

CONTAMINATION SCREENING EVALUATION REPORT

Project Development and Environment (PD&E) Study
SR A1A Over Sebastian Inlet – Bridge 880005
Bridge Replacement
Indian River County and Brevard County, Florida

Financial Project ID: 445618-1-22-02
Federal Aid Number: D420 075B
ETDM Number: 14433

PREPARED FOR



Florida Department of Transportation
District Four
3400 West Commercial Boulevard
Fort Lauderdale, Florida 33309

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.

November 2022

Contamination Screening Evaluation Report

Florida Department of Transportation

District Four
3400 West Commercial Blvd.
Fort Lauderdale, Florida 33309

SR A1A Over Sebastian Inlet
Bridge Replacement
Project Development and Environment (PD&E) Study

Limits of Project: MP 21.945 - MP 22.665 Roadway ID 88070000, Indian River County

MP 0.00 - MP 0.307 Roadway ID 70060000, Brevard County

Indian River County and Brevard County, Florida

Financial Management Number: 445618-1-22-02

ETDM Number: 14433

Date: July 6, 2022

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May 2022

EXECUTIVE SUMMARY

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) which carries State Road (SR) A1A over Sebastian Inlet at the Indian River County and Brevard County boundary. 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 Sebastian Inlet Bridge (bridge), also known as the James H. Pruitt Memorial Bridge, is a 1,548-foot long concrete structure constructed in 1964 to carry SR A1A over the Sebastian Inlet (Inlet). 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 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.

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. This Contamination Screening Evaluation Report (CSER) presents the findings of this investigation in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual.

A review of available data, such as agency regulatory files, historic and current aerial photography and a field review were conducted for the preparation of this report in support of the PD&E Study. An investigation of site history, which included a review of agency regulatory files, was performed for one site identified as a potential contamination concern. Available information for this site was evaluated to determine the site's potential degree of risk for contamination involvement with the proposed project.

Only one potential contamination site, a maintenance yard for Sebastian Inlet State Park, was identified within the Study Area. This site was assigned a Low risk rating for potential contamination concerns. Although the parcel boundary for this site encroaches into the proposed project corridor, the area of concern is located approximately 650 feet west of the project area. Previous surveys for asbestos containing materials (ACM) were completed by FDOT in 2012 and 2014. None of the materials sampled were defined as ACM. An evaluation for Lead Based Paint (LBP) or Metal Based Coatings (MBC) will be completed during the project design phase.

This project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #14433. The Environmental Technical Advisory Team (ETAT) evaluated the project's effects on natural, physical, cultural, social, and economic resources. An ETDM Programming Screen Summary Report containing comments from the ETAT was published on June 3, 2020.

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1.0 INTRODUCTION

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) which carries State Road (SR) A1A over the Sebastian Inlet at the Indian River County and Brevard County boundary. 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 (**Figure 2-1**).

As part of the PD&E, a contamination screening evaluation for the project area was conducted to identify and evaluate properties with known or potential contamination issues within or adjacent to the project area. The results are documented in the Contamination Screening Evaluation Report (CSER) in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual.

This project was evaluated through FDOT's Efficient Transportation Decision Making (ETDM) process as project #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.

The project development process, alternatives developed, and the associated social, economic, and environmental analyses follow the guidance provided in the Department's current version of the PD&E Manual and FDOT Design Manual (FDM). The project also satisfies state and federal processes and incorporates the requirements of the National Environmental Policy Act (NEPA). 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.

2.0 PROJECT DESCRIPTION

The Sebastian Inlet Bridge (bridge), also known as the James H. Pruitt Memorial Bridge, is a 1,548-foot-long concrete structure constructed in 1964 to carry SR A1A over the Sebastian Inlet (Inlet). 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 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. For this PD&E study, there will be a slight overlap with the Design Phase beginning in July 2022. The project will continue in the Design Phase followed by ROW acquisition and construction letting in late 2025. Construction is scheduled to begin in 2026 and is anticipated to take two to three years to complete. Note that the ROW acquisition phase is related to Section 4(f) resource impacts and does not involve any private property impacts.

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 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,

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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 western side of SR A1A north and south of the bridge.

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Figure 2-1: Project Location Map

The bridge has been determined eligible under Criterion C of the National Register of Historic Places (NRHP) in the area of Engineering for its high-integrity embodiment of a prestressed concrete bridge in Florida. The bridge is also situated within the Park, a Section 4(f) resource.

The project includes the evaluation of alternatives including No-Action (No-Build), Transportation Systems Management and Operations (TSM&O), Rehabilitation and Build, 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 northern and southern portions of the bridge. Build alternatives will include evaluation of the bridge vertical clearance as required by the U.S. Coast Guard (USCG).

2.1 PURPOSE AND NEED

2.1.1 PROJECT PURPOSE

The primary purpose of this project is to address the structural and functional deficiencies of the existing bridge over the Sebastian Inlet. The project will also address the gap in system linkage for bicyclists and pedestrians.

2.1.2 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. Structurally deficient bridges are not considered unsafe for public use unless the bridge is also closed. Bridges with a health index of less than 85 require repairs or replacement.

2.1.2.1 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 western 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 and not marked as 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, prepared by Florida Department of Environmental Protection (FDEP) in 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.

3.0 ALTERNATIVE ANALYSIS

The PD&E Study considers a range of alternatives that meet the purpose and need of the project while balancing engineering requirements, environmental impacts., and public input. Project alternatives include the No-Action (No-Build), TSM&O, Rehabilitation, and Build Alternatives.

The development of alternatives and the associated environmental effects were evaluated according to FDOT's PD&E manual and FDM and were undertaken in a collaborative process utilizing input from the Department, stakeholders, and the study team. A detailed discussion of each alternative evaluated is summarized in Section 3.5. A comparative evaluation of the Alternatives has been evaluated using a multi-criteria qualitative and quantitative analysis as part of the PD&E Study.

3.1 PREVIOUS PLANNING STUDIES

FDOT performed an assessment to evaluate the feasibility of replacing the existing bridge as part of a planning level activity. The results of the feasibility study are reported in the Bridge Replacement Feasibility Report (April 2020). This study conducted evaluations to determine ROW requirements, as well as the feasibility of phased construction of a proposed bridge and the approach to maintenance of traffic. Additional feasibility study activities included:

- Traffic Data
- Operational Analysis
- Benthic Survey of Inlet
- Vessel Survey
- Section 4(f) Research Memo
- Preliminary Geotechnical Review

3.2 FUTURE CONDITIONS

Future traffic volumes were developed as part of the feasibility study and documented in the *Traffic Counts and Traffic Projections* report (March 2020). The growth rates were calculated based on analysis of historical traffic counts and 2040 population and employment data.

A study area growth rate of 1.0% was selected and applied to the existing (2019) Annual Average Daily Traffic (AADT) volumes to project future AADT. Future traffic volumes were computed for Opening Year (2025) and Design Year (2045) for both weekday and weekend scenarios during AM and PM peak hours. Future intersection turning movement volumes were also calculated. The alternatives evaluated in the March 2020 report included the No-Action and one Build Alternative. Since this is a bridge replacement project and the capacity along SR A1A will be maintained, future traffic volumes for both alternatives were projected to be the same.

As part of the PD&E Study, a *Project Traffic Analysis Report* (January 2020) was prepared to:

- Validate that the 2-lane capacity will sufficiently accommodate future traffic demand
- Evaluate the two intersections along the project corridor that are access points to/from the Park
- Perform safety analysis

3.3 NO-ACTION (NO-BUILD) ALTERNATIVE

The No-Action alternative is an alternative solution that assumes the retainment of existing conditions within the project's limits and would not have any direct impacts to the physical, natural, cultural, and social environments. Continuous maintenance is performed to make the bridge safe to use. Although this

alternative does not meet the purpose and need for the project, it will remain under consideration and serve as a baseline for comparison against other alternatives throughout the PD&E Study.

3.4 TRANSPORTATION SYSTEMS MANAGEMENT AND OPERATIONS ALTERNATIVE (TSM&O)

The TSM&O alternative consists of short-term improvements aimed at extending the service life of the bridge or optimizing the performance of the existing facility. However, they do not address the structural deficiency of the bridge. The TSM&O alternative does not meet the purpose and need for the project.

3.5 BUILD ALTERNATIVE(S)

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
- Project costs
- Avoidance of bridge closure during construction

A key criterion for the Alternatives development is the vertical and horizontal clearances of the bridge. A *Navigation Needs Analysis Memorandum* was submitted to the USCG, and a preliminary clearance determination was received in July 2021 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.

Based on the USCG response, a vertical clearance evaluation was completed to demonstrate a bridge vertical clearance of less than 65 feet, in contrast to the previous preliminary determination of a minimum vertical clearance of less than 65 feet by the USG, provides for reasonable navigation needs at the Inlet. Also considered were the purpose and need for the project, impacts to the northern and southern park entrances, character of the Inlet, bathymetry, surrounding resources, maintenance of the Inlet and adjacent waterways, and connectivity to the Intracoastal Waterway (ICW).

The proposed typical section developed during the feasibility study was modified during the PD&E Study. The proposed typical section is shown in **Figure 3-1** and includes:

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

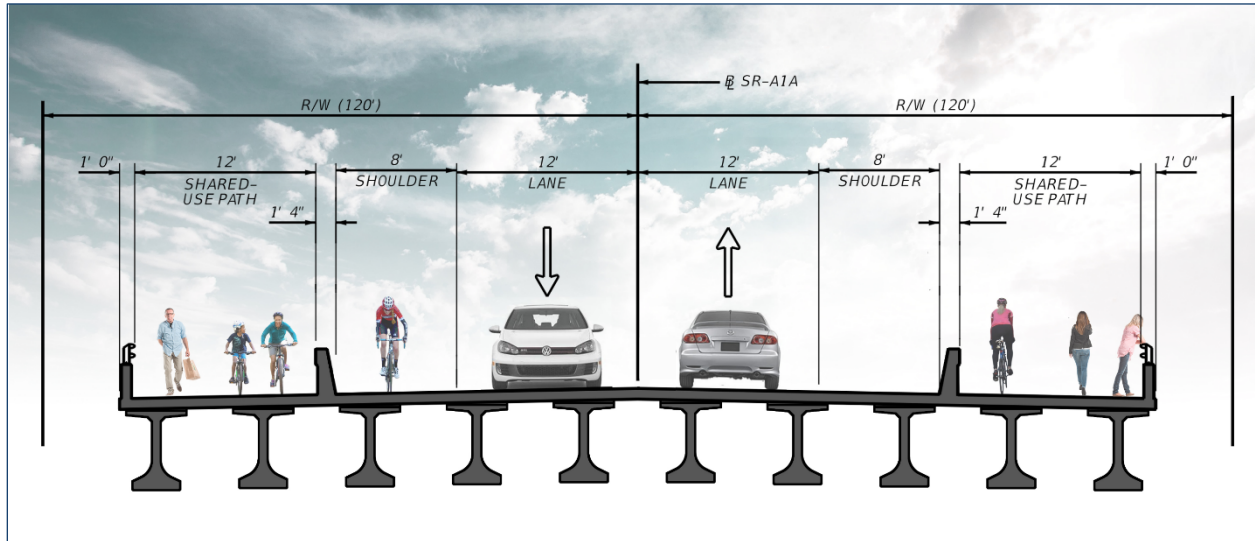


Figure 3-1: Typical Section

3.5.1 REHABILITATION ALTERNATIVE

Because the bridge is considered an eligible historic resource under Section 106 of the National Historic Preservation Act, a rehabilitation alternative was considered. The bridge is eligible under Criterion C – Engineering indicating the bridge “embodies the distinctive characteristics of type, period, or method of construction”.

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.

If the bridge is rehabilitated to meet the purpose and need for the project, at minimum, it must:

- Meet current FDOT Design Standards
- Be widened 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

Whether the bridge is rehabilitated to its original 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, this alternative was removed from further consideration.

3.5.2 BUILD ALTERNATIVE 1 (EXISTING)

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 southern Park entrance
- Lengthened storage of the southbound right turn lane into the Park
- Continuation of the shared-use path on the western side of the bridge and roadway
- Addition of a shared-use path on the eastern side of the bridge and roadway that extends to the public parking lot located on the eastern side of SR A1A
- Addition of a crosswalk crossing SR A1A at the southern 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 western side of the bridge and roadway
- Addition of a shared-use path on the eastern side of the bridge and roadway terminating at the northern Park entrance
- Addition of a crosswalk crossing SR A1A at the northern Park entrance
- Reconfiguration of the SID Access Road

All bridge improvements are located within existing FDOT ROW. Approximately 2.03 acres of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, and shared-use path improvements. Additional ROW may be required for stormwater management totaling 4.56 acres.

3.5.3 BUILD ALTERNATIVE 2 (EAST)

Build Alternative 2 includes a new bridge alignment that is shifted to the east of the centerline of the existing bridge. The western limit of the new bridge is generally located near the western limit 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 0.56 acre of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, and shared-use path improvements. Additional ROW may be required for stormwater management totaling 4.56 acres.

Because the new bridge will be constructed in phases, the existing bridge will remain in place while the eastern portion of the new bridge is constructed. This new construction will include the shared-use path, shoulder, and northbound travel lane.

Once construction of the eastern portion of the new bridge is completed, traffic will be diverted to the newly constructed portion of the bridge. The existing bridge will then be demolished followed by construction of the western side of the bridge completing the new bridge.

3.5.4 BUILD ALTERNATIVE 3 (WEST)

Build Alternative 3 includes a new bridge on alignment that is shifted to the west of the centerline of the existing bridge. The eastern limit of the new bridge is generally located near the eastern limit 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 1.22 acres of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, and shared-use path improvements. Additional ROW may be required for stormwater management totaling 4.56 acres.

Because the new bridge will be constructed in phases, the existing bridge will remain in place while the western portion of the new bridge is constructed. This new construction will include the shared-use path, shoulder, and southbound travel lane.

Once construction of the western portion of the new bridge is completed, traffic will be diverted to the newly constructed portion of the bridge. The existing bridge will then be demolished followed by construction of the eastern side of the bridge completing the new bridge.

3.6 SELECTION OF THE PREFERRED ALTERNATIVE

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

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 centerline of the existing bridge. The western limit of the new bridge typical section is generally located near the western limit of the existing bridge (**Figure 3-2**).

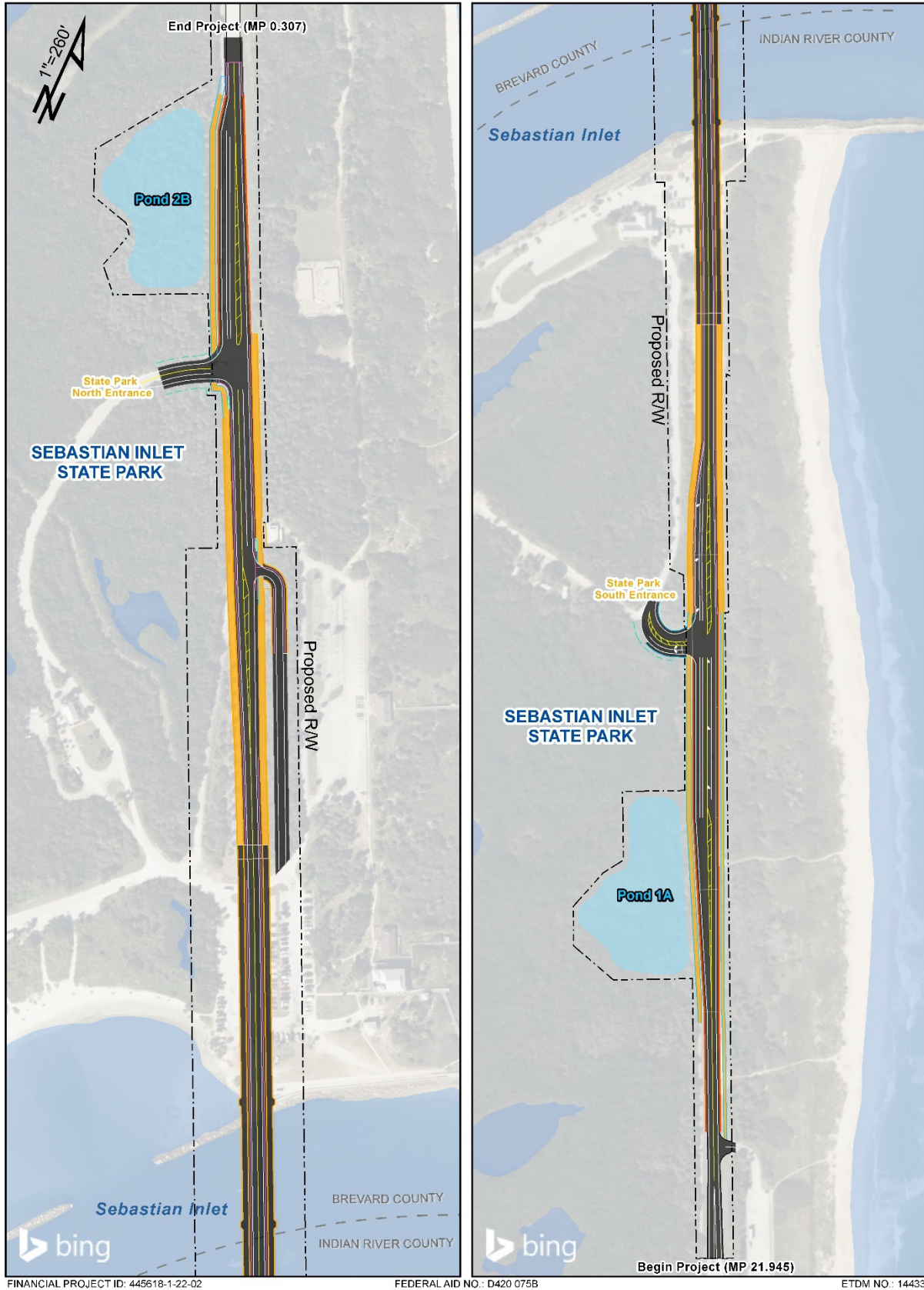


Figure 3-2: Preferred Alternative

South of the bridge, Alternative 2 improvements include:

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

North of the bridge, Alternative 2 improvements include:

- Reconfiguration of the northern 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 western side of the bridge and roadway
- Addition of a shared-use path on the eastern side of the bridge and roadway terminating at the northern Park entrance
- Addition of a crosswalk crossing SR A1A at the northern Park entrance
- Reconfiguration of the SID Access Road
- All bridge improvements are located within existing FDOT ROW. Approximately 0.56 acre of ROW is required to meet current design standards for clear zone and maintenance associated with bridge approaches, roadway, Park entrances, and shared-use path improvements.

Because the new bridge will be constructed in phases, the existing bridge will remain in place while the eastern portion of the new bridge is constructed. This new construction will include the shared-use path, shoulder, and northbound travel lane. Once construction of the eastern portion of the new bridge is completed, traffic will be diverted to the newly constructed portion of the bridge. The existing bridge will then be demolished, followed by construction of the western side of the bridge which completes the new bridge.

4.0 EXISTING CONDITIONS

4.1 LAND USE

The existing land uses within the project area were identified through the interpretation and review of the Florida Land Use Cover and Forms Classification System (FLUCCS) Geographic Information Systems (GIS) layer and modified to match existing conditions identified during a field review in September 2021. Existing land use, including acreage by land use type, is depicted in **Figure 4-1**. The project area includes the following land uses:

Beach (181) – The beach located along the Atlantic Ocean in the vicinity of the project consists of sand and is available for public recreation activities. This category represents the land from the front of the primary dune to the water.

Community Recreational Facilities (186) – This includes the Sebastian Fishing Museum, Inlet Grill & Gifts and Inlet Bait and Tackle facilities located within the Sebastian Inlet State Park.

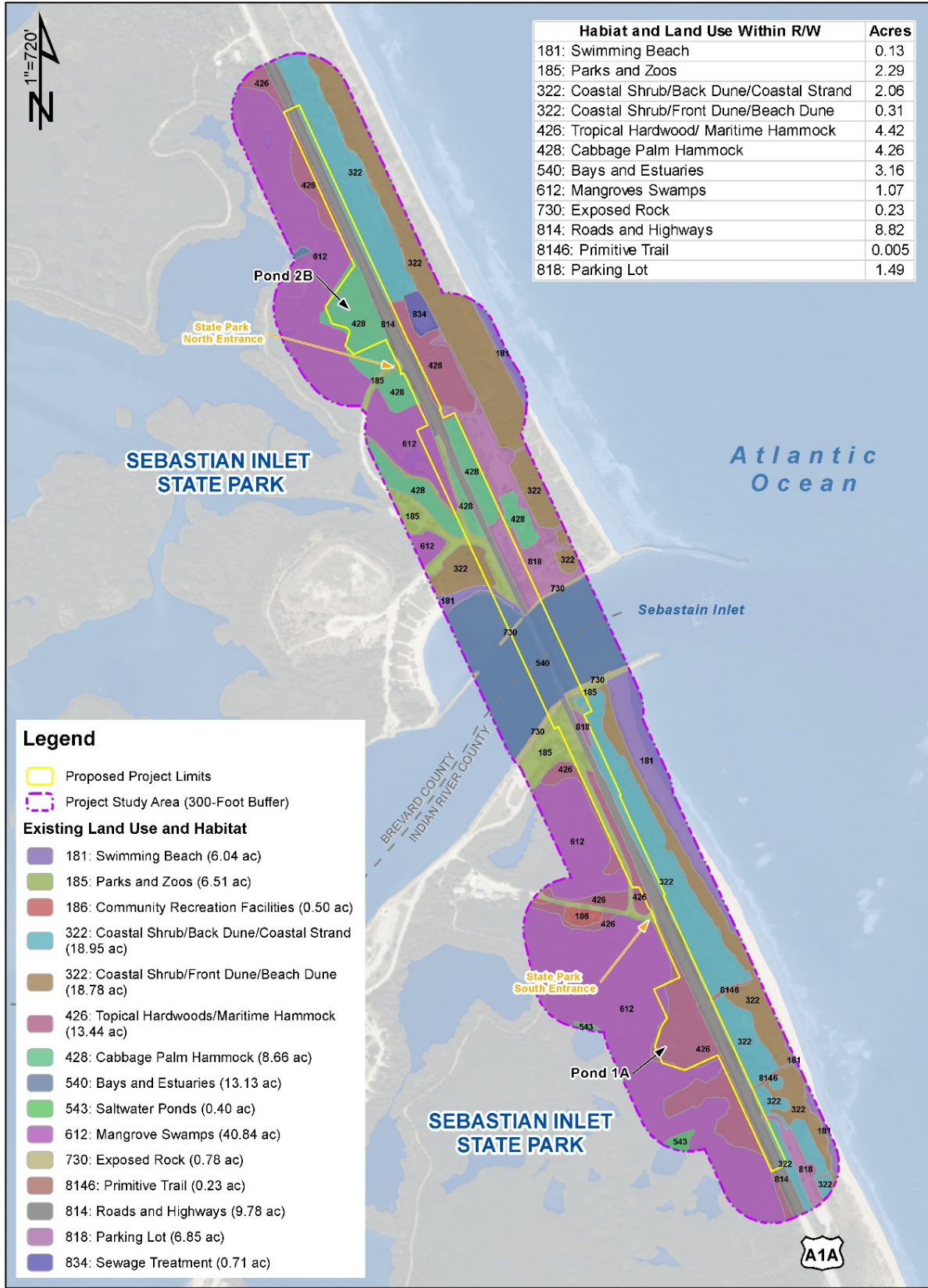


Figure 4-1: Existing Land Use

Coastal Shrub/Back Dune (322) – This represents a wide variety of species found in the coastal zone from the back of the dune system moving landward away from the beach. Common components include saw palmetto, yaupon, railroad vine, sea oats, sea purslane, seagrape, prickly pear, Hercules club, and small oaks.

Tropical Hardwoods/Maritime Hammock (426) – This forested cover type is located further landward of the coastal shrub and upland of the mangrove swamps. Common components include gumbo limbo, mastic, stoppers, wild lime, strangler fig, lancewood, poisonwood, seagrape, marlberry, and wild tamarind.

Cabbage Palm (428) – This forested community is predominantly cabbage palm and is found on sandy soils. Other species can include a wide variety of large and small hardwoods and could include some slash pine or longleaf pine.

Bays and Estuaries (540) – Bays and estuaries are inlets or arms of the sea that extend into land and, as such, are properly classified in this system only when they are included within the land mass of Florida. The Sebastian Inlet and swimming lagoon comprise this category.

Saltwater Ponds (543) – These features occur as inland ponds connected to the surrounding bays or estuaries via man made drainage features such as a culvert and are otherwise not connected hydraulically. Some of these are located within the mangrove swamps where they have been cut off from the bays by roadways within the state park.

Mangrove Swamps (612) – This coastal hardwood community is composed of red and/or black mangrove which is pure or predominant. Major associates include white mangrove, buttonwood, seagrape, and cabbage palm.

Exposed Rock (733) – This area consists of large riprap rock laid along the edge of the inlet as a protective measure against erosion. It exists along both sides of the inlet and both jetties that extend to the east into the ocean.

Roads and Highways (814) – This category includes SR A1A.

Auto Parking (818) – This includes the parking lots for the state park and beach access.

Sewage Treatment (834) – This includes the sewage treatment facility and associated aeration field.

4.2 SOILS

Soil data was obtained from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) data. Soils within the project area are presented by type and acreage for each county. Soils data is described below, summarized in **Table 4-1** and presented in **Figure 4-2**.

Brevard County

Canaveral-Anclote Complex, Gently Undulating (9) – 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. That water table is between depths of 10 to 40 inches for 2 to 4 months a year. The natural vegetation is saw palmetto and scrub live oak on ridges and sand cord grass in sloughs.

Coastal Beaches (20) – Coastal beaches consist 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 seashells. It is subject to movement by wind and the tide and is bare of vegetation. In places, clay balls are imbedded in the sand.

Palm Beach Sand, 0 to 5 % Slopes (42) – 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. Most areas are still in natural vegetation of saw palmetto, scattered cactus, scrub live oak, sea grapes and clumps of sea oats.

Bess Muck, Tidal (66) – This consists of nearly level areas at about mean sea level that are covered with a dense, tangled growth of mangrove trees and roots. It is along the edge of the Banana and Indian Rivers and in smaller areas adjacent to salt water. The dense tangled growth of mangrove trees and roots makes investigation of this unit difficult. The soil material ranges from mixed sand and shells to organic materials. On more than half the acreage in the county, low dikes have been constructed around the seaward perimeter. Artesian wells maintain a fairly constant water level within the diked areas for mosquito control and wildlife management. The water is 6 to 36 inches deep within the diked areas and is brackish. Very high storm tides can overflow some of the dikes. Areas outside the dikes are generally covered with salt water during daily high tides.

Indian River County

Palm Beach Sand, 0 to 5 % Slopes (7) – This soil is nearly level to gently sloping and well drained to excessively drained. It is on dunelike ridges that are parallel to the coastline. The acreage mapped is in one linear unit that varies from 100 feet in width to more than 1,600 feet. This map unit is adjacent to the beach. Slopes are mainly 0 to 5 percent but can range from 0 to 8 percent. Permeability is very rapid, and the available water capacity is very low. It has no water table within a depth of 80 inches. The natural vegetation consists of cabbage palm, scrub oak, saw palmetto, sea grape, and prickly pear.

Quartzipsamments, 0 to 5 % Slopes (17) – This soil is nearly level to gently sloping and moderately well drained to somewhat poorly drained. It consists of thick deposits of sand and mixed sand and shell fragments. This fill material is the result of earthmoving operations. The soil in this map unit is used to fill such areas as sloughs, marshes, shallow depressions, swamps, and other low-lying areas above their natural ground levels. The mapped areas range from about 10 to 300 acres. The water table varies with the amount of fill material and artificial drainage within the map unit. In most years, it is at a depth of 24 to 36 inches below the surface of the fill for 2 to 4 months. It is below a depth of 40 inches during extended dry periods. The existing vegetation consists of south Florida slash pine, scattered saw palmetto, and various weeds.

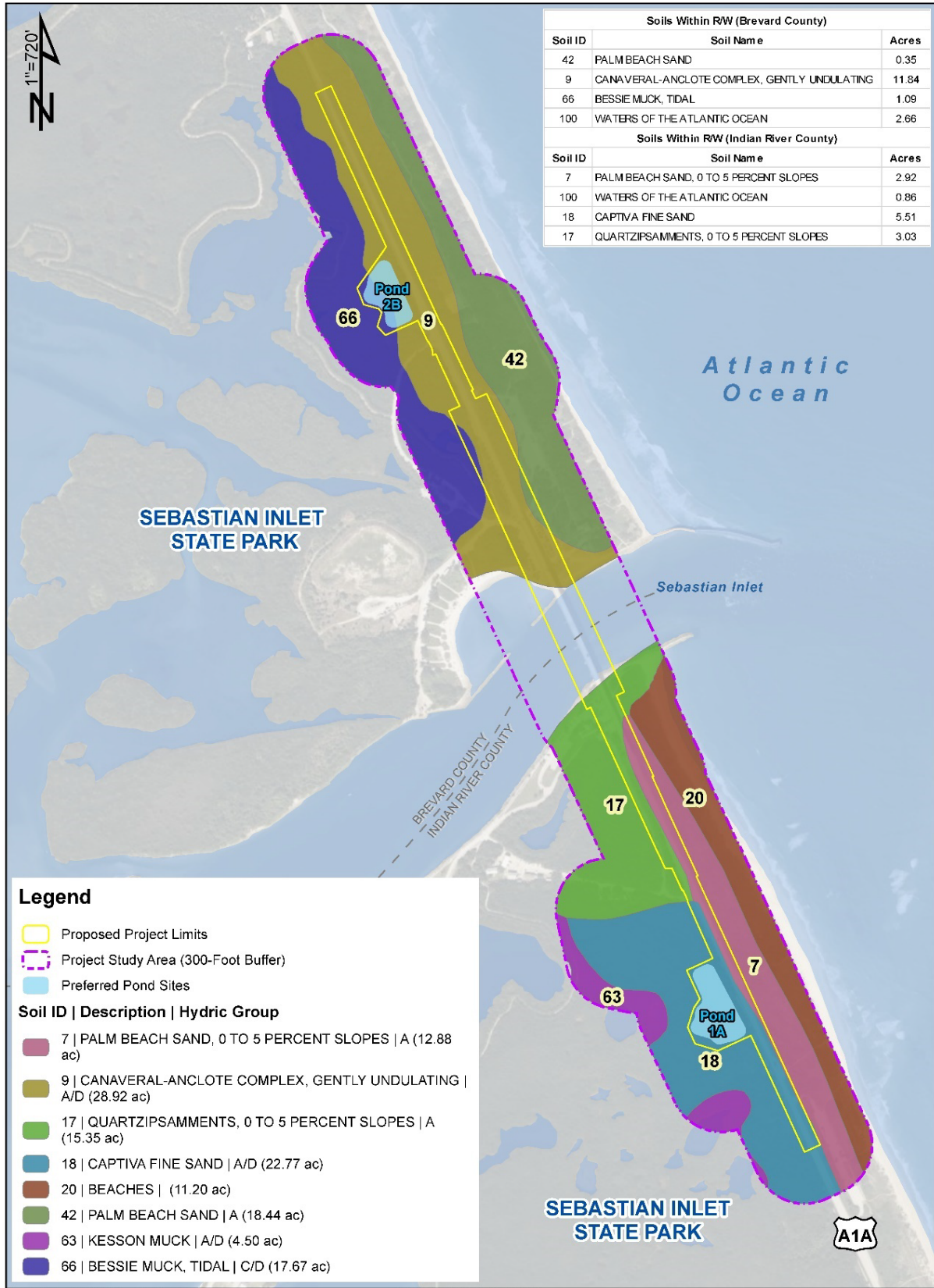
Captiva Fine Sand (18) – This soil is nearly level and poorly drained. It is in narrow, elongated sloughs that are between low, dunelike ridges and mangrove swamps. The mapped areas range from 10 to 200 acres. Slopes are smooth and range from 0 to 1 percent. In most years, under natural conditions, the 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. A large part of the acreage has been cleared and planted as citrus. If present, natural vegetation consists of cabbage palm, tamarind, Australian pine, wax myrtle, strangler fig, wild coffee, and leather leaf fern.

Beaches (20) – This map unit consists of nearly level to sloping, narrow strips of tide and surf washed sands and shell fragments. Beaches range from less than 100 feet to about 300 feet in width. About half of the beach area may be flooded daily during high tides, and all of the beaches can be flooded by storm tides. Most beaches have a uniform gentle slope to the water’s edge, although the shape and slope can change with every storm. Beaches are generally devoid of vegetation, although some sparse growth of sea-oats, railroad vine, or other salt-tolerant plants can occur near the landward edges. Depth to the water table is highly variable depending on the distance from the shore, elevation of the beach, and tidal conditions. Commonly, the water table ranges from a depth of 0 to 6 feet.

