i> .....	59/71,64/76
Roseate Spoonbill.....	<i>Platalea ajaja</i> .....	59/71,64/76
Wood Stork .....	<i>Mycteria americana</i> .....	59/71,64/76
Black Vulture .....	<i>Coragyps atratus</i> .....	Flyover
Turkey Vulture.....	<i>Cathartes aura</i> .....	Flyover
Fulvous Whistling-Duck.....	<i>Dendrocygna bicolor</i> .....	59/71,64/76
Canada Goose.....	<i>Branta canadensis</i> .....	59/71,64/76
Wood Duck .....	<i>Aix sponsa</i> .....	59/71,64/76
Green-winged Teal .....	<i>Anas crecca</i> .....	59/71,64/76
American Black Duck.....	<i>Anas rubripes</i> .....	59/71,64/76

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Mottled Duck.....	<i>Anas fulvigula</i> .....	59/71,64/76
Mallard .....	<i>Anas platyrhynchos</i> .....	59/71,64/76
Northern Pintail .....	<i>Anas acuta</i> .....	59/71,64/76
Blue-winged Teal .....	<i>Anas discors</i> .....	59/71,64/76
Northern Shoveler .....	<i>Anas clypeata</i> .....	59/71,64/76
Gadwall .....	<i>Anas strepera</i> .....	59/71,64/76
American Wigeon .....	<i>Anas americana</i> .....	59/71,64/76
Canvasback .....	<i>Aythya valisineria</i> .....	59/71,64/76
Redhead.....	<i>Aythya americana</i> .....	59/71,64/76
Ring-Necked Duck.....	<i>Aythya collaris</i> .....	59/71,64/76
Greater Scaup .....	<i>Aythya marila</i> .....	59/71,64/76
Lesser Scaup.....	<i>Aythya affinis</i> .....	59/71,64/76
Harlequin Duck.....	<i>Histrionicus histrionicus</i> .....	59/71,64/76
Oldsquaw .....	<i>Clangula hyemalis</i> .....	59/71,64/76
Black Scoter .....	<i>Melanitta nigra</i> .....	59/71,64/76
Surf Scoter .....	<i>Melanitta perspicillata</i> .....	59/71,64/76
White-winged Scoter .....	<i>Melanitta fusca</i> .....	59/71,64/76
Hooded Merganser .....	<i>Lophodytes cucullatus</i> .....	59/71,64/76
Red-breasted Merganser .....	<i>Mergus serrator</i> .....	59/71,64/76
Ruddy Duck.....	<i>Oxyura jamaicensis</i> .....	59/71,64/76
Osprey.....	<i>Pandion haliaetus</i> .....	64,76
Bald Eagle.....	<i>Haliaeetus leucocephalus</i> .....	Flyover
Northern Harrier.....	<i>Circus cyaneus</i> .....	1,5
Sharp-shinned Hawk.....	<i>Accipiter striatus</i> .....	5,7
Cooper's Hawk.....	<i>Accipiter cooperii</i> .....	5,7
Red-shouldered Hawk .....	<i>Buteo lineatus</i> .....	5,7
Broad-winged Hawk .....	<i>Buteo platypterus</i> .....	5
Red-tailed Hawk .....	<i>Buteo jamaicensis</i> .....	5,7
American Kestrel.....	<i>Falco sparverius</i> .....	5
Merlin.....	<i>Falco columbarius</i> .....	5
Peregrine Falcon.....	<i>Falco peregrinus</i> .....	77
Northern Bobwhite .....	<i>Colinus virginianus</i> .....	5,81,82
Black Rail .....	<i>Laterallus jamaicensis</i> .....	64,76
Clapper Rail .....	<i>Rallus longirostris</i> .....	64,76
King Rail.....	<i>Rallus elegans</i> .....	64,76
Virginia Rail .....	<i>Rallus limicola</i> .....	64,76
Sora.....	<i>Porzana carolina</i> .....	64,76
Common Moorhen.....	<i>Gallinula chloropus</i> .....	64,76
American Coot.....	<i>Fulica americana</i> .....	64,76
Black-bellied Plover .....	<i>Pluvialis squatarola</i> .....	77
Wilson's Plover .....	<i>Charadrius wilsonia</i> .....	77

\* Non-native Species



## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Semipalmated Plover.....	<i>Charadrius semipalmatus</i> .....	77
Piping Plover .....	<i>Charadrius melodus</i> .....	77
Killdeer .....	<i>Charadrius vociferus</i> .....	77
American Oystercatcher.....	<i>Haematopus palliatus</i> .....	77
Black-necked Stilt.....	<i>Himantopus mexicanus</i> .....	77
American Avocet.....	<i>Recurvirostra americana</i> .....	77
Greater Yellowlegs.....	<i>Tringa melanoleuca</i> .....	77
Lesser Yellowlegs.....	<i>Tringa flavipes</i> .....	77
Solitary Sandpiper .....	<i>Tringa solitaria</i> .....	77
Willet.....	<i>Catoptrophorus semipalmatus</i> .....	77
Spotted Sandpiper.....	<i>Actitis macularia</i> .....	77
Whimbrel.....	<i>Numenius phaeopus</i> .....	77
Long-billed Curlew.....	<i>Numenius americanus</i> .....	77
Marbled Godwit.....	<i>Limosa fedoa</i> .....	77
Ruddy Turnstone .....	<i>Arenaria interpres</i> .....	77
Red Knot.....	<i>Calidris canutus</i> .....	77
Sanderling .....	<i>Calidris alba</i> .....	77
Semipalmated Sandpiper.....	<i>Calidris pusilla</i> .....	77
Western Sandpiper .....	<i>Calidris mauri</i> .....	77
Least Sandpiper .....	<i>Calidris minutilla</i> .....	77
White-rumped Sandpiper.....	<i>Calidris fuscicollis</i> .....	77
Pectoral Sandpiper.....	<i>Calidris melanotos</i> .....	77
Purple Sandpiper .....	<i>Calidris maritima</i> .....	77
Dunlin .....	<i>Calidris alpina</i> .....	77
Stilt Sandpiper .....	<i>Calidris himantopus</i> .....	77
Short-billed Dowitcher .....	<i>Limnodromus griseus</i> .....	77
Common Snipe.....	<i>Gallinago gallinago</i> .....	77
Wilson's Phalarope .....	<i>Phalaropus tricolor</i> .....	77
Red-necked Phalarope.....	<i>Phalaropus lobatus</i> .....	77
Red Phalarope .....	<i>Phalaropus fulicaria</i> .....	77
Pomarine Jaeger .....	<i>Stercorarius pomarinus</i> .....	77
Parasitic Jaeger .....	<i>Stercorarius parasiticus</i> .....	77
Laughing Gull.....	<i>Larus atricilla</i> .....	77
Bonaparte's Gull.....	<i>Larus philadelphia</i> .....	77
Ring-billed Gull .....	<i>Larus delawarensis</i> .....	77
Herring Gull.....	<i>Larus argentatus</i> .....	77
Iceland Gull.....	<i>Larus glaucoides</i> .....	77
Lesser Black-backed Gull .....	<i>Larus fuscus</i> .....	77
Glaucous Gull .....	<i>Larus hyperboreus</i> .....	77
Great Black-backed Gull .....	<i>Larus marinus</i> .....	77
Black-legged Kittiwake .....	<i>Rissa tridactyla</i> .....	77

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Gull-billed Tern .....	<i>Sterna nilotica</i> .....	77
Caspian Tern.....	<i>Sterna caspia</i> .....	77
Royal Tern.....	<i>Sterna maxima</i> .....	77
Sandwich Tern.....	<i>Sterna sandvicensis</i> .....	77
Roseate Tern.....	<i>Sterna dougallii</i> .....	77
Common Tern.....	<i>Sterna hirundo</i> .....	77
Arctic Tern.....	<i>Sterna paradisaea</i> .....	77
Forster's Tern .....	<i>Sterna forsteri</i> .....	77
Least Tern.....	<i>Sterna antillarum</i> .....	77
Bridled Tern .....	<i>Sterna anaethetus</i> .....	77
Sooty Tern .....	<i>Sterna fuscata</i> .....	77
Black Tern.....	<i>Chlidonias niger</i> .....	77
Brown Noddy .....	<i>Anous stolidus</i> .....	77
Black Skimmer .....	<i>Rynchops nigra</i> .....	77
Rock Dove *.....	<i>Columba livia</i> .....	81,82
Mourning Dove.....	<i>Zenaida macroura</i> .....	81,82
Common Ground-Dove .....	<i>Columbina passerina</i> .....	5,81,82
Black-billed Cuckoo.....	<i>Coccyzus erythrophthalmus</i> .....	5,76
Yellow-billed Cuckoo .....	<i>Coccyzus americanus</i> .....	7,76
Mangrove Cuckoo.....	<i>Coccyzus minor</i> .....	76
Smooth-billed Ani.....	<i>Crotophaga ani</i> .....	5
Barn Owl.....	<i>Tyto alba</i> .....	7
Eastern Screech-Owl.....	<i>Otus asio</i> .....	7
Great Horned Owl .....	<i>Bubo virginianus</i> .....	7
Barred Owl.....	<i>Strix varia</i> .....	7
Common Nighthawk.....	<i>Chordeiles minor</i> .....	5,Flyover
Chuck-will's-widow.....	<i>Caprimulgus carolinensis</i> .....	5,7
Whip-poor-will.....	<i>Caprimulgus vociferus</i> .....	5,7
Chimney Swift.....	<i>Chaetura pelagica</i> .....	Flyover
Ruby-throated Hummingbird.....	<i>Archilochus colubris</i> .....	5,7,81,82
Belted Kingfisher.....	<i>Ceryle alcyon</i> .....	64,76
Red-bellied Woodpecker.....	<i>Melanerpes carolinus</i> .....	5,7,81,82
Yellow-bellied Sapsucker.....	<i>Sphyrapicus varius</i> .....	7
Downy Woodpecker.....	<i>Picoides pubescens</i> .....	5,7
Hairy Woodpecker.....	<i>Picoides villosus</i> .....	5,7
Northern Flicker.....	<i>Colaptes auratus</i> .....	5,81,82
Pileated Woodpecker.....	<i>Dryocopus pileatus</i> .....	7
Eastern Wood-Pewee.....	<i>Contopus virens</i> .....	5,7
Eastern Phoebe .....	<i>Sayornis phoebe</i> .....	5
Great Crested Flycatcher.....	<i>Myiarchus crinitus</i> .....	5,7
Western Kingbird.....	<i>Tyrannus verticalis</i> .....	5

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Eastern Kingbird .....	<i>Tyrannus tyrannus</i> .....	5
Gray Kingbird.....	<i>Tyrannus dominicensis</i> .....	5
Scissor-tailed Flycatcher.....	<i>Tyrannus forficatus</i> .....	5
Horned Lark .....	<i>Eremophila alpestris</i> .....	5
Purple Martin .....	<i>Progne subis</i> .....	5,Flyover
Tree Swallow .....	<i>Tachycineta bicolor</i> .....	5,Flyover
Northern Rough-winged Swallow .....	<i>Stelgidopteryx serripennis</i> .....	5,Flyover
Bank Swallow .....	<i>Riparia riparia</i> .....	5,Flyover
Cliff Swallow .....	<i>Petrochelidon pyrrhonota</i> .....	5,Flyover
Barn Swallow .....	<i>Hirundo rustica</i> .....	5,Flyover
Blue Jay .....	<i>Cyanocitta cristata</i> .....	5,7,81,82
American Crow .....	<i>Corvus brachyrhynchos</i> .....	5,7,81,82
Fish Crow .....	<i>Corvus ossifragus</i> .....	5,7,81,82
Carolina Wren .....	<i>Thryothorus ludovicianus</i> .....	5,7,81,82
House Wren .....	<i>Troglodytes aedon</i> .....	5,7
Sedge Wren.....	<i>Cistothorus platensis</i> .....	5
Marsh Wren .....	<i>Cistothorus palustris</i> .....	5
Ruby-crowned Kinglet.....	<i>Regulus calendula</i> .....	5,7
Blue-gray Gnatcatcher.....	<i>Poliophtila caerulea</i> .....	5,7
Veery .....	<i>Catharus fuscescens</i> .....	5,7
Gray-cheeked Thrush.....	<i>Catharus minimus</i> .....	5,7
Swainson's Thrush.....	<i>Catharus ustulatus</i> .....	5,7
Hermit Thrush.....	<i>Catharus guttatus</i> .....	5,7
Wood Thrush.....	<i>Hylocichla mustelina</i> .....	5,7
American Robin.....	<i>Turdus migratorius</i> .....	5,7
Gray Catbird.....	<i>Dumetella carolinensis</i> .....	5,7
Northern Mockingbird.....	<i>Mimus polyglottos</i> .....	5,7,81,82
Brown Thrasher.....	<i>Toxostoma rufum</i> .....	5,7
Cedar Waxwing.....	<i>Bombycilla cedrorum</i> .....	5,7
Loggerhead Shrike.....	<i>Lanius ludovicianus</i> .....	5
European Starling *.....	<i>Sturnus vulgaris</i> .....	5,81,82
White-eyed Vireo .....	<i>Vireo griseus</i> .....	5,7
Blue-headed Vireo .....	<i>Vireo solitarius</i> .....	7
Philadelphia Vireo .....	<i>Vireo philadelphicus</i> .....	7
Red-eyed Vireo.....	<i>Vireo olivaceus</i> .....	7
Black-whiskered Vireo .....	<i>Vireo altiloquus</i> .....	7
Blue-winged Warbler .....	<i>Vermivora pinus</i> .....	7
Tennessee Warbler.....	<i>Vermivora peregrina</i> .....	7
Orange-crowned Warbler.....	<i>Vermivora celata</i> .....	7
Northern Parula .....	<i>Parula americana</i> .....	7

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Yellow Warbler.....	<i>Dendroica petechia</i> .....	7
Magnolia Warbler .....	<i>Dendroica magnolia</i> .....	7
Cape May Warbler.....	<i>Dendroica tigrina</i> .....	7
Black-throated Blue Warbler .....	<i>Dendroica caerulescens</i> .....	7
Yellow-rumped Warbler.....	<i>Dendroica coronata</i> .....	7
Black-throated Green Warbler .....	<i>Dendroica virens</i> .....	7
Blackburnian Warbler .....	<i>Dendroica fusca</i> .....	7
Yellow-throated Warbler .....	<i>Dendroica dominica</i> .....	7
Pine Warbler .....	<i>Dendroica pinus</i> .....	7
Prairie Warbler .....	<i>Dendroica discolor</i> .....	7
Palm Warbler .....	<i>Dendroica palmarum</i> .....	7
Blackpoll Warbler.....	<i>Dendroica striata</i> .....	7
Cerulean Warbler.....	<i>Dendroica cerulea</i> .....	7
Black-and-white Warbler .....	<i>Mniotilta varia</i> .....	7
American Redstart .....	<i>Setophaga ruticilla</i> .....	7
Prothonotary Warbler .....	<i>Protonotaria citrea</i> .....	7
Worm-eating Warbler .....	<i>Helmitheros vermivorus</i> .....	7
Ovenbird .....	<i>Seiurus aurocapillus</i> .....	7
Northern Waterthrush .....	<i>Seiurus noveboracensis</i> .....	7
Louisiana Waterthrush.....	<i>Seiurus motacilla</i> .....	7
Common Yellowthroat.....	<i>Geothlypis trichas</i> .....	7
Hooded Warbler.....	<i>Wilsonia citrina</i> .....	7
Wilson's Warbler .....	<i>Wilsonia pusilla</i> .....	7
Yellow-breasted Chat .....	<i>Icteria virens</i> .....	7
Bananaquit .....	<i>Coereba flaveola</i> .....	7
Summer Tanager .....	<i>Piranga rubra</i> .....	7
Scarlet Tanager .....	<i>Piranga olivacea</i> .....	7
Western Tanager .....	<i>Piranga ludoviciana</i> .....	7
Northern Cardinal .....	<i>Cardinalis cardinalis</i> .....	5,7,81,82
Rose-breasted Grosbeak.....	<i>Pheucticus ludovicianus</i> .....	7
Indigo Bunting.....	<i>Passerina cyanea</i> .....	5,7
Painted Bunting.....	<i>Passerina ciris</i> .....	7
Eastern Towhee .....	<i>Pipilo erythrophthalmus</i> .....	5,7
Chipping Sparrow .....	<i>Spizella passerina</i> .....	5
Field Sparrow .....	<i>Spizella pusilla</i> .....	5
Savannah Sparrow .....	<i>Passerculus sandwichensis</i> .....	5
Grasshopper Sparrow .....	<i>Ammodramus savannarum</i> .....	5
LeConte's Sparrow .....	<i>Ammodramus leconteii</i> .....	5
Seaside Sparrow .....	<i>Ammodramus maritima</i> .....	5
White-throated Sparrow .....	<i>Zonotrichia albicollis</i> .....	5
Bobolink.....	<i>Dolichonyx oryzivorus</i> .....	5

\* Non-native Species

## Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Red-winged Blackbird.....	<i>Agelaius phoeniceus</i> .....	5,81,82
Boat-tailed Grackle.....	<i>Quiscalus major</i> .....	5,81,82
Common Grackle.....	<i>Quiscalus quiscula</i> .....	5,81,82
Brown-headed Cowbird.....	<i>Molothrus ater</i> .....	5,81,82
Baltimore Oriole.....	<i>Icterus galbula</i> .....	7
Pine Siskin.....	<i>Carduelis pinus</i> .....	5,7
American Goldfinch.....	<i>Carduelis tristis</i> .....	5,7
House Sparrow *.....	<i>Passer domesticus</i> .....	81,82

## MAMMALS

Virginia opossum.....	<i>Didelphis virginiana</i> .....	5,7,81
Eastern mole.....	<i>Scalopus aquaticus</i> .....	5,7,81
Nine-banded armadillo*.....	<i>Dasyurus novemcinctus</i> .....	5,7,64/76,81,82
Marsh rabbit.....	<i>Sylvilagus palustris</i> .....	7,64/76
Eastern cottontail.....	<i>Sylvilagus floridanus</i> .....	5,7,81
Gray squirrel.....	<i>Sciurus carolinensis</i> .....	7,64/76,81
Southern flying squirrel.....	<i>Glaucomys volans</i> .....	5,7
Red bat.....	<i>Lasiurus borealis</i>	
Hoary bat.....	<i>Lasiurus cinereus</i>	
Northern yellow bat.....	<i>Lasiurus intermedius</i>	
Seminole bat.....	<i>Lasiurus seminolus</i>	
Evening bat.....	<i>Nycticeius humeralis</i>	
Cotton mouse.....	<i>Peromyscus gossypinus</i> .....	5,7
Oldfield mouse.....	<i>Peromyscus polionotus</i>	
Southeastern beach mouse.....	<i>Peromyscus polionotus niveiventris</i> .....	1,5
Hispid cotton rat.....	<i>Sigmodon hispidus</i> .....	1,5,7
Norway rat.....	<i>Rattus norvegicus</i>	
Black rat*.....	<i>Rattus rattus</i> .....	5,81,82
Eastern woodrat.....	<i>Neotoma floridana</i>	
Marsh rice rat.....	<i>Oryzomys palustris</i>	
House mouse*.....	<i>Mus musculus</i> .....	81,82
Northern short-tailed shrew.....	<i>Blarina brevicauda</i>	
Least shrew.....	<i>Cryptotis parva</i>	
Gray fox.....	<i>Urocyon cinereoargenteus</i> .....	1,5,7,64/76
Raccoon.....	<i>Procyon lotor</i> .....	1,5,7,64/76,81,82
River otter.....	<i>Lutra canadensis</i> .....	64/76.59/71
Eastern spotted skunk.....	<i>Spilogale putorius</i> .....	5,7,64/76
Striped skunk.....	<i>Mephites mephites</i> .....	5,7,64/76
Bobcat.....	<i>Felis rufus</i> .....	5,7,64/76,81
Feral cat*.....	<i>Felis catus</i> .....	81,82

\* Non-native Species

Sebastian Inlet State Park Animals

Common Name	Scientific Name	Primary Habitat Codes (for all species)
Jaguarundi.....	<i>Felis yagouaroundi</i>	
West Indian manatee .....	<i>Trichechus manatus latirostris</i> .....	59/71
Atlantic bottle-nosed dolphin .....	<i>Tursiops truncatus</i> .....	Water Areas
Pygmy sperm whale .....	<i>Kogia breviceps</i> .....	Water Areas
North Atlantic right whale .....	<i>Balaena glacialis glacialis</i> .....	Water Areas
Eastern pipistrelle .....	<i>Pipistrellus subflavus</i>	

\* Non-native Species

Sebastian Inlet State Park Animals

<b>Common Name</b>	<i>Scientific Name</i>	<b>Primary Habitat Codes (for all species)</b>
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## Habitat Codes

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### **Terrestrial**

1. Beach Dune
2. Bluff
3. Coastal Berm
4. Coastal Rock Barren
5. Coastal Strand
6. Dry Prairie
7. Maritime Hammock
8. Mesic Flatwoods
9. Mesic Hammock
10. Coastal Grasslands
11. Pine Rockland
12. Prairie Hammock
13. Rockland Hammock
14. Sandhill
15. Scrub
16. Scrubby Flatwoods
17. Shell Mound
18. Sinkhole
19. Slope Forest
20. Upland Glade
21. Upland Hardwood Forest
22. Upland Mixed Forest
23. Upland Pine Forest
24. Xeric Hammock

### **Palustrine**

25. Basin Marsh
26. Basin Swamp
27. Baygall
28. Bog
29. Bottomland Forest
30. Coastal Interdunal Swale
31. Depression Marsh
32. Dome
33. Floodplain Forest
34. Floodplain Marsh
35. Floodplain Swamp
36. Freshwater Tidal Swamp
37. Hydric Hammock
38. Marl Prairie
39. Seepage Slope
40. Slough
41. Strand Swamp
42. Swale
43. Wet Flatwoods
44. Wet Prairie

### **Lacustrine**

45. Clastic Upland Lake
46. Coastal Dune Lake
47. Coastal Rockland Lake

### **Lacustrine**

48. Flatwood/Prairie Lake
49. Marsh Lake
50. River Floodplain Lake
51. Sandhill Upland Lake
52. Sinkhole Lake
53. Swamp Lake

### **Riverine**

54. Alluvial Stream
55. Blackwater Stream
56. Seepage Stream
57. Spring-Run Stream

### **Estuarine**

58. Estuarine Algal Bed
59. Estuarine Composite Substrate
60. Estuarine Consolidated Substrate
61. Estuarine Coral Reef
62. Estuarine Grass Bed
63. Estuarine Mollusk Reef
64. Estuarine Octocoral Bed
65. Estuarine Sponge Bed
66. Estuarine Tidal Marsh
67. Estuarine Tidal Swamp
68. Estuarine Unconsolidated Substrate
69. Estuarine Worm Reef

### **Marine**

70. Marine Algal Bed
71. Marine Composite Substrate
72. Marine Consolidated Substrate
73. Marine Coral Reef
74. Marine Grass Bed
75. Marine Mollusk Reef
76. Marine Octocoral Bed
77. Marine Sponge Bed
78. Marine Tidal Marsh
79. Marine Tidal Swamp
80. Marine Unconsolidated Substrate
81. Marine Worm Reef

### **Subterranean**

82. Aquatic Cave
83. Terrestrial Cave

### **Miscellaneous**

84. Ruderal
  85. Developed
- MTC** Many Types of Communities  
**OF** Over Flying



**Habitat Codes**

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**Addendum 5 – Designated Species List**



## **Rank Explanations For FNAI Global Rank, FNAI State Rank, Federal Status, And State Status**

The Nature Conservancy and the Natural Heritage Program Network (of which FNAI is a part) define an element as any exemplary or rare component of the natural environment, such as a species, natural community, bird rookery, spring, sinkhole, cave, or other ecological feature. An element occurrence (EO) is a single extant habitat that sustains or otherwise contributes to the survival of a population or a distinct, self-sustaining example of a particular element.

Using a ranking system developed by The Nature Conservancy and the Natural Heritage Program Network, the Florida Natural Areas Inventory assigns two ranks to each element. The global rank is based on an element's worldwide status; the state rank is based on the status of the element in Florida. Element ranks are based on many factors, the most important ones being estimated number of Element occurrences, estimated abundance (number of individuals for species; area for natural communities), range, estimated adequately protected EOs, relative threat of destruction, and ecological fragility.

Federal and State status information is from the U.S. Fish and Wildlife Service; and the Florida Game and Freshwater Fish Commission (animals), and the Florida Department of Agriculture and Consumer Services (plants), respectively.

### **FNAI GLOBAL RANK DEFINITIONS**

G1	=	Critically imperiled globally because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
G2	=	Imperiled globally because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
G3	=	Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
G4	=	apparently secure globally (may be rare in parts of range)
G5	=	demonstrably secure globally
GH	=	of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
GX	=	believed to be extinct throughout range
GXC	=	extirpated from the wild but still known from captivity or cultivation
G#?	=	tentative rank (e.g., G2?)
G#G#	=	range of rank; insufficient data to assign specific global rank (e.g., G2G3)
G#T#	=	rank of a taxonomic subgroup such as a subspecies or variety; the G portion of the rank refers to the entire species and the T portion refers to the specific subgroup; numbers have same definition as above (e.g., G3T1)
G#Q	=	rank of questionable species - ranked as species but questionable whether it is species or subspecies; numbers have same definition as above (e.g., G2Q)
G#T#Q	=	same as above, but validity as subspecies or variety is questioned.
GU	=	due to lack of information, no rank or range can be assigned (e.g., GUT2).
G?	=	not yet ranked (temporary)
S1	=	Critically imperiled in Florida because of extreme rarity (5 or fewer occurrences or less than 1000 individuals) or because of extreme vulnerability to extinction due to some natural or man-made factor.
S2	=	Imperiled in Florida because of rarity (6 to 20 occurrences or less than 3000 individuals) or because of vulnerability to extinction due to some natural or man-made factor.
S3	=	Either very rare and local throughout its range (21-100 occurrences or less than 10,000 individuals) or found locally in a restricted range or vulnerable to extinction of other factors.
S4	=	apparently secure in Florida (may be rare in parts of range)
S5	=	demonstrably secure in Florida
SH	=	of historical occurrence throughout its range, may be rediscovered (e.g., ivory-billed woodpecker)
SX	=	believed to be extinct throughout range
SA	=	accidental in Florida, i.e., not part of the established biota
SE	=	an exotic species established in Florida may be native elsewhere in North America
SN	=	regularly occurring, but widely and unreliably distributed; sites for conservation hard to determine
SU	=	due to lack of information, no rank or range can be assigned (e.g., SUT2).
S?	=	not yet ranked (temporary)

**Rank Explanations For FNAI Global Rank, FNAI State Rank, Federal Status, And State Status**

**LEGAL STATUS**

N = Not currently listed, nor currently being considered for listing, by state or federal agencies.

**FEDERAL (Listed by the U. S. Fish and Wildlife Service - USFWS)**

LE = Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species that is in danger of extinction throughout all or a significant portion of its range.

PE = Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species.

LT = Listed as Threatened Species. Defined as any species that is likely to become an endangered species within the near future throughout all or a significant portion of its range.

PT = Proposed for listing as Threatened Species.

C = Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Defined as those species for which the USFWS currently has on file sufficient information on biological vulnerability and threats to support proposing to list the species as endangered or threatened.

E(S/A) = Endangered due to similarity of appearance.

T(S/A) = Threatened due to similarity of appearance.

**STATE**

**Animals (Listed by the Florida Fish and Wildlife Conservation Commission - FFWCC)**

LE = Listed as Endangered Species by the FFWCC. Defined as a species, subspecies, or isolated population which is so rare or depleted in number or so restricted in range of habitat due to any man-made or natural factors that it is in immediate danger of extinction or extirpation from the state, or which may attain such a status within the immediate future.

LT = Listed as Threatened Species by the FFWCC. Defined as a species, subspecies, or isolated population which is acutely vulnerable to environmental alteration, declining in number at a rapid rate, or whose range or habitat is decreasing in area at a rapid rate and as a consequence is destined or very likely to become an endangered species within the foreseeable future.

LS = Listed as Species of Special Concern by the FFWCC. Defined as a population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species.

**Plants (Listed by the Florida Department of Agriculture and Consumer Services - FDACS)**

LE = Listed as Endangered Plants in the Preservation of Native Flora of Florida Act. Defined as species of plants native to the state that are in imminent danger of extinction within the state, the survival of which is unlikely if the causes of a decline in the number of plants continue, and includes all species determined to be endangered or threatened pursuant to the Federal Endangered Species Act of 1973, as amended.

LT = Listed as Threatened Plants in the Preservation of Native Flora of Florida Act. Defined as species native to the state that are in rapid decline in the number of plants within the state, but which have not so decreased in such number as to cause them to be endangered.

Sebastian Inlet State Park Designated Species—Plants

Common Name/ Scientific Name	FDACS	Designated Species Status	
		USFWS	FNAI
Florida butterfly orchid <i>Encyclia tampensis</i> .....	CE		
Simpson’s applecactus <i>Harrisia simpsonii</i> .....	LE		
Johnson’s Seagrass <i>Halophila johnsonii</i> .....	LT		
Twinberry <i>Myrcianthes fragans</i> .....	LT		
Erect pricklypear <i>Opuntia stricta</i> .....	LT		
Beachberry <i>Scaevola plumieri</i> .....	LT		
Coontie <i>Zamia pumila</i> .....	CE		

**Sebastian Inlet State Park Designated Species—Plants**

<b>Common Name/ Scientific Name</b>	<b>FDACS</b>	<b><u>Designated Species Status</u> USFWS</b>	<b>FNAI</b>
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## Sebastian Inlet State Park Designated Species—Animals

Common Name/ Scientific Name	Designated Species Status		
	FFWCC	USFWS	FNAI

## REPTILES

American alligator			
<i>Alligator mississippiensis</i> .....	LS .....	T(S/A) .....	S4
Loggerhead turtle			
<i>Caretta caretta</i> .....	LT .....	LT .....	S3
Green turtle			
<i>Chelonia mydas mydas</i> .....	LE .....	LE .....	S2
American crocodile			
<i>Crocodylus acutus</i> .....	LE .....	LE .....	S1
Leatherback			
<i>Dermochelys coriacea coriacea</i> .....	LE .....	LE .....	S2
Eastern indigo snake			
<i>Drymarchon corais couperi</i> .....	LT .....	LT .....	S3
Hawksbill turtle			
<i>Eretmochelys imbricata imbricata</i> .....	LE .....	LE .....	S1
Gopher tortoise			
<i>Gopherus polyphemus</i> .....	LS .....	PT .....	S3
Southern hognose snake			
<i>Heterodon simus</i> .....			S2
Atlantic ridley			
<i>Lepidochelys kempii</i> .....	LE .....	LE .....	S1
Atlantic salt marsh snake			
<i>Nerodia clarkii taeniata</i> .....	LT .....	LT .....	S1
Florida pine snake			
<i>Pituophis melanoleucus mugitus</i> .....	LS .....		S3
Florida brown snake			
<i>Storeria dekayi victa</i> .....	LT		

## BIRDS

Cooper's Hawk			
<i>Accipiter cooperii</i> .....			S3
Brown Noddy			
<i>Anous stolidus</i> .....			S1
Great Egret			
<i>Ardea alba</i> .....			S4
Piping Plover			
<i>Charadrius melodus</i> .....	LT .....	LT .....	S2



## Sebastian Inlet State Park Designated Species—Animals

Common Name/ Scientific Name	FFWCC	Designated Species Status	
		USFWS	FNAI
Wilson's Plover <i>Charadrius wilsonia</i> .....			S2
Mangrove Cuckoo <i>Coccyzus minor</i> .....			S3
Little Blue Heron <i>Egretta caerulea</i> ..... LS .....	LS		S4
Reddish Egret <i>Egretta rufescens</i> .....	LS		S2
Snowy Egret <i>Egretta thula</i> ..... LS .....	LS		S4
Tricolored Heron <i>Egretta tricolor</i> ..... LS .....	LS		S4
White Ibis <i>Eudocimus albus</i> .....	LS		S4
Swallow-tailed Kite <i>Elanoides forficatus</i> .....			S2S3
Merlin <i>Falco columbarius</i> .....			S2
Peregrine Falcon <i>Falco peregrinus</i> .....	LE		
Magnificent Frigatebird <i>Fregata magnificens</i> .....			S1
American Oystercatcher <i>Haematopus palliatus</i> .....	LS		S3
Bald Eagle <i>Haliaeetus leucocephalus</i> ..... LT .....	LT	LT	S3
Worm-eating Warbler <i>Helmitheros vermivorus</i> .....			S1
Black Scoter <i>Melanitta nigra</i> .....			
Wood Stork <i>Mycteria americana</i> ..... LE .....	LE	LE	S2
Yellow-crowned Night-Heron <i>Nyctanassa violaceus</i> .....			S3
Black-crowned Night-Heron <i>Nycticorax nycticorax</i> .....			S3
Osprey <i>Pandion haliaetus</i> .....			S3S4
Painted Bunting <i>Passerina ciris</i> .....			S3

Sebastian Inlet State Park Designated Species—Animals

Common Name/ Scientific Name	Designated Species Status		
	FFWCC	USFWS	FNAI
Brown Pelican <i>Pelecanus occidentalis</i> .....	LS		S3
Hairy Woodpecker <i>Picoides villosus</i> .....			S3
Roseate Spoonbill <i>Platalea ajaja</i> .....	LS		S2
Glossy Ibis <i>Plegadis falcinellus</i> .....			S3
American Avocet <i>Recurvirostra americana</i> .....			S2
Black Skimmer <i>Rynchops niger</i> .....	LS		S3
Louisiana Waterthrush <i>Seiurus motacilla</i> .....			S2
American Redstart <i>Setophaga ruticilla</i> .....			S2
Least Tern <i>Sterna antillarum</i> .....	LT		S3
Caspian Tern <i>Sterna caspia</i> .....			S2
Roseate Tern <i>Sterna dougallii</i> .....	LT	LT	S1
Sooty Tern <i>Sterna fuscata</i> .....			S1
Royal Tern <i>Sterna maxima</i> .....			S3
Gull-billed Tern <i>Sterna nilotica</i> .....			S2
Sandwich Tern <i>Sterna sandvicensis</i> .....			S2
Black-whiskered Vireo <i>Vireo altiloquus</i>			

FISH

Snook <i>Centropomus undecimalis</i> .....	LS
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MAMMALS

North Atlantic right whale <i>Balaena glacialis glacialis</i> .....	LE	LE
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Sebastian Inlet State Park Designated Species—Animals

Common Name/ Scientific Name	Designated Species Status		
	FFWCC	USFWS	FNAI
Southeastern beach mouse			
<i>Peromyscus polionotus niveiventris</i> .....	LT .....	LT .....	S1
West Indian manatee			
<i>Trichechus manatus latirostris</i> .....	LE .....	LE .....	S2

**Addendum 6 – Archaeological Site Data**



### Sebastian Inlet State Park Archaeological Site Data

County	Location	Site #	Site Type 1	Site Type 2	Culture	Culture	Date Recorded
Brevard	in park	8BR124	shell midden	sand mound	unspecified prehistoric		1950
Brevard	in park	8BR125	shell midden homestead or mosquito control structure		Malabar 1 and 2		1951
Brevard	in park	8BR770	shell midden	shell midden	19th - early 20th century	unspecified prehistoric	1990
Brevard	in park	8BR1694	shell midden		unspecified prehistoric		1997
Indian River	in park	8IR34	shell midden		Malabar 1		1953
Indian River	in park	8IR37	shell midden	sand mounds	Malabar 2		1951
Indian River	in park	8IR38	shell midden				1950
Indian River	in park	8IR39	shell midden				1950
Indian River	in park	8IR35	sand mound				1950
Indian River	in park	8IR36	shell midden				1950
Indian River	in park	8IR40	shell midden		Malabar 2		1953

### Sebastian Inlet State Park Archaeological Site Data

County	Location	Site #	Site Type 1	Site Type 2	Culture	Culture	Date Recorded
Indian River	in park	8IR25	shell midden				1967
Indian River	in park	8IR26	shipwreck survivors camp	shell midden	1715	unspecified prehistoric	1971
Brevard	to north of park	8BR559	shell midden				1989
Indian River	to south of park	8IR42	shell midden		Malabar 2		1951
Indian River	to south of park	8IR11	shell midden				1953
Indian River	to south of park	8IR24	shipwreck survivors camp	shell midden			1951
Indian River	to south of park	8IR41	shell midden		Orange	Malabar 1	
Indian River	offshore	8IR23	shipwreck		1715 Spanish Fleet		1965
Indian River	offshore	8IR30	shipwreck		1715 Spanish Fleet		1969
Brevard	offshore	8BR168	shipwreck	early 19th century			1965

**Addendum 7 – Priority Schedule and Cost Estimates**





**Sebastian Inlet State Park Priority Schedule And Cost Estimates**

Estimates are developed for the funding and staff resources needed to implement the management plan based on goals, objectives and priority management activities. Funding priorities for all state park management and development activities are reviewed each year as part of the Division’s legislative budget process. The Division prepares an annual legislative budget request based on the priorities established for the entire state park system. The Division also aggressively pursues a wide range of other funds and staffing resources, such as grants, volunteers and partnerships with agencies, local governments and the private sector for supplementing normal legislative appropriations to address unmet needs. The ability of the Division to implement the specific goals, objectives and priority actions identified in this plan will be determined by the availability of funding resources for these purposes.

**Resource Management**

1. Revise the exotic plant removal plan to include recently acquired parcels. Zero-10 years. Estimated Cost: \$1,000/year reoccurring ..... **\$10,000.00**
2. Survey for exotic species and implement an exotic species removal program. Zero-10 years. Estimated Cost: \$20,000/year recurring ..... **\$200,000.00**
3. Continue and expand the prescribed fire program by obtaining the needed equipment and by training staff. Add overgrown coastal strand on the north side of inlet to the plan. Zero-10 years. Estimated Cost: \$8,000/year reoccurring ..... **\$80,000.00**
4. Mechanically treat overgrown pyrogenic natural communities. Zero-10 years. Estimated Cost: \$50,000 ..... **\$50,000.00**
5. Monitor the site-bearing duneline, Atlantic beach on the east, and coastline on the Indian River Lagoon to the west for erosion damage. Zero-10 years. Estimated Cost: \$2000/year reoccurring ..... **\$20,000.00**
6. Monitor the changes in the quality and quantity of suitable habitat for southeastern beach mice and the mouse population. Zero-10 years. Estimated Cost: \$5,000, plus \$5,000/year reoccurring..... **\$55,000.00**
7. Survey for and monitor wintering and nesting shorebirds. Zero-10 years. Estimated Cost: \$5000/year reoccurring ..... **\$50,000.00**
8. Restoration of Coconut point protection zone for beach-nesting birds and public education according to the restoration plan. Zero-10 years. Estimated Cost: \$40,000 ..... **\$40,000.00**
9. Monitoring all known archaeological sites for possible threats. Zero-10 years. Estimated Cost: \$1000/yearreoccurring ..... **\$10,000.00**
10. Conduct both a Level I and Level II archaeological survey of the park, both on land and underwater, utilizing GPS technology. Zero-10 years. Estimated Cost: \$75,000 ..... **\$75,000.00**

**Sebastian Inlet State Park Priority Schedule And Cost Estimates**

- 11. Implement cultural resource monitoring protocols, utilizing photopoints. Zero-10 years. Estimated Cost: \$1,000, plus \$1,000/year reoccurring ..... **\$11,000.00**
- 12. Consider opportunities to reintroduce beach mice to appropriate habitat north of the inlet. Zero-10 years. Estimated Cost: \$5,000..... **\$5,000.00**
- 13. Catalog all collections objects in the fisheries museum. Zero-10 years. Estimated Cost: \$2,000 ..... **\$2,000.00**
- 14. Reach a planning decision on future of McLarty Museum. Zero-10 years. Estimated Cost: \$1,000 ..... **\$1,000.00**
- 15. Seek grant funding for a research project to document history of park and surrounding area. Zero-10 years. Estimated Cost: \$1,000 ..... **\$1,000.00**

**Administration**

- 1. Add staff positions. Zero-10 years. Estimated Cost (includes benefits): 1 Park Attendant, 2 Toll Collectors, 2 Park Rangers, 1 Environmental Specialist I. Zero-10 years. Estimated Cost: \$136,000/year reoccurring ..... **\$1,360,000.00**

**Total Estimated Cost..... \$ 1,970,000.00**

**Development Area or Facilities**

Administrative Office/"Spanish House" Area .....	468,700.00
Sebastian Inlet Marina.....	1,500,000.00
North Jetty/Beach Use Area.....	1,500,000.00
Swimming Cove/Overflow Area .....	1,026,000.00
South Inlet Shoreline .....	750,000.00
Camping Area .....	710,500.00
Cabin Area .....	1,976,000.00
South Beach Use Areas.....	267,000.00
Miscellaneous .....	67,600.00
Support Facilities.....	1,370,000.00

**Total w/contingency .....\$11,562,960.00**



*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309

JARED W. PERDUE, P.E.  
SECRETARY

May 9, 2023

Mr. Daniel Alsentzer, Bureau Chief, Office of Park Planning  
Florida Department of Environmental Protection  
Division of Recreation and Parks  
3800 Commonwealth Blvd  
Tallahassee, Florida 32399-3000

Subject: Final *De minimis* Request for Concurrence on Sebastian Inlet Park  
Sebastian Inlet Bridge Replacement Project  
Financial Management Number: 445618-1-22-01  
Limits: Roadway ID 88070000 from MP 21.945 to MP 22.665  
Roadway ID 70060000 from MP 0.000 to MP 0.395  
Indian River and Brevard Counties, Florida

Dear Mr. Alsentzer:

As part of the ongoing Project Development and Environment (PD&E) Study for the above referenced project, the Florida Department of Transportation (FDOT) has identified your agency as the Official with Jurisdiction (OWJ) over Sebastian Inlet State Park (Park). This park qualifies for protection as a Section 4(f) resource because it is a publicly owned, recreational resource, 49 U.S.C. §303. In analyzing the project's effects upon the Park with respect to its ability to continue providing public recreational opportunities, FDOT wishes to notify you that our evaluation supports a *de minimis* finding based on park operations. As discussed previously with Florida Department of Environmental Protection (FDEP) state and local park staff, this Section 4(f) process is necessary because of the project's proposed impact to park property for transportation related improvements.