Kesson Muck (63) – This soil is nearly level and very poorly drained and is frequently flooded, occurring 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. Some areas of this soil have been leveled off and are used as mosquito control structures. Under natural conditions, this soil is flooded during normal high tides. The native vegetation consists of red, black, and white mangroves, with sea rocket, saltwort, perennial glasswort, seashore salt grass, and seashore paspalum.

Table 4-1: Project Area Soils		
Soil Type	Acres	Percent (%)
7 – Palm Beach Sand, 0-5 Percent Slopes	2.92	10.33
9 – Canaveral-Anclote Complex, Gently Undulating	11.84	41.90
17 – Quartzipsamments, 0-5 Percent Slopes	3.03	10.72
18 – Captiva Fine Sand	5.51	19.50
42 – Palm Beach Sand, 0-5 Percent Slopes	0.35	1.24
66 – Bessie Muck, Tidal	1.09	3.86
100 – Waters of the Atlantic Ocean	3.52	12.45
TOTAL	28.26	100

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FINANCIAL PROJECT ID: 445618-1-22-02

FEDERAL AID NO.: D420 075B

ETDM NO.: 14433

Figure 4-2: Soils

5.0 PHYSICAL SETTING

5.1 REGIONAL GEOLOGY

Indian River and Brevard County are both part of the Atlantic Coastal Ridge and are underlain by the Anastasia Formation. Although this formation extends as far as 20 miles inland in St. Lucie and Martin Counties, it is predominately coastal, covers approximately 24% of Brevard County and 38% of Indian River County and is the primary geologic unit in the project area. The composition of this formation includes interbedded sands and coquinaid limestones. This formation is also part of the surficial aquifer system. Other geologic units within Indian River and Brevard County include Holocene sediments, shelly sediments of Plio-Pleistocene age, beach ridge and dune and undifferentiated sediments.

5.2 REGIONAL HYDROGEOLOGY

Indian River and Brevard County are within the surficial aquifer system of Florida. This system ranges in depth across the state but is several hundred feet (~400 feet deep) in Indian River County. The surficial aquifer is generally undivided and consists of unconsolidated sand, shelly sand and shell. However, in some portions of Florida clay beds are continuous and thick enough to divide the system into multiple aquifers. Groundwater is generally unconfined, with pockets of confined conditions caused by clay beds. Water that does not return to the atmosphere or directly run off into surface waters will percolate downward into the surficial aquifer system. Water within the surficial aquifer system moves laterally until discharged to a waterbody. The general movement of water within this aquifer is from higher elevations inland to towards lower elevations along the coastline and the Atlantic Ocean.

The topography of the study area is generally flat with little change in relief other than dunes along the eastern project limits. Depth to Water (DTW) level in the project area is approximately 32 to 37 feet in the dry season and 28 to 32.5 feet in the wet season. Therefore, groundwater flow in the study area is likely to follow the regional trend and flow east toward the Atlantic Ocean. However, groundwater in the surficial aquifer system may change movement to the nearest surface water. Therefore, due to the project's proximity to two major waterbodies, the Atlantic Ocean and the Indian River/ICW as well as the Sebastian Inlet, localized groundwater movement may vary within short distances.

5.3 WATER SUPPLIES

As established by the Safe Drinking Water Act (SDWA), Wellhead Protection Areas are delineated to prevent contamination of groundwater supplies. Florida's Wellhead Protection Program managed by FDEP, incorporates a Wellhead Protection Rule, which establishes a 500-foot radius around all community and non-transient non-community public water systems. Therefore, public water supplies within the project area were investigated.

A non-community public water supply well that serves the Park is located within or adjacent to the project area on the north side of the Inlet (**Figure 5-1**). There are no new water supply installations proposed as part of this project that are prohibited or regulated for additional performance standards under Chapter 62-521, Florida Administrative Code. There are no contaminated sites within 500 feet of the Park water supply well. Therefore, construction of the proposed bridge does not have the potential to contaminate this public drinking system. During construction, appropriate erosion control and sedimentation measures will be used to ensure no construction debris or materials migrate offsite or enter this public water supply.



Figure 5-1: Public Water Supply Wells

5.4 DRAINAGE AND STORMWATER MANAGEMENT FACILITIES

The project is within the jurisdiction of the St. Johns River Water Management District (SJRWMD). Stormwater runoff from the bridge discharges directly to the Sebastian Inlet through bridge scuppers. Stormwater runoff from the bridge approaches is collected in two sets of inlets on the south and north approaches that is discharged via existing cross drains to small ponds located west 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 discharging to the Indian River.

This project will make significant improvements to the water quality along the roadway corridor. The stormwater runoff from both the new and existing impervious areas will be treated in proposed stormwater facilities. The stormwater runoff will be collected by storm sewer systems and roadside ditches. The water quality treatment and attenuation will be achieved through construction of offsite ponds, which will require acquisition of additional ROW.

There are two (2) basins within the project limits. The location of where the proposed basins begin, and end is the same as the existing condition. The stormwater management systems were sized for stormwater attenuation and pollution abatement criteria. Multiple stormwater management system alternatives were considered which included dry retention ponds, treatment swales, exfiltration trenches, injection well, wetland stormwater ponds and wet detentions ponds.

The stormwater will be routed to proposed stormwater ponds and outfall to spreader swales that overflow into the adjacent wetlands. All of the ponds discharge to an Outstanding Florida Water (OFW) and nutrient impaired waters. Since seasonal high water elevations were not determined for the proposed pond sites, an elevation of 1 foot North American Vertical Datum (NAVD) was used based on existing permit information. Basins and stormwater pond locations are shown in **Figure 5-2**.

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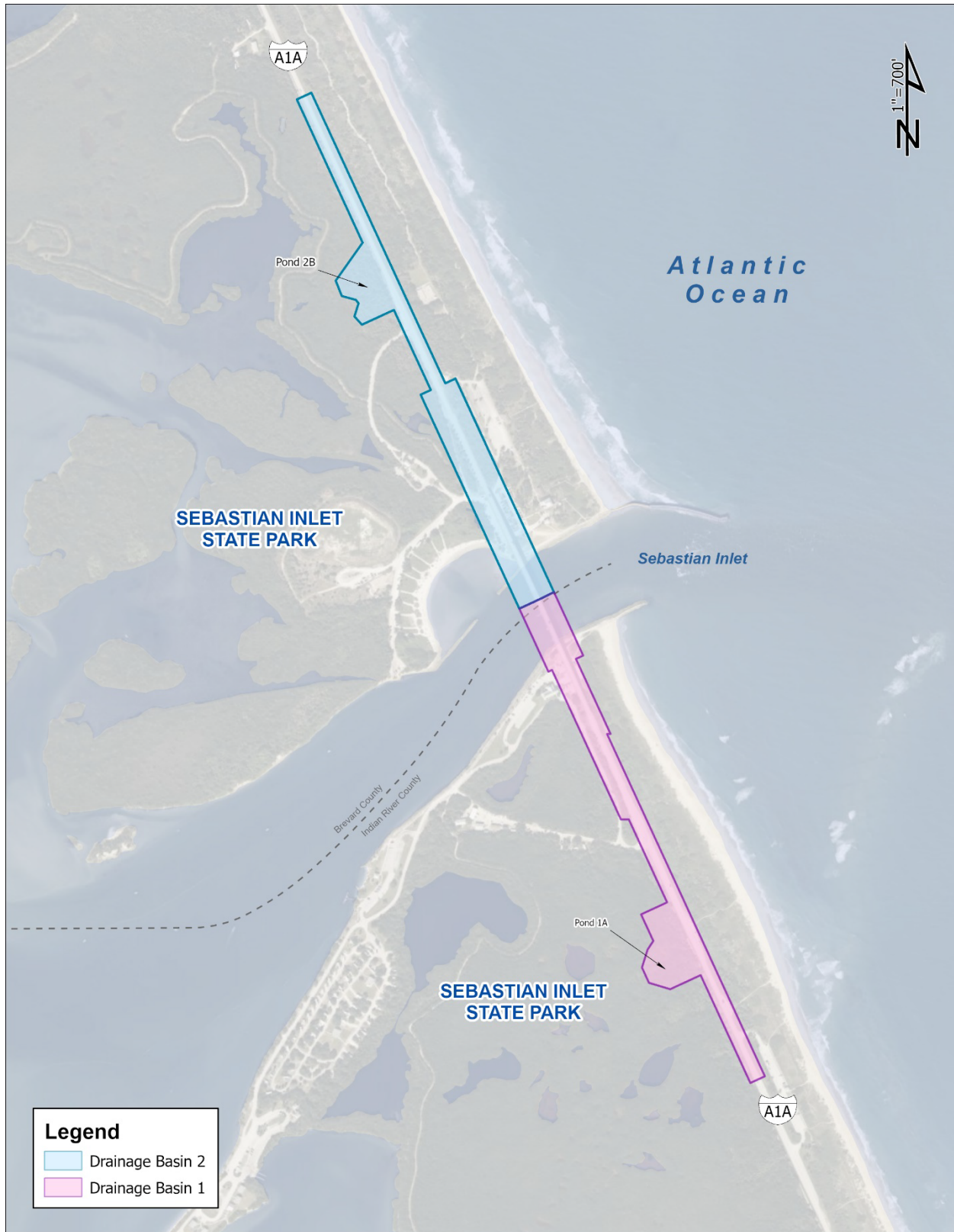


Figure 5-2: Drainage Basin Map

6.0 METHODOLOGY

A preliminary (Level I) evaluation of the Study Area was conducted to determine potential contamination issues within the proposed project limits from properties or operations located within the vicinity of the project. Per the PD&E Manual, the contamination Study Area encompasses the ROW and properties within 500 feet of the project area (non-petroleum hazardous waste sites, drycleaners and petroleum sites), solid waste sites within 1000 feet, and Comprehensive Environmental Response Compensation and Liability Act (CERCLA) Superfund or landfill sites within 1/2 mile. Sites found to have a history of contamination, or to house hazardous substances, were evaluated for potential contamination involvement with respect to each build alternative and a degree of risk was assigned for each identified site. For this project, each build alternative had the same potential for contamination involvement. The evaluation consisted of the following tasks:

1. A review of previous studies and/or documents completed by FDOT that include the project area, include:
 - a. Previous surveys for asbestos containing materials (ACM) were completed by FDOT in 2012 and 2014 for Bridge No. 880005. This bridge is concrete-only, and no Metal Based Coatings (MBC) or Lead Based Paint (LBP) are anticipated to be encountered during construction. An evaluation for LBP) or MBC will be completed during the project design phase.
 - b. LBP and Toxicity Characteristic Leaching Procedure (TCLP) screening surveys are available for the fishing pier bridge located under Bridge No. 880005. This bridge has metal components which were tested in 2013 and 2014 for lead, heavy metals and TCLP analysis.
2. A field survey was conducted in September 2021 to verify information obtained from public records, and to identify additional potential contamination sites not addressed in the public records.
3. Historical aerials obtained from FDOT Aerial Photo Look Up System (APLUS) and Google databases for the years 1968, 1974, 1980, 1983, 1984, 1986, 1993, 1999, 2004, 2009, 2012, 2015, 2018, and 2021 were studied to evaluate the corridor's development and to identify any potential contamination sites predating or unrecorded in available agency records.
4. The identification of facilities permitted to handle, store, or generate hazardous substances and sites with documented contamination discharges within 500 feet; non-landfill solid waste sites within 1000 feet; and CERCLA Superfund sites within 1/2 mile of the project corridor through the review of the Geographic Information Systems (GIS) databases of various Federal, State and local enforcement agencies. The GIS layers reviewed include, but were not limited to: the United States Environmental Protection Agency (USEPA) Resource Conservation and Recovery Act Regulated (RCRA) Facilities; EPA Superfund Sites; FDEP State Funded Hazardous Waste Cleanup Sites; FDEP Dry Cleaning Program Sites; FDEP Petroleum Contamination Monitoring Sites; FDEP Large Quantity Generators of Hazardous Waste; Brownfield Areas; FDEP Storage Tank Contamination Monitoring (STCM) sites; FDEP Solid Waste Facilities; FDEP Institutional Controls Registry; FDEP Treatment, Storage and Disposal (TSD) facilities of Hazardous Waste; and FDEP Compliance and Enforcement Tracking. Data collection from the GIS databases provided basic facility information including addresses, permit/discharge identification (ID) numbers, cleanup status, distance from right of way, etc.
5. Site history investigations conducted in September 2021 for each facility identified as a potential contamination concern were done by reviewing documentation available within Federal and State regulatory agency online databases. The online databases reviewed were the FDEP OCULUS and Map Direct data management systems.

6. This report provides the results of a Level I evaluation of the project corridor and defines the potential for contamination impacts. A Level II investigation, which includes soil and groundwater sampling or other means to verify the type and extent of contamination present (that may have the potential to impact the project), will be conducted during the Final Design phase, as necessary.

An evaluation of all data collected for each site was used to determine the site's potential degree of risk for contamination involvement with the proposed project. Risk ratings were assigned in accordance with Part 2, Chapter 20, Section 20.2.2.4 (July 1, 2020, revision) of the FDOT PD&E Manual. The contamination rating system is divided into four degrees of risk: No, Low, Medium and High. This system expresses the degree of likelihood for potential contamination problems that may impact project construction:

No – A review of available information on the property and a review of the conceptual or design plans indicates there is no potential contamination impact to the project. It is possible that contaminants have been handled on the property. However, findings from the Level I evaluation indicate that contamination impacts are not expected.

Low – A review of available information indicates that past or current activities on the property have an ongoing contamination issue; the site has a hazardous waste generator ID number, or the site stores, handles, or manufactures hazardous materials. However, based on the review of conceptual or design plans and/or findings from the Level I evaluation, it is not likely that there would be any contamination impacts to the project.

Medium – After a review of conceptual or design plans and findings from a Level I evaluation, a potential contamination impact to the project has been identified. If there is insufficient information (such as regulatory records or site historical documents) to make a determination as to the potential for contamination impact, and there is reasonable suspicion that contamination may exist, the property should be rated at least as a "Medium". Properties used historically as gasoline stations and which have not been evaluated or assessed by regulatory agencies, sites with abandoned in place underground petroleum storage tanks or currently operating gasoline stations should receive this rating.

High – After a review of all available information and conceptual or design plans, there is appropriate analytical data that shows contamination will substantially impact construction activities, have implications to right of way acquisition or have other potential transfer of contamination related liability to the FDOT.

7.0 PROJECT IMPACTS AND REGULATORY STATUS OF SITES

The project area was reviewed through the FDOT ETDM process where ETAT members provided input/comments. The ETDM Screening Summary Report (No. 14433) is included in **Appendix A**. During the review, FDEP assigned a degree of effect of "*None*", and the USEPA assigned a degree of effect of "*Minimal*" for contamination. USEPA's review of FDEP GIS data found no storage tank contamination monitoring sites, petroleum contamination monitoring sites, or solid waste sites within a 500-foot project buffer. However, a Phase I (Level I) review to identify any sites not listed in the GIS analysis, as well as an assessment of known sites was recommended to be completed during the PD&E Study and, if necessary, a Phase II (Level II) contamination site assessment. Consistent with these recommendations, a review of regulatory files and a field survey were conducted as part of the contamination screening evaluation to identify any potential contamination sources not captured during the preliminary screening that may affect the proposed project improvements.

7.1 REVIEW OF PREVIOUS FDOT STUDIES

There are no existing Level I or Level II evaluations for FDOT District Four that overlap the Sebastian Inlet Bridge project corridor. Previous surveys for ACMs were completed by FDOT in 2012 and 2014 for Bridge No. 880005. None of the materials sampled were defined as ACMs. This bridge is concrete-only, and no MBC or LBP are anticipated to be encountered during construction. However, an evaluation for LBP or MBC will be completed during the project design phase.

The fishing pier under the bridge includes metal components and were tested for LBP, heavy metals and TCLP analysis in 2013 and 2014. Although heavy metals were detected above EPA reporting limits, the TCLP analysis indicated that the waste stream associated with the painted surfaces was not classified as hazardous.

7.2 HISTORICAL AERIAL REVIEW

Available historical aerial photography from 1968 to 2021 was reviewed using the FDOT APLUS databases and Google Earth. The aerials were reviewed from a contamination perspective to identify any previous (i.e., former gas stations, cattle dip vats) or current land uses, not captured through regulatory file review or field surveys, that may have the potential to impact the proposed project improvements. No contamination potential was observed during a review of the historical aerials. A summary of the historical aerial photographs reviewed is presented in **Table 7-1**. and the historical aerial photographs are included in **Appendix B**.

Table 7-1: Historical Aerial Review	
Year	Summary of Observed Conditions
1968	The lagoon has been constructed west of the north side of the bridge. Single family homes are present on the north oceanside of the inlet. Southern bayside peninsula of the inlet has one structure constructed. The land is largely undeveloped.
1974	Single family homes no longer present, but some parking has been constructed in this area. Southern bayside peninsula has more small structures built. Structures along NE/SW access road south of the inlet have been built.
1980	Structures on the bayside southern peninsula removed. Structures along NE/SW access road south of the inlet expanded and further clearing of vegetation around buildings.
1983	Two paved parking lots have been built north of the inlet (one under the bridge and one further northeast). Northernmost parking lot features a boardwalk over the dunes to the sand. A toll booth has been built northwest of the parking lot under the bridge. Two permanent structures have been built just northeast bridge off the parking lot closest to the bridge, each building with boardwalks over the dunes and onto the sand. Two buildings have been constructed on the northeast side of the road, across from the toll road exit.
1984	No significant changes since 1983.
1986	Parking lot under southwest side of bridge on the southern side of the inlet has been constructed. A second parking lot has been constructed along southern bayside peninsula of the inlet and further clearing of the road has occurred.
1993	Middle portion of southern bayside peninsula has been completely cleared and additional roads, parking, and temporary structures have been constructed.
1999	No significant changes since 1993.
2004	The southern bayside peninsula now has structures stemming off of parking circle.

Table 7-1: Historical Aerial Review

Year	Summary of Observed Conditions
2009	No significant changes have occurred between 2003 and 2009.
2012	A parking loop west of the lagoon road has been constructed and the lagoon beach has been renourished with sand.
2015	The open area northwest of the lagoon has been cleared and the access trails to the beach have been maintained/widened.
2018	The southernmost tip of the bayside peninsula has been leveled.
2021	Sandmining has begun in the open area northwest of the lagoon.

7.3 POTENTIAL CONTAMINATION SITES

One potential contamination site was identified within 500 feet of the project area. No non-landfill solid waste facilities within 1000 feet or CERCLA Superfund/landfill sites within 1/2 mile of the project were identified. The site identified is located within with the Park area approximately 650 feet west of the project area. The potential contamination sites, shown in **Figure 7-1**, have been compared against the Build Alternatives and the results are summarized in **Table 7-2**.

Table 7-2: Number of Potentially Contaminated Sites per Build Alternative

Project Alternative	Contamination Risk			
	No	Low	Medium	High
1	0	1	0	0
2 (Preferred Alternative)	0	1	0	0
3	0	1	0	0

An evaluation summary for this site, including the assigned risk rating associated with the Preferred Alternative, is presented in **Table 7-3**.

Table 7-3: Potential Contamination Sites

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

NOTE: Each alternative impacted the same site and the risk rating for this site remained the same for all alternatives.



Figure 7-1: Contamination Sites

This evaluation revealed zero (0) **No** risk sites, one (1) **Low** risk site, zero (0) **Medium** risk sites and zero (0) **High** risk sites. A detailed description including historical information on the site is included below. Regulatory files for this site are included in **Appendix C**.

Site #1

Sebastian Inlet State Park
9700 South A1A
Melbourne Beach, FL 32951
FDEP Facility ID: 87434859

The site is owned by and located within the Park. The area of concern is a maintenance yard located within the larger Park boundary, is outside the project area, and is approximately 650 feet west of the project area. Historically this Park had two registered above ground storage tanks (AST) used to store unleaded gasoline. The first 1,000-gallon AST was installed in 1979. The earliest registration available was from 1987 and records show the tank was removed in 1990. In 1988, a second 1000-gallon AST was registered on-site. Records show this tank was closed in 1991 and removed by June 1992. During the 13 years of operation, no spills or violations were documented, and currently no known petroleum contamination exists in the soil or groundwater at this location. This site is now operating as the Park's maintenance/storage yard. The area includes several garages and bays with maintenance equipment and vehicles (i.e., trucks, trailers, mowers, tractors, generators). There is also a chemical storage shed located near the northern side of the maintenance yard driveway/access road.

During the field review, numerous drums were observed on site including: two 55-gallon drums in secondary containment labeled used oil and one smaller drum of unknown substance by the westernmost building; two smaller drums of unknown substance behind the second building (moving west to east); two 55-gallon drums and a smaller drum of unknown substance by the chemical storage shed; multiple gas cans (5-10-gallons) under a locked cabinet adjacent to the chemical storage shed; two 55-gallon storage tanks between building 3 and the open structure to the east; and one 55-gallon storage tank under the open structure. Site photographs from the field review can be found in **Appendix D**.

All drums and storage tanks were covered, and no signs of spills or contamination were observed. Furthermore, the closest project related improvements are limited to the south Park entrance approximately 650 feet east from the maintenance yard. While this site actively handles hazardous waste and petroleum products, there have been no reported spills on site. Therefore, contamination of the groundwater or soil and contamination impacts during construction are unlikely and the site was assigned a risk rating of **LOW**.

8.0 RECOMMENDATIONS

One site was identified and evaluated for potential soil and groundwater contamination. No sites evaluated were determined to have a 'High' or 'Medium' risk of contamination potential for all alternatives including the Preferred Alternative. One site within 650 feet of the project area is considered to present 'Low' risk based on current and historical permits, site use, and regulatory status. This site has records for the removal of two ASTs, and currently handles hazardous waste associated with Park maintenance equipment. The potential contamination types at this facility include petroleum hydrocarbons, spent oil, solvents, and other unknown chemicals. However, no contamination events have been documented at this site and soil or ground water contamination is not likely. No sites were determined to have 'No' contamination risk to the project.

Minimal ROW acquisition is required 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 maintenance yard, the need for Level II Contamination testing is not anticipated.

However, it is recommended that the project be reevaluated during the Final Design phase to determine if any new contamination-related risks are present and to evaluate potential dewatering concerns. Should the review identify any new sources of potential contamination, Level II Contamination Assessment investigations would be recommended for any areas that have proposed dewatering or subsurface work activities (e.g., pole foundations, drainage features) occurring adjacent to or at any potential contamination source.

ACM bridge survey reports for Bridge No 880005 dated 2012 and 2014 are available at FDOT and indicate that no ACM was identified in the samples collected. 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 the presence of MBCs or LBP will be completed during the 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 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 National Pollution Discharge Elimination System (NPDES) General Permit for Discharge of Groundwater will be required. The contractor will be held responsible for ensuring compliance with any necessary dewatering permits. A dewatering plan may be necessary to avoid potential contamination plume exacerbation, if found present within the project area. 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 Planning and Environmental Management Office as well as the appropriate regulatory agencies for assistance.

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APPENDIX A

Efficient Transportation Decision Making (ETDM) Report #14433



Florida Department of Transportation

RON DESANTIS
GOVERNOR

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KEVIN J. THIBAUT
SECRETARY

ETDM Summary Report

Project #14433 - SR A1A Sebastian Inlet Bridge (#880005) Replacement

Programming Screen - Published on 06/03/2020

Printed on: 12/08/2020

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Introduction to Programming Screen Summary Report

The Programming Screen Summary Report shown below is a read-only version of information contained in the Programming Screen Summary Report generated by the ETDM Coordinator for the selected project after completion of the ETAT Programming Screen review. The purpose of the Programming Screen Summary Report is to summarize the results of the ETAT Programming Screen review of the project; provide details concerning agency comments about potential effects to natural, cultural, and community resources; and provide additional documentation of activities related to the Programming Phase for the project. Available information for a Programming Screen Summary Report includes:

- Screening Summary Report chart
- Project Description information (including a summary description of the project, a summary of public comments on the project, and community-desired features identified during public involvement activities)
- Purpose and Need information (including the Purpose and Need Statement and the results of agency reviews of the project Purpose and Need)
- Alternative-specific information, consisting of descriptions of each alternative and associated road segments; an overview of ETAT Programming Screen reviews for each alternative; and agency comments concerning potential effects and degree of effect, by issue, to natural, cultural, and community resources.
- Project Scope information, consisting of general project commitments resulting from the ETAT Programming Screen review, permits, and technical studies required (if any)
- Class of Action determined for the project
- Dispute Resolution Activity Log (if any)

The legend for the Degree of Effect chart is provided in an appendix to the report.

For complete documentation of the project record, also see the GIS Analysis Results Report published on the same date as the Programming Screen Summary Report.

#14433 SR A1A Sebastian Inlet Bridge (#880005) Replacement

District: District 4

Phase: Programming Screen

County: Indian River

From:

Planning Organization: FDOT District 4

To:

Plan ID: Not Available

Financial Management No.: 445618-1

Federal Involvement: Other Federal Funding FHWA Funding Other Federal Permit USCG Bridge Permit

Contact Information: Gaspar Jorge Padron (850) 777-4320 gaspar.padron@dot.state.fl.us

Snapshot Data From: Summary Report Re-Published 6/03/2020

Issues and Categories are reflective of what was in place at the time of the screening event.

	Social and Economic						Cultural			Natural					Physical						
	Land Use Changes	Social	Relocation Potential	Farmlands	Aesthetic Effects	Economic	Mobility	Section 4(f) Potential	Historic and Archaeological Sites	Recreation Areas	Wetlands and Surface Waters	Water Quality and Quantity	Floodplains	Wildlife and Habitat	Coastal and Marine	Noise	Air Quality	Contamination	Infrastructure	Navigation	Special Designations
Alternative #1 From: North Indian River Drive To: Main Street <i>Re-Published: 06/03/2020 Reviewed from 12/12/2019 to 01/26/2020</i>	1	2	2	0	2	2	1	3	4	3	3	3	3	3	3	2	2	2	2	3	3

Purpose and Need

Purpose and Need

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 a 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.

Need

ProjectStatus

The bridge was most recently evaluated by the Florida Department of Transportation (FDOT) in November 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. The FDOT Bridge Policy dictates that structurally deficient bridges should be replaced within six years of being deemed structurally deficient. 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 State Route A1A. Just south of the Sebastian Inlet, State Route A1A includes a 9-foot multi-use path on the west side and 5-foot bike lanes on both sides. North of the Inlet, shoulders are 2 to 4 feet wide, although not marked as bike lanes.

The *Indian River County Bicycle and Pedestrian Plan* (IRCMPO, 2015) recommends sidewalks be added on both sides of State Route A1A from Windsor Boulevard to the County Line at the Sebastian Inlet to supplement the existing marked bike lanes. In addition, State Route A1A has been designated as a segment of the East Coast Greenway which provides a multi-modal 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.

Purpose and Need Reviews

FDOT Office of Environmental Management

Acknowledgement	Date Reviewed	Reviewer	Comments
Accepted	01/23/2020	Matthew Marino (Matthew.Marino@dot.state.fl.us)	No Purpose and Need comments found.

FL Department of Agriculture and Consumer Services

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/26/2020	Brian Camposano (Brian.Camposano@FDACS.gov)	No Purpose and Need comments found.

FL Department of Economic Opportunity

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/24/2020	Matt Preston (matt.preston@deo.myflorida.com)	No Purpose and Need comments found.

FL Department of State

Acknowledgement	Date Reviewed	Reviewer	Comments
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Understood	12/16/2019	Adrienne Daggett (Adrienne.Daggett@dos.myflorida.com)	Understood
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FL Fish and Wildlife Conservation Commission

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/24/2020	Jason Hight (Jason.Hight@MyFWC.com)	No Purpose and Need comments found.

National Marine Fisheries Service

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/22/2020	Jennifer Schull (Jennifer.Schull@noaa.gov)	No Purpose and Need comments found.

Saint Johns River Water Management District

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/26/2020	Melissa Parsons (mparsons@sjrwmd.com)	understood

US Army Corps of Engineers

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	12/23/2019	Mark Tamblyn (Mark.M.Tamblyn@usace.army.mil)	No Purpose and Need comments found.

US Coast Guard

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/17/2020	Randall Overton (randall.d.overton@uscg.mil)	No Purpose and Need comments found.

US Environmental Protection Agency

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	01/26/2020	Alya Singh-White (Singh-White.Alya@epa.gov)	No Purpose and Need comments found.

US Fish and Wildlife Service

Acknowledgement	Date Reviewed	Reviewer	Comments
Understood	12/12/2019	John Wrublik (john_wrublik@fws.gov)	no comments provided at this time.

Project Description Data

Project Description

The project proposes to replace the existing James H. Pruitt Memorial Bridge (FDOT # 880005) on State Route A1A over the Sebastian Inlet, at the border of Indian River and Brevard Counties. The new bridge will replace the existing two 12-foot travel lanes and add 8-foot shoulders, a barrier separated 8-foot sidewalk, and a barrier separated 12-foot shared use path. The low member bridge clearance will be 65 feet. Two low level observation piers will be evaluated in this PD&E Study.

Summary of Public Comments

Summary of Public Comments is not available at this time.

Justification

No public comments have been made.

Planning Consistency Status

No information available.

Federal Consistency Determination

Date: 01/30/2020

Determination: CONSISTENT, WITH COMMENTS with Coastal Zone Management Program.

Comment:

Please see comments provided by state agencies during the ETDM review.

Lead Agency

FDOT Office of Environmental Management

Participating and Cooperating Agencies

Cooperating Agencies

- US Coast Guard

Participating Agencies

- US Army Corps of Engineers

Exempted Agencies

Agency Name	Justification	Date
Federal Transit Administration	FTA has requested to be exempt from reviewing any non-transit projects.	11/04/2019

Community Desired Features

No desired features have been entered into the database. This does not necessarily imply that none have been identified.

User Defined Communities Within 500 Feet

- com.esri.aims.mtier.io.http.UnableToPingEsrimapException

Census Places Within 500 Feet

- com.esri.aims.mtier.io.http.UnableToPingEsrimapException

Alternative #1

Alternative Description

Name	From	To	Type	Status	Total Length	Cost	Modes	SIS
Alternative was not named.	North Indian River Drive	Main Street	Bridge	ETAT Review Complete	? mi.		Roadway Bicycle Pedestrian	N

Segment Description(s)

Location and Length

Segment No.	Name	Beginning Location	Ending Location	Length (mi.)	Roadway Id	BMP	EMP
Segment 1	Segment 1			0.339	Digitized		

Jurisdiction and Class

Segment No.	Jurisdiction	Urban Service Area	Functional Class
Segment 1		In/Out	

Base Conditions

Segment No.	Year	AADT	Lanes	Config
Segment 1				

Interim Plan

Segment No.	Year	AADT	Lanes	Config
Segment 1				

Needs Plan

Segment No.	Year	AADT	Lanes	Config
Segment 1				

Cost Feasible Plan

Segment No.	Year	AADT	Lanes	Config
Segment 1				

Funding Sources

No funding sources found.