Through coordination with Mr. Ken Torres, Park Manager, and Ms. Jennifer Roberts, Assistant Bureau Chief, both FDEP and FDOT have discussed the activities, features, and attributes that qualify the park for protection as well as measures to minimize harm through avoidance, mitigation and enhancement. Impacts to these identified qualities, along with proposed avoidance and minimization measures relating to location of the proposed ponds sites as well as reduction in footprint along with betterments for the Park, form the basis for the *de minimis* impact determination. The project plans, including the proposed impacts to the Park, were available for public comment during Public Hearings held on December 13, 2022 (Virtual) and December 15, 2022 (in-person). After reviewing all public comments from the hearings, FDOT documented that there were no public comments on the impacts to the Park.

Through our coordination, we collectively identified the following mitigation measures as part of the *de minimis* process that FDOT commits to providing as part of the project:

- Replacing the existing perimeter fence around the bridge on the north side of the park.
- Repaving both the south and north parking lots within the FDOT right of way (ROW) under the bridge.

Final REVISED De minimis Request for Concurrence Letter

May 9, 2023

- Providing funding through a Joint Participation Agreement (JPA) for installation of electronic gates at both the south and north park entrances.
- Continue efforts to further reduce, and not increase, the total amount of park acreage needed to be converted to FDOT ROW for inclusion as stormwater management facilities during the final design phase from the estimated 2.87 acres shown in the proposed Pond Reduction Alternative Matrix.

In addition to the Section 4(f) consultation, FDOT recognizes there are additional processes which require agency coordination to further consider and minimize impacts to natural resources within the Park. As the project transitions to the final design phase, FDOT will continue working with the Division of State Lands to address the Acquisition and Restoration Council (ARC) process and will embark on the environmental permitting process as well.

To conclude the *de minimis* consultation process in accordance with 23 CFR §774.5(b), FDOT requests your signature below as concurrence from the OWJ with FDOT's *de minimis* finding. As the project moves to design, FDOT will continue to coordinate with your staff to further refine these mitigation measures.

If there are any questions, please feel free to contact me at (954) 777-4325 or Christie Pritchard at (954) 777-4147.

Sincerely,

Ann Broadwell  
Environmental Administrator  
FDOT - District 4

**Concurrence:** The Florida Department of Environmental Protection (FDEP) as the Official with Jurisdiction concurs that the permanent impacts to the Sebastian Inlet State Park as a result of the Sebastian Inlet Bridge Replacement Project, including all measures to mitigate and minimize harm (which shall include, but not be limited to the four commitment bullets in the letter above), will not adversely affect the activities, features, or attributes that qualify the property for protection under Section 4(f) [49 U.S.C. §303] and concurs with FDOT's Section 4(f) *de minimis* finding. In addition, FDEP recognizes that FDOT will continue its coordination to minimize impacts to the Park (which may include further minimization of park natural area conversion to stormwater features to support the expanded roadway which would ultimately be finalized through acquisition of those potentially smaller areas as FDOT ROW) and address proprietary matters through the ARC process.

May 9, 2023

\_\_\_\_\_  
Daniel Alsentzer, Bureau Chief, Office of Park Planning  
Florida Department of Environmental Protection

\_\_\_\_\_  
Date

cc:

*Final REVISED De minimis Request for Concurrence Letter*

*May 9, 2023*

Mr. Ken Torres, FDEP Park Manager  
Ms. Jennifer Roberts, FDEP Assistant Bureau Chief  
Mr. Brad Richardson, FDEP Division of State Lands  
Mr. Binod Basnet, P.E., FDOT Project Manager  
Ms. Beth Beam, Consultant Project Manager, Stantec Inc.  
Ms. Christie Pritchard, Pritchard Environmental Inc.



# FLORIDA DEPARTMENT OF Environmental Protection

Division of Recreation & Parks, District 3  
1800 Wekiwa Circle, Apopka, FL 32712

**Ron DeSantis**  
Governor

**Jeanette Nuñez**  
Lt. Governor

**Shawn Hamilton**  
Secretary

April 21, 2022

Christie Pritchard  
District 4 In-house PLEMO Consultant  
Office: 954-777-4147  
Cell: 561-818-2751

Dear Ms. Pritchard,

In response to your request for information regarding the Sebastian Inlet Bridge replacement project, I have compiled the following information based on the categories of information you are requesting.

**1. Possible adverse effects to the activities, features, and attributes (AFAs) to the park while all park operations are maintained during construction activities:**

- Parking and access on the north side of the park will be affected due to the inability to park, walk or drive under the bridge while construction is taking place during certain times of the project. This would include access to and from two restrooms, bait shop, restaurant, banquet hall, north jetty, north beach, catwalk, fish cleaning station and parking.
- Access over the bridge will be limited while lane closures take place. This would not only affect visitors, but possible emergency services and staff needing to access different areas of the park.
- Temporary or long-term loss of utilities and possible needed repairs.
- Temporary possible disruption of vendor access for deliveries and services. This may include items such as food and propane deliveries.
- Parking and access on the south side of the park will be affected due to the inability to park, walk or drive under the bridge while construction is taking place during certain times of the project. This would include access to the south jetty, south beach access, catwalk and parking area. Area under the bridge is used for staff and visitor parking, park visitor turn-around and firewood storage.

## **2. Permanent impacts to the AFAs from the FDOT project:**

### Activities:

- Addition of bike/pedestrian lane will be a positive addition to the park. Recommend eliminating seating areas on ocean/east side of bridge so pedestrians are not encouraged to cross traffic on State Road A1A to increase safety.
- Additional foot traffic on east and west sides of the bridge.

### Features (structure, form, main items):

- Change to water well access under bridge on north side. This will most likely need to be relocated or removed.
- Recommend eliminating sidewalk to the south day use parking lot as this is not seen as a park need.

### Attributes (characteristic, quality):

- Moving of bridge supports to the east or west will impact those areas of the park. This will vary depending on the footprint of the project boundary.
- Creating stormwater holding ponds will impact habitat due to the removal of native vegetation and the change in elevation. Recommend finding alternatives for stormwater retention that do not involve impacting native habitat.
- Possible unknown archaeological impacts.
- Increase in project area may result in loss of gopher tortoise habitat.
- Recommend removing the catwalk structures under the bridge unless they are maintained in perpetuity by FDOT.

## **3. Park improvement recommendations**

- Paving of north and south entrance roads to include a pedestrian/bike lane.
- Paving of parking lots under north and south bridge.
- Addition of stormwater drainage system in north parking area to address parking lot flooding issues.
- Shoreline stabilization project at Coconut Point.
- Installation of utilities at north and south entrances and electronic entrance gates. Priority would be on south entrance with pin pad and vehicle turn around.
- Replacement of existing rusted perimeter fences around base of bridge.
- Recommend wetland mitigation from stormwater pond impacts be mitigated at Indian River Lagoon Preserve, Brevard County.



Please let me know if you have any additional questions or need more information.

Thank you,

A handwritten signature in black ink that reads "Jennifer Roberts". The signature is written in a cursive style with a large initial "J" and "R".

Jennifer Roberts  
Assistant Bureau Chief  
Department of Environmental Protection  
Division of Recreation & Parks, District 3  
1800 Wekiwa Circle, Apopka, FL 32712  
[Jennifer.e.roberts@FloridaDEP.gov](mailto:Jennifer.e.roberts@FloridaDEP.gov)  
Office: 407-553-4356



*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309

JARED W. PERDUE, P.E.  
SECRETARY

December 12, 2022

Brian Fugate, Assistant Director  
Field Operations  
Florida Department of Environmental Protection  
Division of Recreation and Parks  
3800 Commonwealth Blvd  
Tallahassee, Florida 32399-3000

Subject: Notice of Intent to Pursue *De minimis* Notification for Sebastian Inlet Park  
Sebastian Inlet Bridge Replacement Project Development & Environment (PD&E)  
Study  
Financial Management Number: 445618-1-22-01  
Limits: Roadway ID 88070000 from MP 21.945 to MP 22.665  
Roadway ID 70060000 from MP 0.000 to MP 0.395  
Indian River and Brevard Counties, Florida

Dear Mr. Fugate:

As part of the ongoing Project Development and Environment Study (PD&E) for the above referenced project, the Florida Department of Transportation (FDOT) has identified your agency as the Official with Jurisdiction (OWJ) over the above referenced Sebastian Inlet State Park. This park qualifies for protection as a Section 4(f) resource because it is a publicly owned, recreational resource, and therefore, FDOT wishes to notify you of our intent to pursue a *de minimis* finding. As discussed previously with both Ken Torres, Park Manager, and Ms. Jennifer Roberts, Assistant Bureau Chief, this *de minimis* process is necessary because of our intent to use the existing park property for project related improvements.

Through coordination with Mr. Ken Torres, Park Manager and Ms. Jennifer Roberts, both FDEP and FDOT have identified the activities, features, and attributes that qualify the park for protection as well as measures to minimize harm and enhance existing conditions. Impacts to these qualities, along with proposed enhancements form the basis for the *de minimis* impact determination. The project plans that include the impacts to the existing park, will be available for public comments at the upcoming Public Hearing on both December 13 (Virtual), and December 15 (in-person). After reviewing all public comments from the hearing, we will be respectively requesting a letter of concurrence from your office with the *de minimis* impact so that the FDOT can continue the process of securing park property for project related improvements.

If there are any questions, please feel free to contact me at (954) 777-4325 or Christie Pritchard at (954) 777-4147.

December 12, 2022

Sincerely,



Ann Broadwell  
Environmental Administrator  
FDOT - District 4

cc:

Mr. Ken Torres, FDEP Park Manager  
Ms. Jennifer Roberts, FDEP Assistant Bureau Chief  
Mr. Brad Richardson, FDEP Division of State Lands  
Mr. Binod Basnet, P.E., FDOT Project Manager  
Ms. Beth Beam, Consultant Project Manager, Stantec Inc.  
Ms. Christie Pritchard, Pritchard Environmental Inc.



**Florida Department of Transportation**

**RON DESANTIS**  
GOVERNOR

3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309

**JARED W. PERDUE, P.E.**  
SECRETARY

September 12, 2022

Ms. Jennifer Roberts, Assistant Bureau Chief  
Florida Department of Environmental Protection (FDEP)  
Division of Recreation & Parks, District 3  
1800 Wekiva Circle, Apopka, FL. 32712

Subject: Response to FDEP April 21, 2022 Letter to FDOT  
Sebastian Inlet Bridge Replacement Project Development & Environment  
(PD&E) Study  
Financial Management Number: 445618-1-22-01  
Limits: Roadway ID 88070000 from MP 21.945 to MP 22.665  
Roadway ID 70060000 from MP 0.000 to MP 0.395  
Indian River and Brevard Counties, Florida

Dear Ms. Roberts:

Thank you for your time during our coordination meeting on August 10, 2022. In that meeting, we discussed the issues/concerns relating to the activities, features, and attributes of the Sebastian Inlet State Park regarding the above referenced project. These concerns, along with proposed park improvements/mitigation recommended by FDEP were outlined in FDEP's letter to the Florida Department of Transportation (FDOT, Christie Pritchard) April 21, 2022. Responses to FDEP concerns are summarized below.

**1. Possible adverse effects to the activities, features, and attributes (AFAs) to the park while all park operations are maintained during construction activities:**

- Parking and access on the north side of the park will be affected due to the inability to park, walk or drive under the bridge while construction is taking place during certain times of the project. This would include access to and from two restrooms, bait shop, restaurant, banquet hall, north jetty, north beach, catwalk, fish cleaning station and parking.  
**FDOT Response:** *In general, and as discussed, bridge construction activities are phased. Any duration of potential limits to access to the various AFAs will be coordinated between FDOT and the park during the Final Design Phase to avoid interference with AFAs on a temporary basis while also providing the safest environment for park users. Details associated with construction phasing, temporary traffic control plan to provide access to vehicles and pedestrians, and staging will be completed during the Design Phase of the project. FDOT will be coordinating further with your park personnel regarding these issues. These items will be included in the Construction Plans, Plan Notes, and Contractor*

FM Number: 445618-1/Sebastian Inlet Bridge Response Letter  
September 12, 2022

*Bid Documents etc. A design commitment will be included in the Type II CE regarding the need for additional coordination of these issues.*

- Access over the bridge will be limited while lane closures take place. This would not only affect visitors, but possible emergency services and staff needing to access different areas of the park.

**FDOT Response:**

*Two-way traffic will be maintained during construction which will include access for emergency services and staff needing access to different areas of the park. A Temporary Traffic Control Plan (TTCP) will be completed during the Final Design Phase which will address the temporary traffic control and sequencing of construction phases. The FDOT will further coordinate with the FDEP regarding these issues during the Final Design Phase, and a design commitment will be included in the Type II CE document.*

- Temporary or long-term loss of utilities and possible needed repairs.  
**FDOT Response:** *The need to relocate and/or replace existing utilities located near and within the bridge ROW is anticipated. During the Final Design Phase, FDOT Utility Coordinator will contact utility owners to coordinate any need to relocate utilities during construction and ensure no lapse in utility service.*

- Temporary possible disruption of vendor access for deliveries and services. This may include items such as food and propane deliveries.

**FDOT Response:** *As mentioned above, the proposed bridge demolition and construction will primarily occur within the limits of the FDOT ROW. During the Final Design Phase, FDOT will further develop the sequence of construction activities to avoid/minimize impacts to park related resources, and additional coordination will take place between FDOT and the park staff regarding these issues.*

- Parking and access on the south side of the park will be affected due to the inability to park, walk or drive under the bridge while construction is taking place during certain times of the project. This would include access to the south jetty, south beach access, catwalk, and parking area. Area under the bridge is used for staff and visitor parking, park visitor turn-around and firewood storage.

**FDOT Response:** *The FDOT contractor will phase construction so that sections of the parking lot, outside the FDOT ROW, will be open to the public and FDEP staff at all times. FDOT to further coordinate with FDEP during the Final Design Phase and prior to the Construction Phase to present a sequencing plan for parking and access for these activities.*

**Activities:**

- Addition of bike/pedestrian lane will be a positive addition to the park. Recommend eliminating seating areas on ocean/east side of bridge so pedestrians are not encouraged to cross traffic on State Road A1A to increase safety.

**FDOT Response:** *The proposed shared use path on the east and west sides of the bridge are barrier separated. The proposed "bump out" areas on the east and west sides of the bridge currently do not show any seating area.*

- Additional foot traffic on east and west sides of the bridge.  
**FDOT Response:** *Although the project does not propose capacity changes (2-lanes of travel are maintained), bicyclists and pedestrians will benefit from the improved shoulders and shared use paths proposed on the east and west sides of the bridge. The project is consistent with FDOT design criteria for bridges/roadways of this type and the Indian River County Bicycle and Pedestrian Plan. These improvements will enhance beneficial uses of the environment by providing improved opportunities for increased multi-modal travel within the project area, as requested by the Indian River County Metropolitan Planning Organization (MPO).*

**Features (structure, form, main items):**

- Change to water well access under bridge on north side. This will most likely need to be relocated or removed.  
**FDOT Response:** *The need to relocate and/or replace existing utilities located near and within the bridge ROW is anticipated. FDOT will coordinate with utility owners and the park to ensure no long-term lapse in utility service.*
- Recommend eliminating sidewalk to the south day use parking lot as this is not seen as a park need.  
**FDOT Response:** *Bicyclists and pedestrians will benefit from the improved shoulders and shared use path that extends to the day use parking lot. FDOT is committed to providing a safe transportation facility for all users. These improvements have been coordinated with and requested by the Indian River County MPO and will enhance beneficial uses of the environment by providing improved opportunities for increased multi-modal travel within the project area.*

**Attributes (characteristic, quality):**

- Moving of bridge supports to the east or west will impact those areas of the park. This will vary depending on the footprint of the project boundary.  
**FDOT Response:** *The proposed bridge piers are located within FDOT ROW and will be relocated from the existing bridge pier locations. The existing bridge superstructures will be removed during the construction phase and the area will be reconstructed and incorporated into the revised parking lot layout.*
- Creating stormwater holding ponds will impact habitat due to the removal of native vegetation and the change in elevation. Recommend finding alternatives for stormwater retention that do not involve impacting native habitat.  
**FDOT Response:** *The project team continues to evaluate options to manage stormwater from the proposed bridge/roadway improvements. Currently, the project proposes two wet detention ponds (0.74 acres south and 1.39 acres north of the inlet) within predominantly upland area to avoid or minimize mangrove impacts. Additional drainage concepts that could potentially be within the FDOT ROW will be further developed during the Final Design Phase of the project (which is currently overlapping with the PD&E Study).*
- Possible unknown archaeological impacts.

**FDOT Response:** A Cultural Resource Assessment Survey (CRAS) has been completed for the project and identifies possible locations of archaeological resources. The Preferred Alternative avoids these resources. However, the FDOT commits to having a professional archaeologist conduct monitoring during construction of this project. Should construction activities uncover any archaeological remains while an archaeological monitor is not present in the area, it is recommended that activity in the immediate area of the remains be stopped until a professional archaeologist evaluates the material. The need for an archaeological monitor will be included as a project commitment in the Type II CE document.

- Increase in project area may result in loss of gopher tortoise habitat.  
**FDOT Response:** A survey of the presence of gopher tortoises was completed as part of the Natural Resource Evaluation (NRE) for the PD&E Study. FDOT will continue to work with Park personnel regarding the gopher tortoises and every effort will be made to keep the tortoises within the park boundaries.
- Recommend removing the catwalk structures under the bridge unless they are maintained in perpetuity by FDOT.  
**FDOT Response:** The fishing pier/observation deck will be constructed as part of the project. FDOT will continue to maintain the structural components of the facility and the park will conduct the daily maintenance activities such as trash pickup, etc. This information will be included as a project commitment in the Type II CE document.

## 2. Park improvement recommendations

**FDOT Response:** FDOT has committed to further evaluation and/or construction of the items listed below as measures to minimize harm/mitigate Section 4(f) and Acquisition and Restoration Council (ARC) requirements.

- Paving of north and south entrance roads to include a pedestrian/bike lane. Currently, this improvement is not part of the bridge replacement project. Further evaluation is required to understand the environmental impacts associated with the proposed improvement. The north access road is surrounded by mangroves and any widening or construction would have impacts to the natural environment. Similarly, the south access road has mangroves on west side and SR A1A on the east. Per the recent meeting with the park, more information regarding the type of facility (and examples of this kind of enhancement) will be provided by the park to FDOT. FDOT proposes further evaluation of these improvements during the Design phase to meet the ARC and Section 4(f) impact mitigation requirements.
- Paving of parking lots under north and south bridge. FDOT commits to paving of the parking lots that are impacted by construction of the project. This will be included as a project commitment in the Type II CE document.
- Addition of stormwater drainage system in north parking area to address parking lot flooding issues. Majority of the drainage issues in north parking area are associated with the runoff from the scuppers on the bridge. The proposed bridge replacement project will route the stormwater from the new bridge to a new stormwater management system and

FM Number: 445618-1/Sebastian Inlet Bridge Response Letter  
September 12, 2022

*resolve this issue. Construction of parking lots within FDOT ROW will also include resolving drainage issues. FDOT proposes to evaluate the stormwater runoff from outside of the ROW. This will also be included as a project commitment in the Type II CE document.*

- *Shoreline stabilization project at Coconut Point. FDOT proposes to further evaluate this project as potential mitigation for the following: Section 4(f), wetland impacts, and to meet the Acquisition and Restoration Council (ARC) requirements.*
- *Installation of utilities at north and south entrances and electronic entrance gates. Priority would be on south entrance with pin pad and vehicle turn around. FDOT proposes to install electronic entrance gates at both the south and north entrances as mitigation to Section 4(f) impacts. During the August 10, 2022 meeting with the park, FDOT requested that FDEP share a design of an entrance gate that has been previously installed at a State park. This improvement will be considered for Section 4(f) compensation and/or ARC requirements.*
- *Replacement of existing rusted perimeter fences around base of bridge. FDOT proposes to replace the existing fences around the perimeter of the bridge as mitigation to Section 4(f) impacts. Once agreed, this will be a commitment in the Type II CE document.*
- *Recommend wetland mitigation from stormwater pond impacts be mitigated at Indian River Lagoon Preserve, Brevard County. FDOT to further evaluate this plan once we receive additional details on the scope of work. Additional information was requested by FDOT during the August 10, 2022 meeting. FDOT understands that the Coconut Point restoration project is a park need and that any other proposed mitigation is a park desire and not a need.*

FDOT understands that the need for park property for transportation features, will require compensation based on the Federal Highway Administration (FHWA) Section 4(f) process. We also understand that in order to satisfy the State's Acquisition and Restoration Council (ARC), FDOT needs to work with park personnel to determine that there is a Net Positive Benefit to the park by incorporating elements of the April 21, 2022 letter into the bridge replacement project. If there are any questions, please feel free to contact me at (954) 777-4325 or Christie Pritchard at (954) 777-4147.

Sincerely,



Ann Broadwell  
Environmental Administrator  
FDOT - District 4

cc:

- Mr. Ken Torres, FDEP Park Manager
- Mr. Brad Richardson, FDEP Division of State Lands
- Mr. Binod Basnet, P.E., FDOT Project Manager





### PROJECT LOCATION

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY  
SR-A1A OVER SEBASTIAN INLET - BRIDGE 880005 - BRIDGE REPLACEMENT  
INDIAN RIVER COUNTY AND BREVARD COUNTY, FLORIDA

FIGURE  
1

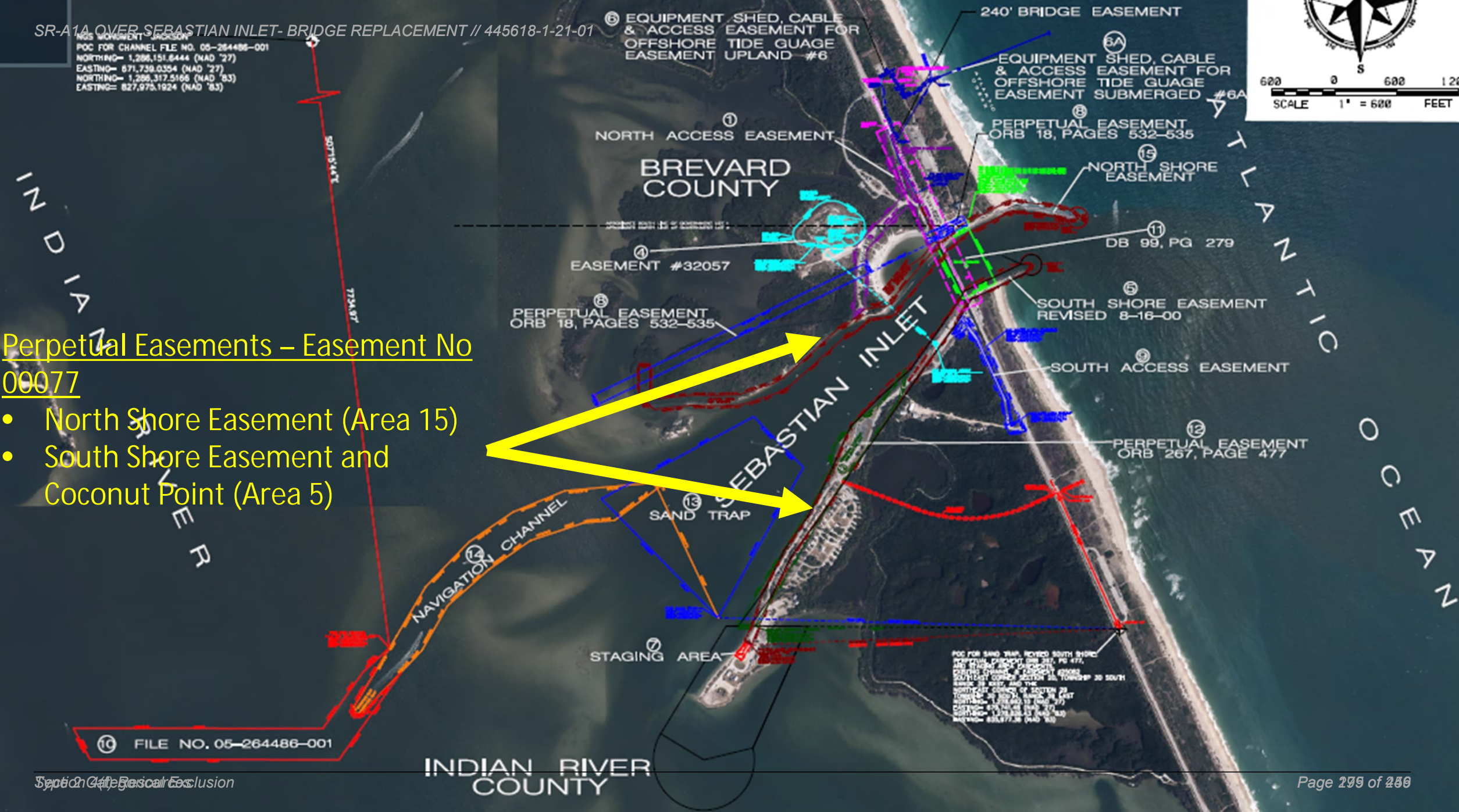
## **Sebastian Inlet District**

### **Contents:**

8-4-22 SID Easement Presentation to OEM

Sebastian Inlet District Submerged Land Parcel

NGS MONUMENT JACKSON  
POC FOR CHANNEL FILE NO. 05-264486-001  
NORTHING= 1,286,151.6444 (NAD '27)  
EASTING= 571,739.0354 (NAD '27)  
NORTHING= 1,286,317.5166 (NAD '83)  
EASTING= 827,975.1924 (NAD '83)



Perpetual Easements – Easement No 00077

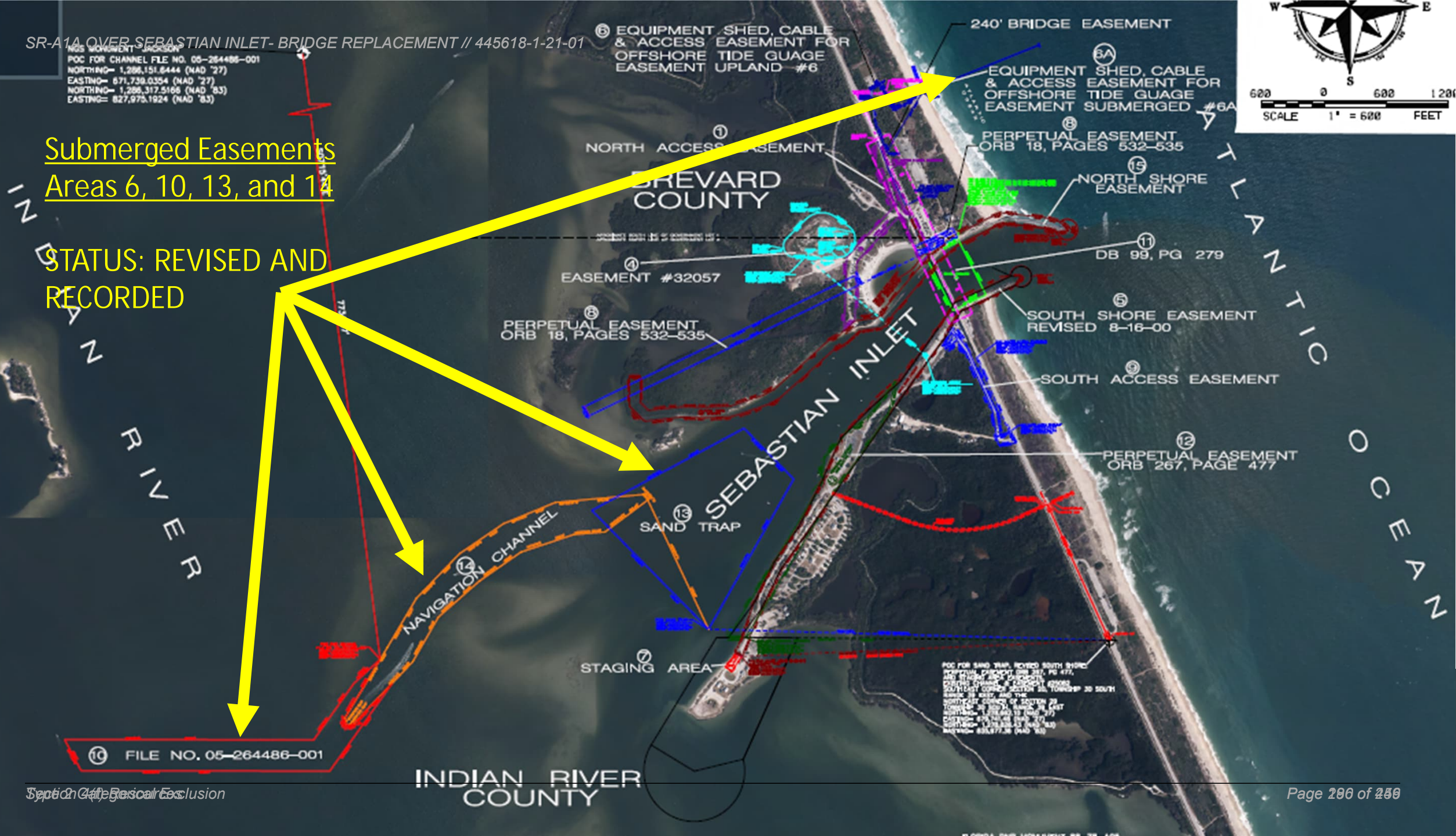
- North Shore Easement (Area 15)
- South Shore Easement and Coconut Point (Area 5)

NGS MONUMENT JACKSON  
POC FOR CHANNEL FILE NO. 05-264486-001  
NORTHING= 1,286,151.6444 (NAD '27)  
EASTING= 671,739.0354 (NAD '27)  
NORTHING= 1,286,317.5166 (NAD '83)  
EASTING= 827,975.1924 (NAD '83)



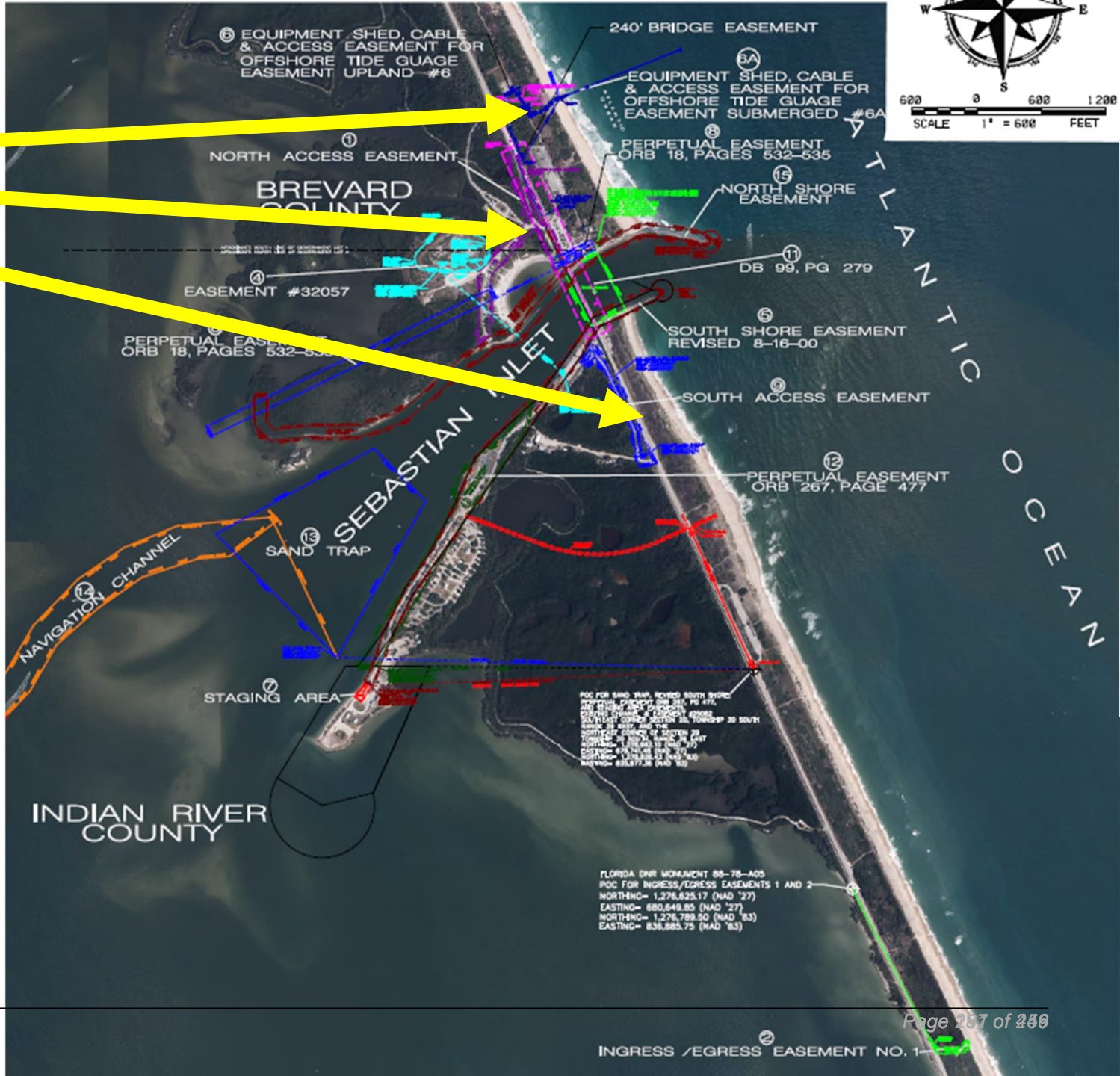
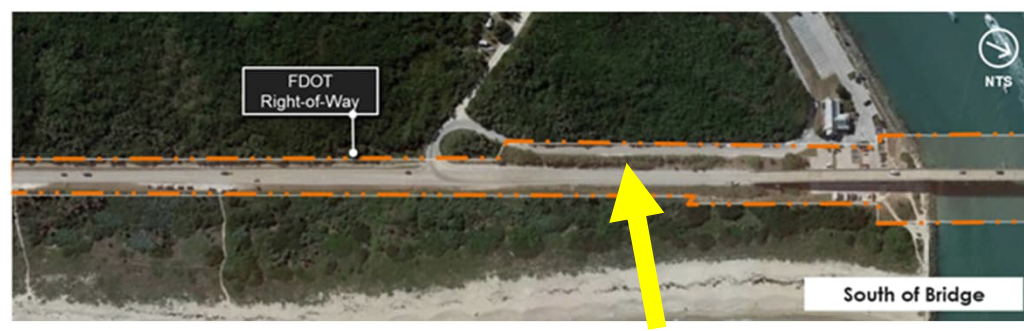
Submerged Easements  
Areas 6, 10, 13, and 14

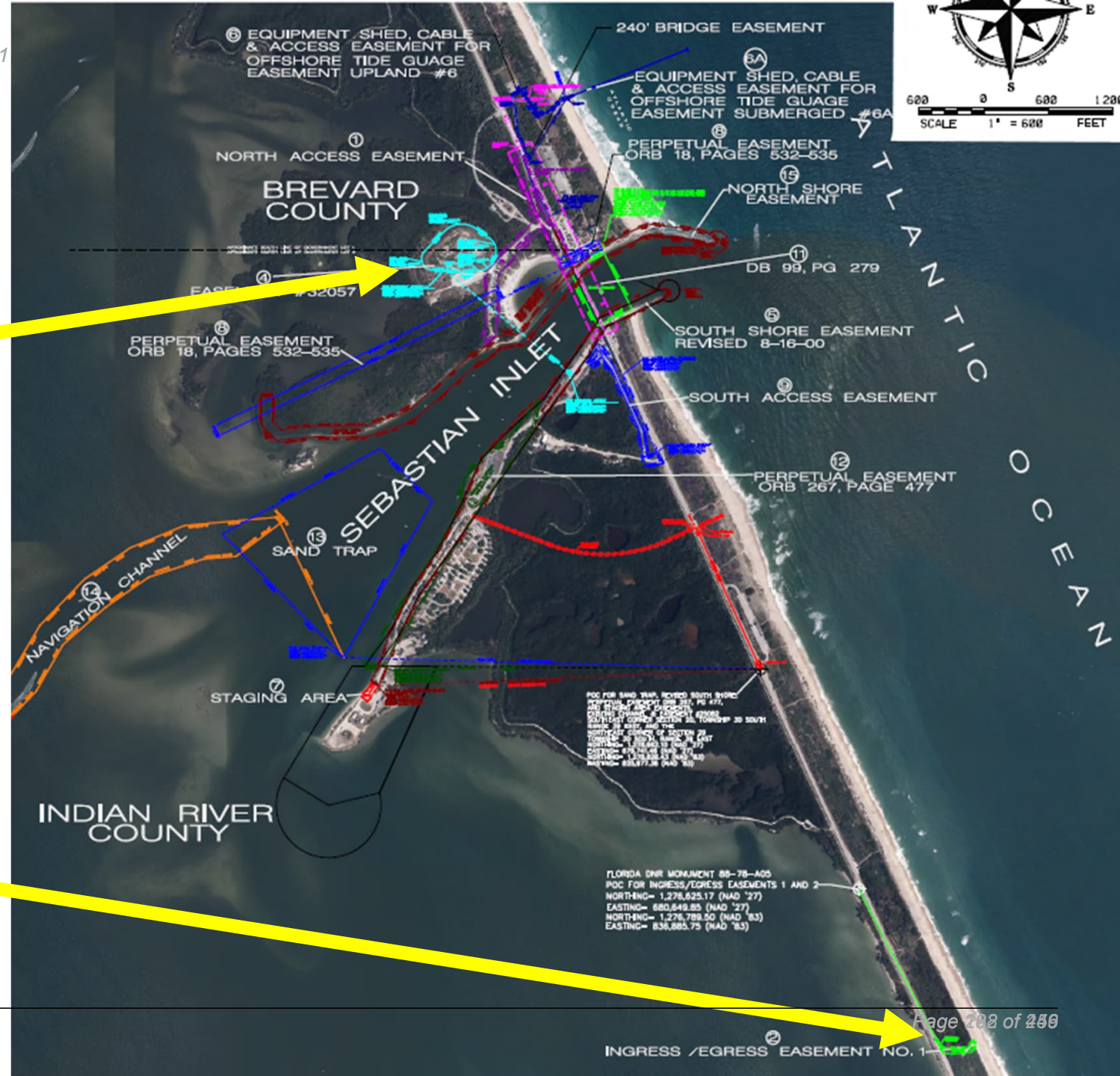
STATUS: REVISED AND  
RECORDED



# Upland Easement 33359

- Wave Gauge Equipment Shed (Area 6)
- North Access Easement (Area 1)
- South Access Easement (Area 9)
- FDEP Approved 1/25/22
- STATUS: FDEP Rescinded 2/3/22 (FDOT ROW Concerns)





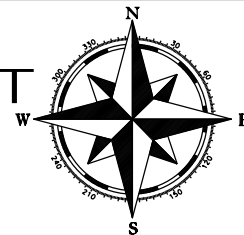
Upland Easement 32057

- Dredged Material Management Area (Area 4)
- STATUS: UNDER FDEP REVIEW

Upland Easement 30247

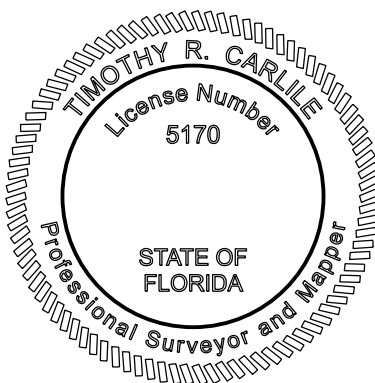
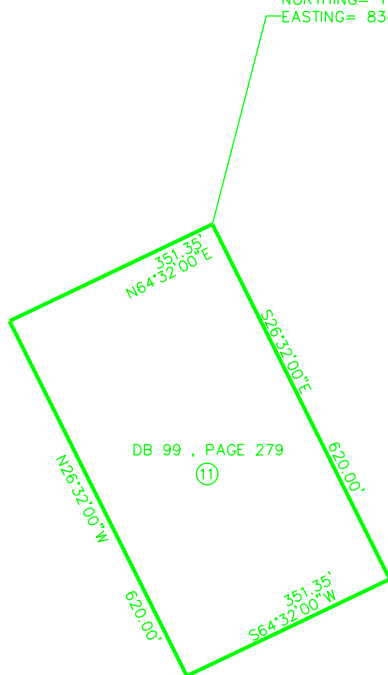
- R-8 Beach Access (Area 2)
- STATUS: REVISED AND RECORDED

# SKETCH OF DESCRIPTION SEBASTIAN INLET TAX DISTRICT DB99-PG.279 BRIDGE PARCEL CERTIFICATIONS SEBASTIAN INLET TAX DISTRICT



LEGEND	
POC	POINT - OF - COMMENCEMENT
POB	POINT - OF - BEG I N N I N G
EASE	EASEMENT

POB DB 99- PG 279  
APPROXIMATE LOCATION OF  
NORTHEAST CORNER OF LOT 2  
TOWNSHIP 30 SOUTH, RANGE 39 EAST  
NORTHING= 1282548.3982 (NAD '27)  
EASTING= 678273.7286 (NAD '27)  
NORTHING= 1282712.7304 (NAD '83)  
EASTING= 834509.6257 (NAD '83)

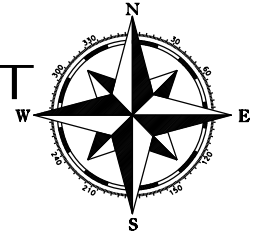


**NOTES**

1. NO UNDERGROUND OR ABOVE-GROUND IMPROVEMENTS LOCATED.
2. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY TIMOTHY R CARLILE, PLS 5170, ON THE DATE INDICATED. PRINTED COPIES ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
3. THIS SKETCH OF DESCRIPTION IS A TRUE AND CORRECT REPRESENTATION OF THE LAND AS SHOWN AND NOTED AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS IN CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, PURSUANT TO SECTION 472.027, FLORIDA STATUTES.
4. LEGAL DESCRIPTION SUPPLIED BY CLIENT.
5. HORIZONTAL CONTROL IS BASED UPON NAD '83 DATUM, FLORIDA EAST ZONE 901. NAD '27 COORDINATES ARE ALSO SHOWN FOR HISTORIC COMPARISON.
6. NO MONUMENTS WERE SET BY SURVEYOR.