Project Effects Overview for Alternative #1

Issue	Degree of Effect	Organization	Date Reviewed
Social and Economic			
Land Use Changes	1 Enhanced	FL Department of Economic Opportunity	01/24/2020
Social	2 Minimal	US Environmental Protection Agency	01/26/2020
Economic	N/A N/A / No Involvement	FL Department of Economic Opportunity	01/24/2020
Cultural			
Historic and Archaeological Sites	4 Substantial	FL Department of State	12/19/2019
Recreation Areas	2 Minimal	Saint Johns River Water Management District	01/26/2020
Recreation Areas	3 Moderate	FL Department of Environmental Protection	01/22/2020
Natural			
Wetlands and Surface Waters	3 Moderate	National Marine Fisheries Service	01/24/2020
Wetlands and Surface Waters	3 Moderate	US Environmental Protection Agency	01/26/2020
Wetlands and Surface Waters	2 Minimal	Saint Johns River Water Management District	01/26/2020

Wetlands and Surface Waters	3	Moderate	US Army Corps of Engineers	12/23/2019
Wetlands and Surface Waters	2	Minimal	US Fish and Wildlife Service	12/12/2019
Wetlands and Surface Waters	3	Moderate	FL Department of Environmental Protection	01/22/2020
Water Quality and Quantity	3	Moderate	US Environmental Protection Agency	01/26/2020
Water Quality and Quantity	3	Moderate	Saint Johns River Water Management District	01/24/2020
Water Quality and Quantity	2	Minimal	FL Department of Environmental Protection	01/22/2020
Floodplains	3	Moderate	Saint Johns River Water Management District	01/24/2020
Wildlife and Habitat	3	Moderate	US Fish and Wildlife Service	12/12/2019
Wildlife and Habitat	N/A	N/A / No Involvement	FL Department of Agriculture and Consumer Services	01/26/2020
Wildlife and Habitat	3	Moderate	FL Fish and Wildlife Conservation Commission	01/24/2020
Coastal and Marine	3	Moderate	National Marine Fisheries Service	01/24/2020
Coastal and Marine	2	Minimal	Saint Johns River Water Management District	01/26/2020
Physical				
Air Quality	2	Minimal	US Environmental Protection Agency	01/26/2020
Contamination	2	Minimal	US Environmental Protection Agency	01/26/2020
Contamination	0	None	FL Department of Environmental Protection	01/22/2020
Navigation	3	Moderate	US Coast Guard	01/17/2020
Navigation	3	Moderate	US Army Corps of Engineers	12/23/2019
Special Designations				
Special Designations	3	Moderate	Saint Johns River Water Management District	01/24/2020
Special Designations	3	Moderate	US Environmental Protection Agency	01/26/2020

ETAT Reviews and Coordinator Summary: Social and Economic

Land Use Changes

Project Effects

Coordinator Summary Degree of Effect: 1 *Enhanced* assigned 03/10/2020 by FDOT District 4

Comments:

The following resources are found within the project area:

100-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 2.72 / 30.42%

PARKS AND ZOOS / 2.13 / 23.83%

SHRUB AND BRUSHLAND / 1.94 / 21.75%

SWIMMING BEACH / 1.90 / 21.30%

CABBAGE PALM HAMMOCK / 0.24 / 2.70%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)

SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

200-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 5.92 / 30.66%
SHRUB AND BRUSHLAND / 4.32 / 22.34%
SWIMMING BEACH / 3.75/ 19.39%
PARKS AND ZOOS / 3.55 / 18.36%
CABBAGE PALM HAMMOCK / 1.02 / 5.27%
MANGROVE SWAMP / 0.77 / 3.98%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (1)

EAST COAST GREENWAY

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

500-foot buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 14.38 / 24.32%
SWIMMING BEACH / 12.28 / 20.78%
SHRUB AND BRUSHLAND / 8.98 / 15.19%
PARKS AND ZOOS / 8.00 / 13.54%
MANGROVE SWAMP / 7.72 / 13.07%
MISSING LAND USE CODE OR OUT OF BOUNDARY / 5.22 / 8.82%
CABBAGE PALM HAMMOCK / 2.42 / 4.09%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 0.11 / 0.18%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

1320-foot (Quarter Mile) buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

MISSING LAND USE CODE OR OUT OF BOUNDARY / 67.71 / 28.93%
MANGROVE SWAMP / 44.59 / 19.05%
BAYS AND ESTUARIES / 31.30 / 13.37%
PARKS AND ZOOS / 25.01 / 10.69%
SHRUB AND BRUSHLAND / 24.10 / 10.30%
SWIMMING BEACH / 22.78 / 9.73%
CABBAGE PALM HAMMOCK / 8.22 / 3.51%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 3.82 / 1.63%
MIXED HARDWOOD WETLAND / 2.79 / 1.19%
COMMERCIAL AND SERVICES / 1.40 / 0.60%
AUSTRALIAN PINE / 1.39 / 0.59%
UPLAND HARDWOOD / 0.96 / 0.41%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

The existing bridge spans the County line and therefore is within both Brevard and Indian River County. The project limits are not within any Community Redevelopment Area.

The project study area is surrounded by bays and estuaries, the Sebastian Inlet State Park, swimming beaches, wetlands, and native upland habitats. There are no residential neighborhoods or homeowner's associations.

The Indian River County Future Land Use Map and the Brevard County Future Land Use Map both show the project area as Recreation. The proposed replacement of the existing bridge will not alter the existing land use type or the future land use classification. Improvements are anticipated to occur primarily within the existing right-of-way and no residential or business relocations are anticipated. The proposed improvements will support the current and future land use patterns of the area and provide additional modes of transportation for the nearby communities in the form of designated bike lanes and sidewalks.

The Florida Department of Economic Opportunity (FDEO) commented that the project is compatible with the Brevard County Comprehensive Plan and the Indian River County 2030 Comprehensive Plan. The proposed project is not identified on either of the County's Future Transportation Map and FDEO recommends that the Counties update their maps to include the bridge replacement project. The project is not located within an Area of Critical State Concern, the Coastal High Hazard Area, or within or near a military base. FDEO assigned a degree of effect of Enhanced because the project will include pedestrian and bicycle accommodations which adds operational and safety benefits.

During the Project Development and Environment (PD&E) study, Florida Department of Transportation (FDOT) District Four will solicit input from the Sebastian Inlet State Park and local businesses within the study area concerning the proposed improvements. FDOT District Four will also coordinate with Indian River County Metropolitan Planning Organization (MPO) and Space Coast Transportation Planning Organization (TPO), to ensure that the project remains consistent with the local comprehensive and transportation plan(s).

FDOT District Four assigns a summary degree of effect of **Enhanced** to the Land Use Changes issue.

Degree of Effect: 1 *Enhanced* assigned 01/24/2020 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

1988 Brevard County Comprehensive Plan (Adopted in July of 1981).
Indian River County 2030 Comprehensive Plan (Adopted on October 12, 2010).

Comments on Effects to Resources:

Compatibility with Community Development Goals and Comprehensive Plan:

The proposed project is compatible with community development goals and consistent with the comprehensive plans.

Brevard County:

The Transportation Element of the Brevard County Comprehensive Plan Policy 2.8 provides that *Brevard County should consider supporting roadway improvement projects that: [C] Improve roadway continuity; [D] Provide operational and safety benefits to various transportation modes using the corridor.* The project will replace the current structurally deficient James H. Pruitt Memorial Bridge ensuring the roadway continuity of US Highway A1A. The inclusion of a barrier separated 8-foot sidewalk, and a barrier separated 12-foot shared use path adds enhanced operational and safety benefits to various non-motorized transportations modes.

Indian River County:

The Indian River Comprehensive Plan Transportation Element, Objective 4 Pedestrian/Bicycle System states: *Through 2030, 80% percent of roadways in Indian River County will operate at Bike/Ped LOS "D" or above.* The expansion and addition of pedestrian and bicycle accessibility helps to meet this objective. The project plan will enhance *Indian River County Bicycle and Pedestrian Plan* recommendations that enhance multimodal transportation along the State Route A1A.

Future Transportation Map:

The project is not included on either Future Transportation Map. DEO staff recommends that the counties update their maps to include the proposed project.

Land Uses:

The future land use designations adjacent to the proposed project are:

Brevard County:

The Recreation (REC) land use designation can be found to the north of the project. The Recreation designation identifies appropriate locations for public recreation land uses. Farther north, into the Sebastian Inlet State Recreation Area, land uses are designated as Public Conservation Lands (PUB-CONS). The Public Conservation designation is designed to provide for the protection of publicly held environmentally sensitive areas and intended to accommodate lands and facilities which are managed by federal, state and local governments within unincorporated Brevard County for conservation or preservation uses.

Indian River County:

The area to the south of the project, located within Indian River County has a designated Future Land Use designation of Recreation (REC). Farther south along the land body land use designation are Conservation-2 (C-2) on the western-side facing the Indian River Lagoon. Low-Density Residential-1 (L-1) (3 Units/Acre) is the designated land use on the eastern side.

Parks:

There are no county parks located in close proximity to the proposed project.

Area of Critical State Concern (ACSC), Coastal High Hazard Area (CHHA), and Military Bases:

The project is not located within an Area of Critical State Concern, nor does it encroach on any military installation. The project is located within the CHHA.

Other Planning-Related Items:

Sebastian Inlet State Park is located immediately south of the project.

Additional Comments (optional):

CLC Commitments and Recommendations:

Social

Project Effects

Coordinator Summary Degree of Effect: 2 Minimal assigned 03/10/2020 by FDOT District 4

Comments:

The following resources are found within the project area:

100-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 2.72 / 30.42%
PARKS AND ZOOS / 2.13 / 23.83%
SHRUB AND BRUSHLAND / 1.94 / 21.75%
SWIMMING BEACH / 1.90 / 21.30%
CABBAGE PALM HAMMOCK / 0.24 / 2.70%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

200-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 5.92 / 30.66%
SHRUB AND BRUSHLAND / 4.32 / 22.34%
SWIMMING BEACH / 3.75 / 19.39%
PARKS AND ZOOS / 3.55 / 18.36%
CABBAGE PALM HAMMOCK / 1.02 / 5.27%
MANGROVE SWAMP / 0.77 / 3.98%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (1)

EAST COAST GREENWAY

500-foot buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 14.38 / 24.32%
SWIMMING BEACH / 12.28 / 20.78%
SHRUB AND BRUSHLAND / 8.98 / 15.19%
PARKS AND ZOOS / 8.00 / 13.54%
MANGROVE SWAMP / 7.72 / 13.07%
MISSING LAND USE CODE OR OUT OF BOUNDARY / 5.22 / 8.82%
CABBAGE PALM HAMMOCK / 2.42 / 4.09%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 0.11 / 0.18%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

1320-foot (Quarter Mile) buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

MISSING LAND USE CODE OR OUT OF BOUNDARY / 67.71 / 28.93%
MANGROVE SWAMP / 44.59 / 19.05%
BAYS AND ESTUARIES / 31.30 / 13.37%
PARKS AND ZOOS / 25.01 / 10.69%
SHRUB AND BRUSHLAND / 24.10 / 10.30%
SWIMMING BEACH / 22.78 / 9.73%
CABBAGE PALM HAMMOCK / 8.22 / 3.51%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 3.82 / 1.63%
MIXED HARDWOOD WETLAND / 2.79 / 1.19%
COMMERCIAL AND SERVICES / 1.40 / 0.60%
AUSTRALIAN PINE / 1.39 / 0.59%
UPLAND HARDWOOD / 0.96 / 0.41%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

The project is located within an area classified as recreational (Sebastian Inlet State Park). The proposed project is anticipated to provide dedicated sidewalks and bike lanes along SR A1A. This will improve connectivity within the Sebastian Inlet State Park. The proposed project is anticipated to occur primarily within the existing right-of-way and no residential or business relocations are anticipated.

Community features associated with aesthetics identified within the 1,320-foot buffer include: the Sebastian Inlet State Park, the Sebastian Inlet State Park Trail, and the Sebastian Fishing Museum. There are no health care facilities, law enforcement facilities, religious centers, governmental buildings, assisted housing facilities, group care facilities, community centers, social service facilities, schools, or fire stations within the 1,320-foot buffer.

The Environmental Screening Tool (EST) Sociocultural Data Report for this project (reporting 2017 American Community Survey (ACS) data) was developed using the following 2017 Census Block Groups: 120610505012 and 120090661043. The 2017 ACS data indicate the project study area increased only slightly in population from 1990 (5 people) to 2017 (18 people). The population is White Alone (100%). Race and Ethnicity is characterized as follows: Black or African American Alone (0%), Native Hawaiian and Other Pacific Islander Alone (0%), Asian Alone (0%), American Indian or Alaska Native Alone (0%), Some Other Race Alone (0%), Claimed 2 or More Races (0%), Hispanic or Latino of Any Race (11.11%), Not Hispanic or Latino (88.89%), and Minority (16.67%). For comparison, Indian River County is 86.02% White, 12.08% Hispanic, and 24.08% Minority. Brevard County is 82.86% White, 9.69% Hispanic, and 24.72% Minority.

The 2017 ACS data indicate the median household income is \$89,800 and 12.50% of the households are below the poverty level. For comparison, Indian River County has a median household income of \$49,009 and 10.37% of households are below the poverty level. Brevard County has a median household income of \$51,536 and 12.49% of households are below the poverty level.

Data regarding language trends was not available for these census block groups. Therefore, the need for Limited English Proficiency accommodations during public involvement efforts will be determined during the PD&E Study.

The proposed project is expected to enhance the community by providing bike lanes and sidewalks. Because the project will be the replacement of an already existing bridge, the project will not divide neighborhoods or create social/cultural isolation. Construction related impacts (such as noise) are anticipated but would be temporary.

The US Environmental Protection Agency (USEPA) commented that the bridge replacement is over the Sebastian Inlet and is located adjacent to the Sebastian Inlet State Park. Although there are two Census Block Groups within the quarter-mile buffer, there are no residential land uses. Therefore, the USEPA assigned a degree of effect of Minimal.

During the PD&E study, FDOT District Four will conduct public outreach and obtain feedback to ensure that the social and transportation needs of the community are addressed during the project study. FDOT District Four will inform the community of its construction schedule and assess changes through signage, websites, and/or other means, as appropriate.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Social issue.

Degree of Effect: 2 *Minimal* assigned 01/26/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Social impacts to residential populations and communities, businesses, and other cultural resources such as social, economic, mobility, land use, and aesthetics. EPA is assigning a Minimal degree of effect to this issue.

Comments on Effects to Resources:

The project proposes to replace the existing James H. Pruitt Memorial Bridge (FDOT # 880005) on State Route A1A over the Sebastian Inlet, at the border of Indian River and Brevard Counties. The new bridge will replace the existing two 12-foot travel lanes and add 8-foot shoulders, a barrier separated 8-foot sidewalk, and a barrier separated 12-foot shared use path.

According to the preliminary environmental discussion (PED) report, the major existing land uses within the 500-foot buffer area are: Bays and Estuaries (24.3 percent of the buffer area), Swimming Beach (20.8 percent of the buffer area), Shrub and Brushland (15.19 percent of the buffer area), Parks and Zoos (13.54 percent of the buffer area), Mangrove Swamp (13.07 percent of the buffer area), Missing Land Use Code (8.82 percent of the buffer area), Cabbage Palm Hammock (4.09 percent of the buffer area), and Enclosed Saltwater Ponds within Marshes (0.18 percent of the buffer area). The bridge replacement is over the Sebastian Inlet and therefore is located in both Brevard and Indian River Counties. Upland of the bridge is the Sebastian Inlet State Park, which is mainly used as a public outdoor recreational facility.

There are two (2) Census Block Groups within the 1/4-mile project buffer. Within these block groups, the housing vacancy rate is approximately 44.6 percent. Both block groups have a majority "White Alone" population. However, GIS data shows that within the 500-foot project buffer, there are no residential land uses and thus no anticipation for the relocation of homes.

EPA is assigning a minimal degree of effect to this issue due to very limited impacts to residential communities, commercial businesses, as well as cultural resources.

Additional Comments (optional):

CLC Commitments and Recommendations:

Relocation Potential

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 03/10/2020 by FDOT District 4

Comments:

The following resources are found within the project area:

100-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 2.72 / 30.42%

PARKS AND ZOOS / 2.13 / 23.83%

SHRUB AND BRUSHLAND / 1.94 / 21.75%

SWIMMING BEACH / 1.90 / 21.30%

CABBAGE PALM HAMMOCK / 0.24 / 2.70%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

200-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 5.92 / 30.66%
SHRUB AND BRUSHLAND / 4.32 / 22.34%
SWIMMING BEACH / 3.75 / 19.39%
PARKS AND ZOOS / 3.55 / 18.36%
CABBAGE PALM HAMMOCK / 1.02 / 5.27%
MANGROVE SWAMP / 0.77 / 3.98%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (1)

EAST COAST GREENWAY

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

500-foot buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 14.38 / 24.32%
SWIMMING BEACH / 12.28 / 20.78%
SHRUB AND BRUSHLAND / 8.98 / 15.19%
PARKS AND ZOOS / 8.00 / 13.54%
MANGROVE SWAMP / 7.72 / 13.07%
MISSING LAND USE CODE OR OUT OF BOUNDARY / 5.22 / 8.82%
CABBAGE PALM HAMMOCK / 2.42 / 4.09%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 0.11 / 0.18%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

1320-foot (Quarter Mile) buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

- MISSING LAND USE CODE OR OUT OF BOUNDARY / 67.71 / 28.93%
- MANGROVE SWAMP / 44.59 / 19.05%
- BAYS AND ESTUARIES / 31.30 / 13.37%
- PARKS AND ZOOS / 25.01 / 10.69%
- SHRUB AND BRUSHLAND / 24.10 / 10.30%
- SWIMMING BEACH / 22.78 / 9.73%
- CABBAGE PALM HAMMOCK / 8.22 / 3.51%
- ENCLOSED SALTWATER PONDS WITHIN MARSHES / 3.82 / 1.63%
- MIXED HARDWOOD WETLAND / 2.79 / 1.19%
- COMMERCIAL AND SERVICES / 1.40 / 0.60%
- AUSTRALIAN PINE / 1.39 / 0.59%
- UPLAND HARDWOOD / 0.96 / 0.41%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

- SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
- SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

- EAST COAST GREENWAY
- SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

The project study area is surrounded by bays and estuaries, the Sebastian Inlet State Park, swimming beaches, wetlands, and native upland habitats. There are no residential neighborhoods or homeowner's associations.

The proposed improvements are anticipated to occur primarily within the existing right-of-way. Partial right-of-way impacts may occur within the Sebastian Inlet State Park; however, no business or residential relocations are anticipated for this project.

No Environmental Technical Advisory Team (ETAT) reviews were submitted for this issue.

It is recommended that further assessment of relocation effects be conducted during the PD&E phase as more detailed and finalized project information regarding right-of-way needs becomes available. The proposed improvements will be adjusted to avoid or minimize impacts to the Sebastian Inlet State Park.

During the PD&E study, FDOT District Four will solicit input from the Sebastian Inlet State Park and businesses that are adjacent to the bridge.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Relocation Potential issue.

None found

Farmlands

Project Effects

Coordinator Summary Degree of Effect: 0 None assigned 03/10/2020 by FDOT District 4

Comments:

There are no soils designated as Farmland of Unique Importance at any buffer widths from the project footprint. This project will have no negative impacts on Farmlands.

No ETAT reviews were submitted for this issue.

FDOT District Four assigns a summary degree of effect of **None** to the Farmlands issue.

None found

Aesthetic Effects

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 03/10/2020 by FDOT District 4

Comments:

The following resources are found within the project area:

100-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 2.72 / 30.42%
PARKS AND ZOOS / 2.13 / 23.83%
SHRUB AND BRUSHLAND / 1.94 / 21.75%
SWIMMING BEACH / 1.90 / 21.30%
CABBAGE PALM HAMMOCK / 0.24 / 2.70%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

200-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 5.92 / 30.66%
SHRUB AND BRUSHLAND / 4.32 / 22.34%
SWIMMING BEACH / 3.75 / 19.39%
PARKS AND ZOOS / 3.55 / 18.36%
CABBAGE PALM HAMMOCK / 1.02 / 5.27%
MANGROVE SWAMP / 0.77 / 3.98%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (1)

EAST COAST GREENWAY

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

500-foot buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 14.38 / 24.32%
SWIMMING BEACH / 12.28 / 20.78%

SHRUB AND BRUSHLAND / 8.98 / 15.19%
PARKS AND ZOOS / 8.00 / 13.54%
MANGROVE SWAMP / 7.72 / 13.07%
MISSING LAND USE CODE OR OUT OF BOUNDARY / 5.22 / 8.82%
CABBAGE PALM HAMMOCK / 2.42 / 4.09%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 0.11 / 0.18%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

1320-foot (Quarter Mile) buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

MISSING LAND USE CODE OR OUT OF BOUNDARY / 67.71 / 28.93%
MANGROVE SWAMP / 44.59 / 19.05%
BAYS AND ESTUARIES / 31.30 / 13.37%
PARKS AND ZOOS / 25.01 / 10.69%
SHRUB AND BRUSHLAND / 24.10 / 10.30%
SWIMMING BEACH / 22.78 / 9.73%
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AUSTRALIAN PINE / 1.39 / 0.59%
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Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

Community features associated with aesthetics reported within the 1,320-foot buffer include: the Sebastian Inlet State Park, the Sebastian Inlet State Park Trail, and the Sebastian Fishing Museum. There are no health care facilities, law enforcement facilities, religious centers, governmental buildings, assisted housing facilities, group care facilities, community centers, social service facilities, schools, or fire stations within the 1,320-foot buffer. The proposed project will have minimal, if any, impact on the viewshed of the surrounding communities.

No ETAT reviews were submitted for this issue.

During the PD&E study, FDOT District Four will solicit input from the Sebastian Inlet State Park and businesses regarding project effects and general design concepts related to aesthetics of the proposed bridge.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Aesthetic Effects issue.

None found

Economic

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 03/10/2020 by FDOT District 4

Comments:

The following resources are found within the project area:

100-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 2.72 / 30.42%
PARKS AND ZOOS / 2.13 / 23.83%
SHRUB AND BRUSHLAND / 1.94 / 21.75%
SWIMMING BEACH / 1.90 / 21.30%
CABBAGE PALM HAMMOCK / 0.24 / 2.70%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

200-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 5.92 / 30.66%
SHRUB AND BRUSHLAND / 4.32 / 22.34%
SWIMMING BEACH / 3.75 / 19.39%
PARKS AND ZOOS / 3.55 / 18.36%
CABBAGE PALM HAMMOCK / 1.02 / 5.27%
MANGROVE SWAMP / 0.77 / 3.98%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (1)

EAST COAST GREENWAY

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

500-foot buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 14.38 / 24.32%
SWIMMING BEACH / 12.28 / 20.78%
SHRUB AND BRUSHLAND / 8.98 / 15.19%
PARKS AND ZOOS / 8.00 / 13.54%
MANGROVE SWAMP / 7.72 / 13.07%
MISSING LAND USE CODE OR OUT OF BOUNDARY / 5.22 / 8.82%
CABBAGE PALM HAMMOCK / 2.42 / 4.09%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 0.11 / 0.18%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

1320-foot (Quarter Mile) buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

MISSING LAND USE CODE OR OUT OF BOUNDARY / 67.71 / 28.93%
MANGROVE SWAMP / 44.59 / 19.05%
BAYS AND ESTUARIES / 31.30 / 13.37%
PARKS AND ZOOS / 25.01 / 10.69%
SHRUB AND BRUSHLAND / 24.10 / 10.30%
SWIMMING BEACH / 22.78 / 9.73%
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ENCLOSED SALTWATER PONDS WITHIN MARSHES / 3.82 / 1.63%
MIXED HARDWOOD WETLAND / 2.79 / 1.19%
COMMERCIAL AND SERVICES / 1.40 / 0.60%
AUSTRALIAN PINE / 1.39 / 0.59%
UPLAND HARDWOOD / 0.96 / 0.41%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

The project study area is surrounded by bays and estuaries, the Sebastian Inlet State Park, swimming beaches, wetlands, and native upland habitats. Access to the adjacent Sebastian Inlet State Park and the Inlet Grille and Gifts are not anticipated but may be temporarily impacted during construction.

The proposed project is expected to enhance multimodal opportunities within the area by providing sidewalks and bike lanes on the proposed bridge. This will improve access to the Sebastian Inlet State Park and Inlet Grille and Gifts. This project is expected to benefit both the local community and visitors to the Sebastian Inlet State Park.

The FDEO commented that the project is not located within a Rural Area of Opportunity. The project has little to no potential for economic development immediately adjacent to the project study area due to its close proximity to Sebastian Inlet State Park. FDEO assigned a degree of effect of N/A / No Involvement.

During the PD&E study, FDOT District Four will solicit input from the Sebastian Inlet State Park and local businesses regarding potential economic enhancements/impacts resulting from the project. Access to the state park and businesses should be maintained during construction.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Economic issue.

Degree of Effect: N/A N/A / No Involvement assigned 01/24/2020 by Matt Preston, FL Department of Economic Opportunity

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comprehensive Plan(s) Reviewed:

1988 Brevard County Comprehensive Plan (Adopted in July of 1981).

Indian River County 2030 Comprehensive Plan (Adopted on October 12, 2010).

Comments on Effects to Resources:

The project is *not* located within a Rural Area of Opportunity.

There is very limited potential for the proposed project to attract new development and generate additional employment opportunities due to its close proximity to Sebastian Inlet State Park.

Additional Comments (optional):

CLC Commitments and Recommendations:

Mobility

Project Effects

Coordinator Summary Degree of Effect: 1 Enhanced assigned 03/10/2020 by FDOT District 4

Comments:

The following resources are found within the project area:

100-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 2.72 / 30.42%

PARKS AND ZOOS / 2.13 / 23.83%

SHRUB AND BRUSHLAND / 1.94 / 21.75%

SWIMMING BEACH / 1.90 / 21.30%

CABBAGE PALM HAMMOCK / 0.24 / 2.70%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)

SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

200-Foot Buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 5.92 / 30.66%
SHRUB AND BRUSHLAND / 4.32 / 22.34%
SWIMMING BEACH / 3.75 / 19.39%
PARKS AND ZOOS / 3.55 / 18.36%
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Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (1)

EAST COAST GREENWAY

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

500-foot buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

BAYS AND ESTUARIES / 14.38 / 24.32%
SWIMMING BEACH / 12.28 / 20.78%
SHRUB AND BRUSHLAND / 8.98 / 15.19%
PARKS AND ZOOS / 8.00 / 13.54%
MANGROVE SWAMP / 7.72 / 13.07%
MISSING LAND USE CODE OR OUT OF BOUNDARY / 5.22 / 8.82%
CABBAGE PALM HAMMOCK / 2.42 / 4.09%
ENCLOSED SALTWATER PONDS WITHIN MARSHES / 0.11 / 0.18%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

1320-foot (Quarter Mile) buffer:

2014 SJRWMD FL Land Use and Land Cover / Acres / Percent

MISSING LAND USE CODE OR OUT OF BOUNDARY / 67.71 / 28.93%
MANGROVE SWAMP / 44.59 / 19.05%
BAYS AND ESTUARIES / 31.30 / 13.37%
PARKS AND ZOOS / 25.01 / 10.69%
SHRUB AND BRUSHLAND / 24.10 / 10.30%

SWIMMING BEACH / 22.78 / 9.73%
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MIXED HARDWOOD WETLAND / 2.79 / 1.19%
COMMERCIAL AND SERVICES / 1.40 / 0.60%
AUSTRALIAN PINE / 1.39 / 0.59%
UPLAND HARDWOOD / 0.96 / 0.41%

Transportation Disadvantaged Service Provider Areas (TDSP) in Florida - 2010 (2)

SENIOR RESOURCE ASSOCIATION, INC. (INDIAN RIVER COUNTY)
SPACE COAST AREA TRANSIT (BREVARD COUNTY)

FDOT RCI Bridges (1)

880005

Parks and Recreational Facilities (1)

SEBASTIAN INLET STATE PARK

Existing Recreational Trails (2)

EAST COAST GREENWAY
SEBASTIAN INLET STATE PARK TRAIL

Cultural Centers (1)

SEBASTIAN FISHING MUSEUM

The proposed Sebastian Inlet Bridge will likely include sidewalks on both the east and west sides of the bridge. The proposed improvements will also provide future accommodations for bicyclists.

The proposed sidewalks and bike lanes on the bridge will improve mobility of pedestrian and bicyclists utilizing the bridge. Mobility may be temporarily impacted during construction; however, the overall effect would be enhanced.

No ETAT reviews were submitted for this issue.

During the PD&E study, FDOT District Four will solicit input from residents, including elderly, low-income, and transportation disadvantaged populations and local businesses to obtain feedback regarding preferences for the project related to mobility.

FDOT District Four assigns a summary degree of effect of **Enhanced** to the Mobility issue.

None found

ETAT Reviews and Coordinator Summary: Cultural

Section 4(f) Potential

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 03/10/2020 by FDOT District 4

Comments:

No ETAT reviews were submitted for this issue, however because this project may be federally-funded, Section 4(f) is applicable. The Sebastian Inlet State Park is immediately adjacent to the proposed project. This park is owned and operated by the State of Florida and therefore is a Section 4(f) resource. During the PD&E phase, a Section 4(f) Determination of Applicability will be completed in accordance with Part 2, Chapter 7 of the FDOT PD&E Manual for any potential impacts to this park. Additional Section 4(f) properties located within the study area will be determined during the PD&E study.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Section 4(f) Potential issue.

None found

Historic and Archaeological Sites

Project Effects

Coordinator Summary Degree of Effect: 4 *Substantial* assigned 03/10/2020 by FDOT District 4

Comments:

The Florida Department of State (FDOS) commented that this area has not been comprehensively surveyed and therefore FDOS recommends that a survey be conducted for the project and all cultural resources should be documented and assessed for National Register of Historic Places (NRHP) eligibility. FDOS (or the appropriate federal agency) should be forwarded the resultant survey for review. FDOS commented that the Sebastian Inlet

Bridge is eligible for listing with the NRHP. FDOS assigned a degree of effect of Substantial.

FDOT will prepare a Cultural Resources Assessment Survey (CRAS) in accordance with Part 2, Chapter 8 of the FDOT PD&E Manual. The CRAS will be coordinated with the State Historic Preservation Officer (SHPO).

FDOT District Four assigns a summary degree of effect of **Substantial** to the Historic and Archaeological Sites issue.

Degree of Effect: 4 *Substantial* assigned 12/19/2019 by Adrienne Daggett, FL Department of State

Coordination Document: PD&E Support Document As Per PD&E Manual

Coordination Document Comments:

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 8 and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment.

Direct Effects

Identified Resources and Level of Importance:

As identified. Bridge 880004 is eligible for listing in the National Register of Historic Places.

Comments on Effects to Resources:

The project has the potential to impact cultural resources within and adjacent to the proposed project. Replacing an eligible bridge typically results in an adverse effect.

Additional Comments (optional):

Since the project area has not been comprehensively surveyed, a survey should be conducted for this project. All cultural resources, including potential historic districts, within the area of potential effect should be documented and assessed for NRHP eligibility. The resultant survey report shall conform to the specifications set forth in Chapter 1A-46 Florida Administrative Code, FDOT PD&E Manual Part 2, Chapter 8 and will need to be forwarded to this agency (or the appropriate Federal Agency) for review and comment.

CLC Commitments and Recommendations:

Recreation Areas

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 03/10/2020 by FDOT District 4

Comments:

The Florida Department of Environmental Protection (FDEP) commented that the Sebastian Inlet State Park, East Coast Greenway and the Sebastian Inlet Trail occur within the 500-foot buffer. Impacts should be minimized to the adjacent state park. FDEP assigned a degree of effect of Moderate.

The St. Johns River Water Management District (SJRWMD) commented that wetlands should be avoided to the greatest extent practicable and if wetlands cannot be avoided, then mitigation would be warranted. SJRWMD assigned a degree of effect of Minimal.

Based upon review of the EST GIS analysis, the Sebastian Inlet State Park, East Coast Greenway and the Sebastian Inlet Trail are within the project buffer. The proposed project would enhance the recreational use of the bridge by pedestrians and cyclists, as sidewalks and bicycle lanes will be evaluated as a part of the project. Additional effects to these recreation areas will be determined during the PD&E phase.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Recreation Areas issue.

Degree of Effect: 2 *Minimal* assigned 01/26/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

All wetlands will need to be avoided. If impacts are proposed mitigation will be warranted.

Comments on Effects to Resources:

Since this is a replacement bridge there should only be minimal impact if the existing bridge footprint is utilized.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: **3** Moderate assigned 01/22/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

The Sebastian Inlet State Park, East Coast Greenway and the Sebastian Inlet Trail occurs within the 500 ft. buffer of the project area.

Comments on Effects to Resources:

Every effort to minimize the impacts to the adjacent state park should be made. Please Contact the Department's Parks and Recreation Division for additional information on these public resources. <https://www.fldepnet.org/content/drp/office-greenways-and-trails>.

Additional Comments (optional):

CLC Commitments and Recommendations:

ETAT Reviews and Coordinator Summary: Natural

Wetlands and Surface Waters

Project Effects

Coordinator Summary Degree of Effect: **3** Moderate assigned 03/10/2020 by FDOT District 4

Comments:

FDEP commented that there is approximately 29.17 acres of various wetlands within the 500-foot buffer. An Environmental Resource Permit (ERP) will be required and the applicant will be required to eliminate or reduce proposed wetland resource impacts. FDEP assigned a degree of effect of Moderate.

The National Marine Fisheries Service (NMFS) commented that seagrass, mangroves, sand/shell bottom, oysters, hardbottom, and worm reef may occur at the project site. These habitats are considered Essential Fish Habitat (EFH). Mangrove, hardbottom, worm reef, and seagrass are also considered Habitat Areas of Particular Concern (HAPC). Also, the project is located within the Sebastian Inlet State Park, which is an Aquatic Preserve and Outstanding Florida Water. Listed species that could inhabit the project area include green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), Kemp's ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), smalltooth sawfish (*Pristis pectinata*), and the giant manta ray (*Manta birostris*). The project area supports seagrass, which may include Johnson's seagrass (*Halophila johnsonii*) and is listed as threatened under the Endangered Species Act. Johnson's seagrass critical habitat is found just west of the project location, and recent seagrass surveys show significant recovery of diverse seagrass assemblages in this area. Loggerhead sea turtle critical habitat is found just outside the inlet from the project area as well. To minimize impacts during construction, construction of the bridge should take place from the uplands and be within the same alignment as the current bridge. Therefore, NMFS assigned a degree of effect of Moderate.

SJRWMD commented that all wetlands and surface waters will need to be delineated. Wetland impacts will need to be mitigated. The project occurs in Basin 22 Central Indian River Lagoon, which contains two suitable mitigation banks. SJRWMD assigned a degree of effect of Minimal.