SCALE: 1" = 300'	SURVEY FOR: <b>SITD</b>	<b>REVISIONS</b>	
JOB NO.: 2021-044		08-05-21	CHANGED TITLE FROM EASEMENT TO PARCEL
SHEET NO. 1 OF 2	<p>LAND BUSINESS #6447 PHONE: 321-454-6310 FAX: 321-454-6998 E-MAIL: TC5170@AOL.COM 1605 CHASE HAMMOCK RD. MERRITT ISLAND, FL 32953</p> <p>WWW.LAND-AND-SEA-SURVEYING.COM</p>	<p>TIM CARLILE P.L.S. FLORIDA P.L.S. 5170 (NOT VALID UNLESS SEALED)</p>	
DATE: 07-26-2021			
DRAWN BY: MC			
CHECKED BY: TC			

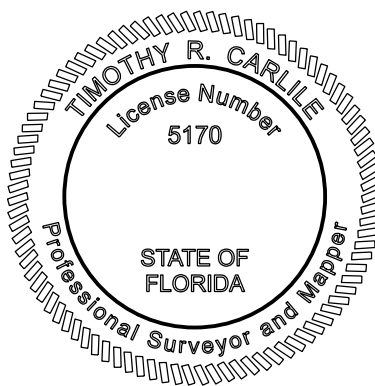
# SKETCH OF DESCRIPTION SEBASTIAN INLET TAX DISTRICT DB99-PG.279 BRIDGE PARCEL CERTIFICATIONS SEBASTIAN INLET TAX DISTRICT



LEGEND	
POC	POINT - OF - COMMENCEMENT
POB	POINT - OF - BEGINNING
EASE	EASEMENT

DESCRIPTION OF DB 99- PG 279

BEGINNING AT THE NORTHEAST CORNER OF FRACTIONAL LOT (2) TWO, SECTION (20) TWENTY, TOWNSHIP (30) THIRTY SOUTH, RANGE (39) THIRTY-NINE EAST, THENCE S 26°32' EAST (620) SIX HUNDRED TWENTY FEET TO SOUTH EDGE OF SOUTH JETTY, THENCE S64°32'W ALONG SOUTH EDGE OF SOUTH JETTY TO INDIAN RIVER, THENCE N 26°32'W (620) SIX HUNDRED TWENTY FEET TO NORTH EDGE OF NORTH JETTY, THENCE N64°32'W ALONG NORTH EDGE OF NORTH JETTY TO POINT OF BEGINNING, CONTAINING (5) FIVE ACRES, MORE OR LESS, TOGETHER WITH RIPARIAN RIGHTS.



NOTES

1. NO UNDERGROUND OR ABOVE-GROUND IMPROVEMENTS LOCATED.
2. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY TIMOTHY R CARLILE, PLS 5170, ON THE DATE INDICATED. PRINTED COPIES ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
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4. LEGAL DESCRIPTION SUPPLIED BY CLIENT.
5. HORIZONTAL CONTROL IS BASED UPON NAD '83 DATUM, FLORIDA EAST ZONE 901. NAD '27 COORDINATES ARE ALSO SHOWN FOR HISTORIC COMPARISON.
6. NO MONUMENTS WERE SET BY SURVEYOR.

SCALE: 1" = 300'	SURVEY FOR: <b>SITD</b>	<b>REVISIONS</b>	
JOB NO.: 2021-044		08-05-21	CHANGED TITLE FROM EASEMENT TO PARCEL
SHEET NO. 2 OF 2	<p>LAND BUSINESS #6447 PHONE: 321-454-6310 FAX: 321-454-6998 E-MAIL: TC5170@AOL.COM 1605 CHASE HAMMOCK RD. MERRITT ISLAND, FL 32953</p> <p>WWW.LAND-AND-SEA-SURVEYING.COM</p>	<p>TIM CARLILE P.L.S. FLORIDA P.L.S. 5170 (NOT VALID UNLESS SEALED)</p>	
DATE: 07-26-2021			
DRAWN BY: MC			
CHECKED BY: TC			



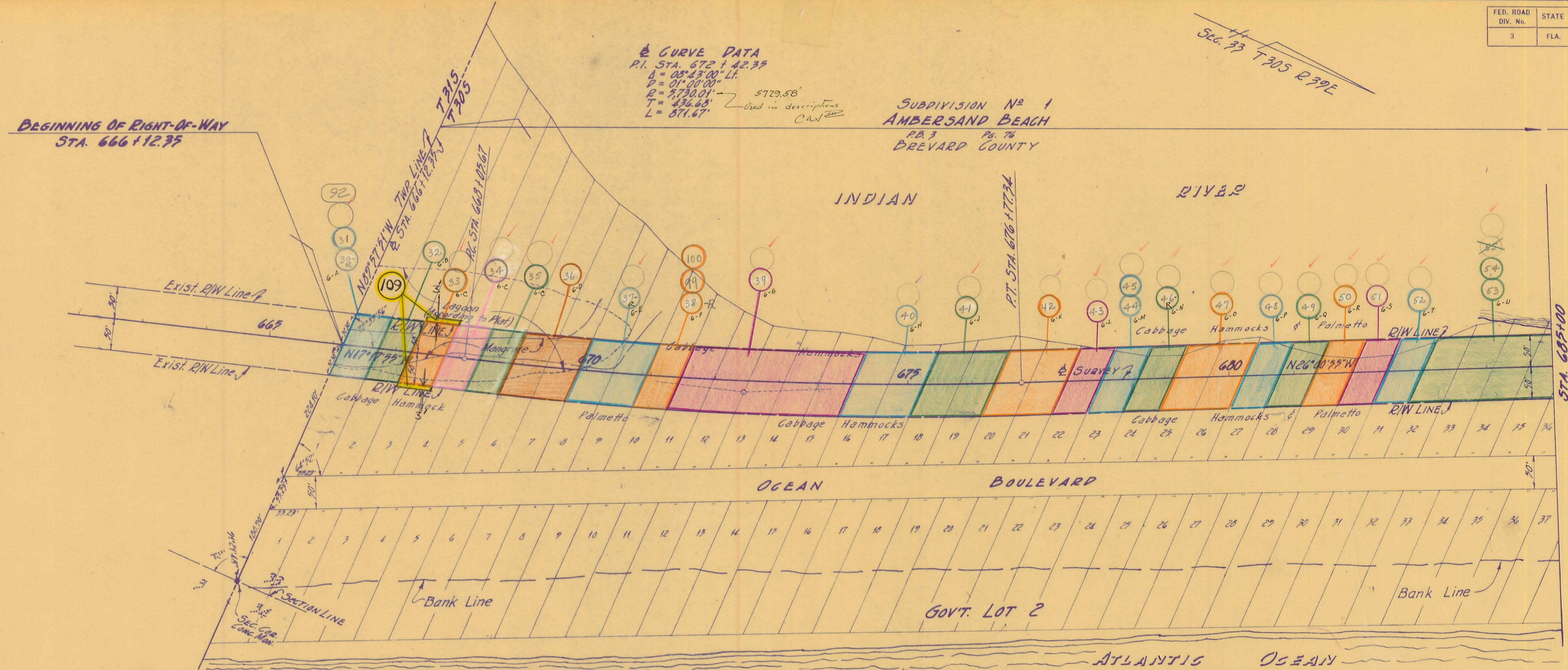
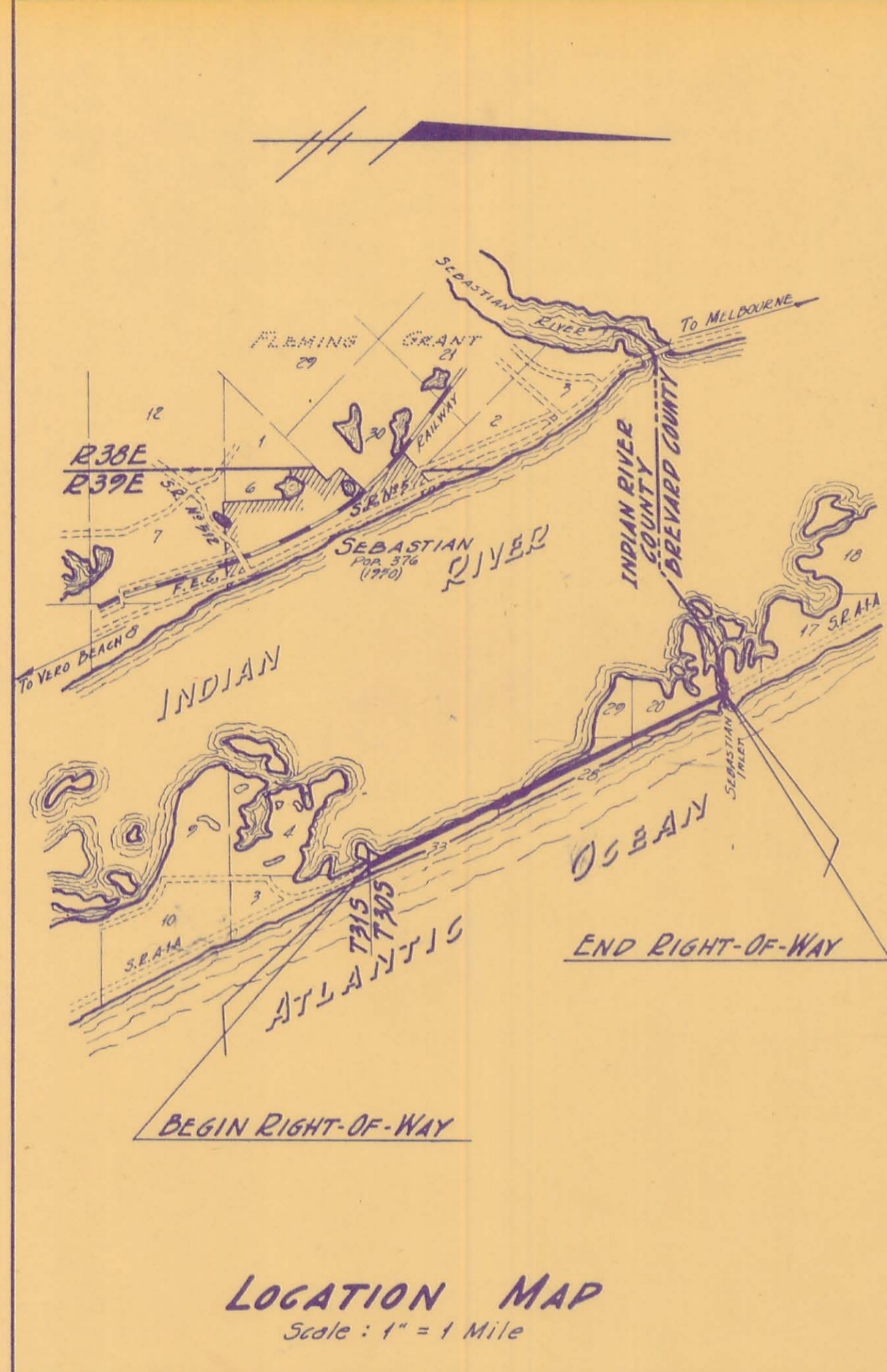
## **FDOT Transportation Easement**

Contents:

FDOT\_ROW\_Map

Sebastian\_Inlet\_District Warranty\_Deed\_99\_279\_to FDOT

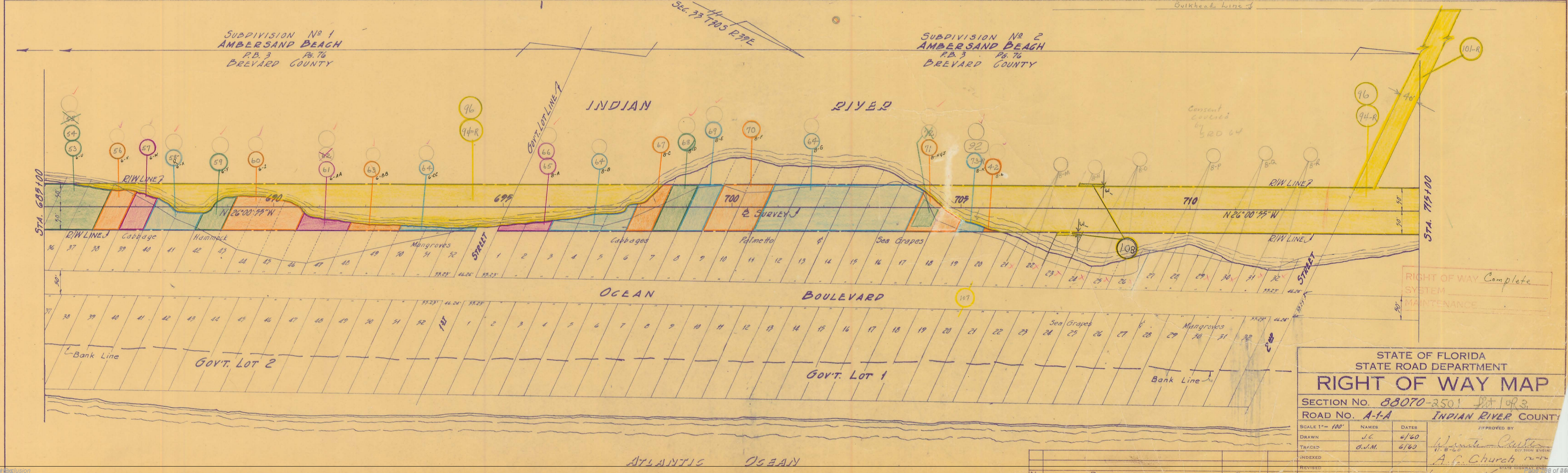
FED. ROAD DIV. No.	STATE	SEC. AND JOB No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
3	FLA.	88070-2501	61	1	3



**Curve Data**  
 P.I. STA. 672+42.39  
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 $D = 07^{\circ}00'00''$   
 $E = 3750.01'$   
 $T = 426.681'$   
 $L = 871.67'$   
 5729.58' Used in Description

SUBDIVISION No. 1  
 AMBERSAND BEACH  
 P.B. 3 P. 76  
 BREVARD COUNTY

SEC. 33 T. 30S R. 39E



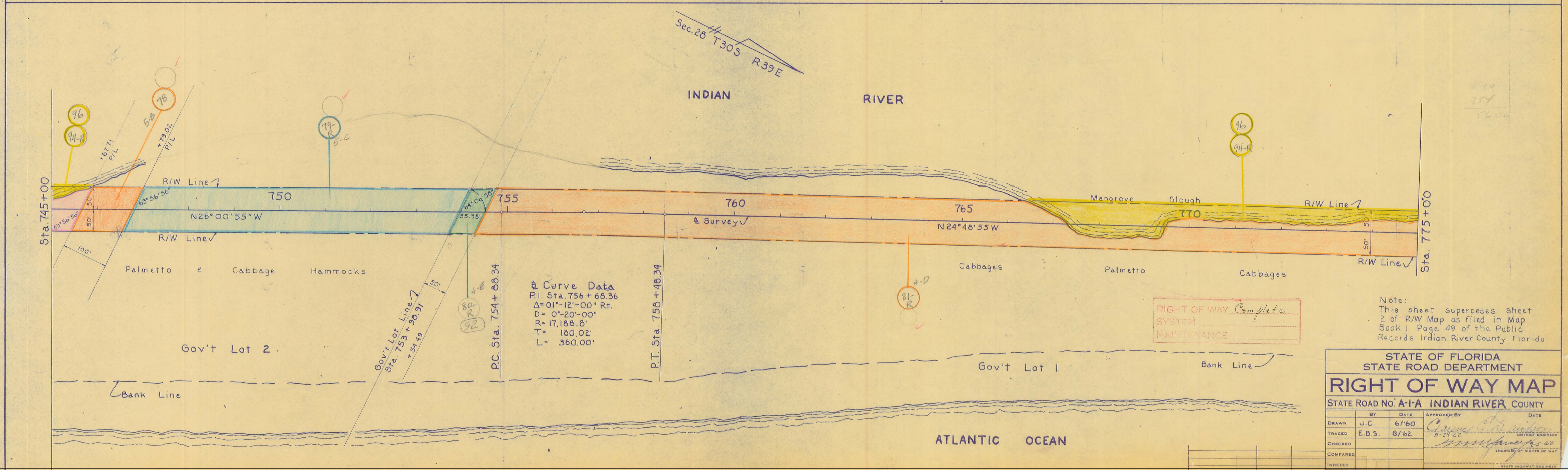
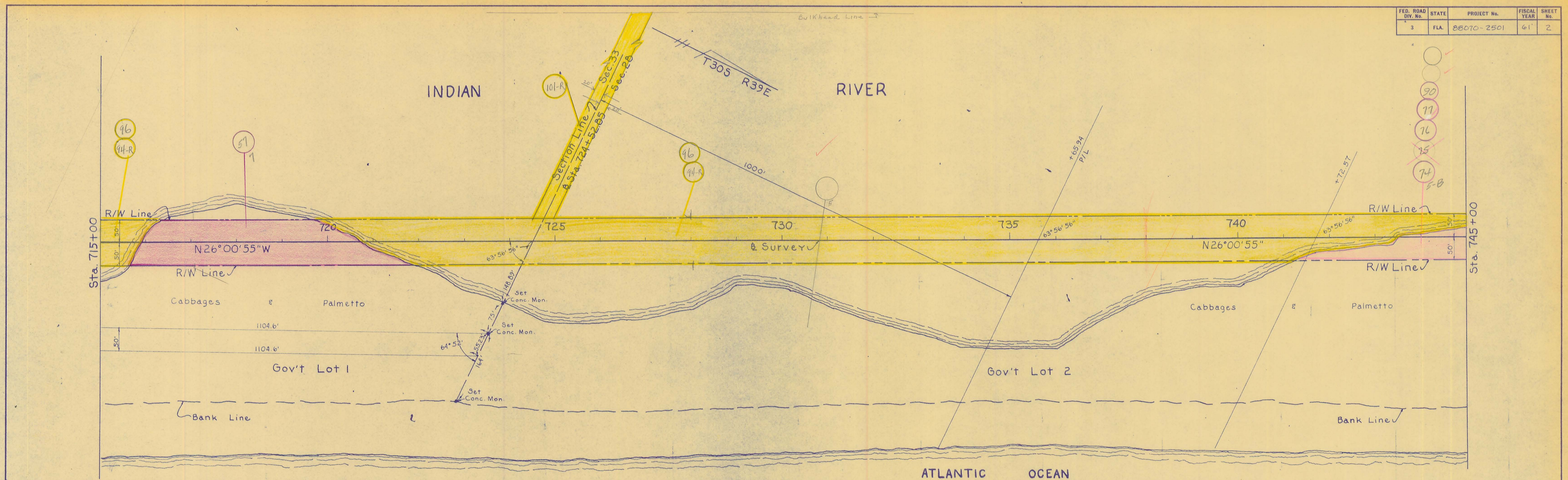
STATE OF FLORIDA  
 STATE ROAD DEPARTMENT  
**RIGHT OF WAY MAP**  
 SECTION No. 88070-2501 Plot 1 of 3  
 ROAD No. A-1A INDIAN RIVER COUNTY

SCALE 1" = 100'	NAMES	DATE	APPROVED BY
DRAWN J.C.		6/60	W. J. Church
TRACED G.V.M.		6/60	
INDEXED			A. G. Church
REVISED			
REVIEWED			

No. REVISION By DATE

RIGHT OF WAY Complete  
 SYSTEM MAINTENANCE

FED. ROAD DIV. No.	STATE	PROJECT No.	FISCAL YEAR	SHEET No.
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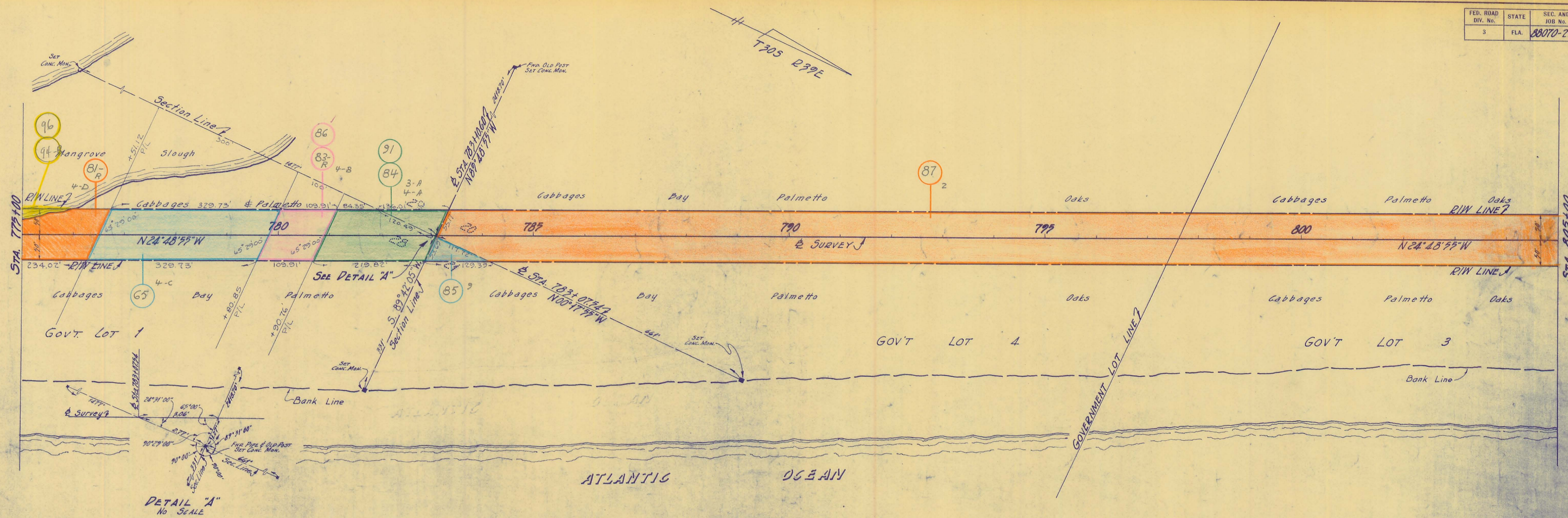
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 P.I. Sta. 756 + 68.36  
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 $D = 0^{\circ}20'00''$   
 $R = 17,188.8'$   
 $T = 180.02'$   
 $L = 360.00'$

RIGHT OF WAY Complete  
 SYSTEM  
 MAINTENANCE

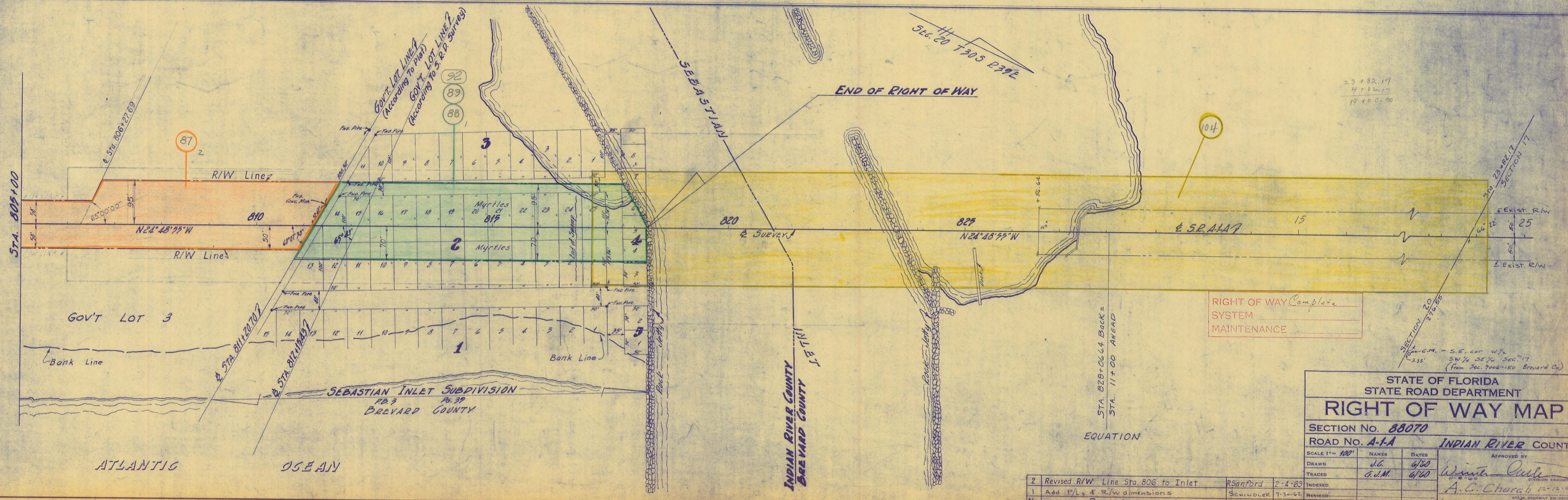
Note:  
 This sheet supercedes Sheet  
 2 of R/W Map as filed in Map  
 Book 1 Page 49 of the Public  
 Records Indian River County Florida

STATE OF FLORIDA STATE ROAD DEPARTMENT			
<b>RIGHT OF WAY MAP</b>			
STATE ROAD NO. A-1-A INDIAN RIVER COUNTY			
BY	DATE	APPROVED BY	DATE
J.C.	6/60	<i>[Signature]</i>	
TRACED	E.B.S.	8/62	
CHECKED			
COMPARED			
INDEXED			

FED. ROAD DIV. No.	STATE	SEC. AND JOB No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
3	FLA.	88070-2501	61	3	3



DETAIL 'A'  
No SCALE



RIGHT OF WAY COMPLETE  
SYSTEM  
MAINTENANCE

STATE OF FLORIDA  
STATE ROAD DEPARTMENT  
**RIGHT OF WAY MAP**  
SECTION No. 88070  
ROAD No. A-1-A  
INDIAN RIVER COUNTY

SCALE 1" = 100'	NAMES	DATE	APPROVED BY
DRAWN	J.G.	6/60	<i>[Signature]</i> DIVISION ENGINEER
TRACED	G.M.M.	6/60	
INDEXED			<i>[Signature]</i> STATE HIGHWAY ENGINEER
REVISION			

2	Revised R/W Line Sta. 806 to Inlet	R Sanford	2-4-63
1	Add P/Ls & R/W dimensions	Scudder	7-3-62
No.	REVISION	BY	DATE

SRD No. 101.1  
SECTION 70060-250  
STATE ROAD A1A  
COUNTIES - BREVARD  
and INDIAN RIVER

SKID No. 104  
SECTION 88070-2501  
STATE ROAD A-1-A  
Indian River COUNTY

E A S E M E N T

THIS EASEMENT, made and entered into this 22<sup>nd</sup> day of July, 1963, by and between the SEBASTIAN INLET DISTRICT, a special taxing district created by Chapter 7976, Special Acts of Florida of 1919, and amended by Chapter 12259, General Acts of Florida of 1927, hereinafter referred to as District, party of the first part, and the STATE ROAD DEPARTMENT OF FLORIDA, a component agency of the State of Florida, hereinafter referred to as the Department, party of the second part,

W I T N E S S E T H :

WHEREAS, said District owns certain lands and easements more particularly described in the following documents, viz:

1. That certain warranty deed by Milton J. Hardee to Sebastian Inlet District, dated September 18, 1923, recorded October 3, 1923 in Deed Book 99, page 279 of the public records of Brevard County, Florida.

2. That certain warranty deed by Milton J. Hardee to Sebastian Inlet Commissioners, dated May 11, 1923, recorded May 12, 1923 in Deed Book 99, page 181 of the public records of Brevard County, Florida.

3. That certain agreement and perpetual easement made by Chas. H. Crim, as Trustee, joined by his wife, Sara M. Crim, to Sebastian Inlet District, dated February 20, 1957, recorded May 27, 1957 in O. R. Book 18, pages 532-535 of the public records of Brevard County, Florida, and,

WHEREAS, said District has agreed to give to said Department an easement across the aforesaid land and easements hereinabove mentioned for the purpose of constructing a

SIC/DTE  
7/23/63  
4 (6) of 280

bridge with all appurtenant facilities, across Sebastian Inlet, which said bridge when completed will become a part of State Road 1A for use by the general public; and

WHEREAS, said appurtenant facilities will consist of (a) fenders for said bridge; (b) pedestrian walk ways beneath said bridge deck, and (c) access roads to the lands and easements of said District and private property abutting the proposed State Road right of way as shown on the construction plans of said bridge; and

WHEREAS, by the acceptance of this easement the Department expressly agrees with the District as follows:

(1) The District shall never be obligated to pay from its public funds any expenses for the construction, replacement, repair, maintenance or upkeep of said bridge, or any part thereof above or below the waters of Sebastian Inlet, including all appurtenances thereto and all approaches to said bridge.

(2) Within ninety (90) days after the Department awards a contract for the construction of said bridge with all appurtenances thereto, the Department will at its expense, change the fender system of said bridge to conform to the recommendations of said District as approved by the Coastal Engineering Laboratory, of Gainesville, Florida, U. S. Army District Engineers, of Corps of Engineers, Jacksonville, Florida. Written notice of such change of said fender system, if any is to be made, shall be given by the District to the Department within said ninety-day period; and

WHEREAS, a written agreement providing for this easement has heretofore been entered into between the District, Indian River County, Florida, and the Department, reference to which is hereby made.

NOW, THEREFORE, the said party of the first part, in consideration of the premises, the aforesaid agreement, and the sum of \$1.00 to it in hand paid by the party of the second part, the receipt whereof is hereby acknowledged, hereby grants unto the said party of the second part, or its successors, an easement across the land and easements hereinabove mentioned for the purpose of constructing said bridge and appurtenances above described, the width of this easement to be 120 feet on each side of the centerline of State Road 1A, Section 70060, and such centerline is described as follows:

Commence at a concrete monument marking the Southeast corner of the W $\frac{1}{2}$  of SW $\frac{1}{4}$  of SE $\frac{1}{4}$  of Section 17, Township 30 South, Range 39 East, and run thence South 3.33 feet to the North line of Section 20, said Township and Range; thence Westerly along said North line of Section 20, a distance of 276.55 feet; thence South 24° 48' 55" East, 482.17 feet to the POINT OF BEGINNING of the centerline being herein described; thence continue South 24° 48' 55" East, 1906.64 feet to the end of this centerline description.

IN WITNESS WHEREOF, each of the parties hereto has caused these presents to be executed by its proper officers under its corporate seal, the day and year first above written.

SIGNED, SEALED and delivered in the presence of:

Eddie T. Adams  
Harold L. Dawson  
As to the Party of First Part

THE BOARD OF COMMISSIONERS OF SEBASTIAN INLET DISTRICT

By Walter C. Cook  
Its Chairman  
ATTEST: Don R. Beaujean  
Its Secretary

(CORP. SEAL)

Lawrence J. Kirkland  
Thomas L. Lee  
As to Party of Second Part

STATE ROAD DEPARTMENT OF FLORIDA

By Reph Davis  
Executive Director  
ATTEST: [Signature]  
Secretary

(CORP. SEAL)

STATE ROAD DEPARTMENT OF FLORIDA  
DIVISION OF RIGHTS OF WAY  
DESCRIPTION APPROVED  
[Signature]

APPROVED AS TO FORM AND EXECUTION  
THOMAS T. COBB  
ATTORNEY, S. R. D.

-3- BY [Signature]  
ASSISTANT ATTORNEY

## **Sebastian Inlet Bridge (Historic)**

### Contents:

ACHP\_e106

Cult\_Res\_Com\_Mtg\_No.1\_Notes

SHPO\_Concurrence\_Effects\_Determination

Executed\_Section\_106 MOA



**From:** [Amy Streelman](#)  
**To:** [lynn.kelley@dot.state.fl.us](mailto:lynn.kelley@dot.state.fl.us)  
**Cc:** [Beam, Beth](#)  
**Subject:** FW: [External] e form and supporting documents for Sebastian Inlet Bridge  
**Date:** Tuesday, August 16, 2022 11:53:36 AM

---

It says below they have 15 days to respond, and that time frame has passed, so it appears that they do not want to participate in consultation -

Amy Streelman  
Janus Research  
1107 N. Ward Street  
Tampa, Florida 33607  
Cell: 727-560-9963  
Office: 813-636-8200

---

**From:** e106 <[e106@achp.gov](mailto:e106@achp.gov)>  
**Sent:** Monday, July 18, 2022 11:53 AM  
**To:** Amy Streelman <[amy\\_streelman@janus-research.com](mailto:amy_streelman@janus-research.com)>  
**Subject:** Automatic reply: [External] e form and supporting documents for Sebastian Inlet Bridge

The ACHP has received your submission to [e106@achp.gov](mailto:e106@achp.gov). If your submission is to:

- notify the ACHP of a finding that an undertaking may adversely affect historic properties, or
- invite the ACHP to participate in a section 106 consultation, and/or
- propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings, or
- file an executed MOA or PA with the ACHP in accordance with Section 800.6(b)(iv) (where the ACHP did not participate in consultation); or
- provide documentation regarding any other situation.

If this is a notification of an adverse effect, this is your official dated receipt of your submission (in accordance with 36 CFR Part 800.6(1) if this is an adverse effect notification). The ACHP has 15 calendar days to determine if it will participate in consultation to resolve adverse effects to historic properties.

If this is a notification for any other reason, this is your official dated receipt of your submission. The time in which the ACHP responds is dependent on the nature of the notification.

\*\*\*\*\*Please note that the [e106@achp.gov](mailto:e106@achp.gov) address is intended solely for the submission of documentation and official notifications to the ACHP regarding new/ongoing consultations and existing agreement documents. This address is not intended for case specific communication,

correspondence, or scheduling. Such communications should be directed to the assigned ACHP staff member using their ACHP email address.\*\*\*\*\*



# MEETING NOTES

## Cultural Resource Committee Meeting No. 1

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<b>Project</b>	Project Development & Environment (PD&E) Study SR A1A Over Sebastian Inlet – Bridge 880005 - Bridge Replacement Indian River County and Brevard County
<b>FM No.</b>	445618-1-22-02
<b>Contract No.</b>	CAA79
<b>Stantec Project No.</b>	215811053

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<b>Date/Time</b>	Wednesday, April 27, 2022/ 8:30 AM – 10:00 AM
<b>Location</b>	GoTo Meeting <a href="https://meet.goto.com/918402493">https://meet.goto.com/918402493</a>
<b>Call-In Number</b>	(872) 240-3412 Access Code: 918-402-493

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<b>FDOT PM</b>	Binod Basnet, PE
<b>Consultant PM</b>	Beth Beam MS, AICP

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The first meeting of the Cultural Resource Committee for the Sebastian Inlet Bridge PD&E Study was held on Wednesday, April 27, 2022, as a GoTo Meeting.

### 1. Introduction

Binod Basnet (FDOT) opened the meeting with call-in attendees. The purpose of the meeting is to conduct and document good faith consultation with affected parties in compliance with Section 106 of the National Historic Preservation Act. Due to time constraints no formal introductions were made.

Following is a summary of key discussion points.

### 2. Presentation

Beth Beam (Stantec), Amy Streelman (Janus), and Rudy Westerman (Janus) presented a PowerPoint presentation that covered the following:

- Project Location
- Purpose and Need for the Project
- PD&E Process
- Project Background
- Existing Bridge Conditions
- Alternatives Development and Analysis
  - No-Action, Rehabilitation, Build Alternatives
- Section 106 Process

### *Discussion*

At the conclusion of the presentation, attendees were invited to comment, ask questions, provide input for discussion.

Ms. Streelman asked if there were any questions on the results of the cultural resources survey or assessment. No comments were received.



# MEETING NOTES

Ms. McManus (FDOS) stated that the Historic American Engineering Recordation (HAER) and bridge marker were anticipated mitigation opportunities. Ann Broadwell (FDOT) noted that the historic aspect of the bridge is straightforward. She mentioned other opportunities to memorialize the bridge such as through information kiosks or the use of QR codes that can take a user to historical information or documentation.

James Gray (Sebastian Inlet District) confirmed that the bridge is the only one that has crossed the Sebastian Inlet. He noted that Indian River County repurposes materials, such as this bridge, for use to continue development of an artificial reef off the coast.

Marsha Welch (FDOS) asked about monitoring of archaeological sites. Mr. Westerman said that the two high probability sites will be monitored.

Meeting adjourned at 9:32 AM

These notes reflect our interpretation of the discussions and issues discussed during the meeting. Please notify Beth Beam if there are any modifications needed to the meeting notes within ten (10) calendar days from issuance of the meeting notes.

**Attachments:** Agenda  
PPT

## ACTION ITEMS

### Stantec

- Coordinate Date for Cultural Resource Committee Meeting No. 2

## LIST OF ATTENDEES

Binod Basnet, FDOT/Project Manger  
 Ann Broadwell, FDOT/District Environmental Administrator  
 Ruben Rodriguez, FDOT/Drainage Design  
 Fernando Ascanio, FDOT Planning and Environmental Management  
 Lindsay Rothrock, FDOT/Office of Environmental Management  
 Deena Woodward, FDOT/Office of Environmental Management  
 Andi Maris, USCG/Bridge Management Specialist  
 Marsha Welch, FDOS/Historic Preservationist, Division of Historical Resources  
 Alyssa McManus, FDOS/Division of Historical Resources  
 Kenneth Torres, FDEP/ Park Manager, Sebastian Inlet State Park  
 Brian Freeman, Indian River County MPO/Staff Director  
 Sarah Kraum, Space Coast TPO/Senior Transportation Planner  
 James Gray, Sebastian Inlet District/Executive Director  
 Beth Beam, Stantec/Project Manager  
 Mohit Soni, Stantec/Deputy Project Manager  
 Roberto Gutierrez, Stantec/Engineering Lead  
 Amy Streelman, Janus/Cultural Resources  
 Ginny Jones, Janus/Cultural Resources  
 Jim Pepe, Janus/Archaeology  
 Rudy Westerman, Janus/Archaeology



# Agenda

## Cultural Resource Committee Meeting No. 1

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**Project** Project Development & Environment (PD&E) Study  
SR A1A Over Sebastian Inlet - Bridge 880005 - Bridge Replacement  
Indian River County and Brevard County

**FM No.** 445618-1-22-02

**Contract No.** CAA79

**Stantec Project No.** 215811053

---

**Date/Time** Wednesday, April 27, 2022, 8:30 AM - 9:30 AM

**Location** GoTo Webinar

**Webinar Link** <https://meet.goto.com/829850525>

**Call-In Number** +1 (646) 749-3122 Access Code: 829-850-525

---

**FDOT PM** Binod Basnet, PE

**Consultant PM** Beth Beam MS, AICP

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### 8:30 am - 9:15 am

Presentation

1. Introductions
2. Project Location
3. Purpose and Need for the Project
4. PD&E Process
5. Project Background
6. Existing Bridge Conditions
7. Alternatives Development and Analysis
8. Section 106 Process

### 9:15 am - 10:00 am

9. Discussion
10. Next Steps

Timeframes are estimated.

Should the time provided not be required the meeting will close early.