The US Army Corps of Engineers (USACE) commented that either a Standard Permit or a Nationwide permit would be required for this project. A Section 408 review will also be required. An Individual permit may be required for this project. There are US wetlands and surface waters within the project area. Avoidance and minimization should be incorporated into the projects design. Compensatory mitigation must be provided for any adverse wetland impacts. A review of the Corps RIBITS indicates that the proposed project corridor would not traverse the geographical service areas of any federally approved mitigation banks or in-lieu fee programs. Permittee responsible on-site and/or off-site mitigation options for unavoidable impacts should be considered early on in the project development and planning phases. USACE assigned a degree of effect of Moderate.

The USEPA commented that wetlands serve a variety of functions and therefore are a critical natural resource. The NWI dataset of the GIS analysis identified approximately 24.1 acres of estuarine wetlands and 5.0 acres of marine wetlands within the 500-foot project buffer. The wetland study should include a delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts. Lastly, Best Management Practices (BMPs) should be implemented during construction to minimize impacts to adjacent wetlands and surface waters. The USEPA assigned a degree of effect of Moderate.

The US Fish and Wildlife Service (USFWS) commented that wetlands provide important habitat for fish and wildlife. Wetlands may be within the project study area and if impacted, mitigation will be required that fully compensates for the loss of important resources. USFWS assigned a degree of effect of Minimal.

A Wetlands Evaluation will be prepared and documented in a Natural Resource Evaluation (NRE) Technical Memorandum in accordance with Part 2, Chapter 9 of the FDOT PD&E Manual to evaluate adverse impacts to wetlands. A mitigation plan will be prepared and will be included in the NRE. FDOT will confirm the appropriate permits required.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Wetlands and Surface Waters issue.

Degree of Effect: 3 *Moderate* assigned 01/24/2020 by Jennifer Schull, National Marine Fisheries Service

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

Based on our review of the information provided on the ETDM website and aerial image interpretation, NOAA's National Marine Fisheries Service (NMFS) has determined that seagrass, mangroves, sand/shell bottom, oysters, hardbottom, and worm reef may occur at the project site. The project is located at the Sebastian Inlet which is within Sebastian Inlet State Park, an Aquatic Preserve and Outstanding Florida Water. These wetlands, estuarine and marine environments are of moderate to excellent quality. The South Atlantic Fishery Management Council (SAFMC) has designated these habitats as essential fish habitat (EFH). Mangrove, hardbottom, worm reef, and seagrass habitats are also considered Habitat Areas of Particular Concern (HAPC). HAPC's are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area.

Federally managed fishery species associated with mangrove and seagrass habitat include postlarval, juvenile, and adult gray, lane and schoolmaster snappers; juvenile goliath grouper and mutton snapper; and adult white grunt. Seagrass is habitat for members of the snapper-grouper complex and postlarval, juvenile, and subadult stages of penaeid shrimp. Federally managed fishery species associated with sand and shell bottom habitat include postlarval, juvenile, and subadult stages of penaeid shrimp; and members of the snapper-grouper complex. The inlet and worm reef habitats are EFH and HAPC for coastal migratory pelagic species such as king mackerel, and Spanish mackerel. The SAFMC provides additional information on EFH and HAPCs and their support of federally managed fishery species in the *Fishery Ecosystem Plan of the South Atlantic Region*, which is available at www.safmc.net.

The seagrass and mangroves are part of a habitat complex that supports a diverse community of fish and invertebrates within the area, including recreationally and commercially important reef, migratory, and pelagic fish. Seagrass and mangroves also benefit fishery resources by providing important nursery and forage habitat. Seagrass provides important water quality maintenance functions (such as pollution uptake), stabilize sediments, attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. Mangroves in the project area indirectly support fishery habitat by controlling runoff and turbidity and by stabilizing sediment. Nearshore hardbottom and worm reef are productive habitats that provide forage and shelter opportunities for a variety of marine species.

Several species listed as either threatened or endangered under the Endangered Species Act may inhabit the project area. These species include green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), Kemp's ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), smalltooth sawfish (*Pristis pectinata*), and the giant manta ray (*Manta birostris*). The project site supports seagrass, which may include Johnson's seagrass (*Halophila johnsonii*), which is listed as threatened under the Endangered Species Act. Johnson's seagrass critical habitat is found just west of the project location, and recent seagrass surveys show significant recovery of diverse seagrass assemblages in this area (See: Atkins 2018 Annual Seagrass Monitoring Report, March 2019 on behalf of Sebastian Inlet District). Loggerhead sea turtle critical habitat is found just outside the inlet from the project area as well.

Comments on Effects to Resources:

The above listed resources may be impacted by the project. Surveys should be conducted that document and quantify all EFH present including seagrass species, location, and density; all hardbottom communities; and delineation of mangrove wetlands. A protected resources Biological Assessment should also be prepared to determine if consultation under Section 7 of the ESA will be required.

If the bridge is replaced, impacts will likely be substantial from construction, re-engineering of the shoreline, right-of-way, routing of traffic, and construction of the new bridge. If possible, construction and/or rehabilitation should take place from the uplands and within the same alignment as the current bridge. Shading impacts from barge-based construction and the new bridge need to be considered. Barge spudding may impact EFH. Impacts to EFH should be avoided and minimized to the extent practical. Mitigation for unavoidable impacts to EFH will be required. Best Management Practices should be followed to reduce or eliminate impacts from sedimentation and runoff. It will be critically important to avoid and minimize impacts to seagrass beds in the area, as the Indian River Lagoon has experienced severe seagrass die-offs and there is evidence of seagrass (including threatened Johnson's seagrass) recovery near the inlet.

With construction of the new bridge, impervious surface area will be increased. The discharge of hydrocarbons and other contaminants may degrade water quality. Subsequently, NOAA trust resources located in the receiving waters could be adversely affected. Surface and stormwater runoff must be treated prior to discharge and in accordance with state and federal (NPDES) standards.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 01/26/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Wetlands are a high level of importance as they are a critical natural resource and serve several functions including filtration/treatment of surface water runoff, flood control, erosion control, groundwater recharge/discharge, wildlife and species habitat, and recreation and tourism opportunities.

Comments on Effects to Resources:

The project proposes to replace the existing James H. Pruitt Memorial Bridge (FDOT # 880005) on State Route A1A over the Sebastian Inlet, at the border of Indian River and Brevard Counties. The new bridge will replace the existing two 12-foot travel lanes and add 8-foot shoulders, a barrier separated 8-foot sidewalk, and a barrier separated 12-foot shared use path.

The National Wetlands Inventory (NWI) dataset of the GIS analysis identified approximately 24.1 acres of estuarine wetlands and 5.0 acres of marine wetlands within the 500-foot project buffer. The St. Johns River Water Management District 2014 GIS data showed 7.72 acres of mangrove swamps within the 500-foot project buffer. The project buffer is located within the Indian River - Malabar to Vero Beach Outstanding Florida Water (OFW) and the Sebastian Inlet State Park OFW. An OFW is a water designated worthy of special protection because of its natural attributes. This special designation is applied to certain waters and is intended to protect existing good water quality. The addition of rock substrate and fill material has great potential to impact wetlands and surface waters.

The environmental phase should focus on identifying wetland areas that will be impacted by the project. The wetland study should include a delineation of wetlands; functional analysis of wetlands to determine their value and function; an evaluation of stormwater pond sites to determine their impact on wetlands; avoidance and minimization strategies for wetlands; and mitigation plans to compensate for adverse impacts. Potential impacts are anticipated to be moderate, but every effort should be made to maximize the collection and treatment of stormwater. Stormwater runoff should be diverted away from surface waters. Best management practices should be implemented during construction. Additionally, stormwater collection and treatment mechanisms should be designed to protect the function of surrounding wetlands and surface water features.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 01/26/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

All wetland and surface waters will need to be delineated. All resource that are adversely impacted will need to be mitigated. The project occurs in basin 22 **Central Indian River Lagoon**.

It consist of two mitigation banks.

Regulatory Basin 22-Central Indian River Lagoon

Basin 22-

SJRWMD: 85.74 forested UMAM, 18.60 herbaceous UMAM

Federal: 26.35 Palustrine Emergent UMAM, 43.9 Palustrine Forested UMAM

CGW-

SJRWMD: 3.38 credits ratio general wetlands

Federal: 23.16 estuarine M-WRAP credits

Comments on Effects to Resources:

All wetlands within the project limits will need to be delineated and any proposed impacts quantified and mitigated for.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 3 *Moderate* assigned 12/23/2019 by Mark M Tamblyn, US Army Corps of Engineers

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

The proposed project will more than likely have to be permitted using a Standard Individual Permit review, given that the project corridor is within tidal waters and are Outstanding Florida Waters. There is a possibility that a Nationwide 3 (Maintenance) or/and a Nationwide 15 (U.S. Coast Guard Approved Bridges) could be used as the project development and planning moves forward. Mitigation should be looked at and identified, throughout the entire project. A section 408 review should also be initiated early on in the permitting process.

Direct Effects

Identified Resources and Level of Importance:

The waters of the U.S. (wetlands and surface waters) are Outstanding Florida Waters, included in the Indian River Lagoon Aquatic Preserve. 24.13 acres of estuarine wetlands exist within a 500 foot buffer; 7.73 acres of estuarine wetlands exist within a 200 foot buffer; and 2.97 acres of estuarine wetlands exist within a 100 foot buffer. The level of importance would be substantial for a new bridge replacement across the Sebastian Inlet. In water placement of rock substrate and wetland fill associated with the new bridge replacement, in addition to roadway improvements will be a challenge along this corridor to avoid and minimize impacts to wetlands and surface waters during construction.

Comments on Effects to Resources:

Any estuarine wetlands in the project area deemed to be jurisdictional along the bridge replacement corridor will contain higher quality wetlands including mangroves swamps and saltwater marsh considered Essential Fish Habitat (EFH). Given the jurisdictional wetland resources along the proposed project corridor, any impacts to these resources will be substantial. Mitigation should be looked at and planned for within the design and planning phase of this project.

Additional Comments (optional):

The proposed project will more than likely have to be permitted using a Standard Individual Permit review, given that the project corridor is within tidal waters and are Outstanding Florida Waters. There is a possibility that a Nationwide 3 (Maintenance) or/and a Nationwide 15 (U.S. Coast Guard Approved Bridges) could be used as the project development and planning moves forward. Mitigation should be looked at and identified, throughout the entire project. A section 408 review should also be initiated early on in the permitting process.

CLC Commitments and Recommendations:

Degree of Effect: 2 *Minimal* assigned 12/12/2019 by John Wrublik, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Wetlands

Comments on Effects to Resources:

Wetlands provide important habitat for fish and wildlife. Wetlands may occur within and near the project site. We recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to these wetlands are unavoidable, we recommend the Florida Department of Transportation provide mitigation that fully compensates for the loss of important resources.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: **3** *Moderate* assigned 01/22/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

The National Wetlands Inventory GIS report indicates that a total of 29.17 acres of estuarine wetlands occur within the 500-ft. project buffer zone. The project area is located near the estuarine resources of the Indian River - Malabar to Vero Beach Aquatic Preserve.

Comments on Effects to Resources:

The project will require an environmental resource permit (ERP) from the St. Johns River Water Management District. The ERP applicant will be required to eliminate or reduce the proposed wetland resource impacts of highway construction to the greatest extent practicable.

Additional Comments (optional):

CLC Commitments and Recommendations:

Water Quality and Quantity

Project Effects

Coordinator Summary Degree of Effect: **3** *Moderate* assigned 03/10/2020 by FDOT District 4

Comments:

The FDEP commented that the project is located in the Indian River Lagoon and the waters of the Sebastian Inlet State Park, which is designated as an Outstanding Florida Water (OFW). Stormwater runoff should be treated prior to being released into the OFW. The PD&E study should include an evaluation of existing stormwater treatment adequacy and details on the future stormwater treatment facilities. FDEP assigned a degree of effect of Minimal.

The SJRWMD commented that the project is adjacent to and/or partially within the limits of the Indian River Malabar to Vero Beach Aquatic Preserve and the Sebastian Inlet State Recreation Area, which are designated as an OFWs. The proposed project should be designed to provide water quality treatment for discharge to OFWs and Class II waters as required per Parts IV and V, SJRWMD ERP Applicant's Handbook (A.H.), Volume II, and subsection 62-330.301(1)(e), F.A.C. SJRWMD assigned a degree of effect of Moderate.

The USEPA recommended that environmental studies for this project include a review of water quality standards for 303(d) listed water bodies, TMDL requirements, and how these regulations and/or requirements may affect the proposed project and environmental resource permits. The project buffer is located within the Indian River - Malabar to Vero Beach OFW and the Sebastian Inlet State Park OFW. The proposed project is expected to generate additional stormwater runoff that could potentially cause adverse water quality and quantity impacts to receiving waters and adjacent. Indirect and cumulative effects on water quality should be evaluated to identify and quantify incremental and cumulative impacts on natural resources (water quality - surface water) as a result of the proposed project. Every effort should be made to maximize the collection and treatment of stormwater. USEPA assigned a degree of effect of Moderate.

The PD&E study will include a Water Quality Impact Evaluation in accordance with Part 2, Chapter 11 of the FDOT PD&E Manual which will identify potential effects on the surface and groundwater resources and identify the impaired waters and other water body classifications (Class I, II, III, OFW, etc.) that could be affected by this project. The effects on water quality and means to avoid, minimize, and mitigate impacts will be evaluated during the study based on the project specific effects from the alternatives developed during the study.

Stormwater Pollution Prevention Plans (SWPPP) will also be prepared during the design phase of the project and will be incorporated into the construction contract to ensure that Best Management Practices (BMPs) are implemented to control stormwater runoff and other potential water quality impacts.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Water Quality and Quantity issue.

Degree of Effect: **3** *Moderate* assigned 01/26/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Water quality within the project area and within the State of Florida are of a high level of importance. EPA is assigning a moderate degree of effect to this issue for the proposed project.

Comments on Effects to Resources:

The project proposes to replace the existing James H. Pruitt Memorial Bridge (FDOT # 880005) on State Route A1A over the Sebastian Inlet, at the border of Indian River and Brevard Counties. The new bridge will replace the existing two 12-foot travel lanes and add 8-foot shoulders, a barrier separated 8-foot sidewalk, and a barrier separated 12-foot shared use path.

This project is located within the Vero Beach Watershed and the St. Sebastian River - Indian River Drainage Basin. The project is within the Surficial Aquifer System, which is not classified as a Sole Source Aquifer. There is one (1) Impaired waterbody within the 500-foot project buffer: South Indian River (Near St. Sebastian River). It should be noted that the project is located within the watershed of the Indian River near St. Sebastian River (WBID 5003D1), which has a TMDL for nutrients. It is recommended that environmental studies for this project include a review of water quality standards for 303(d) listed water bodies, TMDL requirements, and how these regulations and/or requirements may affect the proposed project and environmental resource permits.

The project buffer is located within the Indian River - Malabar to Vero Beach OFW and the Sebastian Inlet State Park OFW. An OFW is a water designated worthy of special protection because of its natural attributes. The proposed project is expected to generate additional stormwater runoff that could potentially cause adverse water quality and quantity impacts to receiving waters and adjacent. Indirect and cumulative effects on water quality should be evaluated to identify and quantify incremental and cumulative impacts on natural resources (water quality - surface water) as a result of the proposed project. Every effort should be made to maximize the collection and treatment of stormwater. Stormwater runoff should be diverted from surface waters. Best management practices should be implemented during construction, including the installation and regular maintenance of erosion control structures. Additionally, stormwater collection and treatment mechanisms should be designed to protect the function of surrounding wetlands and surface water features.

Additional Comments (optional):**CLC Commitments and Recommendations:**

Degree of Effect: 3 *Moderate* assigned 01/24/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document: Permit or Technical Study Required

Direct Effects**Identified Resources and Level of Importance:**

The project is adjacent to and/or partially within the limits of the Indian River Malabar to Vero Beach Aquatic Preserve and the Sebastian Inlet State Recreation Area, which are designated as an Outstanding Florida Waters (OFWs). The Indian River, including the inlet, is also identified as Class II waters. Additionally, although the Indian River in the project location is an OFW and Class II waters, the project is located within the watershed of the Indian River near St. Sebastian River (WBID 5003D1), which has a DEP-adopted TMDL for nutrients. The proposed project is expected to generate stormwater runoff that could potentially cause adverse water quality and quantity impacts to receiving waters and adjacent lands. Additionally, the proposed project may potentially affect existing permitted systems within and/or adjacent to the project boundary. However, the Degree of Effect is assumed to be "Moderate" because the project will require a General Permit or Individual Environmental Resource Permit (ERP), and designing the project to meet the requirements for a General Permit in 62-330.443, F.A.C., or the applicable Water Management District design criteria and the conditions for issuance of an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse water quality or quantity impacts to water resources and adjacent lands.

Water Quality:

Unless the project qualifies for a General Permit pursuant to 62-330.443, F.A.C., the proposed project should be designed to provide water quality treatment for discharge to OFWs and Class II waters as required per Parts IV and V, SJRWMD ERP Applicant's Handbook (A.H.), Volume II, and subsection 62-330.301(1)(e), F.A.C. The required treatment volumes and recovery times are based on the methodology of treatment, which can be found in Parts V and IX, SJRWMD ERP A.H., Volume II. If the discharge from the surface water management system is considered a direct discharge to the Indian River near St. Sebastian River (WBID 5003D1), the project design should include a demonstration that the system will provide a net improvement in the load of nutrients (both total nitrogen and total phosphorus) discharged to the water body.

Water Quantity:

Unless the project qualifies for a General Permit pursuant to 62-330.443, F.A.C., the proposed project should be designed to provide water quantity treatment as required per Part III, SJRWMD ERP A.H., Volume II, and 62-330.301(1)(b) and (c), F.A.C. Pursuant to subsection 3.2.1(a), SJRWMD ERP A.H., Volume II, the project must be designed such that the post-development peak rate of discharge does not exceed the pre-development peak rate of discharge for the mean annual 24-hour duration storm for systems that serve new construction area with greater than 50 percent impervious surface. Pursuant to subsections 3.2.1(b) and 3.2.7, SJRWMD ERP A.H., Volume II, the project must be designed such that the post-development peak rate of discharge does not exceed the pre-development peak rate of discharge for the 25-year, 24-hour duration storm, and the systems must be designed to provide the necessary design detention volume within 14 days following any storm event.

The project crosses the floodplain of the Indian River, St. Sebastian Inlet. Pursuant to subsection 3.3.1, SJRWMD ERP A.H., Volume II, any project that

alters any existing conveyance systems must not adversely affect existing conveyance capabilities. Additionally, the project must be designed such that the applicable criteria in subsections 3.3.2 through 3.3.4, SJRWMD ERP A.H., Volume II, are met to demonstrate that the project will not adversely impact the floodplains, the levels of flood flows or velocities, and the off-site storage and conveyance capacities of the water resource.

Comments on Effects to Resources:

Designing the project to meet the applicable Water Management District design criteria, and the conditions for issuance of a GP in 62-330.443, F.A.C., or an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse water quality or quantity impacts to water resources and adjacent lands.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 Minimal assigned 01/22/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: PD&E Support Document As Per PD&E Manual

Direct Effects

Identified Resources and Level of Importance:

The project area is located over the Indian River Lagoon and waters of the Sebastian Inlet State Park, designated as an Outstanding Florida Waters.

Comments on Effects to Resources:

Every effort should be made to maximize the treatment of stormwater runoff from the proposed highway widening project, as area stormwater ultimately discharges to the Indian River Lagoon, designated as an Outstanding Florida Waters (OFW) under section 62-302.700(9), F.A.C., and afforded a high level of protection under sections 62-4.242(2) and 62-302.700, F.A.C. We recommend that the PD&E study include an evaluation of existing stormwater treatment adequacy and details on the future stormwater treatment facilities. The permit applicant may be required to demonstrate that the proposed stormwater system meets the design and performance criteria established for the treatment and attenuation of discharges to OFWs, pursuant to rule 40C-4, F.A.C., and the SJRWMD Basis of Review for ERP Applications.

Additional Comments (optional):

CLC Commitments and Recommendations:

Floodplains

Project Effects

Coordinator Summary Degree of Effect: 3 Moderate assigned 03/10/2020 by FDOT District 4

Comments:

The SJRWMD commented that a General Permit or Individual Environmental Resource Permit may be required for this project. Additionally, a Bridge Hydraulics Report may be needed. The project is partially located within areas identified as Flood Hazard Zone AE and VE, 100-year Flood Plain of the Indian River, Sebastian Inlet. SJRWMD commented that impacts to floodplain storage need to be compensated per the ERP Applicant's Handbook. SJRWMD assigned a degree of effect of Moderate.

According to the Federal Management Agency (FEMA) Flood Insurance Rate Map data, the project is located within the 100-year floodplain. Although this project may involve work within the horizontal limits of the 100-year floodplain, no work will be performed below the 100-year flood elevation and, thus, this project should not encroach upon the base floodplain.

An analysis of the potential floodplain effects (if any) will be conducted in accordance with Part 2, Chapter 13 of the FDOT PD&E Manual.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Floodplains issue.

Degree of Effect: 3 Moderate assigned 01/24/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project is partially located within areas identified as Flood Hazard Zone AE and VE, 100-year Flood Plain of the Indian River, Sebastian Inlet. The project has the potential to adversely affect floodplain storage or conveyance by direct encroachment into the floodplain or by generating stormwater runoff that could increase the rate or volume of discharge to the floodplain. However, the Degree of Effect is assumed to be "Moderate" because the

project will require a General Permit or an Individual Environmental Resource Permit (ERP), and designing the project to meet the requirements for a General Permit in 62-330.443, F.A.C., or the applicable Water Management District design criteria and the conditions for issuance of an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse impacts to the affected floodplains. With respect to floodplain storage and conveyance, the project must be designed to meet the applicable criteria in section 3.3, SJRWMD ERP Applicant's Handbook, Volume II.

Comments on Effects to Resources:

Designing the project to meet the applicable Water Management District design criteria, and the conditions for issuance of a GP in 62-330.443, F.A.C, or an Individual ERP in 62-330.301 and 302, F.A.C., would provide reasonable assurance that the project would not result in adverse impacts to existing floodplain or surface water storage and conveyance capabilities.

Additional Comments (optional):

CLC Commitments and Recommendations:

Wildlife and Habitat

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 03/10/2020 by FDOT District 4

Comments:

The Florida Department of Agriculture and Consumer Services assigned a degree of effect of N/A / No Involvement.

The Florida Fish and Wildlife Conservation Commission (FWC) commented that the study area is primarily roadway, state park facilities, and estuarine and marine open water. FWC commented that the following species have the potential to occur in the project area: smalltooth sawfish (FE), green sea turtle (FT), loggerhead sea turtle (FT), leatherback sea turtle (FE), Kemp's ridley sea turtle (FE), eastern indigo snake (FT), piping plover (FT), red knot (FT), wood stork (FT), Florida manatee (FE), southeastern beach mouse (FT), gopher tortoise (ST), Florida pine snake (ST), black skimmer (ST), American oystercatcher (ST), least tern (FT), reddish egret (ST), little blue heron (ST), tricolored heron (ST), and roseate spoonbill (ST). Additionally, the project is within Critical Habitat for the Manatee and six Wood Stork Core Foraging Areas. Gopher tortoises and their commensal species are likely in the upland communities as well. FWC recommended the following: the NRE should include planting community mapping and wildlife surveys; a plan should be developed to address direct, indirect, and cumulative effects of the project on wildlife and habitat resources, including listed species. Avoidance, minimization, and mitigation measures should also be formulated and implemented; the Standard Manatee Conditions for In-Water Work should be followed; a 15% gopher tortoise survey should be completed; compensatory mitigation should include the replacement of any wetland, upland, or aquatic habitat lost as a result of the project; concrete bridge material from demolition should be used for artificial reef habitat and coordination with FWC for this process should begin early in the planning stages. FWC assigned a degree of effect of Moderate.

The USFWS commented that the following federally-listed species have the potential to occur within the project study area: West Indian manatee, Atlantic salt marsh snake, piping plover, and federally listed plants. To minimize adverse effects to the manatee, USFWS recommends that FDOT follow the Standard Manatee Protection Construction Conditions for Aquatic-Related Activities. The project has the potential to affect mangroves, seagrasses and benthic marine resources. We recommend that a survey of the shorelines and marine bottoms within the project footprint be conducted to determine the status of these valuable resources. Lastly, to protect birds and to provide a safer bridge crossing for motorists, USFWS recommends that flight diverters be installed on the new bridge. USFWS assigned a degree of effect of Moderate.

Based on FWC, USFWS and the EST GIS Analysis, the project study area is located within six wood stork core foraging area buffers and four US Fish and Wildlife Service Consultation Areas for federally-listed species: Atlantic salt marsh snake, West Indian manatee, piping plover, and Florida scrub-jay. During the PD&E study, the FDOT District Four will prepare a Protected Species and Habitat Evaluation in accordance with Part 2, Chapter 16, of the FDOT PD&E Manual and document findings in the NRE Technical Memorandum. A Wetlands Evaluation will also be prepared in accordance with FDOT PD&E Manual Part 2, Chapter 9. Avoidance, minimization and mitigation for unavoidable impacts will be assessed during the alternatives development to avoid and minimize effects on protected species.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Wildlife and Habitat issue.

Degree of Effect: 3 *Moderate* assigned 12/12/2019 by John Wrublik, US Fish and Wildlife Service

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Federally listed species and fish and wildlife resources

Comments on Effects to Resources:

Federally-listed species -

The Service has reviewed our Geographic Information Systems (GIS) database for recorded locations of federally listed threatened and endangered species on or adjacent to the project study area. The GIS database is a compilation of data received from several sources. Based on review of our GIS database, the Service notes that the following federally listed species may occur in or near the project area.

West Indian manatee

The project occurs within the geographic range of the endangered West Indian manatee (*Trichechus manatus*). The Service notes that manatees are known to use the waters within the project corridor. If removal of the existing bridge requires in-water work, we recommend that the Florida Department of Transportation (FDOT) follow the Service's *Standard Manatee Protection Construction Conditions For Aquatic-Related Activities* (see below)

The permittee/grantee/lessee shall ensure that:

1. The contractor instructs all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s), and shall implement appropriate precautions to ensure protection of the manatee(s).
2. All construction personnel are advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
3. Prior to commencement of construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placard) concerning manatees. For all vessels, a temporary sign (at least 8 1/2" x 11") reading "Manatee Habitat/Idle Speed In Construction Area" will be placed in a prominent location visible to employees operating the vessels. In the absence of a vessel, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land based, water-related construction crews.

A second temporary sign (at least 8 1/2" x 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol at 1-800-DIAL-FMP" will be located prominently adjacent to the displayed issued construction permit. Temporary notices are to be removed by the permittee upon completion of construction.
4. Siltation barriers are properly secured so that manatees cannot become entangled, and are monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
5. All vessels associated with the project operate at "idle speed/no wake" at all times while in the construction area and while in waters where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
6. If manatees are seen within 100 yards of the active daily construction/dredging operation, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment.
7. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1-800-DIALFMP) and to the Florida Department of Protection, Office of Protected Species Management at (904)922-4330.

The contractor maintains a log detailing sightings, collisions, or injuries to manatees should they occur during the contract period. A report summarizing incidents and sightings shall be submitted to the Florida Department of Protection, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service, 3100 University Boulevard, Jacksonville, FL 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

We further recommend that, if possible, removal of the existing bridge structures be conducted without the use of explosives. If the use of explosives is necessary, we recommend that the FDOT follow the Florida Fish and Wildlife Conservation Commission's draft *Guidelines for the Protection of Marine Animals During the Use of Explosives In the Waters of the State of Florida* (<https://www.fws.gov/verobeach/MammalsPDFs/FloridaBlastingGuidelinesMay2006draft.pdf>).

The Service believes that the following federally listed species have the potential to occur in or near the project site: West Indian manatee, Atlantic salt marsh snake (*Nerodia clarkii taeniata*), piping plover (*Charadrius melodus*), and Federally listed plants (<http://www.fws.gov/verobeach/ListedSpeciesPlants.html>). Accordingly, the Service recommends that the Florida Department of Transportation (FDOT) prepare a Biological Assessment for the project (as required by 50 CFR 402.12) during the FDOT's Project Development and Environment process.

Fish and Wildlife Resources -

Wetlands provide important habitat for fish and wildlife. Wetlands may occur within and near the project site. We recommend that these valuable resources be avoided to the greatest extent practicable. If impacts to these wetlands are unavoidable, we recommend the Florida Department of Transportation provide mitigation that fully compensates for the loss of important resources.

The project has the potential to affect mangroves, seagrasses and benthic marine resources. We recommend that a survey of the shorelines and marine bottoms within the project footprint be conducted to determine the status of these valuable resources. The project should be sited to avoid these resources to the greatest extent practicable. If effects to marine resources cannot be avoided, then appropriate mitigation should be provided that fully compensates for the loss of important resources.

The Service notes that the current State Road A1A bridge over Sebastian Inlet contains a series of poles that act as flight diverters for birds (gulls, terns, wading birds etc.). The purpose of the poles is to reduce the potential for motor vehicle collisions with birds by encouraging birds to fly at a higher altitude when flying over the bridge. To protect birds and to provide a safer bridge crossing for motorists, we recommend that flight diverters be installed on the new bridge.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: N/A N/A / No Involvement assigned 01/26/2020 by Brian Camposano, FL Department of Agriculture and Consumer Services

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 3 Moderate assigned 01/24/2020 by Jason Hight, FL Fish and Wildlife Conservation Commission

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Our assessment reveals that landcover within the assessment area is primarily the roadway and state park facilities (24.58%) and Estuarine and Marine Open Water (24.08%). Other landcover types include Mangrove Swamp (12.21%, 7.22 acres), Unconsolidated Substrate (the tidal pool on the north side of the inlet - 12.04%, 7.12 acres), Coastal Strand (9.75%, 5.76 acres), Sand Beach (7.25%, 4.29 acres), Coastal Uplands (3.79%, 2.24 acres), Shrub and Brushland (2.17%, 1.28 acres), Mixed Hardwood-Coniferous (2.12%, 1.26 acres), and Salt Marsh (0.46%, 0.27 acres). All the natural landcover within the assessment area provides valuable fish and wildlife habitat, from the open waters which are Florida's most popular saltwater fishing destination; to the shoreline wetlands, beaches, and coastal uplands which provide habitat for a diverse assemblage of birds and other wildlife.

Based on range and preferred habitat type, the following species listed by the Federal Endangered Species Act and the State of Florida as Federally Endangered (FE), Federally Threatened (FT), or State-Threatened (ST) have the potential to occur in the project area: smalltooth sawfish (FE), green sea turtle (FT), loggerhead sea turtle (FT), leatherback sea turtle (FE), Kemp's ridley sea turtle (FE), Eastern indigo snake (FT), piping plover (FT), red knot (FT), wood stork (FT), Florida manatee (FE), southeastern beach mouse (FT), gopher tortoise (ST), Florida pine snake (ST), black skimmer (ST), American oystercatcher (ST), least tern (FT), reddish egret (ST), little blue heron (ST), tricolored heron (ST), and roseate spoonbill (ST). All the aquatic and wetland species either likely or potentially utilize appropriate habitats in the vicinity of the bridge. The project is within Critical Habitat for the Manatee and six Wood Stork Core Foraging Areas. Gopher tortoises and their commensal species are likely in the upland communities.

Comments on Effects to Resources:

Construction of a replacement bridge on a new alignment or construction of a temporary bridge would likely result in adverse impacts to Sebastian Inlet State Park facilities and possibly adjacent natural habitats, requiring development of plans to minimize and mitigate these impacts.

Primary wildlife issues associated with this project include: potential loss or adverse impact to Sebastian Inlet State park facilities and adjacent wetland

and upland habitat resulting from project works; potential for injury to manatees, sea turtles, and other aquatic life during in-water construction operations; potential adverse effects to a significant number of species listed by the Federal Endangered Species Act as Endangered or Threatened, or by the State of Florida as Threatened; and potential for water quality impacts during construction.

Based on the project information provided, we believe that direct and indirect effects of this project could be moderate, if all natural habitat impacts are appropriately mitigated, special manatee and sea turtle protection measures are adopted for any in-water work, and Best Management Practices are included in the project design to avoid water quality degradation.

Additional Comments (optional):

CLC Commitments and Recommendations:

Coastal and Marine

Project Effects

Coordinator Summary Degree of Effect: 3 Moderate assigned 03/10/2020 by FDOT District 4

Comments:

The NMFS commented that seagrass, mangroves, sand/shell bottom, oysters, hardbottom, and worm reef may occur at the project site. These habitats are considered EFH. Mangrove, hardbottom, worm reef, and seagrass are also considered HAPC. Also, the project is located within the Sebastian Inlet State Park, which is an Aquatic Preserve and Outstanding Florida Water. Listed species that could inhabit the project area include green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), Kemp's ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), smalltooth sawfish (*Pristis pectinata*), and the giant manta ray (*Manta birostris*). The project site supports seagrass, which may include Johnson's seagrass (*Halophila johnsonii*) and is listed as threatened under the Endangered Species Act. Johnson's seagrass critical habitat is found just west of the project location, and recent seagrass surveys show significant recovery of diverse seagrass assemblages in this area. Loggerhead sea turtle critical habitat is found just outside the inlet from the project area as well. To minimize impacts during construction, construction of the bridge should take place from the uplands and should be within the same alignment as the current bridge. NMFS assigned a degree of effect of Moderate.

The SJRWMD commented that the project may negatively impact seagrass and mangrove habitat, both of which will need to be delineated. Mitigation may also be required for impacts. Avoidance should be implemented wherever practical. SJRWMD assigned a degree of effect of Minimal.

An Essential Fish Habitat Assessment (including a benthic resources/seagrass survey) and a NRE report will be prepared to determine potential impacts to area coastal and marine resources. Due to the location of the project, and occurrence of EFH and HAPC, FDOT District Four assigns a summary degree of effect of **Moderate** to the Coastal and Marine issue.

Degree of Effect: 3 Moderate assigned 01/24/2020 by Jennifer Schull, National Marine Fisheries Service

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

Based on our review of the information provided on the ETDM website and aerial image interpretation, NOAA's National Marine Fisheries Service (NMFS) has determined that seagrass, mangroves, sand/shell bottom, oysters, hardbottom, and worm reef may occur at the project site. The project is located at the Sebastian Inlet which is within Sebastian Inlet State Park, an Aquatic Preserve and Outstanding Florida Water. These wetlands, estuarine and marine environments are of moderate to excellent quality. The South Atlantic Fishery Management Council (SAFMC) has designated these habitats as essential fish habitat (EFH). Mangrove, hardbottom, worm reef, and seagrass habitats are also considered Habitat Areas of Particular Concern (HAPC). HAPC's are subsets of EFH that are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area.

Federally managed fishery species associated with mangrove and seagrass habitat include postlarval, juvenile, and adult gray, lane and schoolmaster snappers; juvenile goliath grouper and mutton snapper; and adult white grunt. Seagrass is habitat for members of the snapper-grouper complex and postlarval, juvenile, and subadult stages of penaeid shrimp. Federally managed fishery species associated with sand and shell bottom habitat include postlarval, juvenile, and subadult stages of penaeid shrimp; and members of the snapper-grouper complex. The inlet and worm reef habitats are EFH and HAPC for coastal migratory pelagic species such as king mackerel, and Spanish mackerel. The SAFMC provides additional information on EFH and HAPCs and their support of federally managed fishery species in the *Fishery Ecosystem Plan of the South Atlantic Region*, which is available at www.safmc.net.

The seagrass and mangroves are part of a habitat complex that supports a diverse community of fish and invertebrates within the area, including recreationally and commercially important reef, migratory, and pelagic fish. Seagrass and mangroves also benefit fishery resources by providing important nursery and forage habitat. Seagrass provides important water quality maintenance functions (such as pollution uptake), stabilize sediments,

attenuate wave action, and produce and export detritus (decaying organic material), which is an important component of marine and estuarine food chains. Mangroves in the project area indirectly support fishery habitat by controlling runoff and turbidity and by stabilizing sediment. Nearshore hardbottom and worm reef are productive habitats that provide forage and shelter opportunities for a variety of marine species.

Several species listed as either threatened or endangered under the Endangered Species Act may inhabit the project area. These species include green sea turtle (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), Kemp's ridley sea turtle (*Lepidochelys kempii*), hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), smalltooth sawfish (*Pristis pectinata*), and the giant manta ray (*Manta birostris*). The project site supports seagrass, which may include Johnson's seagrass (*Halophila johnsonii*), which is listed as threatened under the Endangered Species Act. Johnson's seagrass critical habitat is found just west of the project location, and recent seagrass surveys show significant recovery of diverse seagrass assemblages in this area (See: Atkins 2018 Annual Seagrass Monitoring Report, March 2019 on behalf of Sebastian Inlet District). Loggerhead sea turtle critical habitat is found just outside the inlet from the project area as well.

Comments on Effects to Resources:

The above listed resources may be impacted by the project. Surveys should be conducted that document and quantify all EFH present including seagrass species, location, and density; all hardbottom communities; and delineation of mangrove wetlands. A protected resources Biological Assessment should also be prepared to determine if consultation under Section 7 of the ESA will be required.

If the bridge is replaced, impacts will likely be substantial from construction, re-engineering of the shoreline, right-of-way, routing of traffic, and construction of the new bridge. If possible, construction and/or rehabilitation should take place from the uplands and within the same alignment as the current bridge. Shading impacts from barge-based construction and the new bridge need to be considered. Barge spudding may impact EFH. Impacts to EFH should be avoided and minimized to the extent practical. Mitigation for unavoidable impacts to EFH will be required. Best Management Practices should be followed to reduce or eliminate impacts from sedimentation and runoff. It will be critically important to avoid and minimize impacts to seagrass beds in the area, as the Indian River Lagoon has experienced severe seagrass die-offs and there is evidence of seagrass (including threatened Johnson's seagrass) recovery near the inlet.

With construction of the new bridge, impervious surface area will be increased. The discharge of hydrocarbons and other contaminants may degrade water quality. Subsequently, NOAA trust resources located in the receiving waters could be adversely affected. Surface and stormwater runoff must be treated prior to discharge and in accordance with state and federal (NPDES) standards.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 2 Minimal assigned 01/26/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project may have a negative impact on submerged aquatic vegetation (seagrass) and mangrove swamp habitat both which will require the areas to be delineated and quantified and mitigation provided as necessary.

Comments on Effects to Resources:

Shading impacts could result in negative impacts to the resources.

Additional Comments (optional):

CLC Commitments and Recommendations:

ETAT Reviews and Coordinator Summary: Physical

Noise

Project Effects

Coordinator Summary Degree of Effect: 2 Minimal assigned 03/10/2020 by FDOT District 4

Comments:

No ETAT reviews were submitted for this issue.

The Sebastian Inlet State Park is located directly adjacent to the bridge. While temporary construction noise impacts may have short-term effects on the adjacent state park, overall noise and vibration-related impacts as a result of the project are anticipated to be minimal.

During the PD&E study, a Noise Study Report will be prepared to identify potential noise and vibration sensitive land uses in accordance with Part 2, Chapter 18 of the FDOT PD&E Manual.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Noise issue.

None found

Air Quality

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 03/10/2020 by FDOT District 4

Comments:

The USEPA commented that Indian River and Brevard Counties have not been designated non-attainment or maintenance for the ozone, carbon monoxide (CO), or particulate matter (PM) National Ambient Air Quality Standards under the Clean Air Act. Therefore, the proposed project is expected to have minimal impact on air quality. The USEPA assigned a degree of effect of Minimal.

Indian River County and Brevard County are both in an area which is designated attainment for all of the National Ambient Air Quality Standards under the criteria provided in the Clean Air Act. Therefore, the Clean Air Act conformity requirements do not apply to the project. While temporary impacts to air quality could occur during construction as a result of fugitive dust, no permanent effects to air quality are anticipated. An Air Quality Technical Memorandum will be conducted to determine potential effects to air quality.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Air Quality issue.

Degree of Effect: 2 *Minimal* assigned 01/26/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Air quality is of high importance to EPA.

Comments on Effects to Resources:

Indian River and Brevard Counties have not been designated non-attainment or maintenance for the ozone, carbon monoxide (CO), or particulate matter (PM) National Ambient Air Quality Standards under the Clean Air Act. Therefore, the proposed project is expected to have minimal impact on air quality.

Additional Comments (optional):

CLC Commitments and Recommendations:

Contamination

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 03/10/2020 by FDOT District 4

Comments:

FDEP assigned a degree of effect of None.

The USEPA commented that soils, groundwater and surface waters have the potential to be negatively affected by contaminated site features such as underground petroleum storage tanks, industrial or commercial facilities with onsite storage of hazardous materials, solid waste facilities, hazardous waste facilities, and USEPA RCRA facilities. According to FDEP GIS data, no storage tank contamination monitoring sites, petroleum contamination monitoring sites, solid waste sites, or hazardous waste sites have been identified within the 500-foot project buffer. USEPA stated that Phase I and possibly Phase II site assessments should be completed during the PD&E Study. USEPA assigned a degree of effect of Minimal.

The FDOT will prepare CSER in accordance with Part 2, Chapter 20 of the FDOT PD&E Manual. The assessment will include a survey of the area to identify any contaminated sites not listed in the EST as well as an assessment of known sites. Specific procedures will be outlined that would be followed in the event that petroleum storage tanks are to be impacted or if any other contamination is encountered. FDOT will obtain any required permits.

FDOT District Four assigns a summary degree of effect of **Minimal** to the Contamination issue.

Degree of Effect: 2 *Minimal* assigned 01/26/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Soils, groundwater and surface waters have the potential to be negatively affected by contaminated site features such as underground petroleum storage tanks, industrial or commercial facilities with onsite storage of hazardous materials, solid waste facilities, hazardous waste facilities, USEPA RCRA facilities, etc. A minimal degree of effect is being assigned to this issue for the proposed project.

Comments on Effects to Resources:

The project proposes to replace the existing James H. Pruitt Memorial Bridge (FDOT # 880005) on State Route A1A over the Sebastian Inlet, at the border of Indian River and Brevard Counties. The new bridge will replace the existing two 12-foot travel lanes and add 8-foot shoulders, a barrier separated 8-foot sidewalk, and a barrier separated 12-foot shared use path.

According to FDEP GIS data, no storage tank contamination monitoring sites, petroleum contamination monitoring sites, solid waste sites, or hazardous waste sites have been identified within the 500-foot project buffer. The environmental review (PD&E study) should include at least a Phase I and possibly a Phase II contamination site assessment. During the assessment, a survey of the area to identify any contaminated site features not listed in the GIS analysis data which may have been or are currently located in the project alternative buffer distances should be conducted, as well as an assessment of known sites and features.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: 0 *None* assigned 01/22/2020 by Chris Stahl, FL Department of Environmental Protection

Coordination Document: No Involvement

Direct Effects

Identified Resources and Level of Importance:

Comments on Effects to Resources:

Additional Comments (optional):

CLC Commitments and Recommendations:

Infrastructure

Project Effects

Coordinator Summary Degree of Effect: 2 *Minimal* assigned 03/10/2020 by FDOT District 4

Comments:

No ETAT reviews were submitted for this issue.

There are no Federal Aviation Administration Obstructions or Wireless Antenna Structures within the 500-foot buffer. There are no Water Quality Portals located within the 500-foot project buffer according to the National Water Quality Monitoring Council. There is one bridge (FDOT # 880005) within the 500-foot buffer. The replacement of the James H. Pruitt Memorial Bridge (# 880005) will be included with this project. No other impacts are anticipated to existing infrastructure from the proposed project.

FDOT District Four assigns a summary degree of effect of **Minimal** for Infrastructure.

None found

Navigation

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 03/10/2020 by FDOT District 4

Comments:

The USACE commented that the project will either require a Standard Permit or may qualify for a Nationwide 3 or Nationwide 45 permit from the

USACE. The US Coast Guard (USCG) will permit the bridge; however, the USACE will permit any rock placement within the Waters of the US. A Section 408 review may also be required. The bridge clearances proposed should meet and/or exceed minimum requirements to support institutional, commercial and recreational navigation without restrictions. There may be temporary closure impacts to vessels and vehicles during construction activities; however, after completion no impacts to navigation or vessel traffic should exist. The USACE assigned a degree of effect of Moderate.

The USCG commented that a bridge permit will be required for the replacement of this bridge. Additionally, a navigation impact report will be required for the bridge permit application. The USCG assigned a degree of effect of Moderate.

FDOT agrees that this study is within federally navigable waterways and will obtain the required USACE and USCG bridge permits. FDOT District Four assigns a summary degree of effect of **Moderate** to Navigation.

Degree of Effect: **3** Moderate assigned 01/17/2020 by Randall D Overton, US Coast Guard

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

A Coast Guard bridge permit will be required for the modification or replacement of the A1A Bridge across Sebastian Inlet.

Comments on Effects to Resources:

A Coast Guard bridge permit will be required for the modification or replacement of the A1A Bridge across Sebastian Inlet

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: **3** Moderate assigned 12/23/2019 by Mark M Tamblyn, US Army Corps of Engineers

Coordination Document: To Be Determined: Further Coordination Required

Coordination Document Comments:

A Standard Individual Permit review would be applicable for any estuarine wetland impacts associated with the new bridge replacement construction. There is a possibility that a Nationwide 3 (Maintenance) or/and a Nationwide 15 (U.S. Coast Guard Approved Bridges) could be used as the project development and planning moves forward. In addition a 408 review maybe required if the Channel is considered a federal project.

Direct Effects

Identified Resources and Level of Importance:

The project proposes to construct a new bridge over the Sebastian Inlet, which is a Navigable Channel in Sebastian Florida, FL Indian RiverCounty. The waters of the U.S. under Sections 9 and 10 of the Rivers and Harbors Act of 1899 and Section 404 should be considered for placement of any fill (temporary /permanent) during the bridge construction and would require a Department of Army (DA) authorization. The U.S. Coast Guard will permit the bridge under Section 9 of the RHA. Any discharge of fill material or placement of any rock substrate into waters of the U.S. in conjunction with the bridge replacements will require a Corps permit. The level of importance is moderate / substantial. This project should also consider a section 408 review, since the Sebastian Inlet more than likely is a federal project.

Comments on Effects to Resources:

The permanent effect of this project will be unrestricted vehicle and vessel traffic flow. Presently neither vehicle or vessel interruption occur because the existing bridge is a span bridge. Depending on the planning and design of the new bridge, it should be conducive to allow vessel and vehicular traffic free flowing capabilities. The bridge clearances proposed should meet and exceed minimum requirements to support institutional, commercial and recreational navigation without restrictions. There may be temporary closure impacts to vessels and vehicles during construction activities. But after completion no impacts to navigation or vessel traffic should exist. Planning and design plays a critical part within this project.

Additional Comments (optional):

A Standard Individual Permit review would be applicable for any estuarine wetland impacts associated with the new bridge replacement construction. There is a possibility that a Nationwide 3 (Maintenance) or/and a Nationwide 15 (U.S. Coast Guard Approved Bridges) could be used as the project development and planning moves forward. In addition a 408 review maybe required if the Channel is considered a federal project.

ETAT Reviews and Coordinator Summary: Special Designations

Special Designations

Project Effects

Coordinator Summary Degree of Effect: 3 *Moderate* assigned 03/10/2020 by FDOT District 4

Comments:

The SJRWMD commented that the project is not located within a special regulatory basin of the SJRWMD. However, the project is adjacent to and/or partially within the limits of the Indian River Malabar to Vero Beach Aquatic Preserve and the Sebastian Inlet State Recreation Area, which are designated as OFWs. The Indian River, including the inlet, is also identified as Class II waters. The project traverses a water body that could potentially be State-Owned Sovereign Submerged Lands (SSL). A request for a SSL title determination has not been submitted by SJRWMD staff. It is recommended that a request for a SSL title determination be submitted to FDEP. Unless the project qualifies for a General Permit to the Florida Department of Transportation, County, and Municipalities for Minor Bridge Alteration, Placement, Replacement, Removal, Maintenance and Operation pursuant to 62-330.443, F.A.C., an Individual ERP must be obtained for the project pursuant to 62-330, F.A.C. The SJRWMD assigned a degree of effect of Moderate.

The USEPA commented that the project buffer is located within the Indian River - Malabar to Vero Beach OFW and the Sebastian Inlet State Park OFW. The USEPA assigned a degree of effect of Moderate.

Analysis of the GIS data provided in the EST showed the project buffer is located within the Indian River - Malabar to Vero Beach Outstanding Florida Water and the Sebastian Inlet State Park Outstanding Florida Water. Impacts to Outstanding Florida Waters are limited to direct impacts from bridge pilings and secondary shading impacts. More detailed stormwater treatment and attenuation facilities will be evaluated in the PD&E phase to reduce water quality impacts and therefore there may be an improvement in water quality post-construction. FDOT will also use Best Management Practices during construction to reduce water quality impacts.

FDOT District Four assigns a summary degree of effect of **Moderate** to the Special Designations issue.

Degree of Effect: 3 *Moderate* assigned 01/24/2020 by Melissa Bryan Parsons, Saint Johns River Water Management District

Coordination Document: Permit or Technical Study Required

Direct Effects

Identified Resources and Level of Importance:

The project is not located within a special regulatory basin of the SJRWMD. However, the project is adjacent to and/or partially within the limits of the Indian River Malabar to Vero Beach Aquatic Preserve and the Sebastian Inlet State Recreation Area, which are designated as an Outstanding Florida Waters (OFWs). The Indian River, including the inlet, is also identified as Class II waters. Additionally, although the Indian River in the project location is an OFW and Class II waters, the project is located within the watershed of the Indian River near St. Sebastian River (WBID 5003D1), which has a DEP-adopted TMDL for nutrients. If an Individual ERP is required, additional water quality treatment criteria will apply.

The project traverses a water body that could potentially be State-Owned Sovereignty Submerged Lands (SSL). A request for SSL title determination has not been submitted by SJRWMD staff. Recommend that a request for SSL title determination be submitted to the FDEP Division of State Lands Office of Survey and Mapping Title and Land Records Section. If determined to be SSL, the appropriate SSL authorization (such as a Public Easement) would be required pursuant to Chapter 18-21, F.A.C., for any work below the ordinary high water line of the water body, unless that work is performed within, and is consistent with the terms of an existing SSL Public Easement. The SJRWMD is required to concurrently review the Environmental Resource Permit (ERP) and SSL applications.

Comments on Effects to Resources:

Unless the project qualifies for a General Permit to the Florida Department of Transportation, County, and Municipalities for Minor Bridge Alteration, Placement, Replacement, Removal, Maintenance and Operation pursuant to 62-330.443, F.A.C., an Individual Environmental Resource Permit (ERP) must be obtained for the project pursuant to 62-330, F.A.C. If the Indian River in the project location is determined to be State-Owned Sovereignty Submerged Lands (SSL), and the project includes activities in, or, over the ordinary high water line of the water body, the appropriate SSL authorization would be required pursuant to 18-21, F.A.C. The SJRWMD is required to concurrently review Individual ERP and SSL applications, while concurrent review is not required GP and SSL applications. Projects that propose activities waterward of the Coastal Construction Control Line are typically reviewed by the DEP. Pre-application coordination with the SJRWMD is recommended to determine review/permitting responsibility and discuss applicable design criteria.

Additional Comments (optional):

CLC Commitments and Recommendations:

Degree of Effect: **3** *Moderate* assigned 01/26/2020 by Alya Singh-White, US Environmental Protection Agency

Coordination Document: To Be Determined: Further Coordination Required

Direct Effects

Identified Resources and Level of Importance:

Outstanding Florida Water

Comments on Effects to Resources:

The project buffer is located within the Indian River - Malabar to Vero Beach OFW and the Sebastian Inlet State Park OFW. An OFW is a water designated worthy of special protection because of its natural attributes. (also see Water Quality section)

Additional Comments (optional):

CLC Commitments and Recommendations:

Eliminated Alternatives

There are no eliminated alternatives for this project.

Project Scope

General Project Recommendations

There are no general project recommendations identified for this project in the EST.

Anticipated Permits

Permit	Type	Conditions	Review Org	Review Date
Section 404 Nationwide Permit	USACE		FDOT District 4	03/10/20
Bridge Permit	USCG		FDOT District 4	11/04/19

Anticipated Technical Studies

Technical Study Name	Type	Conditions	Review Org	Review Date
Geotechnical Report	ENGINEERING		FDOT District 4	11/19/2019
Noise Study Report	ENVIRONMENTAL		FDOT District 4	11/19/2019
Contamination Screening Evaluation Report	ENVIRONMENTAL		FDOT District 4	11/19/2019
Type 2 CE	ENVIRONMENTAL		FDOT District 4	11/19/2019
Cultural Resource Assessment Survey	ENVIRONMENTAL		FDOT District 4	11/19/2019
Section 4(f) Determination of Applicability	ENVIRONMENTAL		FDOT District 4	11/19/2019
Natural Resources Evaluation (NRE)	ENVIRONMENTAL		FDOT District 4	11/19/2019

Class of Action

Class of Action Determination

Class of Action	Other Actions	Lead Agency	Cooperating Agencies	Participating Agencies
Type 2 Categorical Exclusion	Section 4(f) Evaluation USCG Bridge Permit USACE Section 404 Nationwide Permit	FDOT Office of Environmental Management	US Coast Guard	US Army Corps of Engineers

Class of Action Signatures

Name	Agency	Review Status	Date	ETDM Role
Shandra Davis-Sanders	FDOT District 4	ACCEPTED	06/03/2020	FDOT ETDM Coordinator
Matthew Marino	FDOT Office of Environmental Management	ACCEPTED	06/03/2020	Lead Agency ETAT Member

Dispute Resolution Activity Log

There are no dispute actions identified for this project in the EST.

Hardcopy Maps: Alternative #1

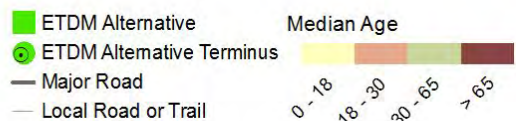
14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Age Distribution Map

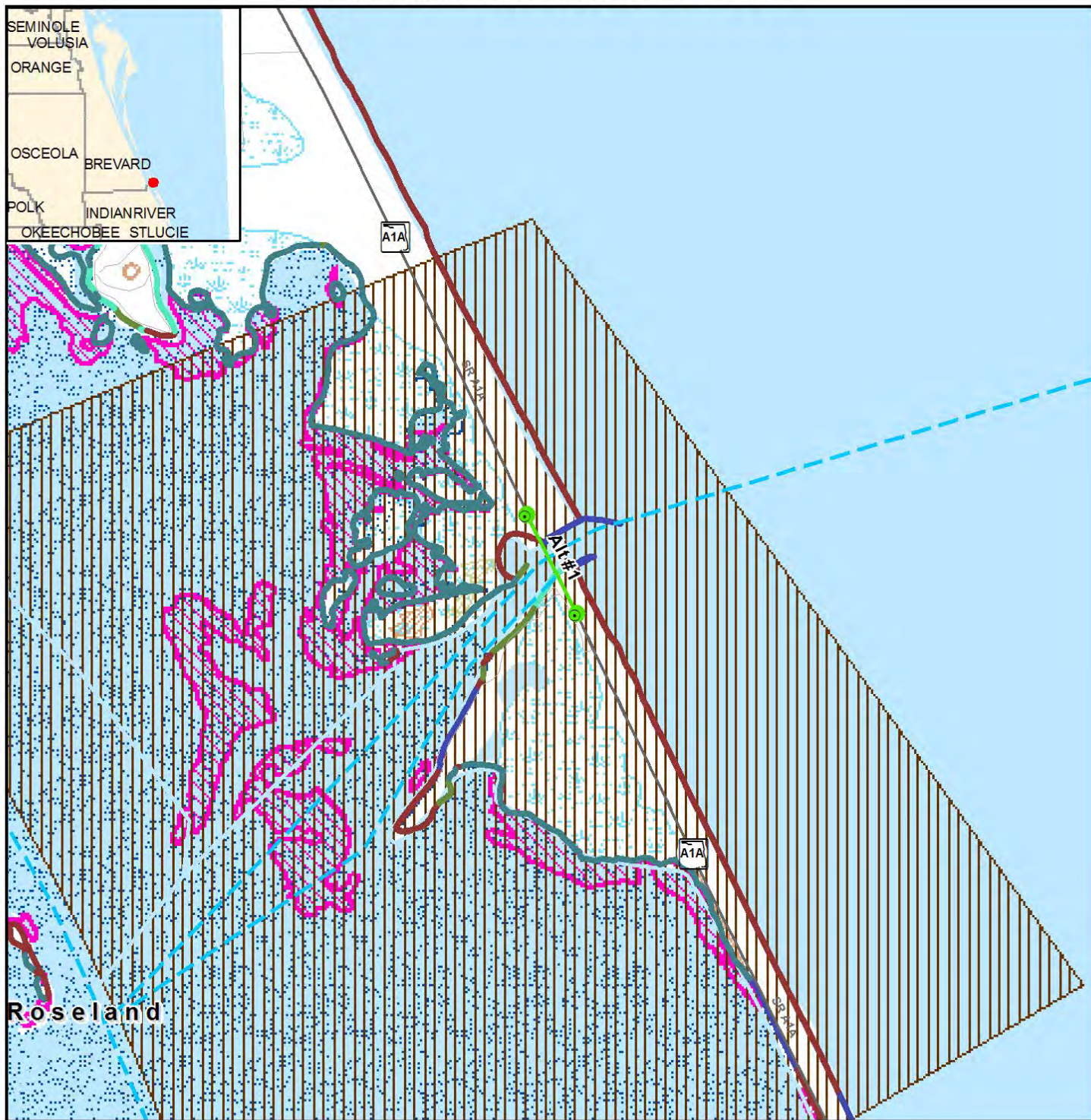


Data Sources:
US Geological Survey
FL Department of Transportation
NAVTEQ
US Census Bureau (2010)



11/4/2019

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Coastal and Marine Map

ETDM Alternative	Swamp or Marsh	Coastal Barrier Resource Area	Non-vegetated Wetland
ETDM Alternative Terminus	Exposed Rocky Platform	Continuous Seagrass	Vegetated Non-forested Wetland
City Limits	Sand Beach	Discontinuous Seagrass	Wetland Forested Mixed
Navigable Water Way	Gravel Beach/Riprap	Aquatic Preserve	Wetland Coniferous Forest
	Exposed Tidal Flat		Wetland Hardwood Forest
	Sheltered Tidal Flat		
	Mixed Sand And Gravel Beach		
	Sheltered Rock/Seawall/Vegetated		
	Exposed Vertical Rocky Shore/Seawall		

Data Sources: NAVTEQ; US Geological Survey; Florida Marine Research Institute; Florida Department of Transportation; Florida Department of Environmental Protection; National Oceanic and Atmospheric Association; Florida Water Management Districts

0 0.125 0.25 0.5 Miles N

11/4/2019

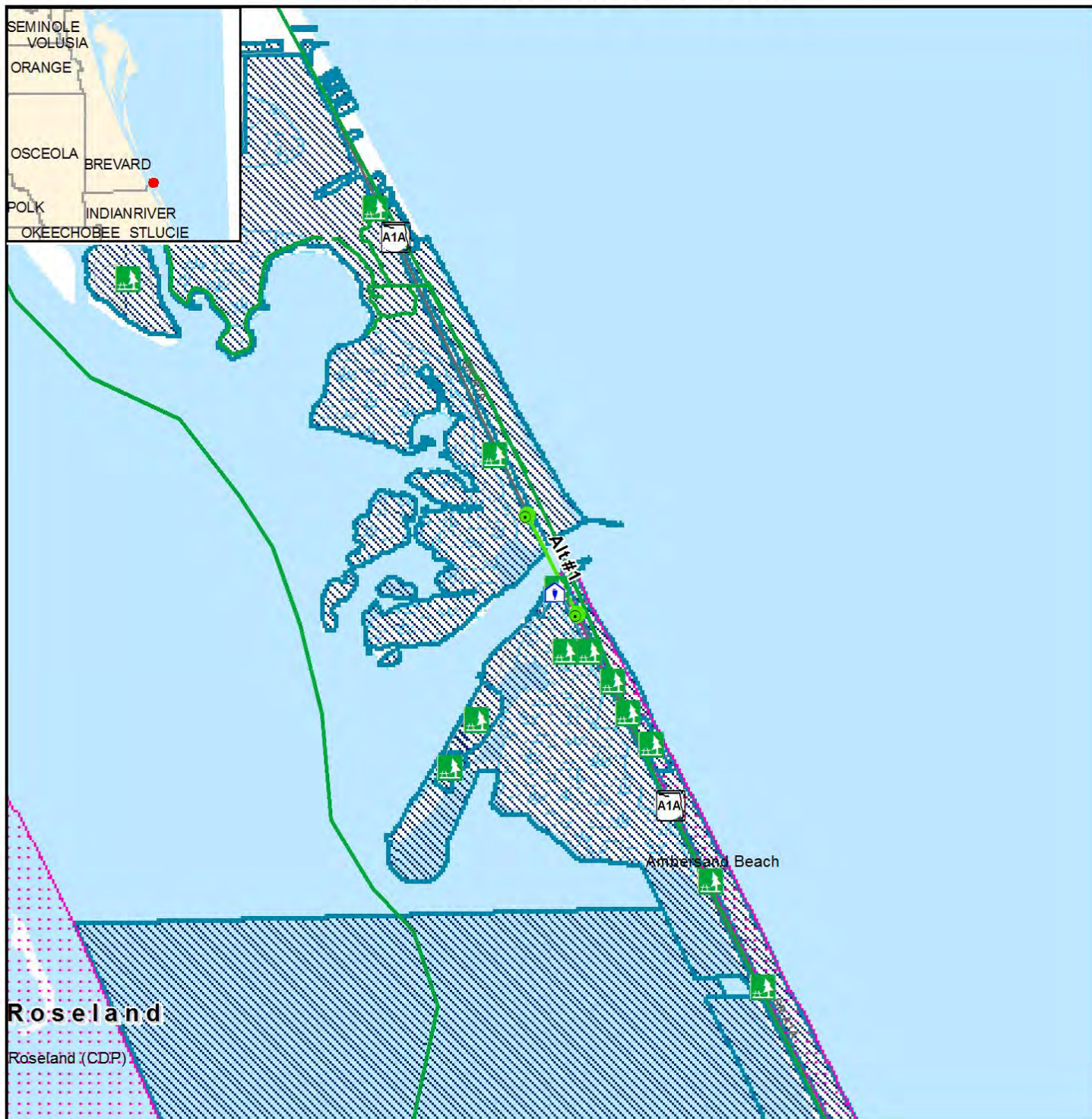
Environmental Screening Tool

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

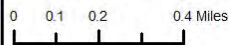
North Indian River Drive to Main Street



Community Services Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- Government
- Civic Center
- Cemetery
- Social Service
- Community Center
- Law Enforcement
- Place of Worship
- Cultural Center
- Fire Station
- Health Care
- School
- Park
- Recreational Trail
- Community Boundary
- Conservation or Recreation Area

Data Sources: US Geological Survey; FL Department of Transportation; NAVTEQ; FL Property Appraisers; FL Natural Areas Inventory



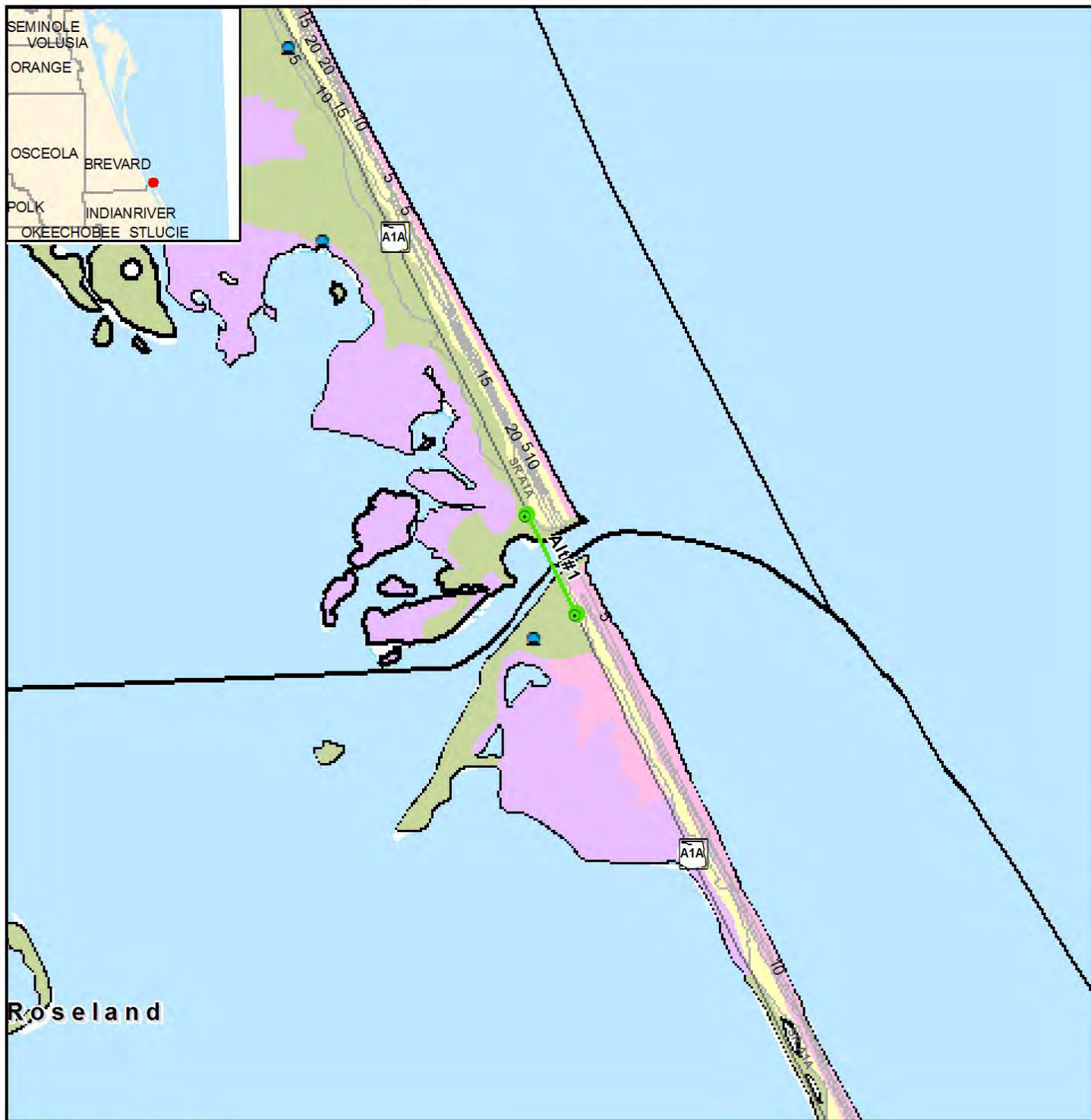
11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