# Cultural Resource Committee Meeting No. 1

SR A1A over Sebastian Inlet  
Bridge 880005 - Bridge Replacement  
PD&E Study  
Indian River County and Brevard County  
FM No. 445618-1-22-02  
ETDM 14433

April 27, 2022  
8:30 AM – 10:00 AM



# AGENDA

- Project Location
- Purpose and Need for the Project
- PD&E Process
- Project Background
- Existing Bridge Conditions
- Alternatives Development and Analysis
- Section 106 Process
- Next Steps
  - Discussion

CULTURAL RESOURCE COMMITTEE MEETING NO. 1

## Project Location

Indian River County and Brevard County Boundary

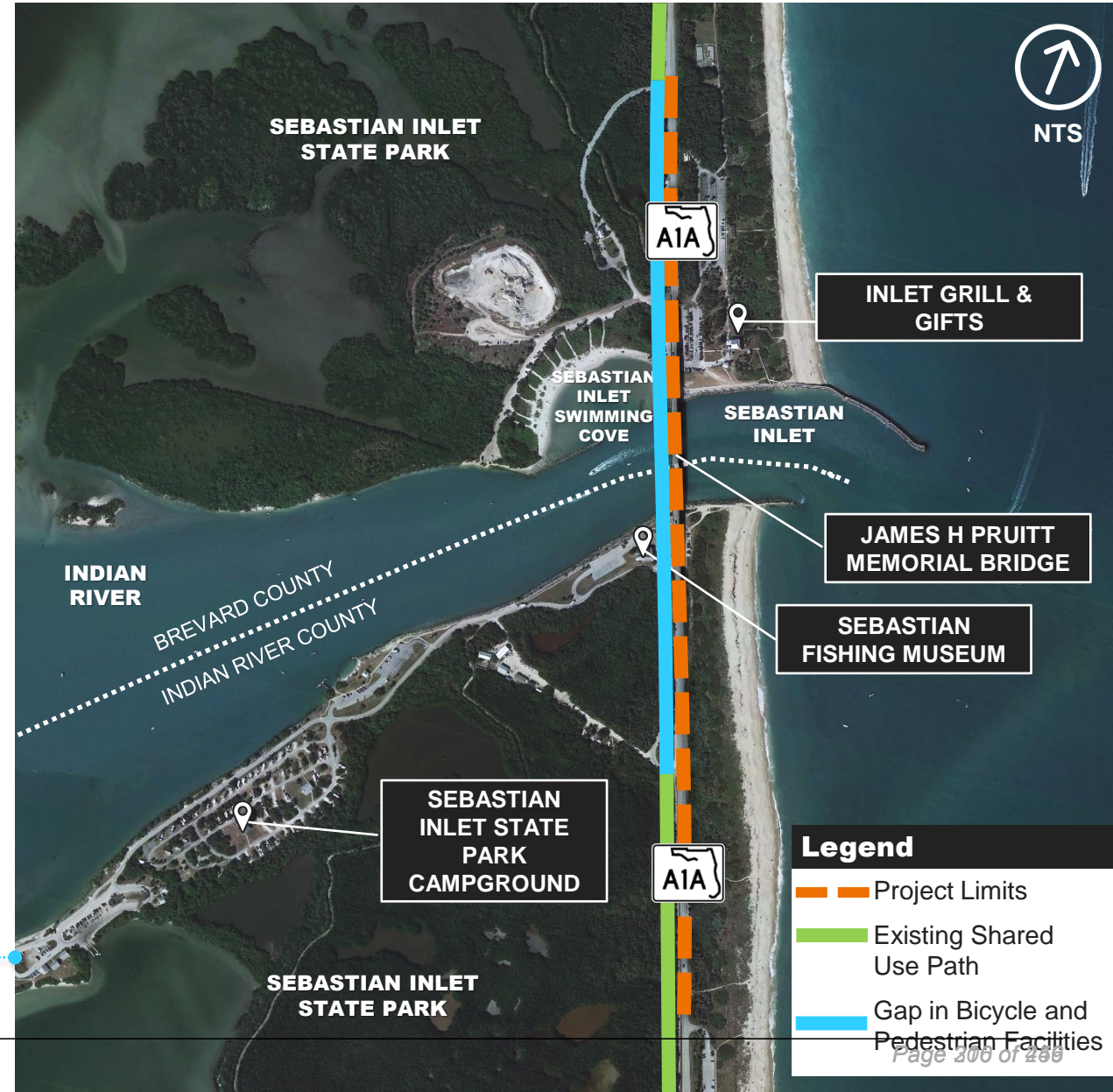
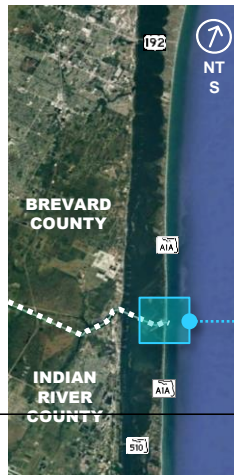
### SR A1A

- Two-lane Roadway
- Shared use path - west side north and south of the bridge
- Part of the Indian River Lagoon National Scenic Byway

### James H Pruitt Memorial Bridge

- Two-lane Bridge
- No shoulders
- No bicycle or pedestrian facilities

Section 4 of the Escrow Agreement





**CULTURAL RESOURCE COMMITTEE MEETING NO. 1**



**Purpose and Need for the Project**

- Address bridge structural and functional deficiencies
- Address the gap in system linkage for bicyclists and pedestrians
- Evaluate bridge alternatives

**Class of Action**

- Type 2 Categorical Exclusion (CE)

**2019 Bicycle/Pedestrian Data Counts**

Dec 12 – Dec 15 6:00 AM to 6:00 PM



**231 Bicyclists**



**5 Pedestrians**

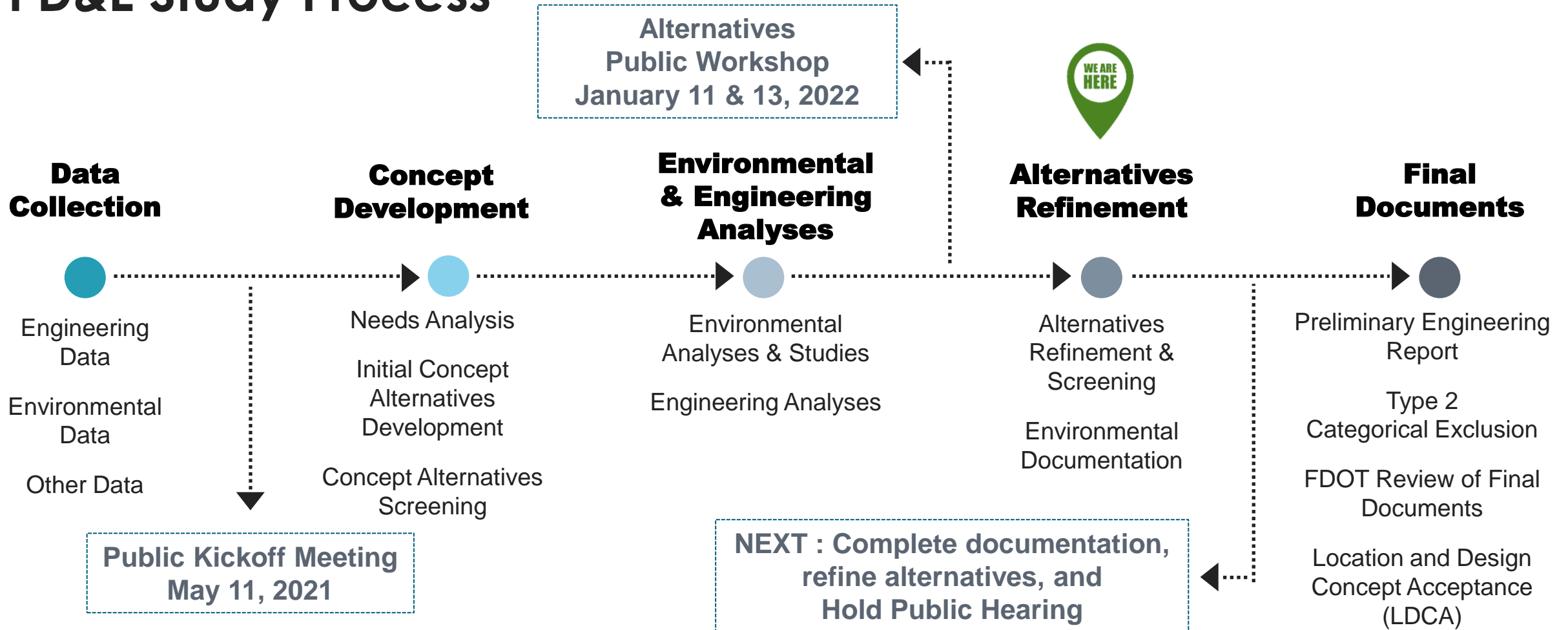
**Currently crossing the bridge despite not having appropriate bicycle and pedestrian facilities**

**Purpose of the Cultural Resource Committee**

To conduct and document good faith consultation with affected parties in compliance with Section 106 of the National Historic Preservation Act.

CULTURAL RESOURCE COMMITTEE MEETING NO. 1

# PD&E Study Process



View Public Meeting Presentations and Project Related Documents on the Project Website:

[www.fdot.gov/projects/SebastianInletBridge](http://www.fdot.gov/projects/SebastianInletBridge)

# Project Background

- Constructed 1964
- Repaired or retrofitted – 1978 and 2003
  - Vertical clearance: 39-feet
  - Horizontal clearance: 150-feet
  - Bridge width: 34-feet 3-inches
- Observation/fishing piers under bridge deck on the north and south sides of the bridge
- November 2018 bridge inspection:
  - Bridge Health Index of 79.8
  - Per FHWA’s national bridge rating system – “structurally deficient” (This does not mean the bridge is unsafe – the rating indicates the need for repair or replacement)

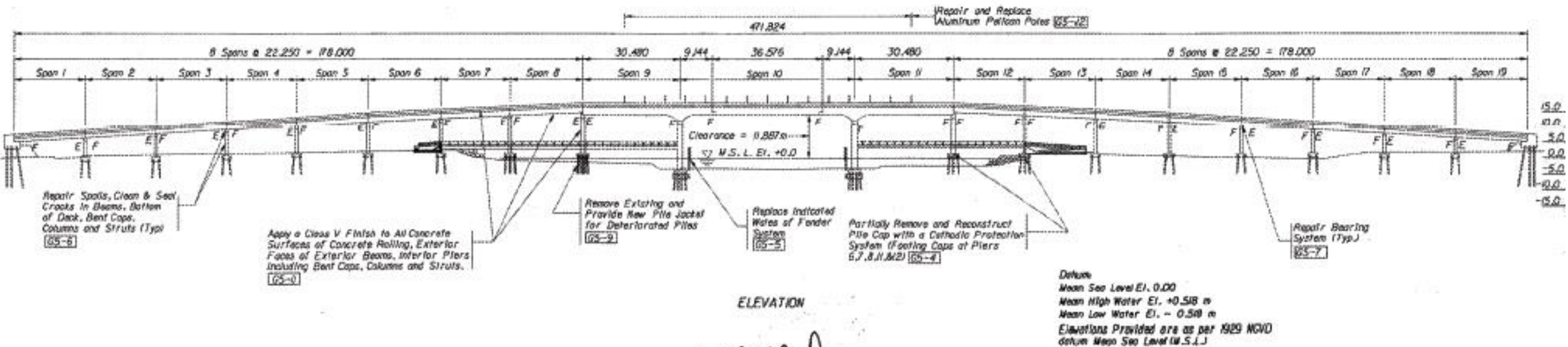


**James H. Pruitt Memorial Bridge**

# National Register of Historic Places (NRHP)

Built as a pre-tensioned bridge

Determined Eligible for Listing under **Criterion C** in the area of Engineering for its high-integrity embodiment of a prestressed concrete bridge in Florida



## Structural Deficiencies

Bridges are rated on a scale of 0 to 9 for the following bridge elements:

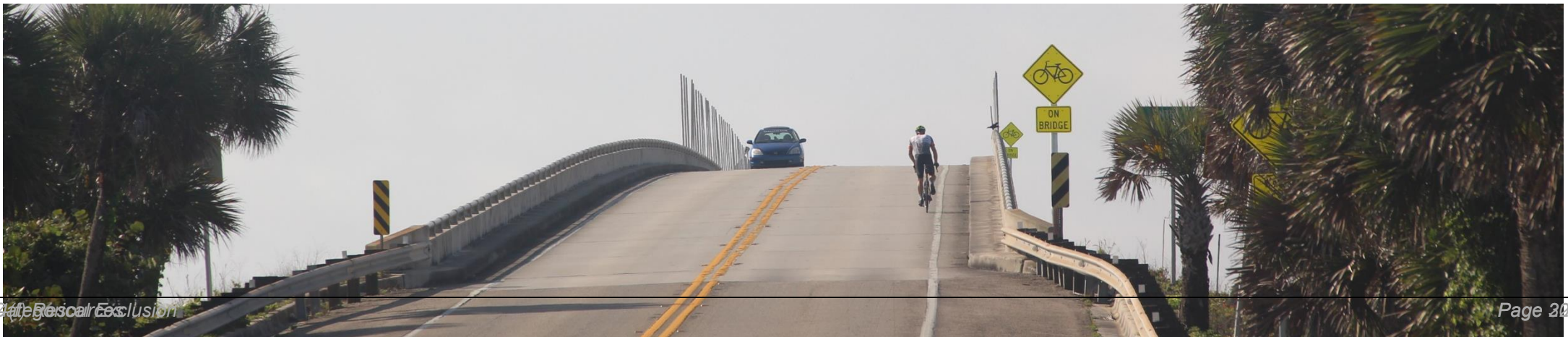
- deck (riding surface),
- superstructure (supports beneath riding surface)
- substructure (bridge foundation)
- culverts

A rating of 4 or less is a structural deficiency

## Functional Deficiencies

A functionally deficient bridge is one that was built to current standards for:

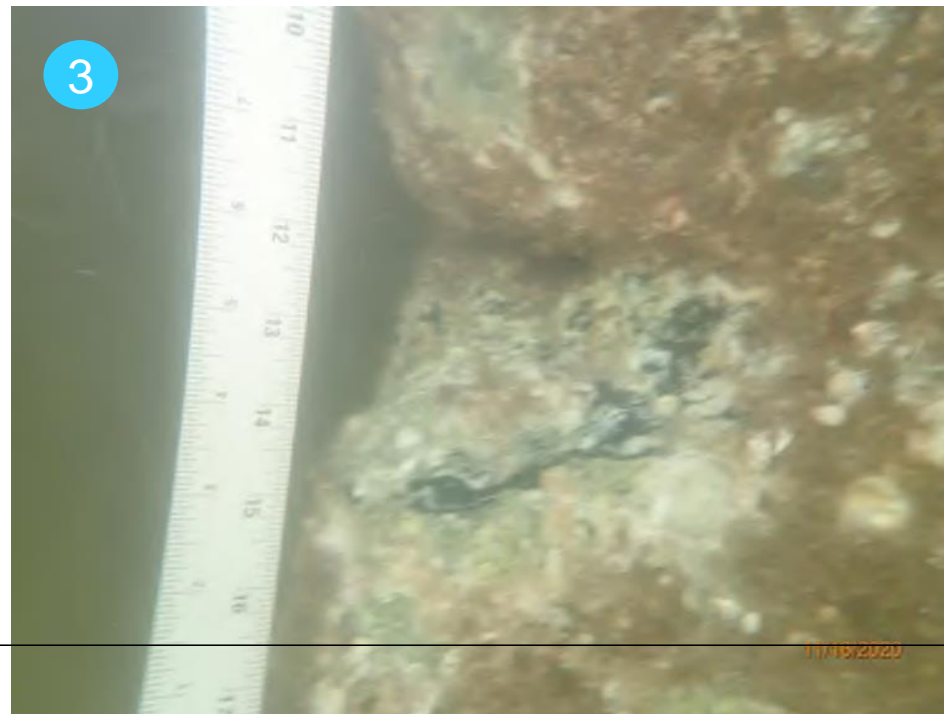
- lane widths
- shoulder widths
- vertical clearances to serve current traffic demand
- may be occasionally flooded



# Existing Bridge Deficiencies

## Scour Critical

1. Pile exposed with corrosion and pitting
2. Pile jacket voids
3. Pile jacket spalling



# Existing Bridge Deficiencies

## Spalling/Delamination

1. Deck exposing steel tie back at Pier 9
2. Deck spall with exposed corroded rebar
3. Spall with exposed steel



# Existing Bridge Deficiencies

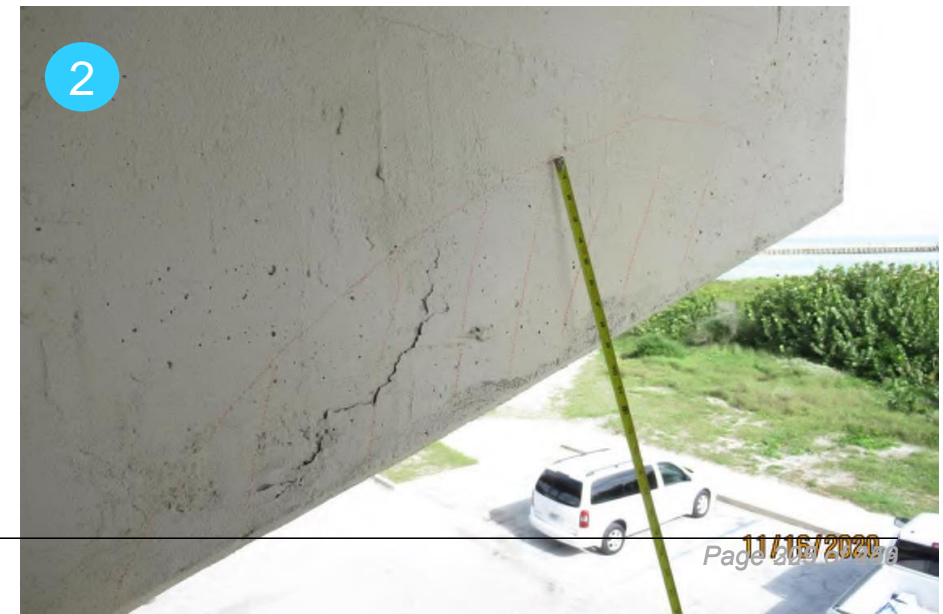
1. Exposed steel, painted
2. Column spalling/delamination
3. Spall with exposed steel – concrete girder/beam





# Existing Bridge Deficiencies

1. Bridge cap delamination between columns
2. Bridge pier cap delamination
3. Bridge cap delamination bottom face



# Existing Bridge Deficiencies

1. Corrosion - Exposed Strands
2. Corrosion on bearing – cantilevered section
3. Spall/delamination of concrete girder/beam with exposed strands



# Existing Bridge Deficiencies

1. Bridge delamination and spalling
2. Corrosion on under bridge fishing pier railing and deck
3. Corrosion on under bridge fishing pier



# Agency Coordination

## Federal and State

- US Coast Guard
- US Army Corps of Engineers
- NOAA National Marine Fisheries Service
- Florida Department of State Parks – Sebastian Inlet State Park
- Florida Department of Environmental Protection
- State Historic Preservation Officer
- St. Johns River Water Management District

## Local Agencies

- Sebastian Inlet District
- Indian River County and Metropolitan Planning Organization
- Brevard County
- Space Coast Transportation Planning Organization
- Indian River Lagoon Council
- Indian River Scenic Byway Coalition

# Public Involvement

- Public Kickoff Meeting held May 11, 2021
- Alternatives Public Workshop held January 11 & 13, 2022
- **NEXT: Public Hearing – Fall 2022**



# Engineering Analysis



Bridge



Roadway



Other Project Areas

# Environmental Analysis

## Cultural Resources



Section 4(e) Historical Resource

## Natural Resources



## Physical Resources



# Alternatives Considered

## No Build

- No improvements are made
- Serves as baseline for comparison of other alternatives

## Rehabilitation or Repair

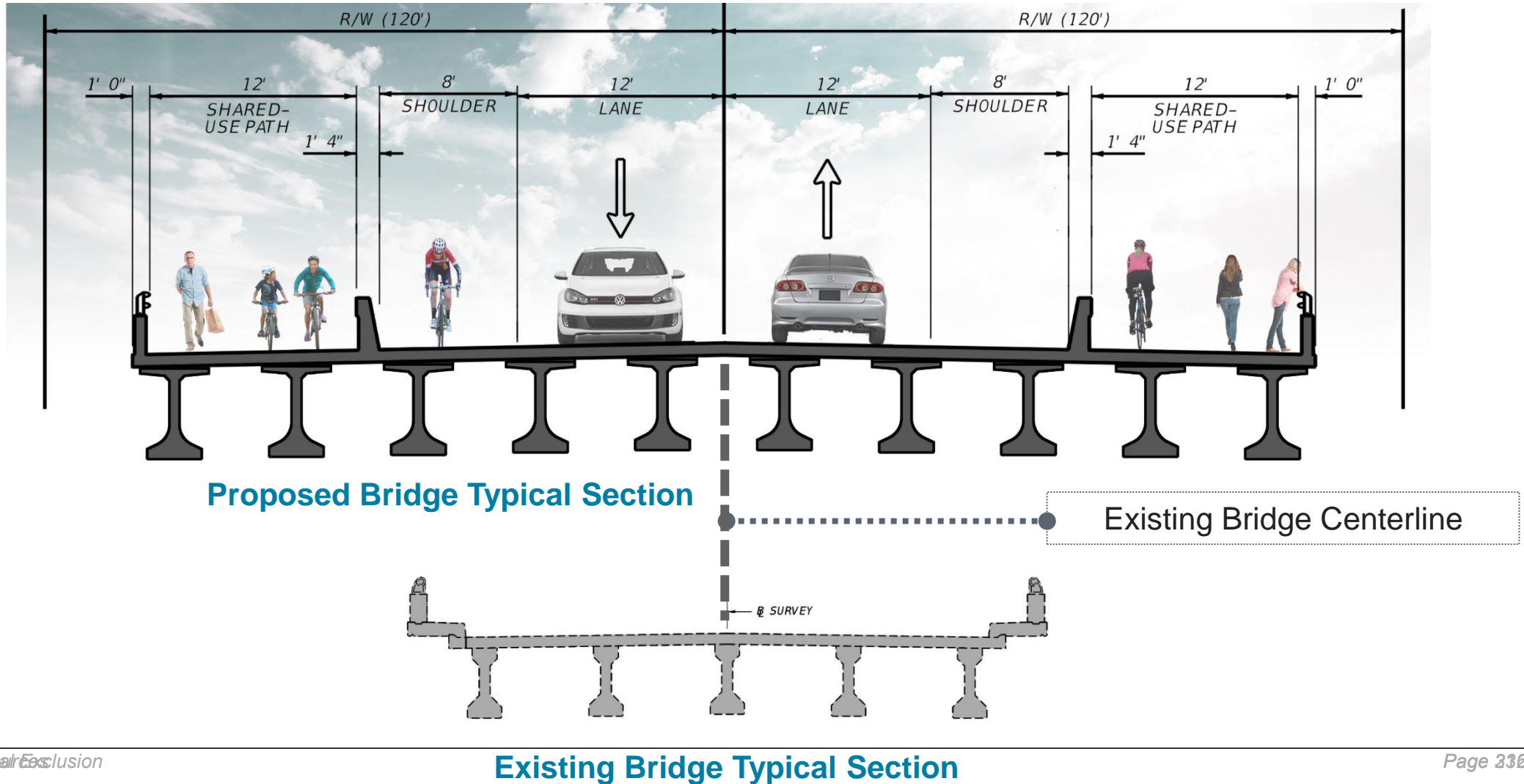
## Build

- Evaluation of alignment
  - Alternative 1: Center (along existing)
  - Alternative 2: East
  - Alternative 3: West

## Evaluation Criteria/Category

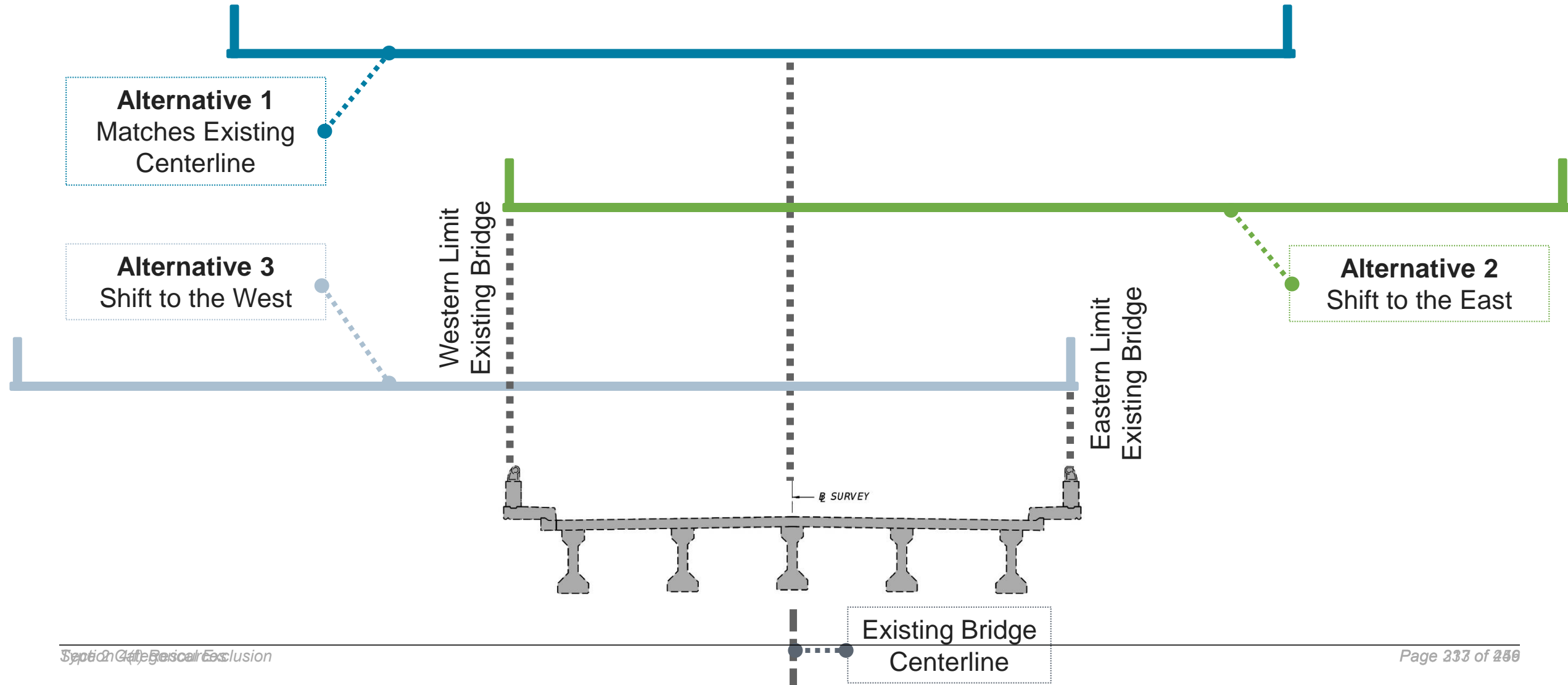
- Design speed
- USCG Determination
  - Vertical Clearance
  - Horizontal Clearance
- Horizontal alignments
- Constructability
- Benefit to:
  - Marine Traffic
  - Vehicular Traffic
- Impact to Resources
  - Recreational
  - Natural Resources
  - Cultural Resources

# Bridge Typical Section

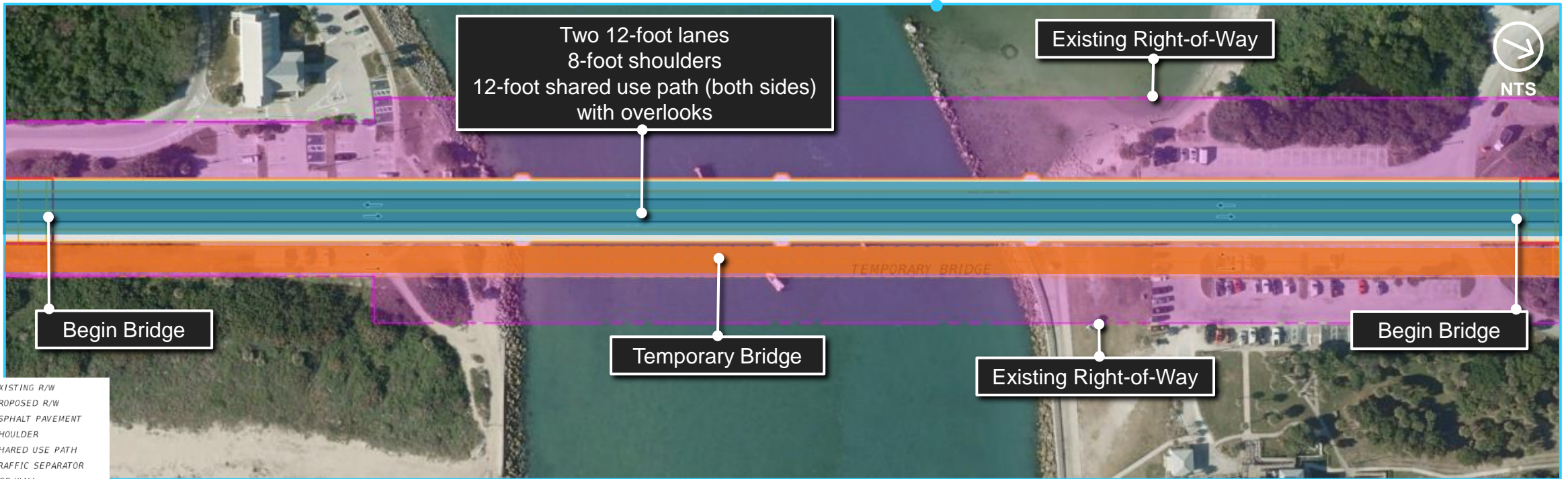




# Viable Build Alternatives Alignment Comparison

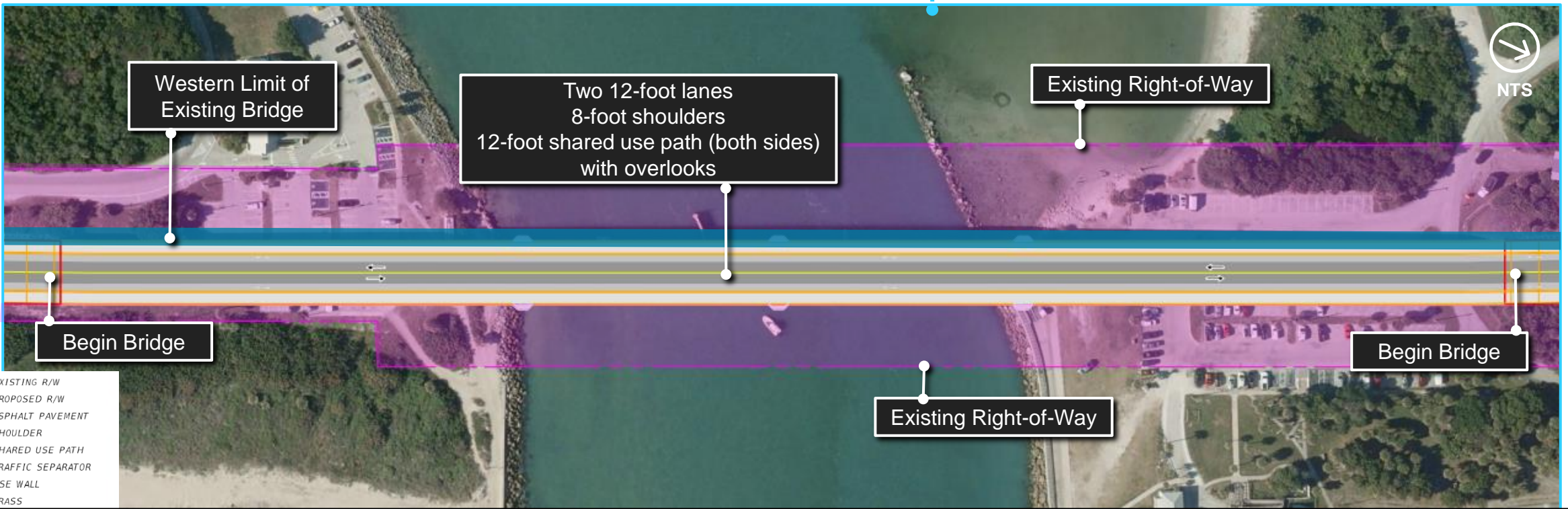
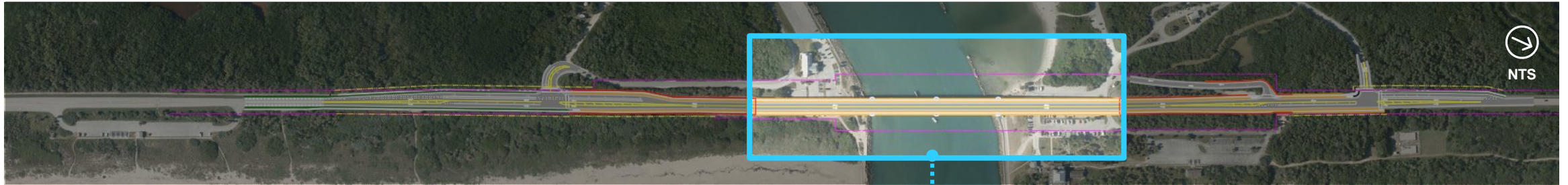


# Viabile Build Alternative 1: Existing Alignment with Temporary Bridge

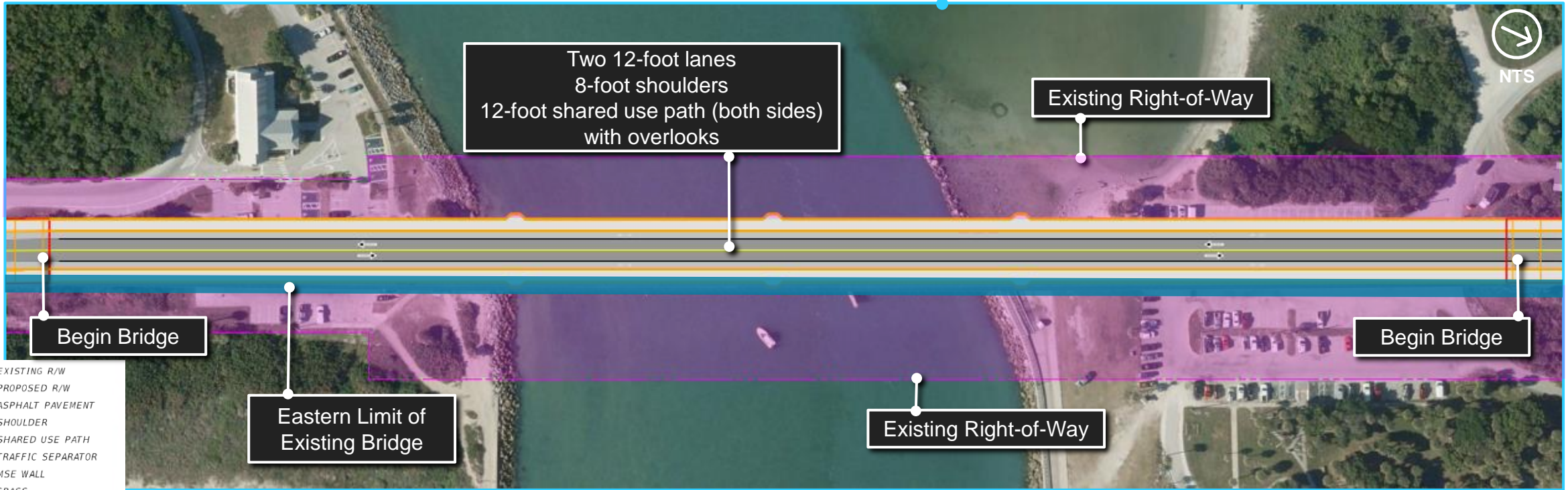
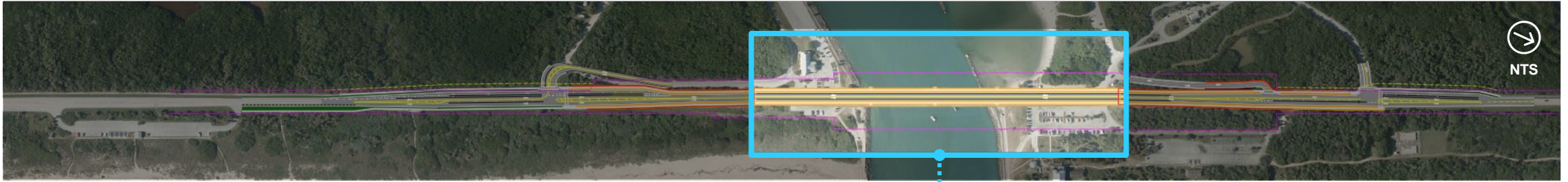


- EXISTING R/W
- PROPOSED R/W
- ASPHALT PAVEMENT
- SHOULDER
- SHARED USE PATH
- TRAFFIC SEPARATOR
- MSE WALL
- GRASS

# Viabile Build Alternative 2: East Alignment

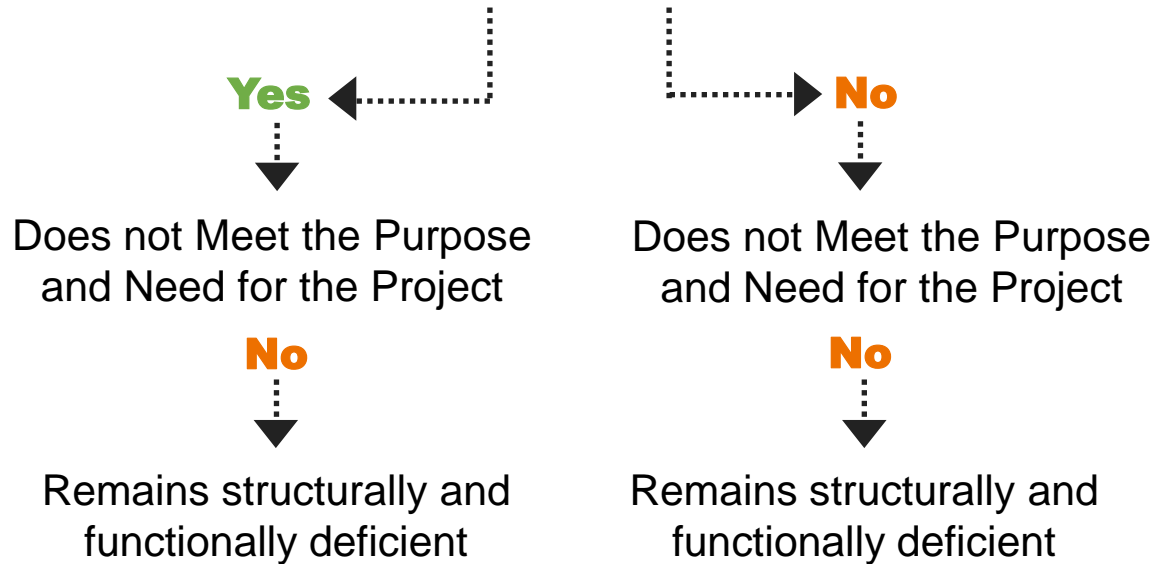


# Viable Build Alternative 3: West Alignment



# Rehabilitation Alternative

## Rehabilitate to Existing Condition



## Rehabilitate to Meet the Purpose and Need for the Project

- Meet current FDOT Design Standards
- At minimum, widen bridge deck by adding shoulders and bicycle/pedestrian facilities
- Provide a 75-Year Service Life
- Maintains existing vertical and horizontal clearances
- Maintain traffic during construction
- Minimize impacts to the natural, cultural, and physical environments



# Section 106 of the National Historic Preservation Act

## Cultural Resources Assessment Survey

- Establish Area of Potential Effect
- Identify and Document Resources
- Evaluate Significance according to NRHP Criteria
- Completed January 2022
- **SHPO concurred with CRAS findings March 2022**

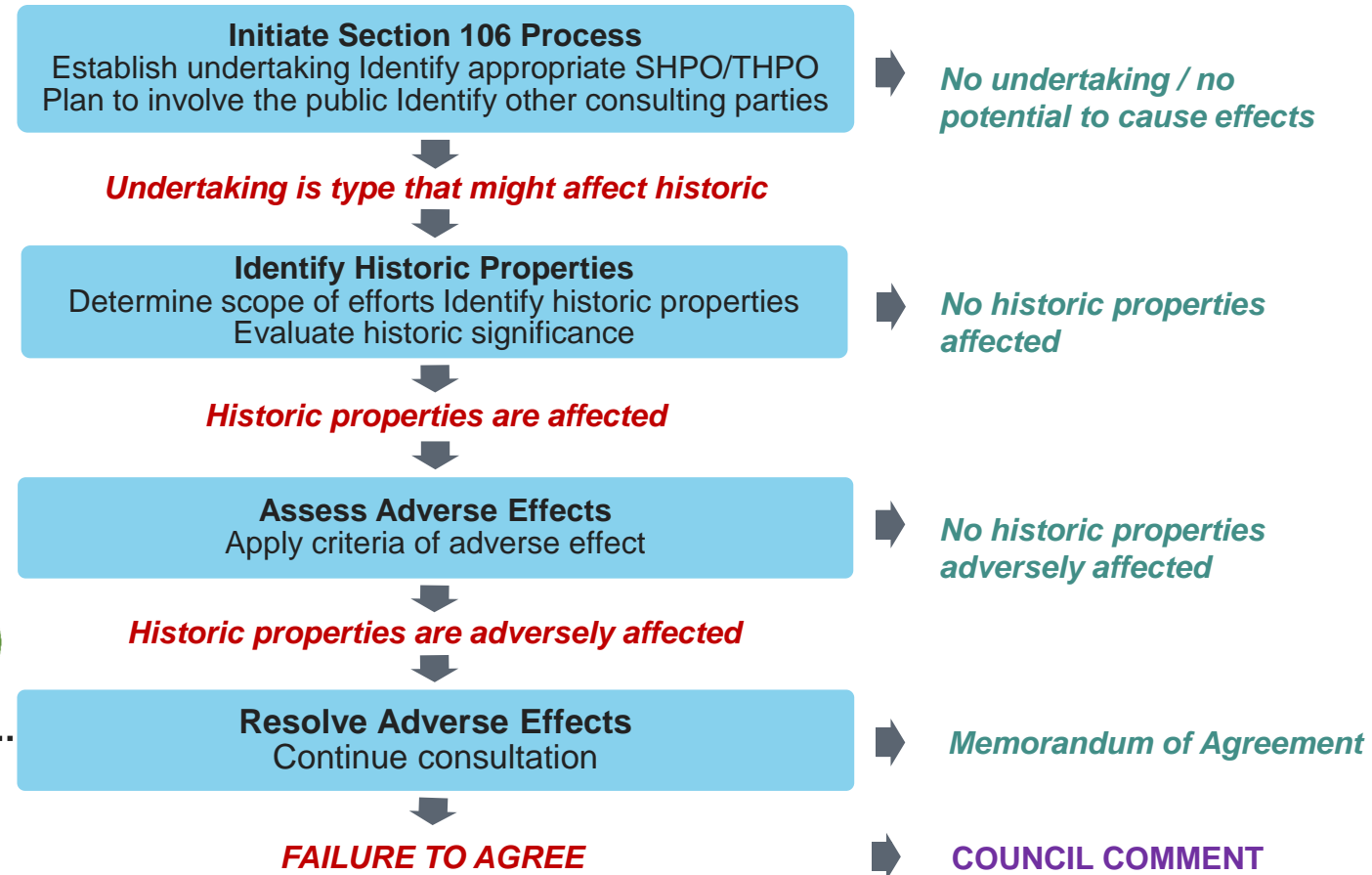
## Evaluation of Effects

### Determination of Effects Case Study

Apply Section 106 Criteria of Effects

**SHPO concurred with Effects March 2022**

- Next step - Develop MOA with minimization and mitigation measures



# Historic Resources

## CRAS Documentation

- CRAS completed and submitted to D4, OEM, and State Historic Preservation Officer (SHPO)
- SHPO Concurrence received March 30, 2022
  - Included Adverse Effect discussion in CRAS cover letter

## Adverse Effect

- Historic Bridge

## Potential Measures to Minimize Harm

1. HAER Recordation of Bridge in accordance with the Secretary of the Interior
2. State Historical Marker



# Archaeological Resources

## CRAS Documentation

- Two archaeological sites recorded in the area:
  - 8IR34:
    - Indian River County
    - west of bridge
  - 8BR125:
    - Brevard County
    - east of the bridge
- Subsurface testing conducted within archaeological APE
- The portions of the sites within the archaeological APE do not have sufficient research potential to be National Register eligible.
- Insufficient information to fully evaluate the eligibility of both sites.