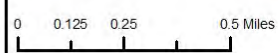
North Indian River Drive to Main Street



Contamination Map

- | | | | | |
|---|-------------------------|------------------------------|-------------------------|-------------------------|
| ■ ETDM Alternative | Solid Waste Facility | FDEP Tanks | Soil Drainage | Somewhat Poorly Drained |
| ETDM Alternative Terminus | Hazardous Material Site | 5 FT Contour | Excessively Drained | Poorly Drained |
| Major Road | Power Plant | Brownfield Area | Well Drained | Very Poorly Drained |
| Local Road or Trail | Superfund Site | Somewhat Excessively Drained | Moderately Well Drained | Unclassified |
| Toxic Release Inventory | Nuclear Site | | | |
| Dry Cleaning Facility | | | | |

Data Sources: NAVTEQ; US Geological Survey; FL Department of Transportation; FL Department of Environmental Protection; FL Water Management Districts; US Environmental Protection Agency; Natural Resource Conservation Service



11/4/2019

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Cultural Resources Data Map

- ETDM Alternative
- Major Road
- Local Road or Trail
- ★ Historic Structure
- Historic Bridge
- State Historic Highway
- ⊠ Historic Cemetery
- ⊠ Historic Resource Group
- Cultural Resource Field Survey Area

Year Built

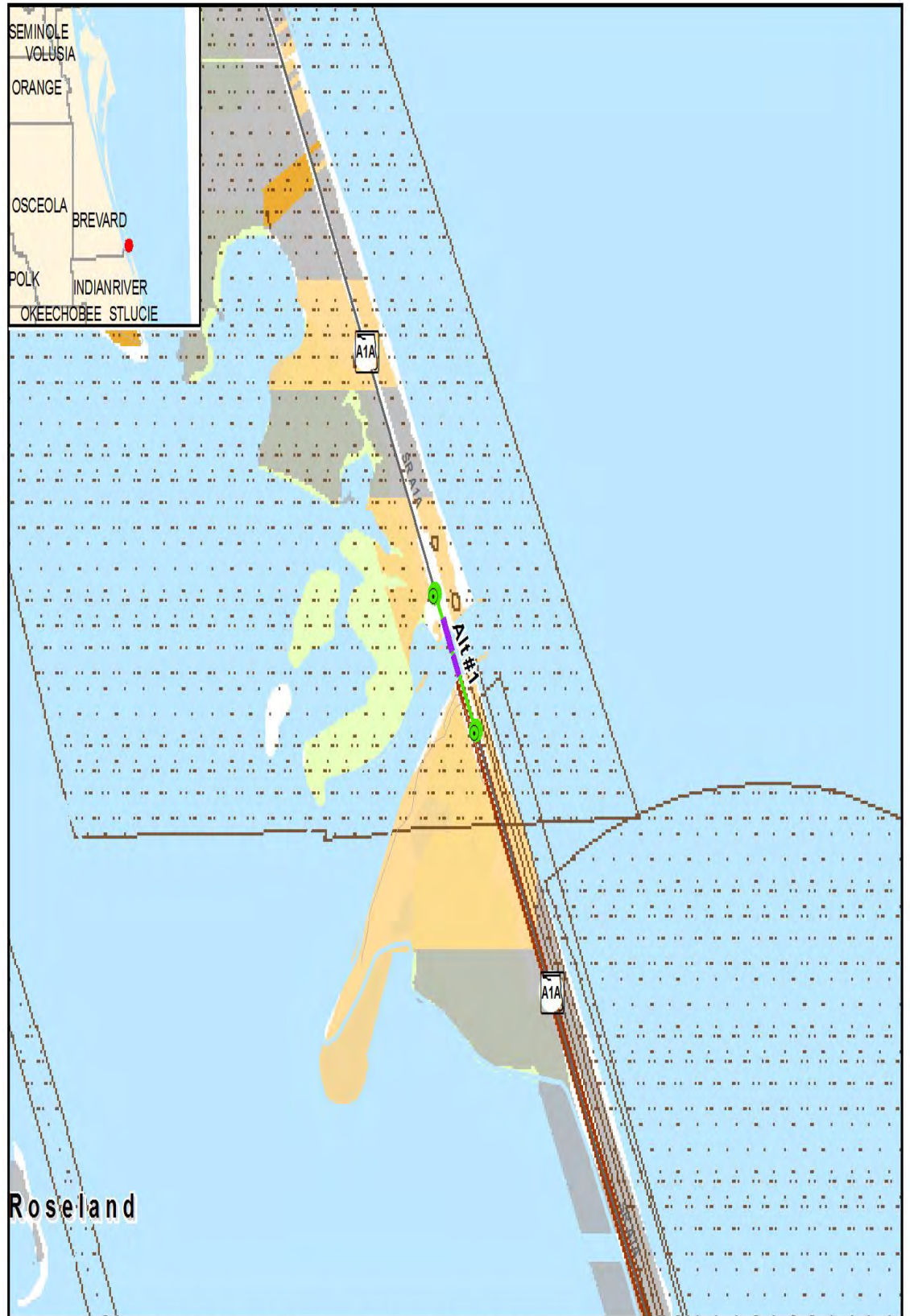
- Pre 1970
- Post 1980
- 1970 - 1979
- Parcels w/ no values



0.0 0.1 0.2 Miles



Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Department of State,
 Bureau of Archaeological Research












Roseland

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 Note: Historic properties depicted on this map represent resources listed in the Florida Master Site File excluding archeological site locations, which, pursuant to Chapter 267.135, Florida Statutes, may be exempt from public record (Chapter 119.07, Florida Statutes). Absence of features on the map does not necessarily indicate an absence of resources in the project vicinity.

-SR A1A Sebastian Inlet Bridge (#880005) Replacement

Alt #1


Cultural Resources Data Map

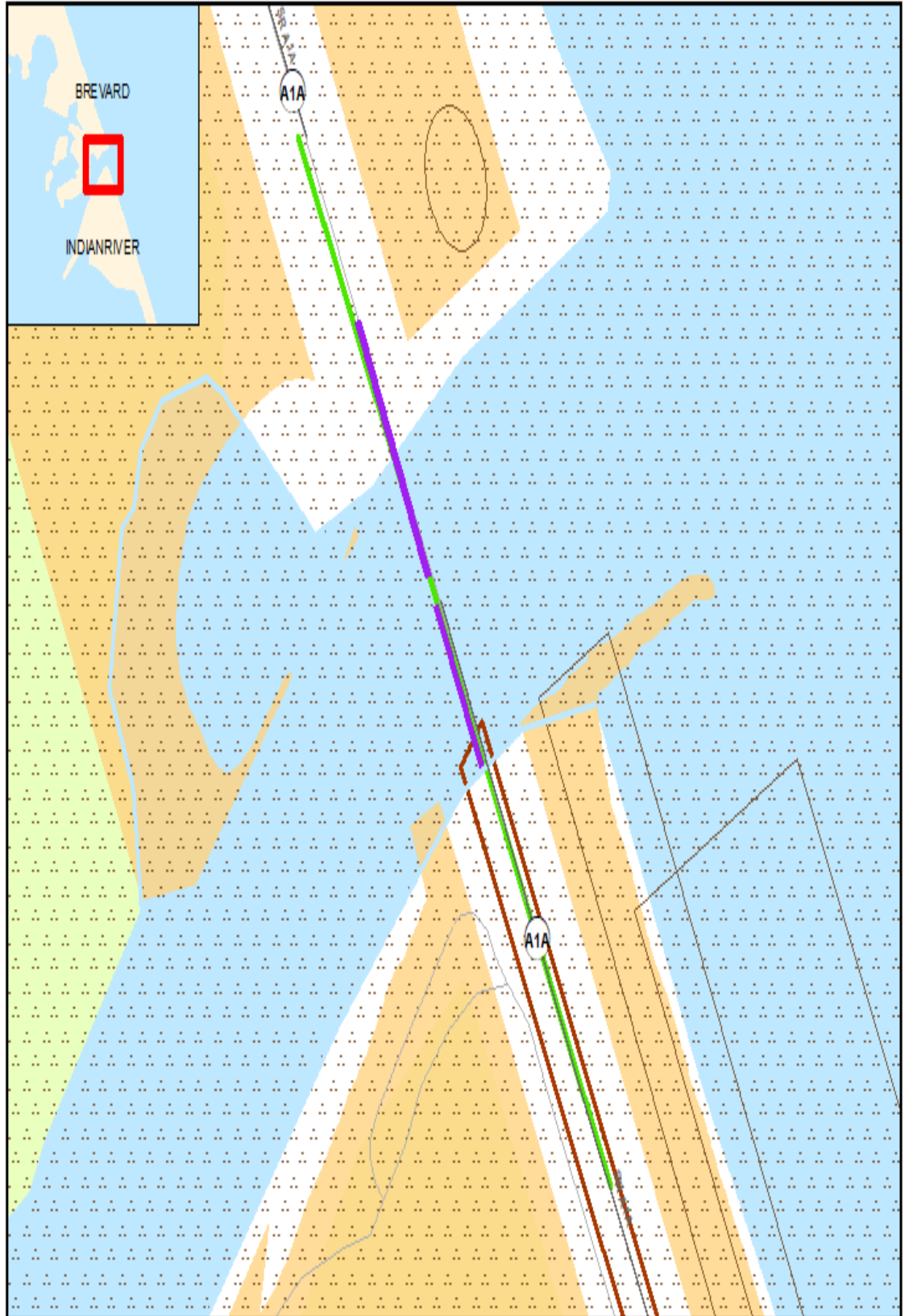
-  ETDM Alternative
-  Major Road
-  Local Road or Trail
-  Historic Structure
-  Historic Bridge
-  State Historic Highway
-  Historic Cemetery
-  Historic Resource Group
-  Cultural Resource Field Survey Area

Year Built

-  Pre 1970
-  Post 1980
-  1970 - 1979
-  Parcels w no values



0.00015 0.03 Miles




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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Farmlands Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- Cropland/Pastureland
- Nurseries/Vineyards
- Specialty Farms
- Tree Crops
- Rural Open Lands
- Prime Farmland Soils

Data Sources:
 NAVTEQ
 Florida Water Management Districts
 US Geological Survey
 Natural Resources Conservation Services



11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

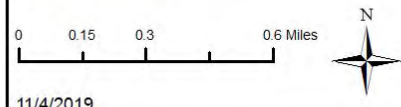
North Indian River Drive to Main Street



Floodplains Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- Special Flood Hazard Area

Data Sources:
NAVTEQ
US Geological Survey
Federal Emergency Management Agency



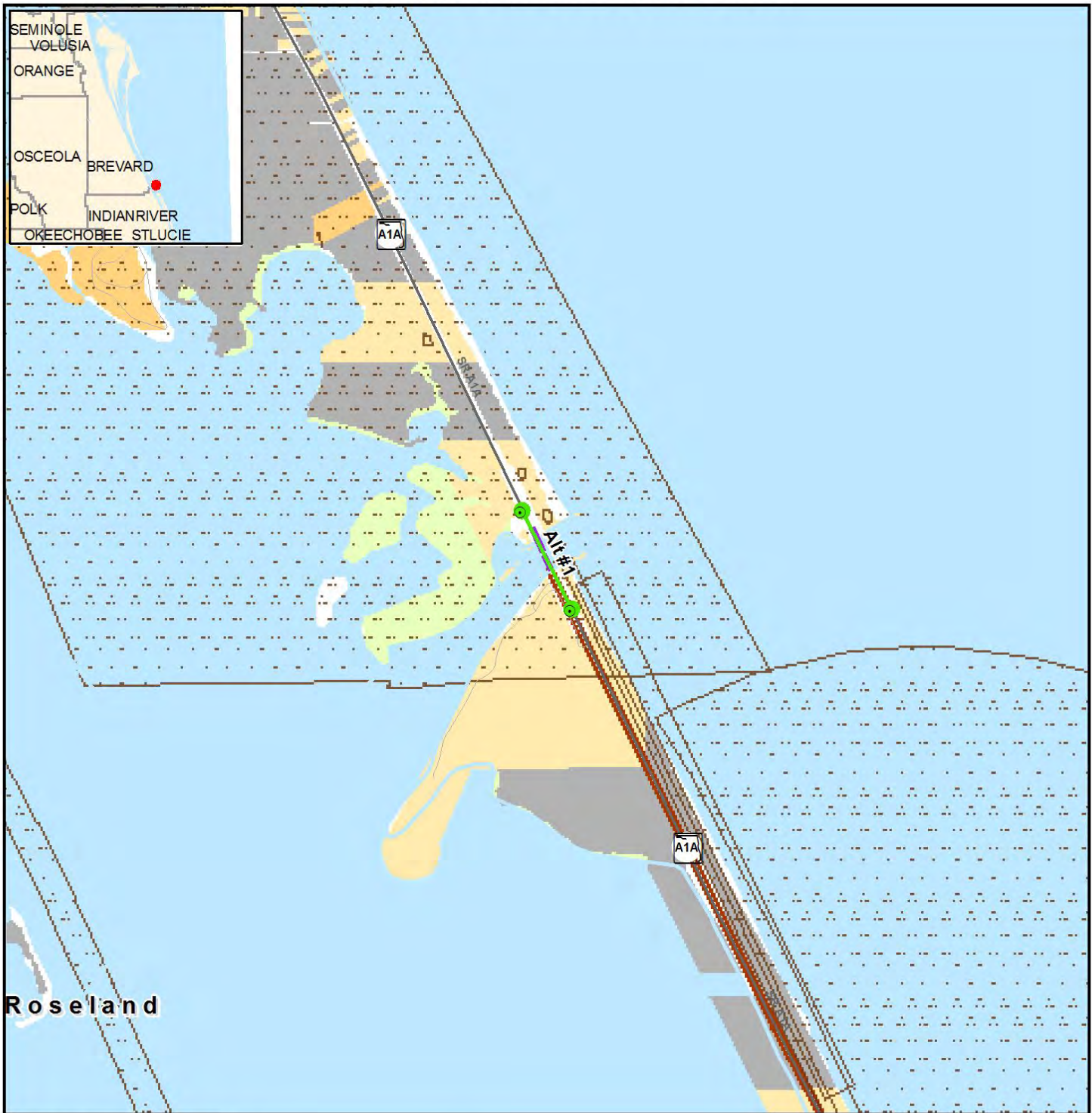
11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Historic Resource Map

- | | | |
|--|---|--|
| ■ ETDM Alternative | Year Built | ★ Historic Structure |
| ● ETDM Alternative Terminus | ■ Pre 1970 | — Historic Bridge |
| — Major Road | ■ Post 1980 | — State Historic Highway |
| — Local Road or Trail | ■ 1970 - 1979 | □ Historic Cemetery |
| | ■ Parcels w/ no values | □ Historic Resource Group |
| | | □ Cultural Resource Field Survey Area |

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Department of State,
 Bureau of Archaeological Research

Note: Historic properties depicted on this map represent resources listed in the Florida Master Site File excluding archeological site locations, which, pursuant to Chapter 267.135, Florida Statutes, may be exempt from public record (Chapter 119.07, Florida Statutes). Absence of features on the map does not necessarily indicate an absence of resources in the project vicinity.

0 0.15 0.3 0.6 Miles



11/4/2019

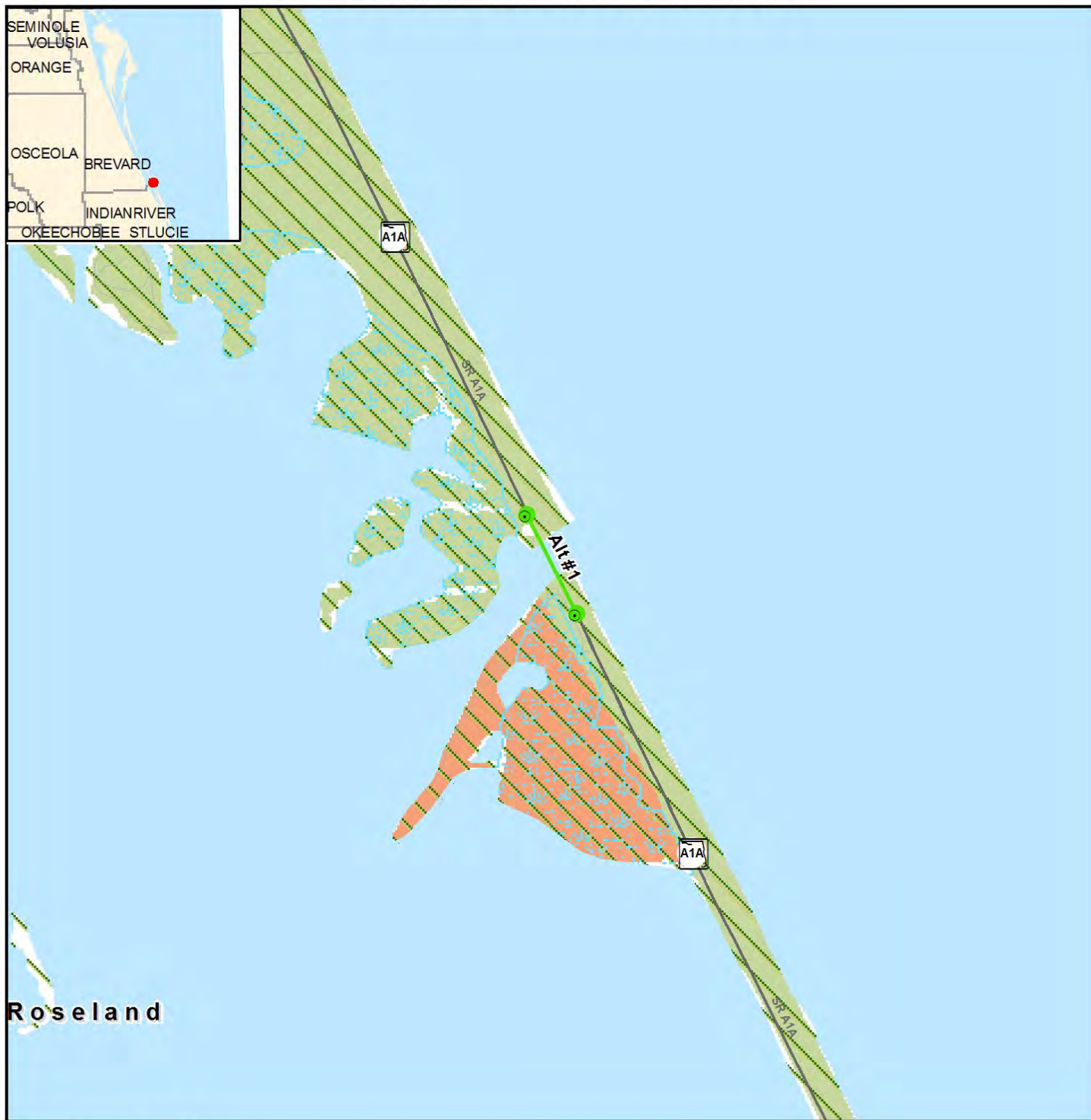


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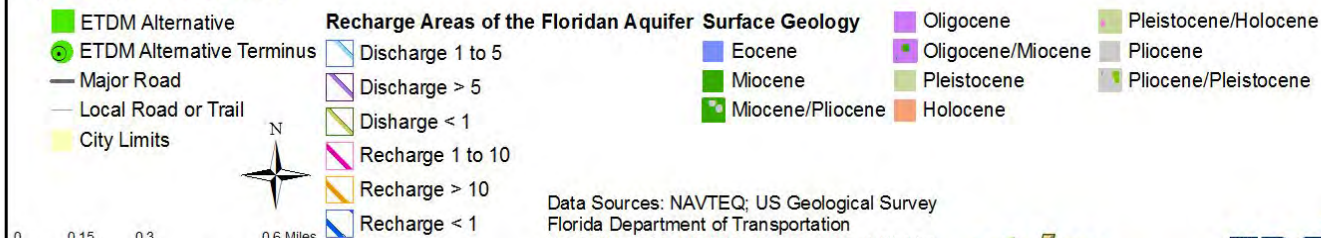
14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Hydrogeology Map



Data Sources: NAVTEQ; US Geological Survey
 Florida Department of Transportation
 South West Florida Water Management District
 Florida Geological Survey



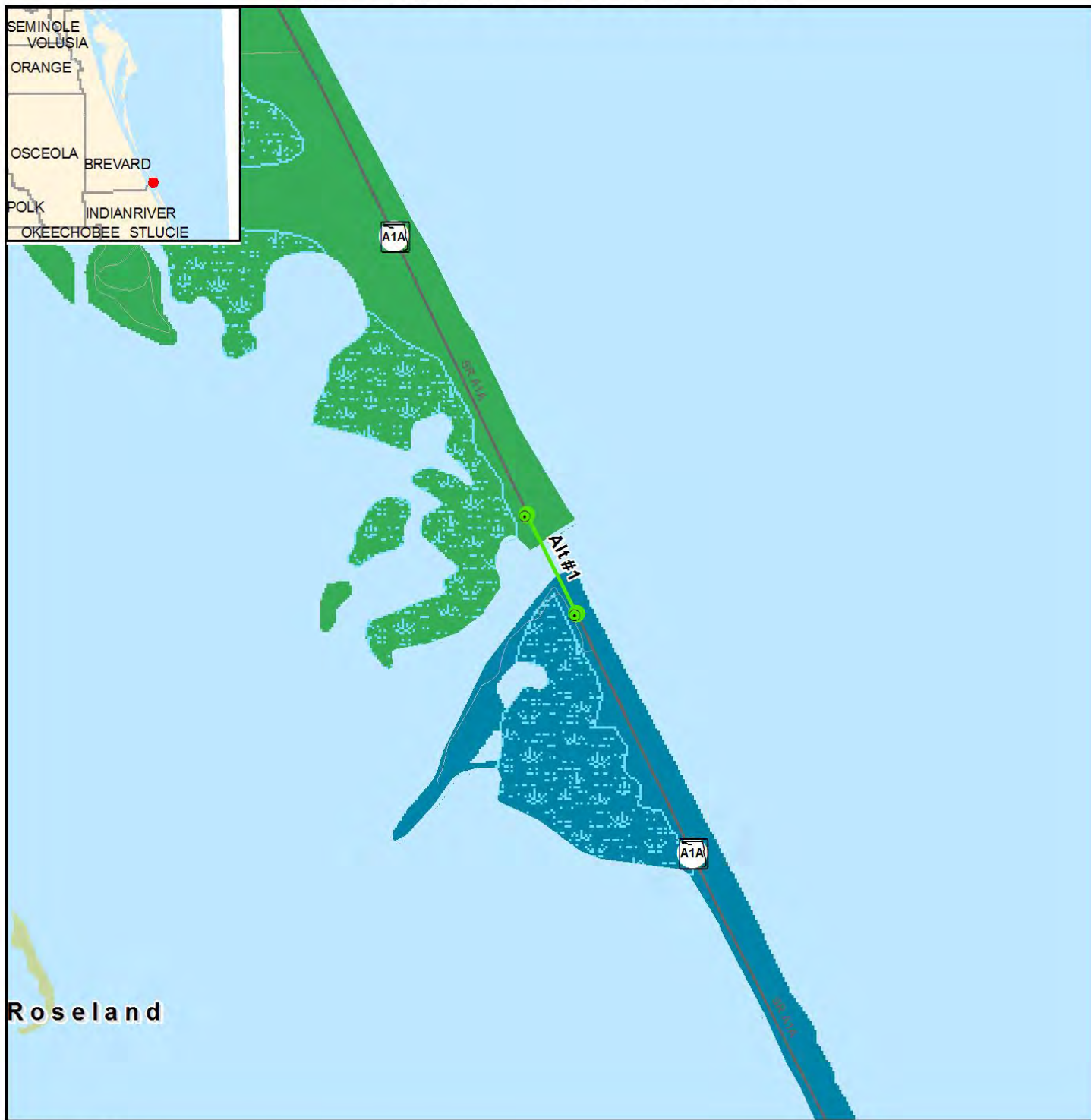
11/4/2019

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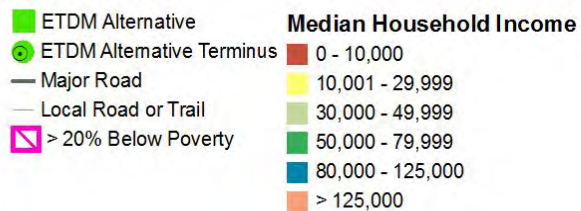
14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Income Map



Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)

0 0.15 0.3 0.6 Miles



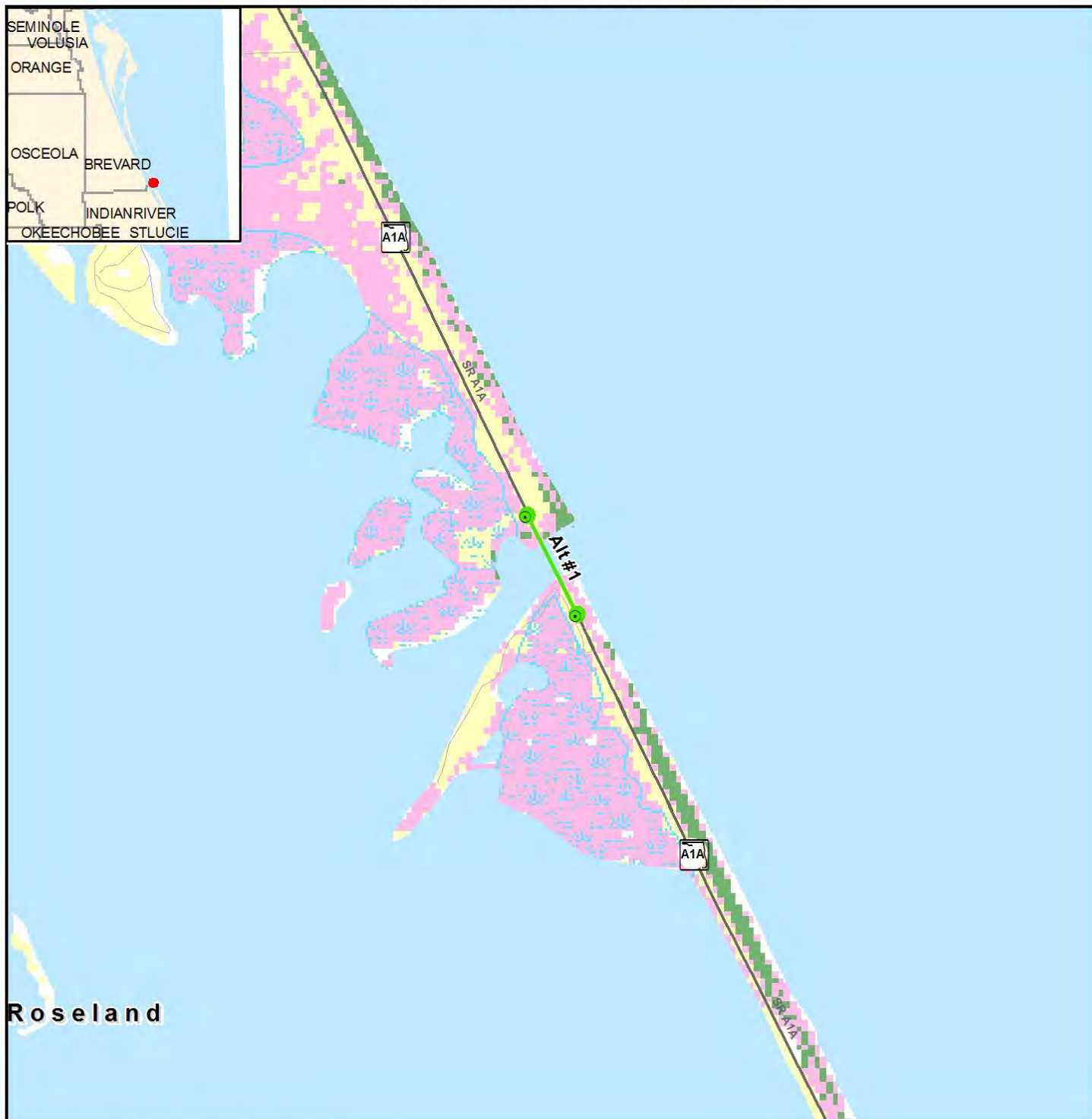
11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Integrated Wildlife Model Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- Low Habitat Quality
- Medium Habitat Quality
- High Habitat Quality

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Fish & Wildlife Conservation Commission



11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Land Use Map

- | | | | |
|---------------------------|-------------------------|--------------|-------------------------|
| ETDM Alternative | Agricultural | Other | Retail/Office |
| ETDM Alternative Terminus | Industrial | Public | Vacant (Residential) |
| Major Road | Institutional | Right-of-Way | Vacant (Nonresidential) |
| Local Road or Trail | Mining | Recreational | Water |
| | Open (Not Agricultural) | Residential | No Data |

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Revenue
 Florida Department of Transportation
 Florida County Property Appraiser Offices



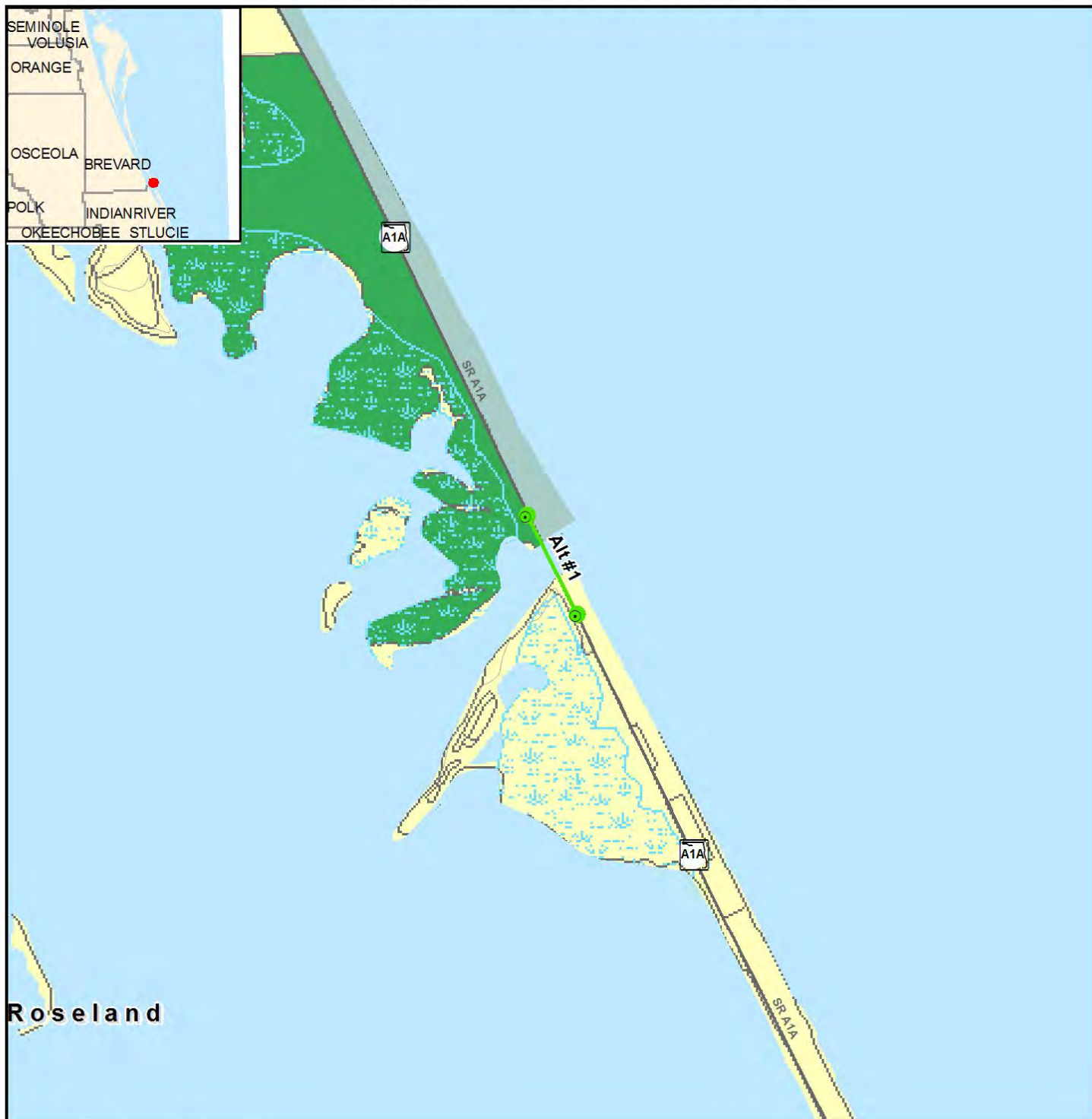
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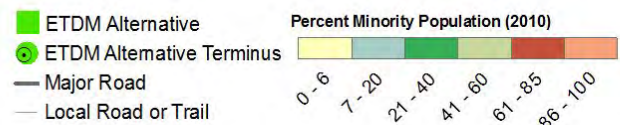
14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Minority Population Map