## No Adverse Effect

- SHPO concurred with the finding of “no adverse effects” on the archaeological sites (8IR34 and 8BR125).

## Archaeological Monitoring

- The APE has areas with high archaeological site potential where testing was impossible.
- Archaeological monitoring during construction was recommended, and the SHPO concurred.
- Archaeological monitoring is prudent because Pre-Columbian human remains have been documented adjacent to APE.



CULTURAL RESOURCE COMMITTEE MEETING NO. 1

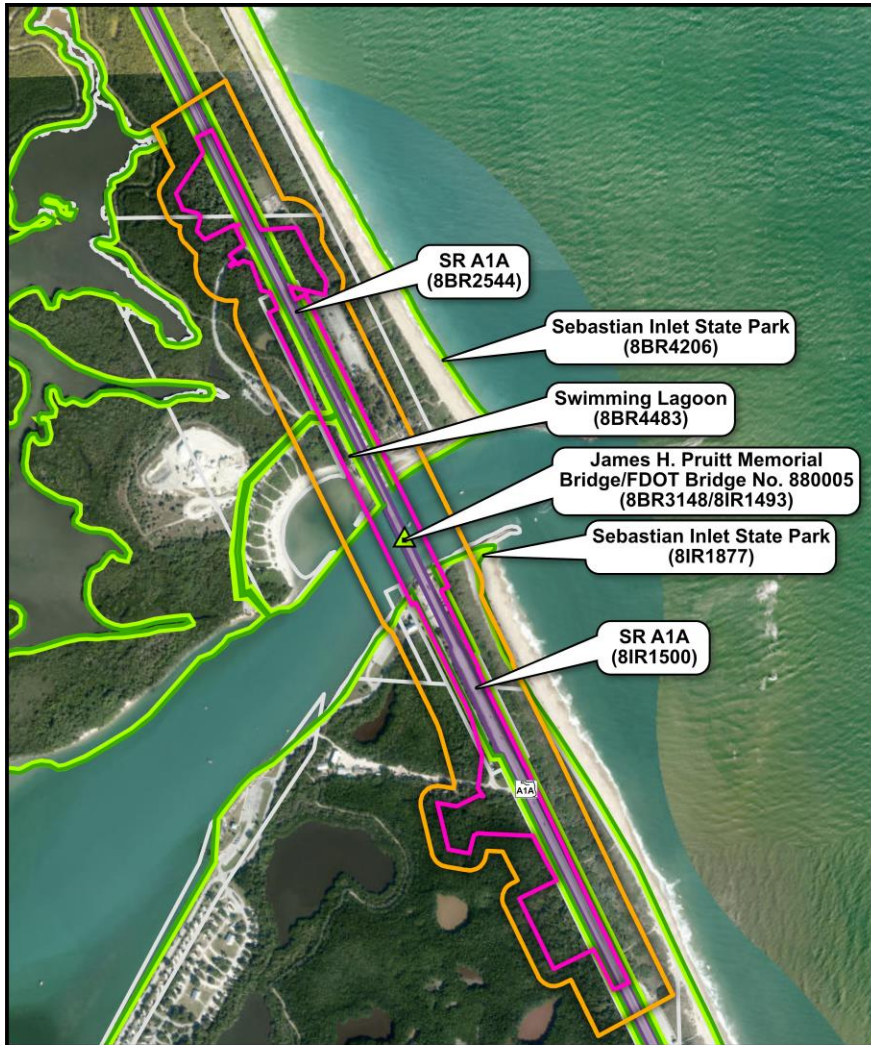
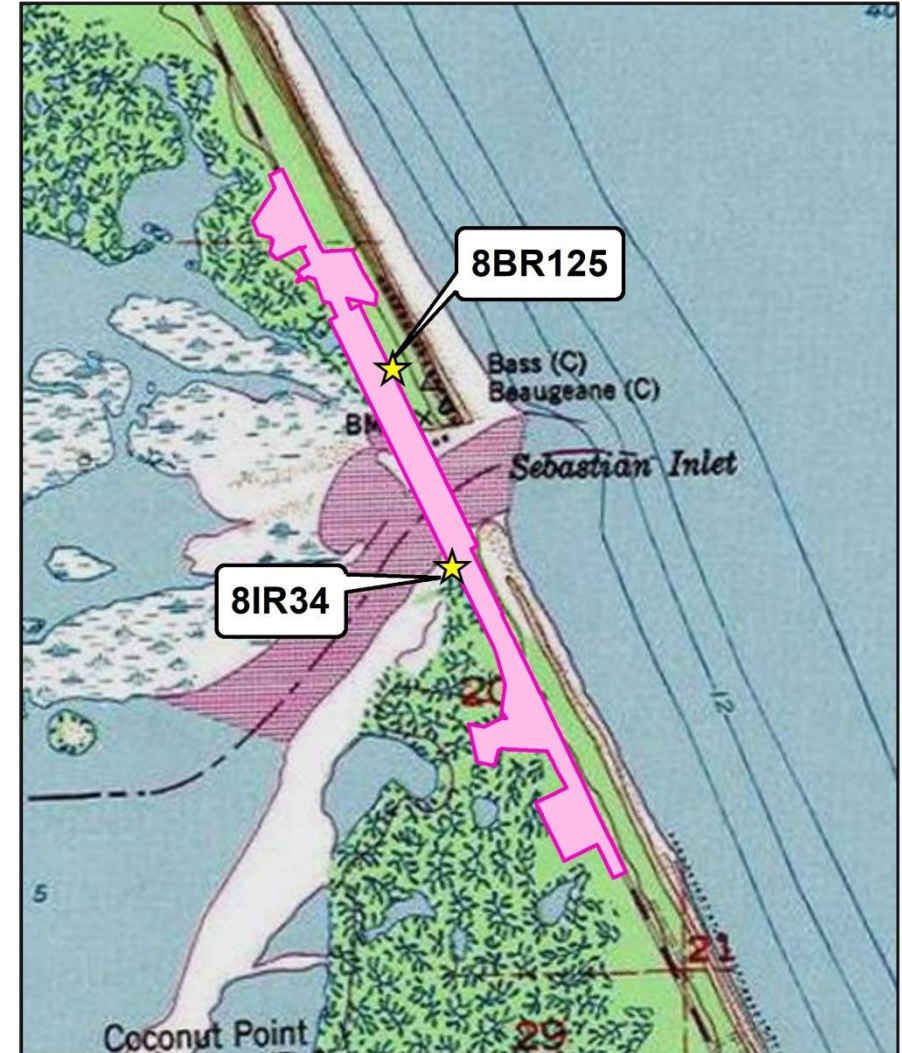
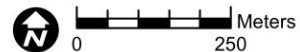


Figure 31: Identified Historic Resources

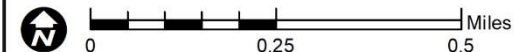
- Historic Resources APE
- ▲ Historic Bridge
- Historic Linear Resource
- Historic Landscape



General Area of Previously Recorded Sites within the Archaeological APE

SR A1A/Sebastian Inlet Bridge (#880005) Replacement (445618-1-22-01)

- Archaeological APE
- ★ Archaeological Sites



# Historic Resource Impacts of No-Build vs. Build Alternatives

## No Build Alternative

- Results in No Adverse Effects/Impacts to the historic resource

## Build Alternatives

- Rehabilitation Adverse Effects/Impacts to the historic resource
- Replacement Adverse Effects/Impacts to the historic resource

## Adverse Effects

- Section 106 Effects Determination completed
- Memorandum of Agreement-Next Step
- Further consultation with affected parties-Ongoing
- Section 4(f) documentation





**CULTURAL RESOURCE COMMITTEE MEETING NO. 1**

**EVALUATION MATRIX**

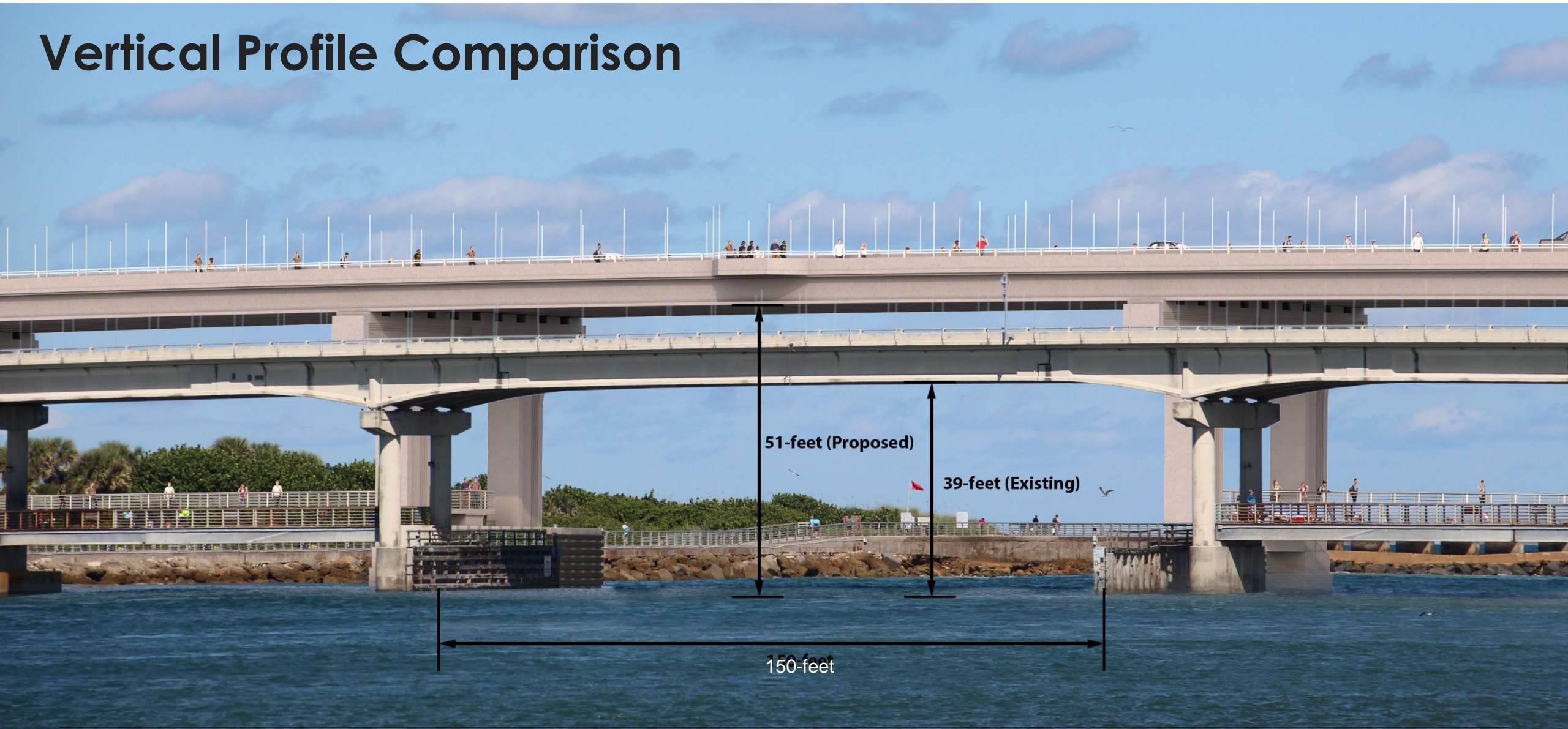
Criteria/Category		No Build Alternative	Rehabilitation Alternative	Alternative 1 (Existing)	Alternative 2 (East)	Alternative 3 (West)
<b>BRIDGE</b>	Vertical Navigational Clearance above Mean High Water	39-feet	39-feet	51-feet	51-feet	51-feet
	Horizontal Navigational Clearance Between Fenders	150-feet	150-feet	150-feet	150-feet	150-feet
	Benefit to Marine Traffic	No Change	No Change	Yes	Yes	Yes
	Temporary Bridge Required	N/A	No	Yes	No	No
	Bridge Closure or Detour During Construction	N/A	No	No	No	No
	Life of Alternative (Estimated Years) <sup>1</sup>	5	15	75	75	75
<b>TRAFFIC OPERATIONS</b>	Benefit to Vehicular Traffic	No	No	Yes	Yes	Yes
	Evacuation / Emergency Response (Improved)	No	No	Yes	Yes	Yes
	Sebastian Inlet State Park North Entrance (Improved)	No	No	Yes	Yes	Yes
	Sebastian Inlet State Park South Entrance (Improved)	No	No	Yes	Yes	Yes
	Sebastian Inlet District North Access Road (Improved)	No	No	Yes	Yes	Yes
<b>NATURAL RESOURCES</b>	Impacts to Wetlands (Acres)	0	0	3.07	3.18	3.2
	Impacts to Surface Waters (Acres)	No Change	2.73	2.73	2.73	2.73
	Impacts to Essential Fish Habitat - Benthic Resources (Acres)	0	0	0	0	0
<b>SOCIAL &amp; CULTURAL RESOURCES</b>	Impacts to Section 4(f) Resources (Park) (Acres)	No	No	2.98	3.26	3.81
	Potentially Eligible Archaeological Resources (Number)	0	0	1	0	1
	Eligible Historic Resources (Number)	0	1	1	1	1
	Bicycle and Pedestrian Facilities	No	No	Yes	Yes	Yes
<b>PHYSICAL RESOURCES</b>	Noise Receptors Impacted	0	0	0	0	1
	Contamination Sites <sup>2</sup>	0	0	0	0	0
	Aesthetics / Visual Changes	No	Yes	Yes	Yes	Yes
<b>RIGHT-OF-WAY</b>	Additional Right-of-Way Required (Acres)	0	0	4.51 *	3	3.26
	* Includes Temporary Bridge					
<b>COSTS (Dollars)</b>	Design	0	1,479,295	6,656,822	5,917,175	5,917,175
	Bridge and Roadway Construction	0	3,553,560 <sup>3</sup>	47,376,210	47,532,207	47,532,207
	Temporary Bridge Construction	0	0	6,906,605	0	0
	Mitigation	0	TBD	TBD	TBD	TBD
<b>TOTAL COST</b>		<b>0</b>	<b>5,032,855</b>	<b>60,939,637</b>	<b>53,449,382</b>	<b>53,449,382</b>

<sup>1</sup> FDOT policy states a structurally deficient bridge must be replaced within 6 years.

<sup>2</sup> Bridge will be evaluated for asbestos, lead paint during design.

<sup>3</sup> Bridge rehabilitation does not meet the project Purpose and Need. Construction costs include repairs to the superstructure and substructure and stabilization of foundation only.

# Vertical Profile Comparison



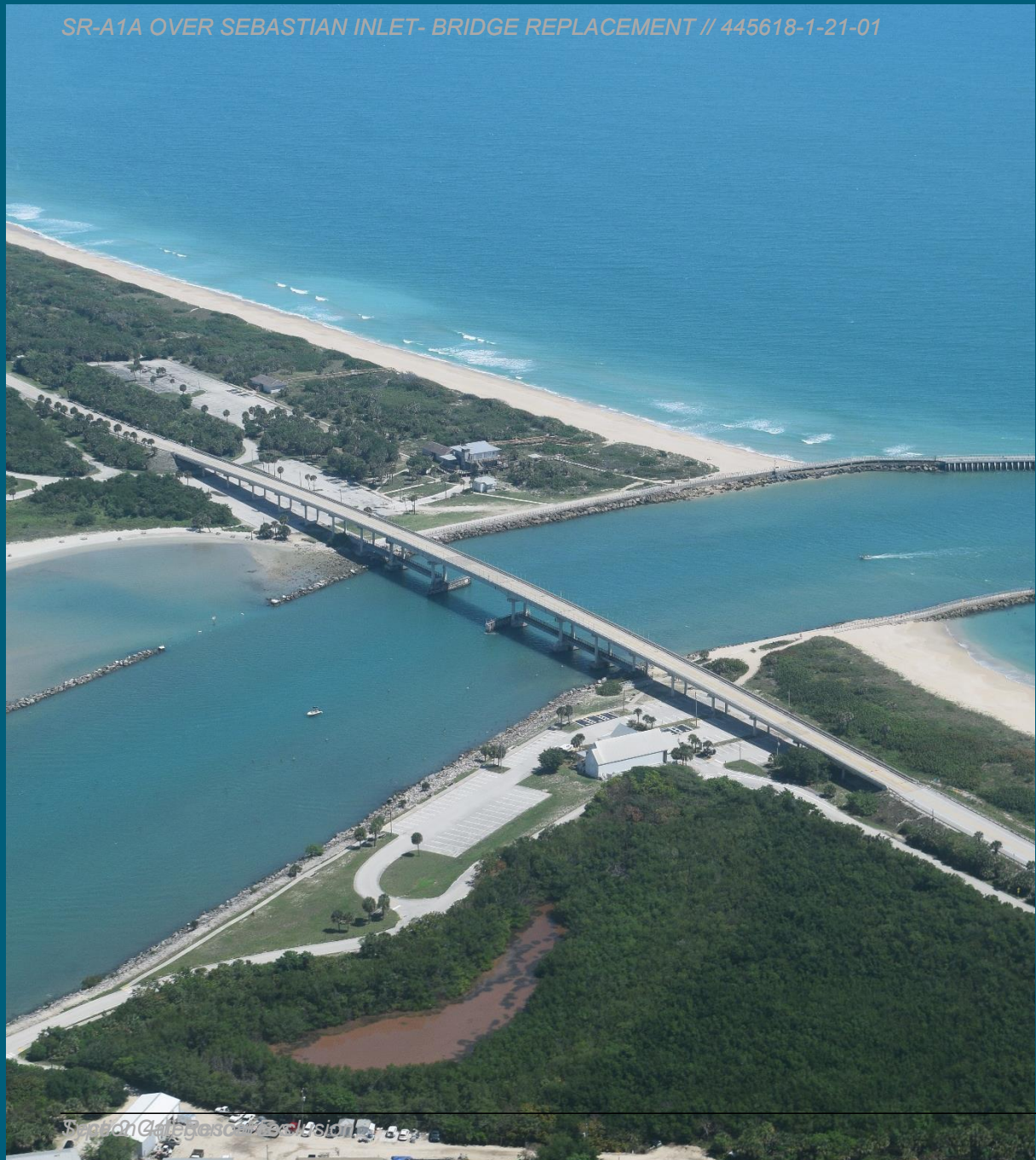
# Proposed Bridge



## NEXT STEPS

- Develop MOA
- Continue Coordination with affected parties
- Complete Section 4(f) Programmatic or Individual Statement Documentation to document there is no prudent or feasible alternative to the proposed improvements
- Public Hearing – Opportunity for Public Involvement





# Thank You

## SR-A1A over Sebastian Inlet

Bridge 880005

Bridge Replacement

**Project Development and Environment (PD&E) Study**

Binod Basnet, PE

Florida Department of Transportation

District Four

3400 W Commercial Blvd

Ft. Lauderdale, FL 33309

**[Binod.Basnet@dot.state.fl.us](mailto:Binod.Basnet@dot.state.fl.us)**

(954) 777-4146

Toll free at (866) 336-8435, ext 4146

**[www.fdot.gov/projects/SebastianInletBridge](http://www.fdot.gov/projects/SebastianInletBridge)**



*Florida Department of Transportation*

RON DESANTIS  
GOVERNOR

3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309

KEVIN J. THIBAUT, P.E.  
SECRETARY

February 9, 2022

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

Attn: Marsha K. Welch, Transportation Compliance Review Program

Re: Cultural Resource Assessment Survey (CRAS) and Effects Finding: State Road (SR) A1A  
Sebastian Inlet Bridge (FDOT Bridge No. 880005) Project Development and Environment  
(PD&E) Study  
FM No. 445618-1-22-02  
ETDM No. 14433  
Brevard County and Indian River County, Florida

Dear Ms. Welch,

The *Cultural Resource Assessment Survey (CRAS) of the State Road (SR) A1A Sebastian Inlet Bridge (FDOT Bridge No. 880005) Project Development and Environment (PD&E) Study, Brevard and Indian River counties, Florida* was undertaken by Janus Research at the request of the Florida Department of Transportation (FDOT), District 4. This survey and report were also prepared under 1A-32 Archaeological Research Permit No. 2021.50, issued by the Bureau of Archaeological Research (BAR) on May 5, 2021. The project limits are approximately one mile long. The purpose of the CRAS of the SR A1A Sebastian Inlet Bridge was to locate and evaluate potential archaeological and historic resources within the Area of Potential Effect (APE) and to assess eligibility for inclusion in the *National Register of Historic Places* (National Register) according to criteria set forth in 36 CFR Section 60.4.

All work was conducted in accordance with Section 106 of the *National Historic Preservation Act (NHPA) of 1966* (Public Law 89-665, as amended), as implemented by 36 CFR 800 -- *Protection of Historic Properties* (incorporating amendments effective August 5, 2004); Stipulation VII of the *Programmatic Agreement among the Federal Highway Administration (FHWA), the Advisory Council on Historic Preservation (ACHP), the Florida Division of Historical Resources (FDHR),*



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*the State Historic Preservation Officer (SHPO), and the FDOT Regarding Implementation of the Federal-Aid Highway Program in Florida (Section 106 Programmatic Agreement, effective March 2016, amended June 7, 2017); Section 102 of the National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.), as implemented by the regulations of the Council on Environmental Quality (CEQ) (40 CFR Parts 1500–1508); Section 4(f) of the Department of Transportation Act of 1966, as amended (49 USC 303 and 23 USC 138); the revised Chapters 267 and 373, Florida Statutes (F.S.); and the standards embodied in the FDHR’s Cultural Resource Management Standards and Operational Manual (February 2003), Chapter 1A-46 (Archaeological and Historical Report Standards and Guidelines), Florida Administrative Code (FAC), and Rule 1A-32 (Archaeological Research), FAC. In addition, this report was prepared in conformity with standards set forth in Part 2, Chapter 8 (Archaeological and Historical Resources) of the FDOT PD&E Manual (effective July 1, 2020). All work also conforms to professional guidelines set forth in the Secretary of Interior’s Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, as amended and annotated).*

The FDOT District 4 is conducting a PD&E Study to evaluate the replacement of the Sebastian Inlet Bridge (FDOT Bridge No. 880005) crossing the Sebastian Inlet located at the Indian River County and Brevard County boundary. The Sebastian Inlet Bridge, also known as the James H. Pruitt Memorial Bridge, was constructed in 1964 to carry SR A1A across the Sebastian Inlet. The bridge is approximately 1,500 feet long with 19 spans, the longest of which is approximately 180 feet long. The bridge vertical clearance is 39 feet and horizontal clearance is 150 feet between the bridge fenders. The Inlet provides access for vessels between the Indian River Lagoon and the Atlantic Ocean and is approximately 525 feet wide at the bridge. The bridge is located within FDOT and Sebastian Inlet District (SID) right-of-way (ROW) and is adjacent to the Sebastian Inlet State Park. The Inlet was created from privately owned uplands. In 1919 the SID was formed to maintain the Inlet and owns the submerged lands under the bridge.

The existing bridge has two 12-foot travel lanes and 2-foot shoulders. The approach roadway has two 12-foot travel lanes. North and south of the bridge, paved shoulders are 2- to 4-foot wide. South of the bridge, shoulders are marked as designated bicycle lanes. There are currently no pedestrian or bicycle facilities located within the bridge approaches or on the bridge, creating a gap in the multimodal network along SR A1A. An 8-foot shared use path, separated from SR A1A, is located on the west side of the roadway north and south of the bridge.

This project was evaluated through FDOT’s Efficient Transportation Decision Making (ETDM) process as project No. 14433. An ETDM Programming Screen Summary Report containing comments from the Environmental Technical Advisory Team (ETAT) was published on June 3, 2020. The ETAT evaluated the project’s effects on natural, physical, cultural, social, and economic resources.

Two archaeological sites, 8IR34 and the Micco Beach Site (8BR125), have been recorded within the archaeological area of potential effect (APE) for the project, which encompasses all areas of potential ground disturbing improvements for each project alternative, as well as areas proposed for ROW acquisition. The SHPO has not previously evaluated these sites for their National

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Register eligibility. Additionally, one archaeological occurrence was identified during the field review.

The field review identified no remnants of previously recorded 8IR34 archaeological site, a pre-Columbian midden, within the archaeological APE. However, due to the presence of a paved parking lot, a paved park road, bridge berms, and underground utilities serving a guard house, no subsurface testing was possible within the vicinity of this site. Therefore, there is insufficient information to determine the National Register eligibility of 8IR34.

A small part of the previously recorded Micco Beach Site (8BR125), a pre-Columbian midden that potentially contains Archaic, Malabar I/St. Johns I, and Malabar II/St. Johns II components, was relocated within the archaeological APE in seven (7) shovel tests. The portion of the site within the archaeological APE lacks intact midden or features and contains a sparse artifact assemblage. Much of it is disturbed and potentially redistributed from the main part of the site to the east, closer to the beach. Previous research on the main portion of the site outside the current archaeological APE has identified more extensive archaeological material and intact human burials. Because of the limited testing of the site for this project, there is insufficient information to assess the eligibility of the larger Micco Beach Site (8BR125). However, if the site were to be determined National Register-eligible in the future, the small portion of the site contained within the current archaeological APE would not contribute to its significance.

Due to the archaeological sensitivity of the area, the previous identification of human remains at the Micco Beach site (8BR125), and the inability to test portions of the APE with elevated archaeological potential, such as within the 8IR34 archaeological site, a professional Archaeologist will conduct monitoring of this project during construction. The resultant report will be provided to your office once it is available.

Historical research and field survey resulted in the identification and evaluation of four resources comprised of one previously identified historic bridge (James H. Pruitt Memorial Bridge, 8BR3148/8IR1493), one previously identified historic roadway (SR A1A, 8BR2544/8IR1500) and two newly identified historic landscapes (Sebastian Inlet State Park, 8BR4206/8IR1877; and Swimming Lagoon, 8BR4433). The James H. Pruitt Memorial Bridge (8BR3148/8IR1493) was constructed in 1964 and was determined individually National Register-eligible in 2012 by the Florida SHPO as a result of the 2010 *Historic Highway Bridges of Florida* study conducted by Archaeological Consultants, Incorporated (ACI) on behalf of the FDOT Office of Environmental Management. The James H. Pruitt Memorial Bridge was determined National Register-eligible under Criterion C for its Engineering. The bridge is an early example of the use of prestressed concrete in Florida. The current study finds that the bridge remains eligible for the National Register.

The portion of SR A1A (8BR2544/8IR1500) within the current project area is similar to other portions determined ineligible in 2010 and 2020. Historical research and field survey did not revealed any additional information to suggest the resource is eligible for the National Register, therefore, the portion of SR A1A within the current project area is considered National Register ineligible.

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The newly identified Sebastian Inlet State Park (8BR4206/8IR1877) and Swimming Lagoon (8BR4433) are associated with the post-World War II development of publicly owned recreational areas that occurred throughout the state of Florida. Based on the lack of significant historical associations, both the Sebastian Inlet State Park and the Swimming Lagoon are considered ineligible for the National Register both individually and as contributing resources to a historic district.

**Effects Discussion:**

The Criteria of Effects established by Section 106 of the NHPA in 36 CFR 800.5 was applied to the project. The current PD&E included evaluation of Build and Rehabilitation alternatives for the bridge and the No-Action (No-Build) alternative, replacement of the existing under deck observation/fishing piers, and the addition of bicycle and pedestrian facilities across the bridge. The underdeck observation/ fishing piers are located under the north and south portions of the bridge. Build alternatives will include evaluation of the bridge vertical clearance as required by the US Coast Guard (USCG). A navigation needs analysis memorandum was submitted to the USCG and a preliminary clearance determination was received which stated a desired minimum vertical clearance of 65-feet above mean high water (MHW) for a fixed bridge and 125-foot minimum horizontal clearance.

The alternatives analysis resulted in the conclusion that the rehabilitation option did not meet the purpose and need for the project and the bridge remains structurally and functionally deficient. Based on the results of the rehabilitation alternative analysis, this alternative was removed from further consideration.


The three build alternatives considered alignments in the current bridge location (Build Alternative 1), an alignment east of the current bridge (Build Alternative 2), and an alignment to the west of the current bridge (Build Alternative 3). All of the build alternatives require the demolition of the current bridge. There currently is not a chosen Preferred Alternative.

Since all of the build alternatives will require the demolition of the National Register eligible James H. Pruitt Memorial Bridge (8BR3148/8IR1493) it was determined that the proposed project will have an adverse effect to historic properties. The remaining resources are ineligible for the National Register. As a result of this adverse effect, further consultation with your office and project stakeholders to minimize and mitigate the adverse effect will occur.

We kindly request that this letter be reviewed, and concurrence provided by your office. This information is provided in accordance with the provisions contained in 36 CFR, Part 800, as well as the provisions contained in the revised Chapter 267, *F.S.* If you have any questions regarding the subject project, please contact me at [ann.broadwell@dot.state.fl.us](mailto:ann.broadwell@dot.state.fl.us) or Lynn Kelley at [lynn.kelley@dot.state.fl.us](mailto:lynn.kelley@dot.state.fl.us).

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Sincerely,

DocuSigned by:  


1942EE83B10D4E7  
Ann Broadwell

Environmental Administrator  
FDOT District 4 Planning & Environmental  
Management

The Florida State Historic Preservation Officer <input checked="" type="checkbox"/> concurs/ <input type="checkbox"/> does not concur with the recommendations and findings provided in this cover letter for SHPO/FDHR Project File Number <u>2019-8223C</u> . Or, the SHPO finds the attached document contains _____ insufficient information.	
SHPO Comments:	
Kelly L. Chase, DSHPO	Digitally signed by Kelly L. Chase, DSHPO DN: cn=Kelly L. Chase, DSHPO, o=doc, email=kelly.chase@doc.myflorida.com, c=US Date: 2022.03.30 09:55:53 -0400
Timothy A. Parsons, Director, and State Historic Preservation Officer Florida Division of Historical Resources	3/30/2022  [DATE]

**MEMORANDUM OF AGREEMENT  
BETWEEN THE FLORIDA DEPARTMENT OF TRANSPORTATION AND  
THE FLORIDA STATE HISTORIC PRESERVATION OFFICER  
REGARDING THE STATE ROAD A1A SEBASTIAN INLET BRIDGE  
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY,  
INDIAN RIVER COUNTY AND BREVARD COUNTY, FLORIDA**

**WHEREAS**, Pursuant to 23 United States Code (U.S.C.) § 327 and the implementing Memorandum of Understanding (MOU) executed on May 26, 2022, the Florida Department of Transportation (FDOT) has assumed Federal Highway Administration's (FHWA) responsibilities under the National Environmental Policy Act (NEPA) for highway projects on the State Highway System (SHS) and Local Agency Program (LAP) projects off the SHS; and

**WHEREAS**, in accordance with the MOU, FDOT's assumption of FHWA's responsibilities under NEPA for highway projects includes assumption of responsibilities for compliance with 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108); and

**WHEREAS**, FDOT proposes to provide federal financial assistance for the State Road (SR) A1A Project Development and Environment Study (PD&E) to address the structural and functional deficiencies of the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) over the Sebastian Inlet (Financial Project Identification Number 445618-1-22-01; Federal Aid Number D420-075-B) (**the Project**); and

**WHEREAS**, FDOT has determined that **the Project** represents an undertaking in accordance with 36 CFR § 800.3(a); and

**WHEREAS**, FDOT has defined **the Project's** area of potential effects (APE) for historic resources to include all historic properties immediately adjacent to the proposed improvements, for a distance of up to 200 feet. The APE for the proposed ponds includes all adjacent historic properties up to 100 feet from the proposed pond right-of-way (ROW). The archaeological APE focuses upon identifying and evaluating resources within the geographic limits of the proposed action and its associated ground disturbing activities; and

**WHEREAS**, FDOT has consulted with the Florida State Historic Preservation Officer (SHPO) pursuant to the requirements of 36 CFR Part 800 and has determined that **the Project** will have an adverse effect on the James H. Pruitt Memorial Bridge (Florida Master Site File [FMSF] Numbers 8BR03148/8IR01493), which is eligible for listing in the National Register of Historic Places (NRHP); and

**WHEREAS**, FDOT has consulted with the United States Coast Guard (USCG), United States Army Corps of Engineers, National Oceanic and Atmospheric Administration (National Marine Fisheries Service), Florida Department of Environmental Protection (FDEP), Sebastian Inlet State Park, St. Johns River Water Management District, Indian River County, Indian River County Metropolitan Planning Organization, Brevard County, Space Coast Transportation

Planning Organization, Sebastian Inlet District, Indian River Lagoon Council, and the Indian River Scenic Byway Council, regarding the effects of **the Project** on historic properties; and

**WHEREAS**, FDOT has provided opportunities for public review and comment regarding the effects of **the Project** on historic properties; and

**WHEREAS**, in accordance with 36 CFR § 800.6(a)(1) FDOT has notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect determination with specified documentation and has invited the ACHP to comment and participate in consultation, and the ACHP has chosen not to participate pursuant to 36 CFR § 800.6(a)(1)(iii); and

**NOW, THEREFORE**, FDOT and the SHPO agree that **the Project** shall be implemented in accordance with the following stipulations to take into account the effect of **the Project** on historic properties.

### STIPULATIONS

Prior to initiating any ground disturbing or demolition work associated with **the Project**, FDOT shall ensure that the following measures are carried out:

#### I. Documentation of the James H. Pruitt Memorial Bridge (8BR03148/8IR01493)

A. Prior to bridge demolition and per guidance provided by the National Park Service (NPS), FDOT will prepare Historic American Engineering Record (HAER) Level II documentation for the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) as follows:

1. Written historical and descriptive data prepared in accordance with outline format guidelines containing a construction history of the bridge including the history of the bridge type, an architectural description of the resource including alterations, a description of the site and changes, any historical photographs in the supplementary materials section, and a site plan; and
2. Reproduction of existing “as built” and existing drawings on vellum; and
3. Large-format (4” x 5” or larger negative size) photographs processed for archival permanence in accordance with HAER photographic specifications; and
4. At least one color digital photograph of the resource and its setting; and
5. Photo locations keyed to the site plan and included with the “Index to Photographs.”

B. FDOT shall provide draft HAER documentation (non-archival format, electronic version) to the NPS and SHPO for concurrent review. Both agencies shall have 30 days, after receipt of the draft documentation, for review, as per Stipulation VII.

C. FDOT shall make requested edits and provide final copies of the HAER documentation, completed in accordance with Stipulation I.A, as follows:

1. An archival copy to the NPS Southeast Regional Office for review and approval prior to salvage and demolition of the structure, per HAER guidelines; and
2. An archival copy to the SHPO for inclusion in the Florida Master Site File and the State Archives of Florida; and
3. Non-archival copies and electronic copies to the Indian River County Historical Society and the Sebastian Inlet District.

D. The HAER documentation cannot be considered complete, and bridge demolition cannot take place, until accepted by NPS.

## II. Public Education

A. FDOT will assist with the development and funding of two State Historic Markers (Markers) with one to be placed in proximity to the north side and the other to be placed in proximity to the south side of the bridge location. The Markers will be located in areas that are safe and accessible to the public. The draft Marker text and location will be coordinated with the SHPO for review, as described in Stipulation VII.

B. FDOT will assist with the development and funding of two educational interpretive panels to be placed within the boundaries of the Sebastian Inlet State Park with one to be placed in proximity to the north side and the other to be placed in proximity to the south side of the bridge location. The panels (design, text, and locations) will be coordinated with the SHPO for review, as described in Stipulation VII.

## III. Documentation of State Road (SR) A1A (8BR02544/8IR01500)

A. FDOT will assist with the documentation of an approximate 25-mile portion of State Road (SR) A1A. from Wabasso Beach (Indian River County) to Indialantic (Brevard County).

1. Field survey of the 25-mile linear resource will include a survey of the historic linear resource as well as the historic resources within the roadway right-of-way. The survey, subsequent documentation, and NRHP evaluations will not include any archaeological resources.
2. A historic context will be developed for the approximate 25-mile portion of SR A1A. The historic context will address the unique historic development of this isolated stretch of the roadway and its association with the construction of the James H. Pruitt Memorial Bridge (FDOT Bridge No. 880005) and the multiple federal and state-owned recreational facilities along the roadway. A historical context will also be developed, or the above-mentioned context will be expanded/augmented, to contextualize any historical resources documented during the field survey should they fall outside the developed historic context, as appropriate.

3. A Survey Document will be compiled in accordance with guidance from Florida Division of Historical Resources (FDHR)/SHPO and Florida Administrative Code Chapters 1A-32 and 1A-46. Content will include, but is not limited to, the purpose of the survey, survey methodology, aforementioned historic context, and survey results sections. In addition, National Register evaluations will be made for the historic resources documented in the survey area (except for the James H. Pruitt Memorial Bridge/FDOT Bridge No. 880005).

4. Florida Master Site File (FMSF) resource forms will be completed for this length of SR A1A (one for Brevard County and one for Indian River County) and any historic resources identified in the roadway right-of-way (excluding the James H. Pruitt Memorial Bridge/ FDOT Bridge No. 880005). A FMSF Survey Log will be completed for the historic architectural survey. Appropriate maps, photographs, and GIS data will be generated to accompany the FMSF forms, per FMSF submission guidance.

B. FDOT will submit the Survey Document and FMSF package, as detailed above, to SHPO for review per Stipulation VII. SHPO will for review the Survey Document for completeness and sufficiency in accordance with Florida Administrative Code Chapter 1A-46 and will review the FMSF resource forms to provide concurrence with NRHP determination recommendations.

#### **IV. PROFESSIONAL STANDARDS**

All archaeological and historic preservation work carried out pursuant to this Agreement shall be conducted by, or under the direct supervision of, a person or persons meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology and Historic Preservation as set forth at 62 FR 33708-33723 (June 20, 1997).

#### **V. DURATION**

This Memorandum of Agreement (MOA) will expire if its terms are not carried out within 5 years from the date of execution or project acceptance, whichever should come first. Prior to expiration, the parties will agree to extend the timeframe for fulfillment of the terms by letter agreement.

#### **VI. POST-REVIEW DISCOVERIES**

In accordance with 36 CFR § 800.13, FDOT will take the following actions if a post-review discovery is made:

A. If previously unidentified historic properties are discovered, or if the potential to affect previously identified historic properties changes after FDOT has completed their appropriate reviews under this Agreement, but before construction has started, FDOT shall reinstate consultation under Section 106 of the National Historic Preservation Act and Chapter 267, Fla. Stat.



B. If previously unidentified historic properties are discovered during construction or if unanticipated impacts to known or previously unidentified historic properties occur during construction, the following procedures shall be followed:

1. All construction-related activity in the vicinity of the discovery shall stop and the contractor shall immediately notify the Project Engineer and the FDOT District 4 Cultural Resources Coordinator of the discovery. Necessary security measures will be taken to protect the discovery as appropriate.

2. FDOT will notify the SHPO of the discovery and invite them to accompany FDOT staff (or consultants) to the location within forty-eight (48) hours of the discovery.

3. FDOT will immediately notify any Indian tribe that might attach religious and cultural significance to the affected property within forty-eight (48) hours of the discovery.

4. FDOT shall consult with the SHPO/THPO and appropriate consulting parties to document and evaluate the project effects and the need, if any, for further investigation within forty-eight (48) hours of the SHPO/THPO receipt of notification.

5. If FDOT determines that the discovery does not warrant further investigation, FDOT will provide written notification to the SHPO outlining FDOT's reasons and requesting their concurrence within two (2) business days of the visit to the discovery location. The SHPO/THPO and Indian tribes will have two (2) business days after receipt to respond. If no comments are received within this period, concurrence will be assumed, and project construction may resume.

6. If FDOT determines that the site warrants further investigation, a scope of work will be developed within forty-eight (48) hours of the site visit. The scope of work will be submitted to the SHPO and, as appropriate, the tribes. The SHPO/THPO and tribes will have two (2) business days after receipt to review and comment. If no comments are received within this period, concurrence will be assumed and work will be implemented in accordance with the scope. If comments are received, FDOT shall take them into account and carry out the scope of work. Upon completion and acceptance of the work, construction may proceed as planned. A report of the investigations will be completed within the time frame established by the scope of work and copies provided to all consulting parties. Should any party object to the proposed work plan or results, FDOT will proceed in accordance with Stipulation VIII.

7. When the discovery consists of human remains, graves, or grave-associated artifacts or other properties that federally recognized tribes with ancestral ties to Florida may ascribe with a traditional cultural or religious significance, FDOT-OEM will notify the tribes. FDOT will comply with Section 1.6 of the current version of the FDOT Standard Specifications for Road and Bridge Construction

and the procedures for inadvertent discovery of human remains contained in Section 872.05, F.S. and Rule 1A-44 of the Florida Administrative Code.

## **VII. REVIEW STIPULATION**

FDOT shall afford the SHPO and other consulting parties, including the federally-recognized tribes affiliated with Florida, as appropriate, a 30-day period for review and comment following the receipt of delivery of those submittals and reviews described above. If no comments are received by FDOT at the end of these 30 days, FDOT will presume there are no objections. Any objections to the findings or plans proposed in these submittals will be addressed in accordance with Stipulation VIII, below.

## **VIII. DISPUTE RESOLUTION**

Should any signatory to this MOA object at any time to any actions proposed or the manner in which the terms of this MOA are implemented, FDOT shall consult with such party to resolve the objection. If FDOT determines that such objection cannot be resolved, FDOT will:

A. Forward all documentation relevant to the dispute, including FDOT's proposed resolution, to the ACHP. The ACHP shall provide FDOT with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, FDOT shall prepare a written response that considers any timely advice or comments regarding the dispute from the ACHP, signatories, and concurring parties, and provide them with a copy of this written response. FDOT will then proceed according to its final decision.

B. Make a final decision on the dispute and proceed accordingly if the ACHP does not provide its advice regarding the dispute within thirty (30) days. Prior to reaching such a final decision, FDOT shall prepare a written response that considers any timely comments regarding the dispute from the signatories to the MOA, and provide them and the ACHP with a copy of the written response.

C. Fulfill its responsibility to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

## **IX. AMENDMENTS**

This MOA may be amended when such an amendment is agreed to in writing by all signatories. All signatories must signify their acceptance of the proposed changes to the MOA in writing within 30 days of their receipt. The amendment will be effective on the date a copy signed by all signatories is filed with the ACHP. In accordance with 36 CFR § 800.6(b)(7), if the ACHP was not a signatory to the original agreement and the signatories execute an amended agreement, FDOT shall file the amended agreement with the ACHP.

## **X. TERMINATION**

If any signatory to this MOA determines that its terms will not or cannot be carried out, that party shall immediately consult with the other signatories in an effort to amend the MOA per Stipulation

IX, above. If within thirty (30) days (or another time agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the MOA upon written notification to the other signatories.

Once the MOA is terminated, and prior to work continuing on **the Project**, FDOT must either (a) execute an MOA pursuant to 36 CFR § 800.6 or (b) request, take into account, and respond to the comments of the ACHP under 36 CFR § 800.7. FDOT shall notify the signatories as to the course of action it will pursue.

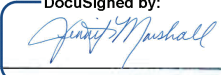
*Execution of this MOA by FDOT and SHPO and implementation of its terms is evidence that FDOT has taken into account the effects of this undertaking on historic properties per the requirements of Section 106 (Public Law 113-287 [Title 54 U.S.C. 306108]), and 36 CFR Part 800 (Protection of Historic Properties).*

**SIGNATORIES:**

FLORIDA STATE HISTORIC PRESERVATION OFFICER

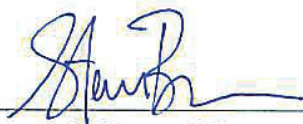
 Date 4/6/23  
Alissa S. Lotane  
Director, Division of Historical Resources  
State Historic Preservation Officer

FLORIDA DEPARTMENT OF TRANSPORTATION

DocuSigned by:  
 Date 04/21/2023 | 3:41 PM EDT  
D881D38487C64B2  
Jennifer Marshall, P.E.  
Director, Office of Environmental Management

**CONCURRING PARTIES:**

FLORIDA DEPARTMENT OF TRANSPORTATION, DISTRICT 4

 Date 4/21/2023  
Steven C. Braun, P.E.  
Director of Transportation Development

## **Natural Resources Appendix**

### **Contents:**

NMFS Letter NARW\_A1A Sebastian\_445618-1-22-02\_Revised

20220812\_USFWS\_signed concurrence sticker\_2022-0073640 SRA1A bridge over sebastian inlet

445618-1 OFW Map

NMFS Reasonable Assurance letter

445618-1 Sebastian Inlet Floodplains Map 12009C0802H

445618-1 Sebastian Inlet Floodplains Map 12061C0102H



## Florida Department of Transportation

Ron DeSantis  
GOVERNOR

3400 West Commercial Blvd.  
Fort Lauderdale, FL 33309

Jared W. Perdue, P.E.  
SECRETARY

February 8, 2023

National Marine Fisheries Service  
400 North Congress Avenue, Suite 270  
West Palm Beach, FL 33401

Attn: Kurtis Gregg

**Subject: ESA Section 7 Consultation/Concurrence Request Letter Additional Information**  
**Project Name:** SR A1A Sebastian Inlet Bridge Replacement PD&E  
 (Bridge No. 880005)  
**Financial Management No.:** 445618-1-22-02  
**Federal Aid No.:** D420-075-B  
**County:** Indian River / Brevard County

Dear Kurtis:

This letter is to respond to NMFS email from February 7, 2023, to provide the requested additional information for your consideration in relation to listed species involvement. The email indicated that the North Atlantic Right Whale should be added to the ESA Section 7 analysis for this project.

### Section 7

The previous letter sent on February 7, 2023, addressed potential impacts to NMFS species covered under the ESA including five species of sea turtles, smalltooth sawfish, and the giant manta ray. All species were given an effects determination of May Affect, not Likely to Adversely Affect based upon the project location and work associated with the SR A1A bridge replacement project. Below is an analysis of the potential impacts from this project to the North Atlantic Right Whale.

Additional Federally Listed Species Potentially Occurring within the Project Area				
Common Name	Scientific Name	Listing	Occurrence Potential	Effect Determination
Mammals				
North Atlantic Right Whale	<i>Eubalaena glacialis</i>	FE	Low	MANLAA

#### **North Atlantic Right Whale** (*Eubalaena glacialis*)

The North Atlantic right whale is one of the world's most endangered large whale species with estimates putting the remaining population size around 350 animals. These baleen whales were hunted to the brink of extinction by the late 1800's and have been unable to recover to pre-whaling population numbers. The primary threats include entanglement in fishing gear and vessel strikes, as well as the impact of noise on their ability to communicate, find food, and navigate. They are listed as Endangered throughout their range which is primarily within the coastal waters in the Atlantic Ocean on the continental shelf although

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Sebastian Inlet Bridge

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they can travel far offshore over deep water. They migrate seasonally traveling in small groups, moving into the waters off New England and Canadian waters where they feed and mate. In the fall, they travel to the shallow coastal waters to birth calves off of South Carolina, Georgia, and Northeastern Florida. The designated Critical Habitat along the eastern coast extends from Cape Fear, North Carolina to just south of Port Canaveral, Florida. It does not extend as far to the south as the project area. Although it is rare for the North Atlantic right whale to venture as far south as the Sebastian Inlet, a mother and calf were observed within the Sebastian Inlet in February of 2016.

The project involves the replacement of the SR A1A bridge, fender system, and observation piers within the inlet, as well as associated improvements to SR A1A and the entrances to the Sebastian Inlet State Park. The in-water work will be limited to the new pilings for 3 new bridge piers (22 pilings for each pier = 66 total pilings), pilings to support the new fender system, and four bents (with 2 pilings each) to support the new observation platforms under the bridge. As described in the previous correspondence, the project will use 24" prestressed concrete piles installed using a diesel impact hammer with an estimated 3,500 blows per pile. Each pile takes approximately 2 hours to install, and it is estimated that 3 to 4 piles would be driven per day. Pile driving is not expected to be restricted to any particular time of year, and the project is expected to last for approximately two and a half years. Because of the currents, it is likely that much of the work will take place utilizing work trestles rather than barges within the inlet.

A vessel-use survey conducted during this PD&E study indicated that many larger vessel owners do not utilize the Sebastian Inlet as a means to travel offshore, opting instead for the access via Port Canaveral to the north or Fort Pierce to the south due to the excessive currents within the inlet. Although the project does include raising the vertical profile of the bridge from 39' to 51', this is not expected to provide greater access for larger vessels to utilize this location to travel offshore as the USCG notice to mariners still indicates that dangerous currents occur. Sailboats that may not have been able to previously use the inlet would still have to navigate this current, and as indicated in the vessel survey, few respondents replied with a desire to access the Atlantic Ocean through the inlet.

The Sebastian Inlet State Park does include fishing piers along the inlet and on the observation piers. Fishing line recycling bins, signage and educational materials are all present at the park to minimize fishing line waste and opportunities for marine life entanglement. A submerged resources survey conducted during the PD&E Study indicated no fishing line or fishing tackle debris within the study area, likely due to the high currents and lack of resources along the inlet bottom.

In order to minimize potential involvement with NMFS species listed under the ESA, FDOT has committed to following the Standard Manatee Conditions for In-Water Work (USFWS), the Sea Turtle and Smalltooth Sawfish Construction Conditions (USFWS), and the Protected Species Construction Conditions (NOAA Fisheries Southeast Regional Office).

Based upon the proposed work, the conditions within the Sebastian Inlet, the potential for vessel strikes or entanglements, and the likelihood of encountering the North Atlantic Right Whale, FDOT has determined that the project **May Affect but is not Likely to Adversely Affect** this species. We are asking your concurrence with this determination for this project.

Sincerely,  
DocuSigned by:

Ann Broadwell

Environmental Administrator

FDOT – District 4

02/08/2023 | 4:33 PM EST

*FM# 445618-1-22-01*

*Sebastian Inlet Bridge*

*Page 3 of 3*

cc: Binod Basnet, P.E., FDOT District 4, Project Manager  
Fernando Ascanio, FDOT  
Beth Beam, P.E., Stantec



## Florida Department of Transportation

**RON DESANTIS**  
GOVERNOR

3400 West Commercial Boulevard  
Fort Lauderdale, FL 33309

**JARED W. PERDUE, P.E.**  
SECRETARY

August 9, 2022

Mr. John Wrublik  
U.S. Fish and Wildlife Service  
South Florida Ecological Services Office  
1339 20th Street  
Vero Beach, FL 32256-7517

**Subject:** Request for Section 7 Information Consultati  
SR A1A over Sebastian Inlet – Bridge 8800C  
Project Development and Environment (PD&E)  
Indian River County and Brevard County, Fl  
Financial Project ID Number: 445618-1-22-0



U.S. Fish and Wildlife Service  
Florida Ecological Service Office

FWS Log No. 2022-0073640

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 Service 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.

\_\_\_\_\_  
José J. Rivera, Division Supervisor, Environmental Review

8/12/2022

Date

Dear Mr. Wrublik,

The Florida Department of Transportation (FDOT or Department) District Four is conducting a Project Development & Environment (PD&E) Study to evaluate the replacement of the Sebastian Inlet Bridge (No. 880005) crossing the Sebastian Inlet located at the Indian River County and Brevard County boundary. As part of the study, a Natural Resources Evaluation (NRE) has been developed to assess the project for its impacts to wetlands and protected species. Based upon the individual species effect determinations that resulted from this evaluation, FDOT is seeking your concurrence for this project as it relates to the potential effects described within the document.

The NRE describes the potential involvement of the project with species listed under the Endangered Species Act and includes species that fall under the jurisdiction of both the USFWS and NMFS, therefore coordination with both agencies is required. A separate letter has been provided to NMFS, as well as to the Florida Fish and Wildlife Conservation Commission for their review.

Nineteen federally protected animals (plus the bald eagle) were determined to have the potential to occur within the Brevard/Indian River County area where the project is located (Table 1). Of these species, the project proposes No Effect determinations for ten animals due to the lack of suitable habitat, while the remaining nine have been given May Affect not Likely to Adversely Affect determinations.

We ask that USFWS review the attached NRE for this project and provide concurrence with FDOT's determinations. Should you have any questions or require additional information, please contact Fernando Ascanio at [Fernando.ascanio@dot.state.fl.us](mailto:Fernando.ascanio@dot.state.fl.us) or by phone at (954) 777-4665.


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[www.fdot.gov](http://www.fdot.gov)



Table 1: Federally Listed Species Potentially Occurring within the Project Area				
Common Name	Scientific Name	Listing	Occurrence Potential	Effects Determination
<b>Birds</b>				
Florida scrub jay	<i>Aphelocoma coerulescens</i>	FT	Low	NE
Audubon's crested caracara	<i>Polyborus plancus</i>	FT	Low	NE
bald eagle	<i>Haliaeetus leucocephalus</i>	NL	Low	NE
wood stork	<i>Mycteria americana</i>	FT	High	MANLAA
piping plover	<i>Charadrius melodus</i>	FT	Low	NE
red knot	<i>Calidris canutus rufa</i>	FT	Low	NE
Eastern black rail	<i>Laterallus jamaicensis</i>	FT	Low	NE
<b>Reptiles</b>				
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	FE	Low	MANLAA
green sea turtle	<i>Chelonia mydas</i>	FT	High	MANLAA
loggerhead sea turtle	<i>Caretta caretta</i>	FT	High	MANLAA
leatherback sea turtle	<i>Dermochelys coriacea</i>	FE	Low	NE
hawksbill sea turtle	<i>Eretmochelys imbricata</i>	FE	Low	NE
Atlantic salt marsh snake	<i>Nerodia clarkii taeniata</i>	FT	Low	MANLAA
Eastern indigo snake	<i>Drymarchon corais couperi</i>	FT	Low	NE
gopher tortoise	<i>Gopherus polyphemus</i>	CS	High	MANLAA
<b>Mammals</b>				
Florida panther	<i>Puma concolor coryi</i>	FE	Low	NE
West Indian manatee	<i>Trichechus manatus</i>	FT	High	MANLAA
Southeastern beach mouse	<i>Peromyscus polionotus niveiventris</i>	FT	Moderate	MANLAA
<b>Fish</b>				
smalltooth sawfish	<i>Pristis pectinata</i>	FE	Moderate	MANLAA
giant manta ray	<i>Manta birostris</i>	FE	Low	MANLAA
FT= Federally Threatened, FE=Federally Endangered, CS=Candidate Species, NE=No Effect, MANLAA=May Affect not Likely to Adversely Affect				

Sincerely,


 Fernando Ascanio 8/11/2022 | 7:48 AM EDT  
 3B218C692E7F49A...

Fernando Ascanio  
 Senior Environmental Specialist  
 District Four – PLEMO  
 3400 West Commercial Blvd  
 Fort Lauderdale, Florida 33309  
 Office: (954)777-4665  
 Mobile: (954)260-7522

Natural Resource Evaluation

### Legend

- OFW Aquatic Preserves
  - Other OFW (State Park)
- Preferred Right of Way**
- Existing RW
  - Pond RW
  - Proposed RW



**SEBASTIAN INLET STATE PARK**

Swimming Cove

Sebastian Inlet

Sebastian Inlet Bridge

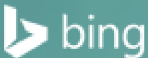
**Atlantic Ocean**

BREVARD COUNTY  
INDIAN RIVER COUNTY

**SEBASTIAN INLET STATE PARK**

End Project (MP 0.307)

Begin Project (MP 21.945)





**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
**NATIONAL MARINE FISHERIES SERVICE**  
Southeast Regional Office  
263 13<sup>th</sup> Avenue South  
St. Petersburg, Florida 33701-5505  
<https://www.fisheries.noaa.gov/region/southeast>

February 24, 2023 F/SER46:DR

Fernando Ascanio  
Senior Environmental Specialist  
Planning and Environmental Management Office  
Florida Department of Transportation – District 4  
3400 West Commercial Boulevard  
Fort Lauderdale, Florida 33309-3421

Ref.: SR A1A Sebastian Inlet Bridge replacement - Project Development and Environment Study (PD&E); Financial Project ID Number 445618-1-22-02, Federal Aid Number D420-075-B; Indian River County and Brevard County, Florida

Dear Mr. Ascanio:

The Florida Department of Transportation (FDOT) District 4 proposes the replacement of the SR A1A Sebastian Inlet Bridge in Indian River County and Brevard County, Florida. The National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NMFS) has reviewed the information you have provided as part of the project's Project Development & Environment phase. This letter responds to your conclusions regarding Endangered Species Act (ESA)-listed species under NMFS's purview and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH), as part of the reasonable assurance process. You have requested that NMFS review the Natural Resources Evaluation (NRE) and provide support for moving the project forward toward determining a finding under the National Environmental Policy Act (NEPA). Our comments are provided in accordance with provisions of Section 7 of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. NMFS believes that, to the extent practicable at this stage of the project, FDOT has addressed NMFS's previous comments.

Regarding ESA-listed species under the NMFS's purview, FDOT has determined the project may affect, but is not likely to adversely affect (NLAA), green, loggerhead, Kemp's ridley, hawksbill, and leatherback sea turtles, smalltooth sawfishes, and giant manta rays. The NMFS cannot provide concurrence or non-concurrence with the NLAA determinations for the ESA-listed species under our purview at this time because sufficiently detailed project information is not yet available for NMFS to conduct an analysis as part of the ESA Section 7 consultation process. In particular, information regarding temporary trestles, cofferdams, and barge spudding should be provided. In addition, uncertainty also remains regarding how construction impacts to ESA-listed species will be minimized. However, we believe we can provide reasonable assurance that the Section 7 consultation can be completed when sufficient project details are provided and commitments are finalized. At this time a jeopardy opinion is not anticipated, and we believe that consultation requirements will be fulfilled consistent with 23 CFR § 771.133.

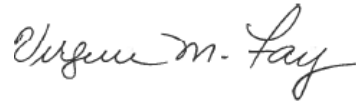


The project's Natural Resources Evaluation states that both NOAA Fisheries Southeast Regional Office (SERO) Sea Turtle and Smalltooth Sawfish Construction Conditions and NOAA Fisheries SERO *Protected Species Construction Conditions* will be implemented. Only the more recent SERO *Protected Species Construction Conditions* need to be implemented, as these supercede the older (SERO) Sea Turtle and Smalltooth Sawfish Construction Conditions. Also, the NMFS would like to see a commitment to only performing in-water pile driving activities during daylight hours.

The NMFS has reviewed the information regarding permanent impacts to mangroves due to the project. It appears the preliminary assessment of impacts to mangroves is accurate. Therefore, if appropriate compensatory mitigation is provided for unavoidable mangrove impacts, the project can likely offset the adverse impacts to EFH. Further coordination with NMFS will be required to identify appropriate compensatory mitigation for mangrove impacts.

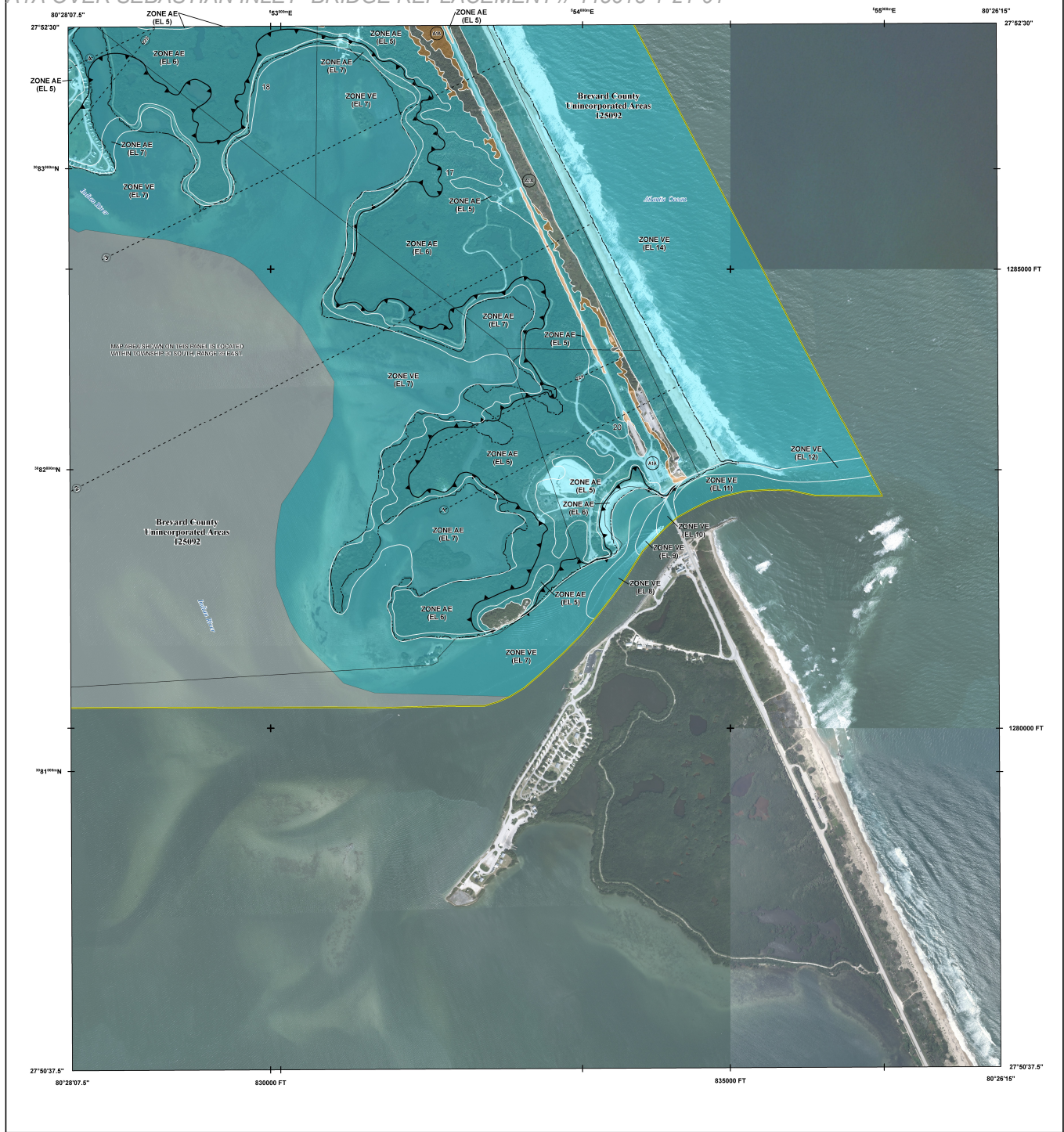
If you have any questions regarding this letter, please contact David Rydene at (727) 824-5379, or by email at David.Rydene@noaa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Virginia M. Fay".

Virginia M. Fay  
Assistant Regional Administrator  
Habitat Conservation Division

# SR-A1A OVER SEBASTIAN INLET- BRIDGE REPLACEMENT // 445618-1-21-01



## FLOOD HAZARD INFORMATION

SEE HIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT  
**THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT**  
[HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

	Without Base Flood Elevation (BFE) Zone A, V, AG, S
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard. Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes, Zone X
	Area with Flood Risk due to Levee Zone D
	Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Coastal Transverse Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation (BFE)
	Limit of Study
	Jurisdiction Boundary

## NOTES TO USERS

For information and questions about the Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Mapping and Insurance Helpline at 1-877-FEMA-Map (1-877-369-6272) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study (FIS), and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities receiving hard or soft copy FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study Report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-438-6820.

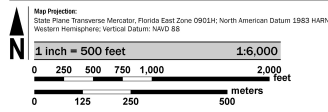
Base map information shown on this FIRM was provided in digital format by the Brevard County Property Appraiser, dated 2014 and 2017; the Florida Department of Transportation, dated 2015; the U.S. Census Bureau, dated 2010; the U.S. Department of Agriculture, dated 2015; and the U.S. Fish and Wildlife Service, dated 2017.

**LIMIT OF MODERATE WAVE ACTION:** Zone AE has been divided by a Limit of Moderate Wave Action (LiMWA). The LiMWA represents the approximate landward limit of the 1-2-foot breaking wave. The effects of wave heights between Zone VE and the LiMWA (or between the shoreline and the LiMWA for areas where Zone VE is not identified) will be similar to, but less severe than, those in the Zone VE.

Limit of Moderate Wave Action (LiMWA)

Coastal Barrier Resources System (CBRS) areas and "otherwise protected areas" (OPAs) are no longer shown on this map panel, but still may be present in the community. Current information on these areas is provided by the U.S. Fish & Wildlife Service (FWS). NFIP flood insurance is not available within CBRS areas for structures that are built or substantially improved on or after the date indicated by FWS. Users should reference the most up-to-date information provided by FWS to determine NFIP insurance eligibility. The official maps and additional information regarding CBRS areas are provided on the FWS website at: [www.fws.gov/cbrs](http://www.fws.gov/cbrs). FEMA also includes the official boundaries from FWS on our interactive and dynamic flood maps available through the FEMA Map Service Center.

## SCALE



## PANEL LOCATOR



**National Flood Insurance Program**

**NATIONAL FLOOD INSURANCE PROGRAM**  
**FLOOD INSURANCE RATE MAP**  
**BREVARD COUNTY, FLORIDA**  
**and Unincorporated Areas**  
**PANEL 802 of 825**

Panel Contains:  
 COMMUNITY 125092  
 BREVARD COUNTY 802 H

NUMBER PANEL SUFFIX  
 125092 0802 H

VERSION NUMBER  
 2.3.3.2

MAP NUMBER  
 12003C0802H

MAP REVISED  
 JANUARY 29, 2021

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (CBFEs) shown on this map apply only landward of 12' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodway were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Transverse Mercator State Plane Florida East FIPS 9601. The horizontal datum was NAD83 HARN, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geospatial Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geospatial Survey website at <http://www.ngs.noaa.gov> or contact the National Geospatial Survey at the following address:

NGS Information Services  
NOMA, NANGS12  
National Geospatial Survey  
SSM/C, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geospatial Survey at (301) 713-3242 or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was provided in digital format by Indian River County and the Florida Geographic Data Library.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels, community map repository addresses, and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

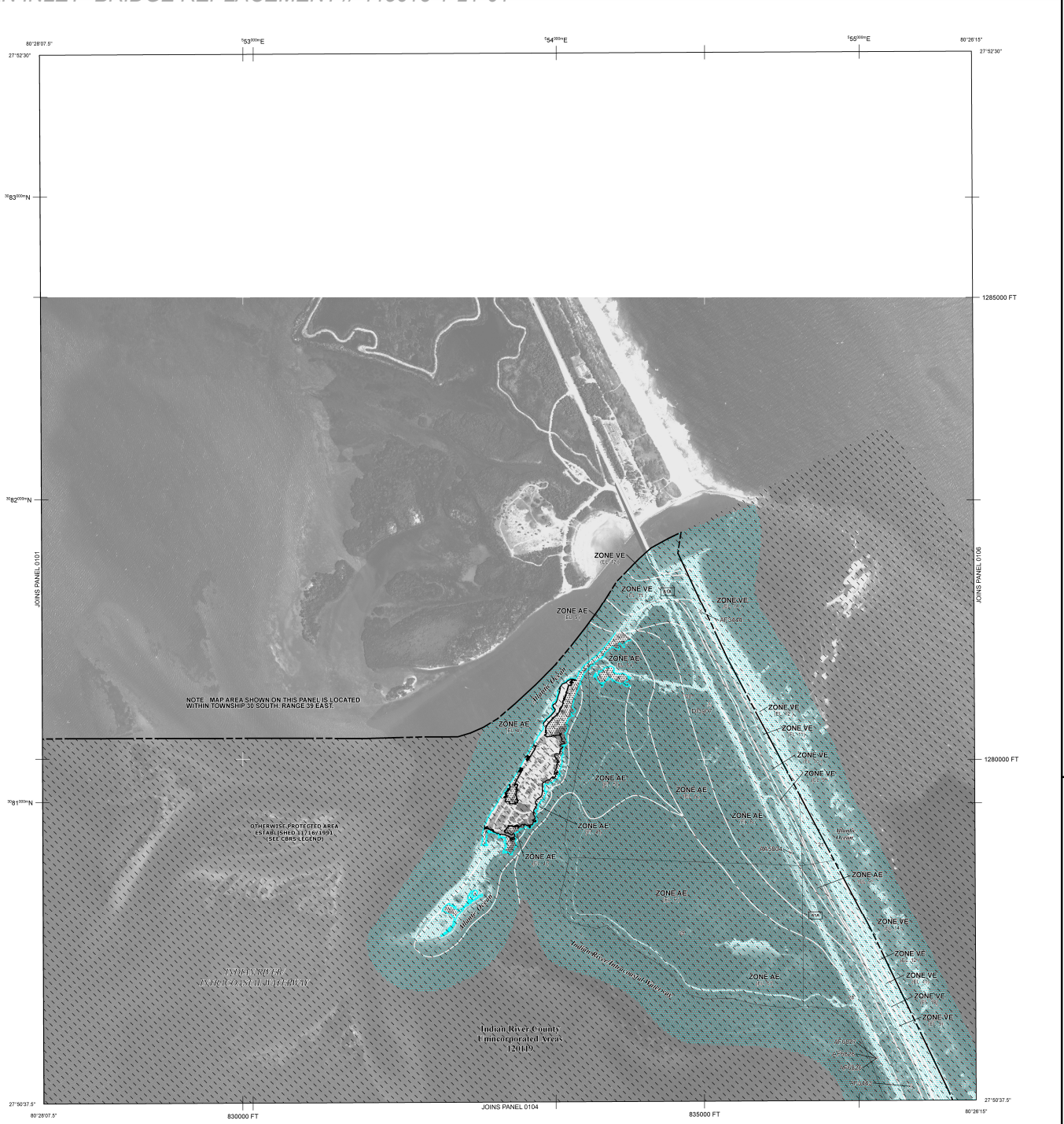
For information and questions about this map, available products associated with this FIRM including historic versions of the FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information Exchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information Exchange.

The "profile base lines" depicted on this map represent the hydraulic modeling boundaries that match the flood profiles in the FIS report. As a result of improved topographic data, the profile base line, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) LEGEND**

11-16-1991 Otherwise Protected Area (OPA)  
FLOOD INSURANCE NOT AVAILABLE FOR STRUCTURES NEWLY BUILT OR SUBSTANTIALLY IMPROVED ON OR AFTER NOVEMBER 16, 1991, IN DESIGNATED OPAs WITHIN THE CBRS.

Boundaries of the John H. Chafee Coastal Barrier Resources System (CBRS) shown on this area are transferred from the official CBRS source map(s) for this area and are depicted on this FIRM for informational purposes only. The official CBRS maps are enacted by Congress via the Coastal Barrier Resources Act, as amended, and maintained by the U.S. Fish and Wildlife Service (FWS). The official CBRS maps used to determine whether or not an area is located within the CBRS are available for download at <http://www.fws.gov>. For an official determination of whether or not an area is located within the CBRS, or for any questions regarding the CBRS, please contact the FWS field office for this area at (772) 862-3993.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

ZONE A: No Base Flood Elevations determined.

ZONE AE: Base Flood Elevations determined.

ZONE AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of shallow flat flooding, velocities also determined.

ZONE AR: Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently identified. Zone AR indicates that the former flood control system is being retained to provide protection from the 1% annual chance or greater flood.

ZONE AV: Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no base Flood Elevations determined.

ZONE V: Coastal flood zone with velocity hazard (wave action); no base Flood Elevations determined.

ZONE VE: Coastal flood zone with velocity hazard (wave action); base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

ZONE X: Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

ZONE D: Areas determined to be outside the 0.2% annual chance floodplain. Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary  
0.2% annual chance floodplain boundary  
Floodway boundary  
Zone D boundary  
Zone V boundary  
Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities  
Base Flood Elevation line and value; elevation in feet  
Bench mark (see explanation in notes to users section of this FIRM panel)  
Referenced to the North American Vertical Datum of 1988  
Cross section line  
Traverse line  
Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere  
479777E  
6000000 FT  
6000000 FT  
DMS510  
M 1.5

**MAP REPOSITORIES**  
Refer to Map Repositories list on Map Index

**EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP**  
May 1, 1985

**EFFECTIVE DATE(S) OF REVISONS TO THIS PANEL**  
July 2, 1992 - to add Coastal Barrier Resources Areas and Otherwise Protected Areas  
May 3, 1993 - to change zone designations  
June 30, 1999 - to reduce Coastal Barrier Resources System units  
December 4, 2012 - to add Base Flood Elevations, floodway, and Special Flood Hazard Areas; to change zone designations and Special Flood Hazard Areas; to update map format; and to reflect updated geographic information.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6623.

**MAP SCALE 1" = 600'**

300 0 300 600 900 1200 FEET

**NFIP**

**PANEL 0102H**

**FIRM**

**FLOOD INSURANCE RATE MAP**

**INDIAN RIVER COUNTY, FLORIDA AND INCORPORATED AREAS**

**(SEE MAP INDEX FOR FIRM PANEL LAYOUT)**

**PANEL 102 OF 390**

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
INDIAN RIVER COUNTY	10019	0102	H

**NOTE:**  
THIS MAP INCLUDES BOUNDARIES OF THE COASTAL BARRIER RESOURCES SYSTEM ESTABLISHED UNDER THE COASTAL BARRIER RESOURCES ACT OF 1982 AND/OR SUBSEQUENTLY ENACTED LEGISLATION.

**NOTE to User:** The Map Number shown below should be used when ordering map copies. The Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER 12061C0102H**

**MAP REVISED DECEMBER 4, 2012**

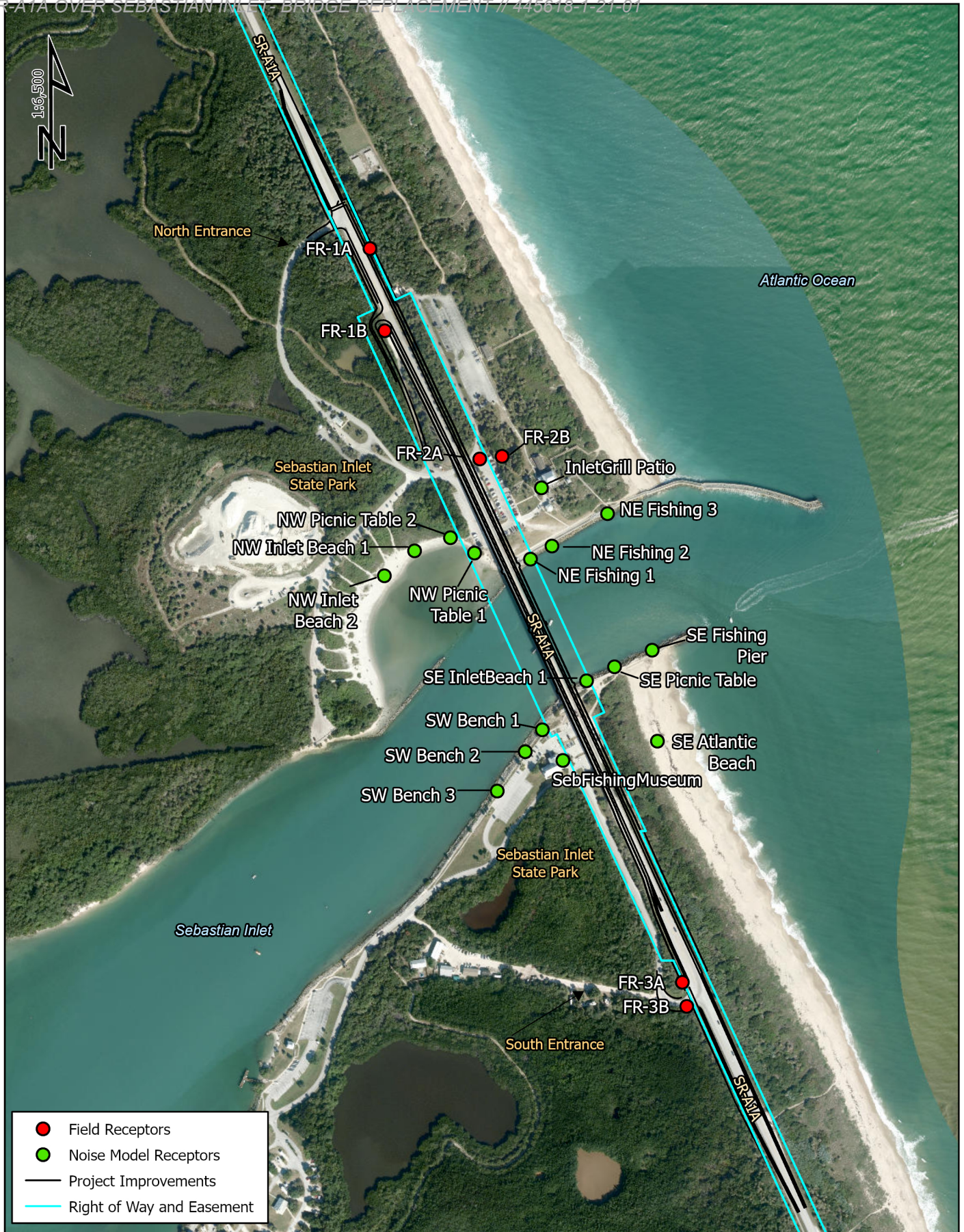
**Federal Emergency Management Agency**

## **Physical Resources Appendix**

### Contents:

Sebastian Inlet Bridge Noise Receptors Map

Sebastian Inlet Bridge Potential Contamination Site Map



- Field Receptors
- Noise Model Receptors
- Project Improvements
- Right of Way and Easement



### Noise Analysis Map

PROJECT DEVELOPMENT AND ENVIRONMENT (PD&E) STUDY  
 SR-A1A OVER SEBASTIAN INLET - BRIDGE 880005 - BRIDGE REPLACEMENT  
 INDIAN RIVER COUNTY AND BREVARD COUNTY, FLORIDA





Pond 2B

Atlantic Ocean

SEBASTIAN INLET STATE PARK

Sebastian Inlet

Brevard County  
Indian River County





Site 1

Pond 1A

SEBASTIAN INLET STATE PARK



**Legend**

-  Proposed Project Limits
-  Maintenance Yard
-  Project Buffer (500 feet)
-  Contamination Sites (Low Risk)

Type 2 Categorical Exclusion

## **Public Involvement Appendix**

### Contents:

Public Hearing Certification

Public Hearing Certification

Virtual Public Hearing Transcript

In-Person Public Hearing Transcript

# PUBLIC HEARING CERTIFICATION

## SR-A1A OVER SEBASTIAN INLET- BRIDGE REPLACEMENT

### Project Development and Environment (PD&E) Study

### from From South of Sebastian Inlet Bridge to North of Sebastian Inlet Bridge

### Indian River County, Florida

### Financial Management No.: 445618-1-21-01

I certify that a public hearing was conducted on 12/15/2022, beginning at 05:30 PM for the above project. A transcript was made and the document attached is a full, true, and complete transcript of what was said at the hearing.