Data Sources:
 US Geological Survey
 FL Department of Transportation
 NAVTEQ
 US Census Bureau (2010)



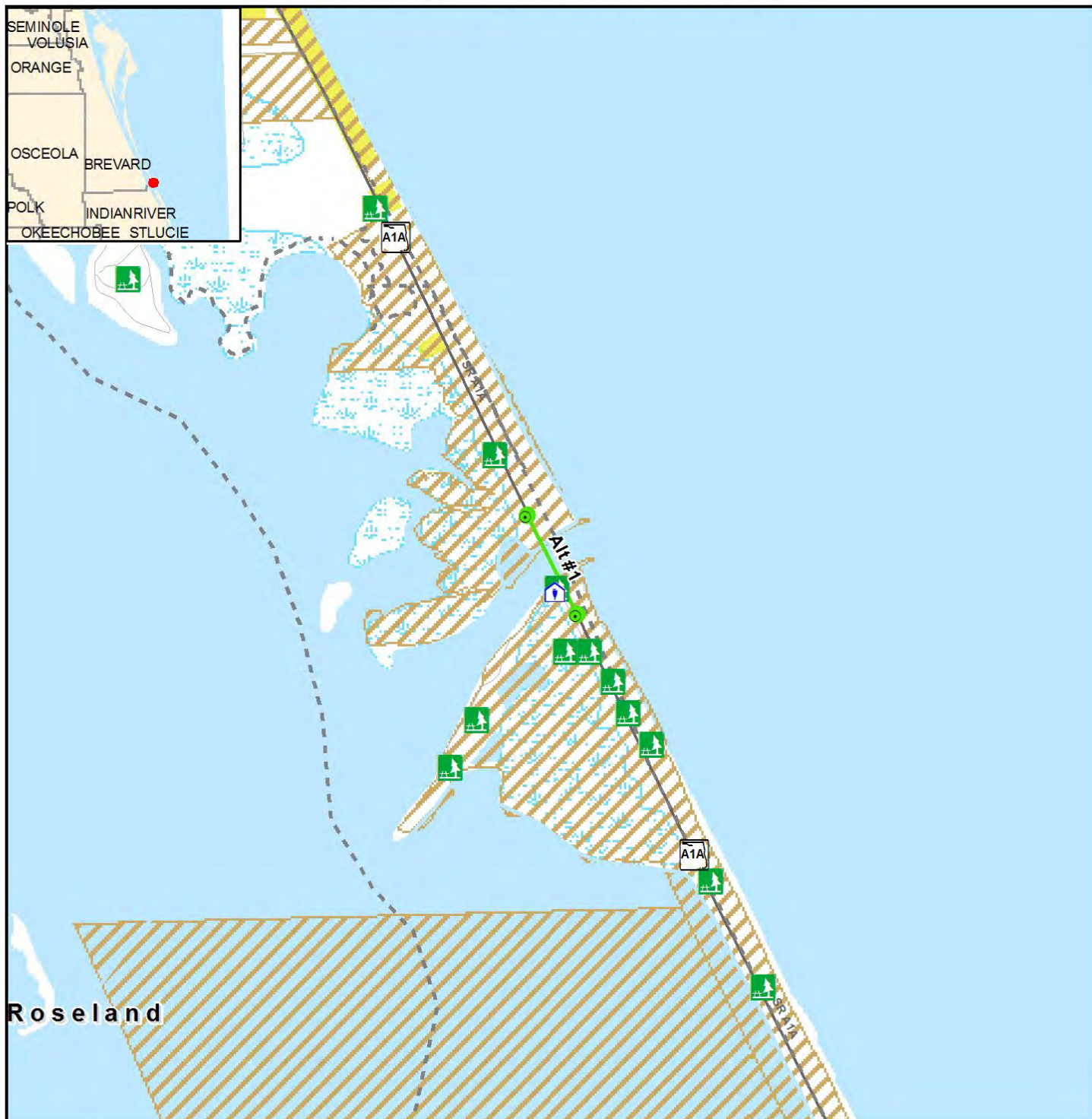
11/4/2019

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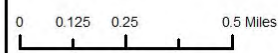
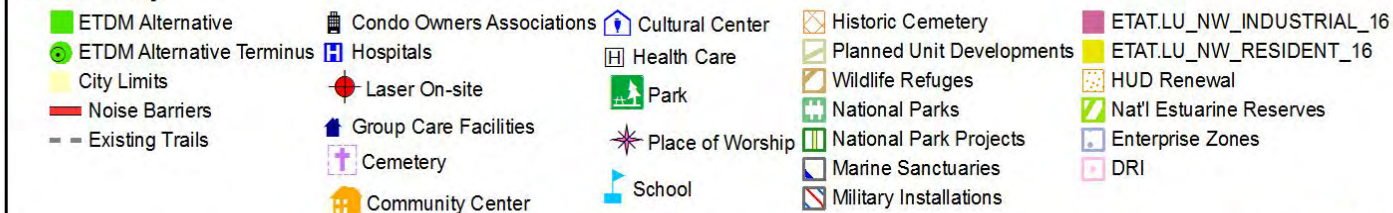
14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Noise Map



Data Sources:
 GeoPlan Center, US Geological Survey, US Census Bureau,
 HUD, Florida DOT, US Fish and Wildlife, National Park Service,
 NOAA, National Estuarine Research, Enterprise Florida



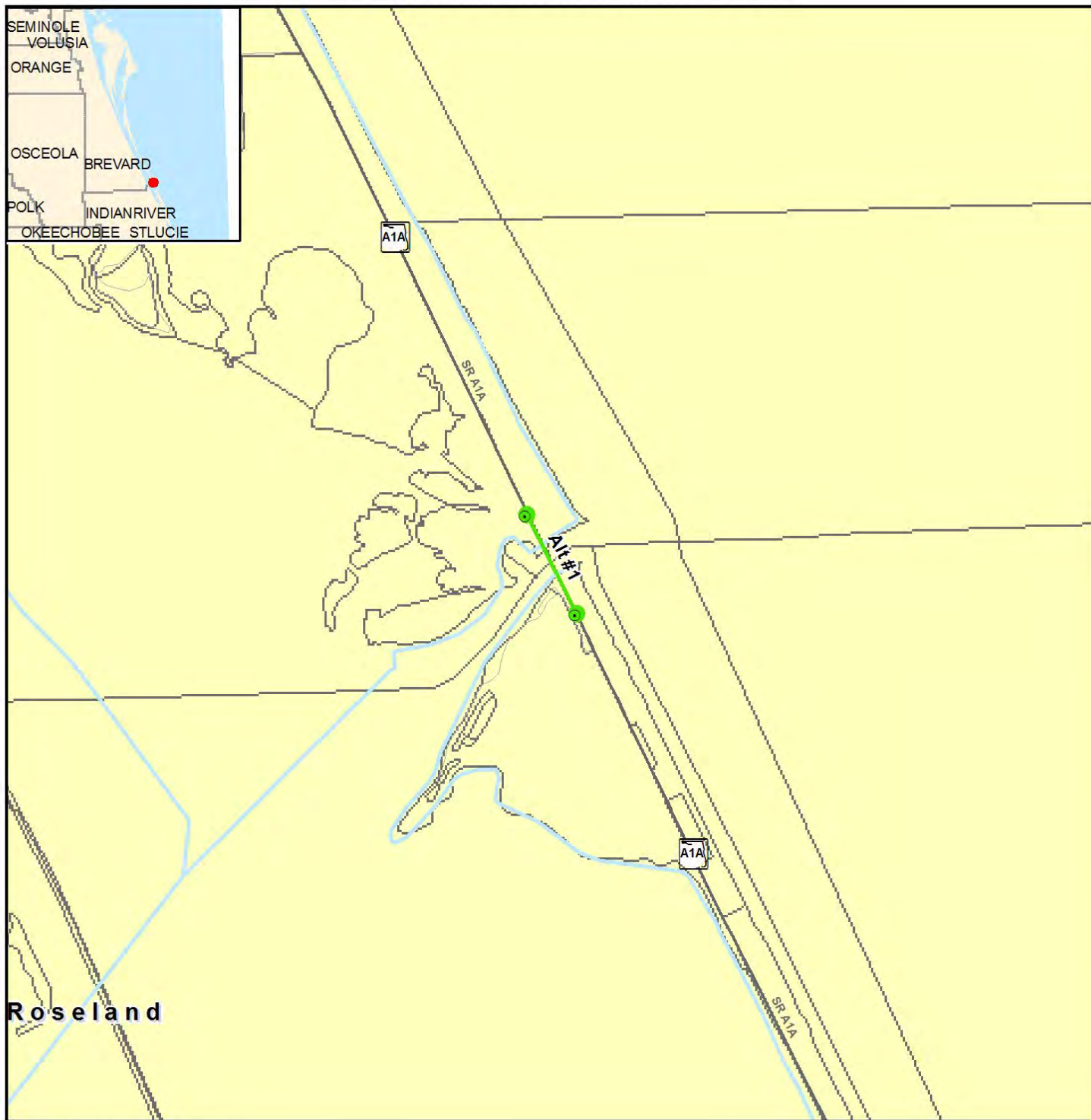
12/6/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

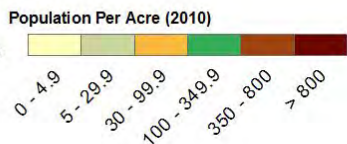
Replacement, Alternative #1

North Indian River Drive to Main Street



Population Density Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail



Data Sources:
US Geological Survey
FL Department of Transportation
NAVTEQ
US Census Bureau (2010)

0 0.15 0.3 0.6 Miles



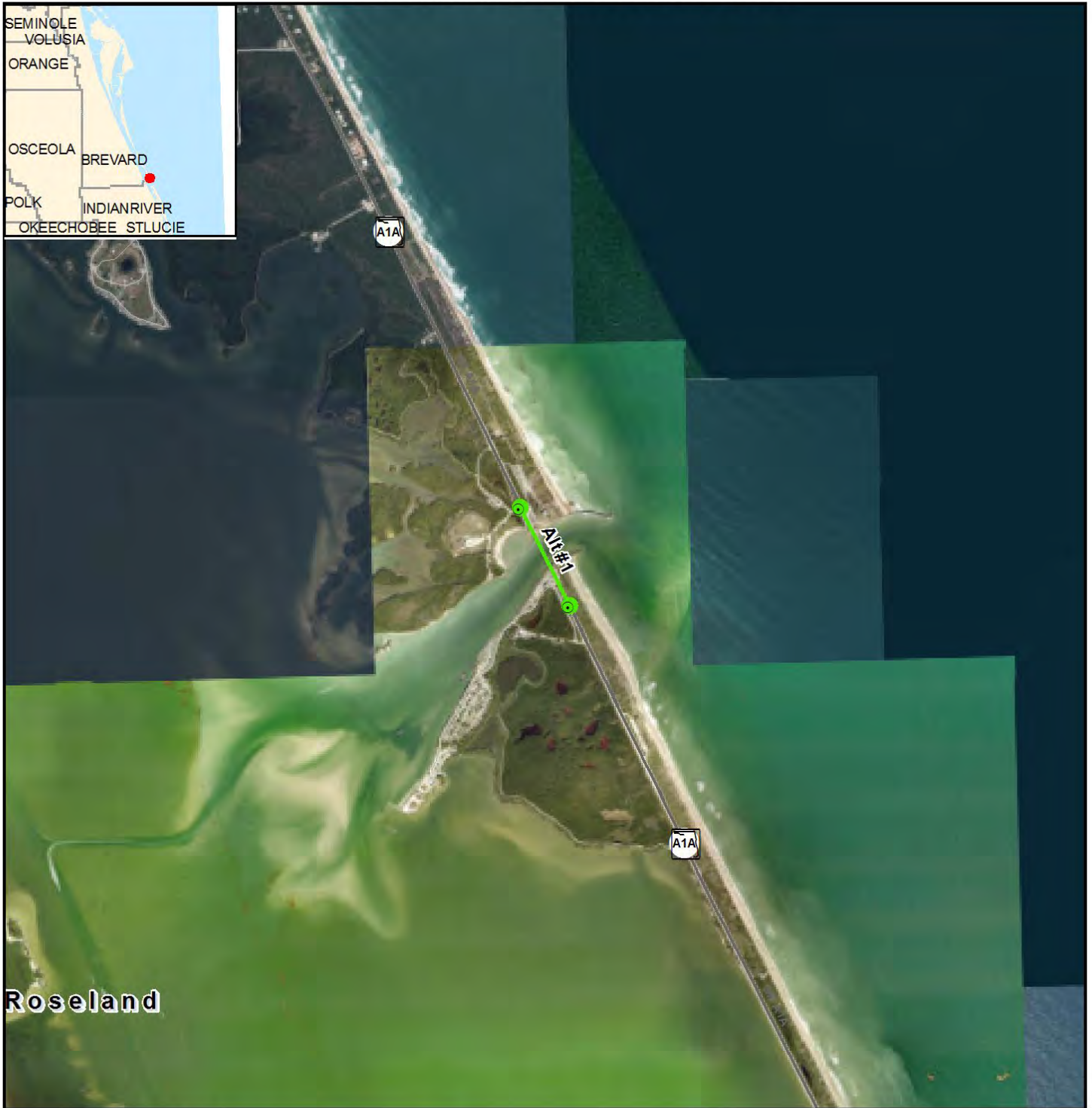
etdm
Environmental Screening Tool



11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005) Replacement, Alternative #1 North Indian River Drive to Main Street



Project Aerial Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail

Data Sources:
Highways - NAVTEQ
Digital Orthophotograph - ArcGIS Online



11/4/2019

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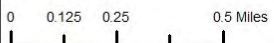
14433 SR A1A Sebastian Inlet Bridge (#880005) Replacement, Alternative #1 North Indian River Drive to Main Street



Project Base Map

- ETDM Alternative
- ETDM Alternative Terminus
- Local Road or Trail
- Major Road
- City Limits
- Managed Conservation Lands

Data Sources:
 NAVTEQ
 US Geological Survey
 US Census Bureau
 County Property Appraisers
 Florida Natural Areas Inventory



11/4/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005) Replacement, Alternative #1 North Indian River Drive to Main Street



Recreational Areas Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- Conservation or Recreation Area

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Natural Areas Inventory



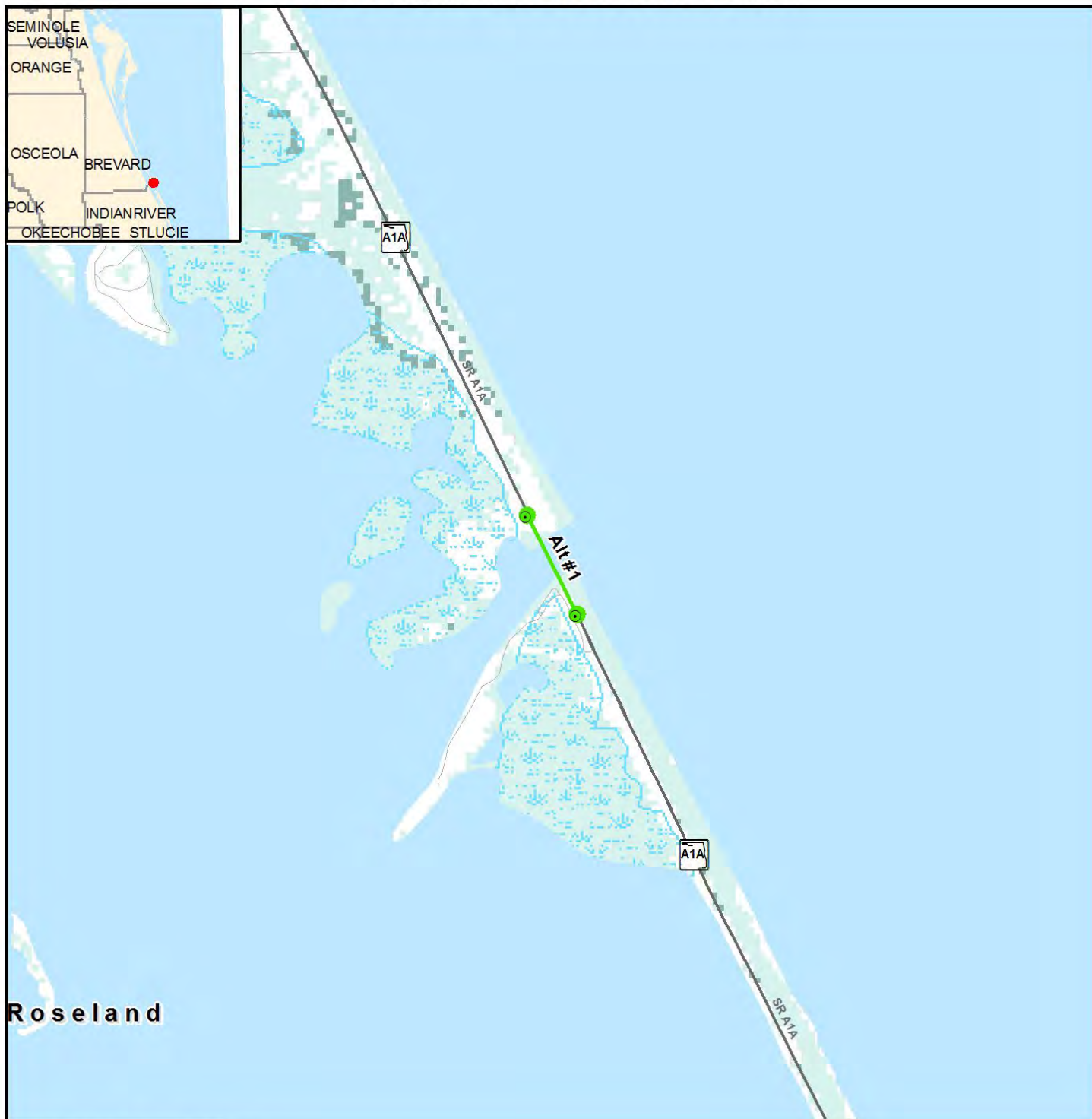
12/6/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

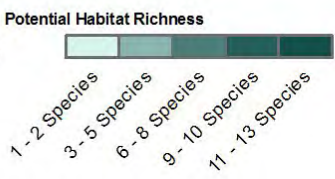
Replacement, Alternative #1

North Indian River Drive to Main Street

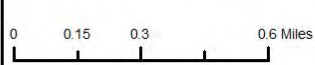


Species Potential Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits



Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Fish & Wildlife Conservation Commission



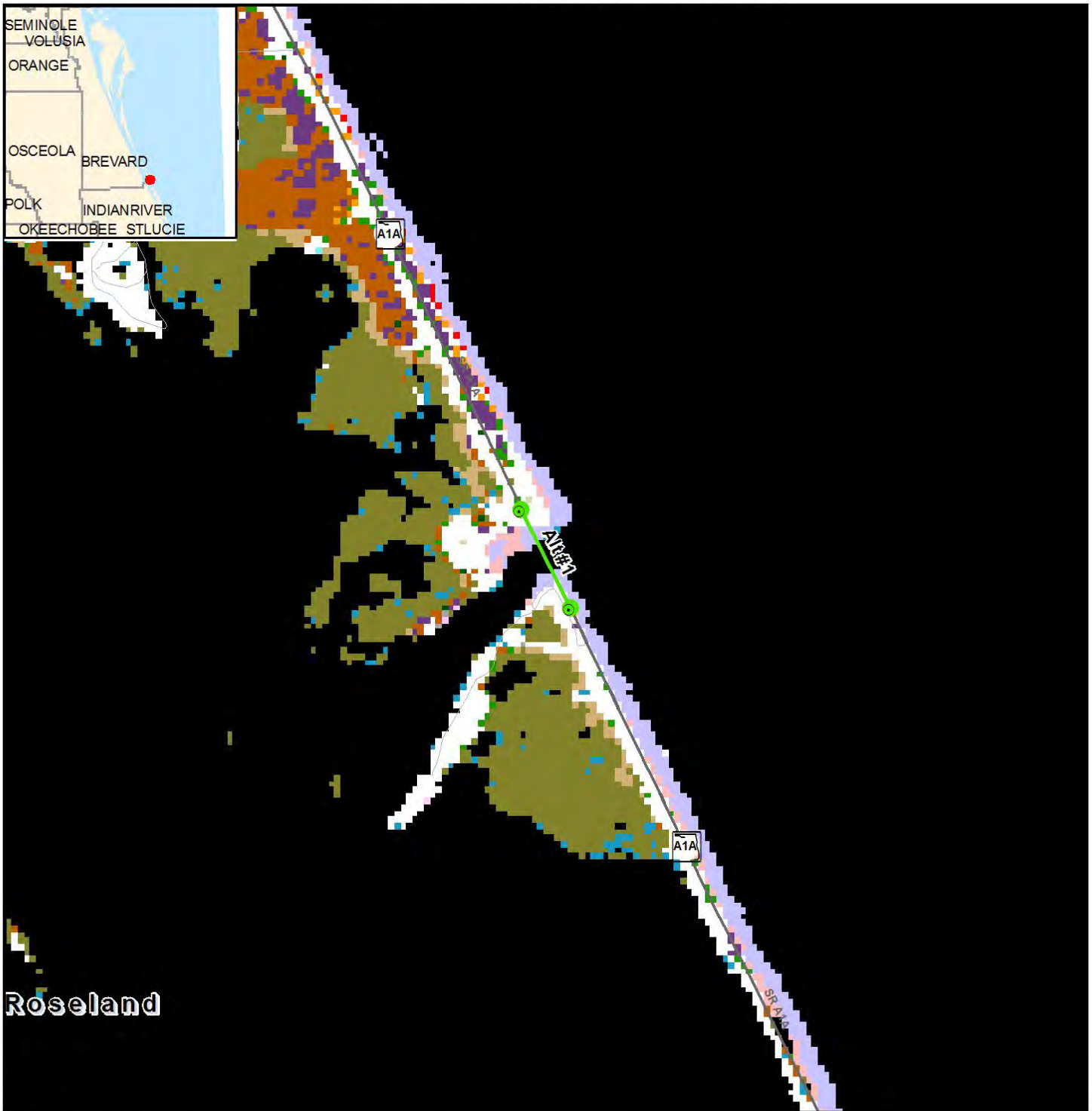
12/6/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Vegetation Map



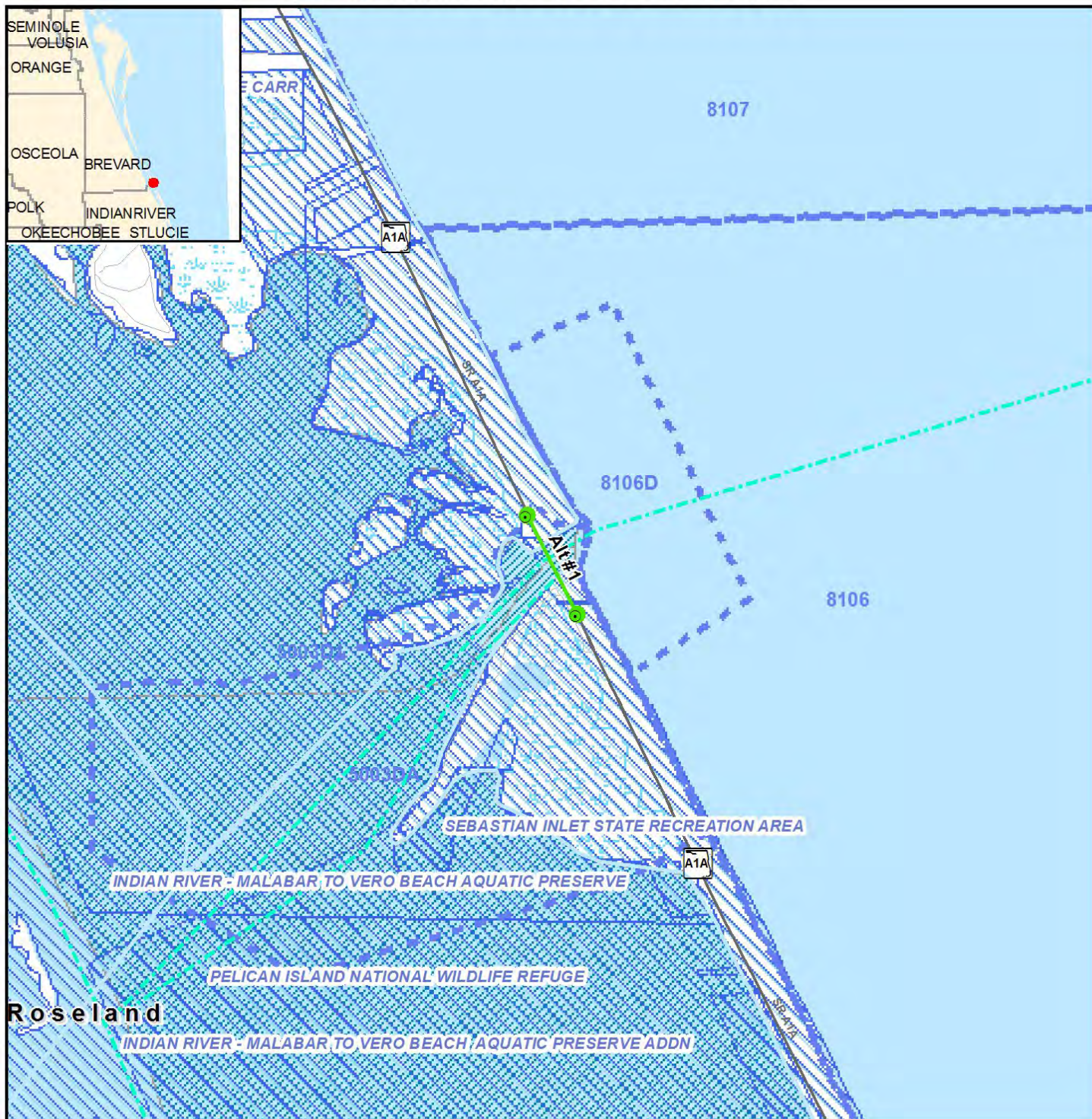
12/6/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

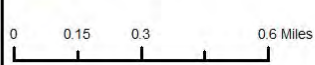
North Indian River Drive to Main Street



Water Resource Map

- ETDM Alternative
- ETDM Alternative Terminus
- Major Road
- Local Road or Trail
- City Limits
- 1st Magnitude Spring
- River, Stream or Canal
- Navigable Water Way
- SFWMD Canals
- Drainage Basin
- Outstanding Florida Water
- Surface Water Class I
- Surface Water Class II
- Water Body
- Swamp/Marsh

Data Sources:
 NAVTEQ
 US Geological Survey
 Florida Department of Transportation
 Florida Department of Environmental Protection
 Florida Geological Survey
 US Bureau of Transportation Statistics



12/6/2019

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14433 SR A1A Sebastian Inlet Bridge (#880005)

Replacement, Alternative #1

North Indian River Drive to Main Street



Wetlands and Surface Waters Map

- | | | |
|--|--|--|
| ■ ETDM Alternative | — River, Stream or Canal | ■ Non-vegetated Wetland |
| ● ETDM Alternative Terminus | ■ Water Body | ■ Vegetated Non-forested Wetland |
| — Major Road | ■ Swamp/Marsh | ■ Wetland Forested Mixed |
| — Local Road or Trail | | ■ Wetland Coniferous Forest |
| ■ City Limits | | ■ Wetland Hardwood Forest |

Data Sources:
 NAVTEQ
 Florida Water Management Districts
 US Geological Survey



12/6/2019



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Appendices

PED Comments

Advance Notification Comments

FL Department of Agriculture and Consumer Services Comment --

No additional comment.

--Brian Camposano, 1/26/2020

Response --

--, \$tools.date.format("M/d/yyyy",\$comment.responseTimestamp)

Saint Johns River Water Management District Comment --

All wetlands will need to be identified and any impacts will need to be mitigation for. Currently there are two mitigation banks in basin 22 but the impacts may not be able to be offset at the banks if there are so unique and the banks do not have that habitat type or ability to offset the impact. The mitigation is usually like kind as the impacts.

--Melissa Bryan Parsons, 1/26/2020

Response --

--, \$tools.date.format("M/d/yyyy",\$comment.responseTimestamp)

FL Department of State Comment --

No comments

--Adrienne Daggett, 12/16/2019

Response --

--, \$tools.date.format("M/d/yyyy",\$comment.responseTimestamp)

GIS Analyses

Since there are so many GIS Analyses available for Project #14433 - SR A1A Sebastian Inlet Bridge (#880005) Replacement , they have not been included in this ETDM Summary Report. GIS Analyses, however, are always available for this project on the Public ETDM Website. Please click on the link below (or copy this link into your Web Browser) in order to view detailed GIS tabular information for this project:

<http://etdmpub.fl.a-etat.org/est/index.jsp?tpID=14433&startPageName=GIS%20Analysis%20Results>

Special Note: Please be sure that when the GIS Analysis Results page loads, the **Summary Report Re-Published 6/03/2020Milestone** is selected. GIS Analyses snapshots have been taken for Project #14433 at various points throughout the project's life-cycle, so it is important that you view the correct snapshot.

Project Attachments

Note: Attachments are not included in this Summary Report, but can be accessed by clicking on the links below:

Date	Type	Size	Link / Description
12/11/2019	Form SF-424: Application for Federal Assistance	230 KB	http://etdmpub.fl.a-etat.org/est/servlet/blobViewer?blobID=28817 Form SF-424: Application for Federal Assistance

Degree of Effect Legend

Color Code	Meaning	ETAT	Public Involvement
N/A	Not Applicable / No Involvement	There is no presence of the issue in relationship to the project, or the issue is irrelevant in relationship to the proposed transportation action.	

0	None (after 12/5/2005)	The issue is present, but the project will have no impact on the issue; project has no adverse effect on ETAT resources; permit issuance or consultation involves routine interaction with the agency. The <i>None</i> degree of effect is new as of 12/5/2005.	No community opposition to the planned project. No adverse effect on the community.
1	Enhanced	Project has positive effect on the ETAT resource or can reverse a previous adverse effect leading to environmental improvement.	Affected community supports the proposed project. Project has positive effect.
2	Minimal	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
2	Minimal to None (assigned prior to 12/5/2005)	Project has little adverse effect on ETAT resources. Permit issuance or consultation involves routine interaction with the agency. Low cost options are available to address concerns.	Minimum community opposition to the planned project. Minimum adverse effect on the community.
3	Moderate	Agency resources are affected by the proposed project, but avoidance and minimization options are available and can be addressed during development with a moderated amount of agency involvement and moderate cost impact.	Project has adverse effect on elements of the affected community. Public Involvement is needed to seek alternatives more acceptable to the community. Moderate community interaction will be required during project development.
4	Substantial	The project has substantial adverse effects but ETAT understands the project need and will be able to seek avoidance and minimization or mitigation options during project development. Substantial interaction will be required during project development and permitting.	Project has substantial adverse effects on the community and faces substantial community opposition. Intensive community interaction with focused Public Involvement will be required during project development to address community concerns.
5	Potential Dispute (Planning Screen)	Project may not conform to agency statutory requirements and may not be permitted. Project modification or evaluation of alternatives is required before advancing to the LRTP Programming Screen.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
5	Dispute Resolution (Programming Screen)	Project does not conform to agency statutory requirements and will not be permitted. Dispute resolution is required before the project proceeds to programming.	Community strongly opposes the project. Project is not in conformity with local comprehensive plan and has severe negative impact on the affected community.
	No ETAT Consensus	ETAT members from different agencies assigned a different degree of effect to this project, and the ETDM coordinator has not assigned a summary degree of effect.	
	No ETAT Reviews	No ETAT members have reviewed the corresponding issue for this project, and the ETDM coordinator has not assigned a summary degree of effect.	

APPENDIX B

Historical Aerial Photographs



1968 - FDOT APLUS



1974 - FDOT APLUS



1980 - FDOT APLUS



1983 - FDOT APLUS



1984 - FDOT APLUS



1986 - FDOT APLUS

1-3-3

3-10-93

1"=2083'

PD 4079-17-04



1993 - FDOT APLUS



1999 – GOOGLE EARTH



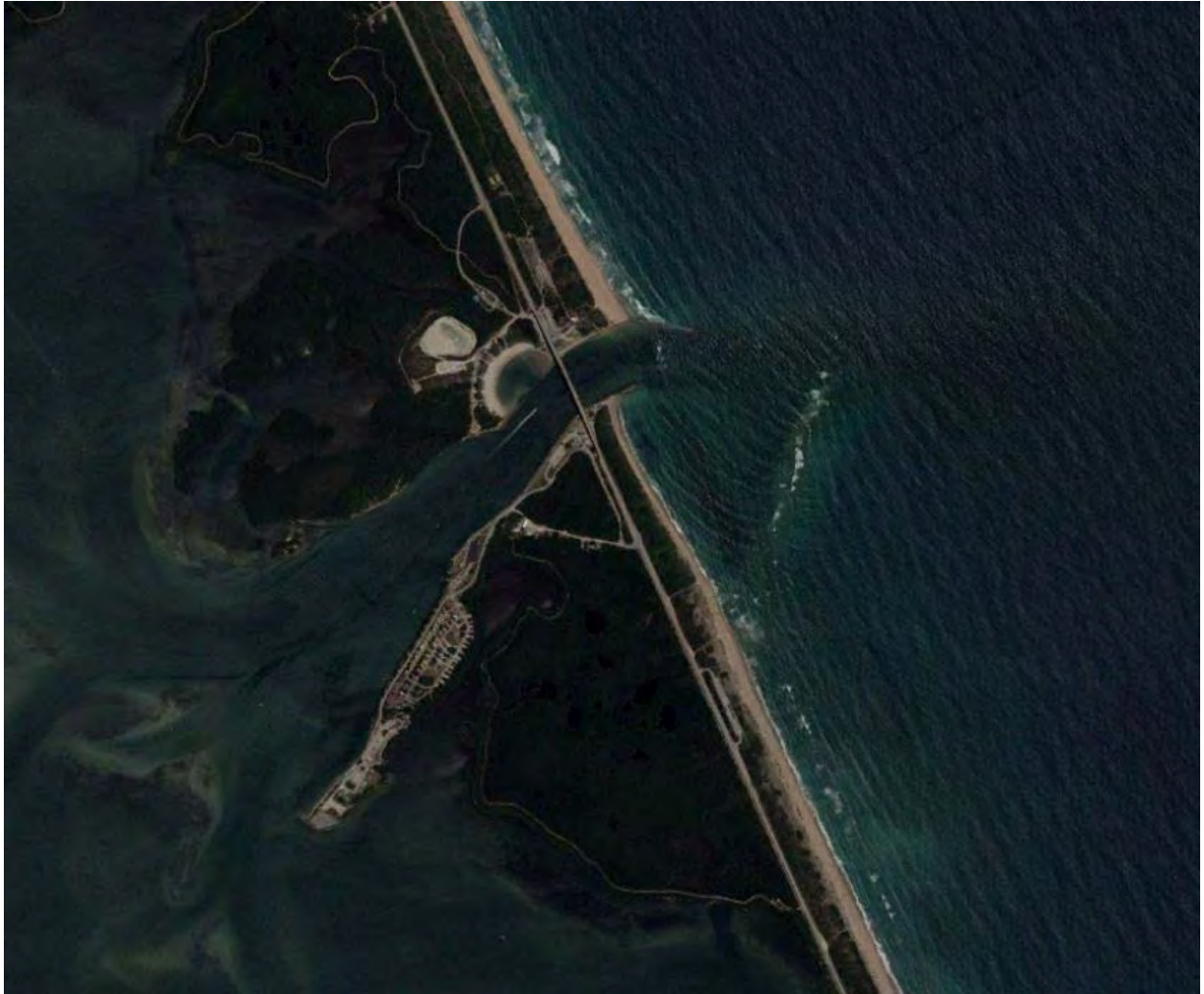
2004 – GOOGLE EARTH



2009 – GOOGLE EARTH



2012 – GOOGLE EARTH



2015 – GOOGLE EARTH



2018 – GOOGLE EARTH



2021 – GOOGLE EARTH

APPENDIX C

Regulatory Files

Sebastian Inlet

Department of Environmental Regulation

Stationary Tank Registration/Notification Form

RECEIVED

DATA ENTERED

Form 17-1.218(2) 7 AN 10:57

AUG 18 1987

STATE PARK - SEBASTIAN INLET

SEBASTIAN INLET
BUREAU OF WASTE MANAGEMENT
FL

Sebastian Inter State Rec. Area
(7450 0707 072)

NAME:
MAIL ADDRESS: 9700 South A1A
CITY/STATE: Melbourne Beach, FL 32951
(305) 727-1752

FACILITY LOCATION

ADDRESS:
CITY/STATE:

(Make corrections to name and address here)	
1. Facility/Address name:	Sebastian Inlet State Recreation Area
Facility address:	9700 S. AIA Melbourne Beach Florida 32951
Mailing address:	SAME

MAILING

Use this form to comply with the following requirements of the Stationary Tank Rule Chapter 17-61, Florida Administrative Code.

- Each owner or operator shall register the following with the department:
 - All existing facilities by December 31, 1984. (Questions 1-19)
 - All new storage systems or facilities at least 10 days prior to the start of installation of tanks except in the case of emergency replacement. (Questions 1-19)
 - A non-pollutant containing installation which is to be converted to a facility, at least 10 days prior to the placement of pollutants in such a facility. (Questions 1-19)
- Each owner or operator shall notify the department of the following:
 - All storage systems within 10 days of abandonment. (Questions 1-12, 16, 20)
 - Facility sale within 10 days of sale. Notice shall be made by the seller. (Answer questions 1-7, and 11. Question 7 about the new owner.)
 - Retrofitting within 10 days of completion. (Questions 1-19)
- You may notify the department of a change of operator. (Questions 1-6)

Agency Use Only

G

PLEASE PRINT OR TYPE

- Facility number (DER will provide this number) 318734859 3. Date August 5, 1987
- Federal Employment Identification (number used to file IRS forms) Unknown - State Government
- County Code (see enclosed letter). Indian River - (No enclosed letter) 31-05-31
- Operator of facility Ronald N. Johns
Effective date (only for change of operator): N/A Telephone number: 305-727-1752
- Company/Person owning tanks and piping Fl. Dept. Natural Resources/Division of Rec. & Parks
Address: 3900 Commonwealth Blvd. - Tallahassee, Fl. 32303
Contact person Joseph F. Knoll Telephone number: 904-488-4891
Effective date (only for change of owner): N/A
- How many tanks at this location have an individual storage capacity of greater than 550 gallons and store vehicular fuel made from petroleum?
0 Underground 1 Aboveground
- Facility location. Latitude 27° 51' 50N Longitude 80° 27' 00W Section Unk Township Unk Range Unk
This information is listed on property deeds, and in the offices of the property appraiser and tax assessor.
- Sketch the facility on a separate page showing the APPROXIMATE location of buildings, tanks, and dispensers.
 - Draw a line from tank to dispenser to show which are connected by piping.
 - Label each tank as Tank 1, Tank 2, etc.
 - Write the date and your facility number, if known, or name and address exactly as it appears above.
 - Keep a copy of your sketch.

REFER TO TANKS BY THESE LABELS IN ANY COMMUNICATION WITH THE DEPARTMENT. DESCRIBE PIPING BY THE NUMBER OF THE TANK IT IS ATTACHED TO

11. TO THE BEST OF MY KNOWLEDGE AND BELIEF ALL INFORMATION SUBMITTED ON THIS FORM IS TRUE, ACCURATE, AND COMPLETE

Ronald N. Johns
Name of owner, operator or authorized representative

[Signature]
Signature of owner, operator or authorized representative

KEEP A COPY OF THIS FORM FOR YOUR RECORDS

MAIL TO: DER Stationary Tank Registration
2600 Blair Stone Road
Room 603
Tallahassee, Florida 32301

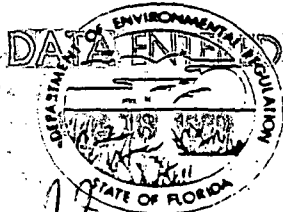
DER FORM 17-1.218(2) 9/1/84 (2/2)

INSTRUCTIONS: Use one row across for each tank counted in question 8. The tank number must agree with the number on the sketch of your facility. A new tank installed where a registered tank was removed should be given the number of the removed tank with an R and a number added. Example. Tank 3R1 is first replacement for tank 3. It is in the same place where tank 3 was. Tank 3R2 is the second replacement for tank 3. Attach extra pages if necessary. Write your facility number, if known, or name and address, exactly as it appears on the front of the form, on all extra pages.

(12) Tank Number	(13) Tank Size in Gallons	(14) Tank Contents (see List 14 below)	(15) Tank Installation Date, Month/Year (put X if unknown)	(16) Underground or Aboveground Tank (write U or A)	(17) Tank Construction Specifics (see List 17U or 17A below)	(18) Integral Piping System Construction Specifics (see List 18 below)	(19) Monitoring System Type (see List 19)	(20) Tank Disposal Method (see List 20)
1R1	1,000	B	00/79	A	R & V	A & C	N	B

ENTER THE LETTERS WHICH APPLY TO EACH TANK IN THE BOXES ABOVE: **WRITE ALL THAT APPLY.**

List 14	List 17U UNDERground Tanks	List 17A ABOVEground Tanks	List 18	List 19	List 20
Tank contents are: A. leaded gasoline. B. unleaded gasoline. C. Alcohol enriched gasoline. D. diesel fuel. E. aviation fuel. Z. other.	Underground tank: A. has overfill protection. B. is interior lined. C. is painted/asphalted steel. D. is of unknown type. E. is fiberglass type. F. is fiberglass-clad steel. G. is sacrificial anode type. H. is impressed current type. I. is double walled. J. is concrete. K. is in secondary containment. N. is or has none of the above.	Aboveground tank: O. has overfill protection. P. is surrounded by impervious dike. Q. is surrounded by earth dike. R. rests on an impervious base. S. rests on a earth/gravel base. T. has interior lined bottom. U. is cathodically protected. V. is built of/coated with corrosion resistant materials. W. is supported above the soil. Z. is or has none of the above.	Integral Piping System has: A. no parts in contact with the soil. Parts contacting the soil which are: B. unprotected metal. C. built of corrosion resistant materials. D. corrosion resistant coated. E. cathodically protected. F. double-walled. G. within a secondary containment. H. interior lined. M. none of the above.	Monitoring system is: A. automatically sampled well(s). B. manually sampled well(s). C. groundwater monitoring plan. D. SPCC plan. E. well/detector in secondary containment. F. in-ground detector. G. within walls of double-walled tank. H. continuous in piping. I. not required. N. none of the above.	Tank disposal method: A. Filling. B. Removal. C. Retrofitting. F. Other.



STATE OF FLORIDA
 Department of Environmental Regulation
 STORAGE TANK NOTIFICATION FORM
 Form 17-61.090 (3)

RECEIVED
 FEB 15 1989

PLEASE PRINT OR TYPE

SOLID WASTE
 SUBSECTION

Tank (s)
 Location

(1) DER facility number (if known) 318734859 (2) County code
 (3) Original registration data revision XX
 (4) Facility type (see code list (4) on back) B

(5) Facility name STATE PARK - SEBASTIAN INLET
 Street address/city/state/zip 9700 S A1A
 Mailing address/city/state/zip MELBORNE Beach, FLA 32951

(6) Operator PARK MANAGER Telephone # (407) 989-4852
 New operator date (only for change of operator) 1/1/88 SC 350-4852

(7) Company/person owning tank(s) and piping Dept of Natural Resources
 Company address/city/state/zip 3900 Commonwealth Blvd Tallahassee FLA

Contact person SANDY COOK Telephone # (904) 487-2388
 New owner date (only for change of owner) 1/1/88

(8) Location (if available): Latitude 27° 51' 50" Longitude 80° 27' 00"
 Section UNIC Township UNIC Range UNIC

PLEASE FILL OUT ONE LINE FOR EACH TANK WITH CODES LISTED ON BACK

Fill out columns (9) through (16) for tanks in use, and (17) through (19) for tanks out of use

(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
01		B	00/88	A	R-V A	I		N/A	N/A	N/A

17, 18, 19 for tanks retrofitted, removed abandoned, etc.

(20) N/A
 Pollutant Storage System Specialty Contractor Name
 For new tank installation or tank removal

DPR # N/A
 Department of Professional Regulation Certificate Number

To the best of my knowledge and belief all information submitted on this form is true, accurate and complete.

R. N. Johns
 Print name and title of owner, operator or authorized person

[Signature]
 Signature

2/13/89
 Date

NOTE: PUT "X" IF ANSWER IS UNKNOWN. This form may be reproduced. For each tank whether in use or out of use, use one row across. Use more than one letter per column, if applicable. When a mixture of several hazardous substances is stored in one tank, enter the name of the substance of greatest quantity. Provide a sketch of tank location in reference to a stationary structure. The tank number on the sketch must agree with the number on the form. Attach extra pages if necessary and write your facility number, if known, or name and address, exactly as it appears on the form.

INFORMATION CODE LIST

<u>List (4)</u>	<u>List (9)</u>	<u>List (10)</u>	<u>List (11)</u>	<u>List (12)</u>	<u>List (13)</u>
Facility Type	Tank Number	Tank Size Gallons	Tank contents are:	Tank Installation Date/Month/Year	Underground or Aboveground (write <u>U</u> or <u>A</u>)
A. service station			A. leaded gasoline		
B. residence			B. unleaded gasoline		
C. business (no fuel sold)			C. unleaded gasohol		
D. bulk petroleum storage			D. vehicular diesel		
E. industrial plant			F. aviation gas	<u>No skid or portable tanks</u>	
F. federal government (give GSA#)			G. jet fuel		
G. state government			H. concrete		
H. local government			I. sand		
I. collection station			K. kerosene		
K. bulk chemical storage			L. used (waste) oil		
L. chemical user facility			M. diesel (boilers & generators)		
M. agricultural facility			N. leaded gasohol		
N. facility on Indian land.			O. new oil		
S. small user facility			P. pesticide (write in name)		
T. terminal facility/marina			R. ammonia compound (write in name)		
			S. chlorine compound (write in name)		
			V. hazardous substance (write in name or Chemical Abstract Service (CAS) number)		
			W. water		
			Z. other (write in name)		

List (14) U

- Underground tank
- A. has overflow protection
 - B. is interior lined
 - C. is painted/asphalted steel
 - D. is of unknown type
 - E. is fiberglass type
 - F. is fiberglass-clad steel
 - G. is sacrificial anode type
 - H. is impressed current type
 - I. is double walled
 - K. is in secondary containment
 - L. compartmented

List (14) A

- Aboveground tank
- M. is double-walled
 - P. is surrounded by impervious dike
 - Q. is surrounded by earth dike
 - R. rests on an impervious base
 - S. rests on an earth/gravel base
 - T. has interior lined bottom
 - U. is cathodically protected
 - V. is built of/coated with corrosion resistant material
 - W. is supported above the soil

List (15)

- Integral piping system has:
- A. no parts in contact with the soil
- Parts contacting the soil which are:
- B. galvanized or unprotected metal
 - C. built of corrosion resistant metal
 - D. corrosion resistant coated
 - E. cathodically protected
 - F. double-walled
 - G. within a secondary containment
 - H. interior lined

List (16)

- Monitoring system is:
- A. automatically sampled well(s)
 - B. manually sampled well(s)
 - C. groundwater monitoring plan
 - D. SPCC plan
 - E. well/detector in secondary containment
 - F. in-ground detector
 - G. within walls of double-wall tank
 - H. continuous in piping
 - I. not required

List (17)

- Tank disposal method
- A. abandoned in place, filled w/sand or concrete
 - B. removed from site
 - C. retrofitted
 - F. abandoned in place, but not filled w/sand or concrete

List (18)

- Gallons Left
- Date Abandoned
Month/Year

List (19)

DER approved alternate procedure(s), if applicable:

MAIL TO: DER Stationary Tank Registration
2600 Blair Stone Road
Tallahassee, Florida 32399-2400



State of Florida
Department of Environmental Regulation

Pollutant Storage Tank System Inspection Report Form

Facility ID No.: 318734859 County: Indian River
 Facility Name: State Park - Sebastian Inlet
 Facility Location: 9700 SAIA Melbourne Beach
 Operator: _____ Phone: _____
 Owner: DNR Phone: _____
 Latitude: 27° 51' 30" Longitude: 80° 26' 50" Section _____ Township _____ Range _____

Tank #	Size	Contents	Installation Date	U/A or In-Contact	Tank Construction	Integral Piping	Monitoring System	Tank Status
<u>1</u>	<u>1000</u>	<u>B</u>	<u>01/79</u>	<u>A</u>	<u>RU</u>	<u>AC</u>	<u>±</u>	<u>U</u>
<u>2</u>		<u>B</u>	<u>xx/88</u>	<u>A</u>	<u>RU</u>	<u>A</u>	<u>±</u>	<u>U</u>

Comments:

Tank # 2 removed to another site
 Tank # 1 Fiberglass clad steel tank
 - Tank has had hole fixed with putty
 - replace with spring load valve in containment drain
 - underground tanks used as above ground (improper installation)
 - piping and pump not in containment area

Inspection Type: <input type="checkbox"/> Complaint Response <input checked="" type="checkbox"/> Initial <input type="checkbox"/> EDI <input type="checkbox"/> Public Well Field <input type="checkbox"/> Reinspection <input type="checkbox"/> Installation <input type="checkbox"/> Tank Removal <input type="checkbox"/> Unregistered	Facility Information: <input type="checkbox"/> Abandoned <input type="checkbox"/> Aboveground <input type="checkbox"/> Govt.-Federal <input checked="" type="checkbox"/> Govt.-Other <input type="checkbox"/> Non-retail <input type="checkbox"/> Retail <input type="checkbox"/> Retrofit (M. or O.) <input type="checkbox"/> Retrofit (L. or R.)
---	---

DER District: Central Local Program: IRCEH

[Signature] 7/30/90 Inspector's Signature & Date
[Signature] Facility Contact's Signature & Date
 see notice

Violations must be corrected by: next routine inspection or by: 1 mo / 1 day / 1 yr

318734859



FLORIDA DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399

RECEIVED
D.E.R.
91 JUN -7 AM 10:05
STORAGE TANK
REGULATION

- Lawton Chiles
Governor
- Jim Smith
Secretary of State
- Bob Butterworth
Attorney General
- Gerald Lewis
State Comptroller
- Tom Gallagher
State Treasurer
- Bob Crawford
Commissioner of Agriculture
- Betty Castor
Commissioner of Education

Tom Gardner, Executive Director

DATA ENTERED

JUN 10 1991

BY _____

May 30, 1991

Sebastian Inlet SRA
9700 South A1A
Melbourne, FL 32951

Mr. Robert Granger
D.E.R.
Motor Fuel Tank Registration
2600 Blair Stone Rd.
Tallahassee, FL 32399-2405

Dear Mr. Granger:

As per your phone instructions I have attached the registration form for our bulk fuel tank for facility #318734859.

In addition this letter will serve as documentation that the second fuel tank was removed under work project #890053 as of or before 06/11/90. The tank was legally disposed of.

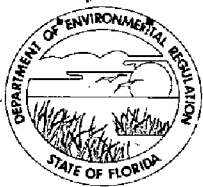
Also attached is a copy of SAMAS for our activity (7450-3307-072-01) on which the payment for fiscal year 1990 was paid. Please remove the \$40.00 in penalty charges for our account. If a copy of the warrant is needed you may contact Finance and Accounting within our agency.

Please submit a new bill reflecting the correct charges for one fuel tank so we can expedite payment.

Sincerely,

Ronald N. Johns
Park Manager

cc: District VII
file



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form #	17-761.900(6)
Form Title	Closure Assessment Form
Effective Date	December 10, 1990
DER Application No.	(Filled in by DER)

Closure Assessment Form

Owners of storage tank systems that are replacing, removing or closing in place storage tanks shall use this form to demonstrate that a storage system closure assessment was performed in accordance with Rule 17-761 or 17-762, Florida Administrative Code. Eligible Early Detection Incentive (EDI) and Reimbursement Program sites do not have to perform a closure assessment.

Please Print or Type
Complete All Applicable Blanks

- Date: 05/30/91
- DER Facility ID Number: 318734859
- County: Indian River
- Facility Name: State Park - Sebastian Inlet
- Facility Owner: Florida Dpeartment of Natural Resources
- Facility Address: 9700 South A1A, Melbourne Beach, FL 32951
- Mailing Address: same
- Telephone Number: (S/C) 350-4852
- Facility Operator: Ronald N. Johns
- Are the Storage Tank(s): (Circle one or both) (A) Aboveground or B. Underground
- Type of Product(s) Stored: Unleaded fule - Gasoline
- Were the Tank(s): (Circle one) A. Replaced (B) Removed C. Closed in Place D: Upgraded (aboveground tanks only)
- Number of Tanks Closed: 1
- Age of Tanks: Approx. 10 years

Facility Assessment Information

- | Yes | No | Not Applicable | |
|-------------------------------------|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | | (unk) 1. Is the facility participating in the Florida Petroleum Liability Insurance and Restoration Program (FPLIRP)? |
| <input type="checkbox"/> | <input type="checkbox"/> | | (unk) 2. Was a Discharge Reporting Form submitted to the Department?
If yes, When: _____ Where: _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | | 3. Is the depth to ground water less than 20 feet? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Are monitoring wells present around the storage system?
If yes, specify type: <input type="checkbox"/> Water monitoring <input type="checkbox"/> Vapor monitoring |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Is there free product present in the monitoring wells or within the excavation? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Were the petroleum hydrocarbon vapor levels in the soils greater than 500 parts per million for gasoline?
Specify sample type: <input type="checkbox"/> Vapor Monitoring wells <input type="checkbox"/> Soil sample(s) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Were the petroleum hydrocarbon vapor levels in the soils greater than 50 parts per million for diesel/kerosene?
Specify sample type: <input type="checkbox"/> Vapor Monitoring wells <input type="checkbox"/> Soil sample(s) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Were the analytical laboratory results of the ground water sample(s) greater than the allowable state target levels?
(See target levels on reverse side of this form and supply laboratory data sheets) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. If a used oil storage system, did a visual inspection detect any discolored soil indicating a release? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | | 10. Are any potable wells located within 1/4 of a mile radius of the facility? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | | 11. Is there a surface water body within 1/4 mile radius of the site? If yes, indicate distance: <u>100ft.</u> |



Virginia B. Wetherell
Executive Director

FLORIDA DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399

Lawton Chiles
Governor
Jim Smith
Secretary of State
Bob Butterworth
Attorney General
Gerald Lewis
State Comptroller
Tom Gallagher
State Treasurer
Bob Crawford
Commissioner of Agriculture
Betty Castor
Commissioner of Education

January 10, 1992

Sebastian Inlet SRA
9700 South A1A
Melbourne Beach, FL 32951

Charles L. Vogt, III, M.S.
Environmental Specialist II
1900 27th Street, 2nd Floor
Vero Beach, FL 32960

Dear Mr. Vogt:

Enclosed you will find a copy of our closure assessment form and a copy of our intent to transfer property form. As you can tell we will be closing down our gasoline storage area and removing the equipment. We anticipate having the tank removed prior to the end of the fiscal year (June 1992).

If you require more information, just let me know.

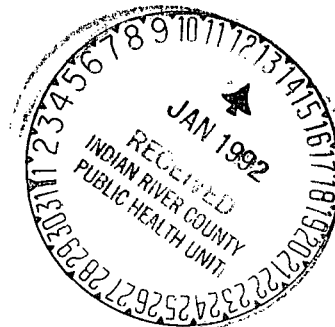
Sincerely,

Clinton E. McKenzie
Assistant Park Manager
Sebastian Inlet SRA

CEM/pb

enclosures

cc: District 7 Administration
file





Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form #	17-701.900(8)
Form Title	Closure Assessment Form
Effective Date	December 10, 1990
DER Application No.	(Filed in by DER)

Closure Assessment Form

Owners of storage tank systems that are replacing, removing or closing in place storage tanks shall use this form to demonstrate that a storage system closure assessment was performed in accordance with Rule 17-761 or 17-762, Florida Administrative Code. Eligible Early Detection Incentive (EDI) and Reimbursement Program sites do not have to perform a closure assessment.

Please Print or Type
Complete All Applicable Blanks

- Date: 10/15/91
- DER Facility ID Number: 318734859
- County: Indian River
- Facility Name: State Park - Sebastian Inlet
- Facility Owner: Florida Department of Natural Resources
- Facility Address: 9700 South A1A, Melbourne Beach, FL 32951
- Mailing Address: same
- Telephone Number: (S/C) 350-4852
- Facility Operator: Ronald N. Johns
- Are the Storage Tank(s): (Circle one or both) A. Aboveground or B. Underground
- Type of Product(s) Stored: Unleaded fuel - Gasoline
- Were the Tank(s): (Circle one) A. Replaced B. Removed C. Closed in Place D. Upgraded (aboveground tanks only)
- Number of Tanks Closed: 1
- Age of Tanks: Approx. 3+ years

Facility Assessment Information

- | Yes | No | Not Applicable | |
|-------------------------------------|-------------------------------------|-------------------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1. Is the facility participating in the Florida Petroleum Liability Insurance and Restoration Program (FPLIRP)? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2. Was a Discharge Reporting Form submitted to the Department?
If yes, When: _____ Where: _____ |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 3. Is the depth to ground water less than 20 feet? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Are monitoring wells present around the storage system?
If yes, specify type: <input type="checkbox"/> Water monitoring <input type="checkbox"/> Vapor monitoring |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 5. Is there free product present in the monitoring wells or within the excavation? |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Were the petroleum hydrocarbon vapor levels in the soils greater than 500 parts per million for gasoline?
Specify sample type: <input type="checkbox"/> Vapor Monitoring wells <input type="checkbox"/> Soil sample(s) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Were the petroleum hydrocarbon vapor levels in the soils greater than 50 parts per million for diesel/kerosene?
Specify sample type: <input type="checkbox"/> Vapor Monitoring wells <input type="checkbox"/> Soil sample(s) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Were the analytical laboratory results of the ground water sample(s) greater than the allowable state target levels.
(See target levels on reverse side of this form and supply laboratory data sheets) |
| <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | 9. If a used oil storage system, did a visual inspection detect any discolored soil indicating a release? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10. Are any potable wells located within 1/4 of a mile radius of the facility? |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 11. Is there a surface water body within 1/4 mile radius of the site? If yes, indicate distance: <u>100ft.</u> |

DATE: _____
 PAGE: _____ of _____
 CERT. NO.: _____

TO: Bureau of State Surplus Property
 813A Lake Bradford Road
 Tallahassee, Florida 32304

FROM: DEPARTMENT OF NATURAL RESOURCES
 PROPERTY SECTION, ROOM 809
 3900 COMMONWEALTH BOULEVARD
 TALLAHASSEE, FLORIDA 32399-3000
 (BSSP Use Only)

Inventory Control #	Qty	Description of Property	Age Yrs	Cond.	Purchase Price	Estimated Value	BSSP CARD NUMBER
1. 00067953	1	Atmore 1000 Gal. Fuel Tank	3	G	965.00	500.00	
2. 00067955	1	Wayne Decade Fuel Disp.	3	G	1289.92	1000.00	
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							

Property Physical Location:
Maintenance Shop
BL 70020

Contact Person:
R. N. Johns/

Telephone Number:
407/984-4852

Suncom Number:
350/4852

CONDITION OF PROPERTY CODE: E-EXCELLENT; G-GOOD; F-FAIR; P-POOR; S-SCRAP;
 DESCRIBE ON THE REVERSE SIDE ANY ADDITIONAL INFORMATION WHICH MAY BE PERTINENT

I hereby certify this property as surplus in accordance with Chapter 273 of the Florida Statutes.



DEPARTMENT OF NATURAL RESOURCES
CERTIFICATION OF STATE SURPLUS PROPERTY

DATE 10/17/91

TO: PROPERTY MANAGER

ORGANIZATION NO. 7450 7000 072

FROM: Sebastian Inlet S.R.A.
(Activity Name)

LOCATION Maintenance Shop/B1 70020
(Building and Room Number)

We, the undersigned members of a survey committee, have determined that the equipment listed is not in use and is no longer needed by the above activity. If anyone is interested in the equipment, it may be inspected at the above location.



Property Custodian

Member, Survey Committee

Member, Survey Committee

Comments on Equipment: _____

Instructions

1. Identify each item exactly as listed on inventory.
2. Make original and one (1) copy of all Certifications of Surplus Property.
3. Do not fill in upper right hand corner on reverse side.
4. Buildings and property with no salvageable value are to be reported separate from other property.
5. For further information refer to DNR Directive 550, Section 12.



State of Florida
 Department of Environmental Regulation
**Pollutant Storage Tank System
 Inspection Report Form**

Facility ID #: 318734859 County: 31
 Facility Name: State Park - Sebastian Inlet
 Facility Location: 9750 S ATA Melbourne Beach
 Facility Contact: _____ Phone: _____
 Owner: _____ Phone: _____
 Owner Address: _____
 Owner Contact: _____ Owner Change Date: _____
 Latitude: 27 : 51 : 50 Longitude: 80 : 26 : 50 Fac. Type: _____

Tank #	Size	Contents	Date Installed	Under or Above	Tank Type	Integral Piping	Monitoring System	Tank Status
1	1000	B	11/88	A	REF	G	X	✓

Comments: change destination to reflect current status
- Emergency power off switch for pumps?
Label as to location NFPA 30 requirements

Inspection Type: (Choose One) <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Installation <input type="checkbox"/> Abandoned <input type="checkbox"/> Discharge (DRF) <input type="checkbox"/> Closure <input type="checkbox"/> Reinspection	Site Information: (All that apply) <input type="checkbox"/> Near Public Wells <input type="checkbox"/> Contaminated <input type="checkbox"/> Complaint <input type="checkbox"/> Acid Tanks <input type="checkbox"/> Repaired <input type="checkbox"/> Upgraded <input checked="" type="checkbox"/> Both UST & AST <input type="checkbox"/> Hazardous Materials
---	---

DER District or Local Program IRCEH
 Inspector Name (Print): Charles Vogt
 Inspector's Signature & Date: [Signature] 12/30/91
 Contact Name (Print): Linda Biggle
 Contact's Signature & Date: [Signature]



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form #	17-761.900(2)
Form Title	Storage Tank Registration Form
Effective Date	December 10, 1990
DER Application No.	(Filled in by DER)

DATA ENTERED

Storage Tank Registration Form

JUL 27 1992

Please Print or Type - Review Instructions Before Completing Form

1. DER Facility ID Number: 318734859 2. Facility Type: G/State/Government

3. New Registration New Owner Data Facility Revision Tank(s) Revision

4. County and Code of tank(s) location: Indian River / _____

5. Facility Name: Sebastian Inlet S.R.A.

Tank(s) Address: 9700 S. AIA

City/State/Zip: Melbourne Beach, Fl. 32951

Contact Person: Ronald N. Johns Telephone: (407) 984-4852

6. Financial Responsibility Type: Natural Resources/Rec. & Parks/Self Insured

7a. Tank(s) Owner: Florida Department of Natural Resources

Owner Mailing Address: 9700 S. AIA

City/State/Zip: Melbourne Bch., Fl. 32951

Contact Person: Ronald N. Johns Telephone: (407) 984-4852

7b. New Owner Signature/Change Date: _____ / ____ / ____ / ____

8. Location (optional) Latitude: ____° ____' ____" Longitude: ____° ____' ____" Section ____ Township ____ Range ____

Complete One Line For Each Tank At This Facility (Use Codes - See Instructions)

Complete 9 - 16 for tanks in use; 9 - 19 for tanks out of use

9	10	11	12	13	14	15	16	17	18	19
								"B"		

20. _____ DPR# _____
 Certified Contractor* Department of Professional Regulation License Number*

*For new tank installation or tank removal

To the best of my knowledge and belief all information submitted on this form is true, accurate and complete.

RONALD N. JOHNS / PARK MGR. [Signature] 06-24-92
 Print name & title of owner or authorized person Signature Date

APPENDIX D

Site Photographs



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing southwest: Buildings in the maintenance yard used to store maintenance equipment. These buildings will be referred to as Building 1 (Right) and Building 2 (Left).



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing east: Maintenance access road leading to SR A1A.



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing west: Used oil stored in 55-gallon drums and in secondary containment and a smaller 20-gallon container with unknown substance. These containers are located in the southwest corner of the maintenance yard between Building 1 and 2.



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing north: Two 20-gallon drums of unknown substance located behind Building 2.



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing north: Locked chemical storage shed on the north side of the access road. A 55-gallon drum of unknown substance is out front.



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing north: Propane tanks, miscellaneous containers and 20-gallon drums containing unknown substances to the west of the chemical shed.



Site #1 – Sebastian Inlet State Park (FDEP Facility ID: 87434859)

Photo facing west: Gas cans located east of the chemical storage shed.