Binod Basnet

(Name)

May 15, 2023

Date

Project Manager

(Title of FDOT Representative)



Electronically signed within SWEPT  
on May 15, 2023 1:21:45 PM EDT  
(electronic signature on file)

### Link to Public Hearing Transcript

1 - [44561812101-CE2-D4-121522\\_DOT\\_PUBLIC\\_HEARING\\_FINAL-2023-0106.pdf](#)

# PUBLIC HEARING CERTIFICATION

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**DEPARTMENT OF TRANSPORTATION**

**VIRTUAL PUBLIC HEARING**

**IN RE:**

**SR A1A OVER SEBASTIAN INLET  
BRIDGE REPLACEMENT PD&E STUDY**

**DECEMBER 13, 2022**

**6:00 P.M. - 7:01 P.M.**

**REPORTED BY:**

**JANE HENEGHAN, COURT REPORTER**

Magnolia Court Reporting  
407.896.1813

1 \* \* \* \* \*

2 P R O C E E D I N G S

3 **December 13, 2022**

6:00 p.m.

4 MS. PAREDES: Okay. We will be starting.

5 I want to thank everybody for their comments and  
6 questions. And we will be starting the formal  
7 presentation. Thank you.

8 MR. BASNET: Good evening. The time is

9 6:00 p.m.

10 The Florida Department of Transportation,  
11 District Four welcomes you to the virtual public  
12 hearing for the Project Development and  
13 Environment study, or PD&E study, for State Road  
14 A1A over Sebastian Inlet-Bridge Replacement  
15 Project.

16 My name is Binod Basnet and I'm the Project  
17 Manager with the Florida Department of  
18 Transportation, District Four.

19 Financial Management Number or FM number  
20 for the project is 445618-1-22-02 and Efficient  
21 Transportation Decisionmaking or ETDM number is  
22 14433.

23 We appreciate your attendance and  
24 participation. The purpose of this public  
25 hearing is to share information with the public

Magnolia Court Reporting  
407.896.1813

1 about the proposed improvements and potential  
2 beneficial and adverse social, economic and  
3 environmental impacts. The public hearing also  
4 serves as an official forum providing an  
5 opportunity for the public to express their  
6 opinions and concerns regarding the project.

7 Here with me tonight are representatives  
8 from FDOT and the consultant project team.

9 If there are any federal, state, county or  
10 city officials who would like to be recognized,  
11 please submit your name, title and affiliation  
12 in the question box and you will be recognized  
13 later in the presentation.

14 In the next few slides, the consultant  
15 public information officer, Veronica Paredes,  
16 will share a few items regarding the logistics  
17 of the webinar and some housekeeping items.  
18 After that, the formal presentation will begin.

19 Veronica.

20 MS. PAREDES: Thank you, Binod.

21 Good evening. My name is Veronica Paredes  
22 and I am the consultant Public Information  
23 Officer for this project.

24 There are three primary components to  
25 tonight's hearing. First, the open house, which

1 occurred prior to this presentation where you  
2 were invited to view the project displays and to  
3 chat directly with the project team.

4 Second, this presentation, which will  
5 explain the project purpose and need, study  
6 alternatives, potential impacts, both beneficial  
7 and adverse, and proposed methods to mitigate  
8 adverse project impacts.

9 And, third, a formal comment period  
10 following this presentation, where you will have  
11 the opportunity to provide oral statements  
12 virtually or you may continue to provide your  
13 comments in writing.

14 Public notice for this public hearing,  
15 including information on how to access the  
16 meeting platform, was provided in letters to  
17 property owners and tenants in the project area,  
18 a posting in the Florida Administrative  
19 Register, in emails to persons on the project  
20 contact list, and other notification methods.  
21 Notice was also posted on the project website.

22 This public hearing was also advertised  
23 consistent with the federal and state  
24 requirements shown on this slide.

25 The proposed project is being developed in



1 accordance with the Civil Rights Act of 1964.  
2 Under Title VI of the Civil Rights Act, public  
3 participation is solicited without regard to  
4 race, color, national origin, age, sex,  
5 religion, disability or family status. Persons  
6 wishing to express concerns relative to the  
7 Department's compliance with Title VI may do so  
8 by contacting Sharon SinghHaygyan, the Title VI  
9 Coordinator for the Florida Department of  
10 Transportation, District Four or Stefan  
11 Kulakowski, the State Title VI Coordinator for  
12 the Florida Department of Transportation Equal  
13 Opportunity Office.

14 At this time, we would like to recognize  
15 federal, state, county or city officials who are  
16 present tonight. If there are any official not  
17 identified who would like to be recognized,  
18 please submit your name and affiliation in the  
19 question box and you'll be recognized later in  
20 the presentation.

21 Now, I would like to ask Priscilla to  
22 recognize the officials that are present  
23 tonight.

24 MS. CLAWGES: Thank you, Veronica. At this  
25 time, we do not have any elected officials.

1 MS. PAREDES: Thank you, Priscilla.

2 Any elected officials who might have just  
3 logged into the webinar and would like to be  
4 recognized, please submit your name, title and  
5 affiliation in the question box and you will be  
6 recognized later in the presentation.

7 Before we begin tonight's presentation, we  
8 would like to share a few items regarding the  
9 logistics for the webinar and the comment  
10 period.

11 If you are following along, we are on Slide  
12 7.

13 You can participate in the public hearing  
14 using any one of the three options shown here.  
15 No matter which option you choose, the  
16 information presented will be the same.

17 If you choose to attend tonight's public  
18 hearing virtually, you will be able to view the  
19 presentation using your computer, tablet or  
20 smartphone. You will not be on camera. You  
21 will remain muted throughout the hearing, except  
22 for the formal public comment period at the end  
23 of the presentation where you will have the  
24 opportunity to provide oral statements or  
25 provide written comments.

1 Dial-in attendees not using a smartphone  
2 are in listen only mode. During the video  
3 portion of tonight's public hearing, you will  
4 not be able to hear the video. You can provide  
5 written comments by mail, email or the project  
6 website.

7 The in-person public hearing will be held  
8 this Thursday, December 15, 2022 from 5:30 p.m.  
9 to 7:30 p.m., at the City of Sebastian Community  
10 Center located at 1805 North Central Avenue,  
11 Sebastian, Florida, 32958.

12 At the meeting, you will be able to view  
13 printed exhibit boards during the open house  
14 followed by a formal presentation and have the  
15 opportunity to provide oral statements at the  
16 microphone or provide comments directly to the  
17 court reporter or in writing.

18 For online participants, the GoToWebinar  
19 Panel should be visible in the upper right  
20 corner of your computer screen. To listen to  
21 the meeting, your computer or device speakers  
22 are selected by default. If you prefer to  
23 listen by phone, select the Phone Call in the  
24 audio pane of the control panel and dial in  
25 using the information displayed. The blue arrow

1 points to the Phone Call option.

2 During tonight's public comment period,  
3 online participants may submit a comment in the  
4 question box. Once you have typed in your  
5 comment, click the Send button to submit. The  
6 orange arrow points to the question box and the  
7 Send button. You will also have the opportunity  
8 to provide oral statements. The green arrow  
9 points to the Raise Hand button, which lets us  
10 know you would like to speak.

11 Slide Nine. For those who dialed into the  
12 meeting by phone and are viewing a paper or  
13 downloaded copy of the presentation, the  
14 presenter will announce the page number of the  
15 slide being shown. The presentation is  
16 available for download on the project website.

17 If you happen to experience any technical  
18 issues during this meeting, please type the  
19 issue in the question box or send an e-mail to  
20 caroline.sanchez@stantec.com or call  
21 786-437-6762 to report it. Staff will do their  
22 best to assist you.

23 Your input matters in our decisionmaking  
24 process. We will now explain additional ways to  
25 provide comments and where you can find the

1 project documents and tonight's meeting  
2 materials for your review.

3 There are multiple ways to submit comments.  
4 As previously noted, online attendees are  
5 welcome to provide oral statements during the  
6 comment period or submit comments and questions  
7 using the chat feature during this time.

8 Everyone, including those who dialed in,  
9 can submit questions after the meeting online at  
10 the project website at  
11 [www.fdot.gov/projects/sebastianinletbridge](http://www.fdot.gov/projects/sebastianinletbridge); by  
12 US mail to the Project Manager Binod Basnet at  
13 the Florida Department of Transportation,  
14 District Four, 3400 West Commercial Boulevard,  
15 Fort Lauderdale, Florida, 33309 using the  
16 comment form provided in the Handouts pane of  
17 the control panel; by email to the project  
18 manager at [binod.basnet@dot.state.fl.us](mailto:binod.basnet@dot.state.fl.us); and,  
19 lastly, you can call the project manager at  
20 954-777-4146 or toll free at 866-336-8435,  
21 Extension 4146 to provide verbal comments during  
22 normal business hours after the public hearing.

23 The contact information shown here is also  
24 available on the public hearing notification  
25 that you may have received by email or mail and

1 on the project website. The public comment  
2 period will remain open through December 27,  
3 2022 to accommodate the public who attend the  
4 in-person meeting. All comments are part of the  
5 public record.

6 Project documents are available for your  
7 review at the Sebastian City Hall located at  
8 1225 Main Street, Sebastian, Florida, 32958,  
9 Monday through Friday, 8:00 a.m. to 4:30 p.m.  
10 the documents will remain on display at the  
11 Sebastian City Hall through December 27th, 2022.

12 Project documents and meeting materials are  
13 also available on the project website under the  
14 Documents and Publications link or by scanning  
15 the QR code shown on the screen. Project  
16 documents are also available for public viewing  
17 during the in-person public hearing this  
18 Thursday, December 15th at the City of Sebastian  
19 Community Center, located at 1805 North Central  
20 Avenue, Sebastian, Florida, 32958.

21 Slide 14. Following tonight's meeting, a  
22 recording of the public hearing will be made  
23 available on the project website.

24 Slide 15. Before we begin tonight's formal  
25 presentation, we would like to take a minute to

1 share information on the National Drunk & Drug  
2 Impaired Driving Prevention Month Safety  
3 Campaign.

4 No matter age or gender, people deciding it  
5 is okay to drive impaired continues to be an  
6 avoidable epidemic for all Florida counties.  
7 Nationally, 17.2 million drivers have driven one  
8 or more times in the preceding 12 months when  
9 they thought they were over the legal limit.  
10 That's double the combined game attendance of  
11 all 10 major league teams and the motor  
12 speedways in Florida.

13 Drinking influences your perception,  
14 thinking and coordination. The consequences of  
15 drinking and riding are serious and real. If  
16 convicted, you can be fined up to \$10,000; spend  
17 a minimum of 72 hours in jail following your  
18 arrest or up to 10 years in jail if convicted of  
19 a DUI; and, your license will be suspended for  
20 up to two years.

21 So remember, Drive Sober or Get Pulled  
22 Over.

23 At this time, I would like to ask Priscila  
24 to recognize any additional elected officials  
25 present tonight.

1 MS. CLAWGES: Hi, Veronica. At this  
2 moment, we do not have any additional  
3 representatives on the line.

4 MS. PAREDES: Thank you, Priscila.

5 At this time, we will begin tonight's  
6 presentation.

7 VOICEOVER: This slide presents an outline  
8 of the information and topics that will be  
9 presented this evening, including where the  
10 project is located, why the project is needed  
11 and the PD&E Study process and objectives.  
12 Information about the engineering and  
13 environmental analyses that have been completed,  
14 the project schedule, the public involvement  
15 process and ways you can be involved in the  
16 project will be presented.

17 Slide 18. The environmental review,  
18 consultation and other actions required by  
19 applicable federal environmental laws for this  
20 project are being, or have been, carried out by  
21 the Florida Department of Transportation, or  
22 FDOT, pursuant to 23 US Code Section 327 and a  
23 Memorandum of Understanding, dated May 26th,  
24 2022, and executed by the Federal Highway  
25 Administration and FDOT. The FDOT Office of



1 Environmental Management in Tallahassee is the  
2 approving authority.

3 Slide 19. The Sebastian Inlet Bridge, also  
4 known as the James H. Pruitt Memorial Bridge, is  
5 located along State Road A1A at the Indian River  
6 and Brevard County boundary. The bridge crosses  
7 the Sebastian Inlet and is surrounded by the  
8 Sebastian Inlet State Park. The Atlantic Ocean  
9 is to the east or right and the Indian River  
10 Lagoon is to the west or left.

11 Within the project limits, State Road A1A  
12 is a two-lane roadway with a shared use path  
13 located at the west side, north of the bridge,  
14 designated by the green line on the location  
15 map. A sidewalk is south of the bridge,  
16 designated by the green dashed line. The bridge  
17 and its approaches is two lanes with minimal  
18 shoulders and no bicycle or pedestrian  
19 facilities. The gap in bicycle and pedestrian  
20 facilities is designated by the blue line shown  
21 on the location map.

22 Slide 20. As shown in this slide, a  
23 feasibility study has been completed and we are  
24 at the PD&E Study phase. A PD&E Study is FDOT's  
25 process to evaluate the social, economic and

1 environmental impacts associated with a planned  
2 transportation improvement project.

3 The PD&E Study process is followed by FDOT  
4 to evaluate engineering alternatives,  
5 environmental impacts and social, cultural,  
6 natural and physical resource impacts and to  
7 comply with the National environmental Policy  
8 Act, or NEPA, federal and state environmental  
9 laws, and meet requirements when federal funding  
10 is involved.

11 For this project, the overlap between the  
12 PD&E Study and the design phase began in June  
13 2022. At the end of the PD&E Study, the project  
14 will continue in the design phase, followed by  
15 right-of-way acquisition and construction, which  
16 is anticipated to take place from early 2026  
17 through fall 2028.

18 Slide 21. The PD&E Study began with data  
19 collection and review of existing conditions  
20 within the project limits. Transportation  
21 issues and concerns were studied and solutions  
22 developed. During the PD&E Study, social,  
23 environmental and engineering analyses are  
24 performed and documented regarding the proposed  
25 transportation improvement.

1           Engineering analysis includes the  
2           development of alternatives that meet the  
3           purpose and need of the project. The  
4           environmental analyses will determine what  
5           potential impacts the project might have on the  
6           social, natural and physical environments.  
7           These analyses supported decisions regarding the  
8           identification of a preferred alternative.

9           Public involvement is ongoing throughout  
10          the PD&E Study. Your input also supports the  
11          project recommendations. There is no need to  
12          wait until any public meeting to provide your  
13          input. Public comments and questions are  
14          welcomed at any time throughout the study.

15          Slide 22. The Sebastian Inlet Bridge was  
16          constructed in 1964 and retrofitted or repaired  
17          in 1978 and 2003. The bridge has a vertical  
18          clearance of 39 feet and a horizontal clearance  
19          of 150 feet. The bridge roadway deck is 34  
20          feet, three inches wide. Observation piers are  
21          located under the north and south sides of the  
22          bridge. Within the project limits, State Road  
23          A1A is a two-lane facility with two-foot wide  
24          shoulders on the bridge and two- to four-foot  
25          wide shoulders along the roadway.

1 State Road A1A is also part of the Indian  
2 River Lagoon National Scenic Byway. Because of  
3 the type of bridge originally constructed, this  
4 bridge is a National Register of Historic Places  
5 eligible resource under Criterion C for  
6 engineering.

7 Slide 23. The November 2018 FDOT bridge  
8 inspection report indicated a structural  
9 deficiency rating for the bridge along with a  
10 bridge health index of 79.8. The Federal  
11 Highway Administration's National Bridge  
12 Inventory rating for a structurally deficient  
13 condition is given to any bridge when any  
14 component is in poor condition or rated a four  
15 or less.

16 The bridge health index is a tool that  
17 measures the overall condition of a bridge and  
18 typically includes 10 to 12 different elements  
19 that are evaluated. A lower health index means  
20 that more work would be required to improve the  
21 bridge to an ideal condition. A health index  
22 below 85 generally indicates that some repairs  
23 are needed. Both the structurally deficient  
24 rating and low health index do not mean the  
25 bridge is unsafe.

1           Slide 24. The National Bridge Inventory  
2 rating represents the primary structural  
3 components of bridges necessary to determine the  
4 overall safety of the structure. The elements  
5 that are rated are the bridge deck,  
6 superstructure, substructure and culvert  
7 condition. A rating greater than or equal to 7  
8 classifies the bridge as in good condition; 5 or  
9 6 is fair; and less than or equal to four is  
10 poor.

11           The term functionally deficient means that  
12 the bridge does not meet current roadway design  
13 standards for features such as lane width,  
14 shoulder width or bicycle and/or pedestrian  
15 facilities. Although the bridge does have 12  
16 foot travel lanes, it has deficient shoulder  
17 widths at two-feet wide and deficient bicycle  
18 and pedestrian facilities with none present  
19 across the bridge.

20           Slide 25. The purpose of this project is  
21 to address the bridge structural and functional  
22 deficiencies, address the gap in system linkage  
23 for bicyclists and pedestrians and evaluate  
24 alternatives. The need for the project is based  
25 on the November 2018 FDOT bridge inspection

1 report that indicated a structural deficiency  
2 rating for the bridge and a bridge health index  
3 of 79.8. The bridge is also functionally  
4 deficient or outdated in that it has minimal  
5 shoulders and no bicycle and pedestrian  
6 facilities.

7 FDOT's work program requires that  
8 structurally deficient bridges, once identified,  
9 have corrective actions, either repair or  
10 replacement, initiated within six years.

11 This project also supports the Indian River  
12 County Bicycle and Pedestrian Plan for State  
13 Road A1A at this location. Bicycle and  
14 pedestrian counts collected over a four-day  
15 period in December 2019 show 231 bicyclists and  
16 five pedestrian crossed the bridge, despite not  
17 having appropriate bicycle and pedestrian  
18 facilities.

19 Slide 26. Due to the location of the  
20 Sebastian Inlet Bridge, coordination with  
21 federal, state and local agencies, along with  
22 public stakeholders, was critical to the  
23 development of project alternatives and  
24 selection of the preferred alternative. The US  
25 Coast Guard and the US Army Corps of Engineers

1 are a participating or cooperating agency.

2 Slide 27. Coordination with the US Coast  
3 Guard has been ongoing throughout the  
4 transportation project delivery process. A  
5 navigation study was completed as part of FDOT's  
6 feasibility study, which visually assessed boat  
7 traffic within the project area over a period of  
8 time.

9 In April 2021, an online navigation survey  
10 was conducted in accordance with the US Coast  
11 Guard's Navigation Impact Study Scope. This  
12 survey was user-driven, providing data on vessel  
13 types and sizes and inlet channel use.

14 A Navigation Needs Memorandum was submitted  
15 to the US Coast Guard in May 2021 followed by a  
16 preliminary clearance determination in July  
17 2021. A Vertical Clearance Evaluation  
18 Memorandum was prepared and submitted to the US  
19 Coast Guard in August 2021.

20 This evaluation considered technical  
21 criteria, such as physical characteristics of  
22 the inlet and inlet topography or bathymetry,  
23 character of surrounding resources, inlet and  
24 adjacent waters maintenance, Intercoastal  
25 Waterway connectivity and impacts to the north

1 and south Sebastian Inlet State Park entrances.

2 The US Coast Guard provided a revised  
3 preliminary clearance determination of 51 feet  
4 in November 2021.

5 Slide 28. This rendering shows a  
6 comparison of the existing bridge with a 39 foot  
7 vertical clearance as compared to the proposed  
8 bridge with a vertical clearance of 51 feet.

9 The proposed bridge maintains the existing  
10 horizontal clearance of 150 feet. This view is  
11 looking northeast from the southwest side of the  
12 inlet, within the Sebastian Inlet State Park.

13 Slide 29. Each build alternative was  
14 developed as it relates to roadway and bridge  
15 design criteria. These design requirements  
16 included such items as bridge horizontal and  
17 vertical clearances, bridge and roadway  
18 alignment, bridge and roadway bicycle and  
19 pedestrian facilities, maintenance of traffic  
20 during construction, safety, stormwater  
21 management, coastal influences, geotechnical  
22 characteristics and utilities, as examples.

23 Results of the analyses are documented in  
24 individual technical memorandums or reports and  
25 summarized in the Type 2 Categorical Exclusion



1 NEPA document and the Preliminary Engineering  
2 Report for this project. The project  
3 documentation has been available for review on  
4 the project website and at the City of Sebastian  
5 City Hall since November 22nd, 2022.

6 Slide 30. Each build alternative was  
7 evaluated as it relates to the natural,  
8 physical, cultural and social environments with  
9 the goal being to avoid or minimize impacts to  
10 these resources. Such criteria include  
11 mobility, economy, community and recreational  
12 resources, historic and archaeological sites,  
13 wetlands, water quality and resources, wildlife  
14 and habitat, traffic noise, air quality and  
15 contamination.

16 Results of the environmental analyses are  
17 documented in individual technical memorandums  
18 or reports and summarized in the Type 2  
19 Categorical Exclusion NEPA document and the  
20 Preliminary Engineering Report for this project.  
21 The project documentation has been available for  
22 review on the project website and at the City of  
23 Sebastian City Hall since November 22nd, 2022.

24 Slide 31. The alternatives development is  
25 based on an understanding of project goals,

1 objectives and constraints. This information  
2 helped identify the criteria used to evaluate  
3 alternatives. The alternatives developed meet  
4 roadway and bridge design criteria with the goal  
5 of minimizing impacts to the community and the  
6 natural and physical environments.

7 The alternatives were developed with input  
8 obtained throughout the study process from the  
9 general public and federal, state and local  
10 government agencies.

11 The No Action, (or No Build) Alternative is  
12 one where no improvements are made. This  
13 alternative remained throughout the study and  
14 served as the baseline of comparison of other  
15 build alternatives.

16 The Rehabilitation or Repair alternative  
17 was also considered. The build alternatives  
18 include evaluating alignments along the existing  
19 bridge, to the east of the bridge and to the  
20 west of the bridge.

21 Following the Alternative Public Workshop  
22 and a Value Engineering Study conducted by FDOT  
23 District Four, alternatives were refined and a  
24 preferred alternative identified.

25 Slide 32. Following the Public Kickoff

1 Meeting and the Alternative Public Workshop, the  
2 public expressed an overall common concern  
3 regarding the bridge remaining open to traffic  
4 during construction. Understanding the public  
5 concern, and because the bridge is a critically  
6 needed regional coastal route with limited and  
7 lengthy available detours, the project team  
8 developed all build alternatives that maintain  
9 traffic across the bridge during construction.

10 As shown here, the existing bridge will  
11 remain open to traffic during construction of  
12 the east half of the new bridge. Once  
13 completed, traffic will be shifted to the newly  
14 constructed east half of the bridge. The  
15 existing bridge will be removed and the west  
16 half of the new bridge will be constructed. The  
17 new bridge will then be completed.

18 In addition, maintenance of navigation  
19 through the Sebastian Inlet and local notices to  
20 mariners will be coordinated with the US Coast  
21 Guard during construction.

22 Slide 33. Because the bridge is determined  
23 an eligible historic resource under Section 106  
24 of the National Historic Preservation Act, a  
25 rehabilitation alternative was considered. The

1 bridge is eligible under Criterion C,  
2 engineering, indicating the bridge embodies the  
3 distinctive characteristics of type, period or  
4 method of construction.

5 A determination of whether rehabilitation  
6 can be completed to an acceptable level in a  
7 feasible and prudent manner is a function of its  
8 ability to perform adequately in both structural  
9 and functional areas.

10 Whether the bridge is rehabilitated to its  
11 existing condition or not, both options do not  
12 meet the purpose and need for the project. The  
13 bridge remains structurally and functionally  
14 deficient and the historic integrity of the  
15 bridge is affected.

16 If the bridge is rehabilitated to meet the  
17 purpose and need for the project, at minimum, it  
18 must meet current FDOT design standards, be  
19 widened by adding shoulders and  
20 bicycle/pedestrian facilities, provide a 75-year  
21 service life, maintain existing vertical and  
22 horizontal clearances, maintain traffic during  
23 construction and minimize impacts to the  
24 natural, cultural and physical environments.

25 Slide 34. Section 106 of the National

1 Historic Preservation Act of 1966 requires  
2 federal agencies to consider the effects of  
3 projects they carry out, approve or fund on  
4 historic properties. Historic resource impacts  
5 were evaluated for the No Build, Rehabilitation  
6 and Build alternatives.

7 The No Build alternative results in no  
8 adverse effect. And the Rehabilitation  
9 alternative results in an adverse effect. Per  
10 Section 106, these alternatives were determined  
11 to fail the Section 4(f), feasible and prudent  
12 standard, and were dismissed from further  
13 consideration.

14 For each of the Build alternatives, the  
15 conditions that caused the bridge to be  
16 determined structurally and functionally  
17 deficient would be corrected. Each Build  
18 alternative results in an adverse effect to the  
19 historic bridge.

20 Because of the adverse effect, the project  
21 team applied the Section 106 criteria and  
22 completed a Section 106 effects determination;  
23 consulted with affected parties, which is  
24 ongoing; and, completed Section 4(f)  
25 documentation. The State Historic Preservation

1 Office concurred with the adverse effects  
2 findings on March 30th, 2022.

3 The team has continued consultation with  
4 the State Historic Preservation Office to  
5 resolve the adverse effects through a Memorandum  
6 of Agreement. Once this is completed, Section  
7 106 consultation will be complete.

8 Slide 35. Potential measures to minimize  
9 harm as a result of the adverse effects to the  
10 historic bridge will be documented in a future  
11 Memorandum of Agreement between the FDOT and the  
12 State Historic Preservation Office.

13 These measures include, documentation  
14 through the US Department of Interior Historic  
15 American Engineering Record documentation  
16 process for the historic bridge; public  
17 education, which will include historic markers  
18 and interpretive panels about the historic  
19 bridge; and, archaeological monitoring during  
20 construction activities.

21 How can you provide input? The Preferred  
22 Alternative exhibit is available in the Handouts  
23 pane of the Control Panel. Additional exhibits  
24 can be found on the project website.

25 Please review the exhibits and fill out a

1 comment form or make a statement to give us your  
2 views on the improvements and their potential  
3 effects on the historic bridge. You may also  
4 comment on the project website, by mail or email  
5 to the FDOT project manager.

6 Slide 36. Because the preferred  
7 alternative impacts the Sebastian Inlet State  
8 Park, a Section 4(f) resource, the team  
9 completed a Section 4(f) evaluation in  
10 accordance with the US Department of  
11 Transportation Act of 1966, which established  
12 the requirement for consideration of park and  
13 recreational lands, wildlife and waterfowl  
14 refuges, and historic sites in transportation  
15 project development. Section 4(f) coordination  
16 steps are shown on this slide.

17 The FDOT Office of Environmental  
18 Management, through NEPA assignment, has been  
19 delegated ultimate responsibility for making all  
20 decisions related to Section 4(f) compliance.

21 Before approving this project, which uses  
22 Section 4(f) property, the Office of  
23 Environmental Management must either, (1)  
24 determine that the impacts are de minimis, or  
25 (2) undertake a Section 4(f) evaluation. For

1 this project, the FDOT District Four is seeking  
2 a de minimum finding from the Office of  
3 Environmental Management for the proposed  
4 improvements that require Section 4(f)  
5 resources.

6 A de minimis impact is one that will not  
7 adversely affect the activities, features, or  
8 attributes of the property. A de minimis impact  
9 determination does require consideration of  
10 measures that avoid, minimize, mitigate or  
11 enhance.

12 How can you provide input? The Preferred  
13 Alternative exhibit is available in the Handouts  
14 pane of the Control Panel. Additional exhibits  
15 can be found on the project website.

16 Please review the exhibits and fill out a  
17 comment form or make a statement to give us your  
18 views on the improvements and their potential  
19 effect on the Section 4(f) resource. You may  
20 also comment on the project website, by mail or  
21 e-mail to the FDOT project manager.

22 Slide 37. The proposed bridge typical  
23 section for Alternatives 1, 2 and 3, is shown  
24 here and includes two 12-foot travel lanes, two  
25 eight-foot shoulders, and two 12-foot shared use



1 paths.

2 For comparison, the existing bridge typical  
3 section, showing two 12-foot travel lanes and  
4 two-foot shoulders is shown below the proposed  
5 typical section.

6 Slide 38. For all Build alternatives,  
7 improvements to the north and south of the  
8 bridge are the same. Alternative 1 includes a  
9 new bridge on the existing alignment. This  
10 alternative requires the installation of a  
11 temporary bridge in order to maintain traffic  
12 and avoid bridge closing or lengthy detours.

13 A closer view of the bridge shows the  
14 location of the new bridge and the temporary  
15 bridge. All bridge improvements are located  
16 within existing FDOT right-of-way.

17 Slide 39. Alternative 2 includes a new  
18 bridge on alignment that is shifted to the east.  
19 A closer view of the bridge shows its location  
20 compared to the location of the existing bridge,  
21 shaded blue.

22 All bridge improvements are located within  
23 the existing FDOT right-of-way.

24 Slide 40. Alternative 3 includes a new  
25 bridge in alignment that is shifted to the west.

1 A closer view of the bridge shows its location  
2 compared to the location of the existing bridge,  
3 shaded blue. All bridge improvements are  
4 located within the existing FDOT right-of-way.

5 Slide 41. Anticipated effects from the No  
6 Build, Rehabilitation and Build alternatives are  
7 presented in the Evaluation Matrix. The  
8 alternatives developed are compared based on  
9 bridge and roadway design criteria; natural,  
10 social, cultural and physical resource impacts;  
11 costs for design and construction and  
12 right-of-way acquisition. The costs for  
13 environmental mitigation will be determined  
14 during final design.

15 The results of the engineering and  
16 environmental analyses are documented in  
17 individual technical memorandums or reports  
18 completed for the project and are summarized in  
19 the Type 2 Categorical Exclusion NEPA document  
20 and the Preliminary Engineering Report. The  
21 project documentation has been available for  
22 review on the project website and at the City of  
23 Sebastian City Hall since November 22nd, 2022.

24 The Evaluation matrix demonstrates  
25 Alternative 2, the east alignment, as the

1 preferred alternative. The preferred  
2 alternative satisfies the purpose and need for  
3 the project; includes improvements that  
4 accommodate vehicular, bicycle and pedestrian  
5 traffic; was developed within FDOT and FHWA  
6 policies and standards; has the lowest wetland  
7 impacts, with 0.11 acres; has the lowest surface  
8 water impacts at 0.81 acres. Note that  
9 Alternative 3 has the same impacts for this  
10 resource.

11 Has the lowest Section 4(f) recreational  
12 impacts with 3.58 acres; requires the least  
13 amount of wetland and Section 4(f) mitigation;  
14 has the lowest archaeological resource impacts  
15 with zero; has the lowest impacts to species and  
16 habitat with 0.81 acres. Note that Alternative  
17 3 has the same impacts for this resource.

18 Requires the least amount of right-of-way  
19 with 3.46 acres, and has the lowest cost,  
20 similar to Alternative 3.

21 Slide 42. Following the Alternatives  
22 Public Workshop and the District Four Value  
23 Engineering Study, refinements were made to the  
24 preferred alternative.

25 Refinements to Alternative 2, which was

1 presented during the Alternatives Public  
2 Workshop, includes shifting the alignment  
3 farther east as the bridge crosses the Sebastian  
4 Inlet. This slight shift farther east improves  
5 bridge constructability by avoiding any  
6 potential conflicts with the existing bridge.  
7 This slight shift does not result in any  
8 additional environmental impacts. All bridge  
9 improvements are located within existing FDOT  
10 right-of-way.

11 Slide 43. South of the bridge, proposed  
12 alternative improvements include,  
13 reconfiguration of the south Sebastian Inlet  
14 Park entrance, including the addition of a right  
15 turn lane out; an added acceleration lane  
16 southbound from the park entrance; lengthened  
17 right turn lane southbound into the park;  
18 continuation of the shared use path on the west  
19 side of the bridge and roadway; addition of a  
20 shared use path on the east side of the bridge  
21 and roadway; addition of a crosswalk near the  
22 park entrance; recommended pond location.

23 Within this area of the preferred  
24 alternative, minor right-of-way acquisition is  
25 required to meet current design standards for

1 clear zone and maintenance and stormwater  
2 management.

3 Slide 44. North of the bridge, proposed  
4 preferred alternative improvements include,  
5 reconfiguration of the north park entrance,  
6 including the addition of a right turn lane out;  
7 lengthened right turn lane southbound into the  
8 park; continuation of the shared use path on the  
9 west side of the bridge and roadway; addition of  
10 a shared use path on the east side of the bridge  
11 and roadway; addition of a crosswalk near the  
12 park entrance; relocated Sebastian Inlet  
13 District access road; recommended pond location.

14 Within this area of the preferred  
15 alternative, minor right-of-way acquisition is  
16 required to meet current design standards for  
17 clear zone and maintenance and stormwater  
18 management.

19 Slide 45. This slide is a simplified  
20 rendering of the proposed bridge construction  
21 phasing. To maintain traffic across the  
22 Sebastian Inlet, the existing bridge will remain  
23 in place during Phase 1. Construction will  
24 include the east half of the new bridge  
25 including the shared use path, shoulder and

1 travel lane.

2 Once the east side of the new bridge is  
3 constructed, traffic will be diverted to the  
4 east side of the new bridge and the existing  
5 bridge will be demolished. Construction of the  
6 west half of the new bridge will begin, as shown  
7 in Phase 2. Phase 3 includes construction of  
8 the west side of the new bridge, completing the  
9 new bridge.

10 Slide 46. This rendering shows a view of  
11 the proposed bridge looking northwest from the  
12 south side of the inlet.

13 Slide 47. This rendering shows a view of  
14 the proposed bridge looking north/northwest from  
15 the south park entrance.

16 Slide 48. This rendering shows a view of  
17 the proposed bridge looking south/southwest from  
18 the north park entrance.

19 Slide 49. Following tonight's public  
20 hearing, the next step is to incorporate your  
21 input from this public hearing into our  
22 decisionmaking process. After the comment  
23 period closes and your input has been  
24 considered, a decision will be made and the  
25 final PD&E documents will be sent to the FDOT

1 Office of Environmental Management, which, based  
2 on the Memorandum of Understanding signed with  
3 the Federal Highway Administration on May 26th,  
4 2022, has approval authority on this project,  
5 granting location and design concept acceptance,  
6 concluding the PD&E study.

7 After location and design concept  
8 acceptance, the project will continue in the  
9 final design phase. This project has and will  
10 continue to comply with all applicable state and  
11 federal rules and regulations.

12 MS. PAREDES: This concludes our  
13 presentation. We will now offer you the  
14 opportunity to make a statement. There have  
15 been various opportunities for the public to  
16 provide input on this project. Several public  
17 meetings have been held, dating from the Public  
18 Kickoff meeting held in May of 2021 until  
19 tonight. We welcome your oral or written  
20 comments that will help us make this important  
21 decision.

22 A court reporter is present and a verbatim  
23 transcript will be made of all oral proceedings  
24 at this hearing. If you do not wish to speak,  
25 you may provide your comments in writing. Every

1 comment method carries equal weight. Written  
2 comments received or postmarked by December  
3 27th, 2022 will become a part of the public  
4 record for this hearing.

5 Please note, we will not respond to your  
6 comments or questions today, but we will respond  
7 in writing at a later date.

8 Online participants who requested to make a  
9 verbal statement at registration will be called  
10 upon to provide their statement first. If you  
11 did not request to speak earlier and wish to  
12 speak, use the Raise Hand button located on the  
13 upper left corner of the Control Panel to let us  
14 know. When the Microphone button is green, you  
15 are unmuted and ready to speak.

16 Dial-in attendees using a smartphone can  
17 raise their hand in the app to provide a verbal  
18 statement.

19 Dial-in attendees not using a smartphone  
20 are in listen only mode. You may submit your  
21 comments after the meeting online through the  
22 project website or by email or US mail to the  
23 project manager.

24 Online participants may also submit written  
25 comments or questions through the Question Box



1 on the GoToWebinar Control Panel. We ask that  
2 you please include your name and address along  
3 with your comment or question to be included as  
4 part of the record.

5 We will now call upon online participants  
6 who have requested to speak, starting with  
7 registered speakers first. When the Microphone  
8 button is green, you are unmuted and ready to  
9 speak. Please state your name and address,  
10 along with your statement, to be included as  
11 part of the record.

12 If you represent an organization,  
13 municipality or other public body, please  
14 provide that information as well.

15 Finally, we ask that you limit your  
16 comments to three minutes. If you have  
17 additional comments, you may continue after  
18 other people have had the opportunity to  
19 comment.

20 As a reminder, dial-in attendees not using  
21 a smartphone may submit questions after the  
22 meeting online through the project website, by  
23 email to the project manager or by US mail to  
24 the project manager.

25 At this time, I will call upon those who

1 requested to speak through the registration.

2 The first person I will call is Glen Austin.

3 Glen, if you would still like to make a  
4 verbal statement for the public hearing record,  
5 please unmute yourself.

6 Okay. Glen, if you don't want to speak, I  
7 will move on to our next registered speaker,  
8 which is Daniel Jay.

9 Daniel, if you would like to make a formal  
10 comment, please unmute yourself.

11 MR. JAY: Thank you. I am Daniel Jay,  
12 board member Bike Walk Indian River County and  
13 it's very uplifting to see that every safety  
14 precaution seems to have been included in the  
15 design of this bridge, the barrier, the 12-foot  
16 shared use path. And the project engineer is to  
17 be commended for taking into account all of the  
18 tools available to him and the team for making  
19 this bridge -- when I saw the 12-foot shared use  
20 path both -- in both directions, I was  
21 absolutely astounded because that goes in such  
22 contrast with what we see here in Vero with most  
23 project that are newer FDOT projects, which are  
24 written to a much higher standard for bicycle  
25 rider and pedestrian safety.

1           So I'd like to thank the team for  
2           incorporating all of these safety measures. And  
3           my hope is that it is contagious and that the  
4           arterial and connectors that are through Indian  
5           River County that are not FDOT roads adopt the  
6           same standards.

7           And finally, I understand that there are --  
8           speed limits become an issue as well. And I  
9           just hope that there's some latitude from FDOT  
10          to Region 4 to allow for certain safety  
11          initiatives to be employed, even though speed  
12          limits may not automatically force them to kick  
13          in.

14          So, again, thank you very much. My name is  
15          Daniel Jay, Bike Walk Indian River County board  
16          member.

17          MS. PAREDES: Thank you, Daniel.

18          The next person I will call is Robert  
19          Baldwin.

20          If you would like to make a verbal  
21          statement, please unmute yourself.

22          MR. BALDWIN: Hi, there. No, actually, my  
23          question was answered just before the  
24          presentation about boat access through the  
25          bridge and I think I heard the person say that

1           there would still be boat access, although the  
2           Coast Guard would kind of work out when that  
3           would happen.

4           Is that all correct? I know this is not  
5           really a question and answer thing.

6           MS. PAREDES: Correct. Yes. Yes.

7           MR. BALDWIN: That was my statement. Thank  
8           you.

9           MS. PAREDES: Thank you for your statement.  
10          I will reply to you at a later date in writing.

11          MR. BALDWIN: Okay.

12          MS. PAREDES: Just as a reminder, if you  
13          are asked to speak to please just state your  
14          full name and your address or location compared  
15          to the project corridor.

16          I will go back to Glen Austin, if you would  
17          like to make another verbal statement, I will  
18          unmute you, if you'd like to unmute yourself.

19          MR. AUSTIN: No, I just had a couple  
20          questions earlier and I got those answered  
21          already. Thank you.

22          MS. PAREDES: Thank you. Okay. We do not  
23          have any additional registered speakers. I will  
24          now call upon participants who have the Raised  
25          Hand button selected. When the Microphone

1 button is green, you are unmuted and ready to  
2 speak, so please state your name and address,  
3 along with your statement, to be included as  
4 part of the record.

5 Again, if you represent an organization,  
6 municipality or other public body, please  
7 provide that information as well.

8 At this time, we do not have any additional  
9 raised hands or additional questions. I'll give  
10 everybody a few minutes if they would like to  
11 speak or provide any written comments.

12 As a reminder, the public comment period  
13 for the public hearing will remain open through  
14 December 27, 2022.

15 For those who provided a verbal statement,  
16 if you do not mind providing your address via  
17 the question box so we could include it as part  
18 of the public hearing record.

19 And we do not have any additional questions  
20 or statements, so we will conclude this portion  
21 of the public hearing.

22 Again, just before we do finalize the  
23 comment portion, if you could please provide  
24 your name if you did speak or provide a verbal  
25 statement, please provide full name and address

1 in our question box. Thank you.

2 Okay. I will officially conclude the  
3 comment portion of the public hearing.

4 MR. BASNET: The verbatim transcript of  
5 this hearing's oral proceedings, together with  
6 all written material received as part of the  
7 hearing record and all studies, displays and  
8 informational material provided at the hearing  
9 will be made a part of the project  
10 decisionmaking process. This will be available  
11 at the District Office for public review upon  
12 request.

13 The recording of tonight's hearing and  
14 other exhibits displayed will be posted on the  
15 project website. Also, anyone who registered  
16 for the public hearing will receive a follow up  
17 email with a link to the hearing recording.

18 If you joined us online, you will be  
19 prompted to take a short exit survey when you  
20 leave the virtual meeting to give us feedback on  
21 how this public hearing was conducted. Thank  
22 you in advance for your feedback.

23 Thank you for attending this public hearing  
24 and for providing your input to this project.  
25 It is now 7:01 p.m. I hereby officially close

1 the virtual public hearing of the Project  
2 Development and Environment study for State Road  
3 A1A over Sebastian Inlet Bridge Replacement  
4 Project. Thank you again and have a good  
5 evening.

6 (The public hearing concluded at 7:01 p.m.)  
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**C E R T I F I C A T E**

STATE OF FLORIDA        )  
COUNTY OF ORANGE        )

I, JANE HENEGHAN, Court Reporter, certify that I was authorized to and did report the aforementioned December 13, 2022 Virtual Public Hearing, SR A1A Over Sebastian Inlet, Bridge Replacement PD&E Study, and that the transcript is a true and complete record of my notes and recordings.

I further certify that I am not a relative, employee, attorney or counsel of any of the parties, nor am I financially interested in the outcome of the foregoing action.

DATED this 31st day of December, 2022.

Jane Heneghan

\_\_\_\_\_  
JANE HENEGHAN, Court Reporter  
Notary Public, State of Florida  
(electronic signature)



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**DEPARTMENT OF TRANSPORTATION**

**PUBLIC HEARING**

**IN RE:**

**SR A1A OVER SEBASTIAN INLET  
BRIDGE REPLACEMENT PD&E STUDY**

**DECEMBER 15, 2022**

**6:01 P.M. - 6:56 P.M.**

**LOCATION:**

**SEBASTIAN COMMUNITY CENTER  
1805 N. CENTRAL AVENUE  
SEBASTIAN, FLORIDA**

**REPORTED BY:**

**CINDY R. GREEN, COURT REPORTER**

Magnolia Court Reporting  
407.896.1813

1 \* \* \* \* \*

2 P R O C E E D I N G S

3 **December 15, 2022**

6:01 p.m.

4 MR. BASNET: Good evening everyone. The  
5 time is 6:01 p.m.

6 The Florida Department of Transportation,  
7 District Four welcomes you to the Public Hearing  
8 for the Project Development and Environmental  
9 Study, or PD&E Study, for State Road A1A over  
10 Sebastian Inlet Bridge Replacement Project.

11 My name is Binod Basnet and I am the  
12 Project Manager with the Florida Department of  
13 Transportation, District Four.

14 This public hearing is for Financial  
15 Management Number, or FM number, 445618-1-22-02  
16 and Efficient Transportation Decisionmaking, or  
17 ETDM Number 14433. We appreciate your  
18 attendance and participation.

19 The purpose of this public hearing is to  
20 share information with the public about the  
21 proposed improvements and potential beneficial  
22 and adverse social, economic and environmental  
23 impacts.

24 The public hearing also serves as an  
25 official forum providing an opportunity for the

Magnolia Court Reporting  
407.896.1813

1 public to express their opinions and concerns  
2 regarding this project.

3 Here with me tonight are representatives  
4 from FDOT and the consultant team.

5 At this time, we would like to recognize  
6 any federal, state, county or city officials who  
7 may be present tonight.

8 If there any elected officials, we would  
9 like to request you to come up to the microphone  
10 and introduce yourself.

11 And I see Commissioner David Barney is here  
12 from Sebastian Inlet District. I would like to  
13 welcome you to the stage over here, and if you  
14 would like to introduce yourself.

15 COMMISSIONER BARNEY: Yes. I'm David  
16 Barney. I'm the newly elected Commissioner from  
17 Sebastian Inlet District, Seat 4.

18 MR. BINOD: Thank you so much, Commissioner  
19 Barney.

20 If there are any other elected officials,  
21 please let us know and we will acknowledge you.

22 (No response.)

23 In the next few slides, Veronica Paredes,  
24 our consultant Public Information Officer for  
25 this project, will share a few items regarding

1 logistics for the hearing and some housekeeping  
2 items.

3 After that, the formal presentation will  
4 begin.

5 Veronica?

6 MS. PAREDES: Thank you, Binod.

7 Good evening. My name is Veronica Paredes  
8 and I am the consultant Public Information  
9 Officer for this project.

10 There are three primary components to  
11 tonight's hearing. First, the open house, which  
12 occurred prior to this presentation where you  
13 were invited to view the project displays and to  
14 chat directly with the project team and provide  
15 your comments in writing to the court reporter.

16 Second, this presentation, which will  
17 explain the project purpose and need, study  
18 alternatives, potential impacts, both beneficial  
19 and adverse, and proposed methods to mitigate  
20 adverse project impacts.

21 And, third, a formal comment period  
22 following this presentation where you will have  
23 the opportunity to provide oral statements  
24 virtually -- not virtually -- verbally or you  
25 may continue to provide your comments in writing

1 or to the court reporter.

2 Public notice for this public hearing was  
3 provided in letters to property owners and  
4 tenants in the project area, was posted in the  
5 Florida Administrative Register, and provided in  
6 e-mails to persons on the project contact list,  
7 along with other notification methods. Notice  
8 was also posted on the project website.

9 This public hearing was also advertised  
10 consistent with the federal and state  
11 requirements shown on this slide.

12 The proposed project is being developed in  
13 accordance with the Civil Rights Act of 1964.  
14 Under Title VI of the Civil Rights Act, public  
15 participation is solicited without regard to  
16 race, color, national origin, age, sex,  
17 religion, disability or family status.

18 Persons wishing to express concerns  
19 relative to the Department's compliance with  
20 Title VI may do so by contacting Sharon  
21 SinghHaygyan, the Title VI Coordinator for the  
22 Florida Department of Transportation District  
23 Four or Stefan Kulakowski, the State Title VI  
24 Coordinator for the Florida Department of  
25 Transportation Equal Opportunity Office.

1           Several participation options have been  
2           provided for you to participate in the public  
3           hearing using any one of the three options shown  
4           here. No matter which option you choose, the  
5           information presented will be the same.

6           The virtual public hearing held on Tuesday,  
7           December 13th -- was held on Tuesday, December  
8           13th, 2022. During the virtual hearing  
9           attendees were able to view project exhibits and  
10          the formal presentation using their computer,  
11          tablet or smartphone.

12          A formal public comment period was held at  
13          the end of the presentation where attendees had  
14          the opportunity to provide oral statements or  
15          provide written comments.

16          Dial-in attendees that were not using a  
17          smartphone during the virtual public hearing  
18          were in listen-only mode.

19          During tonight's in-person public hearing,  
20          you will be able to view printed exhibit boards  
21          during the open house, which will be followed by  
22          a formal presentation and you will have the  
23          opportunity to provide oral statements at the  
24          microphone or provide comments directly to the  
25          court reporter or in writing.

1           Your input matters in our decisionmaking  
2           process. We will now explain additional ways to  
3           provide comments and where you can find the  
4           project documents and tonight's meeting  
5           materials for your review.

6           There are multiple ways to submit comments.  
7           As previously noted, you are welcome to provide  
8           oral statements during the formal comment  
9           period, make statements directly to the court  
10          reporter or submit written comments using the  
11          comment form provided.

12          Comments or questions may also be submitted  
13          after the meeting online at the project website  
14          at [www.fdot.gov/projects/sebastianinletbridge](http://www.fdot.gov/projects/sebastianinletbridge);  
15          or by US mail to the Project Manager, Binod  
16          Basnet, at the Florida Department of  
17          Transportation, District Four, 3400 West  
18          Commercial Boulevard, Fort Lauderdale, Florida,  
19          33309 using the comment form provided; or by  
20          e-mail to the Project Manager at  
21          [binod.basnet@dot.state.fl.us](mailto:binod.basnet@dot.state.fl.us); and, lastly, you  
22          can call the Project Manager at 954-777-4146 or  
23          toll tree at 866-336-8435, extension 4146 to  
24          provide verbal comments during normal business  
25          hours after the public hearing.

1           The contact information shown here is also  
2 available on the public hearing notification you  
3 may have received by e-mail or mail and on the  
4 project website. The comment period will remain  
5 open through December 27, 2022. All comments  
6 received by the comment period closing date will  
7 become part of the public hearing record.

8           Project documents are available for review  
9 at the Sebastian City Hall which is located at  
10 1225 Main Street, Sebastian, Florida 32958,  
11 Monday through Friday, 8:00 a.m. to 4:30 p.m.  
12 The documents will remain on display at the City  
13 Hall through December 27th.

14           Project documents and meeting materials are  
15 also available on the project website. You  
16 would go to -- under the Documents and  
17 Publications link, or by scanning the QR code  
18 shown on the screen. Project documents are also  
19 available for viewing in the back of the room  
20 during tonight's public hearing.

21           A recording of the virtual public hearing  
22 is available on the website.

23           Before we begin tonight's formal  
24 presentation, we would like to take a minute to  
25 share information on the National Drunk & Drug



1 Impaired Driving Prevention Month safety  
2 campaign.

3 No matter age or gender, people deciding  
4 it's okay to drive impaired continues to be an  
5 avoidable epidemic for all Florida counties.

6 Nationally, 17.2 million drivers have  
7 driven one or more times in the preceding 12  
8 months when they thought they were over the  
9 legal limit. That's double the combined game  
10 attendance of all ten major league teams and the  
11 motor speedways in Florida.

12 Drinking influences your perception,  
13 thinking and coordination. The consequences of  
14 drinking and riding are serious and real. If  
15 convicted you can be fined up to \$10,000; spend  
16 a minimum of 72 hours in jail or up to 10 years  
17 in jail if convicted of a DUI; and, your license  
18 will be suspended for up to two years. So,  
19 remember, Driver Sober or Get Pulled Over.

20 At this time, we will begin tonight's  
21 presentation.

22 VOICEOVER: This slide presents an outline  
23 of the information and topics that will be  
24 presented this evening, including where the  
25 project is located, why the project is needed

1 and the PD&E study process and objectives.

2 Information about the engineering and  
3 environmental analyses that have been completed,  
4 the project schedule, the public involvement  
5 process and ways you can be involved in the  
6 project will be presented.

7 The environmental review, consultation and  
8 other actions required by applicable federal  
9 environmental laws for this project are being,  
10 or have been, carried out by the Florida  
11 Department of Transportation, or FDOT, pursuant  
12 to 23 US Code Section 327 and a Memorandum of  
13 Understanding dated May 26, 2022, and executed  
14 by the Federal Highway Administration and FDOT.  
15 The FDOT Office of Environmental Management in  
16 Tallahassee is the approving authority.

17 The Sebastian Inlet Bridge, also known as  
18 the James H. Pruitt Memorial Bridge, is located  
19 along State Road A1A at the Indian River and  
20 Brevard County boundary. The bridge crosses the  
21 Sebastian Inlet and is surrounded by the  
22 Sebastian Inlet State Park. The Atlantic Ocean  
23 is to the east or right and the Indian River  
24 Lagoon is to the west or left.

25 Within the project limits, State Road A1A

1 is a two-lane roadway with a shared use path  
2 located on the west side north of the bridge,  
3 designated by the green line on the location  
4 map. A sidewalk is south of the bridge,  
5 designated by the green dashed line. The bridge  
6 and its approaches is two-lanes with minimal  
7 shoulders and no bicycle or pedestrian  
8 facilities. The gap in bicycle and pedestrian  
9 facilities is designated by the blue line shown  
10 on the location map.

11 As shown in this slide, a feasibility study  
12 has been completed and we are at the PD&E Study  
13 phase. A PD&E Study is FDOT's process to  
14 evaluate the social, economic and environmental  
15 impacts associated with a planned transportation  
16 improvement project.

17 The PD&E Study process is followed by FDOT  
18 to evaluate engineering alternatives,  
19 environmental impacts and social, cultural,  
20 natural and physical resource impacts, and to  
21 comply with the National Environmental Policy  
22 Act, or NEPA, federal and state environmental  
23 laws, and meet the requirements when federal  
24 funding is involved.

25 For this project, the overlap between the

1 PD&E Study and the design phase began in June  
2 2022. At the end of the PD&E Study, the project  
3 will continue in the design phase, followed by  
4 right-of-way acquisition and construction, which  
5 is anticipated to take place from early 2026  
6 through fall 2028.

7 The PD&E Study began with data collection  
8 and review of existing conditions within the  
9 project limits. Transportation issues and  
10 concerns were studied and solutions developed.  
11 During the PD&E Study, social, environmental and  
12 engineering analyses are performed and  
13 documented regarding the proposed transportation  
14 improvement.

15 Engineering analysis includes the  
16 development of alternatives that meet the  
17 purpose and need of the project. The  
18 environmental analyses will determine what  
19 potential impacts the project might have on the  
20 social, natural and physical environments.  
21 These analyses supported decisions regarding the  
22 identification of a preferred alternative.

23 Public involvement is ongoing throughout  
24 the PD&E Study. Your input also supports the  
25 project recommendations. There is no need to

1 wait until any public meeting to provide your  
2 input. Public comments and questions are  
3 welcomed at any time throughout the study.

4 The Sebastian Inlet Bridge was constructed  
5 in 1964 and retrofitted or repaired in 1978 and  
6 2003. The bridge has a vertical clearance of 39  
7 feet and a horizontal clearance of 150 feet.  
8 The bridge roadway deck is 34 feet, three inches  
9 wide. Observation piers are located under the  
10 north and south sides of the bridge. Within the  
11 project limits, State Road A1A is a two-lane  
12 facility with two-foot wide shoulders on the  
13 bridge and two- to four-foot wide shoulders  
14 along the roadway.

15 State Road A1A is also part of the Indian  
16 River Lagoon National Scenic Byway. Because of  
17 the type of bridge originally constructed, this  
18 bridge is a National Register of Historic Places  
19 eligible resource under Criterion C for  
20 engineering.

21 Slide 23. The November 2018 FDOT bridge  
22 inspection report indicated a structural  
23 deficiency rating for the bridge along with a  
24 bridge health index of 79.8. The Federal  
25 Highway Administration's National Bridge

1 Inventory rating for a structurally deficient  
2 condition is given to any bridge when any  
3 component is in poor condition or rated a four  
4 or less.

5 The bridge health index is a tool that  
6 measures the overall condition of a bridge and  
7 typically includes 10 to 12 different elements  
8 that are evaluated. A lower health index means  
9 that more work would be required to improve the  
10 bridge to an ideal condition. A health index  
11 below 85 generally indicates that some repairs  
12 are needed. Both the structurally deficient  
13 rating and low health index do not mean the  
14 bridge is unsafe.

15 Slide 24. The National Bridge Inventory  
16 rating represents the primary structural  
17 components of bridges necessary to determine the  
18 overall safety of the structure. The elements  
19 that are rated are the bridge deck,  
20 superstructure, substructure and culvert  
21 condition. A rating greater than or equal to 7  
22 classifies the bridge as in good condition; 5 or  
23 6 is fair; and less than or equal to 4 is poor.

24 The term functionally deficient means that  
25 the bridge does not meet current roadway design

1 standards for features such as lane width,  
2 shoulder width or bicycle and/or pedestrian  
3 facilities.

4 Although the bridge does have 12-foot  
5 travel lanes, it has deficient shoulder widths  
6 at two-feet wide and deficient bicycle and  
7 pedestrian facilities with none present across  
8 the bridge.

9 Slide 25. The purpose of this project is  
10 to address the bridge structural and functional  
11 deficiencies, address the gap in system linkage  
12 for bicyclists and pedestrians and evaluate  
13 alternatives.

14 The need for the project is based on the  
15 November 2018 FDOT bridge inspection report that  
16 indicated a structural deficiency rating for the  
17 bridge and a bridge health index of 79.8. The  
18 bridge is also functionally deficient or  
19 outdated in that it has minimal shoulders and no  
20 bicycle and pedestrian facilities.

21 FDOT's work program requires that  
22 structurally deficient bridges, once identified,  
23 have corrective actions, either repair or  
24 replacement, initiated within six years.

25 This project also supports the Indian River

1 County Bicycle and Pedestrian Plan for State  
2 Road A1A at this location. Bicycle and  
3 pedestrian counts collected over a four-day  
4 period in December 2019 show 231 bicyclists and  
5 five pedestrians crossed the bridge, despite not  
6 having appropriate bicycle and pedestrian  
7 facilities.

8 Slide 26. Due to the location of the  
9 Sebastian Inlet Bridge, coordination with  
10 federal, state and local agencies, along with  
11 public stakeholders, was critical to the  
12 development of project alternatives and  
13 selection of the preferred alternative. The US  
14 Coast Guard and the US Army Corps of Engineers  
15 are a participating or cooperating agency.

16 Slide 27. Coordination with the US Coast  
17 Guard has been ongoing throughout the  
18 transportation project delivery process. A  
19 navigation study was completed as part of FDOT's  
20 feasibility study, which visually assessed boat  
21 traffic within the project area over a period of  
22 time.

23 In April 2021, an online navigation survey  
24 was conducted in accordance with the US Coast  
25 Guard's Navigation Impact Study Scope. This



1 survey was user-driven, providing data on vessel  
2 types and sizes and inlet channel use.

3 A Navigation Needs Memorandum was submitted  
4 to the US Coast Guard in May 2021 followed by a  
5 preliminary clearance determination in July  
6 2021. A Vertical Clearance Evaluation  
7 Memorandum was prepared and submitted to the US  
8 Coast Guard in August 2021.

9 This evaluation considered technical  
10 criteria, such as physical characteristics of  
11 the inlet and inlet topography or bathymetry,  
12 character of surrounding resources, inlet and  
13 adjacent waters maintenance, Intercoastal  
14 Waterway connectivity and impacts to the north  
15 and south Sebastian Inlet State Park entrances.

16 The US Coast Guard provided a revised  
17 preliminary clearance determination of 51 feet  
18 in November 2021.

19 Slide 28. This rendering shows a  
20 comparison of the existing bridge with a 39 foot  
21 vertical clearance as compared to the proposed  
22 bridge with a vertical clearance of 51 feet.  
23 The proposed bridge maintains the existing  
24 horizontal clearance of 150 feet. This view is  
25 looking northeast from the southwest side of the

1 inlet, within the Sebastian Inlet State Park.

2 Each build alternative was developed as it  
3 relates to roadway and bridge design criteria.  
4 These design requirements included such items as  
5 bridge horizontal and vertical clearances,  
6 bridge and roadway alignment, bridge and roadway  
7 bicycle and pedestrian facilities, maintenance  
8 of traffic during construction, safety,  
9 stormwater management, coastal influences,  
10 geotechnical characteristics and utilities, as  
11 examples.

12 Results of the analyses are documented in  
13 individual technical memorandums or reports and  
14 summarized in the Type 2 Categorical Exclusion  
15 NEPA document and the Preliminary Engineering  
16 Report for this project. The project  
17 documentation has been available for review on  
18 the project website and at the City of Sebastian  
19 City Hall since November 22nd, 2022.

20 Each build alternative was evaluated as it  
21 relates to the natural, physical, cultural and  
22 social environments with the goal being to avoid  
23 or minimize impacts to these resources. Such  
24 criteria include mobility, economy, community  
25 and recreational resources, historic and

1 archaeological sites, wetlands, water quality  
2 and resources, wildlife and habitat, traffic  
3 noise, air quality and contamination.

4 Results of the environmental analyses are  
5 documented in individual technical memorandums  
6 or reports and summarized in the Type 2  
7 Categorical Exclusion NEPA document and the  
8 Preliminary Engineering Report for this project.  
9 The project documentation has been available for  
10 review on the project website and at the City of  
11 Sebastian City Hall since November 22nd, 2022.

12 The alternatives development is based on an  
13 understanding of project goals, objectives and  
14 constraints. This information helped identify  
15 the criteria used to evaluate alternatives. The  
16 alternatives developed meet roadway and bridge  
17 design criteria with the goal of minimizing  
18 impacts to the community and the natural and  
19 physical environments.

20 The alternatives were developed with input  
21 obtained throughout the study process from the  
22 general public and federal, state and local  
23 government agencies.

24 The No Action, or No Build Alternative is  
25 one where no improvements are made. This

1 alternative remained throughout the study and  
2 served as the baseline for comparison of other  
3 build alternatives.

4 The Rehabilitation or Repair alternative  
5 was also considered. The build alternatives  
6 include evaluating alignments along the existing  
7 bridge, to the east of the bridge and to the  
8 west of the bridge.

9 Following the Alternative Public Workshop  
10 and a Value Engineering Study conducted by FDOT  
11 District Four, alternatives were refined and a  
12 preferred alternative identified.

13 Following the Public Kickoff Meeting and  
14 the Alternatives Public Workshop, the public  
15 expressed a concern regarding the bridge  
16 remaining open to traffic during construction.

17 Understanding the public concern, and  
18 because the bridge is a critically needed  
19 regional coastal route with limited and lengthy  
20 available detours, the project team developed  
21 all build alternatives that maintain traffic  
22 across the bridge during construction.

23 As shown here, the existing bridge will  
24 remain open to traffic during construction of  
25 the east half of the new bridge. Once

1 completed, traffic will be shifted to the newly  
2 constructed east half of the bridge. The  
3 existing bridge will be removed and the west  
4 half of the new bridge will be constructed. The  
5 new bridge will then be completed.

6 In addition, maintenance of navigation  
7 through the Sebastian Inlet and local notices to  
8 mariners will be coordinated with the US Coast  
9 Guard during construction.

10 Because the bridge is determined an  
11 eligible historic resource under Section 106 of  
12 the National Historic Preservation Act, a  
13 rehabilitation alternative was considered. The  
14 bridge is eligible under Criterion C,  
15 engineering, indicating the bridge embodies the  
16 distinctive characteristics of type, period or  
17 method of construction.

18 A determination of whether rehabilitation  
19 can be completed to an acceptable level in a  
20 feasible and prudent manner is a function of its  
21 ability to perform adequately in both structural  
22 and functional areas.

23 Whether the bridge is rehabilitated to its  
24 existing condition or not, both options do not  
25 meet the purpose and need for the project. The

1 bridge remains structurally and functionally  
2 deficient and the historic integrity of the  
3 bridge is affected.

4 If the bridge is rehabilitated to meet the  
5 purpose and need for the project, at minimum, it  
6 must meet current FDOT design standards, be  
7 widened by adding shoulders and  
8 bicycle/pedestrian facilities, provide a 75-year  
9 service life, maintain existing vertical and  
10 horizontal clearances, maintain traffic during  
11 construction and minimize impacts to the  
12 natural, cultural and physical environments.

13 Section 106 of the National Historic  
14 Preservation Act of 1966 requires federal  
15 agencies to consider the effects of projects  
16 they carry out, approve or fund on historic  
17 properties. Historic resource impacts were  
18 evaluated for the No Build, Rehabilitation and  
19 Build alternatives.

20 The No Build alternative results in no  
21 adverse effect. And the Rehabilitation  
22 alternative results in a adverse effect. Per  
23 Section 106, these alternatives were determined  
24 to fail the Section 4(f), feasible and prudent  
25 standard, and were dismissed from further

1 consideration.

2 For each of the Build alternatives, the  
3 conditions that caused the bridge to be  
4 determined structurally and functionally  
5 deficient would be corrected. Each Build  
6 alternative results in an adverse effect to the  
7 historic bridge.

8 Because of the adverse effect, the project  
9 team applied the Section 106 criteria and  
10 completed a Section 106 effects determination;  
11 consulted with affected parties, which is  
12 ongoing; and, completed Section 4(f)  
13 documentation. The State Historic Preservation  
14 Office concurred with the adverse effects  
15 findings on March 30th, 2022.

16 The team has continued consultation with  
17 the State Historic Preservation Office to  
18 resolve the adverse effects through a Memorandum  
19 of Agreement. Once this is completed, Section  
20 106 consultation will be complete.

21 Potential measures to minimize harm as a  
22 result of the adverse effects to the historic  
23 bridge will be documented in a future Memorandum  
24 of Agreement between the FDOT and the State  
25 Historic Preservation Office.

1           These measures include, documentation  
2           through the US Department of Interior Historic  
3           American Engineering Record documentation  
4           process for the historic bridge; public  
5           education, which will include historic markers  
6           and interpretive panels about the historic  
7           bridge; and, archaeological monitoring during  
8           construction activities.

9           How can you provide input? The Preferred  
10          Alternative exhibit is available in the Handouts  
11          pane of the Control Panel. Additional exhibits  
12          can be found on the project website.

13          Please review the exhibits and fill out a  
14          comment form or make a statement to give us your  
15          views on the improvements and their potential  
16          effect on the historic bridge. You may also  
17          comment on the project website, by mail or  
18          e-mail to the FDOT project manager.

19          Because the preferred alternative impacts  
20          the Sebastian Inlet State Park, a Section 4(f)  
21          resource, the team completed a Section 4(f)  
22          evaluation in accordance with the US Department  
23          of Transportation Act of 1966, which established  
24          the requirement for consideration of park and  
25          recreational lands, wildlife and waterfowl



1           refuges, and historic sites in transportation  
2           project development. Section 4(f) coordination  
3           steps are shown on this slide.

4           The FDOT Office of Environmental  
5           Management, through NEPA assignment, has been  
6           delegated ultimate responsibility for making all  
7           decisions related to Section 4(f) compliance.

8           Before approving this project, which uses  
9           Section 4(f) property, the Office of  
10          Environmental Management must either, (1)  
11          determine that the impacts are de minimis, or  
12          (2) undertake a Section 4(f) evaluation. For  
13          this project, the FDOT District Four is seeking  
14          a de minimum finding from the Office of  
15          Environmental Management for the proposed  
16          improvements that require Section 4(f)  
17          resources.

18          A de minimis impact is one that will not  
19          adversely affect the activities, features, or  
20          attributes of the property. A de minimis impact  
21          determination does require consideration of  
22          measures that avoid, minimize, mitigate or  
23          enhance.

24          How can you provide input? The Preferred  
25          Alternative exhibit is available in the Handouts

1 pane of the Control Panel. Additional exhibits  
2 can be found on the project website.

3 Please review the exhibits and fill out a  
4 comment form or make a statement to give us your  
5 views on the improvements and their potential  
6 effect on the Section 4(f) resource. You may  
7 also comment on the project website, by mail or  
8 e-mail to the FDOT project manager.

9 The proposed bridge typical section for  
10 Alternatives 1, 2 and 3, is shown here and  
11 includes two 12-foot travel lanes, two  
12 eight-foot shoulders, and two 12-foot shared use  
13 paths.

14 For comparison, the existing bridge typical  
15 section showing two 12-foot travel lanes and  
16 two-foot shoulders is shown below the proposed  
17 typical section.

18 For all build alternatives, improvements to  
19 the north and south of the bridge are the same.  
20 Alternative 1 includes a new bridge on the  
21 existing alignment. This alternative requires  
22 the installation of a temporary bridge in order  
23 to maintain traffic and avoid bridge closing or  
24 lengthy detours.

25 A closer view of the bridge shows the

1 location of the new bridge and the temporary  
2 bridge. All bridge improvements are located  
3 within existing FDOT right-of-way.

4 Alternative 2 includes a new bridge an  
5 alignment that is shifted to the east. A closer  
6 view of the bridge shows its location compared  
7 to the location of the existing bridge, shaded  
8 blue.

9 All bridge improvements are located within  
10 the existing FDOT right-of-way.

11 Alternative 3 includes a new bridge an  
12 alignment that is shifted to the west. A closer  
13 view of the bridge shows its location compared  
14 to the location of the existing bridge, shaded  
15 blue.

16 All bridge improvements are located within  
17 existing FDOT right-of-way.

18 Anticipated effects from the No Build,  
19 Rehabilitation and Build alternatives are  
20 presented in the Evaluation Matrix. The  
21 alternatives developed are compared based on  
22 bridge and roadway design criteria; natural,  
23 social, cultural and physical resource impacts;  
24 costs for design and construction and  
25 right-of-way acquisition. The costs for

1 environmental mitigation will be determined  
2 during final design.

3 The results of the engineering and  
4 environmental analyses are documented in  
5 individual technical memorandums or reports  
6 completed for the project and are summarized in  
7 the Type 2 Categorical Exclusion NEPA document  
8 and the Preliminary Engineering Report. The  
9 project documentation has been available for  
10 review on the project website and at the City of  
11 Sebastian City Hall since November 22nd, 2022.

12 The Evaluation Matrix demonstrates  
13 Alternative 2, the east alignment, as the  
14 preferred alternative. The preferred  
15 alternative satisfies the purpose and need for  
16 the project; includes improvements that  
17 accommodate vehicular, bicycle and pedestrian  
18 traffic; was developed within FDOT and FHWA  
19 policies and standards; has the lowest wetland  
20 impacts, with 0.11 acres; has the lowest surface  
21 water impacts at 0.81 acres. Note that  
22 Alternative 3 has the same impacts for this  
23 resource.

24 Has the lowest Section 4(f) recreational  
25 impacts with 3.58 acres; requires the least

1 amount of wetland and Section 4(f) mitigation;  
2 has the lowest archaeological resource impacts  
3 with zero; has the lowest impacts to species and  
4 habitat with 0.81 acres. Note that Alternative  
5 3 has the same impacts for this resource.  
6 Requires the least amount of right-of-way with  
7 3.46 acres, and has the lowest cost, similar to  
8 Alternative 3.

9           Following the Alternatives Public Workshop  
10 and the FDOT District Four Value Engineering  
11 Study, refinements were made to the preferred  
12 alternative.

13           Refinements to Alternative 2, which was  
14 presented during the Alternatives Public  
15 Workshop, includes shifting the alignment  
16 farther east as the bridge crosses the Sebastian  
17 Inlet. This slight shift farther east improves  
18 bridge constructability by avoiding any  
19 potential conflicts with the existing bridge.  
20 This slight shift does not result in any  
21 additional environmental impacts. All bridge  
22 improvements are located within existing FDOT  
23 right-of-way.

24           South of the bridge, proposed preferred  
25 alternative improvements include,

1 reconfiguration of the south Sebastian Inlet  
2 Park entrance, including the addition of a right  
3 turn lane out; an added acceleration lane  
4 southbound from the park entrance; lengthened  
5 right turn lane southbound into the park;  
6 continuation of the shared use path on the west  
7 side of the bridge and roadway; addition of a  
8 shared use path on the east side of the bridge  
9 and roadway; addition of a crosswalk near the  
10 park entrance; recommended pond location.

11 Within this area of the preferred  
12 alternative, minor right-of-way acquisition is  
13 required to meet current design standards for  
14 clear zone and maintenance and stormwater  
15 management.

16 North of the bridge, proposed preferred  
17 alternative improvements include,  
18 reconfiguration of the north park entrance,  
19 including the addition of a right turn lane out;  
20 lengthened right turn lane southbound into the  
21 park; continuation of the shared use path on the  
22 west side of the bridge and roadway; addition of  
23 a shared use path on the east side of the bridge  
24 and roadway; addition of a crosswalk near the  
25 park entrance; relocated Sebastian Inlet

1 District access road; recommended pond location.

2 Within this area of the preferred  
3 alternative, minor right-of-way acquisition is  
4 required to meet current design standards for  
5 clear zone and maintenance and stormwater  
6 management.

7 This slide is a simplified rendering of the  
8 proposed bridge construction phasing. To  
9 maintain traffic across the Sebastian Inlet, the  
10 existing bridge will remain in place during  
11 Phase 1. Construction will include the east  
12 half of the new bridge including the shared use  
13 path, shoulder and travel lane.

14 Once the east side of the new bridge is  
15 constructed, traffic will be diverted to the  
16 east side of the new bridge and the existing  
17 bridge will be demolished. Construction of the  
18 west half of the new bridge will begin, as shown  
19 in Phase 2. Phase 3 includes construction of  
20 the west side of the new bridge, completing the  
21 new bridge.

22 This rendering shows a view of the proposed  
23 bridge looking northwest from the south side of  
24 the inlet.

25 This rendering shows a view of the proposed

1 bridge looking north/northwest from the south  
2 park entrance.

3 This rendering shows a view of the proposed  
4 bridge looking south/southeast from the north  
5 park entrance.

6 Following tonight's public hearing, the  
7 next step is to incorporate your input from this  
8 public hearing into our decisionmaking process.  
9 After the comment period closes and your input  
10 has been considered, a decision will be made and  
11 the final PD&E documents will be sent to the  
12 FDOT Office of Environmental Management, which,  
13 based on the Memorandum of Understanding signed  
14 with the Federal Highway Administration on May  
15 26th, 2022, has approval authority on this  
16 project, granting location and design concept  
17 acceptance, concluding the PD&E study.

18 After location and design concept  
19 acceptance, the project will continue in the  
20 final design phase. This project has and will  
21 continue to comply with all applicable state and  
22 federal rules and regulations.

23 MS. PAREDES: This concludes our  
24 presentation. We will now offer you the  
25 opportunity to make a statement. There have



1           been various opportunities for the public to  
2           provide input on this project. Several public  
3           meetings have been held, dating from the Public  
4           Kickoff meeting held in May of 2021 until  
5           tonight. We welcome your oral or written  
6           comments that will help us make this important  
7           decision.

8           A court reporter is present and a verbatim  
9           transcript will be made of all oral proceedings  
10          at this hearing. If you do not wish to speak,  
11          you may provide your comments in writing. Every  
12          comment method carries equal weight. Written  
13          comments received or postmarked by December  
14          27th, 2022 will become a part of the public  
15          hearing record for this hearing.

16          Please note, we will not respond to your  
17          comments or questions today, but we will respond  
18          in writing at a later date.

19          Attendees who completed a speaker's card  
20          upon registering at the door will be given an  
21          opportunity to speak at the microphone. Project  
22          staff will also distribute speaker cards to  
23          additional attendees who wish to make a verbal  
24          statement.

25          If you are holding a speaker card or have

1 given Priscila a speaker card, and wish -- if  
2 you wish to speak and have not received a  
3 speaker card, please ask Priscila and she'll  
4 provide you one to fill out.

5 We will now call upon those who a speaker  
6 card or come forward when your name is called.

7 If you represent an organization,  
8 municipality or other body, please provide that  
9 information as well.

10 Finally, we ask that you limit your  
11 comments to three minutes. If you have  
12 additional comments, you may continue after  
13 other people have had the opportunity to  
14 comment.

15 The first person I will call is William  
16 Ferrell. Please come to the microphone so the  
17 court reporter will be able to get a complete  
18 record of your comments.

19 MR. FERRELL: My name is William Ferrell.  
20 I'm with the North Beach Civic Association that  
21 represents a great deal of the property owners  
22 in this corridor that you're speaking of.

23 South of the Inlet. It's in Indian River  
24 County where the North Beach Civic Association  
25 is. And we started Beachland Boulevard in

1 representation to go to the Inlet. But we're  
2 heavily involved in this area near the Inlet.  
3 And there was a meeting last night about sand  
4 erosion and why the people are not here, because  
5 double meetings back to back. But the sand  
6 erosion. It was bad.

7           Anyway, on the bridge. We're in favor of  
8 the bridge and we support it. And we support  
9 the Inlet District and what you're trying to do.  
10 The bridge is old. It needs to be repaired.  
11 And it needs to be fixed for sure.

12           What we are concerned about is expansion of  
13 the corridor improvements, those 12-foot lanes  
14 going all the way back to 710. This could  
15 happen later.

16           We just want to come before you and, for  
17 the record, we want to state that we don't want  
18 these 12-foot bike lanes. It just doesn't fit  
19 in this corridor. There are historic things,  
20 like the 1715 Treasure Museum and some things  
21 from the Spanish treasure fleet. You'd wipe  
22 that out.

23           If you did these 12-foot lanes on both  
24 sides and the eight foot, the 1.4 feet. If you  
25 put that all together, it just doesn't fit in

1 the corridor, and that's what we're here to say.

2 We don't want the corridor expanded. And  
3 this was tried in Indian River Shores and it was  
4 knocked down. They tried to do the same kind of  
5 design. The bridge can drive, design in a  
6 corridor, and that's what we'd like not to  
7 happen.

8 The bridge is fine and what you're doing is  
9 fine. But when you get south of there, it's  
10 going to change the character of the  
11 neighborhood and damage the property. And you  
12 talk about -- I think it was 4. You're going to  
13 have environmental problems because of the  
14 treasure fleet area and the ponds that the  
15 treasure people that were from the wrecks  
16 survived on those ponds and the Treasure Museum  
17 and the property owners, it just wouldn't fit in  
18 this corridor to do what you're doing to the  
19 bridge.

20 So we support the bridge, but just don't  
21 continue it. And that's what we're afraid could  
22 happen. And that's why I'm here tonight, to ask  
23 you not to expand the corridor; it's fine where  
24 you have it, and the bridge is fine. But please  
25 don't ruin our neighborhoods.

1           And I just ask you to do the right thing.

2           Thank you.

3           MS. PAREDES: Thank you for your comment,

4           William.

5           The next person I will call will be Steven.

6           MR. MITCHELL: Good evening. I am Steven

7           Mitchell. To be correct, I'm a snow bird. So

8           my parents bought a place down here in 1985 in

9           Vero Beach, 601 Gardenia.

10          I was on the Board of East Coast Greenway

11          for eight years. Tonight I'm here. I'm a past

12          Board member of the East Coast Greenway.

13          I have attended FDOT projects and FDOT  
14          presentations in Miami and throughout Florida.

15          I've ridden my bike along with a whole  
16          bunch of other people from Canada to Key West.

17          So, it is refreshing to see that FDOT is  
18          taking into account active transportation.

19          Active transportation is biking or walking.

20          There needs to be more emphasis on that and  
21          there needs to be more safety because throughout

22          the 40s, 50s, 60s, the various transportation --

23          State transportation departments had no regard

24          for bicycles or pedestrians.

25          So, I commend you on this wonderful design

1 on the bridge. I'm sorry to the other  
2 gentleman, but I think that the 12-foot wide  
3 lane is appropriate for active transportation.

4 I think the design is wonderful. The one  
5 comment I would say is from Maine to Florida,  
6 the different State departments are making --  
7 wayfinding and, you know, East Coast Greenway  
8 signage along the bridge. And that would be, I  
9 think, a good improvement and part of the bridge  
10 to have East Coast Greenway designation.

11 That's all.

12 MS. PAREDES: Thank you, Steven.

13 Does anyone else desire to speak? (No  
14 response.)

15 If so, you could come up to the microphone  
16 and state your name and address and you can  
17 complete a speaker's card after you've given  
18 your statement for the public record.

19 MR. ROBSON: My name is John Robson and I'm  
20 actually here asking a question for my neighbor  
21 who couldn't make it.

22 I was a little confused on the Intercoastal  
23 Waterway clearance. Has that been considered  
24 and ruled out? And -- I guess you're going to  
25 respond later with some reason because this

1 neighbor is very upset about that.

2 So, that's all I have. So, thank you very  
3 much.

4 MS. PAREDES: Thank you for your comment.

5 Is there anyone else who desires to speak?

6 (No response.)

7 Okay. I just want to remind everybody that  
8 the public comment period will remain open  
9 through December 27th. I'll give everyone a few  
10 minutes in case they do want to include any  
11 additional comments for tonight.

12 There's comment forms in the back of the  
13 room. If you would like to write -- have any --  
14 if you would like to provide written comments.

15 MR. GRAY: Hi. James Gray. I'm  
16 representing Sebastian Inlet District.

17 I just wanted to say as a local government  
18 agency, working with FDOT and your engineers,  
19 has been a pleasure. So, we do appreciate all  
20 of the support that we're receiving. You're  
21 hearing us. You're responding to our e-mails.

22 So, Binod and your team, thank you very  
23 much for that. I just want to go on record  
24 saying that from Sebastian Inlet District.

25 Thank you very much.

1 MS. PAREDES: Thank you.

2 Okay. If there's no additional speakers,  
3 again, you can provide a written comment. The  
4 comment forms are in the back of the room.

5 And we will conclude the comment portion of  
6 tonight's public hearing.

7 (Applause)

8 MR. BASNET: The verbatim transcript of  
9 this hearing's oral proceedings, together with  
10 all written material received as part of the  
11 hearing record and all studies, displays and  
12 informational material provided at the hearing  
13 will be part of the project decisionmaking  
14 process and will be available at the District  
15 Office for public review upon request.

16 All public hearing materials presented  
17 during the virtual and in-person public hearing  
18 will be posted on the project website.

19 We ask you take a short survey, exit  
20 survey, when you leave the tonight's meeting to  
21 give us feedback on how this public hearing was  
22 conducted. The survey can be found at the  
23 sign-in table. Thank you in advance for your  
24 feedback.

25 Thank you for attending this public hearing



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and for providing your input into this project.

It is now 6:56 p.m. I hereby officially  
close the public hearing for the Project  
Development and Environment Study for State Road  
A1A over Sebastian Inlet Bridge Replacement  
Project.

Thank you again and have a good evening.

(The public hearing concluded at 6:56 p.m.)

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**C E R T I F I C A T E**

STATE OF FLORIDA        )  
COUNTY OF ORANGE        )

I, CINDY R. GREEN, Court Reporter, certify that I was authorized to and did report the aforementioned December 15, 2022 Virtual Public Hearing, State Road A1A Over Sebastian Inlet, Bridge Replacement PD&E Study, and that the transcript is a true and complete record of my notes and recordings.

I further certify that I am not a relative, employee, attorney or counsel of any of the parties, nor am I financially interested in the outcome of the foregoing action.

DATED this 31st day of December, 2022.

Cindy R. Green

\_\_\_\_\_  
CINDY R. GREEN, Court Reporter  
Notary Public, State of Florida  
(electronic signature)